FINAL REVISED

MMRP RCRA FACILITY INVESTIGATION REPORT

Anti-Aircraft Range 90-mm - 2 MRS (FTSW-002-R-01) and Hero Road Trench Area MRS (FTSW-008-R-01) Fort Stewart, Georgia

Prepared for:

U.S. Army Corps of Engineers
Baltimore District

Contract No.: W912DR-09-D-0012, Delivery Order 0004

US Army Corps of Engineers®
BUILDING STRONG®

Prepared by:

ERT, Inc.
Laurel, Maryland 20707
(301) 361-0620

August 2014

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MMRP RCRA FACILITY INVESTIGATION REPORT

FOR THE

ANTI-AIRCRAFT RANGE 90-mm – 2 MRS (FTSW-002-R-01)

AND THE HERO ROAD TRENCH AREA MRS (FTSW-008-R-01)

FORT STEWART, GA

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08/25/2014

Jennifer Harlan
Program Manager, PMP

Date

COMPLETION OF SENIOR TECHNICAL REVIEW

This document has been produced within the framework of the ERT, Inc. (ERT) quality management system. As such, a senior technical review has been conducted. This included review of all elements addressed within the document, proposed or utilized technologies and alternatives and their applications with respect to project objectives and framework of U.S. Army Corps of Engineers regulatory constraints under the current project, within which this work has been completed.



12/18/12

Thomas Bachovchin Date
Project Manager

COMPLETION OF INDEPENDENT TECHNICAL REVIEW

This document has been produced within the framework of ERT's quality management system. As such, an independent technical review, appropriate to the level of risk and complexity inherent in the project, has been conducted. This included a review of assumptions; alternatives evaluated; the appropriateness of data used and level of data obtained; and reasonableness of the results, including whether the product meets the project objectives. Comments and concerns resulting from review of the document have been addressed and corrected as necessary.



12/14/2012

Judy Timberlake Date
Independent Technical Reviewer

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ACRONYMS AND ABBREVIATIONS

Acronym	Definition
ALS	Analytical Laboratory Services, Inc.
AOC	area of concern
AP	Armor Piercing
ASP	Ammunition Supply Point
ATSDR	Agency for Toxic Substances and Disease Registry
BGS	below ground surface
BLRA	Baseline Risk Assessment
BTAG	Biological Technical Assistance Group
CAIS	Chemical Agent Identification Set
CENAB	U.S. Army Corps of Engineers, Baltimore District
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CLP	Contract Laboratory Program
cm	centimeter
CMS	Corrective Measures Study
COPC	chemical of potential concern
COPEC	chemical of potential ecological concern
CS	confirmatory sampling
CSM	Conceptual Site Model
CTT	closed, transferring and transferred
DA	Department of the Army
DDESB	Department of Defense Explosives Safety Board
DERP	Defense Environmental Restoration Program
DGM	digital geophysical mapping
DID	Data Item Description
DMM	discarded military munitions
DoD	Department of Defense
DPW	Directorate of Public Works
DQI	data quality indicator
DQO	data quality objective
DVR	data validation report
EM	Engineer Manual or electromagnetic
EOD	explosive ordnance disposal
EP	Engineer Pamphlet
EPC	exposure point concentration
ERAGS	Ecological Risk Assessment Guidance for Superfund
ERT	ERT, Inc.
ESP	Explosives Site Plan
ET	exposure time
FDEM	frequency-domain electromagnetic
FEIS	Final Environmental Impact Statement
FTSW	Fort Stewart
GAEPD	Georgia Environmental Protection Division

GPS	global positioning system
GSV	geophysical system verification
HA	hazard assessment
HCl	hydrochloric acid
HHRA	Human Health Risk Assessment
HRR	Historical Records Review
HQ	hazard quotient
IDW	investigative derived waste
IRIS	Integrated Risk Information System
ISO	industry standard objects
IVS	instrument verification strip
LUC	land use controls
MC	munitions constituents
MCC	maximum contamination concentration
MCGI	Meridian Consultant Group, Inc.
MD	munitions debris
MDAS	material documented as safe
MEC	munitions and explosives of concern
mg/kg	milligrams per kilogram
mg/m^3	milligrams per cubic meter
mm	millimeter
MMRP	Military Munitions Response Program
mph	miles per hour
MPPEH	material potentially presenting an explosive hazard
MRL	minimal risk level
MRS	munitions response site
MRSPP	Munitions Response Site Prioritization Protocol
mS/m	milliseimens per meter
mV	millivolts
OSWER	Office of Solid Waste and Emergency Response
PARCCS	precision, accuracy, representativeness, comparability, completeness, and sensitivity
PDT	Project Delivery Team
PPRTVs	provisional peer-reviewed toxicity values
ppt	parts per thousand
PRE	preliminary risk evaluation
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
RAGS	Risk Assessment Guidance for Superfund
RCRA	Resource Conservation and Recovery Act
RDX	cyclotrimethylenetrinitramine
RfC	reference concentration
RfD	reference dose
RFI	RCRA Facility Investigation
RME	reasonable maximum exposure

RSL	regional screening level
RTK	real-time kinematic
RTS	robotic total station
SARA	Superfund Amendments and Reauthorization Act
SLERA	Screening-Level Ecological Risk Assessment
SSL	soil screening level
STEP	Solutions to Environmental Problems, Inc.
SVOC	semi-volatile organic compounds
SWMU	solid waste management unit
TCLP	toxicity characteristic leaching procedure
TDEM	time-domain electromagnetic
TNT	trinitrotoluene
TP	Technical Paper
TPP	Technical Project Planning
UCL	upper confidence limit
UFP-QAPP	Uniform Federal Policy Quality Assurance Project Plan
USACE	U.S. Army Corps of Engineers
USAEC	U.S. Army Environmental Command
USEPA	U.S. Environmental Protection Agency
UXO	unexploded ordnance
VOC	volatile organic compounds
VSP	Visual Sampling Plan
°F	degrees Fahrenheit
%	percent

GLOSSARY OF TERMS

Cultural Debris – Debris found on operational ranges or munitions response sites, which may be removed to facilitate a range clearance or munitions response, that is not related to munitions or range operations. Such debris includes, but is not limited to, rebar, household items (refrigerators, washing machines, etc.), automobile parts and automobiles that were not associated with range targets, fence posts, and fence wire. Cultural debris does not refer to items of cultural or historical significance.

Defense Site – All locations that are or were owned by, leased to, or otherwise possessed or used by the Department of Defense (DoD). The term does not include any operational range, operating storage or manufacturing facility, or facility that is used or was permitted for the treatment or disposal of military munitions.

Discarded Military Munitions (DMM) – Military munitions that have been abandoned without proper disposal or removed from storage in a military magazine or other storage area for the purpose of disposal. The term does not include unexploded ordnance (UXO), military munitions that are being held for future use or planned disposal, or military munitions that have been properly disposed of, consistent with applicable environmental laws and regulations. (10 U.S.C. 2710(e)(2)).

Explosive Hazard – A condition where danger exists because explosives are present that may react (e.g., detonate, deflagrate) in a mishap with potential unacceptable effects (e.g., death, injury, damage) to people, property, operational capability, or the environment.

Explosive Ordnance Disposal (EOD) – The detection, identification, on-site evaluation, rendering safe, recovery, and final disposal of unexploded ordnance and of other munitions that have become an imposing danger, for example, by damage or deterioration.

Explosives Safety – A condition where operational capability and readiness, people, property, and the environment are protected from the unacceptable effects or risks of potential mishaps involving military munitions.

Material Potentially Presenting an Explosive Hazard (MPPEH) – Material potentially containing explosives or munitions (e.g., munitions containers and packaging material; munitions debris remaining after munitions use, demilitarization, or disposal; range-related debris); or material potentially containing a high enough concentration of explosives such that the materia1 presents an explosive hazard (e.g., equipment, drainage systems, holding tanks, piping, or ventilation ducts that were associated with munitions production, demilitarization or disposal operations). Excluded from MPPEH are munitions within DoD's established munitions management system and other hazardous items that may present explosion hazards (e.g., gasoline cans, compressed gas cylinders) that are not munitions and are not intended for use as munitions.

Munitions and Explosives of Concern (MEC) – This term, which distinguishes specific categories of military munitions that may pose unique explosives safety risks means (A) UXO, as defined in 10 U.S.C. 101(e)(5); (B) DMM, as defined in 10 U.S.C. 2710(e)(2); or (C) munitions constituents (MC) (e.g., Trinitrotoluene [TNT], Cyclotrimethylenetrinitramine [RDX]), as defined in 10 U.S.C. 2710(e)(3), present in high enough concentrations to pose an explosive hazard.

Munitions Constituents (MC) – Any materials originating from UXO, DMM, or other military munitions, including explosive and nonexplosive materials, and emission, degradation, or breakdown elements of such ordnance or munitions. (10 U.S.C. 2710(e)(3)) .

Munitions Debris (MD) – Remnants of munitions (e.g., fragments, penetrators, projectiles, shell casings, links, fins) remaining after munitions use, demilitarization, or disposal.

Munitions Response – Response actions, including investigation, removal actions and remedial actions to address the explosives safety, human health, or environmental risks presented by UXO, DMM, or MC, or to support a determination that no removal or remedial action is required.

Munitions Response Site (MRS) – A discrete location within an MRA that is known to require a munitions response.

Operational Range – A range that is under the jurisdiction, custody, or control of the Secretary of Defense and that is used for range activities or, although not currently being used for range activities, that is still considered by the Secretary to be a range and has not been put to a new use that is incompatible with range activities. (10 U.S.C. 101(e)(3)(A) and (B)). Also includes "military range," "active range," and "inactive range" as those terms are defined in 40 Code of Federal Regulations §266.201.

Range – A designated land or water area that is set aside, managed, and used for range activities of the DoD. The term includes firing lines and positions, maneuver areas, firing lanes, test pads, detonation pads, impact areas, electronic scoring sites, buffer zones with restricted access, and exclusionary areas. The term also includes airspace areas designated for military use in accordance with regulations and procedures prescribed by the Administrator of the Federal Aviation Administration. (10 U.S.C. l0l (e)(l)(A) and (B)).

Unexploded Ordnance (UXO) – Military munitions that (A) have been primed, fuzed, armed, or otherwise prepared for action; (B) have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installations, personnel, or material; and (C) remain unexploded whether by malfunction, design, or any other cause. (10 U.S.C. 101(e)(5)(A) through (C)).

EXECUTIVE SUMMARY

Introduction and Scope

ERT, Inc., (ERT) conducted a Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) for the U.S. Army Corps of Engineers (USACE), Baltimore District (CENAB) at two Military Munitions Response Program (MMRP) sites at Fort Stewart (FTSW), Georgia. The work was performed as a performance-based task order under the Multiple-Award Military Munitions Services Contract (W912DR-09-D-0012, Delivery Order 0004). The USACE Savannah District (CESAS) provided project management for this task order. The two munitions response sites (MRS) identified are the Anti-Aircraft Range 90-mm – 2 (FTSW-002-R-01) and the Hero Road Trench Area (FTSW-008-R-01).

The purpose of the RFI is to adequately characterize the nature and extent of potential munitions constituents (MC) contamination and munitions and explosives of concern (MEC) hazards; determine the potential risks posed to human health and the environment from MC; and to collect or develop additional data for a Corrective Measures Study (CMS), as appropriate, to determine corrective measures, including no further action.

The scope of the RFI included digital geophysical mapping (DGM); intrusive investigations to identify location, density, and types of MEC; and environmental sampling to determine the distribution and concentrations of several MC (select metals, explosives, and degradation products associated with the dilute agent Chemical Agent Identification [CAIS] kits) in soil, sediment, and surface water. The Anti-Aircraft Range 90-mm – 2 MRS was investigated for both MEC and MC contamination, while the Hero Road Trench Area MRS was investigated for MC contamination only.

FTSW is located approximately 40 miles southwest of Savannah, Georgia and just north of Hinesville, Georgia. The cities of Pembroke and Richmond Hill are 1.5 and 2.2 miles north of FTSW, respectively. FTSW is an active installation that currently occupies approximately 280,000 acres. Previous investigations have identified MEC and/or historical activities associated with the use of munitions at the Anti-Aircraft Range 90-mm – 2 MRS and anecdotal evidence of the burial of dilute agent CAIS kits at the Hero Road Trench Area MRS. Findings from these previous investigations have led to this RFI.

Investigation Activities

MC

A total of 105 biased and random surface and subsurface soil samples were collected at the Anti-Aircraft Range 90-mm – 2 and Hero Road Trench Area MRSs, including 10 background samples. Ten surface and ten subsurface random soil samples and three duplicate samples were collected from the Anti-Aircraft Range 90-mm – 2 MRS and analyzed for select metals and explosives. Background soil samples were analyzed for select metals only; 1 duplicate background sample was collected. Sixteen surface and sixteen subsurface biased samples were collected as well as three duplicate samples from the Hero Road Trench Area MRS. Ten surface and ten subsurface random soil samples and two duplicates were also collected as well as five surface and five subsurface soil samples and one duplicate from five test pit locations. All surface and subsurface soil samples collected from the Hero Road Trench Area MRS were

analyzed for degradation products associated with the dilute agent CAIS kits, which include arsenic, 1,4-oxithiane, 1,4-dithiane, and thiodiglycol.

Two sediment samples were collected at the north and south ends of the drainage ditch located within the Anti-Aircraft Range 90-mm – 2 MRS. Standing water was present at the north end of the drainage ditch where a sediment sample was collected; a surface water sample was also collected at this location. Sediment and surface water samples were analyzed for select metals and explosives.

Per the accepted Work Plan for this investigation, groundwater would only have been sampled if the U.S. Environmental Protection Agency (USEPA) Protection of Groundwater Soil Screening Levels (SSLs) for soil were exceeded. Groundwater samples were not collected at either MRS.

MEC

Comprehensive, statistically-based DGM followed by intrusive investigation of the Anti-Aircraft Range 90-mm – 2 MRS was conducted. A total of 1,199 targets were excavated in 24 grids and on 45 transects within the MRS.

A geophysical investigation, including DGM and intrusive work, at the Hero Road Trench Area MRS was performed to identify areas where dilute agent CAIS kits may have been disposed in burial pits. This MRS was investigated for MC only, as no historic or current evidence of MEC at this MRS exists.

Investigation Findings

MC

No explosives compounds or degradation products associated with dilute agent CAIS kits were detected in any soil samples. Residential soil regional screening levels (RSLs) were used as screening criteria at both MRSs, even though land use is not expected to change to residential at the Anti-Aircraft Range 90-mm – 2 MRS in the foreseeable future. The use of residential soil RSLs is therefore conservative criteria. Concentrations of aluminum were detected above the residential RSL in 8 soil samples (2 surface, 6 subsurface) collected from the Anti-Aircraft Range 90-mm – 2 MRS and above the background concentrations collected during the RFI (background screening value of 10,273 milligrams per kilogram [mg/kg]) in 5 soil samples (1 surface, 4 subsurface) from this MRS. Concentrations of arsenic were detected above the residential RSL in 22 soil samples (17 surface, 5 subsurface) collected from the Hero Road Trench Area MRS, but none of these detected concentrations were above background concentrations (background screening value of 2.1 mg/kg).

No explosives compounds were detected in the sediment or surface water samples collected at the Anti-Aircraft Range 90-mm – 2 MRS. The concentration of metals in all sediment samples were below residential RSLs.

Based on a review of the hydrogeological data (Section 3.10.1.1 of the Final Work Plan, January 2012), it appears unlikely that MC in shallow groundwater would migrate to the deeper aquifers that are used as a water supply for Fort Stewart. Therefore, as described in the Work Plan, a shallow groundwater investigation would only have been conducted if the soil sampling results exceeded USEPA “Protection of Ground Water” Soil Screening Levels (Soil-Groundwater SSLs) which are designed to evaluate the leaching potential of constituents from soils to groundwater. Only aluminum at the Anti-Aircraft Range MRS and arsenic at the Hero Road Trench Area MRS

exceeded the Soil-Groundwater SSLs. Aluminum is an essential element. Arsenic was detected in soil at concentrations less than background, therefore it is not likely to be site-related. Thus, it was determined that there was no need for groundwater sampling at either MRS.

MEC

The Hero Road Trench Area MRS was not investigated for MEC, since no historical or current evidence suggests the presence of MEC at this MRS. During the RFI, three MEC items (40-mm rounds) were recovered from the subsurface at the Anti-Aircraft Range 90-mm – 2 MRS. All 40-mm rounds were disposed of by FTSW explosive ordnance disposal personnel. Per the Department of Defense Explosive Safety Manual (DoD, 2010), a "moderate to high" probability for encountering MEC determination can be made if a search of available historical records and onsite investigation data indicates that, given the military or munitions-related activities that occurred at the site, there is more than a low probability that MEC are present. Per the DoD guidance and results of this RFI, the probability of encountering MEC in the Anti-Aircraft Range 90-mm – 2 MRS is therefore deemed to be "moderate to high."

Risk Assessment

Based on the Human Health Risk Assessment (HHRA) and Screening Level Ecological Risk Assessment (SLERA) performed for both MRSs, there are no human health or ecological risks associated with potential human contact with surface or subsurface soil, surface water, or sediment. Furthermore, the SLERA indicates that a detailed ecological risk assessment is not warranted.

Aluminum in subsurface soil was the only chemical of potential concern (COPC) for future human exposures at the Anti-Aircraft Range 90-mm – 2 MRS. The estimated hazard quotients (HQs) used to evaluate the non-cancer effects of aluminum are less than 1, indicating that non-cancer hazards would not occur due to soil exposure under the theoretical future scenarios. In addition, the concentration of aluminum in subsurface soil was greater than its corresponding generic USEPA SSL for the Protection of Groundwater in one out of 11 samples. However, this maximum detected value is within the same order of magnitude as the SSL, and aluminum is not generally considered a contaminant of great concern for leaching to groundwater.

For the SLERA, comparisons of detected analytes to benchmarks were done for sediment and surface water. Inorganics detected in sediment samples collected at the drainage ditch located within the Anti-Aircraft Range 90-mm – 2 MRS were below background soil levels and ecological sediment screening levels, although aluminum in sediment exceeded the ecological soil screening level. Aluminum is not expected to be associated with adverse ecological effects in the sediment at these levels.

Surface water results were compared to surface water freshwater criteria; no surface water background data were available. Copper, lead, and zinc exceeded the Georgia In-Stream Water Quality Standards at an assumed water hardness of 50 mg/l $CaCO^3$, but did not exceed the standards at an assumed water hardness of 100 mg/L $CaCO^3$. Since the water hardness of the ditch water was not measured, and since EPA water quality criteria are often listed at a water hardness of 100 mg/L $CaCO^3$, there are unlikely to be adverse effects from these concentrations in the ditch. Aluminum was also detected at a concentration higher than its freshwater screening criteria. However, the freshwater benchmark levels are based on potential exposures and toxicity for the most sensitive freshwater aquatic organisms and the drainage ditch is a limited aquatic

habitat due to the intermittence of the presence of water. Therefore, surface water in the drainage ditch at the Anti-Aircraft Range 90-mm – 2 MRS is not likely to be of ecological concern.

There were no COPCs identified at the Hero Road Trench Area MRS; therefore, no further HHRA or SLERA evaluation of this MRS was performed. Arsenic was detected at this MRS at a concentration greater than its corresponding generic USEPA SSL for the Protection of Groundwater; however, all detects of arsenic in soil at this MRS were below background levels, indicating that arsenic is not likely to be site-related.

MEC HA

The MEC Hazard Assessment methodology was used to assess potential explosive hazards to human receptors at the Anti-Aircraft Range 90-mm – 2 MRS where three MEC items were recovered during RFI activities. The Anti-Aircraft Range 90-mm – 2 MRS was scored as a 4, which indicates a low hazard potential at this MRS; the MRS score is a function of the size and location of the three MEC items found during the RFI. Based on the findings of this RFI, the Anti-Aircraft Range 90-mm – 2 MRS was given a Munitions Response Site Prioritization Protocol (MRSPP) rating of 4 and the Hero Road Trench Area MRS was given a rating of No Known or Suspected Hazard.

Conclusions

Based on the results of this RFI and the associated human health and ecological risk assessments, there is no release of MC at either the Anti-Aircraft Range 90-mm - 2 MRS or the Hero Road Trench Area MRS. A release of MEC has been found at the Anti-Aircraft Range 90-mm – MRS; this release is associated with a possible subsurface soil explosive hazard risk to humans. Based on the results of this investigation, a Corrective Measures Study is recommended for potential MEC hazards at the Anti-Aircraft Range 90-mm - 2 MRS; no further action is recommended for the Hero Road Trench Area MRS.

1.0 INTRODUCTION

ERT, Inc., (ERT) conducted a Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) for the U.S. Army Corps of Engineers (USACE), Baltimore District (CENAB), at two Military Munitions Response Program (MMRP) sites at Fort Stewart (FTSW), Georgia. The work was performed as a performance-based task order under the Multiple-Award Military Munitions Services Contract (W912DR-09-D-0012, Delivery Order 0004). The USACE Savannah District (CESAS) provides project management for this task order. The two munitions response sites (MRS) identified are the Anti-Aircraft Range 90-mm – 2 (FTSW-002-R-01) and the Hero Road Trench Area (FTSW-008-R-01).

This project falls under the MMRP of the Defense Environmental Restoration Program (DERP). The Department of Defense (DoD) established the MMRP under the DERP to address unexploded ordnance (UXO), munitions and explosives of concern (MEC), discarded military munitions (DMM), and munitions constituents (MC) located on current and former military installations. MEC are a safety hazard and may constitute an imminent and substantial endangerment to field personnel and the public. Applicable provisions of Chapter 29 of the Code of Federal Regulations (CFR) 1910.120 apply. ERT performed all work in accordance with the Georgia Environmental Protection Division (GAEPD) issued RCRA Part B Permit, Section III, Corrective Action, with regulatory coordination, as appropriate, with the GAEPD. All activities involving work in areas potentially containing MEC hazards were conducted in full compliance with USACE, Department of the Army (DA), and DoD safety regulations. MEC/ Material Potentially Presenting an Explosive Hazard (MPPEH) was handled in accordance with installation guidance and followed procedures described in the accepted Work Plan (ERT, 2012).

The Project Delivery Team (PDT) consists of ERT, CENAB, CESAS, GAEPD, FTSW personnel, and the U.S. Army Environmental Command (USAEC).

1.1 Purpose and Scope

The overall purpose of the RFI is to determine whether the Anti-Aircraft Range 90-mm – 2 and the Hero Road Trench Area MRSs warrant further response actions pursuant to RCRA and the MMRP process. The objectives of the RFI are to: determine the nature and extent of potential MC contamination or MEC hazards; determine the potential risks posed to human health and the environment from MC; and to collect or develop additional data for a Corrective Measures Study (CMS), as appropriate, in order to determine corrective measures, including no further action.

The scope of the RFI included digital geophysical mapping (DGM); intrusive investigations to identify location, density, and types of MEC; and environmental sampling to determine the distribution and concentrations of several MC (select metals, explosives, and degradation products associated with the dilute agent CAIS kits) in soil, sediment, and surface water. The Anti-Aircraft Range 90-mm – 2 MRS was investigated for both MEC and MC contamination, while the Hero Road Trench Area MRS was investigated for MC contamination only.

1.2 Property Description and Problem Identification

FTSW is located approximately 40 miles southwest of Savannah, Georgia and just north of Hinesville, Georgia. The cities of Pembroke and Richmond Hill are 1.5 and 2.2 miles north of FTSW, respectively. Situated south of Interstate 16 and west of Interstate 95, FTSW boundaries are roughly defined by the intersection of Interstate 16 and Interstate 95 and the cities of

Richmond Hill, Hinesville, Glennville, Claxton, and Pembroke (Figure 1, Appendix A) (Malcolm Pirnie, 2006). FTSW is an active installation that currently occupies approximately 280,000 acres.

The two MRSs that are the subject of this RFI are the Anti-Aircraft Range 90-mm – 2 MRS and the Hero Road Trench Area MRS. Figure 2 of Appendix A shows the location of the two MRSs as well as surrounding features. Both MRSs are considered areas of concern (AOC) and are covered by the FTSW Hazardous Waste Facility Permit #HW-045(S) (Appendix J). The permit requires FTSW to properly manage the storage of hazardous wastes and to investigate and conduct corrective action at solid waste management units (SWMU) and AOCs.

Based on findings during previous investigations at the two MRSs, small amounts of MEC may be present at the Anti-Aircraft Range 90-mm – 2 MRS. An RFI of the two MRSs is necessary to characterize the nature and extent of impacts to human health and the environment. ERT collected data to identify environmental impacts associated with the Anti-Aircraft Range 90-mm – 2 MRS and the Hero Road Trench Area MRS and to assist with determining whether additional remedial actions are warranted.

1.3 Historical Information

FTSW has been utilized since 1940 for training and as a deployment platform. Training activities have included tank, field artillery, helicopter gunnery, small arms, and various infantry training.

Construction of the reservation that was to become FTSW began on September 10, 1940, on what was formerly the Camp Savannah Anti-Aircraft Firing Center. On November 18, 1940, the reservation's name was changed from Camp Savannah to Camp Stewart in honor of the Revolutionary War Brigadier General Daniel Stewart. The reservation was established as an anti-aircraft center with facilities to prepare artillery troops for overseas deployment. The reservation's mission of training anti-aircraft units ended on November 20, 1944, and all training terminated in December 1944. Army ground forces units were to have departed by April 30, 1945. A prisoner-of-war camp that was operated at the reservation was also closed. The reservation's mission was reestablished as a separation center for redeployed troops from August 6, 1945 until September 2, 1945. On September 30, 1945, Camp Stewart was inactivated, and the reservation became a training location for the Georgia National Guard (Malcolm Pirnie, 2006).

With the outbreak of hostilities in Korea in June 1950, Camp Stewart was reactivated on August 9, 1950 and was designated the 3rd Army Anti-Aircraft Artillery Training Center. In 1953, armor and tank training was added to the mission of the reservation. On March 21, 1956 Camp Stewart was re-designated as Fort Stewart and was designated a permanent Army installation. In 1959, FTSW became an armor and artillery firing center. Troop training at FTSW peaked in 1961 and 1962 in response to the Berlin and Cuban crises, respectively. The 1st Armored Division was relocated to the reservation during the Cuban crisis (Malcolm Pirnie, 2007).

In response to a need for more helicopter and light fixed wing aircraft in support of the Vietnam conflict, an element of the U.S. Army Aviation School at Fort Rucker, Alabama, was transferred to FTSW in 1966. Helicopter pilot training and helicopter gunnery courses became the new mission for FTSW. In 1967, the main mission for FTSW was to train Army aviators. The reservation was also used to maintain readiness for other active duty, Reserve, and National Guard personnel. In 1970, Vietnamese helicopter pilots began training at FTSW. Aviation

training at FTSW was phased out in 1973, when all aviation training was consolidated at Fort Rucker. By 1974, FTSW had become a training and maneuver area, providing tank, field artillery, helicopter gunnery, and small arms training for regular Army and National Guard units. FTSW supported training by providing facilities, conducting training opportunities, and assisting in the mobilization and deployment troops (Malcolm Pirnie, 2006).

Currently, the mission of FTSW is to sustain a quality of life and reservation support at the level necessary for divisions and non-divisional, tenant, and Reserve Component units to accomplish their training missions.

1.4 Previous Investigations

Previous investigations specific to the Anti-Aircraft Range 90-mm – 2 and Hero Road Trench Area MRSs include:

1.4.1 Final Closed, Transferred, and Transferring (CTT) Inventory Report

The Final CTT Inventory report presented the results of the Phase 3 CTT range inventory (Malcolm Pirnie, 2003). In addition to identifying the two MRSs that are being investigated under this task, the report also noted that FTSW occupies 279,081 acres, 274,988 of which are classified as operational range area and 4,093 acres are non-range areas. The Phase 3 inventory identified seven closed ranges totaling 483 acres within FTSW boundaries. No transferred or transferring ranges were identified.

1.4.2 Historical Records Review (HRR)

The HRR identified specific secondary explosives and munitions removed from the Anti-Aircraft Range 90-mm – 2 MRS through Explosive Ordnance Disposal (EOD) call responses, including C-4 plastic explosives, an M-222 Dragon anti-tank missile, M-7 grenades, and MK-2 grenades (Malcolm Pirnie, 2006). Munitions documented at the Anti-Aircraft Range 90-mm – 2 MRS include 40- and 90-mm anti-aircraft projectiles and unknown tank munitions. Additionally, 37-mm rounds are documented to have been issued to FTSW.

The HRR presents the history of the Hero Road Trench Area MRS, including a review of documented dilute agent CAIS kits at FTSW; the presence of a nearby former gas chamber and the wastewater treatment plant; and historical aerial photos documenting ground disturbance in the MRS between the years of 1941 and 1957. Specific potential constituents associated with the dilute agent CAIS kits include mustard agent (5% solution), lewisite (5% solution), chloropicrin (50% solution), and pure phosgene agent. According to the HRR, every dilute agent CAIS kit issued to FTSW was collected and accounted for during disposal activities in 1978. However, individual vials of agent were considered expendable.

The HRR also developed a preliminary conceptual site model (CSM) for each of the MRSs.

1.4.3 Confirmatory Sampling (CS) Report

A limited magnetometer-assisted visual survey was performed as part of the CS in the Anti-Aircraft Range 90-mm – 2 MRS. No MEC or munitions debris (MD) was identified during this survey. A single composite soil sample was collected and analyzed for aluminum, copper, zinc, lead, antimony, and explosives. Only zinc was found to be above FTSW background levels, though it was below U.S. Environmental Protection Agency (USEPA) Region 4 screening values (Malcolm Pirnie, 2007).

A limited magnetometer assisted visual survey was performed over the Hero Road Trench Area MRS. No MEC or MD was identified during the survey. A single composite soil sample was collected and analyzed for aluminum, copper, zinc, lead, antimony, and explosives. Samples were not analyzed for any dilute agent CAIS kit degradation products. Lead was found at levels above FTSW background levels. Visual observations made during the CS found undulating ground surface in the southernmost parts of the area, which was believed to be related to possible suspected burial activities. The MRS was enlarged based on these observations from 10 acres to approximately 34.5 acres. Prior to completion of the CS, 32 acres of this MRS were enclosed by chain link fence in 2005, followed by the fencing of an additional 2.243 acres in 2008.

1.5 Identification of Munitions Response Sites for the Current RCRA Facility Investigation

1.5.1 MRS Locations

The FTSW overall map is included as Figure 2 of Appendix A. Information regarding the boundaries of the MRSs was supplied to ERT by FTSW personnel. The Anti-Aircraft Range 90-mm – 2 MRS is a 77-acre area (Figure 3, Appendix A) located within a former 90-mm anti-aircraft range fan; five other former anti-aircraft and tank ranges also overlap this MRS (Figure 4, Appendix A). This MRS is approximately 2.8 miles northwest of the cantonment area. An ammunition supply point (ASP) is located within this MRS; as such, the MRS is subject to additional security with a secured, gated fence surrounding most of the MRS.

The Hero Road Trench Area MRS is approximately 34.5 acres in size and lies within the cantonment area (Figure 5, Appendix A). There is anecdotal evidence that dilute agent CAIS kits may have been disposed of in burial trenches within this MRS. Historical photos show areas of ground scarring that may be associated with these burial areas; an example of one of these photos is included as Figure 6 of Appendix A. Based on guidance included in the Army Memorandum: Interim Guidance for Chemical Warfare Materiel Responses (DA, 2007), dilute agent CAIS kits and associated chemicals must be treated as hazardous waste. Additionally, based on the Probability Assessment, the probability of encountering chemical warfare materiel during any subsequent actions or operations at FTSW is unlikely (USACE, 2010).

1.5.2 MRS History

The use of the Anti-Aircraft 90-mm – 2 range began in 1941 and ceased in 1944 (Malcolm Pirnie, 2006). The six historical anti-aircraft and tank ranges (Figure 4, Appendix A) that overlap this MRS were used from 1941 through 1964 (Malcolm Pirnie, 2006). These include two 90-mm anti-aircraft ranges, two 40-mm anti-aircraft ranges, a 90-mm tank range, and tank range where the munitions used are unknown. The Anti-Aircraft Range 90-mm – 2 MRS is positioned downrange of these ranges and does not overlap impact/target areas or firing points (Malcolm Pirnie, 2006). The ASP has been active within this MRS since the early 1980s (USACE, 1981 and 1983).

The Hero Road Trench Area MRS was identified in January 2003 when a former Directorate of Public Works (DPW) staff member reported that materials (i.e., mustard agent) had been buried in the vicinity. Initially, the MRS was identified as a 10-acre parcel located within the cantonment area (Malcolm Pirnie, 2006). The CS Report increased the MRS from 10 to 34.5 acres (Malcolm Pirnie, 2007). An Interim Remedial Action, which fenced 32 acres of the site and included the placement of twenty-one warning signs along the fence, was completed in 2005

(STEP, 2005). A time-critical removal action was conducted in 2008 to fence an additional 2.243 acres and add additional warning signs around the fence (SpecPro, 2009).

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2.0 SITE DESCRIPTION AND ENVIRONMENTAL SETTING

2.1 Overall Site Description

FTSW, comprising approximately 280,000 acres, is bordered to the north and south by agriculture and wetlands, to the east by the Ogeechee River, and to the west by agricultural lands. The nearest cities are: Hinesville, next to the southern boundary and cantonment area; Richmond Hill, one mile to the east of the eastern boundary; Pembroke, two miles to the north of the northern boundary; Glennville, on the western boundary; and Savannah, about 41 miles to the northeast (Figure 1, Appendix A).

2.1.1 Surface Features

FTSW is in the Coastal Marine Flatlands region of the Atlantic Coastal Plain physiographic province, which is characterized by flat land areas with an average slope of less than 3 percent. The Coastal Marine Flatlands region's land surface consists of rolling terraces gently rising east to west. These terraces are separated by broad, low-lying areas with poor drainage. Elevations at FTSW average 33 feet above sea level east of the Canoochee River with a peak elevation of 183 feet above sea level near the western boundary (Malcolm Pirnie, 2006).

The Anti-Aircraft Range 90-mm – 2 MRS is relatively flat and covered with maintained grass; buildings, gravel and paved roads and parking areas, including the munition storage bunkers that are all located within the fenced area. The Hero Road Trench Area MRS consists of dense young forest and substantial undergrowth. The land area around the Hero Road Trench Area MRS within the cantonment area includes a wastewater treatment plant, a school, roads, and forested areas.

2.1.2 Meteorology

The climate of FTSW is considered humid subtropical. Average temperatures range from 52 degrees Fahrenheit (°F) in January to 81°F in July. The FTSW area receives approximately 50 inches of precipitation annually. September and October are typically the driest months and March the wettest month of the year (National Oceanic and Atmospheric Administration, 2012). The prevailing wind direction is to the northwest and average wind speed is from 0 to 5 miles per hour (mph). Thunderstorms, hurricanes, and tropical storms occur most frequently from May through September and can produce gusty surface winds well above 5 mph (Malcolm Pirnie, 2007).

2.1.3 Surface Water Hydrology

Four watersheds occur within FTSW's boundaries: the Altamaha, Canoochee, Lower Ogeechee, and Ogeechee Coastal watersheds. Most of FTSW is in the Canoochee River Watershed. FTSW has about 265 miles of freshwater rivers and streams and an additional 12 miles of brackish water streams (U.S. Army, 2010).

2.1.4 Geology

The bedrock in the area surrounding FTSW is composed primarily of rock formations ranging in age from the Precambrian (greater than 570 million years old) to Triassic (205 to 240 million years old) ages. This local bedrock is overlain with thick wedges of unconsolidated and partially consolidated sediments (US Army, 2010).

2.1.5 Soils

Most of the soil at FTSW is classified as sandy and infertile. Soils in low-lying, poorly drained areas are high in organic matter and can remain saturated with water for eight months or more every year (U.S. Army, 2010). Near FTSW, the parent material for all soils is water-lain sediments deposited prior to and during the Pleistocene Age. The soil at the Anti-Aircraft Range 90-mm – 2 MRS is classified as sand-silt/sand-clay. The soil at the Hero Road Trench Area is classified as clay-sand/clay-silt (Malcolm Pirnie, 2007).

2.1.6 Hydrogeology

The principal artesian aquifer in the FTSW region is generally 300 to 500 feet below surface and is isolated from the surface aquifer by a confining unit (SAIC, 1999). The surface aquifer is composed of a relatively thin layer of sands, gravels and clays. It is recharged directly from rainfall percolating through sediments. Primary recharge to the principal artesian aquifer occurs approximately 50 to 90 miles northwest of FTSW. Deep groundwater wells are used as drinking water sources for FTSW. There are 31 groundwater wells located on FTSW, five of which are used to supply drinking water to the cantonment area. The cantonment area wells range in depth from 500 to 800 feet and are cased to depths of 400 to 470 feet. The potable water capacity from the five active wells is approximately 10.4 million gallons per day (Malcolm Pirnie, 2006).

2.1.7 Demography and Land Use

In the 2010 U.S. Census, the Fort's population was listed as 4,942. Its primary residents are members of the 3rd Infantry Division.

The Anti-Aircraft Range 90-mm – 2 MRS is located within the operational range at FTSW and consists of an ASP within a fenced area that covers a majority of the MRS acreage. A cleared buffer area surrounding the fence is also included in this MRS. The ASP is a gated, secured area; entry to this area is controlled and monitored. This MRS is expected to continue as an ASP for the foreseeable future. No activities occur in the buffer area surrounding the fence line.

The Hero Road Trench Area MRS lies within the cantonment area and is surrounded by a gated, locked fence. The MRS is kept secured at all times; no activities occur within this MRS. While not currently planned for development, depending on the outcome of this RFI investigation, development of this site may occur.

2.1.8 Ecology

FTSW is a large, mostly undeveloped installation with more than 87 percent (243,000 acres) that comprises upland forest or forested wetlands, with the remaining 13 percent (37,000 acres) comprising open areas, including the cantonment area, ranges, and impact areas. The cantonment area is the "living and working" portion of FTSW (U.S. Army, 2010).

On a very broad scale, there are four types of ecosystems on FTSW: sandhills, pine flatwoods, upland forests, and wetlands (Malcolm Pirnie, 2006). Wetlands are mainly of the bottomland hardwood variety, with mixed types of vegetation and only occasional flooding. Isolated cypress ponds also occur. There are no threatened or endangered species or species of concern within either MRS (ERT, 2012).

3.0 RCRA FACILITY INVESTIGATION PROJECT OBJECTIVES

3.1 Conceptual Site Model (CSM) and Project Approach

The CSM is used to communicate and describe the current state of knowledge and assumptions about risks at a project site. The CSM presents the exposure pathway analysis by integrating information on the MEC and MC sources, receptors, and receptor/MEC interaction. There is no MEC CSM for the Hero Road Trench Area MRS, since there is no historical evidence to support the presence of MEC on the site.

The preliminary Human Health Risk Assessment (HHRA) CSMs for both MEC and MC and the preliminary Screening Level Ecological Risk Assessment (SLERA) CSM for MC at the Anti-Aircraft Range 90-mm – 2 MRS are presented in Figures 12 and 13 of Appendix B of the Work Plan (ERT, 2012), respectively. The preliminary HHRA CSM for this MRS shows potentially complete exposure pathways for human receptors for MC in the surface and subsurface, except for outdoor workers and trespassers where subsurface exposure pathways are incomplete. The preliminary HHRA CSM for this MRS shows potentially complete exposure pathways for MEC at the surface for trespassers, outdoor and construction workers as well as MEC in the subsurface for construction workers. The preliminary HHRA CSM shows incomplete exposure pathways for MEC in the surface and subsurface for future residents, which was a conservatively considered receptor for this RFI. The preliminary SLERA CSM for the Anti-Aircraft Range 90-mm – 2 MRS shows potentially complete exposure pathways for ecological receptors for MEC and MC in the surface and incomplete exposure pathways for MC in the subsurface.

The preliminary HHRA and SLERA CSMs for MC at the Hero Road Trench Area MRS are presented in Figures 14 and 15 of Appendix B of the Work Plan (ERT, 2012), respectively. The preliminary HHRA CSM for this MRS shows potentially complete exposure pathways for all human receptors for MC in the surface and subsurface, except for outdoor workers and trespassers, for which incomplete exposure pathways exist for MC in the subsurface. The preliminary SLERA CSM for this MRS shows potentially complete exposure pathways for ecological receptors for MC in the surface soil and incomplete exposure pathways for MC in the subsurface.

Discussion of impacts to the preliminary HHRA and SLERA CSMs for each MRS based on the RFI findings are presented in Section 5.0 of this report, where the revised CSMs, in both table and diagram format, are also presented.

3.2 Data Needs and Data Quality Objectives

3.2.1 Data Needs

Data were needed to assess the nature and extent of MEC and MC caused by past military activities at the Anti-Aircraft Range 90-mm – 2 MRS and MC caused by past military activities at the Hero Road Trench Area MRS, and to determine if further response actions pursuant to RCRA and the MMRP process are warranted. Data obtained included DGM surveys; intrusive investigations to identify the location, types, and density of MEC; and environmental sampling to determine the distribution and concentrations of MC in soil, sediment, and surface water. These data were used to quantify risks to human health and the environment and to assess MEC hazards.

3.2.2 Data Quality Objectives

Data Quality Objectives (DQOs) are qualitative and quantitative statements that specify the quality and level of data required to support the decision-making processes for a project. The DQOs were developed in support of the project objectives discussed in Section 1.1.

DGM and intrusive investigations were performed at the Anti-Aircraft Range 90-mm – 2 MRS to identify the nature and extent of MEC contamination. At the Hero Road Trench Area MRS, DGM and intrusive investigations were conducted for the purpose of investigating potential dilute agent CAIS kit burial pits. Tables 3-1 and 3-2 present the overall DQOs for the DGM and intrusive investigations. Environmental sampling was the primary means to identify the nature and extent of MC contamination. Tables 3-3 and 3-4 present the DQOs for soil sampling activities. Limited sediment and surface water samples were added to the sampling activities at the Anti-Aircraft Range 90-mm – 2 MRS at the request of GAEPD at Technical Project Planning (TPP) Meeting #2 in order to ensure MC has not accumulated in the main drainage trench; based on these discussions a table presenting the DQOs for these media was not developed as part of the Work Plan. In addition, laboratory analytical DQOs for environmental sampling were presented in the Uniform Federal Policy Quality Assurance Project Plan (UFP-QAPP; Appendix E to the Work Plan). All DQOs were reviewed and accepted by the PDT prior to the commencement of RFI field activities; the DQO tables are presented exactly as they were in the Work Plan (ERT, 2012).

Table 3-1. DQO – DGM/Intrusive Investigation Anti-Aircraft Range 90-mm – 2 MRS

Data Quality Objective Element	Site-Specific DQO Statement
Project Objective(s) Satisfied	To characterize the nature and extent of MEC.
Data User Perspective(s)	To obtain data that satisfy compliance, risk, and if needed, corrective action requirements.
Contaminant or Characteristic of Interest	To determine the distribution and density of MEC.
Media of Interest	MEC in Soil
Required Sampling Locations or Areas and Depths	A. Perform DGM survey of MRS using EM61-MK2 integrated with robotic total station (RTS) or equivalent accuracy real-time kinematic (RTK) global positioning system (GPS). B. DGM survey coverage will be 5.56 acres via grid survey, determined through Visual Sample Plan (VSP) and UXO Estimator to be sufficient to determine 95% confidence that MEC density is less than or equal to 0.5 MEC item/acre. C. Hand excavation will be performed for each target identified above the target threshold. D. The results will be recorded via GPS and dig sheets.
Number of Samples Required	Each geophysical target identified above the target threshold will be intrusively investigated.
Reference Concentration of Interest or Other Performance Criteria	Determine density of MEC within the MRS.
Sampling Method	• DGM survey of 9.78 percent of the MRS, approximately 5.56 acres, using grids randomly placed by VSP. • Additional biased transects placed between bunkers, including approximately 13,630 linear feet of transects, based on request of GAEPD at TPP #1.
Analytical Method	EM61-MK2A

Table 3-2. DQO – DGM/Intrusive Investigation for the Hero Road Trench Area MRS	
Data Quality Objective Element	**Site-Specific DQO Statement**
Project Objective(s) Satisfied	To characterize the nature and extent of possible dilute agent CAIS kit burial/disposal pits.
Data User Perspective(s)	To obtain data that satisfy compliance, risk, and if needed, corrective action requirements.
Contaminant or Characteristic of Interest	To characterize the nature and extent of dilute agent CAIS kits and their degradation products within the MRS.
Media of Interest	Dilute agent CAIS kit burial/disposal pits in soil.
Required Sampling Locations or Areas and Depths	A. DGM survey of the MRS using the EM31 with RTS or Line & Fiducial navigation. B. Survey to be close to 100 percent coverage, with 15-foot lane spacing over the entire MRS. Based on discussions from TPP #2, the parking area on the southeastern boundary of the MRS will not be surveyed.
Number of Samples Required	A. Intrusively investigate potential burial sites with test pits/trenches based on historical photographs and DGM results. B. Determination of test pits/trenches location and number will be based on a discussion of the Test Pit Recommendation Memo (developed based on DGM results) with the PDT.
Reference Concentration of Interest or Other Performance Criteria	Determine presence/absence of any burial pits potentially containing dilute agent CAIS kits or related degradation products.
Sampling Method	Excavation of potential burial/disposal pit locations, each approximately 30 square feet in surface area.
Analytical Method	EM31

Table 3-3. DQO – Soil Sampling for the Anti-Aircraft Range 90-mm – 2 MRS

Data Quality Objective Element	Site-Specific DQO Statement
Project Objective(s) Satisfied	To characterize the nature and extent of MC contamination.
Data User Perspective(s)	To obtain data that satisfy compliance, risk, and if needed, corrective action requirements.
Contaminant or Characteristic of Interest	Analyze for metals (Al, Cu, Pb, and Zn) as identified in the MC Memo (Appendix H of the Work Plan) and explosives.
Media of Interest	Soil
Required Sampling Locations or Areas and Depths	A. Up to 10 biased soil samples will be collected in areas where there is visible evidence of energetic material, e.g., munitions items which are breeched. Biased soil samples will also be collected in areas of significant MD, where at least 50% of the munition could be identified by UXO Technicians, such that an assumption of MC in the vicinity could be tested by taking a sample. B. The depth for the biased soil samples will be just below the depth of the associated munition, or in the case of samples collected where there is visible evidence of energetic material in the top few inches of soil. C. Randomly placed discrete surface (0-12 inches) and subsurface (12-24 inches) soil samples will be taken at locations determined by VSP. Although the expectation is that no surface MEC or debris will be found at this MRS, past studies have shown levels of some metals (e.g., lead) at FTSW elevated above background levels; therefore, the surface soil must be investigated to support the risk assessment. D. Background surface soil samples collected from FTSW Solid Waste Management Units (SWMUs) used for development of existing background dataset. Availability of these SWMUs for sampling will be coordinated with FTSW personnel.
Number of Samples Required	A. Up to 10 biased samples based on (A. above). B. 10 random discrete surface samples (VSP determined). C. 10 random discrete subsurface samples (VSP determined). D. 10 background surface samples.
Reference Concentration of Interest or Other Performance Criteria	USEPA Regional Screening Levels (RSLs), FTSW SWMUs background dataset (for Pb values), and USEPA Ecological Benchmarks (See QAPP Worksheet #15 for more information).
Sampling Method	A. Obtain discrete, biased, and background soil samples using hand trowels. B. Obtain discrete random surface or subsurface soils using a hand auger or hand trowel, depending on depth.
Analytical Method	Metals analysis (exclusively Al, Cu, Pb, and Zn) by SW-846 Method 6020A/7471A and explosives analysis by SW-846 Method 8330B. For background dataset, Al, Cu, and Zn analysis by SW-846 Method 6020A/7471A as these are not part of the existing SWMU dataset (Pb is covered by the FTSW SMWU background dataset).

Table 3-4. DQO – Soil Sampling for the Hero Road Trench Area MRS	
Data Quality Objective Element	**Site-Specific DQO Statement**
Project Objective(s) Satisfied	To characterize the nature and extent of dilute agent CAIS kit degradation products.
Data User Perspective(s)	To obtain data that satisfy compliance, risk, and if needed, corrective action requirements.
Contaminant or Characteristic of Interest	Analyze for arsenic, 1,4- oxithiane, 1,4-dithiane, and thiodiglycol (degradation products from the dilute agent CAIS kits).
Media of Interest	Soil
Required Sampling Locations or Areas and Depths	A. Collect two biased soil samples from the side wall of each test pit/trench, one 0 to 12 inches bgs and a second sample from 1 foot to the bottom of the pit/trench. B. Biased subsurface soil samples will be collected from the soil horizon immediately above groundwater, and will be placed based on the distribution of DGM ground conductivity results and historical aerial photography. C. Randomly placed surface (0-12 inches) and subsurface (12-24 inches) soil samples will be taken at locations determined by VSP.
Number of Samples Required	A. Two biased soil samples collected from each test pit/trench, up to a total of 8 biased samples in test pits/trenches. B. 16 biased surface and subsurface soil samples placed based on distribution of DGM ground conductivity results and historical aerial photography. C. 10 random discrete surface samples (VSP determined). D. 10 random discrete subsurface samples (VSP determined)
Reference Concentration of Interest or Other Performance Criteria	USEPA Regional Screening Levels (RSLs), FTSW SWMUs background dataset, and USEPA Ecological Benchmarks (See QAPP Worksheet #15 for more information).
Sampling Method	A. Obtain discrete surface and subsurface soil samples from excavation trenches/pits using hand trowels. B. Obtain discrete biased and random surface and subsurface samples using a hand auger.
Analytical Method	Metals analysis (exclusively arsenic analysis) by SW-846 Method 6020A/7471A and organosulfur residues (1,4-dithiane, 1,4-oxathiane, and thiodiglycol) by SW-846 Method 8270D/8321.

4.0 CHARACTERIZATION OF MUNITIONS AND EXPLOSIVES OF CONCERN AND MUNITIONS CONSTITUENTS

This section describes the RFI field activities performed. All activities were performed in accordance with the accepted Work Plan (ERT, 2012).

4.1 Munitions and Explosives of Concern Characterization

4.1.1 General Approach

4.1.1.1 Equipment

Geophysical and navigational equipment used to identify locations for intrusive investigation are listed below. The excavator used in both areas of investigation is described briefly as well.

- Geonics EM61-MK2: This is a time-domain electromagnetic (TDEM) device consisting of a computer, data logger (Juniper Systems Allegro CX), and cart assembly that carries an upper and lower copper coil towed on wheels. This instrument measures the response of the immediate area to a primary pulsed electromagnetic (EM) field, generated in the lower copper coil. The EM61-MK2 is able to discriminate between surface and subsurface conductive materials more efficiently than most other metal detection devices. The device was integrated with the Real Time Kinematic (RTK) Global Positioning System (GPS) (described below) for navigation. See Appendix G, photographs 03, 07, 08, and 09 showing the EM61-MK2 in use.
- Geonics EM31: This is a frequency-domain electromagnetic (FDEM) device consisting of a computer, data logger (Juniper Systems Allegro CX), and the transmitter and receiver coils, which are carried by the operator. This instrument measures the response of the immediate area to an EM field, generated by the transmitter coil. The EM31 measures both the quadrature component (ground conductivity) in units of milliseimens/meter (mS/m) and in-phase component (metal detection) in units of parts per thousand (ppt). The device was planned to be integrated with a robotic total station (RTS) for navigation, but dense vegetation in the Hero Road Trench Area MRS prevented practical use of the RTS due to a line-of-sight requirement for operation. The instrument was operated in line and fiducial mode for navigation, where reference to surveyed stakes allowed geo-referencing of the survey data. See Appendix G, photographs 51, 52, 53, and 54 showing the EM31 in use.
- Schonstedt GA-52Cx: This magnetic locator is a hand-held gradiometer that detects the magnetic field of a ferromagnetic object. The instrument controls consist of an on/off sensitivity switch with four sensitivity settings and a volume control. It responds to the difference in the magnetic field between two sensors spaced about 0.51 m apart. The response is a change in the frequency of the signal emitted by the piezoelectric speaker. The instrument provides audio detection signals that peak in frequency when the locator's tip is held directly over the target. The locator can be oriented in any direction without producing a significant change in the frequency of the tone from its idling frequency. The GA-52Cx was used by qualified UXO personnel for instrument assisted surface clearance, anomaly avoidance, and for intrusive clearance. See Appendix G, photograph 02 showing the Schonstedt in use.

- Topcon RTK GPS: The HiPerGa model of Topcon RTK GPS was used at the Anti-Aircraft Range 90-mm – 2 MRS, and controlled with an Allegro CX field computer running Carlson SurvCE software. High-powered systems were used, transmitting at up to 35 watts. The base station was set up daily at points listed in the surveyor report (Appendix D). When integrated with the EM61-MK2, the rover was mounted on a tripod above the top coil. NMEA 0183 data sentences were transmitted from the rover to the Allegro; both GGA and GSA sentences were transmitted. See Appendix G, photograph 01, 03, 07, and 08 showing the RTK GPS in use. When used for target reacquisition, the rover was mounted above a survey pole.
- Compact excavator: An IHI Model 35N2 compact excavator was used to complete trenching operations in the Hero Road Trench Area MRS and to complete certain difficult excavations in the Anti-Aircraft Range 90-mm – 2 MRS. See Appendix G, photographs 15, 60, and 61 showing the excavator in use.

4.1.1.2 Geophysical Investigation Process

Anti-Aircraft Range 90-mm – 2 MRS

The geophysical investigation at this MRS consisted of a survey with the EM61-MK2 integrated with RTK GPS over 24 grids and along multiple transects. The rationale for quantity and location of the grid transects is briefly described below and presented in detail in Section 3.5.13 of the Work Plan (ERT, 2012).

UXO Estimator software (v2.2) was used to define a minimum area of investigation in the MRS under the assumption that 56.84 acres could be investigated, as agreed upon by the PDT at the TPP #1 meeting; minutes are presented in Appendix K. The software calculated the DGM survey acreage necessary to determine with a 95% confidence that there are 0.5 UXO items or less present per acre was 5.56 acres.

VSP software, developed by Pacific Northwest National Laboratory, was then used to randomly place survey grids of various sizes (in order to investigate narrow areas between the bunkers, road, and fence) to meet the coverage determined by UXO Estimator in the MRS. These grids and transects are shown in Appendix B-3. Grid sizes are summarized in Table 4-1.

Due to the presence of the fence within the MRS boundary and numerous closely-spaced munition storage bunkers in the MRS, additional DGM transects were placed at the request of GAEPD and are shown in Appendix B-3, with a total length of approximately 13,630 feet. These biased transects were placed in order to determine MEC distribution and density in these areas, should they differ from the rest of the MRS.

Hero Road Trench Area MRS

The geophysical investigation at this MRS consisted of a survey with the EM31 along parallel transects covering the entire MRS, with the purpose of identifying any potential burial or disposal pits where dilute agent CAIS kits may be present; this MRS was investigated for MC only as no historic or current evidence of MEC at this MRS exists. Ground conductivity anomalies were targeted for intrusive investigation by trenching or auger holes in conjunction with soil sampling for MC.

Brush clearance was a considerable effort at this MRS, with roughly 50% of the brush having to be cut. This was accomplished by a subcontractor, mainly by use of a brush hog. Brush was cleared along north-south oriented transects to allow passage of the EM31 operator.

Upon review of the first set of EM31 data collected, it was discovered that transects in the MRS had been laid out at a spacing of 20 feet rather than the 15 feet that was agreed upon in order to meet the DQO that appears in the Work Plan (ERT, 2012). Upon coordination with CENAB, it was determined that ERT needed to include additional transects to meet the DQO. This resulted in transects with 10-foot spacing throughout the MRS (Appendix B-4). This modification to the Work Plan was accepted by USACE following the *Transect Spacing at the Hero Road Trench Area* memorandum dated 14 June 2012 (Appendix K). Approximately 45,700 linear meters (28.4 miles) of EM31 data were collected in the MRS, covering approximately 139,350 square meters (34.4 acres).

Results of the EM31 investigation were reported in the subsequent *Final Hero Road Trench Area MRS Test Pit* memorandum to the PDT dated 27 July 2012 (Appendix K), including contour maps of quadrature and in-phase of anomalies as well as the recommended test pit/trench targets. Based on review and discussion of this memo, the number and location of the test pit/trenches as well as biased soil sampling locations (Figure 7, Appendix A) was agreed upon by the PDT prior to ERT commencing intrusive activities.

4.1.1.3 Intrusive Investigation Process

Anti-Aircraft Range 90-mm – 2 MRS

The targets mapped using the EM61-MK2 within grids and on transects were added to dig sheets (Appendix C-2). Once the dig sheets were reviewed and accepted by CENAB, coordinates were uploaded to the RTK GPS and flagged using non-metallic pin flags by field geophysicists. During the reacquisition process, the EM61-MK2 was used by field geophysicists to reacquire each anomaly and refine its location following procedures outlined in the Work Plan (ERT, 2012). New response values (in mV) and offset distances and directions were documented on the dig sheet for each anomaly. Occasionally, anomalies were merged or the signal could not be reacquired (i.e., 'no finds' potentially caused by an erroneous original signal that may have been the result of noise); these instances are documented on the dig sheets (Appendix C-2). One hundred percent of electromagnetic targets within grids and along transects were intrusively investigated.

UXO teams completed all excavations manually or by use of mini-excavator and documented the findings on dig sheets (Appendix C-2). Depth to contact, contact type, and other notes were also included on the dig sheet. The UXO team excavated until the anomaly was encountered. MEC/MPPEH was handled in accordance with installation guidance and followed procedures described in the Work Plan (ERT, 2012). Due to the potential safety hazard, the FTSW EOD Team was called to inspect and remove any MEC items (as documented in Appendix C-5). MD was removed and stored in a secure location on-site until the appropriate inspection was completed, per the Explosives Site Plan (ESP), and items were reclassified as material documented as safe (MDAS). Cultural debris was also removed. MDAS was brought to ERT for recycling and scrap metal was disposed of off-site.

Hero Road Trench Area MRS

This MRS was investigated for MC only as no historic or current evidence of MEC at this MRS exists. The excavator was used to excavate 5 trenches at anomaly locations representative of possible burial areas as described in the *Final Hero Road Trench Area MRS Test Pit* memorandum dated 27 July 2012 (Appendix K). The trenches were approximately 30 square feet in area and depths ranged from 4 feet to 6 feet. Soil samples were collected in each trench

as described in Section 4.2.1 and the Trench Report included in Appendix L. Additional single anomaly locations in this MRS were investigated by hand augering and soil sampling as described in Section 4.2.1, per the 27 July 2012 accepted *Final Hero Road Trench Area MRS Test Pit* memorandum (Appendix K).

4.1.2 Geophysical Quality Control

4.1.2.1 Instrument Verification Strip

As part of the Geophysical System Verification (GSV) procedure, an instrument verification strip (IVS) was installed according to the accepted Work Plan (ERT, 2012) in the southeast corner of the Anti-Aircraft Range 90-mm – 2 MRS, outside of the fenced ASP (Figure 3, Appendix A). The IVS consisted of a row of five industry standard objects (ISOs), which are metal pipes, buried in a straight line. The IVS was constructed prior to data collection, as documented in the *Instrument Verification Strip at Fort Stewart, GA* memorandum to USACE dated 29 June 2012 (Appendix K), which includes the proposed and accepted final designs of the IVS.

The EM61-MK2 was used to survey the IVS at the beginning and end of each day to document dynamic repeatability of the data. One pass was made over the ISOs to confirm sensor operation and one pass was made to confirm that the site noise had not changed. If the sensor performance and system noise were within specifications before and after each day of surveying, it was reasonable to expect that the system was performing within acceptable bounds throughout the day. If the sensor performance was within performance criteria in the morning and not in the evening, the data were examined to determine if any of it was usable. No major data quality issues were identified during the project with respect to the IVS. IVS results are presented in Appendix B-2.

4.1.2.2 Daily Quality Control Tests

For both the EM31 and EM61-MK2, a static background test was performed to quantify instrument background readings or electronic drift and to locate potential interference spikes in the time domain. A minimum of 3 minutes of static background data was collected after instrument warm up. The instrument operator monitored readings to confirm stability.

A vibration test, also known as a cable shake test, was used to identify shorting cables and problematic connectors. All cables were shaken for one minute with the instrument held in a static position. When shorts were found, the associated cables and/or connectors were tightened or replaced immediately. The vibration test was repeated once repairs were complete. Acceptance criteria included an absence of data spikes in the data profile during the test. If data spikes persisted, troubleshooting procedures were initiated.

A static standard response test was performed to determine impulse response and repeatability of the instrument to a standard test item. A minimum of three minutes of static standard response (spike) data was collected after the vibration test. For the EM31, the instrument was held in place over a manhole located near the Hero Road Trench Area MRS. For the EM61-MK2, a 12-inch long, 0.5-inch diameter piece of rebar was used. The instrument operator monitored readings to confirm stability. The acceptance criterion was ±20% of responses for the static spike test between pre-survey and post-survey tests.

All quality control tests for the EM31 are presented in Appendix B-1, and all quality control tests for the EM61-MK2 are presented in Appendix B-2.

4.1.2.3 Blind Seeding Program

A blind seed program was implemented in the production survey areas for the Anti-Aircraft Range 90-mm – 2 MRS to verify that the DQOs concerning geolocation, sensor performance, anomaly selection, and anomaly resolution requirements were met. The "seeds" used were small ISOs, or metal pipes, buried in the grids and along transects at locations unknown to geophysicists collecting or processing data. Due to the limits of the EM31 ability to detect small items, no blind seeds were placed in the Hero Road Trench Area MRS.

Blind seed items were placed by a UXO Tech at the time of civil survey and transect layout. One blind seed item was placed in each of the 24 survey grids and one was placed along a transect. The ISOs were buried in a vertical orientation at a depth of less than 6 inches. Locations were documented by licensed surveyors and are presented in Appendix B-3.

The surveyed locations were provided to the ERT Project Geophysicist (not to the Field Geophysicists) and the Senior Geophysicist after completion of data processing and target selection. All blind seeds detected are shown on target lists in the dig sheets in Appendix C-2. The seed locations were also submitted to the USACE Geophysicist for review.

4.1.2.4 Repeatability

To determine positional and data repeatability in the Anti-Aircraft Range 90-mm – 2 MRS, one line 100-ft long per grid was repeated after a survey. The repeat line was walked in the same direction of travel as the original line. Errors in position repeatability outside acceptable tolerances indicated a problem in navigation by the operator or in the navigation equipment. Errors in amplitude repeatability outside acceptable tolerances indicated detector system problems or operator errors. Acceptance criteria for data repeatability include ±20% for response amplitude and ±20 cm for positional accuracy. All grids were acceptable. Furthermore, operating the instrument on the IVS daily confirmed the dynamic repeatability of the data.

To determine positional and data repeatability in the Hero Road Trench Area MRS, two repeat lines were collected on the final day of the survey over a distance of approximately 850 meters, and there was no significant difference between original and repeat data, as shown in Appendix B-1.

4.1.2.5 Navigational Accuracy

The RTK GPS was used to collect DGM data and to reacquire anomalies at the Anti-Aircraft Range 90-mm – 2 MRS. The base station was set up on monuments or survey nails daily with coordinates provided by a licensed surveyor, and the rover was always checked on a nearby point to ensure the coordinates were correct and that the signal was "fixed" at the highest accuracy. Geophysical technicians monitored the GPS state on the Allegro console during data collection, and paused or stopped work if the signal deviated from fix.

As an additional navigational check in the grids, a "QC Spike" was utilized, where a small ISO or rebar was placed at a grid corner (with known coordinates), and the location was provided to the data processor to ensure the anomaly was detected at the correct location.

In the Hero Road Trench Area MRS, handheld GPS units of sub-meter accuracy were used to navigate along transects for the purpose of brush clearance.

The horizontal accuracy of the EM31 data in the Hero Road Trench Area MRS is constrained by the positions of stakes placed by licensed surveyors at end points and along transects. Additionally, flags were placed every 20 meters between surveyed stakes. Fiducial marks were placed in EM31 data files when the instrument passed over the stakes or flags, and the data were normalized between the fiducial marks; the use of the line and fiducial method of navigation meets the DQO requirement from the Work Plan (ERT, 2012).

4.1.3 Geophysical Data Analysis

4.1.3.1 Processing and Target Selection

EM61-MK2 and EM31 data were transferred from the data loggers via data card. Data was reviewed and converted from R61/R31 format to M61/M31 format using Dat61 and Dat31 software, respectively. Data were integrated with the positioning data and converted to Geosoft .xyz format and transferred to the Senior Geophysicist for QC review, data analysis, and target selection.

Data were downloaded and reviewed for completeness and accuracy at the end of each survey day by the Field Geophysicist, then electronically transferred to the Senior Geophysicist for additional review and processing utilizing Geosoft Oasis Montaj with UX Detect, as follows:

- Latency corrections were performed based on instrument latency;
- Data were reviewed for precision, accuracy, response, completeness, and sensitivity. Line paths were plotted to evaluate across-track sampling in grids. A velocity map was generated to locate any areas where collection speed was above 3 miles per hour;
- EM61-MK2 data were gridded using the minimum curvature algorithm with a cell size of 0.5 feet;
- A series of color maps were produced from the gridded data; and
- Line paths were posted over the mapped data, and reviewed for coverage completeness.

At the Anti-Aircraft Range 90-mm – 2 MRS, individual targets were selected for subsequent intrusive investigation in grids and along transects. Based on IVS results (documented in the *Instrument Verification Strip at Fort Stewart, GA* memorandum dated 29 June 2012, Appendix K), a target threshold of 5 mV on Channel 2 was determined for optimum target detectability. All anomalies exceeding this threshold were isolated for analysis using the Blakely peak picking algorithm in the Oasis Montaj UX-Detect extension. Each automatically selected target was manually reviewed. Any targets displaying abnormal decay or association with cultural features were deselected, but were maintained in the target database. All other targets were identified on a dig sheet along with characteristics of the target to be used during re-acquisition and intrusive investigation. Dig sheets are presented in Appendix C-2.

One hundred percent of target anomalies were intrusively investigated following acceptance of the dig sheets by CENAB.

At the Hero Road Trench Area MRS, M31 files were further processed in DAT31 after conversion from R31 format. First, fiducial corrections were applied to normalize the position

data along the survey transects using local coordinates (raw distances in meters). Second, the data collected in a given day was transformed from local coordinates to Universal Transverse Mercator Zone 17N coordinates based on known survey stake locations. Finally, all data collected over the survey period were compiled into a master data file (.xyz format) to be uploaded to a Geosoft Oasis Montaj database. In Oasis Montaj, the following steps were performed:

- EM31 data were gridded using the minimum curvature algorithm with a cell size of 3.75 feet;
- A series of color maps were produced from the gridded data; and
- Line paths were posted over the mapped data, and reviewed for coverage completeness.

A contour map of the geophysical responses was generated, and recommendations were made for the test pit/trench locations at the Hero Road Trench Area MRS, as documented in the *Final Hero Road Trench Area Test Pit* memorandum dated 27 July 2012 (Appendix K).

For quality control and interim reporting of the DGM data, DID MMRP-04-009 was followed, and the following file formats were provided to USACE for each transect group and each grid: .xyz, .gdb, .target-gdb, .map, and .grd.

4.1.3.2 Grids and Transects, Anti-Aircraft Range 90-mm – 2 MRS

All grid corners and transect end points (for long transects only) were staked out by licensed surveyors. Grid corner and transect endpoint coordinates are presented in Appendix D.

Twenty-four grids were placed randomly using VSP and adjusted to fit between obstacles such as fences and paved areas. A few grids were moved from their proposed locations on account of obstructions and the presence of standing water in drainage ditches. The number of targets and dimensions within each grid are summarized in Table 4-1.

Table 4-1. Grids in Anti-Aircraft Range 90-mm – 2 MRS		
Grid	**Dimensions (m x m)**	**Number of Targets**
G01	10 x 100	78
G02	10 x 100	57
G03	10 x 100	29
G04	10 x 100	109
G05	10 x 100	42
G06	10 x 100	29
G07	10 x 100	27
G08	10 x 100	54
G09	10 x 100	48
G10	30 x 30	13
G11	30 x 30	12
G12	30 x 30	15
G13	30 x 30	16
G14	30 x 30	19
G15	30 x 30	19
G16	30 x 30	18
G17	30 x 30	10
G18	30 x 30	27
G19	30 x 30	13
G20	30 x 30	29
G21	30 x 30	16
G22	30 x 30	23
G23	30 x 30	26
G24	30 x 30	89
	Total	**818**

A total of 6 long, north-south oriented transects and a total of 39 short east-west oriented transects were collected between the 40 munition storage bunkers of the ASP. These were submitted to USACE in three groups for review, and targets were numbered starting at 1 in each group. For this report, an "A," "B," or "C" has been added to the target numbers for each group on the dig sheets to make them unique yet preserve the original field designation (Appendix C-2). The total number of targets on the transects was 376, and all were intrusively investigated.

4.1.3.3 Analysis of EM31 data, Hero Road Trench Area MRS

Anomalies were manually digitized from the EM31 conductivity map. The absolute value of the conductivity readings was used to identify a list of preliminary targets for investigation of potential dilute agent CAIS kit burial pits. Targets with the highest readings that fell within

areas of known ground scars (from 1957 air photo) were recommended as trenching locations, and other targets were recommended as biased soil sampling locations. The accepted trench and soil sample locations are presented in the *Final Hero Road Trench Area Test Pit* memorandum dated 27 July 2012 (Appendix K).

4.2 Munitions Constituents Characterization

The MC Sampling Rationale Memo (Appendix H of the Work Plan) details associated MC and munitions found or expected to be found at each MRS. Based on this memo, samples from the Anti-Aircraft Range 90-mm – 2 MRS were analyzed for aluminum, copper, lead, zinc, and explosives. The Hero Road Trench Area MRS samples were analyzed for the degradation products associated with the dilute agent CAIS kits, which include arsenic, 1,4-oxithiane, 1,4-dithiane, and thiodiglycol. Worksheet #12 of the accepted MC QAPP (ERT, 2012) contains additional detail about the analytical parameters and procedures for the RFI sampling. In addition, ERT standard operating procedures addressing these sampling activities are contained as Attachments to the MC QAPP (ERT, 2012).

Field activities were performed in accordance with the accepted Work Plan (ERT, 2012). Slight deviations from the Work Plan (ERT, 2012) that occurred based on field conditions are documented in the applicable sections of this RFI Report. A USACE representative provided oversight during all sampling activities. Soil sampling was a mixture of random and biased discrete surface and subsurface samples. Biased sampling and trench locations for the Hero Road Trench Area MRS were accepted by the PDT and detailed in the *Final Hero Road Trench Area Test Pit* memorandum dated 27 July 2012 (Appendix K).

The number and types of samples collected during RFI field activities are summarized in Table 4-2. Soil, sediment, and surface water sampling results are summarized in Section 5.3 and presented in Appendix E.

4.2.1 Anti-Aircraft Range 90-mm – 2 MRS

Twenty soil samples and two duplicate samples were collected in the Anti-Aircraft Range 90-mm – 2 MRS at 10 locations randomly chosen by VSP (Figure 8, Appendix A). At each location, one sample was collected at the surface 0 to 12 inches bgs and a subsurface sample was collected from 12 to 24 inches bgs. Surface and subsurface soil samples collected from the Anti-Aircraft Range 90-mm – 2 MRS were analyzed for select metals and explosives.

The random co-located surface and subsurface soil samples FTSW-AA-SO-19 and FTSW-AA-SO-20 were relocated approximately 30 feet southeast of the original location because it was determined during field activities that VSP had placed this sample location on an asphalt road. Biased soil samples were not collected at the Anti-Aircraft Range 90-mm – 2 MRS as there was no visible evidence of energetic material, e.g., breeched munitions items or large areas of MD.

Collection of the surface and subsurface soil samples occurred after clearing the sampling location of grass and other organic material; a disposable scoop was used to collect each surface soil sample and subsurface soil samples were collected via soil auger. Decontamination of the soil auger was conducted after each subsurface soil sample collection per the accepted Work Plan. Each scoop used for collection of the surface sample and set of gloves was disposed of after each surface sample was taken. Investigative derived waste (IDW) was contained within a lidded bucket until the end of the day when it was placed inside of a 10-gallon steel drum; due to

the limited amount of IDW generated, the use of a 55-gallon drum, as stated in the Work Plan (ERT, 2012), was not necessary. The IDW was sampled for Toxicity Characteristic Leaching Procedure (TCLP) disposal characterization as described in Section 5.3.3.

For a few of the sampling locations within the Anti-Aircraft Range 90-mm – 2 MRS, a pick was used to loosen either gravel or dense clay between where the surface and subsurface samples were collected. When using the pick, any loose soil was removed from the subsurface sampling location using a disposable clean scoop prior to inserting the decontaminated hand auger into the hole to collect the actual sample. Therefore, there was no cross-contamination concern associated with the use of the pick to help access the sampling locations.

Due to the compact, hard nature of the soil, a decontaminated knife was also used to break up the surface roots in order to access some of the surface sampling locations. Any soil that came into contact with the knife was removed from the sampling location using a disposable scoop prior to inserting the decontaminated hand auger into the hole to collect the actual sample. Therefore, there was no cross-contamination concern associated with the use of the knife to help access the sampling locations.

4.2.2 Hero Road Trench Area MRS

Thirty-two biased soil samples, and three duplicate samples, were collected at 16 locations where the DGM ground conductivity results showed that there may be disturbed soil; these samples were in locations that were not selected for the large test trenches. Twenty soil samples and two duplicate samples were collected at 10 locations randomly chosen by VSP. At each random soil sampling location, one soil sample was collected at the surface 0 to 12 inches bgs and a subsurface sample was collected from 12 to 24 inches bgs. At each biased soil sampling location, one sample was collected at the surface 0 to 12 inches bgs and a subsurface sample was collected from 7.5 to 10 feet bgs, per the rationale provided in the *Final Hero Road Test Pit* memorandum, dated 27 July 2012 (Appendix K). Random and biased soil sampling locations are presented in Figure 9 of Appendix A.

The area of each soil sampling location was first cleared of brush and other surface organic material to reach the surface of the soil. Sampling and decontamination procedures at the random and biased sampling locations within the Hero Road Trench Area MRS were conducted as described in Section 4.2.1. Random and biased surface soil samples were collected using a disposable scoop while the subsurface soil samples were collected via hand auger. Due to the nature of the subsurface (clay soil that was difficult to auger through) within the Hero Road Trench Area MRS, rather than hand auger to the bottom depth for some of the subsurface samples, an excavator was used to get access to the subsurface sampling location. When this occurred, the excavator was used to excavate subsurface material after collection of the surface sample and the GPS unit was utilized to reacquire the subsurface sampling location so that the surface and subsurface samples were still co-located. No soil cross-contamination was introduced by utilizing the excavator as a 1 foot soil buffer was utilized between the depth excavated with the excavator and the top of the subsurface sample. For example, if the subsurface sample was collected between 7 and 8 ft bgs, the use of the excavator was stopped at 6 ft bgs and the sampler switched back to utilizing the decontaminated hand auger to remove and discard the soil from 6 to 7 ft bgs and then collect the actual subsurface sample per the Work Plan.

Random and biased surface and subsurface soil samples were analyzed for select metals and degradation products associated with the dilute agent CAIS kits, as described in the MC Sampling Rationale Memo in Appendix H of the accepted Work Plan (ERT, 2012). Ten soil samples, two from each trench (one surface and one subsurface) and one duplicate sample were collected within the five trenches as described in the Trench Report presented in Appendix L. Surface and subsurface soil samples collected from the trenches were also analyzed for the degradation products associated with the dilute agent CAIS kits. Locations of the five trenches are presented in Figure 10 of Appendix A.

4.2.3 Background

As the existing FTSW SWMU background dataset does not include data for aluminum, copper and zinc, ten background surface soil samples and one duplicate sample were collected within a subset of the same SWMUs sampled during the development of the background dataset. Background samples were collected during RFI field activities from six locations previously used to develop the background dataset; determination of these sample locations was coordinated with FTSW personnel. Due to the inaccessibility of many of the previous SWMU background sample locations, two surface soil samples were taken within the same SWMU at some of the locations in order to provide a total of 10 background samples and satisfy the DQO for soil sampling (Table 3-3) for the Anti-Aircraft Range 90-mm – 2 MRS. Sampling and decontamination procedures were conducted for background sampling as described in Section 4.2.1. Background sampling locations are presented in Figure 11 of Appendix A.

4.2.4 Sediment and Surface Water Samples

At the request of GAEPD, two sediment samples and one duplicate sample were collected at the north and south ends of the drainage ditch located within the Anti-Aircraft Range 90-mm – 2 MRS (Figure 8, Appendix A).

The sediment samples were discrete samples collected 0 to 12 inches bgs. The samples were collected using a hand auger, which closely resembles a tube sampler. The auger was placed on top of the sediment and then turned to advance the auger into the sediment to a depth of 12 inches bgs. While being advanced, the sediment was pushed up into the collection area of the augur. After removal of the auger from the hole made by the auger, the sample collector filled the appropriately labeled 8-ounce amber glass jars for explosives analysis and 4-ounce amber glass jar for metals analysis, and properly preserved for transport to the analytical laboratory.

Approximately 8 inches of standing water was present at the north end of the drainage ditch where a sediment sample was collected; a surface water sample was also collected at this location prior to sediment sample collection. The standing water was sampled by submerging two 1-liter amber glass bottles beneath the surface of the water. A 250-milliliter plastic bottle containing preservative was filled from one of the 1-liter bottles for metals analysis. Surface water samples were appropriately labeled and properly preserved for transport to the analytical laboratory.

Sediment and surface water sampling locations are presented in Figure 8 of Appendix A.

Table 4-2. MC Sampling Summary					
Sample Location/Type	**Soil**		**Sediment**	**Surface Water**	**Total**
	Surface	**Subsurface**			
Anti-Aircraft Range 90-mm – 2					
Random	10	10	-	-	20
Biased	-	-	2	1	3
MRS TOTAL	**10**	**10**	**2**	**1**	**23**
Hero Road Trench Area					
Random	10	10	-	-	20
Biased	16	16	-	-	32
Trench	5	5	-	-	10
MRS TOTAL	**31**	**31**	-	-	**62**
Background (Biased)	10	-	-	-	10
Duplicates	6	4	0	-	10
TOTAL Samples by Media	**57**	**45**	**2**	**1**	**105**

5.0 INVESTIGATION RESULTS AND REVISED CONCEPTUAL SITE MODEL

5.1 Intrusive Investigation Findings

5.1.1 Anti-Aircraft Range 90-mm – 2 MRS

A total of 1,199 targets were excavated in 24 grids and on approximately 13,630 feet of transects in the Anti-Aircraft Range 90-mm – 2 MRS. Three items considered to be MEC were found in the subsurface. These were all 40-mm rounds, and were disposed of by FTSW EOD (Appendix C-5). These results are presented in Table 5-1.

MD was abundant in most grids and along the transects. Common items were .50 caliber bullets, shipping rings and plugs, and fragments. Nearly-intact rounds that were MDAS included two 90-mm Armor Piercing (AP) rounds, and one fired 37-mm round.

Table 5-1. Intrusive Results in Anti-Aircraft Range 90-mm – 2 MRS

Grid	Targets	# MEC found	MEC summary	Notable MD
G01	78	0		
G02	57	0		
G03	29	0		
G04	113	0		
G05	45	0		
G06	29	0		
G07	27	0		
G08	54	0		
G09	49	0		90-mm AP round
G10	13	0		
G11	12	0		
G12	15	0		
G13	16	0		
G14	19	0		
G15	19	0		
G16	17	0		
G17	10	0		
G18	27	1	40 mm round, fired	
G19	11	1	40 mm round, fired	
G20	29	0		
G21	16	1	40 mm round, fired	
G22	23	0		37-mm AP round, fired
G23	26	0		
G24	89	0		
Transects	376	0		90-mm AP round
Total Targets Investigated	**1,199**	**3**		

The locations of MEC and notable MD items are shown in Figure 12 of Appendix A. MEC and MD are also highlighted in the dig sheets shown in Appendix C-2. Photos of MEC items are presented in Appendix C-3.

5.1.2 Hero Road Trench Area MRS

Sixteen biased, single anomaly locations in the Hero Road Trench Area MRS were investigated by hand auguring and soil sampling as described in Section 4.2.1, per the accepted *Final Hero Road Trench Area Test Pit* memorandum dated 27 July 2012 (Appendix K). Five trenches were excavated at the MRS to investigate geophysical anomalies as discussed in Section 4.1.3.3 and described in the Trench Report (Appendix L). The items found at the biased soil sampling locations and within the trenches are summarized in Table 5-2 and presented in Figure 7 of Appendix A; photographs of several items are also presented in the Trench Report (Appendix L). The locations of the excavated trenches are shown in Figure 10 of Appendix A.

Table 5-2. Intrusive Results in Hero Road Trench Area MRS

Location	Item Found
Biased 1	Misc. metal scrap
Biased 2	Loose metal scrap
Biased 3	Pile of lumber, glass, and metal
Biased 4	Misc. metal scrap
Biased 5	Misc. metal scrap
Biased 6	Misc. metal scrap
Biased 7	Metal pins and scrap wire
Biased 8	Misc. metal scrap
Biased 9	Adjacent to metal structure
Biased 10	Buried metal plate
Biased 11	Misc. metal scrap
Biased 12	Rusted metal chair
Biased 13	Misc. metal scrap
Biased 14	Misc. metal scrap
Biased 15	Misc. metal scrap
Biased 16	Misc. metal scrap
Trench 1	Metal cable, metal drum, and drum remnants
Trench 2	Steel drums and construction debris
Trench 3	Steel drum and barbed wire
Trench 4	Metal scrap, glass bottles
Trench 5	Wire fence adjacent

5.2 Analysis of Intrusive Findings

5.2.1 Overview

In the Anti-Aircraft Range 90-mm – 2 MRS, UXO Estimator (v2.2) was used to evaluate the actual findings in the grids to determine an estimate of the density of MEC within the MRS. The area of the MRS (excluding paved areas), the DGM coverage, the UXO density hypothesis of 0.5 UXO/acre, the desired confidence of 95%, and the actual number of MEC items found were entered. The software outputs an "average UXO density," which is independent of desired confidence. It also outputs two numbers inversely related by confidence and the hypothesis. First, the UXO density (MEC/acre) is displayed at the 95% confidence; this number is always higher than the average UXO density and may be considered a likely upper limit to the density of MEC in the MRS. Second, the confidence that the UXO density is less than the hypothesis of 0.5 UXO/acre is displayed; this number is always lower than 95% when the UXO density is above 0.5 UXO/acre.

UXO Estimator was not used to evaluate the Hero Road Trench Area MRS because this MRS was investigated for MC only. Analyses of MC results are discussed in Section 5.3.

5.2.2 Anti-Aircraft Range 90-mm – 2

The area of the Anti-Aircraft Range 90-mm – 2 MRS is 56.84 acres, excluding paved areas, buildings, and the munition storage bunkers. The area covered by DGM in the grids and on the transects was 7.102 acres, which is greater than the coverage identified in the DQO (Table 3-1). Based on finding three MEC items, UXO Estimator outputs that the average UXO density is 0.546, the UXO density at 95% confidence is 1.038, and the confidence that the UXO density is below 0.5 MEC/acre is 51.03%. Based on this statistical analysis, up to approximately 59 MEC items (56.84 acres x 1.038 MEC/acre) may be present in the subsurface of this MRS, and intrusive findings indicate that most would be 40-mm rounds with possible 37-mm and 90-mm rounds. Per the Department of Defense Explosive Safety Manual (DoD, 2010), a "moderate to high" probability for encountering MEC determination can be made if a search of available historical records and onsite investigation data indicates that, given the military or munitions-related activities that occurred at the site, there is more than a low probability that MEC are present. Per the DoD guidance and results of this RFI, the probability of encountering MEC in the Anti-Aircraft Range 90-mm – 2 MRS is therefore deemed to be "moderate to high."

As stated in Section 4.1.1.2, the transects placed to investigate the area around the ammunition storage magazines were added at the request of GAEPD. No MEC was discovered along these transects, but MD items found included a 90-mm AP round, and .50 caliber rounds, cartridges, and fragments.

5.2.3 Hero Road Trench Area

Based on the DGM results and the trenching conducted at the areas that appeared most likely to be burial pits, there is no physical evidence that dilute agent CAIS kits were improperly buried at the Hero Road Trench Area MRS. Only metallic scrap and other debris were found in the trenches or soil sample locations investigated in this MRS.

5.3 Munitions Constituents

Environmental sampling of soil, surface water, and sediment for MC was completed as described in Sections 3.2 and 4.2. The data summary tables for all samples are presented in Appendix E-1. A formal screening of the data to identify chemicals of potential concern (COPCs) is presented in Section 6.0. Figure 13 and 14 in Appendix A show the soil sampling results that exceed the screening levels by location.

5.3.1 Soil Samples

A total of 101 soil samples and duplicates were collected at the Anti-Aircraft Range 90-mm – 2 and Hero Road Trench Area MRSs. Of the 101 soil samples, 22 random samples (10 surface, 10 subsurface, and 2 duplicates) were collected at the Anti-Aircraft Range 90-mm – 2 MRS, 68 samples (16 biased surface, 16 biased subsurface, 10 random surface, 10 random subsurface, 5 surface trench, 5 subsurface trench, and 6 duplicates) were collected at the Hero Road Trench Area MRS, and 11 background samples (10 surface and 1 duplicate) were collected around FTSW. The number and sample type are summarized in Table 4.2.

At the Anti-Aircraft Range 90-mm – 2 MRS the 20 soil samples and two duplicate samples were analyzed for select metals and explosives.

At the Hero Road Trench Area MRS the 68 soil samples were analyzed for degradation products associated with the dilute agent CAIS kits, which includes arsenic, 1,4-oxithiane, 1,4-dithiane, and thiodiglycol.

Ten background samples collected from six sites previously used to develop the background dataset (SAIC, 1999) were analyzed for select metals only; Section 6.2.1 details how the background dataset was established.

No explosives compounds or degradation products were found above the detection limit in any of the surface or subsurface soil samples. Arsenic was detected in 22 soil samples (17 surface, 5 subsurface) in the Hero Road Trench Area MRS. It is noted that the arsenic detections are "J" qualified, indicating an estimated value, and because the reporting limits (0.92-1.2 mg/kg) are greater than the residential RSL (0.67 mg/kg), this adds some uncertainty to the analysis. However, since the reported concentrations of arsenic are less than background for both surface and subsurface soils, it is not considered to be site-related and is not carried through the risk assessments.

Arsenic was also detected at levels exceeding the Soil-Groundwater screening level, which could indicate a potential impact to groundwater. However, since the detected soil concentrations did not exceed the established background level for arsenic (2.1 mg/kg) at Fort Stewart, and, as noted in Section 6.2.1.3, the Soil-Groundwater screening levels are very conservative, it is unlikely that these concentrations in soil would lead to unacceptable levels of arsenic in groundwater. Select metals analysis for the Anti-Aircraft Range 90-mm – 2 MRS and background samples included aluminum, copper, lead, and zinc. Each of these metals was detected in the Anti-Aircraft Range 90-mm – 2 MRS surface and subsurface soil samples and background samples.

As discussed in greater detail in Section 6.0, aluminum was detected in 8 soil samples (2 surface, 6 subsurface) from the Anti-Aircraft Range 90-mm – 2 MRS and 2 background samples at levels above the residential screening level, but below the industrial screening level. Aluminum was

detected in 5 samples (1 surface, 4 subsurface) from the Anti-Aircraft Range 90-mm – 2 MRS at levels greater than background. Aluminum was also detected at the Anti-Aircraft Range 90-mm at concentrations exceeding the Soil-Groundwater screening levels, indicating a potential impact to groundwater. However, since aluminum is an essential element, and is below the industrial screening level, it is unlikely to be associated with any potential health risks. Copper, lead, and zinc were detected below the residential and industrial screening levels in the Anti-Aircraft Range 90-mm – 2 MRS. Copper was detected in 3 samples (2 surface, 1 subsurface) from the Anti-Aircraft Range 90-mm – 2 MRS at levels above background.

5.3.2 Surface Water and Sediment Samples

Two sediment samples and one duplicate sample were collected in the Aircraft Range 90-mm – 2 MRS. The sediment samples were collected from the north and south ends of the drainage ditch within the Aircraft Range 90-mm – 2 MRS (Figure 8, Appendix A). A co-located surface water sample was also taken at the north end of the drainage ditch; the south end of the drainage ditch did not contain water. Sediment and surface water samples were analyzed for select metals and explosives.

No explosives were detected in the sediment or surface water samples. All select metals were detected in the sediment samples, but at concentrations below both risk-based and ecological screening levels. All select metals were detected in the surface water sample, but only aluminum was detected at a one concentration greater than its ecologically-based freshwater criterion.

5.3.3 IDW Investigation Results

The containerized decontamination water was sampled for Toxicity Characteristic Leaching Procedure (TCLP) disposal characterization, including:

- Volatile organic compounds (VOCs) by SW-846 Method 8260B/1311
- Semi-volatile organic compounds (SVOCs) by SW-846 Method 8270D/1311
- Pesticides by SW-846 Method days to analysis 8081B/3510/1311
- Herbicides by SW-846 Method 8151A/3510/1311
- Metals by SW-846 Method 6010C/3015/7470A/1311

There were no detections for VOCs, SVOCs, pesticides, and herbicides. There were four detections for metals, specifically arsenic, barium, chromium, and lead. Levels for all four metals were significantly below the maximum contaminant concentration (MCC) for each, which are the TCLP limits. Results of the IDW analysis are included in Appendix E-3. The IDW was disposed of by Bear Environmental Services.

5.4 Data Quality Assessment

The data quality assessment (DQA) describes the evaluation of data quality indicators (DQIs) that were used to assess the overall quality of the analytical data collected for this RFI. The DQIs are assessed with respect to the DQOs. Project DQOs (provided in Section 3.2.2) establish the data end uses and end users and provide objective criteria by which the data quality can be measured. More importantly, the DQO process identifies the up-front protocols, processes, procedures, and methods by which the DQOs can be met. With the appropriate planning for

project DQOs, their achievement provides the basis for concluding that the acquired investigation data is scientifically sound, legally defensible, and adequate for their intended use.

The specific DQOs for precision, accuracy, representativeness, comparability, completeness, and sensitivity (PARCCS) were established in the project-planning phase. DQOs may be qualitative statements, while others set quantitative criteria or goals. Both are evaluated in the DQA (Appendix E-3).

5.4.1 Data Evaluation

Environmental samples were collected and analytical data were evaluated to support technical conclusions and recommendations. These data (i.e., concentration values and laboratory qualifiers) were incorporated into one database. Following an initial review to ensure that all Level IV Contract Laboratory Program (CLP) elements were received from the laboratory, hard copy data packages were submitted to the data validator for validation. The applied data validation qualifiers were incorporated into the database once the data validation reports (DVRs) were received and reviewed.

5.4.2 Environmental Analytical Laboratory

Environmental and field quality control (QC) samples were analyzed by ALS Laboratory Group (ALS) of Middletown, Pennsylvania and Salt Lake City, Utah; ALS, Middletown was the lead laboratory. ALS is accredited in accordance with the *National Environmental Laboratory Accreditation Conference*, and certified to perform the specified methods by the National Environmental Laboratory Accreditation Program and the DoD *Environmental Laboratory Accreditation Program*, in compliance with the DoD Quality System Manual (DoD, 2010b). The laboratory analyzed all environmental samples (i.e., soil, sediment, and surface water) and field QC samples (i.e., equipment rinsate blanks, field duplicates, matrix spikes, and matrix spike duplicates) using accepted laboratory standard operating procedures based on the *SW-846 Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (USEPA, 2007). Laboratory analyses were conducted using the QC requirements and quality assurance (QA) objectives as outlined in the accepted UFP-QAPP (ERT, 2012). Soil, sediment, and surface water samples collected from the Anti-Aircraft Range 90-mm – 2 MRS were analyzed for select metals (aluminum, copper, lead, and zinc) and explosives; soil samples collected from the background area were analyzed for select metals only; and soil samples collected from the Hero Road Trench Area MRS were analyzed for arsenic, 1,4-oxithiane, 1,4-dithiane, and thiodiglycol. CLP Level IV data packages and accompanying electronic data deliverables are presented in Appendix E-2.

5.4.3 Analytical Data Validation

Analytical data were independently validated for laboratory adherence to method QA/QC criteria by Meridian Consultant Group, Inc. (MCGI) of Annapolis, Maryland using specifications established in the approved UFP-QAPP (ERT, 2012), and according to the pertinent parts of the *National Functional Guidelines for Inorganic Data Review* (USEPA, 2004a), *National Functional Guidelines for Organic Data Review* (USEPA, 1999a), and the QA/QC requirements for the analytical methods used for the analyses. All data received from the laboratories were subjected to an initial review by the ERT Project Chemist to ensure that all Level IV CLP elements were submitted. DVRs that were produced from the data validation effort are presented in Appendix E-3.

Analytical data were validated according to the guidelines and procedures described in the documents listed in above. The data validator was responsible for the following:

- reviewing laboratory data packages and applying required control,
- using professional judgment where specific limits were not specified,
- qualifying affected data points on the applicable result forms; and,
- preparing a DVR for actions taken.

5.4.4 Data Bias Assessment

The DQA was conducted using the analytical QC data (by matrix and by parameter) and the data validation results. The analytical QC data were evaluated for the number of results observed within the set acceptance criteria. When the data are observed as being lower or higher than the criteria, a bias existed.

5.4.5 Data Quality Management

The project database was populated with analytical results from samples collected during the RFI. In certain cases, data were selected for incorporation into or exclusion from the database; the selection processes are described below.

- All laboratory and field QC results were marked to prevent incorporation into the usable data population; and
- All duplicate values (same sample location) were identified with a unique sample identification to identify them for appropriate incorporation into the usable data population.

It was discovered in the field that samples collected during one day of field of activities in the Hero Road Trench Area MRS were given incorrect sample identification numbers. Since the mislabeled samples were taken from the biased sampling locations, which had been previously numbered before sampling, those locations and time of sampling were known. The sample identification numbers were all corrected before the samples were received at the laboratory, and correct sample identification numbers were double and triple checked by the sampling team lead. Maps, field notes, and correspondence between the sampler and sampling team leader were used to ensure that the analytical results were attributed to the correct sample.

5.4.6 Data Quality Summary

Achievement of the DQOs provides the basis for concluding that the acquired investigation data are scientifically sound, legally defensible, and adequate for their intended use. An overview of the results of the DQA follows; a complete assessment of the data quality is presented in Appendix E-3.

- The data validation process found no systematic problem and produced minor qualifications of the results.
- Completeness for the RFI field and analytical activities is > 95 percent.
- Overall project accuracy is > 90 percent.

- Overall analytical precision is > 90 percent.
- Overall field duplicate precision (all matrices/all parameters) is > 90 percent.
- Representativeness was achieved.
- Comparability was achieved.

5.5 Revised Conceptual Site Models

Section 3.0 presented the preliminary CSMs for the Anti-Aircraft Range 90-mm – 2 and Hero Road Trench Area MRSs. This section discusses changes to the preliminary CSMs based on the findings of the RFI, and presents revised CSM tables and diagrams per MRS. The revised CSMs describe the current state of knowledge about hazards and risks at the site based on the intrusive investigations and MC sampling completed at each MRS.

Tables 5-3 and 5-4 present detailed revised CSMs for each MRS, including facility and physical profiles (setting, layout, structures, terrain, vegetation, significant features, and security), land use and exposure profiles (receptors), ecological (habitat, species) and munition release profiles (types, transport mechanisms, migration routes, and pathway analysis).

Figures 15 through 18 of Appendix A present the revised HHRA and SLERA CSMs, as described in the below sections.

5.5.1 Anti-Aircraft Range 90-mm – 2 MRS

Table 5-3 describes that human receptors are potentially present at the Anti-Aircraft Range 90-mm – 2 MRS for exposure to MEC in the surface and subsurface; however, based on RFI intrusive investigation findings, pathways are considered incomplete, except the pathway for MEC in the subsurface for construction workers, which is considered potentially complete.

Table 5-3 also describes that human and ecological receptors are potentially present at the Anti-Aircraft Range 90-mm – 2 MRS for exposure to MC in the soil, sediment, and surface water; however, based on the RFI sampling results and the HHRA and SLERA described in Section 6.0, pathways are considered incomplete for human and ecological receptors.

Figures 15 and 16 of Appendix A present the revised HHRA and SLERA CSMs for the Anti-Aircraft Range 90-mm -2 MRS.

Table 5-3. Conceptual Site Model for the Anti-Aircraft Range 90-mm – 2 MRS

Profile Type	Site Characterization
Facility Profile	**Location and Area:** • 77 acre area located within a former 90-mm anti-aircraft range fan, approximately 2.8 miles northwest of the FTSW cantonment area.
	Structures: • An ammunition supply point (ASP) is located within this MRS, which contains munition bunkers.
	Boundaries: • Bounded by surrounding upland forest.

Table 5-3. Conceptual Site Model for the Anti-Aircraft Range 90-mm – 2 MRS

Profile Type	Site Characterization
	Security: • Due to an ASP being located in the MRS, there is additional security with a secured, gated fence surrounding the MRS.
	Utilities: • Utilities include underground and overhead power lines, and underground pipes.
Physical Profile	**Topography:** • Elevation is approximately 33 feet above sea level, relatively flat and covered with maintained grass, buildings, gravel and paved roads and parking areas.
	Vegetation: • Maintained grass. • Upland Forest outside the MRS boundary.
	Wetlands: • No wetlands are located within this MRS.
	Soil: • Sandy silt or sandy clay.
	Hydrology: • Located in the Canoochee River Watershed. • Drainage ditch runs through the center of the MRS.
	Hydrogeology: • No groundwater wells are located in this MRS. • The principal artesian aquifer is a deep aquifer that is isolated from the surface aquifer by a confining unit. This aquifer supplies drinking water to the FTSW area. • The surface aquifer is composed of a relatively thin layer of sands, gravels and clays. It is recharged directly from rainfall percolating through sediments.
Land Use and Exposure Profile	**Current Land Use:** • Consists of an active ASP, which is a gated, secured area where entry is controlled and monitored. • A cleared buffer area surrounding the ASP fence is also included in the MRS. No activities occur in the buffer area.
	Cultural, Archaeological and Historical Resources: • Based on available information, there is no indication that cultural, archaeological, or historical resources are present in this MRS.
	Current Human Receptors: • Outdoor Workers • Trespassers
	Potential Future Land Use: • No change in Land Use for the foreseeable future.

Table 5-3. Conceptual Site Model for the Anti-Aircraft Range 90-mm – 2 MRS

Profile Type	Site Characterization
	Potential Future Human Receptors: • No changes are anticipated to the current human receptors; however, future residents are conservatively considered. • Future Construction Workers
Ecological Profile	**Degree of Disturbance:** • Extensive disturbance **Receptors:** • Biota
Munitions/Release Profile	**Munitions Types:** • Based on EOD calls and possible munitions items - Small Arms (.45 caliber, .50 ball, .30 caliber, .50 caliber, 7.62mm) - Projectiles (37mm High explosive (HE), 40 mm HE dual purpose, 90mm HE, 75mm, 76mm, 105mm, 152mm, 155mm) - Grenades (40mm, M7 Riot, fragmentation grenade) - Rockets (Dragon II high explosive anti-tank guided missile, 3.25- inch target rocket)
	Release Mechanisms: • Historical Range Use
	Maximum Probable Penetration Depth: • As the MRS is not an impact area, and ASP as-built records indicate minimal ground disturbance during construction, it was anticipated that MEC may be located in the shallow subsurface between 6 inches and 2 feet.
	MEC Density: • Based on the three MEC items found during RFI field activities, the average MEC density was determined to be 0.546 MEC/acre.
	Munitions Debris: • Numerous MD items have been found and may be encountered at the MRS.
	Associated Munitions Constituents: • Aluminum • Copper • Lead • Zinc • Explosives
	Transport Mechanisms/Migration Routes: • MEC - Movement of a potential item by a person - Intrusive activities (e.g., construction activities) • MC - Natural processes such as wind or lateral movement by surface runoff - Physical and chemical processes such as infiltration, adsorption, and/or dispersion

Table 5-3. Conceptual Site Model for the Anti-Aircraft Range 90-mm – 2 MRS

Profile Type	Site Characterization
	Pathway Analysis: • MEC. Receptors are potentially present and pathways are incomplete for exposure to MEC in the surface; however, for intrusive activities in the subsurface, a potentially complete pathway exists as a source of MEC in the subsurface remains at this MRS. • MC. Receptors are potentially present; however, pathways are incomplete for soil, sediment, and surface water as no source of MC has been identified at this MRS.

5.5.2 Hero Road Trench Area MRS

Table 5-4 describes that human and ecological receptors are potentially present at the Hero Road Trench Area MRS for exposure to MC in the soil; however, based on the RFI soil sampling results and the HHRA and SLERA described in Section 6.0, pathways are considered incomplete for human and ecological receptors.

Figures 17 and 18 of Appendix A present the HHRA and SLERA CSMs for the Hero Road Trench Area MRS.

Table 5-4. Conceptual Site Model for the Hero Road Trench Area MRS

Profile Type	Site Characterization
Facility Profile	**Location and Area:** • Approximately 34.5 acres in size and lies within the cantonment area of FTSW.
	Structures: • There are no structures within the MRS.
	Boundaries: • The MRS is bounded by a fence.
	Security: • MRS is surrounded by a gated, locked fence.
	Utilities: • Adjacent to the MRS is a power line.
Physical Profile	**Topography:** • Relatively flat.
	Vegetation: • Dense young forest and substantial undergrowth.
	Wetlands: • No wetlands are located within this MRS.
	Soil: • Clay-sand and clay-silt.

Table 5-4. Conceptual Site Model for the Hero Road Trench Area MRS

Profile Type	Site Characterization
	Hydrology: • Located in the Canoochee River Watershed. FTSW has about 265 miles of freshwater rivers and streams and an additional 12 miles of brackish water streams. There are no surface water bodies within this MRS.
	Hydrogeology: • No groundwater wells are located within this MRS. • The Principal Artesian aquifer is isolated from the surface aquifer by a confining unit. • The surface aquifer is composed of a relatively thin layer of sands, gravels and clays. It is recharged directly from rainfall percolating through sediments.
Land Use and Exposure Profile	**Current Land Use:** • The MRS is kept secured at all times and no activities occur within the MRS.
	Cultural, Archaeological and Historical Resources: • Based on available information, there is no indication that cultural, archaeological, or historical resources are present in this MRS.
	Current Human Receptors: • Outdoor Workers • Trespassers
	Potential Future Land Use: • Future land use is contingent upon the outcome of this RFI investigation; as this MRS lies within the cantonment area, development of the site may occur.
	Potential Future Human Receptors: • No changes are anticipated to the current human receptors • Future Residents • Future Construction Workers
Ecological Profile	**Degree of Disturbance:** • The MRS consists of dense young forest and substantial undergrowth. • This MRS is not currently in use. • There are no surface water bodies within this MRS.
Munitions/Release Profile	**Munitions Types:** • Dilute agent CAIS Kits.
	Release Mechanisms: • Improper disposal or burial.
	Maximum Probable Penetration Depth: • Expected to be located 2 to 10 feet below the surface in potential burial pits.
	MEC Density: • No MEC was expected or encountered during RFI activities at this MRS.
	Munitions Debris: • No MD was expected or encountered during RFI activities at this MRS.

Table 5-4. Conceptual Site Model for the Hero Road Trench Area MRS

Profile Type	Site Characterization
	Associated Munitions Constituents: • Arsenic • 1,4-oxithiane • 1,4-dithiane • thiodiglycol
	Transport Mechanisms/Migration Routes: • MC - Natural processes such as wind or lateral movement by surface runoff. - Physical and chemical processes such as infiltration, adsorption, and/or dispersion.
	Pathway Analysis: • Receptors are potentially present; however, pathways are incomplete for soil as no source of MC has been identified at this MRS.

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6.0 BASELINE RISK ASSESSMENT FOR MC AND RISK CHARACTERIZATION FOR MEC

This section describes the Baseline Risk Assessment (BLRA) for the FTSW RFI. The BLRA is being conducted under the RCRA Part B Permit, with regulatory coordination with the GAEPD. The BLRA includes a HHRA and SLERA, and focuses on MC only. The potential hazards associated with MEC are addressed in Section 6.5.

The BLRA has been prepared in accordance with the following GAEPD and USEPA guidance:

- Guidance for Selecting Media Remediation Levels at RCRA Solid Waste Management Units (GAEPD, 1996)
- RFI Guidance, Volumes I through IV, Interim Final, EPA/530-SW- 89-031 (USEPA, 1989a)
- Risk Assessment Guidance for Superfund (RAGS), Volume 1, Human Health Evaluation Manual (Part A) (USEPA, 1989b)
- RAGS, Volume I, Human Health Evaluation Manual. Part E, Supplemental Guidance for Dermal Risk Assessment, Final (USEPA, 2004b)
- RAGS, Volume I: Human Health Evaluation Manual. Part F, Supplemental Guidance for Inhalation Risk Assessment (USEPA, 2009)
- Guidance for Data Usability in Risk Assessment (Part A) (USEPA, 1992a)
- Supplemental Guidance to RAGS: Calculating the Concentration Term (USEPA, 1992b)
- Supplemental Guidance to RAGS: Region 4 Bulletins, Human Health Risk Assessment (USEPA, 1995a)
- Guidance for Risk Characterization (USEPA, 1995b)
- Soil Screening Guidance (USEPA, 1996a)
- Exposure Factors Handbook (USEPA, 2011a) and the EPA OSWER Directive 9200.1-120, Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors (USEPA, 2014a)
- Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites (USEPA, 2002)
- Amended Guidance of Ecological Risk Assessment at Military Bases: Process Considerations, Timing of Activities, and Inclusion of Stakeholders. USEPA Region 4, 4WD-OTS Memorandum June 23, 2000 (USEPA, 2004c).
- Ecological Risk Assessment Guidance for Superfund (ERAGS): Process for Designing and Conducting Ecological Risk Assessments; EPA 540-R-97-006 (USEPA, 1997)

6.1 Conceptual Site Models

A CSM identifies contaminant sources and transport mechanisms, potential human or ecological receptors, and exposure scenarios. A CSM is an effective tool in the planning phases of a RFI to

define the goals of the investigation, streamline the risk evaluation, and to develop appropriate response actions. It identifies complete exposure pathways for the media affected by site-related contamination. Understanding site conditions and land uses helps to accurately identify potential receptors under current and likely future scenarios, as well as the most appropriate corrective action, if necessary.

CSMs for current and future human and ecological receptor exposure scenarios at the Anti-Aircraft Range 90-mm – 2 MRS and Hero Road Trench Area MRS have been developed to aid in understanding and describing the MRSs, and to present assumptions regarding:

- Suspected sources and types of constituents present,
- Constituent release and transport mechanisms,
- Affected media,
- Potential exposure routes, and
- Potential human and ecological receptors

The preliminary HHRA and SLERA CSMs for the Aircraft Range 90-mm – 2 MRS and Hero Road Trench Area MRS are discussed in Section 3.1 and are presented in Figures 12 through 15 of Appendix B of the Work Plan (ERT, 2012). The revised HHRA and SLERA CSMs for the Anti-Aircraft Range 90-mm – 2 MRS and Hero Road Trench Area MRS are discussed in Section 5.5 and presented in Figures 15 through 18 of Appendix A of this report.

6.1.1 Constituents Present, Constituent Release and Transport Mechanisms, and Affected Media

Based on past uses of the Anti-Aircraft Range 90-mm – 2 MRS, MEC, MD, and possible MC have been found or are suspected to be present. Based on anecdotal evidence, the Hero Road Trench Area MRS was investigated for potential MC contamination associated with the dilute agent CAIS kits; no MEC is suspected to be present at this MRS. MEC items and associated MC that were found during the RFI are discussed in Section 5.0.

Constituent release and transport mechanisms and affected media must be considered to delineate potential exposure routes. Previous investigations at the Anti-Aircraft Range 90-mm – 2 and Hero Road Trench Area MRSs have determined that potentially impacted media include surface soil and subsurface soil; therefore, soil was the focus of this investigation. Additionally, two sediment samples and one surface water sample were collected from a drainage ditch within the Anti-Aircraft Range 90 mm – 2 MRS at the request of GAEPD.

Soil samples from the Anti-Aircraft Range 90 mm – 2 MRS were analyzed for select metals (aluminum, copper, lead, and zinc) and explosives. The rationale for selecting these metals is outlined in Appendix H (MC Sampling Rationale Memo) of the Work Plan (ERT, 2012). In addition, sediment and surface water samples collected from the drainage ditch located within the Anti-Aircraft Range 90-mm – 2 MRS were collected and analyzed for select metals and explosives.

The Hero Road Trench Area MRS investigations are related exclusively to potential MC contamination from dilute agent CAIS kits, which anecdotal evidence suggests may have been

disposed in burial pits within the MRS. Thus, for the Hero Road Trench Area MRS the specific constituents that were investigated included arsenic, 1,4-oxithiane, 1,4-dithiane, and thiodiglycol.

Based on a review of the hydrogeological data (SAIC, 1999), it appears unlikely that MC in shallow groundwater would migrate to the deeper aquifers that are used as a water supply for FTSW. The principal artesian aquifer is generally 300 to 500 feet below surface and is isolated from the surface aquifer by a confining unit (SAIC, 1999). The surface aquifer is composed of a relatively thin layer of sands, gravels and clays. It is recharged directly from rainfall percolating through sediments. Per the accepted Work Plan for this investigation, groundwater would only have been sampled if the USEPA Protection of Groundwater Soil Screening Levels (SSLs) for soil were exceeded. Generic SSLs are developed by USEPA using default soil and contaminant leaching parameters, which are generally conservative values (USEPA, 1996b). For this screening procedure, the generic SSLs are used because the necessary site-specific parameters for soil, such as soil organic carbon content, were not available for either MRS in this investigation in order to develop site-specific groundwater SSLs.

6.1.2 Potential Receptors and Exposure Routes

The potential receptor evaluation for development of the CSMs considered criteria such as:

- Current and future land use on and near the MRS;
- Zoning status and/or deed restrictions of the MRS and adjacent properties;
- Current and future access to the MRS and to the affected media;
- Existing and/or planned exposure controls (e.g., engineered containment structures);
- Present and planned MRS activities;
- Extent that the MRS is developed and vegetated; and
- Potential for soils to be disturbed (e.g., soil-invasive activities).

Table 6.1 summarizes the potentially exposed receptors and the exposure pathways that were considered in the BLRA. These pathways are also shown in the HHRA CSMs for the Anti-Aircraft Range 90-mm – 2 MRS and Hero Road Trench Area MRS for human receptors in Figures 15 and 17, respectively, and the SLERA CSMs are shown in Figures 16 and 18 for the ecological receptors at each MRS.

Human Receptors

The Anti-Aircraft Range 90-mm – 2 MRS is located within the operational range at FTSW and is an active ASP. As such, there are activities related to ammunitions constantly ongoing at the site, and the area is gated and secured with controlled, monitored entry. Surrounding the fence is a cleared buffer area in which no activities occur. A gate and signs restrict vehicle traffic on FTSW to authorized personnel and visitors. Current surface soil exposure at the Anti-Aircraft Range 90-mm – 2 MRS could occur for outdoor workers and trespassers, although the general public does not have access to the Anti-Aircraft Range 90-mm – 2 MRS. Although current trespassing is very unlikely due to the secure nature of the site (the site is guarded and is surrounded by a secure fence), and due to the distance of the site from the nearest residences, this potential receptor is included in the CSM and the BLRA. In the future, if construction occurs,

subsurface soil could be brought to the surface, resulting in exposure to mixed surface/subsurface soil for future construction workers or residents, if the MRS is developed for residential use. It is noted that the potential soil exposures to current child trespassers would be much less than would occur under a future residential scenario in which resident children could be exposed to soils on a daily basis, therefore, the current child trespasser scenario is qualitatively evaluated.

Since sediment from the drainage ditch located in the center of the Anti-Aircraft Range 90-mm – 2 MRS could also be contacted, sediment results were screened against human health risk-based screening levels. However, because water exists at this location only intermittently, potential exposures to possible contaminants in water at this location are expected to be low for human receptors.

For the Hero Road Trench Area MRS, the current outdoor worker and trespasser scenarios are possible, along with future construction workers and future residents, in the event that the MRS is developed in the future. The Hero Road Trench Area MRS is surrounded by a wastewater treatment plant, a school, roads, and forested areas.

Surface soil exposure at the Hero Road Trench Area MRS could occur for outdoor workers or trespassers. In the future, if construction occurs, subsurface soil could be brought to the surface, resulting in exposure to mixed surface/subsurface soil for future construction workers, or for future residents, if the MRS is developed for residential use. Potential human exposure routes for surface and subsurface soil could include incidental ingestion, dermal contact, and inhalation of particulates. Since volatile compounds are not typically associated with munitions, they were not investigated in this RFI and will not be considered in the BLRA.

Domestic use of shallow groundwater does not currently occur at FTSW. Based on the hydrogeological information detailed in SAIC, 1999, MC in shallow groundwater is not likely to migrate to the deeper aquifer that is used as a water supply for FTSW; therefore, potential exposures via deeper groundwater are not considered as part of the BLRA.

Potential human receptors that may occur outside of the boundaries of FTSW are also not considered in the HHRA.

Ecological Receptors

Most of the Anti-Aircraft Range 90-mm – 2 MRS is enclosed by a fence, relatively flat, and covered with maintained grass and buildings. Sediment and intermittent, standing water exists in the drainage ditch located within the Anti-Aircraft Range 90-mm – 2 MRS.

The presence of MC at the Hero Road Trench MRS was expected to be located 2 to 10 feet below the surface in potential burial pits. The MRS lies within the cantonment area and is surrounded by a fence. The MRS consists of dense young forest and substantial undergrowth.

For ecological receptors, surface soil, sediment, and surface water samples were evaluated in the SLERA (see Section 6.3). Subsurface soil is of lower concern for ecological receptors, and thus was not evaluated.

Table 6-1. Summary of Potential Receptors and Exposure Routes

MRS	Media	MC	Potentially Exposed Receptors	Potential Exposure Routes
Anti-Aircraft Range 90-mm – 2	Surface Soil	Select metals (Al, Cu, Pb, Zn) and explosives	Outdoor workers and trespassers Biota (e.g., birds, mammals, soil invertebrates, reptiles)	Incidental ingestion, dermal contact, and inhalation of particulates Ingestion, dermal contact
	Surface/ Subsurface Soil	Select metals (Al, Cu, Pb, Zn) and explosives	Future construction workers and future residents	Incidental ingestion, dermal contact, inhalation of particulates
	Sediment/ Surface Water	Select metals (Al, Cu, Pb, Zn) and explosives	Outdoor workers, trespassers, future construction workers, and future residents Biota (e.g., birds, mammals, soil invertebrates, reptiles)	Ingestion, dermal contact Ingestion, dermal contact
Hero Road Trench Area	Surface Soil	Arsenic and organosulfur residues (1,4-dithiane; 1,4-oxathiane; and thiodiglycol)	Outdoor workers and trespassers Biota (e.g., birds, mammals, soil invertebrates, reptiles)	Incidental ingestion, dermal contact, and inhalation of particulates Ingestion, dermal contact
	Surface/ Subsurface Soil	Arsenic and organosulfur residues (1,4-dithiane; 1,4-oxathiane; and thiodiglycol)	Future construction workers and future residents	Incidental ingestion, dermal contact, inhalation of particulates

6.2 Human Health Risk Assessment

The HHRA for the Anti-Aircraft Range 90-mm – 2 MRS and Hero Road Trench Area MRS included the following key steps:

1. Screening against risk-based screening levels and soil background to identify COPCs
2. Exposure assessment, including characterizing the site setting and identifying current and potential future human receptors and exposure pathways (as was done in the development of the CSMs), along with calculating exposure point concentrations, and estimating the potential intake of COPCs
3. Identify toxicity information for each COPC
4. Characterize site-specific risks
5. Discuss uncertainties associated with the HHRA

6.2.1 Screening to Identify Chemicals of Potential Concern

Site-specific COPCs are the chemicals detected during the field investigation that warrant evaluation in the quantitative HHRA. The screening process selects COPCs based on comparison of site-related chemicals to conservative risk-based screening criteria and to background concentrations of metals in soil. FTSW-wide soil background data and statistics that were developed as part of a 16 SWMU RFI (SAIC, 1999) were used, along with the additional background soil samples analyzed during this investigation for aluminum, copper, lead, and zinc (Table F-1, Appendix F). The background values were calculated as outlined in the Work Plan, which is consistent with GAEPD guidance (GAEPD, 1996) and USEPA RAGS guidance (USEPA, 2001a).

The screening process for surface soil, subsurface soil, and sediment followed these steps:

1. Comparison to Health Risk-Based Screening Levels: Risk-based screening criteria are tabulated in the USEPA RSL table (USEPA, 2014b) for both residential and industrial exposure scenarios. The maximum detected concentration of a chemical in soil was compared to its generic USEPA RSL, protective to an incremental cancer risk level of $1x10^{-6}$ (for carcinogens) or a non-cancer hazard quotient level of 0.1 (that is, the published RSL is adjusted down by 10 if it is based on a non-cancer effect). For both the Anti-Aircraft Range 90-mm – 2 MRS and the Hero Road Trench Area MRS, maximum detected concentrations were screened against the residential soil RSLs, while the industrial soil RSLs are also displayed based on the current use of the Anti-Aircraft Range 90-mm – 2 MRS. These published, generic RSLs are based on potential exposures via the dermal, ingestion, and inhalation routes. Only chemicals with concentrations in soil that exceed the RSLs were retained as COPCs. Sediment results were also compared to the soil RSLs, because there are no published screening levels based on human contact with sediment.
2. Comparison to Background Soil Concentrations: Inorganic constituents in soil were eliminated as COPCs for the HHRA if the maximum detected concentration was less than two times the average site-specific background concentration. Sediment results were also compared to soil background. There are two sources of soil background data used in this HHRA: surface soil and subsurface soil background previously established (SAIC, 1999) and background data collected as part of this investigation.

The screening of COPCs is consistent with both GAEPD (GAEPD, 1996) and USEPA guidance (USEPA, 2001a).

Tables F-2 through F-5 of Appendix F summarize the detected constituents in soil and the screening criteria used to select or eliminate a COPC for the HHRA, along with the frequency of detection, and the minimum and maximum detected concentrations. The results of the COPC screening for the HHRA are presented in the following subsections.

6.2.1.1 Anti-Aircraft Range 90-mm – 2 MRS

Surface Soil

Aluminum was detected in all surface soil samples collected from the Anti-Aircraft Range 90-mm – 2 MRS (11 samples, including 1 duplicate). Concentrations in 2 samples were detected at levels greater than the residential soil RSL (7,700 mg/kg), but less than the industrial RSL (110,000 mg/kg). One sample, which is also the maximum detected concentration (10,900 mg/kg), was detected at a concentration greater than, but of a similar order of magnitude to, background (10,273 mg/kg).

Copper was detected in 10 of the 11 samples collected, but no concentrations are greater than either the residential or industrial RSLs. The maximum detected concentration (4.6 mg/kg) is greater than background (3.1 mg/kg).

Lead and zinc were detected in all 11 samples, but no concentrations are greater than either the residential or industrial RSLs. No detected concentrations are above background.

No explosives were detected in any of the surface soil samples.

For surface soil, only aluminum is greater than its residential soil RSL; however, the maximum detected concentration is similar to the site-specific background concentration. Therefore, there are no COPCs selected in surface soil at the Anti-Aircraft Range 90-mm – 2 MRS for the HHRA.

Surface soil results for the Anti-Aircraft Range 90-mm – 2 MRS and comparison values are presented in Table F-2 of Appendix F.

Subsurface Soil

Aluminum was detected in all subsurface soil samples collected from the Anti-Aircraft Range 90-mm – 2 MRS (11 samples, including 1 duplicate). Concentrations in 6 samples were detected at levels greater than the residential soil RSL (7,700 mg/L), but less than the industrial RSL (110,000 mg/kg). Aluminum was detected in 4 samples at a concentration greater than, but of a similar order of magnitude to, background (10,273 mg/kg).

Copper was detected in 2 of the 11 samples collected, but no concentrations are greater than either the residential or industrial RSLs. The maximum detected concentration (8.8 mg/kg) is greater than background (3.1 mg/kg).

Lead and zinc were detected in all 11 samples, but no concentrations are greater than either the residential or industrial RSLs or background.

No explosives were detected in any of the 11 samples.

For subsurface soil, only aluminum is detected at levels greater than both the residential soil RSLs and the site-specific background, although it is not greater than the industrial soil RSLs that are more appropriate for this MRS. Therefore, aluminum is selected as a COPC for the HHRA in subsurface soil for the Anti-Aircraft Range 90-mm – 2 MRS, and will be evaluated for future construction workers and future residents in the following sections of the HHRA.

Subsurface soil results for the Anti-Aircraft Range 90-mm – 2 MRS and comparison values are presented in Table F-3 of Appendix F.

Sediment

Aluminum was detected in all sediment samples collected from the Anti-Aircraft Range 90-mm – 2 MRS (2 samples), but no concentrations are greater than either the residential or industrial RSLs or background.

Copper was detected in one of the 2 samples collected, but not at a concentration greater than either the residential or industrial RSLs or background.

Lead and zinc were detected in all samples, but no concentrations are greater than either the residential or industrial RSLs or background.

No explosives were detected in either of the 2 samples.

In sediment from the ditch within of the Anti-Aircraft Range 90-mm – 2 MRS, no sample results are greater than residential or industrial soil RSLs, or site-specific soil background concentrations; therefore, there are no selected COPCs in sediment for the HHRA.

Sediment results for the Anti-Aircraft Range 90-mm – 2 MRS and comparison values are presented in Table F-6 of Appendix F.

6.2.1.2 Hero Road Trench Area MRS

Surface Soil

Arsenic was detected in 17 of the 35 surface soil samples collected and the maximum concentration detected was 1.2 mg/kg. All detects are greater than the residential RSL (0.67 mg/kg), but less than the industrial RSL (3 mg/kg). No sample results are greater than background (2.1 mg/kg).

There were no detected concentrations of 1,4-oxithiane, 1,4-dithiane, or thiodiglycol.

Although arsenic was detected in surface soil at levels greater than the residential soil RSL, all sample results are less than the site-specific background concentration. Therefore, there are no COPCs selected in surface soil at the Hero Road Trench Area MRS for the HHRA.

Surface soil results for the Hero Road Trench Area MRS and comparison values are presented in Table F-4 of Appendix F.

Subsurface Soil

Arsenic was detected in 5 of the 33 subsurface soil samples collected and the maximum concentration detected was 1.1 mg/kg. All detects are greater than the residential RSL (0.67 mg/kg), but less than the industrial RSL (3 mg/kg). No sample results are greater than background (2.1 mg/kg).

There were no detected concentrations of 1,4-oxithiane, 1,4-dithiane, or thiodiglycol.

Although arsenic was detected in subsurface soil at concentrations greater than its residential soil RSL, all sample results are less than the site-specific background concentration. Therefore, there are no COPCs selected in subsurface soil at the Hero Road Trench Area MRS for the HHRA.

Subsurface soil results for the Hero Road Trench Area MRS and comparison values are presented in Table F-5 of Appendix F.

6.2.1.3 Comparison of Soil Concentrations to Soil-to-Groundwater SSLs

In addition to the screening against risk-based soil RSLs and soil background levels, chemicals detected in soil were compared to the generic USEPA SSLs for Protection of Groundwater (USEPA, 2014b)[1], also shown in Tables F-2 through F-5 of Appendix F. At the Anti-Aircraft Range 90-mm – 2 MRS, only aluminum in subsurface soil, at a detected concentration of 30,200 mg/kg, is greater than its corresponding generic USEPA SSL for the Protection of Groundwater (23,000 mg/kg) in one sample out of 11; however, this maximum detected value is within the same order of magnitude as the SSL, and due to the relatively large allowable concentration of aluminum in soil (USEPA, 2014b), aluminum is not generally considered a contaminant of great concern for leaching to groundwater.

At the Hero Road Trench Area MRS, arsenic is detected at a concentration greater than its corresponding generic USPEA SSL for the Protection of Groundwater (0.29 mg/L); however, as noted above, all detects of arsenic at this MRS are below background levels.

It should be noted that the Soil-Groundwater SSLs are very conservative as they were designed for initial screening of contaminants only. Thus, the equations used are based on conservative, simplifying assumptions about the release and transport of contaminants in the subsurface, and are based on protective risk-based ground water concentrations or maximum contaminant levels (MCLs).

All other metals analyzed were detected in concentrations less than Protection of Groundwater SSLs; therefore, it is not expected that leaching of these metals to groundwater will occur. Based on these results, no groundwater was sampled for either MRS.

6.2.1.4 Summary of Selected COPCs for the HHRA

Because no COPCs were selected in surface soil or sediment at the Anti-Aircraft Range 90-mm – 2 MRS, and only aluminum was selected as a COPC in subsurface soil at that MRS, the following sections focus on the assessment of the combined aluminum surface/subsurface soil data set for the future construction worker and future resident receptors, although all potential receptors are discussed.

No COPCs were selected in surface or subsurface soil at the Hero Road Trench Area MRS; therefore, no further evaluation of this MRS is necessary in the HHRA.

6.2.2 Exposure Assessment

Future human receptors for the Anti-Aircraft Range 90-mm – 2 MRS combined surface soil and subsurface soil include future construction workers and future residents.

Future land use is expected to remain the same as current land use for the Anti-Aircraft Range 90-mm – 2 MRS, although construction or excavation could take place, potentially exposing construction workers to subsurface soil. In addition, based on GAEPD guidance, a future residential receptor was also evaluated.

[1] Although it is preferable to use site-specific parameters, these site-specific soil characteristics have not been measured at Fort Stewart, as described in Section 6.1.1.

Reasonable maximum exposure (RME) risk estimates were calculated in this HHRA. The RME scenario is defined as the maximum exposure that is reasonably expected to occur (USEPA, 1989b), and exposure parameters are chosen with the understanding that the combination of variables for a given pathway would result in an estimate of the RME for that pathway. Average or central tendency exposure scenarios were not evaluated in this HHRA.

6.2.2.1 Exposure Routes and Exposure Assumptions

The potentially exposed receptors and exposure routes for the Anti-Aircraft Range 90-mm – 2 MRS are outlined below. The exposure factors used to estimate exposures are summarized in Tables F-8 through F-12 of Appendix F.

Surface Soil

Under current land use, outdoor workers and trespassers could be exposed to surface soil. Relevant exposure pathways to surface soil include incidental ingestion, dermal contact, and inhalation of particulates, although current vegetative cover is likely to reduce dust emissions to low levels. However, since no COPCs were selected in surface soil at the Anti-Aircraft Range 90-mm – 2 MRS for the HHRA, current surface soil exposures were not evaluated.

Surface and Subsurface Soil

Under future land use, construction workers could be exposed to soil both on the surface and soil that is currently at depth when digging foundations or servicing utilities. In addition, future residents could be exposed to this mixed surface/subsurface soil once the subsurface soil has been moved to the surface. Relevant exposure pathways include incidental ingestion, dermal contact, and inhalation of particulates.

USEPA (1996b and 2002) guidance does not recommend estimating intakes (i.e., mg/kg-day) for the air inhalation pathway. Rather, risks and hazards are determined by comparing estimated particulate air concentrations (calculated as described in the following subsection), adjusted for exposure frequencies/durations/time, with inhalation toxicity values. Chronic inhalation toxicity factors developed by USEPA assume continuous (i.e., daily, 24-hour exposure) long-term exposure. Therefore, it is necessary to adjust for the fraction of time breathing contaminated air for daily exposures less than 24 hours, using the Exposure Time (ET) factor; it is assumed that construction workers and residents could be exposed for 8 of 24 hours per day.

Tables F-8 through F-12 of Appendix F summarize the exposure factors for the HHRA. It should be noted that because no COPCs were selected in surface soil, Tables F-8 and F-10, which list exposure factors for current outdoor workers and current trespassers potentially exposed to surface soil, were not applied in the HHRA.

6.2.2.2 Quantification of Exposure

The exposure point concentration (EPC) is a conservative estimate of the average concentration of a COPC, calculated from the analytical results of every sample for a particular environmental medium to which a receptor may be exposed. The upper confidence limit (UCL) on the mean was estimated for each COPC in soil and subsurface soil. USEPA ProUCL statistical software (USEPA, 2011b) was used to calculate 95% UCLs of the mean of datasets with non-detects, and perform other statistical analyses on every dataset (including those with non-detects). The UCL or maximum detected concentration, whichever is smaller, was selected as the EPC.

The EPC for the combined surface/subsurface soil aluminum data set is: 9,103 mg/kg.

Per USEPA (1996a and 2002), EPCs for COPCs in airborne fugitive dust should be based on soil EPCs and were estimated using the following equation:

$$C_{air} = \frac{C_{soil}}{PEF}$$

Where:

C_{air} = COPC concentration in air at the exposure point (mg/m^3)
C_{soil} = COPC exposure-point concentration soil (mg/kg)
PEF = Particulate emission factor (m^3/kg)

The PEF relates the concentration of the soil COPC to the concentration of dust particles in the air. This calculation addresses dust generated from open sources, which is termed "fugitive" because it is not discharged into the atmosphere in a confined flow. The USEPA's default PEF of 4.63E+09 m^3/kg was used for the determination of the COPC concentration in air.

The equations used to estimate risks for future construction workers and future residents were as follows:

Incidental Ingestion of Soil

CDI = (CS x IR x FI x EF x ED x CF) / (BW x AT-NC or AT-C)

where:
CDI=Chronic Daily Intake (mg/kg-day)
CS=Chemical Concentration in Soil (mg/kg)
IR=Incidental Soil Ingestion Rate (mg/day)
FI=Fraction Ingested from Site (unitless)
EF=Exposure Frequency (days/year)
ED=Exposure Duration (years)
BW=Body Weight (kg)
AT-NC=Averaging Time – Noncancer (days)
AT-C=Averaging Time – Cancer (days)
CF=Conversion Factor (kg/mg)

Dermal Contact with Soil

CDI = (CS x SA x AF x DA x EF x ED x CF) / (BW x AT-NC or AT-C)

where:
CDI=Chronic Daily Intake (mg/kg-day)
CS=Chemical Concentration in Soil (mg/kg)
SA=Surface Area for Contact (cm^2/event)
AF=Adherence Factor (mg/cm^2)
DA=Dermal Absorption Fraction (unitless)
EF=Exposure Frequency (days/year)
ED=Exposure Duration (years)
BW=Body Weight (kg)
AT-NC=Averaging Time – Noncancer (days)
AT-C=Averaging Time – Cancer (days)

CF=Conversion Factor (kg/mg)

Inhalation of Particulates

Estimated Air Exposure Concentration (mg/m^3) = (CA x ET X EF x ED)/(AT)

where:

CA=Chemical Concentration in Air (mg/m^3)
ET=Exposure Time (unitless)
EF=Exposure Frequency (days/year)
ED=Exposure Duration (years)
BW=Body Weight (kg)
AT-NC=Averaging Time – Noncancer (days)
AT-C=Averaging Time – Cancer (days)

The exposure factors applied are listed for future construction workers in Table F-9 and for future residents in Table F-11 of Appendix F.

6.2.3 Toxicity Assessment

Reference doses (RfDs) and reference concentrations (RfCs) were obtained from the following hierarchy of primary sources, as specified by USEPA guidance:

- USEPA's Integrated Risk Information System (IRIS) (on-line) (USEPA, 2012a);
- USEPA's Provisional Peer Reviewed Toxicity Values (PPRTVs);
- Agency for Toxic Substances and Disease Registry's (ATSDR) Minimal Risk Levels (MRLs); and
- Other sources, as necessary.

Dermal reference doses may be different from oral values (USEPA, 2004b), and may be adjusted for oral absorption efficiency. In this HHRA, aluminum was a COPC, and was assumed to have an oral absorption efficiency of 100%, so that the oral reference dose was used without adjustment for the dermal pathway.

For the inhalation of particulates pathway, the inhalation chronic toxicity factors derived by USEPA (i.e., inhalation unit risks [IURs] and RfCs) are expressed as air concentrations. USEPA (1996a) recommends direct comparison of measured or modeled air concentrations to inhalation toxicity factors rather than using daily inhalation rates to convert to internal doses (i.e., mg/kg-day).

For aluminum, the oral RfD is 1.0E+00 mg/kg-day (value also used for the dermal exposure pathway), while the inhalation RfC is 5.0E-03 mg/m^3. These toxicity values are not published in the USEPA's IRIS (USEPA, 2012a), but are available as PPRTV (USEPA, 2006a).

6.2.4 Risk Characterization

The risk characterization step integrates the toxicity and exposure assessment outputs into quantitative estimates of risk. There are no carcinogens selected as COPCs, so this discussion focuses only on the calculation of non-carcinogenic hazard (as represented by the Hazard

Quotient [HQ]) posed by a chemical to a receptor. The non-cancer hazard quotient is calculated for aluminum, the only COPC, as follows:

$$HQ = CDI/RfD$$

Where:

- HQ is the non-cancer hazard quotient posed by the chemical through the pathway
- CDI is the intake of the chemical through the pathway
- RfD is the reference dose for the chemical by that pathway

The estimated total hazards were compared to established risk management criteria for non-carcinogens, using an HI of 1 to evaluate exceedance of acceptable total non-carcinogenic hazards for each receptor.

Tables F-13, F-14, and F-15 in Appendix F present the non-cancer hazard calculations for future construction workers, future adult residents, and future child residents for the COPC (aluminum) identified in soil at the Anti-Aircraft Range 90-mm – 2 MRS. Table F-16 of Appendix F presents a summary of the calculated RME HQs for this COPC. All HQs are less than 1, indicating that non-cancer hazards would not occur due to soil exposure under these theoretical future scenarios.

6.2.5 Uncertainty Assessment

This section includes a qualitative discussion of the uncertainties associated with the estimation of human health risks in this HHRA. All risk assessments involve the use of assumptions, judgments, and imperfect data to varying degrees, resulting in uncertainties in the final estimates of risk. These uncertainties are generally associated with each step of the process (data evaluation and identification of COPCs, exposure assessment, toxicity assessment, and risk characterization) (USEPA, 1989b). The parameters used are characteristically conservative and tend to over-estimate potential site-related risks.

Uncertainties associated with the HHRA include:

- Data Evaluation and Identification of COPCs: Representative soil sampling at a site is designed to ensure that a sufficient number of samples have been collected to adequately characterize the site. However, in designing site investigations, one can never be absolutely certain whether these samples truly represent the soil constituents at the site. Data validation conclusions, such as assigning a "J" (estimated) qualifier to a result, also add uncertainty to the data results. In addition, the reporting of detected concentrations below the reporting limit adds uncertainty to the risk assessments.
- Exposure Assessment: Generally, the selection of conservative exposure assumptions used in the HHRA, in particular, for the RME scenario, may result in over-estimates of risk.
- Toxicity Assessment: The use of toxicity values that have not been carried through EPA's IRIS evaluation adds uncertainty to the RA. For example, the toxicity value for aluminum, although provided by the USEPA's PPRTV program, has not been carried through the same peer-review process as values that are published in IRIS. Published toxicity values are based on all available data, however, there is uncertainty associated

with the selection of the toxic effect level and the application of uncertainty factors to that effect level.

- Risk Characterization: The potential for interactions between multiple chemicals has not been evaluated. The presentation of the RME scenario in this HHRA provides an upper-bound risk estimate; without the presentation of an average or central tendency scenario, average risks associated with site constituents cannot be evaluated.

6.3 Screening Level Ecological Risk Assessment

Although the Anti-Aircraft Range 90-mm – 2 MRS is not a maintained ecological habitat, a SLERA was conducted, in which constituents in surface soil, and sediment and surface water from a drainage ditch within the Anti-Aircraft Range – 90 mm MRS – 2, were screened against appropriate ecological benchmarks. The Hero Road Trench Area MRS consists of dense young forest and substantial undergrowth, but does not provide critical ecological habitat. Subsurface soil was not considered for ecological receptors. If constituents exceed ecological screening levels, a qualitative discussion of the potential ecological effects is presented, based on the relatively low ecological value of the MRSs.

In performing the SLERA, the GAEPD 1996 guidance was applied, following the five steps outlined in that guidance defined as a Preliminary Risk Evaluation (PRE):

1. Ecological screening value comparison
2. Preliminary problem formulation
3. Preliminary ecological effects evaluation
4. Preliminary exposure assessment
5. Preliminary risk characterization

These five steps are equivalent to a screening-level risk assessment, Steps 1 and 2 of the eight-step ecological risk assessment process outlined by U.S. EPA in the *Ecological Risk Assessment Guidance for Superfund (ERAGS): Process for Designing and Conducting Ecological Risk Assessments* (USEPA, 1997).

The GAEPD PRE is the initial ecological risk screening assessment at a RCRA facility. The primary purpose of the PRE is to compare concentrations of site-related constituents to ecological screening values and to conduct a preliminary risk characterization. Based on the extent of potential ecological harm, a more detailed ecological exposure assessment and risk characterization may be recommended as a possible next step for one or more ecological receptors.

6.3.1 Ecological Screening Value Comparison

For ecological receptors, surface soil results were evaluated in the SLERA, along with the sediment and surface water results of the samples collected from the drainage ditch within the Anti-Aircraft Range – 90 mm – 2 MRS. Subsurface soil was not evaluated.

Chemicals of potential ecological concern (COPECs) in soil were selected based on comparisons to the following:

1. USEPA Ecological Soil Criteria: the USEPA Region 4 Ecological Screening Values for Soil (USEPA, 2001b)

2. Background: for inorganic metals, the maximum detected concentrations were compared to background (see Section 6.2)

The USEPA Region 4 ecological soil screening levels are based on contaminant levels associated with a low probability of unacceptable risks to ecological receptors, and were developed for use at USEPA Region 4 hazardous waste sites. These numbers are based on conservative endpoints and sensitive ecological effects data. Thus, they represent a preliminary screening of site contaminant levels to determine if there is a need to conduct further investigations.

For sediment and surface water, although the drainage ditch is not an aquatic ecosystem, the analytical results were compared to the following:

1. Sediment: USEPA Region 4 ecological sediment screening values (USEPA, 2001b) and for inorganics, the maximum detected concentrations were compared to background.
2. Surface Water: Georgia In-Stream Water Quality Standards (GAEPD, 2012), if available, at both a water hardness of 50 mg/L $CaCO^3$ and a water hardness of 100 mg/L $CaCO^3$.[2] For one analyte in surface water, aluminum, a Georgia In-Stream Water Quality Standard value was not published. Thus, the EPA National Recommended Water Quality Criteria (NRWQC) aquatic life criterion for aluminum (USEPA, 1988) was used.

Tables F-2, F-4, F-6, and F-7 of Appendix F summarize the detected chemicals in surface soil, sediment, and surface water, and the ecological screening criteria and background comparisons used to select or eliminate a COPEC, along with the frequency of detection, the minimum, and the maximum detected concentrations. Ecological soil screening values are also presented on the subsurface soil summary tables (Tables F-3 and F-5, Appendix F) for reference. The results of the COPEC screening for each MRS are presented in the following subsections.

6.3.1.1 Anti-Aircraft Range 90-mm – 2 MRS

Surface Soil

Aluminum was detected in all surface soil samples collected from the Anti-Aircraft Range 90-mm – 2 MRS (11 samples, including 1 duplicate). One sample result, which is also the maximum detected concentration (10,900 mg/kg), is greater than, but of a similar order of magnitude to, background (10,273 mg/kg). All detected sample concentrations are greater than the USEPA ecological soil screening level (50 mg/kg) for aluminum.

Copper was detected in 10 of the 11 samples collected. The maximum detected concentration (4.6 mg/kg) is greater than background (3.1 mg/kg). All sample concentrations are less than the USEPA ecological soil screening level (40 mg/kg) for copper.

Lead was detected in all 11 samples collected. No detected concentrations are above background. All sample concentrations are less than the USEPA ecological soil screening level (50 mg/kg) for lead.

[2] Surface water hardness was not measured as part of the field program.

Zinc was detected in all 11 samples. No detected concentrations are above background. All sample concentrations are less than the USEPA ecological soil screening level (50 mg/kg) for zinc.

No explosives were detected in any of the 11 samples.

For surface soil, only aluminum was detected in concentrations greater than its USEPA ecological soil screening level, which is set at a very low level of 50 mg/kg. This value is apparently based on the publication of Efroymson et al. (1997)[3] and is likely derived from an assessment of aluminum toxicity to plants. Aluminum toxicity evaluations for fauna have shown much higher effect concentrations (e.g., for micro-organisms, effect level of 600 mg/kg, Efroymson, et al., 1997). In any case, the maximum detected aluminum concentration in soil is similar to the site-specific background soil concentration. Therefore, there are no COPECs selected in surface soil at the Anti-Aircraft Range 90-mm – 2 MRS for the SLERA.

Surface soil results for the Anti-Aircraft Range 90-mm – 2 MRS and comparison values are presented in Table F-2 of Appendix F.

Sediment

Aluminum was detected in both sediment samples collected from the Anti-Aircraft Range 90-mm – 2 MRS, but no sample results are greater than available soil background concentrations. There is no USEPA sediment ecological screening value; all sample results are greater than the ecological soil screening level (50 mg/kg) for aluminum.

Copper was detected in one of the 2 samples collected, but the sample result is not greater than background. The detected sample result is less than the ecological soil screening level (40 mg/kg) and the sediment screening value (18.7 mg/kg) for copper.

Lead was detected in both samples, but no sample results are greater than background soil concentrations. All detected concentrations are less than the ecological soil screening level (50 mg/kg) and the sediment screening value (30.2 mg/kg) for lead.

Zinc was detected in both samples, but no concentrations are greater than background soil concentrations. All detected concentrations are less than the ecological soil screening level (50 mg/kg) and the sediment screening value (124 mg/kg) for zinc.

No explosives were detected in either of the 2 samples.

In sediment samples collected from the drainage ditch within the Anti-Aircraft Range 90-mm – 2 MRS, only aluminum was detected in concentrations greater than its corresponding ecological soil screening level. While there is no published USEPA Region 4 sediment screening value, a sediment no effect concentration of 73,200 mg/kg and a sediment probable effect concentration

[3] Although this soil screening level (50 mg/kg) is published in the USEPA Region IV Ecological Screening Values for Soil table (USEPA, 2001b) and references Efroymson et al., 1997, the Efroymson document lists a soil screening level of 600 mg/kg for aluminum (Efroymson et al., 1997, page 4-2).

of 58,000 mg/kg were published by USEPA (1996c).[4] Moreover, USEPA (2000b) lists chemicals expected to be bioaccumulative when found in sediments, and chemicals that are known to be found in the sediment and in animal tissues at levels associated with toxic effects. Aluminum is not identified as a bioaccumulative chemical in the USEPA (2000b) document. Finally, the detected concentration of aluminum in sediment was not above the site-specific soil background concentration for aluminum; therefore, aluminum is not selected as a COPEC in sediment.

Sediment results for the Anti-Aircraft Range 90-mm – 2 MRS and comparison values are presented in Table F-6 of Appendix F.

Surface Water

For the single surface water sample taken from the drainage ditch within the Anti-Aircraft Range 90-mm – 2 MRS, results were compared to the Georgia In-Stream Water Quality Standards (GAEPD, 2012), which are expressed based on water hardness for copper, lead, and zinc. For aluminum, for which a Georgia In-Stream Water Quality Standard was not published, the EPA National Recommended Water Quality Criteria NRWQC freshwater aquatic life criterion (expressed in terms of total recoverable metal) was used for aluminum (USEPA, 1988). These freshwater aquatic life criteria are applied to the surface water results, although, as it has been noted, the surface water intermittently existing in this drainage ditch does not constitute a viable aquatic habitat.

Aluminum was detected in the surface water sample collected from the drainage ditch within the Anti-Aircraft Range 90-mm – 2 MRS at a concentration (2.3 mg/L), which is greater than the freshwater criterion value (0.087 mg/L total recoverable metal) for aluminum.

Copper, lead, and zinc exceeded the Georgia In-Stream Water Quality Standards at an assumed water hardness of 50 mg/l $CaCO^3$, but did not exceed the standards at an assumed water hardness of 100 mg/L $CaCO^3$. Since the water hardness of the ditch water was not measured, and since EPA water quality criteria are often listed at a water hardness of 100 mg/L $CaCO^3$, the comparisons to the standards are reported below for both levels of water hardness.

Copper was detected in the surface water sample at an estimated concentration (0.0054 mg/L) slightly greater than the copper freshwater benchmark value, when it is based on a water hardness of 50 mg/L $CaCO^3$ (0.005 mg/L), but not greater than the criterion when it is based on a hardness of 100 mg/L $CaCO^3$ (0.009 mg/L).

Lead was detected in the surface water sample at a concentration (0.0025 mg/L), which is greater than the freshwater benchmark value (0.0012 mg/L) for lead based on a water hardness of 50

[4] The no effect concentration is the representative effect concentration selected from among the high no-effect-concentrations for *Hyalella azteca* and *Chironomus riparius* are presented in USEPA (1996c). It is a concentration above which statistically significant adverse biological effects always occur. Effects may occur below these levels. The probable effect concentration (PEC) is the geometric mean of the 50th percentile in the effects data set and the 85th percentile in the no effects data set. It represents the lower limit of the range of concentrations usually associated with adverse effects. A concentration greater than the PEC is likely to result in adverse effects to these organisms.

mg/L $CaCO^3$, but the same as the criterion based on a water hardness of 100 mg/L $CaCO^3$ (mg/L).

Zinc was detected at a concentration (0.075 mg/L), which is greater than the zinc freshwater benchmark value based on a water hardness of 50 mg/L $CaCO^3$ (0.065 mg/L), but not the freshwater benchmark value based on a water hardness of 100 mg/L $CaCO^3$ (0.116 mg/l).

Aluminum was detected at a concentration higher than the freshwater screening benchmark level. Aluminum is a naturally occurring inorganic element, and, in general, the freshwater aquatic criteria are based on potential exposures and toxicity for the most sensitive freshwater aquatic organisms. Since the drainage ditch is a limited aquatic habitat due to its intermittent nature, surface water in the drainage ditch at the Anti-Aircraft Range 90-mm – 2 MRS is not likely to be of ecological concern. In addition, it is noted that the detected aluminum concentration in surface water (2.3 mg/L) is also similar to the concentration reported for groundwater background (2.4 mg/L).

Surface water results for the Anti-Aircraft Range 90-mm – 2 MRS and comparison values are presented in Table F-7 of Appendix F. The available groundwater background data are also presented in Table F-7, for comparison purposes.

6.3.1.2 Hero Road Trench Area MRS

Surface Soil

Arsenic was detected in 17 of the 35 surface soil samples collected and the maximum concentration detected was 1.2 mg/kg. No sample results are greater than background (2.1 mg/kg). All sample concentrations are less than the ecological soil screening level (10 mg/kg) for arsenic.

There were no detected concentrations of 1,4-oxithiane, 1,4-dithiane, or thiodiglycol.

All soil arsenic results are less than the ecological soil screening level and are less than the site-specific arsenic background level. Therefore, there are no COPECs selected in surface soil at the Hero Road Trench Area MRS for the SLERA.

Surface soil results for the Hero Road Trench Area MRS and comparison values are presented in Table F-4 of Appendix F.

6.3.1.3 Summary of Ecological Screening Value Comparison

Based on the above assessments, there are no COPECs in surface soil, sediment, or surface water at either the Anti-Aircraft Range – 90 mm – 2 MRS or the Hero Road Trench Area MRS. Therefore, the discussions below present the problem formulation, to outline the factors related to this SLERA, but do not quantify ecological risks associated with these media at the two MRSs.

6.3.2 Preliminary Problem Formulation

The problem formulation step summarizes the ecological setting, discusses potential receptors and critical habitats, and discusses potential ecological exposure pathways.

Ecological Setting

Most of the Anti-Aircraft Range – 90 mm – 2 MRS is enclosed by a fence, relatively flat, and covered with maintained grass and buildings. It is an active ASP, with consistent daily human

activity. There are no surface water bodies on the MRS; however, sediment and surface water samples were taken from a drainage ditch that is located within the Anti-Aircraft Range 90-mm – 2 MRS. This is not an aquatic ecosystem, and fish or other aquatic organisms do not occur there. The surface water sample was taken at the north end because it contained standing water; the ditch was otherwise fairly dry at the time of sample collection.

The Hero Road Trench Area MRS lies within the cantonment area and is surrounded by a fence. The MRS consists of dense young forest and substantial undergrowth. This MRS is not currently in use. There are no surface water bodies within this MRS.

At other FTSW sites, numerous mammals and birds, or their signs, were noted by field personnel (SAIC, 1999). These species included: red-headed woodpecker, turkey vulture, deer, coyote, armadillo, and raccoon. Small mammals (e.g., shrews, voles, and mice), birds (e.g., robins, sparrows, and warblers), and mammals that are attracted to or tolerate humans (e.g., raccoons, opossums) are expected to occur in the forests adjacent to the two MRSs, and possibly within the Hero Road Trench Area MRS. Most wildlife species are unlikely to nest or forage at the Anti-Aircraft Range 90-mm – 2 MRS because of the consistent human activity that occurs at that location.

Potential Receptors and Critical Habitats

Potential ecological receptors for soil, and for sediment/surface water in the Anti-Aircraft Range 90-mm – 2 MRS drainage ditch, include terrestrial invertebrates, mammals, and birds. Surrogate species that may represent the generic small mammal and bird receptors are, respectively, the short-tailed shrew and the American robin,[5] consistent with past ecological risk assessments conducted at FTSW (e.g., SAIC, 1999).

There are no aquatic receptors, given the limited surface water habitat in the drainage ditch, and no critical habitats have been identified for either the Anti-Aircraft Range 90-mm – 2 MRS or the Hero Road Trench Area MRS.

Potential Ecological Exposure Pathways

The potential soil, sediment, and surface water exposure pathways for terrestrial organisms include direct contact, such as ingestion or dermal contact, or indirect contact, such as bioaccumulation of contaminants through the food chain.

Preliminary Assessment Endpoint

The preliminary assessment endpoint for surface soil, and sediment and surface water in the Anti-Aircraft Range 90-mm – 2 MRS drainage ditch, is protection of small mammals and birds from adverse effects.

6.3.3 Preliminary Ecological Effects Evaluation

In general, a preliminary ecological effects evaluation would include a discussion of the potential toxicity of the COPECs that are detected in concentrations greater than screening criteria for

[5] The home range of the shrew is small, and robins are territorial during the spring mating season. Earthworms and other soil-dwelling invertebrates can represent a large percentage of both species' diets (SAIC, 1999).

potential ecological receptors. However, since there were no COPECs identified in the screening step (Section 6.3.1), there are unlikely to be levels of contaminants in surface soil, sediment, or surface water that could cause adverse effects for the ecological receptors that may come in contact with these media at either the Anti-Aircraft Range 90-mm – 2 MRS or the Hero Road Trench Area MRS.

6.3.4 Preliminary Exposure Assessment

In general, a preliminary exposure assessment would estimate the nature, extent, and magnitude of potential exposure of receptors to COPECs that are present at or migrating from each MRS. Potential exposure pathways for terrestrial receptors include:

- Ingestion of soil
- Dermal contact with soil
- Uptake of contaminants through the food chain

However, since there were no COPECs identified in the screening step (Section 6.3.1), exposures of concern at either MRS for ecological receptors is unlikely.

6.3.5 Preliminary Risk Characterization

A preliminary risk characterization would be completed only if there were analytes detected at concentrations above screening levels, and thus were selected as COPECs. Since no COPECs were selected in surface soil, sediment, or surface water, a quantitative assessment of hazard is not necessary.

6.4 Risk Assessment Conclusions

6.4.1 Human Health Risk Assessment Conclusions

No COPCs are selected in surface soil or sediment for the Anti-Aircraft Range 90-mm – 2 MRS, and only aluminum is selected as a COPC in subsurface soil at that MRS. All HQs are less than 1 for aluminum (Table F-16, Appendix F), which indicates that non-cancer hazards would not occur due to soil exposure under the theoretical future construction workers, future adult residents, and future child residents scenarios.

At the Anti-Aircraft Range 90-mm – 2 MRS, only aluminum in subsurface soil, at a detected concentration of 30,200 mg/kg is greater than its corresponding generic USEPA SSL for the Protection of Groundwater (23,000 mg/kg) in one sample out of 11; however, this maximum detected value is within the same order of magnitude as the SSL, and due to the relatively large allowable concentration of aluminum in soil (USEPA, 2014b), aluminum is not generally considered a contaminant of great concern for leaching to groundwater.

No COPCs are selected in surface or subsurface soil at the Hero Road Trench Area MRS; therefore, evaluation of this MRS is not necessary in the HHRA. At the Hero Road Trench Area MRS, arsenic was detected at a concentration greater than its corresponding generic USEPA SSL for the Protection of Groundwater; however, all detects of arsenic at this MRS are below background levels.

6.4.2 Screening Level Ecological Risk Assessment Conclusions

No COPECs are identified in the screening step of the SLERA (Section 6.3.1) using comparisons to conservative ecological screening levels and background concentrations for surface soil, sediment, and surface water. Thus, there are unlikely to be levels of contaminants in surface soil, sediment, or surface water that could cause adverse effects for the ecological receptors that may come in contact with these media at either the Anti-Aircraft Range 90-mm – 2 MRS or the Hero Road Trench Area MRS. Further refinement of the SLERA in a more detailed ecological risk assessment (e.g., using receptor-specific exposure parameters) is therefore not necessary.

6.5 MEC Hazard Assessment

The MEC HA methodology was used to assess potential explosive hazards to human receptors at the Anti-Aircraft Range 90-mm – 2 MRS; per the Work Plan (ERT, 2012) a MEC HA was not completed for the Hero Road Trench Area MRS as no explosive hazard exists. MEC HA is the 'explosive hazard' component of a HHRA, intended to evaluate the potential explosive hazard associated with an MRS, given current conditions and under various potential cleanup scenarios, land use activities, and land use control alternatives. The *MEC Hazard Assessment Methodology, Interim* (DoD, 2008), provides the methodology for assessing explosive hazards to human receptors at MRSs.

The results of the MEC HA are used to evaluate potential munitions response alternatives. The risk characterization is used to communicate the magnitude of the risk at the location and the primary causes of that risk, and to aid in the development, evaluation, and selection of appropriate response alternatives. The MEC HA reflects the difference between chronic environmental contaminant exposure risk and acute MEC explosive hazards. If MEC is known or suspected to be present, a munitions response typically will be required. The munitions response may include further investigation, cleanup of MEC through a removal or remedial action, including land use controls (LUCs), or LUCs alone. LUCs may include educational programs and restrictions on land use activities. The MEC HA addresses human health and safety concerns associated with potential exposure to MEC at MRSs.

Appendix I presents the MEC HA scoring for the Anti-Aircraft Range 90-mm – 2 MRS where three MEC items were found in the subsurface during the RFI. The individual score sheets are summarized in Table 6-2 below.

Table 6-2. MEC HA Scores

Activity / Response Alternative	Anti-Aircraft Range 90-mm – 2 MRS	
	Hazard Level	Score
Current Use Activities	4	485
Response Alternative 1: LUCs	4	485
Response Alternative 2: Subsurface Clearance	4	405

The Anti-Aircraft Range 90-mm – 2 MRS score is in the hazard level 4 range for current use activities. The ranges and definitions are shown below.

- Hazard Level 1 represents sites with the highest hazard potential (840 - 1,000)
- Hazard Level 2 represents sites with a high hazard potential (725 - 835)
- Hazard Level 3 represents sites with a moderate hazard potential (530 - 720)
- Hazard Level 4 represents sites with low hazard potential (125 - 525)

In general, the inputs to the MEC HA are very conservative. There may be considerable uncertainty for some of the inputs that drive the hazard levels (e.g., identifying the number of people and contact time [hours per year] associated with an MRS is based on broad estimations). As a result, the MEC HA scoring differs from the "moderate to high" determination discussed in Section 5.2.2, which is based on UXO Estimator software outputs and Department of Defense Explosive Safety Manual (DoD, 20010) guidance; this determination is used by the Army to determine the severity of MEC hazard at an MRS.

All inputs to the MEC HA scoring are contained on the score sheets in Appendix I with explanations and input source.

Munitions Response Site Prioritization Protocol (MRSPP) scores were also prepared and are contained in Appendix H. The MRSPP is a tool used to rank sites for further action. At the RFI stage, the intent is to update the MRSPP ratings from the CS report (Malcolm Pirnie, 2007). Based on the findings of this RFI, the Anti-Aircraft Range 90-mm – 2 MRS was assigned an MRSPP rating of 4 and the Hero Road Trench Area MRS was given a rating of No Known or Suspected Hazard.

7.0 CONTAMINANT FATE AND TRANSPORT FOR MUNITIONS CONSTITUENTS

Based on conclusions from the HHRA and SLERA (Section 6.0), for both MRSs there are:

- No human health risks associated with potential human contact with surface or subsurface soil, surface water, sediments, or groundwater; and,
- No detailed ecological risk assessments were warranted.

Therefore, no contaminant fate and transport analysis for MCs at either MRS is warranted. The subsequent sections provide specific information to support this rationale.

7.1 Soil

Residential soil RSLs were used as screening levels for surface and subsurface soil at the MRSs. The use of these residential RSLs is conservative, particularly for the Anti-Aircraft Range 90-mm – 2 MRS as site use at this MRS is not expected to change to residential in the future. For subsurface soil, only aluminum is detected at levels greater than both the residential soil RSLs and the site-specific background, although it is not greater than the industrial soil RSLs, which are more appropriate for this MRS. Therefore, aluminum was selected as a COPC for the HHRA in subsurface soil for the Anti-Aircraft Range 90-mm – 2 MRS, and was evaluated for future construction workers and future residents (Section 6.2.1). The HHRA concluded that all HQs are less than 1 for this COPC, indicating that non-cancer hazards would not occur due to soil exposure under these theoretical future scenarios.

No COPCs were selected in surface or subsurface soil at the Hero Road Trench Area MRS; therefore, evaluation of this MRS was not necessary in the HHRA.

No explosives compounds were detected in the Anti-Aircraft Range 90-mm – 2 MRS. No degradation products associated with the dilute agent CAIS kits were detected in any of the soil samples collected at the Hero Road Trench Area MRS, except for arsenic, which was detected at levels below background.

No COPECs were identified in the screening step of the SLERA (Section 6.3.1) using comparisons to conservative ecological screening levels and background concentrations for surface soil. Thus, there are unlikely to be levels of contaminants in surface soil that could cause adverse effects for the ecological receptors that may come in contact with these media at either MRS.

7.2 Sediment

Residential soil RSLs for screening of sediment concentrations were used and are extremely conservative, since the likelihood of sediment contact in the Anti-Aircraft Range 90-mm – 2 MRS is low as site use at this MRS is not expected to change to residential in the future and very little sediment exists within the MRS.

Concentrations of select metals detected in sediment samples are below the residential RSLs as well as ecological screening criteria; the ecological screening criteria are detailed in Section 6.3.1.

7.3 Surface Water

Aluminum, copper, lead, and zinc were detected in the only surface water sample collected from the drainage ditch within the Anti-Aircraft Range 90-mm – 2 MRS; however, because water exists at this location only intermittently, potential exposures to contaminants in water at this location are expected to be low for human receptors. To evaluate potential ecological risks, surface water results were compared to the Georgia In-Stream Water Quality Standards (GAEPD, 2012) at two different hardness levels or the USEPA freshwater benchmark for aluminum (USEPA, 1988) , as discussed in Section 6.3.1.1, although, as it has been noted, the surface water intermittently existing in this drainage ditch does not constitute a viable aquatic habitat.

7.4 Groundwater

Groundwater samples were not collected at either MRS. At the Anti-Aircraft Range 90-mm – 2 MRS, only aluminum in subsurface soil, at a detected concentration of 30,200 mg/kg, is greater than its corresponding generic USEPA SSL for the Protection of Groundwater in one sample out of 11; however, this maximum detected value is within the same order of magnitude as the SSL, and due to the relatively large allowable concentration of aluminum in soil (USEPA, 2014b), aluminum is not generally considered a contaminant of great concern for leaching to groundwater.

At the Hero Road Trench Area MRS, arsenic was detected at a concentration greater than its corresponding generic USPEA SSL for the Protection of Groundwater; however, all detects of arsenic at this MRS were below background levels

Domestic use of shallow groundwater does not currently occur at FTSW. Based on the hydrogeological information detailed in SAIC, 1999 and discussed in Section 2.1.6, MC in shallow groundwater is not likely to migrate to the deeper aquifer that is used as a water supply for FTSW.

8.0 SUMMARY OF RESULTS

8.1 Summary

8.1.1 Nature and Extent of Contamination

8.1.1.1 MC

Environmental sampling of soil, surface water, and sediment, for MC, was completed for this RFI. A total of 101 surface and subsurface soil samples were collected and analyzed for select metals and explosives at the Anti-Aircraft Range 90-mm – 2 MRS and degradation products associated with the dilute agent CAIS kits, which include arsenic, 1,4-oxithiane, 1,4-dithiane, and thiodiglycol at the Hero Road Trench Area MRS. No explosives compounds were detected in any sample. Aluminum, copper, lead, and zinc were detected, but only aluminum is detected above residential RSLs and background levels in 8 and 5 samples, respectively, collected from the Anti-Aircraft Range 90-mm – 2 MRS. No metals were detected above ecological screening levels. Arsenic was detected at levels below background at the Hero Road Trench Area MRS and no degradation products associated with dilute agent CAIS kits were detected. Based on the DGM results and the trenching that was conducted at the areas that were most likely to be burial pits, there is no physical evidence that dilute agent CAIS kits were improperly buried at the Hero Road Trench Area MRS.

For the RFI, two sediment samples and one co-located surface water sample were collected from a drainage ditch within the Anti-Aircraft Range 90-mm – 2 MRS and analyzed for select metals and explosives at the request of GAEPD. Aluminum, copper, lead, and zinc were detected in these samples, but none were found in concentrations above residential RSLs or ecological screening levels. No explosives were detected in the sediment or surface water samples.

Section 8.1.2 below discusses the results with regard to whether these findings represent risks posed to human health or the environment.

8.1.1.2 MEC

A comprehensive, statistically based DGM and intrusive investigation of the Anti-Aircraft Range 90-mm – 2 MRS was conducted at FTSW, including approximately 13,630 feet of transects, 24 grids, and 1,199 anomalies intrusively investigated. Three MEC items (40-mm rounds) were found in the subsurface at the Anti-Aircraft Range 90-mm – 2 MRS.

The results of the DGM and intrusive investigations indicate that there is a “moderate to high” probability of encountering MEC within the subsurface of the Anti-Aircraft Range 90-mm – 2 MRS.

8.1.2 Risk Assessment

The HHRA evaluated potential current and future exposure of receptors to site media. This evaluation demonstrated that MC in the surface soil, subsurface soil, sediment, and surface water do not pose a threat to human health.

Aluminum was the only COPC identified for subsurface soil in the Anti-Aircraft Range 90-mm – 2 MRS (Section 6.2.1); however, all HQs for aluminum are less than 1, which indicates that non-cancer hazards would not occur. Arsenic in the Hero Road Trench Area MRS does not pose a threat to human health, as detected concentrations were below background.

At the Anti-Aircraft Range 90-mm – 2 MRS, only aluminum in subsurface soil, at a detected concentration of 30,200 mg/kg, was greater than its corresponding generic USEPA SSL (23,000 mg/kg) for the Protection of Groundwater in one sample out of 11; however, this maximum detected value is within the same order of magnitude as the SSL, and aluminum is not generally considered a contaminant of great concern for leaching to groundwater.

No COPECs were identified in the screening step of the SLERA (Section 6.3.1) using comparisons to conservative ecological screening levels and background concentrations for surface soil, sediment, and surface water. Further refinement of the SLERA in a more detailed ecological risk assessment (e.g., using receptor-specific exposure parameters) was therefore not necessary.

8.1.3 MEC Hazard Assessment

The MEC HA methodology was used to assess potential explosive hazards to human receptors at the Anti-Aircraft Range 90-mm – 2 MRS. The MEC HA scored in the hazard level 4 range. The MRS-4 score is a function of the size and location of the three MEC items that were found during the RFI (40-mm rounds, found in the subsurface). These items were properly disposed of by FTSW EOD (Appendix C-5). Based on the findings of this RFI, the Anti-Aircraft Range 90-mm – 2 MRS was given a MRSPP rating of 4 and the Hero Road Trench Area MRS was given a rating of No Known or Suspected Hazard.

8.2 Conclusions and Recommendations

The nature and extent of MC contamination and MEC hazards have been characterized, as described above. Based on the results of this RFI and the associated human health and ecological risk assessments, there is no release of MC at either the Anti-Aircraft Range 90-mm - 2 MRS or the Hero Road Trench Area MRS. A release of MEC has been found at the Anti-Aircraft Range 90-mm – MRS; this release is associated with a possible subsurface soil explosive hazard risk to humans. Based on the results of this investigation, a Corrective Measures Study is recommended for potential MEC hazards at the Anti-Aircraft Range 90-mm - 2 MRS; no further action is recommended for the Hero Road Trench Area MRS.

9.0 REFERENCES

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Appendix B: DGM Data

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Appendix J: RCRA Part B Permit

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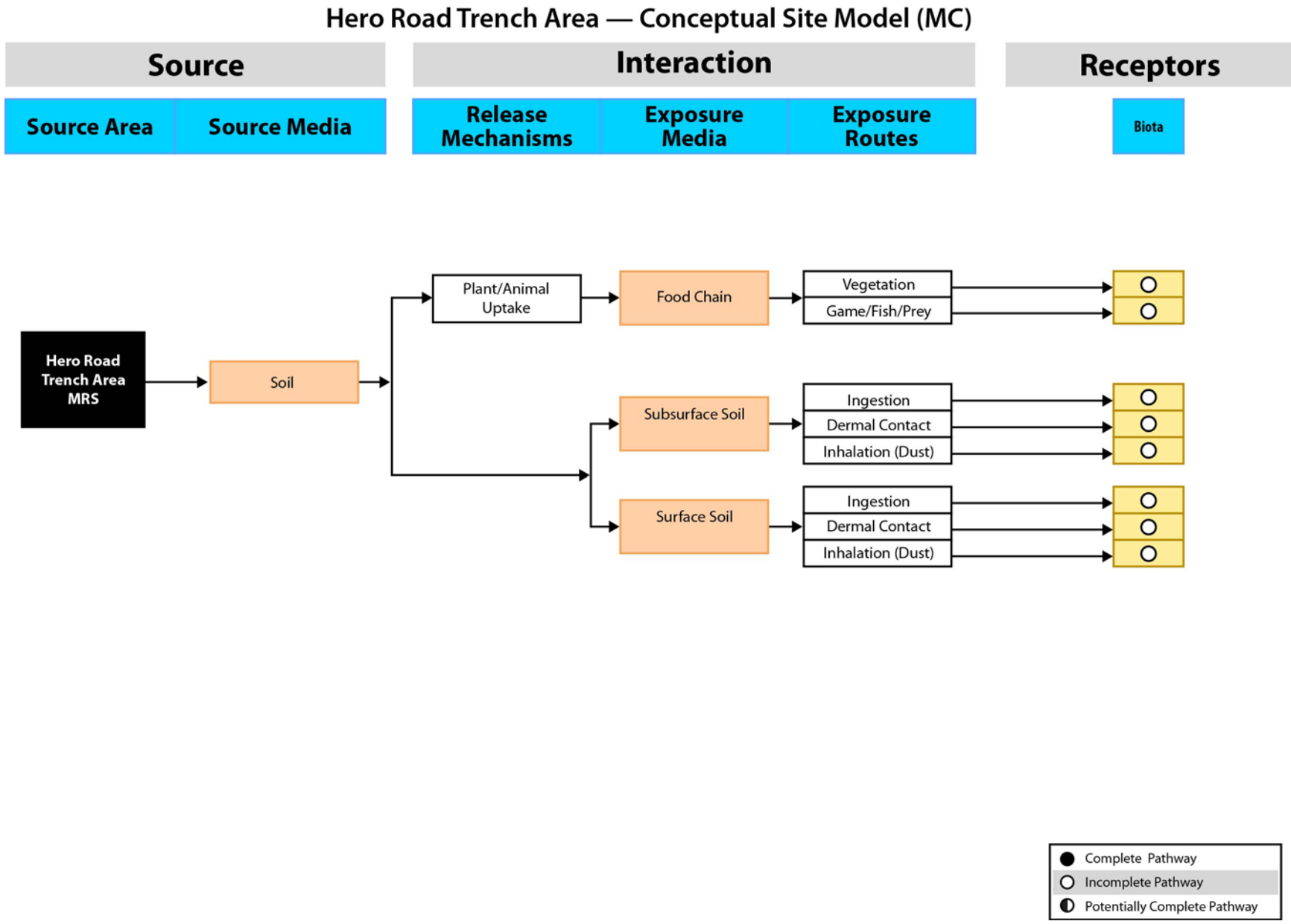


Figure 18
SLERA CSM Hero Road Trench Area MRS

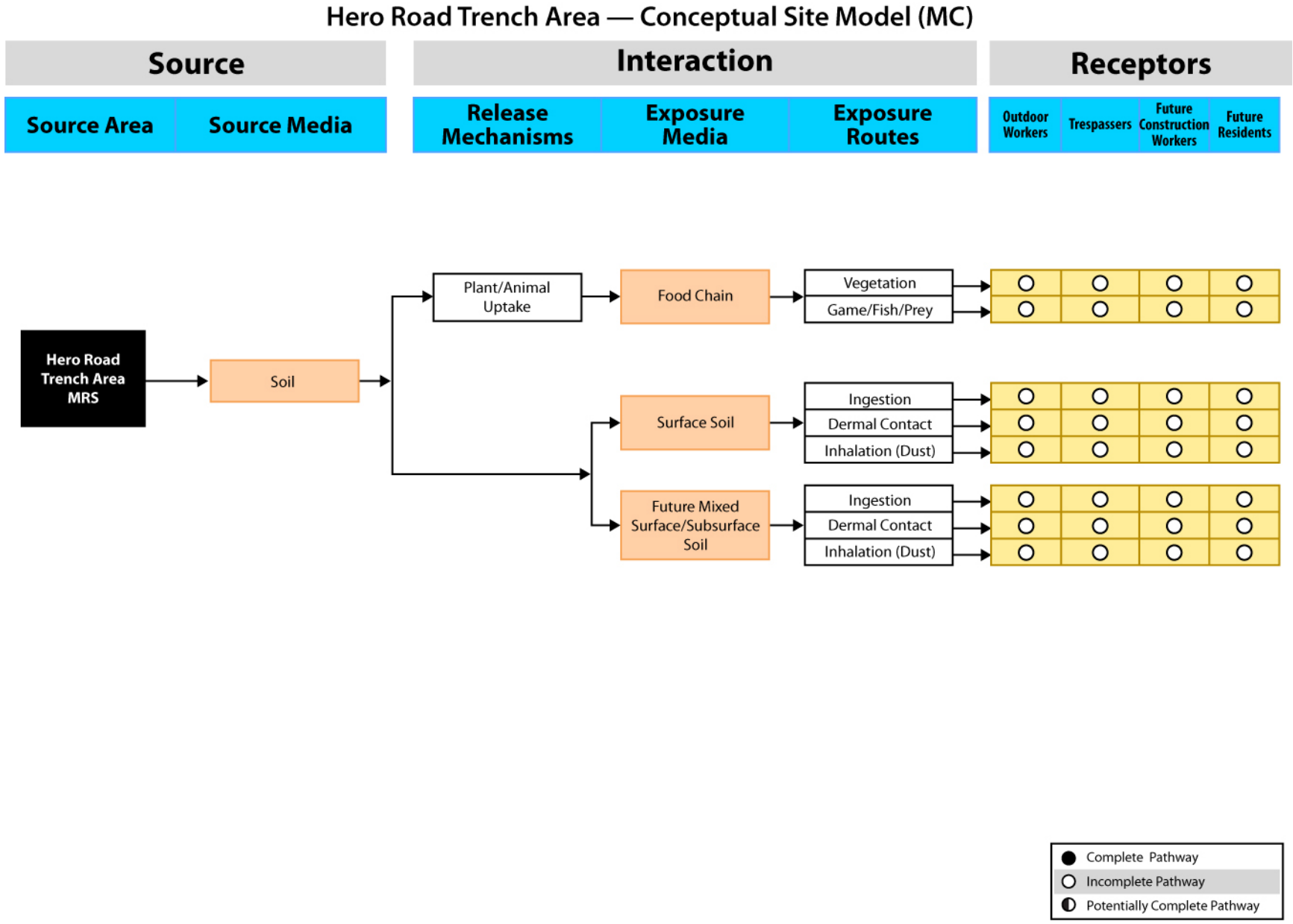


Figure 17
HHRA CSM Hero Road Trench Area MRS

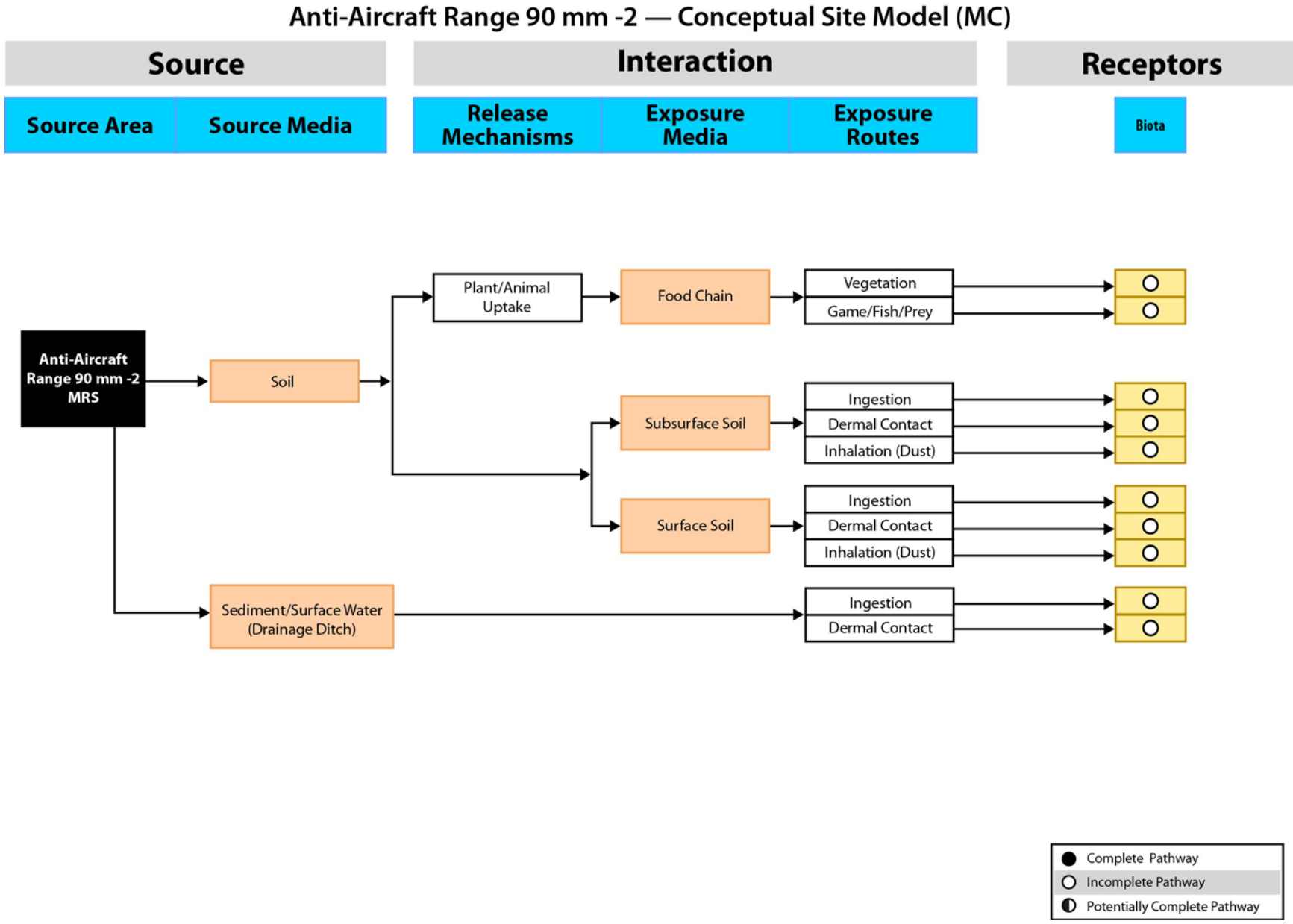


Figure 16
SLERA CSM Anti-Aircraft Range 90-mm - 2 MRS

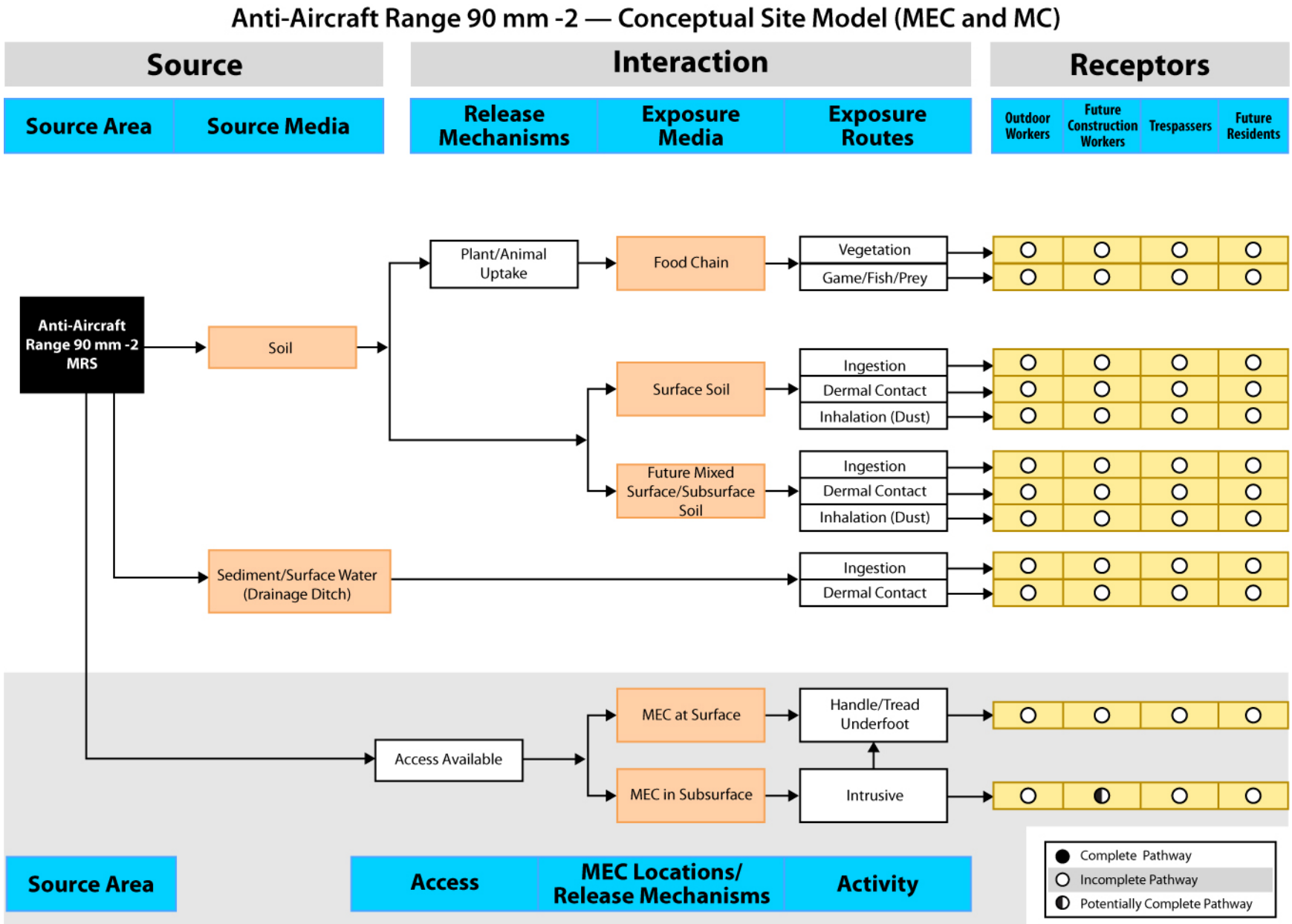
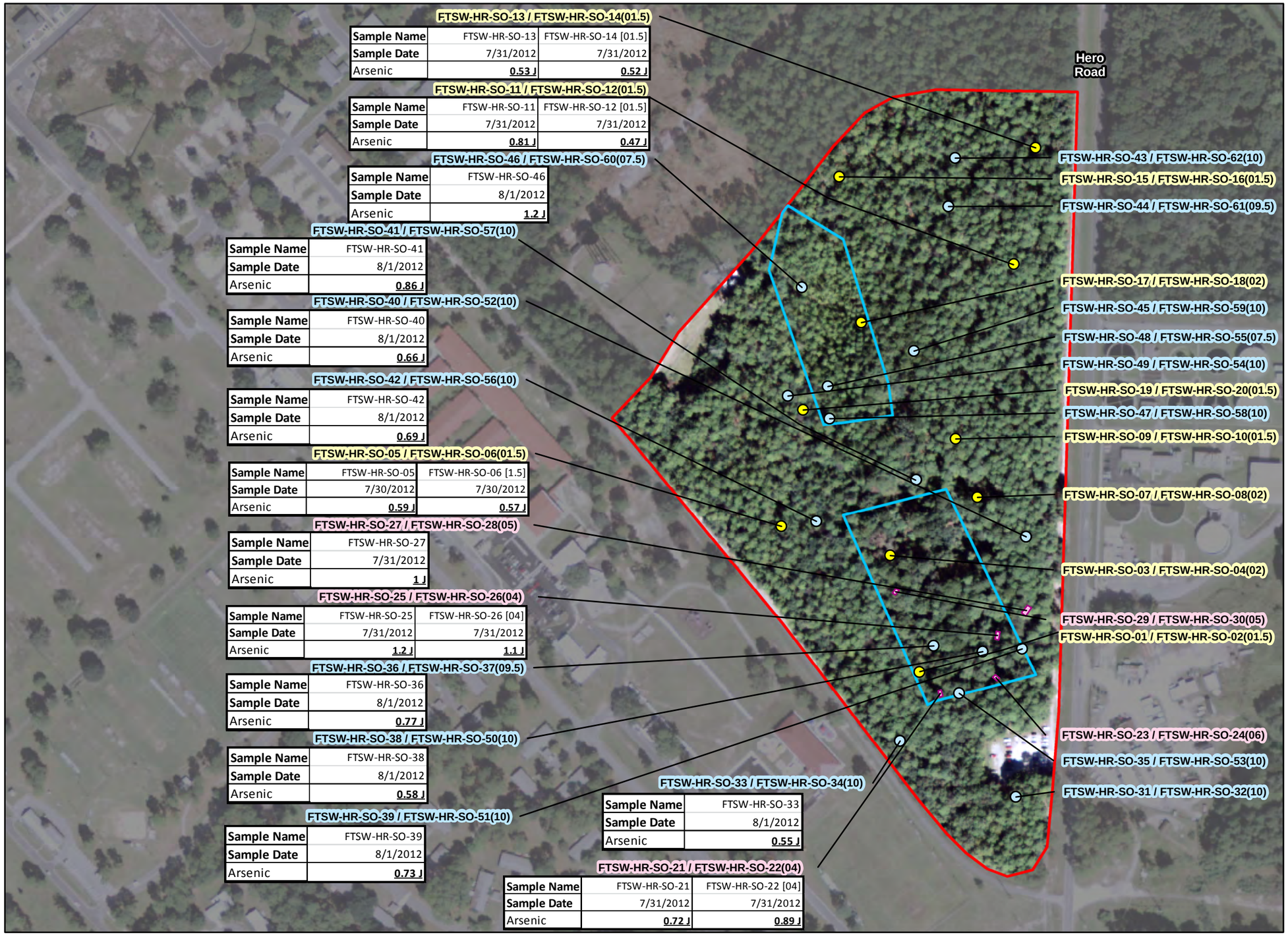


Figure 15
HHRA CSM Anti-Aircraft Range 90-mm - 2 MRS



Screening Levels

Parameter	SOIL BKGD	RI SOIL BKGD	USEPA RES SOIL RSL	USEPA IND SOIL RSL	USEPA GW SSL	USEPA ECO SOIL
Arsenic	2.1	NA	0.67	3	0.29	10

Data Label Definitions

value	bold value above USEPA RES SOIL RSL
value	underlined value above USEPA GW SSL
value	italicized value above USEPA ECO SOIL
value	highlighted value above BKGD and/or RI BKGD
mg/kg	milligrams per kilogram
SOIL BKGD	Fort Stewart background soil data (value is two times the average background result) from Phase II RFI Appendix F (SAIC, 1999)
RI SOIL BKGD	Fort Stewart background soil data (value is two time the average background result) from current sampling program
USEPA RES SOIL RSL	USEPA RSL for Residential Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens
USEPA IND SOIL RSL	USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.
USEPA GW SSL	USEPA Protection of Groundwater Soil Screening Levels (SSLs) (May 2014)
USEPA ECO SOIL	USEPA Region IV Ecological Screening Values for Soil (WSRC-TR98-00110)
NA	not sampled in current program
J	estimated value

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ERT
Date: August 2014

Legend

- Biase Surface and Subsurface Soil Samples
- Random Surface and Subsurface Soil Samples
- Trench Surface and Subsurface Samples
- General Ground Scar Outlines
- MRS Boundary MRS Boundary
- Other Than Operational Range Area

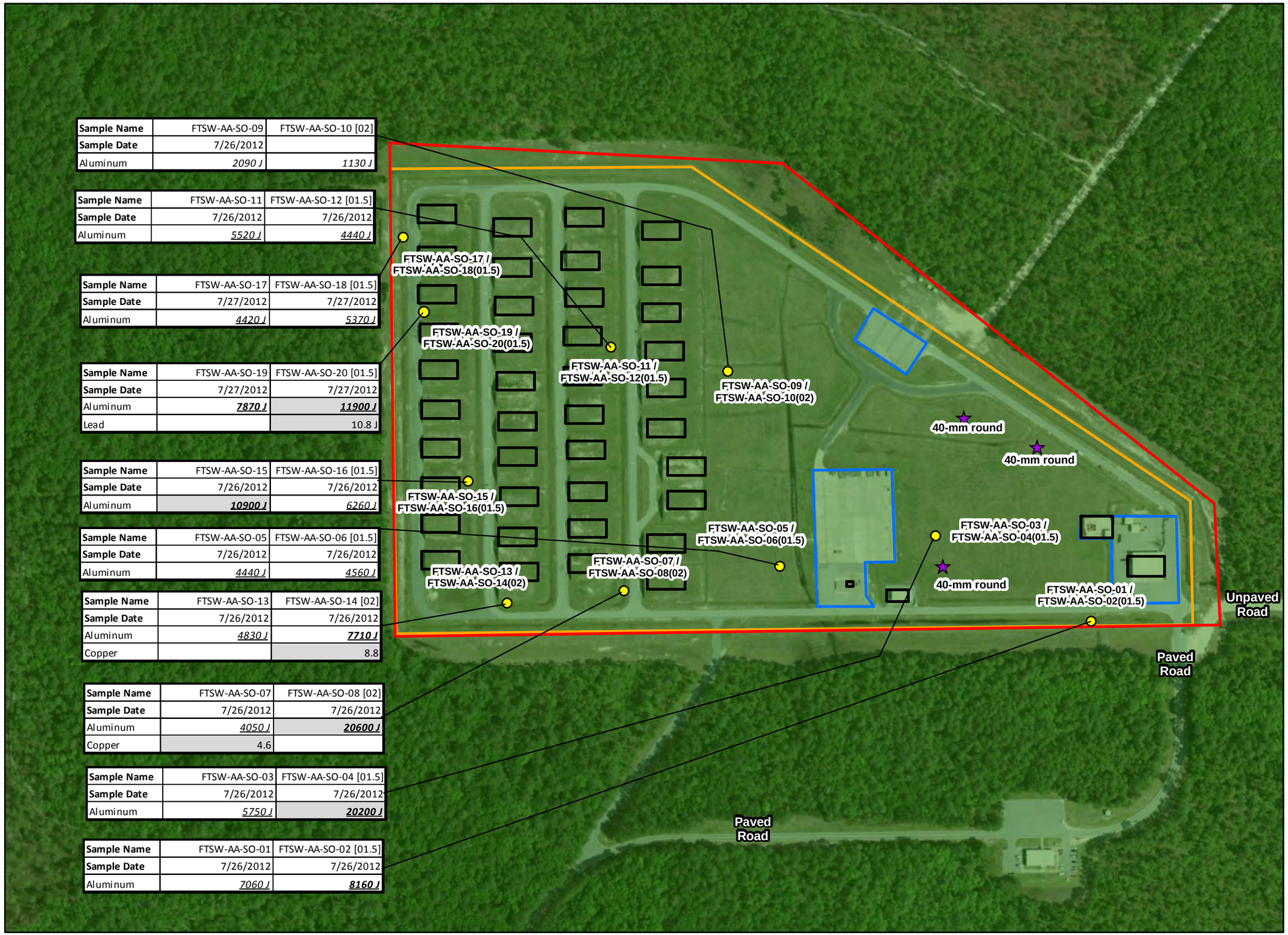
N

0 162.5 325 Feet

Imagery Source: National Agriculture Imagery Program (NAIP), 2009

Figure 14
Soil Sample Results Above Screening Levels:
Hero Road Trench Area
(FTSW-008-R-01) MRS
Fort Stewart, Georgia

Revised August 25, 2014



Sample Name	FTSW-AA-SO-09	FTSW-AA-SO-10 [02]
Sample Date	7/26/2012	
Aluminum	*2090 J*	*1130 J*

Sample Name	FTSW-AA-SO-11	FTSW-AA-SO-12 [01.5]
Sample Date	7/26/2012	7/26/2012
Aluminum	*5520 J*	*4440 J*

Sample Name	FTSW-AA-SO-17	FTSW-AA-SO-18 [01.5]
Sample Date	7/27/2012	7/27/2012
Aluminum	*4420 J*	*5370 J*

Sample Name	FTSW-AA-SO-19	FTSW-AA-SO-20 [01.5]
Sample Date	7/27/2012	7/27/2012
Aluminum	***7870 J***	***11900 J***
Lead		10.8 J

Sample Name	FTSW-AA-SO-15	FTSW-AA-SO-16 [01.5]
Sample Date	7/26/2012	7/26/2012
Aluminum	***10900 J***	*6260 J*

Sample Name	FTSW-AA-SO-05	FTSW-AA-SO-06 [01.5]
Sample Date	7/26/2012	7/26/2012
Aluminum	*4440 J*	*4560 J*

Sample Name	FTSW-AA-SO-13	FTSW-AA-SO-14 [02]
Sample Date	7/26/2012	7/26/2012
Aluminum	*4830 J*	***7710 J***
Copper		8.8

Sample Name	FTSW-AA-SO-07	FTSW-AA-SO-08 [02]
Sample Date	7/26/2012	7/26/2012
Aluminum	*4050 J*	***20600 J***
Copper	4.6	

Sample Name	FTSW-AA-SO-03	FTSW-AA-SO-04 [01.5]
Sample Date	7/26/2012	7/26/2012
Aluminum	*5750 J*	***20200 J***

Sample Name	FTSW-AA-SO-01	FTSW-AA-SO-02 [01.5]
Sample Date	7/26/2012	7/26/2012
Aluminum	*7060 J*	***8160 J***

Screening Levels

Parameter	SOIL BKGD	RI SOIL BKGD	USEPA RES SOIL RSL	USEPA IND SOIL RSL	USEPA GW SSL	USEPA ECO SOIL
Aluminum	NS	10,273	7,700	110,000	3,000	50
Copper	NS	3.1	310	4,700	46	40
Lead	8.8	12.7	400	800	14	14

Data Label Definitions

value	bold value above USEPA RES SOIL RSL
value	underlined value above USEPA GW SSL
value	italicized value above USEPA ECO SOIL
value	highlighted value above BKGD and/or RI BKGD
mg/kg	milligrams per kilogram
SOIL BKGD	Fort Stewart background soil data (value is two times the average background result) from Phase II RFI Appendix F (SAIC, 1999)
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USEPA IND SOIL RSL	USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.
USEPA GW SSL	USEPA Protection of Groundwater Soil Screening Levels (SSLs) (May 2014)
USEPA ECO SOIL	USEPA Region IV Ecological Screening Values for Soil (WSRC-TR98-00110)
NS	none specified
J	estimated value

Legend

- Random Surface and Subsurface Soil Sample Locations
- MEC Item
- MRS Boundary
- Structures
- Fence
- Parking Area
- Operational Range Area

0 162.5 325 Feet

N

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Date: August 2014

Imagery Source: ArcGIS Online, 2014

Figure 13
Soil Sample Results Above Screening Levels:
Anti-Aircraft Range 90-mm - 2
(FTSW-002-R-01) MRS
Fort Stewart, Georgia

Revised August 25, 2014



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Legend

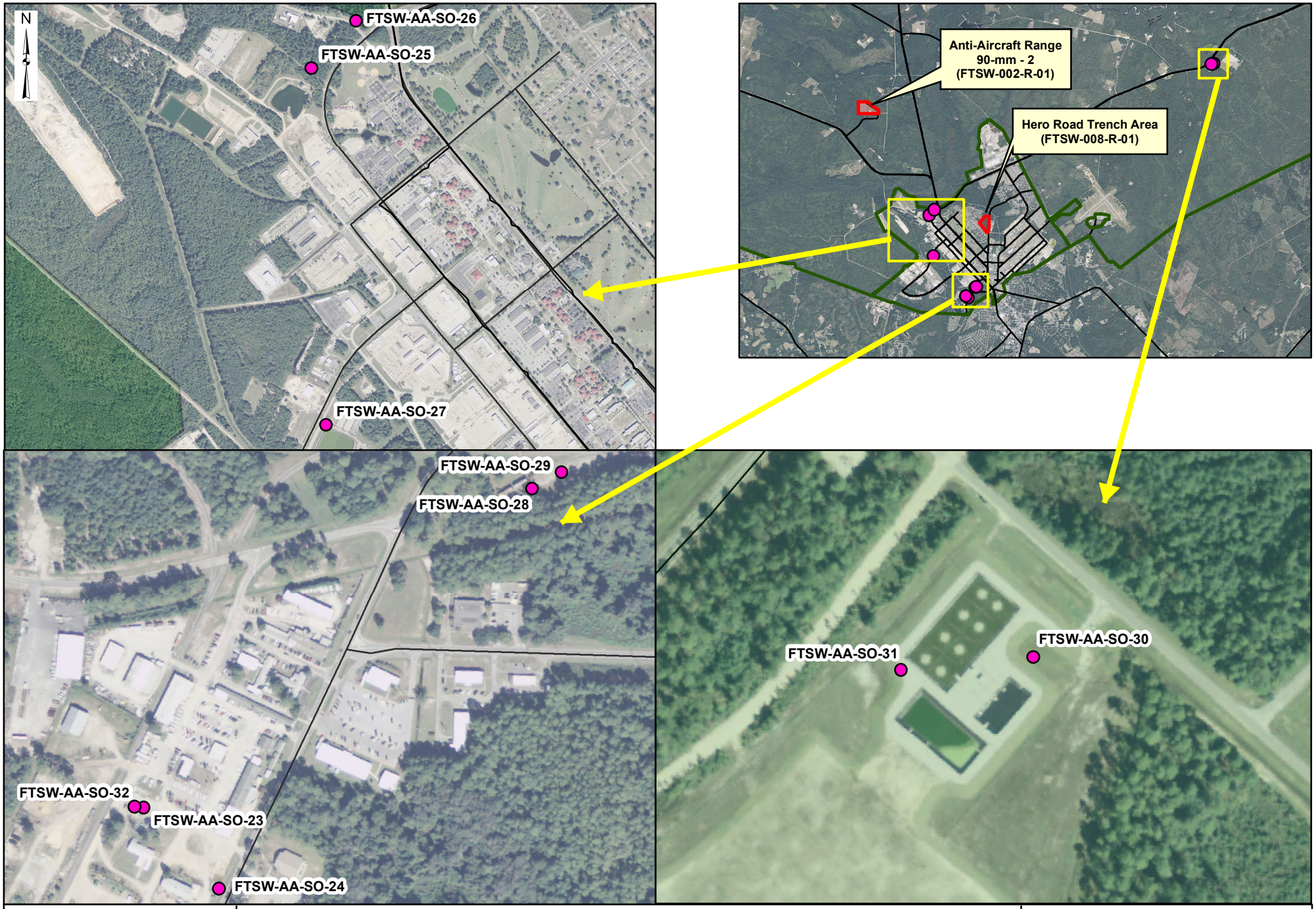
0 150 300 Feet

MRS Boundary
Operational Range Area
IVS Location
DGM Coverage
Parking Areas
Fence
MEC item
projectile MD item
fuze/fuze part
small arms MD
G03 grid number
frag/cartridge/other

Date: March 2013

Imagery Source: National Agriculture Imagery Program (NAIP) 2009

Figure 12
Anti-Aircraft Range MRS
MD and MEC Finds
Fort Stewart, Georgia



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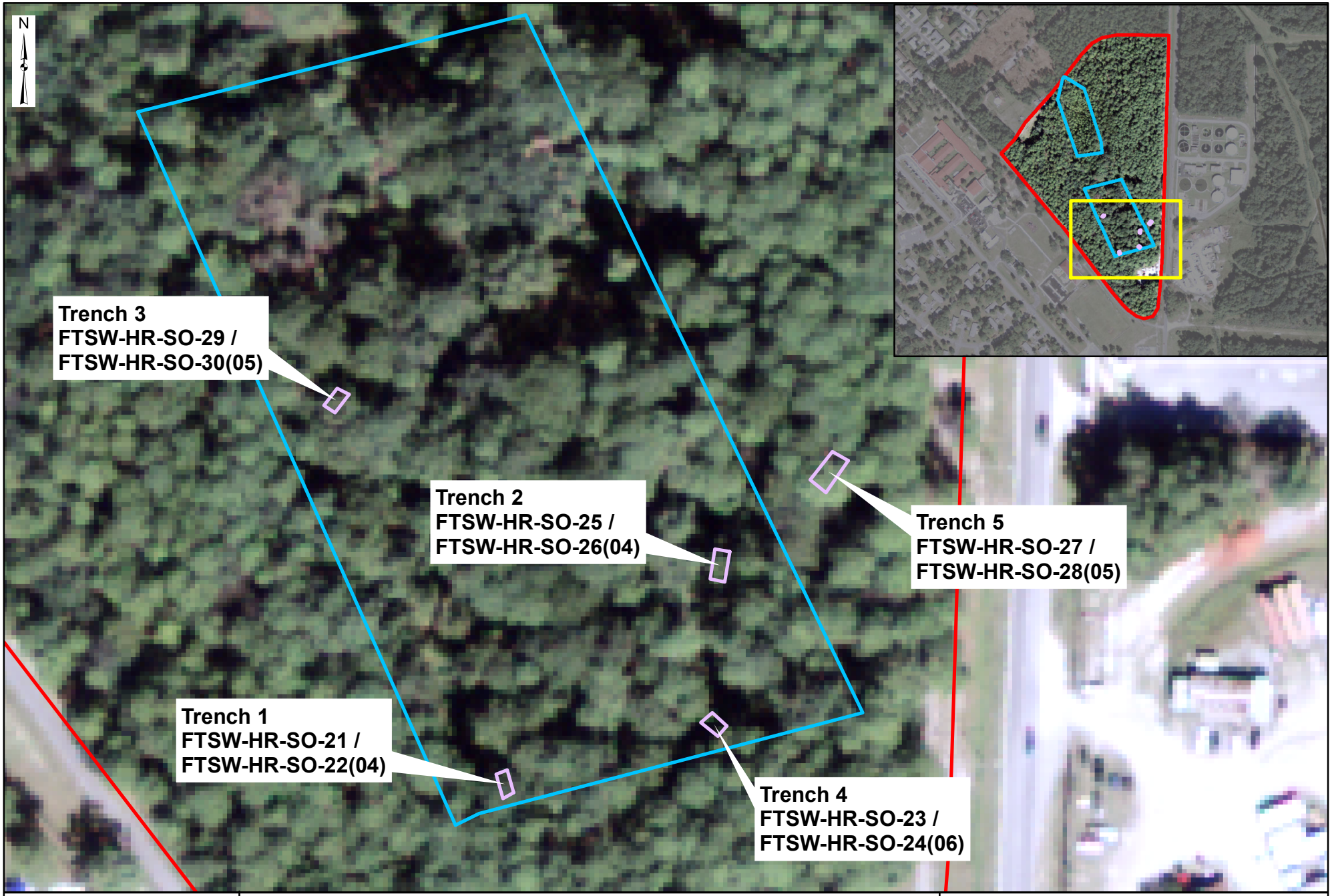
Legend

- MRS Areas
- Operational Range Area
- Background Soil Sampling Location
- Major and State Highways
- Other than Operational Range Area

Date: March 2013

Imagery Source: Google Earth 2008

Figure 11
Background
Soil Sample Locations
Fort Stewart, Georgia



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Legend

MRS Boundary

General Ground Scar Outlines

0 45 90 Feet

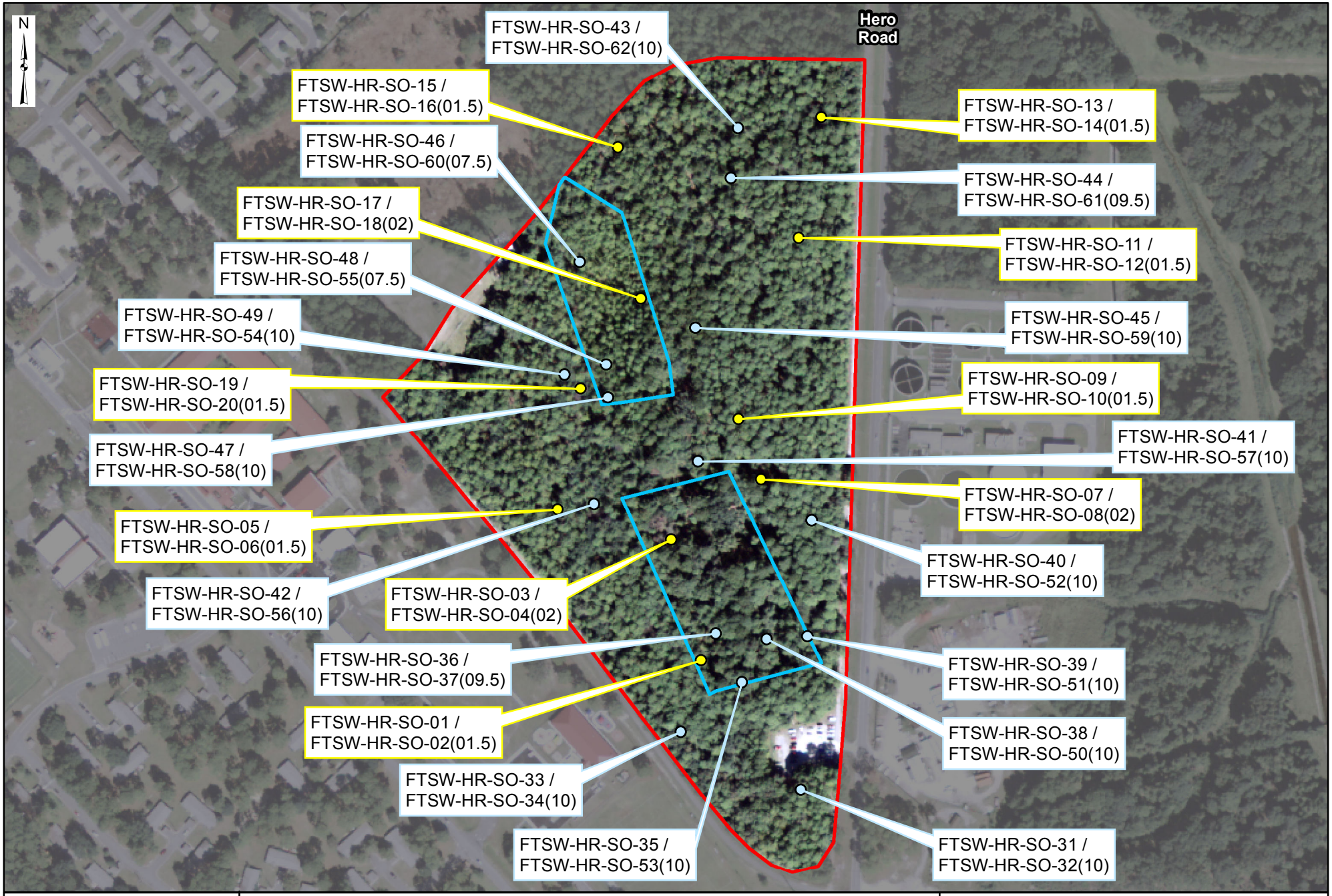
Other than Operational Range Area

Trenches

Date: March 2013

Imagery Source: National Agriculture Imagery Program (NAIP) 2009

Figure 10
Trench Locations and Sampling:
Hero Road Trench Area
(FTSW-008-R-01) MRS
Fort Stewart, Georgia



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0 175 350 Feet

MRS Boundary

Other than Operational Range Area

General Ground Scar Outlines

Biased Surface and Subsurface Soil Samples

Random Surface and Subsurface Soil Samples

Date: March 2013

Imagery Source: National Agriculture Imagery Program (NAIP) 2009

Figure 9
Soil Sampling Locations:
Hero Road Trench Area
(FTSW-008-R-01) MRS
Fort Stewart, Georgia



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Legend

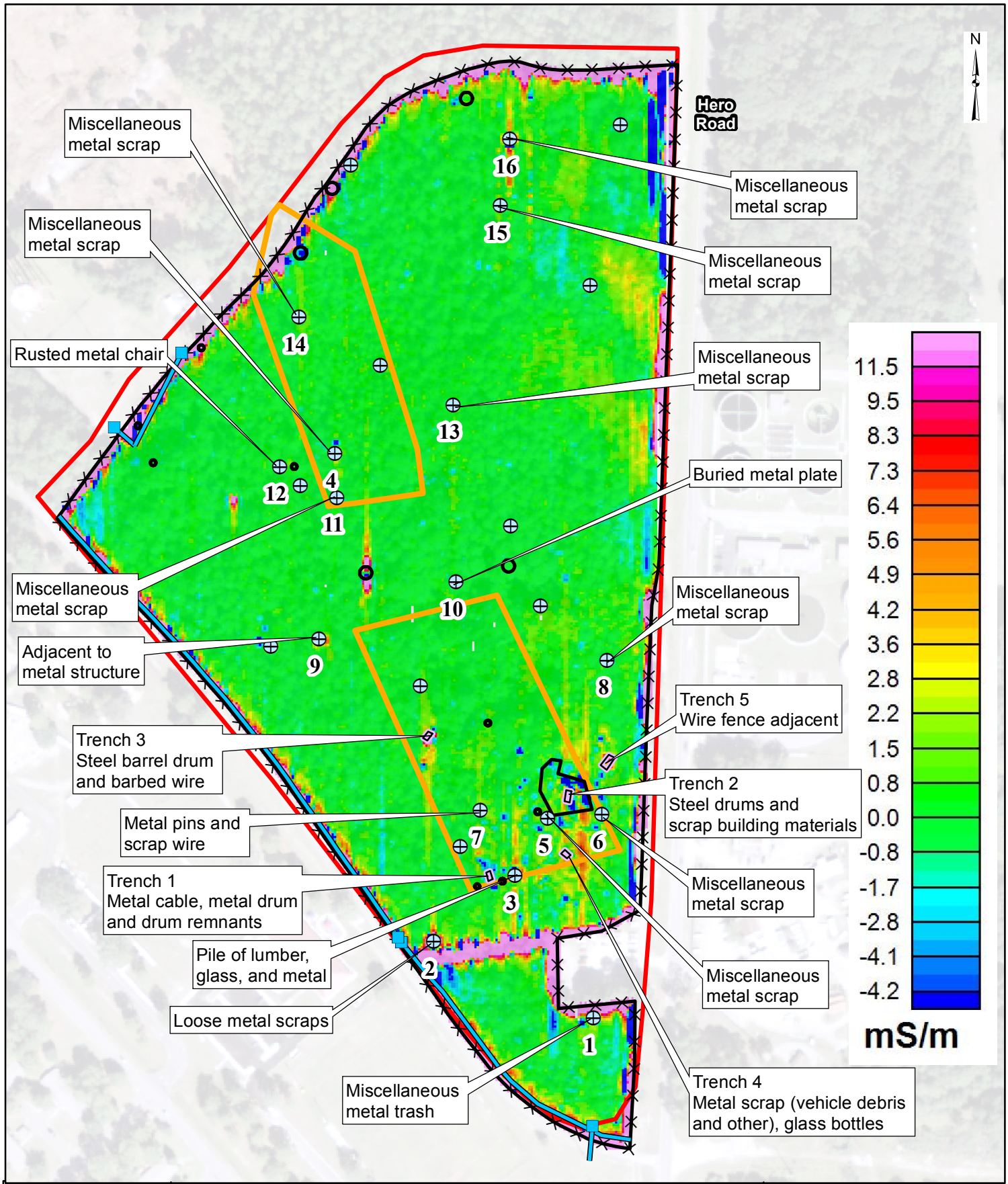
0 150 300 Feet

- MRS Boundary
- Operational Range Area
- MEC Items
- Random Surface and Subsurface Soil Sample Locations
- Structures
- Parking Areas
- Fence
- Surface water and Sediment Sample Locations

Date: March 2013

Imagery Source: National Agriculture Imagery Program (NAIP) 2009

Figure 8
Sampling and MEC Item Locations:
Anti-Aircraft Range 90-mm - 2
(FTSW-002-R-01) MRS
Fort Stewart, Georgia



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Legend

EM-31 Conductivity Data

Surface Debris

Utilities

Hero Road MRS

2 Biased Soil Sampling Locations

Trenches

Ground Scar Outlines

Barbed Wire Fence

0 100 Feet

Date: March 2013

Imagery Source: National Agriculture Imagery Program (NAIP) 2009

Figure 7
Metallic Items Found
Hero Road Trench Area
(FTSW-008-R-01) MRS
Fort Stewart, Georgia



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0 250 500 Feet

MRS Boundary

Features Previously Outlined by USACE St. Louis District:

General Site Location

ASR Areas of Concern
(Basis for general ground scar outlines)

Date: March 2013

Imagery Source: Fort Stewart, January 8, 1957

Figure 6
Historical Photo of
Hero Road Trench Area
(FTSW-008-R-01) MRS
Fort Stewart, Georgia



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0 200 400 Feet

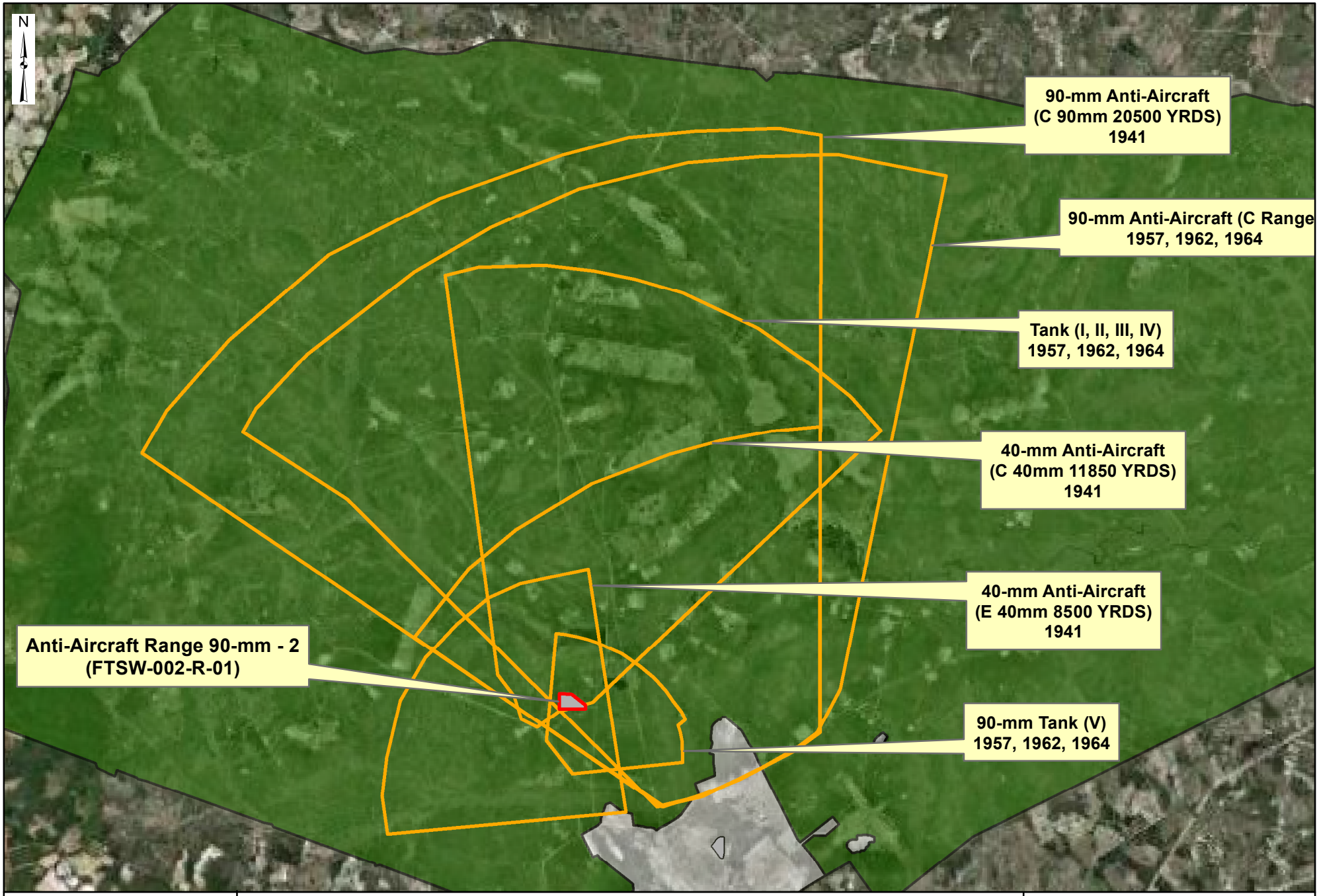
MRS Boundary

Other than Operational Range Area

Date: March 2013

Imagery Source: National Agriculture Imagery Program (NAIP) 2009

Figure 5
Hero Road Trench Area (FTSW-008-R-01) MRS
Fort Stewart, Georgia



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Legend

0 1 2 Miles

MRS Boundary

Historical Range Fan

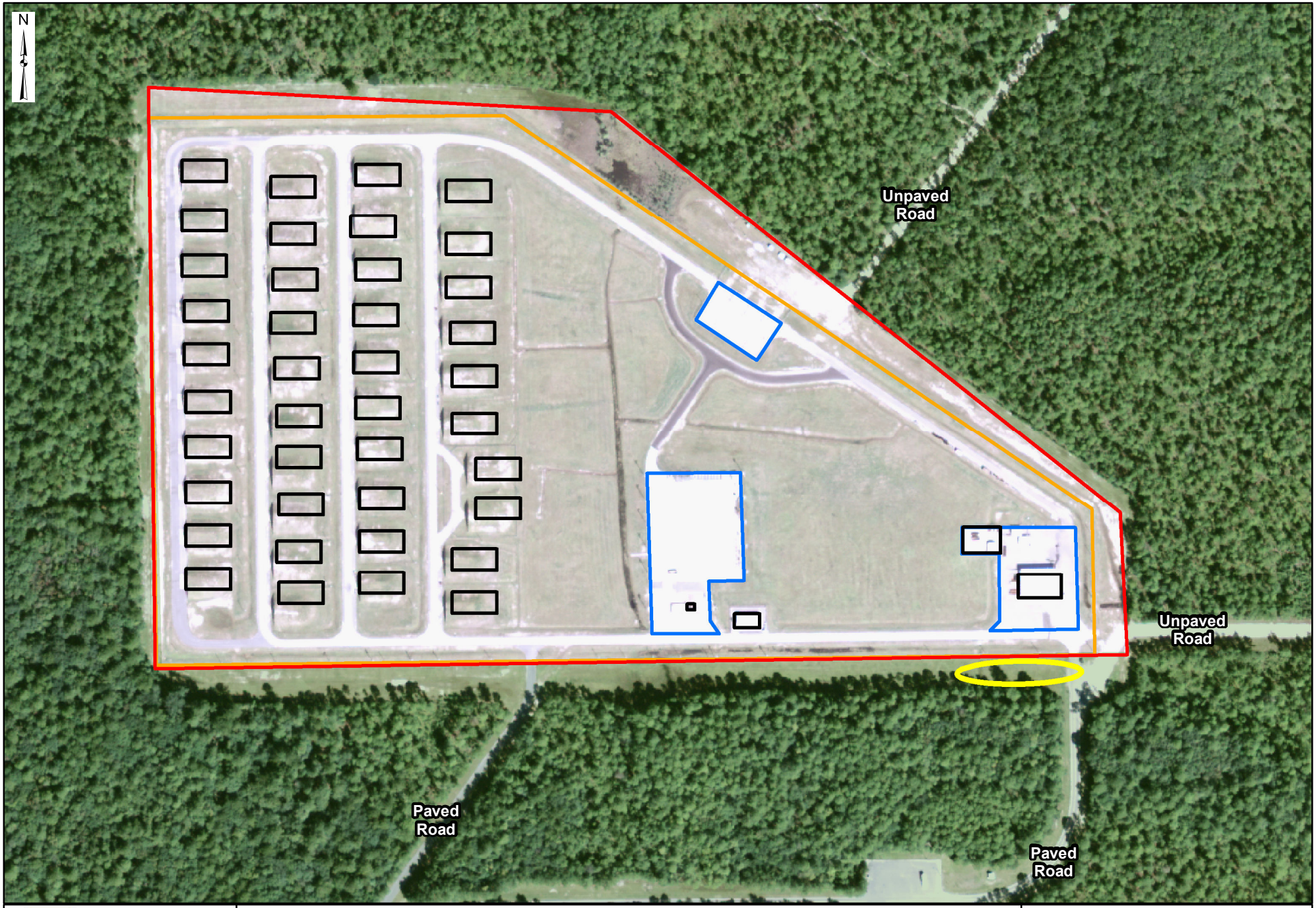
Operational Range Area

Other than Operational Range Area

Date: March 2013

Imagery Source: Google Earth 2008 Historical Range Fan Source: USAEC 2011

Figure 4
Historical Range Fans:
Anti-Aircraft Range 90-mm - 2
(FTSW-002-R-01) MRS
Fort Stewart, Georgia



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Legend

MRS Boundary
IVS Location
Structures
Operational Range Area
Fence
Parking Areas

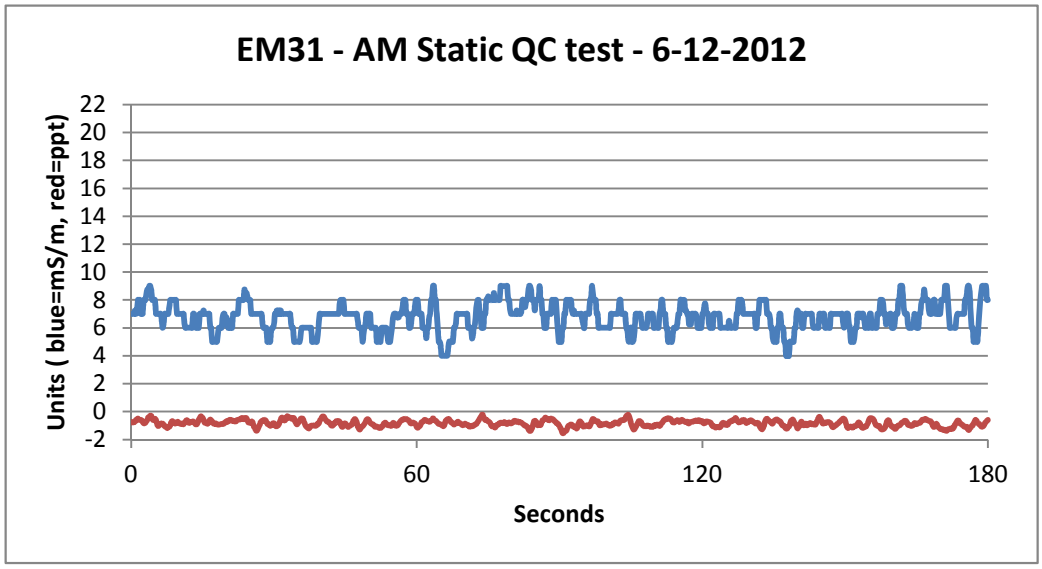
0 150 300 Feet

Date: March 2013

Imagery Source: National Agriculture Imagery Program (NAIP) 2009

Figure 3
Anti-Aircraft Range 90mm - 2 (FTSW-002-R-01) MRS
Fort Stewart, Georgia

Revised August 25, 2014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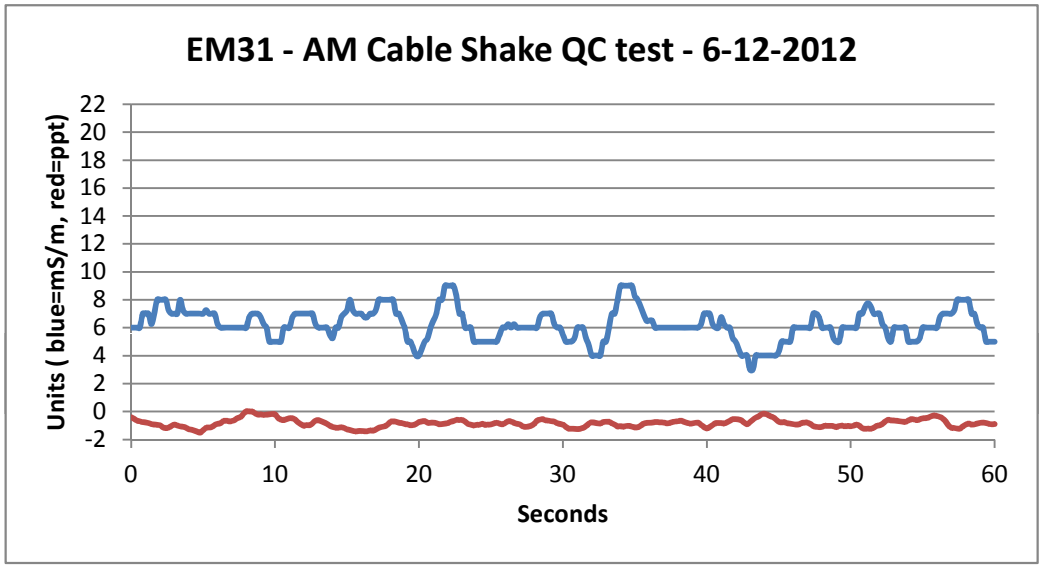
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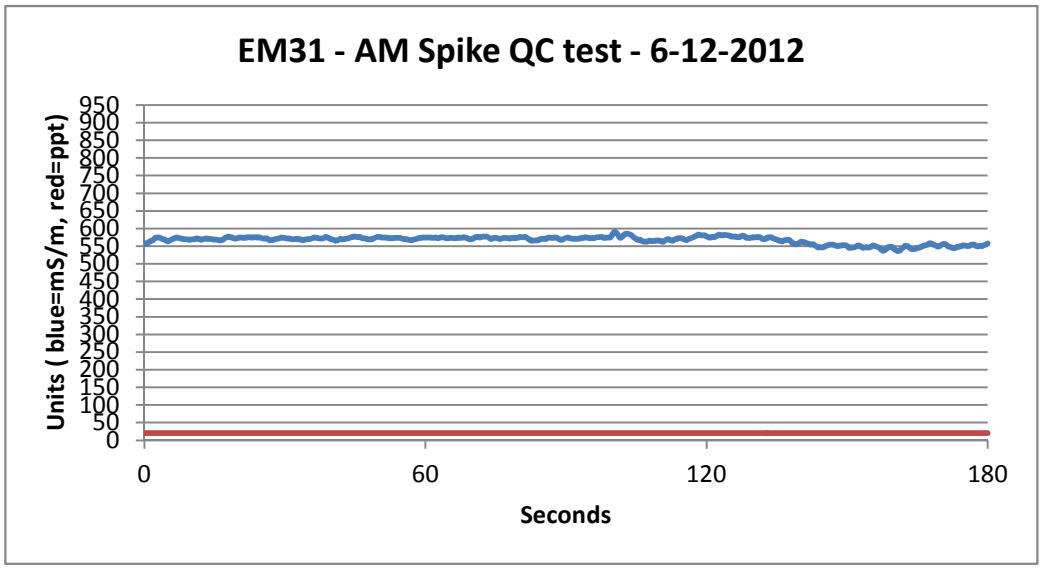
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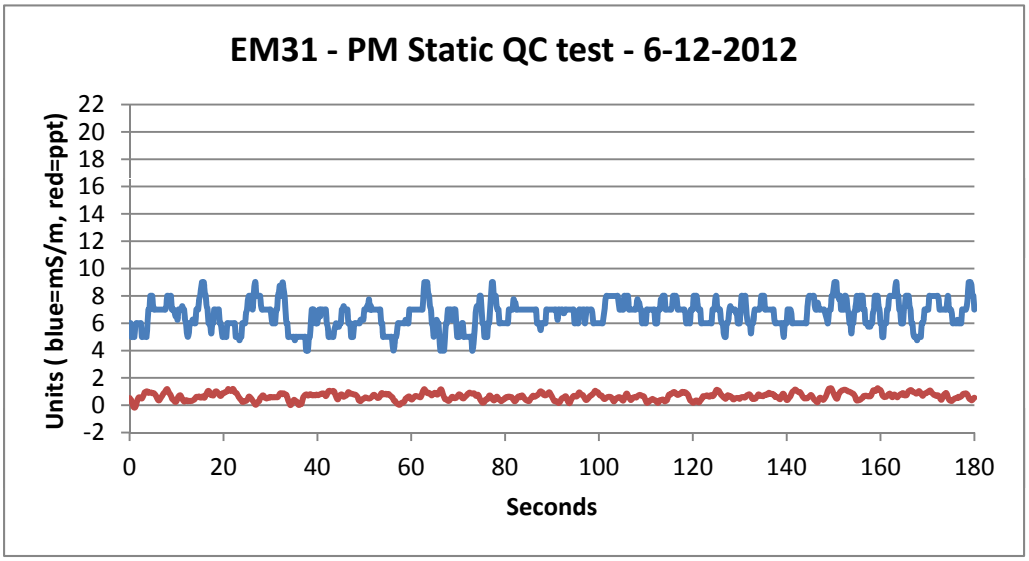
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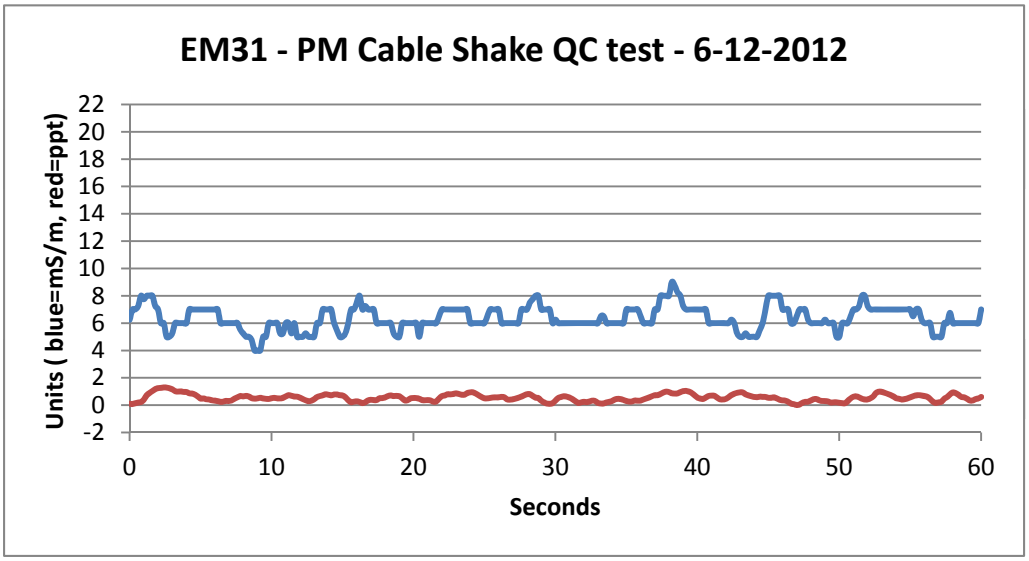
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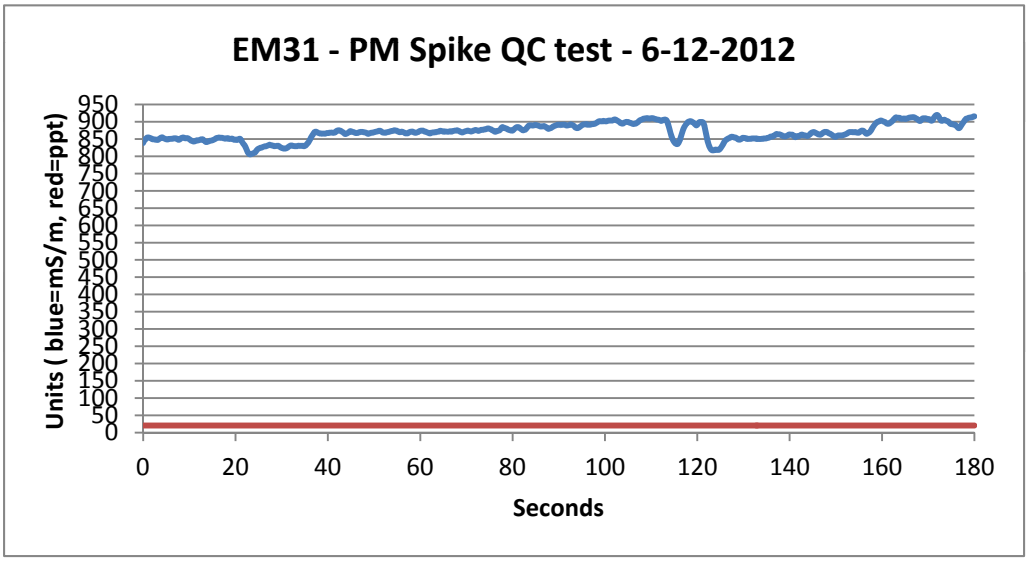
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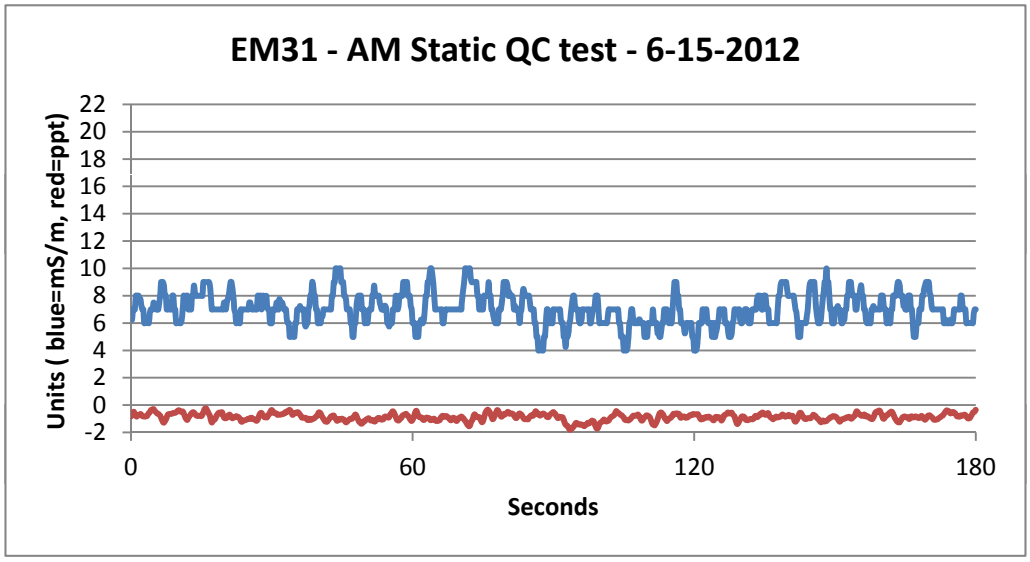
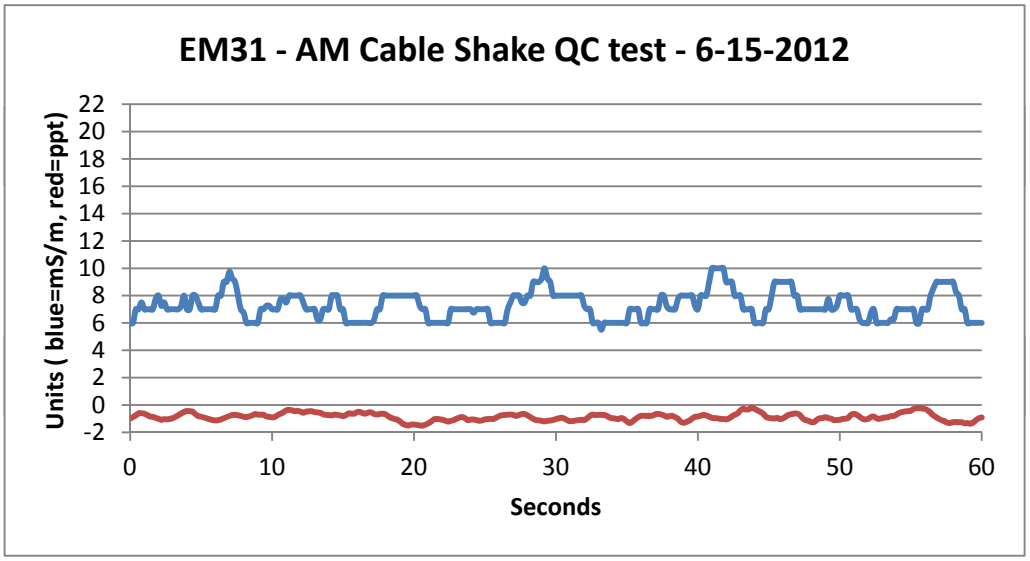
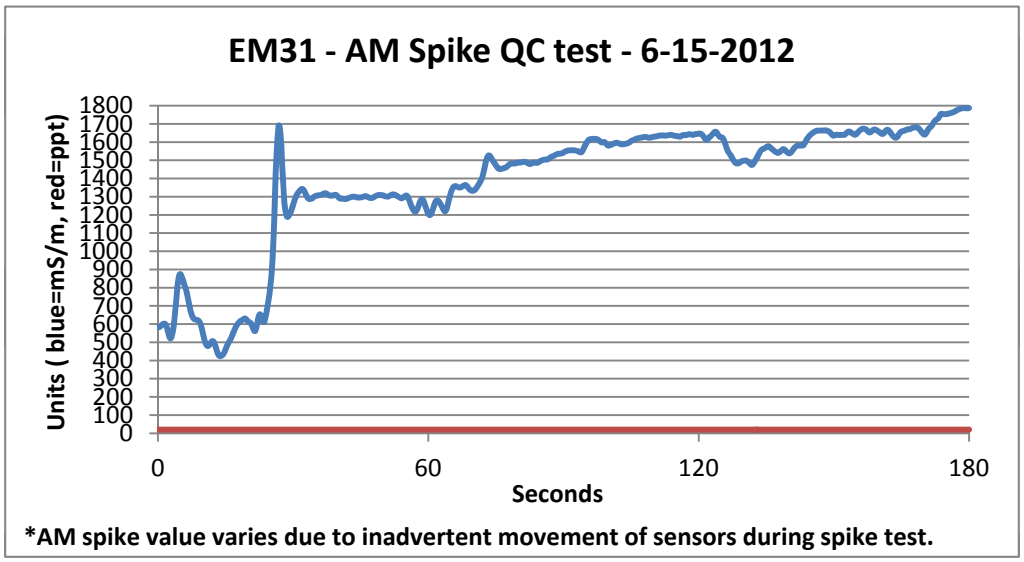
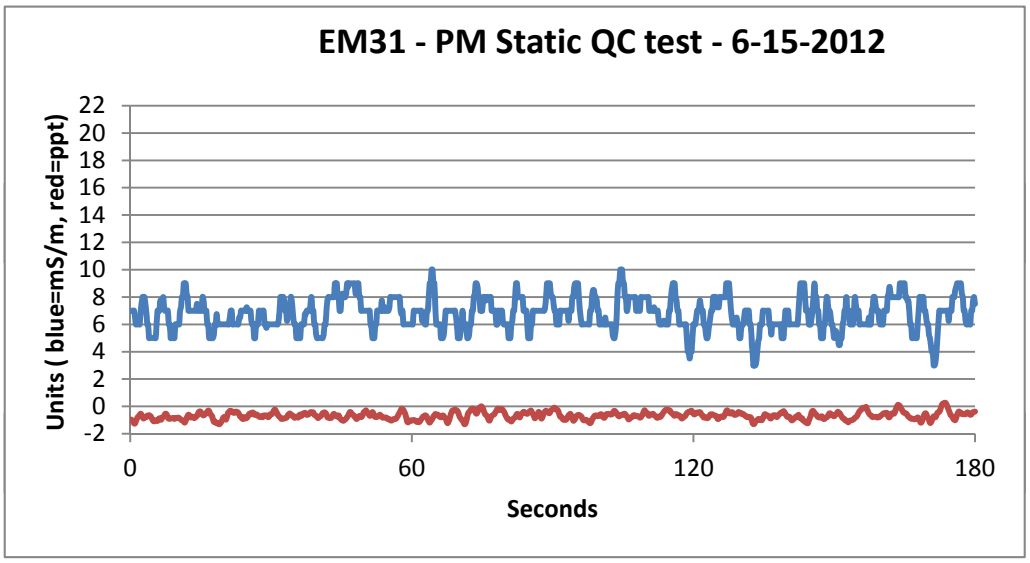






*AM spike value varies due to inadvertent movement of sensors during spike test.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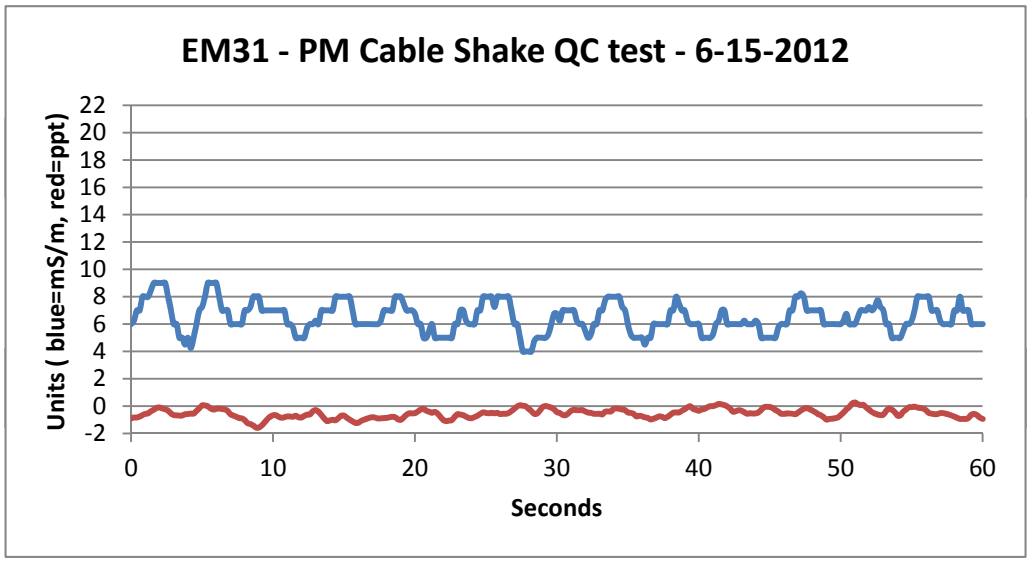
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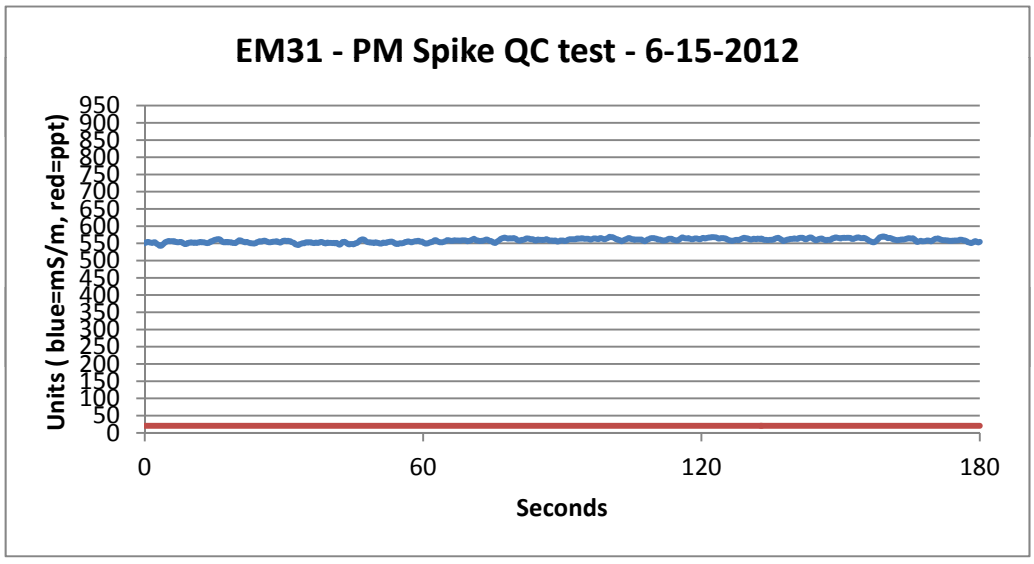
Seconds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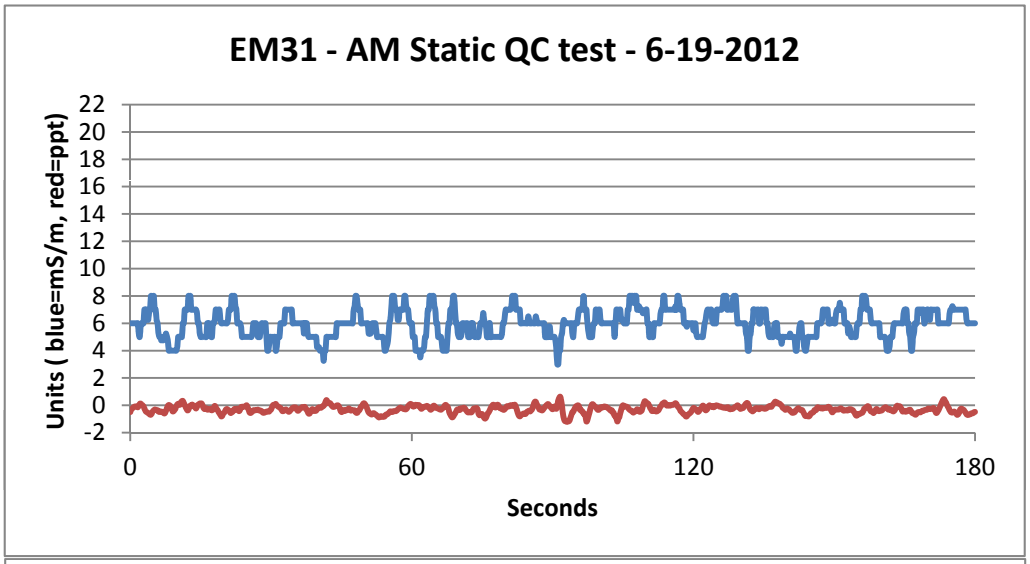
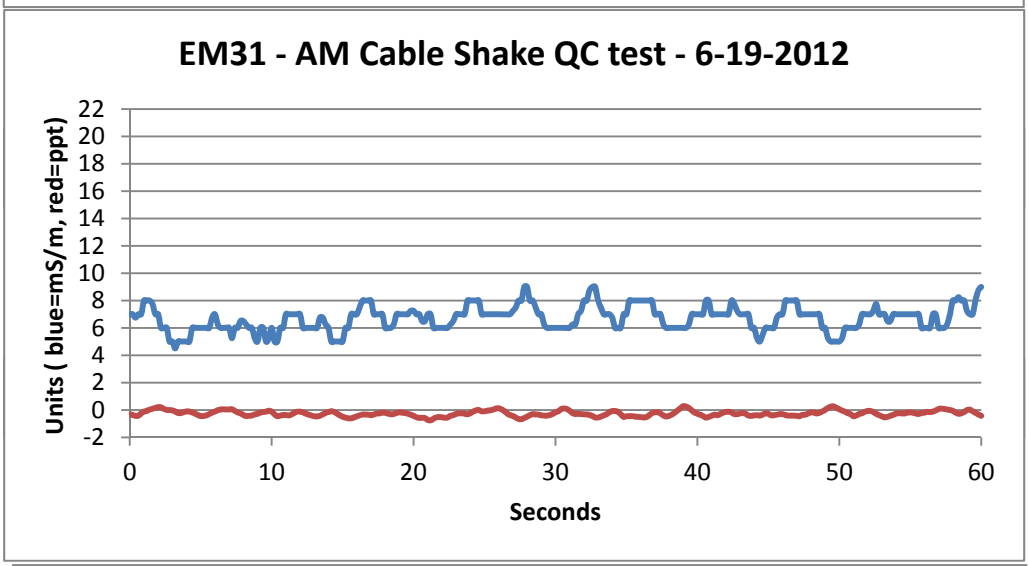
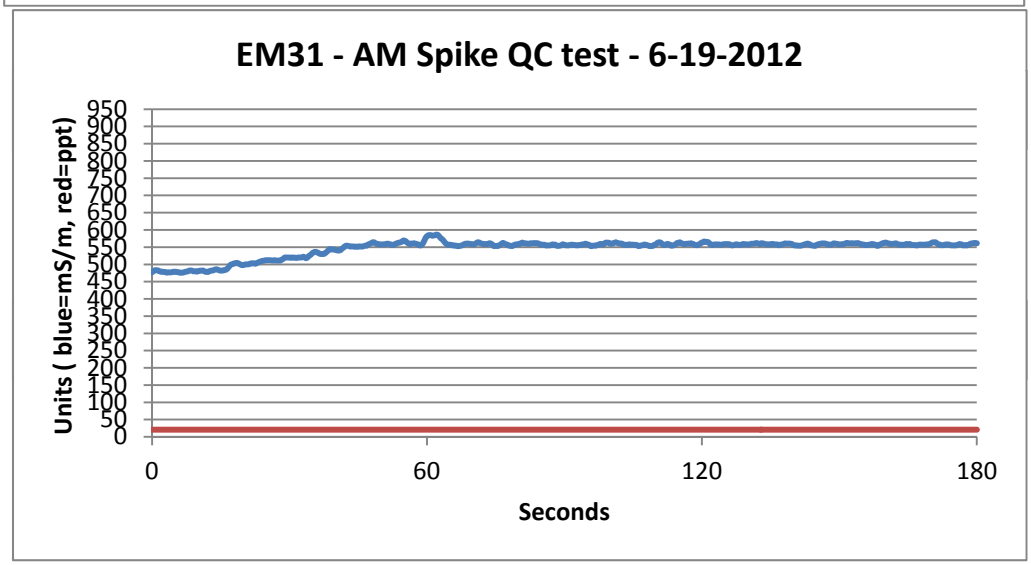
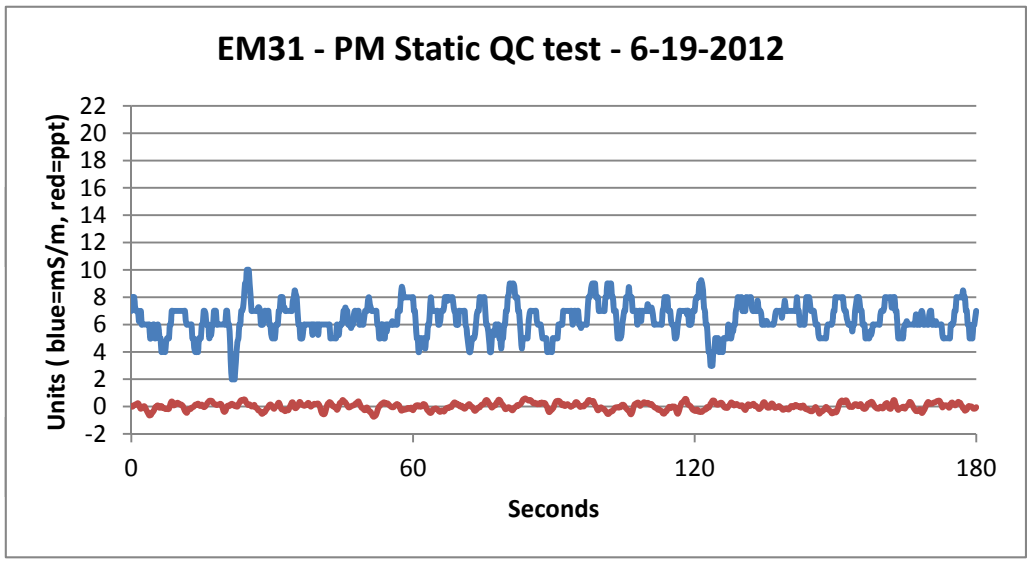
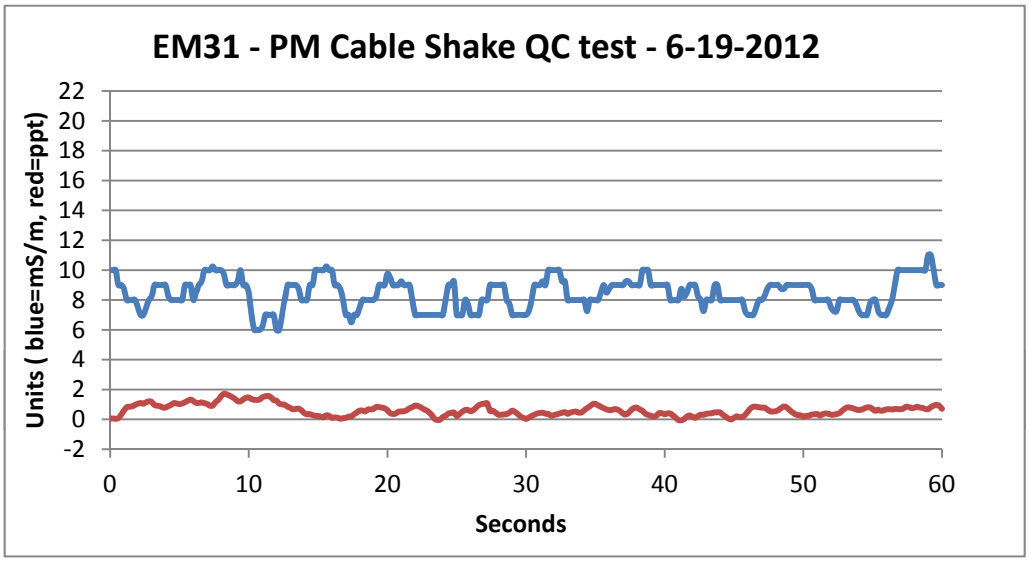
180
Seconds

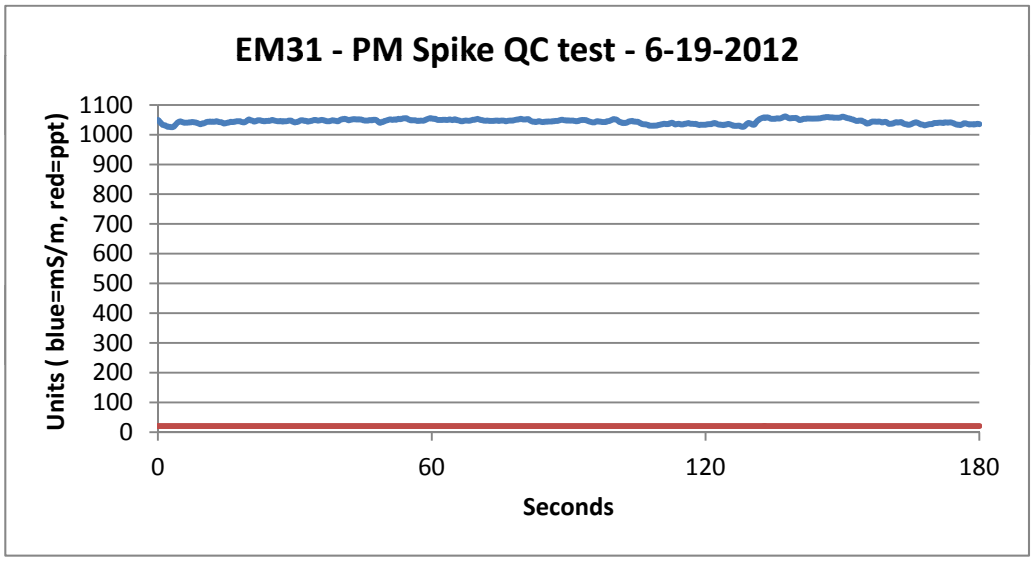

EM31 - AM Static QC test - 6-19-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds

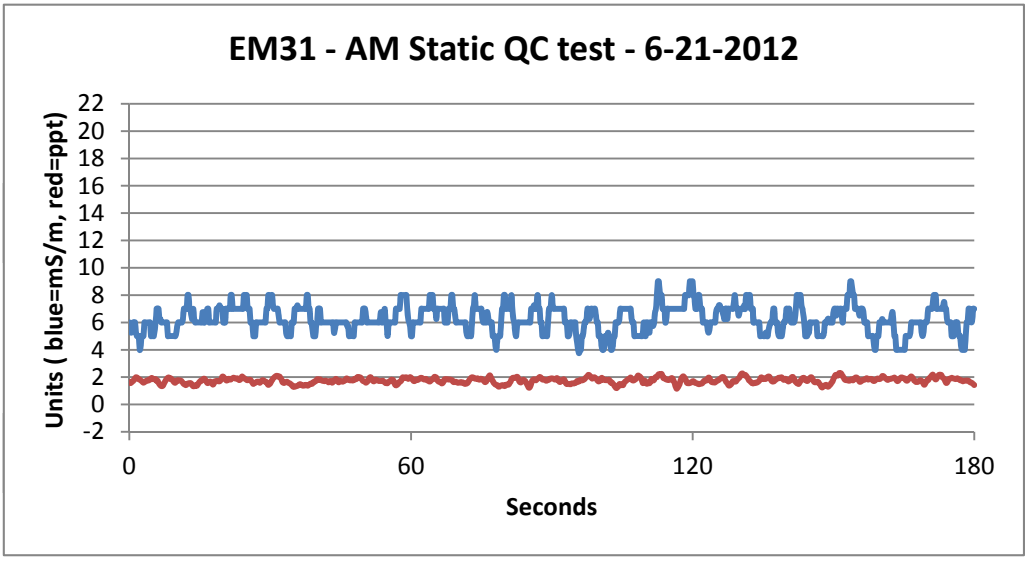

EM31 - AM Cable Shake QC test - 6-19-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds

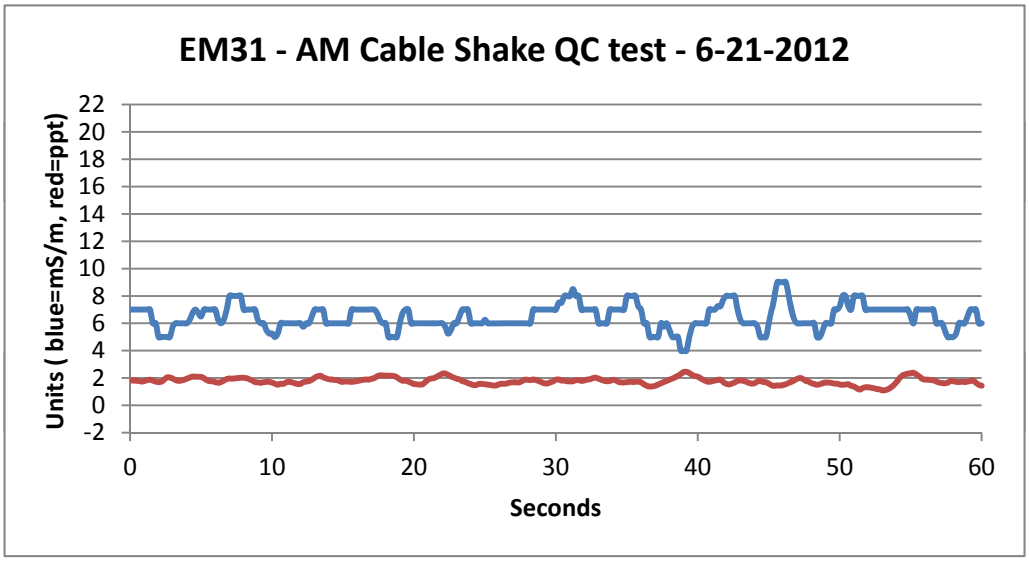

EM31 - AM Spike QC test - 6-19-2012
Units (blue=mS/m, red=ppt)
950
900
850
800
750
700
650
600
550
500
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds

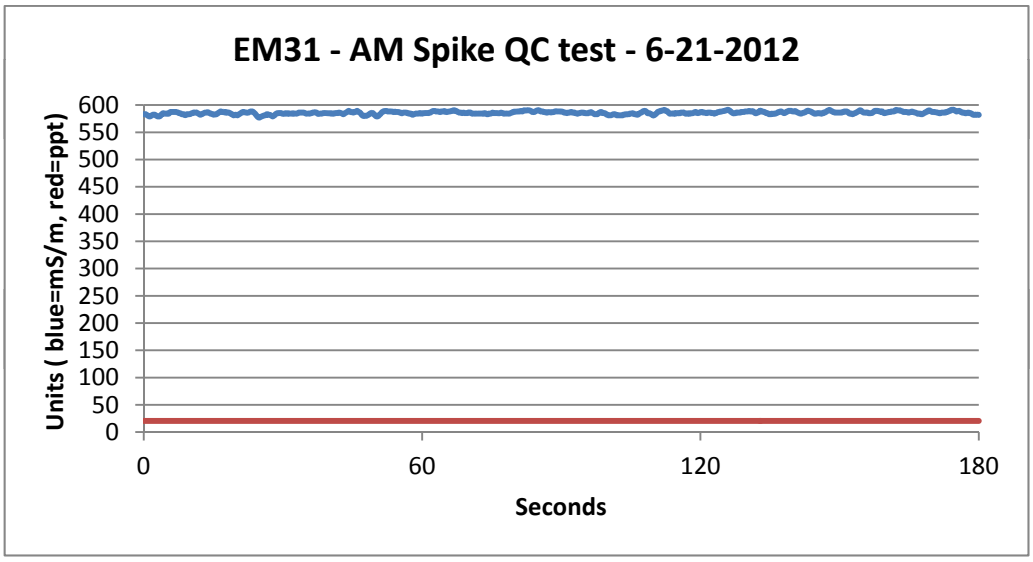

EM31 - PM Static QC test - 6-19-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds

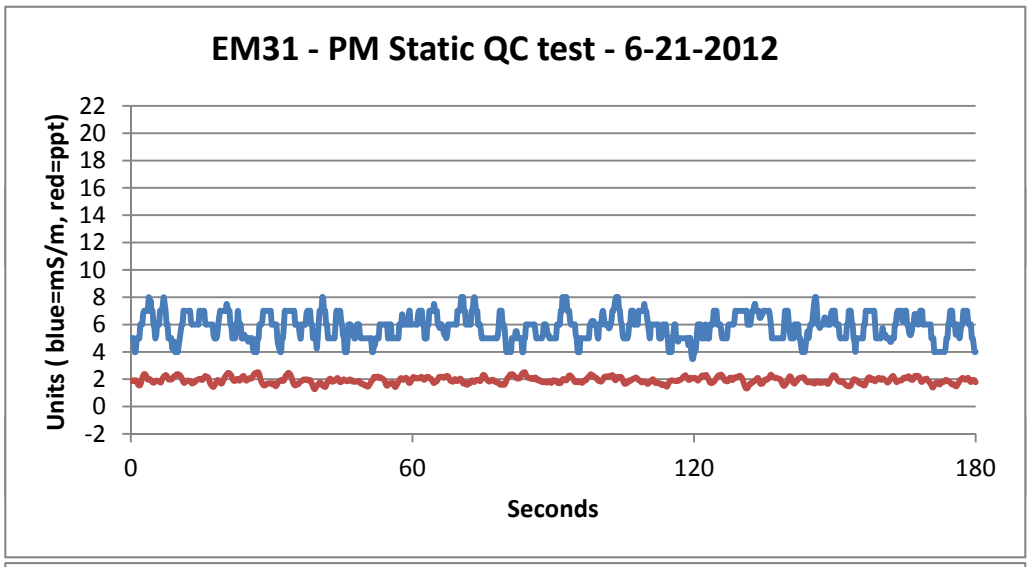

EM31 - PM Cable Shake QC test - 6-19-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds

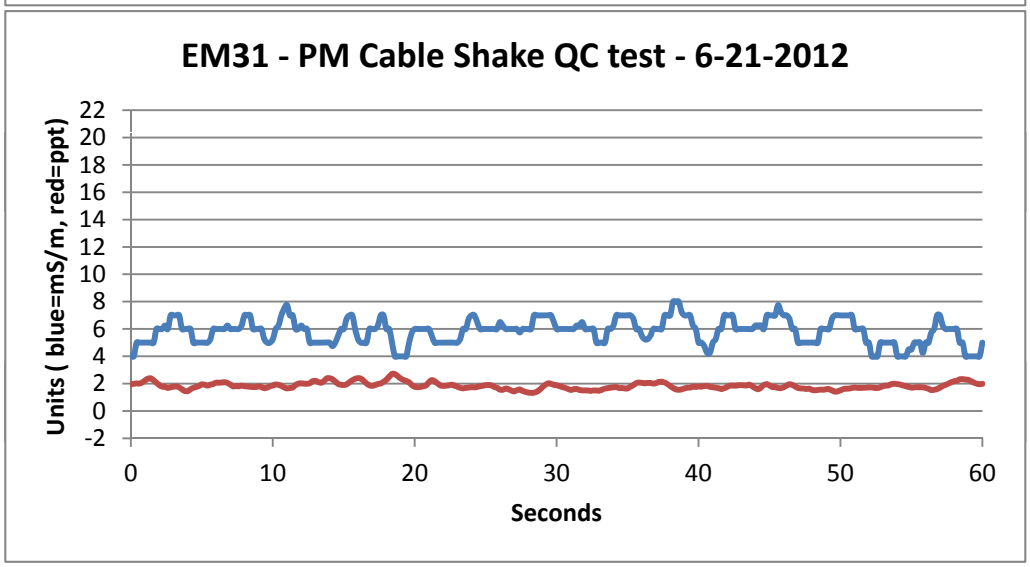

EM31 - PM Spike QC test - 6-19-2012
Units (blue=mS/m, red=ppt)
1100
1000
900
800
700
600
500
400
300
200
100
0
0
60
120
180
Seconds

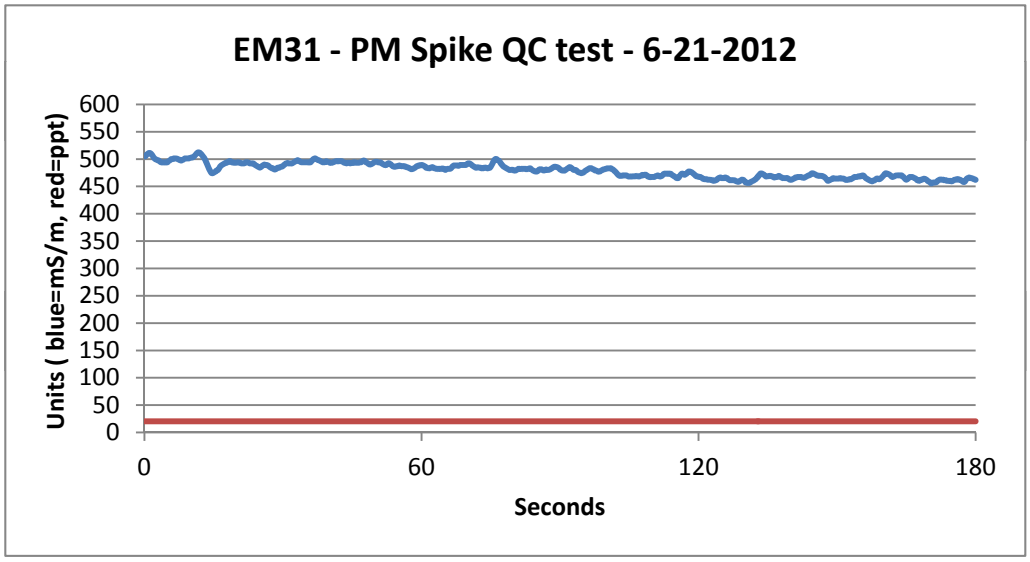

EM31 - AM Static QC test - 6-21-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds

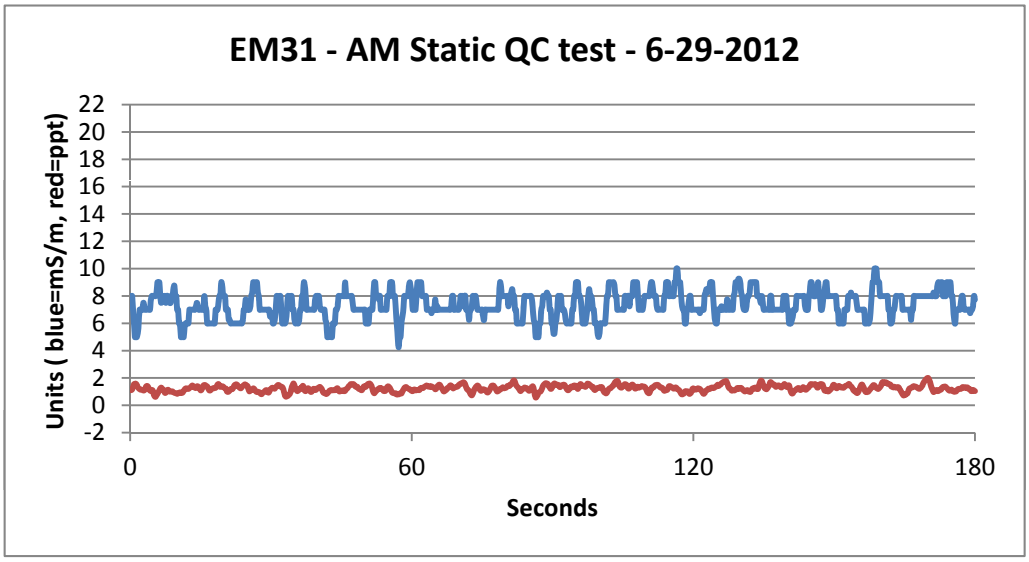

EM31 - AM Cable Shake QC test - 6-21-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds

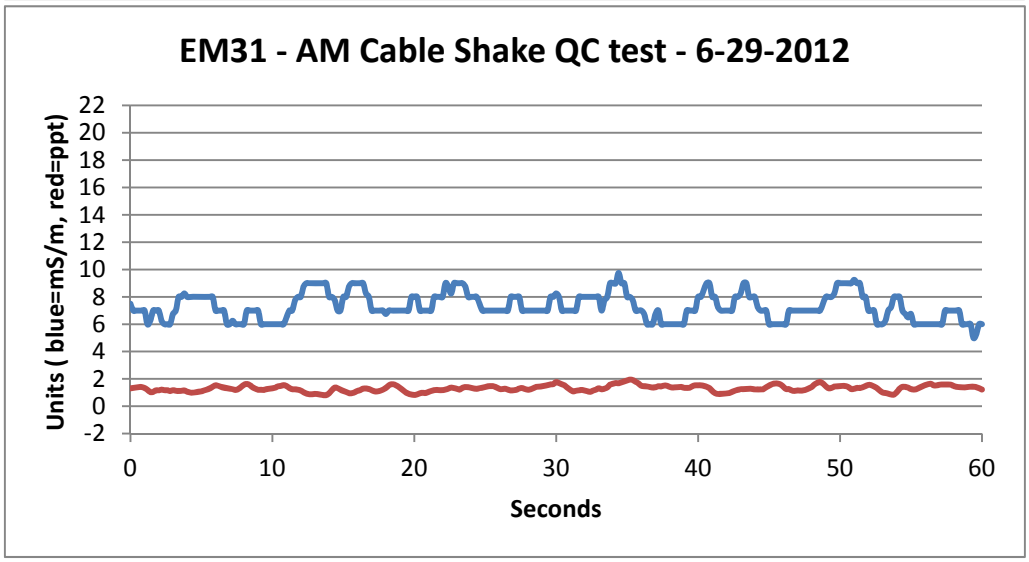

EM31 - AM Spike QC test - 6-21-2012
Units (blue=mS/m, red=ppt)
600
550
500
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds

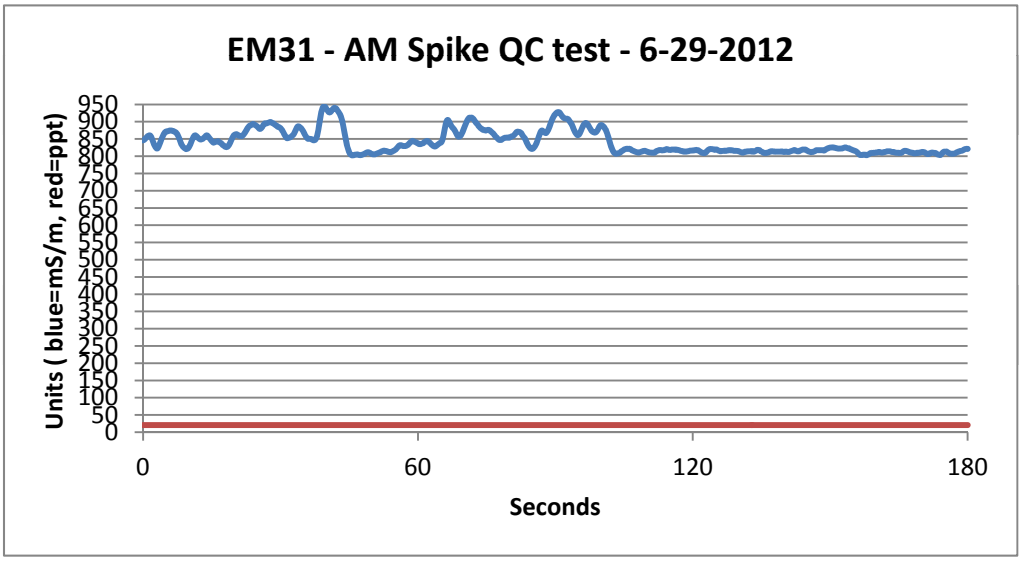

EM31 - PM Static QC test - 6-21-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds

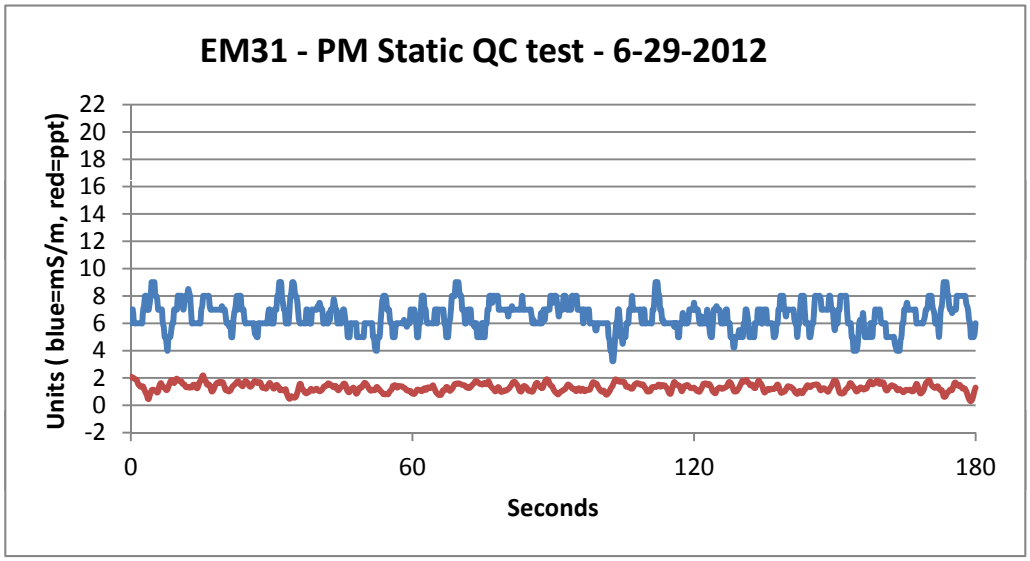

EM31 - PM Cable Shake QC test - 6-21-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds

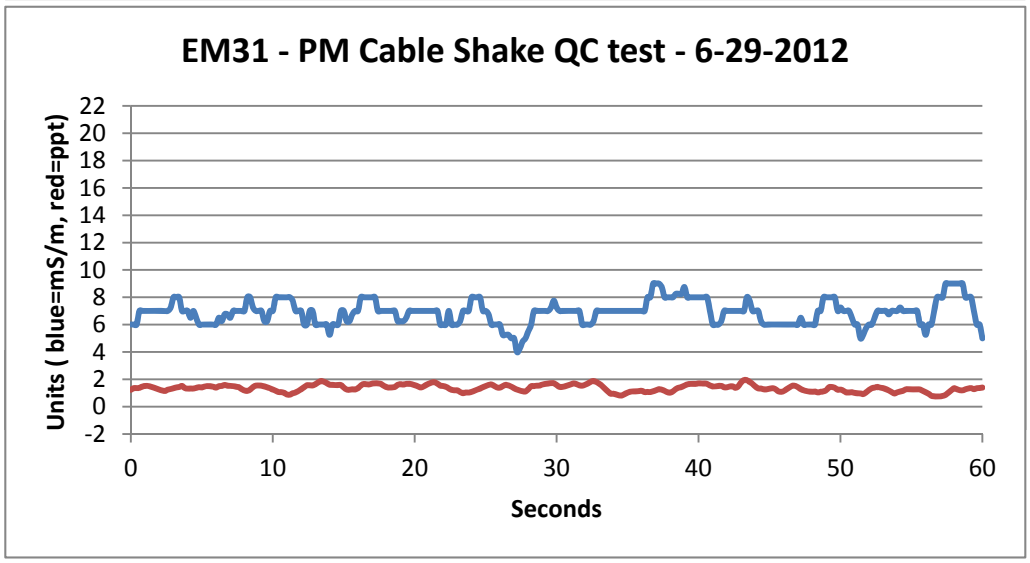

EM31 - PM Spike QC test - 6-21-2012
Units (blue=mS/m, red=ppt)
600
550
500
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds

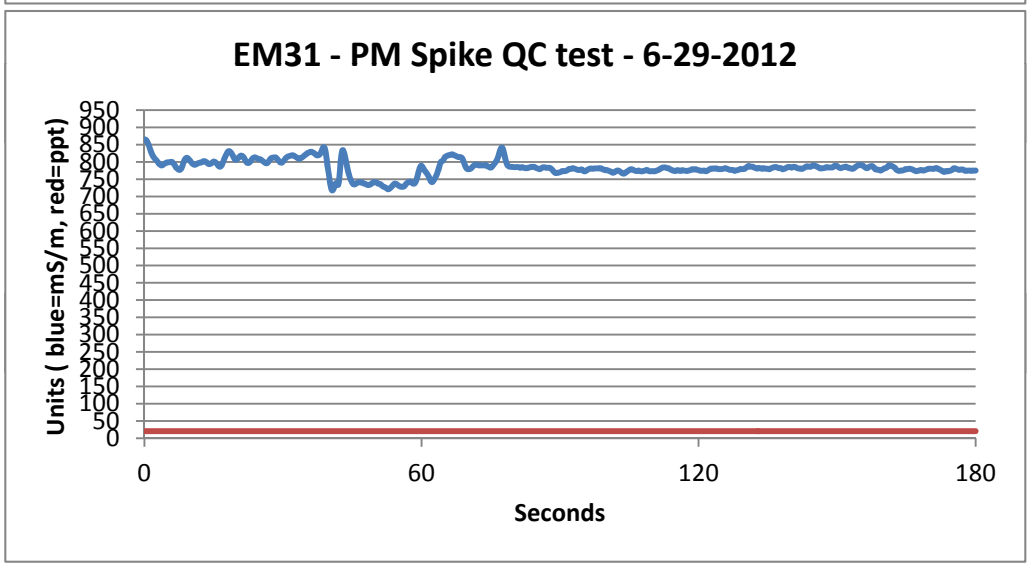

EM31 - AM Static QC test - 6-29-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds

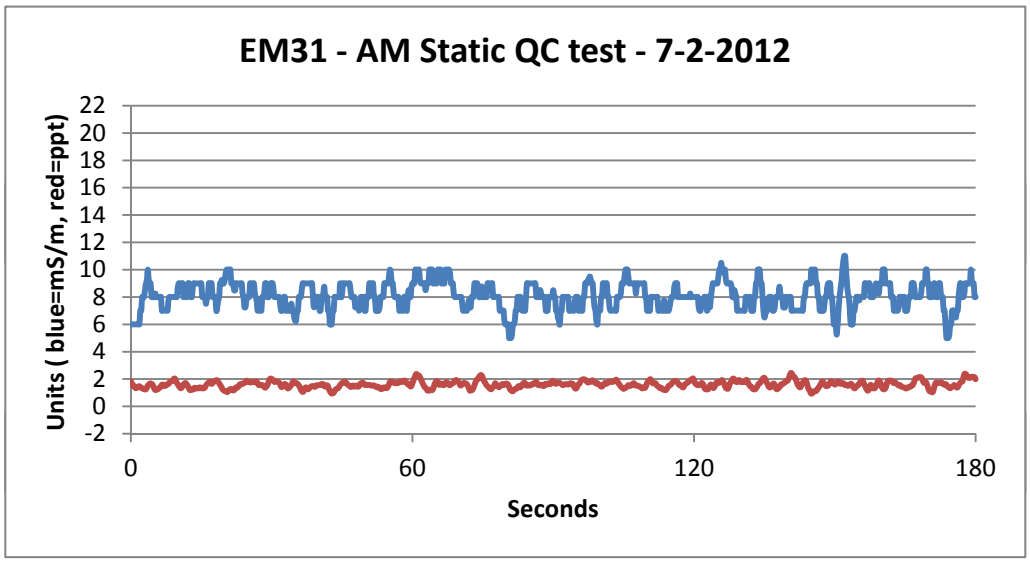

EM31 - AM Cable Shake QC test - 6-29-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds

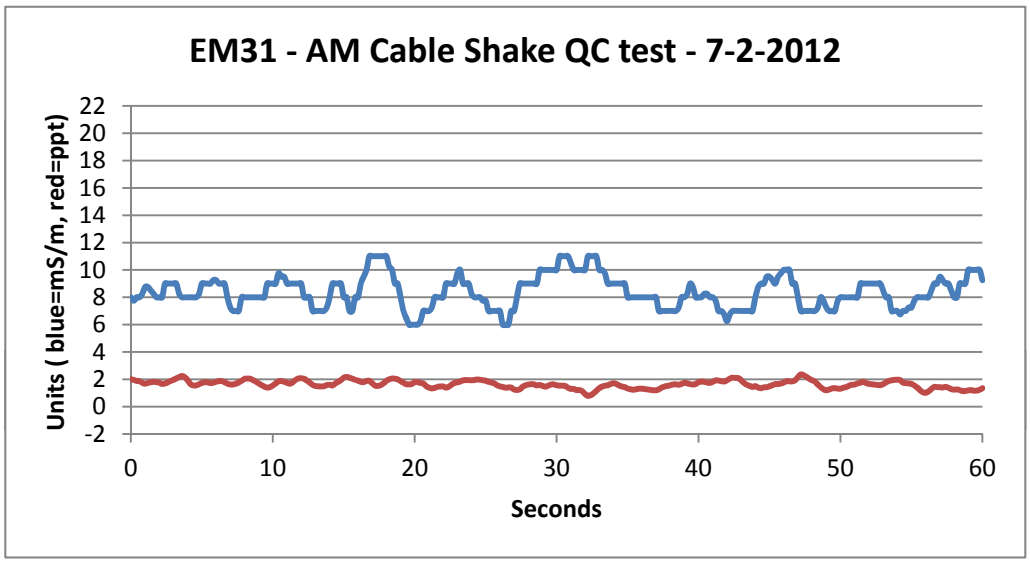

EM31 - AM Spike QC test - 6-29-2012
Units (blue=mS/m, red=ppt)
950
900
850
800
750
700
650
600
550
500
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds

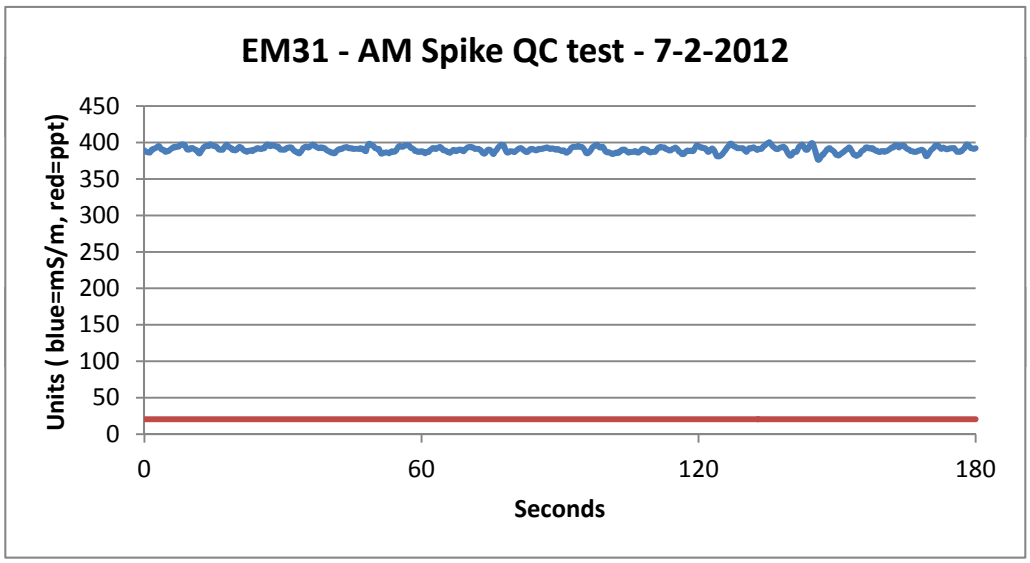

EM31 - PM Static QC test - 6-29-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds

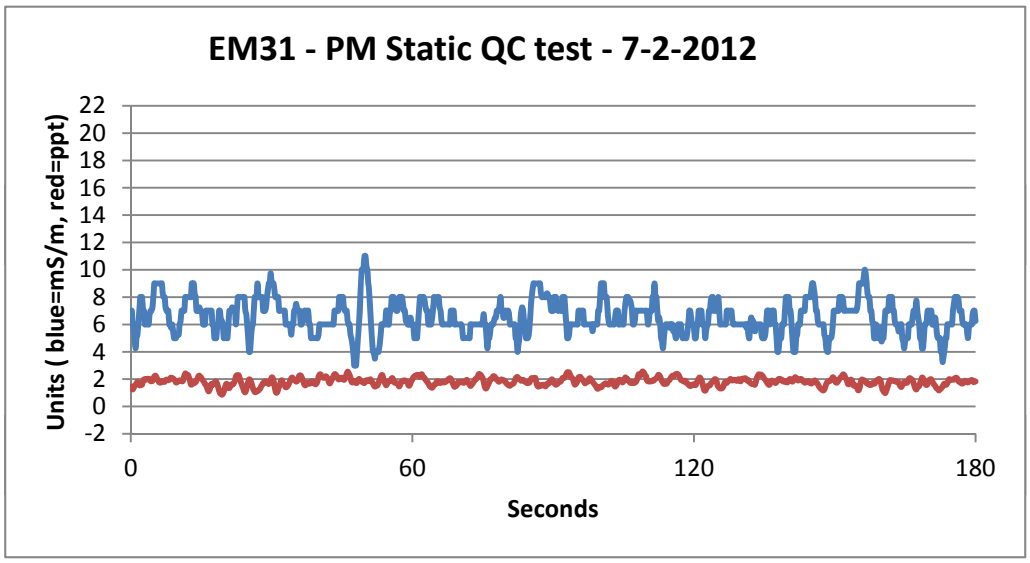

EM31 - PM Cable Shake QC test - 6-29-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds

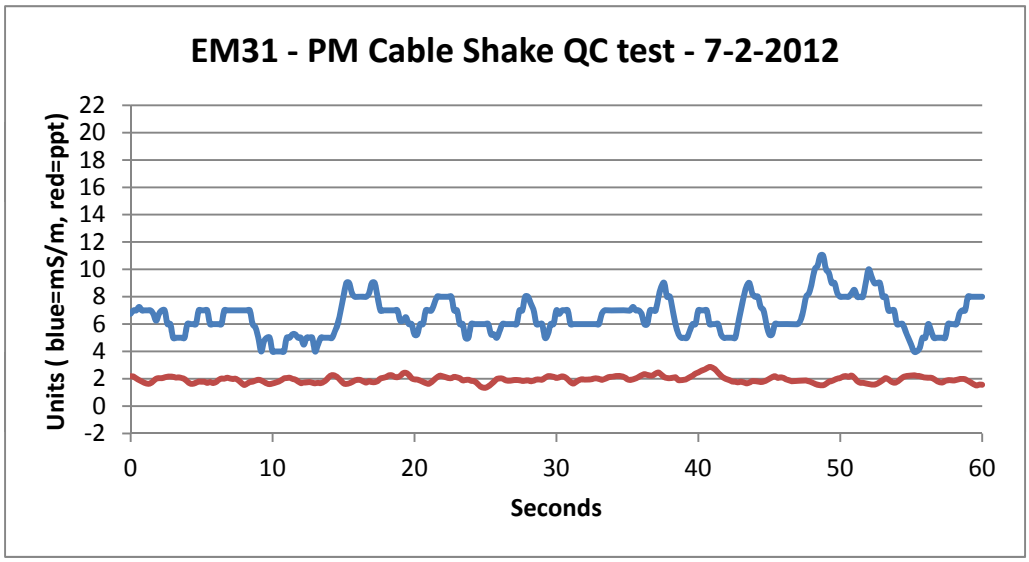

EM31 - PM Spike QC test - 6-29-2012
Units (blue=mS/m, red=ppt)
950
900
850
800
750
700
650
600
550
500
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds

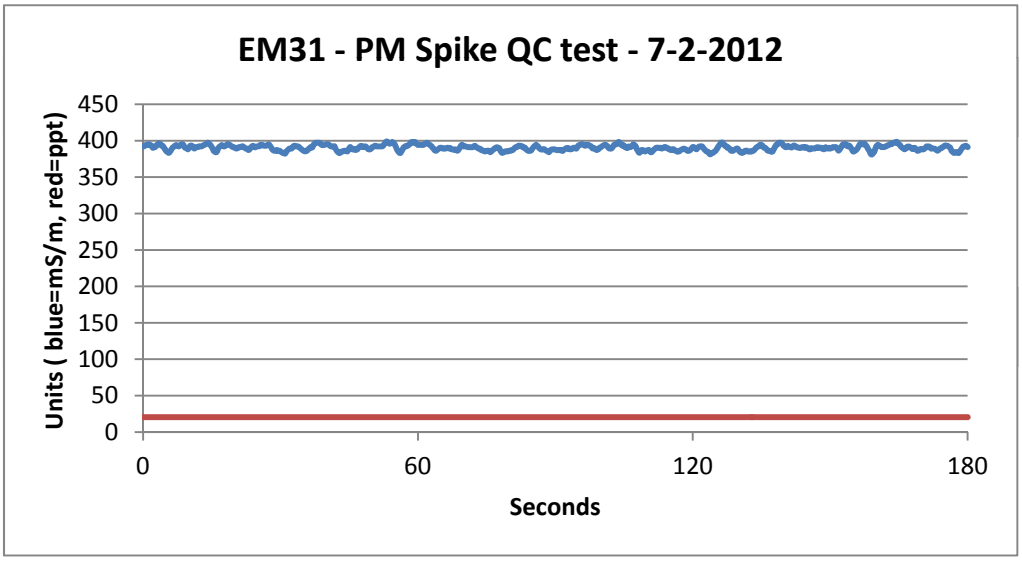

EM31 - AM Static QC test - 7-2-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds

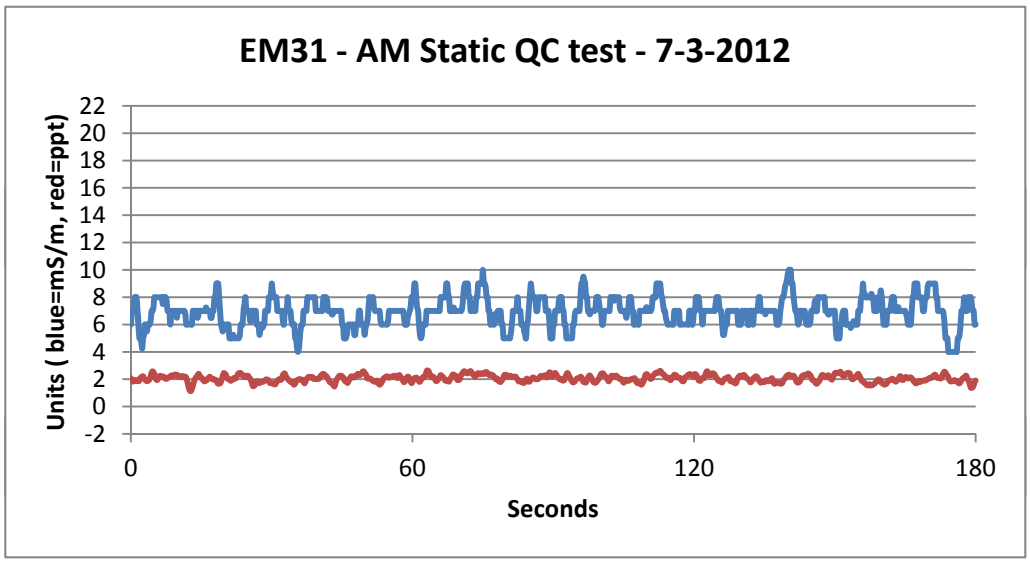

EM31 - AM Cable Shake QC test - 7-2-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds

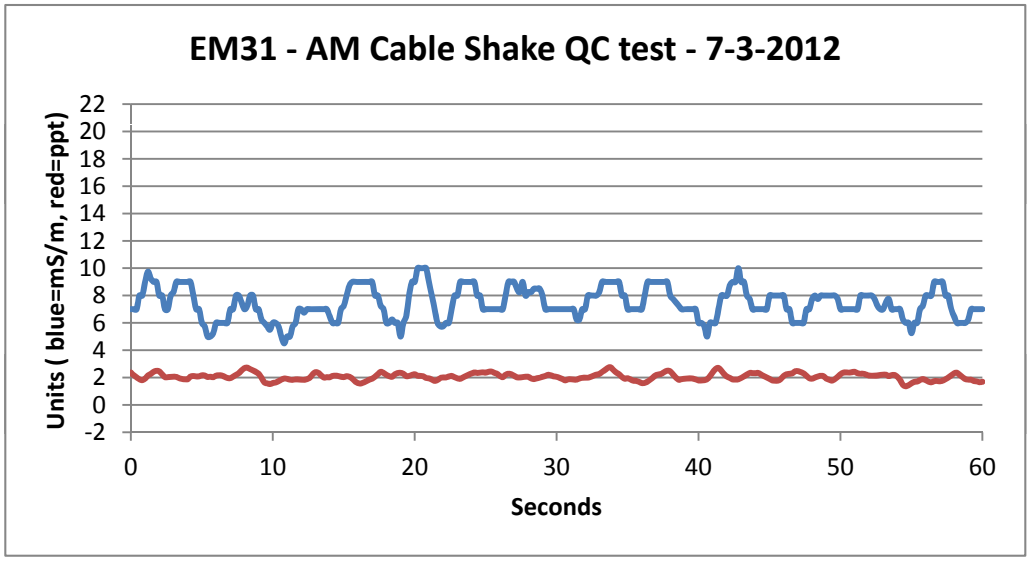

EM31 - AM Spike QC test - 7-2-2012
Units (blue=mS/m, red=ppt)
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds

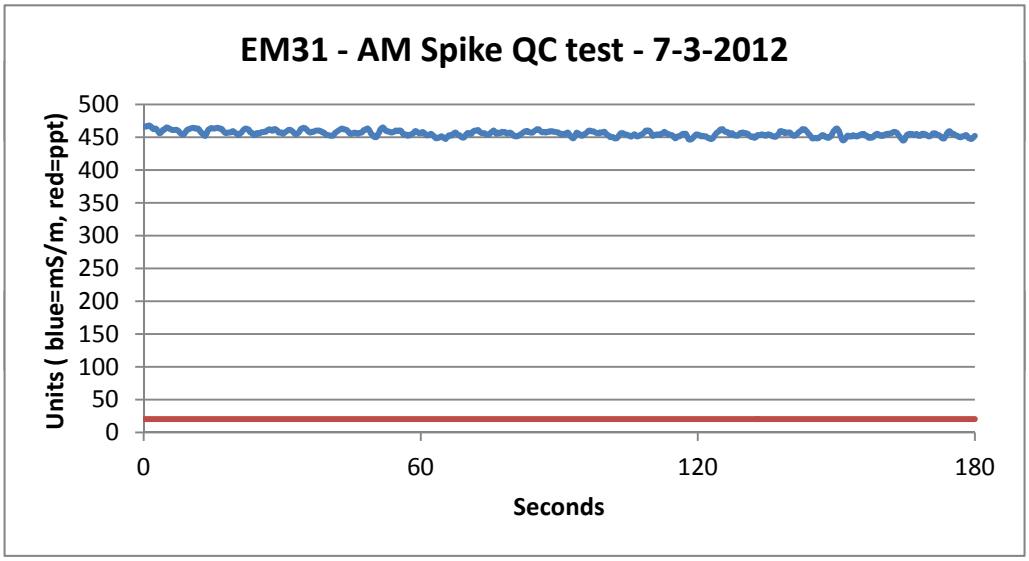

EM31 - PM Static QC test - 7-2-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds

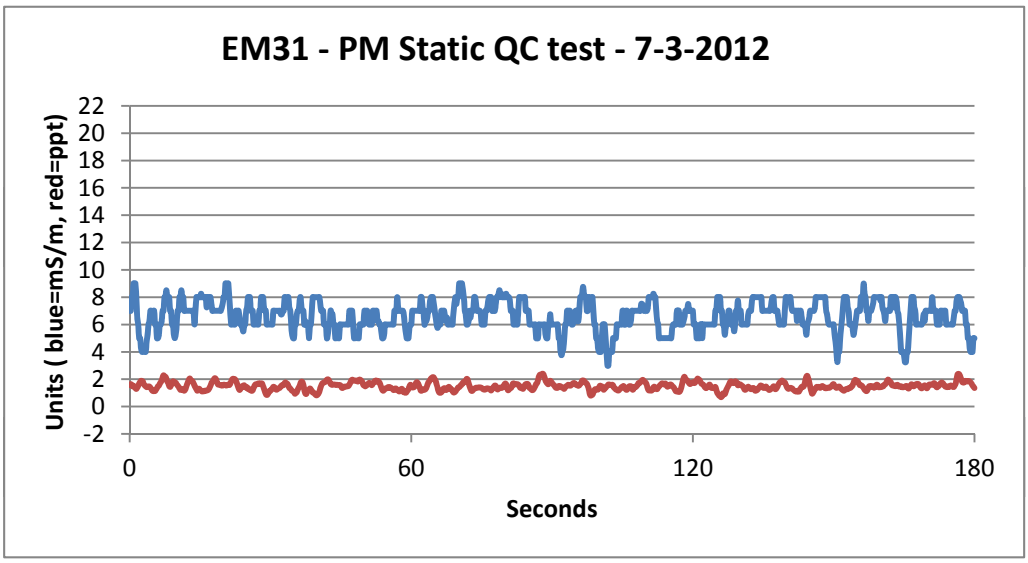

EM31 - PM Cable Shake QC test - 7-2-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds

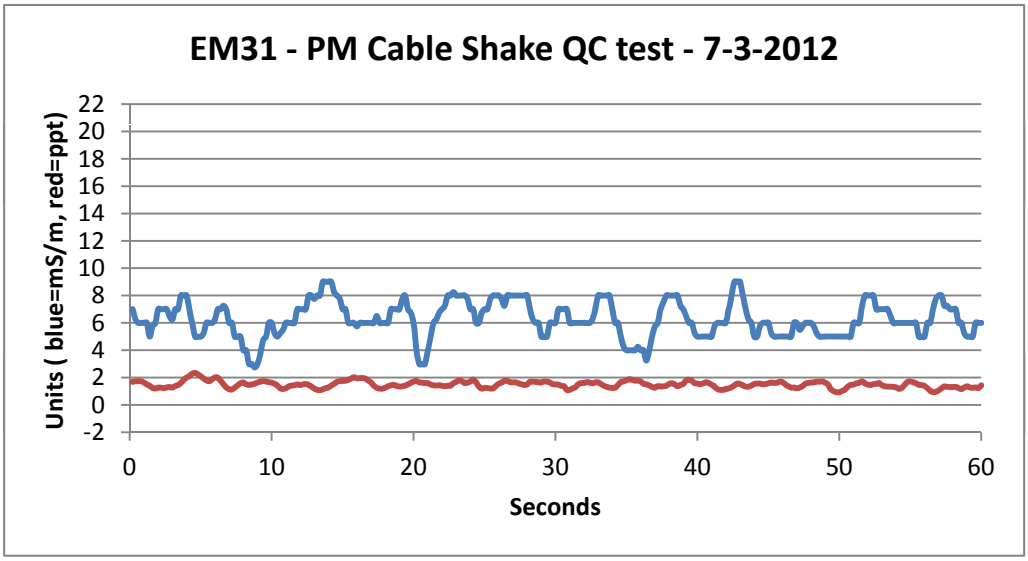

EM31 - PM Spike QC test - 7-2-2012
Units (blue=mS/m, red=ppt)
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds

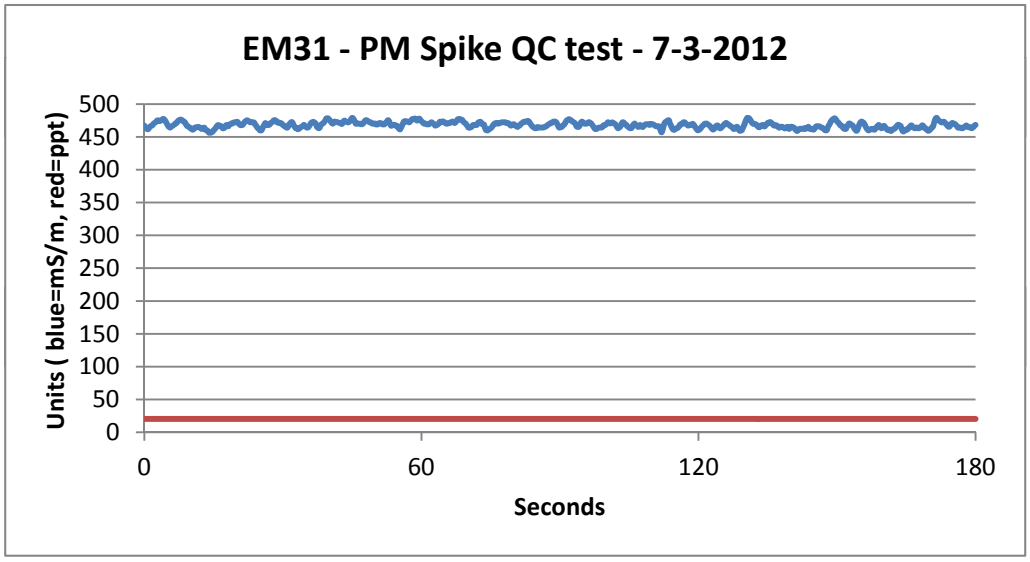

EM31 - AM Static QC test - 7-3-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds

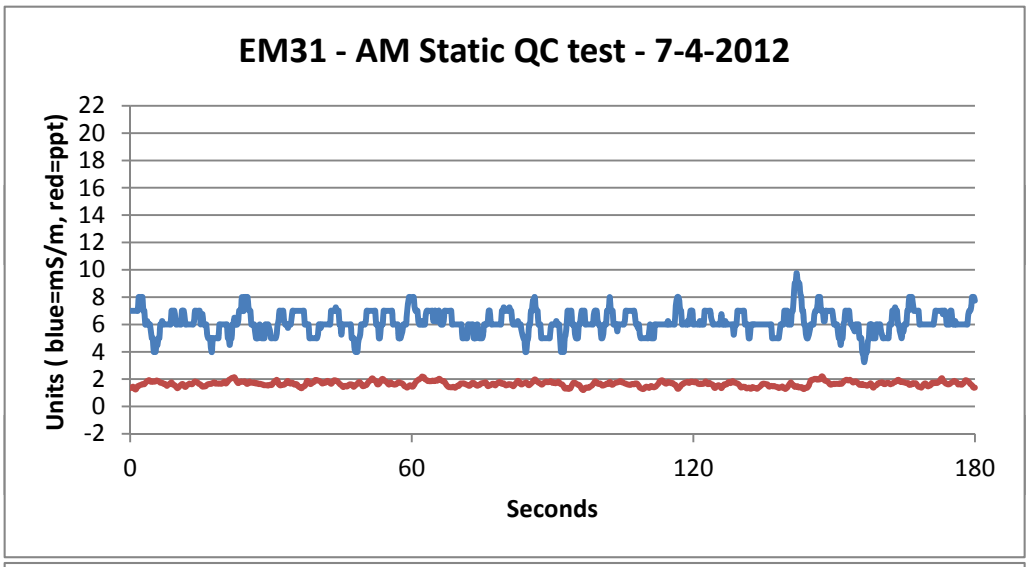

EM31 - AM Cable Shake QC test - 7-3-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds

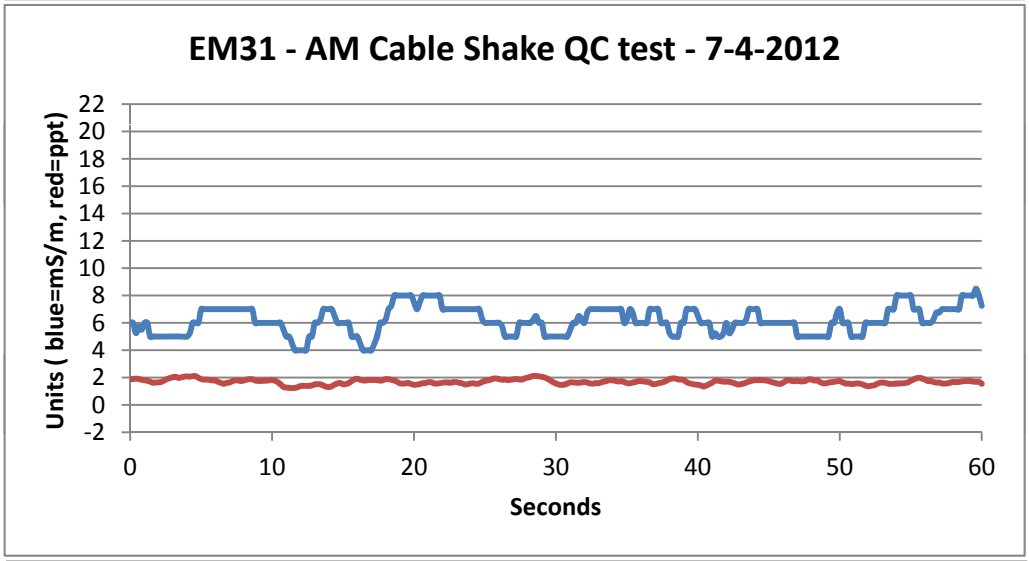

EM31 - AM Spike QC test - 7-3-2012
Units (blue=mS/m, red=ppt)
500
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds

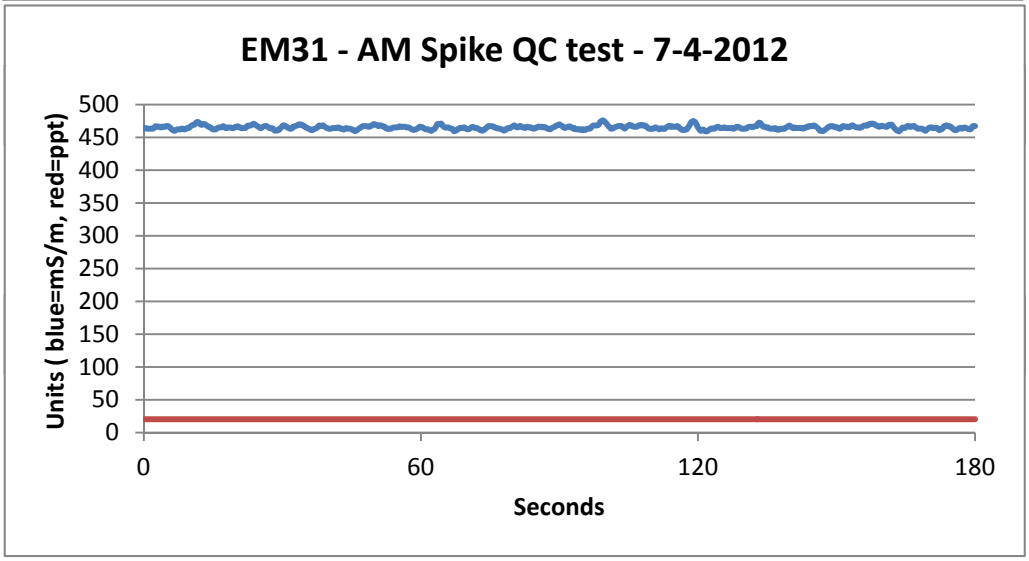

EM31 - PM Static QC test - 7-3-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds

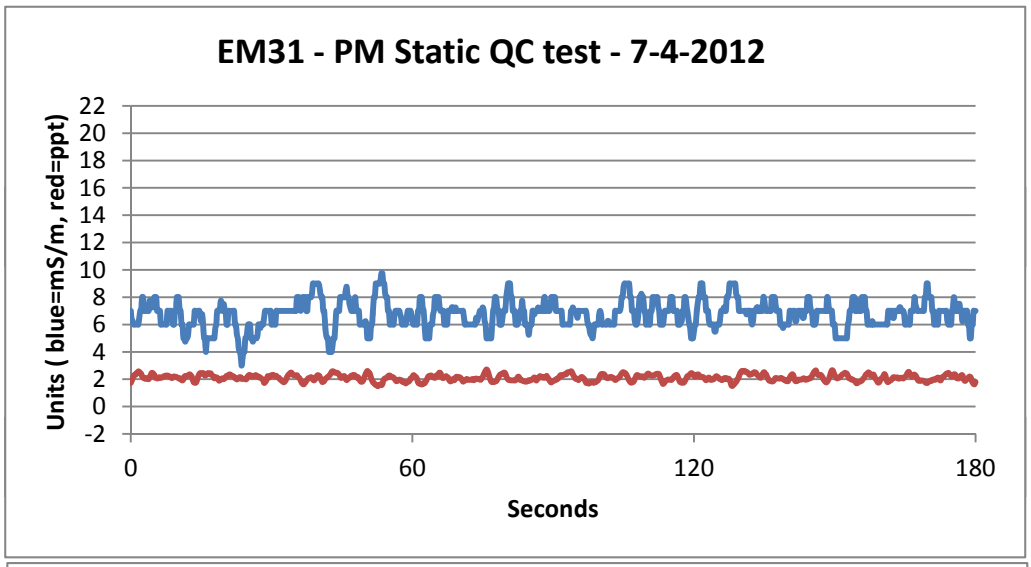

EM31 - PM Cable Shake QC test - 7-3-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds

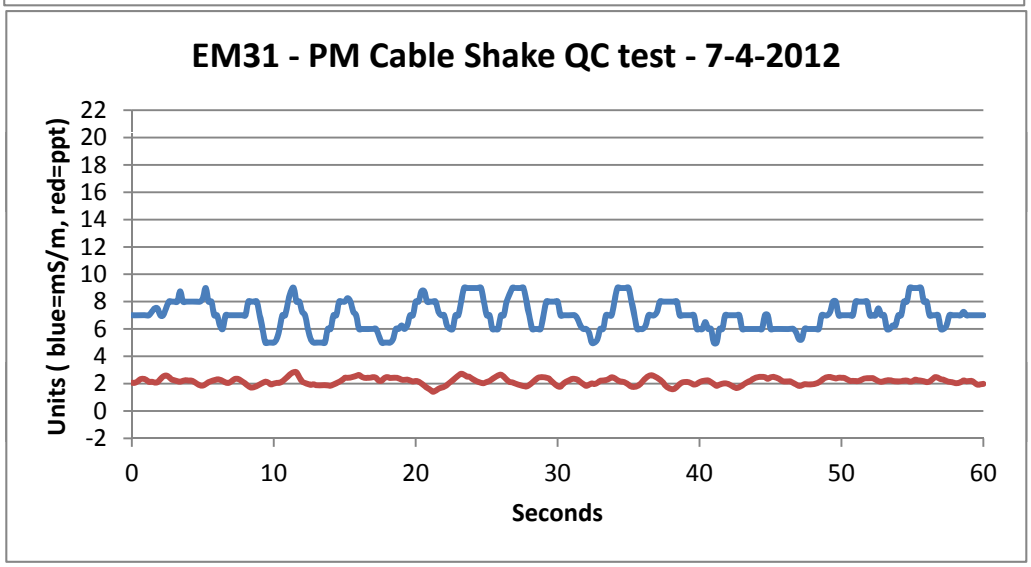

EM31 - PM Spike QC test - 7-3-2012
Units (blue=mS/m, red=ppt)
500
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds

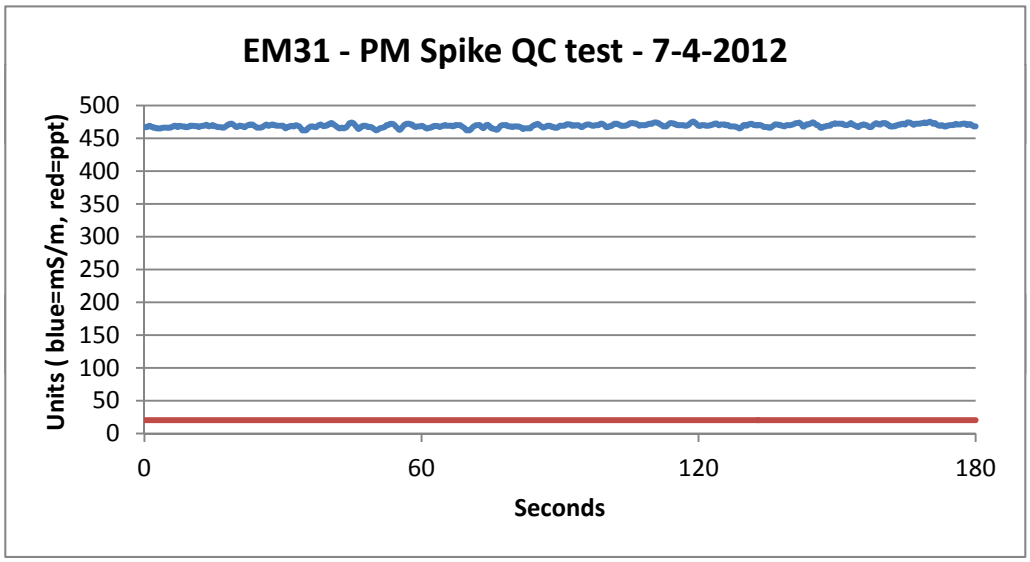

EM31 - AM Static QC test - 7-4-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds

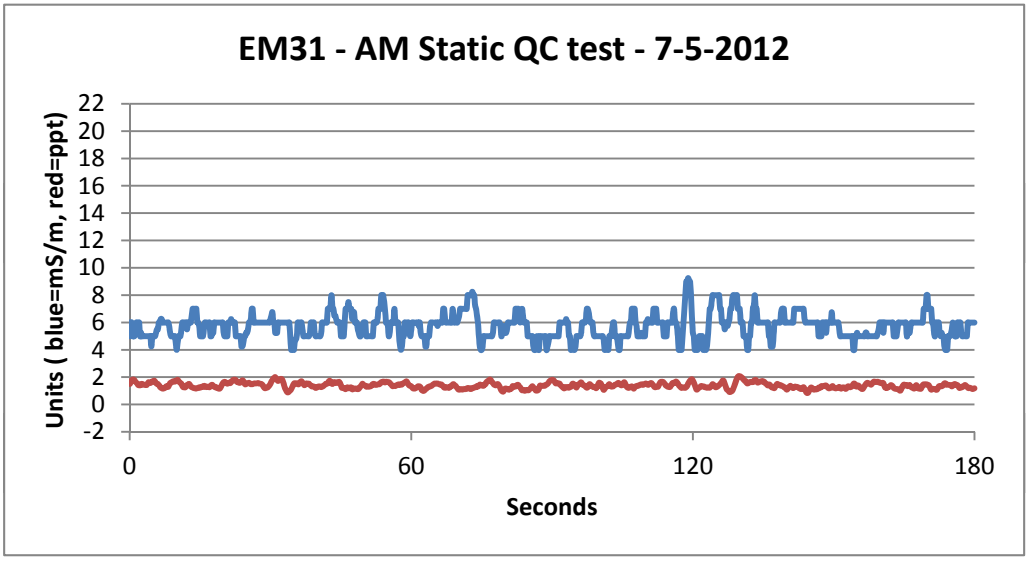

EM31 - AM Cable Shake QC test - 7-4-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds

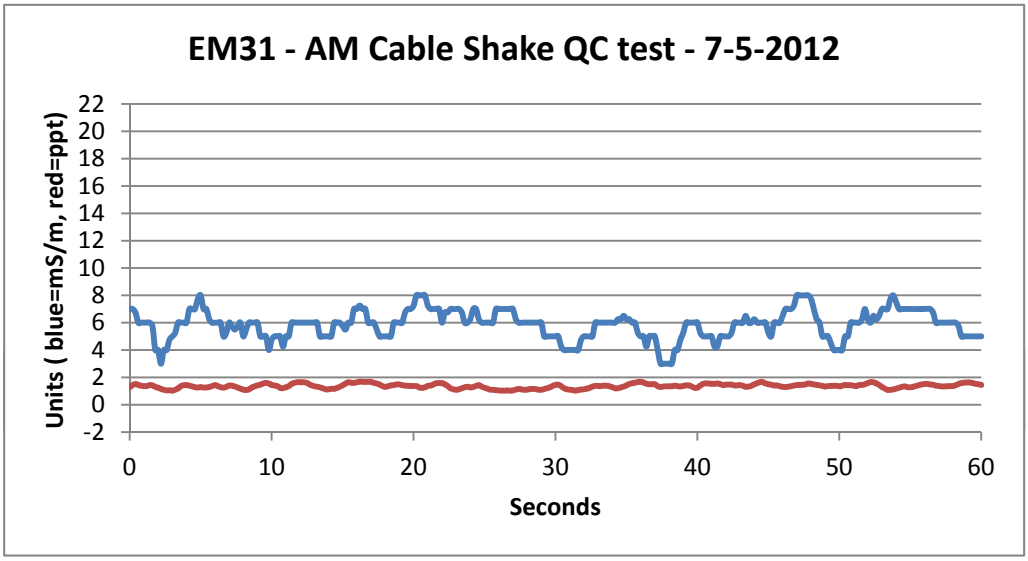

EM31 - AM Spike QC test - 7-4-2012
Units (blue=mS/m, red=ppt)
500
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds

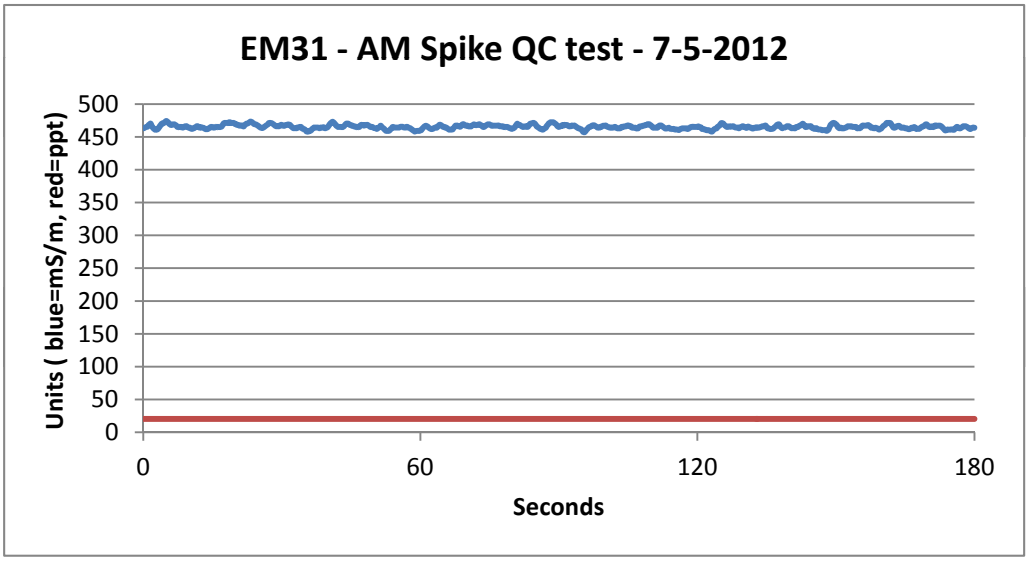

EM31 - PM Static QC test - 7-4-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds

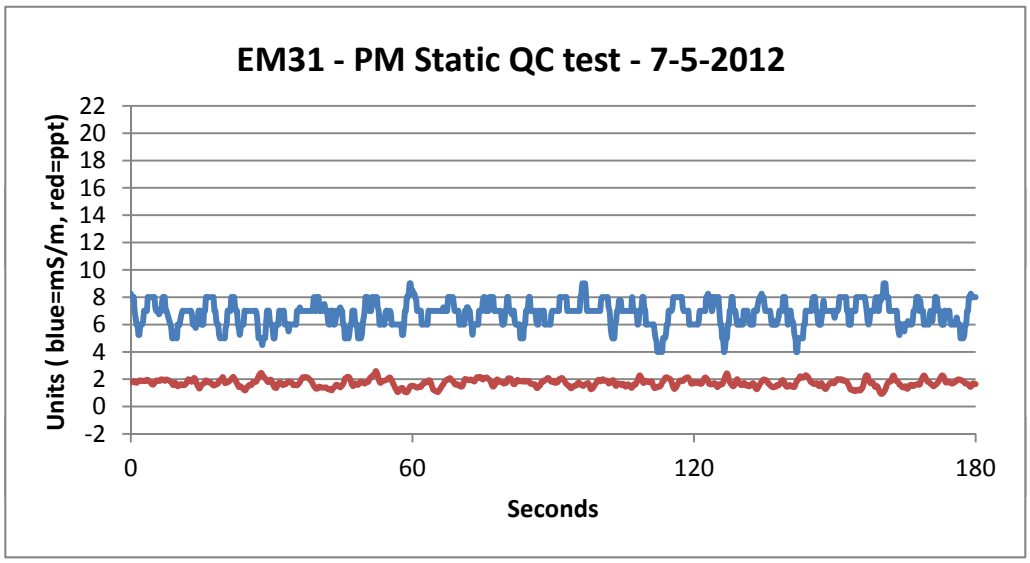

EM31 - PM Cable Shake QC test - 7-4-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds

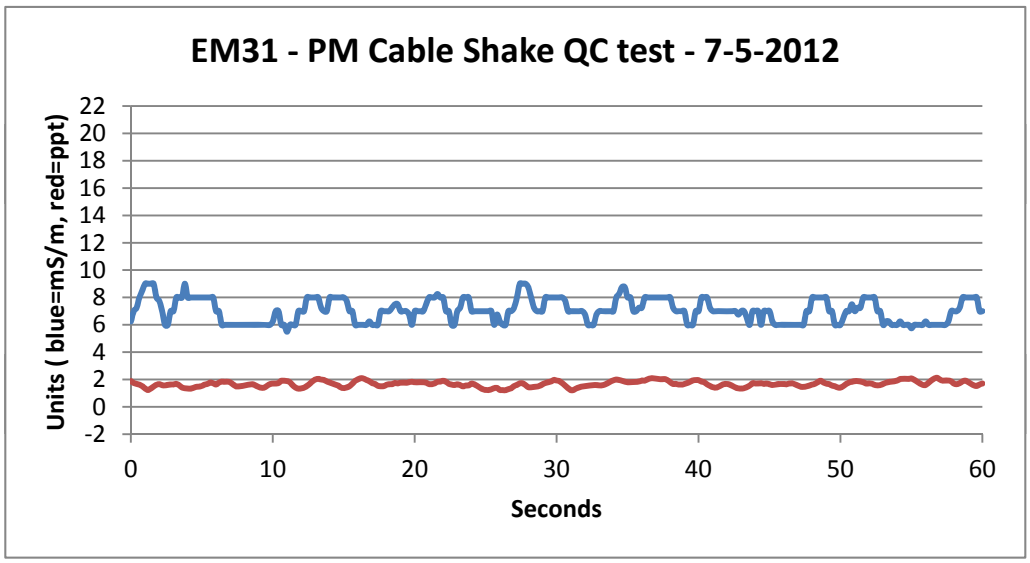

EM31 - PM Spike QC test - 7-4-2012
Units (blue=mS/m, red=ppt)
500
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds

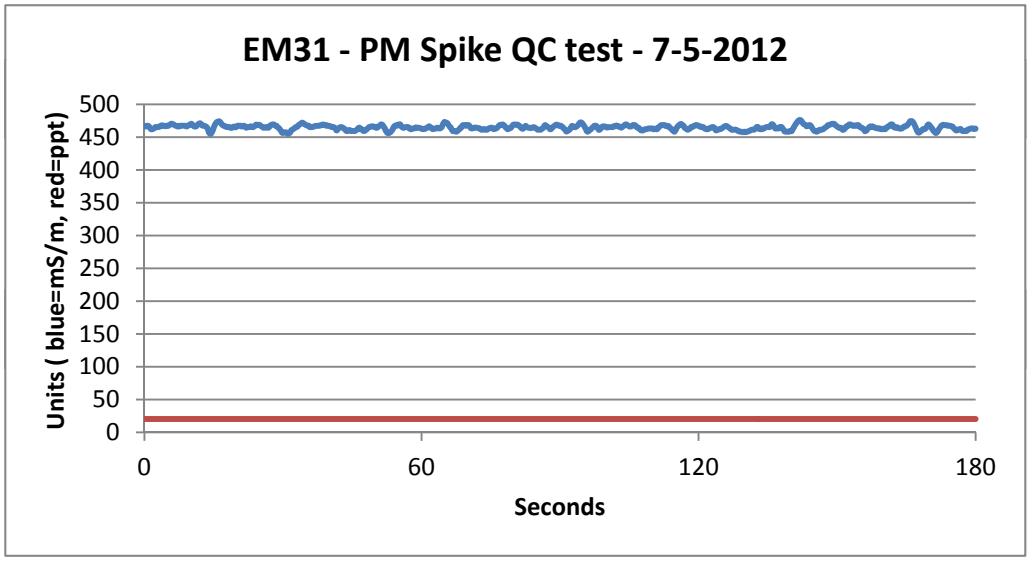

EM31 - AM Static QC test - 7-5-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds

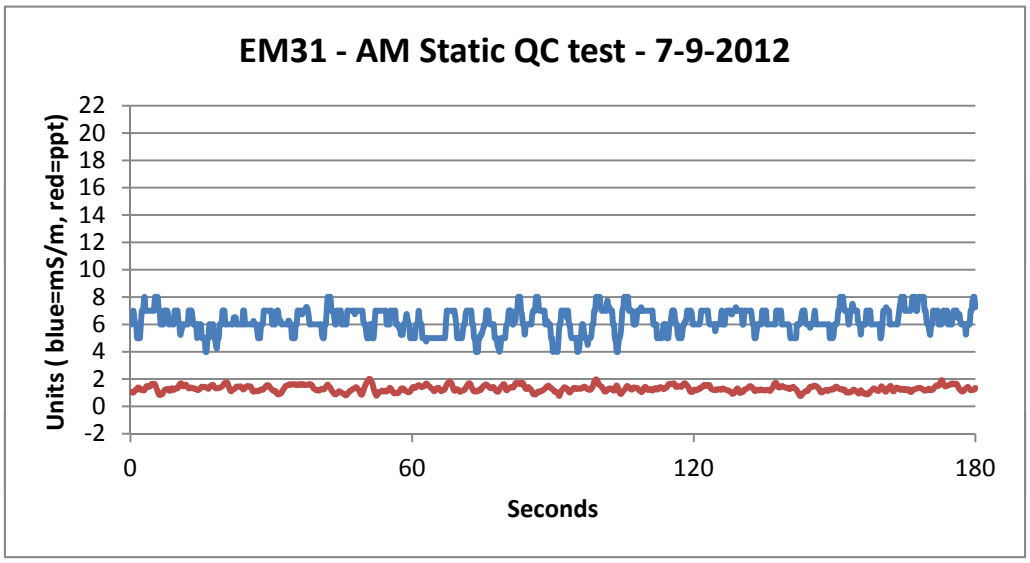

EM31 - AM Cable Shake QC test - 7-5-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds

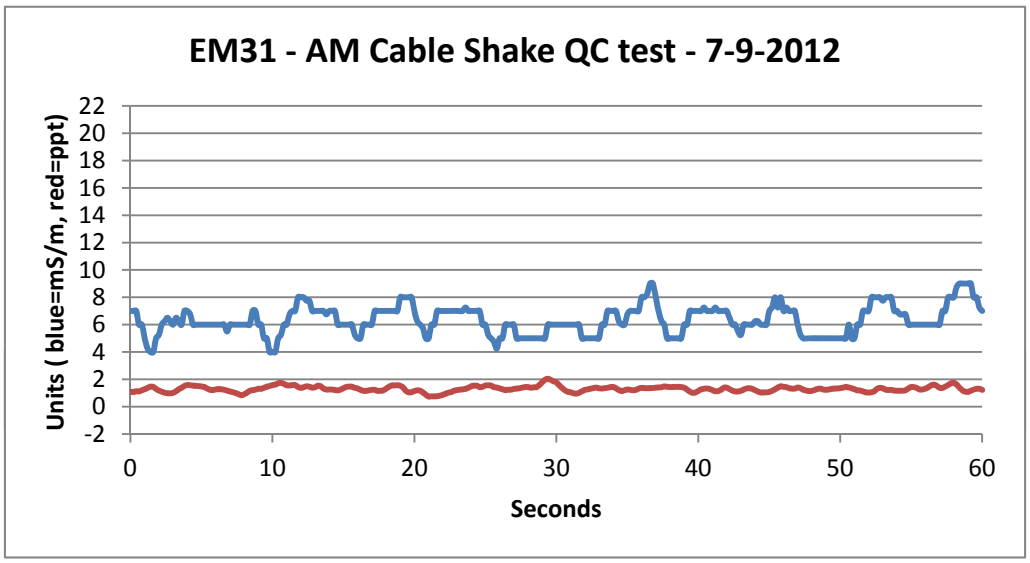

EM31 - AM Spike QC test - 7-5-2012
Units (blue=mS/m, red=ppt)
500
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds

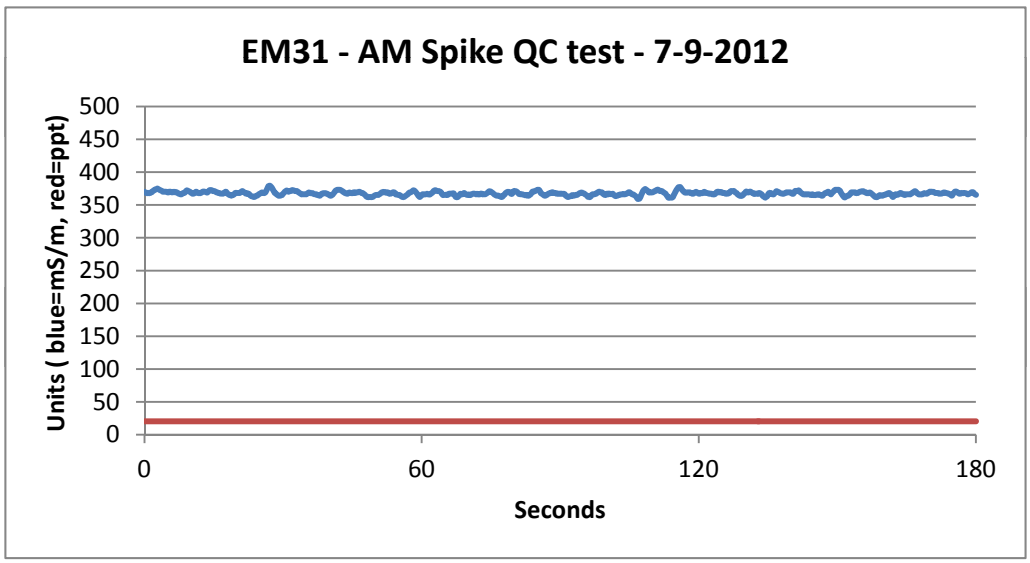

EM31 - PM Static QC test - 7-5-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds

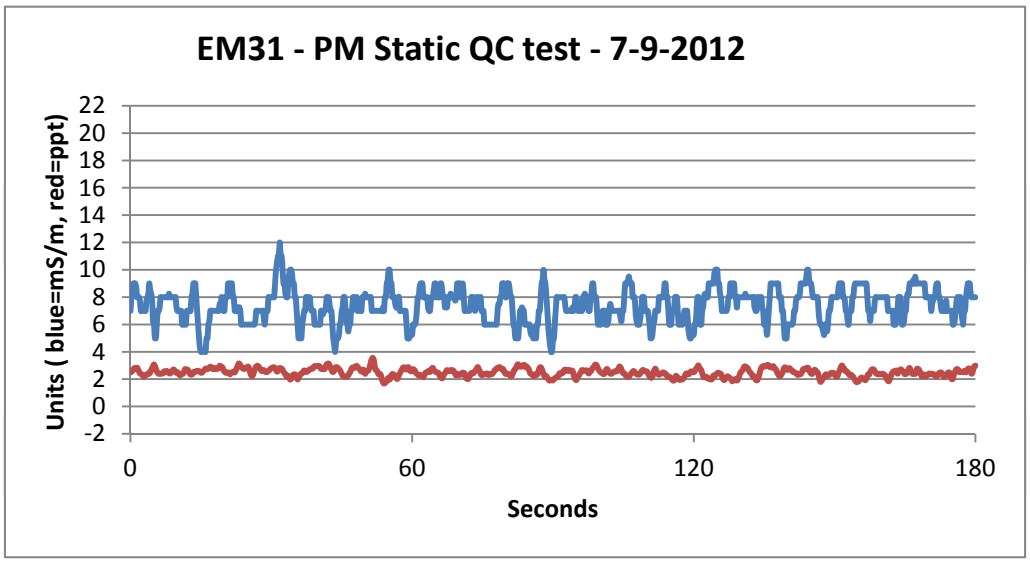

EM31 - PM Cable Shake QC test - 7-5-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds

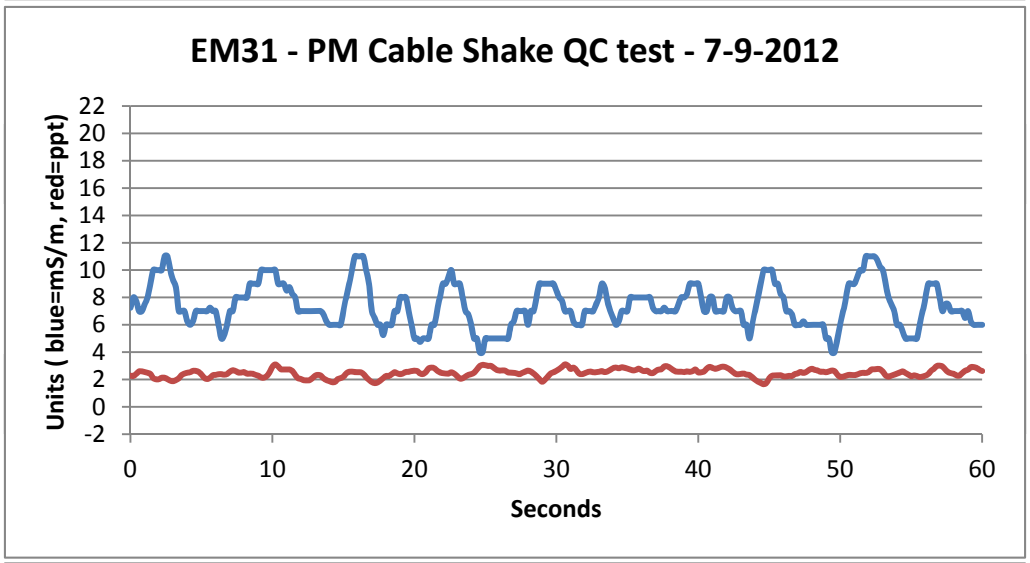

EM31 - PM Spike QC test - 7-5-2012
Units (blue=mS/m, red=ppt)
500
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds

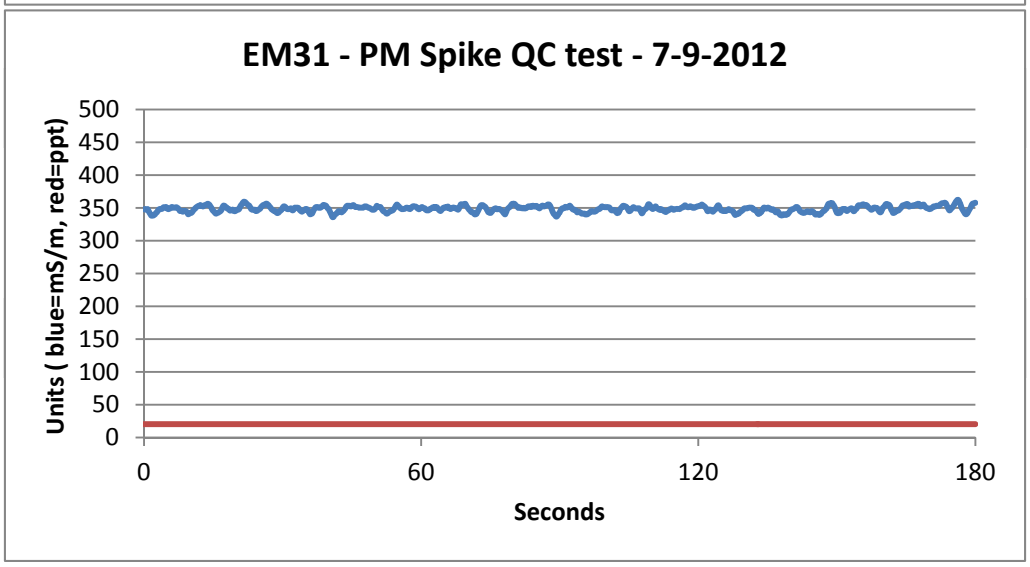

EM31 - AM Static QC test - 7-9-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds

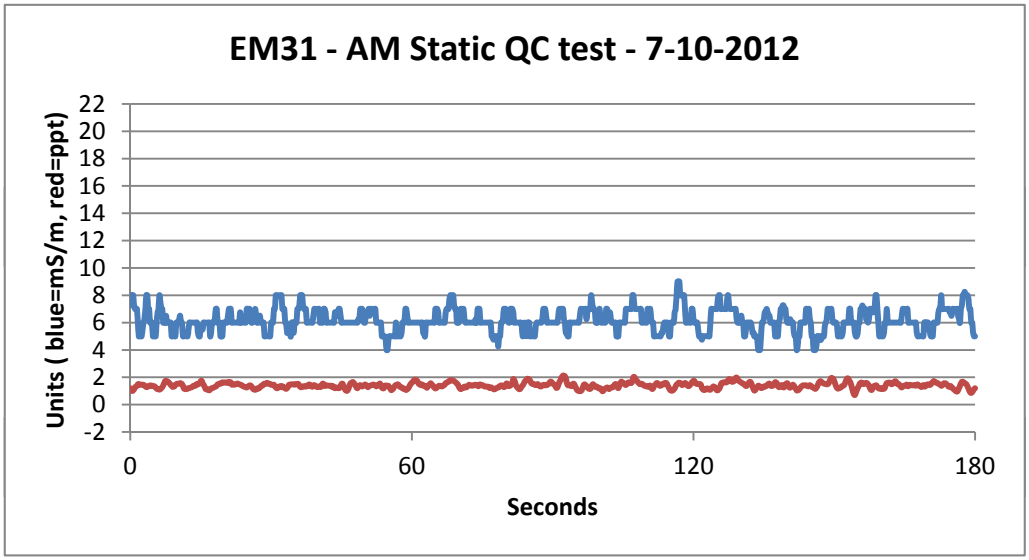

EM31 - AM Cable Shake QC test - 7-9-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds

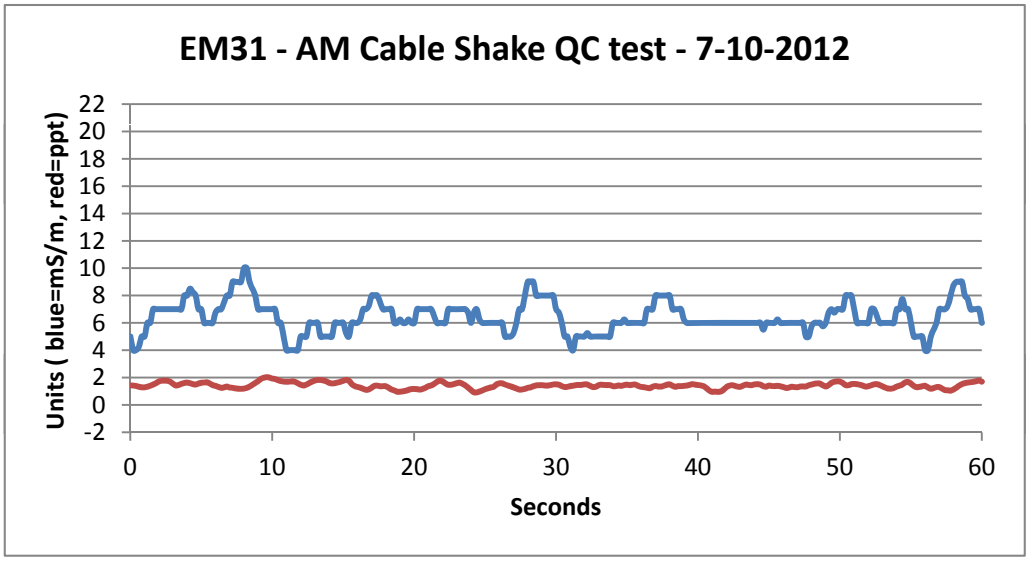

EM31 - AM Spike QC test - 7-9-2012
Units (blue=mS/m, red=ppt)
500
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds

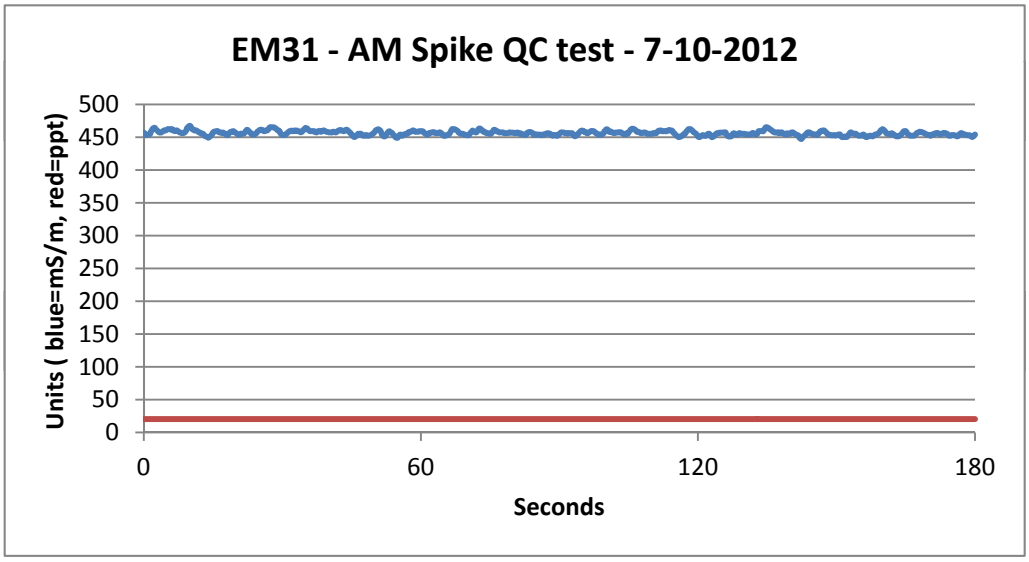

EM31 - PM Static QC test - 7-9-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds

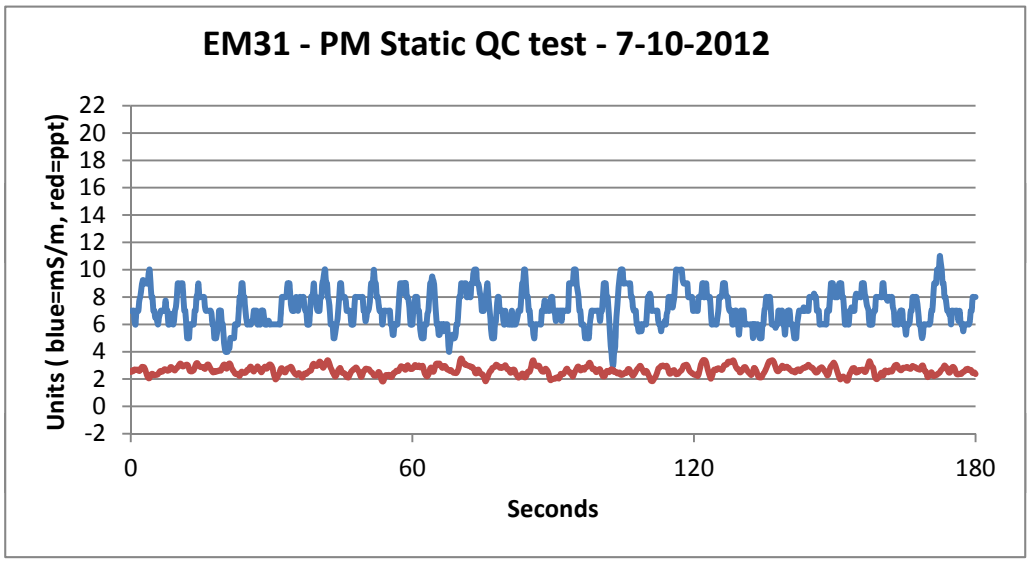

EM31 - PM Cable Shake QC test - 7-9-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds

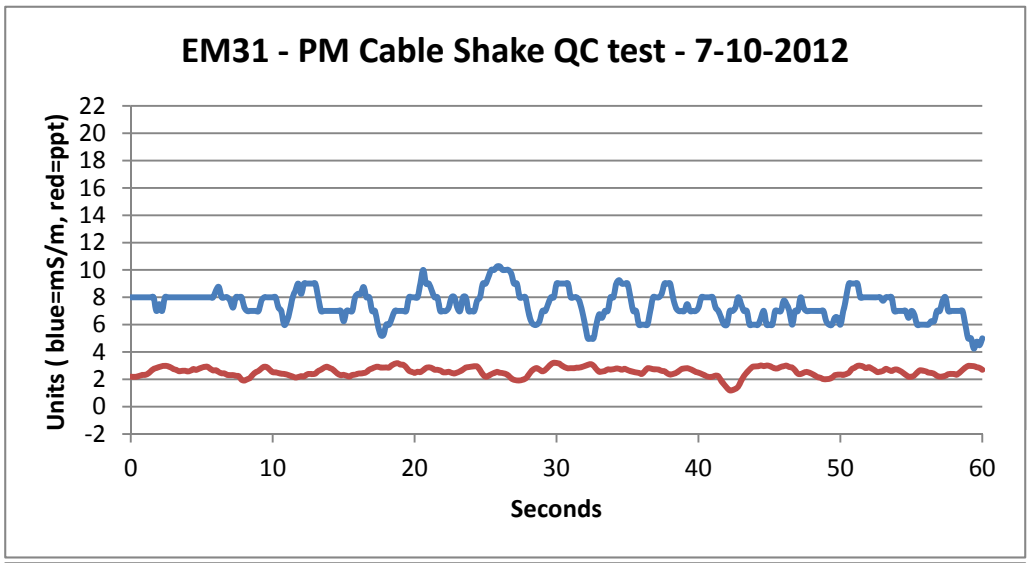

EM31 - PM Spike QC test - 7-9-2012
Units (blue=mS/m, red=ppt)
500
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds

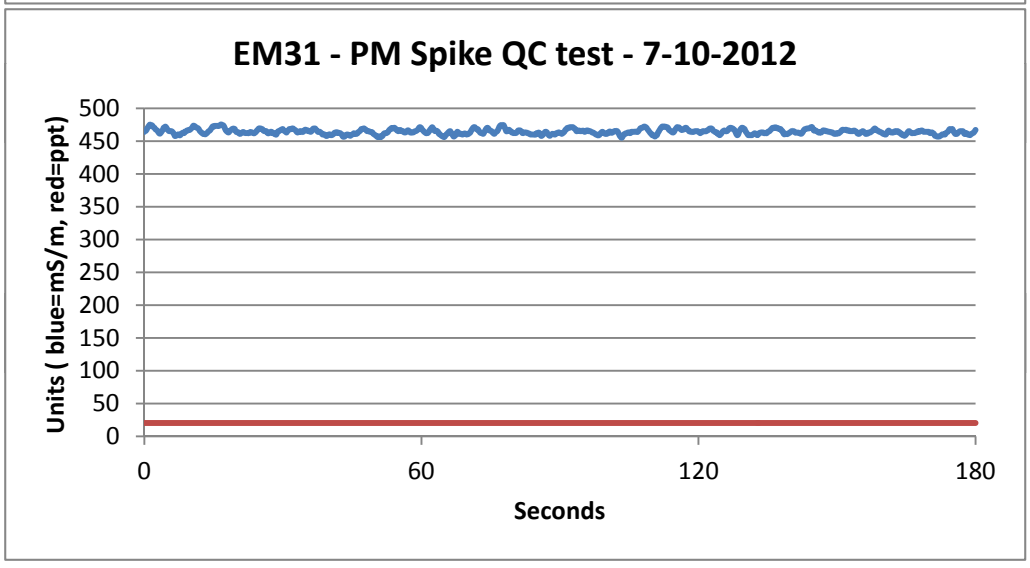

EM31 - AM Static QC test - 7-10-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds

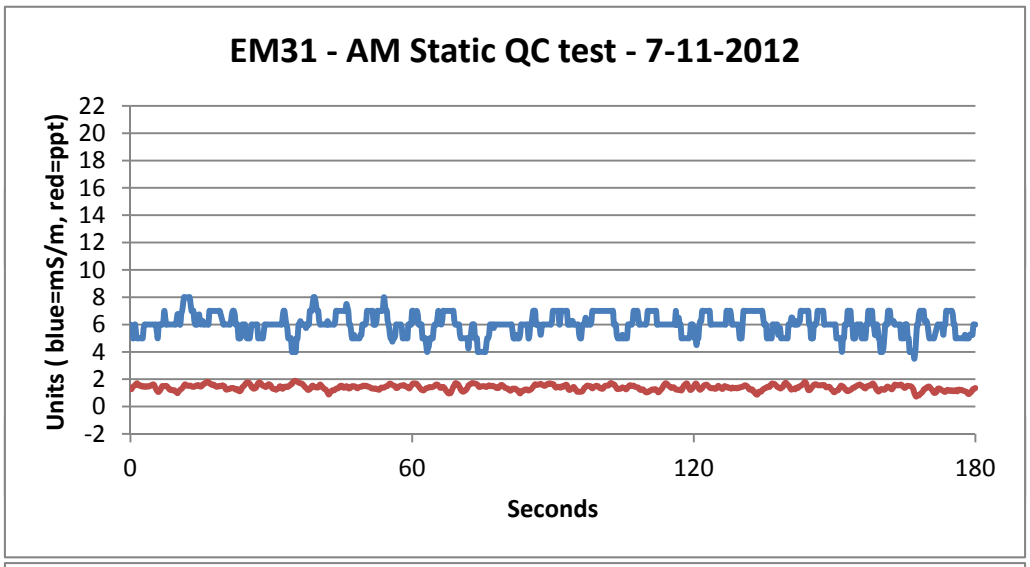

EM31 - AM Cable Shake QC test - 7-10-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds

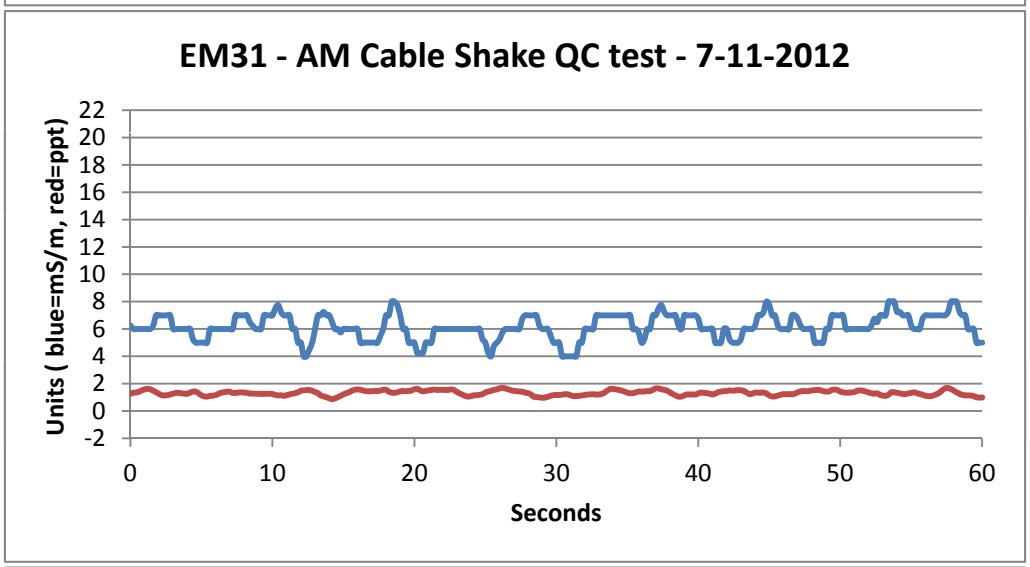

EM31 - AM Spike QC test - 7-10-2012
Units (blue=mS/m, red=ppt)
500
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds

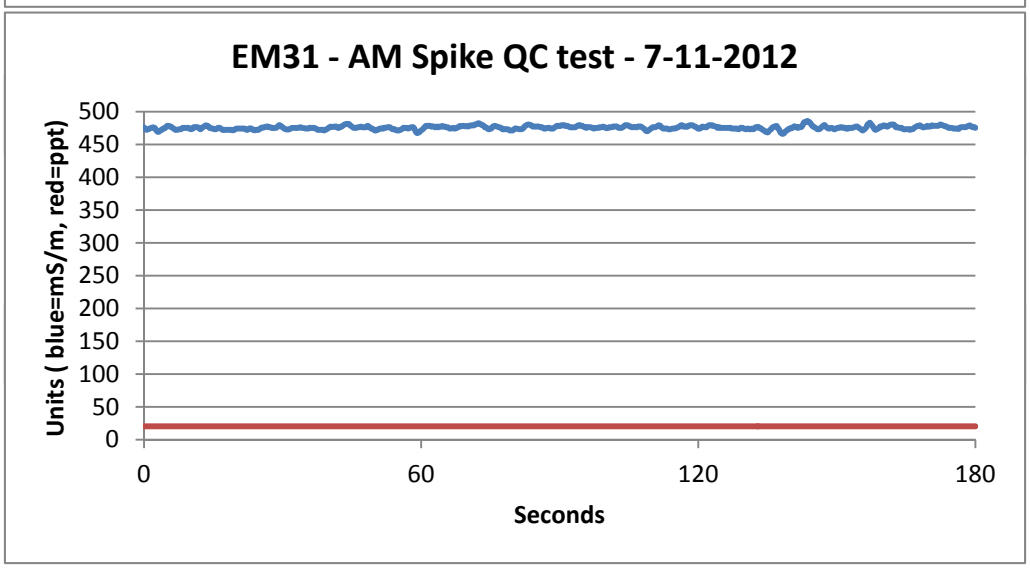

EM31 - PM Static QC test - 7-10-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds

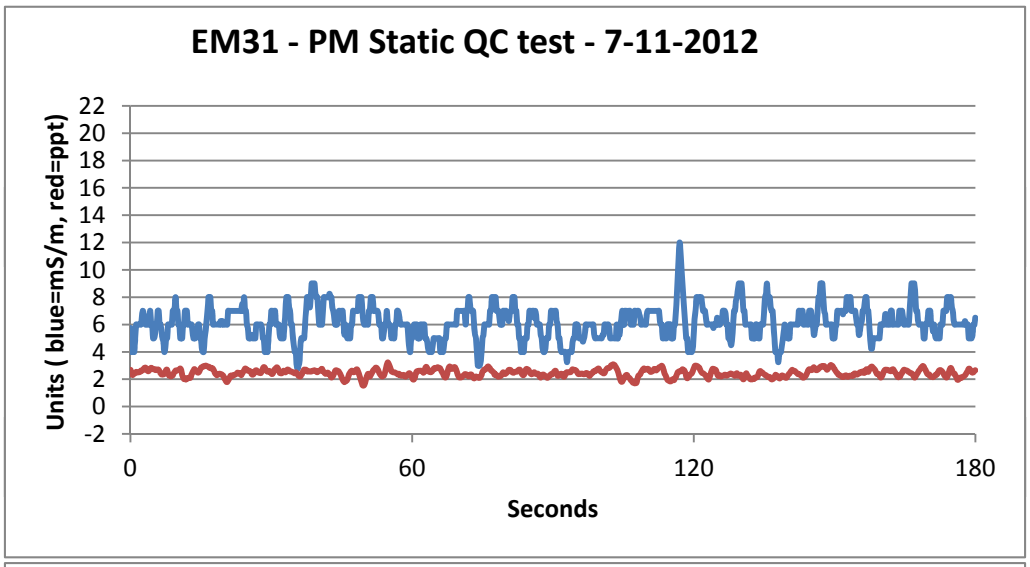

EM31 - PM Cable Shake QC test - 7-10-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds

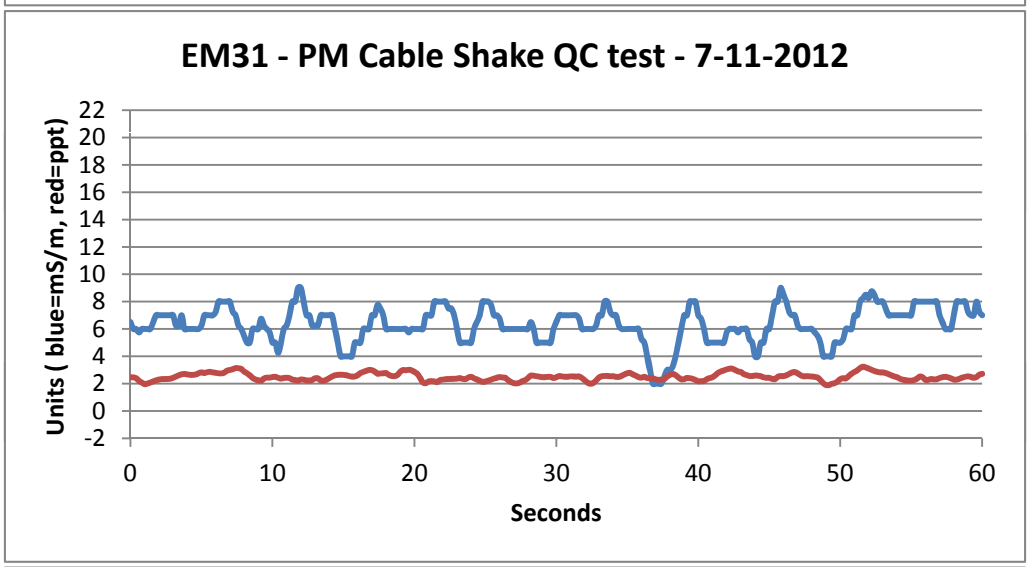

EM31 - PM Spike QC test - 7-10-2012
Units (blue=mS/m, red=ppt)
500
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds

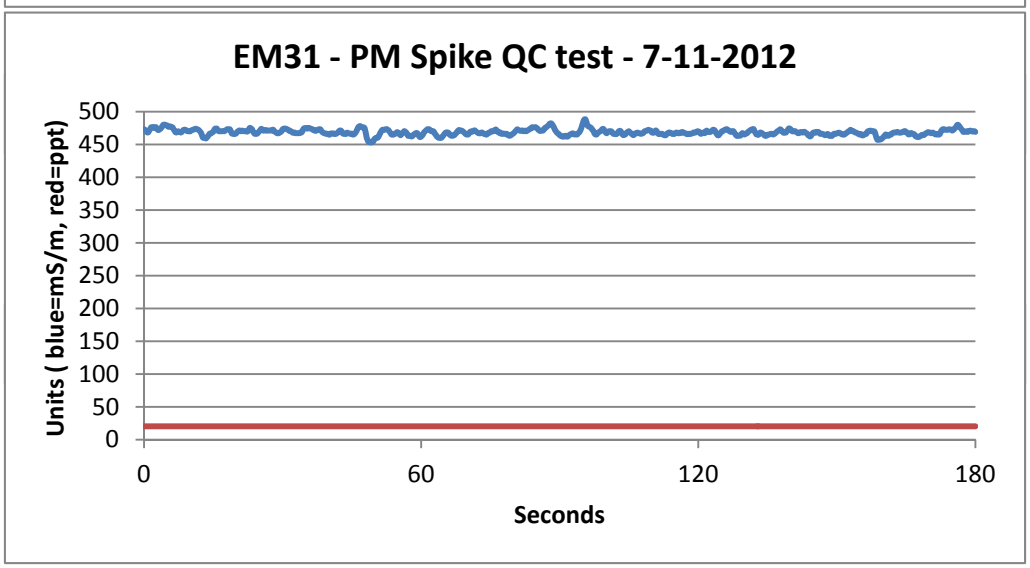

EM31 - AM Static QC test - 7-11-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds

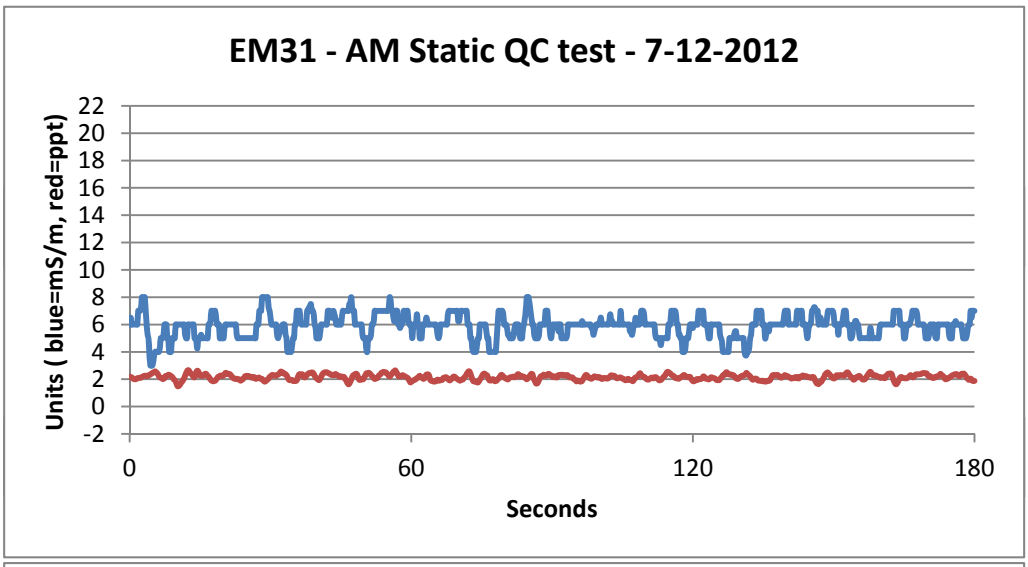

EM31 - AM Cable Shake QC test - 7-11-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds

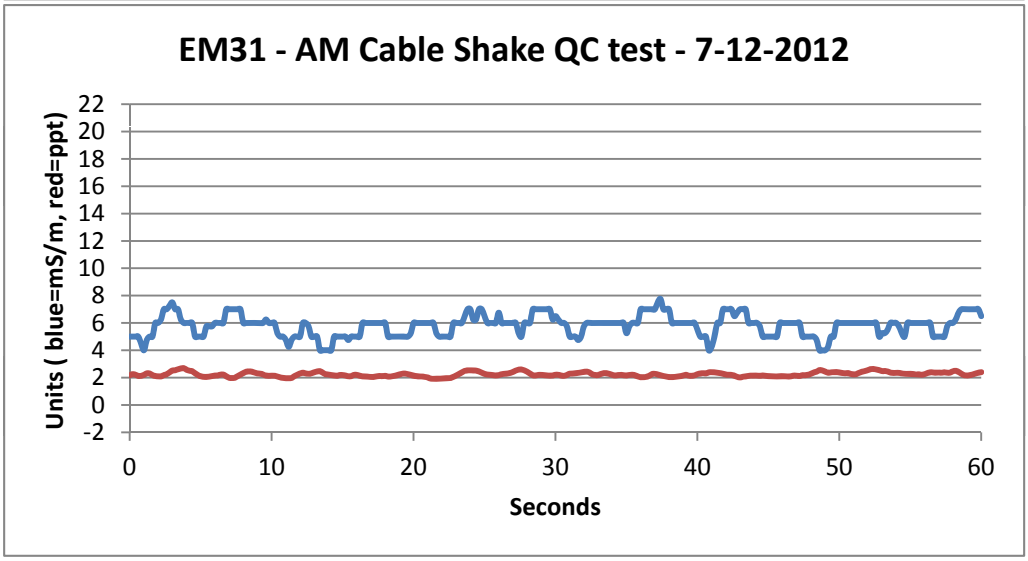

EM31 - AM Spike QC test - 7-11-2012
Units (blue=mS/m, red=ppt)
500
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds


EM31 - PM Static QC test - 7-11-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds


EM31 - PM Cable Shake QC test - 7-11-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds


EM31 - PM Spike QC test - 7-11-2012
Units (blue=mS/m, red=ppt)
500
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds


EM31 - AM Static QC test - 7-12-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds


EM31 - AM Cable Shake QC test - 7-12-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
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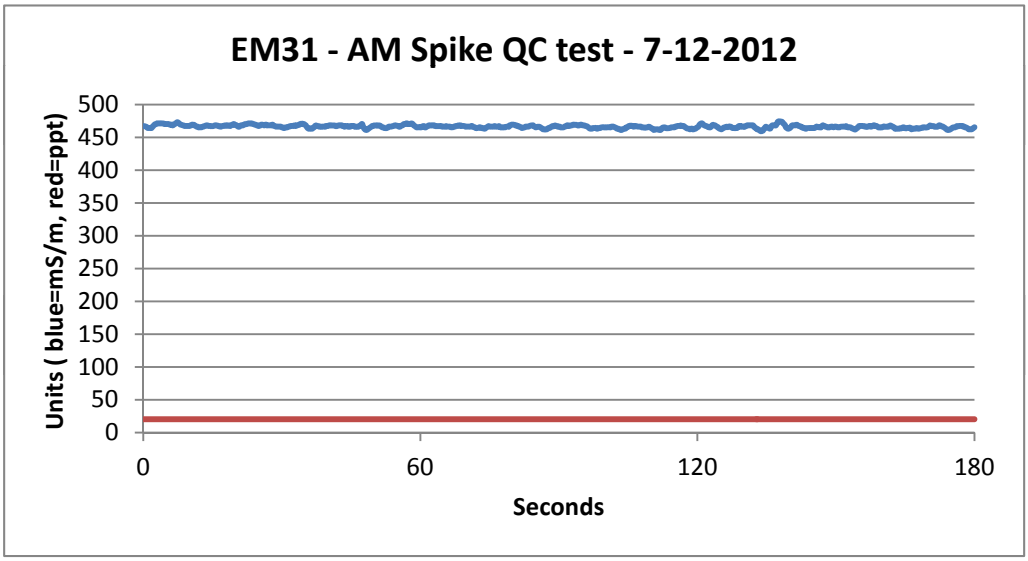
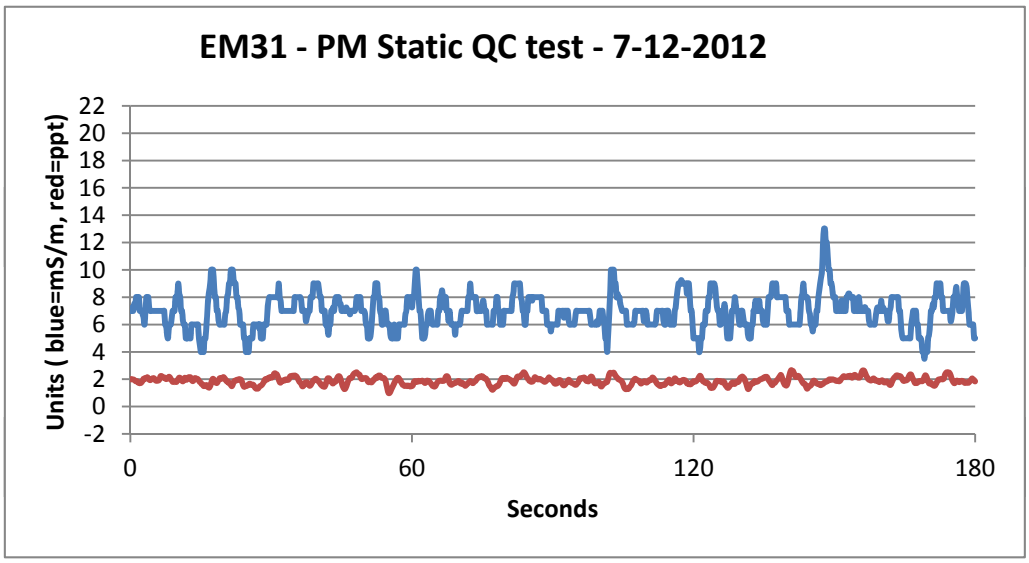
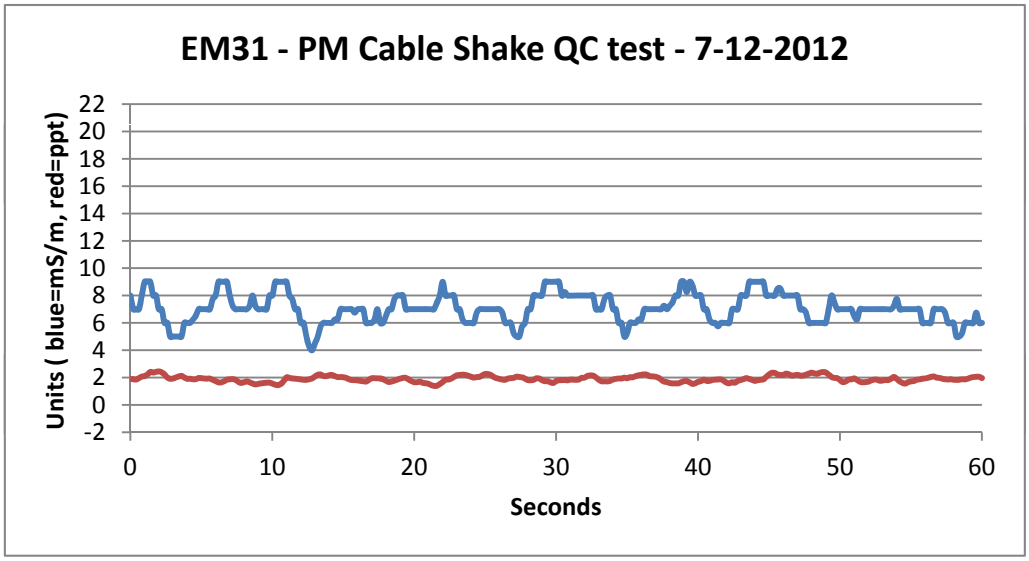
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds


EM31 - AM Spike QC test - 7-12-2012
Units (blue=mS/m, red=ppt)
500
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds


EM31 - PM Static QC test - 7-12-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds


EM31 - PM Cable Shake QC test - 7-12-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
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12
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8
6
4
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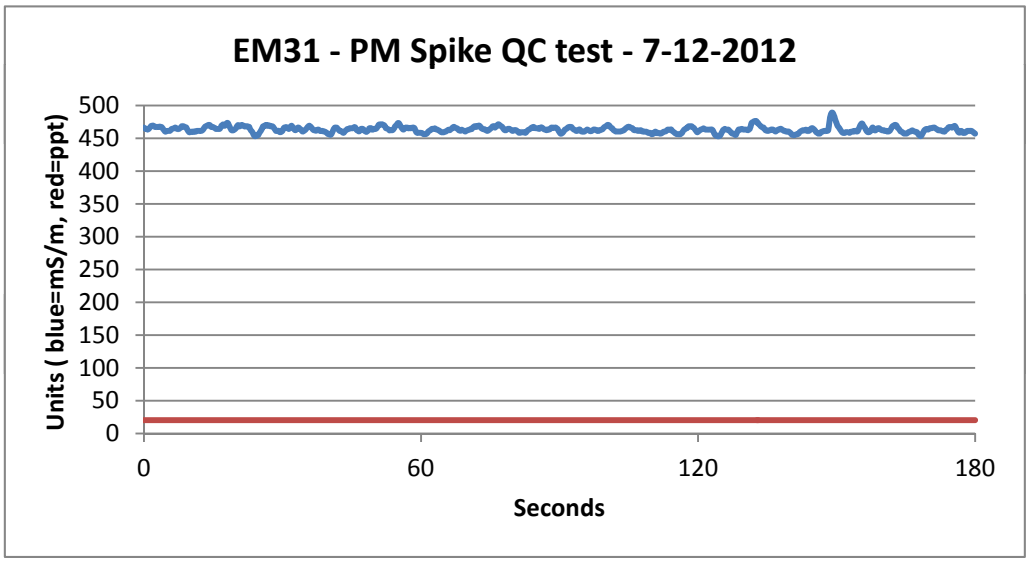
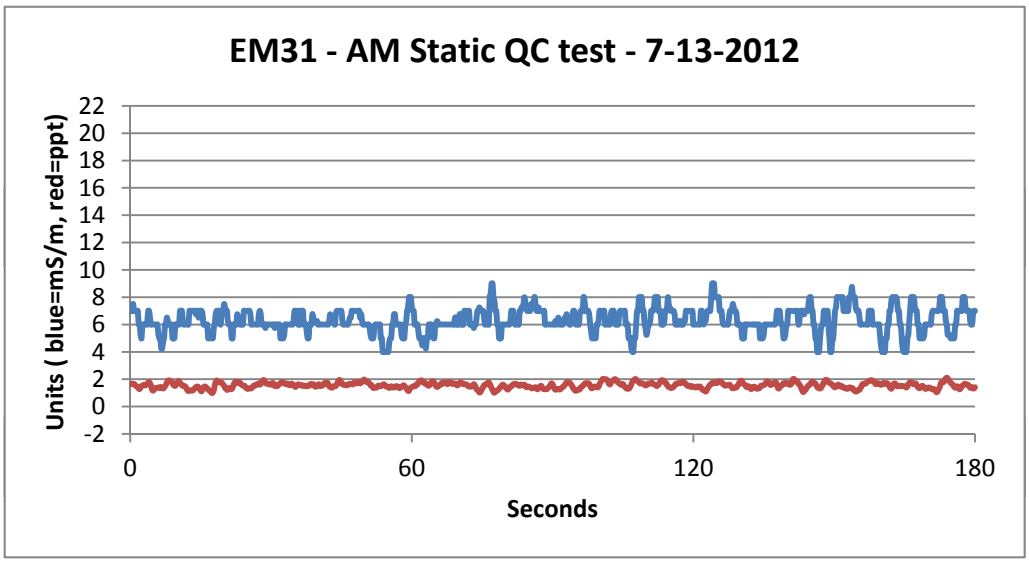
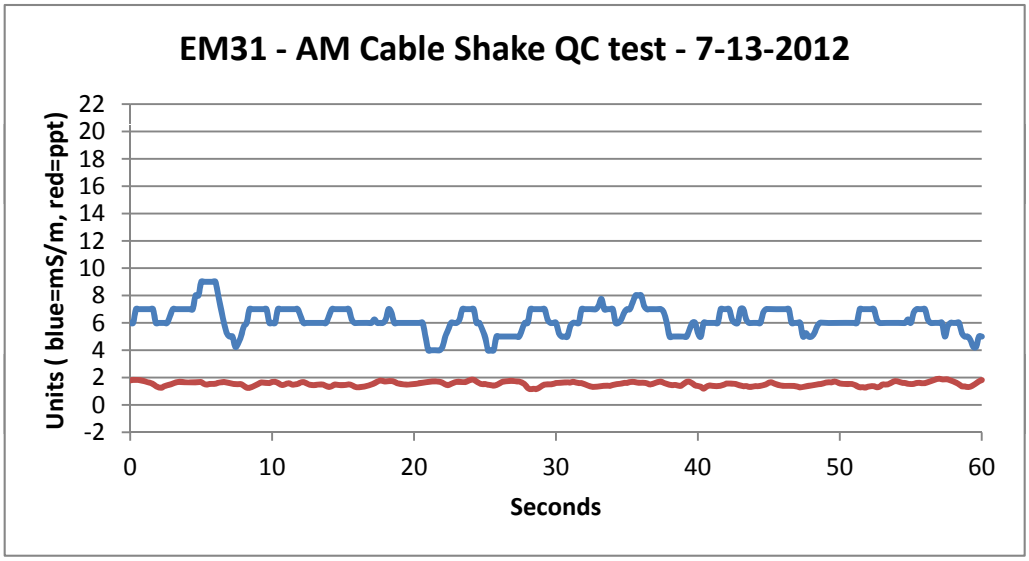
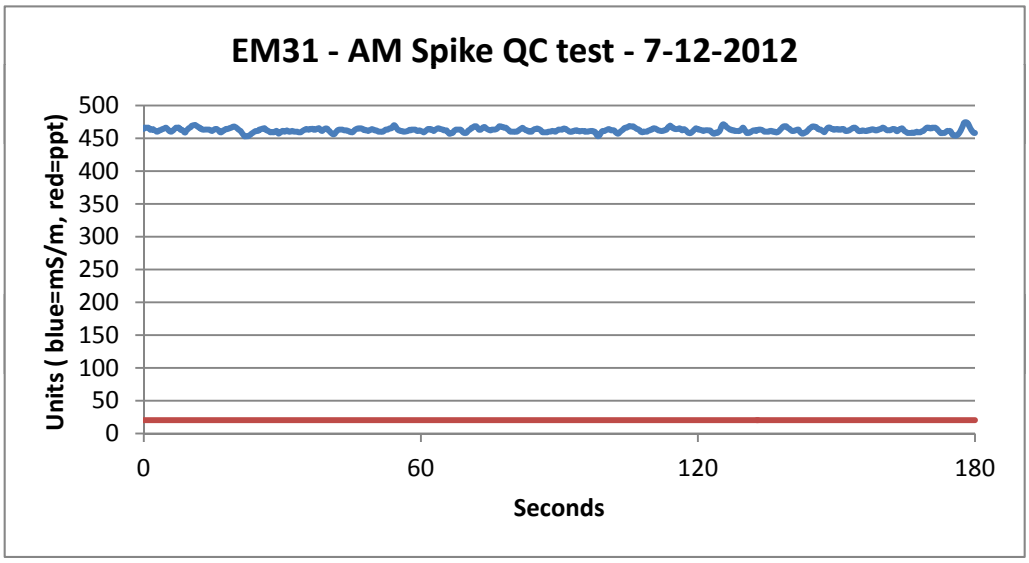
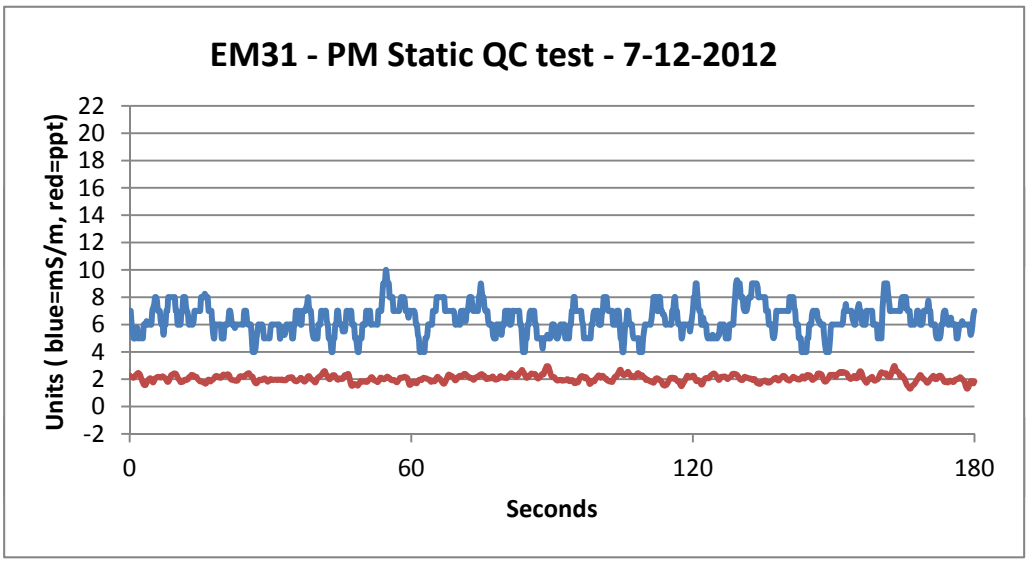
-2
0
10
20
30
40
50
60
Seconds

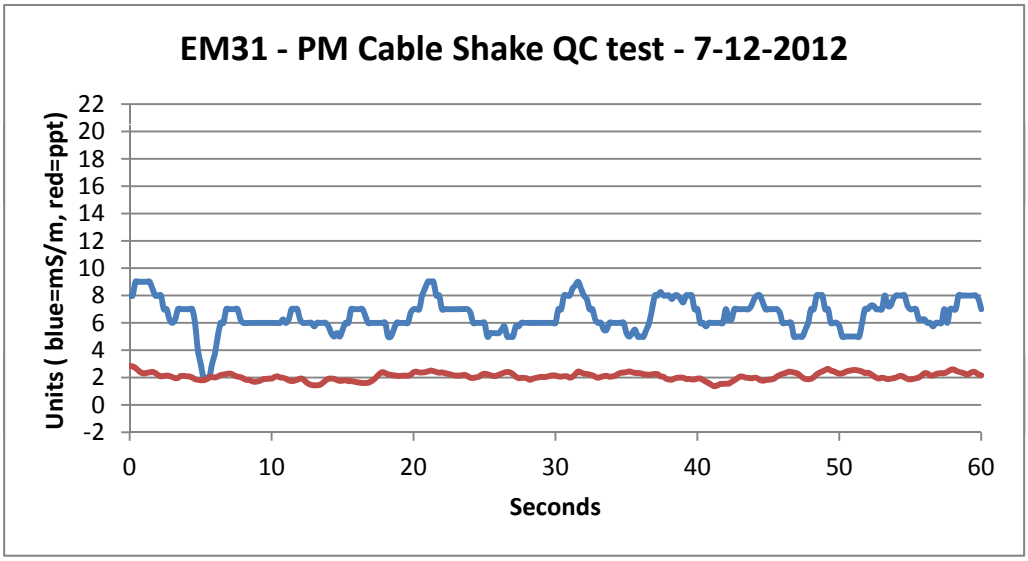

EM31 - PM Spike QC test - 7-12-2012
Units (blue=mS/m, red=ppt)
500
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds

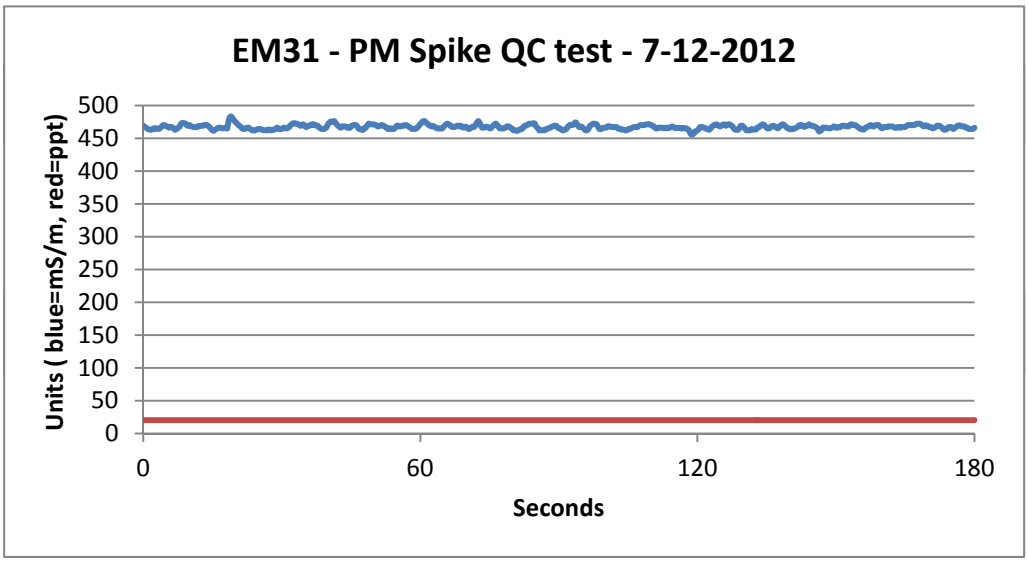

EM31 - AM Static QC test - 7-13-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds

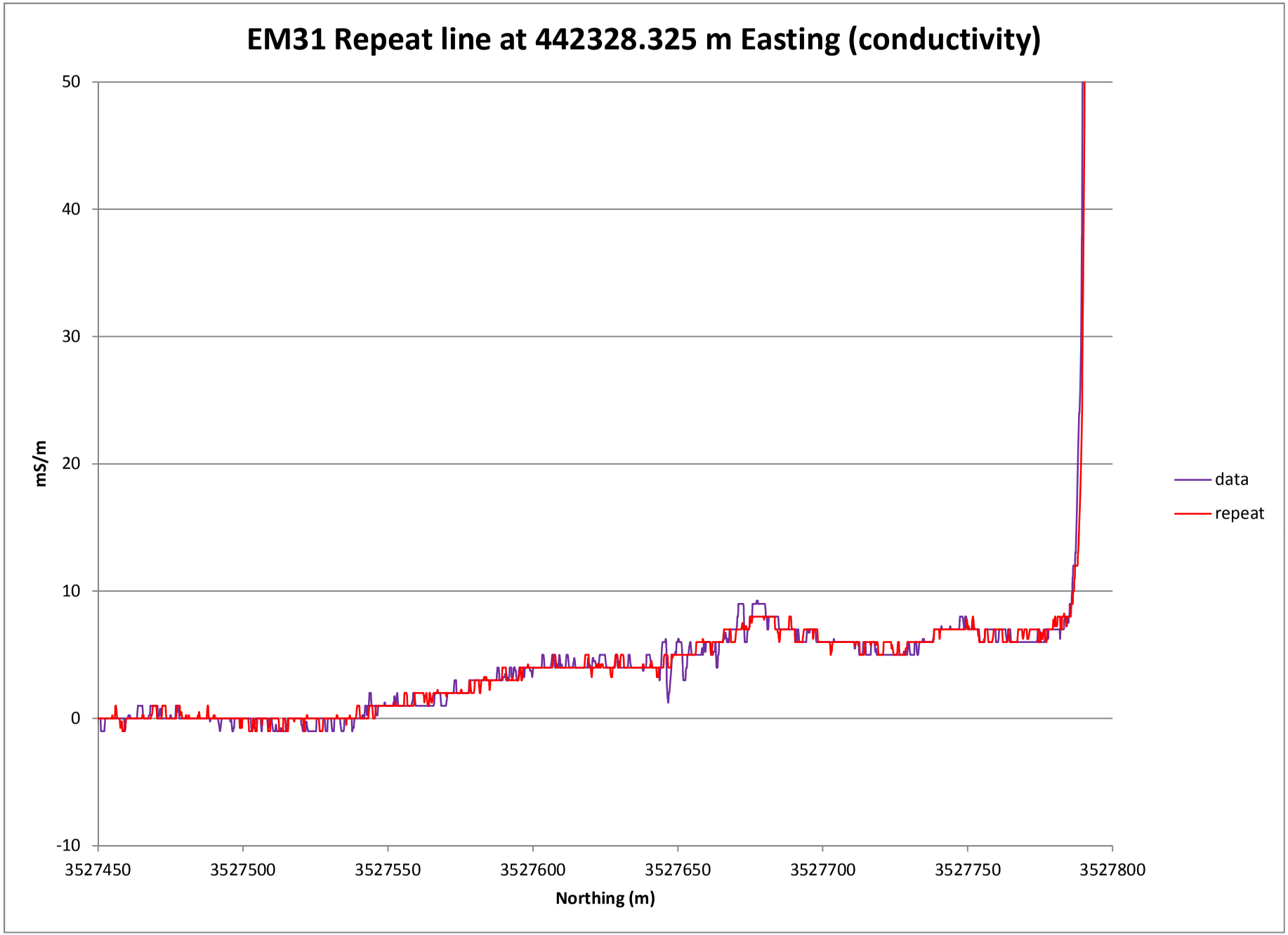

EM31 - AM Cable Shake QC test - 7-13-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds

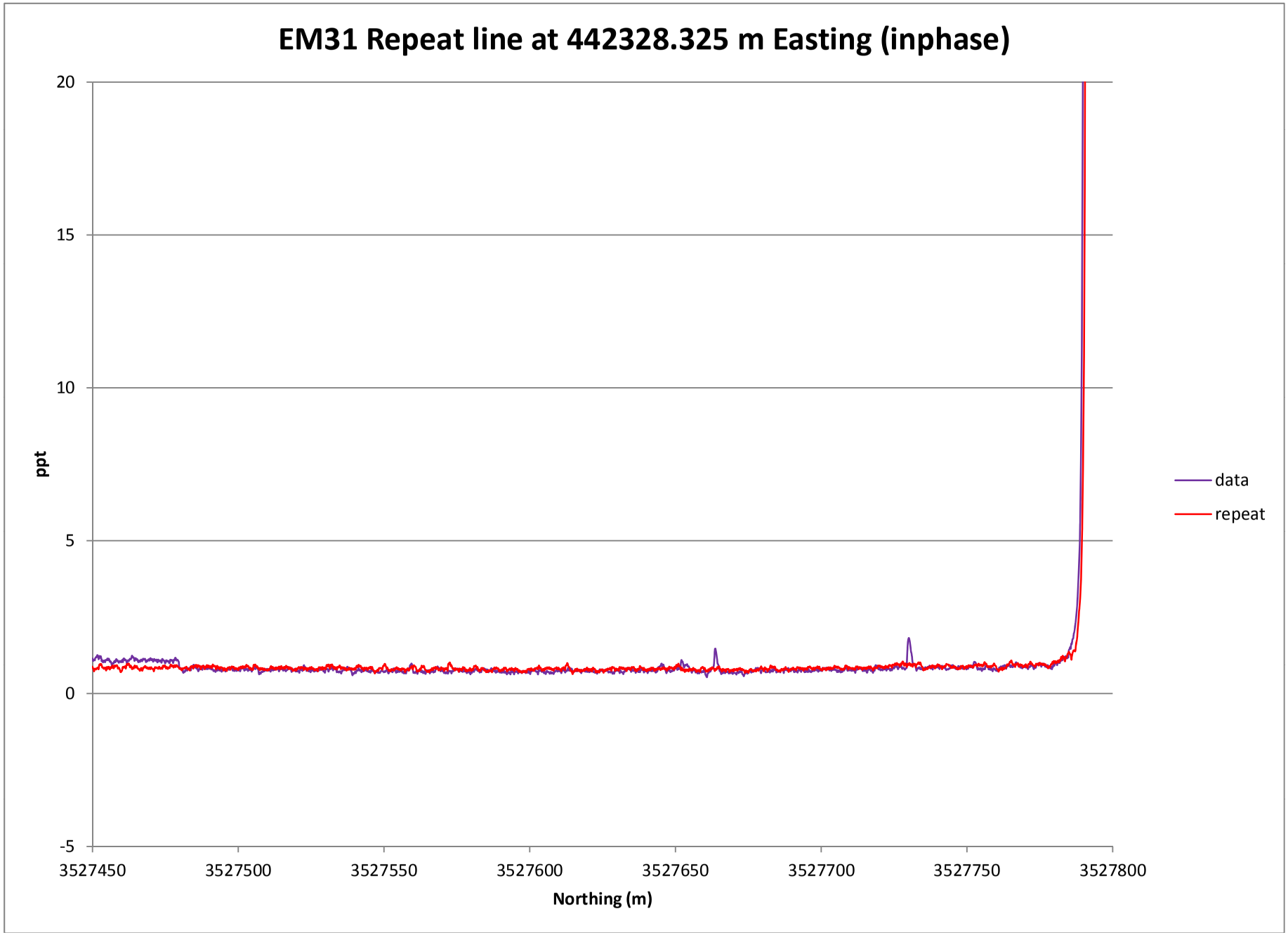

EM31 - AM Spike QC test - 7-12-2012
Units (blue=mS/m, red=ppt)
500
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds

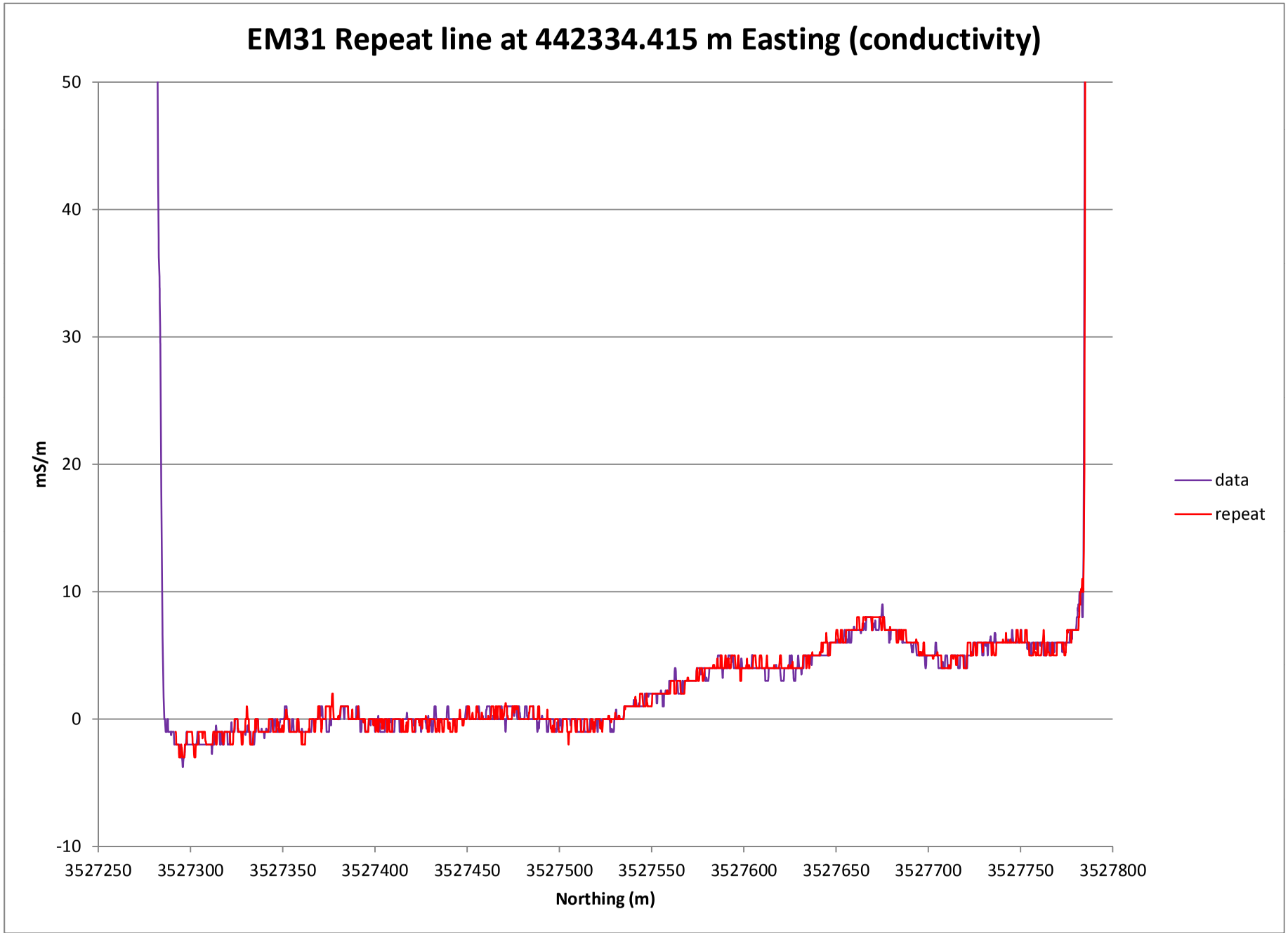

EM31 - PM Static QC test - 7-12-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
60
120
180
Seconds

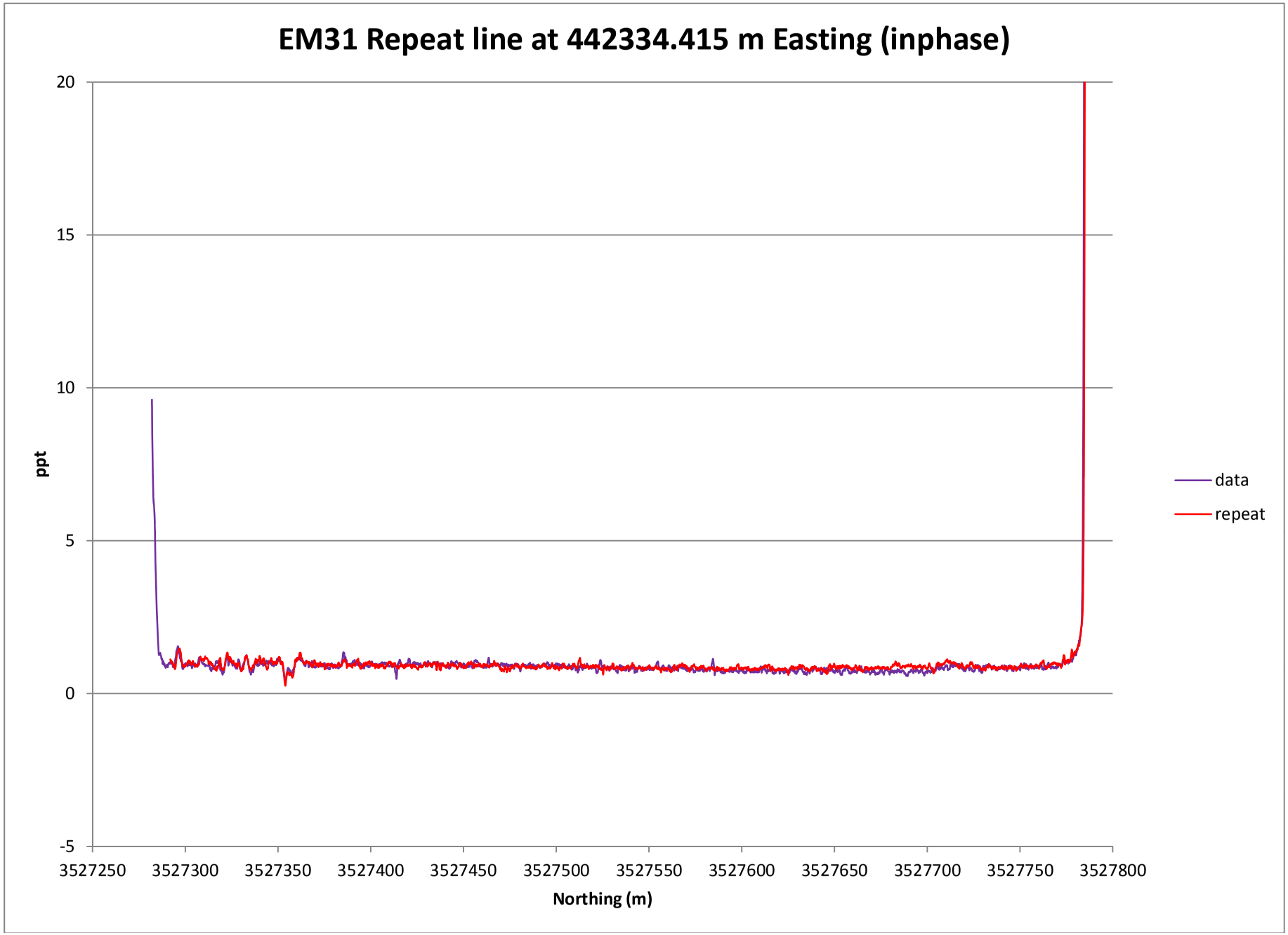

EM31 - PM Cable Shake QC test - 7-12-2012
Units (blue=mS/m, red=ppt)
22
20
18
16
14
12
10
8
6
4
2
0
-2
0
10
20
30
40
50
60
Seconds

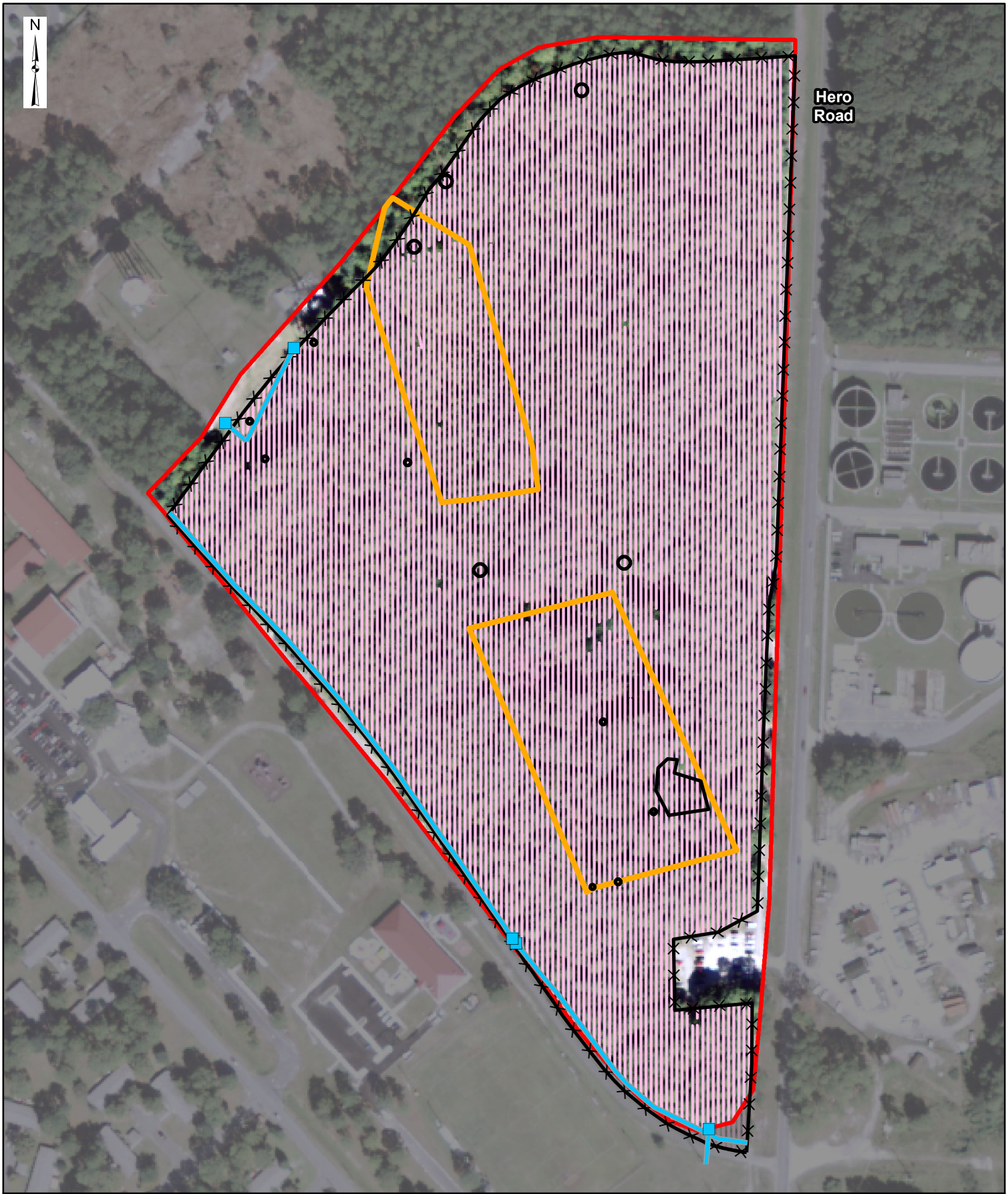

EM31 - PM Spike QC test - 7-12-2012
Units (blue=mS/m, red=ppt)
500
450
400
350
300
250
200
150
100
50
0
0
60
120
180
Seconds


EM31 Repeat line at 442328.325 m Easting (conductivity)
50
40
30
20
10
0
-10
mS/m
3527450
3527500
3527550
3527600
3527650
3527700
3527750
3527800
Northing (m)
data
repeat


EM31 Repeat line at 442328.325 m Easting (inphase)
20
15
10
5
0
-5
ppt
3527450
3527500
3527550
3527600
3527650
3527700
3527750
3527800
Northing (m)
data
repeat


EM31 Repeat line at 442334.415 m Easting (conductivity)
50
40
30
20
10
0
-10
mS/m
3527250
3527300
3527350
3527400
3527450
3527500
3527550
3527600
3527650
3527700
3527750
3527800
Northing (m)
data
repeat


EM31 Repeat line at 442334.415 m Easting (inphase)
20
15
10
5
0
-5
ppt
3527250
3527300
3527350
3527400
3527450
3527500
3527550
3527600
3527650
3527700
3527750
3527800
Northing (m)
data
repeat



US Army Corps of Engineers
BUILDING STRONG

ERT

Legend

Surface Debris
Utilities
Barbed Wire Fence
Ground Scar Outlines
Hero Road MRS
EM-31 Transect

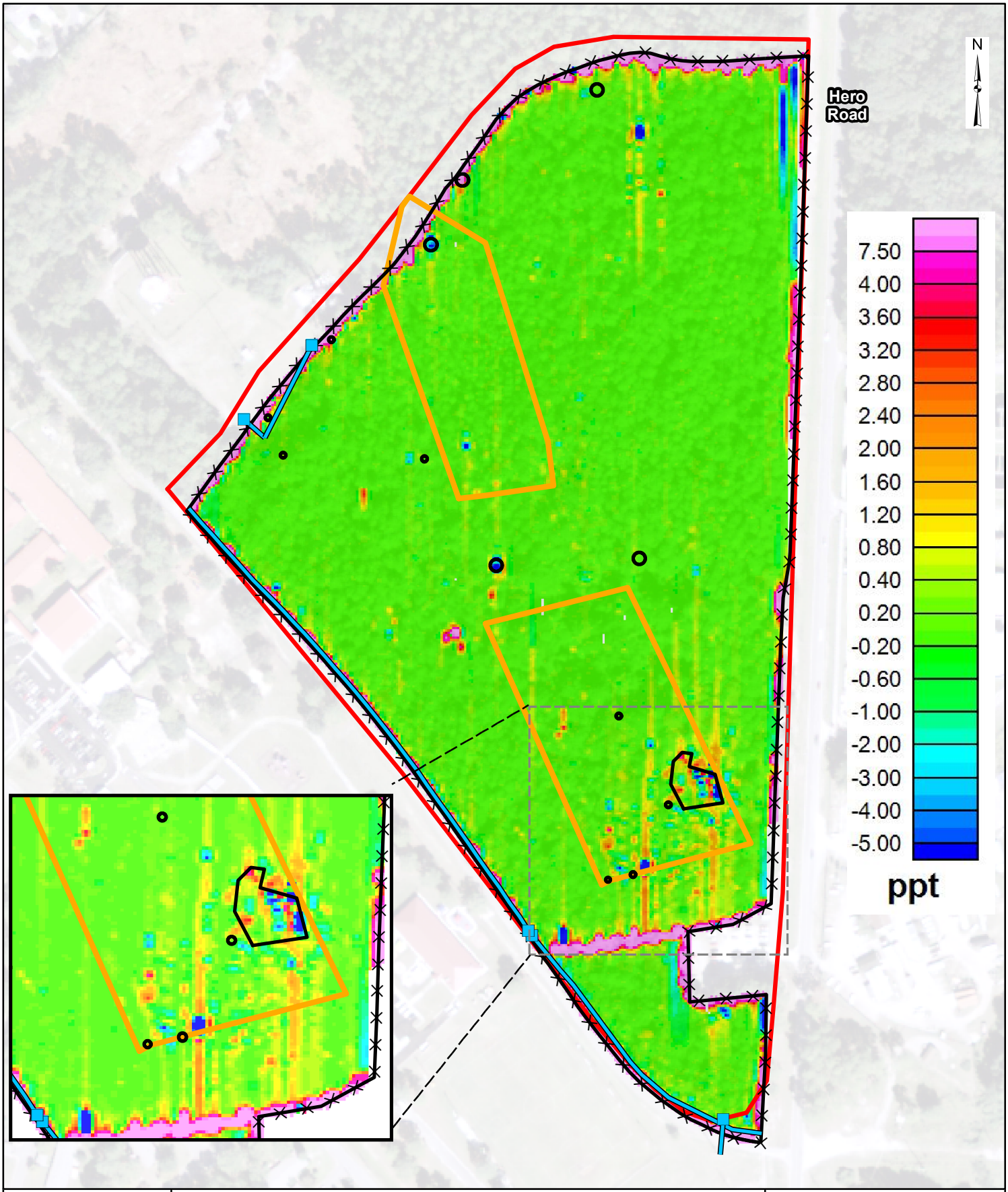
0 70
Feet

EM-31 Transects
Hero Road Trench Area
(FTSW-008-R-01) MRS

Fort Stewart, Georgia

Date: November 2012

Imagery Source: National Agriculture Imagery Program (NAIP) 2009



US Army Corps of Engineers
BUILDING STRONG
ERT

Legend

EM-31 In-Phase Data
Surface Debris
Utilities
Ground Scar Outlines
Hero Road MRS
Barbed Wire Fence

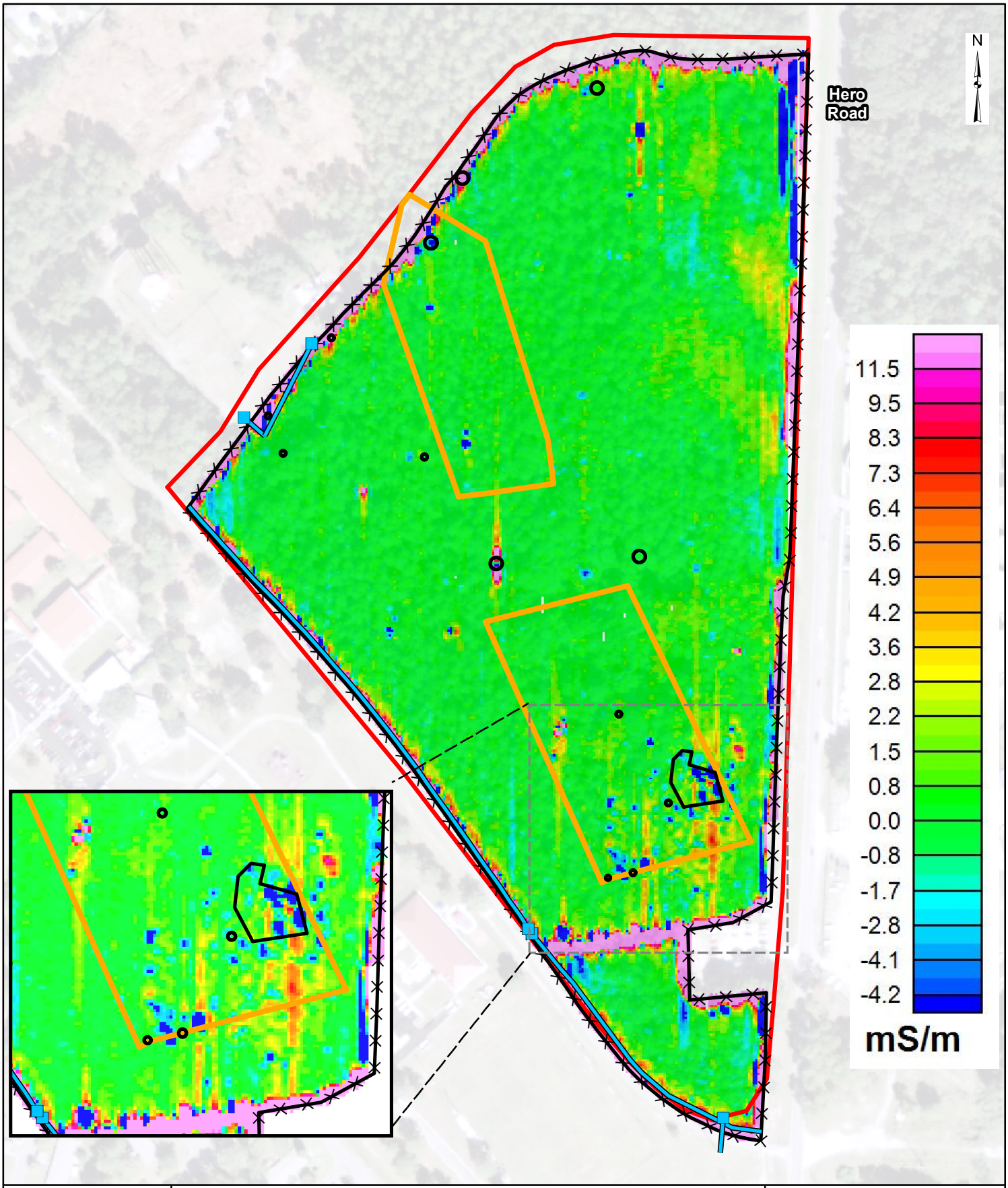
0 80
Feet

EM-31 In-Phase Data
Hero Road Trench Area
(FTSW-008-R-01) MRS

Fort Stewart, Georgia

Date: November 2012

Imagery Source: National Agriculture Imagery Program (NAIP) 2009



US Army Corps of Engineers
BUILDING STRONG
ERT

Legend

- EM-31 Conductivity Data
- Surface Debris
- Utilities
- Ground Scar Outlines
- Hero Road MRS
- Barbed Wire Fence

0 80 Feet

Date: November 2012

Imagery Source: National Agriculture Imagery Program (NAIP) 2009

EM-31 Conductivity Data
Hero Road Trench Area
(FTSW-008-R-01) MRS

Fort Stewart, Georgia

Anti-Aircraft Range 90-mm-2 (FTSW-002-R-01) Geophysical Survey

EM61-MK2 Survey Channel 2





mV

0 3 6 9 12 16 20 24 28 32 36 40 44 48 52 56 60 64 68 72

Legend:

Grid Boundary
Transect Lines

N

50 0 50 100

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.		Date: July 2012
Created By: JM	Verified By: JS	Approved By: JH

ERT



Anti-Aircraft Range 90-mm-2
(FTSW-002-R-01)
Grid 01

EM61-MK2 Survey
Channel 2



mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- Blind Seed
- Fence
- Overhead Wires
- Pipe
- Telephone Pole
- Sign

N

10 0 10 20

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH



Anti-Aircraft Range 90-mm-2
(FTSW-002-R-01)
Grid 02

EM61-MK2 Survey
Channel 2



mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- Blind Seed
- Fence
- Overhead Wires
- Pipe
- Telephone Pole
- QC Spike

N

10 0 10 20

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH



Anti-Aircraft Range 90-mm-2 (FTSW-002-R-01) Grid 03

EM61-MK2 Survey Channel 2



mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- Blind Seed
- Fence
- Overhead Wires
- Pipe
- Telephone Pole

N

10 0 10 20

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH



Anti-Aircraft Range 90-mm-2
(FTSW-002-R-01)
Grid 04

EM61-MK2 Survey
Channel 2



mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- Blind Seed
- Fence
- Overhead Wires
- Rebar
- Telephone Pole

N

10 0 10 20

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH

Anti-Aircraft Range 90-mm-2
(FTSW-002-R-01)
Grid 05

EM61-MK2 Survey
Channel 2





mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- Blind Seed
- Fence
- Sheds
- Telephone Pole
- QC Spike

N

10 0 10 20

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH



Anti-Aircraft Range 90-mm-2 (FTSW-002-R-01) Grid 06

EM61-MK2 Survey Channel 2



mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- Blind Seed
- Fence
- Overhead Wires
- Telephone Pole
- Sign
- QC Spike

N

10 0 10 20

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH

ERT

Anti-Aircraft Range 90-mm-2
(FTSW-002-R-01)
Grid 07

EM61-MK2 Survey
Channel 2





mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- Blind Seed
- Fence
- Overhead Wires
- Pipe
- Telephone Pole
- Sign

N

10 0 10 20

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH

Anti-Aircraft Range 90-mm-2
(FTSW-002-R-01)
Grid 08

EM61-MK2 Survey
Channel 2





mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- Blind Seed
- Fence
- Overhead Wires
- Pipe
- Telephone Pole
- Sign
- QC Spike

N

10 0 10 20

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH



Anti-Aircraft Range 90-mm-2
(FTSW-002-R-01)
Grid 09

EM61-MK2 Survey
Channel 2



mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- Blind Seed
- Fence
- Overhead Wires
- Pipe
- Telephone Pole
- Sign
- QC Spike

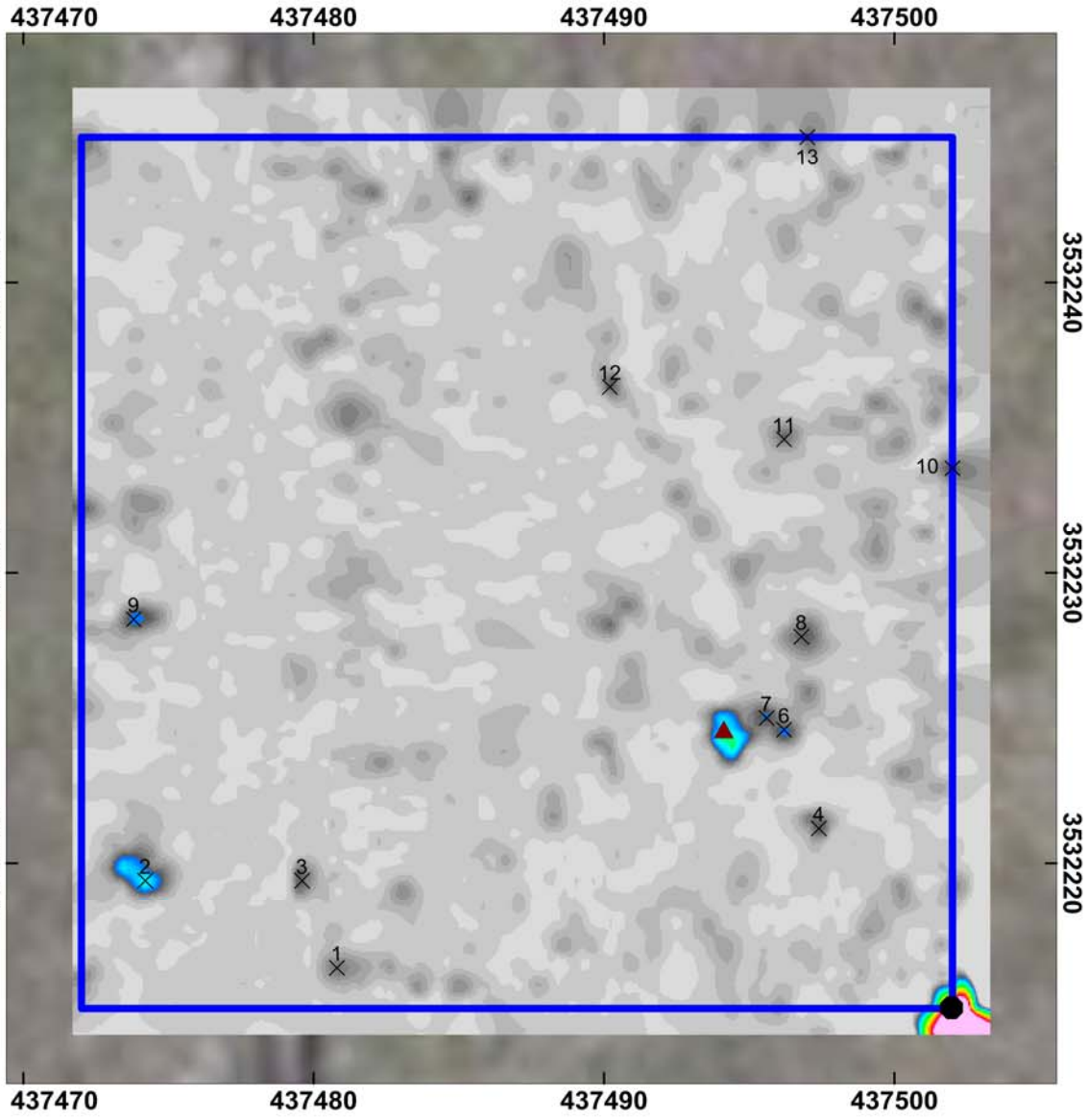
N

10 0 10 20

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH



Anti-Aircraft Range 90-mm-2
(FTSW-002-R-01)
Grid 10

EM61-MK2 Survey
Channel 2



mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- QC Spike
- Blind Seed

N

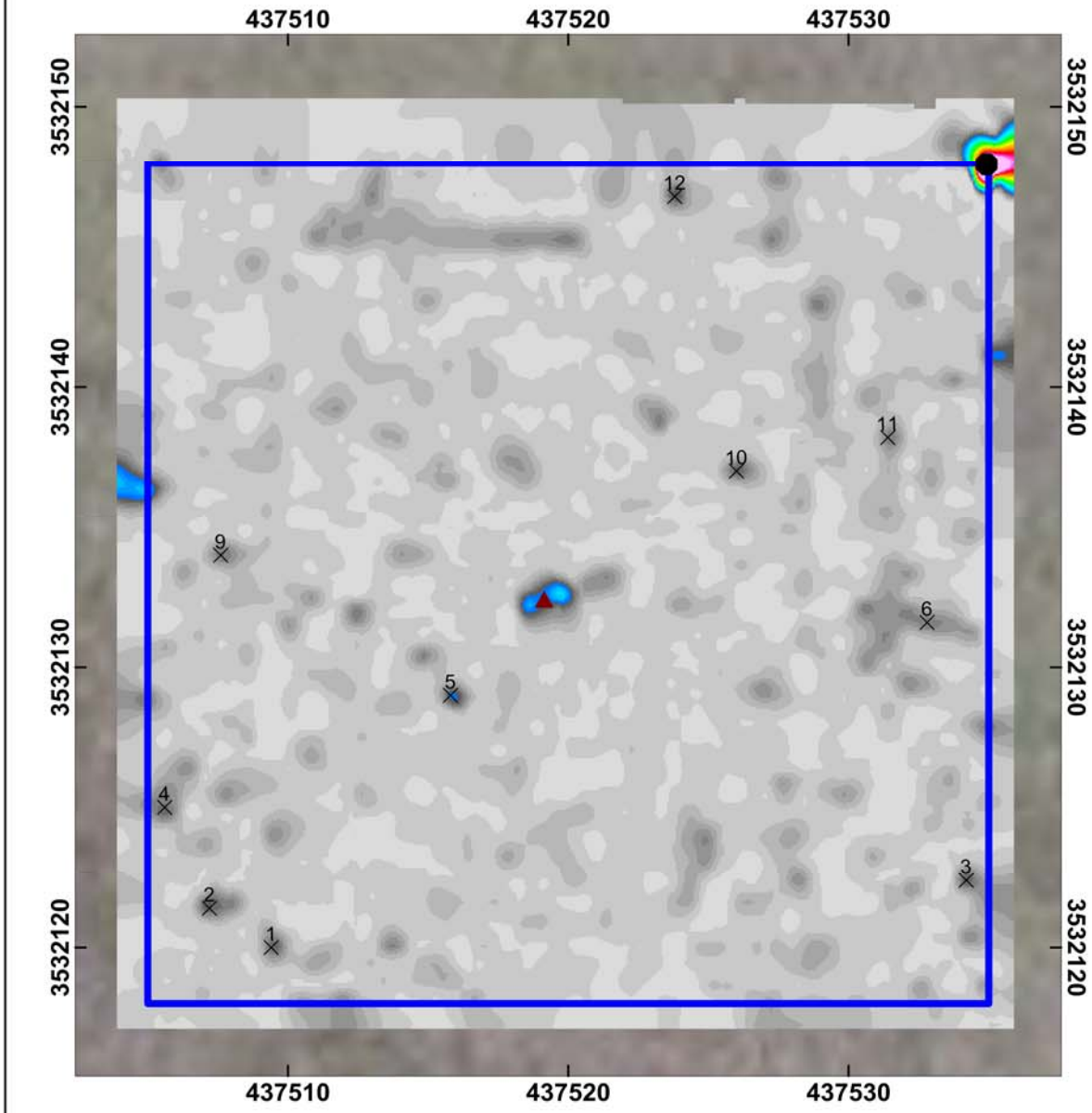
2.5 0 2.5 5 7.5

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH

ERT



Anti-Aircraft Range 90-mm-2
(FTSW-002-R-01)
Grid 11

EM61-MK2 Survey
Channel 2



mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- QC Spike
- Blind Seed

N

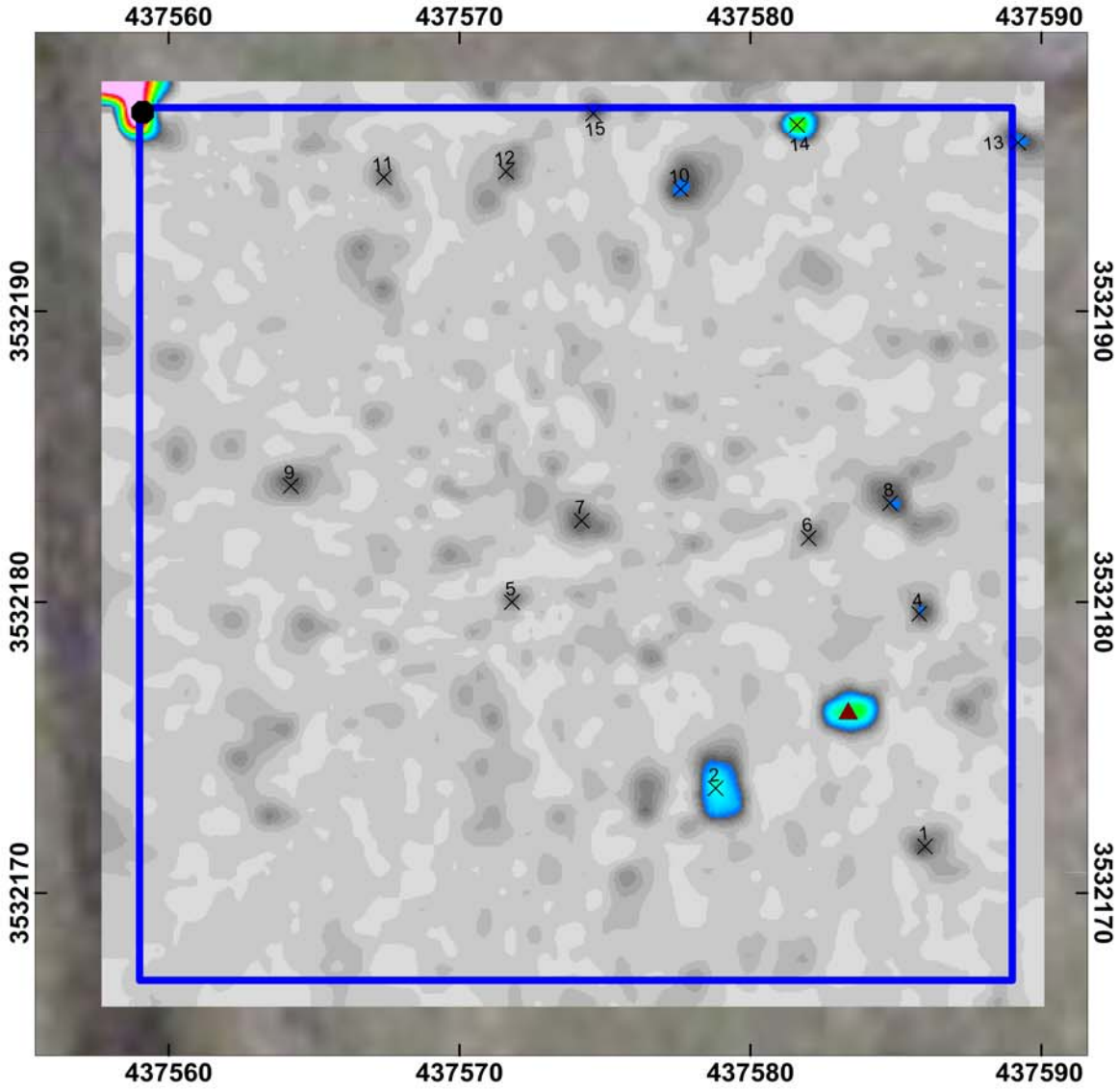
2.5 0 2.5 5 7.5

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH

ERT



Anti-Aircraft Range 90-mm-2
(FTSW-002-R-01)
Grid 12

EM61-MK2 Survey
Channel 2



mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- QC Spike
- Blind Seed

N

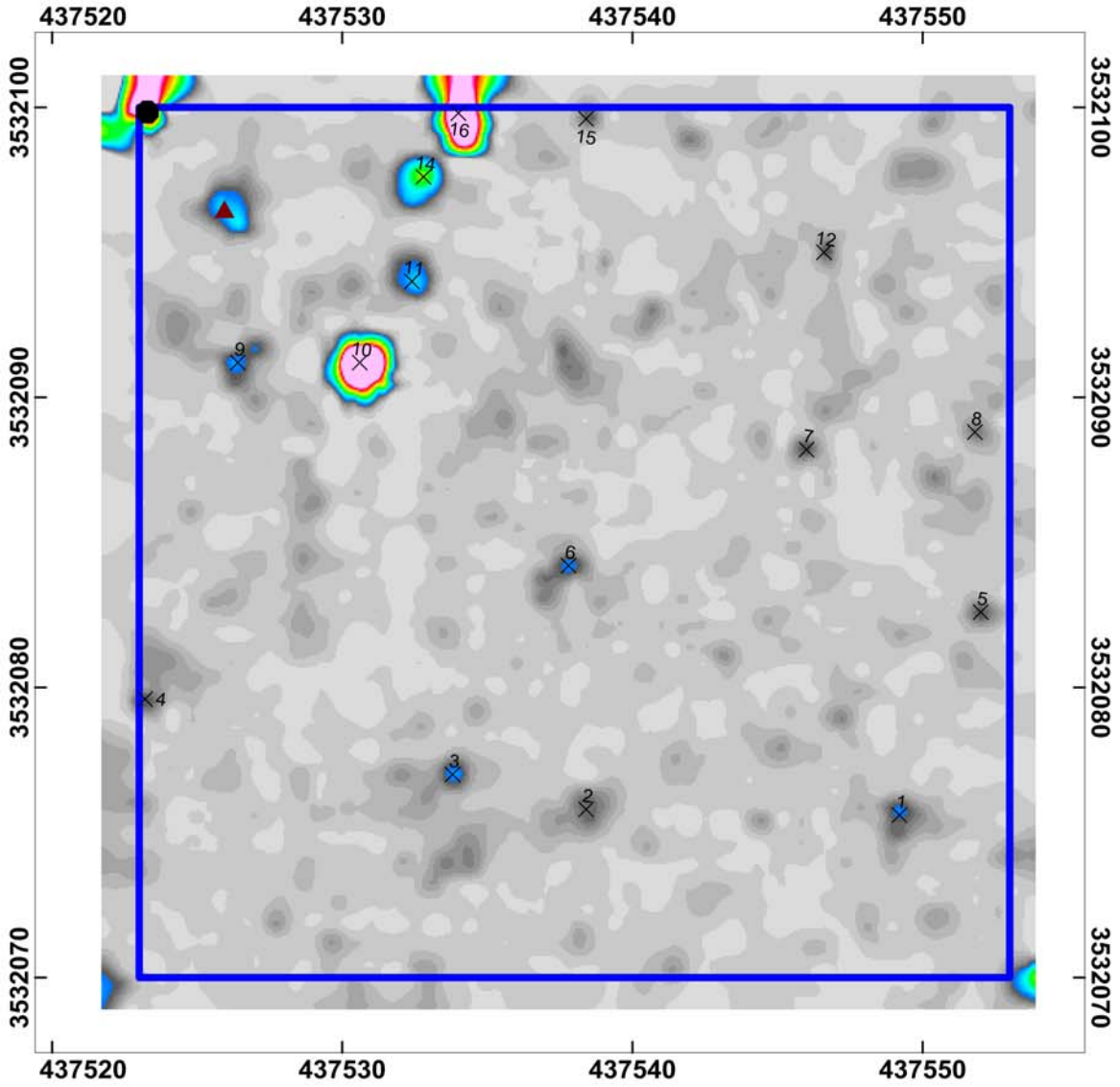
2.5 0 2.5 5 7.5

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH

ERT



Anti-Aircraft Range 90-mm-2
(FTSW-002-R-01)
Grid 13

EM61-MK2 Survey
Channel 2



mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- QC Spike
- Blind Seed

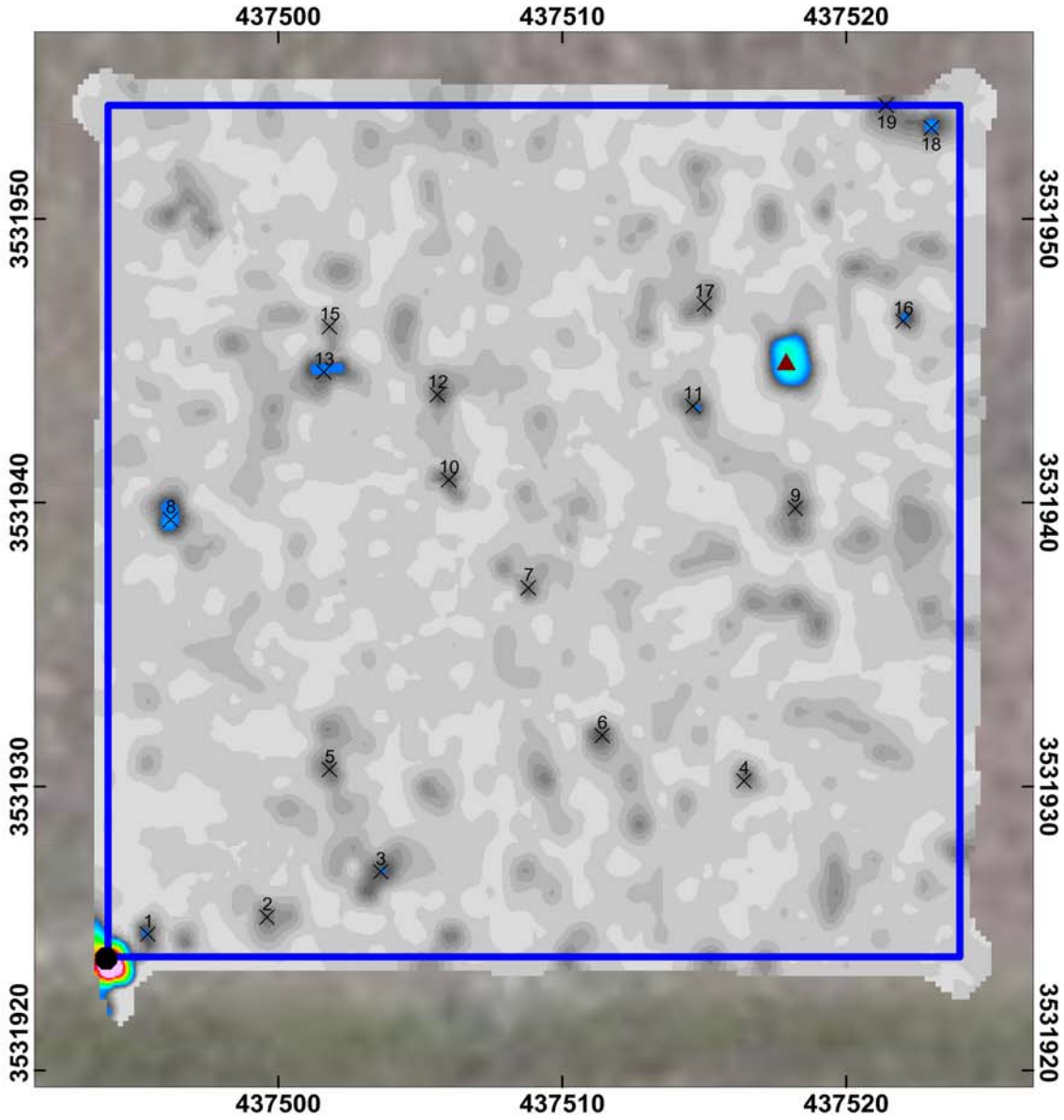
N

2.5 0 2.5 5 7.5

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH



Anti-Aircraft Range 90-mm-2 (FTSW-002-R-01) Grid 14

EM61-MK2 Survey Channel 2



mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- QC Spike
- Blind Seed

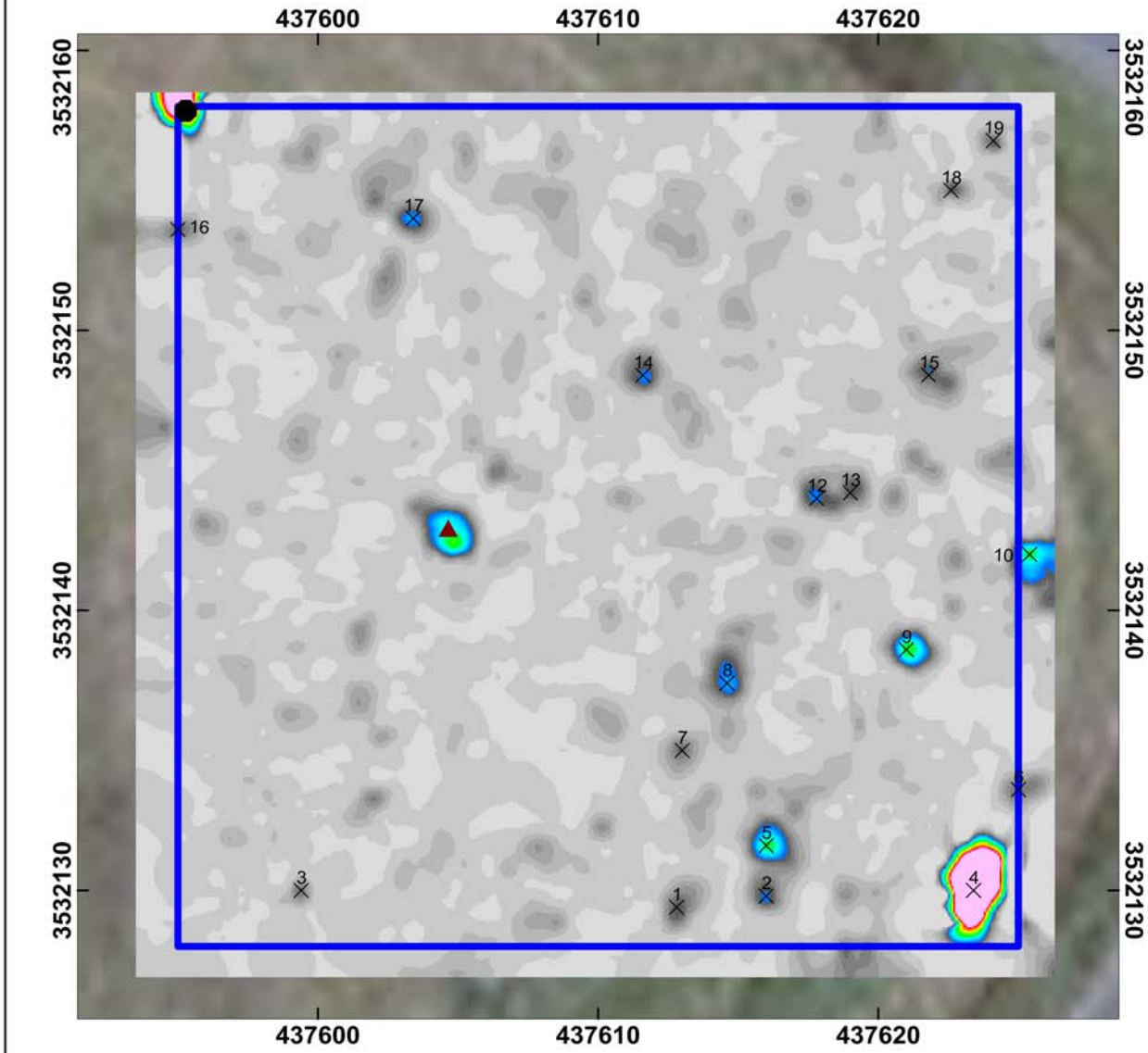
N

2.5 0 2.5 5 7.5

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH



Anti-Aircraft Range 90-mm-2 (FTSW-002-R-01) Grid 15

EM61-MK2 Survey Channel 2



mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- QC Spike
- Blind Seed

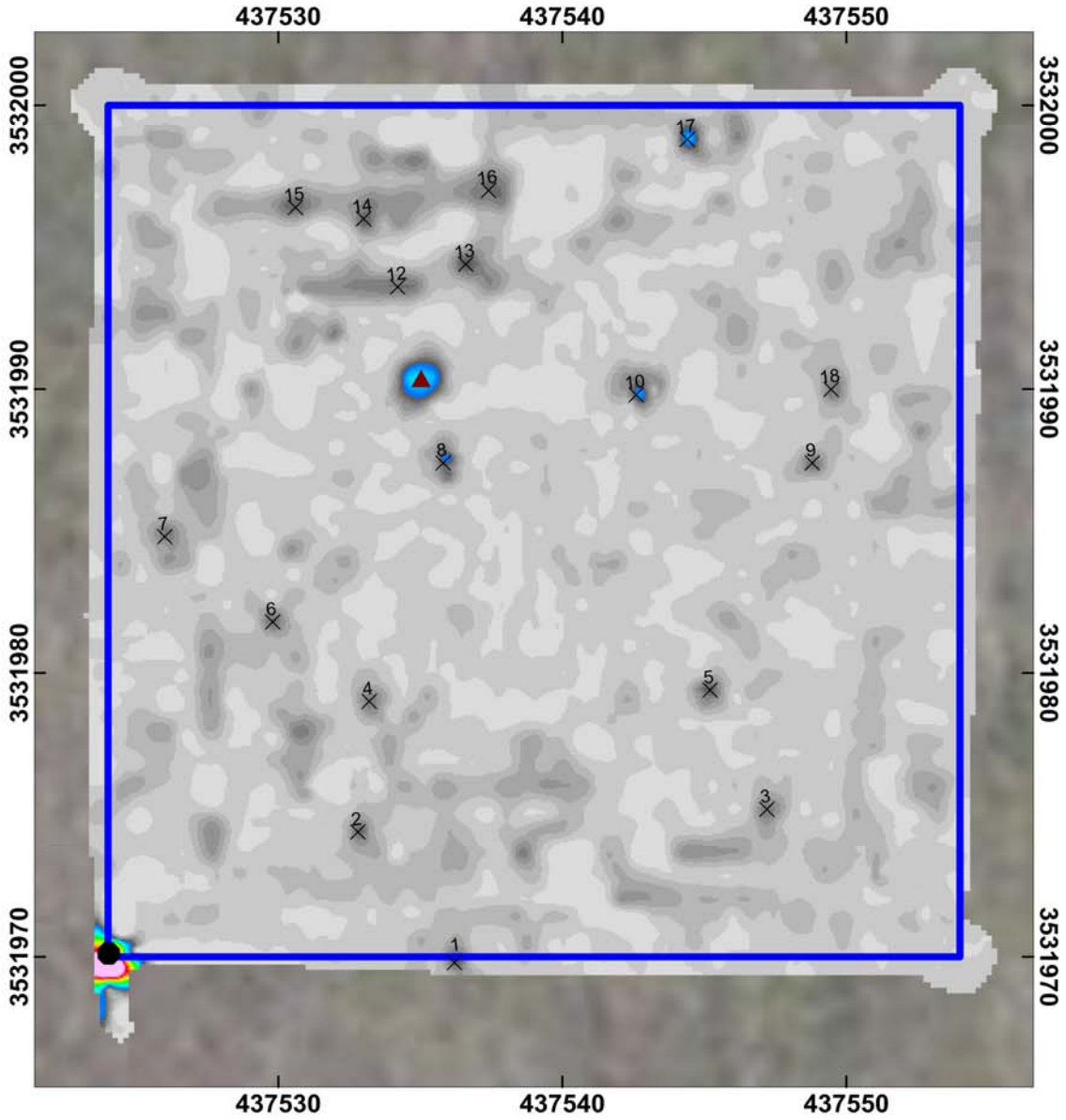
N

2.5 0 2.5 5 7.5

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH



Anti-Aircraft Range 90-mm-2 (FTSW-002-R-01) Grid 16

EM61-MK2 Survey Channel 2



mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- QC Spike
- Blind Seed

N

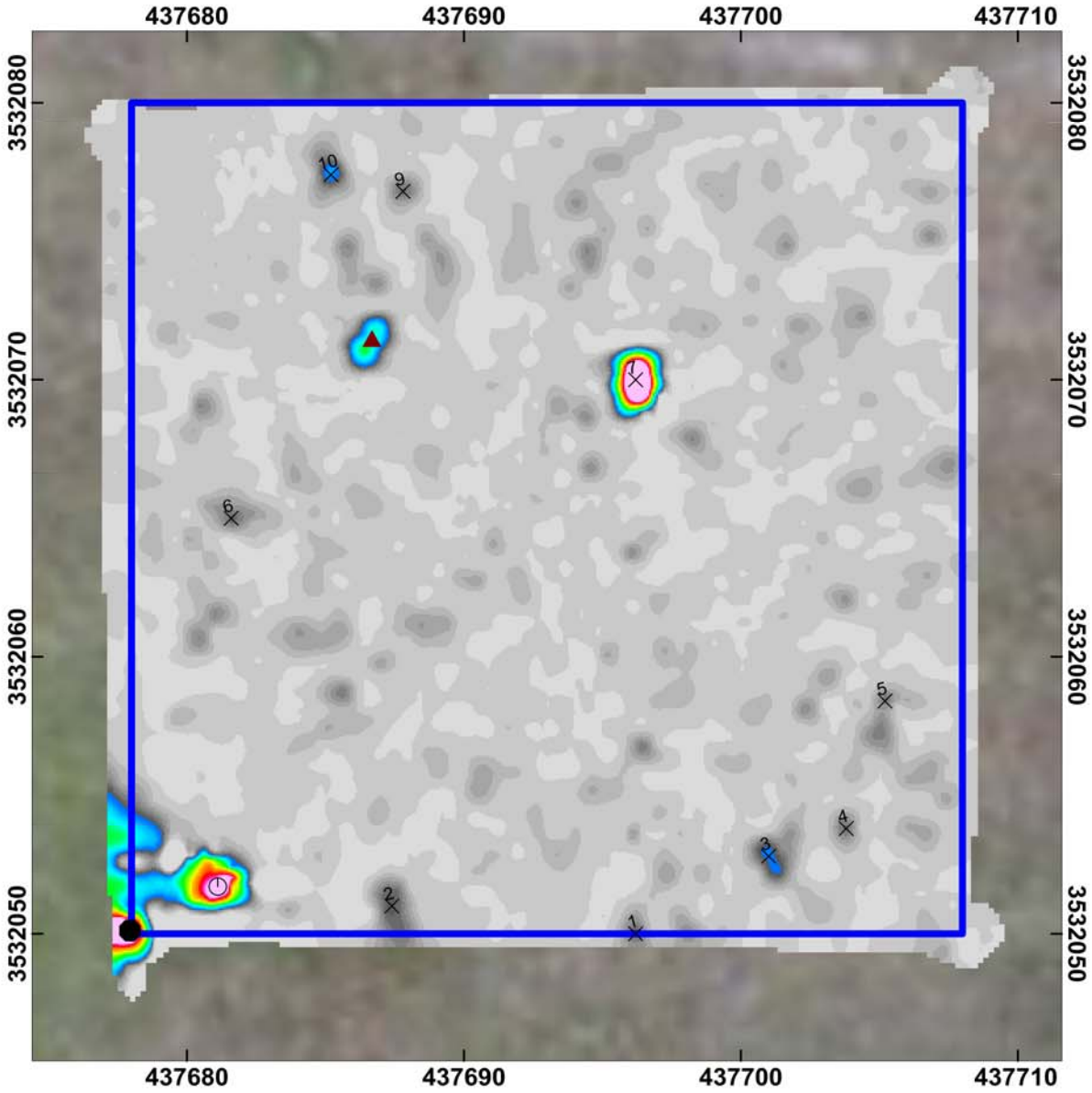
2.5 0 2.5 5 7.5

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH

ERT



Anti-Aircraft Range 90-mm-2
(FTSW-002-R-01)
Grid 17

EM61-MK2 Survey
Channel 2



mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- QC Spike
- Blind Seed
- Guy-wire

N

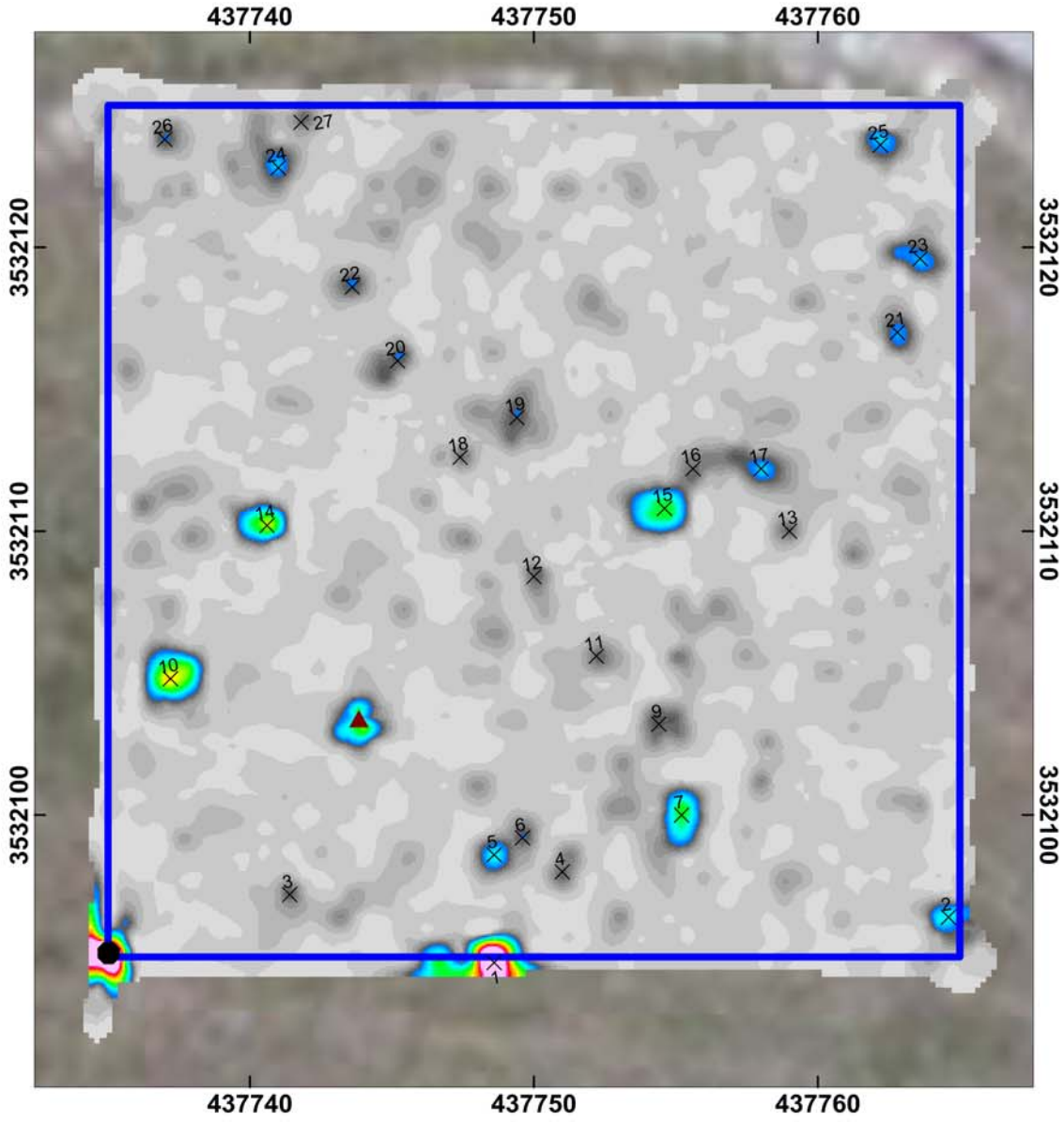
2.5 0 2.5 5 7.5

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH

ERT



Anti-Aircraft Range 90-mm-2 (FTSW-002-R-01) Grid 18

EM61-MK2 Survey Channel 2



mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- QC Spike
- Blind Seed

N

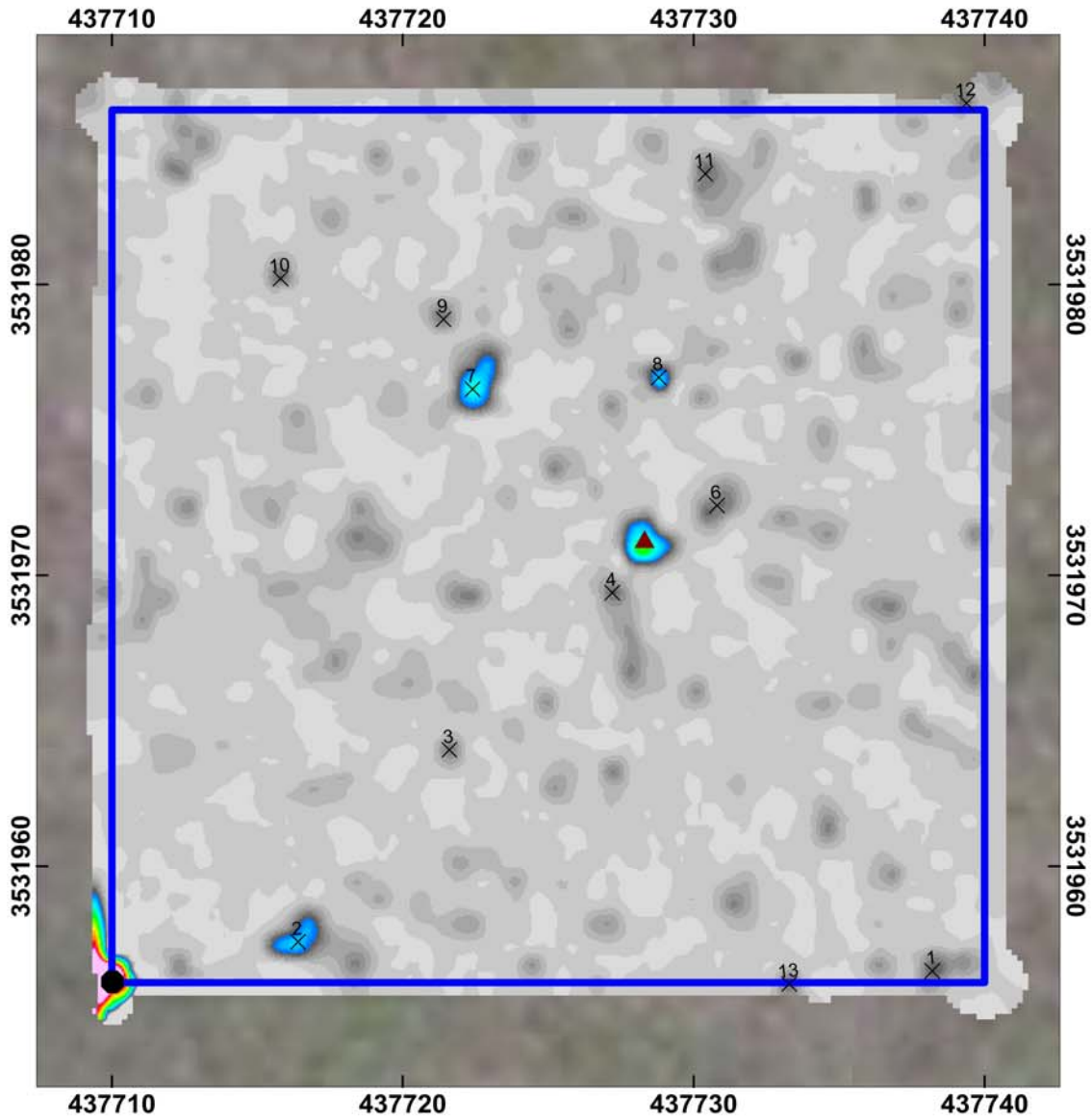
2.5 0 2.5 5 7.5

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH

ERT



Anti-Aircraft Range 90-mm-2
(FTSW-002-R-01)
Grid 19

EM61-MK2 Survey
Channel 2



mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- QC Spike
- Blind Seed

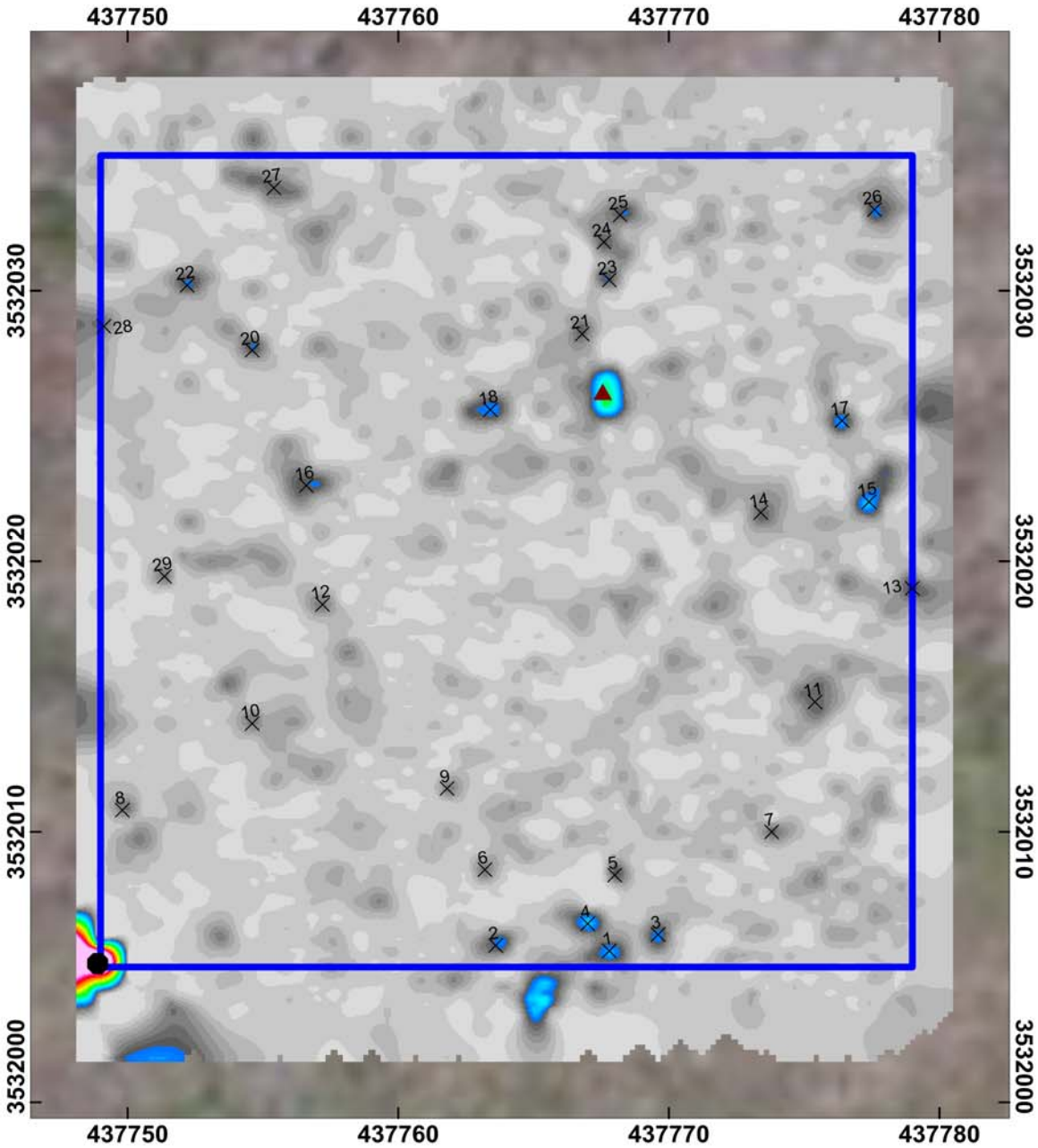
N

2.5 0 2.5 5 7.5

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH



Anti-Aircraft Range 90-mm-2 (FTSW-002-R-01) Grid 20

EM61-MK2 Survey Channel 2



mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- QC Spike
- Blind Seed

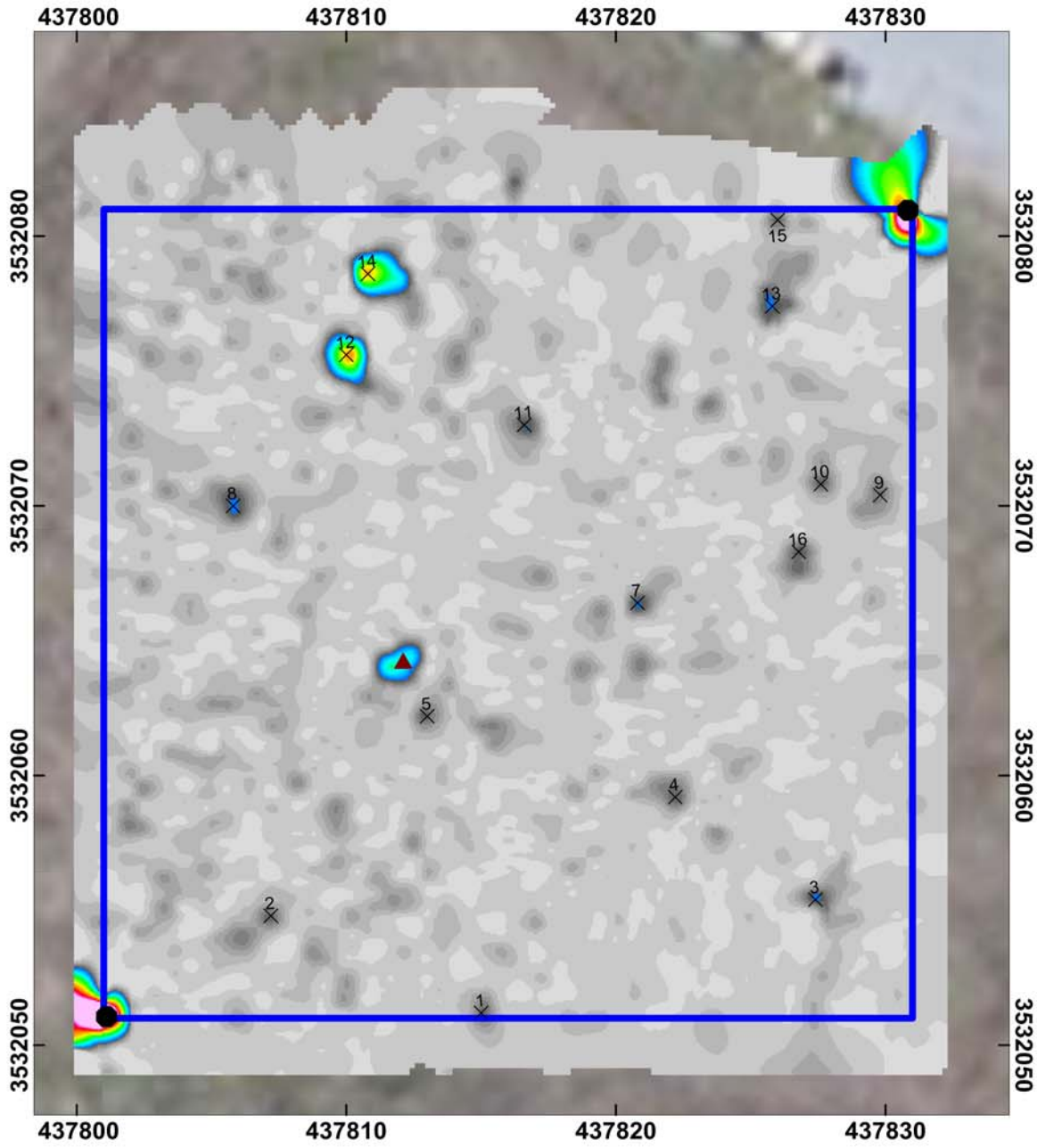
N

2.5 0 2.5 5 7.5

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH



Anti-Aircraft Range 90-mm-2 (FTSW-002-R-01) Grid 21

EM61-MK2 Survey Channel 2



mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- QC Spike
- Blind Seed

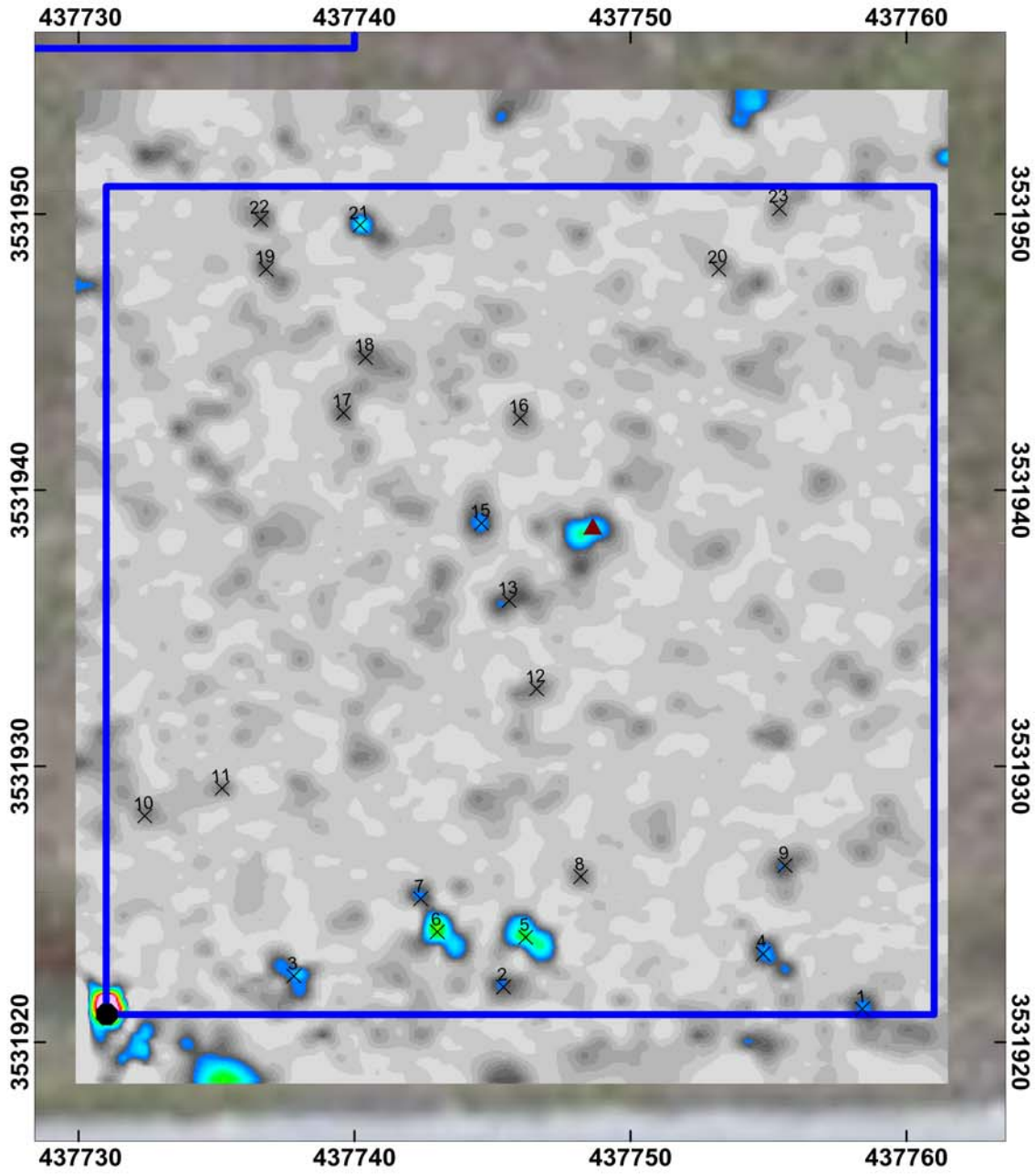
N

2.5 0 2.5 5 7.5

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH



Anti-Aircraft Range 90-mm-2 (FTSW-002-R-01) Grid 22

EM61-MK2 Survey Channel 2



mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- QC Spike
- Blind Seed

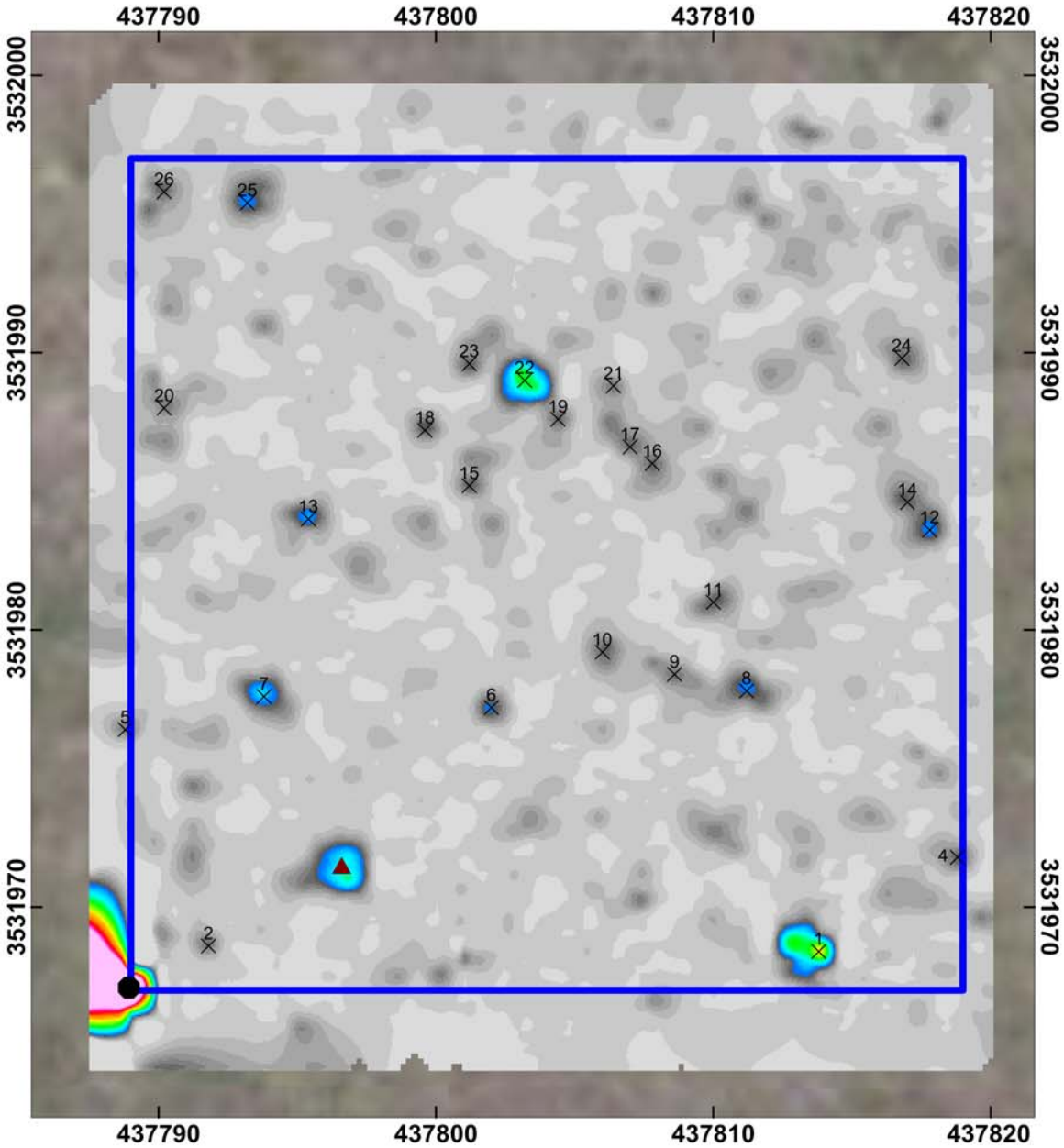
N

2.5 0 2.5 5 7.5

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH



Anti-Aircraft Range 90-mm-2 (FTSW-002-R-01) Grid 23

EM61-MK2 Survey Channel 2



mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- QC Spike
- Blind Seed

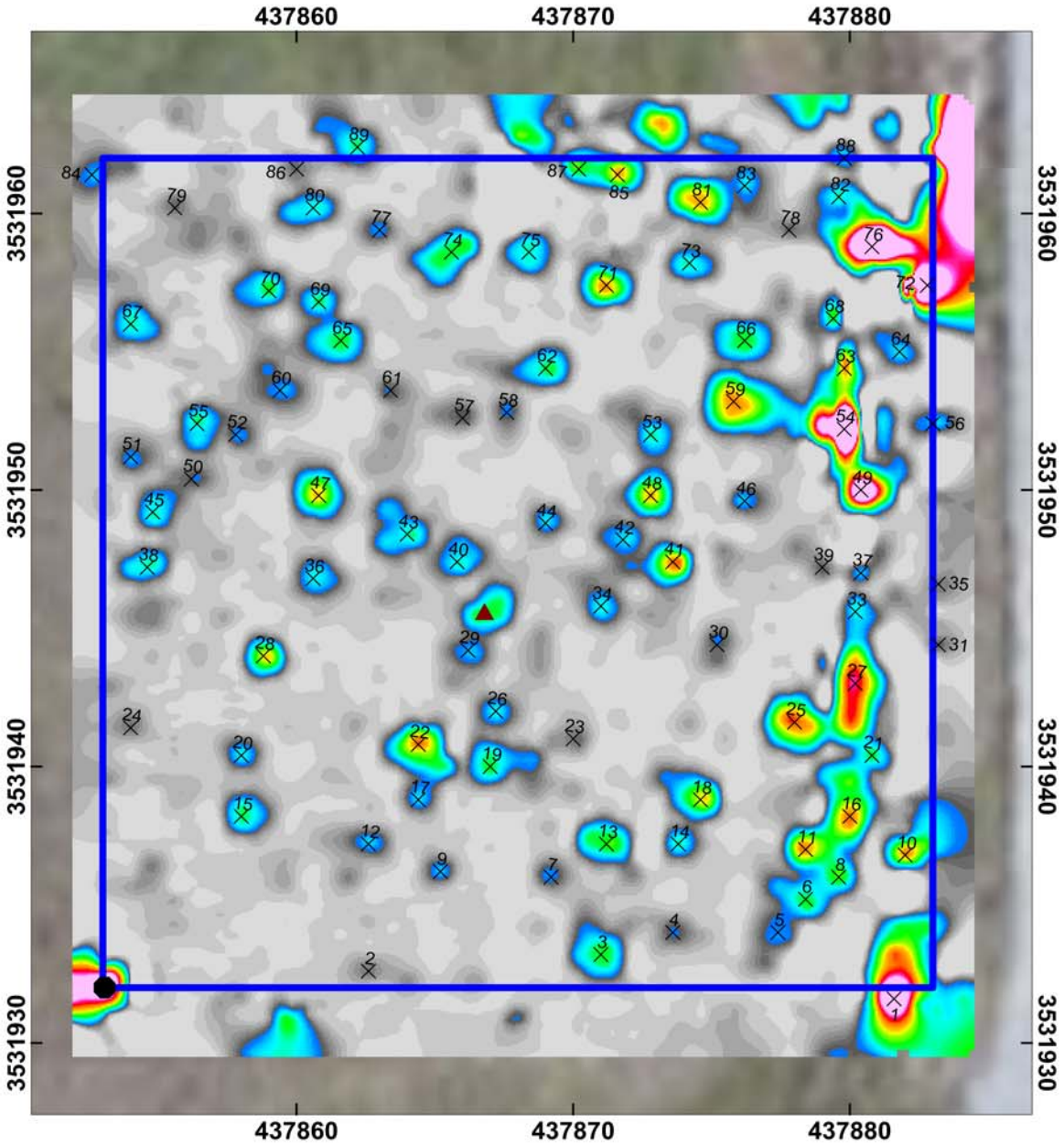
N

2.5 0 2.5 5 7.5

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH



Anti-Aircraft Range 90-mm-2
(FTSW-002-R-01)
Grid 24

EM61-MK2 Survey
Channel 2



mV

0 5 10 18 26 34 42 50 58 66 74

Legend:

- Grid Boundary
- EM61 Targets
- 23 Target ID
- QC Spike
- Blind Seed

N

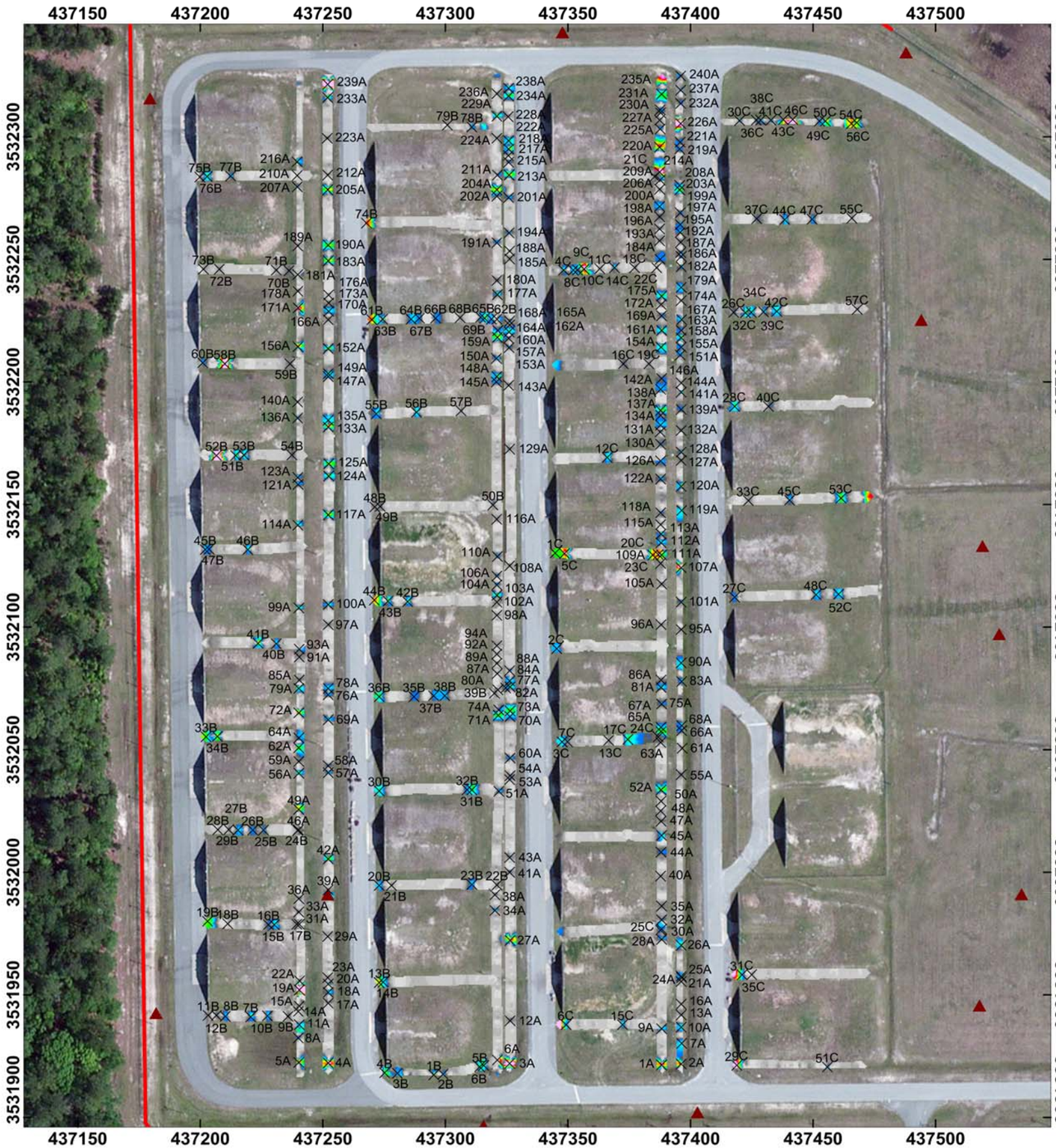
2.5 0 2.5 5 7.5

metres

WGS 84 / UTM zone 17N

Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.	Date: July 2012	
Created By: JM	Verified By: JS	Approved By: JH

ERT



Anti-Aircraft Range 90-mm-2 (FTSW-002-R-01) Transect Lines

EM61-MK2 Survey Channel 2



mV

0 3 6 9 12 16 20 24 28 32 36 40 44 48 52 56 60 64 68 72

Legend:

- Transect Lines
- Fence
- EM61 Targets
- 23 Target ID
- Blind Seed

N

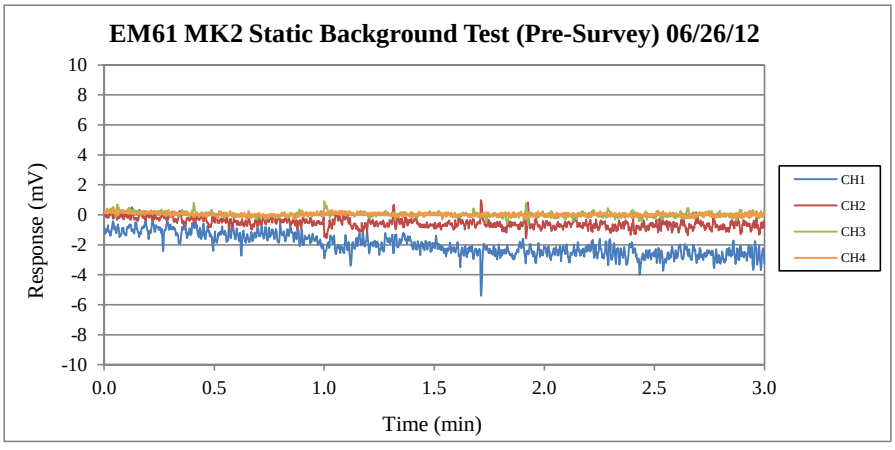
25 0 25 50

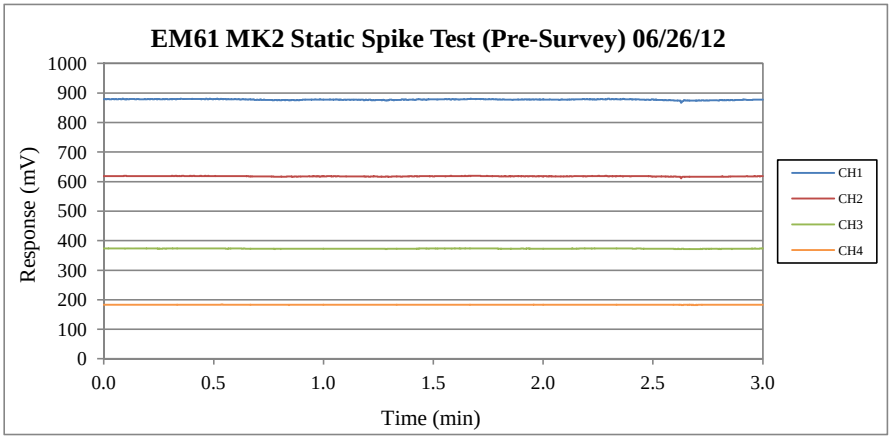
metres

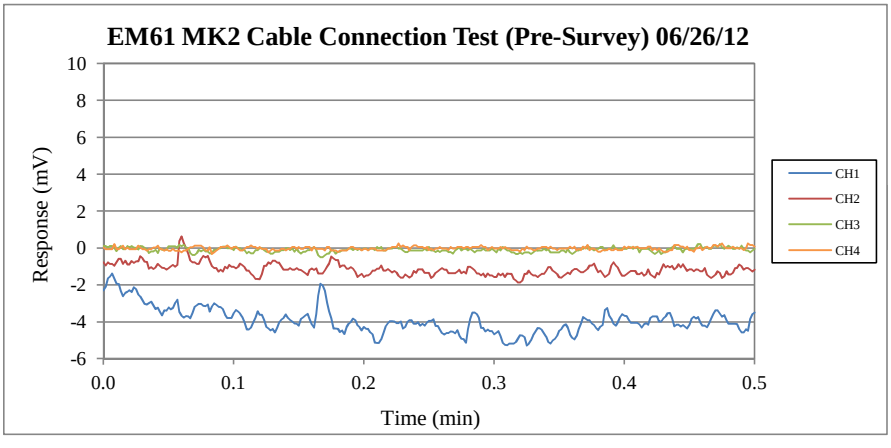
WGS 84 / UTM zone 17N

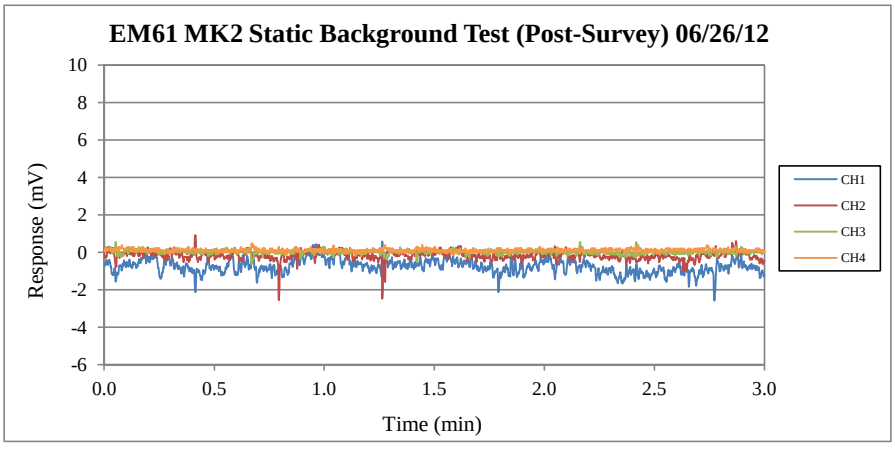
Client: U.S. Army Corps of Engineers		
Project: Ft Stewart, GA		
Contractor: ERT, Inc.		Date: July 2012
Created By: JM	Verified By: JS	Approved By: JH

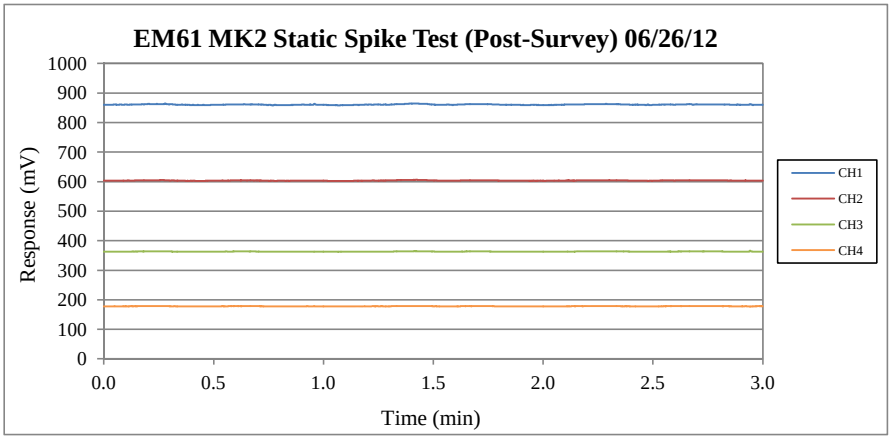
ERT

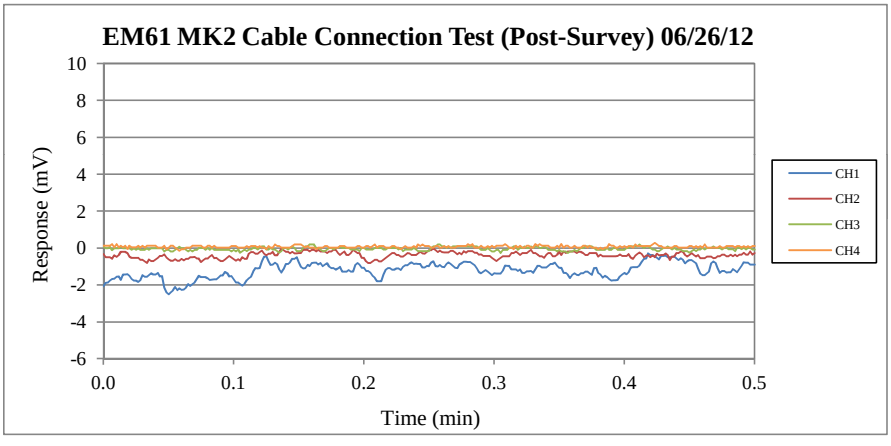

EM61 MK2 Static Background Test (Pre-Survey) 06/26/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
-8
-10
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

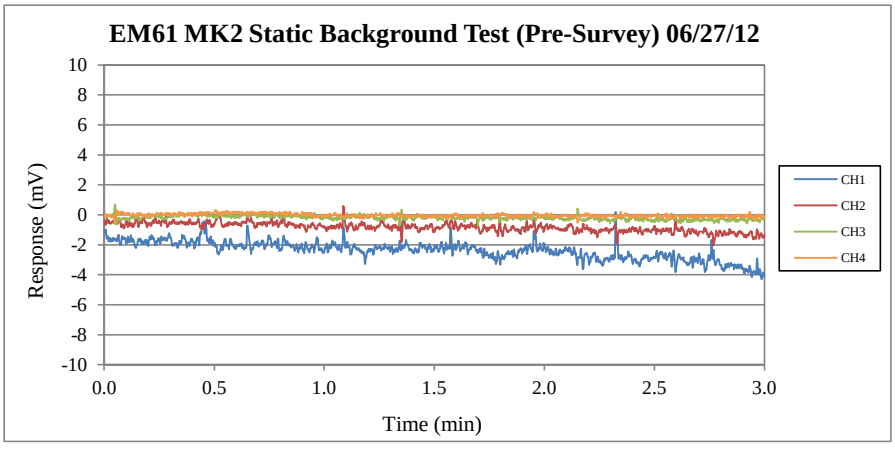

EM61 MK2 Static Spike Test (Pre-Survey) 06/26/12
Response (mV)
1000
900
800
700
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Cable Connection Test (Pre-Survey) 06/26/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Static Background Test (Post-Survey) 06/26/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Static Spike Test (Post-Survey) 06/26/12
Response (mV)
1000
900
800
700
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Cable Connection Test (Post-Survey) 06/26/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Static Background Test (Pre-Survey) 06/27/12
Response (mV)
10
8
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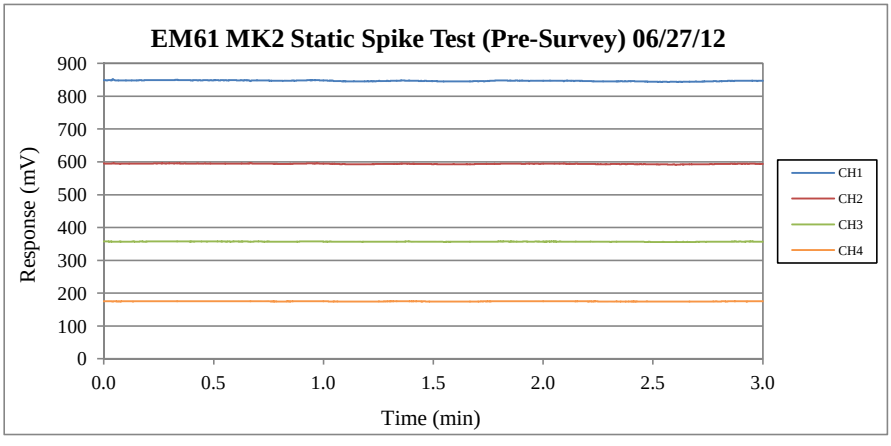
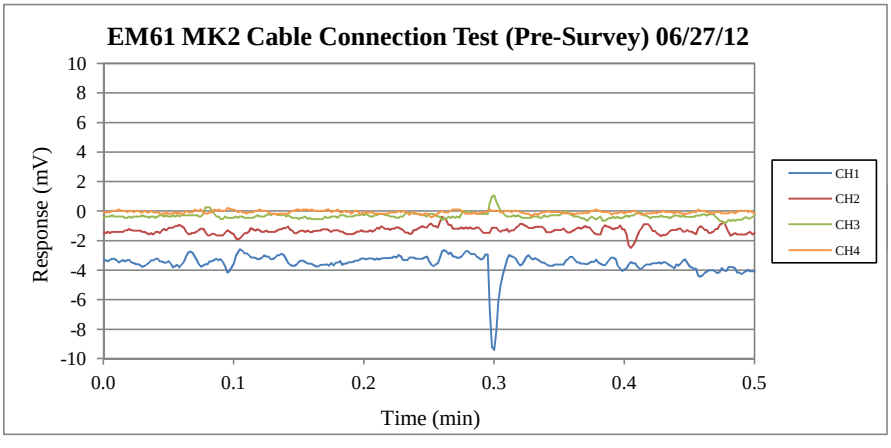
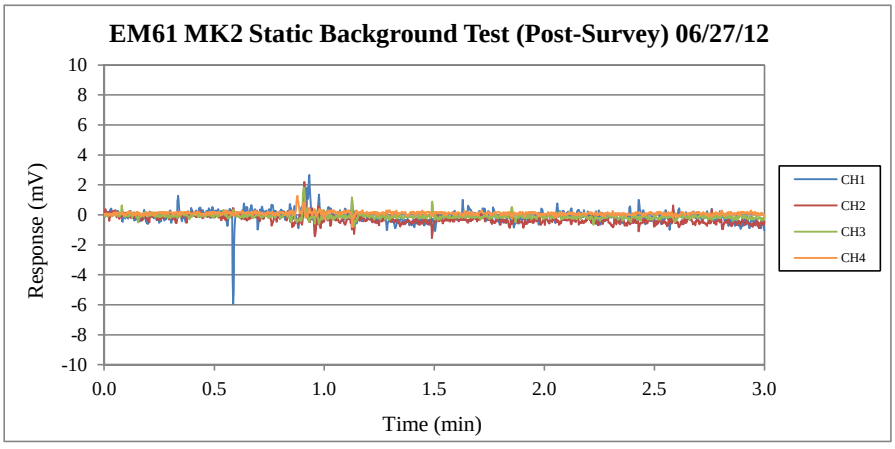
4
2
0
-2
-4
-6
-8
-10
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Static Spike Test (Pre-Survey) 06/27/12
Response (mV)
900
800
700
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Cable Connection Test (Pre-Survey) 06/27/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
-8
-10
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Static Background Test (Post-Survey) 06/27/12
Response (mV)
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8
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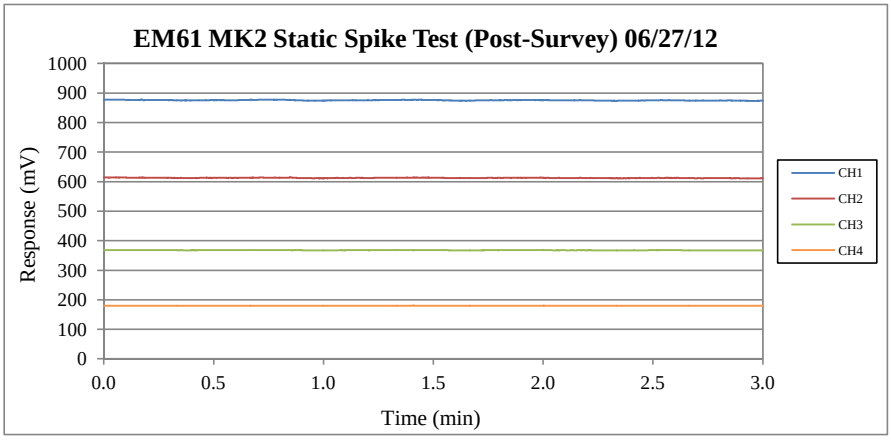
-2
-4
-6
-8
-10
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Static Spike Test (Post-Survey) 06/27/12
Response (mV)
1000
900
800
700
600
500
400
300
200
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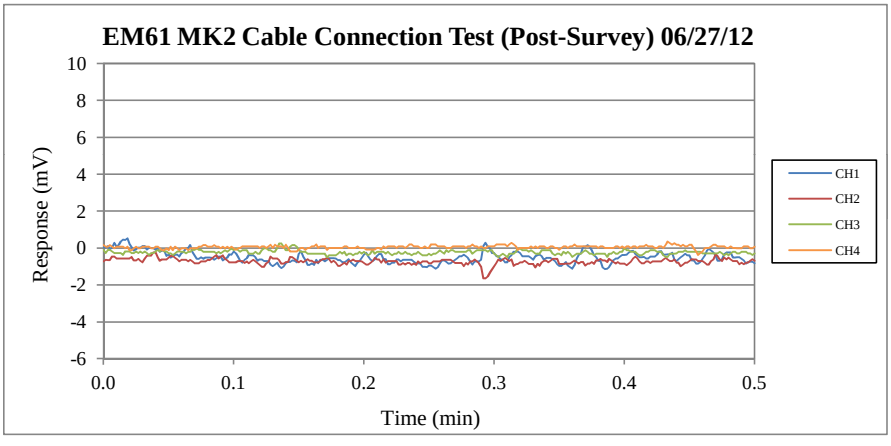
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Cable Connection Test (Post-Survey) 06/27/12
Response (mV)
10
8
6
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0.2
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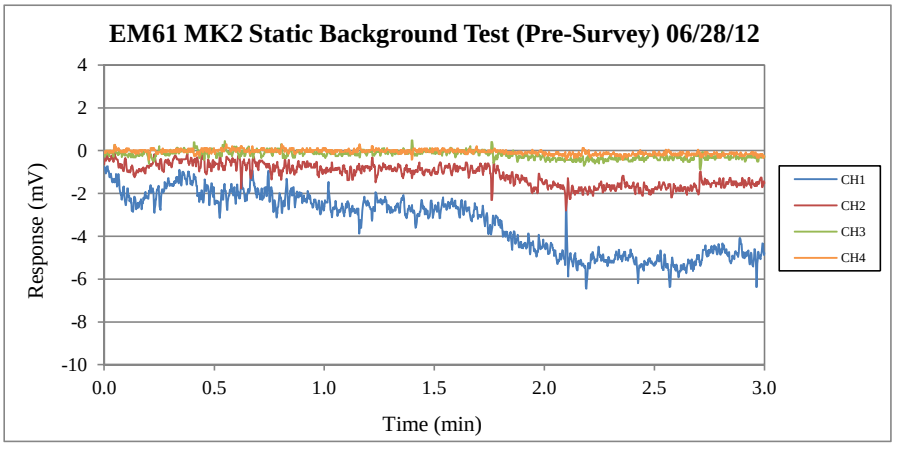
0.5
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Static Background Test (Pre-Survey) 06/28/12
Response (mV)
4
2
0
-2
-4
-6
-8
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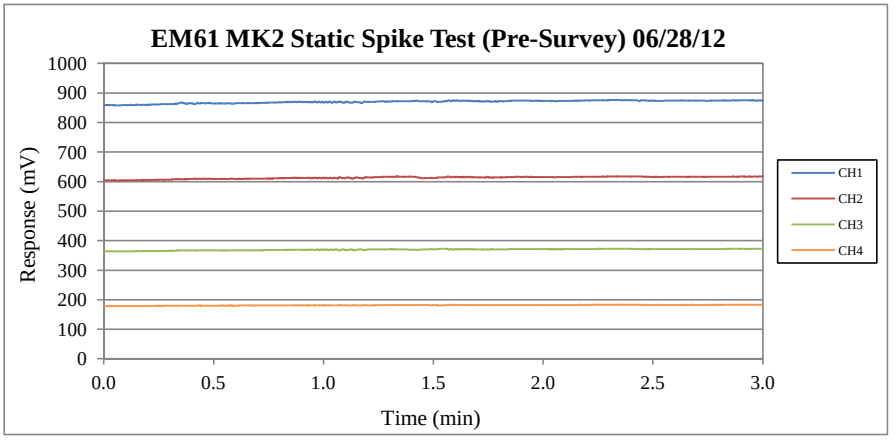
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Static Spike Test (Pre-Survey) 06/28/12
Response (mV)
1000
900
800
700
600
500
400
300
200
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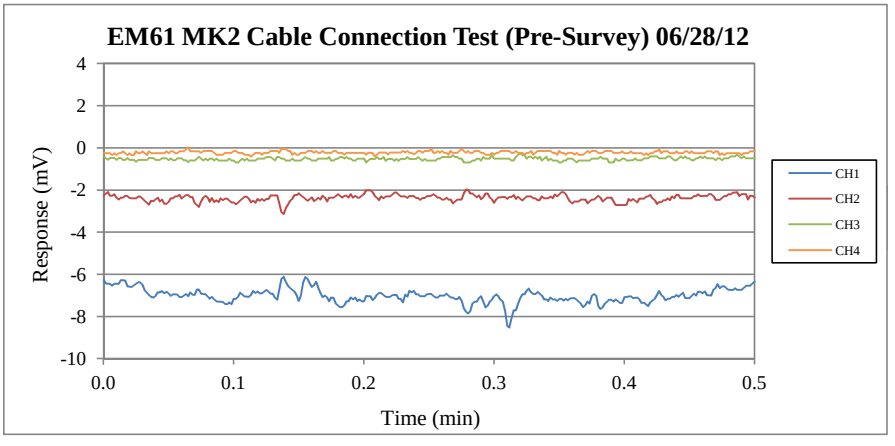
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Cable Connection Test (Pre-Survey) 06/28/12
Response (mV)
4
2
0
-2
-4
-6
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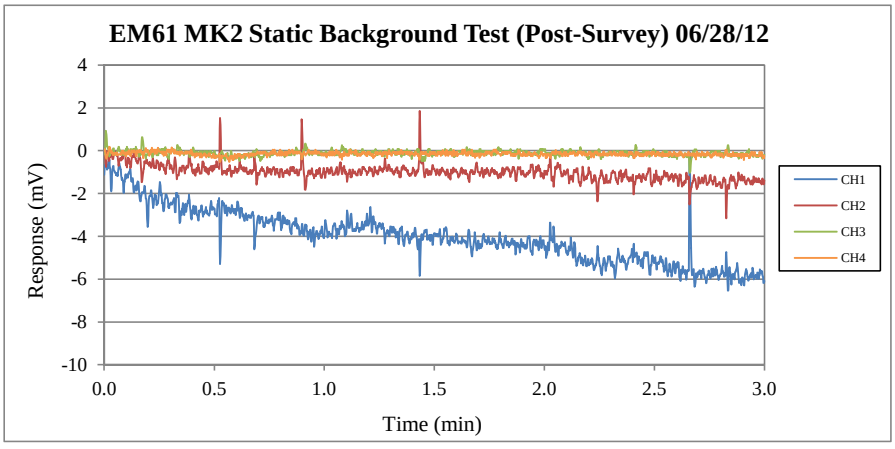
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Static Background Test (Post-Survey) 06/28/12
Response (mV)
4
2
0
-2
-4
-6
-8
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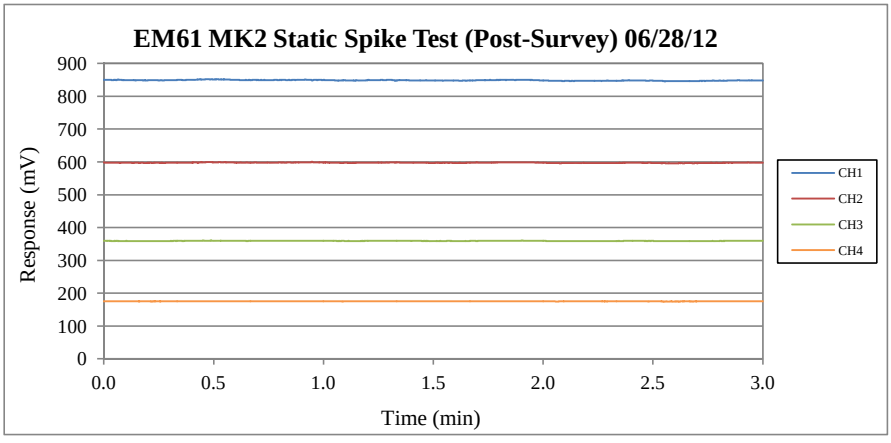
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Static Spike Test (Post-Survey) 06/28/12
Response (mV)
900
800
700
600
500
400
300
200
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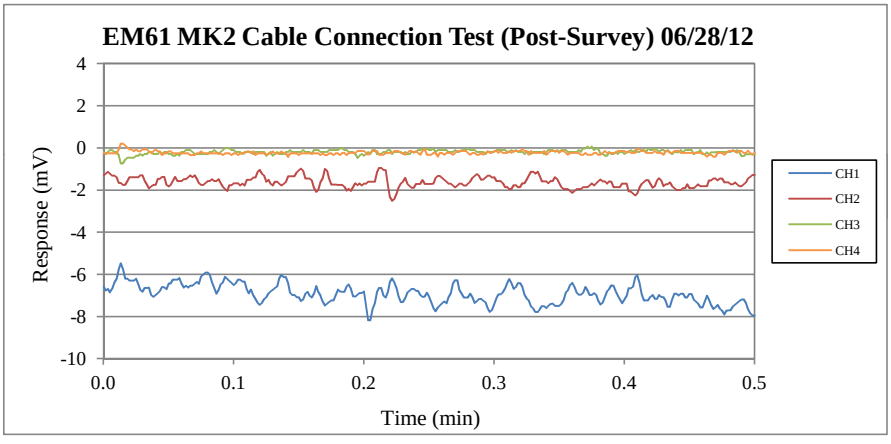
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Cable Connection Test (Post-Survey) 06/28/12
Response (mV)
4
2
0
-2
-4
-6
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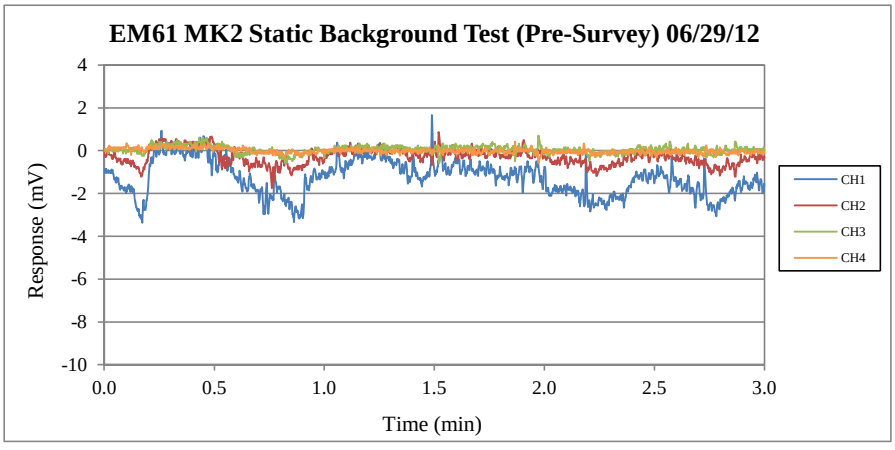
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Static Background Test (Pre-Survey) 06/29/12
Response (mV)
4
2
0
-2
-4
-6
-8
-10
0.0
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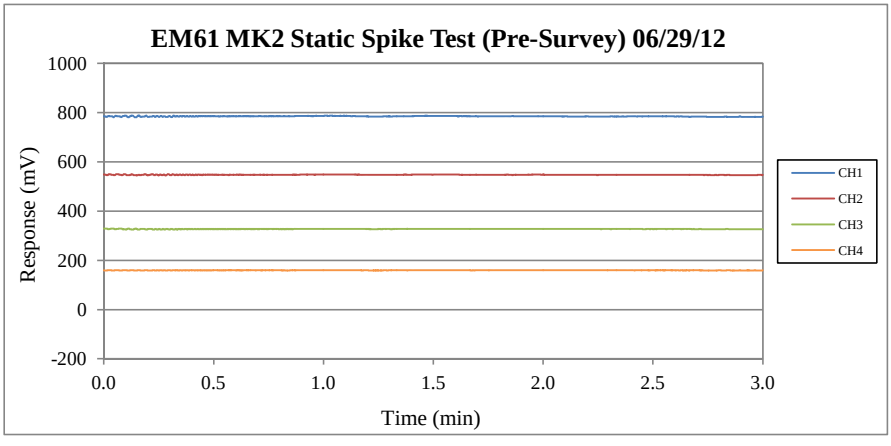
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Static Spike Test (Pre-Survey) 06/29/12
Response (mV)
1000
800
600
400
200
0
-200
0.0
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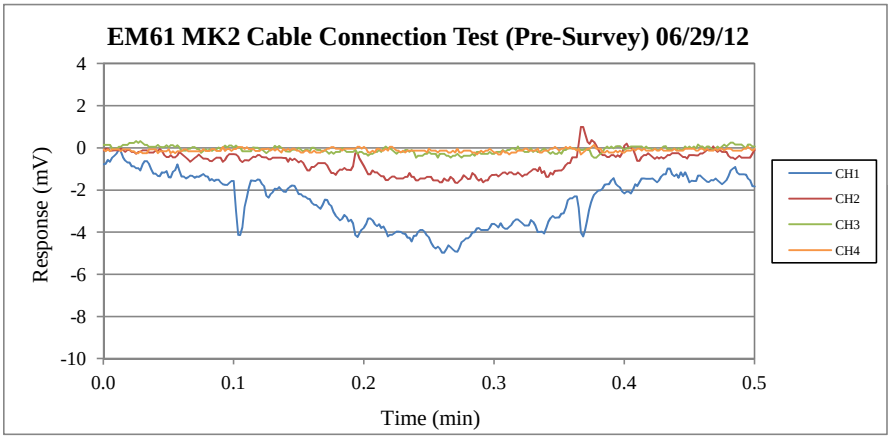
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Cable Connection Test (Pre-Survey) 06/29/12
Response (mV)
4
2
0
-2
-4
-6
-8
-10
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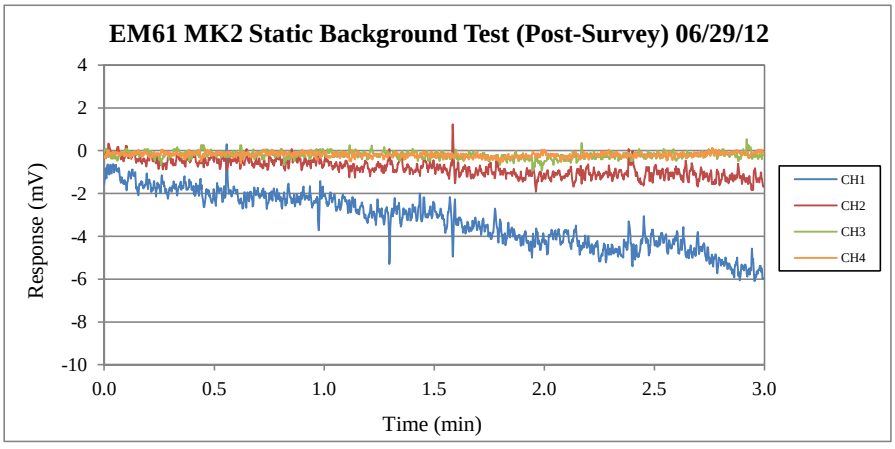
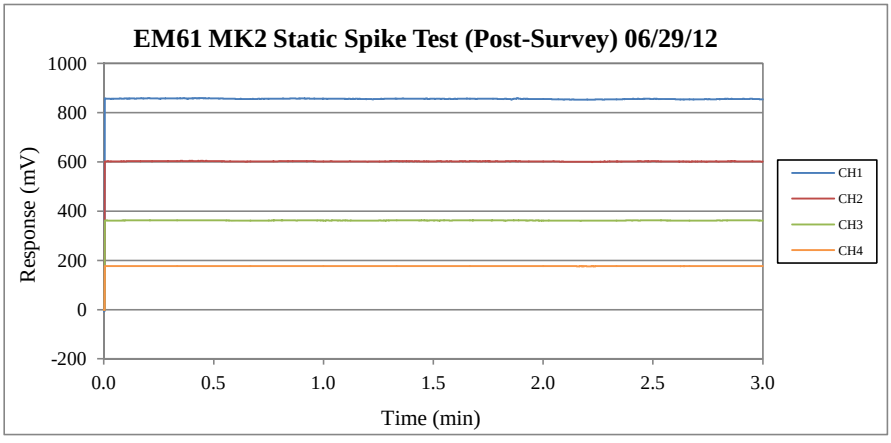
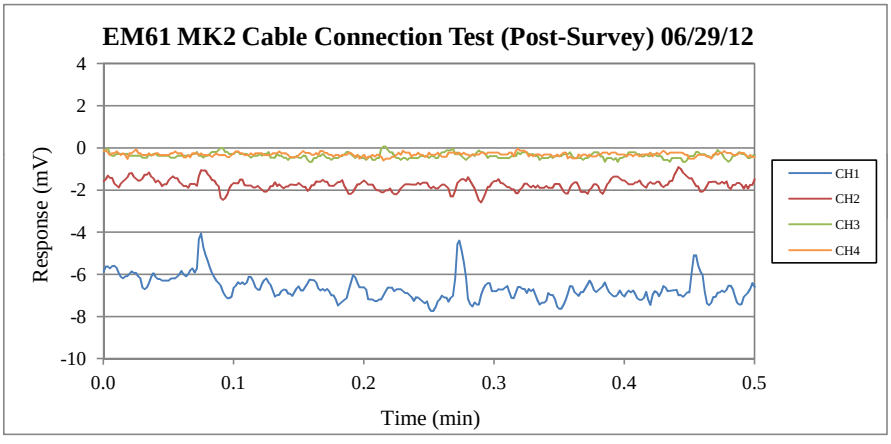
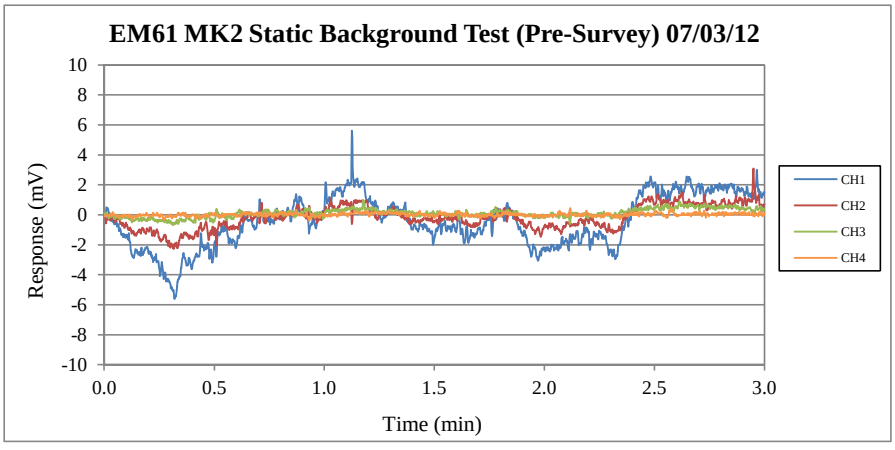
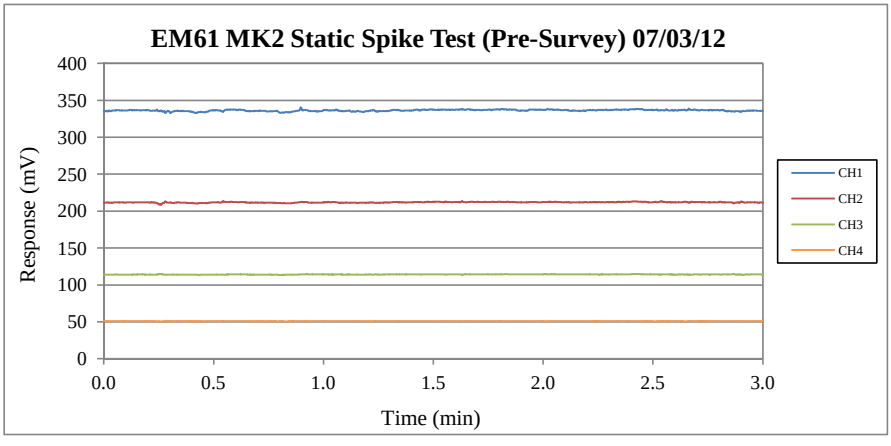
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Static Background Test (Post-Survey) 06/29/12
Response (mV)
4
2
0
-2
-4
-6
-8
-10
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Static Spike Test (Post-Survey) 06/29/12
Response (mV)
1000
800
600
400
200
0
-200
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Cable Connection Test (Post-Survey) 06/29/12
Response (mV)
4
2
0
-2
-4
-6
-8
-10
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Static Background Test (Pre-Survey) 07/03/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
-8
-10
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Static Spike Test (Pre-Survey) 07/03/12
Response (mV)
400
350
300
250
200
150
100
50
0
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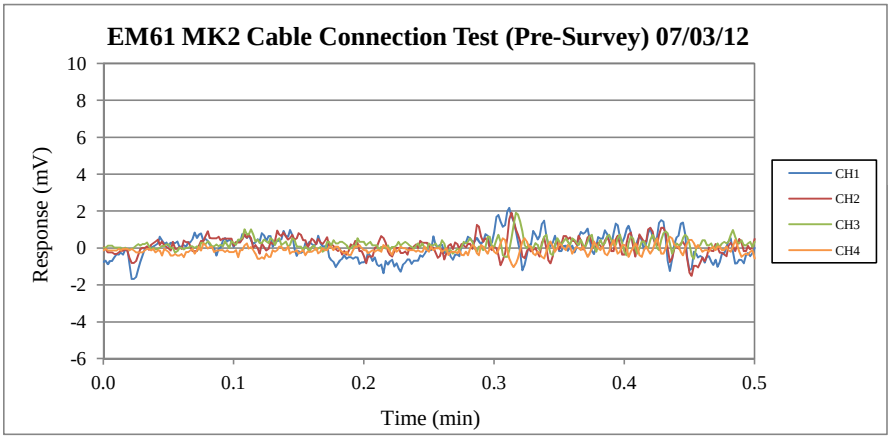
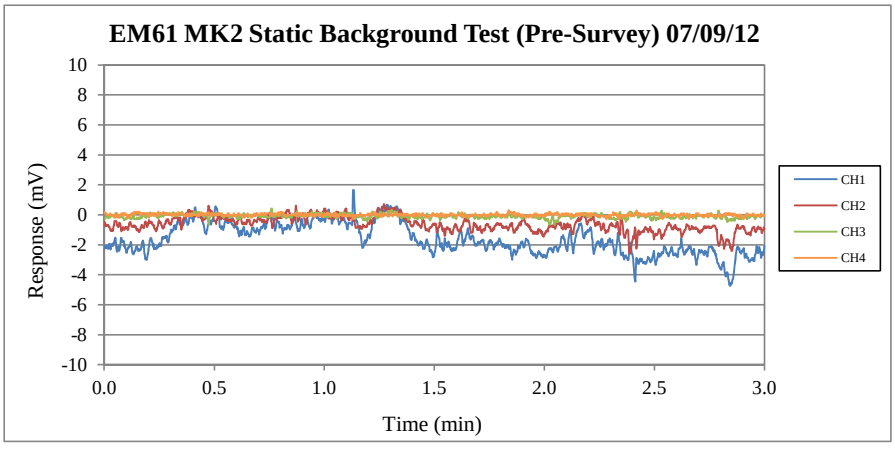
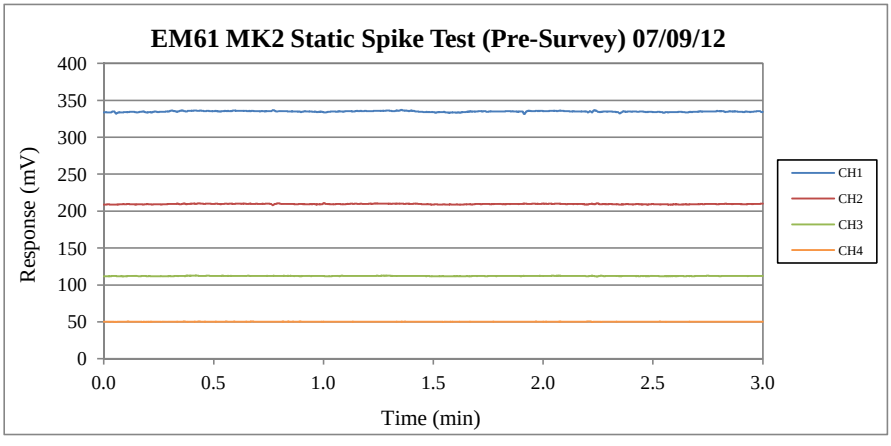
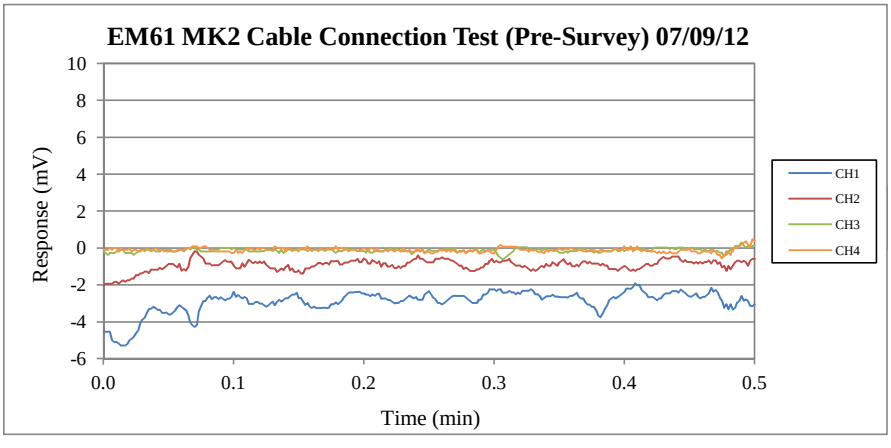
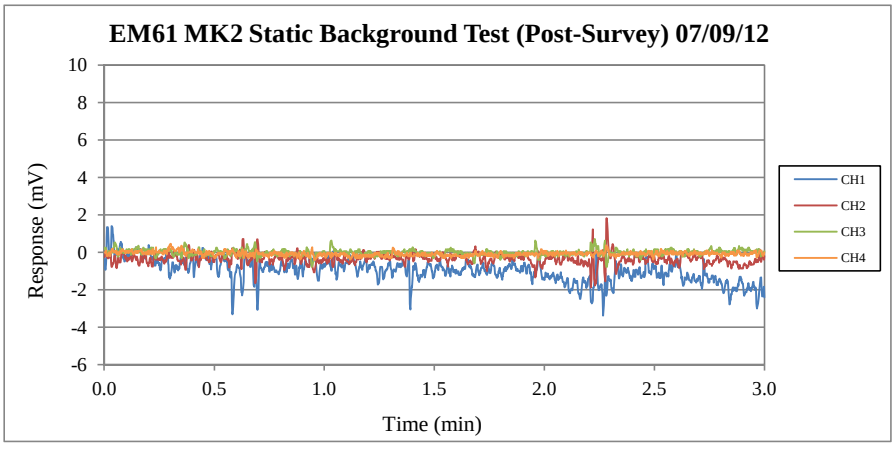
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

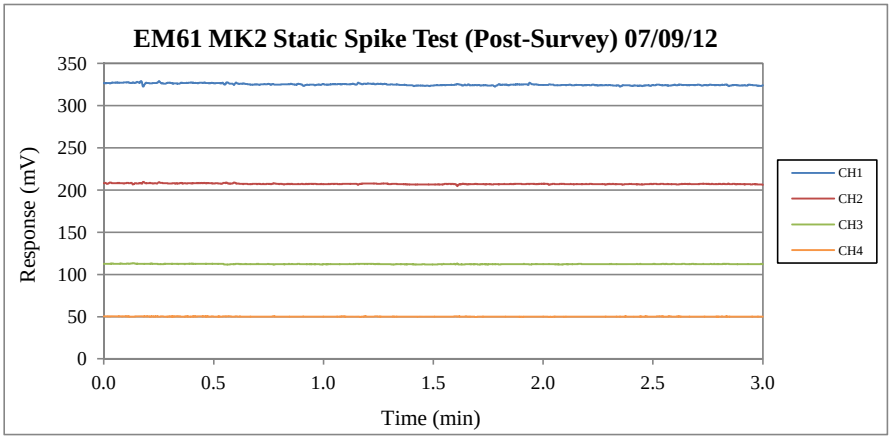

EM61 MK2 Cable Connection Test (Pre-Survey) 07/03/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

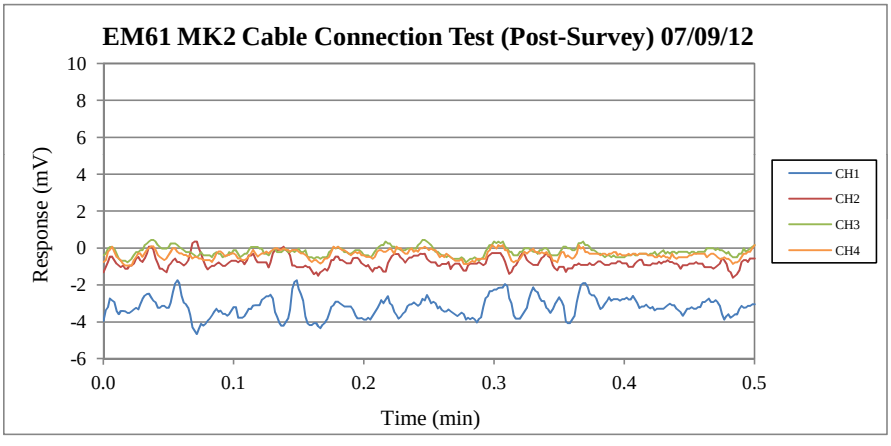

EM61 MK2 Static Background Test (Pre-Survey) 07/09/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
-8
-10
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

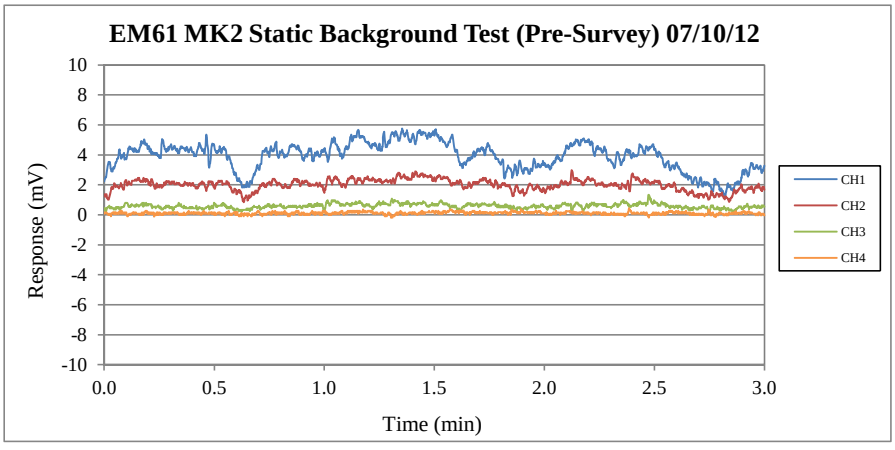

EM61 MK2 Static Spike Test (Pre-Survey) 07/09/12
Response (mV)
400
350
300
250
200
150
100
50
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

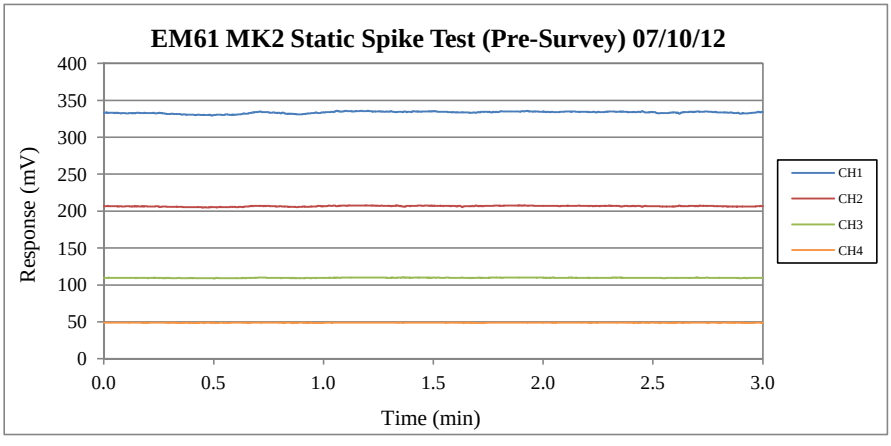

EM61 MK2 Cable Connection Test (Pre-Survey) 07/09/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

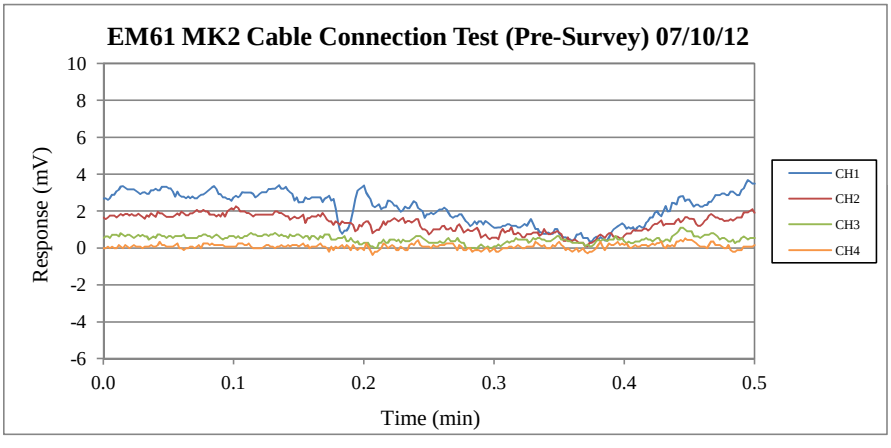

EM61 MK2 Static Background Test (Post-Survey) 07/09/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

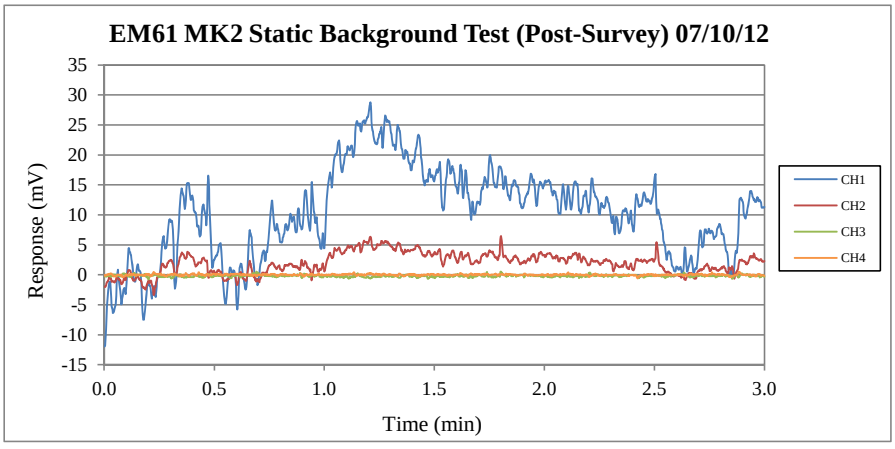

EM61 MK2 Static Spike Test (Post-Survey) 07/09/12
Response (mV)
350
300
250
200
150
100
50
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

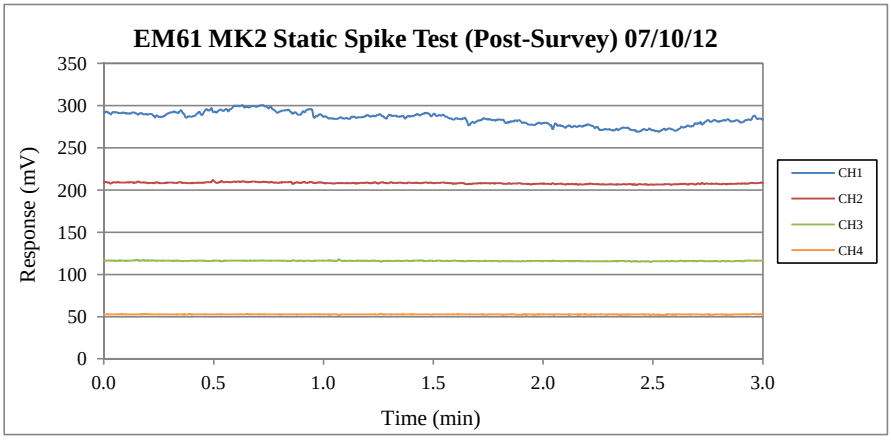

EM61 MK2 Cable Connection Test (Post-Survey) 07/09/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

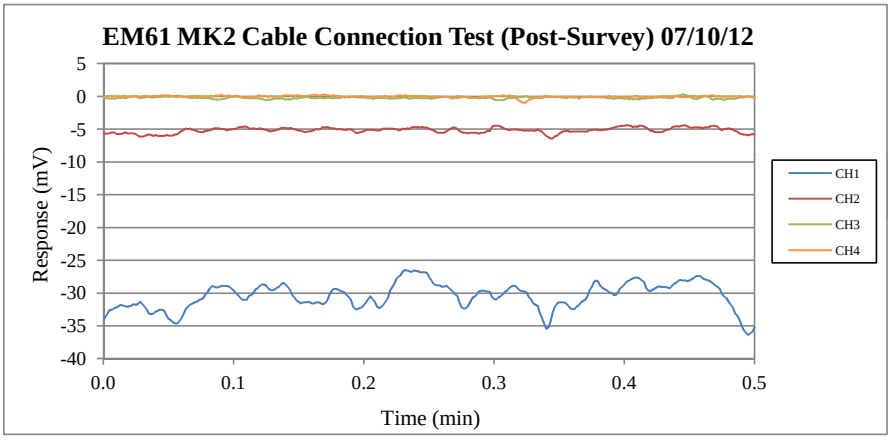

EM61 MK2 Static Background Test (Pre-Survey) 07/10/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
-8
-10
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

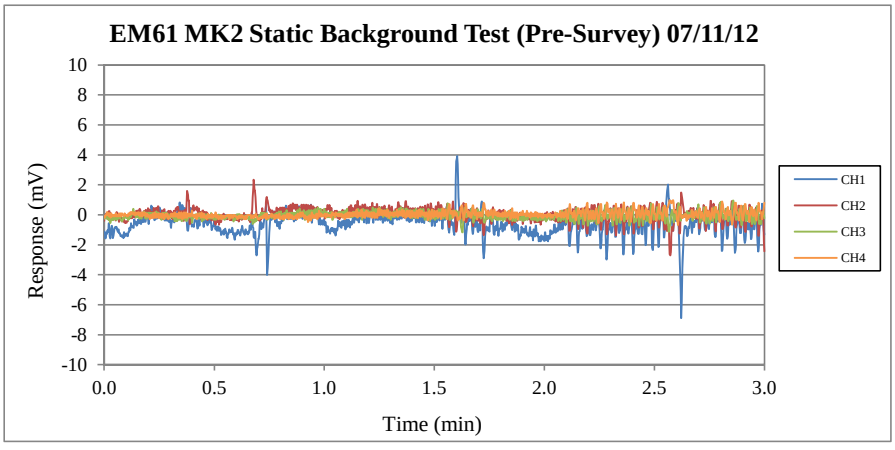

EM61 MK2 Static Spike Test (Pre-Survey) 07/10/12
Response (mV)
400
350
300
250
200
150
100
50
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

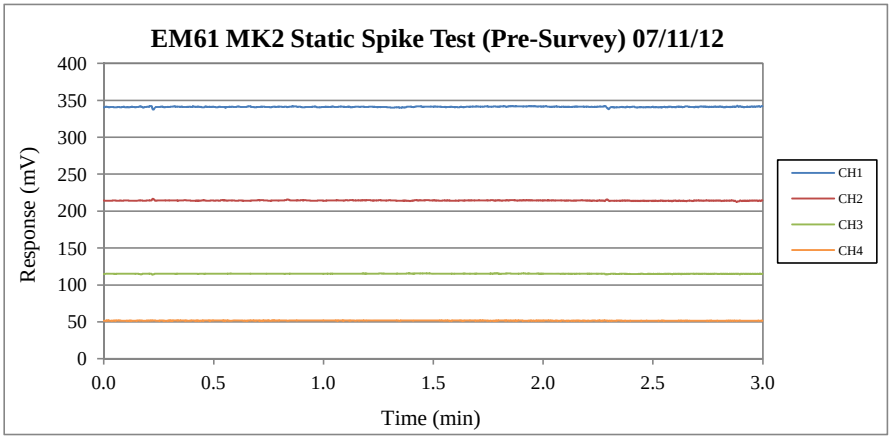

EM61 MK2 Cable Connection Test (Pre-Survey) 07/10/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

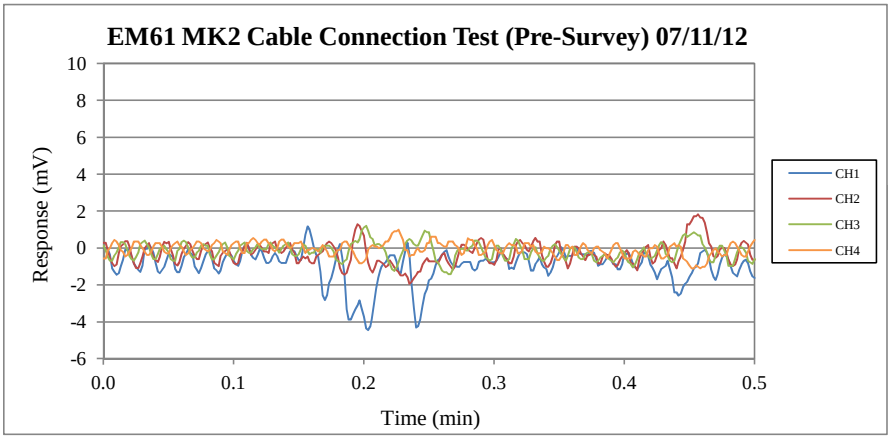

EM61 MK2 Static Background Test (Post-Survey) 07/10/12
Response (mV)
35
30
25
20
15
10
5
0
-5
-10
-15
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

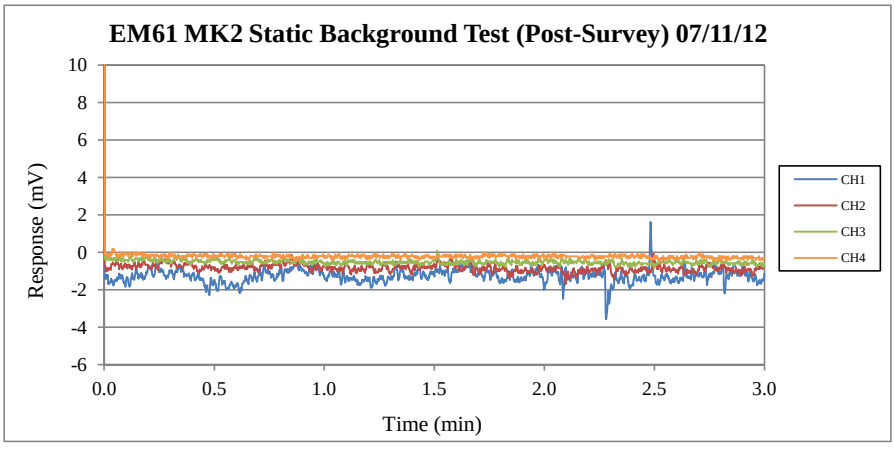

EM61 MK2 Static Spike Test (Post-Survey) 07/10/12
Response (mV)
350
300
250
200
150
100
50
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

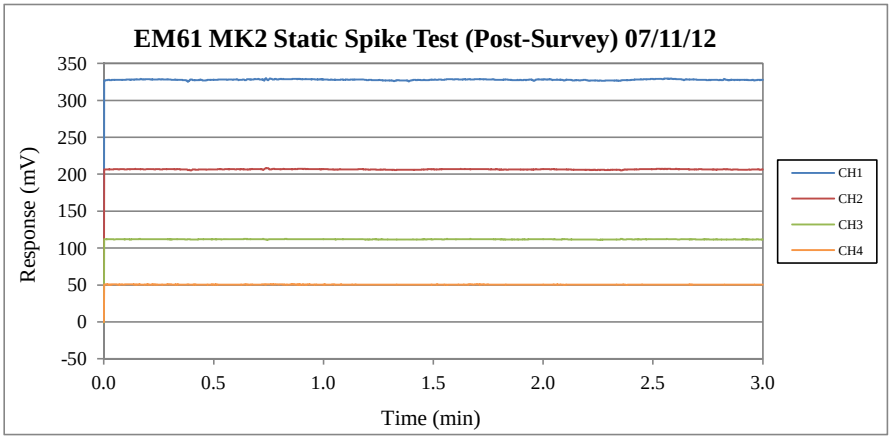

EM61 MK2 Cable Connection Test (Post-Survey) 07/10/12
Response (mV)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

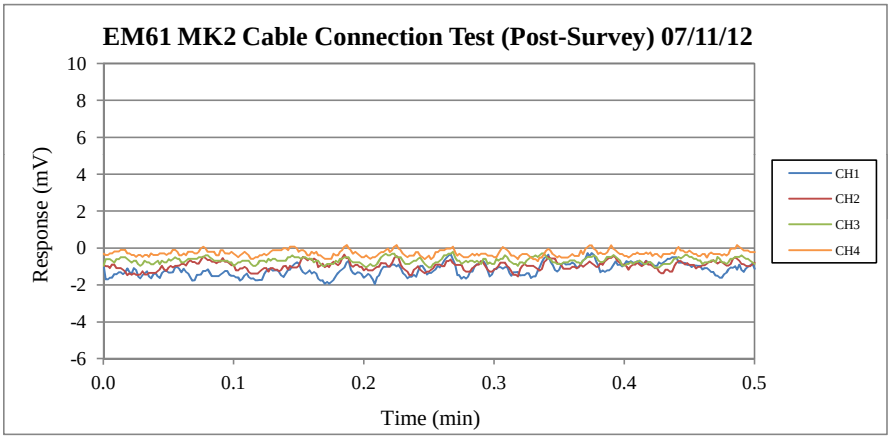

EM61 MK2 Static Background Test (Pre-Survey) 07/11/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
-8
-10
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

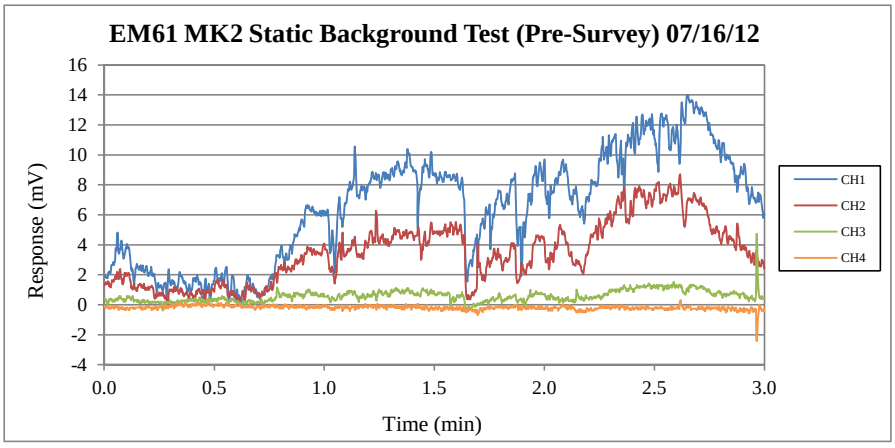

EM61 MK2 Static Spike Test (Pre-Survey) 07/11/12
Response (mV)
400
350
300
250
200
150
100
50
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

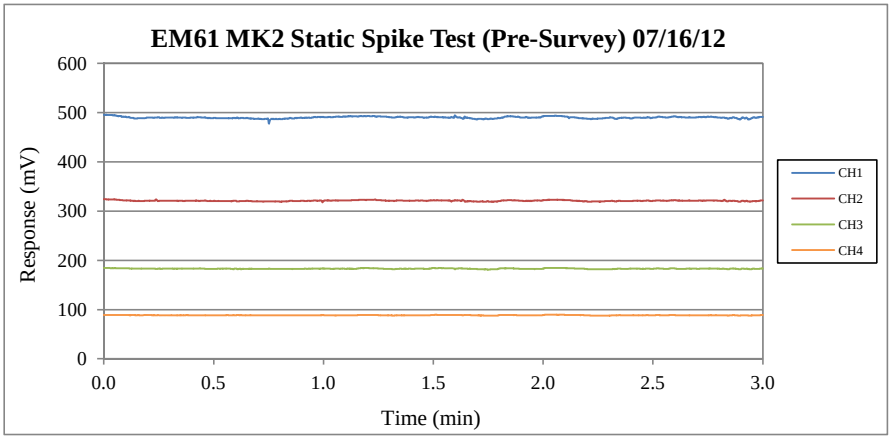

EM61 MK2 Cable Connection Test (Pre-Survey) 07/11/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

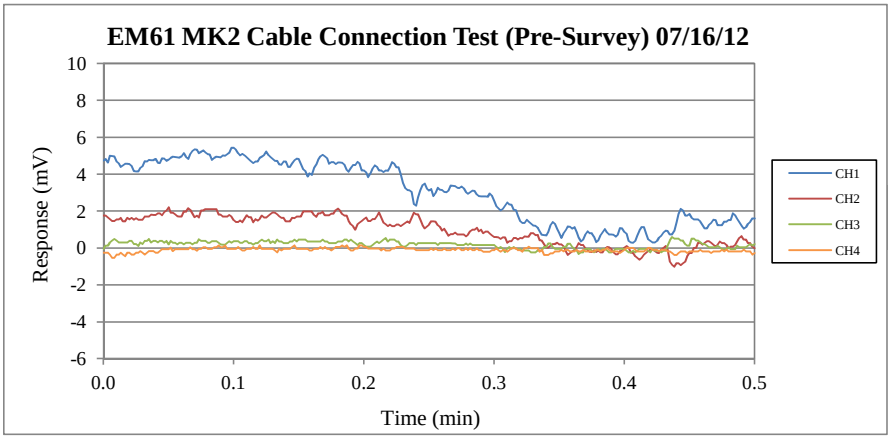

EM61 MK2 Static Background Test (Post-Survey) 07/11/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

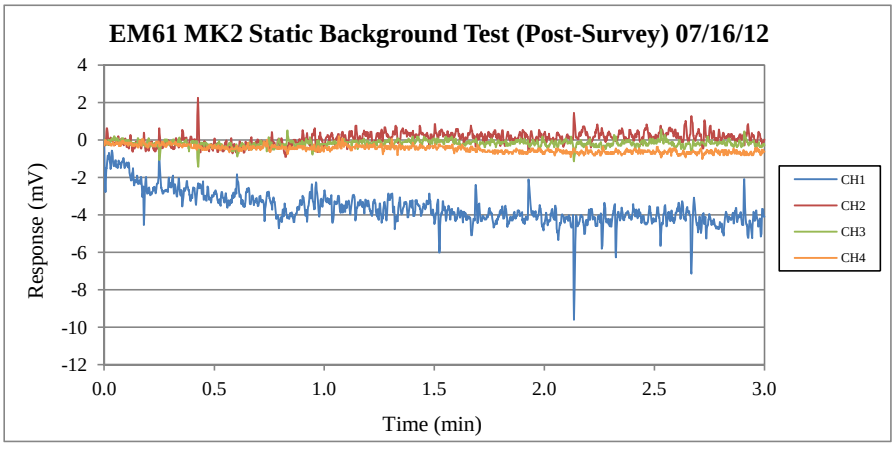

EM61 MK2 Static Spike Test (Post-Survey) 07/11/12
Response (mV)
350
300
250
200
150
100
50
0
-50
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

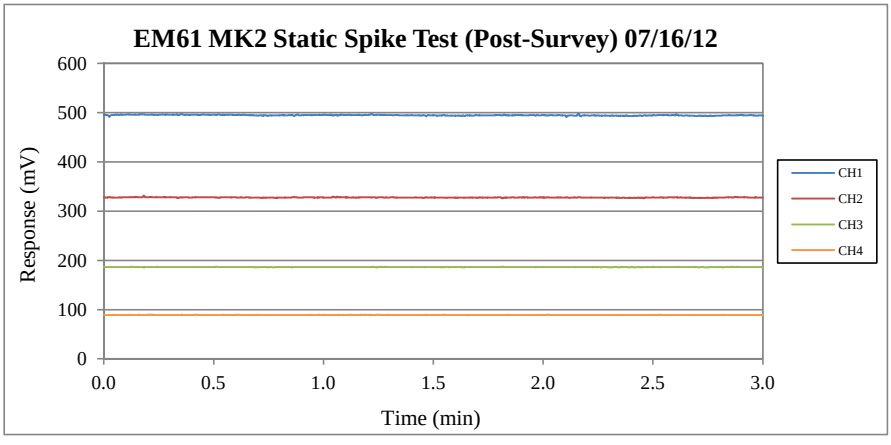

EM61 MK2 Cable Connection Test (Post-Survey) 07/11/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

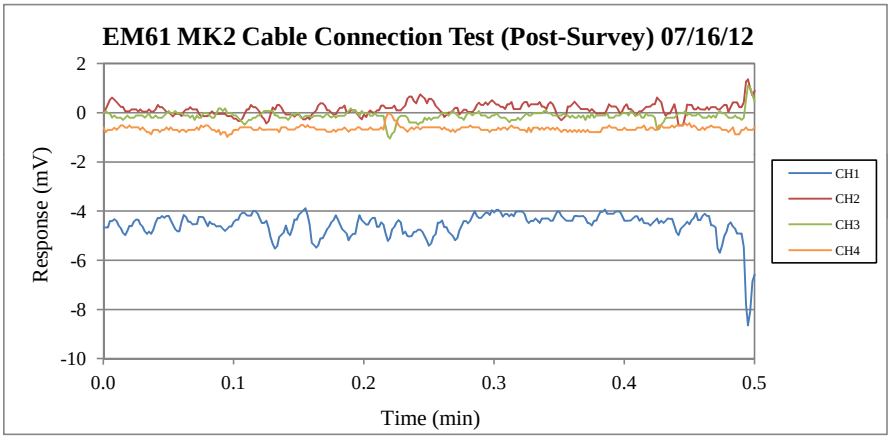

EM61 MK2 Static Background Test (Pre-Survey) 07/16/12
Response (mV)
16
14
12
10
8
6
4
2
0
-2
-4
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

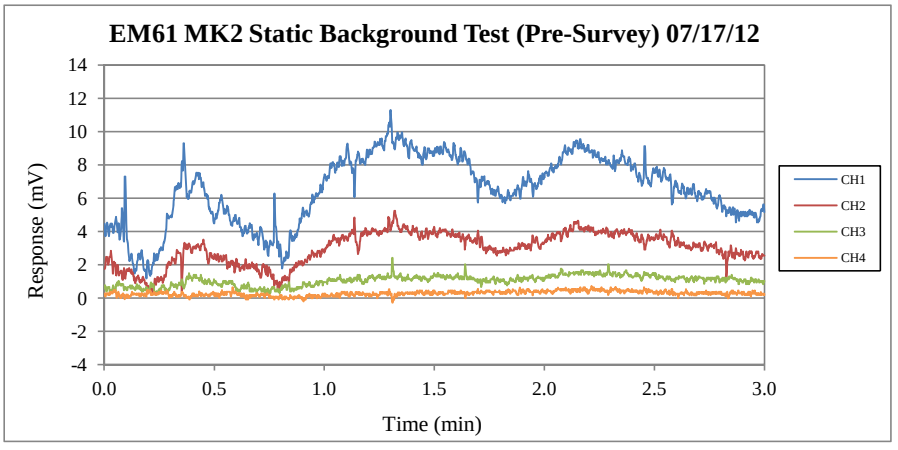

EM61 MK2 Static Spike Test (Pre-Survey) 07/16/12
Response (mV)
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

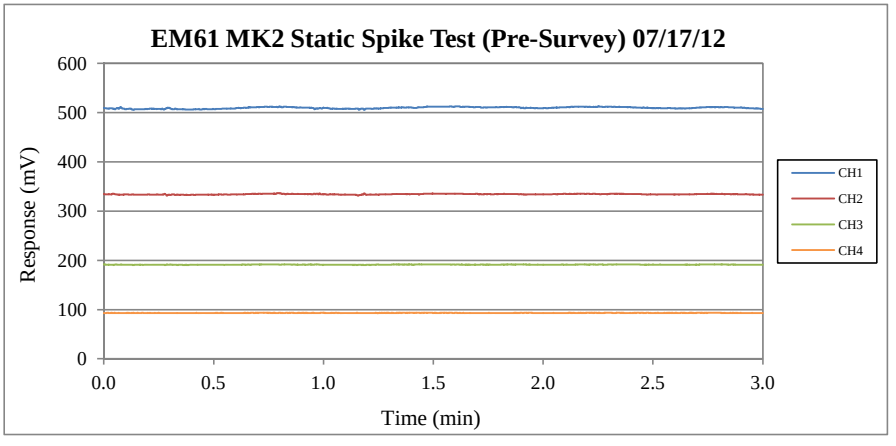

EM61 MK2 Cable Connection Test (Pre-Survey) 07/16/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

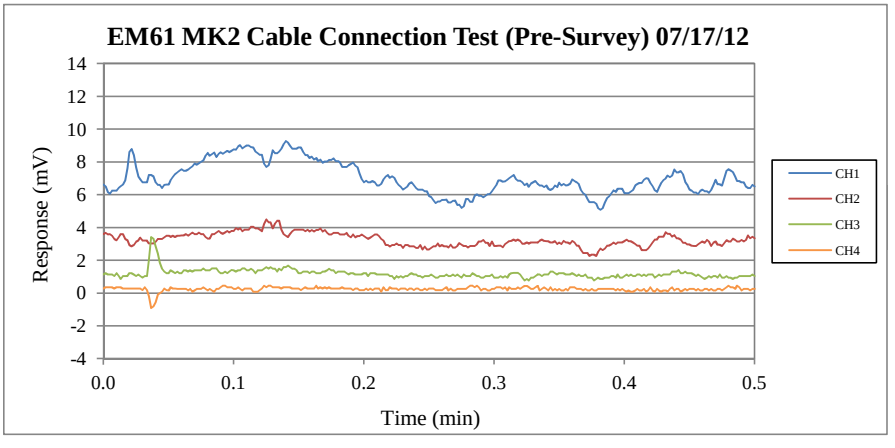

EM61 MK2 Static Background Test (Post-Survey) 07/16/12
Response (mV)
4
2
0
-2
-4
-6
-8
-10
-12
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

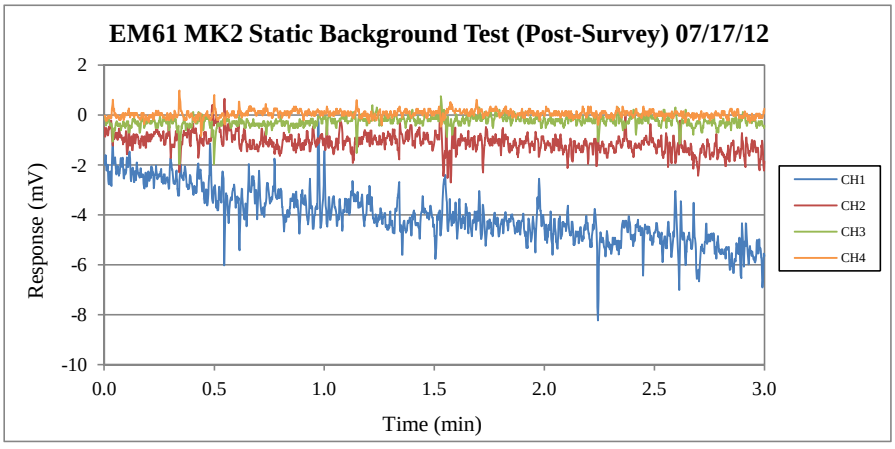

EM61 MK2 Static Spike Test (Post-Survey) 07/16/12
Response (mV)
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

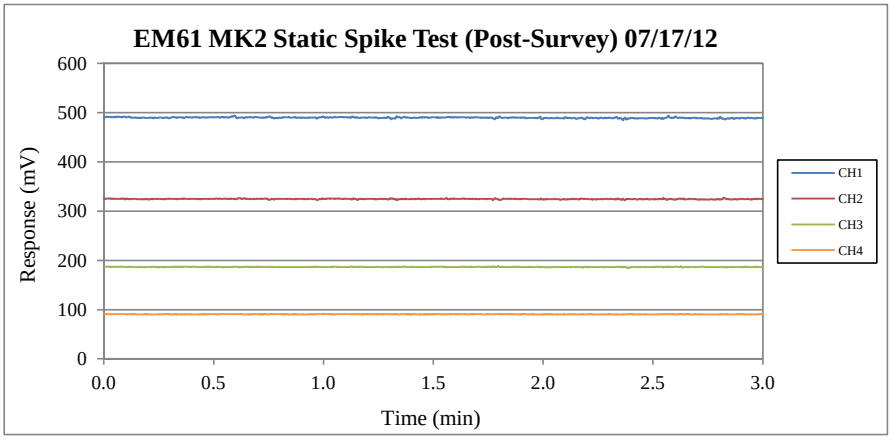

EM61 MK2 Cable Connection Test (Post-Survey) 07/16/12
Response (mV)
2
0
-2
-4
-6
-8
-10
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

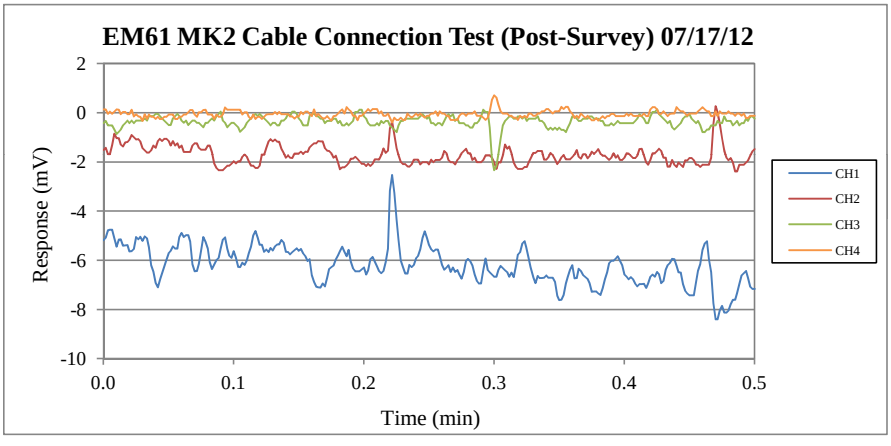

EM61 MK2 Static Background Test (Pre-Survey) 07/17/12
Response (mV)
14
12
10
8
6
4
2
0
-2
-4
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

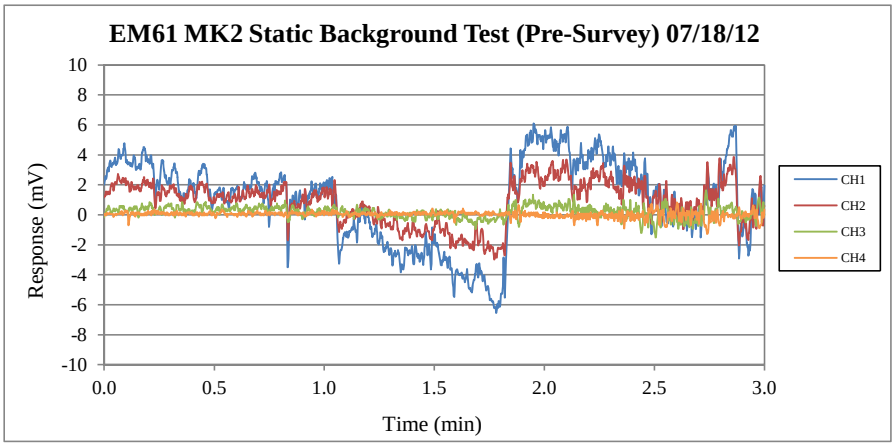

EM61 MK2 Static Spike Test (Pre-Survey) 07/17/12
Response (mV)
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

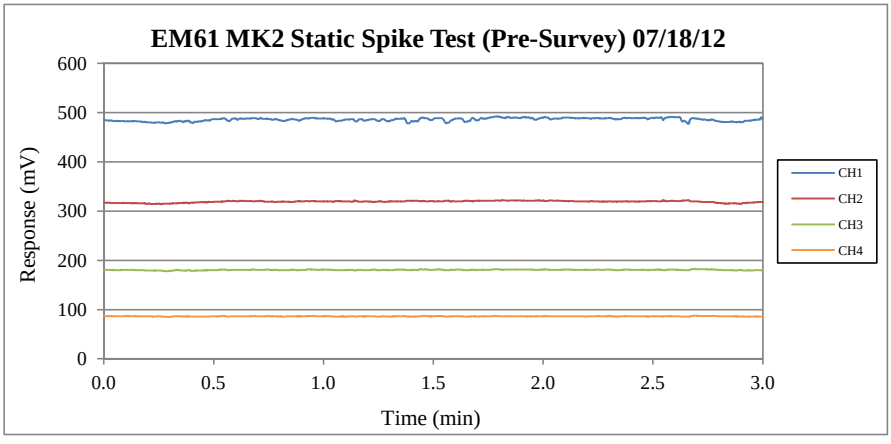

EM61 MK2 Cable Connection Test (Pre-Survey) 07/17/12
Response (mV)
14
12
10
8
6
4
2
0
-2
-4
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

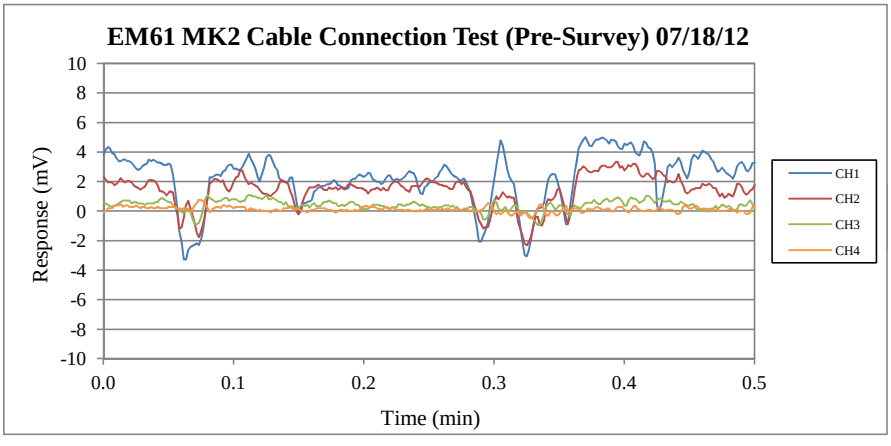

EM61 MK2 Static Background Test (Post-Survey) 07/17/12
Response (mV)
2
0
-2
-4
-6
-8
-10
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

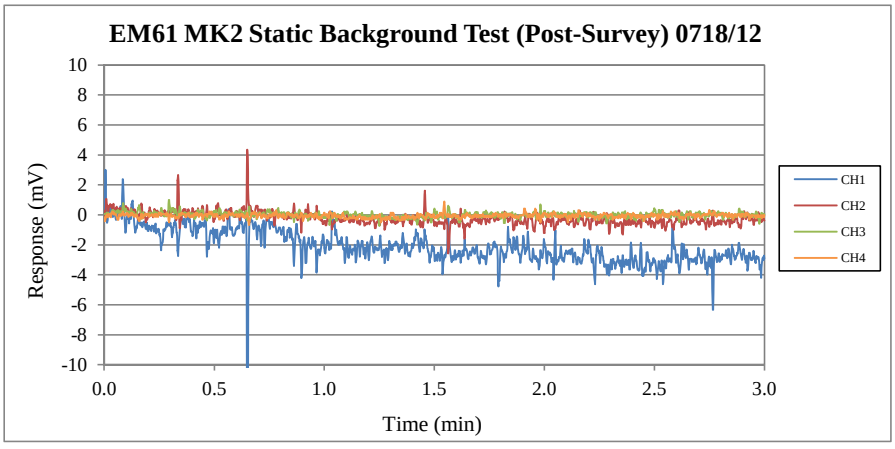

EM61 MK2 Static Spike Test (Post-Survey) 07/17/12
Response (mV)
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

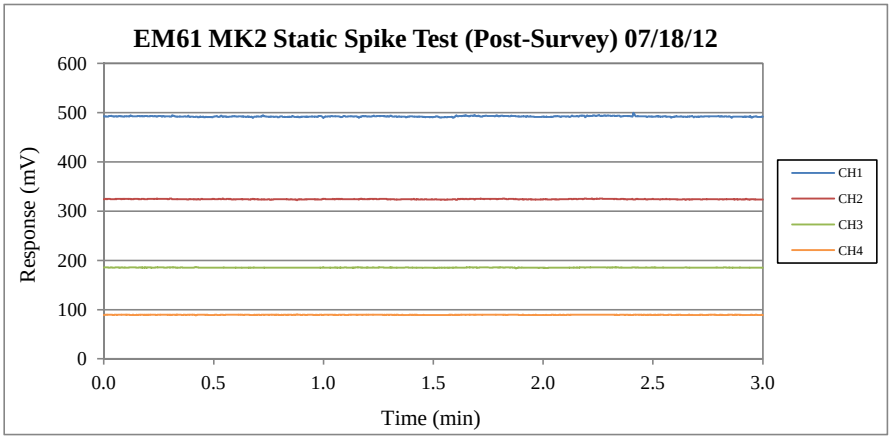

EM61 MK2 Cable Connection Test (Post-Survey) 07/17/12
Response (mV)
2
0
-2
-4
-6
-8
-10
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

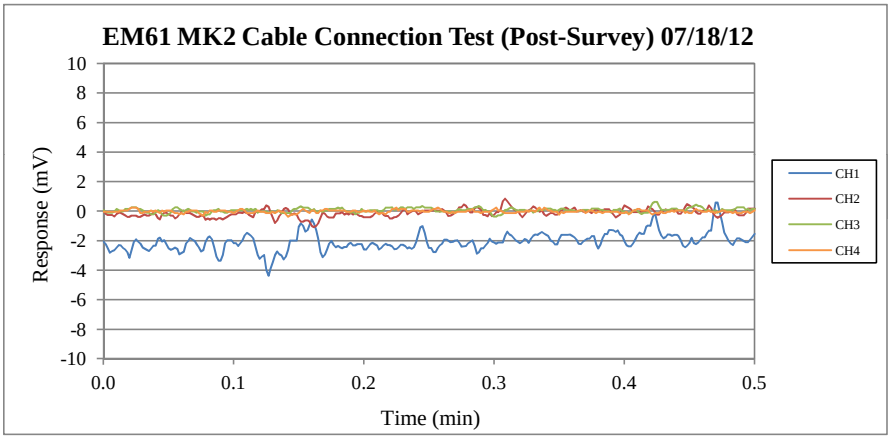

EM61 MK2 Static Background Test (Pre-Survey) 07/18/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
-8
-10
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

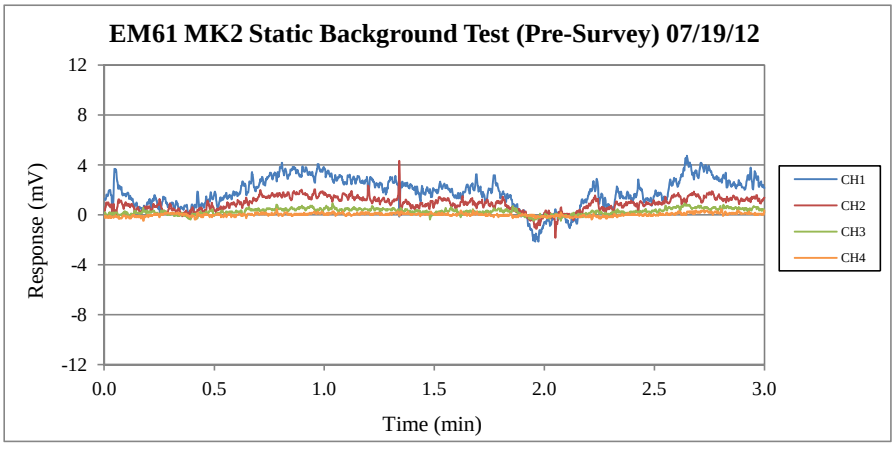

EM61 MK2 Static Spike Test (Pre-Survey) 07/18/12
Response (mV)
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

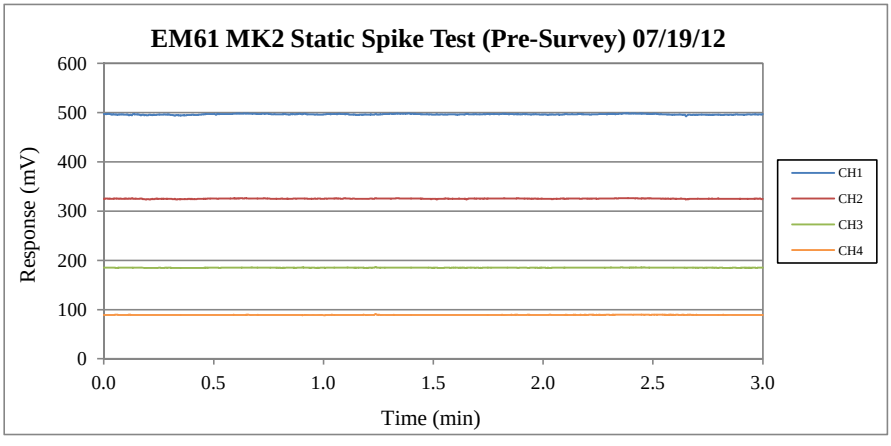

EM61 MK2 Cable Connection Test (Pre-Survey) 07/18/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
-8
-10
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

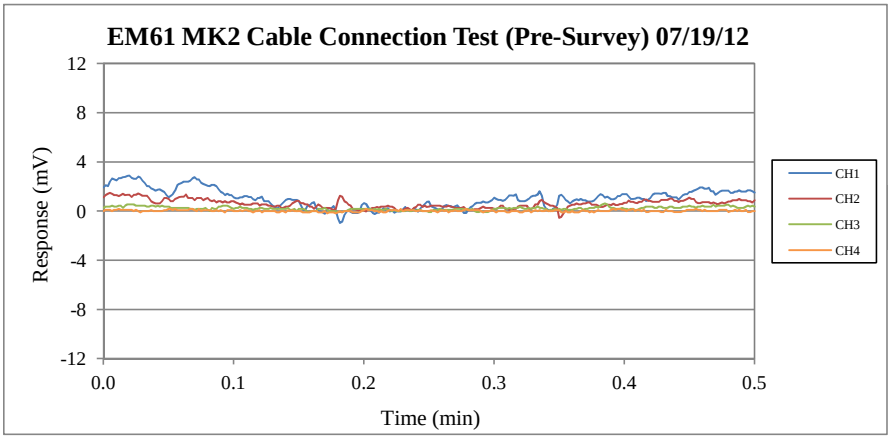

EM61 MK2 Static Background Test (Post-Survey) 0718/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
-8
-10
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

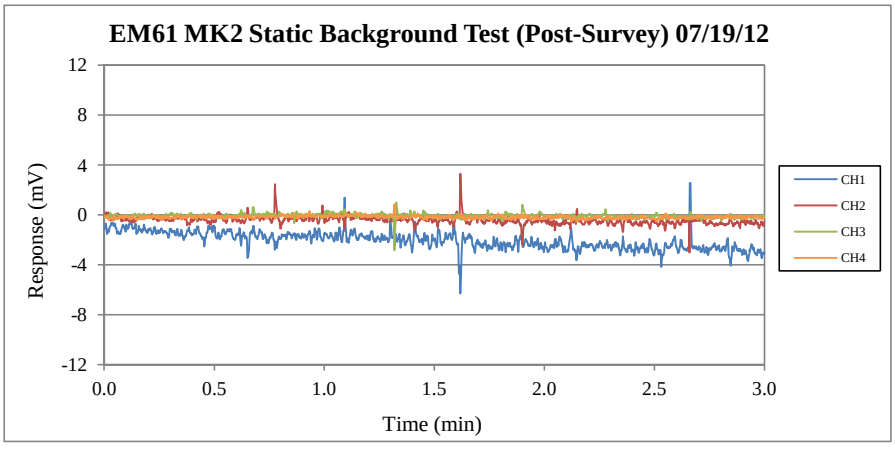

EM61 MK2 Static Spike Test (Post-Survey) 07/18/12
Response (mV)
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

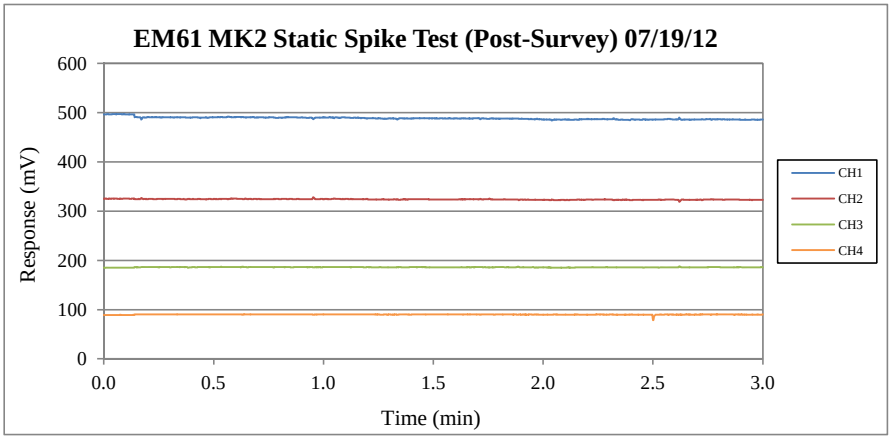

EM61 MK2 Cable Connection Test (Post-Survey) 07/18/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
-8
-10
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

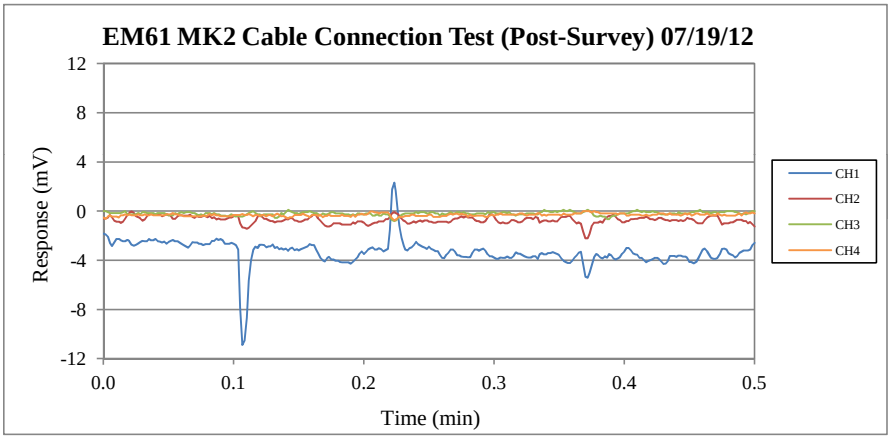

EM61 MK2 Static Background Test (Pre-Survey) 07/19/12
Response (mV)
12
8
4
0
-4
-8
-12
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

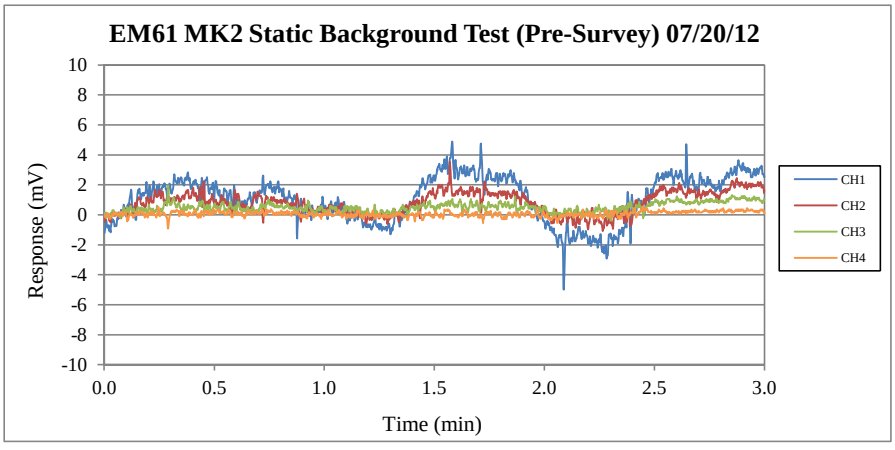

EM61 MK2 Static Spike Test (Pre-Survey) 07/19/12
Response (mV)
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

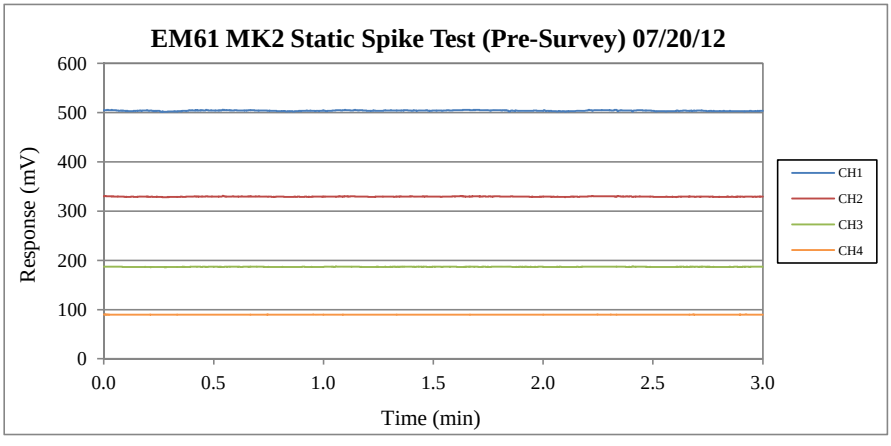

EM61 MK2 Cable Connection Test (Pre-Survey) 07/19/12
Response (mV)
12
8
4
0
-4
-8
-12
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

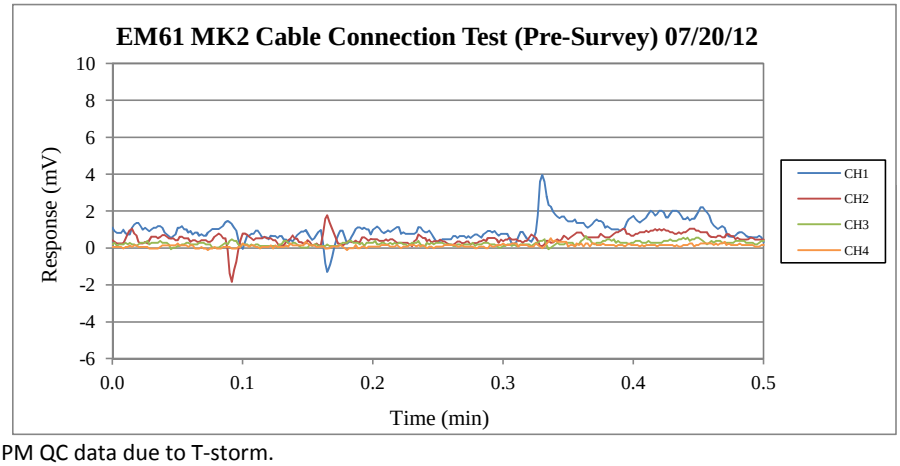

EM61 MK2 Static Background Test (Post-Survey) 07/19/12
Response (mV)
12
8
4
0
-4
-8
-12
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Static Spike Test (Post-Survey) 07/19/12
Response (mV)
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

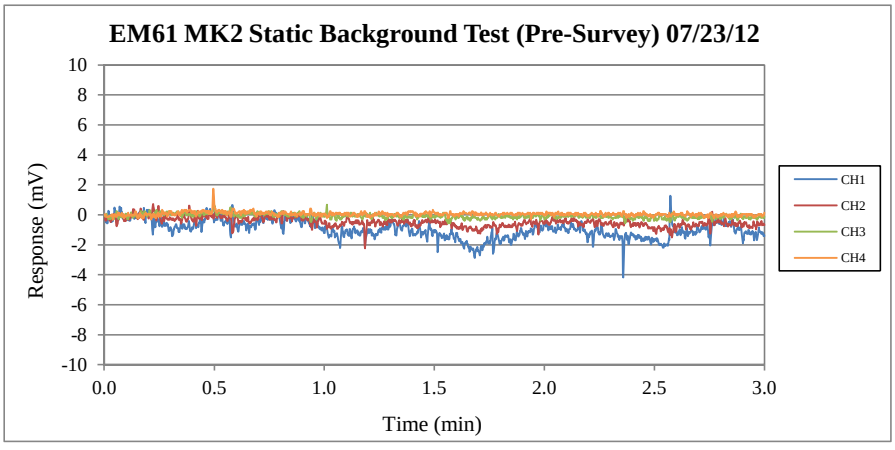

EM61 MK2 Cable Connection Test (Post-Survey) 07/19/12
Response (mV)
12
8
4
0
-4
-8
-12
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

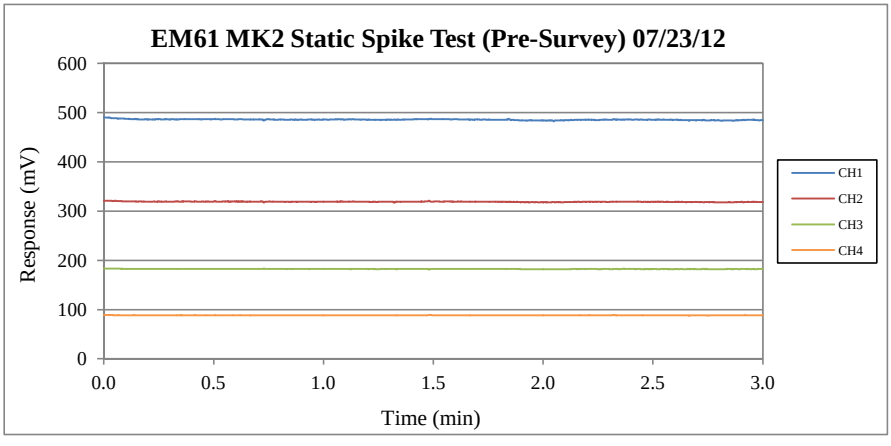


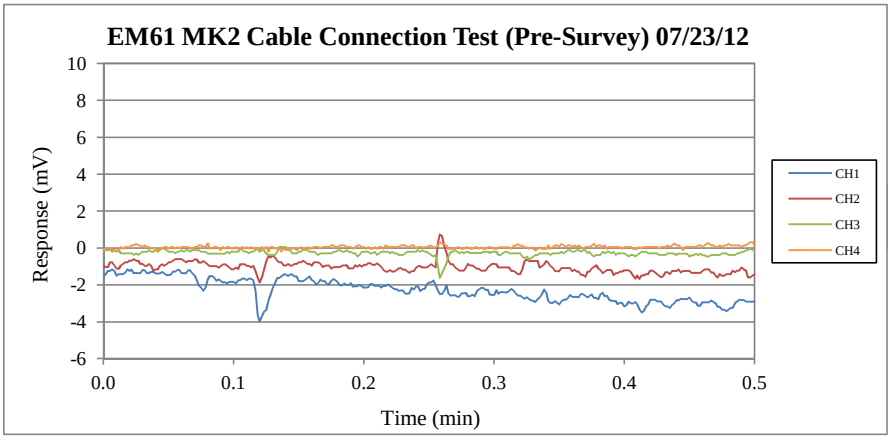


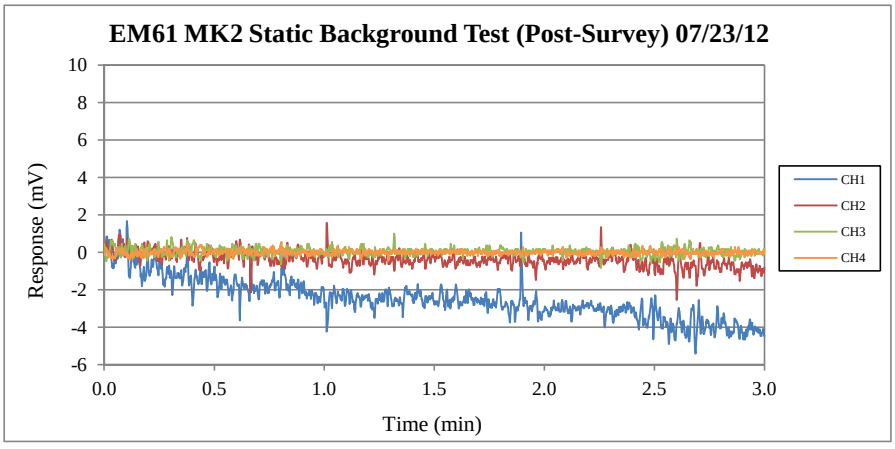


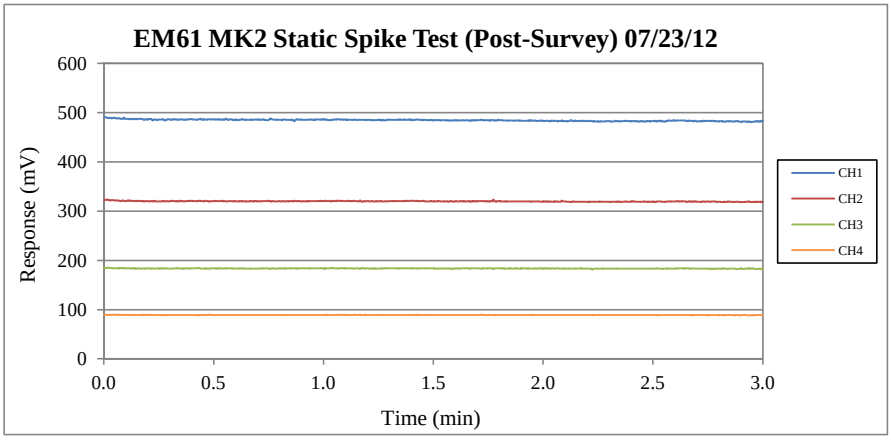
No PM QC data due to T-storm.

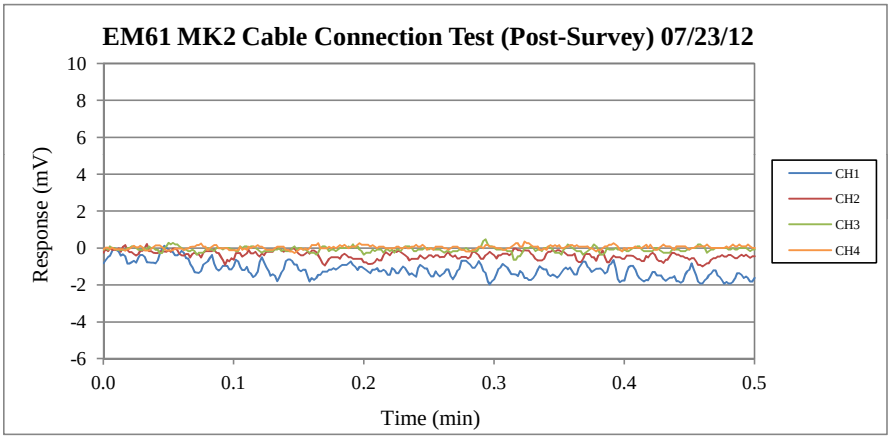

EM61 MK2 Static Background Test (Pre-Survey) 07/23/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
-8
-10
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

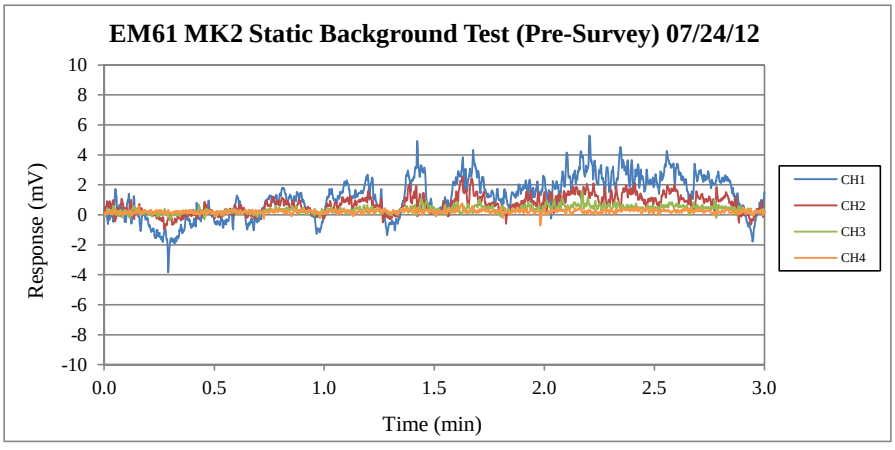

EM61 MK2 Static Spike Test (Pre-Survey) 07/23/12
Response (mV)
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

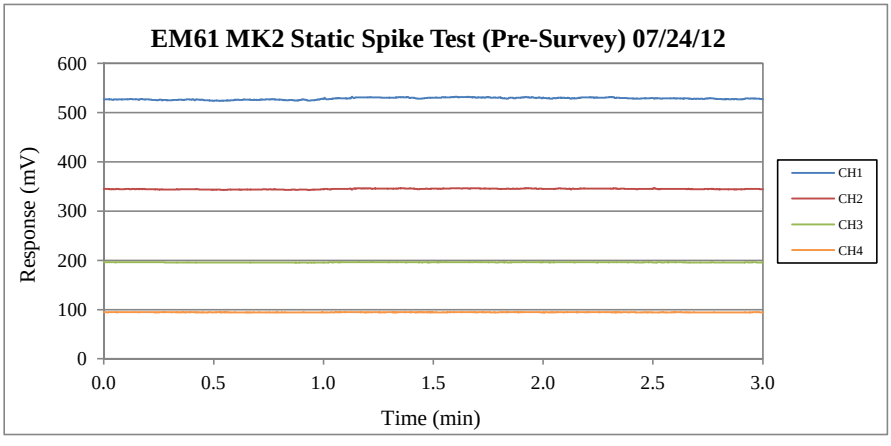

EM61 MK2 Cable Connection Test (Pre-Survey) 07/23/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

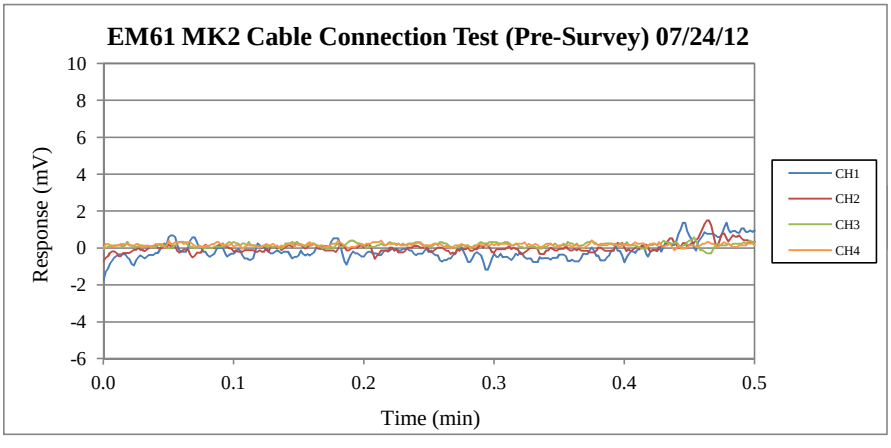

EM61 MK2 Static Background Test (Post-Survey) 07/23/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

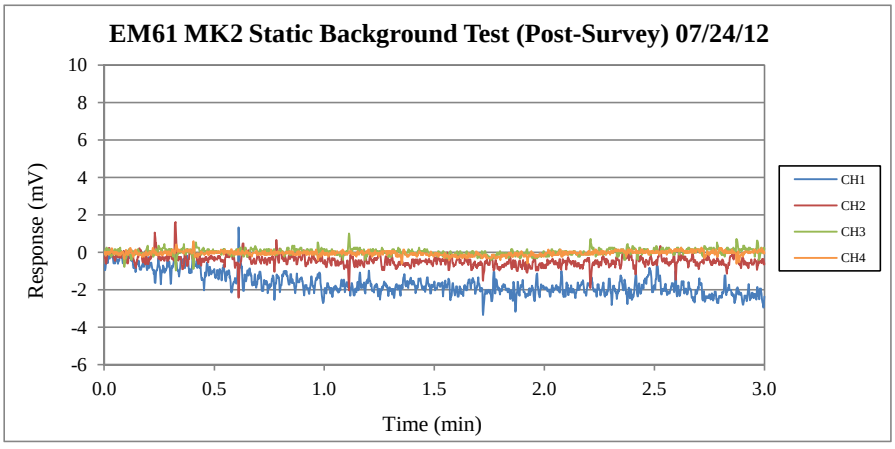

EM61 MK2 Static Spike Test (Post-Survey) 07/23/12
Response (mV)
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

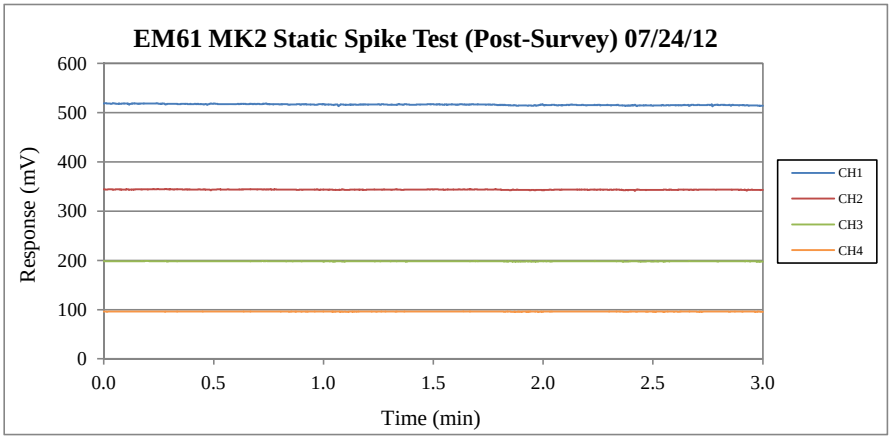

EM61 MK2 Cable Connection Test (Post-Survey) 07/23/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

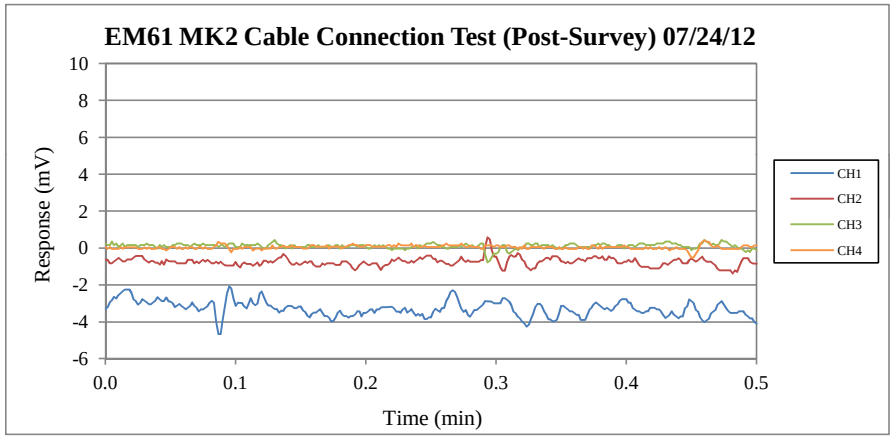

EM61 MK2 Static Background Test (Pre-Survey) 07/24/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
-8
-10
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

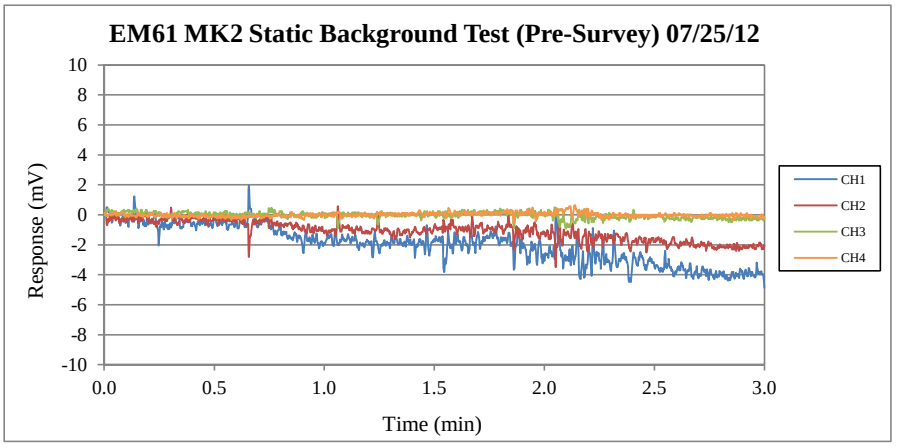

EM61 MK2 Static Spike Test (Pre-Survey) 07/24/12
Response (mV)
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

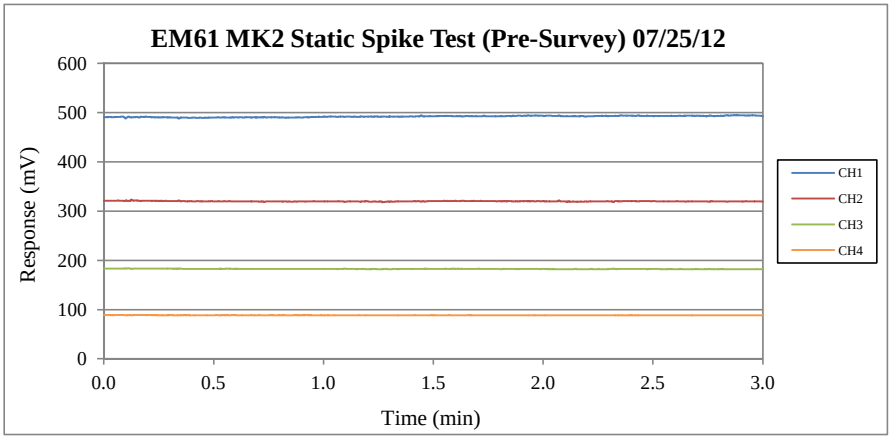

EM61 MK2 Cable Connection Test (Pre-Survey) 07/24/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

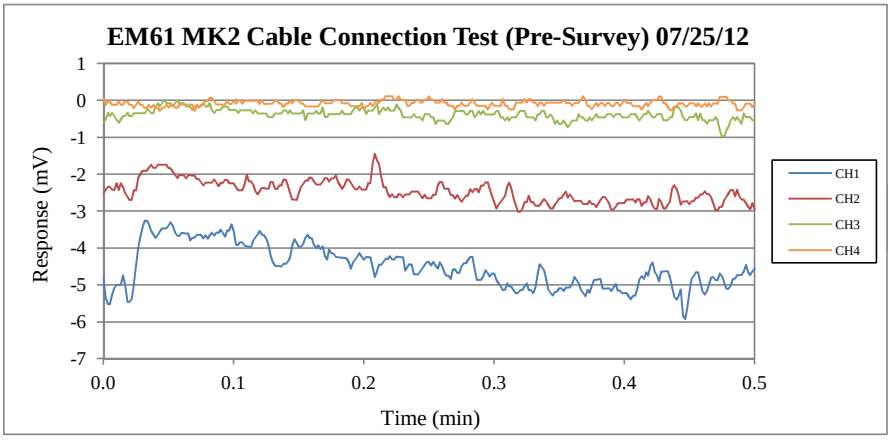

EM61 MK2 Static Background Test (Post-Survey) 07/24/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

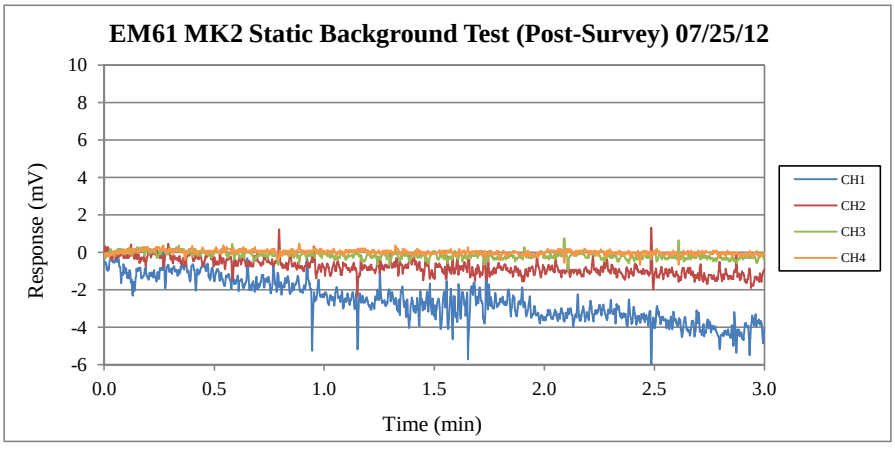

EM61 MK2 Static Spike Test (Post-Survey) 07/24/12
Response (mV)
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

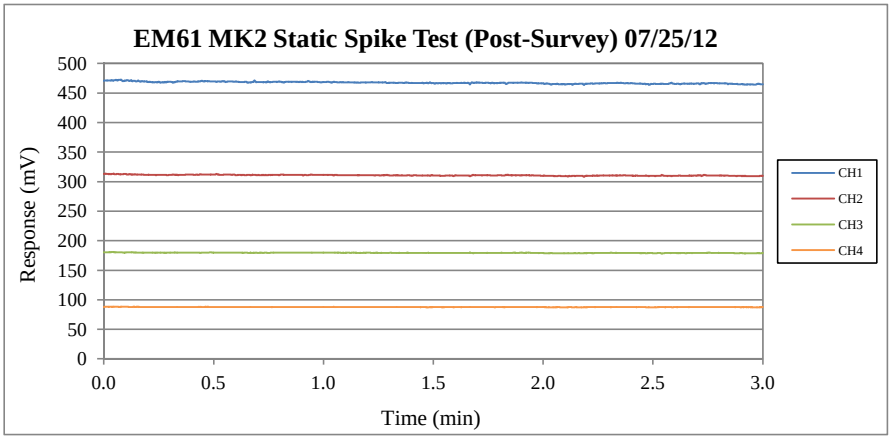

EM61 MK2 Cable Connection Test (Post-Survey) 07/24/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

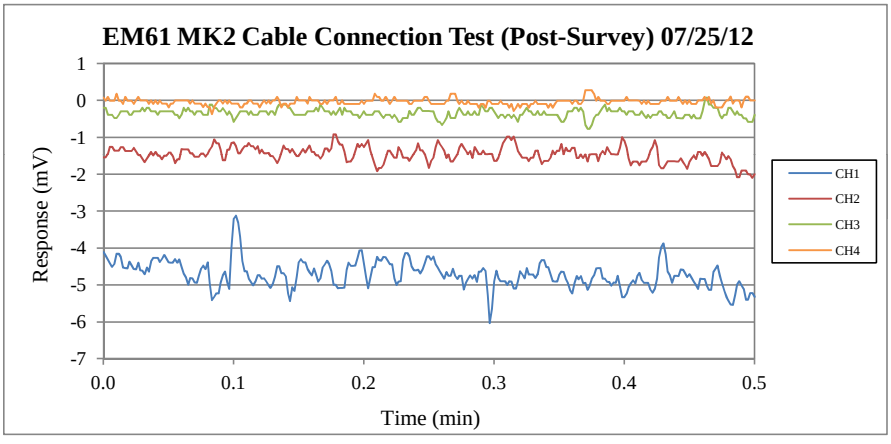

EM61 MK2 Static Background Test (Pre-Survey) 07/25/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
-8
-10
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

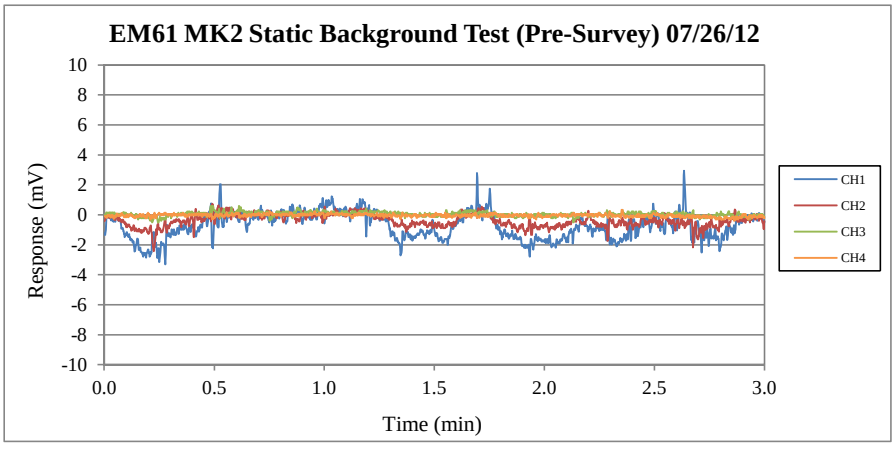

EM61 MK2 Static Spike Test (Pre-Survey) 07/25/12
Response (mV)
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

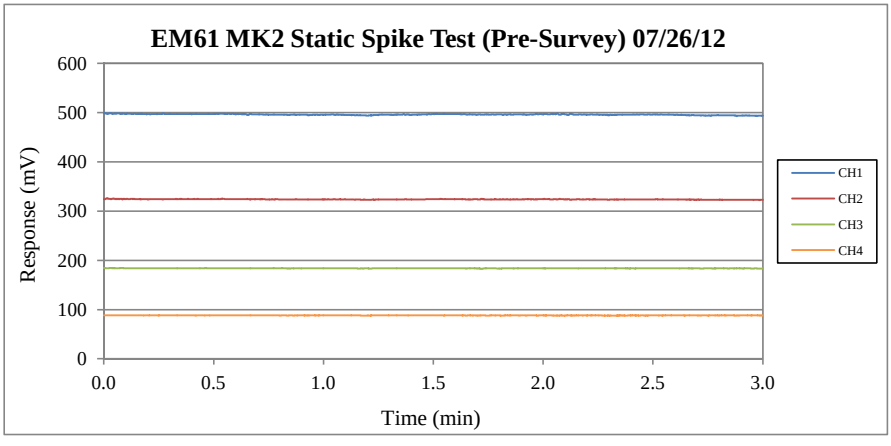

EM61 MK2 Cable Connection Test (Pre-Survey) 07/25/12
Response (mV)
1
0
-1
-2
-3
-4
-5
-6
-7
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

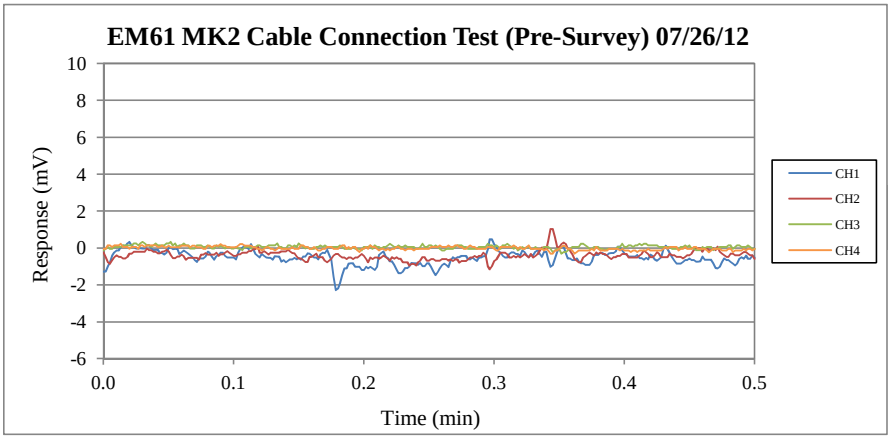

EM61 MK2 Static Background Test (Post-Survey) 07/25/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

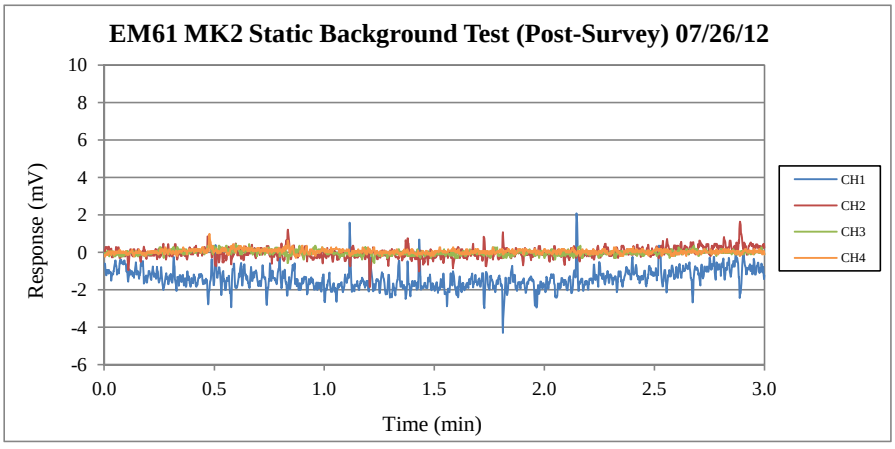

EM61 MK2 Static Spike Test (Post-Survey) 07/25/12
Response (mV)
500
450
400
350
300
250
200
150
100
50
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

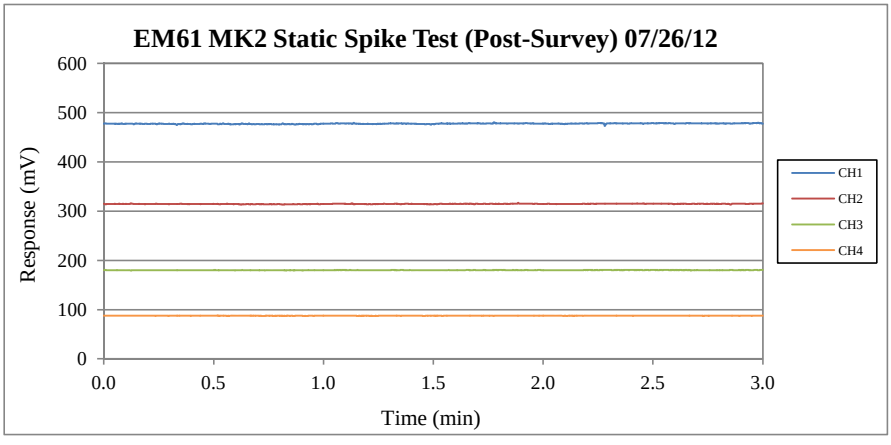

EM61 MK2 Cable Connection Test (Post-Survey) 07/25/12
Response (mV)
1
0
-1
-2
-3
-4
-5
-6
-7
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

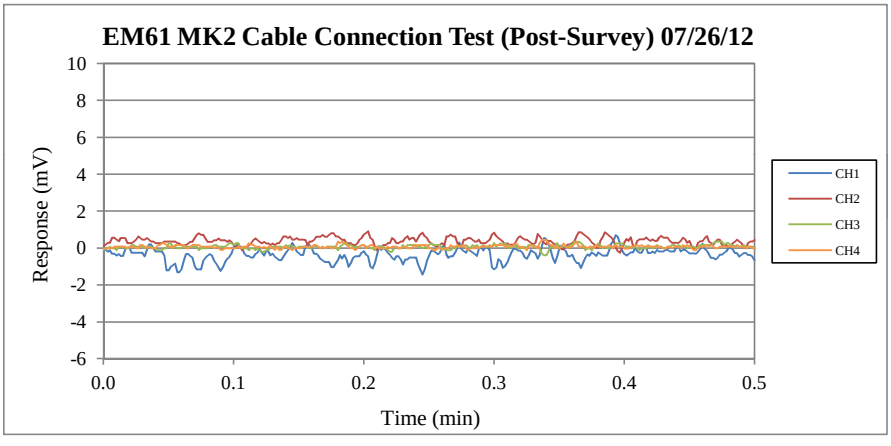

EM61 MK2 Static Background Test (Pre-Survey) 07/26/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
-8
-10
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

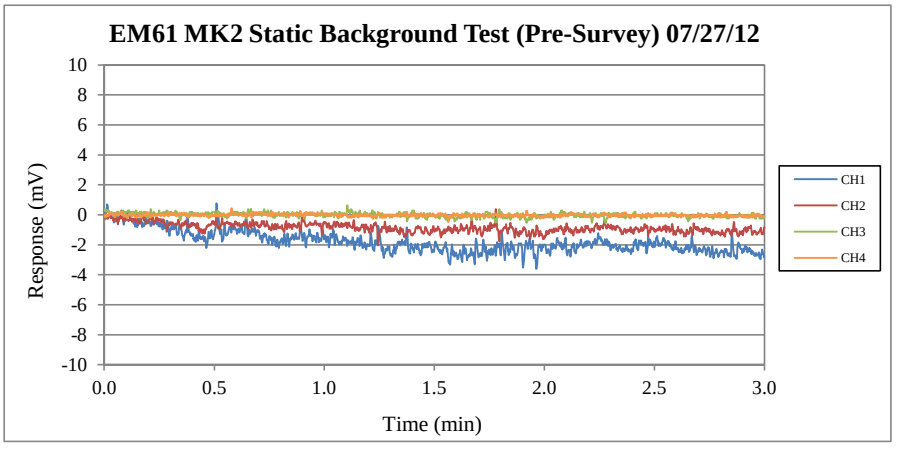

EM61 MK2 Static Spike Test (Pre-Survey) 07/26/12
Response (mV)
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

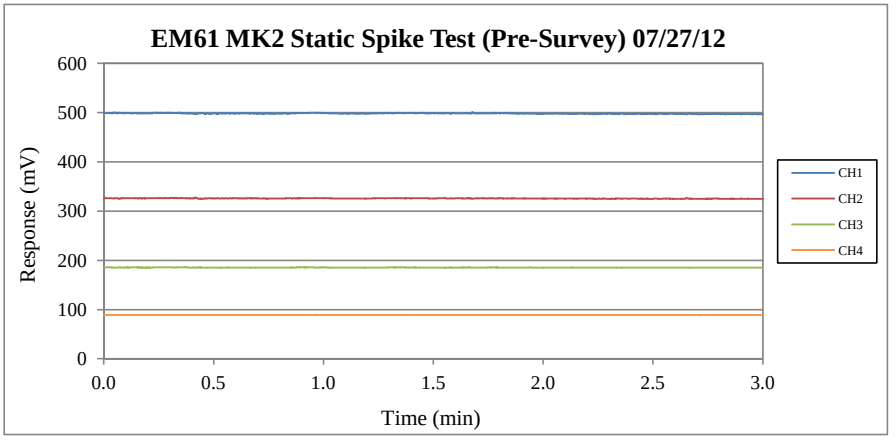

EM61 MK2 Cable Connection Test (Pre-Survey) 07/26/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

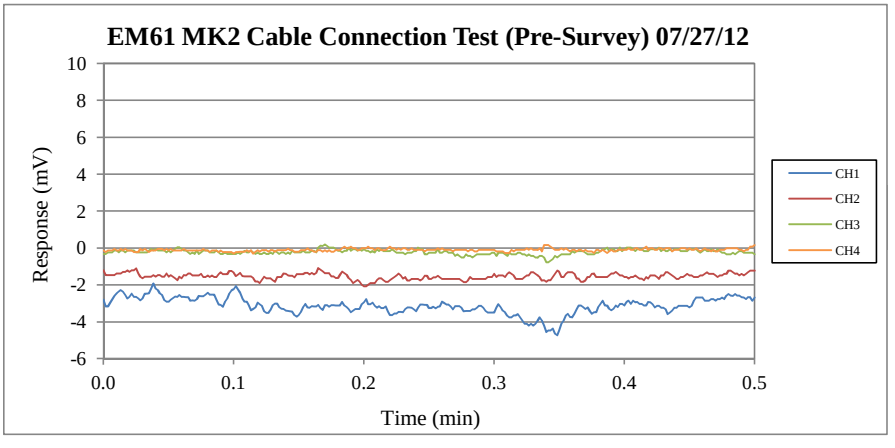

EM61 MK2 Static Background Test (Post-Survey) 07/26/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

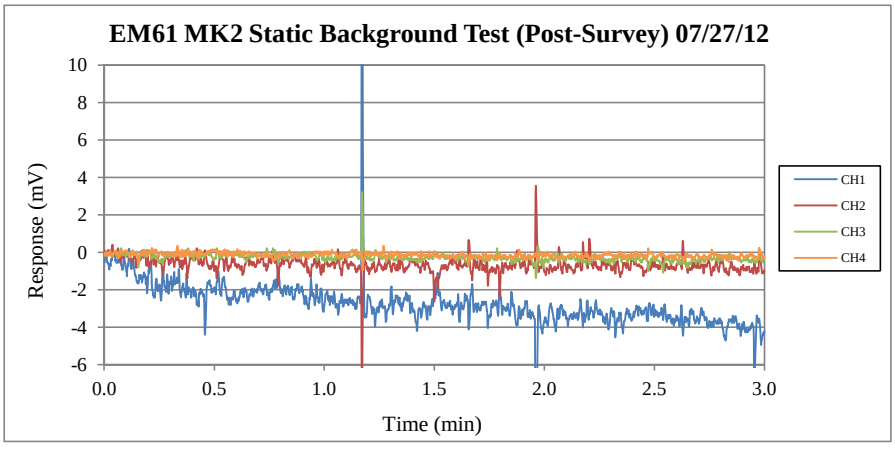

EM61 MK2 Static Spike Test (Post-Survey) 07/26/12
Response (mV)
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

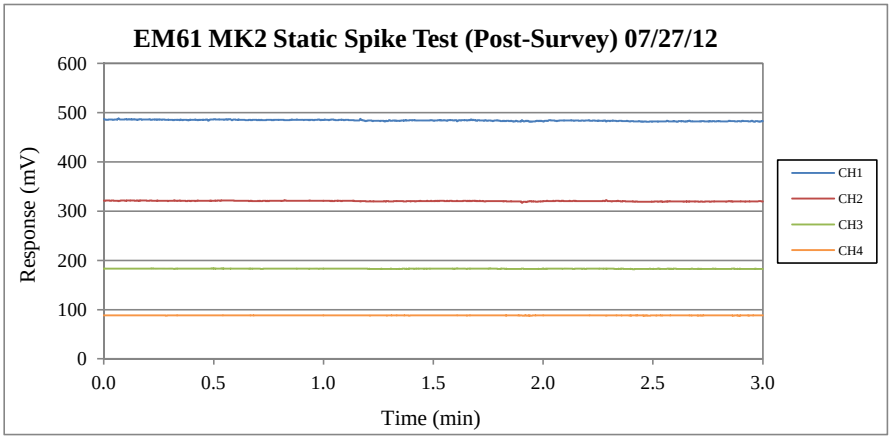

EM61 MK2 Cable Connection Test (Post-Survey) 07/26/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

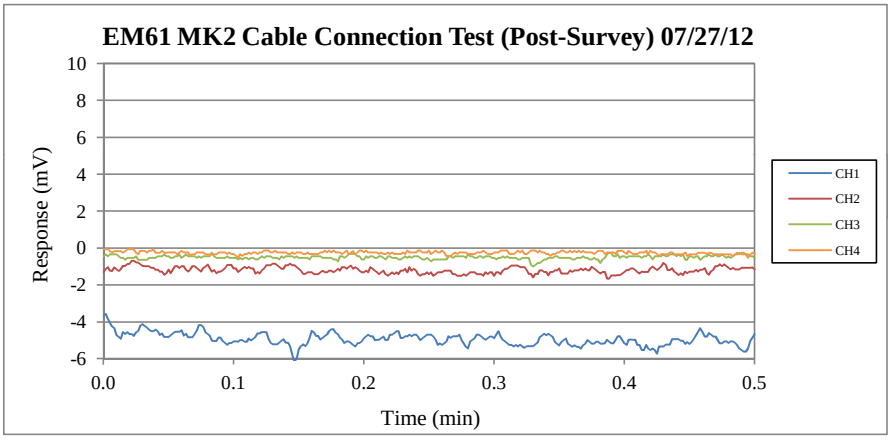

EM61 MK2 Static Background Test (Pre-Survey) 07/27/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
-8
-10
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

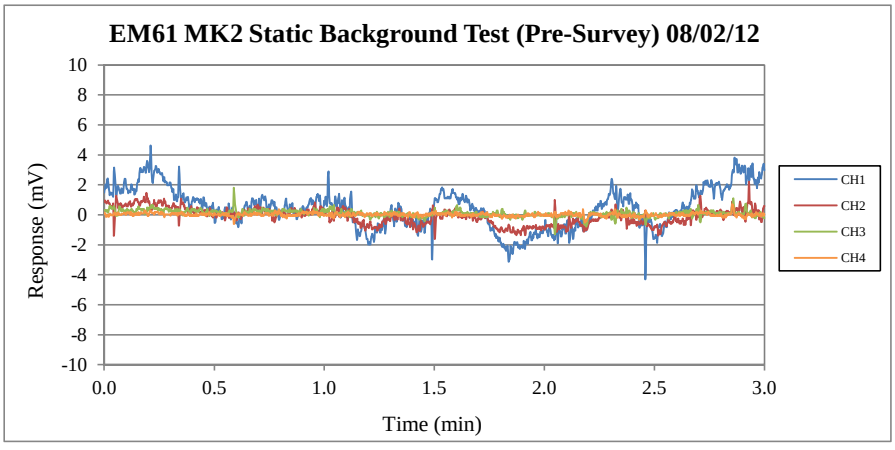

EM61 MK2 Static Spike Test (Pre-Survey) 07/27/12
Response (mV)
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

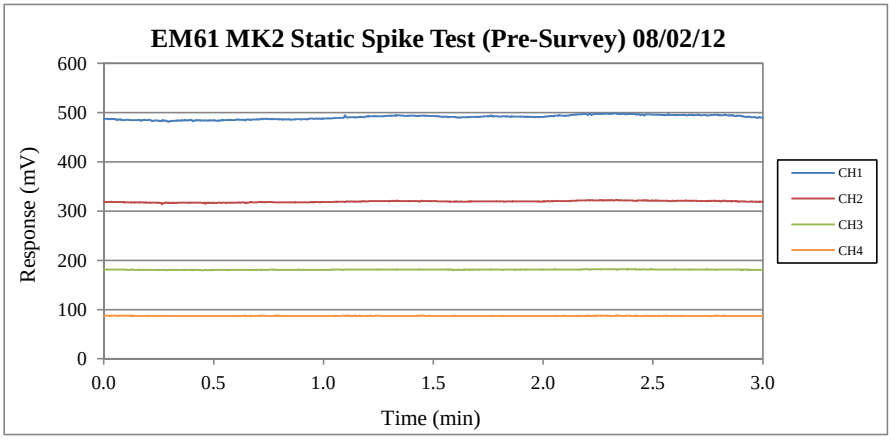

EM61 MK2 Cable Connection Test (Pre-Survey) 07/27/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

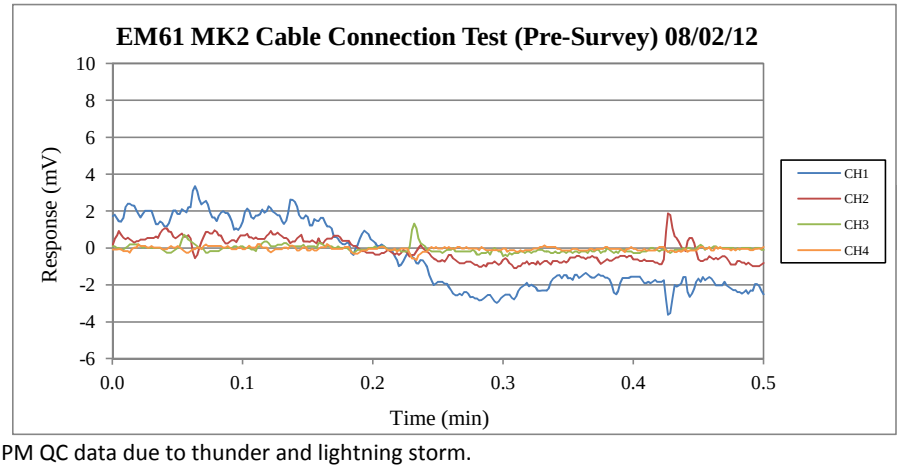

EM61 MK2 Static Background Test (Post-Survey) 07/27/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Static Spike Test (Post-Survey) 07/27/12
Response (mV)
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4

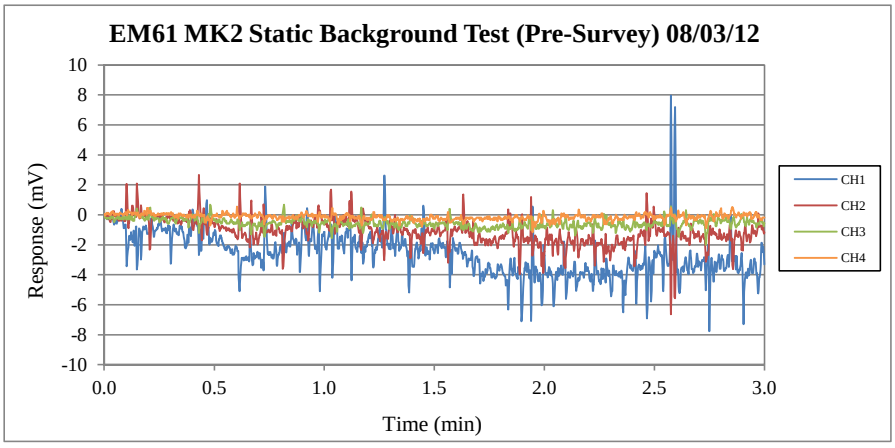

EM61 MK2 Cable Connection Test (Post-Survey) 07/27/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

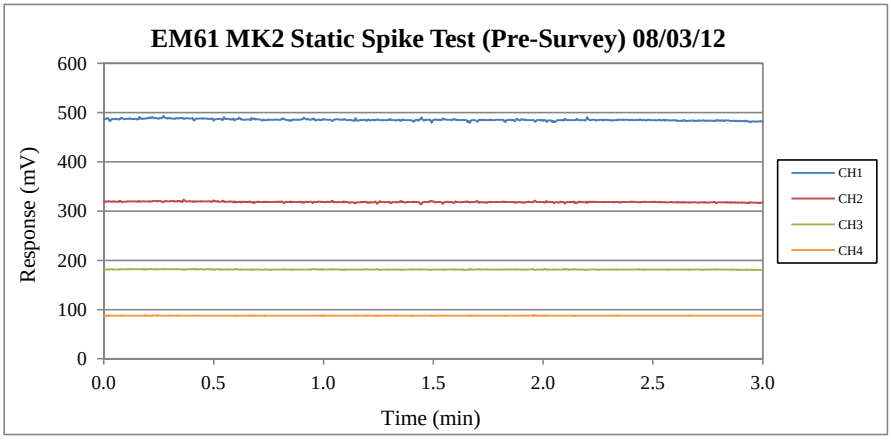


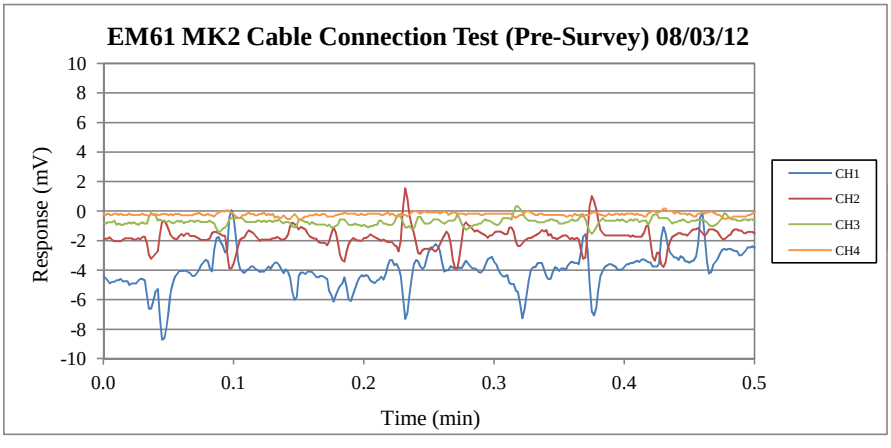


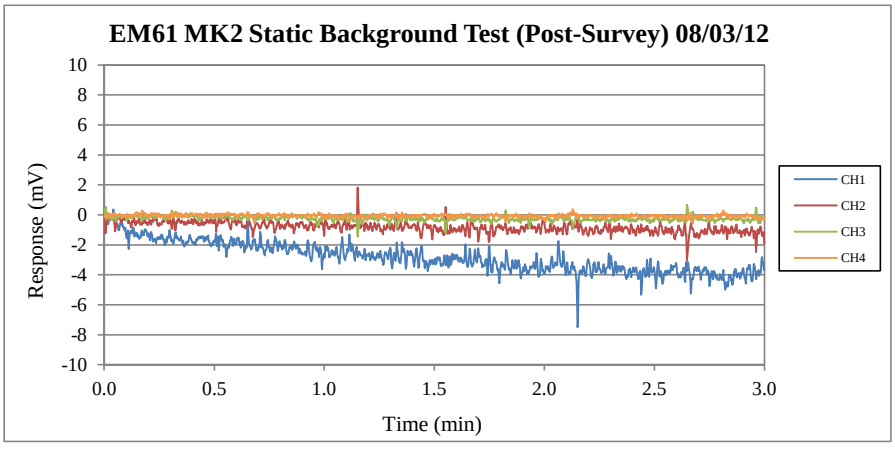


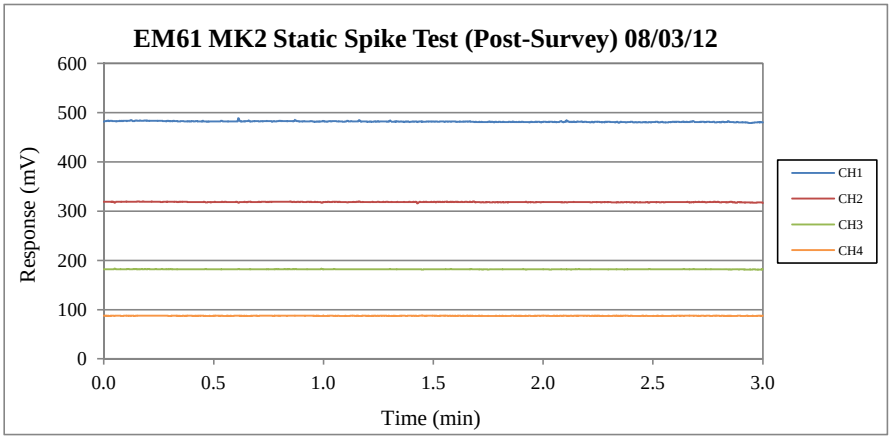
No PM QC data due to thunder and lightning storm.

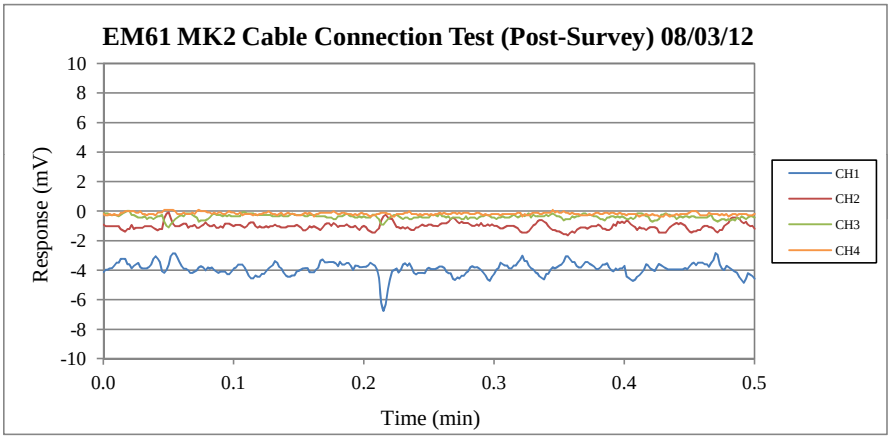

EM61 MK2 Static Background Test (Pre-Survey) 08/03/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
-8
-10
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Static Spike Test (Pre-Survey) 08/03/12
Response (mV)
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Cable Connection Test (Pre-Survey) 08/03/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
-8
-10
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Static Background Test (Post-Survey) 08/03/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
-8
-10
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Static Spike Test (Post-Survey) 08/03/12
Response (mV)
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Time (min)
CH1
CH2
CH3
CH4


EM61 MK2 Cable Connection Test (Post-Survey) 08/03/12
Response (mV)
10
8
6
4
2
0
-2
-4
-6
-8
-10
0.0
0.1
0.2
0.3
0.4
0.5
Time (min)
CH1
CH2
CH3
CH4

Area: Ft. Stewart, GA | **Team:** | **QC Check by:** JW
Dataset: 0626_em_QC | **Survey Date:** 06/26/12 | **Date:** 06/27/12

Static Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	062612A					062612Z					
Line #:	1.0					201.0					
Min:	-5.4	-1.57	-0.68	-0.31		-2.56	-2.55	-0.63	-0.24		
Max:	-0.39	0.98	0.89	0.43		0.58	0.92	0.55	0.47		
Mean:	-2.01	-0.54	0.03	0.03		-0.74	-0.16	0.02	0.11		2.5mV p-p
Std:	0.71	0.32	0.16	0.1		0.38	0.24	0.11	0.08		

Comments: EM values are reported in milivolts

Cable Shake Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	062612A					062612Z					
Line #:	2.0					202.0					
Min:	-5.29	-1.86	-0.49	-0.32		-2.5	-0.81	-0.27	-0.15		
Max:	-1.38	0.63	0.22	0.25		-0.29	-0.03	0.19	0.29		
Mean:	-3.92	-1.17	-0.09	-0.02		-1.21	-0.38	-0.04	0.07		no spikes
Std:	0.73	0.33	0.13	0.1		0.43	0.17	0.09	0.06		2 mV p-p

Comments: EM values are reported in milivolts

Static Spike Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	062612A					062612Z					
Line #:	3.0					203.0					
Min:	865.97	610.46	371.5	182.31		857.57	602.16	362.37	176.88		
Max:	880.49	619.73	373.94	184.19		864.78	606.16	365.9	179.08		
Mean:	877.47	617.88	373.04	183.23		860.62	603.75	363.33	178.33		+/- 20%
Std:	1.55	0.87	0.45	0.23		1.17	0.75	0.43	0.21		& 2.5 mV p-p

Comments: EM values are reported in milivolts

Area: Ft. Stewart, GA | **Team:** | **QC Check by:** JW
Dataset: 0627_em_QC | **Survey Date:** 06/27/12 | **Date:** 06/29/12

Static Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	062712A					062712Z					
Line #:	1.0					201.0					
Min:	-4.28	-2.03	-0.74	-0.61		-5.94	-1.54	-0.76	-0.82		
Max:	0.19	0.59	0.7	0.29		2.65	2.19	1.81	1.28		
Mean:	-2.37	-0.82	-0.19	-0.03		-0.1	-0.31	-0.1	0.1		2.5mV p-p
Std:	0.61	0.3	0.14	0.1		0.43	0.27	0.18	0.11		

Comments: EM values are reported in milivolts

Cable Shake Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	062712A					062712Z					
Line #:	2.0					202.0					
Min:	-9.41	-2.5	-0.85	-0.44		-1.14	-1.64	-0.49	-0.37		
Max:	-2.59	-0.4	1.07	0.19		0.52	-0.23	0.25	0.36		
Mean:	-3.52	-1.31	-0.33	-0.07		-0.5	-0.72	-0.23	0.05		no spikes
Std:	0.69	0.24	0.2	0.1		0.32	0.17	0.11	0.09		2 mV p-p

Comments: EM values are reported in milivolts

Static Spike Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	062712A					062712Z					
Line #:	3.0					203.0					
Min:	843.28	590.58	355.95	174.64		872.89	611.01	367.1	179.58		
Max:	851.94	596.26	357.89	175.81		878.29	614.95	368.89	180.55		
Mean:	846.75	593.93	357.04	175.17		875.29	612.49	367.96	180.07		+/- 20%
Std:	1.53	0.88	0.43	0.19		1.01	0.7	0.37	0.17		& 2.5 mV p-p

Comments: EM values are reported in milivolts

Area: Ft. Stewart, GA | **Team:** | **QC Check by:** JW
Dataset: 0628_em_QC | **Survey Date:** 06/28/12 | **Date:** 06/30/12

Static Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	062812A					062812Z					
Line #:	1.0					201.0					
Min:	-6.45	-2.8	-0.89	-0.43		-6.54	-3.16	-1.03	-0.52		
Max:	-0.73	0.05	0.48	0.3		-0.06	1.85	0.92	0.18		
Mean:	-3.36	-1.12	-0.19	-0.06		-4	-1.01	-0.11	-0.15		2.5mV p-p
Std:	1.39	0.49	0.18	0.11		1.25	0.38	0.13	0.09		

Comments: EM values are reported in milivolts

Cable Shake Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	062812A					062812Z					
Line #:	2.0					202.0					
Min:	-8.53	-3.14	-0.7	-0.42		-8.18	-2.52	-0.74	-0.43		
Max:	-6.11	-1.99	-0.25	0.02		-5.48	-0.96	0.07	0.2		
Mean:	-7.01	-2.38	-0.53	-0.22		-6.92	-1.63	-0.2	-0.23		no spikes
Std:	0.34	0.16	0.08	0.07		0.47	0.26	0.11	0.08		2 mV p-p

Comments: EM values are reported in milivolts

Static Spike Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	062812A					062812Z					
Line #:	3.0					203.0					
Min:	857.69	603.47	363.78	178.57		845.48	595.45	358.52	174.94		
Max:	876.75	617.9	372.79	183.26		852.04	600.62	360.63	175.93		
Mean:	869.99	613.1	369.77	181.62		848.5	597.49	359.42	175.42		+/- 20%
Std:	4.82	3.83	2.41	1.19		1.3	0.74	0.37	0.18		& 2.5 mV p-p

Comments: EM values are reported in milivolts

Area: Ft. Stewart, GA
Dataset: 0629_em_QC

Team:
Survey Date: 06/29/12

QC Check by: JW
Date: 06/30/12

Static Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	062912A					062912Z					
Line #:	1.0					201.0					
Min:	-3.37	-1.75	-0.58	-0.58		-6.09	-1.91	-0.95	-0.6		
Max:	1.65	0.87	0.7	0.42		0.3	1.23	0.53	0.13		
Mean:	-1.27	-0.29	0.05	-0.01		-3.24	-0.81	-0.21	-0.19		2.5mV p-p
Std:	0.82	0.38	0.17	0.12		1.29	0.4	0.16	0.1		

Comments: EM values are reported in milivolts

Cable Shake Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	062912A					062912Z					
Line #:	2.0					202.0					
Min:	-4.97	-1.66	-0.47	-0.31		-7.74	-2.59	-0.67	-0.6		
Max:	-0.08	0.99	0.32	0.14		-4.06	-0.91	0.07	-0.04		
Mean:	-2.47	-0.68	-0.08	-0.11		-6.66	-1.75	-0.38	-0.32		no spikes
Std:	1.24	0.52	0.16	0.08		0.57	0.26	0.13	0.09		2 mV p-p

Comments: EM values are reported in milivolts

Static Spike Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	062912A					062912Z					
Line #:	3.0					203.0					
Min:	780.8	545.11	325	158.64		852.18	599.87	360.76	176.3		
Max:	788.65	550.48	329.43	160.62		859.72	604.31	363.31	177.46		
Mean:	784.99	547.62	327.32	159.69		855.97	602.29	362.25	176.91		+/- 20%
Std:	1.24	0.76	0.55	0.22		1.42	0.74	0.38	0.2		& 2.5 mV p-p

Comments: EM values are reported in milivolts

Area: Ft. Stewart, GA | **Team:** | **QC Check by:** JW

Dataset: 0703_em_QC | **Survey Date:** 07/03/12 | **Date:** 07/05/12

Static Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	070312A					070312Z					
Line #:	1.0					201.0					
Min:	-5.6	-2.28	-0.7	-0.4							
Max:	5.61	3.08	1	0.45							
Mean:	-0.44	-0.17	0.11	0.01							2.5mV p-p
Std:	1.7	0.77	0.29	0.1							

Comments: EM values are reported in milivolts — No PM QC data due to GPS problem.

Cable Shake Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	070312A					070312Z					
Line #:	2.0					202.0					
Min:	-1.68	-1.15	-0.58	-1.03							
Max:	2.17	1.92	1.91	0.62							
Mean:	0.06	0.12	0.21	-0.11							no spikes
Std:	0.68	0.46	0.31	0.23							2 mV p-p

Comments: EM values are reported in milivolts — No PM QC data due to GPS problem.

Static Spike Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	070312A					070312Z					
Line #:	3.0					203.0					
Min:	332.69	208.62	113.43	50.65							
Max:	340.43	213.74	115.23	51.51							
Mean:	336.31	211.91	114.29	51.12							+/- 20%
Std:	1.05	0.56	0.22	0.1							& 2.5 mV p-p

Comments: EM values are reported in milivolts — No PM QC data due to GPS problem.

Area: Ft. Stewart, GA
Dataset: 0709_em_QC

Team:
Survey Date: 07/09/12

QC Check by: JW
Date: 07/11/12

Static Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	070912A					070912Z					
Line #:	1.0					201.0					
Min:	-4.73	-2.59	-0.66	-0.29		-3.37	-1.87	-0.78	-0.4		
Max:	1.66	0.71	0.41	0.29		1.39	1.83	0.71	0.46		
Mean:	-1.62	-0.63	-0.08	0		-0.97	-0.35	-0.01	-0.08		2.5mV p-p
Std:	1.04	0.51	0.14	0.08		0.62	0.29	0.16	0.11		

Comments: EM values are reported in milivolts

Cable Shake Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	070912A					070912Z					
Line #:	2.0					202.0					
Min:	-5.28	-2.04	-0.62	-0.57		-4.66	-1.6	-0.78	-0.95		
Max:	-1.92	-0.19	0.3	0.47		-1.74	0.36	0.44	0.16		
Mean:	-2.91	-0.93	-0.12	-0.11		-3.2	-0.78	-0.19	-0.36		no spikes
Std:	0.63	0.31	0.11	0.12		0.55	0.32	0.25	0.24		2 mV p-p

Comments: EM values are reported in milivolts

Static Spike Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	070912A					070912Z					
Line #:	3.0					203.0					
Min:	331.26	208.18	111.52	49.98		322.52	204.72	111.5	49.72		
Max:	337	210.84	113.06	50.83		329.01	209.58	113.51	50.69		
Mean:	334.85	209.58	112.21	50.36		325.03	207.29	112.33	50.18		+/- 20%
Std:	0.75	0.39	0.2	0.11		1.12	0.52	0.24	0.13		& 2.5 mV p-p

Comments: EM values are reported in milivolts

Area: Ft. Stewart, GA | **Team:** | **QC Check by:** JW
Dataset: 0710_em_QC | **Survey Date:** 07/10/12 | **Date:** 07/12/12

Static Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	071012A					071012Z					
Line #:	1.0					201.0					
Min:	1.08	0.84	0.09	-0.19		-11.96	-3.39	-0.75	-0.57		
Max:	5.76	2.99	1.34	0.45		28.77	6.48	0.55	0.52		
Mean:	3.91	2	0.59	0.11		10.33	1.97	-0.18	0		2.5mV p-p
Std:	0.95	0.37	0.16	0.08		7.59	1.77	0.17	0.12		

Comments: EM values are reported in milivolts

Cable Shake Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	071012A					071012Z					
Line #:	2.0					202.0					
Min:	0.35	0.1	-0.08	-0.38		-36.39	-6.41	-0.6	-1.04		
Max:	3.68	2.26	1.09	0.53		-26.48	-4.37	0.28	0.24		
Mean:	2.17	1.33	0.49	0.08		-30.43	-5.18	-0.23	-0.05		no spikes
Std:	0.89	0.49	0.2	0.14		2.03	0.42	0.15	0.15		2 mV p-p

Comments: EM values are reported in milivolts

Static Spike Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	071012A					071012Z					
Line #:	3.0					203.0					
Min:	329.3	205.04	109.02	48.6		268.92	206.23	115	51.95		
Max:	335.91	207.89	110.5	49.21		300.72	211.78	117.95	53.36		
Mean:	333.51	206.72	109.72	48.9		284.63	208.11	116.11	52.71		+/- 20%
Std:	1.41	0.63	0.24	0.09		7.87	0.96	0.31	0.15		& 2.5 mV p-p

Comments: EM values are reported in milivolts

Area: Ft. Stewart, GA | **Team:** | **QC Check by:** JW
Dataset: 0711_em_QC | **Survey Date:** 07/11/12 | **Date:** 07/12/12

Static Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	071112A					071112Z					
Line #:	1.0					201.0					
Min:	-6.88	-2.71	-1.16	-0.67		-3.56	-1.69	-0.97	-0.49		
Max:	3.92	2.35	0.95	0.98		1.61	-0.05	0.08	0.19		
Mean:	-0.6	0.02	-0.05	0.04		-1.26	-0.83	-0.52	-0.22		2.5mV p-p
Std:	0.77	0.46	0.27	0.24		0.36	0.2	0.11	0.08		

Comments: EM values are reported in milivolts

Cable Shake Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	071112A					071112Z					
Line #:	2.0					202.0					
Min:	-4.45	-1.93	-1.42	-1.11		-1.96	-1.54	-1.06	-0.7		
Max:	1.17	1.83	1.21	0.99		-0.27	-0.36	-0.2	0.16		
Mean:	-0.95	-0.32	-0.18	-0.04		-1.19	-0.97	-0.68	-0.28		no spikes
Std:	0.92	0.62	0.47	0.36		0.34	0.24	0.17	0.17		2 mV p-p

Comments: EM values are reported in milivolts

Static Spike Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	071112A					071112Z					
Line #:	3.0					203.0					
Min:	337.44	212.29	114.18	51.43		325.35	205.16	111.33	50.18		
Max:	342.64	216.8	115.81	52.29		329.91	208.22	112.68	51.07		
Mean:	341.13	214.35	115.26	51.86		327.89	206.58	111.93	50.67		+/- 20%
Std:	0.49	0.35	0.2	0.13		0.64	0.39	0.2	0.12		& 2.5 mV p-p

Comments: EM values are reported in milivolts

Area: Ft. Stewart, GA | **Team:** | **QC Check by:** JW
Dataset: 0716_em_QC | **Survey Date:** 07/16/12 | **Date:** 07/30/12

Static Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	071612A					071612Z					
Line #:	1.0					201.0					
Min:	-0.18	-0.01	-0.37	-2.43		-9.6	-0.9	-1.43	-1.01		
Max:	13.98	8.71	4.73	0.31		-0.31	2.24	0.55	0.19		
Mean:	6.53	3.5	0.58	-0.19		-3.63	0.08	-0.18	-0.48		2.5mV p-p
Std:	3.64	2.06	0.39	0.15		0.87	0.32	0.17	0.18		

Comments: EM values are reported in milivolts

Cable Shake Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	071612A					071612Z					
Line #:	2.0					202.0					
Min:	0.29	-1.01	-0.33	-0.54		-8.64	-0.52	-1.05	-0.98		
Max:	5.43	2.21	0.6	0.15		-3.89	1.35	1.1	-0.04		
Mean:	3.05	0.95	0.18	-0.11		-4.56	0.15	-0.13	-0.65		no spikes
Std:	1.68	0.83	0.2	0.11		0.54	0.25	0.2	0.11		2 mV p-p

Comments: EM values are reported in milivolts

Static Spike Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	071612A					071612Z					
Line #:	3.0					203.0					
Min:	477.85	318.02	181.03	87.8		491.19	325.98	185.51	88.82		
Max:	495.65	324.61	184.92	89.62		498.28	331.45	187.56	89.81		
Mean:	490.05	321.1	183.15	88.7		494.83	327.78	186.56	89.29		+/- 20%
Std:	1.84	1	0.65	0.36		0.81	0.42	0.19	0.11		& 2.5 mV p-p

Comments: EM values are reported in milivolts

Area: Ft. Stewart, GA | **Team:** | **QC Check by:** JW

Dataset: 0717_em_QC | **Survey Date:** 07/17/12 | **Date:** 07/26/12

Static Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	071712A					071712Z					
Line #:	1.0					201.0					
Min:	1.18	0.33	0.22	-0.28		-8.22	-2.7	-1.97	-0.84		
Max:	11.3	5.24	2.41	0.73		-0.13	0.65	0.75	0.98		
Mean:	6.53	2.99	1.06	0.28		-4.03	-1.11	-0.26	0.04		2.5mV p-p
Std:	2.05	0.97	0.32	0.14		1.07	0.37	0.22	0.14		

Comments: EM values are reported in milivolts

Cable Shake Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	071712A					071712Z					
Line #:	2.0					202.0					
Min:	5.08	2.26	0.77	-0.92		-8.39	-2.39	-2.34	-0.4		
Max:	9.27	4.49	3.41	0.45		-2.53	0.26	0.13	0.7		
Mean:	7.01	3.26	1.19	0.24		-6.18	-1.72	-0.37	-0.06		no spikes
Std:	0.98	0.41	0.28	0.14		0.81	0.39	0.28	0.15		2 mV p-p

Comments: EM values are reported in milivolts

Static Spike Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	071712A					071712Z					
Line #:	3.0					203.0					
Min:	505.39	331.52	190.18	92.72		484.81	322.27	184.78	90.13		
Max:	513.1	336.85	192.22	93.78		494.15	327.29	188.35	91.56		
Mean:	509.72	334.32	191.36	93.31		489.75	324.71	186.72	90.77		+/- 20%
Std:	1.69	0.72	0.27	0.12		1.05	0.59	0.31	0.18		& 2.5 mV p-p

Comments: EM values are reported in milivolts

Area: Ft. Stewart, GA | **Team:** | **QC Check by:** JW
Dataset: 0718_em_QC | **Survey Date:** 07/18/12 | **Date:** 07/27/12

Static Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	071812A					071812Z					
Line #:	1.0					201.0					
Min:	-6.54	-2.97	-1.51	-1.27		-15.23	-2.57	-0.74	-0.68		
Max:	6.1	3.86	1.64	0.82		3.01	4.35	1	0.88		
Mean:	0.98	0.87	0.19	0.02		-2.09	-0.22	0	-0.06		2.5mV p-p
Std:	2.82	1.46	0.4	0.21		1.19	0.44	0.19	0.13		

Comments: EM values are reported in milivolts

Cable Shake Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	071812A					071812Z					
Line #:	2.0					202.0					
Min:	-3.28	-2.31	-0.94	-0.5		-4.37	-1.09	-0.38	-0.4		
Max:	5	3.33	1.08	0.76		0.58	0.85	0.63	0.24		
Mean:	2.25	1.42	0.39	0.11		-2.07	-0.13	0.06	-0.02		no spikes
Std:	1.76	1.07	0.36	0.18		0.62	0.27	0.15	0.1		2 mV p-p

Comments: EM values are reported in milivolts

Static Spike Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	071812A					071812Z					
Line #:	3.0					203.0					
Min:	476.98	314.11	178.26	85.34		489.22	322.38	183.69	88.75		
Max:	492.73	322.26	182.55	87.65		499.55	325.93	186.74	90.47		
Mean:	485.98	319.26	180.67	86.48		492.33	324.35	185.48	89.5		+/- 20%
Std:	3.26	1.81	0.69	0.36		0.9	0.46	0.26	0.15		& 2.5 mV p-p

Comments: EM values are reported in milivolts

Area: Ft. Stewart, GA
Dataset: 0719_em_QC

Team:
Survey Date: 07/19/12

QC Check by: JW
Date: 07/30/12

Static Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	071912A					071912Z					
Line #:	1.0					201.0					
Min:	-2.14	-1.84	-0.46	-0.46		-6.29	-3.01	-2.83	-0.54		
Max:	4.73	4.33	0.91	0.45		2.55	3.29	1	0.84		
Mean:	1.85	0.91	0.28	0.02		-2.04	-0.42	-0.07	-0.18		2.5mV p-p
Std:	1.2	0.56	0.23	0.13		0.7	0.34	0.18	0.12		

Comments: EM values are reported in milivolts

Cable Shake Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	071912A					071912Z					
Line #:	2.0					202.0					
Min:	-0.96	-0.55	-0.09	-0.19		-10.86	-2.21	-0.82	-0.76		
Max:	2.88	1.49	0.63	0.18		2.32	-0.04	0.1	0		
Mean:	1.05	0.6	0.22	0.01		-3.31	-0.72	-0.19	-0.31		no spikes
Std:	0.78	0.35	0.15	0.08		1.08	0.3	0.14	0.11		2 mV p-p

Comments: EM values are reported in milivolts

Static Spike Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	071912A					071912Z					
Line #:	3.0					203.0					
Min:	492.54	323.54	184.39	88.23		484.25	319	185.16	78.45		
Max:	498.62	326.68	186.41	91.24		492.08	328.33	187.6	91.01		
Mean:	496.54	325.31	185.13	89.34		488.12	323.89	186.18	90.2		+/- 20%
Std:	0.84	0.44	0.21	0.16		1.88	0.76	0.29	0.51		& 2.5 mV p-p

Comments: EM values are reported in milivolts

Area: Ft. Stewart, GA
Dataset: 0720_em_QC

Team:
Survey Date: 07/20/12

QC Check by: JW
Date: 07/30/12

Static Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	072012A					072012Z					
Line #:	1.0					201.0					
Min:	-4.99	-1.08	-0.4	-0.91							
Max:	4.89	3.54	1.95	0.54							
Mean:	1.08	0.81	0.51	0.07							2.5mV p-p
Std:	1.51	0.74	0.31	0.17							

Comments: EM values are reported in milivolts No PM QC data.

Cable Shake Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	072012A					072012Z					
Line #:	2.0					202.0					
Min:	-1.29	-1.83	-0.07	-0.12							
Max:	3.95	1.77	0.65	0.52							
Mean:	1	0.51	0.25	0.12							no spikes
Std:	0.58	0.33	0.12	0.09							2 mV p-p

Comments: EM values are reported in milivolts

Static Spike Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	072012A					072012Z					
Line #:	3.0					203.0					
Min:	501.63	328.13	186.21	89.54							
Max:	505.98	331.35	187.84	90.38							
Mean:	503.94	329.45	186.91	89.91							+/- 20%
Std:	0.8	0.4	0.19	0.1							& 2.5 mV p-p

Comments: EM values are reported in milivolts

Area: Ft. Stewart, GA | **Team:** | **QC Check by:** JW
Dataset: 0723_em_QC | **Survey Date:** 07/23/12 | **Date:** 08/06/12

Static Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	072312A					072312Z					
Line #:	1.0					201.0					
Min:	-4.18	-2.23	-0.56	-0.32		-5.41	-2.53	-0.82	-0.45		
Max:	1.28	0.72	0.68	1.75		1.67	1.57	1	0.55		
Mean:	-0.97	-0.48	-0.08	0.06		-2.47	-0.37	0.04	-0.01		2.5mV p-p
Std:	0.61	0.31	0.15	0.13		1.1	0.4	0.2	0.13		

Comments: EM values are reported in milivolts

Cable Shake Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	072312A					072312Z					
Line #:	2.0					202.0					
Min:	-3.99	-1.86	-1.63	-0.21		-1.97	-1	-0.63	-0.28		
Max:	-1.15	0.73	0.06	0.32		0.12	0.21	0.47	0.36		
Mean:	-2.28	-1.04	-0.27	0.05		-1.17	-0.39	-0.07	0.03		no spikes
Std:	0.62	0.31	0.16	0.09		0.43	0.22	0.14	0.1		2 mV p-p

Comments: EM values are reported in milivolts

Static Spike Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	072312A					072312Z					
Line #:	3.0					203.0					
Min:	482.47	317.3	181.64	88.08		480.72	318.18	181.26	88.39		
Max:	490.49	321.37	183.65	89.07		490.93	323.42	185.15	89.87		
Mean:	485.77	319.02	182.55	88.58		484.64	319.97	183.66	89.19		+/- 20%
Std:	1.01	0.57	0.26	0.13		1.71	0.76	0.37	0.19		& 2.5 mV p-p

Comments: EM values are reported in milivolts

Area: Ft. Stewart, GA
Dataset: 0724_em_QC

Team:
Survey Date: 07/24/12

QC Check by: JW
Date: 08/07/12

Static Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	072412A					072412Z					
Line #:	1.0					201.0					
Min:	-3.83	-0.95	-0.38	-0.72		-3.33	-2.42	-0.97	-0.6		
Max:	5.28	2.57	1.62	0.75		1.32	1.62	1	0.6		
Mean:	1.19	0.67	0.35	0.22		-1.66	-0.45	0.02	-0.05		2.5mV p-p
Std:	1.38	0.59	0.23	0.12		0.6	0.29	0.17	0.12		

Comments: EM values are reported in milivolts

Cable Shake Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	072412A					072412Z					
Line #:	2.0					202.0					
Min:	-1.74	-0.71	-0.29	-0.12		-4.66	-1.39	-0.78	-0.51		
Max:	1.38	1.49	0.58	0.41		-2.08	0.57	0.44	0.42		
Mean:	-0.16	0.02	0.16	0.17		-3.28	-0.75	0.11	0.04		no spikes
Std:	0.49	0.28	0.12	0.09		0.41	0.23	0.15	0.11		2 mV p-p

Comments: EM values are reported in milivolts

Static Spike Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	072412A					072412Z					
Line #:	3.0					203.0					
Min:	523.81	342.78	195.27	94.2		512.53	341.22	197.67	95.6		
Max:	532.06	347.24	197.17	95.21		519.39	344.99	198.9	96.68		
Mean:	528.44	344.97	196.07	94.68		516.33	343.74	198.23	96.13		+/- 20%
Std:	2.08	0.85	0.3	0.13		1.21	0.44	0.2	0.13		& 2.5 mV p-p

Comments: EM values are reported in milivolts

Area: Ft. Stewart, GA
Dataset: 0725_em_QC

Team:
Survey Date: 07/25/12

QC Check by: JW
Date: 08/07/12

Static Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	072512A					072512Z					
Line #:	1.0					201.0					
Min:	-4.85	-3.48	-0.91	-0.59		-5.96	-2.34	-0.96	-0.67		
Max:	1.96	0.56	0.51	0.65		0.03	1.31	0.74	0.47		
Mean:	-1.97	-1.08	-0.03	0		-2.58	-0.78	-0.16	0		2.5mV p-p
Std:	1.25	0.64	0.21	0.14		1.11	0.43	0.18	0.12		

Comments: EM values are reported in milivolts

Cable Shake Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	072512A					072512Z					
Line #:	2.0					202.0					
Min:	-5.92	-3.02	-0.98	-0.29		-6.03	-2.1	-0.77	-0.37		
Max:	-3.26	-1.45	0.01	0.11		-3.12	-0.92	0.08	0.28		
Mean:	-4.51	-2.47	-0.38	-0.09		-4.71	-1.46	-0.35	-0.04		no spikes
Std:	0.58	0.31	0.15	0.08		0.36	0.21	0.12	0.09		2 mV p-p

Comments: EM values are reported in milivolts

Static Spike Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	072512A					072512Z					
Line #:	3.0					203.0					
Min:	487.86	317.87	181.75	88.23		463.39	308.3	178.26	87.3		
Max:	494.91	323.87	184.24	89.24		472.59	313.37	180.81	88.3		
Mean:	492.14	320.01	182.64	88.68		467.35	310.74	179.49	87.76		+/- 20%
Std:	1.43	0.55	0.35	0.15		1.69	0.86	0.39	0.17		& 2.5 mV p-p

Comments: EM values are reported in milivolts

Area: Ft. Stewart, GA
Dataset: 0726_em_QC

Team:
Survey Date: 07/26/12

QC Check by: JW
Date: 08/07/12

Static Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	072612A					072612Z					
Line #:	1.0					201.0					
Min:	-3.29	-2.42	-0.49	-0.39		-4.29	-1.85	-0.57	-0.29		
Max:	2.93	0.74	0.59	0.33		2.08	1.63	0.44	0.99		
Mean:	-0.73	-0.39	0.04	-0.04		-1.41	-0.01	-0.01	0.05		2.5mV p-p
Std:	0.88	0.42	0.15	0.1		0.54	0.28	0.13	0.11		

Comments: EM values are reported in milivolts

Cable Shake Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	072612A					072612Z					
Line #:	2.0					202.0					
Min:	-2.28	-1.16	-0.31	-0.31		-1.43	-0.25	-0.39	-0.11		
Max:	0.47	1.03	0.33	0.23		0.7	0.91	0.35	0.44		
Mean:	-0.53	-0.4	0.06	-0.01		-0.36	0.38	0.07	0.07		no spikes
Std:	0.4	0.26	0.1	0.1		0.36	0.21	0.12	0.09		2 mV p-p

Comments: EM values are reported in milivolts

Static Spike Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	072612A					072612Z					
Line #:	3.0					203.0					
Min:	492.86	322.6	182.79	87.8		473.03	313.28	179.55	87.24		
Max:	499.07	326.13	184.64	88.8		480.55	316.94	180.94	88.18		
Mean:	496.1	323.9	183.92	88.28		477.68	314.71	180.27	87.66		+/- 20%
Std:	1.05	0.5	0.19	0.11		0.71	0.39	0.19	0.11		& 2.5 mV p-p

Comments: EM values are reported in milivolts

Area: Ft. Stewart, GA | **Team:** | **QC Check by:** JW
Dataset: 0727_em_QC | **Survey Date:** 07/27/12 | **Date:** 08/07/12

Static Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	072712A					072712Z					
Line #:	1.0					201.0					
Min:	-3.6	-2.03	-0.52	-0.45		-20.25	-7.53	-1.37	-0.97		
Max:	0.76	0.38	0.64	0.44		20.67	3.55	3.21	0.34		
Mean:	-1.79	-0.85	-0.01	-0.02		-2.72	-0.66	-0.27	-0.14		2.5mV p-p
Std:	0.72	0.31	0.15	0.08		1.5	0.46	0.23	0.12		

Comments: EM values are reported in milivolts

Cable Shake Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	072712A					072712Z					
Line #:	2.0					202.0					
Min:	-4.73	-2.08	-0.78	-0.31		-6.16	-1.66	-1	-0.53		
Max:	-1.92	-1.08	0.2	0.16		-3.57	-0.69	-0.16	-0.06		
Mean:	-3.13	-1.53	-0.22	-0.1		-4.93	-1.2	-0.5	-0.26		no spikes
Std:	0.46	0.17	0.14	0.08		0.34	0.18	0.11	0.08		2 mV p-p

Comments: EM values are reported in milivolts

Static Spike Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	072712A					072712Z					
Line #:	3.0					203.0					
Min:	496.35	324.31	184.91	88.77		481.35	317.1	181.91	87.74		
Max:	500.92	327.84	186.11	89.63		488.45	322.5	183.91	88.9		
Mean:	498.18	325.76	185.45	89.15		484.17	320.48	183.15	88.41		+/- 20%
Std:	0.78	0.47	0.2	0.1		1.36	0.68	0.27	0.14		& 2.5 mV p-p

Comments: EM values are reported in milivolts

Area: Ft. Stewart, GA | **Team:** | **QC Check by:** JW
Dataset: 0802_em_QC | **Survey Date:** 08/02/12 | **Date:** 08/07/12

Static Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	080212A					080212Z					
Line #:	1.0					201.0					
Min:	-4.3	-1.6	-1.3	-0.61							
Max:	4.62	2.21	1.81	0.72							
Mean:	0.45	-0.1	0.11	0.02							2.5mV p-p
Std:	1.35	0.55	0.22	0.11							

Comments: EM values are reported in milivolts — No PM data due to thunder and lightning storm.

Cable Shake Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	080212A					080212Z					
Line #:	2.0					202.0					
Min:	-3.62	-1.08	-0.45	-0.66							
Max:	3.36	1.88	1.33	0.22							
Mean:	-0.46	-0.13	-0.04	-0.05							no spikes
Std:	1.83	0.63	0.21	0.11							2 mV p-p

Comments: EM values are reported in milivolts

Static Spike Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	080212A					080212Z					
Line #:	3.0					203.0					
Min:	481.57	314.17	180.08	86.75							
Max:	498.65	322.58	182.1	87.92							
Mean:	490.77	319.39	181.2	87.4							+/- 20%
Std:	4.37	1.57	0.39	0.13							& 2.5 mV p-p

Comments: EM values are reported in milivolts

Area: Ft. Stewart, GA
Dataset: 0803_em_QC

Team:
Survey Date: 08/03/12

QC Check by: JW
Date: 08/07/12

Static Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	080312A					080312Z					
Line #:	1.0					201.0					
Min:	-7.76	-6.63	-2	-1.16		-7.48	-3.06	-1.47	-0.57		
Max:	7.69	2.65	0.67	0.54		0.53	1.83	0.68	0.37		
Mean:	-2.58	-1.11	-0.54	-0.14		-2.82	-0.81	-0.24	-0.06		2.5mV p-p
Std:	1.47	0.87	0.3	0.2		1.01	0.35	0.17	0.1		

Comments: EM values are reported in milivolts

Cable Shake Test

Sensor #1

	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	080312A					080312Z					
Line #:	2.0					202.0					
Min:	-8.71	-3.89	-1.55	-0.64		-6.77	-1.65	-1.1	-0.38		
Max:	0.06	1.53	0.32	0.17		-2.85	-0.09	0.02	0.09		
Mean:	-3.99	-1.79	-0.72	-0.23		-3.9	-1.02	-0.38	-0.17		no spikes
Std:	1.24	0.71	0.25	0.12		0.46	0.24	0.15	0.1		2 mV p-p

Comments: EM values are reported in milivolts

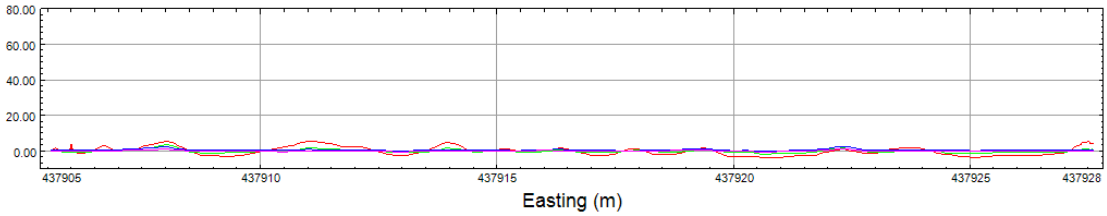
Static Spike Test

Sensor #1

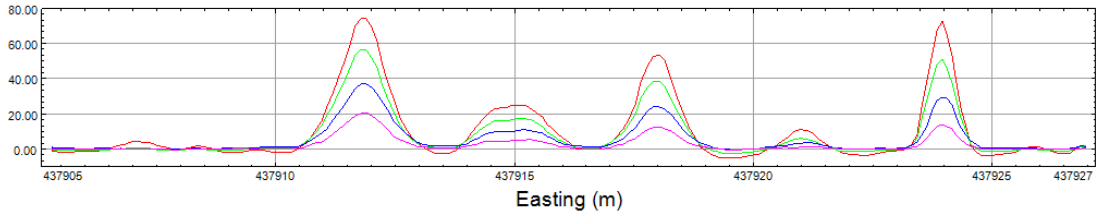
	Pre Survey					Post Survey					Metric
	CH 1	CH 2	CH3	CH4	G858	CH 1	CH 2	CH3	CH4	G858	
File Name	080312A					080312Z					
Line #:	3.0					203.0					
Min:	478.8	314.15	180.39	87.18		478.67	315.88	181.18	87.12		
Max:	493.28	322.71	183.06	88.51		488.86	319.93	183.17	88.21		
Mean:	485.37	318.52	181.5	87.87		481.81	318.54	182.1	87.53		+/- 20%
Std:	1.78	0.92	0.35	0.16		1.01	0.44	0.2	0.12		& 2.5 mV p-p

Comments: EM values are reported in milivolts

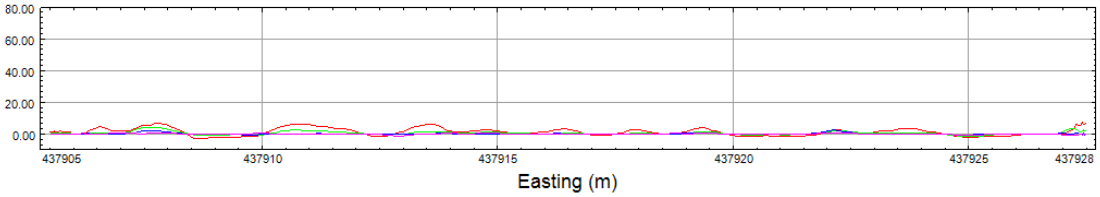
EM61MK2 Response (4 Channels), Background Line – 06/26/12 AM



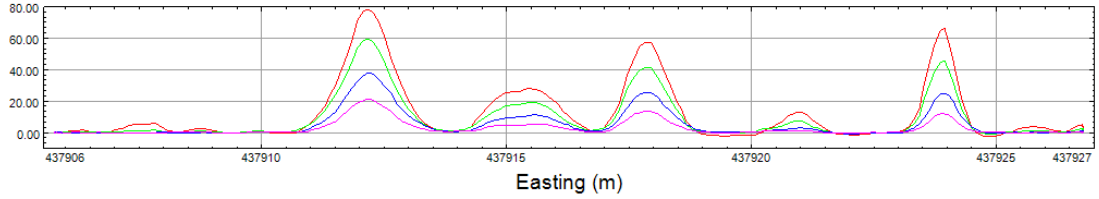
EM61MK2 Response (4 Channels), Seed Line – 06/26/12 AM



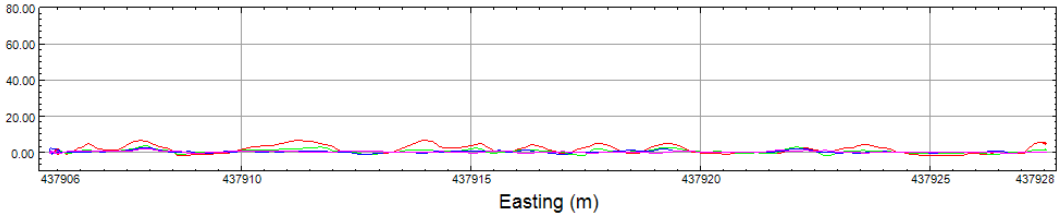
EM61MK2 Response (4 Channels), Background Line – 06/26/12 PM



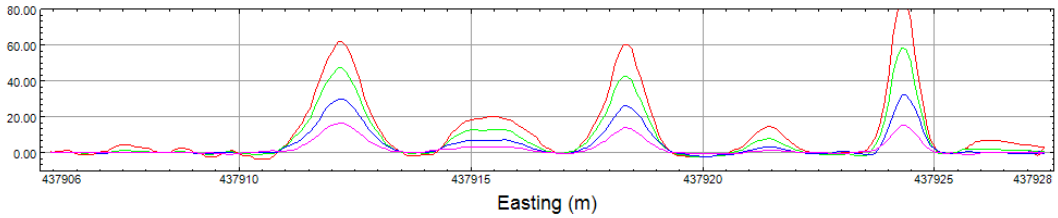
EM61MK2 Response (4 Channels), Seed Line – 06/26/12 PM



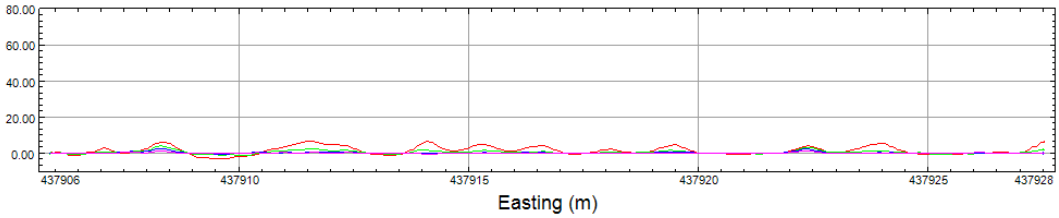
EM61MK2 Response (4 Channels), Background Line – 06/27/12 AM



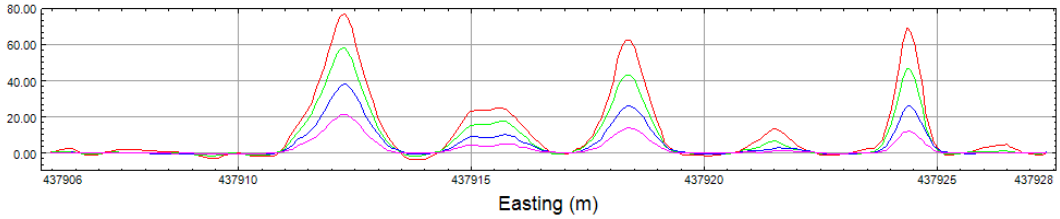
EM61MK2 Response (4 Channels), Seed Line – 06/27/12 AM



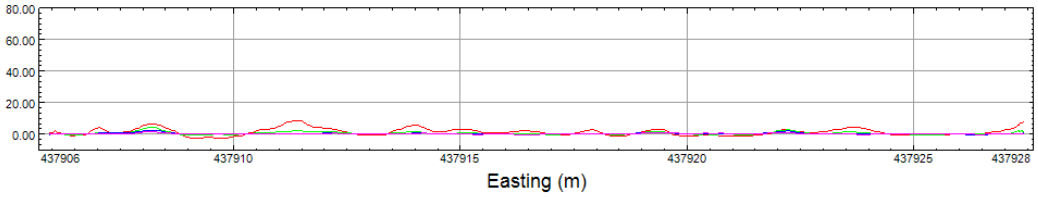
EM61MK2 Response (4 Channels), Background Line – 06/27/12 PM



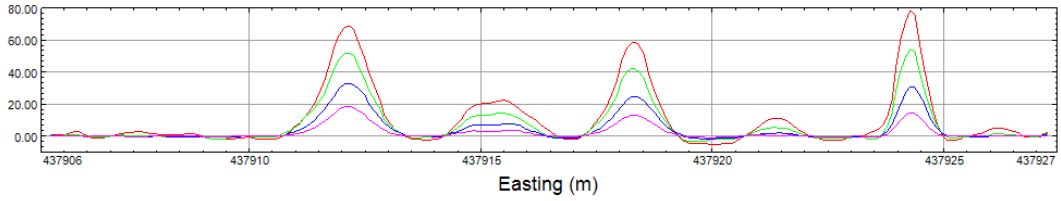
EM61MK2 Response (4 Channels), Seed Line – 06/27/12 PM



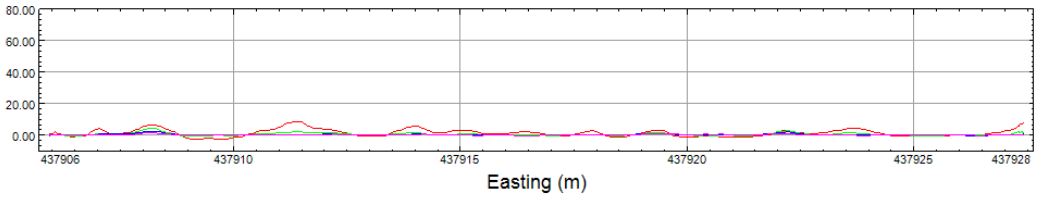
EM61MK2 Response (4 Channels), Background Line – 06/28/12 AM



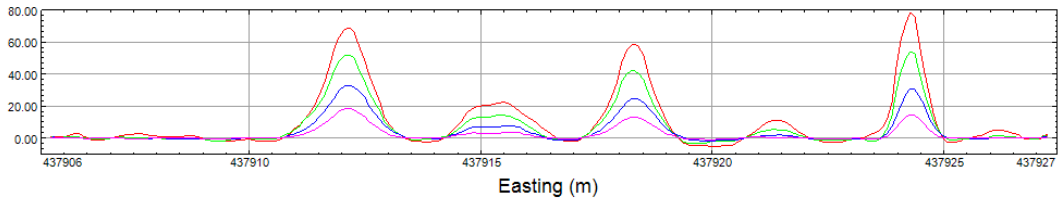
EM61MK2 Response (4 Channels), Seed Line – 06/28/12 AM



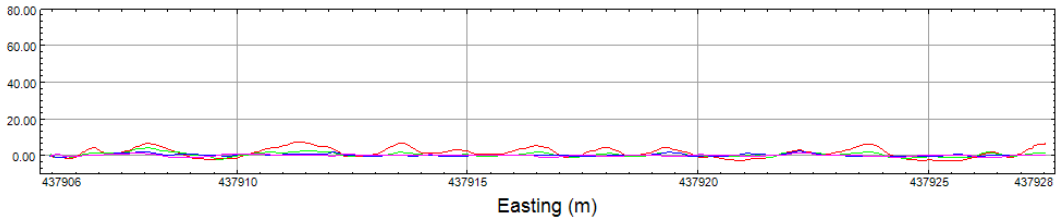
EM61MK2 Response (4 Channels), Background Line – 06/28/12 PM



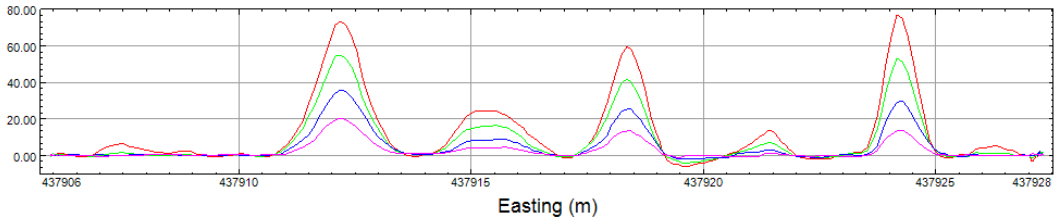
EM61MK2 Response (4 Channels), Seed Line – 06/28/12 PM



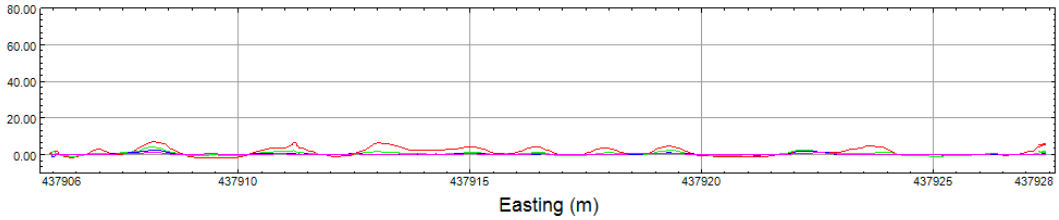
EM61MK2 Response (4 Channels), Background Line – 06/2/12 AM



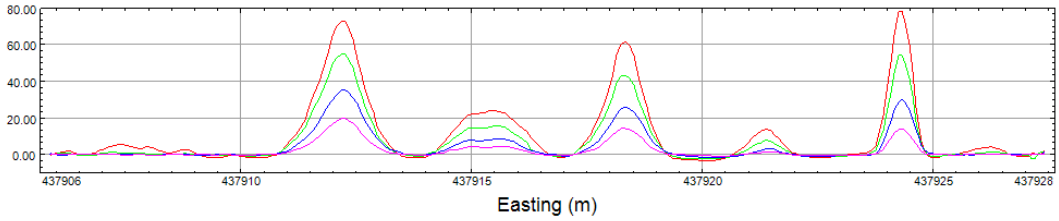
EM61MK2 Response (4 Channels), Seed Line – 06/29/12 AM



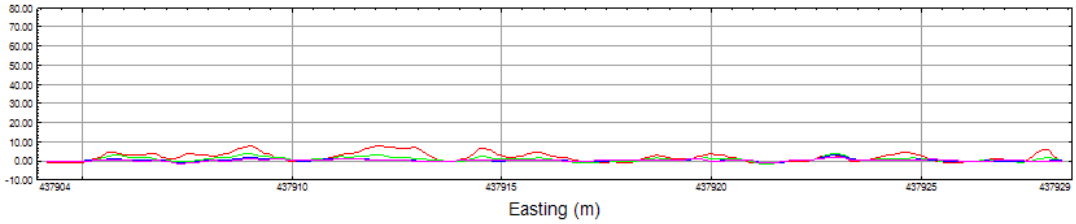
EM61MK2 Response (4 Channels), Background Line – 06/29/12 PM



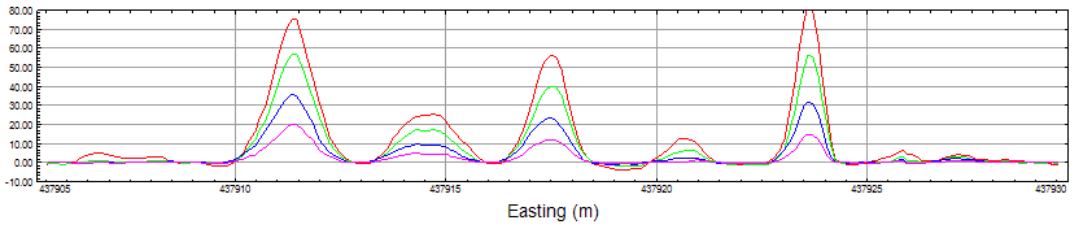
EM61MK2 Response (4 Channels), Seed Line – 06/29/12 PM



EM61MK2 Response (4 Channels), Background Line – 07/03/12 AM



EM61MK2 Response (4 Channels), Seed Line – 07/03/12 AM



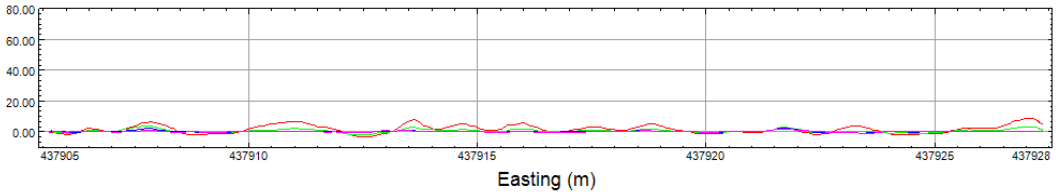
EM61MK2 Response (4 Channels), Background Line – 06/26/12 PM

NO PM DATA

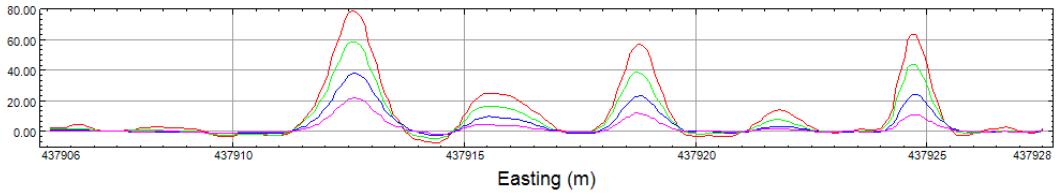
EM61MK2 Response (4 Channels), Seed Line – 06/26/12 PM

NO PM DATA

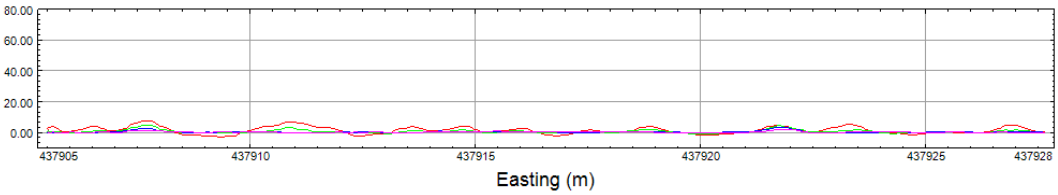
EM61MK2 Response (4 Channels), Background Line – 07/0912 AM



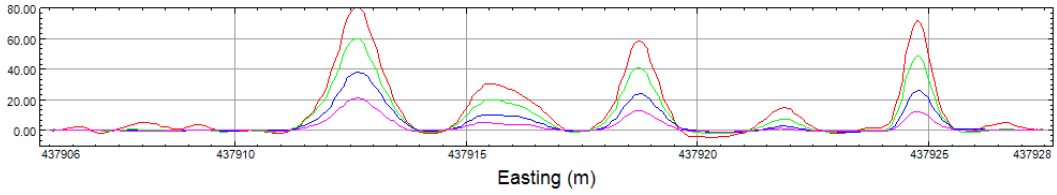
EM61MK2 Response (4 Channels), Seed Line – 07/09/12 AM



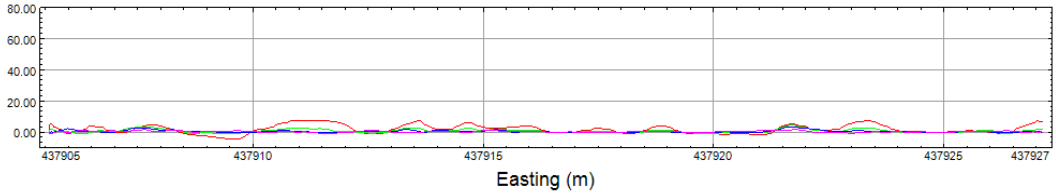
EM61MK2 Response (4 Channels), Background Line – 07/09/12 PM



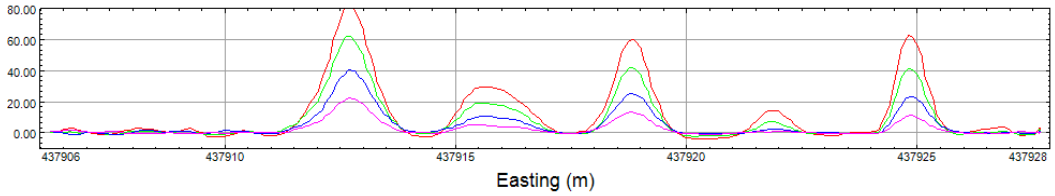
EM61MK2 Response (4 Channels), Seed Line – 07/09/12 PM



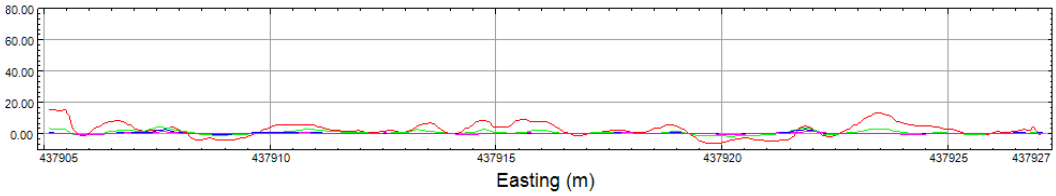
EM61MK2 Response (4 Channels), Background Line – 07/10/12 AM



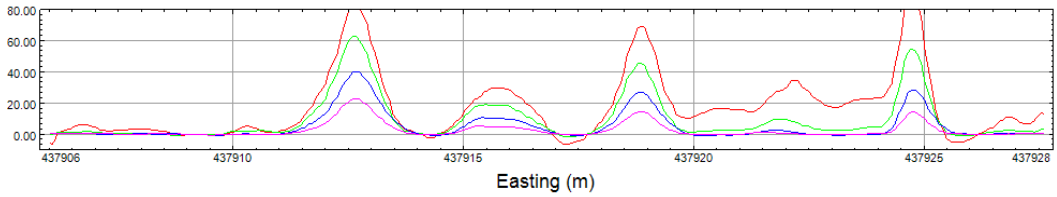
EM61MK2 Response (4 Channels), Seed Line – 07/10/12 AM



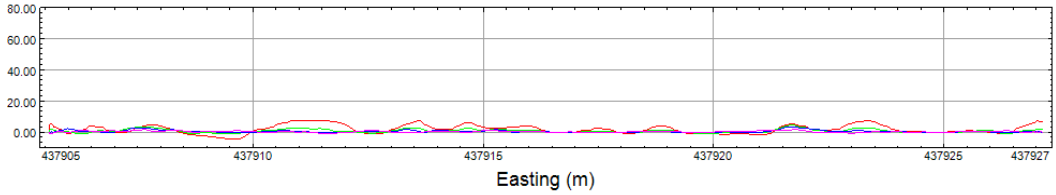
EM61MK2 Response (4 Channels), Background Line – 07/10/12 PM



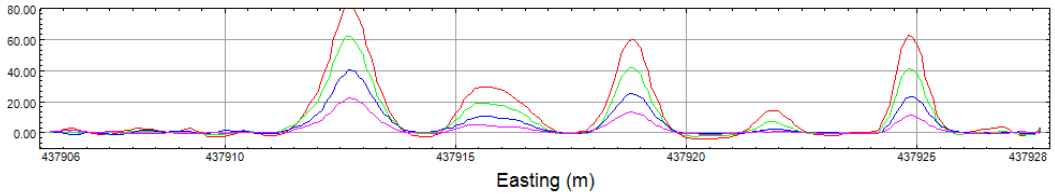
EM61MK2 Response (4 Channels), Seed Line – 07/10/12 PM



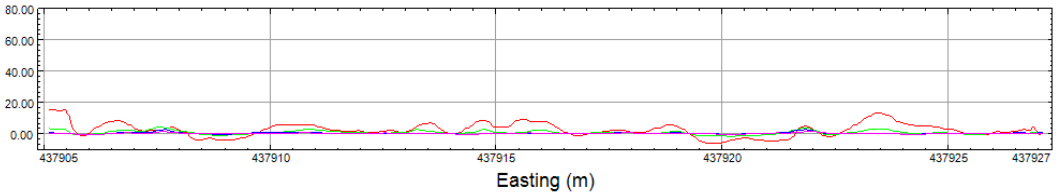
EM61MK2 Response (4 Channels), Background Line – 07/11/12 AM



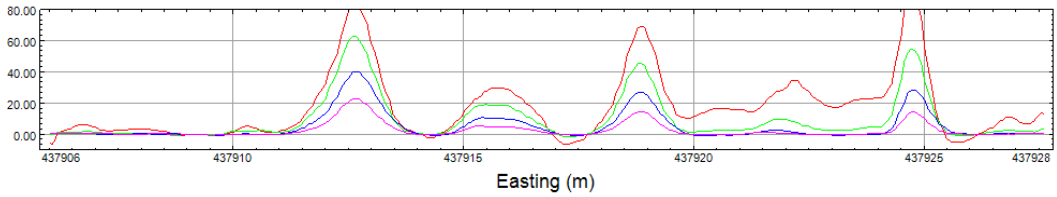
EM61MK2 Response (4 Channels), Seed Line – 07/11/12 AM



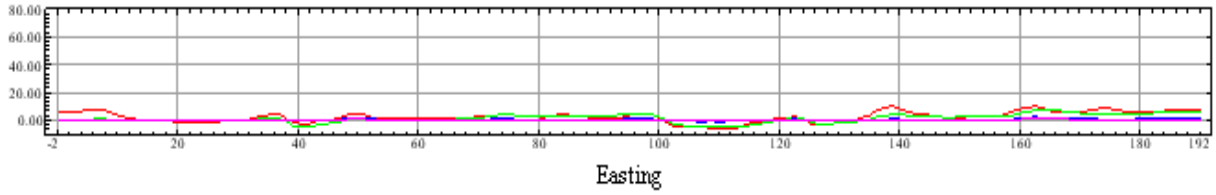
EM61MK2 Response (4 Channels), Background Line – 07/11/12 PM



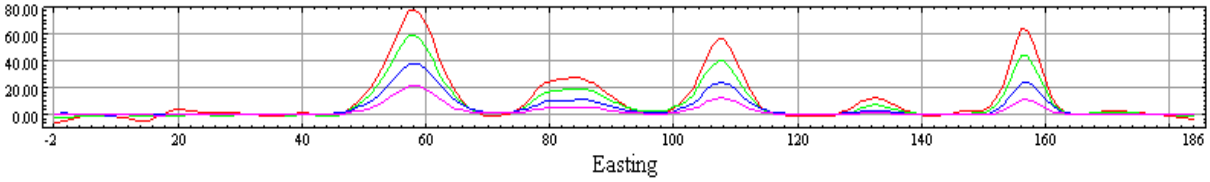
EM61MK2 Response (4 Channels), Seed Line – 07/11/12 PM



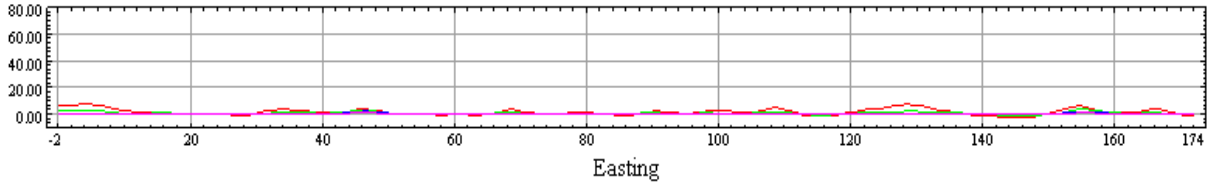
EM61MK2 Response (4 Channels), Background Line – 07/16/12 AM



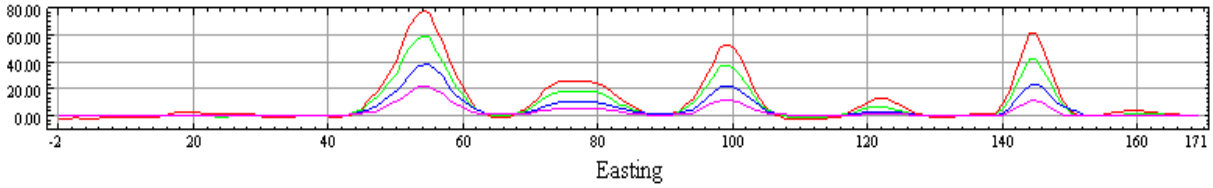
EM61MK2 Response (4 Channels), Seed Line – 07/16/12 AM



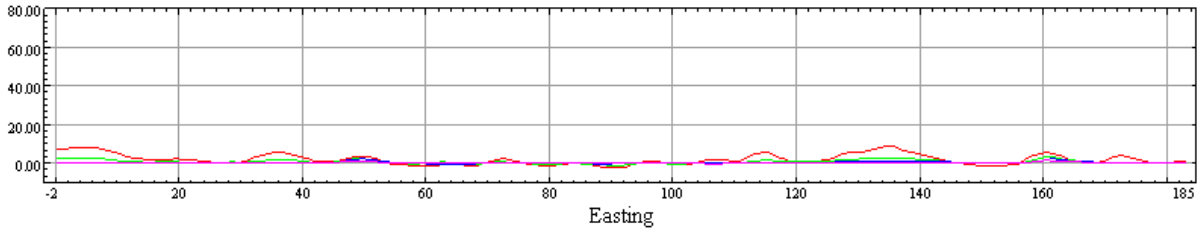
EM61MK2 Response (4 Channels), Background Line – 07/16/12 PM



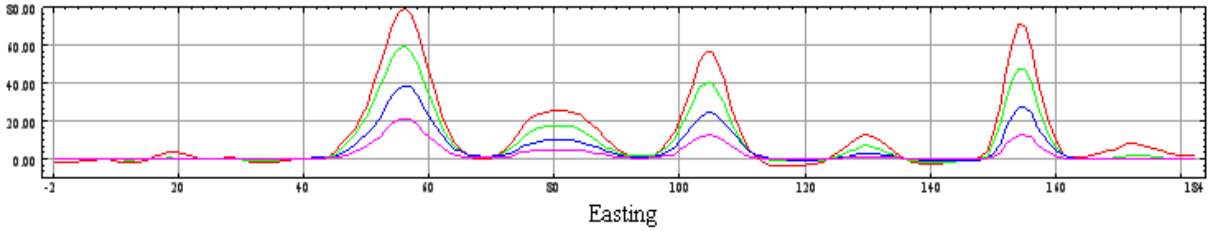
EM61MK2 Response (4 Channels), Seed Line – 07/16/12 PM



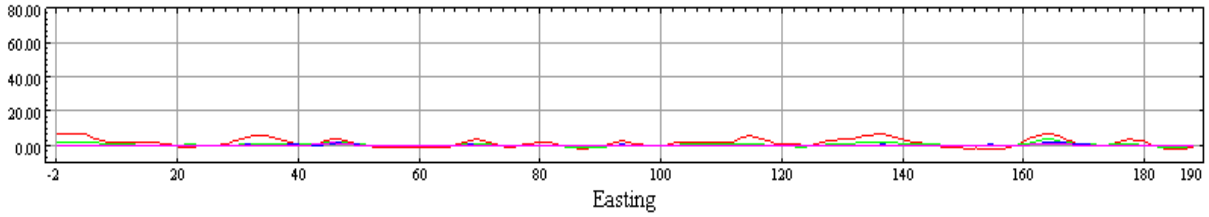
EM61MK2 Response (4 Channels), Background Line – 07/17/12 AM



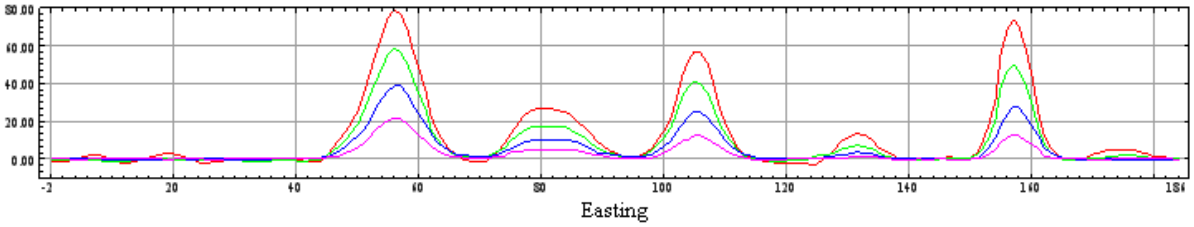
EM61MK2 Response (4 Channels), Seed Line – 07/17/12 AM



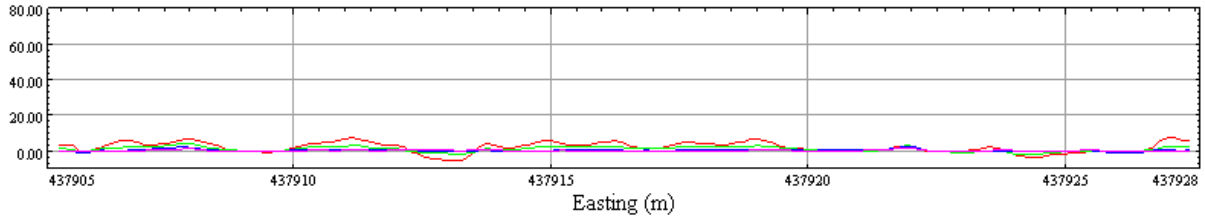
EM61MK2 Response (4 Channels), Background Line – 07/17/12 PM



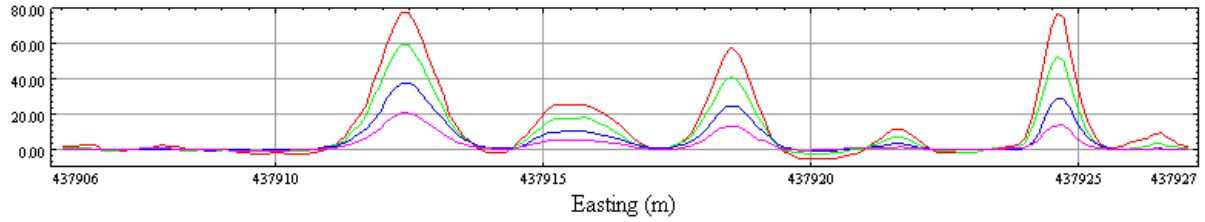
EM61MK2 Response (4 Channels), Seed Line – 07/17/12 PM



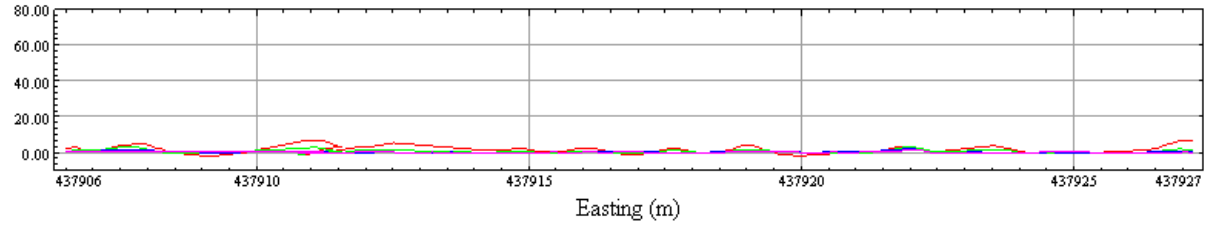
EM61MK2 Response (4 Channels), Background Line – 07/18/12 AM



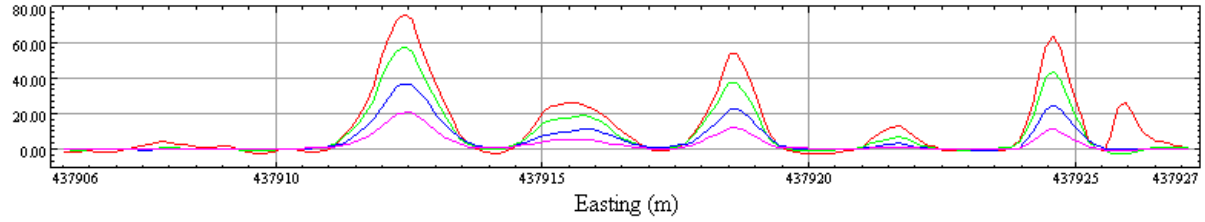
EM61MK2 Response (4 Channels), Seed Line – 07/18/12 AM



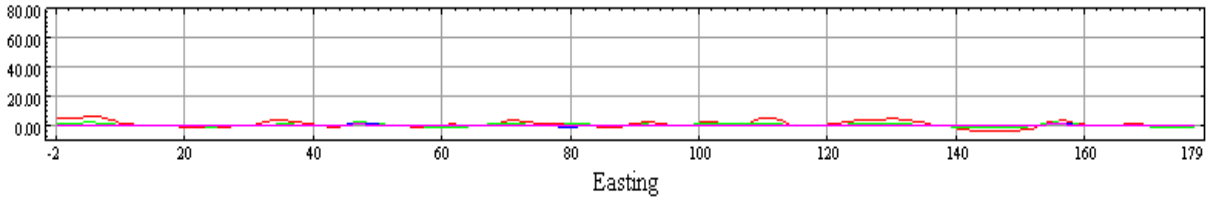
EM61MK2 Response (4 Channels), Background Line – 07/18/12 PM



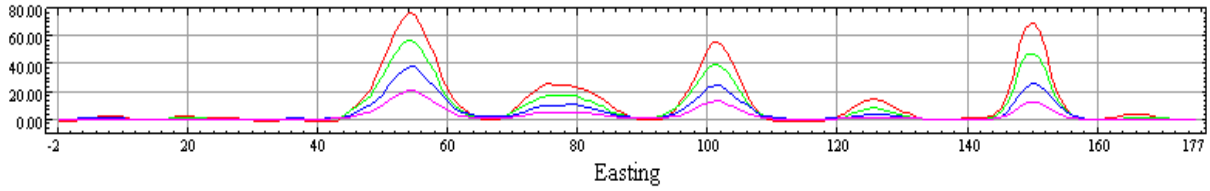
EM61MK2 Response (4 Channels), Seed Line – 07/18/12 PM



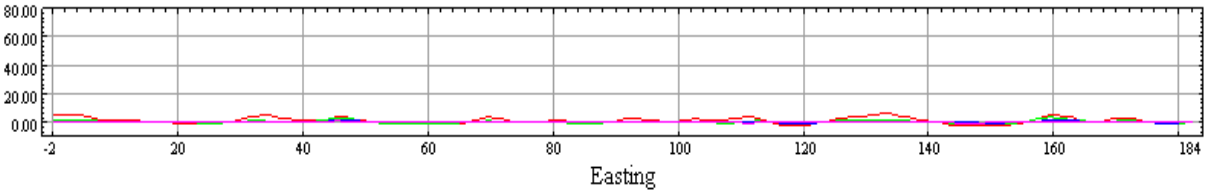
EM61MK2 Response (4 Channels), Background Line – 07/19/12 AM



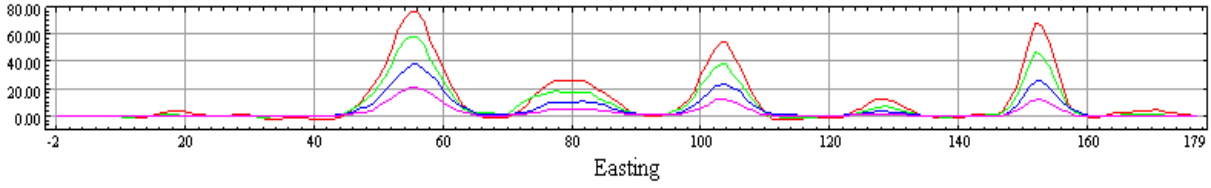
EM61MK2 Response (4 Channels), Seed Line – 07/19/12 AM



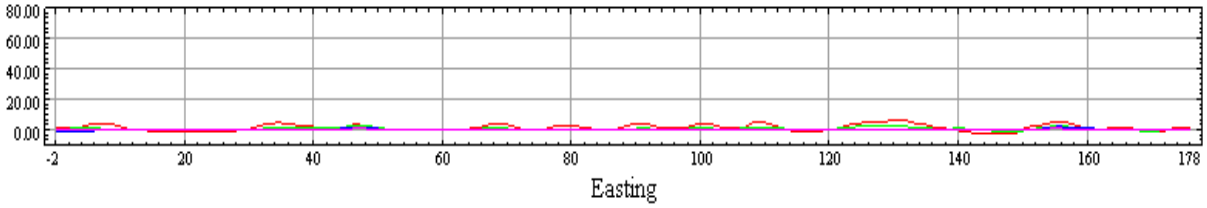
EM61MK2 Response (4 Channels), Background Line – 07/19/12 PM



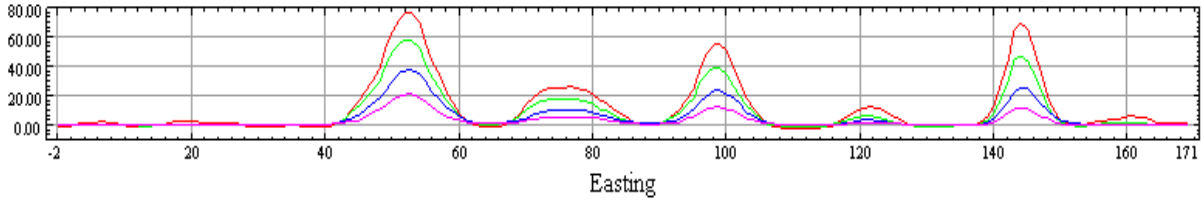
EM61MK2 Response (4 Channels), Seed Line – 07/19/12 PM



EM61MK2 Response (4 Channels), Background Line – 07/20/12 AM



EM61MK2 Response (4 Channels), Seed Line – 07/20/12 AM

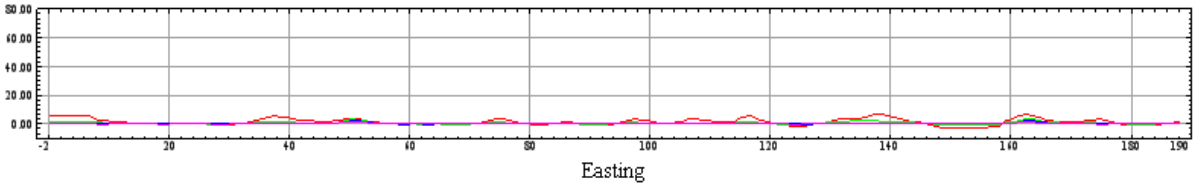


EM61MK2 Response (4 Channels), Background Line – 07/20/12 PM

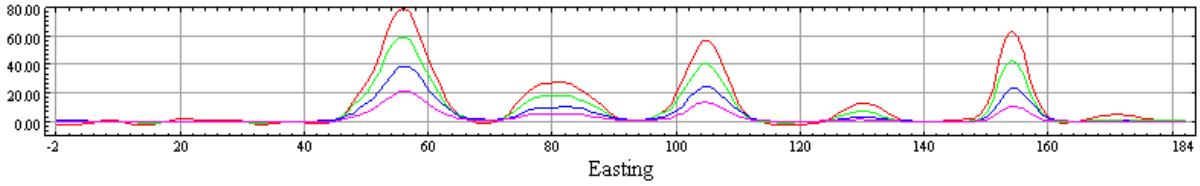
There are no PM IVS survey.

EM61MK2 Response (4 Channels), Seed Line – 07/20/12 PM

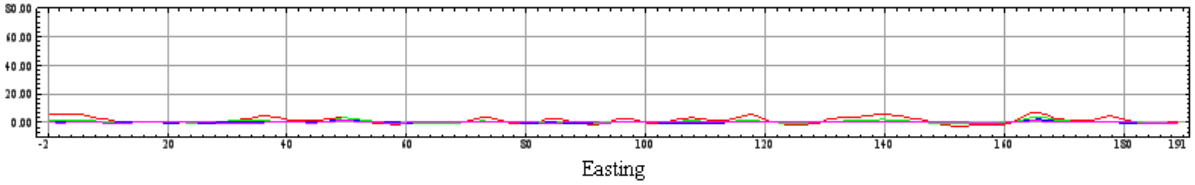
EM61MK2 Response (4 Channels), Background Line – 07/23/12 AM



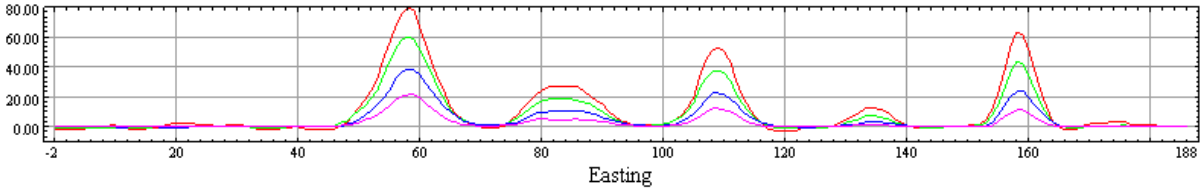
EM61MK2 Response (4 Channels), Seed Line – 07/23/12 AM



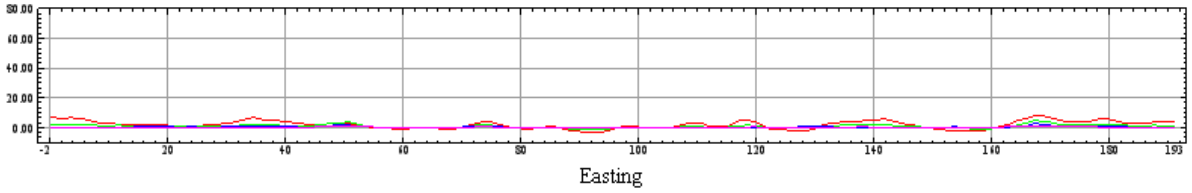
EM61MK2 Response (4 Channels), Background Line – 07/23/12 PM



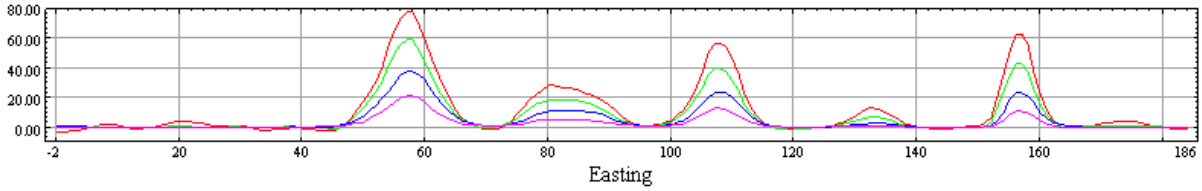
EM61MK2 Response (4 Channels), Seed Line – 07/23/12 PM



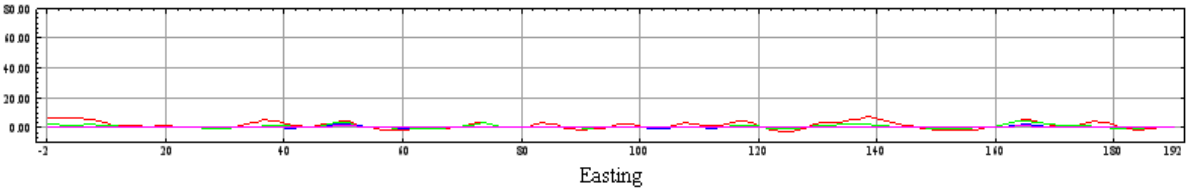
EM61MK2 Response (4 Channels), Background Line – 07/24/12 AM



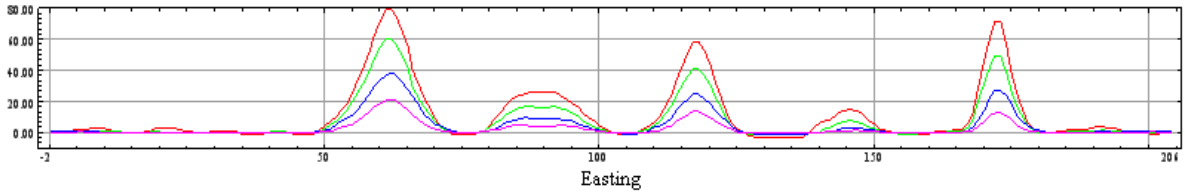
EM61MK2 Response (4 Channels), Seed Line – 07/24/12 AM



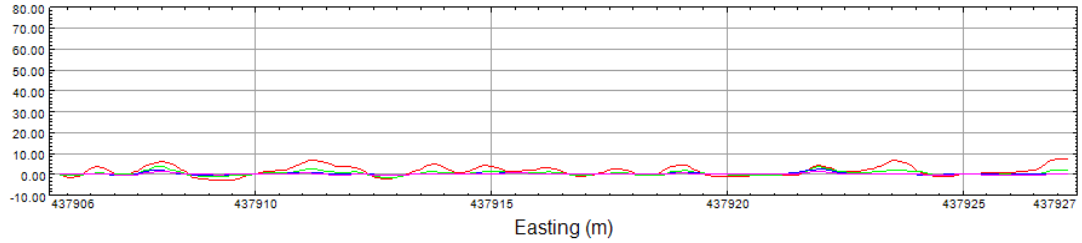
EM61MK2 Response (4 Channels), Background Line – 07/24/12 PM



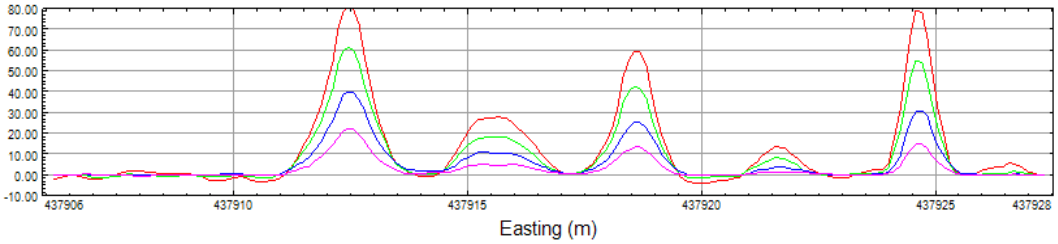
EM61MK2 Response (4 Channels), Seed Line – 07/24/12 PM



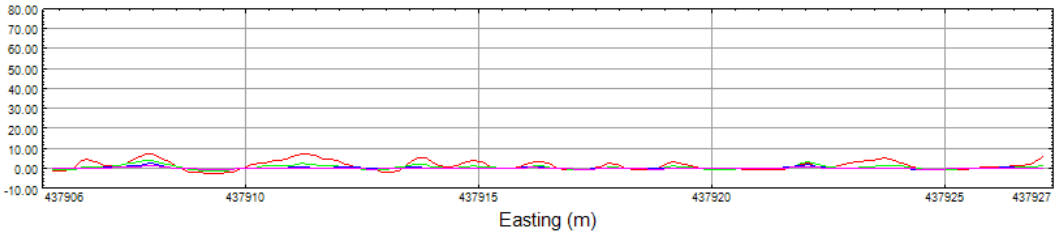
EM61MK2 Response (4 Channels), Background Line – 07/25/12 AM



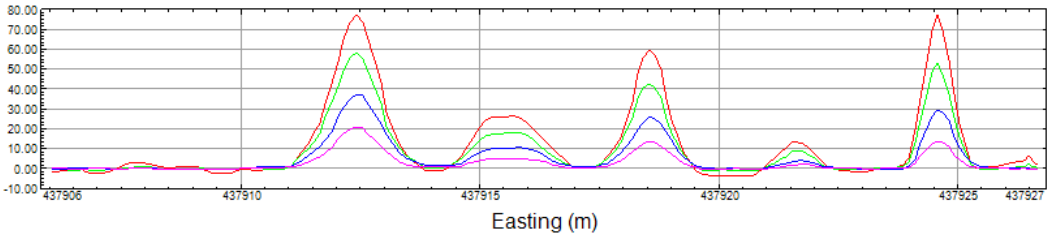
EM61MK2 Response (4 Channels), Seed Line – 07/25/12 AM



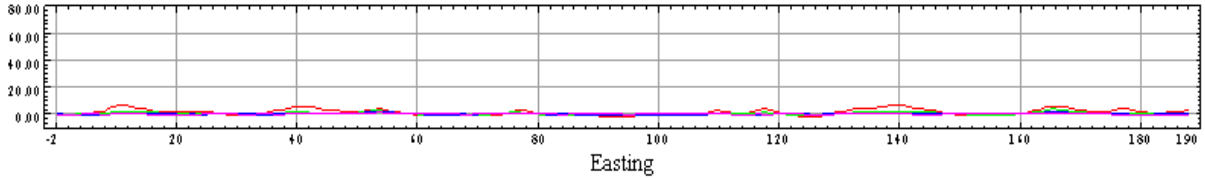
EM61MK2 Response (4 Channels), Background Line – 07/25/12 PM



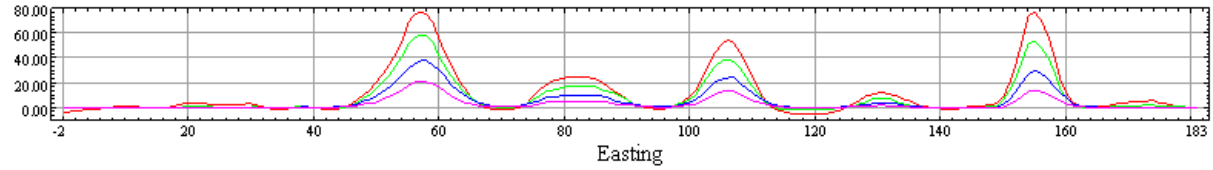
EM61MK2 Response (4 Channels), Seed Line – 07/25/12 PM



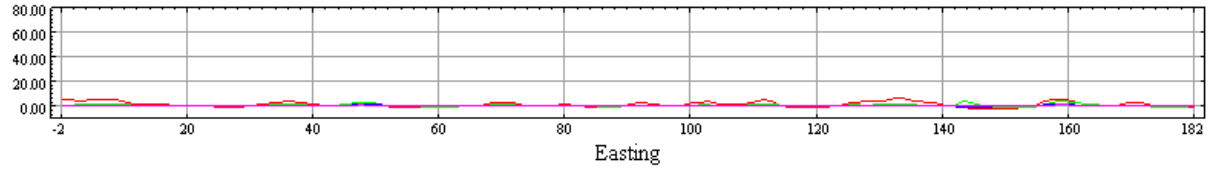
EM61MK2 Response (4 Channels), Background Line – 07/26/12 AM



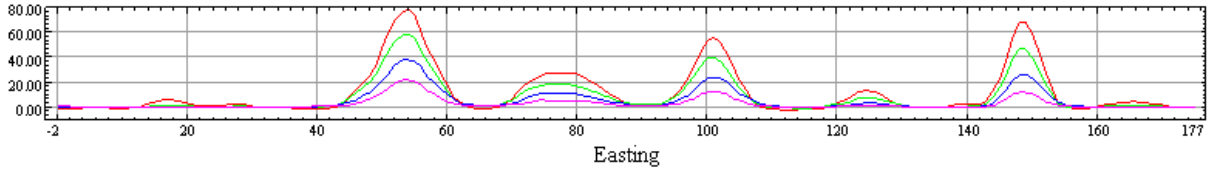
EM61MK2 Response (4 Channels), Seed Line – 07/26/12 AM



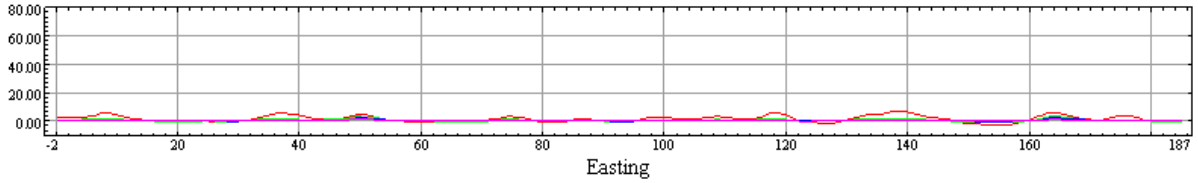
EM61MK2 Response (4 Channels), Background Line – 07/26/12 PM



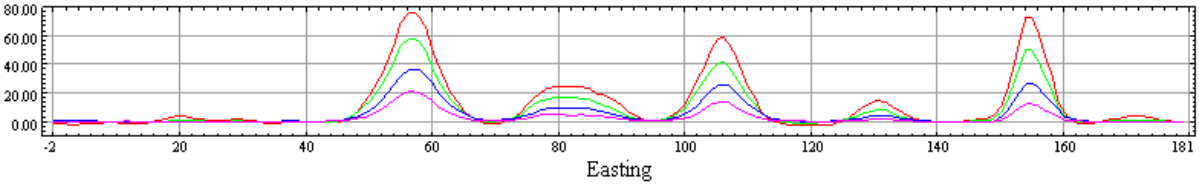
EM61MK2 Response (4 Channels), Seed Line – 07/26/12 PM



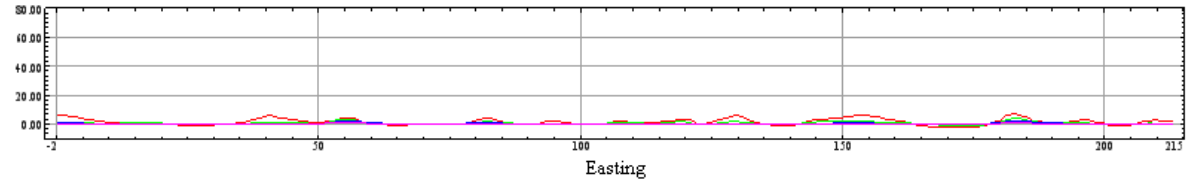
EM61MK2 Response (4 Channels), Background Line – 07/27/12 AM



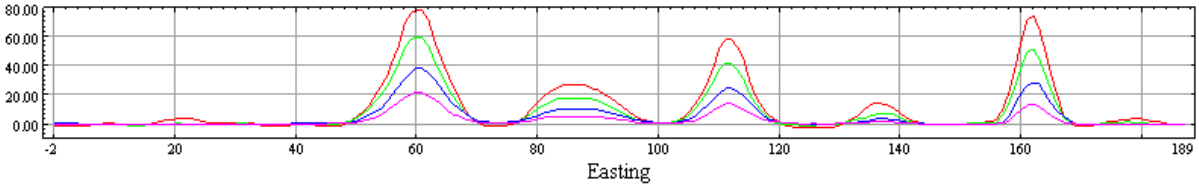
EM61MK2 Response (4 Channels), Seed Line – 07/27/12 AM



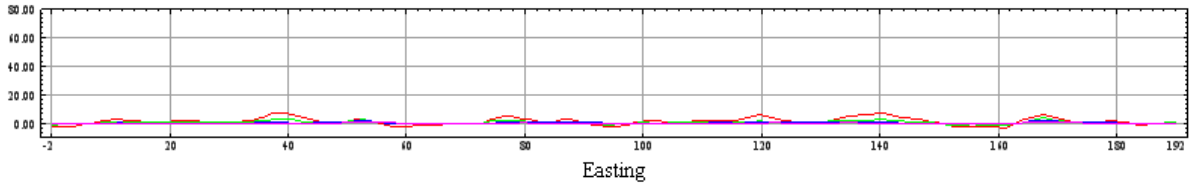
EM61MK2 Response (4 Channels), Background Line – 07/27/12 PM



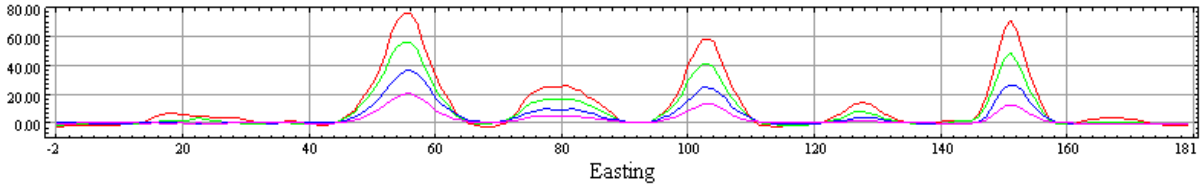
EM61MK2 Response (4 Channels), Seed Line – 07/27/12 PM



EM61MK2 Response (4 Channels), Background Line – 08/02/12 AM



EM61MK2 Response (4 Channels), Seed Line – 08/02/12 AM

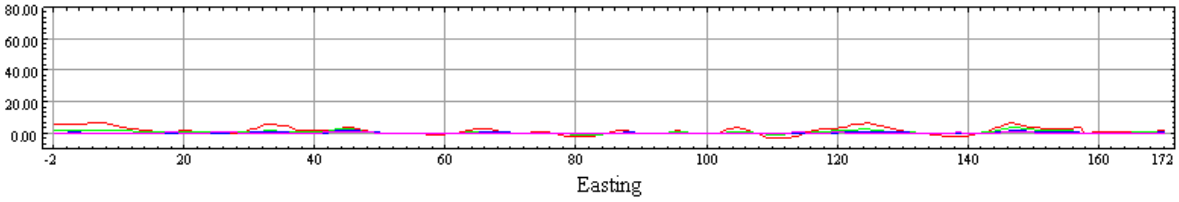


EM61MK2 Response (4 Channels), Background Line – 08/02/12 PM

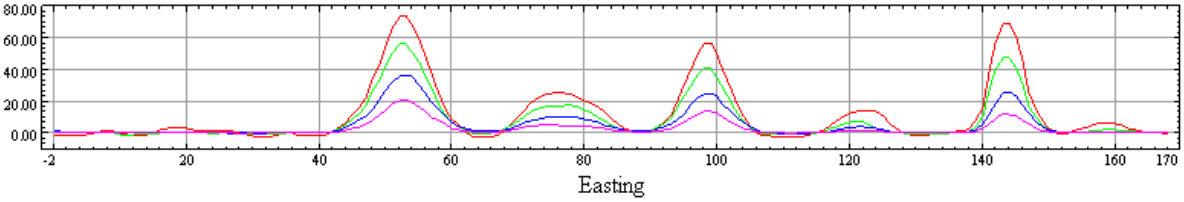
No PM data due to thunder and lighting storm.

EM61MK2 Response (4 Channels), Seed Line – 08/02/12 PM

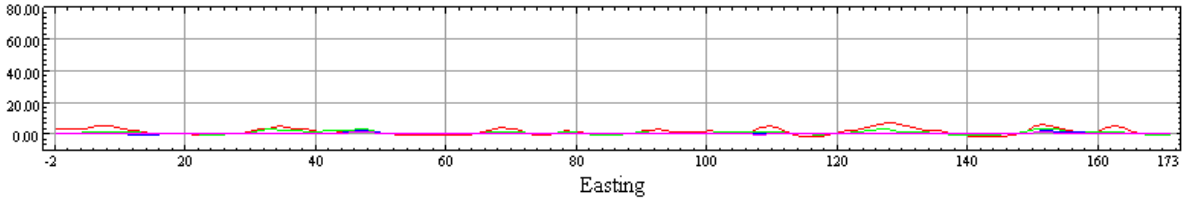
EM61MK2 Response (4 Channels), Background Line – 08/03/12 AM



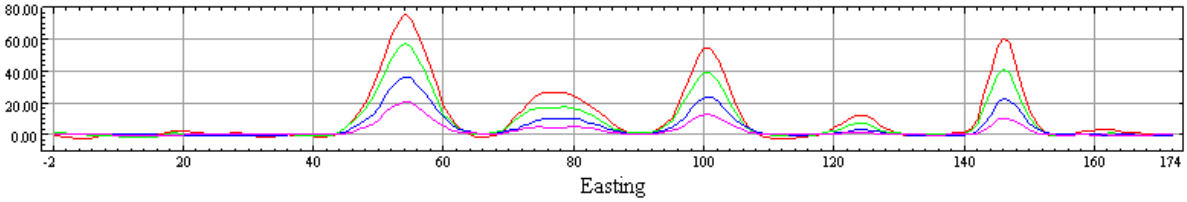
EM61MK2 Response (4 Channels), Seed Line – 08/03/12 AM



EM61MK2 Response (4 Channels), Background Line – 08/03/12 PM



EM61MK2 Response (4 Channels), Seed Line – 08/03/12 PM



FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **07 June 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	**10**		
Tyler Zaal	UXO Tech II	**10**		
Charlie Ethridge	Brush Cutting Contractor	**4.25**		
	Totals	**24.25**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
Vehicle		**1**				**1**
						0
						0
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0.05	TEMPERATURE RANGE:	WEATHER CONDITIONS:
	63 to 76	**overcast**

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	5	# DGM grids completed today	
total # transects brush cleared	5	Total # DGM grids completed	
# of transects DGM complete today		# DGM transects completed today	
Total # DGM transects complete		Total # DGM transects completed	
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	

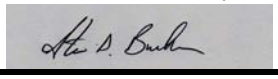
GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

One hour rain delay today for both brush cutter and Surveyor. Brush cutter did transects 62,61,60,59,and 58. Brush is very dense and transects are still not completely clear due to larger trees and over hanging bushs/trees in the transect path. The inner fence boundary was 3/4 completed/brush cut as was requested for safety purposes for quicker access route to egress to gate locations. The complete inner fence boundary could not be completed due to large trees and fenced off area. The lower South area of the Hero Road Trench Area is completely fenced in below the Parking area, there is a single gate access to the area on the west or school side of the area. Brush cutter requested transects be marked better for his cutting and departed the area at 11:47 am. Five more transect lines were marked with tape orange and pink alternating to help identify the individual transect lines. The transect lines are increasing in length as we go east and the brush is getting thicker. An alternate cutting pattern will be discussed in the morning with the brush cutter. The Survey crew has completed putting in transect points today.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.



Date: 7-Jun-2012

Title: SSHO/UXOSO-QC Steve Burhans

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **08 June 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	11		
Tyler Zaal	UXO Tech II	11		
Charlie Ethridge	Contract Brush cutter	5		
	Totals	**27**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
Vehicle		1				1
						0
						0
						0
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0	TEMPERATURE RANGE:	WEATHER CONDITIONS:
	63 to 81	partly cloudy

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	10	# DGM grids completed today	
total # transects brush cleared	15	Total # DGM grids completed	
# of transects DGM complete today		# DGM transects completed today	
Total # DGM transects complete		Total # DGM transects completed	
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	

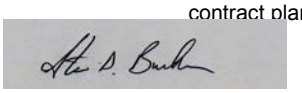
GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Brush cutting commenced this morning; and after 3 hours, ended as the hydraulic pump was malfunctioning on the cutting machine. Charlie left to get the machine repaired, returned five hours later, and continued to cut transects. After two hours of operation a vine caught the hose of the hydraulic line and snapped the line at the joint coupling. Charlie left to get the machine fixed. He will return Tuesday to continue. Transects have been taped/marked for cutting to transect 39 from transect 62. 15 transects are available for EM31 processing. The conex was placed yesterday next to the bike/walking path across from the Balfur Beaty Housing offices by the parking area in the MMRP Hero Road site.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.



Date: 8-Jun-2011

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **11 June 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	**10**		
Tyler Zaal	UXO Tech II	**10**		
Lynelle Brode	GEO	**10**		
Alex Mussio	GEO	**10**		
	Totals	**40**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM31				**1**		**1**
Vehicle		**1**		**1**		**2**
						0
						0
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE
Chris Larson	USACE	Visit GEO

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0.5	TEMPERATURE RANGE:	WEATHER CONDITIONS:
	63 to 84	**partly cloudy/thunderstorm**

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	15	Total # DGM grids completed	0
# of transects DGM complete today	0	# DGM transects completed today	0
Total # DGM transects complete	0	Total # DGM transects completed	0
# of pits/trenches dug	0	# digs completed today	0
Total # of pits/trenches dug	0	Total # digs completed	0

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	

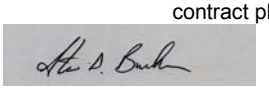
GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0630 in the hotel breakfast area and we proceded to the Hero site. GEO downloaded the van and checked out the EM31. GEO put in flags for marking fiducials and noted transect 57 and 59 need be re-cut. Tyler and I flagged transects 39 to 30. Transects 34 to 30 flagging is partially complete as the terrain and brush limited access. Flagging of transects will continue from 29 tomorrow. Charlie is scheduled for two machines on site tomorrow. Chris Larson of the USACE GEO Baltimore was on site today at about 1550 hrs. A thunderstorm began at 1555 and we had lightning at 1558. A 30 minute wait was established and we called it a day. Ticks are abundant on site and the humidity was very high.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.



Date: 11-Jun-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **12 June 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	**10**		
Tyler Zaal	UXO Tech II	**10**		
Lynelle Brode	GEO	**10**		
Alex Mussio	GEO	**10**		
	Totals	**40**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
lightning detector		**1**				**1**
EM 31				**1**		**1**
						0
						0
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE
Chris Larson	USACE	Visit GEO

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0.5	TEMPERATURE RANGE:	WEATHER CONDITIONS:
	63 to 84	**partly cloudy/thunderstorm**

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	
total # transects brush cleared	15	Total # DGM grids completed	
# of transects DGM complete today	10	# DGM transects completed today	
Total # DGM transects complete	10	Total # DGM transects completed	
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	

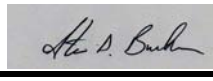
GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0630 in the hotel breakfast area and we proceded to the Hero site. GEO checked out the EM31. Flagging was continue to transect 25. Brush cutter is scheduled for two machines on site tomorrow. Chris Larson of the USACE GEO Baltimore was on site today for most of the day. A thunderstorm began at 1425 and we had lightning at 1425. A 30 minute wait was established and after 30 minutes Lynelle went to the hotel to process data from the EM31 that was collected today. Lynelle and Alex assited in flagging today after completing the EM31 available transects. Ticks are abundant on site and the humidity was very high.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.



Date: 12-Jun-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **13 June 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	**11**		
Tyler Zaal	UXO Tech II	**11**		
Lynelle Brode	GEO	**11**		
Alex Mussio	GEO	**11**		
Charlie Ethridge	Brush cutter	**10**		
Herbert Warnell	Brush cutter	**10**		
	Totals	**64**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM 31				**1**		**1**
						0
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE
Chris Larson	USACE	Visit GEO

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0	TEMPERATURE RANGE:	WEATHER CONDITIONS:
	63 to 84	**partly cloudy**

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD

(to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		**Anti-Aircraft Range 90mm - 2**	
# of transects brush cleared today	0*	# DGM grids completed today	
total # transects brush cleared	15	Total # DGM grids completed	
# of transects DGM complete today		# DGM transects completed today	
Total # DGM transects complete		Total # DGM transects completed	
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	

GENERAL COMMENTS

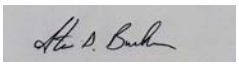
(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0630 in the hotel breakfast area and we proceded to the Hero site. Chris Larson of the USACE GEO Baltimore was on site today for most of the day. Lynelle and Alex assited in flagging today and put in some fiducials as well. Ticks are abundanton site and the humidity was very high. Flagging is down to transect 17 however; heavy brush has kept us from completing transects 34 to 29 as heavy brush needs to be cleared prior to marking some sections of these transects. The fenced in south portion below the parking area has been cut(looks good). Both machines had some mechanical problems, but each machine cut brush for about 7 hours. Notified by the PM that the surveyed transects were installed at 20 foot spacing intervals rather than 15 feet; PM will provide update on revised approach once approved by the Corps.

*significant portions of over half of the transects have been cut but not finished due to heavy brush areas that are left to cut

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.



Date: 13-Jun-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **14 June 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	11		
Tyler Zaal	UXO Tech II	11		
Lynelle Brode	GEO	11		
Alex Mussio	GEO	11		
Charlie Ethridge	Brush cutter	7		
Herbert Warnell	Brush cutter	6		
	Totals	57	0	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
vehicles		1		1		2
						0
						0
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE
Chris Larson	USACE	Visit GEO

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0	TEMPERATURE RANGE:	WEATHER CONDITIONS:
	63 to 87	partly cloudy

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	10	# DGM grids completed today	
total # transects brush cleared	57	Total # DGM grids completed	
# of transects DGM complete today		# DGM transects completed today	
Total # DGM transects complete		Total # DGM transects completed	
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	

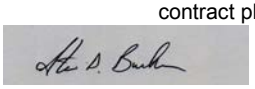
GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0630 in the hotel breakfast area and we proceded to the Hero site. Chris Larson of the USACE GEO Baltimore was on site today for most of the day. Lynelle and Alex assited in flagging today. Ticks are abundant on site and the humidity was very high. Flagging for brush cutting is down to 5 transects; however, heavy brush has kept us from completing the marking of some areas. Each brush cutting machine ran about 6 hours; brush cutters will return on Monday to complete transect cutting. Per PM notification, additional transects will need to be installed at site so that all transects will be 10 feet apart; installation of these new transects will begin next week.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.



Date: 14-Jun-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **15 June 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	**10**		
Tyler Zaal	UXO Tech II	**10**		
Lynelle Brode	GEO	**10**		
Alex Mussio	GEO	**10**		
	Totals	**40**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM31				**1**		**1**
Vehicles		**1**		**1**		**2**
						0
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE
Chris Larson	USACE	Visit GEO

WEATHER CONDITIONS

PRECIPITATION WITHIN	TEMPERATURE RANGE:	WEATHER CONDITIONS:
LAST 24 HOURS: 0	**63 to 87**	**partly cloudy**

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	
total # transects brush cleared	47	Total # DGM grids completed	
# of transects DGM complete today	7	# DGM transects completed today	
Total # DGM transects complete	17	Total # DGM transects completed	
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	

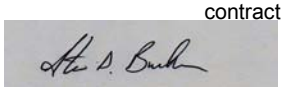
GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0630 in the hotel breakfast area and we proceeded to the Hero site. Chris Larson of the USACE GEO Baltimore was on site today for most of the day. Lynelle and Alex ran transects with the EM31. Ticks are abundant on site and the humidity was very high. Flagging for brush cutting of original transects is mostly completed; however, heavy brush has kept us from completing all of the transect marking. No brush cutting occurred on the site today. Transects cleared has been updated from yesterday's reported number (which was the number of transects that were marked with flagging tape rather than cleared transects).

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.



Date: 15-Jun-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **18 June 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	11		
Tyler Zaal	UXO Tech II	11		
Lynelle Brode	GEO	11		
Alex Mussio	GEO	11		
	Totals	**44**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM31				1		1
Vehicles		1		1		2
						0
						0
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0	TEMPERATURE RANGE: 62 to 87	WEATHER CONDITIONS: partly cloudy

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	
total # transects brush cleared	47	Total # DGM grids completed	
# of transects DGM complete today	0	# DGM transects completed today	
Total # DGM transects complete	17	Total # DGM transects completed	
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	

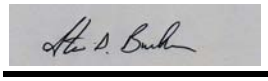
GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0630 in the hotel breakfast area and we proceeded to the Hero site . Ticks are abundant on site and the humidity was very high. Brush cutting is on hold until Wednesday due to death in the family of the brush cutting contractor. Noted which original transects still need to be complete. EM31 data was collected today. In addition, the Anti-Aircraft Range MRS boundary and expected IVS location was marked out with white flags for the Georgia811 utilities mapping.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.



Date: 18-Jun-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **19 June 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	**10**		
Tyler Zaal	UXO Tech II	**10**		
Lynelle Brode	GEO	**10**		
Alex Mussio	GEO	**10**		
Shawn Rhodes	UXO Tech I	**10**		
Craig Brewer	Surveyor	**8**		
	Totals	**58**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM 31				**1**		**1**
schonstedt			**1**			**1**
vehicles		**1**	**1**	**1**		**3**
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0	TEMPERATURE RANGE: 62 to 87	WEATHER CONDITIONS: partly cloudy

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	
total # transects brush cleared	47	Total # DGM grids completed	
# of transects DGM complete today	11	# DGM transects completed today	
Total # DGM transects complete	28	Total # DGM transects completed	
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	

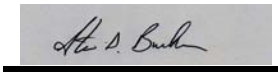
GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0630 in the hotel breakfast area. Lynelle and Alex proceded to the Hero RD site. Shawn was briefed and read the WP,SSHP, and APP. Tyler conducted escort at the Anti-Aircraft Range site and Shawn assisted at the Hero Rd location. Hero Road: installed fiducials and collected data on 11 transects. No brush cutting was conducted today. Anti-Aircraft Range: surveyor put in 62 points, 6 transects and 8 grids today.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.



Date: 19-Jun-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **20 June 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	12		
Tyler Zaal	UXO Tech II	10		
Lynelle Brode	GEO	12		
Alex Mussio	GEO	10		
Shawn Rhodes	UXO Tech I	10		
Craig Brewer	Surveyor	8		
Charlie Ethridge	Brush cutter	10		
	Totals	**72**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
vehicles		1	1	1		3
schonstadt			1			1
						0
						0
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN	TEMPERATURE RANGE:	WEATHER CONDITIONS:
LAST 24 HOURS: 0	62 to 89	partly cloudy

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0*	# DGM grids completed today	
total # transects brush cleared	47	Total # DGM grids completed	
# of transects DGM complete today	0	# DGM transects completed today	
Total # DGM transects complete	28	Total # DGM transects completed	
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	

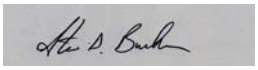
GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0630 in the hotel breakfast area. A second briefing was held in the ASP parking lot for the survey crew. Lynelle, Shawn, and Alex proceded to the Hero RD site. Tyler and I went to the ASP where we met Craig Brewer. Hero Rd: Lynelle, Shawn, and Alex put in fiducals at the Hero Rd site. Brush cutting occurred today. *Additional portions of transects were cut, but no full transects were completed due to heavy brush areas. Anti-Aircraft Range: Survey put in 60 points, and 15 grids today at the ASP. Survey will complete grid corner and transect spacing and install seed items on Friday.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.



Date: 20-Jun-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **21 June 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	10		
Tyler Zaal	UXO Tech II	10		
Lynelle Brode	GEO	10		
Alex Mussio	GEO	10		
Shawn Rhodes	UXO Tech I	10		
Charlie Ethridge	Brush cutter	5		
	Totals	**55**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
100 meter tape				2		2
vehicles		1	1	1		3
						0
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0	TEMPERATURE RANGE:	WEATHER CONDITIONS:
	62 to 91	partly cloudy

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD

(to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		**Anti-Aircraft Range 90mm - 2**	
# of transects brush cleared today	13	# DGM grids completed today	
total # transects brush cleared	60	Total # DGM grids completed	
# of transects DGM complete today	6	# DGM transects completed today	
Total # DGM transects complete	34	Total # DGM transects completed	
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0630 in the hotel breakfast area and we proceeded to the Hero Rd site. Lynelle and Shawn worked the EM31. They collected data from the transects in the fenced area and transects 2 thru 8. Alex and Tyler put in fiducals in transects 2 thru 7 and 9 and 10. Charlie arrived a litttle before noon and cut until 16:30; all brush clearing of the original transects is complete. Dig folks from electric company marked off areas in the ASP today.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

Steven Burhans Date: 21-Jun-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **22 June 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	9		
Tyler Zaal	UXO Tech II	8		
Lynelle Brode	GEO	9		
Alex Mussio	GEO	9		
Shawn Rhodes	UXO Tech I	9		
Craig Brewester	Survey	8		
	Totals	**52**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
100 meter tape				2		2
vehicles		1	1	1		3
schnostadt			1			1
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0	TEMPERATURE RANGE:	WEATHER CONDITIONS:
	62 to 91	partly cloudy

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD

(to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		**Anti-Aircraft Range 90mm - 2**	
# of transects brush cleared today	0	# DGM grids completed today	
total # transects brush cleared	60	Total # DGM grids completed	
# of transects DGM complete today	0	# DGM transects completed today	
Total # DGM transects complete	34	Total # DGM transects completed	
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0630 in the hotel breakfast area and we proceeded to the Hero Rd site. Lynelle, Shawn, and Alex worked putting in fiducials. Anti-Aircraft Range: Blind seeds were installed (24 total), survey data was collected on the blind seeds. All grids/transects have been marked/surveyed.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

Steven Burhans Date: 22-Jun-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT	DATE:	25 June 2012

CONTRACT: USACE/W912-DR-09-D-0012	PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA
PROJECT: Delivery Order 0004	ERT PROJECT NO: 3153

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	0		
Tyler Zaal	UXO Tech II	0		
Lynelle Brode	GEO	0		
Alex Mussio	GEO	0		
Shawn Rhodes	UXO Tech I	0		
Craig Brewester	Survey	0		
	Totals	0	0	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
100 meter tape						0
vehicles						0
schnostadt						0
						0
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0.42 in	TEMPERATURE RANGE:	WEATHER CONDITIONS:
	72 to 83	cloudy/rain (TS in area)

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD

(to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		**Anti-Aircraft Range 90mm - 2**	
# of transects brush cleared today	0	# DGM grids completed today	
total # transects brush cleared	60	Total # DGM grids completed	
# of transects DGM complete today	0	# DGM transects completed today	
Total # DGM transects complete	34	Total # DGM transects completed	
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

No work was conducted today due to rain (TS Debby in area).

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

Steven Burhans Date: 25-Jun-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **26 June 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	9		
Tyler Zaal	UXO Tech II	8		
Lynelle Brode	GEO	9		
Shawn Rhodes	UXO Tech I	9		
Craig Brewester	Survey	8		
Ji Ma	GEO	9		
	Totals	**52**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
100 meter tape				2		2
EM 61				1		1
vehicles		1	1	1		3
schnostadt			1			1
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE
David King	USACE	oversee geophsyics work

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0	TEMPERATURE RANGE:	WEATHER CONDITIONS:
	62 to 87	rain to cloudy

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA			
Hero Road Trench Area		**Anti-Aircraft Range 90mm - 2**	
# of transects brush cleared today	0	# DGM grids completed today	
total # transects brush cleared	60	Total # DGM grids completed	
# of transects DGM complete today	0	# DGM transects completed today	
Total # DGM transects complete	34	Total # DGM transects completed	
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data			
Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:	5	Pounds of MD To Date:	5
Pounds of Non-MEC Scrap Today:	5	Pounds of Non-MEC Scrap To Date:	5

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0630 in the hotel breakfast area and we proceeded to the 90mm site. Geo assembled the GPS and EM61. UXO swept the IVS and flagged the anomalies (82). The Geo party departed the area and the UXO located and dug the anomalies. Geo returned and ran the EM61 and found 7 additional anomalies that were not detected with the schonstadts. Using the EM61 to pinpoint the anomaly, it was determined that the 7 anomalies were brass and aluminum items. The IVS was then totally clear and ISO items were placed, surveyed in and covered. Received verbal approval from David King for IVS.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

Steven Burhans Date: 26-Jun-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **27 June 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	**11**		
Tyler Zaal	UXO Tech II	**10**		
Lynelle Brode	GEO	**11**		
Shawn Rhodes	UXO Tech II	**10**		
Ji Ma	GEO	**9**		
Charlie Ethridge	Brush cutter	**5**		
	Totals	**56**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
100 meter tape				**2**		**2**
EM 61				**1**		**1**
vehicles		**1**	**1**	**1**		**3**
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE
David King	USACE	oversee geophysics work

WEATHER CONDITIONS

PRECIPITATION WITHIN	TEMPERATURE RANGE:	WEATHER CONDITIONS:
LAST 24 HOURS: 0	**62 to 87**	**cloudy**

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	20	# DGM grids completed today	3.5
total # transects brush cleared	80	Total # DGM grids completed	3.5
# of transects DGM complete today	0	# DGM transects completed today	
Total # DGM transects complete	34	Total # DGM transects completed	
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	5
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	5

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0630 in the hotel breakfast area and we proceded to the 90mm site. Geo assembled the GPS and EM61. QC test conducted and EM61 data on 3.5 grids was collected: 24, 23, 20 and 1/2 of 21. At Hero Road site, Lynelle and Shawn put in fiducials on lines 11 thru 17 leaving 8 more transects to put fiducials in. Charlie began cutting new transects; 20 new transects were completely cut today and portions of another 7 were 75% cut.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

Steven Burhans — Date: 27-Jun-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **28 June 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	**10**		
Tyler Zaal	UXO Tech II	**10**		
Lynelle Brode	GEO	**10**		
Shawn Rhodes	UXO Tech I	**10**		
Ji Ma	GEO	**10**		
	Totals	**50**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
100 meter tape				**2**		**2**
EM 61				**1**		**1**
						0
						0
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE
David King	USACE	Oversee geophysics work

WEATHER CONDITIONS

PRECIPITATION WITHIN	TEMPERATURE RANGE:	WEATHER CONDITIONS:
LAST 24 HOURS: 0	**62 to 97**	**sunny humid**

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	5.5
total # transects brush cleared	80	Total # DGM grids completed	9
# of transects DGM complete today	0	# DGM transects completed today	
Total # DGM transects complete	34	Total # DGM transects completed	
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	5
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	5

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0630 in the hotel breakfast area and we proceeded to the AAR site. Geo assembled the GPS and EM61. Static test conducted and 5 and 1/2 grids collected: 19,17,18, 1/2 of 21,14, and 16. At the Hero Road site, Lynelle and Shawn put in fiducials on lines 18 thru 23 . Leaving 3 more of the original transects to put fiducials in.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

Steven Burhans Date: 28-Jun-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **29 June 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	**10**		
Tyler Zaal	UXO Tech II	**10**		
Lynelle Brode	GEO	**10**		
Shawn Rhodes	UXO Tech I	**10**		
Charlie Etheridge	Brush cutter	**4**		
Ji Ma	GEO	**10**		
	Totals	**54**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
100 meter tape				**2**		**2**
EM61				**1**		**1**
EM31				**1**		**1**
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE
David King	USACE	Oversee geophysics work

WEATHER CONDITIONS

PRECIPITATION WITHIN	TEMPERATURE RANGE:	WEATHER CONDITIONS:
LAST 24 HOURS: 0	**73 to 101**	**sunny humid**

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD
(to include donor materials)

ID & CONDITION	LOCATION	DISPOSITION	COMMENTS

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	40	# DGM grids completed today	5
total # transects brush cleared	120	Total # DGM grids completed	14
# of transects DGM complete today	8	# DGM transects completed today	
Total # DGM transects complete	42	Total # DGM transects completed	
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	5
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	5

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0630 in the hotel breakfast area and we proceeded to the 90mm site. Geo assembled the GPS and EM61. Static test conducted and 5 grids collected: 10, 11,12,13, and15. At Hero Road site, Lynelle and shawn completed fiducials for the originial transects. All brush cutting for the additional transects was completed today. Heat was a factor in the work day. Teams had to be monitored closely and multiple breaks used to keep them cool.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

Steven Burhans — Date: 28-Jun-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **02 July 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	**10**		
Tyler Zaal	UXO Tech II	**10**		
Lynelle Brode	GEO	**10**		
Shawn Rhodes	UXO Tech I	**10**		
	Totals	**40**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
100 meter tape				**2**		**2**
EM31				**1**		**1**
						0
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0	TEMPERATURE RANGE:	WEATHER CONDITIONS:
	73 to 98	**sunny humid**

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	120	Total # DGM grids completed	14
# of transects DGM complete today	13	# DGM transects completed today	
Total # DGM transects complete	55	Total # DGM transects completed	
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	5
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	5

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0630 in the hotel breakfast area and we proceeded to the Hero Rd site. Geo assembled the E31. Static test conducted and data on 13 of the original transects collected. Steve and Tyler reviewed the area where Charlie cut Friday, there are a few areas that need touch up. No work was conducted at the AAR site today. Heat was a factor in the work day. Teams had to be monitored closely and multiple breaks used to keep them cool.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

Steven Burhans Date: 2-Jul-2012

Title: SSHO/UXOSO-Qc

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **03 July 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	**10**		
Tyler Zaal	UXO Tech II	**10**		
Lynelle Brode	GEO	**10**		
Alex Mussio	GEO	**10**		
Shawn Rhodes	UXO Tech I	**10**		
	Totals	**50**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
100 meter tape				**2**		**2**
EM31				**1**		**1**
EM61				**1**		**1**
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0	TEMPERATURE RANGE:	WEATHER CONDITIONS:
	73 to 99	**sunny humid**

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA			
Hero Road Trench Area		**Anti-Aircraft Range 90mm - 2**	
# of transects brush cleared today	0	# DGM grids completed today	3
total # transects brush cleared	120	Total # DGM grids completed	17
# of transects DGM complete today	5	# DGM transects completed today	
Total # DGM transects complete	60	Total # DGM transects completed	
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data			
Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	5
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	5

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0630 in the hotel breakfast area and we proceeded to the 90mm site. Geo assembled the EM 61. Static test conducted and 3 grids collected (2, 3, and 22). The team at the 90mm site had issues with the GPS unit inthe afternoon. The EM31 was put into operation at the Hero RD location and the rest of the original transects were collected. Team started establishing fidicials on additional transects. Heat was a factor in the work day. Teams had to be monitored closely and multiple breaks used to keep them cool.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

Steven Burhans — Date: 3-Jul-2012

Title:

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **04 July 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	8		
Tyler Zaal	UXO Tech II	8		
Lynelle Brode	GEO	8		
Alex Mussio	GEO	8		
Shawn Rhodes	UXO Tech I	8		
	Totals	**40**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
100 meter tape				2		2
EM31				1		1
						0
						0
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0	TEMPERATURE RANGE:	WEATHER CONDITIONS:
	73 to 99	sunny humid

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	120	Total # DGM grids completed	17
# of transects DGM complete today	0	# DGM transects completed today	
Total # DGM transects complete	60*	Total # DGM transects completed	
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	5
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	5

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0600 in the hotel breakfast area and we proceeded to the Hero Road site. Fiducials continued to be installed on the additional transects. EM31 data was collected on a portion of the additional transects in the southern portion of the MRS; no full transects were completed today. The day was an 8 hour day and was started early due to miday heat. The AAR site was closed today due to the holiday.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

Steven Burhans Date: 4-Jul-2012

Title:

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **05 July 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	**10**		
Tyler Zaal	UXO Tech II	**10**		
Lynelle Brode	GEO	**10**		
Alex Mussio	GEO	**10**		
Shawn Rhodes	UXO Tech I	**10**		
	Totals	**50**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
100 meter tape				**2**		**2**
EM31				**1**		**1**
EM61				**1**		**1**
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0	TEMPERATURE RANGE:	WEATHER CONDITIONS:
	73 to 99	**sunny humid**

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	0*
total # transects brush cleared	120	Total # DGM grids completed	17
# of transects DGM complete today	12	# DGM transects completed today	
Total # DGM transects complete	72	Total # DGM transects completed	
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	5
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	5

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0630 in the hotel breakfast area and we proceeded to the sites. At Hero Road site, used EM31 at acquire data on additional transects. At the AAR site, 5 grids were collected using the EM 61, however, due to a malfunction of the equipment, no data was saved. These grids will be re-collected on Monday July 9th.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

Steven Burhans Date: 5-Jul-2012

Title:

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **09 July 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	10		
Tyler Zaal	UXO Tech II	9		
Lynelle Brode	GEO	10		
Alex Mussio	GEO	9		
Shawn Rhodes	UXO Tech I	10		
	Totals	**48**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
100 meter tape				2		2
EM31				1		1
EM61				1		1
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN	TEMPERATURE RANGE:	WEATHER CONDITIONS:
LAST 24 HOURS: 0	73 to 100	sunny humid

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	4
total # transects brush cleared	120	Total # DGM grids completed	21
# of transects DGM complete today	10	# DGM transects completed today	
Total # DGM transects complete	82	Total # DGM transects completed	
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	5
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	5

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0630 in the hotel breakfast area and we proceeded to the Hero Rd/AAR 90mm sites. Data was collected on 10 transects using the EM31 at Hero Rd. At the AAR 90mm site, 4 grids (1, 6, 7, and 9) were collected.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

Steven Burhans — Date: 9-Jul-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **10 July 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	**10**		
Tyler Zaal	UXO Tech II	**9**		
Lynelle Brode	GEO	**10**		
Alex Mussio	GEO	**9**		
Shawn Rhodes	UXO Tech I	**10**		
	Totals	**48**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
100 meter tape				**2**		**2**
EM31				**1**		**1**
EM61				**1**		**1**
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0	TEMPERATURE RANGE:	WEATHER CONDITIONS:
	73 to 98	**sunny humid**

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	3
total # transects brush cleared	120	Total # DGM grids completed	24
# of transects DGM complete today	7.5	# DGM transects completed today	26
Total # DGM transects complete	89.5	Total # DGM transects completed	26
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	5
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	5

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0600 in the hotel breakfast area and we proceded to the sites. At Hero Road, 7.5 transects were collected. At the AAR site, collected grids 5, 8, and 4, transects 1 thru 6 (the long ones that run the length of the roads), and 20 of the small transects between the bunkers.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

Steven Burhans Date: 10-Jul-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **11 July 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	**10**		
Tyler Zaal	UXO Tech II	**10**		
Lynelle Brode	GEO	**10**		
Alex Mussio	GEO	**10**		
Shawn Rhodes	UXO Tech I	**10**		
	Totals	**50**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
100 meter tape				**2**		**2**
EM31				**1**		**1**
EM61				**1**		**1**
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0	TEMPERATURE RANGE:	WEATHER CONDITIONS:
	73 to 97	**sunny humid**

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA			
Hero Road Trench Area		**Anti-Aircraft Range 90mm - 2**	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	120	Total # DGM grids completed	24
# of transects DGM complete today	10	# DGM transects completed today	20
Total # DGM transects complete	99.5	Total # DGM transects completed	46
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data			
Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	5
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	5

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0600 in the hotel breakfast area and we proceeded to the sites. At Hero Road, collected 10 transects using the EM31. Crew from AAR assisted at Hero Road site in afternoon. Recollected a few data gaps on grid22 and finished collecting the rest of the small transects between the bunkers at the AAR. All DGM data collection at the AAR is complete.

SSHO coordinated with Mr. Walker at the ASP regarding intrusive work on the grids closest to the main ASP building; this work will be conducted on July 24th from noon to 3 PM.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

Steven Burhans — Date: 11-Jul-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **12 July 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	**10**		
Tyler Zaal	UXO Tech II	**10**		
Lynelle Brode	GEO	**10**		
Alex Mussio	GEO	**10**		
Shawn Rhodes	UXO Tech I	**10**		
	Totals	**50**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
100 meter tape				**2**		**2**
EM31				**1**		**1**
						0
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0	TEMPERATURE RANGE:	WEATHER CONDITIONS:
	73 to 91	**sunny humid**

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA			
Hero Road Trench Area		**Anti-Aircraft Range 90mm - 2**	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	119	Total # DGM grids completed	24
# of transects DGM complete today	12	# DGM transects completed today	0
Total # DGM transects complete	111.5	Total # DGM transects completed	46
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data			
Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	5
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	5

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0600 in the hotel breakfast area and we proceeded to the Hero Rd site. EM31 data collection for 12 transects was completed today.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

Steven Burhans Date: 12-Jul-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **13 July 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	8		
Tyler Zaal	UXO Tech II	8		
Lynelle Brode	GEO	8		
Shawn Rhodes	UXO Tech I	8		
	Totals	**32**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
100 meter tape				2		2
EM31				1		1
						0
						0
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN	TEMPERATURE RANGE:	WEATHER CONDITIONS:
LAST 24 HOURS: 0	73 to 91	sunny humid

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		**Anti-Aircraft Range 90mm - 2**	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	119	Total # DGM grids completed	24
# of transects DGM complete today	7.5	# DGM transects completed today	0
Total # DGM transects complete	119	Total # DGM transects completed	46
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	5
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	5

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0600 in the hotel breakfast area and we proceded to the Hero Rd site. All remaining transects plus repeat data were collected at the Hero Rd site using the EM31 today. All DGM data for the project has now been collected.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

Steven Burhans Date: 13-Jul-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **16 July 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	8		
Tyler Zaal	UXO Tech II	8		
Lynelle Brode	GEO	8		
Shawn Rhodes	UXO Tech I	8		
	Totals	**32**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM 61				1		1
GPS			1			1
						0
						0
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE
David King	USACE	Oversee geophysics work

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0	TEMPERATURE RANGE:	WEATHER CONDITIONS:
	73 to 88	partly sunny humid

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	119	Total # DGM grids completed	24
# of transects DGM complete today	0	# DGM transects completed today	0
Total # DGM transects complete	119	Total # DGM transects completed	46
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	5
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	5

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0700 in the hotel breakfast area and we proceded to the 90mm Site/ASP. EM61 GPS unit used to reacquire and flag anomaly positions. Flags installed in Grids 10 -23; reacquisition occurred in Grids 18, 20, 21, and 23.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

Steven Burhans — Date: 16-Jul-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **17 July 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	8		
Tyler Zaal	UXO Tech II	8		
Lynelle Brode	GEO	8		
Shawn Rhodes	UXO Tech I	8		
	Totals	**32**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM 61				1		1
GPS			1			1
						0
						0
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE
David King	USACE	Oversee geophysics work

WEATHER CONDITIONS

PRECIPITATION WITHIN	TEMPERATURE RANGE:	WEATHER CONDITIONS:
LAST 24 HOURS: 0	73 to 90	partly sunny humid

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA			
Hero Road Trench Area		**Anti-Aircraft Range 90mm - 2**	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	119	Total # DGM grids completed	24
# of transects DGM complete today	0	# DGM transects completed today	0
Total # DGM transects complete	119	Total # DGM transects completed	46
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data			
Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	5
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	5

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0700 in the hotel breakfast area and we proceeded to the 90mm Site/ASP . EM61 GPS used for flagging and reacquisition. Reacquired grids 10-17 and 19; grids 24,13, 6, 7, and portions of 1, 2, and 3 were flagged.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

Steven Burhans Date: 17-Jul-2012

Title: SSHO/UXOSO/QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **18 July 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	8		
Tyler Zaal	UXO Tech II	8		
Lynelle Brode	GEO	8		
Shawn Rhodes	UXO Tech I	8		
	Totals	**32**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM 61				1		1
GPS			1			1
						0
						0
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0	TEMPERATURE RANGE:	WEATHER CONDITIONS:
	73 to 90	partly sunny humid T storms

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	119	Total # DGM grids completed	24
# of transects DGM complete today	0	# DGM transects completed today	0
Total # DGM transects complete	119	Total # DGM transects completed	46
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	5
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	5

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0700 in the hotel breakfast area and we proceeded to the 90mm Site/ASP. Used EM61 to recollect Grids 3 and 9. Finished flagging Grid 2 and continued to flag Grid 1.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

Steven Burhans — Date: 18-Jul-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **19 July 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	8		
Tyler Zaal	UXO Tech II	8		
Lynelle Brode	GEO	8		
Shawn Rhodes	UXO Tech I	8		
	Totals	**32**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM 61				1		1
GPS			1			1
						0
						0
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0	TEMPERATURE RANGE:	WEATHER CONDITIONS:
	73 to 91	partly sunny

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	119	Total # DGM grids completed	24
# of transects DGM complete today	0	# DGM transects completed today	0
Total # DGM transects complete	119	Total # DGM transects completed	46
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data

Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	5
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	5

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0700 in the hotel breakfast area and we proceeded to the 90mm Site/ASP. Used EM61 to reacquire grids G01, G03, G06, G07, G09, and G22 and flag anomalies.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

Steven Burhans Date: 19-Jul-2012

Title: SSHO/UXOSO-QC

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **20 July 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
Steven Burhans	UXOSO/Site Safety	8		
Tyler Zaal	UXO Tech II	8		
Lynelle Brode	GEO	8		
Shawn Rhodes	UXO Tech I	8		
	Totals	**32**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM 61				1		1
GPS			1			1
						0
						0
						0
						0
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN LAST 24 HOURS: 0	TEMPERATURE RANGE:	WEATHER CONDITIONS:
	73 to 91	partly sunny

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA			
Hero Road Trench Area		**Anti-Aircraft Range 90mm - 2**	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	119	Total # DGM grids completed	24
# of transects DGM complete today	0	# DGM transects completed today	0
Total # DGM transects complete	119	Total # DGM transects completed	46
# of pits/trenches dug		# digs completed today	
Total # of pits/trenches dug		Total # digs completed	

MEC/MPPEH/MD Data			
Number of Live MEC Items Today:		Number of Live MEC Items To Date:	
Number of MPPEH/MD Items Today:		Number of MPPEH/MD Items To Date:	
Pounds of MD Today:		Pounds of MD To Date:	5
Pounds of Non-MEC Scrap Today:		Pounds of Non-MEC Scrap To Date:	5

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Safety Brief was held at 0700 in the hotel breakfast area and we proceeded to the AAR/ASP. All remaining grids were flagged and reacquired. Transects T1 thru T6 were flagged. No PM QCs on the EM61 were collected due to a thunder and lightening storm at the end of the day.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

Steven Burhans Date: 20-Jul-2012

Title:

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **23 July 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
TJ Fanning	SUXOS	9		
Steve Burhans	UXOSO/UXOQC	9		
Wes Rogers	UXO Tech III	9		
James Hamel	UXO Tech II	9		
Tyler Zaal	UXO Tech II	9		
Bobby Morris	UXO Tech II	9		
Shawn Rhodes	UXO Tech I	9		
Robert Smith	UXO Tech I	9		
Lynelle Brode	GEO	9		
	Totals	**81**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM 61				1		1
GPS			1			1
Schonstedts		1	6			7
Trucks		1	1			2
Van				1		1
						0
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN	TEMPERATURE RANGE:	WEATHER CONDITIONS:
LAST 24 HOURS: 0	73 to 91	partly sunny

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today: Jeff Brewer

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)			
ID & CONDITION	**LOCATION**	**DISPOSITION**	**COMMENTS**

PRODUCTION DATA

Hero Road Trench Area		**Anti-Aircraft Range 90mm - 2**	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	119	Total # DGM grids completed	24
# of transects DGM complete today	0	# DGM transects completed today	0
Total # DGM transects complete	119	Total # DGM transects completed	46
# of pits/trenches dug	0	# digs completed today	109
Total # of pits/trenches dug	0	Total # digs completed	109

MEC/MPPEH/MD Data

Number of Live MEC Items Today:	0	Number of Live MEC Items To Date:	0
Number of MPPEH/MD Items Today:	0	Number of MPPEH/MD Items To Date:	0
Pounds of MD Today:	0	Pounds of MD To Date:	5
Pounds of Non-MEC Scrap Today:	75	Pounds of Non-MEC Scrap To Date:	80

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Began site training for the project at 0615. All personnel received training on the Work Plan, ESS, Health and Safety Plan. Collected all Certs from the intrusive team for the UXOSO. The team truck was picked up from Enterprise. We arrived at the ASP and issued equipment to the team and the gear for the work truck. The team tested instruments in the IVS. We began intrusive operations at 0930.

Stopped intrusive operations at 1540. Lynelle took the EM61 through the IVS at the end of the day. Grids completed for the day G12, G15 and G16. The team worked 7 grids but have a few no contacts that need to be checked with the EM61 before the grids are considered complete. Total targets investigated: 109 for the day.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

TJ Fanning Date: 23-Jul-2012

Title: SUXOS

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **23 July 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
TJ Fanning	SUXOS	9		
Steve Burhans	UXOSO/UXOQC	9		
Wes Rogers	UXO Tech III	9		
James Hamel	UXO Tech II	9		
Tyler Zaal	UXO Tech II	9		
Bobby Morris	UXO Tech II	9		
Shawn Rhodes	UXO Tech I	9		
Robert Smith	UXO Tech I	9		
Lynelle Brode	GEO	9		
Rebekah McCoy	Enviromental	0		
	Totals	**81**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM 61				1		1
GPS			1			1
Schonstedts		1	6			7
Trucks		1	1			2
Van				1		1
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN	TEMPERATURE RANGE:	WEATHER CONDITIONS:
LAST 24 HOURS: 0	73 to 92	Sunny

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today: Jeff Brewer

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD
(to include donor materials)

ID & CONDITION	LOCATION	DISPOSITION	COMMENTS

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	119	Total # DGM grids completed	24
# of transects DGM complete today	0	# DGM transects completed today	0
Total # DGM transects complete	119	Total # DGM transects completed	46
# of pits/trenches dug	0	# grids completed today (intrusive)	7
Total # of pits/trenches dug	0	# grids completed to date (intrusive)	7
		# transects completed today (intrusive)	0
		# transects completed to date (intrusive)	0
		# digs completed today	109
		Total # digs completed	109

MEC/MPPEH/MD Data

Number of Live MEC Items Today:	0	Number of Live MEC Items To Date:	0
Number of MPPEH/MD Items Today:	0	Number of MPPEH/MD Items To Date:	0
Pounds of MD Today:	0	Pounds of MD To Date:	5
Pounds of Non-MEC Scrap Today:	75	Pounds of Non-MEC Scrap To Date:	80

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Began site training for the project at 0615. All personnel received training on the Work Plan, ESP, Health and Safety Plan. Collected all Certs from the intrusive team for the UXOSO. The team truck was picked up from Enterprise. We arrived at the ASP and issued equipment to the team and the gear for the work truck. The team tested instruments in the IVS. We began intrusive operations at 0930. Stopped intrusive operations at 1540. Lynelle took the EM61 through the IVS at the end of the day.

Grids completed for the day: G10,G11, G12, G13,G14,G15, G16.
Grids QC checked with the EM61: G10
Total targets investigated for the day: 109

The following grids have been accepted by the Gov per 948 #	
The following grids are ready for Government QA:	
The following grids were accepted today by UXOQCS:	1

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

TJ Fanning Date: 23-Jul-2012

Title: SUXOS

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **24 July 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
TJ Fanning	SUXOS	**8.5**		
Steve Burhans	UXOSO/UXOQC	**8.5**		
Wes Rogers	UXO Tech III	**8.5**		
James Hamel	UXO Tech II	**8.5**		
Tyler Zaal	UXO Tech II	**8.5**		
Bobby Morris	UXO Tech II	**8.5**		
Shawn Rhodes	UXO Tech I	**8.5**		
Robert Smith	UXO Tech I	**8.5**		
Lynelle Brode	GEO	**8.5**		
Rebekah McCoy	Enviromental	**0**		
	Totals	**76.5**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM 61				**1**		**1**
GPS			**1**			**1**
Schonstedts		**1**	**6**			**7**
Trucks		**1**	**1**			**2**
Van				**1**		**1**
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE
Jimmy McGowan	DPW	See UXOSO and USACE Rep.

WEATHER CONDITIONS

PRECIPITATION WITHIN	TEMPERATURE RANGE:	WEATHER CONDITIONS:
LAST 24 HOURS: 0	**75 to 97**	**Sunny**

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today: Jeff Brewer

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD
(to include donor materials)

ID & CONDITION	LOCATION	DISPOSITION	COMMENTS
40mm Bofors	G18	Ft. Stewart EOD	Per Emergency resopnse guidelines, Ft Stewart EOD took possession of all MEC items.
40mm Bofors	G19	Ft. Stewart EOD	

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	119	Total # DGM grids completed	24
# of transects DGM complete today	0	# DGM transects completed today	0
Total # DGM transects complete	119	Total # DGM transects completed	46
# of pits/trenches dug	0	# grids completed today (intrusive)	5
Total # of pits/trenches dug	0	# grids completed to date (intrusive)	12
		# transects completed today (intrusive)	0
		# transects completed to date (intrusive)	0
		# digs completed today	166
		Total # digs completed	275

MEC/MPPEH/MD Data

Number of Live MEC Items Today:	2	Number of Live MEC Items To Date:	2
Number of MPPEH/MD Items Today:	0	Number of MPPEH/MD Items To Date:	0
Pounds of MD Today:	105	Pounds of MD To Date:	110
Pounds of Non-MEC Scrap Today:	37	Pounds of Non-MEC Scrap To Date:	117

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Conducted morning safety brief and operations brief at 0700. Went to the ASP and conducted instrument checks. We began intrusive operations in G18. 0830 team found 40mm Bofors in G18. All Installation personnel where contacted by the Safety Officer and EOD came out to pickup the round at 0920 to take it for disposal. Jimmy McGowen came by from DPW to speak with the Safety Officer and the USACE Rep. USACE Rep left the site at 1115. We started work in G24 next to the receiving building for the ASP at 1200. USACE Rep came back to the site so that we could go to the EOD shop and discuss what needs to be done with the MEC items found on the ASP. We spoke with them and following the previously set-up protocol, ERT will notify DPW and the ASP Manager; EOD will be called and due to the safety zone associated with the ASP, they will treat all of our calls as emergency responses. EOD will forward all response logs to USACE. The second 40mm Bofors was found in G19 and EOD came to pickup at 1530. Stopped intrusive operations at 1545. Ended the day at 1600.

Grids completed today: G17,G18, G19, G20, G24. Total targets dug: 166
Grids QC checked with the EM61: G17,G18,G24

The following grids have been accepted by the Gov per 948 #	
The following grids are ready for Government QA:	
The following grids were accepted today by UXOQCS:	4

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

TJ Fanning Date: 24-Jul-2012

Title: SUXOS

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **25 July 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
TJ Fanning	SUXOS	8		
Steve Burhans	UXOSO/UXOQC	8		
Wes Rogers	UXO Tech III	8		
James Hamel	UXO Tech II	8		
Tyler Zaal	UXO Tech II	8		
Bobby Morris	UXO Tech II	8		
Shawn Rhodes	UXO Tech I	8		
Robert Smith	UXO Tech I	8		
Lynelle Brode	GEO	8		
Rebekah McCoy	Enviromental	0		
	Totals	72	0	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM 61				1		1
GPS			1			1
Schonstedts		1	6			7
Trucks		1	1			2
Van				1		1
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN	TEMPERATURE RANGE:	WEATHER CONDITIONS:
LAST 24 HOURS: 0	75 to 97	Sunny

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today: Jeff Brewer

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)

ID & CONDITION	LOCATION	DISPOSITION	COMMENTS
40mm Bofors	G21	Ft. Stewart EOD	Per Emergency resopnse guidelines, Ft Stewart EOD Took Possession of all MEC items.
37mm AP Projectile	G22		MDAS

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	119	Total # DGM grids completed	24
# of transects DGM complete today	0	# DGM transects completed today	0
Total # DGM transects complete	119	Total # DGM transects completed	46
# of pits/trenches dug	0	# grids completed today (intrusive)	6
Total # of pits/trenches dug	0	# grids completed to date (intrusive)	18
		# transects completed today (intrusive)	0
		# transects completed to date (intrusive)	0
		# digs completed today	150
		Total # digs completed	425

MEC/MPPEH/MD Data

Number of Live MEC Items Today:	1	Number of Live MEC Items To Date:	3
Number of MPPEH/MD Items Today:	0	Number of MPPEH/MD Items To Date:	0
Pounds of MD Today:	5	Pounds of MD To Date:	115
Pounds of Non-MEC Scrap Today:	92	Pounds of Non-MEC Scrap To Date:	209

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Conducted morning safety brief and operations brief at 0645. Went to the ASP and conducted instrument checks. We began intrusive operations in G21. 0745 team found 40mm Bofors in G21. All Installation personnel were contacted by the Safety Officer. The intrusive team also found a 37mm AP projectile in G22 that was deemed MDAS. USACE Rep left the site 1030. We broke for lunch and Wes Rogers asked if I could go purchase a canopy for the team to get out of the sun on the ASP. I went to Walmart to purchase. USACE Rep returned to the site around 1230. EOD arrived on site to remove the 40mm Bofors at 1515. Geophysics recollected 16 short transects as the data quality was deemed poor when processing the data to select targets. Ended the day at 1530.

Grids completed today G21,G23, G22, G03, G07, G06. Total targets dug 150.
Grids QC checked with the EM61:G11,G13,G14,G15

The following grids have been accepted by the Gov per 948 #	
The following grids are ready for Government QA:	
The following grids were accepted today by UXOQCS:	4

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

TJ Fanning — Date: 25-Jul-2012

Title: SUXOS

FT. STEWART DAILY ACTIVITIES REPORT					DATE:	26 July 2012
CONTRACT: USACE/W912-DR-09-D-0012			PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA			
PROJECT: Delivery Order 0004			ERT PROJECT NO: 3153			
PERSONNEL HOURS (includes subcontractors)						
Name	**Position**			**Hours On-Site**	**Hours Absent**	**Reason for Absence NOTES**
TJ Fanning	SUXOS			**8.5**		
Steve Burhans	UXOSO/UXOQC			**8.5**		
Wes Rogers	UXO Tech III			**8.5**		
James Hamel	UXO Tech II			**8.5**		
Tyler Zaal	UXO Tech II			**8.5**		
Bobby Morris	UXO Tech II			**8.5**		
Shawn Rhodes	UXO Tech I			**8.5**		
Robert Smith	UXO Tech I			**8.5**		
Lynelle Brode	GEO			**8.5**		
Rebekah McCoy	Enviromental			**8**		
	Totals			**84.5**	**0**	
EQUIPMENT						
ITEM	**SUXOS**	**Safety**	**Team 1**	**Geoph.**		**Totals**
EM 61				**1**		**1**
GPS			**1**			**1**
Schonstedts		**1**	**6**			**7**
Trucks		**1**	**1**			**2**
Van				**1**		**1**
						0
						0
						0
SITE VISITORS						
NAME	**ORGANIZATION**			**PURPOSE**		
WEATHER CONDITIONS						
PRECIPITATION WITHIN	**TEMPERATURE RANGE:**			**WEATHER CONDITIONS:**		
LAST 24 HOURS: 0	**75 to 97**			**Sunny**		
VERBAL COMMUNICATIONS FROM CUSTOMER						
N/A						
USACE OE Safety Representative onsite Today: Jeff Brewer						
EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD (to include donor materials)						
ID & CONDITION	**LOCATION**		**DISPOSITION**		**COMMENTS**	

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	119	Total # DGM grids completed	24
# of transects DGM complete today	0	# DGM transects completed today	0
Total # DGM transects complete	119	Total # DGM transects completed	46
# of pits/trenches dug	0	# grids completed today (intrusive)	2
Total # of pits/trenches dug	0	# grids completed to date (intrusive)	20
		# transects completed today (intrusive)	0
		# transects completed to date (intrusive)	0
		# digs completed today	127
		Total # digs completed	552

MEC/MPPEH/MD Data

Number of Live MEC Items Today:	0	Number of Live MEC Items To Date:	3
Number of MPPEH/MD Items Today:	0	Number of MPPEH/MD Items To Date:	0
Pounds of MD Today:	0	Pounds of MD To Date:	115
Pounds of Non-MEC Scrap Today:	225	Pounds of Non-MEC Scrap To Date:	434

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Conducted morning safety brief and operations brief at 0645. Went to the ASP and conducted instrument checks. We began intrusive operations in G09. There was a 90mm AP projectile found in grid G09 at 1015; it is deemed MDAS. SUXOS, Safety Officer and USACE Rep went to Hero Road site at lunch in preparation for next week's activities. Had to modify work rest due to the heat. Geo completed reaquistion of targets on the short transects today. Environmental completed 8 random sampling locations at the AAR. Ended the day at 1545.

Grids completed today: G09,G01. Total targets dug 127.

The following grids have been accepted by the Gov per 948 #	
The following grids are ready for Government QA:	
The following grids were accepted today by UXOQCS:	0

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

TJ Fanning — Date: 26-Jul-2012

Title: SUXOS

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **27 July 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
TJ Fanning	SUXOS	8.5		
Steve Burhans	UXOSO/UXOQC	8.5		
Wes Rogers	UXO Tech III	8.5		
James Hamel	UXO Tech II	8.5		
Tyler Zaal	UXO Tech II	8.5		
Bobby Morris	UXO Tech II	8.5		
Shawn Rhodes	UXO Tech I	8.5		
Robert Smith	UXO Tech I	8.5		
Lynelle Brode	GEO	8.5		
Rebekah McCoy	Enviromental	8		
	Totals	**84.5**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM 61				1		1
GPS			1			1
Schonstedts		1	6			7
Trucks		1	1			2
Van				1		1
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN	TEMPERATURE RANGE:	WEATHER CONDITIONS:
LAST 24 HOURS: 0	75 to 97	Sunny

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today: Jeff Brewer

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD
(to include donor materials)

ID & CONDITION	LOCATION	DISPOSITION	COMMENTS

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	119	Total # DGM grids completed	24
# of transects DGM complete today	0	# DGM transects completed today	0
Total # DGM transects complete	119	Total # DGM transects completed	46
# of pits/trenches dug	0	# grids completed today (intrusive)	1
Total # of pits/trenches dug	0	# grids completed to date (intrusive)	21
		# transects completed today (intrusive)	3
		# transects completed to date (intrusive)	3
		# digs completed today	156
		Total # digs completed	708

MEC/MPPEH/MD Data

Number of Live MEC Items Today:	0	Number of Live MEC Items To Date:	3
Number of MPPEH/MD Items Today:	0	Number of MPPEH/MD Items To Date:	0
Pounds of MD Today:	1	Pounds of MD To Date:	116
Pounds of Non-MEC Scrap Today:	102	Pounds of Non-MEC Scrap To Date:	536

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Conducted morning safety brief and operations brief at 0645. Went to the ASP and conducted instrument checks. We began intrusive operations in G02. Completed all grids inside the ASP and started digging the long transects. The targets directly behind the bunkers are very hard digging and the only thing being found is rebar. I am having Lynelle pickup a tanker bar at Home Depot and they will dig those targets next week. Geo completed QC checks of 11 grids today. Environmental finished all sampling within the AAR MRS and completed 5 of the background samples. We completed operations at 1545.

Grids completed today G02.
Grids QC checked with the EM61:G03,G06,G07,G09,G12,G16,G19,G20,G21,G22,G23
Long transects completed-T2,T3,T4

The following grids have been accepted by the Gov per 948 #	
The following grids are ready for Government QA:	
The following grids were accepted today by UXOQCS:	11

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

TJ Fanning — Date: 27-Jul-2012

Title: SUXOS

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **30 July 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
TJ Fanning	SUXOS	8		
Steve Burhans	UXOSO/UXOQC	8		
Wes Rogers	UXO Tech III	8		
James Hamel	UXO Tech II	8		
Tyler Zaal	UXO Tech II	8		
Bobby Morris	UXO Tech II	8		
Shawn Rhodes	UXO Tech I	8		
Lynelle Brode	GEO	8		
Rebekah McCoy	Enviromental	8		
	Totals	**72**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM 61				1		1
GPS			1			1
Schonstedts		1	6			7
Trucks		1	1			2
Van				1		1
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN	TEMPERATURE RANGE:	WEATHER CONDITIONS:
LAST 24 HOURS: 0	75 to 97	Sunny

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today: Jeff Brewer

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD
(to include donor materials)

ID & CONDITION	LOCATION	DISPOSITION	COMMENTS

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	119	Total # DGM grids completed	24
# of transects DGM complete today	0	# DGM transects completed today	0
Total # DGM transects complete	119	Total # DGM transects completed	46
# of pits/trenches dug	5	# grids completed today (intrusive)	0
Total # of pits/trenches dug	5	# grids completed to date (intrusive)	21
		# transects completed today (intrusive)	0
		# transects completed to date (intrusive)	3
		# digs completed today	0
		Total # digs completed	708

MEC/MPPEH/MD Data

Number of Live MEC Items Today:	0	Number of Live MEC Items To Date:	3
Number of MPPEH/MD Items Today:	0	Number of MPPEH/MD Items To Date:	0
Pounds of MD Today:	0	Pounds of MD To Date:	116
Pounds of Non-MEC Scrap Today:	0	Pounds of Non-MEC Scrap To Date:	536

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Conducted morning safety brief and operations brief at 0700. We began operationsat the Hero Road site at 0745. The team began removing all of the flags and the survey tape from the site while we were waiting for the mini-ex to arrive. We got the mini-ex in and checked it out and took pictures for damage purposes. The team began digging the trenches at 0945. All 5 trenches were dug to native soil today. No evidence of dilute agent CAIS kits was found. The trenches in the Landfill are complete. T1 & T2 were dug to 4 feet; T3 & T5 were dug to 5 feet; T6 was dug to 6 feet.

Environmental completed 2 background samples, 5 of the random sampling locations in Hero Road and oversaw trenching activities to determine native soil and when digging of the trenches was complete.

Grids completed today-0
Grids QC checked with the EM61-0
Long transects completed-0

The following grids have been accepted by the Gov per 948 #	
The following grids are ready for Government QA:	
The following grids were accepted today by UXOQCS:	0

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

TJ Fanning — Date: 30-Jul-2012

Title: SUXOS

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **31 July 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
TJ Fanning	SUXOS	8.5		
Steve Burhans	UXOSO/UXOQC	8.5		
Wes Rogers	UXO Tech III	8.5		
James Hamel	UXO Tech II	8.5		
Tyler Zaal	UXO Tech II	8.5		
Bobby Morris	UXO Tech II	8.5		
Shawn Rhodes	UXO Tech I	8.5		
Andrew Torres	UXO Tech I	8.5		
Lynelle Brode	GEO	8		
Rebekah McCoy	Enviromental	8		
	Totals	84	0	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM 61				1		1
GPS			1			1
Schonstedts		1	6			7
Trucks		1	1			2
Van				1		1
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN	TEMPERATURE RANGE:	WEATHER CONDITIONS:
LAST 24 HOURS: 0	75 to 97	Sunny

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today: Jeff Brewer

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD
(to include donor materials)

ID & CONDITION	LOCATION	DISPOSITION	COMMENTS

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	119	Total # DGM grids completed	24
# of transects DGM complete today	0	# DGM transects completed today	0
Total # DGM transects complete	119	Total # DGM transects completed	46
# of pits/trenches dug	0	# grids completed today (intrusive)	0
Total # of pits/trenches dug	5	# grids completed to date (intrusive)	21
		# transects completed today (intrusive)	3
		# transects completed to date (intrusive)	6
		# digs completed today	179
		Total # digs completed	887

MEC/MPPEH/MD Data

Number of Live MEC Items Today:	0	Number of Live MEC Items To Date:	3
Number of MPPEH/MD Items Today:	0	Number of MPPEH/MD Items To Date:	0
Pounds of MD Today:	0	Pounds of MD To Date:	116
Pounds of Non-MEC Scrap Today:	77	Pounds of Non-MEC Scrap To Date:	613

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Conducted morning safety brief and operations brief at 0645. Rebekah and Lynelle went to the Hero Road site to continue with soil sampling and documenting trench soils/anomalies. The UXO team continued to work in the ASP. We are working on completing the transects inside the ASP. We are having the mini-ex moved over to the ASP on Wed morning to dig out the deep targets that are in the hard soil between the bunkers.

Environmental completed the remaining random samples at Hero Road, collected all samples from the trenches, and documented in writing and with photographs trench conditions, soil types, and anomalies causing responses in geophysics work.

Grids completed today-0
Grids QC checked with the EM61-0
Long transects completed-3

The following grids have been accepted by the Gov per 948 #	
The following grids are ready for Government QA:	
The following grids were accepted today by UXOQCS:	0

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

TJ Fanning — Date: 31-Jul-2012

Title: SUXOS

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **1 August 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
TJ Fanning	SUXOS	**9.5**		
Steve Burhans	UXOSO/UXOQC	**11**		
Wes Rogers	UXO Tech III	**9.5**		
James Hamel	UXO Tech II	**9.5**		
Tyler Zaal	UXO Tech II	**9.5**		
Bobby Morris	UXO Tech II	**9.5**		
Shawn Rhodes	UXO Tech I	**9.5**		
Andrew Torres	UXO Tech I	**9.5**		
Lynelle Brode	GEO	**11**		
Rebekah McCoy	Enviromental	**11**		
	Totals	**99.5**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM 61				**1**		**1**
GPS			**1**			**1**
Schonstedts		**1**	**6**			**7**
Trucks		**1**	**1**			**2**
Van				**1**		**1**
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE
Officer Thompson	Federal Law Enforcement Forestry	Wanted to know why we are here.
Jimmy McGowan	DPW	Bring documents for Officer Thompson

WEATHER CONDITIONS

PRECIPITATION WITHIN	TEMPERATURE RANGE:	WEATHER CONDITIONS:
LAST 24 HOURS: 0	75 to 97	Sunny

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today: Jeff Brewer

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD
(to include donor materials)

ID & CONDITION	LOCATION	DISPOSITION	COMMENTS

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	119	Total # DGM grids completed	24
# of transects DGM complete today	0	# DGM transects completed today	0
Total # DGM transects complete	119	Total # DGM transects completed	46
# of pits/trenches dug	0	# grids completed today (intrusive)	1
Total # of pits/trenches dug	5	# grids completed to date (intrusive)	22
		# transects completed today (intrusive)	0
		# transects completed to date (intrusive)	6
		# digs completed today	207
		Total # digs completed	1094

MEC/MPPEH/MD Data

Number of Live MEC Items Today:	0	Number of Live MEC Items To Date:	3
Number of MPPEH/MD Items Today:	0	Number of MPPEH/MD Items To Date:	0
Pounds of MD Today:	0	Pounds of MD To Date:	116
Pounds of Non-MEC Scrap Today:	100	Pounds of Non-MEC Scrap To Date:	713

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Conducted morning safety brief and operations brief at 0645. Rebekah and Lynelle went to the Hero Road site to continue with soil sampling. The team continued to work in the ASP. We have completed all of the initial digs in the ASP. We have 19 digs left in the ASP that need to be dug with the mini-ex. We completed digging G04 outside the ASP. We were visited today by a Federal Law Enforcement Officer with the Forestry Service (Thompson) to question what we were doing as the area outside of the ASP fence is overseen by his department. We needed passes for our vehicles. Jimmy McGowan brought me the documents and they will be in the trucks tomorrow.

Environmental collected all 16 of the biased surface soil samples at Hero Road and 3 of the subsurface samples. The subsurface is difficult to auger through and groundwater is below 10 feet bgs.

Grids completed today-1
Grids QC checked with the EM61-0
Long transects completed-0

The following grids have been accepted by the Gov per 948 #	
The following grids are ready for Government QA:	
The following grids were accepted today by UXOQCS:	0

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

TJ Fanning Date: 1-Aug-2012

Title: SUXOS

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **2 August 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
TJ Fanning	SUXOS	10		
Steve Burhans	UXOSO/UXOQC	10		
Wes Rogers	UXO Tech III	10		
James Hamel	UXO Tech II	10		
Tyler Zaal	UXO Tech II	10		
Bobby Morris	UXO Tech II	10		
Shawn Rhodes	UXO Tech I	10		
Andrew Torres	UXO Tech I	10		
Lynelle Brode	GEO	10		
Rebekah McCoy	Enviromental	4		
	Totals	94	0	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM 61				1		1
GPS			1			1
Schonstedts		1	6			7
Trucks		1	1			2
Van				1		1
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN	TEMPERATURE RANGE:	WEATHER CONDITIONS:
LAST 24 HOURS: 0	75 to 97	Sunny

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today: Jeff Brewer

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD
(to include donor materials)

ID & CONDITION	LOCATION	DISPOSITION	COMMENTS

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	119	Total # DGM grids completed	24
# of transects DGM complete today	0	# DGM transects completed today	0
Total # DGM transects complete	119	Total # DGM transects completed	46
# of pits/trenches dug	0	# grids completed today (intrusive)	2
Total # of pits/trenches dug	5	# grids completed to date (intrusive)	24
		# transects completed today (intrusive)	2
		# transects completed to date (intrusive)	46
		# digs completed today	99
		Total # digs completed	1193

MEC/MPPEH/MD Data

Number of Live MEC Items Today:	0	Number of Live MEC Items To Date:	3
Number of MPPEH/MD Items Today:	0	Number of MPPEH/MD Items To Date:	0
Pounds of MD Today:	4	Pounds of MD To Date:	120
Pounds of Non-MEC Scrap Today:	35	Pounds of Non-MEC Scrap To Date:	748

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Conducted morning safety brief and operations brief at 0645. The team continued to work in the ASP. We completed digging the grids outside of the fence at the ASP. All mini-ex digs are complete inside the ASP. The team pulled all flags and grid stakes except those that need to be QC checked. Lynelle worked on QC checks all day.

Grids completed today: G05,G08
Grids QC checked with the EM61:G01,G02,G04,G05,G08,Short Transect 02
Long transects completed-0
Short transects completed-2

The following grids have been accepted by the Gov per 948 #	
The following grids are ready for Government QA:	
The following grids were accepted today by UXOQCS:	5

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

TJ Fanning Date: 2-Aug-2012

Title: SUXOS

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **3 August 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
TJ Fanning	SUXOS	11		
Steve Burhans	UXOSO/UXOQC	11		
Wes Rogers	UXO Tech III	11		
James Hamel	UXO Tech II	11		
Tyler Zaal	UXO Tech II	0		
Bobby Morris	UXO Tech II	11		
Shawn Rhodes	UXO Tech I	11		
Andrew Torres	UXO Tech I	11		
Lynelle Brode	GEO	11		
Rebekah McCoy	Enviromental	1		
	Totals	89	0	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM 61				1		1
GPS			1			1
Schonstedts		1	6			7
Trucks		1	1			2
Van				1		1
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN	TEMPERATURE RANGE:	WEATHER CONDITIONS:
LAST 24 HOURS: 0	75 to 97	Sunny

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today: Jeff Brewer

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD
(to include donor materials)

ID & CONDITION	LOCATION	DISPOSITION	COMMENTS

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	119	Total # DGM grids completed	24
# of transects DGM complete today	0	# DGM transects completed today	0
Total # DGM transects complete	119	Total # DGM transects completed	46
# of pits/trenches dug	0	# grids completed today (intrusive)	0
Total # of pits/trenches dug	5	# grids completed to date (intrusive)	24
		# transects completed today (intrusive)	0
		# transects completed to date (intrusive)	46
		# digs completed today	0
		Total # digs completed	1193

MEC/MPPEH/MD Data

Number of Live MEC Items Today:	0	Number of Live MEC Items To Date:	3
Number of MPPEH/MD Items Today:	0	Number of MPPEH/MD Items To Date:	0
Pounds of MD Today:	0	Pounds of MD To Date:	120
Pounds of Non-MEC Scrap Today:	0	Pounds of Non-MEC Scrap To Date:	748

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Conducted morning safety brief and operations brief at 0645. SUXOS, Geophysisict and 2 UXO personnel went over to the ASP to complete the QC checks of the remaining flags at the ASP. All QC checks were completed. We then removed all remaining flags and stakes from the ASP & removed the IVS. We then went over to the Hero Road Landfill to continue with the sampling. The team completed all removal of the debris from the first few feet from each sample site to make it easier to conduct the hand augering to take the subsamples. Lynelle completed subsurface samples Bias #3, #5, #6 and #8. A portion of the team will be demobbing on Saturday.

The following grids have been accepted by the Gov per 948 #	
The following grids are ready for Government QA:	
The following grids were accepted today by UXOQCS:	0

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

TJ Fanning Date: 3-Aug-2012

Title: SUXOS

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **6 August 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
TJ Fanning	SUXOS	9		
Steve Burhans	UXOSO/UXOQC	0		
Wes Rogers	UXO Tech III	9		
James Hamel	UXO Tech II	9		
Tyler Zaal	UXO Tech II	0		
Bobby Morris	UXO Tech II	0		
Shawn Rhodes	UXO Tech I	0		
Andrew Torres	UXO Tech I	9		
Lynelle Brode	GEO	9		
Rebekah McCoy	Enviromental	0		
	Totals	**45**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM 61				1		1
GPS			1			1
Schonstedts		1	6			7
Trucks		1	1			2
Van				1		1
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN	TEMPERATURE RANGE:	WEATHER CONDITIONS:
LAST 24 HOURS: 0	75 to 97	Sunny

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today: NA

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD
(to include donor materials)

ID & CONDITION	LOCATION	DISPOSITION	COMMENTS

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	119	Total # DGM grids completed	24
# of transects DGM complete today	0	# DGM transects completed today	0
Total # DGM transects complete	119	Total # DGM transects completed	46
# of pits/trenches dug	0	# grids completed today (intrusive)	0
Total # of pits/trenches dug	5	# grids completed to date (intrusive)	24
		# transects completed today (intrusive)	0
		# transects completed to date (intrusive)	46
		# digs completed today	0
		Total # digs completed	1193

MEC/MPPEH/MD Data

Number of Live MEC Items Today:	0	Number of Live MEC Items To Date:	3
Number of MPPEH/MD Items Today:	0	Number of MPPEH/MD Items To Date:	0
Pounds of MD Today:	0	Pounds of MD To Date:	120
Pounds of Non-MEC Scrap Today:	0	Pounds of Non-MEC Scrap To Date:	748

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Conducted morning safety brief and operations brief at 0615. Went to the Hero Road Landfill site to continue with the remaining subsurface soil samples to be collected. We had to go on a weather hold this morning for about 45 minutes. We completed 7 of the remaining 9 subsurface samples to be collected.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

TJ Fanning Date: 6-Aug-2012

Title: SUXOS

FT. STEWART DAILY ACTIVITIES REPORT **DATE:** **7 August 2012**

CONTRACT: USACE/W912-DR-09-D-0012	**PROJECT NAME: Ft. Stewart MMRP RFI, Hinesville, GA**
PROJECT: Delivery Order 0004	**ERT PROJECT NO: 3153**

PERSONNEL HOURS (includes subcontractors)

Name	Position	Hours On-Site	Hours Absent	Reason for Absence NOTES
TJ Fanning	SUXOS	6		
Steve Burhans	UXOSO/UXOQC	0		
Wes Rogers	UXO Tech III	6		
James Hamel	UXO Tech II	6		
Tyler Zaal	UXO Tech II	0		
Bobby Morris	UXO Tech II	0		
Shawn Rhodes	UXO Tech I	0		
Robert Smith	UXO Tech I	0		
Lynelle Brode	GEO	6		
Rebekah McCoy	Environmental	0		
Andrew Torres	UXO Tech I	6		
	Totals	**30**	**0**	

EQUIPMENT

ITEM	SUXOS	Safety	Team 1	Geoph.		Totals
EM 61				1		1
GPS			1			1
Schonstedts		1	6			7
Trucks		1	1			2
Van				1		1
						0
						0
						0

SITE VISITORS

NAME	ORGANIZATION	PURPOSE

WEATHER CONDITIONS

PRECIPITATION WITHIN	TEMPERATURE RANGE:	WEATHER CONDITIONS:
LAST 24 HOURS: 0	75 to 97	Sunny

VERBAL COMMUNICATIONS FROM CUSTOMER

N/A

USACE OE Safety Representative onsite Today:

EXPLOSIVE ORDNANCE-RELATED MATERIAL RECORD
(to include donor materials)

ID & CONDITION	LOCATION	DISPOSITION	COMMENTS

PRODUCTION DATA

Hero Road Trench Area		Anti-Aircraft Range 90mm - 2	
# of transects brush cleared today	0	# DGM grids completed today	0
total # transects brush cleared	119	Total # DGM grids completed	24
# of transects DGM complete today	0	# DGM transects completed today	0
Total # DGM transects complete	119	Total # DGM transects completed	46
# of pits/trenches dug	0	# grids completed today (intrusive)	0
Total # of pits/trenches dug	5	# grids completed to date (intrusive)	24
		# transects completed today (intrusive)	0
		# transects completed to date (intrusive)	46
		# digs completed today	0
		Total # digs completed	1193

MEC/MPPEH/MD Data

Number of Live MEC Items Today:	0	Number of Live MEC Items To Date:	3
Number of MPPEH/MD Items Today:	0	Number of MPPEH/MD Items To Date:	0
Pounds of MD Today:	0	Pounds of MD To Date:	120
Pounds of Non-MEC Scrap Today:	0	Pounds of Non-MEC Scrap To Date:	748

GENERAL COMMENTS

(Include any delays in work progress, any possible modifications and/or claims, evaluation of work progress to include progress on critical path, work sequence, work behind schedule, proper staffing of trades and conflicts between trades.) Narrative of what was accomplished this date to include subcontractor activities.

Conducted morning safety brief and operations brief at 0615. Went to the Hero Road Landfill site to continue with the remaining soil samples to be collected. We collected the last 2 subsurface biased soil samples. The IDW (10 gallon drum of decontamination water from soil auger) was left on site at the North end of the site. I notified the container company to pickup the container (confirmation #211000359). The mini-ex will be picked up this afternoon. Lynelle Brode is shipping the last of the samples today. The two rental trucks have been returned to Enterprise. The site has been closed down and all equipment and supplies demobilized from the Installation.

CERTIFICATION

On behalf of ERT, I certify that this report is complete and correct and to the best of my knowledge, all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications excepted as noted above.

TJ Fanning — Date: 7-Aug-2012

Title: SUXOS

REACQUISITION & DIG SHEET

Date/Time:					Site: Fort Stewart RCRA Investigation					
MRS: AAR (FTSW-002-R-01)					Grid or Transect: G1					
Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437186.0	3531900.2	23.2	-	-	No find	-	-	N	-
2	437185.4	3531902.2	21.3	-	-	No find	12"	MD	Y	frag
3	437183.4	3531903.2	307.8	-	530	-	2"	CD	Y	cable LIP
4	437178.4	3531904.0	346.4	-	495	Fence post?		agree	Y	fence LIP
5	437185.4	3531904.6	14.9	-	-	No find	12"	MD	Y	frag
6	437178.2	3531907.2	147.4	-	1197	Fence post?		agree	Y	fence LIP
7	437187.0	3531908.0	2102.9	1' NE	2170	-	4"	CD	Y	pipe LIP
8	437183.2	3531908.8	17.0	1.5' W	37.5	-	4"	CD	Y	scrap LIP
9	437183.8	3531910.8	7.5	1' W	5	-	6"	-	N	in spoils, too small to find
10	437186.0	3531913.4	29.3	-	-	No find	-	-	N	-
11	437181.6	3531913.8	6.1	-	6.5	-	4"	MD	Y	.50 cal
12	437183.8	3531913.8	6.6	-	-	No find	-	-	N	-
13	437180.2	3531917.8	8.1	1' S	12	-	24"	CD	Y	rebar LIP
14	437183.8	3531920.0	20.3	-	-	No find	10"	CD	Y	nail
15	437187.2	3531920.4	23.2	1' W	24	-	4"	CD	Y	wire LIP
16	437183.8	3531921.8	14.2	-	-	No find	-	-	N	-
17	437183.8	3531924.6	15.5	-	-	No find	4"	CD	Y	nail
18	437185.8	3531924.6	135.6	1.5' SE	135	-	6"	CD	Y	rebar LIP
19	437184.2	3531927.8	26.1	-	-	No find	-	-	N	-
20	437185.8	3531928.2	8.7	-	-	No find	-	-	N	-
21	437187.4	3531929.0	29.2	1' E	50	-	4"	CD	Y	wire
22	437185.8	3531929.6	10.1	-	-	No find	-	-	N	-
23	437185.8	3531931.4	7.5	-	-	No find	-	-	N	-
24	437181.0	3531932.6	100.0	2' W	101.5	-			N	unable to locate
25	437186.8	3531933.4	42.8	-	81	-	16"	CD	Y	scrap LIP
26	437181.0	3531935.4	760.4	2.5' SE	7850	guide wire		agree	Y	LIP

N/C = no contact
"no find" is a location where the mV value does not change within 2 feet of the flag, meaning there is no detectable metal in the ground.
LIP = Left in place

REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G1**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
27	437183.2	3531936.6	79.8	-	94	-	14"	CD	Y	rebar LIP
28	437185.0	3531937.6	95.4	1' N	141	-	4"	CD	Y	rebar shared w/30
29	437180.6	3531938.6	36.8	-	-	telephone pole		-	Y	-
30	437184.4	3531938.6	56.5	1' S	84	-	-	-	Y	rebar shared w/28 LIP
31	437181.6	3531938.8	7.9	1.5' S	13	-	6"	CD	Y	washer
32	437186.8	3531941.2	100.9	2' NE	173	-	4"	CD	Y	wire LIP
33	437180.8	3531941.4	15.9	-	16	-	10"	CD	Y	rebar LIP
34	437182.2	3531941.6	27.7	-	27	SEED	4"	SEED	Y	-
35	437185.6	3531942.2	26.4	-	-	No find	-	-	N	-
36	437182.2	3531944.6	5.7	-	-	No find	-	-	N	-
37	437185.2	3531946.4	40.8	-	-	No find	4"	???	N	too small to recover
38	437185.8	3531948.2	19.9	-	-	No find	4"	CD	Y	bolt
39	437180.2	3531949.2	220.5	4' SW	262	-	6"	CD	Y	angle iron
40	437185.0	3531950.6	10.4	-	-	No find	5"	CD	Y	wire
41	437180.2	3531951.6	79.1	4' W	56	hill side	2"	CD	Y	wire LIP
42	437183.6	3531951.6	11.6	-	11	-	18"	CD	Y	co-joined w/44
43	437185.0	3531951.6	16.2	1.5' N	209	-	12"	CD	Y	bolt
44	437183.8	3531952.6	10.4	-	13		18"	CD	Y	co-joined w/42
45	437185.0	3531954.0	39.2	-	-	No find	12"	CD	Y	banding
46	437186.4	3531955.6	30.5	2.5' E	38	-	8"	CD	Y	wire LIP
47	437186.4	3531961.6	10.3	1' NE	10	-	6"	CD	Y	wire
48	437182.8	3531963.6	8.1	-	-	No find	-	-	N	-
49	437186.4	3531964.0	67.6	-	87	-	2"	CD	Y	wire LIP
50	437184.6	3531964.4	1002.3	1' N	1123	-	3"	CD	Y	screen LIP
51	437180.2	3531965.6	10.9	1' N	12.3	-	18"	CD	Y	rebar LIP
52	437182.6	3531965.8	5.1	-	-	No find	6"	CD	Y	wire
53	437184.2	3531967.2	15.6	-	-	No find	-	-	N	-
54	437180.2	3531968.6	2024.7	-	3100	surface	surface	CD	Y	fence post LIP
55	437184.2	3531971.2	29.9	-	-	No find	-	-	N	-
56	437184.6	3531972.2	17.8	-	-	No find	-	-	N	-
57	437187.0	3531972.6	7.7	2' SE	9.5	-	4"	CD	Y	bolt
58	437184.4	3531973.6	44.1	-	-	No find	8"	CD	Y	nail
59	437184.8	3531979.4	89.9	-	-	No find	-	-	N	-

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G1**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
60	437184.8	3531981.6	40.6	-	-	No find	-	-	N	-
61	437181.4	3531982.6	6.4	-	-	No find	-	-	N	-
62	437186.2	3531983.0	148.5	-	176	-	18"	CD	Y	grounding rod LIP
63	437184.0	3531983.8	39.7	-	-	No find	-	-	N	-
64	437179.2	3531985.2	56.3	1' N	123	-	6"	CD	Y	rebar LIP
65	437184.8	3531985.6	55.5	-	-	No find			N	
66	437181.4	3531987.4	5.4	-	-	No find	6"	CD	Y	scrap
67	437182.8	3531987.4	11.7	2.5' W	17	-	12"	CD	Y	rebar LIP
68	437184.0	3531989.8	36.2	-	-	No find	-	-	N	-
69	437185.6	3531989.8	9.3	-	7	-	3"	CD	Y	wire LIP
70	437186.8	3531991.6	5.1	-	-	No find	surface	MD	Y	.50 cal
71	437184.6	3531992.4	29.4	-	-	No find	-	-	N	-
72	437182.8	3531994.0	5.9	-	-	No find	-	-	N	-
73	437184.4	3531995.8	63.7	-	-	No find	-	-	N	-
74	437181.2	3531996.8	78.8	1' S	114	-	3"	CD	Y	rebar LIP
75	437186.8	3531997.2	94.1	2' E	82	-	3"	CD	Y	rebar LIP
76	437179.0	3531997.4	16.3	1' N	30	-	20"	CD	Y	rebar LIP
77	437184.6	3531998.4	98.6	1.5' SE	113	-	1"	CD	Y	metal bar
78	437185.2	3532000.2	106.4	2' SE	108	-	2"	CD	Y	metal bar

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G2**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437272.7	3531893.2	23.9	3.5' S	850	guide wire		agree	Y	deadmain LIP
2	437276.7	3531893.3	261.4	2.5' E	582	telephone pole		CD	Y	telephone pole
3	437311.8	3531893.4	5.6	1' W	5.8	-	5"	CD	Y	nugget
4	437322.2	3531893.7	849.5	3' S	-	telephone pole		agree	Y	LIP
5	437247.6	3531894.2	85.6	-	91	-	4"	CD	Y	concrete w/wire
6	437237.4	3531894.2	42.2	-	55	-	3"	CD	Y	cutting wheel
7	437261.8	3531894.8	101.7	-	122	-	4"	CD	Y	concrete & clamp
8	437241.6	3531895.0	36.9	-	-	no find	-	no find	N	-
9	437332.6	3531895.5	11.2	-	14	-	5"	MD	Y	.50 cal
10	437256.0	3531895.6	7.8	-	-	no find	-	no find	N	-
11	437262.6	3531895.8	52.0	1' S	72	-	-	-	N	might be part of 7
12	437251.0	3531895.8	15.6	-	-	no find	-	no find	N	-
13	437272.8	3531895.8	6.4	-	-	no find	-	no find	N	-
14	437267.8	3531895.8	7.0	-	-	no find	-	no find	N	-
15	437290.0	3531896.0	5.0	2' W	13.8	-	6"	MD	Y	.50 cal
16	437281.4	3531896.0	12.1	-	-	no find	-	no find	N	-
17	437315.8	3531896.2	30.5	1.5' SW	35	SEED	6"	SEED	Y	-
18	437276.8	3531897.0	80.3	1' W	88	utility	26"	CD	Y	utility line
19	437321.6	3531897.0	20.1	-	-	no find	-	-	N	-
20	437256.6	3531897.2	10.8	-	11	-	14"	CD	Y	rebar
21	437312.6	3531897.8	5.6	2' W	7.5	-	8"	MD	Y	frag
22	437323.3	3531897.9	13.5	2.5' S	15	-	8"	CD	Y	pipe
23	437333.7	3531898.0	12.5	-	-	no find	-	-	N	-
24	437261.2	3531898.0	15.4	1' E	19	-	12"	CD	Y	nails
25	437246.2	3531898.0	1386.9	1' N	1411	-	2"	CD	Y	concrete w/wire
26	437276.0	3531898.4	76.9	-	76	-		CD	Y	utility line

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G2**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
27	437234.4	3531899.0	5.9	2' N	6.5	-	3"	CD	Y	bolt
28	437253.4	3531899.0	15.3	-	15.3	-	4"	CD	Y	5 gal lid LIP
29	437240.0	3531899.2	316.9	1.5' SW	523	-	1"	CD	Y	rebar LIP
30	437276.2	3531899.6	52.2	-	62	-		CD	Y	culvert
31	437302.6	3531899.8	9.6	1' W	17	-	5"	MD	Y	cartridge
32	437318.2	3531899.8	12037.8	-	1237.8	culvert		CD	Y	culvert
33	437261.8	3531900.0	48.7	1.5' E	53	-	4"	CD	Y	rebar LIP
34	437292.4	3531900.2	7.9	2' NW	20.5	-	6"	CD	Y	scrap
35	437277.0	3531900.4	45.8	1' W	52	-	-	-	N	-
36	437250.6	3531900.8	230.4	1.5' W	233	-	6"	CD	Y	pipe LIP
37	437318.0	3531901.0	10531.9	-	1100	culvert		CD	Y	culvert
38	437311.0	3531901.0	40.8	1.5' N	50	-	4"	MD	Y	spacer
39	437333.8	3531901.2	22.6	1.5' E	29	-	8"	CD	Y	scrap
40	437242.2	3531901.2	6480.4	-	7000	culvert	2"	CD	Y	culvert
41	437248.4	3531901.2	20.5	-	40	-	2"	CD	Y	wire
42	437234.4	3531901.8	8.5	2' W	9	-	2"	CD	Y	nail
43	437238.4	3531901.8	330.3	2.5' N	350	steep slope	4"	CD	Y	base of fence post
44	437251.4	3531901.8	85.0	1.5' NW	93	-	8"	CD	Y	pipe LIP
45	437332.2	3531901.8	13.3	2.5' NW	13.5	-	4"	CD	Y	metal LIP
46	437254.4	3531901.8	5.8	1' N	5.2	-	2"	CD	Y	wire
47	437275.2	3531902.6	20.3	-	20	-		-	N	-
48	437281.6	3531902.6	5.5	-	6	-	8"	CD	Y	gear
49	437261.4	3531902.6	1233.4	1' N	1250	-	2"	CD shared w/56	Y	concrete base of fence
50	437253.2	3531902.8	7.4	-	-	no find	-	-	N	-
51	437317.8	3531903.0	1748.2	-	1900	culvert		CD	Y	culvert
52	437255.4	3531903.3	121.7	2' NW	100	-	8"	CD	Y	rebar LIP
53	437268.4	3531903.4	17.2	-	17	-	2"	CD	Y	wire
54	437284.7	3531903.4	33.2	2' NW	133	-	surface	CD	Y	flat bar
55	437272.0	3531903.4	102.5	2' N	112	-	2"	CD	Y	rebar LIP
56	437262.2	3531903.6	1144.3	-	-	merge w/49		CD shared w/49	N	-
57	437280.2	3531894.3	5.3	-	5.2	-		-	N	too small to find

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G3**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437430.6	3531895.7	7.4	-	8.4	-	3"	MD	Y	Base of fuze
2	437457.4	3531895.7	12.5	2' S	35	-	2"	CD	Y	grounding rod LIP
3	437390.7	3531895.7	18.6	3' S	103	Located on hillside	3"	???	Y	too small to locate
4	437469.8	3531896.3	13.0	1' NW	23	-	3"	CD	Y	wire
5	437446.3	3531896.3	6.7	1' E	7.5	-	10"	MD	Y	.50 cal
6	437436.8	3531898.3	5.4	1.5' S	4	-	8"	MD	Y	.50 cal
7	437456.3	3531899.0	26.2	1' S	82	-	1"	CD	Y	Aluminum plate
8	437442.0	3531899.8	12.3	-	42	-	8"	CD	Y	Sardine can
9	437434.5	3531900.0	5.1	-	8	-	6"	CD	Y	Broken pad lock
10	437441.0	3531900.3	11.2	-	17	-	14"	CD	Y	Fuel Filter
11	437439.3	3531900.8	6.8	-	-	No Find	-	-	N	-
12	437403.3	3531901.0	26.8	2' N	43	SEED	8"	SEED	Y	-
13	437462.8	3531901.5	22.3	2' NW	37	-	8"	MD	Y	spacer
14	437407.8	3531901.8	17.6	-	17	-	4"	CD	Y	Piece of pipe
15	437475.5	3531902.0	45.4	-	53	-	3"	CD	Y	Steel plate
16	437402.8	3531902.5	6.5	-	8.2	-	3"	CD	Y	Wire
17	437413.5	3531903.0	523.7	-	807	-	6"	MD	Y	Cartridge 155mm
18	437424.5	3531903.3	60.8	-	108	-	3"/4"	MD/CD	Y	Ordnance tube cap (MD) Gear (CD)
19	437454.0	3531903.3	7.3	-	7.2	-	6"	CD	Y	Spike
20	437434.0	3531903.3	68.0	1' N	112	-	8"	CD	Y	Track link
21	437419.8	3531903.5	63.0	-	93	-	3"	CD	Y	Piston rod
22	437441.0	3531903.8	12.3	-	20	-	12"	MD	Y	Frag
23	437451.5	3531904.0	5.8	-	10	-	4"	MD	Y	.50 cal
24	437436.5	3531904.3	36.9	-	63	-	2"	CD	Y	Scrap Metal
25	437396.3	3531904.3	31.2	2' N	49	-	1"	CD	Y	Wire
26	437428.2	3531904.5	21.8	3' N	143	Edge of grid	1"	MD	Y	Frag
27	437426.0	3531904.8	9.2	1' N	12	-	1"	CD	Y	Nut
28	437381.99	3531901.567	5.459351	-	4	-	3"	CD	Y	Wire
29	437418.018	3531899.331	211.6131	-	230	-	12"	CD	Y	Telephone Cable

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G4**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437974.6	3531923.6	87.2	-	91	-	6"	MD	Y	fuze safety (7)
2	437977.6	3531924.6	30.0	1' N	30	-	4"	MD	Y	fuze safety/cartridge
3	437976.0	3531925.0	11.2	1' N	23	-	4"	CD	Y	battery
4	437974.0	3531926.4	65.5	-	105	-	4"	MD/CD	Y	scrap (2)/wire/fuze safety
5	437979.2	3531926.8	35.6	1' W	37	-	4"	CD	Y	scrap
6	437971.8	3531927.2	34.3	1.5' S	37	-	1"	CD	Y	scrap
7	437977.6	3531927.4	40.7	-	75	-	4"	CD	Y	scrap (2)
8	437970.2	3531927.8	22.8	-	11	-	4"	CD	Y	wire
9	437973.4	3531928.0	47.7	1' N	37	-	3"	CD	Y	scrap/wire
10	437975.2	3531928.4	66.0	1' E	70	-	6"	CD	Y	scrap (7)
11	437978.4	3531929.2	47.7	1.5' W	40	-	2"	CD	Y	scrap
12	437980.2	3531929.4	23.6	1.5' W	40	-	3"	CD	Y	scrap
13	437971.6	3531930.4	69.8	-	73	-	3"	CD	Y	wire/scrap
14	437974.8	3531931.4	13.4	-	-	no find	-	CD	Y	ammo can latch
15	437979.4	3531931.8	67.6	-	71	-	3"	CD	Y	scrap
16	437971.0	3531932.0	20.9	-	-	no find	8"	CD	Y	comm wire
17	437972.8	3531932.6	12.8	-	-	no find	-	-	N	-
18	437976.0	3531933.0	59.7	1' W	59	-	3"	CD	Y	wire
19	437973.8	3531934.2	9.1	-	9	-	4"	CD	Y	scrap (2)
20	437975.8	3531934.4	11.8	-	-	no find	-	-	N	-
21	437971.6	3531935.2	41.6	-	60	-	3"	CD	Y	scrap
22	437975.2	3531935.8	11.3	1' E	12	-	3"	CD	Y	wire
23	437976.8	3531936.0	32.9	-	34	-	2"	MD	Y	fuze safety
24	437976.4	3531943.0	142.0	2' SW	1062	-	1"	CD	Y	beam
25	437977.0	3531943.6	84.7	-	104	-	5"	MD/CD	Y	fuze safety/banding
26	437978.4	3531943.8	170.1	-	176	-	6"	MD/CD	Y	wire/scrap/fuze safety

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G4**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
27	437970.4	3531944.8	2781.6	-	-	surface metal	-	-	N	-
28	437980.0	3531945.2	35.6	-	35	-	-	MD	Y	fuze safety
29	437977.6	3531945.4	27.5	-	31	-	4"	MD/CD - battery	Y	fuze safety/cartridge
30	437975.4	3531948.0	10.7	1' W	19.5	-	2"	CD	Y	battery
31	437969.8	3531948.6	9.9	-	-	no find	-	-	Y	battery
32	437975.6	3531950.0	45.2	-	46	-	3"	MD	Y	shipping plug
33	437970.0	3531950.2	12.4	-	11	-	-	CD	Y	cartridge
34	437977.6	3531950.4	11.1	1' E	19	-	6"	CD	Y	knife
35	437972.8	3531952.0	30.7	-	30	-	3"	MD	Y	fuze safety
36	437970.2	3531952.0	11.5	1' N	13	-	5"	CD	Y	bolt
37	437974.6	3531956.0	8.0	-	8	-	4"	CD	Y	scrap
38	437978.2	3531956.4	16.4	-	22	-	6"	CD	Y	scrap
39	437973.6	3531957.2	13.7	-	17	-	4"	MD	Y	fuze clip
40	437970.4	3531957.8	5.8	-	-	no find	-	CD	Y	nail
41	437972.6	3531958.8	6.0	-	3	-	-	CD	Y	cartridge
42	437971.0	3531959.2	8.5	-	-	no find	-	-	N	-
43	437977.6	3531961.2	17.2	-	18	-	4"	MD	Y	frag
44	437970.0	3531964.4	11.3	-	8	-	7"	CD	Y	scrap metal
45	437979.8	3531965.8	13.5	-	7	-	3"	CD	Y	scrap metal
46	437977.0	3531966.6	34.9	-	57	-	3"	CD	Y	scrap metal
47	437980.2	3531967.6	5.7	-	-	no find	-	-	N	-
48	437974.6	3531968.0	22.6	-	38	-	3"	CD	Y	scrap metal
49	437976.0	3531969.0	46.5	-	48	-	5"	CD	Y	scrap metal x 2
50	437974.8	3531970.0	18.6	1' W	22	-	-	CD	Y	cartridge
51	437980.0	3531971.4	21.2	-	31	-	9"	CD	Y	scrap
52	437973.8	3531971.6	44.4	-	57	SEED	6"	CD	Y	seed
53	437971.4	3531971.8	23.4	-	34	-	5"	MD	Y	casing
54	437976.2	3531971.8	22.6	-	25	-	20"	CD	Y	screwdriver/scrap
55	437979.6	3531973.0	7.6	-	6.8	-	5"	CD	Y	scrap metal
56	437975.2	3531973.0	9.9	-	19	-	1"	CD	Y	scrap metal
57	437975.2	3531975.0	25.4	1' E	29	-	6"	CD	Y	scrap metal
58	437972.4	3531976.8	12.4	1' W	12.4	-	-	MD	Y	fuze piece
59	437979.0	3531977.0	22.9	1' W	22.5	-	6"	CD	Y	scrap metal

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G4**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
60	437971.0	3531977.8	5.0	-	-	no find	-	-	N	-
61	437971.0	3531979.0	5.9	-	-	no find	-	-	N	-
62	437978.4	3531979.2	6.2	-	-	no find	-	-	N	-
63	437974.4	3531980.4	8.9	-	14	-	5"	MD/CD	Y	40 mm/scrap metal
64	437971.4	3531982.0	11.4	-	13.5	-	26"	CD	Y	scrap metal LIP
65	437970.4	3531982.8	15.1	1.5' NE	11	-	15"	CD	Y	scrap metal LIP
66	437973.8	3531983.0	15.8	-	18	-	3"	CD	Y	scrap metal
67	437979.8	3531984.0	5.0	-	5	-	7"	CD	Y	nail
68	437972.0	3531984.2	12.3	-	13	-	-	CD	Y	scrap metal
69	437975.2	3531985.8	30.8	2' W	30.3	-	2"	CD	Y	scrap metal x 2
70	437977.8	3531986.4	9.7	-	10	-	10"	CD	Y	scrap
71	437974.2	3531989.6	7.7	1' W	7.8	-	6"	MD	Y	scrap
72	437979.2	3531989.8	11.3	-	11.5	-	2"	MD	Y	shippping plate
73	437975.8	3531990.6	7.0	1' N	7	-	-	CD	Y	cartridge
74	437979.0	3531992.0	31.7	-	33	-	10"	CD	Y	scrap metal
75	437970.0	3531993.2	7.1	-	-	no find	-	-	N	-
76	437973.6	3531993.2	6.5	1' W	8.2	-	4"	CD	Y	scrap metal
77	437979.0	3531994.2	10.0	-	4	-	12"	CD	Y	scrap metal LIP
78	437977.0	3531994.6	5.3	2' W	5.3	-	6"	CD	Y	scrap metal
79	437970.8	3531996.6	5.7	-	-	no find	-	-	N	-
80	437976.8	3531997.8	5.6	-	7.9	-	8"	CD	Y	scrap metal LIP
81	437970.0	3531999.0	11.9	-	-	no find	-	-	N	-
82	437979.6	3532000.2	6.3	-	6.8	-	10"	CD	Y	scrap metal LIP
83	437969.8	3532000.8	10.1	-	-	no find	-	-	N	-
84	437974.8	3532001.2	24.0	1.5' W	37	-	6"	MD	Y	shipping plug
85	437976.6	3532002.4	10.3	1' W	16	-	8"	CD	Y	scrap metal
86	437971.2	3532003.6	12.3	-	-	no find	-	-	N	-
87	437977.2	3532004.0	69.7	1' S	69.7	-	6"	CD	Y	scrap LIP
88	437974.6	3532004.4	20.2	1' N	21.8	-	8"	CD	Y	washer/nail
89	437971.2	3532004.8	12.1	-	-	no find	-	-	N	-
90	437970.2	3532006.4	10.5	-	-	no find	8"	CD	Y	nugget
91	437977.4	3532006.8	131.0	-	121	-	8"	CD	Y	rebar LIP
92	437971.2	3532006.8	21.4	1' N	13	-	4"	MD	Y	.50 cal/scrap

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LIP = Left in place

REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G4**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
93	437974.6	3532007.0	5.6	-	5.6	-	-	CD	Y	scrap metal
94	437970.6	3532009.4	6.5	1.5' W	4	-	-	CD	Y	ts
95	437978.2	3532012.2	9.5	-	10.5	-	3"	MD	Y	fuze clip
96	437976.0	3532013.2	9.0	-	-	no find	6"	MD	Y	.50 cal
97	437976.0	3532014.6	8.3	1.5' NW	9.5	-	6"	CD	Y	scrap
98	437975.0	3532017.4	5.3	-	-	no find	-	-	N	-
99	437970.6	3532017.8	43.1	-	43	-	3"	MD	Y	shipping plug
100	437977.2	3532018.0	11.2	1' E	13	-	8"	CD	Y	link/railroad spike
101	437973.0	3532019.2	212.5	-	310	-	4"	CD	Y	lid
102	437977.4	3532019.8	6.7	-	-	no find	-	-	N	-
103	437978.8	3532020.2	6.6	1.5' N	5	-	5"	MD	Y	frag
104	437975.2	3532020.8	5.4	1.5' N	4.9	no find	-	MD	Y	.50 cal
105	437970.0	3532020.8	32.4	-	36	-	16"	CD	Y	rebar LIP
106	437975.2	3532021.6	7.5	-	6	-	6"	CD	Y	scrap metal
107	437979.0	3532022.8	7.5	-	-	no find	-	-	N	-
108	437975.4	3532024.0	17.4	-	20	-	6"	MD	Y	link/cartridge
109	437971.0	3532024.2	25.2	-	31	-	3"	CD	Y	wire/pin
110	437981.31	3531950.9	14.3	-	14	-	-	CD	Y	cart
111	437981.28	3531958.3	12.4	-	11.2	-	-	CD	Y	brass lock
112	437981.14	3531964.6	16.15	-	-	no find	-	-	N	-
113	437982.15	3531930.4	59.2	-	64	-	1"	CD	Y	scrap

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G5**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437710.2	3532221.8	135.2	-	177	-	10"	CD	Y	banding LIP
2	437712.0	3532222.4	12.1	-	16	-	10"	CD	Y	banding LIP
3	437707.8	3532224.0	27.3	-	37	-	8"	CD	Y	scrap metal
4	437713.4	3532224.2	19.9	-	28	-	6"	CD	Y	cargo strap
5	437702.6	3532226.6	86.0	1' W	90	-	4"	CD	Y	rebar LIP
6	437719.2	3532226.8	13.1	1' N	23	-	6"	CD	Y	scrap metal
7	437700.2	3532228.2	23.5	-	40	-	8"	CD	Y	rebar LIP
8	437716.0	3532228.2	5.8	1' N	12	-	5"	CD	Y	scrap metal
9	437699.8	3532230.6	31.9	1' S	40	-	3"	CD	Y	rebar
10	437696.6	3532230.8	53.6	-	58	-	6"	CD	Y	rebar LIP
11	437695.0	3532231.0	102.3	-	120	-	6"	CD	Y	rebar/stake
12	437689.8	3532234.6	42.9	-	56	-	4"	CD	Y	rebar
13	437696.2	3532235.0	8.7	-	45	-	5"	CD	Y	pin
14	437686.0	3532238.8	22.1	1' N	28	-	10"	CD	Y	wire LIP
15	437685.2	3532240.0	11.8		13	-	8"	CD	Y	banding
16	437681.4	3532240.2	66.5	1' N	79	-	3"	CD	Y	rebar LIP
17	437682.2	3532242.4	10.9	-	12	-	6"	CD	Y	cargo strap
18	437674.4	3532245.2	32.9	-	34	-	3"	CD	Y	wire
19	437686.0	3532247.8	7.1	-	-	no find	3"	NF/CD	Y	scrap metal
20	437676.4	3532249.2	23.8	-	38	-	8"	CD	Y	rebar LIP
21	437681.2	3532250.0	7.2	-	7.2	-	3"	MD	Y	.50 cal
22	437677.6	3532251.8	31.9	1' E	32	-	4"	CD	Y	scrap metal
23	437661.8	3532253.6	5.7	-	5.7	-	5"	MD	Y	frag
24	437677.8	3532254.4	7.2	-	7	-	-	CD	Y	nail
25	437676.4	3532254.6	6.6	-	5	-	3"	MD	Y	.50 cal
26	437665.4	3532256.2	22.8	-	24	-	3"	CD	Y	scrap metal

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G5**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
27	437663.2	3532256.8	9.3	-	13	-	18"	MD	Y	expended smoke grenade
28	437672.2	3532257.2	5.2	-	5	-	1"	CD	Y	scrap metal
29	437661.2	3532258.6	11.1	-	17	-	6"	MD	Y	.50 cal
30	437659.6	3532259.2	7.9	-	7	-	4"	MD	Y	.50 cal
31	437654.8	3532259.6	7.9	-	9	-	4"	CD	Y	scrap metal
32	437656.2	3532260.6	5.6	-	5	-	3"	-	Y	too small
33	437656.8	3532263.6	34.3	-	34	SEED	8"	-	Y	seed
34	437647.6	3532266.0	5.5	-	6	-	6"	MD	Y	.50 cal
35	437650.6	3532268.0	6.0	-	-	no find	6"	CD	Y	scrap metal
36	437649.0	3532270.2	6.0	-	9.5	-	8"	CD	Y	scrap metal
37	437637.6	3532270.4	14.3	-	24	-	6"	MD	Y	.50 cal
38	437651.6	3532271.2	5.6	-	6	-	6"	CD	Y	scrap metal
39	437644.2	3532273.4	7.8	-	9	-	4"	CD	Y	scrap metal
40	437646.2	3532274.0	5.1	-	6	-	8"	MD	Y	.50 cal
41	437636.0	3532274.2	6.4	-	7	-	7"	CD	Y	scrap metal
42	437644.4	3532278.0	6.5	-	6.5	-	5"	CD	Y	scrap metal
43	437719.2	3532211.7	48.1	1' W	48	-	3"	CD	Y	rod
44	437721.6	3532215.6	9.6	1' N	12	-	4"	CD	Y	wire
45	437719.8	3532219.6	21.0	-	27	-	6"	CD	Y	scrap metal (2)

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G06**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437541.5	3532293.3	21.1	No Move	34	-	8"	CD	Y	Aluminum Can
2	437548.5	3532296.3	6.4	1' N	11	-	6"	MD	Y	.50 cal
3	437544.8	3532298.0	117.2	No Move	-	Utility Pole	-	-	Y	Grounding Rod
4	437528.5	3532301.5	10.8	1' N	13	-	6"	CD	Y	Nugget
5	437532.5	3532306.0	25.4	1' N	29	-	30"	CD	Y	Cable
6	437507.5	3532313.0	11.3	No Move	26	-	12"	CD	Y	Nail, Long
7	437509.3	3532317.0	5.7	No Move	10	-	6"	MD	Y	.50 cal
8	437512.0	3532317.3	14.2	1.5' N	33	-	16"	CD	Y	Brake pad
9	437513.8	3532318.5	7.1	1' N	8.5	-	18"	CD	Y	Brake pad
10	437510.8	3532320.8	20.0	No Move	28	-	12"	CD	Y	Brake pad
11	437503.0	3532322.5	13.4	No Move	8	-	6"	CD	Y	Bearing race
12	437507.0	3532323.3	722.6	No Move	-	-	8"	CD	Y	Grounding rod
13	437505.8	3532324.0	7.8	No Move	8	-	6"	CD	Y	Staple
14	437494.8	3532325.0	8.4	No Move	13	-	6"	MD	Y	.50 cal
15	437504.5	3532325.5	12.1	No Move	15	-	30"	CD	Y	Hook???
16	437499.5	3532327.5	5.5	No Move	8.5	-	6"	CD	Y	Nugget
17	437491.3	3532329.3	10.6	1' W	13	-	8"	CD	Y	Nugget
18	437492.3	3532330.3	5.1	No Move	6	-	12"	CD	Y	Nugget
19	437488.3	3532333.3	33.9	No Move	46	SEED	8"	CD	Y	SEED
20	437468.5	3532340.5	10.5	1.5' W	11	-	8"	CD	Y	Steel plate
21	437477.8	3532341.0	6.6	No Move	10	-	6"	CD	Y	Slag
22	437471.8	3532343.0	9.9	No Move	19	-	8"	CD	Y	Nugget
23	437474.3	3532345.0	6.8	No Move	-	No Find	-	-	N	-
24	437462.3	3532345.8	109.4	1' W	123	-	4"	CD	Y	Twisted rebar
25	437468.5	3532346.0	5.8	No Move	4	-	12"	CD	Y	Pocket knife
26	437465.5	3532349.0	5.8	No Move	7	-	14"	CD	Y	Nugget
27	437468.0	3532349.5	35.5	No Move	-	Utility Pole	12"	CD	Y	Grounding rod
28	437500.3	3532316.7	10.7	No Move	12	QA Target	12"	CD	Y	Wire
29	437522.3	3532306.5	5.7	No Move	7.2	QA Target	8"	MD	Y	Fuze

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G07**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth		Resolved?	Comments
1	437288.8	3532346.3	9.9	No Move	11	-	8"	CD	Y	Wire
2	437298.0	3532348.0	9.0	1' N	10	-	4"	???	Y	Too small to find
3	437302.0	3532347.3	5.8	No Move	9	-	6"	MD	Y	Frag
4	437302.3	3532344.0	5.7	1' N	12	-	14"	MD	Y	.50 cal
5	437313.3	3532346.3	39.0	1' N	59	-	6"	CD	Y	Can
6	437331.5	3532344.8	50.6	1.5' N	65	-	12"	???	Y	Lots of small nuggets
7	437333.8	3532343.3	10.2	No Move	12	-	8"	CD	Y	Scrap
8	437334.0	3532348.0	6.4	2.5' S	9	-	6"	CD	Y	Same as #6
9	437338.3	3532347.5	10.5	No Move	15	-	8"	MD	Y	Frag
10	437339.3	3532345.3	7.3	No Move	5	-	6"	CD	Y	Slag
11	437342.5	3532342.8	27.8	2' E	50	-	3"	CD	Y	Pipe
12	437343.5	3532347.5	5.3	1' N	13	-	4"	CD	Y	Small Noisy Nugget
13	437343.1	3532349.0	8.4	No Move	9	-	4"	???	Y	Moved in spoils
14	437346.5	3532347.5	10.4	No Move	13	-	8"	MD	Y	.50 cal
15	437347.5	3532342.5	24.4	1.5' S	33	SEED	6"	CD	Y	SEED
16	437348.5	3532340.5	7.2	1' S	5	-	9"	CD	Y	Wire
17	437351.5	3532345.5	6.7	No Move	9.5	-	8"	MD	Y	.50 cal
18	437355.3	3532345.5	6.4	1' N	10	-	12"	CD	Y	Slag
19	437356.3	3532340.0	19.9	1.5' SE	19	-	8"	CD	Y	Wire
20	437359.3	3532346.3	5.5	1.5' S	6	-	8"	CD	Y	Slag
21	437359.3	3532340.5	5.6	2' S	6	-	12"	CD	Y	Concrete & Wire
22	437364.3	3532346.0	5.6	1' N	7	-	14"	CD	Y	Slag
23	437364.8	3532340.8	5.5	3' S	8	Locataed on Hillside	10"	CD	Y	Rust Flakes
24	437366.0	3532345.8	10.1	No Move	11	-	8"	CD	Y	Slag
25	437370.5	3532345.0	5.8	2' N	14	-	8"	CD	Y	Too small to find
26	437295.8	3532338.5	12.5	No Move	-	No Find	5"/2"	MD	Y	wire/frag
27	437319.2	3532348.0	322.0	No Move	-	Utility Pole	-	CD	Y	Surface Feature

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G8**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437190.2	3532358.4	7.6	-	7.8	-	6"	CD	Y	scrap
2	437282.2	3532358.4	9.1	-	8	-	6"	MD	Y	.50 cal
3	437199.2	3532358.6	8.2	-	12	-	4"	MD	Y	.50 cal
4	437218.4	3532359.0	19.8	-	20	-	2"	CD	Y	wire LIP
5	437230.8	3532359.4	7.7	-	11	-	4"	CD	Y	scrap
6	437267.6	3532359.4	54.5	1' NE	72	-	6"	CD	Y	pin/wrench
7	437247.0	3532359.6	15.6	1' S	19	-	2"	CD	Y	wire LIP
8	437198.6	3532359.6	10.1	-	11	-	4"	CD	Y	scrap
9	437249.0	3532359.8	5.0	-	3	-	4"	CD	Y	scrap
10	437280.2	3532360.0	22.1	-	27	SEED	6"	CD	Y	seed
11	437219.4	3532360.2	32.0	-	30	-	2"	CD	Y	wire LIP
12	437238.4	3532360.4	5.1	-	-	no find	-	-	N	-
13	437240.2	3532361.0	11.5	-	13	-	4"	CD	Y	scrap
14	437210.2	3532361.2	6.3	-	6.6	-	6"	CD	Y	CO2 cartridge
15	437277.8	3532361.4	6.9	-	4.5	-	8"	CD	Y	banding LIP
16	437214.8	3532361.6	6.0	-	10	-	6"	CD	Y	wire
17	437267.0	3532361.8	8.1	-	8	-	2"	MD	Y	.50 cal
18	437227.6	3532361.8	37.8	-	47	-	8"	CD	Y	scrap
19	437221.0	3532361.8	5.2	-	5	-	4"	CD	Y	wire
20	437243.4	3532361.8	5.2	-	5	-	4"	CD	Y	slag LIP
21	437188.0	3532362.0	5.7	-	6	-	4"	CD	Y	scrap
22	437195.6	3532362.2	7.3	-	7.5	-	4"	CD	Y	scrap
23	437189.6	3532362.2	11.4	1' S	11.4	-	3"	CD	Y	scrap
24	437274.0	3532362.2	5.8	1' N	8	-	4"	CD	Y	nugget
25	437259.0	3532362.4	6.7	1' S	6.7	-	3"	MD	Y	.50 cal
26	437260.8	3532362.4	15.1	1.5' N	20	-	2"	CD	Y	wire LIP

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G8**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
27	437217.6	3532362.4	10.7	-	10.7	-	4"	CD	Y	wire
28	437224.2	3532362.6	6.0	-	6	-	3"	CD	Y	scrap
29	437219.0	3532362.6	6.9	-	11	-	4"	CD	Y	wire
30	437200.8	3532362.6	5.8	-	10	-	6"	CD	Y	scrap
31	437283.0	3532362.8	17.0	-	17	-	4"	CD	Y	scrap
32	437243.8	3532363.4	8.0	-	8	-	5"	CD	Y	scrap
33	437272.2	3532363.6	6.2	1' E	6.2	-	-	-	N	-
34	437211.4	3532363.8	15.3	-	20	-	5"	CD	Y	scrap (2)
35	437260.0	3532364.0	6.6	-	-	no find	-	-	N	-
36	437229.4	3532364.0	16.5	-	17	-	3"	CD	Y	scrap
37	437265.2	3532364.4	5.0	-	-	no find	-	CD	Y	BB (2)
38	437225.2	3532364.4	12.0	1' N	12	-	6"	CD	Y	scrap
39	437215.2	3532364.6	15.0	1' W	12	-	6"	CD	Y	wire LIP
40	437187.8	3532364.8	42.5	1' E	53	-	3"	CD	Y	round bar
41	437285.6	3532365.0	14.8	1' S	15.7	-	4"	CD	Y	scrap
42	437193.0	3532365.2	5.7	-	6.8	-	6"	MD	Y	.50 cal
43	437211.4	3532365.2	5.3	-	5	-	4"	CD	Y	scrap
44	437262.4	3532365.4	8.3	-	5	-	5"	CD	Y	wire LIP
45	437202.6	3532366.0	5.0	-	4	-	6"	CD	Y	nugget LIP
46	437265.2	3532366.2	6.9	-	7	-	6"	MD	Y	.50 cal
47	437229.6	3532366.2	14.0	-	13	-	3"	CD	Y	scrap
48	437200.2	3532366.6	5.5	-	4.9	-	3"	MD	Y	.50 cal
49	437273.8	3532366.6	5.4	-	5	-	-	CD	Y	too small
50	437206.0	3532367.4	55.0	-	57	-	4"	CD	Y	round bar
51	437263.6	3532367.4	7.4	-	7.4	-	6"	CD	Y	scrap
52	437217.6	3532368.0	5.3	1' N	3	-	3"	CD	Y	scrap (TS)
53	437208.0	3532368.2	5.2	-	5.5	-	-	CD	Y	nugget
54	437195.4	3532368.6	10.4	1' S	17	-	4"	CD	Y	scrap

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G9**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437173.8	3532249.0	43.7	No Move		Fence Post	3"	CD	Y	Wire
2	437173.5	3532252.0	32.8	No Move		Fence Post		CD	Y	Agree - Fence LIP
3	437183.3	3532252.0	27.9	3.0' S	25	-	3"	CD	Y	Pin
4	437183.0	3532254.8	12.6	4.0' E	110	Peak outside of grid	4"	CD	Y	Rod
5	437177.0	3532257.5	68.8	No Move	101	-	3"	CD	Y	Rebar
6	437176.3	3532259.5	9.1	No Move	11	-	3"	CD	Y	Wire LIP
7	437180.0	3532260.3	6.3	No Move	10	-	8"	CD	Y	Bolt
8	437181.5	3532260.3	10.4	No Move	10	-	6"	CD	Y	Nugget
9	437183.3	3532262.3	868.3	2' E	1100	Sign post		CD	Y	Agree - Sign LIP
10	437176.8	3532263.3	159.4	No Move	225	-	10"	MD	Y	90mm AP
11	437178.8	3532267.0	9.7	1' W	7	-	8"	MD	Y	Frag
12	437183.3	3532267.5	23.4	4.5' NE	400	Peak outside of grid	5"	CD	Y	Pipe LIP
13	437173.5	3532268.0	19.8	No Move		Fence Post		CD	Y	Agree - Fence LIP
14	437180.3	3532269.0	990.3	3' NE	990	Culvert	2"	CD	Y	Screen
15	437173.5	3532277.0	26.0	No Move		Fence Post		CD	Y	Other end of #17 Not dug-SUXOS
16	437183.3	3532277.8	14.2	No Move	14	-	12"	CD	Y	Rebar LIP
17	437174.5	3532278.0	83.0	No Move		No Find - Fence/Pole?	40"	CD	Y	Steel Bar LIP
18	437182.8	3532284.0	7.5	2' E	8	Steep Slope	4"	CD	Y	2 nails
19	437177.5	3532284.3	16.7	1' N	25	-	8"	CD	Y	Rebar
20	437183.5	3532285.0	6.4	No Move	4	-	2"	CD	Y	Nail
21	437174.3	3532285.5	38.4	No Move		No Find - Fence?		CD	Y	Agree - Fence
22	437180.5	3532290.3	9.3	1' E	10	-	10"	CD	Y	Piece of Iron Bar
23	437179.3	3532291.3	6.8	No Move	8	-	20"	CD	Y	Rebar
24	437175.5	3532291.8	7.8	2.5' W	12	Steep Slope	<6"	???	N	Too small to find
25	437181.3	3532292.8	6.8	1.5' SE	11	-	6"	CD	Y	Nail
26	437183.5	3532293.0	44.5	2.0' E	54	Steep Slope	8"	CD	Y	Rebar

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LIP = Left in place

REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G9**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
27	437181.0	3532299.8	11.7	1.5' E	21	-	4"	CD	Y	Nails
28	437178.5	3532301.0	73.7	No Move	108	-	4"	CD	Y	Rebar LIP
29	437173.0	3532302.0	23.4	No Move		Fence Post		CD	Y	Agree - Fence Post LIP
30	437175.0	3532302.5	431.9	No Move		Utility Pole		CD	Y	Power Pole LIP
31	437183.3	3532306.0	12.3	1' N	9	-	20"	CD	Y	12" Rebar
32	437182.5	3532307.8	118.8	1' E	145	-	4"	CD	Y	Steel Bar
33	437183.8	3532309.5	10.2	No Move	15	-	3"	CD	Y	Steel Bar
34	437183.8	3532312.0	37.2	No Move	128	-	4"	CD	Y	Rebar
35	437182.8	3532313.3	13.1	No Move	11	-	12"	CD	Y	Nail
36	437179.0	3532313.8	26.3	No Move	67	-	10"	CD	Y	Metal Bar
37	437179.0	3532315.0	19.5	No Move	52	SEED	8"	CD	Y	SEED
38	437179.0	3532316.3	8.5	No Move	17	-	12"	CD	Y	Wire
39	437175.3	3532320.0	18.1	2' W	25	-	6"	CD	Y	6" Rebar
40	437179.5	3532322.8	50.2	1.5' NE	77	-	8"	CD	Y	Iron Bar
41	437174.0	3532325.0	171.7	No Move	325	-	4"	CD	Y	12" of 3" angle iron
42	437175.0	3532326.5	110.1	1' N	132	-	0"	CD	Y	Flat Bar
43	437174.0	3532334.3	13.1	No Move	19	-	15"	CD	Y	8" Rebar
44	437183.5	3532335.8	15.2	No Move		No Find - Street Sign?		CD	Y	Agree - Sign
45	437176.5	3532336.3	6.7	No Move	7	-	surface	CD	Y	Large screw
46	437173.8	3532338.3	10.6	No Move		No Find - Culvert?	24"	CD	Y	12" pc rebar
47	437182.8	3532341.5	5.8	No Move	3	-	14"/12"6"	CD	Y	nail/nut/nugget
48	437175.3	3532345.8	109.4	No Move		Utility Pole		CD	Y	Utility Pole
49	437183.75	3532345.5	13.5	1' N	15	-	24"	CD	Y	Grounding Rod

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LIP = Left in place

REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G10**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437480.8	3532216.4	5.2	-	-	no find	-	-	N	no find
2	437474.2	3532219.4	15.4	1' W	16	-	6"	MD/CD	Y	.50 cal and slag
3	437479.6	3532219.4	5.8	2' E	8	-	5"	MD	Y	.50 cal
4	437497.4	3532221.2	6.5	-	10	-	6"	MD	Y	.50 cal
5	437494.2	3532224.2	20.2	1.5' NW	94	SEED	-	seed	Y	seed
6	437496.2	3532224.6	8.0	-	13	-	2"	CD	Y	slag
7	437495.6	3532225.0	7.7	-	11	-	3"	CD	Y	slag
8	437496.8	3532227.8	6.0	-	15	-	3"	CD	Y	slag
9	437473.8	3532228.4	8.6	-	13	-	5"	MD	Y	plate or cap
10	437502.0	3532233.6	5.7	-	6	-	4"	MD	Y	.50 cal
11	437496.2	3532234.6	5.5	-	11	-	4"	MD	Y	.50 cal
12	437490.2	3532236.4	6.9	-	9	-	2"	CD	Y	slag
13	437497.0	3532245.0	5.1	-	7	-	5"	MD	Y	.50 cal

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G11**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437509.4	3532120.0	6.0	-	6	-	6"	MD	Y	.50 cal
2	437507.2	3532121.4	6.2	-	7	-	6"	CD	Y	slag
3	437534.2	3532122.4	6.7	-	10	-	4"	MD	Y	.50 cal
4	437505.6	3532125.0	5.6	-	9	-	5"	MD	Y	.50 cal
5	437515.8	3532129.0	8.3	-	11	-	4"	MD	Y	.50 cal
6	437532.8	3532131.6	5.1	-	5	-	3"	CD	Y	slag
7	437518.8	3532132.2	8.9	-	26	SEED	6"	seed	Y	seed
8	437519.6	3532132.6	12.9	-	20	-	6"	CD	Y	slag
9	437507.6	3532134.0	5.4	1' W	10	-	5"	CD	Y	slag
10	437526.0	3532137.0	6.5	-	5	-	6"	MD	Y	.50 cal
11	437531.4	3532138.2	5.2	-	4.9	-	8"	MD	Y	.50 cal
12	437523.8	3532146.8	7.1	-	7	-	3"	MD	Y	.50 cal

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G12**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437586.0	3532171.6	6.0	No Move	9	-	8"	CD	Y	Slag
2	437578.8	3532173.6	17.3	1' W	30	-	?	CD	Y	Multiple Items 3pcs
3	437583.6	3532176.2	23.6	No Move	32	SEED	6"	seed	Y	SEED
4	437585.8	3532179.6	7.7	1' N	9	-	5"	CD	Y	Slag
5	437571.8	3532180.0	5.6	No Move	8	-	4"	CD	Y	Slag
6	437582.0	3532182.2	5.7	No Move	10	-	4"	CD	Y	Slag
7	437574.2	3532182.8	6.1	No Move	7	-	3"	CD	Y	Slag
8	437584.8	3532183.4	7.3	No Move	10	-	4"	CD	Y	Chain 3 Link
9	437564.2	3532184.0	6.1	No Move	7	-	2" AVG	MD/CD	Y	Stacker Ring, Fuze Adapters & Slag
10	437577.6	3532194.2	8.1	No Move	11	-	4"	CD	Y	2 pc slag
11	437567.4	3532194.6	5.7	No Move	6	-	4"	MD	Y	.50 cal
12	437571.6	3532194.8	5.9	No Move	10	-	4"	CD	Y	3 pc slag
13	437589.2	3532195.8	9.7	No Move	16	-	4"/6"	CD	Y	2 pc slag
14	437581.6	3532196.4	32.7	1.5' S	34	-	SURFACE	CD	Y	Slag
15	437574.6	3532196.8	7.6	No Move	7	-	6"	MD	Y	.50 cal

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LIP = Left in place

REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G13**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437549.2	3532075.6	8.3	No Move	9	-	3"	CD	Y	Slag
2	437538.4	3532075.8	5.9	No Move	10	-	4"	MD	Y	.50 cal
3	437533.8	3532077.0	10.4	No Move	12	-	6"	MD	Y	.50 cal
4	437523.2	3532079.6	7.0	No Move	11	-	4"	CD	Y	Slag
5	437552.0	3532082.6	6.9	No Move	11	-	6"	MD	Y	Fuze Piece
6	437537.8	3532084.2	9.6	1' E	13	-	6"	CD	Y	Slag and Wire
7	437546.0	3532088.2	7.5	No Move	7	-	5"	CD	Y	Slag
8	437551.8	3532088.8	5.1	No Move	4	-	6"	CD	Y	Slag
9	437526.4	3532091.2	9.1	No Move	11	-	2"	CD	Y	Small wire Stake
10	437530.6	3532091.2	252.5	No Move	278	-	2"	CD	Y	Chain link & 6' of chain
11	437532.4	3532094.0	11.6	No Move	19	-	4"	CD	Y	Chain hook
12	437546.6	3532095.0	7.1	No Move	8	-	8"	MD	Y	.50 cal
13	437526.2	3532096.2	13.1	No Move	26	SEED	6"	CD	Y	SEED
14	437532.8	3532097.6	31.7	No Move	37	-	10"	CD	Y	Piece of chain w/4" ring
15	437538.4	3532099.6	6.1	No Move	6	-	8"	CD	Y	Large slag
16	437534.0	3532099.8	178.5	No Move	245	-	1"	CD	Y	4' to 5' of chain

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G14**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437495.4	3531924.8	7.3	-	8	-	6"	MD	Y	.50 cal
2	437499.6	3531925.4	5.5	-	6	-	4"	CD	Y	slag
3	437503.6	3531927.0	7.5	-	13	-	5"/4"/2"	CD	Y	slag (3)
4	437516.4	3531930.2	5.5	-	8	-	8"	CD	Y	slag
5	437501.8	3531930.6	6.1	-	6	-	4"	CD	Y	metal strip
6	437511.4	3531931.8	6.9	-	8	-	4"	CD	Y	slag
7	437508.8	3531937.0	5.4	-	9	-	2"	CD	Y	slag
8	437496.2	3531939.4	9.5	-	15	-	6"/6"	CD	Y	slag (2)
9	437518.2	3531939.8	6.7	-	6	-	4"	CD	Y	slag
10	437506.0	3531940.8	6.5	-	12	-	6"	CD	Y	slag
11	437514.6	3531943.4	7.0	-	7	-	5"	CD	Y	slag
12	437505.6	3531943.8	6.3	1' E	13	-	3"/3"	CD	Y	slag (2)
13	437501.6	3531944.6	7.6	1' NE	11	-	5"	CD	Y	wire
14	437518.0	3531945.0	17.3	1' N	30	SEED	6"	CD	Y	seed
15	437501.8	3531946.2	5.1	1' S	5	-	4"	MD	Y	.50 cal
16	437522.0	3531946.4	8.1	-	10	-	5"	CD	Y	slag
17	437515.0	3531947.0	5.1	-	7	-	5"	CD	Y	slag
18	437523.0	3531953.2	10.3	-	20	-	3"/5"	CD	Y	slag (2)
19	437521.4	3531954.0	5.8	1' S	19	-	6"	CD	Y	slag

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G15**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437612.8	3532129.4	6.9	-	8	-	6"	CD	Y	slag
2	437616.0	3532129.8	7.6	-	11	-	12"	MD	Y	shipping plug
3	437599.4	3532130.0	5.5	-	8	-	6"	MD	Y	.50 cal
4	437623.4	3532130.0	395.2	1' W	627	-	3"	CD	Y	rebar
5	437616.0	3532131.6	23.7	-	31	-	6"	MD	Y	shipping plug
6	437625.0	3532133.6	5.0	1' W	5	-	7"	CD	Y	slag
7	437613.0	3532135.0	5.6	-	5	-	4"	CD	Y	slag
8	437614.6	3532137.4	10.1	-	12	-	3"	CD	Y	nail
9	437621.0	3532138.6	27.1	-	30	-	8"	MD/CD	Y	lifting lug and slag
10	437625.4	3532142.0	25.0	-	45	-	4"	CD	Y	slag
11	437604.8	3532142.4	29.0	1'W	40	SEED	6"	seed	Y	seed
12	437617.8	3532144.0	8.0	-	8	-	14"	CD	Y	wire
13	437619.0	3532144.2	6.8	-	13	-	14"	CD	Y	wire
14	437611.6	3532148.4	8.2	-	8	-	2"	CD	Y	3 links of chain
15	437621.8	3532148.4	6.8	-	16	-	6"	CD	Y	slag
16	437595.0	3532153.6	5.2	-	8	-	3"/10"	MD/CD	Y	.50 cal and wood with nails
17	437603.4	3532154.0	9.5	1' E	17	-	4"	C	Y	3 links of chain
18	437622.6	3532155.0	7.4	1' S	9	-	6"	MD	Y	.50 cal
19	437624.1	3532156.8	8.8	1' N	11	(QA target)	6"	CD	Y	slag

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G16**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437536.2	3531969.8	6.7	-	16	-	4"	CD	Y	slag
2	437532.8	3531974.4	6.0	-	8	-	4"	CD	Y	slag
3	437547.2	3531975.2	5.1	-	11	-	4"/4"	CD	Y	slag (2)
4	437533.2	3531979.0	5.2	-	6	-	4"	MD	Y	.50 cal
5	437545.2	3531979.4	6.0	-	11	-	8"	MD	Y	.50 cal
6	437529.8	3531981.8	5.7	-	6	-	4"	MD	Y	.50 cal
7	437526.0	3531984.8	5.0	1' NW	10	-	3"	CD	Y	slag (2)
8	437535.8	3531987.4	7.3	1' NE	10	-	3"	CD	Y	slag
9	437548.8	3531987.4	5.6	-	12	-	6"	MD	Y	.50 cal
10	437542.6	3531989.8	9.9	-	15	-	4"	CD	Y	slag
11	437535.0	3531990.4	12.3	-	25	SEED	5"	seed	Y	seed
12	437534.2	3531993.6	5.2	-	-	no find	-	-	N	-
13	437536.6	3531994.4	7.1	-	8	-	12"	MD	Y	.50 cal
14	437533.0	3531996.0	5.8	-	8	-	6"	MD	Y	.50 cal
15	437530.6	3531996.4	5.9	-	3	-	-	-	N	-
16	437537.4	3531997.0	5.2	-	-	no find	-	-	N	-
17	437544.4	3531998.8	11.4	-	19	-	2"/2"	MD/CD	Y	.50 cal/slag

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G17**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437696.2	3532050.0	6.2	1' NW	10	-	6"	CD	Y	slag
2	437687.4	3532051.0	6.4	1' S	7	-	10"	CD	Y	slag
3	437701.0	3532052.8	8.1	-	10	-	8"	CD	Y	slag
4	437703.8	3532053.8	5.5	-	7	-	7"	MD	Y	.50 cal
5	437705.2	3532058.4	5.2	1' E	8	-	-	???	N	too small to locate
6	437681.6	3532065.0	5.8	-	5	-	4"	CD	Y	slag
7	437696.2	3532070.0	163.2	-	225	-	4"	CD	Y	piece of pipe
8	437686.4	3532071.0	23.3	-	35	SEED	6"	seed	Y	seed
9	437687.8	3532076.8	5.5	-	5	-	12"	CD	Y	slag
10	437685.2	3532077.4	10.1	1' N	11	-	5"/6"	MD/CD	Y	frag/slag

N/C = no contact
"no find" is a location where the mV value does not change within 2 feet of the flag, meaning there is no detectable metal in the ground.
LIP = Left in place

REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G18**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437748.6	3532094.8	165.5	-	363	-	16"	CD	Y	metal ring
2	437764.6	3532096.4	14.6	-	17	-	8"	CD	Y	wire
3	437741.4	3532097.2	6.6	-	7	-	12"	CD	Y	wire
4	437751.0	3532098.0	5.6	-	12	-	8"	CD	Y	slag
5	437748.6	3532098.6	15.1	-	21	-	12"	CD	Y	slag
6	437749.6	3532099.2	7.8	-	22	-	8"	CD	Y	slag
7	437755.2	3532100.0	24.1	-	50	-	12"/18"	CD	Y	slag/oil filter
8	437743.8	3532103.0	25.9	-	41	SEED	8"	seed	Y	pipe
9	437754.4	3532103.2	6.7	1' W	12	-	-	-	N	-
10	437737.2	3532104.8	40.1	-	67	-	6"	MEC	Y	40 mm
11	437752.2	3532105.6	6.0	-	7	-	5"	CD	Y	slag
12	437750.0	3532108.4	6.1	-	10	-	6"	CD	Y	slag
13	437759.0	3532110.0	5.9	-	6	-	8"	CD	Y	slag
14	437740.6	3532110.2	36.5	1' W	55	-	6"	CD	Y	shipping plate
15	437754.6	3532110.8	24.0	1' NW	32	-	6"	CD	Y	slag
16	437755.6	3532112.2	5.4	1' N	4	-	5"	CD	Y	linch pin
17	437758.0	3532112.2	12.1	1' E	15	-	4"	CD	Y	slag
18	437747.4	3532112.6	5.8	-	3	-	6"	CD	Y	slag
19	437749.4	3532114.0	7.2	-	8	-	4"	CD	Y	chain link
20	437745.2	3532116.0	7.1	-	7.5	-	4"	CD	Y	slag
21	437762.8	3532117.0	9.5	-	11	-	3"	CD	Y	slag
22	437743.6	3532118.6	7.5	-	9	-	6"	CD	Y	slag
23	437763.6	3532119.6	10.4	-	16	-	4"	MD	Y	.50 cal
24	437741.0	3532122.8	11.4	1' S	13	-	6"	CD	Y	slag
25	437762.2	3532123.6	10.7	1' W	10.5	-	6"	MD	Y	cartridge 30 mm
26	437737.0	3532123.8	8.0	-	7	-	4"	MD	Y	.50 cal
27	437741.8	3532124.4	5.3	-	5.3	-	3"	MD	Y	.50 cal

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G19**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437738.2	3531956.4	6.5	-	9	-	4"	CD/MD	Y	slag and .50 cal
2	437716.4	3531957.4	11.1	-	16	-	10"	MEC	Y	40 mm
3	437721.6	3531964.0	5.1	-	11	-	6"	MD	Y	.50 cal
4	437727.2	3531969.4	5.9	-	8	-	8"	MD	Y	.50 cal
5	437728.2	3531971.0	27.2	1' S	45	SEED	4"	seed	Y	seed
6	437730.8	3531972.4	5.0	1' E	10	-	8"/3"	CD/MD	Y	nugget and .50 cal
7	437722.4	3531976.4	18.0	-	29	-	5"	CD	Y	wire
8	437728.8	3531976.8	12.0	1' SE	18	-	7"/5"	CD/MD	Y	nugget and fuze
9	437721.4	3531978.8	5.1	-	8	-	11"	MD	Y	.50 cal
10	437715.8	3531980.2	5.7	-	8.6	-	8"	MD	Y	.50 cal
11	437730.4	3531983.8	5.3	1' N	7	-	10"/8"	CD	Y	slag (2)

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REACQUISITION & DIG SHEET

Date/Time:					Site: Fort Stewart RCRA Investigation					
MRS: AAR (FTSW-002-R-01)					Grid or Transect: G20					
Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437767.8	3532005.6	10.0	-	14	-	8"	CD	Y	slag
2	437763.6	3532005.8	7.8	1' NE	13	-	4"/4"	CD	Y	slag (2)
3	437769.6	3532006.2	9.0	-	13	-	8"	CD	Y	slag
4	437767.0	3532006.6	12.3	1' SE	22	-	6"	CD	Y	slag
5	437768.0	3532008.4	7.0	-	7	-	5"	MD	Y	.50 cal
6	437763.2	3532008.6	5.1	1' NE	5.2	-	4"	CD	Y	slag
7	437773.8	3532010.0	6.1	-	5	-	5"	MD	Y	.50 cal
8	437749.8	3532010.8	5.2	-	6	-	6"	MD	Y	.50 cal
9	437761.8	3532011.6	5.0	-	4	-	4"	CD	Y	rust flake
10	437754.6	3532014.0	5.0	-	3	-	6"	MD	Y	.50 cal
11	437775.4	3532014.8	5.7	2' S	3	-	5"	CD	Y	slag (2)
12	437757.2	3532018.4	5.0	-	6	-	10"	MD	Y	.50 cal
13	437779.0	3532019.0	6.7	-	6	-	6"	CD	Y	slag
14	437773.4	3532021.8	5.9	-	5	-	5"	CD	Y	slag
15	437777.4	3532022.2	10.3	-	15	-	3"/5"	CD	Y	slag (2)
16	437756.6	3532022.8	6.9	-	7	-	8"	MD	Y	frag
17	437776.4	3532025.2	9.4	1' SW	12	-	4"	MD	Y	frag
18	437763.4	3532025.6	8.7	-	6	-	6"	MD	Y	frag
19	437767.6	3532026.0	22.1	1' SW	28	SEED	6"/8"	seed/CD	Y	seed/slag
20	437754.6	3532027.8	7.3	1' W	8	-	6"	CD	Y	slag
21	437766.8	3532028.4	6.1	-	-	no find	6"	CD	Y	slag
22	437752.2	3532030.2	8.0	1' NW	10	-	8"	CD	Y	slag
23	437767.8	3532030.4	6.5	-	6.5	-	8"	CD	Y	slag
24	437767.6	3532031.8	6.5	1' E	7	-	4"	CD	Y	slag
25	437768.2	3532032.8	7.0	-	5	-	8"	CD	Y	slag
26	437777.6	3532033.0	8.1	1' E	9	-	6"/5"	MD/CD	Y	frag/slag
27	437755.4	3532033.8	5.5	1' SE	6.5	-	6"	CD	Y	slag
28	437749.1	3532028.7	5.1	-	3	(QA target)	4"	CD	Y	slag
29	437751.4	3532019.4	6.1	-	6	(QA target)	4"	CD	Y	slag

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G21**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437815.0	3532051.2	5.9	-	6	-	8"	MD	Y	.50 cal
2	437807.2	3532054.8	5.6	-	7.5	-	5"	CD	Y	slag
3	437827.4	3532055.4	8.6	1' SE	9.5	-	6"	CD	Y	nugget (2)
4	437822.2	3532059.2	6.0	-	8.5	-	4"	CD	Y	nugget (2)
5	437813.0	3532062.2	5.6	-	-	no find	-	-	N	-
6	437811.8	3532064.0	18.7	-	23	SEED	5"	seed	Y	seed
7	437820.8	3532066.4	7.7	-	8	-	5"	MD	Y	.50 cal
8	437805.8	3532070.0	7.9	-	8	-	4"	MD	Y	.50 cal
9	437829.8	3532070.4	5.4	1' SE	10	-	7"	CD	Y	slag
10	437827.6	3532070.8	6.7	1' SW	8	-	3"	CD	Y	cable
11	437816.6	3532073.0	7.2	-	8	-	6"	CD	Y	nugget
12	437810.0	3532075.6	46.8	-	100	-	6"	MEC	Y	40 mm fired
13	437825.8	3532077.4	7.4	-	23	-	6"	CD	Y	u-bolt
14	437810.8	3532078.6	44.7	-	67	-	4"	CD	Y	pick head
15	437826.0	3532080.6	6.2	1' S	7	-	3"	MD	Y	adapter ring
16	437826.8	3532068.3	7.2	-	8.5	(QA target)	6"	CD	Y	cable

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G22**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437758.4	3531921.2	9.5	1' S	11	-	8"	CD	Y	bearing
2	437745.4	3531922.0	7.5	-	7.5	-	3"	CD	Y	cable
3	437737.8	3531922.4	11.1	-	12	-	5"	CD	Y	washer
4	437754.8	3531923.2	9.2	1' S	10	-	8"	MD	Y	safing clip
5	437746.2	3531923.8	22.9	-	24	-	10"	MD	Y	spacer
6	437743.0	3531924.0	29.9	-	24	-	6"	CD	Y	bearing
7	437742.4	3531925.2	8.1	-	8	-	6"	MD	Y	.50 cal
8	437748.2	3531926.0	5.6	1' N	4	-	12"	MD	Y	.50 cal
9	437755.6	3531926.4	6.8	-	7	-	4"	CD	Y	nugget
10	437732.4	3531928.2	5.1	-	5	-	6"	CD	Y	nugget
11	437735.2	3531929.2	5.5	-	-	no find	-	-	N	-
12	437746.6	3531932.8	5.9	-	9	-	8"	CD	Y	nail
13	437745.6	3531936.0	6.6	-	15	-	8"	CD	Y	railroad spike
14	437748.2	3531938.4	20.8	-	28	SEED	10"	seed	Y	seed
15	437744.6	3531938.8	10.2	1' S	8	-	24"	MD	Y	37 mm AP fired
16	437746.0	3531942.6	5.7	-	4.5	-	13"	CD	Y	noisy small flake
17	437739.6	3531942.8	5.8	-	6	-	10"	CD	Y	nugget
18	437740.4	3531944.8	6.0	-	5.8	-	8"	CD	Y	nugget
19	437736.8	3531948.0	5.6	-	6.8	-	10"	CD	Y	nail
20	437753.2	3531948.0	5.1	-	7	-	13"/6"	MD/CD	Y	.50 cal/nugget
21	437740.2	3531949.6	17.8	-	24	-	8"	CD	Y	nugget
22	437736.6	3531949.8	6.5	-	6.3	-	12"	CD	Y	noisy small flake
23	437755.4	3531950.2	5.2	-	5.2	-	8"	MD	Y	.50 cal

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G23**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437813.8	3531968.4	42.4	-	56	-	4"	CD	Y	steel rod
2	437791.8	3531968.6	5.7	-	11	-	12"	MD	Y	.50 cal
3	437796.8	3531971.2	17.5	1' SW	47	SEED	8"	seed	Y	seed
4	437818.8	3531971.8	6.1	-	13	-	10"	MD	Y	.50 cal
5	437788.8	3531976.4	5.3	-	11	-	6"	MD	Y	frag
6	437802.0	3531977.2	7.5	-	19	-	8"	MD	Y	.50 cal
7	437793.8	3531977.6	11.5	-	20	-	12"	CD	Y	nugget
8	437811.2	3531977.8	8.7	-	17	-	8"	MD	Y	frag
9	437808.6	3531978.4	5.3	-	7	-	6"	MD	Y	frag
10	437806.0	3531979.2	5.5	1' NE	12	-	4"	CD	Y	pipe reducer
11	437810.0	3531981.0	6.3	1' S	14	-	8"	MD	Y	frag
12	437817.8	3531983.6	9.2	-	12	-	6"	CD	Y	nugget
13	437795.4	3531984.0	10.3	-	19	-	8"	CD	Y	nugget
14	437817.0	3531984.6	6.0	1' N	12	-	8"	CD	Y	nugget
15	437801.2	3531985.2	6.9	-	6	-	20"	CD	Y	nugget
16	437807.8	3531986.0	5.9	-	14	-	4"	MD	Y	.50 cal
17	437807.0	3531986.6	5.8	-	13	-	4"	CD	Y	nugget
18	437799.6	3531987.2	6.9	1' NE	8	-	4"	MD/CD	Y	.50 cal/nail
19	437804.4	3531987.6	5.9	-	7	-	4"	CD	Y	slag
20	437790.2	3531988.0	5.0	-	6	-	?	???	N	too small to locate
21	437806.4	3531988.8	5.3	-	14	-	4"	CD	Y	nugget
22	437803.2	3531989.0	24.4	-	32	-	4"	MD	Y	cartridge
23	437801.2	3531989.6	6.5	-	7	-	8"	CD	Y	nugget
24	437816.8	3531989.8	6.2	-	13	-	4"	CD	Y	pipe reducer
25	437793.2	3531995.4	8.7	-	12	-	4"	CD	Y	nugget
26	437790.2	3531995.8	6.4	-	7	-	4"	CD	Y	nugget

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G24**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1	437881.6	3531931.6	127.2	1' E	130	utilities?	12"	CD	Y	pipe
2	437862.6	3531932.6	5.4	-	3	-	10"	MD	Y	.50 cal
3	437871.0	3531933.2	23.8	1' N	36	-	8"	MD	Y	spacer
4	437873.6	3531934.0	8.1	-	5	-	8"	MD	Y	40 mm (MK19) cartridge
5	437877.4	3531934.0	8.9	-	5	-	12"	MD	Y	spacing clip
6	437878.4	3531935.2	22.4	1' SW	50	-	4"	MD	Y	spacer
7	437869.2	3531936.0	8.8	1' SW	8	-	6"	MD/MD	Y	40 mm (MK19)/.50 cal cart
8	437879.6	3531936.0	29.5	-	38	-	12"	MD	Y	spacer
9	437865.2	3531936.2	12.4	1' S	13	-	6"	MD	Y	slap flare cap
10	437882.0	3531936.8	53.4	2' E	90	-	8"	CD	Y	pipe
11	437878.4	3531937.0	50.4	1' NE	75	-	6"	MD	Y	spacer
12	437862.6	3531937.2	13.4	-	12	-	8"	MD	Y	40 mm (MK19) cartridge
13	437871.2	3531937.2	26.2	-	40	-	6"	MD	Y	spacer
14	437873.8	3531937.2	19.6	-	19	-	10"	CD	Y	nugget
15	437858.0	3531938.2	20.4	-	24	-	6"	MD	Y	safing clip
16	437880.0	3531938.2	53.2	1' W	130	-	12"	MD	Y	safing clip
17	437864.4	3531938.8	13.6	-	11	-	10"	CD	Y	slag
18	437874.6	3531938.8	39.6	-	52	-	3"	MD	Y	spacer
19	437867.0	3531940.0	23.2	-	27	-	6"	MD	Y	30 mm cartridge
20	437858.0	3531940.4	15.6	-	15	-	6"	MD	Y	40 mm (MK19) cartridge
21	437880.8	3531940.4	22.9	2' W	32	-	10"	MD	Y	frag
22	437864.4	3531940.8	56.4	1' S	56	-	6"	CD	Y	drill index
23	437870.0	3531941.0	5.2	-	5.2	-	8"	MD	Y	40 mm (MK19) cartridge
24	437854.0	3531941.4	5.4	-	-	no find	8"	CD	Y	single chain link
25	437878.0	3531941.6	55.9	1' S	65	-	6"	MD	Y	spacer
26	437867.2	3531942.0	15.5	-	16	-	8"	MD	Y	25 mm cartridge

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G24**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
27	437880.2	3531943.0	67.1	-	-	surface metal	18"	MD	Y	4 spacing clips, 4 spacers & cart
28	437858.8	3531944.0	38.5	-	52	-	6"	MD	Y	spacer plate
29	437866.2	3531944.2	10.4	-	17	-	6"	CD	Y	tent peg
30	437875.2	3531944.4	7.5	1' NE	8.5	-	10"	MD	Y	frag
31	437883.2	3531944.4	6.4	-	7	-	8"	CD	Y	knob
32	437867.0	3531945.6	22.9	1' SE	38	SEED	6"	seed	Y	seed
33	437880.2	3531945.6	15.8	-	90	-	12"	MD/CD	Y	spacer/pipe
34	437871.0	3531945.8	16.6	-	7	-	8"	MD	Y	grenade pin
35	437883.2	3531946.6	5.1	-	7	-	5"	CD	Y	nail
36	437860.6	3531946.8	14.7	-	21	-	10"	MD	Y	safing clip
37	437880.4	3531947.0	12.8	-	70	-	12"	MD/CD	Y	safing clip/wire
38	437854.6	3531947.2	18.5	1' W	30	-	10"	MD	Y	cartridge
39	437879.0	3531947.2	6.3	-	7	-	12"	MD	Y	spacer
40	437865.8	3531947.4	16.9	-	36	-	8"	MD	Y	safing clip
41	437873.6	3531947.4	53.3	-	67	-	12"	MD	Y	frag
42	437871.8	3531948.2	13.4	-	17	-	8"	MD/MD	Y	link/.50 cal cartridge
43	437864.0	3531948.4	18.2	-	32	-	12"	MD	Y	cartridge
44	437869.0	3531948.8	13.8	-	7	-	6"	MD	Y	40 mm cartridge-low velocity
45	437854.8	3531949.2	17.3	-	32	-	4"	CD	Y	railroad spike
46	437876.2	3531949.6	11.1	-	21	-	4"	MD	Y	cartridge
47	437860.8	3531949.8	41.2	-	52	-	6"	MD	Y	spacer plate
48	437872.8	3531949.8	45.6	-	45	-	4"	MD	Y	spacer
49	437880.4	3531950.0	122.6	1' N	127	-	3"	MD	Y	proj container cap
50	437856.2	3531950.4	7.1	-	19	-	8"	MD	Y	frag
51	437854.0	3531951.2	9.9	-	12	-	8"	MD	Y	frag
52	437857.8	3531952.0	9.6	1' NE	15	-	6"	MD	Y	frag
53	437872.8	3531952.0	19.0	-	22	-	8"	CD	Y	slag
54	437879.8	3531952.2	310.0	-	315	-	16"	MD	Y	1 safing clip, 2 cart, 2 spacer
55	437856.4	3531952.4	20.7	1' N	28	-	6"	CD	Y	railroad spike
56	437883.0	3531952.4	11.4	-	20	-	8"	CD	Y	wire & scrap
57	437866.0	3531952.6	6.8	-	14	-	6"	MD	Y	40 mm (MK19) cartridge
58	437867.6	3531952.8	8.8	-	13	-	4"	MD	Y	frag
59	437875.8	3531953.2	49.0	-	61	-	8"	MD/MD	Y	spacer/.50 cartridge

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: G24**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
60	437859.4	3531953.6	10.1	-	18	-	8"	MD	Y	frag
61	437863.4	3531953.6	7.0	-	10	-	8"	MD	Y	.50 cal
62	437869.0	3531954.4	21.3	-	32	-	4"/6"	MD/MD	Y	link .50/safing clip
63	437879.8	3531954.4	50.6	-	120	-	24"	MD	Y	5 lifting lug, 2 spacer, 1 cartridge
64	437881.8	3531955.0	13.9	-	17	-	12"	MD	Y	spacer
65	437861.6	3531955.4	23.0	-	32	-	8"	MD	Y	safing clip
66	437876.2	3531955.4	24.7	-	35	-	8"	MD	Y	spacer
67	437854.0	3531956.0	18.1	-	32	-	7"	MD	Y	30 mm cartridge
68	437879.4	3531956.2	28.2	1' NW	36	-	12"/3"	MD/CD	Y	lifting lug/bolt
69	437860.8	3531956.8	22.6	-	31	-	6"	CD	Y	railroad spike
70	437859.0	3531957.2	25.3	1' W	55	-	3"	MD	Y	spacer plate
71	437871.2	3531957.4	46.2	-	62	-	10"	MD	Y	spacer
72	437882.8	3531957.4	130.3	-	-	surface metal/utiities	-	CD	Y	pipe LIP
73	437874.2	3531958.2	17.2	-	32	-	8"	CD	Y	slag
74	437865.6	3531958.6	22.8	-	42	-	4"/4"	MD/MD	Y	cartridge/spacer
75	437868.4	3531958.6	17.2	-	32	-	12"/3"	MD/CD	Y	safing clip/slag
76	437880.8	3531958.8	264.4	-	413	-	16"	MD	Y	lifting lug/cartridge/ 2 spacer
77	437863.0	3531959.4	10.1	-	12	-	3"	MD	Y	40 mm (MK19) cartridge
78	437877.8	3531959.4	6.2	-	6	-	12"	MD	Y	.50 cal cartridge
79	437855.6	3531960.2	5.7	-	10	-	6"/8"	MD/CD	Y	.50 cal/slag
80	437860.6	3531960.2	16.8	-	25	-	14"/4"/6"	CD/MD/CD	Y	railroad spike/.50 cal/slag
81	437874.6	3531960.4	46.0	-	50	-	12"/8"/6"	MD/MD/CD	Y	spacer/link/scrap
82	437879.6	3531960.6	19.6	1' S	61	-	12"/8"/4"	MD/MD/MD	Y	lifting lug/2 spacer
83	437876.2	3531961.0	14.0	-	15	-	6"	MD	Y	40 mm (MK19) cartridge
84	437852.6	3531961.4	10.9	1' N	38	-	6"	CD	Y	slag
85	437871.6	3531961.4	47.7	-	55	-	12"	MD	Y	spacer
86	437860.0	3531961.6	5.4	-	10	-	6"	MD	Y	.50 cal
87	437870.2	3531961.6	26.9	1' NE	45	-	5"	MD	Y	spacer
88	437879.8	3531962.0	11.6	1' S	42	-	12"/8"	MD/MD	Y	cartridge/spacer
89	437862.2	3531962.4	20.1	1' W	35	-	10"	MD	Y	cartridge

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Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: Long Transects**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1A	437388.2	3531921.4	84.6	-	-	no find	-	-	N	no contact
2A	437396.2	3531921.8	115.2	-	-	no find	-	-	N	no contact
3A	437326.2	3531922	197.6	-	-	no find	4"	CD	Y	2 nails
4A	437252.2	3531922.2	128.8	-	-	no find	-	-	N	no contact
5A	437240.2	3531922.4	81.5	-	-	no find	6"	CD	Y	rebar
6A	437321.2	3531923.4	124.7	-	-	no find	2"	CD	Y	wire
7A	437396.4	3531930.2	15.0	-	-	no find	-	-	N	no contact
8A	437240	3531932.4	8.2	-	8.5	-	8"	CD	Y	wire LIP
9A	437388.2	3531936.2	14.8	-	25.6	-	6"	CD	Y	pipe
10A	437396.2	3531936.8	14.6	-	-	no find	-	-	N	no contact
11A	437240.4	3531937.8	18.2	-	83	-	2"	CD	Y	rebar
12A	437326.4	3531939.4	7.5	-	10	-	2"	MD	Y	frag
13A	437396.2	3531941.8	5.2	2' E	3.2	-	8"	CD	Y	wire
14A	437240	3531943.2	6.2	-	6.2	-	36"	CD	Y	cable wire
15A	437240.4	3531945.4	5.2	-	8	-	36"	CD	Y	same as #14
16A	437396.2	3531946.2	5.5	-	17	-	3"	CD	Y	nail
17A	437252.2	3531946.6	12.1	-	15	-	5"	CD	Y	rebar
18A	437252.2	3531951	23.2	-	50	-	7"	CD	Y	wire LIP
19A	437240.4	3531952	337.5	-	340	-	8"	CD	Y	metal LIP
20A	437252.2	3531954.4	14.4	-	27	-	2"	CD	Y	wire LIP
21A	437396.2	3531955.4	6.1	-	21	-	4"	CD	Y	long staple
22A	437240.516	3531955.68	7.7	-	15	-	4"	CD	Y	wire LIP
23A	437252	3531957	6.5	-	35	-	5"	CD	Y	nugget
24A	437396.4	3531957	14.8	2' S	24	-	6"	CD	Y	2 long staples
25A	437396.2	3531957.6	17.2	2' W	17	-	12"	CD	Y	long staple
26A	437396.2	3531970.2	26.0	-	26	-	-	utility & something	N	too small to find

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Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
27A	437326.4	3531972.2	129.7	2' N	133	-	6"	CD	Y	rebar
28A	437388.2	3531972.6	15.8	1' S	17.6	-	3"	CD	Y	nugget
29A	437252	3531973.8	7.6	-	8	-	3"/3"	CD/CD	Y	cable/nugget
30A	437388.2	3531976.8	8.3	3' E	26	-	6"	CD	Y	bolt 12"
31A	437240.4	3531978.8	6.8	3' W	12.5	peak outside transect	2"	???	N	too small to find
32A	437388.2	3531980.6	9.3	2' SW	15	-	5"	CD/MD	Y	nugget/cartridge
33A	437240.158	3531983.77	6.9	-	10	-	2"	CD	Y	bar
34A	437320.2	3531984.4	19.7	1' W	24	-	2"	CD	Y	wire LIP
35A	437388.2	3531986.2	6.1	4' NE	13.8	-	-	utility	Y	hit 5' E/not dug
36A	437240.2	3531989.2	13.2	1.5' NE	13	-	22"	CD	Y	rebar
37A	437252.2	3531990	27.0	-	40	-	6"	seed	Y	seed
38A	437320.2	3531990.8	8.4	2' E	240	-	8"	CD	Y	scrap LIP
39A	437252.2	3531992.8	6.7	-	6	-	5"	CD	Y	nail
40A	437387.8	3531998.4	5.0	1' S	10	-	4"	CD	Y	nail
41A	437326.2	3532000	8.7	-	10	-	5"	CD	Y	tie down strap
42A	437252.2	3532005.4	56.2	-	85	-	3"	CD	Y	rebar LIP
43A	437326.2	3532006	11.6	-	40	-	5"	CD	Y	rebar
44A	437388	3532008.2	11.4	-	12	-	5"	CD	Y	chain links
45A	437388.2	3532015	7.1	-	18	-	-	-	N	5' E utility power
46A	437240.046	3532017.29	6.4	-	11	-	10"	CD	Y	nugget
47A	437388	3532020.8	8.6	-	10	-	8"	CD	Y	rebar LIP
48A	437387.8	3532025	9.4	1' S	11	-	-	big hit 5' N of flag	N	power ground/not dug
49A	437240.148	3532025.63	40.4	-	41	-	20	CD	Y	1" rebar LIP
50A	437388	3532029	5.5	-	5.5	-	-	-	Y	utility ground/not dug
51A	437321.8	3532033	15.1	-	25	associate w/utility pole	-	agree	Y	pole LIP
52A	437388	3532033.6	37.1	1' S	44	-	10"	CD	Y	metal LIP
53A	437326.2	3532037.8	9.3	-	17.7	-	4"	MD	Y	cartridge
54A	437326.4	3532039.4	6.3	-	45	-	3"	CD	Y	flat stock
55A	437396.2	3532039.8	7.0	-	7.8	-	4"	CD	Y	nugget
56A	437240.2	3532040.4	33.7	-	57	-	4"	CD	Y	rebar LIP
57A	437252.2	3532040.6	19.7	2' W	53	peak outside transect	3"	CD	Y	rebar
58A	437252.2	3532043.4	10.4	2.5' W	25	peak outside transect	4"	CD	Y	wire LIP
59A	437240.2	3532045.2	8.4	-	19	-	16"	CD	Y	wire LIP

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Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
60A	437326.4	3532046.6	20.7	2.5' SW	45	-	4"	CD	Y	rod
61A	437396.6	3532050.6	6.7	-	6.7	-	4"	MD	Y	.50 cal
62A	437240.141	3532050.79	26.7	-	41	-	-	utility	Y	not dug
63A	437387.8	3532053	5.1	-	5.1	-	5"	CD	Y	nails
64A	437240.2	3532054.8	18.9	-	30	-	-	utility	Y	not dug
65A	437388	3532057.4	36.7	-	36	-	-	utility w/#67	Y	electrical/not dug
66A	437396.4	3532057.8	13.4	-	22	-	-	utility w/#68	Y	electrical/not dug
67A	437387.95	3532059.15	11.9	-	27	-	-	utility w/#65	Y	electrical/not dug
68A	437396.4	3532059.8	20.7	-	23	-	-	utility w/#66	Y	electrical/not dug
69A	437252.2	3532062.2	17.0	1.5' W	40	-	8"	CD	Y	wire spool
70A	437326.327	3532063.48	12.9	1' N	25	-	-	-	Y	utility
71A	437321.6	3532064	34.3	1' W	34	-	-	utility	Y	power line
72A	437240.2	3532065	74.8	-	112	-	2"	CD	Y	rebar LIP
73A	437326.4	3532065.8	35.5	-	17	-	10"	CD	Y	bolt
74A	437321.8	3532066.2	8.3	1' S	20	-	-	utility	Y	power line
75A	437388.2	3532068.6	9.9	1.5' SW	9	-	6"	CD	Y	metal LIP
76A	437252.2	3532072.4	13.1	2' W	20	-	5"	CD/MD	Y	nail/frag
77A	437321.4	3532074.4	11.8	1' SW	21	-	6"	CD	Y	metal scrap
78A	437252.2	3532075	15.1	-	15	-	12"	???	N	too small to find
79A	437240.2	3532075	19.5	-	19.5	-	-	utility	Y	not dug
80A	437324.6	3532075.2	9.6	-	-	merge w/#82	8"	CD w/#82	Y	pipe
81A	437388	3532075.4	22.0	-	33	-	8"	CD	Y	piece of fence post
82A	437326.4	3532075.6	33.0	1.5' W	98	-	8"	CD w/#80	Y	pipe
83A	437396.4	3532077.8	10.5	-	-	no find	-	-	N	no contact
84A	437326.2	3532078	23.1	-	20	-	10"	CD	Y	bolt
85A	437240.4	3532078.4	5.8	-	13	-	10"	CD	Y	wire LIP
86A	437388	3532078.4	5.9	-	-	no find	4"	CD	Y	nugget
87A	437321.148	3532081.02	6.0	-	6	-	8"	CD	Y	nugget
88A	437326.2	3532082.2	10.0	-	10	-	4"	CD	Y	hook
89A	437321	3532085.2	8.1	-	8.5	-	4"	CD	Y	wire
90A	437396.2	3532085.4	18.0	-	10	-	4"/2"	MD/CD	Y	.50 cal/battery
91A	437240.4	3532087.8	6.0	-	6	-	3"	CD	Y	nail
92A	437321	3532089	5.1	-	5.1	-	8"	???	N	too small to find

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Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
93A	437240.4	3532091	12.8	2' SW	8	-	-	???	N	can't locate
94A	437321	3532092.4	6.5	-	5.6	-	3"/4"	CD/CD	Y	nugget/nail
95A	437396.2	3532099	8.1	-	33	-	12"	CD	Y	brake shoe
96A	437388	3532101	7.1	-	11..8	-	3"	CD	Y	metal LIP
97A	437252.2	3532101	7.2	1' S	16	-	4"	CD	Y	wire LIP
98A	437321	3532104.8	5.7	1' E	10.6	-	3"	CD	Y	wire LIP
99A	437240.2	3532107.8	25.6	-	35	-	12"	CD	Y	rebar LIP
100A	437252.2	3532109.2	22.0	1.5' SW	24	-	2"	CD	Y	rebar
101A	437396.2	3532110.2	13.7	2' W	14	-	3"/5"	CD/CD	Y	wire/culvert LIP
102A	437321	3532110.2	7.3	-	8	-	6"	CD	Y	hot bolt small
103A	437321	3532113	48.5	-	56	-	2"	CD	Y	wire LIP
104A	437321	3532117.2	13.3	2' SE	99	-	3"	CD	Y	chain
105A	437388.2	3532117.6	7.9	1' S	7.5	-	4"	CD	Y	nugget
106A	437321	3532120.8	11.7	1' W	20	-	4"	CD	Y	flat bar
107A	437396.2	3532124.2	162.6	-	213	-	4"	CD	Y	metal scrap
108A	437326.2	3532125	7.2	1' W	7.1	-	8"	CD	Y	chain
109A	437387.8	3532126	5.0	-	-	no find	2"	???	N	too small to find
110A	437321.2	3532128.8	10.3	2' W	10.5	-	4"	CD	Y	wire LIP
111A	437388.2	3532129.4	25.7	-	25.7	-	6"	CD	Y	bolt
112A	437388	3532134.4	21.2	2' SW	67	peak outside transect	-	big hit 4' to N	N	not dug
113A	437388	3532138	20.2	1' W	20.2	-	8"	CD	Y	nail & flat stock
114A	437239.8	3532141.6	17.6	2' E	32	-	18"	CD	Y	rebar LIP
115A	437387.8	3532141.8	6.8	2' SE	5.5	-	8"	CD	Y	nugget
116A	437320.951	3532143.97	5.1	-	-	no find	-	-	N	no contact
117A	437252.2	3532145.8	53.3	1.5' N	82	-	4"	CD	Y	nails/wire LIP
118A	437387.8	3532146.6	10.4	-	14.3	-	3"	CD	Y	wire
119A	437396.4	3532147.6	17.9	-	-	no find	-	-	N	no contact
120A	437396.2	3532157.4	41.4	-	63	-	4"	CD	Y	scrap
121A	437239.914	3532158.19	13.4	4' W	260	peak outside transect	30"	CD	Y	rebar LIP
122A	437387.8	3532160.4	17.4	1' SW	37	-	18"	CD	Y	3" pipe LIP
123A	437239.8	3532161	14.5	1' W	32	-	4"	CD	Y	rebar LIP
124A	437252.4	3532161.6	40.7	-	43	-	3"	CD	Y	ball hitch
125A	437252.4	3532166.6	76.5	-	121	-	3"	CD	Y	rebar

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Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
126A	437387.8	3532167.8	11.5	-	-	no find	-	-	N	no contact
127A	437396.2	3532168	5.9	-	-	no find	3"	CD	Y	strapping
128A	437396.2	3532171.4	15.6	2' E	16	-	4"	CD	Y	bolt
129A	437326.2	3532172.6	5.1	4' E	26	steep slope	4"/8"	CD/CD	Y	flat metal/nugget
130A	437387.8	3532174.6	9.4	-	-	no find	-	-	N	no contact
131A	437387.6	3532179.6	13.5	1' N	14	-	8"	CD	Y	metal
132A	437396.2	3532180.2	12.1	1' S	36	-	4"	CD	Y	bar
133A	437252.2	3532181.6	79.0	1' W	219	-	2"	CD	Y	metal bar
134A	437387.8	3532182.4	15.7	-	-	no find	3"/3"	CD/CD	Y	wire/nail
135A	437252.2	3532184.4	19.2	-	23	-	2"	CD	Y	metal scrap
136A	437239.714	3532185.28	12.5	-	14	-	4"	CD	Y	wire LIP
137A	437387.8	3532186.4	10.2	2' W	100	-	4"	CD	Y	metal LIP
138A	437387.8	3532188.4	45.5	1.5' S	55	-	12"	CD	Y	angle iron LIP
139A	437396.2	3532188.8	8.8	-	-	no find	-	-	N	no contact
140A	437239.693	3532191.83	7.8	-	8	-	3"	CD	Y	scrap
141A	437396.2	3532195.8	17.5	-	33	-	4"	CD	Y	bolt
142A	437387.8	3532197	14.4	-	-	no find	4"	CD	Y	wire LIP
143A	437325.8	3532198.6	10.8	1' E	13.5	-	8"	CD	Y	wire
144A	437396.2	3532199.6	5.0	-	-	no find	-	-	N	no contact
145A	437320.8	3532200	12.5	-	13.5	-	2"/4"	CD/CD	Y	metal/rebar
146A	437388.2	3532201.4	7.4	3' W	25.2	peak outside transect	18"	CD/CD	Y	bolt/carburator
147A	437252.2	3532202.2	18.7	1' N	25	-	6"	???	N	too small to find
148A	437321	3532202.2	38.1	2' W	98	-	4"	CD	Y	flat steel LIP
149A	437252.2	3532203.4	22.2	-	25	-	4"	???	N	too small to find
150A	437320.8	3532209.6	14.3	1.5' W	52	-	12"	CD	Y	coupling
151A	437395.8	3532211	13.6	-	20	-	3"	???	N	too small to find
152A	437252.2	3532213.6	53.3	2' NE	62	-	1"	CD	Y	rebar LIP
153A	437326	3532214	10.3	-	49	-	6"	CD	Y	clip
154A	437388	3532214.2	24.2	-	24	-	14"	CD	Y	nugget
155A	437396.2	3532214.2	11.0	-	20	-	4"	???	N	too small to find
156A	437239.847	3532214.35	57.2	2' NE	187	-	3"	CD	Y	rebar LIP
157A	437325.8	3532217.8	7.1	-	13	-	-	possible utility	N	no contact
158A	437396.2	3532218	43.5	1' S	50	-	4"	CD	Y	tongs

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159A	437321.2	3532218.2	49.6	3' W	108	-	12"	CD	Y	metal LIP
160A	437326	3532220.4	23.6	-	20	-	-	possible utility	N	no contact
161A	437388.2	3532221	37.2	-	63	-	24"	MD	Y	frag
162A	437321.4	3532221	8.4	1' NE	22	-	3"	CD	Y	nail
163A	437396.2	3532221	10.1	-	-	no find	3"	CD 3' NW	Y	banding
164A	437326.2	3532223.2	6.8	-	11	-	6"	CD	Y	nail
165A	437326.2	3532224.8	10.7	-	16	-	2"/4"	CD/CD	Y	scrap
166A	437252.2	3532225.4	5.7	1' N	15	-	7"	CD	Y	nugget
167A	437396.4	3532225.4	19.0	-	-	no find	-	-	N	no contact
168A	437321	3532225.6	18.3	-	19	-	2"	CD	Y	eye bolt
169A	437388.2	3532227	11.0	-	11	-	24"	CD	Y	tie rod
170A	437252.4	3532228.8	16.9	1' SW	18	-	6"	CD	Y	nugget
171A	437239.893	3532230.26	84.5	-	118	-	3"/2"	CD/CD	Y	flat metal/rebar
172A	437388	3532231.6	5.5	-	5	-	18"	CD	Y	pin & ring
173A	437252.4	3532232.2	6.9	1.5' S	38	-	6"	CD	Y	rebar LIP
174A	437396.2	3532233.2	6.3	-	-	no find	4"	CD	Y	pellet
175A	437388.2	3532235	30.0	2.5' E	39	-	26"	CD	Y	pipe LIP
176A	437252.344	3532235.49	5.1	-	7	-	8"	CD	Y	wire
177A	437321.2	3532235.6	38.1	2' N	50	-	6"	CD	Y	wire LIP
178A	437239.8	3532237	7.9	-	14.5	-	18"	CD	Y	rebar LIP
179A	437396.2	3532238.6	15.1	1' W	12	-	8"	CD	Y	large nail
180A	437321	3532241.4	7.1	1' NW	12.8	-	4"	CD	Y	nugget
181A	437239.775	3532243.78	29.2	-	35	-	4"	CD	Y	wire LIP
182A	437396.2	3532247	14.1	1' N	70	-	4"	CD	Y	angle iron
183A	437252.2	3532249.4	53.8	-	63	-	4"	CD	Y	pin & chain
184A	437387.6	3532250	10.1	-	-	no find	-	-	N	no contact
185A	437326.2	3532250.2	6.3	3' E	52	steep slope	6"	CD	Y	rebar LIP
186A	437396.2	3532251.2	10.7	1.5' SE	40	-	12"	CD	Y	bar
187A	437396	3532252.8	8.1	2' N	6	-	3"	CD	Y	coke can
188A	437326.2	3532253.4	8.4	1' E	9.4	-	6"	MD	Y	.50 cal
189A	437239.753	3532255.48	6.8	-	6.7	-	14"	CD	Y	wire LIP
190A	437252.2	3532255.8	35.9	2' E	21	-	14"	CD	Y	rebar LIP
191A	437321	3532256.8	16.4	2' W	21.8	-	2"	CD	Y	door hook

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LIP = Left in place

REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: Long Transects**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
192A	437396	3532257	6.6	-	-	no find	4"	MD	Y	.30 cal cartridge
193A	437387.4	3532257.6	8.7	-	-	no find	-	-	N	no contact
194A	437326	3532260.8	15.4	2.5' E	37	steep slope	8"	CD	Y	wire LIP
195A	437395.8	3532261	23.9	-	42	-	4"	CD	Y	bar
196A	437387.4	3532262.4	7.7	2' SE	6	-	12"	CD	Y	wire LIP
197A	437395.8	3532264.2	10.9	-	-	no find	-	-	N	no contact
198A	437387.4	3532267.4	7.6	4' NE	30	peak outside transect	4"	CD	Y	pipe LIP
199A	437395.8	3532269	10.8	-	-	no find	-	-	N	no contact
200A	437387.4	3532271.6	13.5	-	-	no find	-	-	N	no contact
201A	437325.8	3532275.2	14.6	2.5' E	13	steep slope	10"	CD	Y	rebar
202A	437321	3532275.8	10.1	-	11.4	-	2"	CD	Y	rebar
203A	437395.6	3532278.4	35.3	-	98	-	6"	CD	Y	wire LIP
204A	437321	3532278.4	52.7	4' W	506	peak outside transect	4"	CD	Y	flat metal
205A	437252	3532278.4	55.4	1' NW	100	-	3"	CD	Y	rebar LIP
206A	437387.4	3532278.6	7.9	-	13	-	4"	MD	Y	frag
207A	437239.588	3532279.6	9.6	-	9.6	-	6"/8"	CD/MD	Y	2 nails/frag
208A	437395.6	3532280.2	15.4	-	72	-	6"	CD	Y	bar
209A	437387.6	3532282.4	10.3	-	-	no find	-	-	N	no contact
210A	437239.55	3532284.22	6.6	-	7.7	-	6"	CD	Y	soda can LIP
211A	437321.2	3532284.4	7.7	-	23	surface metal	surface	culvert	Y	surface metal
212A	437252	3532284.4	5.7	-	5.7	-	2"	CD	Y	nugget
213A	437326	3532284.4	38.2	-	105	-	8"/3"	CD/CD	Y	rebar/center punch
214A	437387.4	3532285.6	150.5	4' W	470	-	1"	CD	Y	wire LIP
215A	437325.8	3532289.6	10.9	4' NE	25	steep slope	12"	CD	Y	rod foot
216A	437239.527	3532289.79	35.9	-	60	-	6"	CD	Y	wire LIP
217A	437325.697	3532292.35	5.7	-	11	-	12"	CD	Y	wire LIP
218A	437325.8	3532295	58.2	1' NE	51	-	8"	CD	Y	rebar LIP
219A	437395.6	3532295	11.9	-	-	no find	-	-	N	no contact
220A	437387.4	3532295.8	63.1	2' S	77	-	8"	CD	Y	rebar LIP
221A	437395.8	3532297.8	8.9	1' W	70	-	4"	CD	Y	wire LIP
222A	437325.8	3532298.4	26.5	3' NE	43	-	12"	CD	Y	bar LIP
223A	437251.8	3532299.4	6.4	1' N	5	-	6"	CD	Y	bolt & washer
224A	437321	3532299.4	6.6	-	12.8	-	4"	CD	Y	metal LIP

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REACQUISITION & DIG SHEET											
Date/Time:					**Site: Fort Stewart RCRA Investigation**						
MRS:	**AAR (FTSW-002-R-01)**				**Grid or Transect: Long Transects**						
Anomaly ID	**Easting**	**Northing**	**CH2 (mV)**	**Offset Distance & Direction***	**New CH2 (mV)**	**Notes** (merge, no find, etc)	**Depth**	**Contact Type**	**Resolved?**	**Comments**	
225A	437387.6	3532303.2	17.1	1' SW	17	-	24"	CD	Y	metal LIP	
226A	437396	3532305.4	280.0	-	490	-	6"/3"	CD/CD	Y	pipe LIP/pipe	
227A	437387.4	3532306.8	5.2	-	-	no find	6"	CD 3' NW	Y	metal	
228A	437325.6	3532308.2	5.9	-	5.9	-	2"	CD	Y	wire LIP	
229A	437321	3532308.4	43.7	-	51	-	4"	CD	Y	scissors	
230A	437387.8	3532309.8	17.5	-	-	no find	-	-	N	no contact	
231A	437387.6	3532311	12.9	-	4.7	-	16"	CD	Y	metal LIP	
232A	437396	3532313.6	9.1	-	-	no find	-	-	N	no contact	
233A	437252	3532316	32.9	1' N	37	-	4"	CD	Y	wire LIP	
234A	437325.8	3532316.6	38.6	4' E	100	peak outside transect	10"	CD	Y	rebar LIP	
235A	437388.2	3532317.4	25.2	-	-	no find	-	-	N	no contact	
236A	437321	3532317.6	6.6	2.5' E	12	-	12"	CD	Y	metal LIP	
237A	437396	3532319	14.0	-	15.5	-	6"	CD	Y	nugget	
238A	437325.8	3532319.8	19.7	1' N	184	-	3"	CD	Y	bar	
239A	437252	3532321.4	338.9	-	550	-	2"	CD	Y	fence post	
240A	437396	3532324.8	10.6	-	10.6	-	10"	CD	Y	rebar LIP	

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: Short Transects-1**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1B	437295.252	3531917.36	50.6	2' NW	67	-	8"	CD	Y	metal LIP
2B	437299.043	3531917.66	11.3	1' NW	12	-	4"	CD	Y	chain
3B	437280.4	3531918	12.7	6' S	700	utility pole	-	agreed	Y	not dug
4B	437275.2	3531918.2	34.0	4' NE	75	peak outside transect	-	utility	Y	not dug
5B	437314	3531920.6	27.0	2' N	51	-	12"	CD	Y	rebar LIP
6B	437315.6	3531921.2	28.6	2' NW	42	-	3"	CD	Y	slag
7B	437220.6	3531941	28.8	3' S	48	-	3"	CD	Y	rebar
8B	437210.2	3531941.2	20.3	1' S	66	-	3"	CD	Y	rebar
9B	437235.8	3531941.2	8.4	-	11	-	4"	CD	Y	nails
10B	437227.4	3531941.4	15.0	1' N	30	-	6"/2"	CD/CD	Y	bar/nugget
11B	437203.2	3531941.6	5.1	1' W	11	surface metal	surface	CD	Y	security tag
12B	437206.6	3531941.6	9.2	-	12	-	28"	CD	Y	rebar LIP
13B	437273	3531955	41.6	-	125	associated with road?	4"	CD	Y	wire LIP
14B	437274.6	3531955.2	19.2	-	28	-	-	utility	Y	not dug
15B	437230.2	3531978.6	25.1	1.5' NE	43	-	6"	CD	Y	flat stock
16B	437227.8	3531978.6	10.3	1' NE	36	-	3"	CD	Y	rebar
17B	437239.4	3531978.8	7.2	-	-	merge w/#31 long transect	-	-	Y	-
18B	437211.2	3531979	5.1	-	15	-	6"	CD	Y	bolt LIP
19B	437203	3531980	29.4	1' E	45	-	-	utility	Y	not dug
20B	437273	3531994.6	12.5	-	21	road	8"	MD	Y	frag
21B	437278	3531994.6	7.2	2' NE	20	-	12"	CD	Y	large washer
22B	437321	3531994.8	5.5	1' S	-	utility pole	-	agreed	Y	not dug
23B	437310.8	3531995	14.9	-	15	-	-	-	N	no contact
24B	437239.8	3532017	6.3	-	-	merge w/#46 long transect	-	agreed	Y	already done
25B	437225.8	3532017.2	14.3	1' W	23	-	2"	CD	Y	flat washer
26B	437221.4	3532017.2	10.1	1' N	26	-	10"	CD	Y	wire LIP

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: Short Transects-1**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
27B	437215.4	3532017.2	16.0	1' S	22	-	3"	CD	Y	flat washer
28B	437207.161	3532017.36	5.2	-	6	-	18"	CD	Y	rebar
29B	437211.6	3532017.4	7.0	4' N	92	peak outside transect	10"	CD	Y	rebar LIP
30B	437273	3532033.2	20.9	-	24	-	4"	CD	Y	staple
31B	437310.8	3532033.6	28.8	1.5' S	25	-	-	utility	Y	not dug
32B	437308.838	3532033.66	11.8	-	17	-	8"	CD	Y	nugget
33B	437202.366	3532055.26	32.0	-	39	-	-	utility	Y	not dug
34B	437207	3532055.4	58.5	1' W	67	-	2"	CD	Y	metal LIP
35B	437287.2	3532071.6	8.7	-	16	-	-	utility	Y	not dug
36B	437273	3532071.6	30.9	2' S	65	-	8"	CD	Y	wire LIP
37B	437295.2	3532072	10.6	1' E	15	-	10"	CD	Y	several items??
38B	437299.8	3532072	15.4	-	37	-	-	utility	Y	not dug
39B	437320	3532073	7.1	2' S	-	utility pole	-	agreed	Y	not dug
40B	437231	3532093.2	17.3	-	37	-	16"	MDAS	Y	90mm AP
41B	437223.6	3532093.4	103.7	-	135	-	6"	CD	Y	metal LIP
42B	437284.6	3532110.4	40.8	-	96	-	4"	CD	Y	rebar LIP
43B	437276.6	3532110.6	35.6	1.5' S	75	-	6"	CD	Y	rebar LIP
44B	437271	3532111	46.4	-	122	associated with road?	-	utility	Y	not dug
45B	437202	3532131.6	12.9	-	13.5	-	3"	CD	Y	wire LIP
46B	437219.4	3532131.6	17.2	1' W	30	-	2"	CD	Y	wire
47B	437203.6	3532131.8	9.6	1' N	36	-	14"	CD	Y	rebar removed w/ backhoe
48B	437271.2	3532149	5.0	-	11	-	6"	CD	Y	wire
49B	437273.4	3532149.2	10.6	2' SW	22	-	20"	CD	Y	oil filter LIP
50B	437319.4	3532149.8	12.6	-	13	utility pole	-	agreed	Y	not dug
51B	437214.4	3532170	33.8	3' S	125	-	1"	CD	Y	wire LIP
52B	437206.6	3532170	519.1	1' NW	821	-	4"	CD	Y	metal LIP
53B	437217.8	3532170.2	22.4	1.5' NE	43	-	3"	CD	Y	rebar LIP
54B	437237.4	3532170.2	7.2	-	7.5	-	3"	???	N	too small to find
55B	437271.8	3532187	18.0	1' N	27	-	24"	CD	Y	bar
56B	437288.2	3532187.6	26.6	1.5' NE	246	-	20"	CD	Y	metal scrap LIP
57B	437306.4	3532188.2	8.2	-	19	-	4"	MD	Y	frag
58B	437210	3532207.4	243.2	1' E	277	-	2"	CD	Y	rebar LIP
59B	437236.6	3532207.4	6.0	-	6	-	5"	CD	Y	wire LIP

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: Short Transects-1**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
60B	437201	3532207.8	11.9	2' N	13	-	-	-	N	no contact
61B	437270	3532225.4	67.9	-	86	utility?	2"	CD	Y	nugget
62B	437318.8	3532225.6	17.6	-	38	-	2"	CD/utility	Y	battery/utility not dug
63B	437274.4	3532225.6	35.2	-	85	-	-	utility	Y	possibly junction box
64B	437286	3532225.6	17.3	2.5' SW	55	-	-	utility	Y	not dug
65B	437316	3532226	41.1	1' W	34	-	2"	CD	Y	flat bar
66B	437296	3532226	10.2	-	14	-	-	utility	Y	no contact
67B	437289.4	3532226	9.4	-	16	-	-	utility	Y	not dug
68B	437306	3532226.2	6.9	3' S	80	-	10"	CD	Y	bar LIP
69B	437314.4	3532226.4	14.9	1' S	46	-	24"	???	N	too small to find
70B	437236.2	3532245.4	7.7	-	7	-	2"	CD	Y	nugget
71B	437231	3532245.6	6.9	-	11	-	14"	CD	Y	long nail in concrete
72B	437207.8	3532246	5.8	-	10	-	34"	CD	Y	rebar LIP
73B	437201.299	3532246	5.1	2' S	14	-	3"	CD	Y	wire LIP
74B	437267.8	3532264.8	56.1	-	-	asphalt road	-	utility	Y	not dug
75B	437199.8	3532283.6	6.2	-	6.2	-	3"	???	N	too small to find
76B	437202.8	3532283.8	28.8	2' NE	40	-	18"	CD	Y	wire LIP
77B	437212.4	3532284	19.1	-	25	-	3"/3"	CD/CD	Y	rebar/wire
78B	437310.8	3532304	12.4	-	25	-	4"	CD	Y	rebar hook
79B	437300.8	3532304.8	5.1	-	6	-	18"	CD	Y	very hot nugget

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: Short Transect-2**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
1C	437344.8	3532130.2	27.3	-	67	-	14"	CD	Y	rebar LIP
2C	437345.4	3532091.2	12.2	-	-	no find	-	utility	Y	not dug
3C	437347.6	3532053.2	18.4	1.5 NE	35	-	14"	CD	Y	rebar LIP
4C	437348.2	3532245.6	20.9	-	39	-	8"	CD	Y	rebar LIP
5C	437348.6	3532130	83.7	-	135	-	3"	CD	Y	rebar
6C	437349.261	3531937.79	13.1	1' S	18	-	-	utility	Y	not dug
7C	437349.8	3532053.2	20.2	-	16	-	8"	CD	Y	bolt
8C	437352.2	3532245.6	23.1	-	35	-	8"	CD	Y	rebar LIP
9C	437353.906	3532245.7	12.0	3.5' SW	496	peak outside transect	3"	CD	Y	partial fence post
10C	437356.6	3532246	102.5	-	119	-	3"	CD	Y	rest of fence post
11C	437363	3532246.2	5.1	-	9	-	20"	MD/CD	Y	frag/nail
12C	437366	3532169.2	25.3	4' SW	111	peak outside transect	16"	CD	Y	rebar LIP
13C	437366.6	3532053.8	5.8	2' S	16	-	-	utility	Y	not dug
14C	437369	3532246.6	17.5	1' NW	40	-	3"	CD	Y	wire
15C	437372.245	3531937.81	29.1	2' NE	39	-	4"	CD	Y	slag
16C	437372.6	3532207.4	7.2	-	23	-	6"	MD	Y	safing clip
17C	437374.4	3532054.2	21.3	-	32	-	-	utility	Y	not dug
18C	437377.2	3532246.6	6.1	1' S	9	-	3"	CD	Y	flat washer
19C	437383	3532207.4	5.8	-	7.5	-	4"	CD	Y	bolt
20C	437384.6	3532129.4	70.3	2' W	90	-	4"	CD	Y	rebar LIP
21C	437385.4	3532283.8	8.7	4' N	227	peak outside transect	-	NC	N	-
22C	437386.2	3532246.6	5.9	-	6	-	4"	MD	Y	.50 cal
23C	437386.8	3532129.6	95.4	2' N	138	-	2"	CD	Y	rebar LIP
24C	437386.8	3532055.2	5.8	-	12	-	12"	MD	Y	.50 cal
25C	437387.8	3531976.4	14.3	1' N	15	-	8"	CD	Y	bolt
26C	437417.6	3532228.4	9.4	-	11	-	12"	CD	Y	wire LIP

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REACQUISITION & DIG SHEET

Date/Time: | **Site: Fort Stewart RCRA Investigation**

MRS: AAR (FTSW-002-R-01) | **Grid or Transect: Short Transect-2**

Anomaly ID	Easting	Northing	CH2 (mV)	Offset Distance & Direction*	New CH2 (mV)	Notes (merge, no find, etc)	Depth	Contact Type	Resolved?	Comments
27C	437418	3532112.2	10.5	1.5' E	11	-	-	CD	Y	wire
28C	437418	3532190	42.1	1.5' W	163	-	6"	CD	Y	pin/banding/scrap
29C	437418.889	3531921.26	143.3	1' W	200	utility?	-	utility	Y	not dug
30C	437420	3532306.6	17.8	1' S	26	-	-	NC	N	-
31C	437421.05	3531958.18	14.4	-	17	-	8"	CD	Y	wire
32C	437422.4	3532228.2	30.3	1' SE	87	-	6"	CD	Y	bar LIP
33C	437423.6	3532151.6	5.5	2' N	6.5	-	-	NC	N	-
34C	437424.8	3532228.4	36.3	-	63	-	12"	CD	Y	bar LIP
35C	437424.969	3531958.22	5.4	-	17	-	8"	CD	Y	wire
36C	437426.8	3532306.8	8.2	-	-	merge w/38	4"	CD	Y	bar LIP
37C	437427	3532266.6	7.8	4' NE	154	peak outside transect	20"	CD	Y	rebar LIP
38C	437428.6	3532306.8	16.7	6' NW	150	peak outside transect	4"	CD	Y	bar LIP
39C	437429.8	3532228.6	18.3	2' SE	42	-	12"	CD	Y	bar LIP
40C	437431.8	3532190	8.3	-	14	-	24"	CD	Y	wire LIP
41C	437432.8	3532306.8	20.5	4' NW	650	peak outside transect	6"	CD	Y	bar LIP
42C	437435.2	3532228.8	19.6	1.5' E	47	-	6"	CD	Y	wire LIP
43C	437437.889	3532307.06	135.2	2' N	140	-	12"	CD	Y	bar LIP
44C	437438.4	3532266.2	17.2	2' N	68	-	6"	CD	Y	pin-tank track
45C	437440.4	3532151.8	17.4	2' E	27	-	18"	CD	Y	flat metal LIP
46C	437441.697	3532307.09	310.9	1' E	380	-	3"	CD	Y	bar LIP
47C	437449.6	3532266.4	13.8	2' NW	24	-	6"	CD	Y	nail
48C	437451.2	3532113.2	17.1	2.5' S	75	peak outside transect	30"	CD	Y	wire LIP
49C	437452.6	3532306.4	9.8	2.5' SE	73	-	4"	CD	Y	bar LIP
50C	437455	3532306.4	47.4	-	55	-	12"	CD	Y	metal LIP
51C	437455.836	3531920.57	13.6	2' N	100	-	4"	CD	Y	metal plate
52C	437460.4	3532113.4	21.8	-	55	-	12"	CD	Y	pin
53C	437461.4	3532152.6	58.9	-	67	-	12"	CD	Y	flat bar
54C	437465.6	3532305.4	58.1	-	105	-	3"	CD	Y	bar LIP
55C	437465.8	3532266.8	5.9	1' NW	10	-	6"	CD	Y	nail
56C	437467.8	3532305.8	45.0	3' SE	87	peak outside transect	4"	CD	Y	bar LIP
57C	437468	3532229.6	7.6	1' E	7.6	-	6"	CD	Y	scrap

N/C = no contact
"no find" is a location where the mV value does not change within 2 feet of the flag, meaning there is no detectable metal in the ground.
LIP = Left in place



Photograph 01
MEC: 40-mm Round Grid 18, Anomaly #10 – July 24, 2012



Photograph 02
MEC: 40-mm Round Grid 19, Anomaly #2 – July 24, 2012



Photograph 03
MEC: 40-mm Round Grid 21, Anomaly #12 – July 25, 2012

DD FORM 1348-1A, JUL 91 ISSUE RELEASE/RECEIPT DOCUMENT

PREVIOUS EDITION MAY BE USED

1 DOC IDENT	2	3	4 RI FROM	5	6	7 M&S	23 UNIT ISS	24	25 QUANTITY	26	27	28	29	45 SER	46	47	48	49	50	51 SIG	52 FUND	53	54 DISTRIBUTION	55	56	57 PROJECT	58	59	60 PRI	61	62 REQD	63 DEAL	64 DATE	65 ADV	66	67 RI	68	69	70 O/P	71 COND	72 MGT	73

74 UNIT PRICE DOLLARS	75	76	77	78	79	80 CTS	1. TOTAL PRICE DOLLARS	CTS	2. SHIP FROM	3. SHIP TO
									4. MARK FOR	

5. DOC DATE	6. NMFC	7. FRT RATE	8. TYPE CARGO	9. PS

10. QTY. REC'D	11.UP	12. UNIT WEIGHT	13. UNIT CUBE	14. UFC	15. SL

16. FREIGHT CLASSIFICATION NOMENCLATURE

17. ITEM NOMENCLATURE

18. TY CONT	19. NO CONT	20. TOTAL WEIGHT	21. TOTAL CUBE

22. RECEIVED BY	23. DATE RECEIVED

24. DOCUMENT NUMBER & SUFFIX (30-44)

Basic Material Content: 1 EA 37mm AP Round and 2 EA 90mm AP round

Total number of items: 3

25. NATIONAL STOCK NO. & ADD (8-22)

Recovery Site Address: Fort Stewart ASP, Fort Stewart GA

PM Phone: 301-323-1394

26. RIC (4-6) UI (23-24) QTY (25-29) CON CODE (71) DIST (55-56) UP (74-80)

This certifies that the material listed above has been 100% inspected and 100% re-inspected by qualified individuals per the guidance provided in DoD Instruction 4140.62 and is reclassified as Material Documented as Safe (MDAS).

Above items will be held at the ERT Corporate office located in Laurel MD for use in training/DGM Testing. PM Phone: 301-323-1394

27. ADDITIONAL DATA

Certified by:

Date: 6 AUG 2012

TJ Fanning, ERT SUXOS, Ft Stewart RI Project

Date: AUG 6 2012

Paul Greene ERT UXO Program Manager

Jennifer Harlan

From: stburhans@aol.com
Sent: Wednesday, June 27, 2012 6:14 PM
To: Jennifer Harlan; Paul Greene
Subject: Letter about using EOD at ASP
Attachments: message_walker_to_Horton_pg_1_001.jpg; walker_to_horton_pg_2_001.jpg; walker_to_horton_pg_3_001.jpg

Attached is an email message from Laryy Walker at the ASP to higher Belinda Horton about 731st EOD being available to handle UXO/MEC items. Commander Ashley Philben (CPT) has said they would be available for response as needed. I gave a copy to Jimmie Mcgowan at DPW/environmental. Larry Walker is rather serious about not doing demo in the ASP proper if at all possible.

Steven Burhans
UXOSO, ERT
443-804-7448

Walker, Larry D CIV (US)

From: Horton, Belinda K CIV USARMY IMCOM ATLANTIC (US)
Sent: Wednesday, June 27, 2012 10:16 AM
To: Walker, Larry D CIV (US)
Subject: FW: Work Plan for Upcoming Work @ ASP (UNCLASSIFIED)
Signed By: belinda.k.horton@us.army.mil

Classification: UNCLASSIFIED
Caveats: FOUO

Larry --this is what I received ---sorry, didn't notice that you were not copied.

Thanks,
Belinda

-----Original Message-----
From: Philbin, Ashley E CPT USARMY 52 EOD (US)
Sent: Thursday, June 14, 2012 10:52 AM
To: Horton, Belinda K CIV USARMY IMCOM ATLANTIC (US)
Subject: RE: Work Plan for Upcoming Work @ ASP (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Mrs. Horton,

We will be able to support you. We will not be able to have someone sit out there while they dig just due to manning, but if anything comes up, we would be able to respond immediately. Any questions, please let me know. Thanks!

v/r,

Ashley Philbin
CPT, LG
731st EOD Commander
"Iron Maiden 6"
Office: 912-435-8345
Cell: 910-723-4508
BB: 912-320-5752
ashley.philbin@conus.army.mil
ashley.philbin@us.army.mil

-----Original Message-----
From: Horton, Belinda K CIV USARMY IMCOM ATLANTIC (US)
Sent: Thursday, June 07, 2012 4:34 PM
To: Erwin, William J CPT USARMY (US); Philbin, Ashley E CPT USARMY 52 EOD (US); Strickland, Johnny J 1SG USARMY (US)
Cc: Walker, Larry D CIV (US)
Subject: FW: Work Plan for Upcoming Work @ ASP (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Good Afternoon-
Please see message below (and attachment) regarding an inspection scheduled for the Fort Stewart Ammunition Supply Point.

There is a possibility that during this inspection the team may locate and/or
recover some discarded military munitions that would require detonation.

Mr. Walker, Chief of Ammunition Supply Point, was told that the contractor is
not supposed to transport the munitions;-- according to their contract, they

are required to detonate on site.

If munitions are discovered, we would like to request that EOD analyze situation and provide additional guidance for disposal/detonation. Our concern
is that the munitions may need to be taken to another site (away from ASP) to
detonate.

Please advise if this support will be available (if needed) and provide a point of contact. Our POC is Mr. Larry Walker, phone 435-8119/435-8112.

v/r-
Belinda K. Horton
Chief, Supply Division
Directorate of Logistics, FSGA
912-435-0240

-----Original Message-----
From: Walker, Larry D CIV (US)
Sent: Thursday, June 07, 2012 1:39 PM
To: Horton, Belinda K CIV USARMY IMCOM ATLANTIC (US)
Subject: FW: Work Plan for Upcoming Work @ ASP (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Who: Environmental

What: Environmental inspection, due to this area was once an anti-aircraft range.

When: Inspection is scheduled to begin 18 June 2012 through 18 July 2012

Where: Inside/outside the ASP Area.

Why: To ensure area is environmentally safe

Larry

Classification: UNCLASSIFIED

EXPLOSIVE ORDNANCE INCIDENT REPORT

For use of this fonn, see FM 4-30.5;
the proponent agency is TRADOC.

1. UNIT NUMBER	2. CONTROL NUMBER	3. UNUSUAL	4. ROUTINE
756-120-12		O	~

SECTION A: INITIAL INFORMATION

5. DATE/TIME REPORTED	9. INCIDENT LOCATION	11. ITEM(S) REPORTED
251500LJUL2012	FSGAASP 17RMR3471132737	1xUXO
6. REPORTED BY		
Steven Burhans		
7. PHONE NUMBER	**10. POINT OF CONTACT**	
(433) 804-7448	Steven Burhans FSGAASP (433) 804-7448	
8. ADDRESS		
ASP, FSGA		

SECTION B: ACTION BY EOD

12. PERSONNEL DISPATCHED	13. DATE/TIME	14. TRAVEL DATA	15. WORK HOURS
SGTThommen SSG McGuire SPC Gaither SPC Dietz	A. DPRT 251505LJUL2012 B.ARR 251515LJUL2012 C. COMPL 251540LJUL2012	A. AIR: FLYING TIME NA B. VEH: MILEAGE 4 Miles	A. TRAVEL 40 Minutes B.INCIDENT 2 Hour 20 Minutes

16. CONFIRMED IDENTIFICATION	17. DISPOSITION
Ix MK 1 BL&P (40 mm)	Disposed of by detonation at OP4 17R MR 4503736944

18. INCIDENT NARRATIVE (INCLUDE ALL SIGNIFICANT DETAILS AND PROBLEMS)

On 241500LJUL2012 Fort Stewart Range Control reported a UXO dug up during construction at the ASP at grid 17R MR 34711 32737. EOD arrived on scene at 241514LJUL2012 and met with Steven Burhans, who was the UXO representative on ground and assumed control of the scene. EOD Team Leader performed a recon of the UXO and, utilizing AEODPS, positively identified the UXO as a MK1 BL&P (40mm) projectile. Due to the proximity of the UXO to infrastructure (BLD 17001 explosives receiving ramp), and inside the ASP, the UXO was remotely moved and placed in a CMC with sand then removed from the scene for Emergency Disposal. EOD Team Leader relinquished the sight back to Mr. Burhans. EOD Team received a follow on call and moved the UXO to a safe disposal area on OP4 at grid 17R MR 4503736944. No further explosive hazards were found. EOD team moved to follow on mission at 251540LJUL2012.

Class V Used: Ix Ml12, LOT: MA-08B035-031
2x M14, LOT: SHK 98K 001-008
2x M81, LOT: MTL08G 101-008

GPPOC:N/A

BNPOC:N/A

CO POC: CPT Wagner, Karl L. (912) 435-8302

SIR: No

SECTION C: AUTHENTICATION

19. NAME AND GRADE AND SIGNATURE OF UNIT COMMANDER	20. TELEPHONE NO.	21. DATE *(VYVYMMOO)*
CPT Karl Wagner "WAGNERKARL".i::.129304oCO"	(912) 435-8302	20120727

EXPLOSIVE ORDNANCE INCIDENT REPORT

For use of this form, see FM 4-30.5;
the proponent agency is TRADOC.

1. UNIT NUMBER	2. CONTROL NUMBER	3. UNUSUAL	4. ROUTINE
756-118-12		D	~

SECTION A: INITIAL INFORMATION

5. DATE/TIME REPORTED	9. INCIDENT LOCATION	11.ITEM(S) REPORTED
241445LJUL2012	FSGAASP Ft. Stewart, GA 31315	1xUXO
6. REPORTED BY		
Steven Burhans		
7. PHONE NUMBER	**10. POINT OF CONTACT**	
(433) 804-7448	Steven Burhans FSGAASP (433) 804-7448	
8. ADDRESS		
ASP, FSGA		

SECTION B: ACTION BY EOD

12. PERSONNEL DISPATCHED	13. DATE/TIME	14. TRAVEL DATA	15. WORK HOURS
SGTThommen SSG McGuire SPC Gaither SPCDietz	A.. DPRT 241500LmL2012 B.ARR 241514LmL2012 C.COMPL 241622LmL2012	A.. AIR: FLYING TIME NA B. VEH: MILEAGE II Miles	A.. TRAVEL 1 Hour, 3 Minutes B.INCIDENT 4 Hours, 38 Minutes

16. CONFIRMED IDENTIFICATION	17. DISPOSITION
Ix MK 1 BL&P (40 mm)	Disposed of by detonation at grid: 17R MR 4385937049 (EOD Range)

18. INCIDENT NARRATIVE (INCLUDE ALL SIGNIFICANT DETAILS AND PROBLEMS)

On 241445LJUL2012 EOD received a report ofa UXO dug up during construction at the ASP. EOD arrived on scene at 241514LmL2012, met with Steven Burhans, and assumed control of the scene. EOD Team Leader performed a recon of the UXO and, utilizing AEODPS, positively identified the UXO as a MK1 BL&P (40mm) projectile. Due to the proximity of the UXO to infrastructure (BLD 17001 explosives receiving ramp) and being inside the ASP, the UXO was remotely moved and placed jn a CMC. EOD Team Leader relinquished the site back to Mr. Burhans and moved the UXO to a safe disposal area at grid 17R MR 4385937049 (EOD Range) and disposed ofthe UXO by detonation. EOD Team returned to base at 241622LmL2012. No further explosive hazards were found.

Class V Used: Ix Ml12, LOT: MA-08B035-031
2x M14, LOT: SHK 98K 001-008
2x M81, LOT: MTL08Gl 01-008

GPPOC:N/A

BNPOC:N/A

CO POC: CPT Wagner, Karl L. (912) 435-8302

SIR: No

SECTION C: AUTHENTICATION

19. NAME AND GRADE AND SIGNATURE OF UNIT COMMANDER	20. TELEPHONE NO.	21. DATE *(YYYYMMOO)*
CPT Karl Wagner 'WAGNERKARL:L:iz9304000'	(912) 435-8302	20120727

EXPLOSIVE ORDNANCE INCIDENT REPORT

For use of this form. see FM 4-30.5;
the proponent agency is TRADOC.

1. UNIT NUMBER	2. CONTROL NUMBER	3. UNUSUAL	4. ROUTINE
756-117-12		D	I~

SECTION A: INITIAL INFORMATION

5. DATE/TIME REPORTED	9. INCIDENT LOCATION	11.ITEM(S) REPORTED
240900LJUL2012	FSGAASP Fort Stewart, GA 31315	1xUXO
6. REPORTED BY Steven Burhans		
7. PHONE NUMBER (433) 804-7448	10. POINT OF CONTACT Steven Burhans FSGAASP (433) 804-7448	
8. ADDRESS ASP, FSGA		

SECTION B: ACTION BY EOD

12. PERSONNEL DISPATCHED	13. DATE/TIME A DPRT	14. TRAVEL DATA A AIR: FLYING TIME	15. WORK HOURS A TRAVEL
SGTThoromen SSG McGuire SPC Gaither SPC Dietz	240907LJUL2012	NA	1 Hour, 12 Minutes
	B.ARR 240916LJUL2012	B. VEH: MILEAGE	B.INCIDENT
	C.COMPL 241054LJUL2012	11 Miles	6 Hours, 52 Minutes

16. CONFIRMED IDENTIFICATION	17. DISPOSITION
Ix MK 1 BL&P (40 rom)	Disposed of by detonation at grid: 17R MR 4385937049 (FSGA EOD Range)

18. INCIDENT NARRATIVE (INCLUDE ALL SIGNIFICANT DETAILS AND PROBLEMS)

On 240900LJUL2012 EOD received a report ofa UXO dug up during construction at the ASP. EOD arrived on scene at 240916LJUL20 12, met with Steven Burhans, and assumed control of the scene. EOD Team Leader preformed a recon of the UX;O and, utilizing AEODPS, positively identified the UXO as a MK1 BL&P (4Omm) projectile. Due to the proximity of the UXO to infrastructure (BLD 17001 explosives receiving ramp) and being inside the ASP, the UXO was remotely moved and placed in a CMC. EOD Team Leader relinquished the site back to Mr. Burhans and moved the UXO to a safe disposal area at grid 17R MR 4385937049 (EOD Range) and disposed of the UXO by detonation. EOD Team returned to base at 241054LJUL2012. No further explosive hazards were found.

Class V Used: Ix M112, LOT: MA-08B035-031
2x M14, LOT: SHK 98K 001-008
2x M81, LOT: MTL08Gl01-008

GPPOC:N/A

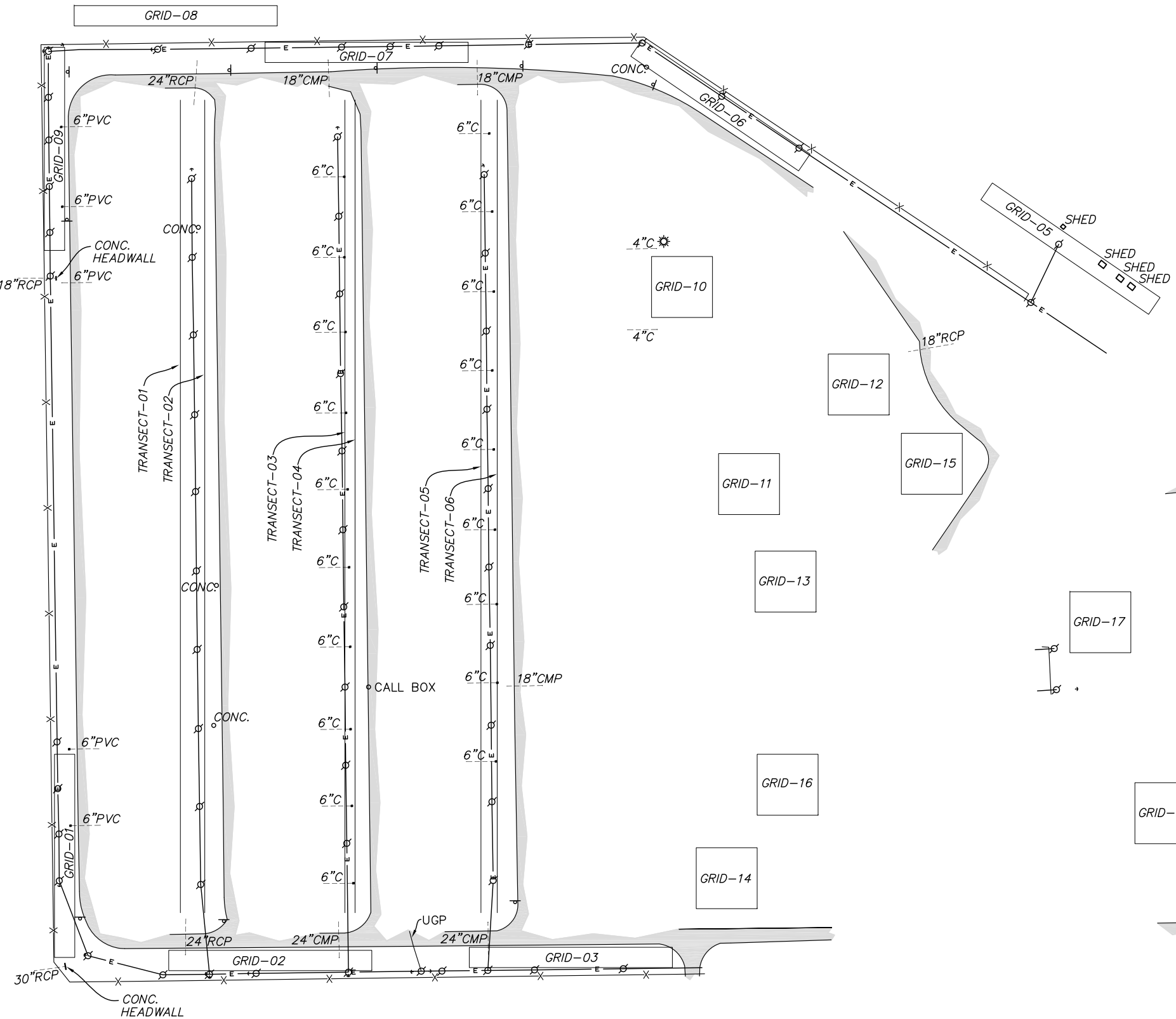
BNPOC:N/A

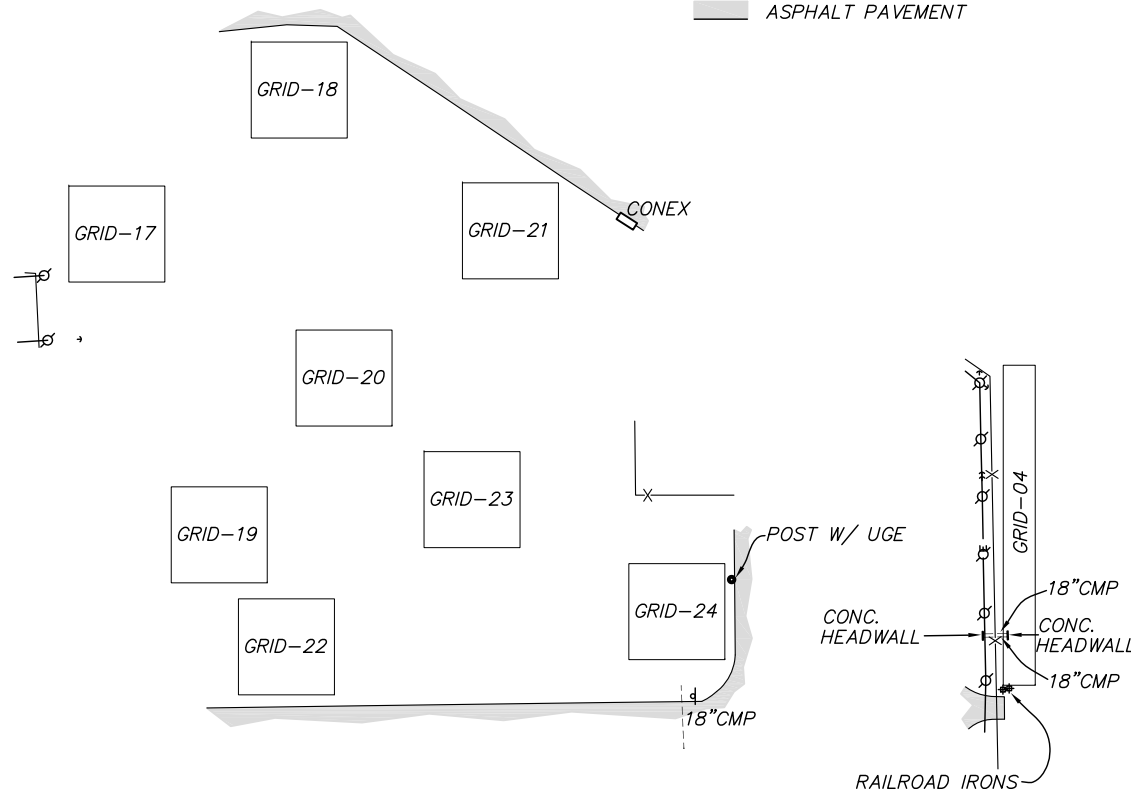
CO POC: CPT Wagner, Karl L. (912) 435-8302

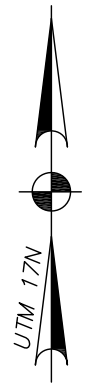
SIR: No

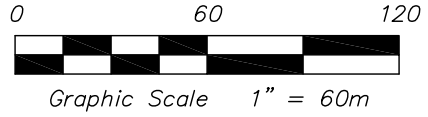
SECTION C: AUTHENTICATION

19. NAME AND GRADE AND SIGNATURE OF UNIT COMMANDER	20. TELEPHONE NO.	21. DATE *(YYYYMMDD)*
CPT Karl Wagner 'WAGNERKARL~Ci29i040CO'	(912) 435-8302	20120727











LEGEND

	POWER POLE
	GUY ANCHOR
	RAILROAD IRON
	METAL SIGN
	CONCRETE LIGHT POLE BASE
RCP	REINFORCED CONCRETE PIPE
CMP	CORRUGATED METAL PIPE
C	CLAY PIPE
UGP	UNDERGROUND POWER LINE
	CHAINLINK FENCE
E	OVERHEAD POWER LINES
	ASPHALT PAVEMENT

1. THE PURPOSE OF THIS EXHIBIT IS TO SHOW EXISTING FEATURES WITHIN 25 FEET OF EACH GRID AND TRANSECT. OTHER FEATURES EXIST WITHIN THIS OTHER THAN AS SHOWN.

BREWER
LANDSURVEYING
P.O. Box 441
Pooler, GA 31322
craig@brewersurvey.com
Phone (912) 856-2205
www.BrewerSurvey.com

AN EXHIBIT OF THE AAR SITE

FORT STEWART, GEORGIA

PREPARED FOR

EARTH RESOURCES TECHNOLOGY, INC.

PROJECT #:	120091
FIELD:	6/26/12
DRAWING:	6/30/12
LAST REVISED:	6/30/12
DRAWN BY:	JCB

0 60 120

Graphic Scale 1" = 60m

UTM 17N

15" STORM PIPE
15" STORM PIPE

GUY WIRE
OVERHEAD POWER LINE
GUY WIRE

HERO ROAD

UNDERGROUND TELEPHONE LINE

OBSERVED DEBRIS (TYP.)

TELEPHONE JUNCTION BOX

GRAVEL PARKING

PERIMETER FENCE (PROJECT LIMIT)

UNDERGROUND TELEPHONE LINE

UNDERGROUND TELEPHONE LINE

GUY POLE
GUY WIRE

GEORGIA REGISTERED No. 3022 PROFESSIONAL LAND SURVEYOR JAMES CRAIG BREWER

PROJECT #:	120091
FIELD:	6/07/12
DRAWING:	6/09/12
LAST REVISED:	6/09/12
DRAWN BY:	JCB

AN EXHIBIT OF THE HRTA SITE - 34.618 ACRES

FORT STEWART, GEORGIA

PREPARED FOR

EARTH RESOURCES TECHNOLOGY, INC.

BREWER
LAND SURVEYING
P.O. Box 441
Pooler, GA 31322
craig@brewersurvey.com
Phone (912) 856-2205
www.BrewerSurvey.com

Fort Stewart, GA
HTRA Survey Readings

Point	Easting	Northing	Flag Color	Station
2-1	442367.93	3527730.222	BLUE	0+00.000
2-4	442367.93	3527764.01	BLUE	0+33.787
2-5	442367.93	3527794.772	BLUE	0+64.549
3-1	442361.84	3527568.718	PINK	0+00.000
3-4	442361.84	3527581.03	PINK	0+12.312
3-5	442361.84	3527681.03	PINK	1+12.312
3-6	442361.84	3527781.03	PINK	2+12.312
3-7	442361.84	3527794.308	PINK	2+25.590
4-1	442355.75	3527477.037	GREEN	0+00.000
4-4	442355.75	3527506.77	GREEN	0+29.733
4-5	442355.75	3527606.77	GREEN	1+29.733
4-6	442355.75	3527706.77	GREEN	2+29.733
4-7	442355.75	3527793.937	GREEN	3+16.900
5-1	442349.65	3527339.156	RED	0+00.000
5-3	442349.65	3527374.29	RED	0+35.134
5-4	442349.65	3527474.29	RED	1+35.134
5-5	442349.65	3527574.29	RED	2+35.134
5-6	442349.65	3527674.29	RED	3+35.134
5-7	442349.65	3527774.29	RED	4+35.134
5-8	442349.65	3527793.515	RED	4+54.359
6-1	442343.56	3527181.605	BLUE	0+00.000
6-2	442343.56	3527264.72	BLUE	0+83.115
6-3	442343.56	3527364.72	BLUE	1+83.115
6-4	442343.56	3527464.72	BLUE	2+83.115
6-5	442343.56	3527564.72	BLUE	3+83.115
6-6	442343.56	3527664.72	BLUE	4+83.115
6-7	442343.56	3527764.72	BLUE	5+83.115
6-8	442343.56	3527793.114	BLUE	6+11.509
7-1	442337.46	3527149.031	PINK	0+00.000
7-2	442337.46	3527260.02	PINK	1+10.989
7-3	442337.46	3527360.02	PINK	2+10.989
7-4	442337.46	3527460.02	PINK	3+10.989
7-5	442337.46	3527560.02	PINK	4+10.989
7-6	442337.46	3527660.02	PINK	5+10.989
7-7	442337.46	3527760.02	PINK	6+10.989
7-8	442337.46	3527792.743	PINK	6+43.711
8-1	442331.37	3527150.233	GREEN	0+00.000
8-2	442331.37	3527258.5	GREEN	1+08.267
8-3	442331.37	3527358.5	GREEN	2+08.267
8-4	442331.37	3527458.5	GREEN	3+08.267
8-5	442331.37	3527558.5	GREEN	4+08.267
8-6	442331.37	3527658.5	GREEN	5+08.267
8-7	442331.37	3527758.5	GREEN	6+08.267
8-8	442331.37	3527792.36	GREEN	6+42.126
9-1	442325.28	3527151.742	RED	0+00.000
9-2	442325.28	3527256.97	RED	1+05.228
9-3	442325.28	3527356.97	RED	2+05.228
9-4	442325.28	3527456.97	RED	3+05.228
9-5	442325.28	3527556.97	RED	4+05.228
9-6	442325.28	3527656.97	RED	5+05.228
9-7	442325.28	3527756.97	RED	6+05.228
9-8	442325.28	3527791.943	RED	6+40.201
10-1	442319.18	3527153.563	BLUE	0+00.000
10-2	442319.18	3527256.26	BLUE	1+02.697
10-3	442319.18	3527356.26	BLUE	2+02.697
10-4	442319.18	3527456.26	BLUE	3+02.697
10-5	442319.18	3527556.26	BLUE	4+02.697
10-6	442319.18	3527656.26	BLUE	5+02.697
10-7	442319.18	3527756.26	BLUE	6+02.697
10-8	442319.18	3527791.562	BLUE	6+37.999
11-1	442313.09	3527156.218	PINK	0+00.000
11-2	442313.09	3527258.5	PINK	1+02.282
11-3	442313.09	3527358.5	PINK	2+02.282
11-4	442313.09	3527458.5	PINK	3+02.282
11-5	442313.09	3527558.5	PINK	4+02.282
11-6	442313.09	3527658.5	PINK	5+02.282
11-7	442313.09	3527758.5	PINK	6+02.282
11-8	442313.09	3527791.353	PINK	6+35.135
12-1	442306.99	3527159.113	GREEN	0+00.000
12-2	442306.99	3527260.75	GREEN	1+01.637
12-3	442306.99	3527360.75	GREEN	2+01.637
12-4	442306.99	3527460.75	GREEN	3+01.637
12-5	442306.99	3527560.75	GREEN	4+01.637
12-6	442306.99	3527660.75	GREEN	5+01.637
12-7	442306.99	3527760.75	GREEN	6+01.637
12-8	442306.99	3527791.452	GREEN	6+32.340
13-1	442300.9	3527162.118	RED	0+00.000
13-2	442300.9	3527264.23	RED	1+02.112
13-3	442300.9	3527364.23	RED	2+02.112
13-4	442300.9	3527464.23	RED	3+02.112
13-5	442300.9	3527564.23	RED	4+02.112
13-6	442300.9	3527664.23	RED	5+02.112
13-7	442300.9	3527764.23	RED	6+02.112
13-8	442300.9	3527791.553	RED	6+29.435
14-1	442294.81	3527165.692	BLUE	0+00.000
14-2	442294.81	3527268.8	BLUE	1+03.108
14-3	442294.81	3527368.8	BLUE	2+03.108
14-4	442294.81	3527468.8	BLUE	3+03.108
14-5	442294.81	3527568.8	BLUE	4+03.108
14-6	442294.81	3527668.8	BLUE	5+03.108
14-7	442294.81	3527768.8	BLUE	6+03.108
14-8	442294.81	3527791.931	BLUE	6+26.239
15-1	442288.71	3527169.892	PINK	0+00.000
15-2	442288.71	3527273.37	PINK	1+03.478
15-3	442288.71	3527373.37	PINK	2+03.478
15-4	442288.71	3527473.37	PINK	3+03.478

Fort Stewart, GA
HTRA Survey Readings

Point	Easting	Northing	Flag Color	Station
15-5	442288.71	3527573.37	PINK	4+03.478
15-6	442288.71	3527673.37	PINK	5+03.478
15-7	442288.71	3527773.37	PINK	6+03.478
15-8	442288.71	3527793.078	PINK	6+23.186
16-1	442282.62	3527174.16	GREEN	0+00.000
16-2	442282.62	3527279.01	GREEN	1+04.850
16-3	442282.62	3527379.01	GREEN	2+04.850
16-4	442282.62	3527479.01	GREEN	3+04.850
16-5	442282.62	3527579.01	GREEN	4+04.850
16-6	442282.62	3527679.01	GREEN	5+04.850
16-7	442282.62	3527779.01	GREEN	6+04.850
16-8	442282.62	3527794.629	GREEN	6+20.468
17-1	442276.52	3527179.145	RED	0+00.000
17-2	442276.52	3527285.11	RED	1+05.965
17-3	442276.52	3527385.11	RED	2+05.965
17-4	442276.52	3527485.11	RED	3+05.965
17-5	442276.52	3527585.11	RED	4+05.965
17-6	442276.52	3527685.11	RED	5+05.965
17-7	442276.52	3527785.11	RED	6+05.965
17-8	442276.52	3527796.282	RED	6+17.137
18-1	442270.43	3527184.302	BLUE	0+00.000
18-2	442270.43	3527291.38	BLUE	1+07.078
18-3	442270.43	3527391.38	BLUE	2+07.078
18-4	442270.43	3527491.38	BLUE	3+07.078
18-5	442270.43	3527591.38	BLUE	4+07.078
18-6	442270.43	3527691.38	BLUE	5+07.078
18-7	442270.43	3527791.38	BLUE	6+07.078
18-8	442270.43	3527796.929	BLUE	6+12.627
19-1	442264.34	3527190.417	PINK	0+00.000
19-2	442264.34	3527298.6	PINK	1+08.183
19-3	442264.34	3527398.6	PINK	2+08.183
19-4	442264.34	3527498.6	PINK	3+08.183
19-5	442264.34	3527598.6	PINK	4+08.183
19-6	442264.34	3527698.6	PINK	5+08.183
19-7	442264.34	3527796.285	PINK	6+05.868
20-1	442258.24	3527197.368	GREEN	0+00.000
20-2	442258.24	3527305.83	GREEN	1+08.462
20-3	442258.24	3527405.83	GREEN	2+08.462
20-4	442258.24	3527505.83	GREEN	3+08.462
20-5	442258.24	3527605.83	GREEN	4+08.462
20-6	442258.24	3527705.83	GREEN	5+08.462
20-7	442258.24	3527795.03	GREEN	5+97.662
21-1	442252.15	3527205.04	RED	0+00.000
21-2	442252.15	3527313.05	RED	1+08.010
21-3	442252.15	3527413.05	RED	2+08.010
21-4	442252.15	3527513.05	RED	3+08.010
21-5	442252.15	3527613.05	RED	4+08.010
21-6	442252.15	3527713.05	RED	5+08.010
21-7	442252.15	3527793.549	RED	5+88.509
22-1	442246.05	3527212.739	BLUE	0+00.000
22-2	442246.05	3527320.51	BLUE	1+07.771
22-3	442246.05	3527420.51	BLUE	2+07.771
22-4	442246.05	3527520.51	BLUE	3+07.771
22-5	442246.05	3527620.51	BLUE	4+07.771
22-6	442246.05	3527720.51	BLUE	5+07.771
22-7	442246.05	3527792.07	BLUE	5+79.331
23-1	442239.96	3527220.618	PINK	0+00.000
23-2	442239.96	3527328.44	PINK	1+07.822
23-3	442239.96	3527428.44	PINK	2+07.822
23-4	442239.96	3527528.44	PINK	3+07.822
23-5	442239.96	3527628.44	PINK	4+07.822
23-6	442239.96	3527728.44	PINK	5+07.822
23-7	442239.96	3527790.026	PINK	5+69.408
24-1	442233.87	3527228.773	GREEN	0+00.000
24-2	442233.87	3527336.36	GREEN	1+07.587
24-3	442233.87	3527436.36	GREEN	2+07.587
24-4	442233.87	3527536.36	GREEN	3+07.587
24-5	442233.87	3527635.639	GREEN	4+07.587
24-6	442233.87	3527736.36	GREEN	5+07.587
24-7	442233.87	3527787.613	GREEN	5+58.839
25-1	442227.77	3527237.81	RED	0+00.000
25-2	442227.77	3527344.28	RED	1+06.470
25-3	442227.77	3527444.28	RED	2+06.470
25-4	442227.77	3527544.28	RED	3+06.470
25-5	442227.77	3527644.28	RED	4+06.470
25-6	442227.77	3527744.28	RED	5+06.470
25-7	442227.77	3527785.467	RED	5+47.657
26-1	442221.68	3527246.574	BLUE	0+00.000
26-2	442221.68	3527352.2	BLUE	1+05.626
26-3	442221.68	3527452.2	BLUE	2+05.626
26-4	442221.68	3527552.2	BLUE	3+05.626
26-5	442221.68	3527652.2	BLUE	4+05.626
26-6	442221.68	3527752.2	BLUE	5+05.626
26-7	442221.68	3527783.016	BLUE	5+36.442
27-1	442215.58	3527255.349	PINK	0+00.000
27-2	442215.58	3527360.13	PINK	1+04.781
27-3	442215.58	3527459.676	PINK	2+04.781
27-4	442215.58	3527560.13	PINK	3+04.781
27-5	442215.58	3527660.13	PINK	4+04.781
27-6	442215.58	3527760.13	PINK	5+04.781
27-7	442215.58	3527780.397	PINK	5+25.049
28-1	442209.49	3527264.028	GREEN	0+00.000
28-2	442209.49	3527368.05	GREEN	1+04.022
28-3	442209.49	3527468.05	GREEN	2+04.022
28-4	442209.49	3527568.05	GREEN	3+04.022
28-5	442209.49	3527668.05	GREEN	4+04.022

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Point	Easting	Northing	Flag Color	Station
28-6	442209.49	3527768.05	GREEN	5+04.022
28-7	442209.49	3527777.295	GREEN	5+13.267
29-1	442203.4	3527272.862	RED	0+00.000
29-2	442203.4	3527375.97	RED	1+03.108
29-3	442203.4	3527475.97	RED	2+03.108
29-4	442203.4	3527575.97	RED	3+03.108
29-5	442203.4	3527675.97	RED	4+03.108
29-6	442203.4	3527773.849	RED	5+00.987
30-1	442197.3	3527281.453	BLUE	0+00.000
30-2	442197.3	3527383.89	BLUE	1+02.437
30-3	442197.3	3527483.89	BLUE	2+02.437
30-4	442197.3	3527583.89	BLUE	3+02.437
30-5	442197.3	3527683.89	BLUE	4+02.437
30-6	442197.3	3527769.812	BLUE	4+88.359
31-1	442191.21	3527290.145	PINK	0+00.000
31-2	442191.21	3527391.81	PINK	1+01.665
31-3	442191.21	3527491.81	PINK	2+01.665
31-4	442191.21	3527591.81	PINK	3+01.665
31-5	442191.21	3527691.81	PINK	4+01.665
31-6	442191.21	3527763.753	PINK	4+73.608
32-1	442185.11	3527298.95	GREEN	0+00.000
32-2	442185.11	3527399.74	GREEN	1+00.790
32-3	442185.11	3527499.74	GREEN	2+00.790
32-4	442185.11	3527599.74	GREEN	3+00.790
32-5	442185.11	3527699.74	GREEN	4+00.790
32-6	442185.11	3527757.181	GREEN	4+58.231
33-1	442179.02	3527307.66	RED	0+00.000
33-2	442179.02	3527407.66	RED	1+00.123
33-3	442179.02	3527507.66	RED	2+00.123
33-4	442179.02	3527607.66	RED	3+00.123
33-5	442179.02	3527707.66	RED	4+00.123
33-6	442179.02	3527748.521	RED	4+40.984
34-1	442172.93	3527316.254	BLUE	0+00.000
34-2	442172.93	3527415.58	BLUE	0+99.326
34-3	442172.93	3527515.58	BLUE	1+99.326
34-4	442172.93	3527615.58	BLUE	2+99.326
34-5	442172.93	3527715.58	BLUE	3+99.326
34-6	442172.93	3527739.771	BLUE	4+23.517
35-1	442166.83	3527324.909	PINK	0+00.000
35-2	442166.83	3527423.5	PINK	0+98.591
35-3	442166.83	3527523.5	PINK	1+98.591
35-4	442166.83	3527623.5	PINK	2+98.591
35-5	442166.83	3527723.5	PINK	3+98.591
35-6	442166.83	3527731.279	PINK	4+06.37
36-1	442160.74	3527333.543	GREEN	0+00.000
36-2	442160.74	3527431.43	GREEN	0+97.887
36-3	442160.74	3527531.43	GREEN	1+97.887
36-4	442160.74	3527631.43	GREEN	2+97.887
36-5	442160.74	3527722.89	GREEN	3+89.347
37-1	442154.64	3527342.322	RED	0+00.000
37-2	442154.64	3527439.35	RED	0+97.028
37-3	442154.64	3527539.35	RED	1+97.028
37-4	442154.64	3527639.35	RED	2+97.028
37-5	442154.64	3527715.806	RED	3+73.484
38-1	442148.55	3527350.837	BLUE	0+00.000
38-2	442148.55	3527447.27	BLUE	0+96.433
38-3	442148.55	3527547.27	BLUE	1+96.433
38-4	442148.55	3527647.27	BLUE	2+96.433
38-5	442148.55	3527705.733	BLUE	3+54.897
39-1	442142.46	3527359.549	PINK	0+00.000
39-2	442142.46	3527455.19	PINK	0+95.641
39-3	442142.46	3527555.19	PINK	1+95.641
39-4	442142.46	3527655.19	PINK	2+95.641
39-5	442142.46	3527695.848	PINK	3+36.299
40-1	442136.36	3527368.267	GREEN	0+00.000
40-2	442136.36	3527463.11	GREEN	0+94.843
40-3	442136.36	3527563.11	GREEN	1+94.843
40-4	442136.36	3527663.11	GREEN	2+94.843
40-5	442136.36	3527686.857	GREEN	3+18.59
41-1	442130.27	3527376.55	RED	0+00.000
41-2	442130.27	3527470.49	RED	0+93.940
41-3	442130.27	3527570.49	RED	1+93.940
41-4	442130.27	3527670.49	RED	2+930940
41-5	442130.27	3527678.796	RED	3+02.246
42-1	442124.17	3527384.595	BLUE	0+00.000
42-2	442124.17	3527477.84	BLUE	0+93.245
42-3	442124.17	3527577.84	BLUE	1+93.245
42-4	442124.17	3527670.986	BLUE	2+86.391
43-1	442118.08	3527392.496	PINK	0+00.000
43-2	442118.08	3527485.2	PINK	0+92.704
43-3	442118.08	3527585.2	PINK	1+92.704
43-4	442118.08	3527664.557	PINK	2+72.061
44-1	442111.99	3527400.03	GREEN	0+00.000
44-2	442111.99	3527492.56	GREEN	0+92.530
44-3	442111.99	3527592.56	GREEN	1+92.530
44-4	442111.99	3527658.662	GREEN	2+58.632
45-1	442105.89	3527407.816	RED	0+00.000
45-2	442105.89	3527499.92	RED	0+92.104
45-3	442105.89	3527599.92	RED	1+92.104
45-4	442105.89	3527652.702	RED	2+44.886
46-1	442099.8	3527415.299	BLUE	0+00.000
46-2	442099.8	3527507.28	BLUE	0+91.981
46-3	442099.8	3527607.28	BLUE	1+91.981
46-4	442099.8	3527646.424	BLUE	2+31.125
47-1	442093.7	3527422.386	PINK	0+00.000
47-2	442093.7	3527514.64	PINK	0+92.254
47-3	442093.7	3527614.64	PINK	1+92.254

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Point	Easting	Northing	Flag Color	Station
47-4	442093.7	3527640.125	PINK	2+17.739
48-1	442087.61	3527429.254	GREEN	0+00.000
48-2	442087.61	3527522	GREEN	0+92.746
48-3	442087.61	3527622	GREEN	1+92.746
48-4	442087.61	3527633.577	GREEN	2+04.323
49-1	442081.52	3527436.171	RED	0+00.000
49-2	442081.52	3527529.36	RED	0+93.189
49-3	442081.52	3527627.102	RED	1+90.931
50-1	442075.42	3527443.154	BLUE	0+00.000
50-2	442075.42	3527536.72	BLUE	0+93.566
50-3	442075.42	3527620.615	BLUE	1+77.46
51-1	442069.33	3527449.962	PINK	0+00.000
51-2	442069.33	3527544.08	PINK	0+94.118
51-3	442069.33	3527613.788	PINK	1+63.826
52-1	442063.23	3527456.426	GREEN	0+00.000
52-2	442063.23	3527551.43	GREEN	0+95.004
52-3	442063.23	3527606.9	GREEN	1+50.475
53-1	442057.14	3527462.841	RED	0+00.000
53-2	442057.14	3527558.79	RED	0+95.949
53-3	442057.14	3527599.464	RED	1+36.623
54-1	442051.05	3527469.204	BLUE	0+00.000
54-2	442051.05	3527566.15	BLUE	0+96.946
54-3	442051.05	3527592.061	BLUE	1+22.858
55-1	442044.95	3527475.406	PINK	0+00.000
55-2	442044.95	3527573.51	PINK	0+98.104
55-3	442044.95	3527583.937	PINK	1+08.531
56-1	442038.86	3527481.683	GREEN	0+00.000
56-2	442038.86	3527575.804	GREEN	0+94.121
57-1	442032.76	3527488.407	RED	0+00.000
57-2	442032.76	3527567.427	RED	0+79.02
58-1	442026.67	3527495.132	BLUE	0+00.000
58-2	442026.67	3527559.303	BLUE	0+64.171
59-1	442020.58	3527501.819	PINK	0+00.000
59-2	442020.58	3527551.178	PINK	0+49.359
60-1	442014.48	3527508.567	GREEN	0+00.000
60-2	442014.48	3527542.678	GREEN	0+34.11
61-1	442008.39	3527515.363	RED	0+00.000
61-2	442008.391	3527534.521	RED	0+19.157
62-1	442002.29	3527522.19	BLUE	0+00.000
62-2	442002.29	3527526.116	BLUE	0+03.926

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AAR Grids Survey Readings

Grid Corner	Easting	Northing
01ne	437188	3532000
01nw	437178	3532000
01se	437188	3531900
01sw	437178	3531900
02ne	437334.25	3531903.5
02nw	437234.25	3531903.5
02se	437334.25	3531893.5
02sw	437234.25	3531893.5
03ne	437482.25	3531905
03nw	437382.25	3531905
03se	437482.25	3531895
03sw	437382.25	3531895
04ne	437980	3532024
04nw	437970	3532024
04se	437980	3531924
04sw	437970	3531924
05e	437722.383	3532224.803
05n	437639.803	3532281.199
05s	437716.744	3532216.545
05w	437634.164	3532272.941
06e	437550.023	3532295.413
06n	437467.443	3532351.809
06s	437544.384	3532287.155
06w	437461.804	3532343.551
07ne	437381.704	3532350.503
07nw	437281.704	3532350.503
07se	437381.704	3532340.503
07sw	437281.704	3532340.503
08ne	437287.704	3532368.503
08nw	437187.704	3532368.503
08se	437287.704	3532358.503
08sw	437187.704	3532358.503
09ne	437183	3532348
09nw	437173	3532348
09se	437183	3532248
09sw	437173	3532248
10ne	437502	3532245
10nw	437472	3532245
10se	437502	3532215
10sw	437472	3532215
11ne	437535	3532148
11nw	437505	3532148
11se	437535	3532118
11sw	437505	3532118
12ne	437589	3532197
12nw	437559	3532197
12se	437589	3532167
12sw	437559	3532167
13ne	437553	3532100
13nw	437523	3532100
13se	437553	3532070

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AAR Grids Survey Readings

Grid Corner	Easting	Northing
13sw	437523	3532070
14ne	437524	3531954
14nw	437494	3531954
14se	437524	3531924
14sw	437494	3531924
15ne	437625	3532158
15nw	437595	3532158
15se	437625	3532128
15sw	437595	3532128
16ne	437554	3532000
16ne	437554	3531970
16nw	437524	3532000
16sw	437524	3531970
17ne	437708	3532080
17nw	437678	3532080
17se	437708	3532050
17sw	437678	3532050
18ne	437765	3532125
18nw	437735	3532125
18se	437765	3532095
18sw	437735	3532095
19ne	437740	3531986
19nw	437710	3531986
19se	437740	3531956
19sw	437710	3531956
20ne	437779	3532035
20nw	437749	3532035
20se	437779	3532005
20sw	437749	3532005
21ne	437831	3532081
21nw	437801	3532081
21se	437831	3532051
21sw	437801	3532051
22ne	437761	3531951
22nw	437731	3531951
22se	437761	3531921
22sw	437731	3531921
23ne	437819	3531997
23nw	437789	3531997
23se	437819	3531967
23sw	437789	3531967
24ne	437883	3531962
24nw	437853	3531962
24se	437883	3531932
24sw	437853	3531932

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AAR Transects Survey Readings

Transect Point	Easting	Northing
T1-1	437240	3532322
T1-2	437240	3532222
T1-3	437240	3532122
T1-4	437240	3532022
T1-5	437240	3531922
T2-1	437252	3532322
T2-2	437252	3532222
T2-3	437252	3532122
T2-4	437252	3532022
T2-5	437252	3531922
T3-1	437321	3532322
T3-2	437321	3532222
T3-3	437321	3532122
T3-4	437321	3532022
T3-5	437321	3531922
T4-1	437326	3532322
T4-2	437326	3532222
T4-3	437326	3532122
T4-4	437326	3532022
T4-5	437326	3531922
T5-1	437388	3532322
T5-2	437388	3532222
T5-3	437388	3532122
T5-4	437388	3532022
T5-5	437388	3531922

Fort Stewart, GA
AAR Blind Seeds Survey Readings

Grid	Easting	Northing
G1	437181.971	3531941.782
G2	437315.567	3531895.782
G3	437402.84	3531901.295
G4	437973.772	3531971.64
G5	437656.803	3532263.959
G6	437487.912	3532333.601
G7	437347.768	3532341.856
G8	437280.337	3532360.138
G9	437179.465	3532314.914
G10	437494.124	3532224.517
G11	437519.139	3532132.334
G12	437583.362	3532176.174
G13	437525.938	3532096.397
G14	437517.885	3531944.876
G15	437604.649	3532142.837
G16	437535.025	3531990.279
G17	437686.678	3532071.393
G18	437743.836	3532103.3
G19	437728.313	3531971.152
G20	437767.556	3532026.169
G21	437812.108	3532064.17
G22	437748.634	3531938.597
G23	437796.596	3531971.409
G24	437866.792	3531945.514
transect	437252.005	3531990.187

Fort Stewart, GA
IVS Seeds Survey Readings

Point	Easting	Northing	Elevation
SEED 6IN	437924.168	3531880.858	18.36
SEED 9IN	437921.196	3531880.745	18.32
SEED 18IN	437918.071	3531881.108	18.14
SEED 24IN	437911.924	3531881.068	17.94
SEED 18IN	437915.106	3531880.953	18.06

Fort Stewart
Validated Surface Soil Results - Anti-Aircraft Range 90-mm - 2 MRS

						Sample ID	FTSW-AA-SO-01	FTSW-AA-SO-03	FTSW-AA-SO-03 DUP	FTSW-AA-SO-05	FTSW-AA-SO-07	FTSW-AA-SO-09
						Parent ID			FTSW-AA-SO-03			
						Sample Date	7/26/2012	7/26/2012	7/26/2012	7/26/2012	7/26/2012	7/26/2012
Parameter	**SOIL BKGD**	**RI SOIL BKGD**	**USEPA RES SOIL RSL**	**USEPA IND SOIL RSL**	**USEPA GW SSL**	**USEPA ECO SOIL**						
Percent Mositure by A2540G (%)												
Solids, Percent	NS	NS	NS	NS	NS	NS	64.9	92.1	95.3	83.5	93.9	72.8
Select Metals by SW6020A (mg/kg)												
Aluminum	NS	10,273	7,700	110,000	3,000	50	*7060 J*	*5750 J*	*4370 J*	*4440 J*	*4050 J*	*2090 J*
Copper	NS	3.1	310	4,700	46	40	1.3 J	2 J	3.2	1.5 J	4.6	2 U
Lead	8.8	12.7	400	800	14	14	5.3	3.8	3.5	4.4	3.3	2.9
Zinc	NS	19.9	2,300	35,000	37	50	9.7	6.5	7.6	9	10.4	3.1
Explosives by SW8330B (mg/kg)												
1,3,5-Trinitrobenzene	NS	NS	220	3200	2.10E-01	NS	0.093 U	0.094 U	0.093 U	0.094 U	0.093 U	0.099 U
1,3-Dinitrobenzene	NS	NS	0.62	8.2	1.80E-04	NS	0.093 U	0.094 U	0.093 U	0.094 U	0.093 U	0.099 U
2,4,6-Trinitrotoluene	NS	NS	3.6	52	5.70E-03	NS	0.093 U	0.094 U	0.093 U	0.094 U	0.093 U	0.099 U
2,4-Dinitrotoluene	NS	NS	1.7	7.4	3.20E-04	NS	0.093 U	0.094 U	0.093 U	0.094 U	0.093 U	0.099 U
2,6-Dinitrotoluene	NS	NS	0.36	1.5	6.70E-05	NS	0.093 U	0.094 U	0.093 U	0.094 U	0.093 U	0.099 U
2-Amino-4,6-dinitrotoluene	NS	NS	15	230	3.00E-03	NS	0.093 U	0.094 U	0.093 U	0.094 U	0.093 U	0.099 U
2-Nitrotoluene	NS	NS	3.2	15	2.90E-04	NS	0.093 U	0.094 U	0.093 U	0.094 U	0.093 U	0.099 U
3,5-Dinitroaniline	NS	NS	NS	NS	NS	NS	0.093 U	0.094 U	0.093 U	0.094 U	0.093 U	0.099 U
3-Nitrotoluene	NS	NS	0.62	8.3	1.60E-04	NS	0.093 U	0.094 U	0.093 U	0.094 U	0.093 U	0.099 U
4-Amino-2,6-dinitrotoluene	NS	NS	15	230	3.00E-03	NS	0.093 U	0.094 U	0.093 U	0.094 U	0.093 U	0.099 U
4-Nitrotoluene	NS	NS	24	140	3.90E-03	NS	0.093 U	0.094 U	0.093 U	0.094 U	0.093 U	0.099 U
HMX	NS	NS	380	5700	1.30E-01	NS	0.093 U	0.094 U	0.093 U	0.094 U	0.093 U	0.099 U
Nitrobenzene	NS	NS	5.1	22	9.20E-05	NS	0.093 U	0.094 U	0.093 U	0.094 U	0.093 U	0.099 U
Nitroglycerin	NS	NS	0.62	8.2	8.50E-05	NS	0.93 U	0.94 U	0.93 U	0.94 U	0.93 U	0.99 U
PETN	NS	NS	12	160	5.80E-03	NS	0.93 U	0.94 U	0.93 U	0.94 U	0.93 U	0.99 U
RDX	NS	NS	6	28	2.70E-04	NS	0.093 U	0.094 U	0.093 U	0.094 U	0.093 U	0.099 U
Tetryl	NS	NS	12	160	3.70E-02	NS	0.093 U	0.094 U	0.093 U	0.094 U	0.093 U	0.099 U

Legend

value	*bold value above USEPA RES SOIL RSL*
value	*underlined value above USEPA GW SSL*
value	*italicized value above USEPA ECO SOIL*
value	*highlighted value above BKGD and RI BKGD*
mg/kg	*milligrams per kilogram*
SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from Phase II RFI Appendix F (SAIC, 1999)*
RI SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from current sampling program*
USEPA RES SOIL RSL	*USEPA RSL for Residential Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA IND SOIL RSL	*USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA GW SSL	*USEPA Protection of Groundwater Soil Screening Levels (SSLs) (May 2014)*
USEPA ECO SOIL	*USEPA Region IV Ecological Screening Values for Soil (WSRC-TR98-00110)*
NS	*none specified*
NA	*not sampled in current program*
blank cell	*not analyzed*
U	*not detected, associated value is limit of detection (LOD)*
J	*estimated value*

Fort Stewart
Validated Surface Soil Results - Anti-Aircraft Range 90-mm - 2 MRS

						Sample ID	FTSW-AA-SO-11	FTSW-AA-SO-13	FTSW-AA-SO-15	FTSW-AA-SO-17	FTSW-AA-SO-19
						Parent ID					
						Sample Date	7/26/2012	7/26/2012	7/26/2012	7/27/2012	7/27/2012
Parameter	**SOIL BKGD**	**RI SOIL BKGD**	**USEPA RES SOIL RSL**	**USEPA IND SOIL RSL**	**USEPA GW SSL**	**USEPA ECO SOIL**					
Percent Mositure by A2540G (%)											
Solids, Percent	NS	NS	NS	NS	NS	NS	96	68.1	84.4	74.9	74.6
Select Metals by SW6020A (mg/kg)											
Aluminum	NS	10,273	7,700	110,000	3,000	50	*5520 J*	*4830 J*	***10900 J***	*4420 J*	***7870 J***
Copper	NS	3.1	310	4,700	46	40	2.4 J	1.4 J	1.4 J	3.1 J	1 J
Lead	8.8	12.7	400	800	14	14	5.1	5.8	7.8	4.2 J	6.5 J
Zinc	NS	19.9	2,300	35,000	37	50	11.2	7.4	8.4	11.1	11.6
Explosives by SW8330B (mg/kg)											
1,3,5-Trinitrobenzene	NS	NS	220	3200	2.10E-01	NS	0.1 U	0.096 U	0.098 U	0.097 U	0.097 U
1,3-Dinitrobenzene	NS	NS	0.62	8.2	1.80E-04	NS	0.1 U	0.096 U	0.098 U	0.097 U	0.097 U
2,4,6-Trinitrotoluene	NS	NS	3.6	52	5.70E-03	NS	0.1 U	0.096 U	0.098 U	0.097 U	0.097 U
2,4-Dinitrotoluene	NS	NS	1.7	7.4	3.20E-04	NS	0.1 U	0.096 U	0.098 U	0.097 U	0.097 U
2,6-Dinitrotoluene	NS	NS	0.36	1.5	6.70E-05	NS	0.1 U	0.096 U	0.098 U	0.097 U	0.097 U
2-Amino-4,6-dinitrotoluene	NS	NS	15	230	3.00E-03	NS	0.1 U	0.096 U	0.098 U	0.097 U	0.097 U
2-Nitrotoluene	NS	NS	3.2	15	2.90E-04	NS	0.1 U	0.096 U	0.098 U	0.097 U	0.097 U
3,5-Dinitroaniline	NS	NS	NS	NS	NS	NS	0.1 U	0.096 U	0.098 U	0.097 U	0.097 U
3-Nitrotoluene	NS	NS	0.62	8.3	1.60E-04	NS	0.1 U	0.096 U	0.098 U	0.097 U	0.097 U
4-Amino-2,6-dinitrotoluene	NS	NS	15	230	3.00E-03	NS	0.1 U	0.096 U	0.098 U	0.097 U	0.097 U
4-Nitrotoluene	NS	NS	24	140	3.90E-03	NS	0.1 U	0.096 U	0.098 U	0.097 U	0.097 U
HMX	NS	NS	380	5700	1.30E-01	NS	0.1 U	0.096 U	0.098 U	0.097 U	0.097 U
Nitrobenzene	NS	NS	5.1	22	9.20E-05	NS	0.1 U	0.096 U	0.098 U	0.097 U	0.097 U
Nitroglycerin	NS	NS	0.62	8.2	8.50E-05	NS	1 U	0.96 U	0.98 U	0.97 U	0.97 U
PETN	NS	NS	12	160	5.80E-03	NS	1 U	0.96 U	0.98 U	0.97 U	0.97 U
RDX	NS	NS	6	28	2.70E-04	NS	0.1 U	0.096 U	0.098 U	0.097 U	0.097 U
Tetryl	NS	NS	12	160	3.70E-02	NS	0.1 U	0.096 U	0.098 U	0.097 U	0.097 U

Legend

value	*bold value above USEPA RES SOIL RSL*
value	*underlined value above USEPA GW SSL*
value	*italicized value above USEPA ECO SOIL*
value	*highlighted value above BKGD and RI BKGD*
mg/kg	*milligrams per kilogram*
SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from Phase II RFI Appendix F (SAIC, 1999)*
RI SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from current sampling program*
USEPA RES SOIL RSL	*USEPA RSL for Residential Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA IND SOIL RSL	*USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA GW SSL	*USEPA Protection of Groundwater Soil Screening Levels (SSLs) (May 2014)*
USEPA ECO SOIL	*USEPA Region IV Ecological Screening Values for Soil (WSRC-TR98-00110)*
NS	*none specified*
NA	*not sampled in current program*
blank cell	*not analyzed*
U	*not detected, associated value is limit of detection (LOD)*
J	*estimated value*

Fort Stewart
Validated Subsurface Soil Results - Anti-Aircraft Range 90-mm - 2 MRS

						Sample ID	FTSW-AA-SO-02 [01.5]	FTSW-AA-SO-04 [01.5]	FTSW-AA-SO-06 [01.5]	FTSW-AA-SO-08 [02]	FTSW-AA-SO-08 [02] DUP	FTSW-AA-SO-10 [02]
						Parent ID					FTSW-AA-SO-08 [02]	
						Sample Date	7/26/2012	7/26/2012	7/26/2012	7/26/2012	7/26/2012	
Parameter	**SOIL BKGD**	**RI SOIL BKGD**	**USEPA RES SOIL RSL**	**USEPA IND SOIL RSL**	**USEPA GW SSL**	**USEPA ECO SOIL**						
Percent Mositure by A2540G (%)												
Solids, Percent	NS	NS	NS	NS	NS	NS	92.6	84.9	80.2	78	79.5	79.8
Select Metals by SW6020A (mg/kg)												
Aluminum	NS	10,273	7,700	110,000	3,000	50	***8160 J***	***20200 J***	*4560 J*	***20600 J***	***30200 J***	*1130 J*
Copper	NS	3.1	310	4,700	46	40	1.5 U	1.7 U	1.8 U	2 U	2 U	1.9 U
Lead	8.8	12.7	400	800	14	14	4.6	7.2	3.7	7.3	6.9	1.8
Zinc	NS	19.9	2,300	35,000	37	50	2.7	5.4	1.7 J	4.5	5.3	1.4 J
Explosives by SW8330B (mg/kg)												
1,3,5-Trinitrobenzene	NS	NS	220	3200	2.10E-01	NS	0.093 U	0.097 U	0.095 U	0.097 U	0.094 U	0.099 U
1,3-Dinitrobenzene	NS	NS	0.62	8.2	1.80E-04	NS	0.093 U	0.097 U	0.095 U	0.097 U	0.094 U	0.099 U
2,4,6-Trinitrotoluene	NS	NS	3.6	52	5.70E-03	NS	0.093 U	0.097 U	0.095 U	0.097 U	0.094 U	0.099 U
2,4-Dinitrotoluene	NS	NS	1.7	7.4	3.20E-04	NS	0.093 U	0.097 U	0.095 U	0.097 U	0.094 U	0.099 U
2,6-Dinitrotoluene	NS	NS	0.36	1.5	6.70E-05	NS	0.093 U	0.097 U	0.095 U	0.097 U	0.094 U	0.099 U
2-Amino-4,6-dinitrotoluene	NS	NS	15	230	3.00E-03	NS	0.093 U	0.097 U	0.095 U	0.097 U	0.094 U	0.099 U
2-Nitrotoluene	NS	NS	3.2	15	2.90E-04	NS	0.093 U	0.097 U	0.095 U	0.097 U	0.094 U	0.099 U
3,5-Dinitroaniline	NS	NS	NS	NS	NS	NS	0.093 U	0.097 U	0.095 U	0.097 U	0.094 U	0.099 U
3-Nitrotoluene	NS	NS	0.62	8.3	1.60E-04	NS	0.093 U	0.097 U	0.095 U	0.097 U	0.094 U	0.099 U
4-Amino-2,6-dinitrotoluene	NS	NS	15	230	3.00E-03	NS	0.093 U	0.097 U	0.095 U	0.097 U	0.094 U	0.099 U
4-Nitrotoluene	NS	NS	24	140	3.90E-03	NS	0.093 U	0.097 U	0.095 U	0.097 U	0.094 U	0.099 U
HMX	NS	NS	380	5700	1.30E-01	NS	0.093 U	0.097 U	0.095 U	0.097 U	0.094 U	0.099 U
Nitrobenzene	NS	NS	5.1	22	9.20E-05	NS	0.093 U	0.097 U	0.095 U	0.097 U	0.094 U	0.099 U
Nitroglycerin	NS	NS	0.62	8.2	8.50E-05	NS	0.93 U	0.97 U	0.95 U	0.97 U	0.94 U	0.99 U
PETN	NS	NS	12	160	5.80E-03	NS	0.93 U	0.97 U	0.95 U	0.97 U	0.94 U	0.99 U
RDX	NS	NS	6	28	2.70E-04	NS	0.093 U	0.097 U	0.095 U	0.097 U	0.094 U	0.099 U
Tetryl	NS	NS	12	160	3.70E-02	NS	0.093 U	0.097 U	0.095 U	0.097 U	0.094 U	0.099 U

Legend

value	*bold value above USEPA RES SOIL RSL*
value	*underlined value above USEPA GW SSL*
value	*italicized value above USEPA ECO SOIL*
value	*highlighted value above BKGD and RI BKGD*
mg/kg	*milligrams per kilogram*
SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from Phase II RFI Appendix F (SAIC, 1999)*
RI SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from current sampling program*
USEPA RES SOIL RSL	*USEPA RSL for Residential Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA IND SOIL RSL	*USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA GW SSL	*USEPA Protection of Groundwater Soil Screening Levels (SSLs) (May 2014)*
USEPA ECO SOIL	*USEPA Region IV Ecological Screening Values for Soil (WSRC-TR98-00110)*
NS	*none specified*
NA	*not sampled in current program*
blank cell	*not analyzed*
U	*not detected, associated value is limit of detection (LOD)*
J	*estimated value*

Fort Stewart
Validated Subsurface Soil Results - Anti-Aircraft Range 90-mm - 2 MRS

						Sample ID	FTSW-AA-SO-12 [01.5]	FTSW-AA-SO-14 [02]	FTSW-AA-SO-16 [01.5]	FTSW-AA-SO-18 [01.5]	FTSW-AA-SO-20 [01.5]
						Parent ID					
						Sample Date	7/26/2012	7/26/2012	7/26/2012	7/27/2012	7/27/2012
Parameter	**SOIL BKGD**	**RI SOIL BKGD**	**USEPA RES SOIL RSL**	**USEPA IND SOIL RSL**	**USEPA GW SSL**	**USEPA ECO SOIL**					
Percent Mositure by A2540G (%)											
Solids, Percent	NS	NS	NS	NS	NS	NS	78	82.1	75.8	76.6	78.1
Select Metals by SW6020A (mg/kg)											
Aluminum	NS	10,273	7,700	110,000	3,000	50	*4440 J*	***7710 J***	*6260 J*	*5370 J*	***11900 J***
Copper	NS	3.1	310	4,700	46	40	2 U	8.8	2.1 U	2 U	1.1 J
Lead	8.8	12.7	400	800	14	14	3.7	8	4.8	3.3 J	10.8 J
Zinc	NS	19.9	2,300	35,000	37	50	2 J	10.6	3.5	2.4 J	3.8
Explosives by SW8330B (mg/kg)											
1,3,5-Trinitrobenzene	NS	NS	220	3200	2.10E-01	NS	0.096 U	0.097 U	0.094 U	0.093 U	0.1 U
1,3-Dinitrobenzene	NS	NS	0.62	8.2	1.80E-04	NS	0.096 U	0.097 U	0.094 U	0.093 U	0.1 U
2,4,6-Trinitrotoluene	NS	NS	3.6	52	5.70E-03	NS	0.096 U	0.097 U	0.094 U	0.093 U	0.1 U
2,4-Dinitrotoluene	NS	NS	1.7	7.4	3.20E-04	NS	0.096 U	0.097 U	0.094 U	0.093 U	0.1 U
2,6-Dinitrotoluene	NS	NS	0.36	1.5	6.70E-05	NS	0.096 U	0.097 U	0.094 U	0.093 U	0.1 U
2-Amino-4,6-dinitrotoluene	NS	NS	15	230	3.00E-03	NS	0.096 U	0.097 U	0.094 U	0.093 U	0.1 U
2-Nitrotoluene	NS	NS	3.2	15	2.90E-04	NS	0.096 U	0.097 U	0.094 U	0.093 U	0.1 U
3,5-Dinitroaniline	NS	NS	NS	NS	NS	NS	0.096 U	0.097 U	0.094 U	0.093 U	0.1 U
3-Nitrotoluene	NS	NS	0.62	8.3	1.60E-04	NS	0.096 U	0.097 U	0.094 U	0.093 U	0.1 U
4-Amino-2,6-dinitrotoluene	NS	NS	15	230	3.00E-03	NS	0.096 U	0.097 U	0.094 U	0.093 U	0.1 U
4-Nitrotoluene	NS	NS	24	140	3.90E-03	NS	0.096 U	0.097 U	0.094 U	0.093 U	0.1 U
HMX	NS	NS	380	5700	1.30E-01	NS	0.096 U	0.097 U	0.094 U	0.093 U	0.1 U
Nitrobenzene	NS	NS	5.1	22	9.20E-05	NS	0.096 U	0.097 U	0.094 U	0.093 U	0.1 U
Nitroglycerin	NS	NS	0.62	8.2	8.50E-05	NS	0.96 U	0.97 U	0.94 U	0.93 U	1 U
PETN	NS	NS	12	160	5.80E-03	NS	0.96 U	0.97 U	0.94 U	0.93 U	1 U
RDX	NS	NS	6	28	2.70E-04	NS	0.096 U	0.097 U	0.094 U	0.093 U	0.1 U
Tetryl	NS	NS	12	160	3.70E-02	NS	0.096 U	0.097 U	0.094 U	0.093 U	0.1 U

Legend

value	*bold value above USEPA RES SOIL RSL*
value	*underlined value above USEPA GW SSL*
value	*italicized value above USEPA ECO SOIL*
value	*highlighted value above BKGD and RI BKGD*
mg/kg	*milligrams per kilogram*
SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from Phase II RFI Appendix F (SAIC, 1999)*
RI SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from current sampling program*
USEPA RES SOIL RSL	*USEPA RSL for Residential Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA IND SOIL RSL	*USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA GW SSL	*USEPA Protection of Groundwater Soil Screening Levels (SSLs) (May 2014)*
USEPA ECO SOIL	*USEPA Region IV Ecological Screening Values for Soil (WSRC-TR98-00110)*
NS	*none specified*
NA	*not sampled in current program*
blank cell	*not analyzed*
U	*not detected, associated value is limit of detection (LOD)*
J	*estimated value*

Fort Stewart
Validated Surface Soil Results - Hero Road Trench Area MRS

						Sample ID	FTSW-HR-SO-01	FTSW-HR-SO-01 DUP	FTSW-HR-SO-03	FTSW-HR-SO-05	FTSW-HR-SO-07	FTSW-HR-SO-09	FTSW-HR-SO-11
						Parent ID		FTSW-HR-SO-01					
						Sample Date	7/30/2012	7/30/2012	7/30/2012	7/30/2012	7/30/2012	7/30/2012	7/31/2012
Parameter	**SOIL BKGD**	**RI SOIL BKGD**	**USEPA RES SOIL RSL**	**USEPA IND SOIL RSL**	**USEPA GW SSL**	**USEPA ECO SOIL**							
Percent Mositure by A2540G (%)													
Solids, Percent	NS	NS	NS	NS	NS	NS	90.5	90.7	86.4	90.6	84.3	87.9	78.4
Select Metals by SW6020A (mg/kg)													
Arsenic	2.1	NA	0.67	3	0.29	10	1 U	**0.85 J**	1 U	**0.59 J**	1.1 U	1.1 U	**0.81 J**
ABPs by SW8270 (µg/kg)													
1,4-Dithiane	NS	NS	62	820	0.0097	NS	5.3 U	5.2 U	5.3 U	5.2 U	5.9 U	5.4 U	6 U
1,4-Oxathiane	NS	NS	NS	NS	NS	NS	7 U	6.9 U	7 U	6.9 U	7.8 U	7.2 U	7.9 U
ABPs by SW8321 (µg/g)													
Thiodiglycol	NS	NS	540	79,000	0.028	NS	0.028 U	0.028 U	0.029 U	0.028 U	0.032 U	0.029 U	0.032 U

Legend

value	*bold value above USEPA RES SOIL RSL*
value	*underlined value above USEPA GW SSL*
value	*italicized value above USEPA ECO SOIL*
value	*highlighted value above BKGD and/or RI BKGD*
mg/kg	*milligrams per kilogram*
SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from Phase II RFI Appendix F (SAIC, 1999)*
RI SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from current sampling program*
USEPA RES SOIL RSL	*USEPA RSL for Residential Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA IND SOIL RSL	*USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA GW SSL	*USEPA Protection of Groundwater Soil Screening Levels (SSLs) (May 2014)*
USEPA ECO SOIL	*USEPA Region IV Ecological Screening Values for Soil (WSRC-TR98-00110)*
NS	*none specified*
NA	*not sampled in current program*
blank cell	*not analyzed*
U	*not detected, associated value is limit of detection (LOD)*
J	*estimated value*

Fort Stewart
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						Sample ID	FTSW-HR-SO-13	FTSW-HR-SO-15	FTSW-HR-SO-17	FTSW-HR-SO-19	FTSW-HR-SO-21	FTSW-HR-SO-23	FTSW-HR-SO-25
						Parent ID							
						Sample Date	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012
Parameter	**SOIL BKGD**	**RI SOIL BKGD**	**USEPA RES SOIL RSL**	**USEPA IND SOIL RSL**	**USEPA GW SSL**	**USEPA ECO SOIL**							
Percent Mositure by A2540G (%)													
Solids, Percent	NS	NS	NS	NS	NS	NS	91.2	89	89.5	87.7	83.9	87.6	89.5
Select Metals by SW6020A (mg/kg)													
Arsenic	2.1	NA	0.67	3	0.29	10	**0.53 J**	1.1 U	0.98 U	1.1 U	**0.72 J**	1.1 U	**1.2 J**
ABPs by SW8270 (µg/kg)													
1,4-Dithiane	NS	NS	62	820	0.0097	NS	5.2 U	5.3 U	5.2 U	5.2 U	5.4 U	5.6 U	5.8 U
1,4-Oxathiane	NS	NS	NS	NS	NS	NS	6.9 U	7 U	6.9 U	6.9 U	7.2 U	7.4 U	7.7 U
ABPs by SW8321 (µg/g)													
Thiodiglycol	NS	NS	540	79,000	0.028	NS	0.028 U	0.029 U	0.028 U	0.027 U	0.029 U	0.029 U	0.031 U

Legend	
value	*bold value above USEPA RES SOIL RSL*
value	*underlined value above USEPA GW SSL*
value	*italicized value above USEPA ECO SOIL*
value	*highlighted value above BKGD and/or RI BKGD*
mg/kg	*milligrams per kilogram*
SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from Phase II RFI Appendix F (SAIC, 1999)*
RI SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from current sampling program*
USEPA RES SOIL RSL	*USEPA RSL for Residential Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA IND SOIL RSL	*USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA GW SSL	*USEPA Protection of Groundwater Soil Screening Levels (SSLs) (May 2014)*
USEPA ECO SOIL	*USEPA Region IV Ecological Screening Values for Soil (WSRC-TR98-00110)*
NS	*none specified*
NA	*not sampled in current program*
blank cell	*not analyzed*
U	*not detected, associated value is limit of detection (LOD)*
J	*estimated value*

Fort Stewart
Validated Surface Soil Results - Hero Road Trench Area MRS

						Sample ID	FTSW-HR-SO-27	FTSW-HR-SO-29	FTSW-HR-SO-31	FTSW-HR-SO-31 DUP	FTSW-HR-SO-33	FTSW-HR-SO-35	FTSW-HR-SO-36
						Parent ID				FTSW-HR-SO-31			
						Sample Date	7/31/2012	7/31/2012	8/1/2012	8/1/2012	8/1/2012	8/1/2012	8/1/2012
Parameter	**SOIL BKGD**	**RI SOIL BKGD**	**USEPA RES SOIL RSL**	**USEPA IND SOIL RSL**	**USEPA GW SSL**	**USEPA ECO SOIL**							
Percent Mositure by A2540G (%)													
Solids, Percent	NS	NS	NS	NS	NS	NS	91.3	91.2	89	87.7	94	88.7	81.4
Select Metals by SW6020A (mg/kg)													
Arsenic	2.1	NA	0.67	3	0.29	10	**1 J**	1.1 U	1 U	**0.82 J**	**0.55 J**	0.99 U	**0.77 J**
ABPs by SW8270 (µg/kg)													
1,4-Dithiane	NS	NS	62	820	0.0097	NS	5.6 U	5.1 U	5.1 U	5.2 U	5.1 U	5.3 U	5.8 U
1,4-Oxathiane	NS	NS	NS	NS	NS	NS	7.4 U	6.8 U	6.8 U	6.9 U	6.8 U	7 U	7.6 U
ABPs by SW8321 (µg/g)													
Thiodiglycol	NS	NS	540	79,000	0.028	NS	0.029 U	0.028 U	0.027 U	0.028 U	0.027 U	0.028 U	0.031 U

Legend

value	*bold value above USEPA RES SOIL RSL*
value	*underlined value above USEPA GW SSL*
value	*italicized value above USEPA ECO SOIL*
value	*highlighted value above BKGD and/or RI BKGD*
mg/kg	*milligrams per kilogram*
SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from Phase II RFI Appendix F (SAIC, 1999)*
RI SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from current sampling program*
USEPA RES SOIL RSL	*USEPA RSL for Residential Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA IND SOIL RSL	*USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA GW SSL	*USEPA Protection of Groundwater Soil Screening Levels (SSLs) (May 2014)*
USEPA ECO SOIL	*USEPA Region IV Ecological Screening Values for Soil (WSRC-TR98-00110)*
NS	*none specified*
NA	*not sampled in current program*
blank cell	*not analyzed*
U	*not detected, associated value is limit of detection (LOD)*
J	*estimated value*

Fort Stewart
Validated Surface Soil Results - Hero Road Trench Area MRS

						Sample ID	FTSW-HR-SO-38	FTSW-HR-SO-39	FTSW-HR-SO-40	FTSW-HR-SO-41	FTSW-HR-SO-42	FTSW-HR-SO-43	FTSW-HR-SO-44
						Parent ID							
						Sample Date	8/1/2012	8/1/2012	8/1/2012	8/1/2012	8/1/2012	8/1/2012	8/1/2012
Parameter	**SOIL BKGD**	**RI SOIL BKGD**	**USEPA RES SOIL RSL**	**USEPA IND SOIL RSL**	**USEPA GW SSL**	**USEPA ECO SOIL**							
Percent Mositure by A2540G (%)													
Solids, Percent	NS	NS	NS	NS	NS	NS	91.7	91.4	84.5	82.2	85	89.2	89.6
Select Metals by SW6020A (mg/kg)													
Arsenic	2.1	NA	0.67	3	0.29	10	**0.58 J**	**0.73 J**	**0.66 J**	**0.86 J**	**0.69 J**	1 U	1.1 U
ABPs by SW8270 (µg/kg)													
1,4-Dithiane	NS	NS	62	820	0.0097	NS	5.2 U	5.3 U	6.4 U	5.7 U	5.7 U	5.7 U	5.4 U
1,4-Oxathiane	NS	NS	NS	NS	NS	NS	6.9 U	7 U	8.5 U	7.6 U	7.6 U	7.5 U	7.1 U
ABPs by SW8321 (µg/g)													
Thiodiglycol	NS	NS	540	79,000	0.028	NS	0.028 U	0.028 U	0.034 U	0.03 U	0.03 U	0.022 U	0.023 U

Legend	
value	*bold value above USEPA RES SOIL RSL*
value	*underlined value above USEPA GW SSL*
value	*italicized value above USEPA ECO SOIL*
value	*highlighted value above BKGD and/or RI BKGD*
mg/kg	*milligrams per kilogram*
SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from Phase II RFI Appendix F (SAIC, 1999)*
RI SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from current sampling program*
USEPA RES SOIL RSL	*USEPA RSL for Residential Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA IND SOIL RSL	*USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA GW SSL	*USEPA Protection of Groundwater Soil Screening Levels (SSLs) (May 2014)*
USEPA ECO SOIL	*USEPA Region IV Ecological Screening Values for Soil (WSRC-TR98-00110)*
NS	*none specified*
NA	*not sampled in current program*
blank cell	*not analyzed*
U	*not detected, associated value is limit of detection (LOD)*
J	*estimated value*

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Validated Surface Soil Results - Hero Road Trench Area MRS

						Sample ID	FTSW-HR-SO-45	FTSW-HR-SO-46	FTSW-HR-SO-46 DUP	FTSW-HR-SO-47	FTSW-HR-SO-48	FTSW-HR-SO-49
						Parent ID			FTSW-HR-SO-46			
						Sample Date	8/1/2012	8/1/2012	8/1/2012	8/1/2012	8/1/2012	8/1/2012
Parameter	**SOIL BKGD**	**RI SOIL BKGD**	**USEPA RES SOIL RSL**	**USEPA IND SOIL RSL**	**USEPA GW SSL**	**USEPA ECO SOIL**						
Percent Mositure by A2540G (%)												
Solids, Percent	NS	NS	NS	NS	NS	NS	88.1	65.5	73.9	85.8	92.8	77
Select Metals by SW6020A (mg/kg)												
Arsenic	2.1	NA	0.67	3	0.29	10	1.1 U	**1.2 J**	1.3 U	1.1 U	1 U	1.1 U
ABPs by SW8270 (µg/kg)												
1,4-Dithiane	NS	NS	62	820	0.0097	NS	5.3 U	5.9 U	5.4 U	6.1 U	5.7 U	5.3 U
1,4-Oxathiane	NS	NS	NS	NS	NS	NS	7 U	7.8 U	7.1 U	8.1 U	7.6 U	7 U
ABPs by SW8321 (µg/g)												
Thiodiglycol	NS	NS	540	79,000	0.028	NS	0.022 U	0.025 U	0.027 U	0.027 U	0.03 U	0.024 U

Legend

value	*bold value above USEPA RES SOIL RSL*
value	*underlined value above USEPA GW SSL*
value	*italicized value above USEPA ECO SOIL*
value	*highlighted value above BKGD and/or RI BKGD*
mg/kg	*milligrams per kilogram*
SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from Phase II RFI Appendix F (SAIC, 1999)*
RI SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from current sampling program*
USEPA RES SOIL RSL	*USEPA RSL for Residential Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA IND SOIL RSL	*USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA GW SSL	*USEPA Protection of Groundwater Soil Screening Levels (SSLs) (May 2014)*
USEPA ECO SOIL	*USEPA Region IV Ecological Screening Values for Soil (WSRC-TR98-00110)*
NS	*none specified*
NA	*not sampled in current program*
blank cell	*not analyzed*
U	*not detected, associated value is limit of detection (LOD)*
J	*estimated value*

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Validated Subsurface Soil Results - Hero Road Trench Area MRS

						Sample ID	FTSW-HR-SO-02 [01.5]	FTSW-HR-SO-04 [02]	FTSW-HR-SO-06 [1.5]	FTSW-HR-SO-08 [02]	FTSW-HR-SO-10 [01.5]	FTSW-HR-SO-12 [01.5]	FTSW-HR-SO-14 [01.5]
						Parent ID							
						Sample Date	7/30/2012	7/30/2012	7/30/2012	7/30/2012	7/30/2012	7/31/2012	7/31/2012
Parameter	**SOIL BKGD**	**RI SOIL BKGD**	**USEPA RES SOIL RSL**	**USEPA IND SOIL RSL**	**USEPA GW SSL**	**USEPA ECO SOIL**							
Percent Mositure by A2540G (%)													
Solids, Percent	NS	NS	NS	NS	NS	NS	96.5	96.4	95.6	90.3	94.2	93.3	91.8
Select Metals by SW6020A (mg/kg)													
Arsenic	2.1	NA	0.67	3	0.29	10	0.96 U	0.96 U	**0.57 J**	1 U	0.92 U	**0.47 J**	**0.52 J**
ABPs by SW8270 (µg/kg)													
1,4-Dithiane	NS	NS	62	820	0.0097	NS	5 U	5.1 U	4.9 U	5.3 U	5.1 U	5.2 U	5.1 U
1,4-Oxathiane	NS	NS	NS	NS	NS	NS	6.6 U	6.7 U	6.5 U	7.1 U	6.7 U	6.9 U	6.8 U
ABPs by SW8321 (µg/g)													
Thiodiglycol	NS	NS	540	79,000	0.028	NS	0.026 U	0.028 U	0.026 U	0.029 U	0.028 U	0.028 U	0.027 U

Legend

value	*bold value above USEPA RES SOIL RSL*
value	*underlined value above USEPA GW SSL*
value	*italicized value above USEPA ECO SOIL*
value	*highlighted value above BKGD and/or RI BKGD*
mg/kg	*milligrams per kilogram*
SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from Phase II RFI Appendix F (SAIC, 1999)*
RI SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from current sampling program*
USEPA RES SOIL RSL	*USEPA RSL for Residential Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA IND SOIL RSL	*USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA GW SSL	*USEPA Protection of Groundwater Soil Screening Levels (SSLs) (May 2014)*
USEPA ECO SOIL	*USEPA Region IV Ecological Screening Values for Soil (WSRC-TR98-00110)*
NS	*none specified*
NA	*not sampled in current program*
blank cell	*not analyzed*
U	*not detected, associated value is limit of detection (LOD)*
J	*estimated value*

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Validated Subsurface Soil Results - Hero Road Trench Area MRS

						Sample ID	FTSW-HR-SO-14 [01.5] DUP	FTSW-HR-SO-16 [01.5]	FTSW-HR-SO-18 [02]	FTSW-HR-SO-20 [01.5]	FTSW-HR-SO-22 [04]	FTSW-HR-SO-22 [04] DUP	FTSW-HR-SO-24 [06]
						Parent ID	FTSW-HR-SO-14 [01.5]					FTSW-HR-SO-22 [04]	
						Sample Date	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012
Parameter	**SOIL BKGD**	**RI SOIL BKGD**	**USEPA RES SOIL RSL**	**USEPA IND SOIL RSL**	**USEPA GW SSL**	**USEPA ECO SOIL**							
Percent Mositure by A2540G (%)													
Solids, Percent	NS	NS	NS	NS	NS	NS	92.7	92.1	86.5	96	88	92.4	84.9
Select Metals by SW6020A (mg/kg)													
Arsenic	2.1	NA	0.67	3	0.29	10	0.95 U	1 U	1.1 U	0.93 U	**0.89 J**	**0.75 J**	1.1 U
ABPs by SW8270 (µg/kg)													
1,4-Dithiane	NS	NS	NS	820	0.0097	NS	5.2 U	5 U	5.8 U	4.9 U	5.2 U	5.3 U	5.3 U
1,4-Oxathiane	NS	NS	NS	NS	NS	NS	6.8 U	6.6 U	7.6 U	6.5 U	6.9 U	7 U	7.1 U
ABPs by SW8321 (µg/g)													
Thiodiglycol	NS	NS	540	79,000	0.028	NS	0.028 U	0.026 U	0.03 U	0.026 U	0.027 U	0.028 U	0.029 U

Legend

value	*bold value above USEPA RES SOIL RSL*
value	*underlined value above USEPA GW SSL*
value	*italicized value above USEPA ECO SOIL*
value	*highlighted value above BKGD and/or RI BKGD*
mg/kg	*milligrams per kilogram*
SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from Phase II RFI Appendix F (SAIC, 1999)*
RI SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from current sampling program*
USEPA RES SOIL RSL	*USEPA RSL for Residential Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA IND SOIL RSL	*USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA GW SSL	*USEPA Protection of Groundwater Soil Screening Levels (SSLs) (May 2014)*
USEPA ECO SOIL	*USEPA Region IV Ecological Screening Values for Soil (WSRC-TR98-00110)*
NS	*none specified*
NA	*not sampled in current program*
blank cell	*not analyzed*
U	*not detected, associated value is limit of detection (LOD)*
J	*estimated value*

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						Sample ID	FTSW-HR-SO-26 [04]	FTSW-HR-SO-28 [05]	FTSW-HR-SO-30 [05]	FTSW-HR-SO-32 [10]	FTSW-HR-SO-34 [10]	FTSW-HR-SO-34 [10] DUP	FTSW-HR-SO-37 [09.5]
						Parent ID						FTSW-HR-SO-34 [10]	
						Sample Date	7/31/2012	7/31/2012	7/31/2012	8/1/2012	8/1/2012	8/1/2012	8/1/2012
Parameter	**SOIL BKGD**	**RI SOIL BKGD**	**USEPA RES SOIL RSL**	**USEPA IND SOIL RSL**	**USEPA GW SSL**	**USEPA ECO SOIL**							
Percent Mositure by A2540G (%)													
Solids, Percent	NS	NS	NS	NS	NS	NS	94.4	92.1	94.2	80.8	77.6	77.5	77.6
Select Metals by SW6020A (mg/kg)													
Arsenic	2.1	NA	0.67	3	0.29	10	**1.1 J**	1 U	0.88 U	1.1 U	1.1 U	1.1 U	1.2 U
ABPs by SW8270 (µg/kg)													
1,4-Dithiane	NS	NS	NS	820	0.0097	NS	5.1 U	5.2 U	5 U	5.6 U	5.8 U	6 U	6.3 U
1,4-Oxathiane	NS	NS	NS	NS	NS	NS	6.8 U	6.9 U	6.6 U	7.4 U	7.7 U	8 U	8.3 U
ABPs by SW8321 (µg/g)													
Thiodiglycol	NS	NS	540	79,000	0.028	NS	0.027 U	0.028 U	0.026 U	0.031 U	0.031 U	0.033 U	0.034 U

Legend

value	*bold value above USEPA RES SOIL RSL*
value	*underlined value above USEPA GW SSL*
value	*italicized value above USEPA ECO SOIL*
value	*highlighted value above BKGD and/or RI BKGD*
mg/kg	*milligrams per kilogram*
SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from Phase II RFI Appendix F (SAIC, 1999)*
RI SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from current sampling program*
USEPA RES SOIL RSL	*USEPA RSL for Residential Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA IND SOIL RSL	*USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA GW SSL	*USEPA Protection of Groundwater Soil Screening Levels (SSLs) (May 2014)*
USEPA ECO SOIL	*USEPA Region IV Ecological Screening Values for Soil (WSRC-TR98-00110)*
NS	*none specified*
NA	*not sampled in current program*
blank cell	*not analyzed*
U	*not detected, associated value is limit of detection (LOD)*
J	*estimated value*

Fort Stewart
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						Sample ID	FTSW-HR-SO-50 [10]	FTSW-HR-SO-51 [10]	FTSW-HR-SO-52 [10]	FTSW-HR-SO-53 [10]	FTSW-HR-SO-54 [10]	FTSW-HR-SO-55 [07.5]	FTSW-HR-SO-56 [10]
						Parent ID							
						Sample Date	8/3/2012	8/3/2012	8/3/2012	8/3/2012	8/6/2012	8/6/2012	8/6/2012
Parameter	**SOIL BKGD**	**RI SOIL BKGD**	**USEPA RES SOIL RSL**	**USEPA IND SOIL RSL**	**USEPA GW SSL**	**USEPA ECO SOIL**							
Percent Mositure by A2540G (%)													
Solids, Percent	NS	NS	NS	NS	NS	NS	80	87.2	85.4	81.3	90.7	78.4	89.6
Select Metals by SW6020A (mg/kg)													
Arsenic	2.1	NA	0.67	3	0.29	10	1 U	1 U	1.1 U	1.2 U	1 U	1.1 U	1.1 U
ABPs by SW8270 (µg/kg)													
1,4-Dithiane	NS	NS	NS	820	0.0097	NS	5.9 U	5.2 U	5.5 U	5.7 U	5 U	6 U	5.4 U
1,4-Oxathiane	NS	NS	NS	NS	NS	NS	7.7 U	6.9 U	7.3 U	7.5 U	6.6 U	7.9 U	7.1 U
ABPs by SW8321 (µg/g)													
Thiodiglycol	NS	NS	540	79,000	0.028	NS	0.021 U	0.024 U	0.018 U	0.025 U	0.017 U	0.024 U	0.027 U

Legend

value	*bold value above USEPA RES SOIL RSL*
value	*underlined value above USEPA GW SSL*
value	*italicized value above USEPA ECO SOIL*
value	*highlighted value above BKGD and/or RI BKGD*
mg/kg	*milligrams per kilogram*
SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from Phase II RFI Appendix F (SAIC, 1999)*
RI SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from current sampling program*
USEPA RES SOIL RSL	*USEPA RSL for Residential Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA IND SOIL RSL	*USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA GW SSL	*USEPA Protection of Groundwater Soil Screening Levels (SSLs) (May 2014)*
USEPA ECO SOIL	*USEPA Region IV Ecological Screening Values for Soil (WSRC-TR98-00110)*
NS	*none specified*
NA	*not sampled in current program*
blank cell	*not analyzed*
U	*not detected, associated value is limit of detection (LOD)*
J	*estimated value*

Fort Stewart
Validated Subsurface Soil Results - Hero Road Trench Area MRS

						Sample ID	FTSW-HR-SO-57 [10]	FTSW-HR-SO-58 [10]	FTSW-HR-SO-59 [10]	FTSW-HR-SO-60 [07.5]	FTSW-HR-SO-61 [09.5]	FTSW-HR-SO-62 [10]
						Parent ID						
						Sample Date	8/6/2012	8/6/2012	8/6/2012	8/6/2012	8/7/2012	8/7/2012
Parameter	**SOIL BKGD**	**RI SOIL BKGD**	**USEPA RES SOIL RSL**	**USEPA IND SOIL RSL**	**USEPA GW SSL**	**USEPA ECO SOIL**						
Percent Mositure by A2540G (%)												
Solids, Percent	NS	NS	NS	NS	NS	NS	90.7	79.3	92.1	78.5	82.6	82.2
Select Metals by SW6020A (mg/kg)												
Arsenic	2.1	NA	0.67	3	0.29	10	1 U	1.1 U	1 U	1.1 U	1 U	1.1 U
ABPs by SW8270 (µg/kg)												
1,4-Dithiane	NS	NS	62	820	0.0097	NS	5.1 U	5.8 U	5.1 U	5.9 U	5.6 U	5.6 U
1,4-Oxathiane	NS	NS	NS	NS	NS	NS	6.7 U	7.7 U	6.7 U	7.8 U	7.4 U	7.5 U
ABPs by SW8321 (µg/g)												
Thiodiglycol	NS	NS	540	79,000	0.028	NS	0.024 U	0.023 U	0.022 U	0.029 U	0.028 U	0.02 U

Legend

value	*bold value above USEPA RES SOIL RSL*
value	*underlined value above USEPA GW SSL*
value	*italicized value above USEPA ECO SOIL*
value	*highlighted value above BKGD and/or RI BKGD*
mg/kg	*milligrams per kilogram*
SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from Phase II RFI Appendix F (SAIC, 1999)*
RI SOIL BKGD	*Fort Stewart background soil data (value is two times the average background result) from current sampling program*
USEPA RES SOIL RSL	*USEPA RSL for Residential Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA IND SOIL RSL	*USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of 0.1 for non-carcinogens.*
USEPA GW SSL	*USEPA Protection of Groundwater Soil Screening Levels (SSLs) (May 2014)*
USEPA ECO SOIL	*USEPA Region IV Ecological Screening Values for Soil (WSRC-TR98-00110)*
NS	*none specified*
NA	*not sampled in current program*
blank cell	*not analyzed*
U	*not detected, associated value is limit of detection (LOD)*
J	*estimated value*

Fort Stewart
Validated Sediment Results

		Sample ID	FTSW-AA-SO-21	FTSW-AA-SO-22
		Date	7/27/2012	7/27/2012
Parameter	**USEPA ECO**			
Percent Moisture by A2540G (%)				
Percent Moisture	NS		24.1	18.9
Select Metals by SW6020A (mg/kg)				
Aluminum	NS		6,540 J	886 J
Copper	18.7		1.9 J	1.8 U
Lead	30.2		7.1 J	1.5 J
Zinc	124		10.9	2.3 J
Explosives by SW8330B (mg/kg)				
1,3,5-Trinitrobenzene	NS		0.099 U	0.096 U
1,3-Dinitrobenzene	NS		0.099 U	0.096 U
2,4,6-Trinitrotoluene	NS		0.099 U	0.096 U
2,4-Dinitrotoluene	NS		0.099 U	0.096 U
2,6-Dinitrotoluene	NS		0.099 U	0.096 U
2-Amino-4,6-dinitrotoluene	NS		0.099 U	0.096 U
2-Nitrotoluene	NS		0.099 U	0.096 U
3,5-Dinitroaniline	NS		0.099 U	0.096 U
3-Nitrotoluene	NS		0.099 U	0.096 U
4-Amino-2,6-dinitrotoluene	NS		0.099 U	0.096 U
4-Nitrotoluene	NS		0.099 U	0.096 U
HMX	NS		0.099 U	0.096 U
Nitrobenzene	NS		0.099 U	0.096 U
Nitroglycerin	NS		0.99 U	0.96 U
PETN	NS		0.99 U	0.96 U
RDX	NS		0.099 U	0.096 U
Tetryl	NS		0.099 U	0.096 U

Legend

%	*percent*
mg/kg	*milligrams per kilogram*
USEPA ECO	*USEPA Region 4 Sediment Screening Values (USEPA, 20o1b)*
NS	*none specified*
U	*not detected, associated value is limit of detection (LOD)*
J	*estimated value*

Fort Stewart
Validated Surface Water Results

Sample ID Sample Date		FTSW-AA-SW-21 7/27/2012
Parameter	**Surface Water Screening Benchmarks**	
Metals by SW6020A (mg/L)		
Aluminum	0.087	2.3
Copper	0.005	0.0054 J
Lead	0.0012	0.0025
Zinc	0.065	0.075
Explosives by SW8330B (µg/L)		
1,3,5-Trinitrobenzene	NS	0.096 UJ
1,3-Dinitrobenzene	NS	0.096 UJ
2,4,6-Trinitrotoluene	NS	0.096 UJ
2,4-Dinitrotoluene	0.31	0.096 UJ
2,6-Dinitrotoluene	NS	0.096 UJ
2-Amino-4,6-dinitrotoluene	NS	0.096 UJ
2-Nitrotoluene	NS	0.096 UJ
3,5-Dinitroaniline	NS	0.11 UJ
3-Nitrotoluene	NS	0.096 UJ
4-Amino-2,6-dinitrotoluene	NS	0.096 UJ
4-Nitrotoluene	NS	0.096 UJ
HMX	NS	0.096 UJ
Nitrobenzene	0.27	0.096 UJ
Nitroglycerin	NS	0.77 UJ
PETN	NS	0.77 UJ
RDX	NS	0.096 UJ
Tetryl	NS	0.19 UJ

Legend

mg/L	*milligrams per liter*
µg/L	*micrograms per liter*
U	*not detected, associated value is limit of detection (LOD), quantitation limit may be inaccurate or imprecise*
J	*estimated value*
Surface Water Screening Benchmarks	*For aluminum: EPA Freshwater Aquatic Life Criteria Table (USEPA, 1988) expressed in terms of total recoverable metal in the water column* *For copper, lead, and zinc: Georgia In-Stream Water Quality Standards - Freshwater Chronic* *1. Assuming water hardness=50 mg/L $CaCO^3$*

Fort Stewart
Validated Background Soil Results

		Sample ID	FTSW-AA-SO-23	FTSW-AA-SO-24	FTSW-AA-SO-25*	FTSW-AA-SO-25 DUP*
		Parent ID				FTSW-AA-SO-25
		Sample Date	7/27/2012	7/27/2012	7/27/2012	7/27/2012
Parameter	**Mean of Data***	**Background**				
Select Metals by SW6020A (mg/kg)						
Aluminum	5,137	10,273	5140 J	5060 J	2080 J	2530 J
Copper	1.5	3.1	2.7 J	1.9 J	1.6 J	2.3 J
Lead	6.3	12.7	4.6 J	2.6 J	3.9 J	4.6 J
Zinc	9.9	19.9	12.9	12.8	1.8 J	6.5

		Sample ID	FTSW-AA-SO-26	FTSW-AA-SO-27	FTSW-AA-SO-28	FTSW-AA-SO-29
		Parent ID				
		Sample Date	7/27/2012	7/27/2012	7/30/2012	7/30/2012
Parameter	**Mean of Data***	**Background**				
Select Metals by SW6020A (mg/kg)						
Aluminum	5,137	10,273	9590 J	5670 J	2300	3000
Copper	1.5	3.1	1.4 J	1.6 J	1 J	1.5 J
Lead	6.3	12.7	17 J	4 J	3.3	4.8
Zinc	9.9	19.9	11	14.2	7.8	6.8

		Sample ID	FTSW-AA-SO-30	FTSW-AA-SO-31	FTSW-AA-SO-32
		Parent ID			
		Sample Date	8/2/2012	8/2/2012	8/2/2012
Parameter	**Mean of Data***	**Background**			
Select Metals by SW6020A (mg/kg)					
Aluminum	5,137	10,273	4490	5500	8310
Copper	1.5	3.1	1 J	1.1 J	1.3 J
Lead	6.3	12.7	11.8	5.9	5
Zinc	9.9	19.9	4.5	4.3	20.8

Legend:

*	*mean calculated using the average of the detected value and its duplicate*
Background	*defined as two times the mean*
mg/kg	*milligrams per kilogram*
J	*estimated value*

Fort Stewart
Investigative Derived Waste Results

Sample ID		FTSW-IDW-02
Sample Date		9/6/2012
Parameter	**MCC**	**RESULT**
TCLP VOCs (SW8260B) (µg/L)		
Benzene	500	75.0U
2-Butanone	200000	375U
Carbon Tetrachloride	500	75.0U
Chlorobenzene	100000	75.0U
Chloroform	6000	53.2J
1,2-Dichloroethane	500	75.0U
1,1-Dichloroethene	700	75.0U
Tetrachloroethene	700	75.0U
Trichloroethene	500	75.0U
Vinyl Chloride	200	75.0U
TCLP SVOCs (SW8270D) (µg/L)		
mp-Cresol	200000	20.0U
o-Cresol	200000	20.0U
1,4-Dichlorobenzene	7500	20.0U
2,4-Dinitrotoluene	130	20.0U
Hexachlorobenzene	130	20.0U
Hexachlorobutadiene	500	20.0U
Hexachloroethane	3000	20.0U
Nitrobenzene	2000	40.0U
Pentachlorophenol	100000	160U
Pyridine	5000	40.0U
2,4,5-Trichlorophenol	400000	60.0U
2,4,6-Trichlorophenol	2000	20.0U
TCLP Pesticides (SW8081B) (µg/L)		
gamma-BHC	4000	1.7U
Chlordane	30	5.0U
Endrin	20	1.7U
Heptachlor	8	1.7U
Heptachlor Epoxide	8	1.7U
Methoxychlor	10000	1.7U
Toxaphene	500	5.0U
TCLP Herbicides (SW8151A) (µg/L)		
2,4-D	10000	3.2U
2,4,5-TP	1000	3.2U
TCLP Metals (SW6010C) (mg/L)		
Arsenic, Total	5	0.022
Barium, Total	100	0.11
Cadmium, Total	1	0.0028U
Chromium, Total	5	0.29
Lead, Total	5	0.11
Selenium, Total	1	0.028U
Silver, Total	5	0.0058U
Wet Chemistry		
Corrosivity as pH (units)	≤2 or ≥12.5	9.29
Cyanide, Reactive (ppm)	250	10.01
Flashpoint/Ignitability (°C)	<60	>200
Sulfide, Reactive (ppm)	500	3.2J

Legend:

MCC	Maximum Contaminant Concentration from 40 CFR 261 (June 1996)
µg/L	micrograms per liter
U	analyte was analyzed for, but not detected above the limit of detection
J	value is between the detection limit and limit of quantitation
ppm	parts per million
°C	degrees Celsius

PROJECT TITLE:
Fort Stewart

Earth Resources Technology, Inc.
6100 Frost Place
Laurel, MD 20707

Data Deliverable Group ERT-004
ALS#9980614

DoD QSM V.4.2
DATA PACKAGE

SAMPLES COLLECTED
July 31, 2012

Total Number of Pages 262

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Case Narrative

Earth Resources Technology, Inc.
Fort Stewart

ALS-Middletown
Case Narrative
ERT-004

Sample Management

This report contains the results of the analysis of twenty-two (22) solid samples collected on July 31, 2012. Analytical results and quality control information are summarized in this data package.

Qualifier Symbol Definitions:

U = Qualifier indicates that the analyte was not detected above the LOD.
J = Qualifier indicates that the analyte value is between the DL and the LOQ.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds the calibration range.
P = Qualifier indicates that the RPD between the two analytical columns is greater than 40%.
NSC = Qualifier indicates that spike recoveries were not calculated based on the spiking concentration.

Result Symbol Definitions:

DL = The smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence.
LOD = The smallest analyte concentration that must be present in a sample in order to be detected at a high level of confidence.
LOQ = The lowest concentration that produces a quantitative result within specified limits of precision or bias.

Sample Receipt

Samples arrived at ALS via courier on August 1, 2012. Upon receipt, the samples were inspected and compared to the Chain of Custody. Sample temperature was documented on the enclosed Chain of Custody. Samples were received intact and properly preserved, unless noted on the enclosed Certificate of Analysis and/or Chain of Custody.

Subcontracting

Twenty-two (22) samples were subcontracted for Method 8270/8321 analysis. Results are provided at the end of this report.

Totals Metals by SW-846 Method 6020A

Sample handling. Twenty-two (22) solid samples were digested and analyzed for total metals on the Agilent 7700x using SW-846 Method 6020A. The samples were analyzed within the six-month holding time established for this method.

Calibration. All criteria associated with the calibration were within method control limits.

Blanks. Metals were not detected in the blanks.

Laboratory Control Samples. Recoveries were within method control limits.

Matrix Spike/Matrix Spike Duplicate. A matrix spike and matrix spike duplicate were performed on sample FTSW-HR-SO-22 (04) (9980614013) in this data deliverable. The MS and MSD recoveries and their RPDs were within method control limits.

Total Solids by SM 2540G

Sample handling. Twenty-two (22) solid samples were analyzed for total solids by Standard Method 2540G for dry weight reporting purposes. The samples were analyzed within the 14-day method recommended hold time for dry weight reporting.

Duplicate. A duplicate analysis, identified as 1018169, was performed on sample 9980614003 (FTSW-HR-SO-13). The relative percent difference between the results was within the QC limit of 5%.

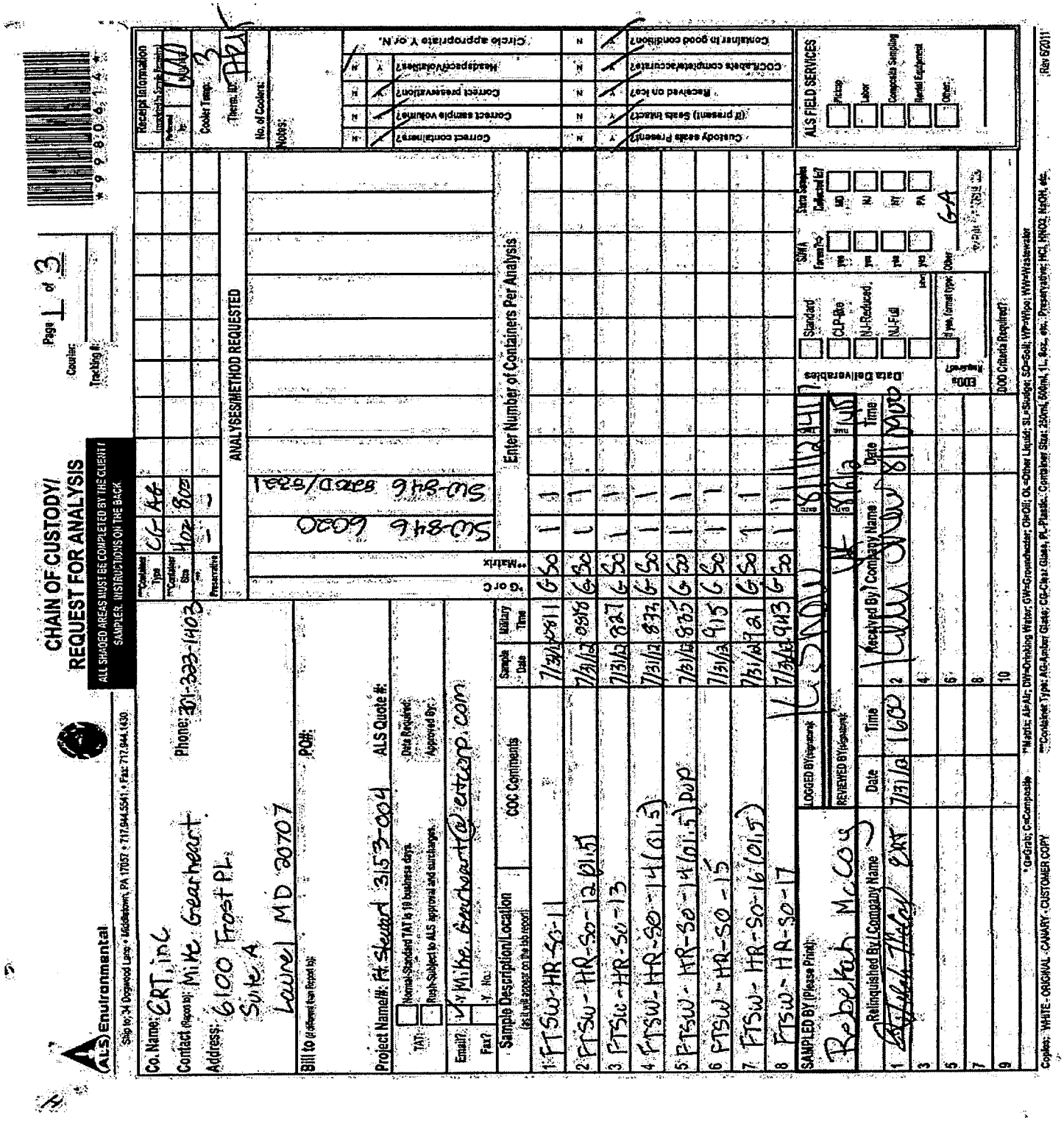
A duplicate analysis, identified as 1018170, was performed on sample 9980614013 (FTSW-HR-SO-22(04)). The relative percent difference between the results was within the QC limit of 5%.

Chain of Custody

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



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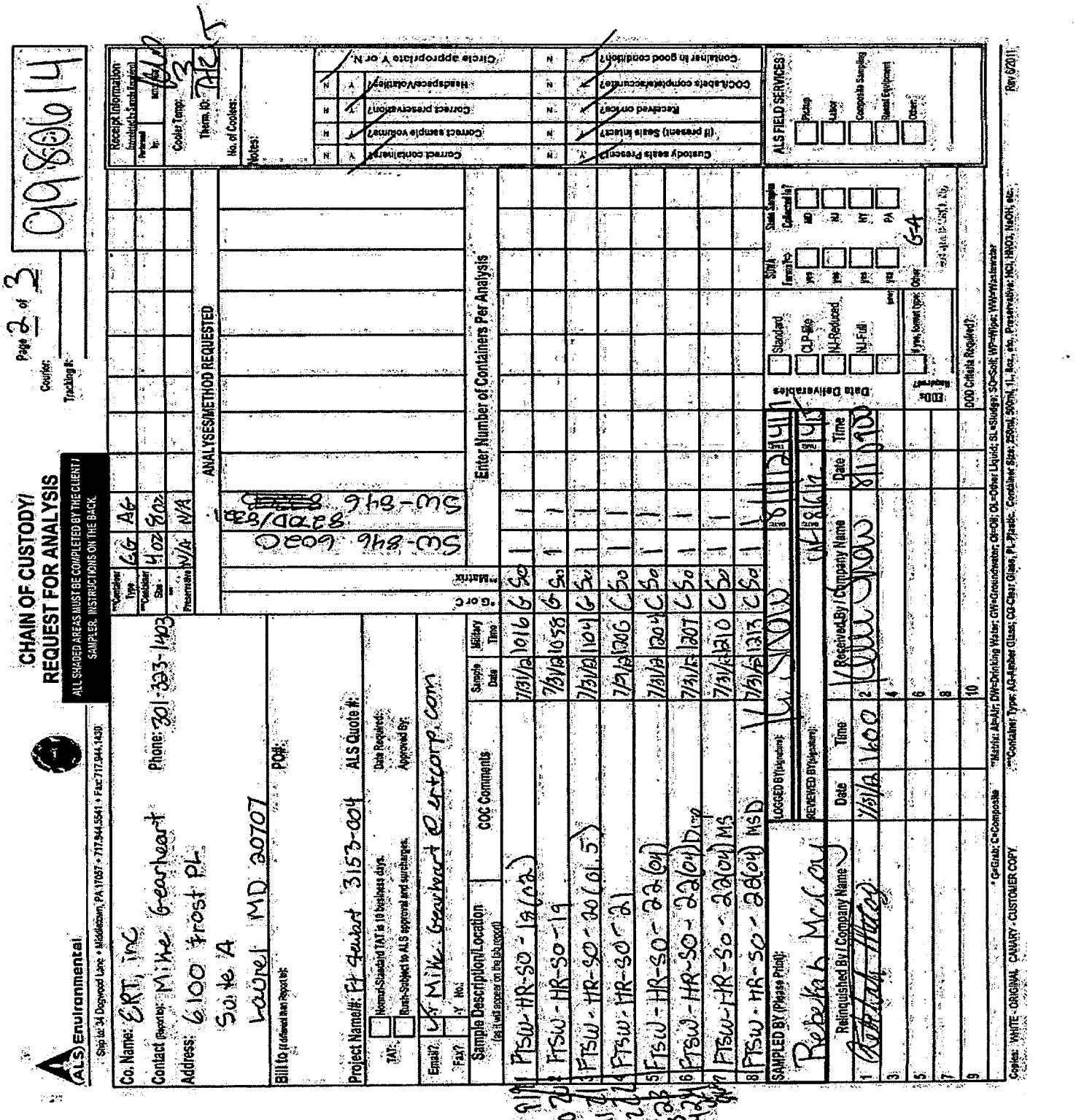

Page 2 of 3

Cooler: _____

Tracking #: _____

9980614

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

ALS Environmental — Ship to: 34 Dogwood Lane • Middletown, PA 17057 • 717-944-5541 • Fax: 717-944-1430

Co. Name: ERT, Inc — Phone: 301-353-1403

Contact (Report to): Mike Gearhard

Address: 6100 Frost PL Suite A Laurel MD 20707

Bill To (if different than Report to): — PO#:

Project Name/#: Ft. Stewart BIS3-004 — ALS Quote #:

TAT: Normal/Standard TAT is 10 business days. Rush-Subject to ALS approval and surcharges. — Date Required: — Approved By:

Email? Y Mike.Gearhard@ertcorp.com — Fax? Y No:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	Matrix	Container Type	Preservative	Container Size	Container Qty	Enter Number of Containers Per Analysis	Contact container?	Contact sample volume?	Contact preservation?	Headspace/Volatiles?	Circle appropriate Y or N
15 FTSW-HR-SO-23		7/31/12	1239	SO	G	N/A	8oz	1	1					
16 FTSW-HR-SO-24(DC)		7/31/12	1244	SO	G	N/A	8oz	1	1					
17 FTSW-HR-SO-25		7/31/12	1319	SO	G	N/A	8oz	1	1					
18 FTSW-HR-SO-26(DUP)		7/31/12	1326	SO	G	N/A	8oz	1	1					
19 FTSW-HR-SO-27		7/31/12	1340	SO	G	N/A	8oz	1	1					
20 FTSW-HR-SO-28(05)		7/31/12	1342	SO	G	N/A	8oz	1	1					
21 FTSW-HR-SO-29		7/31/12	1411	SO	G	N/A	8oz	1	1					
22 FTSW-HR-SO-30(05)		7/31/12	1418	SO	G	N/A	8oz	1	1					

Custody seals Present? N — (if present) Seals Intact? N — Received on Ice? Y — COC/Labels complete/accurate? Y — Container in good condition? Y

Cooler Temp: 2.2 — Therm. ID: TR2 — No. of Coolers: 1

Notes:

Receipt Information (custody seals intact): Yes — Received: Ice

SAMPLED BY (Please Print): Rebekah McCoy

Relinquished By / Company Name — Date — Time — Received By / Company Name — Date — Time

1 Rebekah McCoy ERT 7/31/12 1600 — 2 [illegible] ALS 8/1/12 1000

LOGGED BY (Signature): — REVIEWED BY (Signature):

ALS FIELD SERVICES: Pickup, Labor, Composite Sampling, Rental Equipment, Other

Data Deliverables: Standard, CLP-like, NJ-Reduced, NJ-Full, EDDs, Electronic

State Samples Relinquished to? MD, NJ, NY, PA

SWF: Formaldehyde? yes/no

DOD Criteria Required? yes/no

GA

Copies: WHITE - ORIGINAL, CANARY - CUSTOMER COPY

*Grab; C=Composite — **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; O=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater — ***Container Type: AG-Amber Glass; CG-Clear Glass; P-Plastic. Container Size: 250ml, 500ml, 1L, 8oz, etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 6/2011

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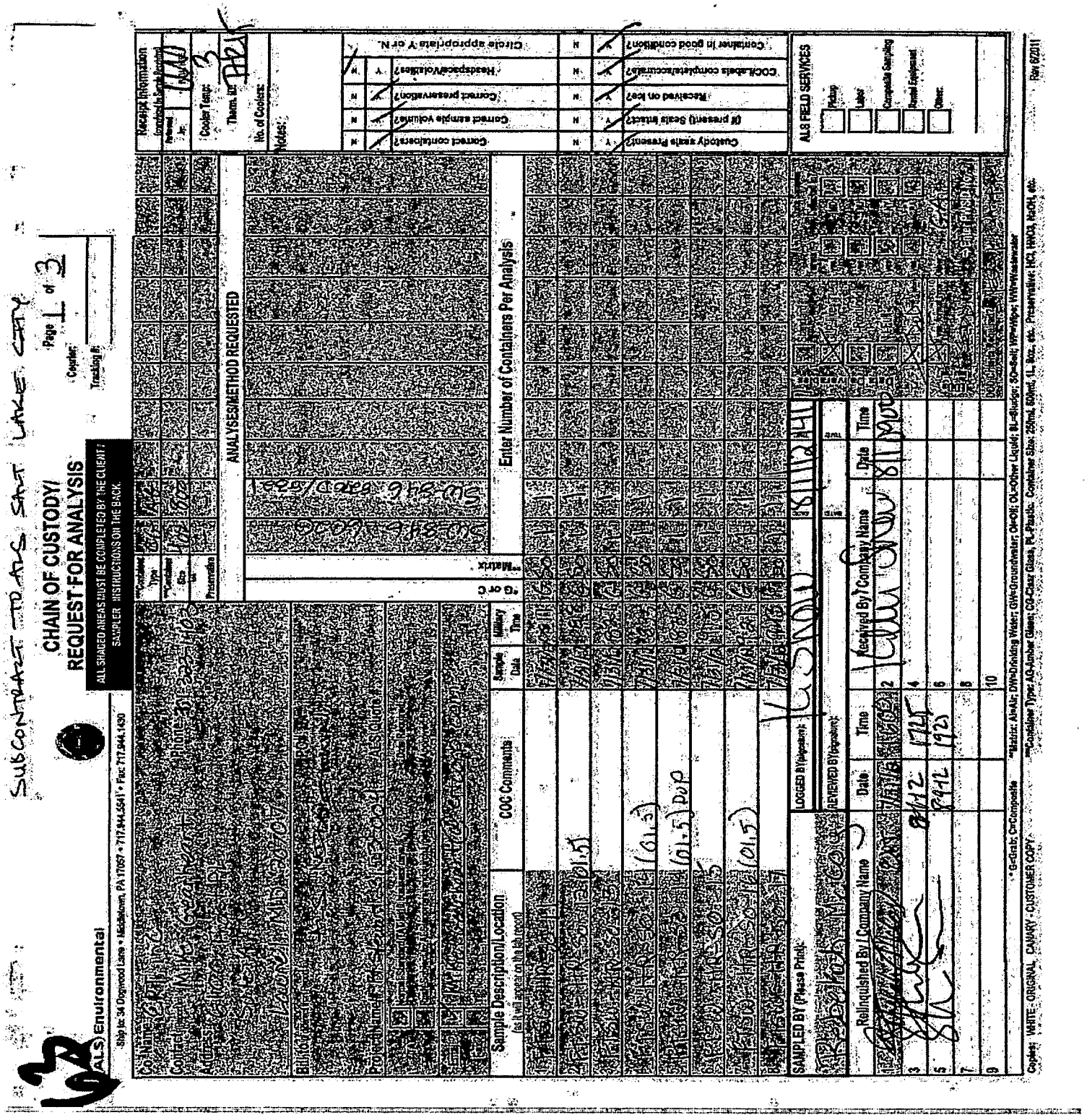

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Page 2 of 3
Courier:
Tracking #:
9980614

Co. Name: GRT Inc
Contact (report to): Mike Gearheart Phone: 301-323-1403
Address: 6100 Frost Pl
Suite A
Laurel, MD 20707
Bill to (if different than report to): PO#:
Project Name/#: Fewart 3153-004 ALS Quote #:
Normal Standard TAT (10 business days) Date Required:
Rush - Subject to ALS approval and surcharges Approved By:
Email: Mike.Gearheart@entcorp.com
Fax:

**Container Type	GG	AG
**Container Size	4oz	8oz
Preservative	N/A	N/A

ANALYSES/METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	SW-846 6020	SW-846 8270D/8270
9	1 FTSW-HR-SO-17(02)		7/31/12	1016	G	SO	1	1
10	2 FTSW-HR-SO-19		7/31/12	1058	G	SO	1	1
11	3 FTSW-HR-SO-20(01.5)		7/31/12	1104	G	SO	1	1
12	4 FTSW-HR-SO-21		7/31/12	1206	G	SO	1	1
13	5 FTSW-HR-SO-22(04)		7/31/12	1203	G	SO	1	1
14	6 FTSW-HR-SO-22(04) Dup		7/31/12	1207	G	SO	1	1
15	7 FTSW-HR-SO-22(04) MS		7/31/12	1210	G	SO	1	1
15	8 FTSW-HR-SO-22(04) MSD		7/31/12	1213	G	SO	1	1

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)
Performed by: [illegible]
Cooler Temp: 3
Therm. ID: 7R15
No. of Coolers:
Notes:

	Y	N
Correct containers?	Y	N
Correct sample volume?	Y	N
Correct preservation?	Y	N
Headspace/Volatiles?	Y	N
Circle appropriate Y or N.		

	Y	N
Custody seals Present?	Y	N
(If present) Seals intact?	Y	N
Received on ice?	Y	N
COC/Labels complete/accurate?	Y	N
Container in good condition?	Y	N

SAMPLED BY (Please Print): Rebekah McCoy
LOGGED BY (signature): K. Snow 8/1/12 1141
REVIEWED BY (signature):

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature]	7/31/12	1600	2	Kelli Snow	8/1	0900
3	[signature]	8/1/12	1725	4			
5	[signature]	8/1/12	1925	6			
7				8			
9				10			

Data Deliverables: Standard; CLP-like; NJ Reduced; NJ Full; Other: GA
DOD Criteria Required?

ALS FIELD SERVICES
- Pickup
- Labor
- Composite Sampling
- Rental Equipment
- Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 5oz., etc. Preservative: HCl, HNO3, NaOH, etc.

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ALS Environmental

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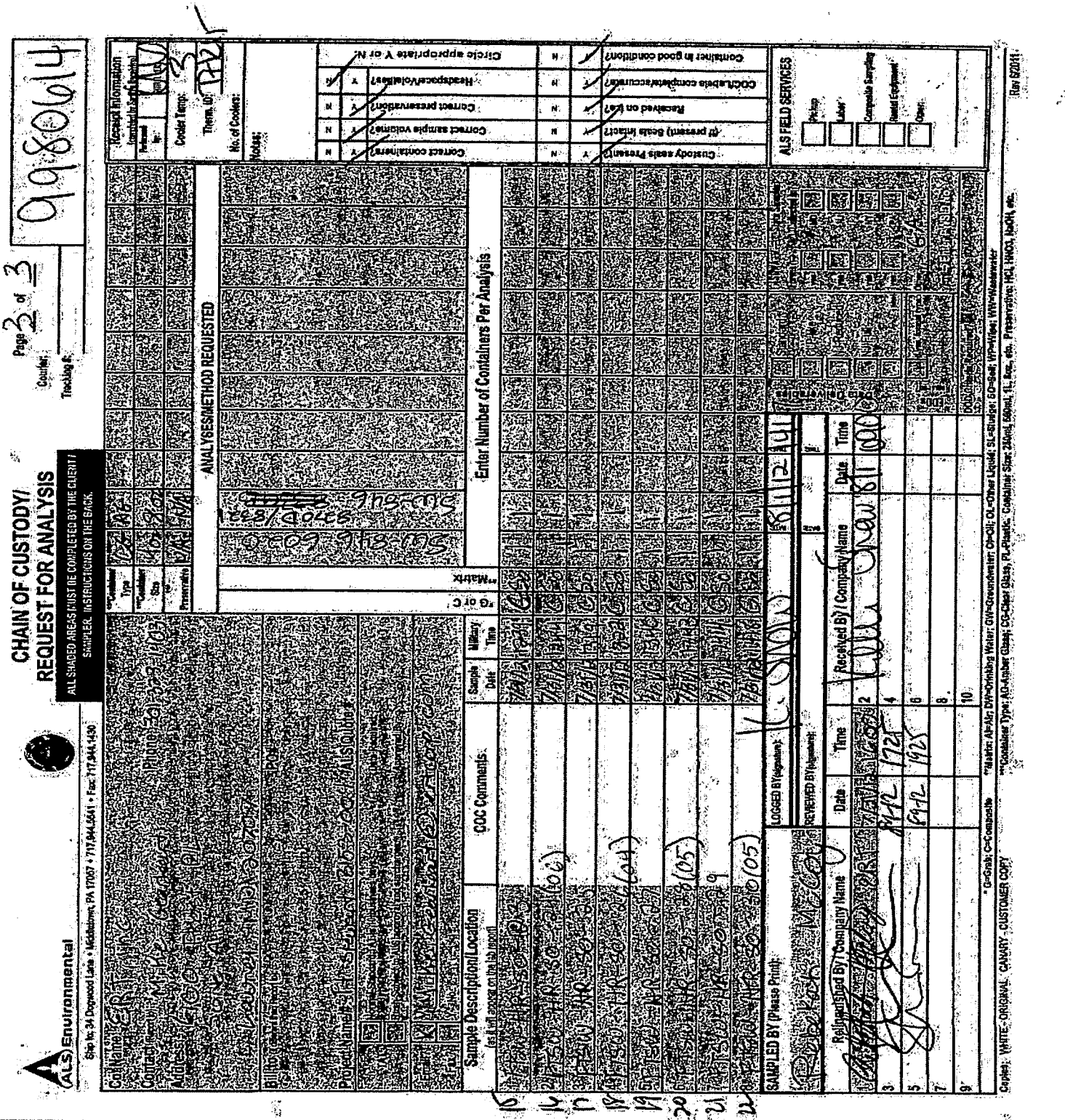
NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



ALS Environmental

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Internal Chain of Custody

Work Order: 9980614

9980614001-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614001-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:58	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614001-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:20	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614001-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614001-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614001-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

9980614002-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614002-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:58	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614002-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:20	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614002-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

ALS Environmental

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Internal Chain of Custody

Work Order: 9980614

9980614002-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614002-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

9980614003-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614003-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:58	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614003-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:20	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614003-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614003-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614003-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

9980614004-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614004-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:58	INORPREP-LAB		Kauffman, Mr. Kevin M

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Internal Chain of Custody

Work Order: 9980614

9980614004-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:20	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614004-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614004-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614004-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

9980614005-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614005-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:58	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614005-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:20	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614005-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614005-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614005-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

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Internal Chain of Custody
Work Order: 9980614

9980614006-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614006-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:58	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614006-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:20	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614006-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614006-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614006-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

9980614007-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614007-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:58	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614007-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:20	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614007-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

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Internal Chain of Custody

Work Order: 9980614

9980614007-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614007-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

9980614008-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614008-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:58	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614008-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:20	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614008-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614008-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614008-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

9980614009-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614009-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:58	INORPREP-LAB		Kauffman, Mr. Kevin M

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Internal Chain of Custody

Work Order: 9980614

9980614009-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:20	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614009-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614009-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614009-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

9980614010-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614010-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:58	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614010-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:20	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614010-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614010-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614010-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

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Internal Chain of Custody

Work Order: 9980614

9980614011-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614011-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:58	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614011-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:20	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614011-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614011-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614011-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

9980614012-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614012-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:58	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614012-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:20	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614012-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

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Internal Chain of Custody

Work Order: 9980614

9980614012-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614012-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

9980614013-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614013-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:58	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614013-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:20	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614013-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614013-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614013-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614013-E	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

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Internal Chain of Custody

Work Order: 9980614

9980614013-F	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614013-G	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614013-H	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

9980614013-I	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

9980614013-J	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

9980614014-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614014-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:58	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614014-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:20	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614014-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614014-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

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Internal Chain of Custody

Work Order: 9980614

9980614014-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

9980614015-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614015-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:58	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614015-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:20	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614015-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614015-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614015-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

9980614016-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614016-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:59	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614016-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

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Internal Chain of Custody
Work Order: 9980614

9980614016-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614016-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614016-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

9980614017-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614017-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:59	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614017-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614017-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614017-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614017-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

9980614018-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.

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Internal Chain of Custody

Work Order: 9980614

9980614018-A (cont)	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 09:00	*Sample Received At Lab*		

9980614018-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:59	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614018-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614018-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614018-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614018-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

9980614019-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614019-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:59	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614019-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614019-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614019-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.

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Internal Chain of Custody
Work Order: 9980614

9980614019-C (cont)	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614019-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

9980614020-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614020-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:59	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614020-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614020-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614020-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614020-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

9980614021-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614021-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:59	INORPREP-LAB		Kauffman, Mr. Kevin M

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Internal Chain of Custody

Work Order: 9980614

9980614021-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614021-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614021-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614021-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

9980614022-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614022-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:59	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614022-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9980614022-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614022-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 14:35	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-01-12 14:17	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-01-12 09:00	*Sample Received At Lab*		

9980614022-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:48	RECEIVING	LOGIN	Smith, Mr. Steven L
08-01-12 09:00	*Sample Received At Lab*		

Certificate of Analysis

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

August 31, 2012

Mr. Mike Gearhart
Earth Resources Technology, Inc.
6100 Frost Place
Suite A
Laurel, MD 20707

Certificate of Analysis

Project Name:	**Ft. Stewart GA project**	Workorder:	**9980614**
Purchase Order:		Workorder ID:	**ERT004|Ft. Stewart 3153-004**

Dear Mr. Gearhart,

Enclosed are the analytical results for samples received by the laboratory on Wednesday, August 01, 2012.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Vicki Forney (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

ALS Environmental

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SAMPLE SUMMARY

Workorder: 9980614 ERT004|Ft. Stewart 3153-004 Discard Date: 09/14/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9980614001	FTSW-HR-SO-11	Solid	7/31/12 08:11	8/1/12 09:00	Customer
9980614002	FTSW-HR-SO-12 (01.5)	Solid	7/31/12 08:18	8/1/12 09:00	Customer
9980614003	FTSW-HR-SO-13	Solid	7/31/12 08:27	8/1/12 09:00	Customer
9980614004	FTSW-HR-SO-14 (01.5)	Solid	7/31/12 08:33	8/1/12 09:00	Customer
9980614005	FTSW-HR-SO-14 (01.5) DUP	Solid	7/31/12 08:35	8/1/12 09:00	Customer
9980614006	FTSW-HR-SO-15	Solid	7/31/12 09:15	8/1/12 09:00	Customer
9980614007	FTSW-HR-SO-16 (01.5)	Solid	7/31/12 09:21	8/1/12 09:00	Customer
9980614008	FTSW-HR-SO-17	Solid	7/31/12 09:43	8/1/12 09:00	Customer
9980614009	FTSW-HR-SO-18 (02)	Solid	7/31/12 10:16	8/1/12 09:00	Customer
9980614010	FTSW-HR-SO-19	Solid	7/31/12 10:58	8/1/12 09:00	Customer
9980614011	FTSW-HR-SO-20 (01.5)	Solid	7/31/12 11:04	8/1/12 09:00	Customer
9980614012	FTSW-HR-SO-21	Solid	7/31/12 12:00	8/1/12 09:00	Customer
9980614013	FTSW-HR-SO-22 (04)	Solid	7/31/12 12:04	8/1/12 09:00	Customer
9980614014	FTSW-HR-SO-22 (04) DUP	Solid	7/31/12 12:07	8/1/12 09:00	Customer
9980614015	FTSW-HR-SO-23	Solid	7/31/12 12:39	8/1/12 09:00	Customer
9980614016	FTSW-HR-SO-24 (06)	Solid	7/31/12 12:44	8/1/12 09:00	Customer
9980614017	FTSW-HR-SO-25	Solid	7/31/12 13:19	8/1/12 09:00	Customer
9980614018	FTSW-HR-SO-26 (04)	Solid	7/31/12 13:22	8/1/12 09:00	Customer
9980614019	FTSW-HR-SO-27	Solid	7/31/12 13:40	8/1/12 09:00	Customer
9980614020	FTSW-HR-SO-28 (05)	Solid	7/31/12 13:43	8/1/12 09:00	Customer
9980614021	FTSW-HR-SO-29	Solid	7/31/12 14:14	8/1/12 09:00	Customer
9980614022	FTSW-HR-SO-30 (05)	Solid	7/31/12 14:18	8/1/12 09:00	Customer

Workorder Comments:

Analytical results attached from ALS-Salt Lake City for 8270/8321 results. VLF

These reports were modified on 8/31/12 to replace the subcontracting data with updated reports. VLF

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SAMPLE SUMMARY

Workorder: 9980614 ERT004|Ft. Stewart 3153-004 Discard Date: 09/14/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

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ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft. Stewart 3153-004

Lab ID: **9980614001** Date Collected: 7/31/2012 08:11 Matrix: Solid

Sample ID: **FTSW-HR-SO-11** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	21.6	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	78.4	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	0.81J	mg/kg		1.8	1.2	0.60	SW846 6020A	8/8/12	8/13/12 18:00	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/14/12 20:32	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft. Stewart 3153-004

Lab ID: **9980614002** Date Collected: 7/31/2012 08:18 Matrix: Solid

Sample ID: **FTSW-HR-SO-12 (01.5)** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	6.7	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	93.3	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	0.47J	mg/kg		1.4	0.92	0.46	SW846 6020A	8/8/12	8/13/12 18:04	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/14/12 22:21	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft. Stewart 3153-004

Lab ID: **9980614003** Date Collected: 7/31/2012 08:27 Matrix: Solid

Sample ID: **FTSW-HR-SO-13** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	8.8	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	91.2	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	0.53J	mg/kg		1.6	1.1	0.53	SW846 6020A	8/8/12	8/13/12 18:07	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/14/12 22:57	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft. Stewart 3153-004

Lab ID: **9980614004** Date Collected: 7/31/2012 08:33 Matrix: Solid

Sample ID: **FTSW-HR-SO-14 (01.5)** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	8.2	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	91.8	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	0.52J	mg/kg		1.5	0.97	0.49	SW846 6020A	8/8/12	8/13/12 18:11	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/14/12 23:33	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft. Stewart 3153-004

Lab ID: **9980614005** Date Collected: 7/31/2012 08:35 Matrix: Solid

Sample ID: **FTSW-HR-SO-14 (01.5) DUP** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	7.3	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	92.7	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	0.95U	mg/kg		1.4	0.95	0.47	SW846 6020A	8/8/12	8/13/12 18:14	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 00:10	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft: Stewart 3153-004

Lab ID: **9980614006** Date Collected: 7/31/2012 09:15 Matrix: Solid

Sample ID: **FTSW-HR-SO-15** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	11.0	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	89.0	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	1.1U	mg/kg		1.6	1.1	0.53	SW846 6020A	8/8/12	8/13/12 18:18	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 00:46	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft. Stewart 3153-004

Lab ID: **9980614007** Date Collected: 7/31/2012 09:21 Matrix: Solid

Sample ID: **FTSW-HR-SO-16 (01.5)** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	7.9	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	92.1	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	1.0U	mg/kg		1.6	1.0	0.52	SW846 6020A	8/8/12	8/13/12 18:21	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 01:59	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft. Stewart 3153-004

Lab ID: **9980614008** Date Collected: 7/31/2012 09:43 Matrix: Solid

Sample ID: **FTSW-HR-SO-17** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	10.5	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	89.5	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	0.98U	mg/kg		1.5	0.98	0.49	SW846 6020A	8/8/12	8/13/12 18:25	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 02:35	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft. Stewart 3153-004

Lab ID: **9980614009** Date Collected: 7/31/2012 10:16 Matrix: Solid

Sample ID: **FTSW-HR-SO-18 (02)** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	13.5	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	86.5	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	1.1U	mg/kg		1.7	1.1	0.56	SW846 6020A	8/8/12	8/13/12 18:28	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 03:12	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft. Stewart 3153-004

Lab ID: **9980614010** Date Collected: 7/31/2012 10:58 Matrix: Solid

Sample ID: **FTSW-HR-SO-19** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	12.3	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	87.7	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	1.1U	mg/kg		1.6	1.1	0.55	SW846 6020A	8/8/12	8/13/12 18:42	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 03:48	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft. Stewart 3153-004

Lab ID: **9980614011** Date Collected: 7/31/2012 11:04 Matrix: Solid

Sample ID: **FTSW-HR-SO-20 (01.5)** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	4.0	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	96.0	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	0.93U	mg/kg		1.4	0.93	0.47	SW846 6020A	8/8/12	8/13/12 18:46	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 04:24	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft. Stewart 3153-004

Lab ID: **9980614012** Date Collected: 7/31/2012 12:00 Matrix: Solid

Sample ID: **FTSW-HR-SO-21** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	16.1	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	83.9	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	0.72J	mg/kg		1.7	1.1	0.56	SW846 6020A	8/8/12	8/13/12 18:49	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 05:01	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft. Stewart 3153-004

Lab ID: **9980614013** Date Collected: 7/31/2012 12:04 Matrix: Solid

Sample ID: **FTSW-HR-SO-22 (04)** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	12.0	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	88.0	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	0.89J	mg/kg		1.6	1.1	0.54	SW846 6020A	8/8/12	8/13/12 18:53	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 06:50	CLT	G

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft. Stewart 3153-004

Lab ID: **9980614014** Date Collected: 7/31/2012 12:07 Matrix: Solid

Sample ID: **FTSW-HR-SO-22 (04) DUP** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	7.6	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	92.4	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	0.75J	mg/kg		1.5	1.0	0.50	SW846 6020A	8/8/12	8/13/12 19:06	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 09:15	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft. Stewart 3153-004

Lab ID: **9980614015** Date Collected: 7/31/2012 12:39 Matrix: Solid

Sample ID: **FTSW-HR-SO-23** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	12.4	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	87.6	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	1.1U	mg/kg		1.6	1.1	0.53	SW846 6020A	8/8/12	8/13/12 19:10	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 09:52	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft. Stewart 3153-004

Lab ID: **9980614016** Date Collected: 7/31/2012 12:44 Matrix: Solid

Sample ID: **FTSW-HR-SO-24 (06)** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	15.1	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	84.9	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	1.1U	mg/kg		1.6	1.1	0.54	SW846 6020A	8/8/12	8/13/12 19:27	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 10:28	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft. Stewart 3153-004

Lab ID: **9980614017** Date Collected: 7/31/2012 13:19 Matrix: Solid

Sample ID: **FTSW-HR-SO-25** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	10.5	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	89.5	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	1.2J	mg/kg		1.6	1.1	0.54	SW846 6020A	8/8/12	8/13/12 19:31	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 11:05	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft. Stewart 3153-004

Lab ID: **9980614018** Date Collected: 7/31/2012 13:22 Matrix: Solid

Sample ID: **FTSW-HR-SO-26 (04)** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	5.6	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	94.4	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	1.1J	mg/kg		1.3	0.90	0.45	SW846 6020A	8/8/12	8/13/12 19:34	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 11:41	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft. Stewart 3153-004

Lab ID: **9980614019** Date Collected: 7/31/2012 13:40 Matrix: Solid

Sample ID: **FTSW-HR-SO-27** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	8.7	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	91.3	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	1.0J	mg/kg		1.5	1.0	0.50	SW846 6020A	8/8/12	8/13/12 19:38	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 12:17	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft. Stewart 3153-004

Lab ID: **9980614020** Date Collected: 7/31/2012 13:43 Matrix: Solid

Sample ID: **FTSW-HR-SO-28 (05)** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	7.9	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	92.1	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	1.0U	mg/kg		1.6	1.0	0.52	SW846 6020A	8/8/12	8/13/12 19:41	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 12:54	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft. Stewart 3153-004

Lab ID: **9980614021** Date Collected: 7/31/2012 14:14 Matrix: Solid

Sample ID: **FTSW-HR-SO-29** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	8.8	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	91.2	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	1.1U	mg/kg		1.6	1.1	0.54	SW846 6020A	8/8/12	8/13/12 19:45	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 13:30	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9980614 ERT004|Ft. Stewart 3153-004

Lab ID: **9980614022** Date Collected: 7/31/2012 14:18 Matrix: Solid

Sample ID: **FTSW-HR-SO-30 (05)** Date Received: 8/1/2012 09:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	5.8	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
Total Solids	94.2	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 11:30	KED	A
METALS											
Arsenic, Total	0.88U	mg/kg		1.3	0.88	0.44	SW846 6020A	8/8/12	8/13/12 19:48	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 14:07	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

Total Metals in Solid by 6020A Summary Forms

6020 3051
- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, Inc

SDG No.: ERT-004 Method Type: 6020 3051 SOW No.:

Contract: ERT004|Ft. Stewart 3 Lab Code: CAS Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
9980614001	FTSW-HR-SO-11	
9980614002	FTSW-HR-SO-12 (01.5)	
9980614003	FTSW-HR-SO-13	
9980614004	FTSW-HR-SO-14 (01.5)	
9980614005	FTSW-HR-SO-14 (01.5) DU	
9980614006	FTSW-HR-SO-15	
9980614007	FTSW-HR-SO-16 (01.5)	
9980614008	FTSW-HR-SO-17	
9980614009	FTSW-HR-SO-18 (02)	
9980614010	FTSW-HR-SO-19	
9980614011	FTSW-HR-SO-20 (01.5)	
9980614012	FTSW-HR-SO-21	
9980614013	FTSW-HR-SO-22 (04)	
9980614013S	FTSW-HR-SO-22 (04)S	Matrix Spike

Were ICP interelement corrections applied?	Yes/No	Yes
Were ICP background corrections applied?	Yes/No	Yes
If yes - were raw data generated before applications of background corrections?	Yes/No	No

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: Lisa Miller

Date: Title: Metals Manager

6020 3051
- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, Inc

SDG No.: ERT-004 **Method Type:** 6020 3051 **SOW No.:**

Contract: ERT004|Ft. Stewart 3 **Lab Code:** CAS **Case No.:** **SAS No.:**

Lab Sample ID	Client Sample ID	QC Description
9980614013SD	FTSW-HR-SO-22 (04)SD	Matrix Spike Duplicate
9980614014	FTSW-HR-SO-22 (04) DUP	
9980614015	FTSW-HR-SO-23	
9980614016	FTSW-HR-SO-24 (06)	
9980614017	FTSW-HR-SO-25	
9980614018	FTSW-HR-SO-26 (04)	
9980614019	FTSW-HR-SO-27	
9980614020	FTSW-HR-SO-28 (05)	
9980614021	FTSW-HR-SO-29	
9980614022	FTSW-HR-SO-30 (05)	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: **Lisa Miller**

Date: Title: **Metals Manager**

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614001 **Client ID:** FTSW-HR-SO-11

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 78.4 **Sample Wt/Vol:** 0.53 **Final Vol:** 50.0

Prep Batch ID: 475031 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.81	mg/Kg	J		M	1.8	1.20	0.60	5.00	8/13/2012	18:00:51

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614002 **Client ID:** FTSW-HR-SO-12 (01.5)

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 93.3 **Sample Wt/Vol:** 0.58 **Final Vol:** 50.0

Prep Batch ID: 475031 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.47	mg/Kg	J		M	1.4	0.92	0.46	5.00	8/13/2012	18:04:21

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614003 **Client ID:** FTSW-HR-SO-13

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 91.2 **Sample Wt/Vol:** 0.52 **Final Vol:** 50.0

Prep Batch ID: 475031 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.53	mg/Kg	J		M	1.6	1.05	0.53	5.00	8/13/2012	18:07:51

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614004 **Client ID:** FTSW-HR-SO-14 (01.5)

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 91.8 **Sample Wt/Vol:** 0.56 **Final Vol:** 50.0

Prep Batch ID: 475031 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.52	mg/Kg	J		M	1.5	0.97	0.49	5.00	8/13/2012	18:11:20

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614005 **Client ID:** FTSW-HR-SO-14 (01.5) DUP

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 92.7 **Sample Wt/Vol:** 0.57 **Final Vol:** 50.0

Prep Batch ID: 475031 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.95	mg/Kg	U		M	1.4	0.95	0.47	5.00	8/13/2012	18:14:49

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614006 **Client ID:** FTSW-HR-SO-15

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 89.0 **Sample Wt/Vol:** 0.53 **Final Vol:** 50.0

Prep Batch ID: 475031 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.06	mg/Kg	U		M	1.6	1.06	0.53	5.00	8/13/2012	18:18:19

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614007 **Client ID:** FTSW-HR-SO-16 (01.5)

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 92.1 **Sample Wt/Vol:** 0.52 **Final Vol:** 50.0

Prep Batch ID: 475031 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.04	mg/Kg	U		M	1.6	1.04	0.52	5.00	8/13/2012	18:21:49

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614008 **Client ID:** FTSW-HR-SO-17

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 89.5 **Sample Wt/Vol:** 0.57 **Final Vol:** 50.0

Prep Batch ID: 475031 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.98	mg/Kg	U		M	1.5	0.98	0.49	5.00	8/13/2012	18:25:17

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614009 **Client ID:** FTSW-HR-SO-18 (02)

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 86.5 **Sample Wt/Vol:** 0.52 **Final Vol:** 50.0

Prep Batch ID: 475031 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.11	mg/Kg	U		M	1.7	1.11	0.56	5.00	8/13/2012	18:28:47

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614010 **Client ID:** FTSW-HR-SO-19

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 87.7 **Sample Wt/Vol:** 0.52 **Final Vol:** 50.0

Prep Batch ID: 475031 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.10	mg/Kg	U		M	1.6	1.10	0.55	5.00	8/13/2012	18:42:41

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614011 **Client ID:** FTSW-HR-SO-20 (01.5)

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 96.0 **Sample Wt/Vol:** 0.56 **Final Vol:** 50.0

Prep Batch ID: 475031 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.93	mg/Kg	U		M	1.4	0.93	0.47	5.00	8/13/2012	18:46:11

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614012 **Client ID:** FTSW-HR-SO-21

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 83.9 **Sample Wt/Vol:** 0.53 **Final Vol:** 50.0

Prep Batch ID: 475031 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.72	mg/Kg	J		M	1.7	1.12	0.56	5.00	8/13/2012	18:49:41

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614013 **Client ID:** FTSW-HR-SO-22 (04)

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 88.0 **Sample Wt/Vol:** 0.53 **Final Vol:** 50.0

Prep Batch ID: 475031 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.89	mg/Kg	J		M	1.6	1.07	0.54	5.00	8/13/2012	18:53:11

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614014 **Client ID:** FTSW-HR-SO-22 (04) DUP

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 92.4 **Sample Wt/Vol:** 0.54 **Final Vol:** 50.0

Prep Batch ID: 475031 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.75	mg/Kg	J		M	1.5	1.00	0.50	5.00	8/13/2012	19:06:57

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614015 **Client ID:** FTSW-HR-SO-23

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 87.6 **Sample Wt/Vol:** 0.54 **Final Vol:** 50.0

Prep Batch ID: 475031 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.06	mg/Kg	U		M	1.6	1.06	0.53	5.00	8/13/2012	19:10:26

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614016 **Client ID:** FTSW-HR-SO-24 (06)

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 84.9 **Sample Wt/Vol:** 0.55 **Final Vol:** 50.0

Prep Batch ID: 475032 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.07	mg/Kg	U		M	1.6	1.07	0.54	5.00	8/13/2012	19:27:51

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614017 **Client ID:** FTSW-HR-SO-25

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 89.5 **Sample Wt/Vol:** 0.52 **Final Vol:** 50.0

Prep Batch ID: 475032 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.2	mg/Kg	J		M	1.6	1.07	0.54	5.00	8/13/2012	19:31:21

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614018 **Client ID:** FTSW-HR-SO-26 (04)

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 94.4 **Sample Wt/Vol:** 0.59 **Final Vol:** 50.0

Prep Batch ID: 475032 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.1	mg/Kg	J		M	1.3	0.90	0.45	5.00	8/13/2012	19:34:52

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614019 **Client ID:** FTSW-HR-SO-27

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 91.3 **Sample Wt/Vol:** 0.55 **Final Vol:** 50.0

Prep Batch ID: 475032 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.0	mg/Kg	J		M	1.5	1.00	0.50	5.00	8/13/2012	19:38:20

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614020 **Client ID:** FTSW-HR-SO-28 (05)

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 92.1 **Sample Wt/Vol:** 0.52 **Final Vol:** 50.0

Prep Batch ID: 475032 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.04	mg/Kg	U		M	1.6	1.04	0.52	5.00	8/13/2012	19:41:46

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614021 **Client ID:** FTSW-HR-SO-29

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 91.2 **Sample Wt/Vol:** 0.51 **Final Vol:** 50.0

Prep Batch ID: 475032 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.08	mg/Kg	U		M	1.6	1.08	0.54	5.00	8/13/2012	19:45:15

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-004 **Method Type:** 6020 3051

Sample ID: 9980614022 **Client ID:** FTSW-HR-SO-30 (05)

Matrix: SOIL **Date Received:** 8/1/2012 **Level:** LOW

% Solids: 94.2 **Sample Wt/Vol:** 0.60 **Final Vol:** 50.0

Prep Batch ID: 475032 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.88	mg/Kg	U		M	1.3	0.88	0.44	5.00	8/13/2012	19:48:45

Comments:

6020 3051

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-004

Contract: ERT004|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
ICV	Arsenic	0.0984	0.1000	98		90 - 110	M	8/13/2012	12:37	A081312C
LLICV	Arsenic	0.0033	0.0030	110		70 - 130	M	8/13/2012	12:47	A081312C
LLCCV	Arsenic	0.0154	0.0150	103		70 - 130	M	8/13/2012	13:54	A081312C
CCV	Arsenic	0.0940	0.1000	94		90 - 110	M	8/13/2012	13:58	A081312C
CCV	Arsenic	0.0930	0.1000	93		90 - 110	M	8/13/2012	14:52	A081312C
LLCCV	Arsenic	0.0032	0.0030	107		70 - 130	M	8/13/2012	14:59	A081312C
CCV	Arsenic	0.0950	0.1000	95		90 - 110	M	8/13/2012	17:46	A081312C
LLCCV	Arsenic	0.0030	0.0030	100		70 - 130	M	8/13/2012	17:53	A081312C
CCV	Arsenic	0.0922	0.1000	92		90 - 110	M	8/13/2012	18:32	A081312C
LLCCV	Arsenic	0.0031	0.0030	103		70 - 130	M	8/13/2012	18:39	A081312C
CCV	Arsenic	0.0929	0.1000	93		90 - 110	M	8/13/2012	19:17	A081312C

6020 3051

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-004

Contract: ERT004|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
LLCCV										
	Arsenic	0.0031	0.0030	103		70 - 130	M	8/13/2012	19:24	A081312C
CCV										
	Arsenic	0.0939	0.1000	94		90 - 110	M	8/13/2012	20:02	A081312C
LLCCV										
	Arsenic	0.0032	0.0030	107		70 - 130	M	8/13/2012	20:09	A081312C

6020 3051

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-004

Contract: ERT004|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Conc Qual	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
ICB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	12:44	A081312C
CCB	Arsenic	0.0135	U	0.011	0.0050	0.0135	M	8/13/2012	13:51	A081312C
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	14:56	A081312C
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	17:50	A081312C
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	18:35	A081312C
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	19:20	A081312C
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	20:06	A081312C

6020 3051
- 3b -
PREPARATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-004

Contract: ERT004|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result (mg/Kg)	Conc Qual	Q	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
1020187			**QC-SOLID**								
	Arsenic	1.50000	U		0.75	0.50000	1.50000	M	8/13/2012	14:32	A081312C
1020191			**QC-SOLID**								
	Arsenic	1.50000	U		0.75	0.50000	1.50000	M	8/13/2012	14:38	A081312C

6020 3051
- 4 -
INTERFERENCE CHECK SAMPLE

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-004

Contract: ERT004|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

ICS Source: Inorganic Ventures **Instrument ID:** AGILENT 7700 ICPMS

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	Analysis Date	Analysis Time	Run Number
ICSA									
	Arsenic	0.0006				-0.00300 - -0.00300	8/13/2012	12:51	A081312C
ICSAB									
	Arsenic	0.0201	0.02000	100		80 - 120%	8/13/2012	13:00	A081312C

6020 3051
- 5a -
MATRIX SPIKE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-004

Contract: ERT004|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: SOIL **Sample ID:** 9980614013 **Client ID:** FTSW-HR-SO-22 (04)S **LIMS ID:** 1020189

Percent Solids for Sample: 87.98 **Spiked ID:** 9980614013S **Percent Solids for Spike Sample:** 87.98

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/Kg	80 - 120	18.91		0.89		20.297	89		M

6020 3051

- 5a -

MATRIX SPIKE DUPLICATE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-004

Contract: ERT004|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Matrix: SOIL **Sample ID:** 9980614013 **Client ID:** FTSW-HR-SO-22 (04)SD **LIMS ID:** 1020190

Percent Solids for Sample: 87.98 **Spiked ID:** 9980614013SD **Percent Solids for Spike Sample:** 87.98

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/Kg	80 - 120	17.22		0.89		19.265	85		M

6020 3051
- 6 -
DUPLICATE SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-004

Contract: ERT004|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: SOIL **Sample ID:** 9980614013S **Client ID:** FTSW-HR-SO-22 (04)SD **LIMS ID:** 1020190

Percent Solids for Sample: 87.98 **Duplicate ID:** 9980614013SD **Percent Solids for Duplicate:** 87.98

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/Kg	0 - 20	18.91		17.22		9		M

6020 3051
- 7 -
LABORATORY CONTROL SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-004

Contract: ERT004|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Aqueous LCS Source: **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Q	QC Criteria	M
1020188									
	Arsenic	mg/Kg	20.0	19.7		98.5		80 - 120	M

6020 3051
- 7 -
LABORATORY CONTROL SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-004

Contract: ERT004|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Aqueous LCS Source: **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Q	QC Criteria	M
1020192									
	Arsenic	mg/Kg	20.0	18.9		94.5		80 - 120	M

6020 3051

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LINEAR RANGES

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-004

Contract: ERT004|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Instrument ID: AGILENT 7700 ICPMS **Date:** 1/19/2012

Analyte	Integration Time (sec)	LDR mg/L
Arsenic	1.00	5

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SAMPLE PREPARATION SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-004

Contract: ERT004|Ft. Stewart 3153-004 **Lab Code:** CAS **Method:** MS

Case No.: _____ **SAS No.:** _____

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	475031						
1020187	MB for HBN 475031 [MDIG/3742	MB	QC-SOLI	8/8/12	0.50	50.0	100.00
1020188	LCS for HBN 475031 [MDIG/3742	LCS	QC-SOLI	8/8/12	0.50	50.0	100.00
9980614001	FTSW-HR-SO-11	SAM	SOIL	8/8/12	0.53	50.0	78.36
9980614002	FTSW-HR-SO-12 (01.5)	SAM	SOIL	8/8/12	0.58	50.0	93.27
9980614003	FTSW-HR-SO-13	SAM	SOIL	8/8/12	0.52	50.0	91.24
9980614004	FTSW-HR-SO-14 (01.5)	SAM	SOIL	8/8/12	0.56	50.0	91.85
9980614005	FTSW-HR-SO-14 (01.5) DUP	SAM	SOIL	8/8/12	0.57	50.0	92.71
9980614006	FTSW-HR-SO-15	SAM	SOIL	8/8/12	0.53	50.0	89.00
9980614007	FTSW-HR-SO-16 (01.5)	SAM	SOIL	8/8/12	0.52	50.0	92.08
9980614008	FTSW-HR-SO-17	SAM	SOIL	8/8/12	0.57	50.0	89.48
9980614009	FTSW-HR-SO-18 (02)	SAM	SOIL	8/8/12	0.52	50.0	86.48
9980614010	FTSW-HR-SO-19	SAM	SOIL	8/8/12	0.52	50.0	87.69
9980614011	FTSW-HR-SO-20 (01.5)	SAM	SOIL	8/8/12	0.56	50.0	95.95
9980614012	FTSW-HR-SO-21	SAM	SOIL	8/8/12	0.53	50.0	83.89
9980614013	FTSW-HR-SO-22 (04)	SAM	SOIL	8/8/12	0.53	50.0	87.98
9980614013S	FTSW-HR-SO-22 (04)S	MS	SOIL	8/8/12	0.56	50.0	87.98
9980614013SD	FTSW-HR-SO-22 (04)SD	MSD	SOIL	8/8/12	0.59	50.0	87.98
9980614014	FTSW-HR-SO-22 (04) DUP	SAM	SOIL	8/8/12	0.54	50.0	92.42
9980614015	FTSW-HR-SO-23	SAM	SOIL	8/8/12	0.54	50.0	87.58

6020 3051
- 13 -
SAMPLE PREPARATION SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-004

Contract: ERT004|Ft. Stewart 3153-004 **Lab Code:** CAS **Method:** MS

Case No.: **SAS No.:**

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	475032						
1020191	MB for HBN 475032 [MDIG/3742	MB	QC-SOLI	8/8/12	0.50	50.0	100.00
1020192	LCS for HBN 475032 [MDIG/3742	LCS	QC-SOLI	8/8/12	0.50	50.0	100.00
9980614016	FTSW-HR-SO-24 (06)	SAM	SOIL	8/8/12	0.55	50.0	84.86
9980614017	FTSW-HR-SO-25	SAM	SOIL	8/8/12	0.52	50.0	89.47
9980614018	FTSW-HR-SO-26 (04)	SAM	SOIL	8/8/12	0.59	50.0	94.39
9980614019	FTSW-HR-SO-27	SAM	SOIL	8/8/12	0.55	50.0	91.26
9980614020	FTSW-HR-SO-28 (05)	SAM	SOIL	8/8/12	0.52	50.0	92.14
9980614021	FTSW-HR-SO-29	SAM	SOIL	8/8/12	0.51	50.0	91.20
9980614022	FTSW-HR-SO-30 (05)	SAM	SOIL	8/8/12	0.60	50.0	94.24

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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT004|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-004

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1212																												
BLK	1.00	1216				X																								
STANDARD 1	1.00	1219				X																								
STANDARD 2	1.00	1223				X																								
STANDARD 3	1.00	1226				X																								
STANDARD 4	1.00	1230				X																								
STANDARD 5	1.00	1233				X																								
ICV	1.00	1237				X																								
ZZZZZZ	1.00	1240																												
ICB2	1.00	1244				X																								
LLICV	1.00	1247				X																								
ICS-A1	1.00	1251				X																								
ICS-AB1	1.00	1300				X																								
ZZZZZZ	5.00	1304																												
ZZZZZZ	5.00	1307																												
ZZZZZZ	5.00	1311																												
ZZZZZZ	5.00	1314																												
ZZZZZZ	5.00	1318																												
ZZZZZZ	5.00	1321																												
ZZZZZZ	5.00	1324																												
ZZZZZZ	5.00	1328																												
ZZZZZZ	5.00	1331																												
ZZZZZZ	5.00	1335																												
ZZZZZZ	5.00	1338																												
CCB1	5.00	1351				X																								
LLCCV	5.00	1354				X																								
CCV2	1.00	1358				X																								
ZZZZZZ	5.00	1401																												
ZZZZZZ	5.00	1405																												
ZZZZZZ	5.00	1408																												
ZZZZZZ	5.00	1412																												
1020187	5.00	1432				X																								
1020188	5.00	1435				X																								
1020191	5.00	1438				X																								
1020192	5.00	1442				X																								
ZZZZZZ	5.00	1445																												

6020 3051
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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT004|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-004

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	1449																								
CCV3	1.00	1452				X																				
CCB2	1.00	1456				X																				
LLCCV	1.00	1459				X																				
ZZZZZZ	5.00	1503																								
ZZZZZZ	5.00	1506																								
ZZZZZZ	5.00	1510																								
ZZZZZZ	5.00	1513																								
ZZZZZZ	5.00	1517																								
ZZZZZZ	5.00	1520																								
ZZZZZZ	5.00	1524																								
ZZZZZZ	5.00	1527																								
ZZZZZZ	5.00	1531																								
ZZZZZZ	5.00	1534																								
ZZZZZZ	1.00	1538																								
ZZZZZZ	1.00	1541																								
ZZZZZZ	1.00	1545																								
ZZZZZZ	5.00	1550																								
ZZZZZZ	5.00	1554																								
ZZZZZZ	5.00	1557																								
ZZZZZZ	5.00	1600																								
ZZZZZZ	5.00	1604																								
ZZZZZZ	5.00	1607																								
ZZZZZZ	5.00	1611																								
ZZZZZZ	5.00	1614																								
ZZZZZZ	5.00	1618																								
ZZZZZZ	5.00	1621																								
ZZZZZZ	5.00	1624																								
ZZZZZZ	5.00	1628																								
ZZZZZZ	25.00	1631																								
ZZZZZZ	5.00	1635																								
ZZZZZZ	5.00	1638																								
ZZZZZZ	5.00	1642																								
ZZZZZZ	5.00	1645																								
ZZZZZZ	5.00	1649																								
ZZZZZZ	5.00	1652																								

6020 3051
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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT004|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-004

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	1656																								
ZZZZZZ	1.00	1659																								
ZZZZZZ	1.00	1705																								
ZZZZZZ	1.00	1708																								
ZZZZZZ	5.00	1712																								
ZZZZZZ	5.00	1715																								
ZZZZZZ	5.00	1719																								
ZZZZZZ	5.00	1722																								
ZZZZZZ	25.00	1726																								
ZZZZZZ	5.00	1729																								
ZZZZZZ	5.00	1733																								
ZZZZZZ	5.00	1736																								
ZZZZZZ	5.00	1740																								
ZZZZZZ	5.00	1743																								
CCV8	1.00	1746				X																				
CCB6	1.00	1750				X																				
LLCCV	1.00	1753				X																				
ZZZZZZ	25.00	1757																								
9980614001	5.00	1800				X																				
9980614002	5.00	1804				X																				
9980614003	5.00	1807				X																				
9980614004	5.00	1811				X																				
9980614005	5.00	1814				X																				
9980614006	5.00	1818				X																				
9980614007	5.00	1821				X																				
9980614008	5.00	1825				X																				
9980614009	5.00	1828				X																				
CCV9	1.00	1832				X																				
CCB7	1.00	1835				X																				
LLCCV	1.00	1839				X																				
9980614010	5.00	1842				X																				
9980614011	5.00	1846				X																				
9980614012	5.00	1849				X																				
9980614013	5.00	1853				X																				
9980614013S	5.00	1856				X																				
9980614013SD	5.00	1900				X																				

6020 3051
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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT004|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-004

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
9980614013PS	5.00	1903				X																								
9980614014	5.00	1906				X																								
9980614015	5.00	1910				X																								
9980614015L	25.00	1913				X																								
CCV10	1.00	1917				X																								
CCB8	1.00	1920				X																								
LLCCV	1.00	1924				X																								
9980614016	5.00	1927				X																								
9980614017	5.00	1931				X																								
9980614018	5.00	1934				X																								
9980614019	5.00	1938				X																								
9980614020	5.00	1941				X																								
9980614021	5.00	1945				X																								
9980614022	5.00	1948				X																								
9980614022L	25.00	1952				X																								
ZZZZZZ	5.00	1955																												
ZZZZZZ	5.00	1959																												
CCV11	1.00	2002				X																								
CCB9	1.00	2006				X																								
LLCCV	1.00	2009				X																								
ZZZZZZ	5.00	2013																												
ZZZZZZ	5.00	2016																												
ZZZZZZ	5.00	2020																												
ZZZZZZ	5.00	2023																												
ZZZZZZ	5.00	2026																												
ZZZZZZ	5.00	2030																												
ZZZZZZ	5.00	2033																												
ZZZZZZ	5.00	2037																												
ZZZZZZ	5.00	2040																												
ZZZZZZ	5.00	2044																												
ZZZZZZ	1.00	2047																												
ZZZZZZ	1.00	2051																												
ZZZZZZ	1.00	2054																												
ZZZZZZ	5.00	2058																												
ZZZZZZ	5.00	2101																												
ZZZZZZ	5.00	2105																												

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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT004|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-004

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	2108																								
ZZZZZZ	25.00	2112																								
ZZZZZZ	5.00	2115																								
ZZZZZZ	25.00	2119																								
ZZZZZZ	5.00	2122																								
ZZZZZZ	5.00	2126																								
ZZZZZZ	5.00	2129																								
ZZZZZZ	1.00	2133																								
ZZZZZZ	1.00	2136																								
ZZZZZZ	1.00	2140																								
ZZZZZZ	5.00	2143																								
ZZZZZZ	5.00	2147																								
ZZZZZZ	5.00	2150																								
ZZZZZZ	5.00	2153																								
ZZZZZZ	5.00	2157																								
ZZZZZZ	5.00	2200																								
ZZZZZZ	5.00	2204																								
ZZZZZZ	5.00	2207																								
ZZZZZZ	5.00	2211																								
ZZZZZZ	5.00	2214																								
ZZZZZZ	5.00	2218																								
ZZZZZZ	5.00	2221																								
ZZZZZZ	5.00	2225																								
ZZZZZZ	5.00	2228																								
ZZZZZZ	25.00	2232																								
ZZZZZZ	5.00	2235																								
ZZZZZZ	5.00	2239																								
ZZZZZZ	5.00	2242																								
ZZZZZZ	1.00	2246																								
ZZZZZZ	1.00	2256																								
ZZZZZZ	5.00	2259																								
ZZZZZZ	5.00	2311																								
ZZZZZZ	5.00	2315																								
ZZZZZZ	5.00	2318																								
ZZZZZZ	25.00	2327																								
ZZZZZZ	5.00	2330																								

6020 3051
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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT004|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-004

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	5.00	2339																												
ZZZZZZ	5.00	2343																												
ZZZZZZ	5.00	2346																												

6020 3051

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT004|Ft. Stewart 3153-004

Lab Code: CAS Case No.: _____ NRAS No.: _____ SDG NO.: ERT-004

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
BLK	ZZZZZZ	1212												
BLK	BLK	1216	100		100		100		100		100		100	
STANDARD 1	STANDARD 1	1219	112		99		97		102		91		95	
STANDARD 2	STANDARD 2	1223	113		100		98		103		102		102	
STANDARD 3	STANDARD 3	1226	116		100		101		101		102		105	
STANDARD 4	STANDARD 4	1230	114		100		99		105		103		104	
STANDARD 5	STANDARD 5	1233	117		101		101		104		103		105	
ICV	ICV	1237	115		99		99		104		102		103	
ICB1	ZZZZZZ	1240												
ICB2	ICB	1244	102		99		98		98		99		98	
LLICV	LLICV	1247	111		100		97		103		104		100	
ICS-A1	ICSA	1251	106		96		92		101		99		96	
ICS-AB1	ICSAB	1300	107		102		95		107		106		102	
1020719	ZZZZZZ	1304												
1020720	ZZZZZZ	1307												
9981408002	ZZZZZZ	1311												
9981430001	ZZZZZZ	1314												
1020721	ZZZZZZ	1318												
1020722	ZZZZZZ	1321												
9981430001P	ZZZZZZ	1324												
9981517002	ZZZZZZ	1328												
9981517003	ZZZZZZ	1331												
9981517003L	ZZZZZZ	1335												
CCV1	ZZZZZZ	1338												
CCB1	CCB	1351	112		107		104		111		112		112	
LLCCV	LLCCV	1354	109		105		100		109		113		109	
CCV2	CCV	1358	108		104		99		110		112		109	
1021781	ZZZZZZ	1401												
1021782	ZZZZZZ	1405												
1020183	ZZZZZZ	1408												
1020184	ZZZZZZ	1412												
1020187	MB for HBN 47503	1432	105		102		97		106		111		111	
1020188	LCS for HBN 4750	1435	107		103		97		109		111		109	
1020191	MB for HBN 47503	1438	107		103		97		106		109		107	
1020192	LCS for HBN 4750	1442	106		104		98		109		112		109	
1020195	ZZZZZZ	1445												
1020196	ZZZZZZ	1449												
CCV3	CCV	1452	115		110		106		114		116		116	
CCB2	CCB	1456	117		112		108		115		116		116	
LLCCV	LLCCV	1459	111		107		105		114		113		114	
9980394001	ZZZZZZ	1503												
9980394002	ZZZZZZ	1506												
9980394003	ZZZZZZ	1510												
9980394004	ZZZZZZ	1513												
9980394005	ZZZZZZ	1517												

6020 3051

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT004|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-004

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980394007	ZZZZZZ	1520												
9980394008	ZZZZZZ	1524												
9980394009	ZZZZZZ	1527												
9980394010	ZZZZZZ	1531												
9980394011	ZZZZZZ	1534												
CCV4	ZZZZZZ	1538												
CCB3	ZZZZZZ	1541												
LLCCV	ZZZZZZ	1545												
1020719	ZZZZZZ	1550												
1020720	ZZZZZZ	1554												
9981430001	ZZZZZZ	1557												
1020721	ZZZZZZ	1600												
1020722	ZZZZZZ	1604												
9981430001P	ZZZZZZ	1607												
CCV5	ZZZZZZ	1611												
CCB4	ZZZZZZ	1614												
LLCCV	ZZZZZZ	1618												
CCV6	ZZZZZZ	1621												
9980394012	ZZZZZZ	1624												
9980394013	ZZZZZZ	1628												
9980394013L	ZZZZZZ	1631												
9980395001	ZZZZZZ	1635												
9980395002	ZZZZZZ	1638												
9980395003	ZZZZZZ	1642												
1020185	ZZZZZZ	1645												
1020186	ZZZZZZ	1649												
9980395003P	ZZZZZZ	1652												
9980395004	ZZZZZZ	1656												
CCV7	ZZZZZZ	1659												
CCB5	ZZZZZZ	1705												
LLCCV	ZZZZZZ	1708												
9980395005	ZZZZZZ	1712												
9980395007	ZZZZZZ	1715												
9980395008	ZZZZZZ	1719												
9980395009	ZZZZZZ	1722												
9980395009L	ZZZZZZ	1726												
9980395010	ZZZZZZ	1729												
9980395011	ZZZZZZ	1733												
9980395012	ZZZZZZ	1736												
9980395013	ZZZZZZ	1740												
9980395014	ZZZZZZ	1743												
CCV8	CCV	1746	107		103		100		110		111		105	
CCB6	CCB	1750	108		103		100		109		109		105	
LLCCV	LLCCV	1753	107		103		98		109		112		107	
9980395014L	ZZZZZZ	1757												

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT004|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-004

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For: Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980614001	FTSW-HR-SO-11	1800	106		100		97		108		111		106	
9980614002	FTSW-HR-SO-12 (0	1804	107		101		97		108		110		104	
9980614003	FTSW-HR-SO-13	1807	106		101		96		108		109		107	
9980614004	FTSW-HR-SO-14 (0	1811	107		100		97		109		109		105	
9980614005	FTSW-HR-SO-14 (0	1814	105		101		97		108		109		105	
9980614006	FTSW-HR-SO-15	1818	107		101		98		109		109		106	
9980614007	FTSW-HR-SO-16 (0	1821	99		95		91		103		107		105	
9980614008	FTSW-HR-SO-17	1825	106		101		97		108		109		106	
9980614009	FTSW-HR-SO-18 (0	1828	106		100		98		110		112		106	
CCV9	CCV	1832	108		102		96		109		110		105	
CCB7	CCB	1835	98		92		88		99		107		102	
LLCCV	LLCCV	1839	106		100		96		108		109		104	
9980614010	FTSW-HR-SO-19	1842	108		102		99		109		110		106	
9980614011	FTSW-HR-SO-20 (0	1846	108		102		98		109		109		105	
9980614012	FTSW-HR-SO-21	1849	107		101		96		109		110		103	
9980614013	FTSW-HR-SO-22 (0	1853	108		99		98		110		110		108	
9980614013S	FTSW-HR-SO-22 (0	1856	99		91		89		100		104		103	
9980614013S	FTSW-HR-SO-22 (0	1900	108		100		97		110		110		106	
9980614013P	FTSW-HR-SO-22 (0	1903	109		102		99		112		113		106	
9980614014	FTSW-HR-SO-22 (0	1906	108		101		99		111		111		105	
9980614015	FTSW-HR-SO-23	1910	109		102		100		112		111		106	
9980614015L	FTSW-HR-SO-23L	1913	108		102		101		111		111		106	
CCV10	CCV	1917	107		103		98		109		114		107	
CCB8	CCB	1920	110		103		102		109		111		107	
LLCCV	LLCCV	1924	107		103		99		110		114		108	
9980614016	FTSW-HR-SO-24 (0	1927	108		102		101		111		112		109	
9980614017	FTSW-HR-SO-25	1931	108		103		101		112		111		108	
9980614018	FTSW-HR-SO-26 (0	1934	106		101		99		111		109		106	
9980614019	FTSW-HR-SO-27	1938	104		101		96		112		119		91	
9980614020	FTSW-HR-SO-28 (0	1941	106		101		98		110		110		106	
9980614021	FTSW-HR-SO-29	1945	108		102		99		110		112		106	
9980614022	FTSW-HR-SO-30 (0	1948	107		101		97		110		111		106	
9980614022L	FTSW-HR-SO-30 (0	1952	108		102		99		111		111		106	
9980875001	ZZZZZZ	1955												
9980875001S	ZZZZZZ	1959												
CCV11	CCV	2002	105		103		98		110		113		108	
CCB9	CCB	2006	106		106		102		110		111		109	
LLCCV	LLCCV	2009	100		98		94		105		110		108	
9980875001S	ZZZZZZ	2013												
9980875001P	ZZZZZZ	2016												
9980875002	ZZZZZZ	2020												
9980875003	ZZZZZZ	2023												
9980875004	ZZZZZZ	2026												
9980875005	ZZZZZZ	2030												
9980875006	ZZZZZZ	2033												

6020 3051

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT004|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-004

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980875007	ZZZZZZ	2037												
9980875008	ZZZZZZ	2040												
9980875009	ZZZZZZ	2044												
CCV12	ZZZZZZ	2047												
CCB10	ZZZZZZ	2051												
LLCCV	ZZZZZZ	2054												
9980875010	ZZZZZZ	2058												
9980875011	ZZZZZZ	2101												
9980875012	ZZZZZZ	2105												
9980875013	ZZZZZZ	2108												
9980875013L	ZZZZZZ	2112												
9980875014	ZZZZZZ	2115												
9980875014L	ZZZZZZ	2119												
9981198001	ZZZZZZ	2122												
9981198002	ZZZZZZ	2126												
9981198003	ZZZZZZ	2129												
CCV13	ZZZZZZ	2133												
CCB11	ZZZZZZ	2136												
LLCCV	ZZZZZZ	2140												
1020197	ZZZZZZ	2143												
1020198	ZZZZZZ	2147												
9981198003P	ZZZZZZ	2150												
9981198004	ZZZZZZ	2153												
9981198005	ZZZZZZ	2157												
9981198006	ZZZZZZ	2200												
9981198007	ZZZZZZ	2204												
9981198008	ZZZZZZ	2207												
9981198009	ZZZZZZ	2211												
9981198010	ZZZZZZ	2214												
CCV14	ZZZZZZ	2218												
CCB12	ZZZZZZ	2221												
LLCCV	ZZZZZZ	2225												
9981198011	ZZZZZZ	2228												
9981198011L	ZZZZZZ	2232												
CCV15	ZZZZZZ	2235												
CCB13	ZZZZZZ	2239												
LLCCV	ZZZZZZ	2242												
50 PPM LDR	ZZZZZZ	2246												
30 PPM LDR	ZZZZZZ	2256												
1020719	ZZZZZZ	2259												
CCV16	ZZZZZZ	2311												
CCB14	ZZZZZZ	2315												
LLCCV	ZZZZZZ	2318												
9980875009	ZZZZZZ	2327												
1021781	ZZZZZZ	2330												

6020 3051

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT004|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-004

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
CCV17	ZZZZZZ	2339												
CCB15	ZZZZZZ	2343												
LLCCV	ZZZZZZ	2346												

Total Metals in Solid by 6020A Raw Data

Dataset: A081312C 2nd Review MWO/ MM

First Review: MM/MWO Approval: MWO/ MM

Internal Standards: **ICPMS9190**

200	60-125%	**6020Qc:**	70-130%	**6020A**	30-130%	**DOD:**	70-120%

Standards :
Tuning MS0361
Daily Standard: MS0361

Calibration Standards
MS0343
MS0344

PIPETTES:

03-028	10.0 mL
03-202	.200 mL
03-201	1.0 mL
03-031	1.0 mL

ICSA: MS0341
ICSAB:MS0340

Al LDR 30 ppm

GOLD: MS0346
DW LCS: MS0358
Second Source

MA1393	MA1388	MA1360
MA1342	MS0345	MA1381
MS0309	MA1359	

Internal Standards/ Target Analytes

Sc-Al,V,Cr,Mn,Co,Ni,Cu,Na, K, Ti, Mg, Ca, Fe, As, Zn, Se,
Y
In-Sr, Mo, Ag, Cd, Sn, Sb, Ba
Tb
Bi-Hg, Tl, Pb, U

Rerun at passed

RR. MB 1020719 } Fe } Carry
LCS 1020720 } Mo } over from ICSAB

Case Narrative:

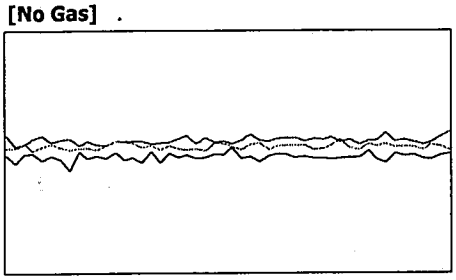
998143-0001 - MO
1020721
1020722

***D**: *D at the beginning of the Dataset Denotes that the samples were run on the Elan DRCe ICP-MS*

Tune Report

Batch Folder C:\Agilent\ICPMH\1\DATA\A081312.b
Report Comment
Instrument Name G3281A JP11040846

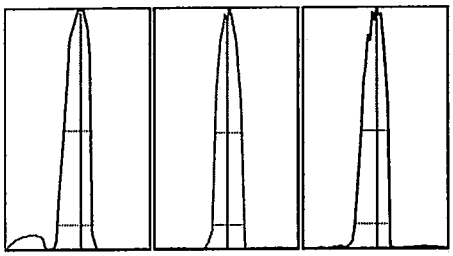
[No Gas]



Mass	Range	Count	RSD%	Background
7	20000	10949	2.467	16.800
89	10000	5213	2.148	10.900
205	5000	2399	3.205	29.500

Ratio (oxide) 156/140 0.448 % **Ratio (2+)** 70/140 12.811 %

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.311



Mass	Peak Height	Axis	W-50%	W-X%
7	10990.74	7.10	0.60	0.728
89	5222.83	89.05	0.59	0.689
205	2456.22	205.05	0.61	0.740

X = 10 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 22.74 **Y Axis** Linear

Tune Parameters

Plasma Paramters

RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	9.2 V	Deflect	16.0 V
Extract 2	-200.0 V	Cell Entrance	-32 V	Plate Bias	-50 V
Omega Bias	-85 V	Cell Exit	-48 V		

Cell Parameters

OctP Bias	-8.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	200 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

[he]

Mass	Range	Count	RSD%	Background
59	2000	1752	4.007	
89	5000	2182	3.418	
51	500	382	7.089	

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.306

Tune Parameters

Tune Report

Plasma Paramters

RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
Mass	**Range** **Count**	**RSD%**	**Background**		
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	9.2 V	Deflect	0.0 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-85 V	Cell Exit	-60 V		

Cell Parameters

OctP Bias	-18.0 V	He Flow	3.5 mL/min	Energy Discrimination	3.0 V
OctP RF	200 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

[HeHe]

Mass	Range	Count	RSD%	Background
59	1000	573	5.217	
89	1000	478	5.792	
51	50	28	27.475	

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.306

Tune Parameters

Plasma Paramters

RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1.	0.0 V	Omega Lens	9.2 V	Deflect	-73.2 V
Extract 2	-200.0 V	Cell Entrance	-140 V	Plate Bias	-150 V
Omega Bias	-85 V	Cell Exit	-150 V		

Cell Parameters

OctP Bias	-100.0 V	He Flow	10.0 mL/min	Energy Discrimination	7.0 V
OctP RF	180 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	001CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:12:50-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	2551	3.61
Cr	52	1	No Gas	9974	0.04
Mn	55	1	No Gas	19045	0.02
Co	59	1	No Gas	330	7.40
Ni	60	1	No Gas	18053	0.01
Cu	63	1	No Gas	601	0.73
Sr	88	1	No Gas	59	210.68
Ag	107	1	No Gas	56	164.96
Al	27	1	No Gas	7669	0.03
Sn	118	1	No Gas	215	1.39
Ti	47	1	No Gas	297	7.26
Zn	66	1	No Gas	660	3.98
As	75	3	HeHe	10	373.51
As	75	1	No Gas	24182	0.01
Sb	121	1	No Gas	167	18.33
Hg	201	1	No Gas	39	65.07
Be	9	1	No Gas	22	71.57
Pb	208	1	No Gas	463	4.16
Se	82	1	No Gas	41	386.23
Mo	98	1	No Gas	923	2.04
Ba	137	1	No Gas	53	162.38
Tl	205	1	No Gas	63	85.61
U	238	1	No Gas	107	53.04
Na	23	2	he	85677	0.00
Mg	24	2	he	200	13.89
K	39	2	he	193930	0.00
Se	82	3	HeHe	48	14.65
Fe	57	3	HeHe	126	26.53
Cd	114	1	No Gas	37	214.72
Ca	44	1	No Gas	123727	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	5836894	3.06
Sc	45	2	he	1293410	1.06
Ge	72	1	No Gas	677402	2.06
In	115	1	No Gas	3685121	2.00
Tb	159	1	No Gas	4485657	1.37

Calibration Blank Report

Bi	209	1	No Gas	2034548	4.06
Sc	45	3	HeHe	136772	1.11

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	002CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:16:22-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	1149	13.25
Cr	52	1	No Gas	10752	0.07
Mn	55	1	No Gas	31947	0.08
Co	59	1	No Gas	248	5.80
Ni	60	1	No Gas	18861	0.01
Cu	63	1	No Gas	595	1.97
Sr	88	1	No Gas	93	45.51
Ag	107	1	No Gas	37	337.22
Al	27	1	No Gas	8628	0.05
Sn	118	1	No Gas	193	6.24
Ti	47	1	No Gas	295	6.58
Zn	66	1	No Gas	783	1.76
As	75	3	HeHe	7	579.68
As	75	1	No Gas	23234	0.03
Sb	121	1	No Gas	126	31.60
Hg	201	1	No Gas	33	81.17
Be	9	1	No Gas	23	265.75
Pb	208	1	No Gas	293	14.59
Mo	98	1	No Gas	864	3.14
Ba	137	1	No Gas	50	105.83
Tl	205	1	No Gas	26	668.06
U	238	1	No Gas	37	247.43
Na	23	2	he	83881	0.00
Mg	24	2	he	152	54.16
K	39	2	he	200065	0.00
Se	82	3	HeHe	62	45.93
Fe	57	3	HeHe	174	12.88
Cd	114	1	No Gas	50	207.84
Ca	44	1	No Gas	123511	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	5896472	4.01
Sc	45	2	he	1271268	0.31
Ge	72	1	No Gas	682805	1.30
In	115	1	No Gas	3697856	1.76
Tb	159	1	No Gas	4404848	1.64
Bi [s]	209	1	No Gas	1997135	4.62

Calibration Blank Report

Sc	45	3	HeHe	132951	0.59

Calibration Standard Report

Sample Table

Sample Name	Standard 1
Data File Name	003CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:19:52-04:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	5673	0.60
Cr	52	1	No Gas	15856	0.04
Mn	55	1	No Gas	38340	0.02
Co	59	1	No Gas	3771	0.10
Ni	60	1	No Gas	21774	0.02
Cu	63	1	No Gas	3188	0.06
Sr	88	1	No Gas	4608	0.25
Ag	107	1	No Gas	1700	0.31
Al	27	1	No Gas	94327	0.00
Sn	118	1	No Gas	1674	1.15
Tl	47	1	No Gas	1051	0.70
Zn	66	1	No Gas	2127	0.49
As	75	3	HeHe	32	48.14
As	75	1	No Gas	25894	0.02
Sb	121	1	No Gas	1559	0.78
Hg	201	1	No Gas	34	105.24
Be	9	1	No Gas	352	4.93
Pb	208	1	No Gas	3630	0.14
Se	82	1	No Gas	49	760.54
Mo	98	1	No Gas	2340	0.68
Ba	137	1	No Gas	527	4.30
Tl	205	1	No Gas	2463	0.17
U	238	1	No Gas	2708	0.13
Na	23	2	he	102533	0.00
Mg	24	2	he	2849	0.21
K	39	2	he	210864	0.00
Se	82	3	HeHe	57	31.86
Fe	57	3	HeHe	233	19.68
Cd	114	1	No Gas	833	2.16
Ca	44	1	No Gas	137356	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6025814	1.84	5896472	102.19	70	120	
Sc	45	2	he	1152938	27.74	1271268	90.69	70	120	
Ge	72	1	No Gas	676306	1.76	682805	99.05	70	120	

Calibration Standard Report

In	115	1	No Gas	3601392	3.13	3697856	97.39	70	120	
Tb	159	1	No Gas	4357156	1.15	4404848	98.92	70	120	
Bi	209	1	No Gas	2230028	3.15	1997135	111.66	70	120	
Sc	45	3	HeHe	126675	2.93	132951	95.28	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 2
Data File Name	004CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:23:22-04:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	36707	0.01
Cr	52	1	No Gas	43016	0.00
Mn	55	1	No Gas	64359	0.00
Co	59	1	No Gas	33047	0.01
Ni	60	1	No Gas	28157	0.01
Cu	63	1	No Gas	19610	0.01
Sr	88	1	No Gas	42535	0.00
Ag	107	1	No Gas	18389	0.02
Al	27	1	No Gas	65426	0.00
Sn	118	1	No Gas	8458	0.07
Ti	47	1	No Gas	2941	0.03
Zn	66	1	No Gas	7561	0.10
As	75	3	HeHe	346	3.44
As	75	1	No Gas	28695	0.01
Sb	121	1	No Gas	13917	0.03
Hg	201	1	No Gas	69	35.57
Be	9	1	No Gas	3490	0.12
Pb	208	1	No Gas	31540	0.01
Se	82	1	No Gas	200	55.45
Mo	98	1	No Gas	10991	0.02
Ba	137	1	No Gas	4901	0.05
Tl	205	1	No Gas	23645	0.02
U	238	1	No Gas	26795	0.01
Na	23	2	he	131719	0.00
Mg	24	2	he	19022	0.02
K	39	2	he	237673	0.00
Se	82	3	HeHe	74	11.51
Fe	57	3	HeHe	930	1.42
Cd	114	1	No Gas	8162	0.07
Ca	44	1	No Gas	141966	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6077153	2.03	5896472	103.06	70	120	
Sc	45	2	he	1293877	1.51	1271268	101.78	70	120	
Ge	72	1	No Gas	684931	2.11	682805	100.31	70	120	

Calibration Standard Report

In	115	1	No Gas	3628326	3.66	3697856	98.12	70	120	
Tb	159	1	No Gas	4313712	2.41	4404848	97.93	70	120	
Bi	209	1	No Gas	2247572	3.62	1997135	112.54	70	120	
Sc	45	3	HeHe	134887	1.50	132951	101.46	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 3
Data File Name	005CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:26:52-04:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	347687	0.00
Cr	52	1	No Gas	324578	0.00
Mn	55	1	No Gas	404655	0.00
Co	59	1	No Gas	336563	0.00
Ni	60	1	No Gas	94971	0.00
Cu	63	1	No Gas	179719	0.00
Sr	88	1	No Gas	419711	0.00
Ag	107	1	No Gas	186331	0.00
Al	27	1	No Gas	225467	0.00
Sn	118	1	No Gas	85168	0.01
Tl	47	1	No Gas	26475	0.01
Zn	66	1	No Gas	46308	0.01
As	75	3	HeHe	3572	0.14
As	75	1	No Gas	69418	0.00
Sb	121	1	No Gas	144398	0.00
Hg	201	1	No Gas	321	3.02
Be	9	1	No Gas	34814	0.00
Pb	208	1	No Gas	311633	0.00
Se	82	1	No Gas	2388	0.35
Mo	98	1	No Gas	105298	0.00
Ba	137	1	No Gas	49424	0.00
Tl	205	1	No Gas	238405	0.00
U	238	1	No Gas	284661	0.00
Na	23	2	he	378460	0.00
Mg	24	2	he	160598	0.00
K	39	2	he	470770	0.00
Se	82	3	HeHe	196	2.49
Fe	57	3	HeHe	8647	0.06
Cd	114	1	No Gas	83808	0.00
Ca	44	1	No Gas	219400	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5975593	2.40	5896472	101.34	70	120	
Sc	45	2	he	1295638	1.95	1271268	101.92	70	120	
Ge	72	1	No Gas	682250	0.93	682805	99.92	70	120	

Calibration Standard Report

In	115	1	No Gas	3734350	0.92	3697856	100.99	70	120	
Tb	159	1	No Gas	4329799	0.59	4404848	98.30	70	120	
Bi	209	1	No Gas	2313155	0.17	1997135	115.82	70	120	
Sc	45	3	HeHe	139923	1.19	132951	105.24	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 4
Data File Name	006CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:30:23-04:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	3327729	0.00
Cr	52	1	No Gas	3025690	0.00
Mn	55	1	No Gas	3711637	0.00
Co	59	1	No Gas	3336506	0.00
Ni	60	1	No Gas	758712	0.00
Cu	63	1	No Gas	1768262	0.00
Sr	88	1	No Gas	4216323	0.00
Ag	107	1	No Gas	1897625	0.00
Al	27	1	No Gas	1994166	0.00
Sn	118	1	No Gas	999552	0.00
Ti	47	1	No Gas	269085	0.00
Zn	66	1	No Gas	455362	0.00
As	75	3	HeHe	35929	0.00
As	75	1	No Gas	493405	0.00
Sb	121	1	No Gas	1435359	0.00
Hg	201	1	No Gas	2804	0.04
Be	9	1	No Gas	344243	0.00
Pb	208	1	No Gas	3113349	0.00
Se	82	1	No Gas	23663	0.00
Mo	98	1	No Gas	1133897	0.00
Ba	137	1	No Gas	484561	0.00
Tl	205	1	No Gas	2284952	0.00
U	238	1	No Gas	2921542	0.00
Na	23	2	he	2821420	0.00
Mg	24	2	he	1615680	0.00
K	39	2	he	2725055	0.00
Se	82	3	HeHe	1791	0.20
Fe	57	3	HeHe	81592	0.00
Cd	114	1	No Gas	835193	0.00
Ca	44	1	No Gas	979919	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6200036	1.53	5896472	105.15	70	120	
Sc	45	2	he	1303185	0.51	1271268	102.51	70	120	
Ge	72	1	No Gas	682451	1.66	682805	99.95	70	120	

Calibration Standard Report

In	115	1	No Gas	3670872	2.59	3697856	99.27	70	120	
Tb	159	1	No Gas	4348184	1.52	4404848	98.71	70	120	
Bi	209	1	No Gas	2283484	4.44	1997135	114.34	70	120	
Sc	45	3	HeHe	138327	1.35	132951	104.04	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 5
Data File Name	007CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:33:47-04:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	6563421	0.00
Cr	52	1	No Gas	5906265	0.00
Mn	55	1	No Gas	7211085	0.00
Co	59	1	No Gas	6504377	0.00
Ni	60	1	No Gas	1495844	0.00
Cu	63	1	No Gas	3519800	0.00
Sr	88	1	No Gas	8227989	0.00
Ag	107	1	No Gas	3678532	0.00
Al	27	1	No Gas	3886184	0.00
Sn	118	1	No Gas	2200502	0.00
Ti	47	1	No Gas	542859	0.00
Zn	66	1	No Gas	890715	0.00
As	75	3	HeHe	72900	0.00
As	75	1	No Gas	972406	0.00
Sb	121	1	No Gas	2915076	0.00
Hg	201	1	No Gas	5833	0.05
Be	9	1	No Gas	681346	0.00
Pb	208	1	No Gas	6208559	0.00
Se	82	1	No Gas	48679	0.00
Mo	98	1	No Gas	2354816	0.00
Ba	137	1	No Gas	968617	0.00
Tl	205	1	No Gas	4555286	0.00
U	238	1	No Gas	5741236	0.00
Na	23	2	he	5414301	0.00
Mg	24	2	he	3082653	0.00
K	39	2	he	5133884	0.00
Se	82	3	HeHe	3501	0.06
Fe	57	3	HeHe	164269	0.00
Cd	114	1	No Gas	1701177	0.00
Ca	44	1	No Gas	1821322	0.00

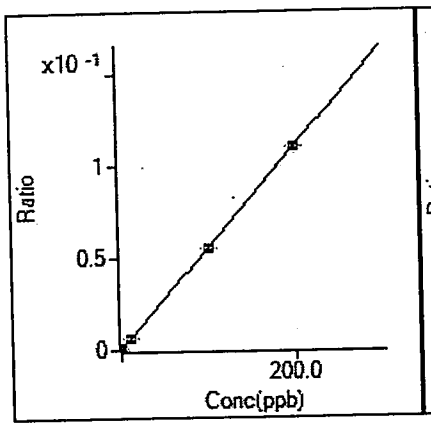
QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6151770	1.24	5896472	104.33	70	120	
Sc	45	2	he	1310111	1.57	1271268	103.06	70	120	
Ge	72	1	No Gas	687781	0.71	682805	100.73	70	120	

Calibration Standard Report

In	115	1	No Gas	3726710	1.53	3697856	100.78	70	120	
Tb	159	1	No Gas	4360250	1.19	4404848	98.99	70	120	
Bi	209	1	No Gas	2328198	0.87	1997135	116.58	70	120	
Sc	45	3	HeHe	139392	1.58	132951	104.84	70	120	

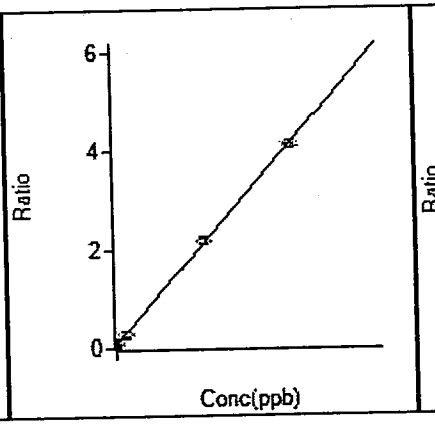
Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



9 Be [No Gas] / ISTD: 45 Sc

y = 5.541E-4 x + 4.025E-6

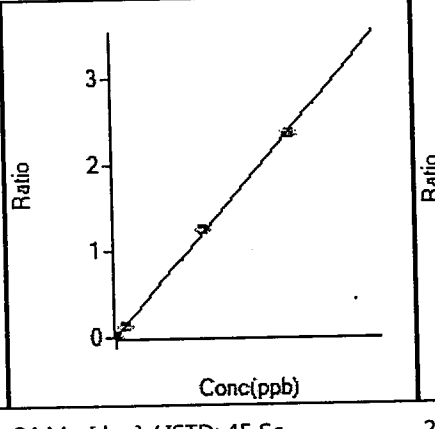
R	1.0000
DL	0.01445
BEC	0.007265



23 Na [he] / ISTD: 45 Sc

y = 2.047E-3 x + 6.598E-2

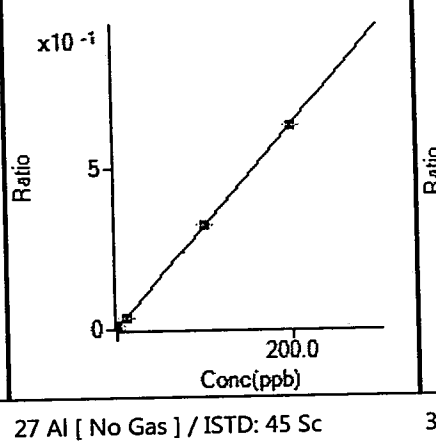
R	0.9999
DL	2.634
BEC	32.23



24 Mg [he] / ISTD: 45 Sc

y = 1.189E-3 x + 1.195E-4

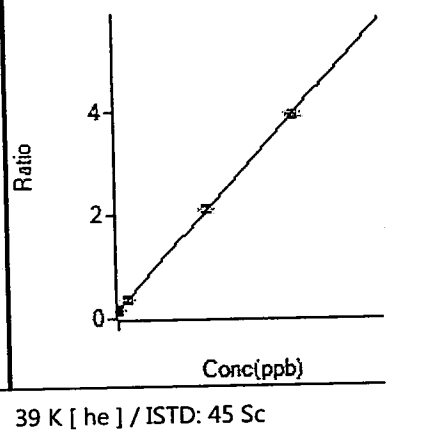
R	0.9997
DL	0.2482
BEC	0.1004



27 Al [No Gas] / ISTD: 45 Sc

y = 3.162E-3 x + 1.467E-3

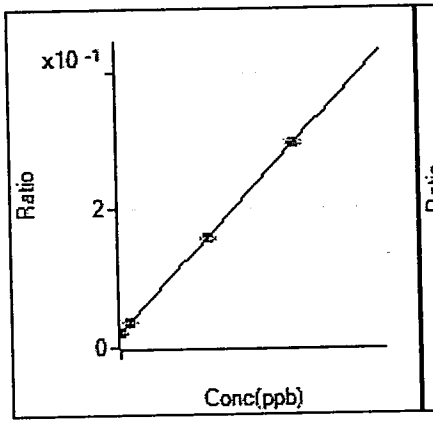
R	1.0000
DL	0.1167
BEC	0.4638



39 K [he] / ISTD: 45 Sc

y = 1.892E-3 x + 1.574E-1

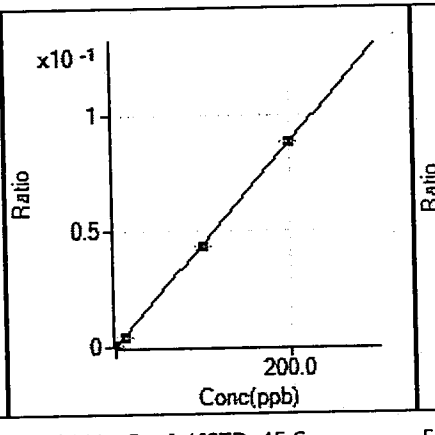
R	0.9999
DL	2.785
BEC	83.19



44 Ca [No Gas] / ISTD: 45 Sc

y = 1.375E-4 x + 2.096E-2

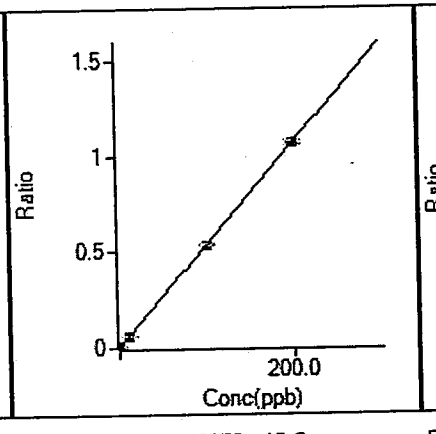
R	1.0000
DL	13.36
BEC	152.5



47 Ti [No Gas] / ISTD: 45 Sc

y = 4.395E-4 x + 5.013E-5

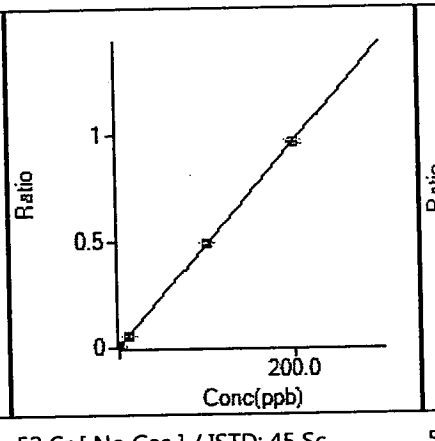
R	1.0000
DL	0.0652
BEC	0.1141



51 V [No Gas] / ISTD: 45 Sc

y = 5.340E-3 x + 2.003E-4

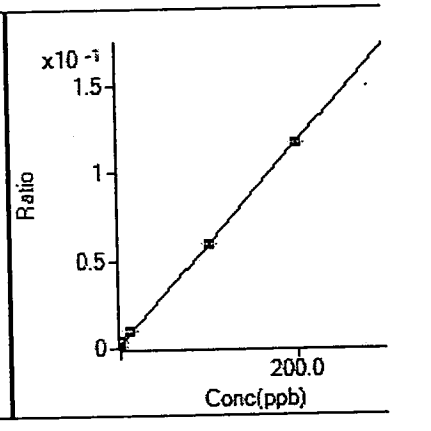
R	1.0000
DL	0.1719
BEC	0.03751



52 Cr [No Gas] / ISTD: 45 Sc

y = 4.807E-3 x + 1.824E-3

R	1.0000
DL	0.08261
BEC	0.3795

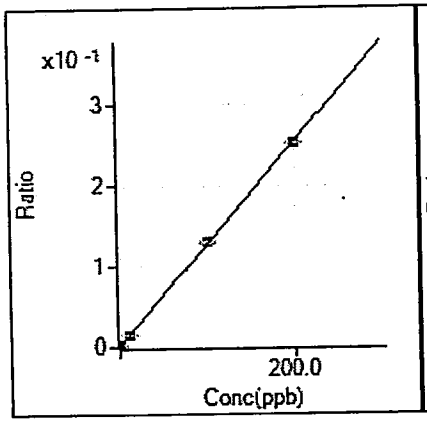


53 [V] [No Gas] / ISTD: 45 Sc

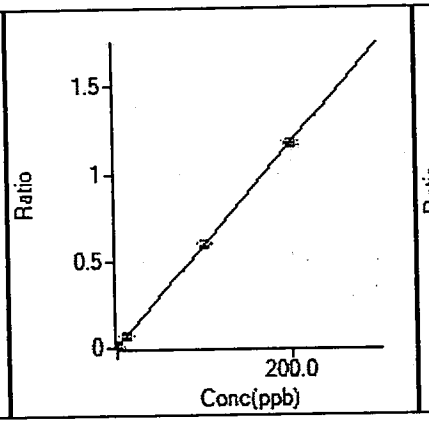
y = 5.795E-4 x + 1.368E-3

R	0.9998
DL	0.3926
BEC	2.361

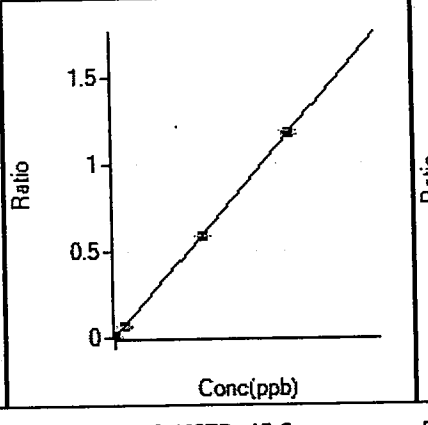
Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



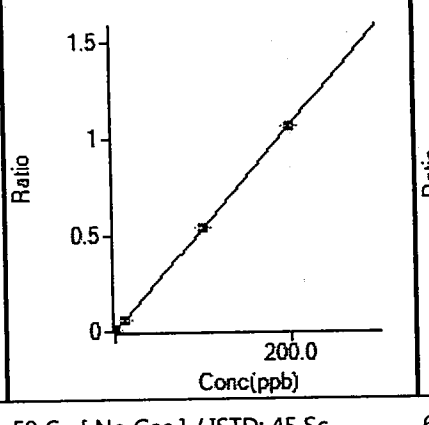
53 [V] [he] / ISTD: 45 Sc
y = 1.270E-3 x + 6.762E-4
R 0.9999
DL 0.5229
BEC 0.5325



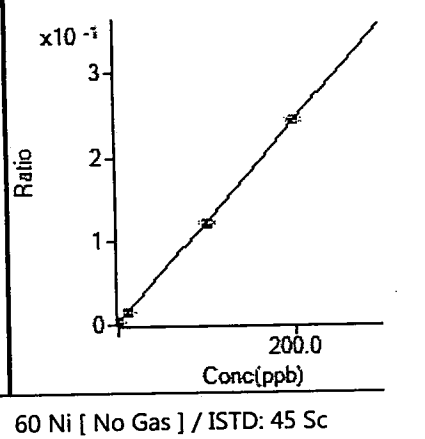
55 Mn [No Gas] / ISTD: 45 Sc
y = 5.855E-3 x + 5.402E-3
R 1.0000
DL 0.6308
BEC 0.9226



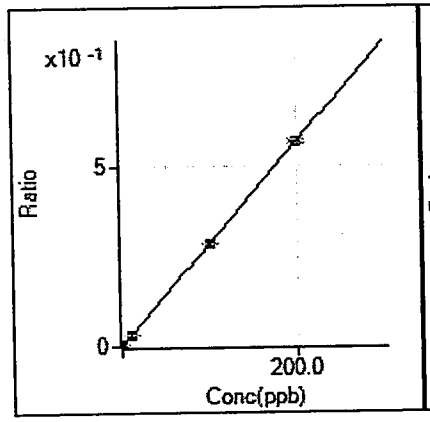
57 Fe [HeHe] / ISTD: 45 Sc
y = 5.887E-4 x + 1.311E-3
R 1.0000
DL 1.531
BEC 2.226



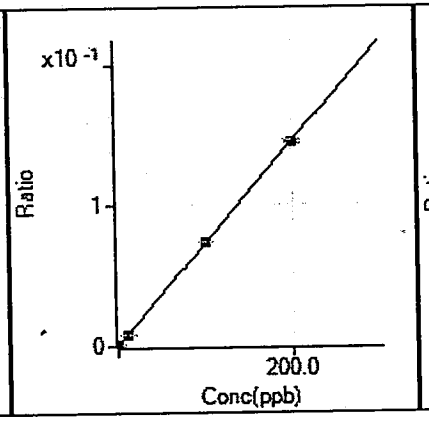
59 Co [No Gas] / ISTD: 45 Sc
y = 5.306E-3 x + 4.206E-5
R 1.0000
DL 0.003114
BEC 0.007927



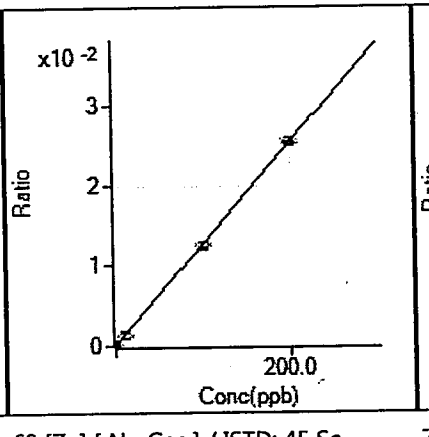
60 Ni [No Gas] / ISTD: 45 Sc
y = 1.198E-3 x + 3.204E-3
R 1.0000
DL 0.5389
BEC 2.674



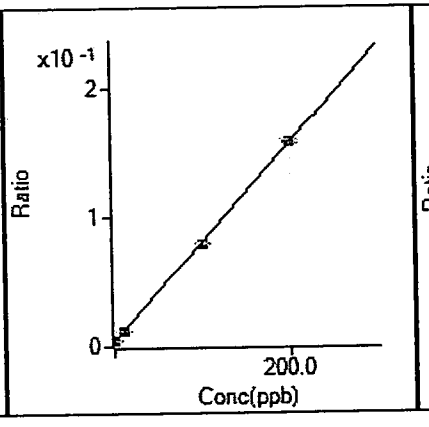
63 Cu [No Gas] / ISTD: 45 Sc
y = 2.859E-3 x + 1.007E-4
R 1.0000
DL 0.009209
BEC 0.03522



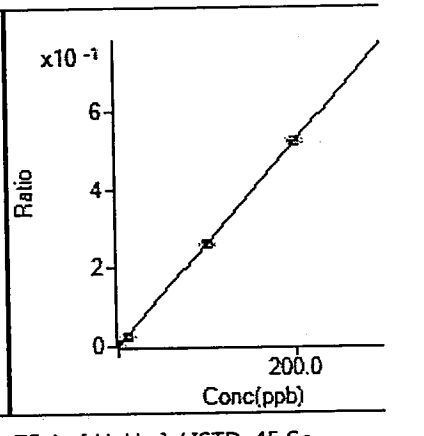
66 Zn [No Gas] / ISTD: 45 Sc
y = 7.254E-4 x + 1.333E-4
R 1.0000
DL 0.09382
BEC 0.1838



69 [Zn] [No Gas] / ISTD: 45 Sc
y = 1.267E-4 x + 3.180E-5
R 1.0000
DL 0.2514
BEC 0.251

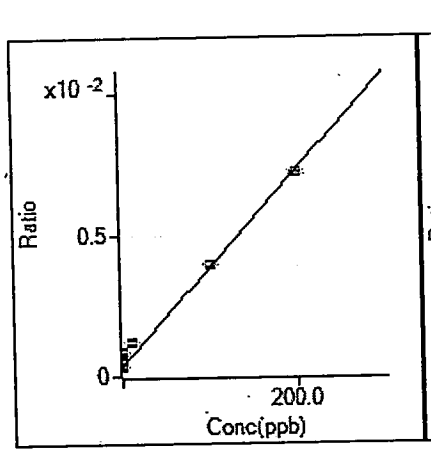


75 As [No Gas] / ISTD: 45 Sc
y = 7.678E-4 x + 3.949E-3
R 1.0000
DL 1.424
BEC 5.143

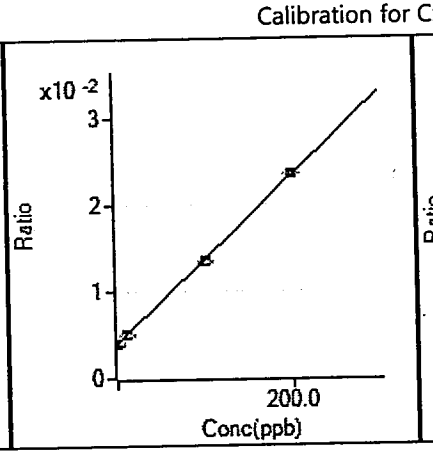


75 As [HeHe] / ISTD: 45 Sc
y = 2.611E-3 x + 5.400E-5
R 1.0000
DL 0.02561
BEC 0.02068

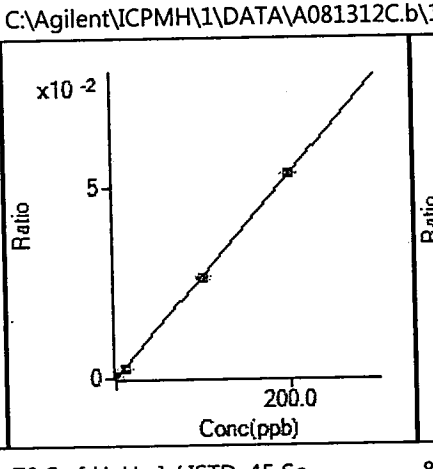
Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



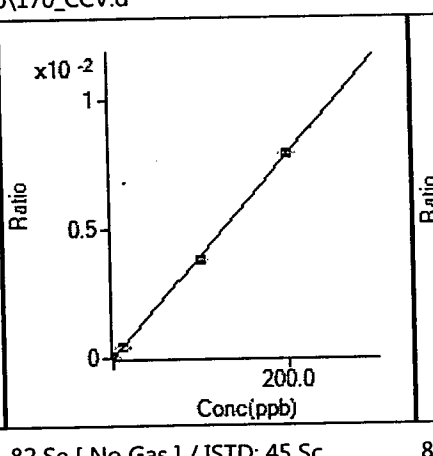
77 [As] [No Gas] / ISTD: 45 Sc
y = 3.487E-5 x + 3.519E-4
R 0.9974
DL 3.908
BEC 10.09



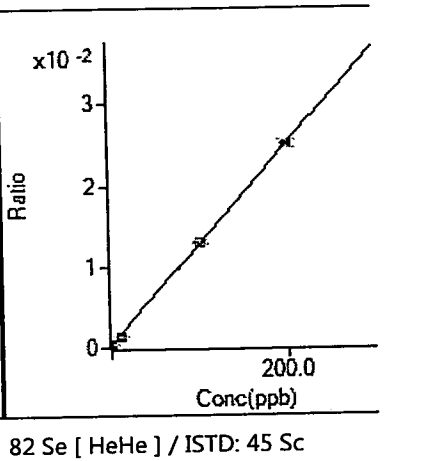
78 Se [No Gas] / ISTD: 45 Sc
y = 9.716E-5 x + 3.968E-3
R 0.9999
DL 5.747
BEC 40.84



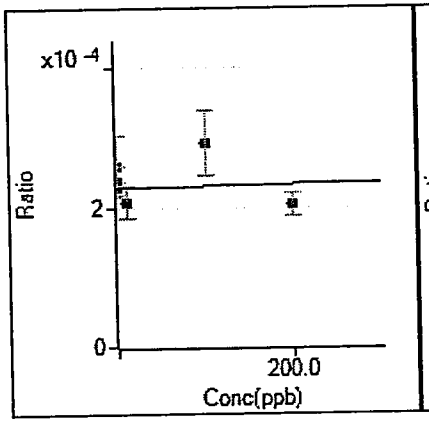
78 Se [HeHe] / ISTD: 45 Sc
y = 2.667E-4 x + 1.669E-5
R 1.0000
DL 0.1883
BEC 0.06256



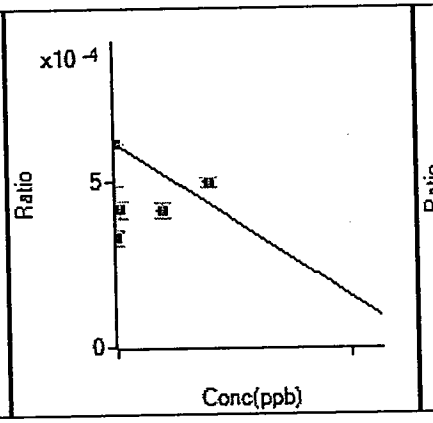
82 Se [No Gas] / ISTD: 45 Sc
y = 3.939E-5 x - 1.575E-5
R 0.9999
DL 0.3858
BEC -0.3998



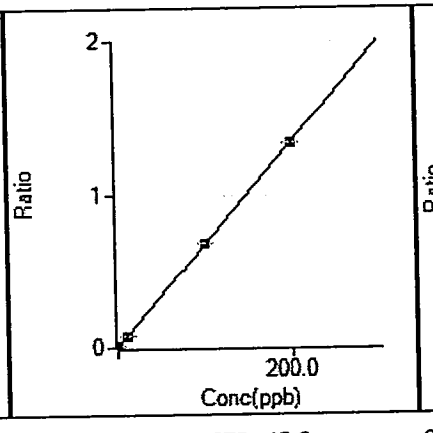
82 Se [HeHe] / ISTD: 45 Sc
y = 1.235E-4 x + 4.684E-4
R 0.9999
DL 3.293
BEC 3.792



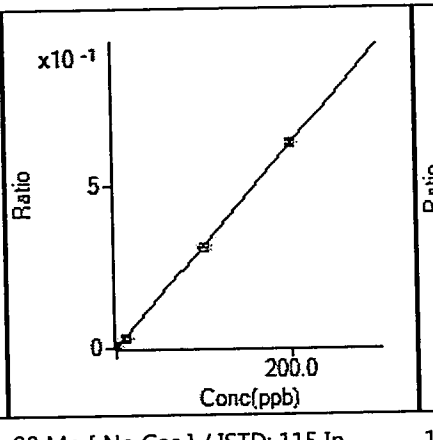
83 [Se] [No Gas] / ISTD: 115 In
y = 2.676E-8 x + 2.284E-4
R -0.1341
DL 2359
BEC 8534



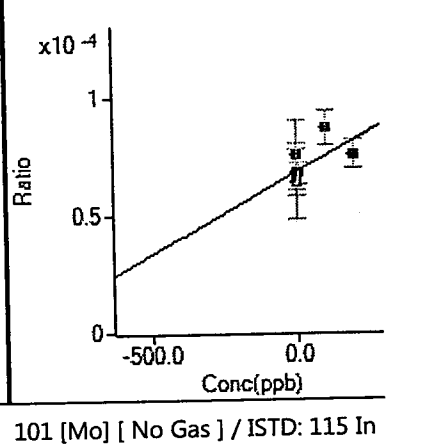
83 [Se] [HeHe] / ISTD: 45 Sc
y = - 9.258E-7 x + 6.156E-4
R 0.1431
DL -12.3
BEC -665



88 Sr [No Gas] / ISTD: 45 Sc
y = 6.711E-3 x + 1.555E-5
R 1.0000
DL 0.002704
BEC 0.002318

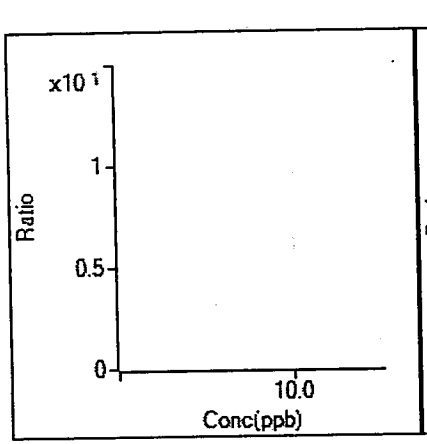


98 Mo [No Gas] / ISTD: 115 In
y = 3.143E-3 x + 2.337E-4
R 0.9999
DL 0.06173
BEC 0.07434



101 [Mo] [No Gas] / ISTD: 115 In
y = 6.819E-8 x + 6.787E-5
R 0.5579
DL 895.1
BEC 995.3

Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



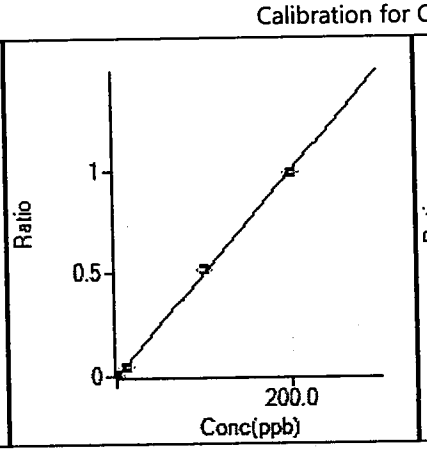
106 [Cd] [No Gas] / ISTD: 115 In

y =

R

DL

BEC



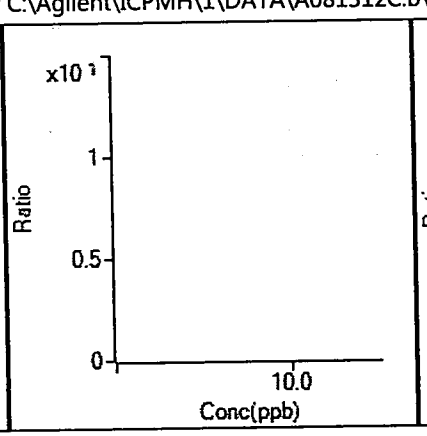
107 Ag [No Gas] / ISTD: 115 In

y = 4.983E-3 x + 1.008E-5

R 0.9997

DL 0.007648

BEC 0.002023



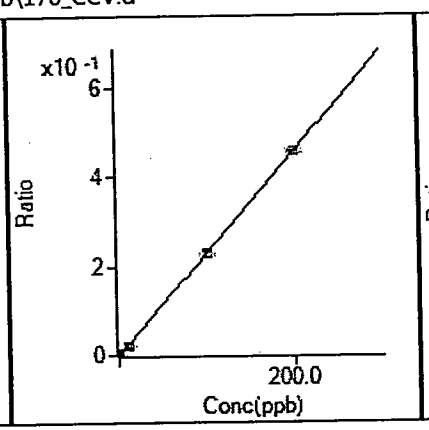
108 [Cd] [No Gas] / ISTD: 115 In

y =

R

DL

BEC



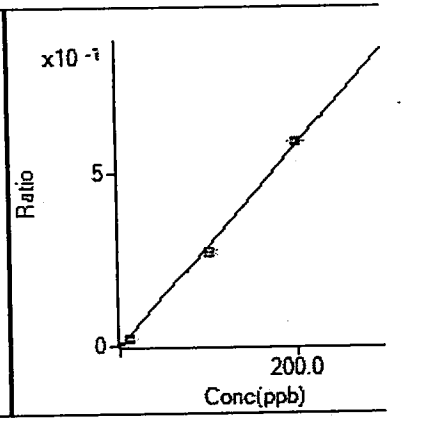
114 Cd [No Gas] / ISTD: 115 In

y = 2.281E-3 x + 1.336E-5

R 1.0000

DL 0.018

BEC 0.005859



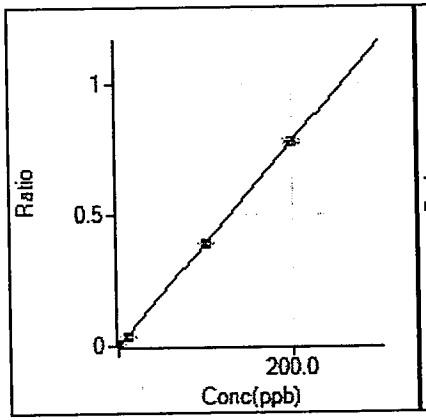
118 Sn [No Gas] / ISTD: 115 In

y = 2.905E-3 x + 5.207E-5

R 0.9993

DL 0.006195

BEC 0.01792



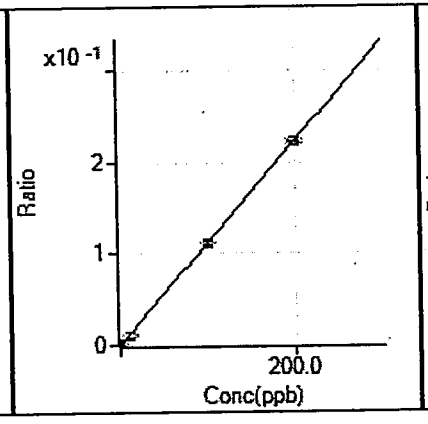
121 Sb [No Gas] / ISTD: 115 In

y = 3.911E-3 x + 3.410E-5

R 1.0000

DL 0.01061

BEC 0.008718



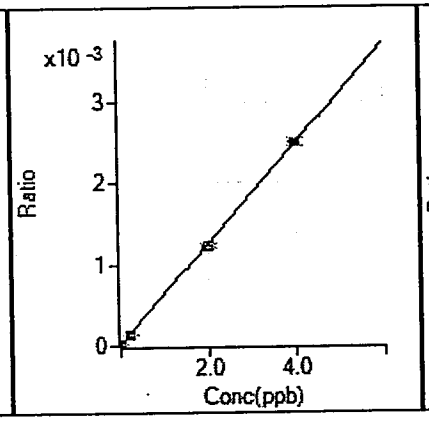
137 Ba [No Gas] / ISTD: 159 Tb

y = 1.112E-3 x + 1.129E-5

R 1.0000

DL 0.01568

BEC 0.01016



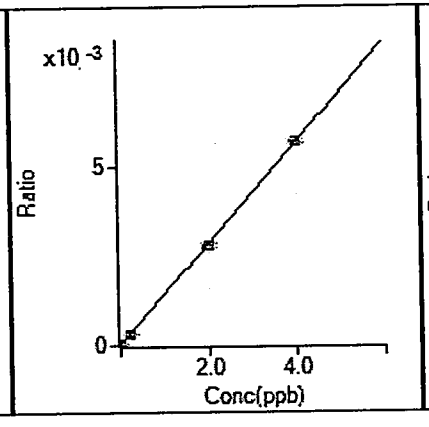
201 Hg [No Gas] / ISTD: 209 Bi

y = 6.191E-4 x + 1.681E-5

R 0.9999

DL 0.02511

BEC 0.02716



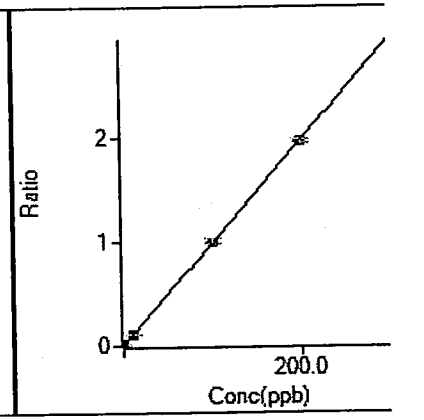
202 Hg [No Gas] / ISTD: 209 Bi

y = 1.413E-3 x + 1.890E-5

R 1.0000

DL 0.01015

BEC 0.01337



205 Tl [No Gas] / ISTD: 209 Bi

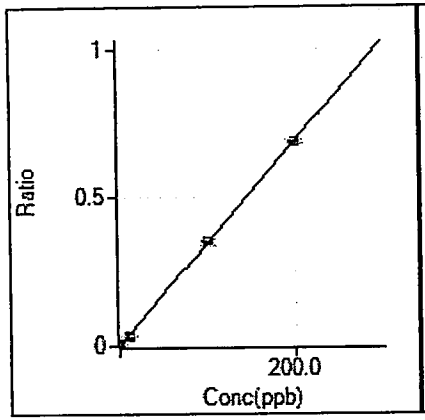
y = 9.832E-3 x + 1.279E-5

R 0.9999

DL 0.00676

BEC 0.001301

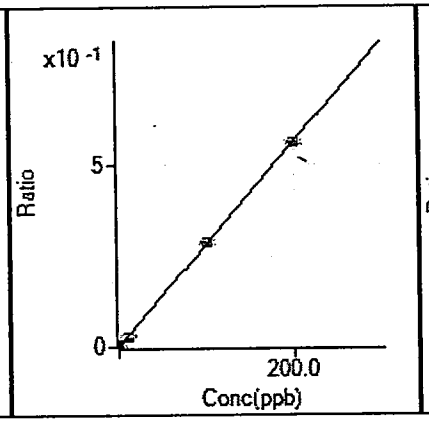
Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



206 [Pb] [No Gas] / ISTD: 209 Bi

y = 3.452E-3 x + 2.751E-5

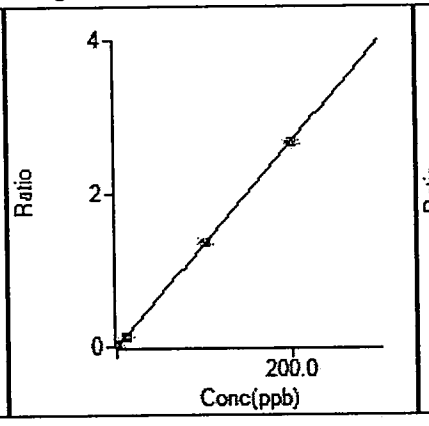
R	1.0000
DL	0.01696
BEC	0.00797



207 [Pb] [No Gas] / ISTD: 209 Bi

y = 2.838E-3 x + 2.212E-5

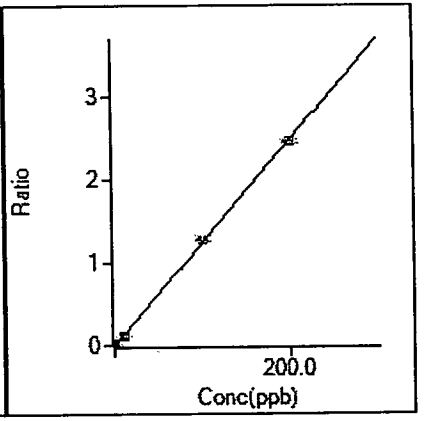
R	1.0000
DL	0.004877
BEC	0.007795



208 Pb [No Gas] / ISTD: 209 Bi

y = 1.340E-2 x + 1.450E-4

R	0.9999
DL	0.01306
BEC	0.01083



238 U [No Gas] / ISTD: 209 Bi

y = 1.243E-2 x + 1.804E-5

R	0.9998
DL	0.00397
BEC	0.001452

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	008_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:37:09-04:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	98.742	1.626	3245310	1.36	100	98.7	90	110	
Cr	52	1	No Gas	97.531	1.079	2895291	0.94	100	97.5	90	110	
Mn	55	1	No Gas	99.658	1.042	3623044	0.49	100	99.7	90	110	
Co	59	1	No Gas	97.852	0.975	3194700	1.50	100	97.9	90	110	
Ni	60	1	No Gas	96.889	1.045	734016	0.49	100	96.9	90	110	
Cu	63	1	No Gas	99.610	1.149	1752874	2.11	100	99.6	90	110	
Sr	88	1	No Gas	99.428	1.067	4104861	0.44	100	99.4	90	110	
Ag	107	1	No Gas	98.743	0.588	1805761	1.29	100	98.7	90	110	
Al	27	1	No Gas	99.447	2.057	1943613	1.74	100	99.4	90	110	
Sn	118	1	No Gas	103.632	0.816	1105279	1.98	100	103.6	90	110	
Tl	47	1	No Gas	89.870	1.572	243295	1.48	100	89.9	90	110	ICV Main CR1 Failed
Zn	66	1	No Gas	97.104	1.054	434159	0.47	100	97.1	90	110	
As	75	3	HeHe	98.358	1.316	35022	1.16	100	98.4	90	110	
As	75	1	No Gas	96.807	1.290	481574	0.51	100	96.8	90	110	
Sb	121	1	No Gas	99.039	0.731	1421867	2.12	100	99.0	90	110	
Hg	201	1	No Gas	1.960	2.785	2832	3.79	2	98.0	90	110	
Be	9	1	No Gas	96.075	0.565	327551	1.32	100	96.1	90	110	
Pb	208	1	No Gas	96.947	0.294	2990417	1.22	100	96.9	90	110	
Se	82	1	No Gas	97.671	1.676	23568	0.48	100	97.7	90	110	
Mo	98	1	No Gas	98.092	0.652	1132499	1.15	100	98.1	90	110	
Ba	137	1	No Gas	96.951	2.061	467348	1.65	100	97.0	90	110	
Tl	205	1	No Gas	96.006	2.060	2172954	2.24	100	96.0	90	110	
U	238	1	No Gas	107.911	0.514	3086981	0.64	100	107.9	90	110	
Na	23	2	he	1016.583	0.510	2782809	1.42	1000	101.7	90	110	
Mg	24	2	he	1031.757	0.765	1590388	0.37	1000	103.2	90	110	
K	39	2	he	993.630	0.651	2640040	0.42	1000	99.4	90	110	
Se	82	3	HeHe	96.572	1.756	1690	2.10	100	96.6	90	110	
Fe	57	3	HeHe	1054.143	1.763	84778	1.53	1000	105.4	90	110	
Cd	114	1	No Gas	96.656	0.453	809269	1.89	100	96.7	90	110	
Ca	44	1	No Gas	975.081	1.456	953715	0.30	1000	97.5	90	110	

OK

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6152674	1.51	5896472	104.35	70	120	
Sc	45	2	he	1296036	1.02	1271268	101.95	70	120	
Ge	72	1	No Gas	677632	0.92	682805	99.24	70	120	
In	115	1	No Gas	3670280	1.45	3697856	99.25	70	120	
Tb	159	1	No Gas	4336489	0.63	4404848	98.45	70	120	
Bi	209	1	No Gas	2302057	1.10	1997135	115.27	70	120	
Sc	45	3	HeHe	136339	1.09	132951	102.55	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	009_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:40:33-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.060	46.8	2984	28.2	9	
Cr	52	1	No Gas	-0.024	-100.7	9837	8.5	4	
Mn	55	1	No Gas	0.230	61.8	38897	13.7	25	
Co	59	1	No Gas	0.003	36.1	326	9.8	1	
Ni	60	1	No Gas	-0.970	-3.7	11748	1.2	25	
Cu	63	1	No Gas	0.016	17.0	843	3.8	25	
Sr	88	1	No Gas	0.002	47.7	163	21.9	25	
Ag	107	1	No Gas	0.003	30.2	100	19.2	9	
Al	27	1	No Gas	0.091	32.8	10100	4.3	1000000	
Sn	118	1	No Gas	0.273	9.0	3149	10.0	25	
Ti	47	1	No Gas	0.186	35.1	760	22.6	10000	
Zn	66	1	No Gas	-0.002	-1981.6	760	18.1	25	
As	75	3	HeHe	0.534	5.2	192	5.4	9	
As	75	1	No Gas	0.665	41.1	25663	4.1	9	
Sb	121	1	No Gas	0.317	27.9	4760	28.2	4	
Hg	201	1	No Gas	0.051	15.8	103	5.6	0.04	ICB Main CR1 Failed
Be	9	1	No Gas	0.009	48.8	51	28.0	1	
Pb	208	1	No Gas	0.041	38.8	1467	23.8	4	
Se	82	1	No Gas	1.216	31.7	185	46.4	25	
Mo	98	1	No Gas	0.870	17.2	11068	16.9	10000	
Ba	137	1	No Gas	0.012	45.1	107	23.6	25	
Tl	205	1	No Gas	0.058	16.2	1222	11.2	1	
U	238	1	No Gas	0.091	23.8	2452	28.0	25	
Na	23	2	he	0.911	105.6	86357	2.7	2500000	
Mg	24	2	he	0.022	179.4	185	33.0	2500000	
K	39	2	he	-1.460	-140.0	196775	1.6	5000000	
Se	82	3	HeHe	0.954	58.7	78	10.8	25	
Fe	57	3	HeHe	2.795	28.2	393	16.1	2500000	
Cd	114	1	No Gas	0.017	69.8	190	51.8	1	
Ca	44	1	No Gas	1.853	39.0	122116	1.5	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5755553	1.63	5896472	97.61	70	120	
Sc	45	2	he	1272979	1.57	1271268	100.13	70	120	
Ge	72	1	No Gas	678801	0.96	682805	99.41	70	120	
In	115	1	No Gas	3724033	1.61	3697856	100.71	70	120	

Initial Calibration Blank (ICB) Report

Tb	159	1	No Gas	4391649	2.36	4404848	99.70	70	120	
Bi	209	1	No Gas	2121785	6.49	1997135	106.24	70	120	
Sc	45	3	HeHe	132766	1.09	132951	99.86	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	010_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:44:04-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.060	23.2	2987	12.1	9	
Cr	52	1	No Gas	-0.020	-34.6	9970	2.9	4	
Mn	55	1	No Gas	-0.049	-139.3	29452	4.3	25	
Co	59	1	No Gas	0.001	231.9	282	32.1	1	
Ni	60	1	No Gas	-1.141	-6.8	10577	1.9	25	
Cu	63	1	No Gas	0.009	42.2	726	7.1	25	
Sr	88	1	No Gas	0.001	205.9	133	66.7	25	
Ag	107	1	No Gas	0.004	104.3	111	70.0	9	
Al	27	1	No Gas	0.097	68.0	10207	8.6	1000000	
Sn	118	1	No Gas	0.149	15.1	1756	13.3	25	
Ti	47	1	No Gas	0.097	27.4	537	16.1	10000	
Zn	66	1	No Gas	0.100	43.5	1183	13.1	25	
As	75	3	HeHe	0.233	13.5	86	12.7	9	
As	75	1	No Gas	0.497	37.8	24951	1.1	9	
Sb	121	1	No Gas	0.160	21.8	2389	20.5	4	
Hg	201	1	No Gas	0.021	58.8	60	23.1	0.04	
Be	9	1	No Gas	0.005	33.6	39	15.8	1	
Pb	208	1	No Gas	0.029	16.5	1096	10.2	4	
Se	82	1	No Gas	0.964	56.4	127	94.6	25	
Mo	98	1	No Gas	0.359	24.3	4943	19.9	10000	
Ba	137	1	No Gas	0.015	26.5	123	16.9	25	
Tl	205	1	No Gas	0.018	15.6	393	17.3	1	
U	238	1	No Gas	0.029	18.5	782	21.9	25	
Na	23	2	he	1.101	76.9	85432	2.0	2500000	
Mg	24	2	he	0.054	43.2	230	15.6	2500000	
K	39	2	he	-1.277	-156.7	193999	1.6	5000000	
Se	82	3	HeHe	-0.195	-280.4	58	13.9	25	
Fe	57	3	HeHe	1.010	11.2	248	5.2	2500000	
Cd	114	1	No Gas	0.001	229.3	60	44.1	1	
Ca	44	1	No Gas	-0.233	-2580.8	120570	0.6	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5765949	3.66	5896472	97.79	70	120	
Sc	45	2	he	1252133	0.83	1271268	98.49	70	120	
Ge	72	1	No Gas	672367	1.16	682805	98.47	70	120	

Initial Calibration Blank (ICB) Report

In	115	1	No Gas	3630295	0.40	3697856	98.17	70	120	
Tb	159	1	No Gas	4440065	1.55	4404848	100.80	70	120	
Bi	209	1	No Gas	2035819	5.74	1997135	101.94	70	120	
Sc	45	3	HeHe	130204	1.70	132951	97.93	70	120	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV
Data File Name	011LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:47:33-04:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.091	1.496	69306	1.16	2	104.6	70	130	
Cr	52	1	No Gas	2.203	0.635	75672	0.95	2	110.2	70	130	
Mn	55	1	No Gas	5.045	1.512	212993	1.07	5	100.9	70	130	
Co	59	1	No Gas	5.109	0.804	165513	1.18	5	102.2	70	130	
Ni	60	1	No Gas	3.934	3.998	48267	2.04	5	78.7	70	130	
Cu	63	1	No Gas	5.135	0.980	90105	1.31	5	102.7	70	130	
Sr	88	1	No Gas	4.703	0.815	192472	0.55	5	94.1	70	130	
Ag	107	1	No Gas	2.050	2.058	36540	1.72	2	102.5	70	130	
Al	27	1	No Gas	81.870	0.770	1587082	0.38	80	102.3	70	130	
Sn	118	1	No Gas	3.469	11.534	36237	12.68	2	173.4	70	130	LLICV Main CR1 Failed
Tl	47	1	No Gas	4.796	2.834	13156	3.17	5	95.9	70	130	
Zn	66	1	No Gas	5.054	1.676	23163	1.63	5	101.1	70	130	
As	75	3	HeHe	3.285	4.256	1152	4.98	3	109.5	70	130	
As	75	1	No Gas	3.625	8.318	41043	3.82	3	120.8	70	130	
Sb	121	1	No Gas	2.193	3.231	30770	3.86	2	109.6	70	130	
Hg	201	1	No Gas	0.220	6.167	341	7.00	0.2	110.0	70	130	
Be	9	1	No Gas	0.985	3.574	3352	3.17	1	98.5	70	130	
Pb	208	1	No Gas	2.061	3.918	61758	2.27	2	103.1	70	130	
Se	82	1	No Gas	5.592	26.926	1247	29.10	5	111.8	70	130	
Mo	98	1	No Gas	2.700	5.148	31185	6.35	2	135.0	70	130	LLICV Main CR1 Failed
Ba	137	1	No Gas	4.969	5.073	23564	5.89	5	99.4	70	130	
Tl	205	1	No Gas	1.024	3.850	22424	2.36	1	102.4	70	130	
U	238	1	No Gas	5.078	2.417	140424	0.90	5	101.6	70	130	
Na	23	2	he	106.819	2.456	376395	2.91	100	106.8	70	130	
Mg	24	2	he	102.005	0.843	160538	0.74	100	102.0	70	130	
K	39	2	he	111.098	2.411	485879	0.39	100	111.1	70	130	
Se	82	3	HeHe	6.391	3.045	168	1.15	5	127.8	70	130	
Fe	57	3	HeHe	60.742	8.525	4945	8.57	50	121.5	70	130	
Cd	114	1	No Gas	1.122	5.295	9203	6.69	1	112.2	70	130	
Ca	44	1	No Gas	105.838	0.870	216494	0.06	100	105.8	70	130	

NA

NA

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6096014	0.41	5896472	103.38	70	120	
Sc	45	2	he	1322090	1.04	1271268	104.00	70	120	
Ge	72	1	No Gas	679695	1.35	682805	99.54	70	120	
In	115	1	No Gas	3573913	1.49	3697856	96.65	70	120	
Tb	159	1	No Gas	4256462	0.84	4404848	96.63	70	120	
Bi	209	1	No Gas	2225339	1.63	1997135	111.43	70	120	
Sc	45	3	HeHe	133391	0.99	132951	100.33	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	012ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:51:03-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.408	14.9	14217	13.4	9	
Cr	52	1	No Gas	1.305	5.1	48404	3.5	4	
Mn	55	1	No Gas	1.387	6.3	80819	2.6	25	
Co	59	1	No Gas	1.341	6.0	42760	4.7	1	ICSA Main CR1 Failed
Ni	60	1	No Gas	-0.521	-8.8	15424	3.4	5	
Cu	63	1	No Gas	1.138	6.5	20033	4.9	5	
Ag	107	1	No Gas	0.229	8.9	3919	8.4	9	
Al	27	1	No Gas	86238.701	2.3	1629911165	0.9	110000	
Sn	118	1	No Gas	0.745	20.8	7539	20.2	25	
Tl	47	1	No Gas	1706.488	1.7	4483115	0.6	2200	
Zn	66	1	No Gas	3.487	6.4	15910	4.7	5	
As	75	3	HeHe	0.607	16.0	209	14.4	9	
As	75	1	No Gas	1.066	33.9	28487	4.7	9	
Sb	121	1	No Gas	0.449	5.0	6094	5.2	4	
Hg	201	1	No Gas	0.031	39.3	76	20.9	0.04	
Be	9	1	No Gas	0.008	40.2	51	21.5	1	
Pb	208	1	No Gas	0.503	14.0	14655	14.6	4	
Se	82	1	No Gas	0.519	17.6	28	77.8	25	
Mo	98	1	No Gas	1978.830	1.3	21173724	0.9	2200	
Ba	137	1	No Gas	0.155	3.0	763	4.0	25	
Tl	205	1	No Gas	0.027	10.5	589	10.5	1	
U	238	1	No Gas	0.080	20.7	2141	21.1	25	
Na	23	2	he	88481.402	1.0	228143533	0.7	110000	
Mg	24	2	he	88791.717	1.2	132950658	0.3	110000	
K	39	2	he	90634.329	0.7	216072962	0.1	110000	
Se	82	3	HeHe	0.170	252.5	63	11.8	25	
Fe	57	3	HeHe	95975.268	1.0	7219717	0.1	110000	
Cd	114	1	No Gas	0.807	3.6	6315	4.1	1	
Ca	44	1	No Gas	83755.733	1.9	68956089	0.5	110000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5978213	1.44	5896472	101.39	70	120	
Sc	45	2	he	1259096	0.87	1271268	99.04	70	120	
Ge	72	1	No Gas	652515	0.32	682805	95.56	70	120	
In	115	1	No Gas	3404061	0.52	3697856	92.05	70	120	
Tb	159	1	No Gas	4155147	1.57	4404848	94.33	70	120	
Bi	209	1	No Gas	2125630	0.86	1997135	106.43	70	120	
Sc	45	3	HeHe	127793	1.10	132951	96.12	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	013ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T13:00:47-04:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	39.560	1.314	1329992	0.73	40	98.9	80	120	
Cr	52	1	No Gas	19.750	2.876	608506	2.29	20	98.8	80	120	
Mn	55	1	No Gas	20.318	3.116	782143	2.19	20	101.6	80	120	
Co	59	1	No Gas	37.232	2.656	1242688	1.92	40	93.1	80	120	
Ni	60	1	No Gas	34.405	1.343	279478	1.08	40	86.0	80	120	
Cu	63	1	No Gas	19.315	2.159	347936	1.71	20	96.6	80	120	
Ag	107	1	No Gas	19.360	1.453	338694	1.83	20	96.8	80	120	
Al	27	1	No Gas	87401.980	1.778	1738225116	0.91	100000	87.4	90	110	ICSB Main CR1 Failed
Tl	47	1	No Gas	1734.566	1.843	4794854	1.45	2000	86.7	90	110	ICSB Main CR1 Failed
Zn	66	1	No Gas	23.932	2.902	110015	2.13	20	119.7	80	120	
As	75	3	HeHe	20.105	1.202	7128	1.50	20	100.5	80	120	
As	75	1	No Gas	20.392	2.981	123308	1.75	20	102.0	80	120	
Sb	121	1	No Gas	0.544	7.259	7595	7.45	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Hg	201	1	No Gas	0.019	59.638	61	24.91	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Be	9	1	No Gas	0.003	57.299	37	18.81	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Pb	208	1	No Gas	0.437	6.517	12858	6.46	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Se	82	1	No Gas	19.163	4.940	4647	4.00	20	95.8	80	120	
Mo	98	1	No Gas	2022.259	0.332	22316878	0.19	2000	101.1	90	110	
Ba	137	1	No Gas	0.221	7.541	1103	5.54	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Tl	205	1	No Gas	0.022	7.548	482	7.42	0	#DIV/0!	0	0	ICSB Main CR1 Failed
U	238	1	No Gas	0.066	15.781	1800	15.75	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Na	23	2	he	87984.945	1.603	242410011	2.05	100000	88.0	90	110	ICSB Main CR1 Failed
Mg	24	2	he	89548.792	1.071	143263065	0.20	100000	89.5	90	110	ICSB Main CR1 Failed
K	39	2	he	90005.881	0.921	229262169	0.27	100000	90.0	90	110	
Se	82	3	HeHe	19.533	10.748	391	8.56	20	97.7	80	120	
Fe	57	3	HeHe	95616.436	1.635	7634400	0.88	100000	95.6	90	110	
Cd	114	1	No Gas	10.043	3.166	80478	3.55	10	100.4	80	120	
Ca	44	1	No Gas	84131.326	1.047	72885131	0.52	100000	84.1	90	110	ICSB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6289971	1.06	5896472	106.67	70	120	
Sc	45	2	he	1345290	0.96	1271268	105.82	70	120	
Ge	72	1	No Gas	697499	1.87	682805	102.15	70	120	
In	115	1	No Gas	3510678	0.39	3697856	94.94	70	120	
Tb	159	1	No Gas	4306271	1.65	4404848	97.76	70	120	
Bi	209	1	No Gas	2142239	0.30	1997135	107.27	70	120	
Sc	45	3	HeHe	135647	1.32	132951	102.03	70	120	

Sample Report

Sample Table

Sample Name	1020187
Data File Name	032SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:32:02-04:00
Sample Type	Sample
Dilution	1
Comment	37996 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3203

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	0.339	0.339	6.80	12557	0.00	1000	
Cr	52	1	No Gas	0.313	0.313	10.27	20813	0.00	1000	
Mn	55	1	No Gas	0.070	0.070	46.71	36336	0.00	1000	
Co	59	1	No Gas	0.002	0.002	126.92	315	0.00	1000	
Ni	60	1	No Gas	-2.555	-2.555	-0.85	890	-0.29	1000	
Cu	63	1	No Gas	0.127	0.127	1.41	2900	0.00	1000	
Sr	88	1	No Gas	0.017	0.017	16.77	830	0.00	1000	
Ag	107	1	No Gas	0.006	0.006	18.93	144	0.00	1000	
Al	27	1	No Gas	2.246	2.246	5.78	53562	0.00	100000	
Sn	118	1	No Gas	0.836	0.836	31.53	8858	0.01	100	
Ti	47	1	No Gas	0.417	0.417	29.64	1460	0.03	2000	
Zn	66	1	No Gas	0.552	0.552	5.33	3334	0.02	1000	
As	75	3	HeHe	0.224	0.224	5.22	94	0.24	1000	
As	75	1	No Gas	1.238	1.238	21.95	30632	0.00	1000	
Sb	121	1	No Gas	0.093	0.093	21.83	1415	0.01	100	
Hg	201	1	No Gas	0.014	0.014	32.80	53	0.03	4	
Be	9	1	No Gas	0.000	0.000	871.38	26	0.00	1000	
Pb	208	1	No Gas	0.019	0.019	28.42	852	0.00	1000	
Se	82	1	No Gas	0.913	0.913	124.37	127	0.72	1000	
Mo	98	1	No Gas	0.784	0.784	45.66	9636	0.01	2000	
Ba	137	1	No Gas	0.095	0.095	10.70	490	0.02	1000	
Tl	205	1	No Gas	0.002	0.002	98.98	74	0.00	1000	
U	238	1	No Gas	0.009	0.009	35.62	282	0.00	1000	
Na	23	2	he	11.382	11.382	20.13	125553	0.01	100000	
Mg	24	2	he	0.889	0.889	8.33	1656	0.05	100000	
K	39	2	he	5.079	5.079	37.12	234852	0.00	100000	
Se	82	3	HeHe	-1.123	-1.123	-90.73	49	-2.31	1000	
Fe	57	3	HeHe	10.435	10.435	14.82	1096	0.95	100000	
Cd	114	1	No Gas	0.032	0.032	7.70	307	0.01	1000	
Ca	44	1	No Gas	5.996	5.996	19.53	136169	0.00	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6250333	1.14	5896472	106.00	70	120	
Sc	45	2	he	1406645	1.09	1271268	110.65	70	120	

Ge	72	1	No Gas	696042	0.52	682805	101.94	70	120	
In	115	1	No Gas	3570512	0.84	3697856	96.56	70	120	
Tb	159	1	No Gas	4179053	2.43	4404848	94.87	70	120	
Bi	209	1	No Gas	2101429	2.54	1997135	105.22	70	120	
Sc	45	3	HeHe	147042	0.64	132951	110.60	70	120	

Sample Report

Sample Table

Sample Name	1020188
Data File Name	033SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:35:31-04:00
Sample Type	Sample
Dilution	1
Comment	37996 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3204

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	41.815	41.815	0.87	1429780	0.00	1000	
Cr	52	1	No Gas	41.435	41.435	0.66	1285725	0.00	1000	
Mn	55	1	No Gas	43.223	43.223	0.19	1653620	0.00	1000	
Co	59	1	No Gas	41.764	41.764	1.37	1417862	0.00	1000	
Ni	60	1	No Gas	38.253	38.253	0.64	313778	0.01	1000	
Cu	63	1	No Gas	40.837	40.837	0.41	747593	0.01	1000	
Sr	88	1	No Gas	38.557	38.557	1.31	1655264	0.00	1000	
Ag	107	1	No Gas	16.432	16.432	1.42	294993	0.01	1000	
Al	27	1	No Gas	418.517	418.517	0.74	8475702	0.00	100000	
Sn	118	1	No Gas	39.898	39.898	1.04	417812	0.01	100	
Ti	47	1	No Gas	38.371	38.371	0.07	108203	0.04	2000	
Zn	66	1	No Gas	412.649	412.649	1.21	1915960	0.02	1000	
As	75	3	HeHe	39.460	39.460	5.25	14880	0.27	1000	
As	75	1	No Gas	39.915	39.915	0.19	221328	0.02	1000	
Sb	121	1	No Gas	40.909	40.909	0.46	576501	0.01	100	
Hg	201	1	No Gas	0.448	0.448	0.28	626	0.07	4	
Be	9	1	No Gas	38.444	38.444	0.64	136309	0.03	1000	
Pb	208	1	No Gas	40.738	40.738	0.82	1162884	0.00	1000	
Se	82	1	No Gas	37.198	37.198	3.32	9269	0.40	1000	
Mo	98	1	No Gas	41.740	41.740	0.51	473519	0.01	2000	
Ba	137	1	No Gas	432.884	432.884	1.46	1999870	0.02	1000	
Tl	205	1	No Gas	40.197	40.197	1.36	841859	0.00	1000	
U	238	1	No Gas	0.005	0.005	37.08	163	0.00	1000	
Na	23	2	he	462.776	462.776	1.79	1431626	0.03	100000	
Mg	24	2	he	430.984	430.984	0.51	724339	0.06	100000	
K	39	2	he	450.420	450.420	1.15	1426262	0.03	100000	
Se	82	3	HeHe	34.780	34.780	5.42	688	5.06	1000	
Fe	57	3	HeHe	446.306	446.306	2.17	38131	1.17	100000	
Cd	114	1	No Gas	40.110	40.110	1.28	329641	0.01	1000	
Ca	44	1	No Gas	422.648	422.648	1.14	505879	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6397464	1.54	5896472	108.50	70	120	
Sc	45	2	he	1412878	0.95	1271268	111.14	70	120	

Ge	72	1	No Gas	701501	1.13	682805	102.74	70	120	
In	115	1	No Gas	3602544	1.23	3697856	97.42	70	120	
Tb	159	1	No Gas	4156161	0.54	4404848	94.35	70	120	
Bi	209	1	No Gas	2130085	0.27	1997135	106.66	70	120	
Sc	45	3	HeHe	144475	2.89	132951	108.67	70	120	

Sample Report

Sample Table

Sample Name	1020191
Data File Name	034SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:38:58-04:00
Sample Type	Sample
Dilution	1
Comment	37996 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3205

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	0.323	0.323	11.79	12025	0.00	1000	
Cr	52	1	No Gas	0.273	0.273	4.69	19601	0.00	1000	
Mn	55	1	No Gas	0.210	0.210	5.65	41462	0.00	1000	
Co	59	1	No Gas	0.003	0.003	27.17	363	0.00	1000	
Ni	60	1	No Gas	-2.560	-2.560	-0.54	857	-0.30	1000	
Cu	63	1	No Gas	0.131	0.131	3.24	2964	0.00	1000	
Sr	88	1	No Gas	0.045	0.045	17.49	1971	0.00	1000	
Ag	107	1	No Gas	0.007	0.007	47.95	156	0.00	1000	
Al	27	1	No Gas	3.898	3.898	1.64	86265	0.00	100000	
Sn	118	1	No Gas	0.610	0.610	29.44	6568	0.01	100	
Ti	47	1	No Gas	0.378	0.378	25.81	1352	0.03	2000	
Zn	66	1	No Gas	0.381	0.381	24.82	2560	0.01	1000	
As	75	3	HeHe	0.402	0.402	11.57	158	0.25	1000	
As	75	1	No Gas	1.014	1.014	35.87	29563	0.00	1000	
Sb	121	1	No Gas	0.168	0.168	21.04	2485	0.01	100	
Hg	201	1	No Gas	0.031	0.031	62.63	77	0.04	4	
Be	9	1	No Gas	0.003	0.003	230.24	35	0.01	1000	
Pb	208	1	No Gas	0.020	0.020	9.53	870	0.00	1000	
Se	82	1	No Gas	1.086	1.086	45.19	169	0.64	1000	
Mo	98	1	No Gas	0.672	0.672	31.44	8453	0.01	2000	
Ba	137	1	No Gas	0.129	0.129	10.30	627	0.02	1000	
Tl	205	1	No Gas	0.016	0.016	25.30	370	0.00	1000	
U	238	1	No Gas	0.005	0.005	44.09	167	0.00	1000	
Na	23	2	he	12.652	12.652	10.29	127381	0.01	100000	
Mg	24	2	he	1.099	1.099	8.63	1978	0.06	100000	
K	39	2	he	5.460	5.460	8.71	232495	0.00	100000	
Se	82	3	HeHe	-1.105	-1.105	-49.58	47	-2.33	1000	
Fe	57	3	HeHe	11.964	11.964	11.61	1193	1.00	100000	
Cd	114	1	No Gas	0.036	0.036	31.25	340	0.01	1000	
Ca	44	1	No Gas	8.414	8.414	15.01	138334	0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6254038	0.30	5896472	106.06	70	120	
Sc	45	2	he	1386365	0.10	1271268	109.05	70	120	

Ge	72	1	No Gas	702221	1.77	682805	102.84	70	120	
In	115	1	No Gas	3590714	1.88	3697856	97.10	70	120	
Tb	159	1	No Gas	4053278	1.49	4404848	92.02	70	120	
Bi	209	1	No Gas	2127283	0.91	1997135	106.52	70	120	
Sc	45	3	HeHe	142820	0.54	132951	107.42	70	120	

Sample Report

Sample Table

Sample Name	1020192
Data File Name	035SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:42:28-04:00
Sample Type	Sample
Dilution	1
Comment	37996 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3206

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	40.289	40.289	0.77	1387954	0.00	1000	
Cr	52	1	No Gas	40.269	40.269	0.38	1259221	0.00	1000	
Mn	55	1	No Gas	41.587	41.587	0.39	1604236	0.00	1000	
Co	59	1	No Gas	40.167	40.167	1.56	1373780	0.00	1000	
Ni	60	1	No Gas	36.828	36.828	0.79	305082	0.01	1000	
Cu	63	1	No Gas	39.776	39.776	0.56	733580	0.01	1000	
Sr	88	1	No Gas	37.912	37.912	1.44	1639917	0.00	1000	
Ag	107	1	No Gas	16.060	16.060	0.85	290761	0.01	1000	
Al	27	1	No Gas	411.931	411.931	1.72	8405266	0.00	100000	
Sn	118	1	No Gas	39.061	39.061	0.22	412507	0.01	100	
Ti	47	1	No Gas	37.047	37.047	1.11	105255	0.04	2000	
Zn	66	1	No Gas	399.985	399.985	1.81	1870765	0.02	1000	
As	75	3	HeHe	37.855	37.855	1.44	14342	0.26	1000	
As	75	1	No Gas	38.512	38.512	1.20	216024	0.02	1000	
Sb	121	1	No Gas	40.291	40.291	1.35	572580	0.01	100	
Hg	201	1	No Gas	0.436	0.436	3.18	606	0.07	4	
Be	9	1	No Gas	37.446	37.446	1.07	133761	0.03	1000	
Pb	208	1	No Gas	40.363	40.363	1.34	1143827	0.00	1000	
Se	82	1	No Gas	37.676	37.676	0.66	9462	0.40	1000	
Mo	98	1	No Gas	40.612	40.612	1.41	464611	0.01	2000	
Ba	137	1	No Gas	418.805	418.805	1.94	1973844	0.02	1000	
Tl	205	1	No Gas	40.186	40.186	1.63	835542	0.00	1000	
U	238	1	No Gas	0.004	0.004	103.38	137	0.00	1000	
Na	23	2	he	446.515	446.515	0.44	1400013	0.03	100000	
Mg	24	2	he	415.040	415.040	0.26	705265	0.06	100000	
K	39	2	he	432.949	432.949	0.72	1394759	0.03	100000	
Se	82	3	HeHe	36.420	36.420	8.47	720	5.06	1000	
Fe	57	3	HeHe	426.307	426.307	2.54	36584	1.17	100000	
Cd	114	1	No Gas	39.431	39.431	1.78	326774	0.01	1000	
Ca	44	1	No Gas	413.179	413.179	1.54	501251	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6445081	0.91	5896472	109.30	70	120	
Sc	45	2	he	1428500	1.52	1271268	112.37	70	120	

Ge	72	1	No Gas	710043	1.57	682805	103.99	70	120	
In	115	1	No Gas	3633264	1.71	3697856	98.25	70	120	
Tb	159	1	No Gas	4240126	1.04	4404848	96.26	70	120	
Bi	209	1	No Gas	2114657	0.85	1997135	105.88	70	120	
Sc	45	3	HeHe	145003	0.88	132951	109.07	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	038_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:52:51-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	100.342	0.861	3607283	0.88	100	100.3	90	110	
Cr	52	1	No Gas	98.206	1.673	3188450	0.84	100	98.2	90	110	
Mn	55	1	No Gas	102.665	0.140	4081801	1.62	100	102.7	90	110	
Co	59	1	No Gas	97.691	2.070	3488283	1.72	100	97.7	90	110	
Ni	60	1	No Gas	95.621	1.296	792621	0.65	100	95.6	90	110	
Cu	63	1	No Gas	100.063	2.328	1925718	2.09	100	100.1	90	110	
Sr	88	1	No Gas	101.148	0.948	4567626	0.84	100	101.1	90	110	
Ag	107	1	No Gas	99.440	1.473	1949285	0.65	100	99.4	90	110	
Al	27	1	No Gas	101.775	2.134	2175255	0.90	100	101.8	90	110	
Sn	118	1	No Gas	98.236	1.799	1122983	0.86	100	98.2	90	110	
Tl	47	1	No Gas	89.161	1.635	264018	1.55	100	89.2	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	97.198	1.062	475366	1.47	100	97.2	90	110	
As	75	3	HeHe	93.041	2.372	37531	2.83	100	93.0	90	110	
As	75	1	No Gas	95.419	2.230	519516	0.45	100	95.4	90	110	
Sb	121	1	No Gas	99.710	1.543	1534440	1.72	100	99.7	90	110	
Hg	201	1	No Gas	1.988	3.343	2866	3.78	2	99.4	90	110	
Be	9	1	No Gas	92.661	1.055	345522	0.88	100	92.7	90	110	
Pb	208	1	No Gas	96.714	2.907	2976376	1.55	100	96.7	90	110	
Se	82	1	No Gas	94.700	1.740	24991	0.51	100	94.7	90	110	
Mo	98	1	No Gas	97.240	1.242	1203454	0.59	100	97.2	90	110	
Ba	137	1	No Gas	98.519	0.867	494076	0.19	100	98.5	90	110	
Tl	205	1	No Gas	96.547	0.675	2180762	1.40	100	96.5	90	110	
U	238	1	No Gas	103.411	0.916	2952826	2.73	100	103.4	90	110	
Na	23	2	he	1009.441	0.996	3153775	0.90	1000	100.9	90	110	
Mg	24	2	he	1023.870	2.192	1801121	2.53	1000	102.4	90	110	
K	39	2	he	995.257	1.211	3017136	0.36	1000	99.5	90	110	
Se	82	3	HeHe	91.168	1.627	1812	1.11	100	91.2	90	110	
Fe	57	3	HeHe	1014.418	1.032	92426	1.47	1000	101.4	90	110	
Cd	114	1	No Gas	95.639	1.179	858320	0.86	100	95.6	90	110	
Ca	44	1	No Gas	975.801	1.350	1043939	1.77	1000	97.6	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6729857	1.72	5896472	114.13	70	120	
Sc	45	2	he	1478963	0.94	1271268	116.34	70	120	
Ge	72	1	No Gas	751230	0.64	682805	110.02	70	120	
In	115	1	No Gas	3934751	1.69	3697856	106.41	70	120	
Tb	159	1	No Gas	4511436	0.78	4404848	102.42	70	120	
Bi	209	1	No Gas	2297520	1.88	1997135	115.04	70	120	
Sc	45	3	HeHe	154433	0.45	132951	116.16	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	039_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:56:14-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.174	1.0	7679	2.9	9	
Cr	52	1	No Gas	0.064	23.6	14473	2.3	4	
Mn	55	1	No Gas	0.315	12.0	49189	0.9	25	
Co	59	1	No Gas	0.002	104.2	359	19.9	1	
Ni	60	1	No Gas	-2.561	-0.5	923	12.6	25	
Cu	63	1	No Gas	0.219	3.3	4927	1.4	25	
Sr	88	1	No Gas	0.009	38.3	526	28.7	25	
Ag	107	1	No Gas	0.010	28.4	241	25.4	9	
Al	27	1	No Gas	0.878	2.8	28798	1.3	1000000	
Sn	118	1	No Gas	1.070	22.7	12598	21.3	25	
Ti	47	1	No Gas	0.380	22.4	1479	19.2	10000	
Zn	66	1	No Gas	0.642	5.8	4070	5.5	25	
As	75	3	HeHe	0.682	11.5	283	11.9	9	
As	75	1	No Gas	0.877	3.1	31391	2.1	9	
Sb	121	1	No Gas	0.326	29.4	5223	27.7	4	
Hg	201	1	No Gas	0.011	102.9	55	27.6	0.04	
Be	9	1	No Gas	0.006	95.0	49	39.9	1	
Pb	208	1	No Gas	0.049	10.9	1885	7.1	4	
Se	82	1	No Gas	0.928	133.5	146	229.6	25	
Mo	98	1	No Gas	1.111	27.7	14850	24.6	10000	
Ba	137	1	No Gas	0.050	11.8	303	10.1	25	
Tl	205	1	No Gas	0.039	30.6	933	27.7	1	
U	238	1	No Gas	0.195	20.3	5709	19.2	25	
Na	23	2	he	8.842	4.8	124345	2.4	2500000	
Mg	24	2	he	0.478	26.0	1015	20.3	2500000	
K	39	2	he	2.115	51.8	238599	0.8	5000000	
Se	82	3	HeHe	0.103	846.9	74	21.5	25	
Fe	57	3	HeHe	7.978	7.3	926	6.2	2500000	
Cd	114	1	No Gas	0.041	14.8	423	11.9	1	
Ca	44	1	No Gas	-6.992	-18.3	135814	1.3	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6791089	2.12	5896472	115.17	70	120	
Sc	45	2	he	1478720	1.50	1271268	116.32	70	120	
Ge	72	1	No Gas	763164	2.30	682805	111.77	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3992092	2.76	3697856	107.96	70	120	
Tb	159	1	No Gas	4554022	2.98	4404848	103.39	70	120	
Bi	209	1	No Gas	2337198	2.84	1997135	117.03	70	120	
Sc	45	3	HeHe	154133	0.82	132951	115.93	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	040LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:59:43-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	2.277	5.072	82954	5.53	2	113.8	70	130		
Cr	52	1	No Gas	2.144	2.412	81420	2.66	2	107.2	70	130		
Mn	55	1	No Gas	5.400	1.722	248458	0.66	5	108.0	70	130		
Co	59	1	No Gas	5.004	1.957	178473	2.08	5	100.1	70	130		
Ni	60	1	No Gas	2.301	2.532	40013	0.86	5	46.0	70	130	LLCCV Main CR1 Failed	N/A
Cu	63	1	No Gas	5.051	0.804	97588	0.97	5	101.0	70	130		
Sr	88	1	No Gas	4.695	1.416	211538	0.46	5	93.9	70	130		
Ag	107	1	No Gas	2.028	4.098	39306	3.14	2	101.4	70	130		
Al	27	1	No Gas	80.239	1.554	1712993	2.64	80	100.3	70	130		
Sn	118	1	No Gas	2.665	10.894	30311	11.43	2	133.2	70	130	LLCCV Main CR1 Failed	N/A
Tl	47	1	No Gas	4.875	2.731	14719	3.73	5	97.5	70	130		
Zn	66	1	No Gas	5.117	2.048	25809	2.04	5	102.3	70	130		
As	75	3	HeHe	3.196	1.675	1277	2.34	3	106.5	70	130		
As	75	1	No Gas	3.624	1.522	45181	1.76	3	120.8	70	130		
Sb	121	1	No Gas	2.142	3.901	32707	5.00	2	107.1	70	130		
Hg	201	1	No Gas	0.202	7.605	315	5.75	0.2	100.9	70	130		
Be	9	1	No Gas	0.931	2.046	3490	2.27	1	93.1	70	130		
Pb	208	1	No Gas	2.043	0.682	61231	1.61	2	102.2	70	130		
Se	82	1	No Gas	5.905	2.520	1455	2.37	5	118.1	70	130		
Mo	98	1	No Gas	2.507	5.975	31546	6.40	2	125.3	70	130		
Ba	137	1	No Gas	5.154	2.864	25207	1.80	5	103.1	70	130		
Tl	205	1	No Gas	0.975	4.456	21371	5.64	1	97.5	70	130		
U	238	1	No Gas	4.843	1.143	133946	1.08	5	96.9	70	130		
Na	23	2	he	111.962	2.312	424089	1.81	100.	112.0	70	130		
Mg	24	2	he	102.011	0.878	174470	0.91	100	102.0	70	130		
K	39	2	he	112.325	0.830	531372	0.23	100	112.3	70	130		
Se	82	3	HeHe	3.306	2.874	133	2.21	5	66.1	70	130	LLCCV Main CR1 Failed	N/A
Fe	57	3	HeHe	54.935	6.887	5120	7.85	50	109.9	70	130		
Cd	114	1	No Gas	1.086	4.884	9680	3.82	1	108.6	70	130		
Ca	44	1	No Gas	91.211	3.520	224849	0.94	100	91.2	70	130		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6711721	1.15	5896472	113.83	70	120	
Sc	45	2	he	1436675	0.31	1271268	113.01	70	120	
Ge	72	1	No Gas	733028	1.78	682805	107.36	70	120	
In	115	1	No Gas	3887074	1.18	3697856	105.12	70	120	
Tb	159	1	No Gas	4393092	2.33	4404848	99.73	70	120	
Bi	209	1	No Gas	2225007	1.29	1997135	111.41	70	120	
Sc	45	3	HeHe	152061	1.55	132951	114.37	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	087_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T17:46:58-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	96.277	1.413	3346622	1.78	100	96.3	90	110	
Cr	52	1	No Gas	94.089	0.846	2954246	0.68	100	94.1	90	110	
Mn	55	1	No Gas	98.093	2.029	3771874	1.68	100	98.1	90	110	
Co	59	1	No Gas	94.925	2.353	3277057	1.72	100	94.9	90	110	
Ni	60	1	No Gas	91.820	1.926	736713	1.37	100	91.8	90	110	
Cu	63	1	No Gas	96.511	2.579	1795791	2.21	100	96.5	90	110	
Sr	88	1	No Gas	99.017	0.949	4323200	0.74	100	99.0	90	110	
Ag	107	1	No Gas	99.540	0.725	1842129	1.53	100	99.5	90	110	
Al	27	1	No Gas	98.628	1.406	2038642	1.16	100	98.6	90	110	
Sn	118	1	No Gas	96.622	0.160	1042807	1.47	100	96.6	90	110	
Tl	47	1	No Gas	87.571	1.419	250713	0.80	100	87.6	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	93.917	2.071	444100	1.86	100	93.9	90	110	
As	75	3	HeHe	95.007	1.432	34660	0.71	100	95.0	90	110	
As	75	1	No Gas	93.233	1.224	491440	0.82	100	93.2	90	110	
Sb	121	1	No Gas	98.466	0.982	1430385	1.25	100	98.5	90	110	
Hg	201	1	No Gas	1.962	4.624	2621	5.45	2	98.1	90	110	
Be	9	1	No Gas	92.991	1.867	335245	1.27	100	93.0	90	110	
Pb	208	1	No Gas	97.324	1.535	2773823	1.36	100	97.3	90	110	
Se	82	1	No Gas	94.990	1.253	24238	0.63	100	95.0	90	110	
Mo	98	1	No Gas	95.110	1.314	1111157	0.91	100	95.1	90	110	
Ba	137	1	No Gas	99.682	0.571	462490	1.20	100	99.7	90	110	
Tl	205	1	No Gas	97.692	1.412	2043157	1.65	100	97.7	90	110	
U	238	1	No Gas	104.691	1.339	2767203	0.06	100	104.7	90	110	
Na	23	2	he	1031.370	1.222	3057558	1.74	1000	103.1	90	110	
Mg	24	2	he	1043.735	1.705	1743067	1.22	1000	104.4	90	110	
K	39	2	he	1010.395	0.915	2904911	0.71	1000	101.0	90	110	
Se	82	3	HeHe	90.493	5.510	1627	4.74	100	90.5	90	110	
Fe	57	3	HeHe	1022.058	1.295	84234	2.11	1000	102.2	90	110	
Cd	114	1	No Gas	93.460	1.823	791696	0.37	100	93.5	90	110	
Ca	44	1	No Gas	950.131	1.589	986297	1.03	1000	95.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6506305	0.64	5896472	110.34	70	120	
Sc	45	2	he	1404268	1.54	1271268	110.46	70	120	
Ge	72	1	No Gas	703336	1.50	682805	103.01	70	120	
In	115	1	No Gas	3714175	1.47	3697856	100.44	70	120	
Tb	159	1	No Gas	4173837	1.69	4404848	94.76	70	120	
Bi	209	1	No Gas	2127246	1.37	1997135	106.51	70	120	
Sc	45	3	HeHe	139691	1.05	132951	105.07	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	088_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T17:50:22-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.080	72.0	4064	51.2	9	
Cr	52	1	No Gas	0.097	14.6	14707	3.5	4	
Mn	55	1	No Gas	0.281	26.9	45217	5.4	25	
Co	59	1	No Gas	0.003	54.0	374	15.0	1	
Ni	60	1	No Gas	-2.423	-1.2	1930	13.1	25	
Cu	63	1	No Gas	0.156	6.7	3509	3.5	25	
Sr	88	1	No Gas	0.008	16.9	456	14.6	25	
Ag	107	1	No Gas	0.014	6.0	296	7.8	9	
Al	27	1	No Gas	0.703	0.9	23687	1.7	1000000	
Sn	118	1	No Gas	1.113	19.1	12161	19.5	25	
Ti	47	1	No Gas	0.427	28.5	1530	24.3	10000	
Zn	66	1	No Gas	0.412	0.7	2773	1.5	25	
As	75	3	HeHe	0.535	18.3	203	17.2	9	
As	75	1	No Gas	0.854	24.3	29579	5.0	9	
Sb	121	1	No Gas	0.278	30.7	4149	30.1	4	
Hg	201	1	No Gas	0.014	54.4	55	16.5	0.04	
Be	9	1	No Gas	0.006	47.8	49	23.4	1	
Pb	208	1	No Gas	0.030	4.2	1189	5.2	4	
Se	82	1	No Gas	1.390	51.1	252	72.7	25	
Mo	98	1	No Gas	0.904	28.6	11386	26.9	10000	
Ba	137	1	No Gas	0.041	67.0	233	54.3	25	
Tl	205	1	No Gas	0.037	9.4	807	10.3	1	
U	238	1	No Gas	0.210	21.5	5661	22.0	25	
Na	23	2	he	9.884	13.0	119814	2.8	2500000	
Mg	24	2	he	0.428	27.6	874	22.8	2500000	
K	39	2	he	3.042	50.3	226686	0.4	5000000	
Se	82	3	HeHe	0.183	474.8	69	22.6	25	
Fe	57	3	HeHe	7.654	13.6	815	9.9	2500000	
Cd	114	1	No Gas	0.037	15.3	360	13.9	1	
Ca	44	1	No Gas	-9.881	-19.0	125869	1.1	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6421494	2.00	5896472	108.90	70	120	
Sc	45	2	he	1389979	2.15	1271268	109.34	70	120	
Ge	72	1	No Gas	699763	0.63	682805	102.48	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3697967	3.53	3697856	100.00	70	120	
Tb	159	1	No Gas	4128851	0.67	4404848	93.73	70	120	
Bi	209	1	No Gas	2156669	2.08	1997135	107.99	70	120	
Sc	45	3	HeHe	140175	0.78	132951	105.43	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	089LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T17:53:52-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.193	3.206	76328	4.73	2	109.7	70	130	
Cr	52	1	No Gas	2.191	0.679	79136	1.96	2	109.5	70	130	
Mn	55	1	No Gas	5.324	2.940	234190	1.00	5	106.5	70	130	
Co	59	1	No Gas	4.884	1.846	166220	1.74	5	97.7	70	130	
Ni	60	1	No Gas	2.372	4.547	38733	3.32	5	47.4	70	130	LLCCV Main CR1 Failed
Cu	63	1	No Gas	5.003	1.329	92244	1.50	5	100.1	70	130	
Sr	88	1	No Gas	4.602	0.591	197885	2.00	5	92.0	70	130	
Ag	107	1	No Gas	2.041	4.579	36971	3.13	2	102.1	70	130	
Al	27	1	No Gas	82.359	1.867	1677597	2.96	80	102.9	70	130	
Sn	118	1	No Gas	2.374	11.346	25257	11.78	2	118.7	70	130	
Tl	47	1	No Gas	4.813	3.084	13874	4.53	5	96.3	70	130	
Zn	66	1	No Gas	5.199	0.478	25009	1.95	5	104.0	70	130	
As	75	3	HeHe	2.953	8.053	1101	6.31	3	98.4	70	130	
As	75	1	No Gas	3.564	6.078	42810	0.93	3	118.8	70	130	
Sb	121	1	No Gas	2.172	1.131	30989	2.00	2	108.6	70	130	
Hg	201	1	No Gas	0.189	10.692	285	7.31	0.2	94.5	70	130	
Be	9	1	No Gas	0.960	2.891	3431	1.52	1	96.0	70	130	
Pb	208	1	No Gas	1.992	3.381	57103	3.01	2	99.6	70	130	
Se	82	1	No Gas	5.042	8.947	1172	10.50	5	100.8	70	130	
Mo	98	1	No Gas	2.334	4.562	27508	5.12	2	116.7	70	130	
Ba	137	1	No Gas	5.168	3.144	24032	2.69	5	103.4	70	130	
Tl	205	1	No Gas	0.989	1.875	20729	3.58	1	98.9	70	130	
U	238	1	No Gas	4.831	2.235	127806	0.22	5	96.6	70	130	
Na	23	2	he	108.296	2.329	410388	0.42	100	108.3	70	130	
Mg	24	2	he	101.032	2.496	171577	1.82	100	101.0	70	130	
K	39	2	he	106.177	2.801	511048	0.67	100	106.2	70	130	
Se	82	3	HeHe	4.419	21.011	144	12.00	5	88.4	70	130	
Fe	57	3	HeHe	56.391	3.955	4901	5.68	50	112.8	70	130	
Cd	114	1	No Gas	1.042	2.845	8689	4.73	1	104.2	70	130	
Ca	44	1	No Gas	89.389	2.573	212968	1.17	100	89.4	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6404916	1.58	5896472	108.62	70	120	
Sc	45	2	he	1426766	1.40	1271268	112.23	70	120	
Ge	72	1	No Gas	700678	2.14	682805	102.62	70	120	
In	115	1	No Gas	3633723	2.02	3697856	98.27	70	120	
Tb	159	1	No Gas	4175467	0.75	4404848	94.79	70	120	
Bi	209	1	No Gas	2128959	2.04	1997135	106.60	70	120	
Sc	45	3	HeHe	141962	1.90	132951	106.78	70	120	

Sample Report

Sample Table

Sample Name	9980614001
Data File Name	091SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T18:00:51-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3504

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	6.266	6.266	2.59	214575	0.00	1000	
Cr	52	1	No Gas	4.144	4.144	1.17	138584	0.00	1000	
Mn	55	1	No Gas	4.843	4.843	1.26	215155	0.00	1000	
Co	59	1	No Gas	0.215	0.215	3.11	7554	0.00	1000	
Ni	60	1	No Gas	-1.635	-1.635	-1.85	7935	-0.02	1000	
Cu	63	1	No Gas	0.797	0.797	3.04	15153	0.01	1000	
Sr	88	1	No Gas	2.266	2.266	0.66	97014	0.00	1000	
Ag	107	1	No Gas	0.025	0.025	26.10	474	0.01	1000	
Al	27	1	No Gas	3758.744	3758.744	0.61	75755869	0.00	100000	
Sn	118	1	No Gas	0.892	0.892	14.85	9477	0.01	100	
Ti	47	1	No Gas	57.866	57.866	0.77	162397	0.04	2000	
Zn	66	1	No Gas	3.244	3.244	1.78	15849	0.02	1000	
As	75	3	HeHe	1.353	1.353	8.79	504	0.27	1000	
As	75	1	No Gas	1.830	1.830	1.79	34120	0.01	1000	
Sb	121	1	No Gas	0.236	0.236	7.20	3434	0.01	100	
Hg	201	1	No Gas	0.074	0.074	10.39	133	0.06	4	
Be	9	1	No Gas	0.058	0.058	7.50	229	0.03	1000	
Pb	208	1	No Gas	10.651	10.651	1.18	303655	0.00	1000	
Se	82	1	No Gas	1.111	1.111	53.34	179	0.62	1000	
Mo	98	1	No Gas	0.508	0.508	18.06	6562	0.01	2000	
Ba	137	1	No Gas	11.090	11.090	1.60	51190	0.02	1000	
Tl	205	1	No Gas	0.027	0.027	7.61	600	0.00	1000	
U	238	1	No Gas	0.442	0.442	5.74	11724	0.00	1000	
Na	23	2	he	25.930	25.930	3.24	167901	0.02	100000	
Mg	24	2	he	152.087	152.087	1.34	255205	0.06	100000	
K	39	2	he	143.490	143.490	1.94	604655	0.02	100000	
Se	82	3	HeHe	0.049	0.049	536.29	67	0.07	1000	
Fe	57	3	HeHe	960.464	960.464	0.91	79602	1.21	100000	
Cd	114	1	No Gas	0.055	0.055	2.27	500	0.01	1000	
Ca	44	1	No Gas	57.143	57.143	3.94	183670	0.03	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6372986	1.38	5896472	108.08	70	120	
Sc	45	2	he	1410146	1.13	1271268	110.92	70	120	
Ge	72	1	No Gas	684986	1.83	682805	100.32	70	120	

In	115	1	No Gas	3581031	0.87	3697856	96.84	70	120	
Tb	159	1	No Gas	4149010	1.08	4404848	94.19	70	120	
Bi	209	1	No Gas	2125810	1.46	1997135	106.44	70	120	
Sc	45	3	HeHe	140460	0.78	132951	105.65	70	120	

Sample Report

Sample Table

Sample Name	9980614002
Data File Name	092SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T18:04:21-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3505

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	5.911	5.911	0.97	202754	0.00	1000	
Cr	52	1	No Gas	4.579	4.579	1.30	152112	0.00	1000	
Mn	55	1	No Gas	4.194	4.194	1.41	191203	0.00	1000	
Co	59	1	No Gas	0.115	0.115	2.91	4156	0.00	1000	
Ni	60	1	No Gas	-1.742	-1.742	-1.06	7125	-0.02	1000	
Cu	63	1	No Gas	0.257	0.257	1.66	5337	0.00	1000	
Sr	88	1	No Gas	1.773	1.773	2.42	76050	0.00	1000	
Ag	107	1	No Gas	0.006	0.006	60.34	152	0.00	1000	
Al	27	1	No Gas	3320.437	3320.437	1.72	67027077	0.00	100000	
Sn	118	1	No Gas	0.609	0.609	12.20	6520	0.01	100	
Ti	47	1	No Gas	78.741	78.741	2.80	221218	0.04	2000	
Zn	66	1	No Gas	2.127	2.127	0.86	10700	0.02	1000	
As	75	3	HeHe	1.018	1.018	14.44	376	0.27	1000	
As	75	1	No Gas	1.310	1.310	1.60	31622	0.00	1000	
Sb	121	1	No Gas	0.100	0.100	10.55	1522	0.01	100	
Hg	201	1	No Gas	0.037	0.037	2.42	84	0.04	4	
Be	9	1	No Gas	0.279	0.279	4.82	1014	0.03	1000	
Pb	208	1	No Gas	3.637	3.637	3.13	103858	0.00	1000	
Se	82	1	No Gas	0.517	0.517	117.05	30	1.74	1000	
Mo	98	1	No Gas	0.291	0.291	30.12	4119	0.01	2000	
Ba	137	1	No Gas	9.003	9.003	2.67	40811	0.02	1000	
Tl	205	1	No Gas	0.025	0.025	13.17	559	0.00	1000	
U	238	1	No Gas	0.427	0.427	0.36	11331	0.00	1000	
Na	23	2	he	20.241	20.241	2.93	150183	0.01	100000	
Mg	24	2	he	133.271	133.271	1.04	221776	0.06	100000	
K	39	2	he	108.839	108.839	0.77	507904	0.02	100000	
Se	82	3	HeHe	0.737	0.737	70.65	77	0.95	1000	
Fe	57	3	HeHe	490.682	490.682	2.73	40180	1.22	100000	
Cd	114	1	No Gas	0.039	0.039	4.50	363	0.01	1000	
Ca	44	1	No Gas	18.927	18.927	21.47	150405	0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6382012	1.26	5896472	108.23	70	120	
Sc	45	2	he	1398148	0.42	1271268	109.98	70	120	
Ge	72	1	No Gas	687443	2.17	682805	100.68	70	120	

In	115	1	No Gas	3573662	1.60	3697856	96.64	70	120	
Tb	159	1	No Gas	4072382	1.82	4404848	92.45	70	120	
Bi	209	1	No Gas	2126363	2.73	1997135	106.47	70	120	
Sc	45	3	HeHe	138516	1.84	132951	104.19	70	120	

Sample Report

Sample Table

Sample Name	9980614003
Data File Name	093SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T18:07:51-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3506

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	4.185	4.185	2.85	142990	0.00	1000	
Cr	52	1	No Gas	2.237	2.237	3.62	79754	0.00	1000	
Mn	55	1	No Gas	3.340	3.340	1.61	158262	0.00	1000	
Co	59	1	No Gas	0.093	0.093	6.90	3386	0.00	1000	
Ni	60	1	No Gas	-2.083	-2.083	-0.82	4491	-0.05	1000	
Cu	63	1	No Gas	0.392	0.392	6.60	7738	0.01	1000	
Sr	88	1	No Gas	0.757	0.757	4.18	32306	0.00	1000	
Ag	107	1	No Gas	0.011	0.011	33.91	230	0.00	1000	
Al	27	1	No Gas	1893.717	1893.717	1.57	37977092	0.00	100000	
Sn	118	1	No Gas	0.599	0.599	3.62	6390	0.01	100	
Ti	47	1	No Gas	40.249	40.249	0.96	112469	0.04	2000	
Zn	66	1	No Gas	2.181	2.181	7.76	10878	0.02	1000	
As	75	3	HeHe	1.007	1.007	8.71	380	0.26	1000	
As	75	1	No Gas	1.098	1.098	24.27	30383	0.00	1000	
Sb	121	1	No Gas	0.140	0.140	4.36	2071	0.01	100	
Hg	201	1	No Gas	0.055	0.055	28.62	108	0.05	4	
Be	9	1	No Gas	0.039	0.039	4.53	161	0.02	1000	
Pb	208	1	No Gas	6.869	6.869	1.83	195677	0.00	1000	
Se	82	1	No Gas	1.111	1.111	90.68	177	0.63	1000	
Mo	98	1	No Gas	0.372	0.372	24.70	5010	0.01	2000	
Ba	137	1	No Gas	4.617	4.617	3.90	21131	0.02	1000	
Tl	205	1	No Gas	0.008	0.008	24.33	193	0.00	1000	
U	238	1	No Gas	0.439	0.439	9.65	11612	0.00	1000	
Na	23	2	he	26.707	26.707	4.89	166726	0.02	100000	
Mg	24	2	he	75.152	75.152	0.79	123690	0.06	100000	
K	39	2	he	74.504	74.504	5.31	412173	0.02	100000	
Se	82	3	HeHe	-0.030	-0.030	-1147.63	66	-0.04	1000	
Fe	57	3	HeHe	1123.186	1123.186	1.69	93956	1.20	100000	
Cd	114	1	No Gas	0.035	0.035	6.98	333	0.01	1000	
Ca	44	1	No Gas	34.582	34.582	6.03	163058	0.02	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6340126	0.55	5896472	107.52	70	120	
Sc	45	2	he	1382149	2.25	1271268	108.72	70	120	
Ge	72	1	No Gas	687624	1.68	682805	100.71	70	120	

In	115	1	No Gas	3565471	1.78	3697856	96.42	70	120	
Tb	159	1	No Gas	4111237	2.57	4404848	93.33	70	120	
Bi	209	1	No Gas	2123383	2.14	1997135	106.32	70	120	
Sc	45	3	HeHe	141831	0.67	132951	106.68	70	120	

Sample Report

Sample Table

Sample Name	9980614004
Data File Name	094SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T18:11:20-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3507

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	5.517	5.517	2.35	190157	0.00	1000	
Cr	52	1	No Gas	3.615	3.615	3.26	123094	0.00	1000	
Mn	55	1	No Gas	3.586	3.586	2.67	169191	0.00	1000	
Co	59	1	No Gas	0.109	0.109	6.34	3986	0.00	1000	
Ni	60	1	No Gas	-1.912	-1.912	-0.91	5855	-0.03	1000	
Cu	63	1	No Gas	0.191	0.191	4.01	4139	0.00	1000	
Sr	88	1	No Gas	0.955	0.955	0.99	41173	0.00	1000	
Ag	107	1	No Gas	0.006	0.006	35.97	148	0.00	1000	
Al	27	1	No Gas	3123.047	3123.047	1.08	63313670	0.00	100000	
Sn	118	1	No Gas	0.399	0.399	14.18	4336	0.01	100	
Ti	47	1	No Gas	48.741	48.741	1.50	137639	0.04	2000	
Zn	66	1	No Gas	1.312	1.312	8.20	6954	0.02	1000	
As	75	3	HeHe	1.074	1.074	12.49	398	0.27	1000	
As	75	1	No Gas	1.509	1.509	7.56	32742	0.00	1000	
Sb	121	1	No Gas	0.064	0.064	24.56	1019	0.01	100	
Hg	201	1	No Gas	0.039	0.039	7.29	88	0.04	4	
Be	9	1	No Gas	0.100	0.100	3.95	380	0.03	1000	
Pb	208	1	No Gas	2.906	2.906	1.79	83584	0.00	1000	
Se	82	1	No Gas	0.946	0.946	83.13	139	0.68	1000	
Mo	98	1	No Gas	0.214	0.214	44.99	3249	0.01	2000	
Ba	137	1	No Gas	5.289	5.289	2.35	24586	0.02	1000	
Tl	205	1	No Gas	0.015	0.015	22.08	348	0.00	1000	
U	238	1	No Gas	0.595	0.595	7.89	15857	0.00	1000	
Na	23	2	he	19.167	19.167	12.62	146122	0.01	100000	
Mg	24	2	he	111.747	111.747	3.47	184784	0.06	100000	
K	39	2	he	78.268	78.268	4.80	424358	0.02	100000	
Se	82	3	HeHe	-0.364	-0.364	-366.20	59	-0.62	1000	
Fe	57	3	HeHe	1046.905	1046.905	1.36	86147	1.22	100000	
Cd	114	1	No Gas	0.028	0.028	14.05	280	0.01	1000	
Ca	44	1	No Gas	18.153	18.153	11.67	150358	0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6409797	1.01	5896472	108.71	70	120	
Sc	45	2	he	1389853	2.62	1271268	109.33	70	120	
Ge	72	1	No Gas	685477	1.79	682805	100.39	70	120	

In	115	1	No Gas	3583348	0.97	3697856	96.90	70	120	
Tb	159	1	No Gas	4174313	0.30	4404848	94.77	70	120	
Bi	209	1	No Gas	2139032	2.01	1997135	107.11	70	120	
Sc	45	3	HeHe	139520	2.72	132951	104.94	70	120	

Sample Report

Sample Table

Sample Name	9980614005
Data File Name	095SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T18:14:49-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3508

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	5.158	5.158	4.79	176043	0.00	1000	
Cr	52	1	No Gas	4.310	4.310	2.59	143026	0.00	1000	
Mn	55	1	No Gas	4.168	4.168	1.83	189122	0.00	1000	
Co	59	1	No Gas	0.125	0.125	3.03	4486	0.00	1000	
Ni	60	1	No Gas	-1.753	-1.753	-2.03	7002	-0.03	1000	
Cu	63	1	No Gas	0.249	0.249	0.94	5155	0.00	1000	
Sr	88	1	No Gas	0.950	0.950	0.68	40568	0.00	1000	
Ag	107	1	No Gas	0.007	0.007	54.17	167	0.00	1000	
Al	27	1	No Gas	3398.361	3398.361	2.22	68193781	0.00	100000	
Sn	118	1	No Gas	0.448	0.448	12.18	4842	0.01	100	
Ti	47	1	No Gas	50.471	50.471	1.86	141057	0.04	2000	
Zn	66	1	No Gas	1.416	1.416	3.79	7362	0.02	1000	
As	75	3	HeHe	0.723	0.723	0.87	270	0.27	1000	
As	75	1	No Gas	0.917	0.917	14.57	29525	0.00	1000	
Sb	121	1	No Gas	0.078	0.078	24.75	1211	0.01	100	
Hg	201	1	No Gas	0.046	0.046	6.07	95	0.05	4	
Be	9	1	No Gas	0.109	0.109	15.47	409	0.03	1000	
Pb	208	1	No Gas	3.027	3.027	2.37	85481	0.00	1000	
Se	82	1	No Gas	1.204	1.204	48.39	200	0.60	1000	
Mo	98	1	No Gas	0.231	0.231	36.55	3446	0.01	2000	
Ba	137	1	No Gas	5.790	5.790	1.12	26579	0.02	1000	
Tl	205	1	No Gas	0.015	0.015	25.77	337	0.00	1000	
U	238	1	No Gas	0.721	0.721	2.82	18861	0.00	1000	
Na	23	2	he	21.685	21.685	2.89	153034	0.01	100000	
Mg	24	2	he	115.379	115.379	1.74	190405	0.06	100000	
K	39	2	he	78.189	78.189	4.06	423249	0.02	100000	
Se	82	3	HeHe	0.080	0.080	1131.69	66	0.12	1000	
Fe	57	3	HeHe	555.299	555.299	1.62	45601	1.22	100000	
Cd	114	1	No Gas	0.033	0.033	17.66	317	0.01	1000	
Ca	44	1	No Gas	28.665	28.665	7.44	158017	0.02	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6345212	0.70	5896472	107.61	70	120	
Sc	45	2	he	1386644	1.60	1271268	109.08	70	120	
Ge	72	1	No Gas	688294	0.23	682805	100.80	70	120	

In	115	1	No Gas	3573719	1.89	3697856	96.64	70	120	
Tb	159	1	No Gas	4122734	1.49	4404848	93.60	70	120	
Bi	209	1	No Gas	2100921	1.68	1997135	105.20	70	120	
Sc	45	3	HeHe	138966	1.65	132951	104.52	70	120	

Sample Report

Sample Table

Sample Name	9980614006
Data File Name	096SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T18:18:19-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3509

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	4.707	4.707	1.40	163168	0.00	1000	
Cr	52	1	No Gas	3.174	3.174	1.19	109990	0.00	1000	
Mn	55	1	No Gas	6.103	6.103	0.87	264917	0.00	1000	
Co	59	1	No Gas	0.135	0.135	3.34	4871	0.00	1000	
Ni	60	1	No Gas	-1.646	-1.646	-5.16	7932	-0.02	1000	
Cu	63	1	No Gas	0.837	0.837	2.17	16059	0.01	1000	
Sr	88	1	No Gas	2.429	2.429	1.62	105075	0.00	1000	
Ag	107	1	No Gas	0.012	0.012	25.73	244	0.00	1000	
Al	27	1	No Gas	2422.685	2422.685	1.93	49341657	0.00	100000	
Sn	118	1	No Gas	0.618	0.618	6.72	6702	0.01	100	
Ti	47	1	No Gas	105.602	105.602	2.06	299178	0.04	2000	
Zn	66	1	No Gas	2.591	2.591	5.17	12961	0.02	1000	
As	75	3	HeHe	0.839	0.839	3.64	315	0.27	1000	
As	75	1	No Gas	1.286	1.286	6.63	31790	0.00	1000	
Sb	121	1	No Gas	0.170	0.170	0.58	2534	0.01	100	
Hg	201	1	No Gas	0.054	0.054	30.98	107	0.05	4	
Be	9	1	No Gas	0.033	0.033	25.72	144	0.02	1000	
Pb	208	1	No Gas	10.291	10.291	3.02	295948	0.00	1000	
Se	82	1	No Gas	0.871	0.871	97.86	119	0.73	1000	
Mo	98	1	No Gas	0.387	0.387	20.58	5263	0.01	2000	
Ba	137	1	No Gas	6.036	6.036	3.27	28065	0.02	1000	
Tl	205	1	No Gas	0.020	0.020	14.74	444	0.00	1000	
U	238	1	No Gas	0.269	0.269	4.62	7198	0.00	1000	
Na	23	2	he	42.315	42.315	4.37	211125	0.02	100000	
Mg	24	2	he	147.349	147.349	1.54	242621	0.06	100000	
K	39	2	he	118.193	118.193	0.35	527132	0.02	100000	
Se	82	3	HeHe	0.528	0.528	201.59	75	0.71	1000	
Fe	57	3	HeHe	1091.034	1091.034	1.47	90297	1.21	100000	
Cd	114	1	No Gas	0.046	0.046	12.01	427	0.01	1000	
Ca	44	1	No Gas	90.153	90.153	4.99	214812	0.04	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6439605	1.00	5896472	109.21	70	120	
Sc	45	2	he	1383694	1.23	1271268	108.84	70	120	
Ge	72	1	No Gas	690465	0.59	682805	101.12	70	120	

In	115	1	No Gas	3626346	1.27	3697856	98.07	70	120	
Tb	159	1	No Gas	4176471	0.94	4404848	94.82	70	120	
Bi	209	1	No Gas	2144916	1.40	1997135	107.40	70	120	
Sc	45	3	HeHe	140319	0.95	132951	105.54	70	120	

Sample Report

Sample Table

Sample Name	9980614007
Data File Name	097SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T18:21:49-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3510

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	4.136	4.136	5.52	134646	0.00	1000	
Cr	52	1	No Gas	4.241	4.241	5.75	134133	0.00	1000	
Mn	55	1	No Gas	3.608	3.608	6.87	160199	0.00	1000	
Co	59	1	No Gas	0.216	0.216	4.30	7172	0.00	1000	
Ni	60	1	No Gas	-1.223	-1.223	-10.09	10497	-0.01	1000	
Cu	63	1	No Gas	0.406	0.406	5.40	7614	0.01	1000	
Sr	88	1	No Gas	1.033	1.033	2.21	42005	0.00	1000	
Ag	107	1	No Gas	0.007	0.007	17.88	156	0.00	1000	
Al	27	1	No Gas	4170.970	4170.970	5.91	79653825	0.01	100000	
Sn	118	1	No Gas	0.401	0.401	9.27	4101	0.01	100	
Ti	47	1	No Gas	41.676	41.676	6.37	110892	0.04	2000	
Zn	66	1	No Gas	1.888	1.888	4.51	9081	0.02	1000	
As	75	3	HeHe	0.367	0.367	16.11	141	0.26	1000	
As	75	1	No Gas	1.308	1.308	26.02	29919	0.00	1000	
Sb	121	1	No Gas	0.078	0.078	17.91	1141	0.01	100	
Hg	201	1	No Gas	0.063	0.063	37.34	109	0.06	4	
Be	9	1	No Gas	0.049	0.049	14.56	189	0.03	1000	
Pb	208	1	No Gas	3.238	3.238	6.65	85695	0.00	1000	
Se	82	1	No Gas	0.552	0.552	194.36	42	1.32	1000	
Mo	98	1	No Gas	0.260	0.260	41.98	3532	0.01	2000	
Ba	137	1	No Gas	5.660	5.660	7.46	24856	0.02	1000	
Tl	205	1	No Gas	0.019	0.019	30.45	389	0.00	1000	
U	238	1	No Gas	0.257	0.257	9.64	6305	0.00	1000	
Na	23	2	he	16.063	16.063	9.43	134764	0.01	100000	
Mg	24	2	he	125.811	125.811	1.28	204145	0.06	100000	
K	39	2	he	59.803	59.803	4.20	368739	0.02	100000	
Se	82	3	HeHe	-1.030	-1.030	-56.12	48	-2.16	1000	
Fe	57	3	HeHe	652.297	652.297	1.77	53872	1.21	100000	
Cd	114	1	No Gas	0.034	0.034	42.89	303	0.01	1000	
Ca	44	1	No Gas	17.889	17.889	34.18	141520	0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6047588	3.79	5896472	102.56	70	120	
Sc	45	2	he	1363427	1.80	1271268	107.25	70	120	
Ge	72	1	No Gas	650505	6.18	682805	95.27	70	120	

In	115	1	No Gas	3380393	5.91	3697856	91.41	70	120	
Tb	159	1	No Gas	3951042	4.56	4404848	89.70	70	120	
Bi	209	1	No Gas	1972580	4.72	1997135	98.77	70	120	
Sc	45	3	HeHe	139799	1.30	132951	105.15	70	120	

Sample Report

Sample Table

Sample Name	9980614008
Data File Name	098SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T18:25:17-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3511

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	3.226	3.226	1.71	111035	0.00	1000	
Cr	52	1	No Gas	2.266	2.266	4.53	81008	0.00	1000	
Mn	55	1	No Gas	1.681	1.681	2.85	97116	0.00	1000	
Co	59	1	No Gas	0.097	0.097	9.11	3560	0.00	1000	
Ni	60	1	No Gas	-1.891	-1.891	-2.49	5981	-0.03	1000	
Cu	63	1	No Gas	1.076	1.076	1.48	20243	0.01	1000	
Sr	88	1	No Gas	0.883	0.883	2.88	37877	0.00	1000	
Ag	107	1	No Gas	0.006	0.006	47.07	137	0.00	1000	
Al	27	1	No Gas	1889.712	1889.712	1.93	38082127	0.00	100000	
Sn	118	1	No Gas	0.438	0.438	11.57	4771	0.01	100	
Ti	47	1	No Gas	45.031	45.031	0.91	126406	0.04	2000	
Zn	66	1	No Gas	1.887	1.887	3.69	9569	0.02	1000	
As	75	3	HeHe	0.358	0.358	3.29	140	0.26	1000	
As	75	1	No Gas	0.908	0.908	3.02	29598	0.00	1000	
Sb	121	1	No Gas	0.169	0.169	18.10	2489	0.01	100	
Hg	201	1	No Gas	0.047	0.047	25.02	98	0.05	4	
Be	9	1	No Gas	0.026	0.026	23.29	118	0.02	1000	
Pb	208	1	No Gas	8.268	8.268	0.83	235371	0.00	1000	
Se	82	1	No Gas	1.058	1.058	92.07	165	0.64	1000	
Mo	98	1	No Gas	0.275	0.275	23.74	3955	0.01	2000	
Ba	137	1	No Gas	3.395	3.395	1.89	15872	0.02	1000	
Tl	205	1	No Gas	0.006	0.006	30.32	156	0.00	1000	
U	238	1	No Gas	0.165	0.165	8.81	4386	0.00	1000	
Na	23	2	he	25.430	25.430	4.94	163666	0.02	100000	
Mg	24	2	he	61.504	61.504	2.02	101560	0.06	100000	
K	39	2	he	60.673	60.673	2.32	377322	0.02	100000	
Se	82	3	HeHe	-0.318	-0.318	-410.43	61	-0.52	1000	
Fe	57	3	HeHe	225.815	225.815	0.82	18978	1.19	100000	
Cd	114	1	No Gas	0.044	0.044	9.76	407	0.01	1000	
Ca	44	1	No Gas	19.321	19.321	5.36	150464	0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6370687	1.03	5896472	108.04	70	120	
Sc	45	2	he	1386343	1.06	1271268	109.05	70	120	
Ge	72	1	No Gas	687186	1.73	682805	100.64	70	120	

In	115	1	No Gas	3596903	2.08	3697856	97.27	70	120	
Tb	159	1	No Gas	4193282	1.25	4404848	95.20	70	120	
Bi	209	1	No Gas	2121750	2.06	1997135	106.24	70	120	
Sc	45	3	HeHe	141370	0.53	132951	106.33	70	120	

Sample Report

Sample Table

Sample Name	9980614009
Data File Name	099SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T18:28:47-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3512

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	5.340	5.340	0.93	185939	0.00	1000	
Cr	52	1	No Gas	21.262	21.262	1.00	673497	0.00	1000	
Mn	55	1	No Gas	2.419	2.419	5.22	126674	0.00	1000	
Co	59	1	No Gas	0.154	0.154	4.96	5549	0.00	1000	
Ni	60	1	No Gas	4.369	4.369	1.22	54649	0.01	1000	
Cu	63	1	No Gas	1.903	1.903	0.81	35884	0.01	1000	
Sr	88	1	No Gas	1.074	1.074	1.16	46780	0.00	1000	
Ag	107	1	No Gas	0.006	0.006	46.10	152	0.00	1000	
Al	27	1	No Gas	9440.577	9440.577	1.56	193293607	0.00	100000	
Sn	118	1	No Gas	0.477	0.477	7.81	5205	0.01	100	
Ti	47	1	No Gas	46.736	46.736	1.35	133311	0.04	2000	
Zn	66	1	No Gas	3.593	3.593	1.77	17737	0.02	1000	
As	75	3	HeHe	0.406	0.406	11.79	157	0.26	1000	
As	75	1	No Gas	0.559	0.559	58.37	28348	0.00	1000	
Sb	121	1	No Gas	0.119	0.119	17.92	1811	0.01	100	
Hg	201	1	No Gas	0.072	0.072	32.94	130	0.06	4	
Be	9	1	No Gas	0.178	0.178	7.29	665	0.03	1000	
Pb	208	1	No Gas	5.341	5.341	1.58	152382	0.00	1000	
Se	82	1	No Gas	1.233	1.233	26.06	212	0.58	1000	
Mo	98	1	No Gas	0.485	0.485	20.77	6368	0.01	2000	
Ba	137	1	No Gas	3.206	3.206	3.30	14660	0.02	1000	
Tl	205	1	No Gas	0.009	0.009	6.40	215	0.00	1000	
U	238	1	No Gas	0.501	0.501	3.81	13273	0.00	1000	
Na	23	2	he	16.410	16.410	6.48	141338	0.01	100000	
Mg	24	2	he	26.347	26.347	3.18	44641	0.06	100000	
K	39	2	he	22.916	22.916	6.68	284910	0.01	100000	
Se	82	3	HeHe	0.341	0.341	189.19	72	0.47	1000	
Fe	57	3	HeHe	159.049	159.049	2.37	13358	1.19	100000	
Cd	114	1	No Gas	0.041	0.041	18.87	387	0.01	1000	
Ca	44	1	No Gas	19.982	19.982	6.35	153509	0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6474525	0.28	5896472	109.80	70	120	
Sc	45	2	he	1419548	1.15	1271268	111.66	70	120	
Ge	72	1	No Gas	685030	1.85	682805	100.33	70	120	

In	115	1	No Gas	3623787	2.46	3697856	98.00	70	120	
Tb	159	1	No Gas	4102611	2.36	4404848	93.14	70	120	
Bi	209	1	No Gas	2125039	1.07	1997135	106.40	70	120	
Sc	45	3	HeHe	140699	0.31	132951	105.83	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	100_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T18:32:17-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	96.478	1.274	3300884	1.82	100	96.5	90	110	
Cr	52	1	No Gas	95.095	0.283	2938787	0.80	100	95.1	90	110	
Mn	55	1	No Gas	100.014	0.273	3784801	1.04	100	100.0	90	110	
Co	59	1	No Gas	95.812	0.770	3256063	1.49	100	95.8	90	110	
Ni	60	1	No Gas	92.279	0.542	728734	1.60	100	92.3	90	110	
Cu	63	1	No Gas	98.406	0.241	1802414	1.30	100	98.4	90	110	
Sr	88	1	No Gas	99.608	1.303	4280385	0.45	100	99.6	90	110	
Ag	107	1	No Gas	103.659	0.165	1841708	1.04	100	103.7	90	110	
Al	27	1	No Gas	101.307	2.173	2060611	1.08	100	101.3	90	110	
Sn	118	1	No Gas	99.002	0.880	1025790	1.35	100	99.0	90	110	
Tl	47	1	No Gas	88.222	1.215	248600	0.58	100	88.2	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	95.551	0.868	444731	1.33	100	95.6	90	110	
As	75	3	HeHe	92.226	2.611	33738	0.32	100	92.2	90	110	
As	75	1	No Gas	93.747	0.084	486261	1.06	100	93.7	90	110	
Sb	121	1	No Gas	100.687	3.087	1403968	2.01	100	100.7	90	110	
Hg	201	1	No Gas	2.002	4.421	2696	4.27	2	100.1	90	110	
Be	9	1	No Gas	94.528	0.494	335460	1.38	100	94.5	90	110	
Pb	208	1	No Gas	94.811	0.974	2726545	0.63	100	94.8	90	110	
Se	82	1	No Gas	92.342	1.624	23190	1.66	100	92.3	90	110	
Mo	98	1	No Gas	97.614	1.455	1094819	0.39	100	97.6	90	110	
Ba	137	1	No Gas	97.165	1.902	454670	0.75	100	97.2	90	110	
Tl	205	1	No Gas	95.469	1.357	2014703	1.86	100	95.5	90	110	
U	238	1	No Gas	103.929	1.075	2771870	0.54	100	103.9	90	110	
Na	23	2	he	1033.751	3.253	3054615	2.10	1000	103.4	90	110	
Mg	24	2	he	1034.281	2.304	1722107	1.62	1000	103.4	90	110	
K	39	2	he	1013.232	2.190	2903566	1.05	1000	101.3	90	110	
Se	82	3	HeHe	93.104	3.753	1677	2.96	100	93.1	90	110	
Fe	57	3	HeHe	1001.606	2.345	82787	2.37	1000	100.2	90	110	
Cd	114	1	No Gas	96.158	1.120	782172	1.94	100	96.2	90	110	
Ca	44	1	No Gas	952.944	0.694	973281	0.67	1000	95.3	90	110	

NA

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6404070	1.08	5896472	108.61	70	120	
Sc	45	2	he	1400061	1.09	1271268	110.13	70	120	
Ge	72	1	No Gas	693442	0.67	682805	101.56	70	120	
In	115	1	No Gas	3565749	1.07	3697856	96.43	70	120	
Tb	159	1	No Gas	4209990	1.35	4404848	95.58	70	120	
Bi	209	1	No Gas	2146282	0.57	1997135	107.47	70	120	
Sc	45	3	HeHe	140121	2.36	132951	105.39	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	101_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T18:35:42-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.094	27.6	4079	17.1	9	
Cr	52	1	No Gas	0.140	24.6	14492	3.5	4	
Mn	55	1	No Gas	0.376	14.5	44183	3.8	25	
Co	59	1	No Gas	0.008	14.7	504	3.4	1	
Ni	60	1	No Gas	-2.367	-1.0	2140	6.1	25	
Cu	63	1	No Gas	0.192	9.0	3773	0.8	25	
Sr	88	1	No Gas	0.011	39.4	533	29.5	25	
Ag	107	1	No Gas	0.016	19.4	285	8.1	9	
Al	27	1	No Gas	0.919	14.2	25359	3.5	1000000	
Sn	118	1	No Gas	1.282	31.9	12087	23.9	25	
Ti	47	1	No Gas	0.498	31.1	1546	19.0	10000	
Zn	66	1	No Gas	0.470	9.5	2753	1.7	25	
As	75	3	HeHe	0.390	5.5	146	5.4	9	
As	75	1	No Gas	1.406	62.5	29099	6.8	9	
Sb	121	1	No Gas	0.280	33.8	3612	25.3	4	
Hg	201	1	No Gas	0.014	31.0	49	6.2	0.04	
Be	9	1	No Gas	0.010	14.4	56	9.4	1	
Pb	208	1	No Gas	0.035	9.6	1189	3.7	4	
Se	82	1	No Gas	1.347	19.0	214	20.9	25	
Mo	98	1	No Gas	1.057	33.4	11370	23.3	10000	
Ba	137	1	No Gas	0.049	44.4	243	31.1	25	
Tl	205	1	No Gas	0.046	16.6	900	11.3	1	
U	238	1	No Gas	0.246	26.5	5916	19.0	25	
Na	23	2	he	11.109	3.9	120353	1.4	2500000	
Mg	24	2	he	0.423	23.1	845	19.4	2500000	
K	39	2	he	4.577	9.5	225223	1.3	5000000	
Se	82	3	HeHe	-0.307	-356.4	59	31.6	25	
Fe	57	3	HeHe	7.500	15.9	778	12.2	2500000	
Cd	114	1	No Gas	0.045	33.1	373	20.5	1	
Ca	44	1	No Gas	0.829	1463.8	122268	0.9	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5823362	7.25	5896472	98.76	70	120	
Sc	45	2	he	1356497	1.02	1271268	106.70	70	120	
Ge	72	1	No Gas	631029	8.22	682805	92.42	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3268680	10.95	3697856	88.39	70	120	
Tb	159	1	No Gas	3756696	8.58	4404848	85.29	70	120	
Bi	209	1	No Gas	1957971	10.48	1997135	98.04	70	120	
Sc	45	3	HeHe	135864	0.28	132951	102.19	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	102LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T18:39:11-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.125	5.736	73588	5.54	2	106.3	70	130	
Cr	52	1	No Gas	2.160	0.486	77774	0.36	2	108.0	70	130	
Mn	55	1	No Gas	5.199	0.197	228380	0.57	5	104.0	70	130	
Co	59	1	No Gas	4.865	1.529	164764	1.31	5	97.3	70	130	
Ni	60	1	No Gas	2.478	4.590	39345	2.85	5	49.6	70	130	LLCCV Main CR1 Failed
Cu	63	1	No Gas	4.950	1.534	90832	2.14	5	99.0	70	130	
Sr	88	1	No Gas	4.503	2.249	192630	2.42	5	90.1	70	130	
Ag	107	1	No Gas	1.995	1.162	35464	0.57	2	99.8	70	130	
Al	27	1	No Gas	82.609	0.868	1673794	0.56	80	103.3	70	130	
Sn	118	1	No Gas	2.465	7.756	25698	7.15	2	123.2	70	130	
Ti	47	1	No Gas	4.806	1.793	13779	2.34	5	96.1	70	130	
Zn	66	1	No Gas	5.142	4.340	24620	4.65	5	102.8	70	130	
As	75	3	HeHe	3.099	6.025	1129	5.14	3	103.3	70	130	
As	75	1	No Gas	3.585	10.750	42705	4.74	3	119.5	70	130	
Sb	121	1	No Gas	2.113	2.239	29571	1.71	2	105.6	70	130	
Hg	201	1	No Gas	0.202	6.614	301	6.66	0.2	101.2	70	130	
Be	9	1	No Gas	0.954	1.647	3392	2.07	1	95.4	70	130	
Pb	208	1	No Gas	1.974	1.422	56231	1.15	2	98.7	70	130	
Se	82	1	No Gas	5.647	13.673	1318	15.30	5	112.9	70	130	
Mo	98	1	No Gas	2.263	4.918	26179	4.19	2	113.1	70	130	
Ba	137	1	No Gas	5.150	3.216	23444	3.89	5	103.0	70	130	
Tl	205	1	No Gas	0.948	2.188	19747	2.26	1	94.8	70	130	
U	238	1	No Gas	4.856	3.507	127638	2.52	5	97.1	70	130	
Na	23	2	he	111.927	0.790	410351	0.78	100	111.9	70	130	
Mg	24	2	he	103.169	1.718	170765	1.27	100	103.2	70	130	
K	39	2	he	107.901	1.992	502632	0.70	100	107.9	70	130	
Se	82	3	HeHe	3.472	6.944	124	3.22	5	69.4	70	130	LLCCV Main CR1 Failed
Fe	57	3	HeHe	53.562	5.765	4553	4.27	50	107.1	70	130	
Cd	114	1	No Gas	1.056	2.413	8633	2.96	1	105.6	70	130	
Ca	44	1	No Gas	81.937	0.891	205354	0.40	100	81.9	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6371935	0.65	5896472	108.06	70	120	
Sc	45	2	he	1390484	0.77	1271268	109.38	70	120	
Ge	72	1	No Gas	684714	1.13	682805	100.28	70	120	
In	115	1	No Gas	3564021	0.61	3697856	96.38	70	120	
Tb	159	1	No Gas	4086984	0.76	4404848	92.78	70	120	
Bi	209	1	No Gas	2115228	1.00	1997135	105.91	70	120	
Sc	45	3	HeHe	138691	1.27	132951	104.32	70	120	

Sample Report

Sample Table

Sample Name	9980614010
Data File Name	103SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T18:42:41-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4101

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	2.329	2.329	3.65	80929	0.00	1000	
Cr	52	1	No Gas	1.623	1.623	3.27	61604	0.00	1000	
Mn	55	1	No Gas	2.846	2.846	4.15	141240	0.00	1000	
Co	59	1	No Gas	0.072	0.072	7.44	2734	0.00	1000	
Ni	60	1	No Gas	-2.082	-2.082	-2.35	4541	-0.05	1000	
Cu	63	1	No Gas	0.752	0.752	2.66	14401	0.01	1000	
Sr	88	1	No Gas	0.883	0.883	3.23	38032	0.00	1000	
Ag	107	1	No Gas	0.013	0.013	13.75	270	0.00	1000	
Al	27	1	No Gas	904.566	904.566	1.24	18322152	0.00	100000	
Sn	118	1	No Gas	0.989	0.989	20.85	10678	0.01	100	
Ti	47	1	No Gas	41.097	41.097	0.78	115974	0.04	2000	
Zn	66	1	No Gas	1.569	1.569	11.45	8126	0.02	1000	
As	75	3	HeHe	0.484	0.484	11.62	186	0.26	1000	
As	75	1	No Gas	0.841	0.841	29.05	29435	0.00	1000	
Sb	121	1	No Gas	0.185	0.185	11.01	2767	0.01	100	
Hg	201	1	No Gas	0.043	0.043	21.04	93	0.05	4	
Be	9	1	No Gas	0.019	0.019	8.67	93	0.02	1000	
Pb	208	1	No Gas	6.997	6.997	0.54	201934	0.00	1000	
Se	82	1	No Gas	1.023	1.023	44.30	155	0.66	1000	
Mo	98	1	No Gas	0.475	0.475	30.96	6304	0.01	2000	
Ba	137	1	No Gas	3.446	3.446	4.15	15945	0.02	1000	
Tl	205	1	No Gas	0.014	0.014	23.04	315	0.00	1000	
U	238	1	No Gas	0.179	0.179	1.52	4823	0.00	1000	
Na	23	2	he	18.675	18.675	3.02	144998	0.01	100000	
Mg	24	2	he	40.795	40.795	3.47	67653	0.06	100000	
K	39	2	he	36.011	36.011	2.76	313762	0.01	100000	
Se	82	3	HeHe	-0.673	-0.673	-36.86	54	-1.24	1000	
Fe	57	3	HeHe	460.619	460.619	2.26	38488	1.20	100000	
Cd	114	1	No Gas	0.056	0.056	32.45	513	0.01	1000	
Ca	44	1	No Gas	38.181	38.181	6.47	167818	0.02	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6403250	2.37	5896472	108.59	70	120	
Sc	45	2	he	1391514	1.64	1271268	109.46	70	120	

Ge	72	1	No Gas	695353	1.30	682805	101.84	70	120	
In	115	1	No Gas	3647876	0.83	3697856	98.65	70	120	
Tb	159	1	No Gas	4151287	1.20	4404848	94.24	70	120	
Bi	209	1	No Gas	2150667	1.14	1997135	107.69	70	120	
Sc	45	3	HeHe	141263	1.12	132951	106.25	70	120	

Sample Report

Sample Table

Sample Name	9980614011
Data File Name	104SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T18:46:11-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4102

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	3.105	3.105	4.19	108062	0.00	1000	
Cr	52	1	No Gas	3.328	3.328	2.56	114667	0.00	1000	
Mn	55	1	No Gas	4.046	4.046	1.92	187190	0.00	1000	
Co	59	1	No Gas	0.254	0.254	1.73	8936	0.00	1000	
Ni	60	1	No Gas	-1.258	-1.258	-5.31	10924	-0.01	1000	
Cu	63	1	No Gas	0.475	0.475	1.46	9398	0.01	1000	
Sr	88	1	No Gas	1.178	1.178	2.34	50951	0.00	1000	
Ag	107	1	No Gas	0.010	0.010	13.60	222	0.00	1000	
Al	27	1	No Gas	3543.288	3543.288	0.32	72120664	0.00	100000	
Sn	118	1	No Gas	0.682	0.682	23.04	7346	0.01	100	
Ti	47	1	No Gas	48.530	48.530	1.69	137552	0.04	2000	
Zn	66	1	No Gas	3.191	3.191	4.60	15751	0.02	1000	
As	75	3	HeHe	0.414	0.414	10.78	158	0.26	1000	
As	75	1	No Gas	0.538	0.538	42.56	28071	0.00	1000	
Sb	121	1	No Gas	0.114	0.114	26.44	1734	0.01	100	
Hg	201	1	No Gas	0.062	0.062	8.42	119	0.05	4	
Be	9	1	No Gas	0.067	0.067	15.17	267	0.03	1000	
Pb	208	1	No Gas	2.913	2.913	1.96	84763	0.00	1000	
Se	82	1	No Gas	0.495	0.495	88.84	24	2.06	1000	
Mo	98	1	No Gas	0.345	0.345	33.79	4767	0.01	2000	
Ba	137	1	No Gas	6.793	6.793	2.70	31037	0.02	1000	
Tl	205	1	No Gas	0.025	0.025	18.02	559	0.00	1000	
U	238	1	No Gas	0.251	0.251	10.58	6792	0.00	1000	
Na	23	2	he	24.347	24.347	4.13	160335	0.02	100000	
Mg	24	2	he	125.402	125.402	2.02	206583	0.06	100000	
K	39	2	he	54.535	54.535	5.26	360551	0.02	100000	
Se	82	3	HeHe	-0.174	-0.174	-177.31	62	-0.28	1000	
Fe	57	3	HeHe	637.399	637.399	3.03	52431	1.22	100000	
Cd	114	1	No Gas	0.048	0.048	1.98	447	0.01	1000	
Ca	44	1	No Gas	17.349	17.349	12.84	150242	0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6436034	2.69	5896472	109.15	70	120	
Sc	45	2	he	1384220	1.91	1271268	108.88	70	120	
Ge	72	1	No Gas	694237	0.58	682805	101.67	70	120	

In	115	1	No Gas	3608209	1.39	3697856	97.58	70	120	
Tb	159	1	No Gas	4105478	2.01	4404848	93.20	70	120	
Bi	209	1	No Gas	2163274	1.72	1997135	108.32	70	120	
Sc	45	3	HeHe	139239	0.37	132951	104.73	70	120	

Sample Report

Sample Table

Sample Name	9980614012
Data File Name	105SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T18:49:41-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4103

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	11.062	11.062	0.78	381545	0.00	1000	
Cr	52	1	No Gas	9.910	9.910	1.22	318339	0.00	1000	
Mn	55	1	No Gas	19.685	19.685	0.69	776647	0.00	1000	
Co	59	1	No Gas	0.937	0.937	2.31	32286	0.00	1000	
Ni	60	1	No Gas	0.452	0.452	27.04	24101	0.00	1000	
Cu	63	1	No Gas	3.894	3.894	0.50	72310	0.01	1000	
Sr	88	1	No Gas	6.750	6.750	0.37	291685	0.00	1000	
Ag	107	1	No Gas	0.281	0.281	6.69	5005	0.01	1000	
Al	27	1	No Gas	7425.744	7425.744	0.45	151168313	0.00	100000	
Sn	118	1	No Gas	1.368	1.368	9.91	14314	0.01	100	
Ti	47	1	No Gas	69.773	69.773	2.15	197666	0.04	2000	
Zn	66	1	No Gas	20.871	20.871	0.96	98322	0.02	1000	
As	75	3	HeHe	1.276	1.276	8.65	461	0.28	1000	
As	75	1	No Gas	1.310	1.310	1.83	31895	0.00	1000	
Sb	121	1	No Gas	0.360	0.360	6.74	5127	0.01	100	
Hg	201	1	No Gas	0.126	0.126	24.01	202	0.06	4	
Be	9	1	No Gas	0.255	0.255	2.18	935	0.03	1000	
Pb	208	1	No Gas	17.158	17.158	0.46	490421	0.00	1000	
Se	82	1	No Gas	1.555	1.555	41.53	292	0.53	1000	
Mo	98	1	No Gas	0.448	0.448	15.10	5838	0.01	2000	
Ba	137	1	No Gas	18.895	18.895	1.09	87005	0.02	1000	
Tl	205	1	No Gas	0.059	0.059	18.24	1274	0.00	1000	
U	238	1	No Gas	0.713	0.713	6.42	18927	0.00	1000	
Na	23	2	he	28.412	28.412	2.21	173152	0.02	100000	
Mg	24	2	he	404.813	404.813	1.05	671641	0.06	100000	
K	39	2	he	432.714	432.714	1.93	1361134	0.03	100000	
Se	82	3	HeHe	0.942	0.942	65.90	80	1.18	1000	
Fe	57	3	HeHe	3308.092	3308.092	0.82	265686	1.25	100000	
Cd	114	1	No Gas	0.115	0.115	8.24	980	0.01	1000	
Ca	44	1	No Gas	362.698	362.698	0.69	455923	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6437127	1.56	5896472	109.17	70	120	
Sc	45	2	he	1394849	1.34	1271268	109.72	70	120	
Ge	72	1	No Gas	691337	1.75	682805	101.25	70	120	

In	115	1	No Gas	3554482	1.43	3697856	96.12	70	120	
Tb	159	1	No Gas	4139955	0.86	4404848	93.99	70	120	
Bi	209	1	No Gas	2132018	0.19	1997135	106.75	70	120	
Sc	45	3	HeHe	136347	1.43	132951	102.55	70	120	

Sample Report

Sample Table

Sample Name	9980614013
Data File Name	106SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T18:53:11-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4104

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	18.440	18.440	1.54	640693	0.00	1000	
Cr	52	1	No Gas	16.255	16.255	1.28	519130	0.00	1000	
Mn	55	1	No Gas	28.304	28.304	1.82	1111041	0.00	1000	
Co	59	1	No Gas	2.379	2.379	1.65	82230	0.00	1000	
Ni	60	1	No Gas	2.797	2.797	9.58	42546	0.01	1000	
Cu	63	1	No Gas	7.022	7.022	1.03	131011	0.01	1000	
Sr	88	1	No Gas	13.306	13.306	1.19	579877	0.00	1000	
Ag	107	1	No Gas	0.125	0.125	12.44	2282	0.01	1000	
Al	27	1	No Gas	11188.475	11188.475	1.88	229698443	0.00	100000	
Sn	118	1	No Gas	0.958	0.958	11.70	10233	0.01	100	
Ti	47	1	No Gas	101.926	101.926	1.03	291186	0.04	2000	
Zn	66	1	No Gas	61.935	61.935	1.22	292584	0.02	1000	
As	75	3	HeHe	1.668	1.668	4.81	631	0.26	1000	
As	75	1	No Gas	1.406	1.406	8.58	32655	0.00	1000	
Sb	121	1	No Gas	0.309	0.309	5.39	4486	0.01	100	
Hg	201	1	No Gas	0.098	0.098	10.43	167	0.06	4	
Be	9	1	No Gas	0.564	0.564	2.74	2055	0.03	1000	
Pb	208	1	No Gas	18.448	18.448	0.92	532514	0.00	1000	
Se	82	1	No Gas	0.991	0.991	57.56	150	0.66	1000	
Mo	'98	1	No Gas	0.383	0.383	11.42	5186	0.01	2000	
Ba	137	1	No Gas	39.445	39.445	0.92	182926	0.02	1000	
Tl	205	1	No Gas	0.100	0.100	1.40	2148	0.00	1000	
U	238	1	No Gas	1.199	1.199	5.26	32120	0.00	1000	
Na	23	2	he	38.999	38.999	5.73	204300	0.02	100000	
Mg	24	2	he	731.064	731.064	2.11	1218437	0.06	100000	
K	39	2	he	827.286	827.286	2.49	2413342	0.03	100000	
Se	82	3	HeHe	2.690	2.690	50.96	114	2.35	1000	
Fe	57	3	HeHe	6959.700	6959.700	2.34	586440	1.19	100000	
Cd	114	1	No Gas	0.188	0.188	8.11	1593	0.01	1000	
Ca	44	1	No Gas	354.818	354.818	1.80	452897	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6494269	2.74	5896472	110.14	70	120	
Sc	45	2	he	1401615	2.29	1271268	110.25	70	120	
Ge	72	1	No Gas	676028	1.91	682805	99.01	70	120	

In	115	1	No Gas	3607542	1.28	3697856	97.56	70	120	
Tb	159	1	No Gas	4170913	0.85	4404848	94.69	70	120	
Bi	209	1	No Gas	2153112	0.77	1997135	107.81	70	120	
Sc	45	3	HeHe	143118	1.12	132951	107.65	70	120	

Sample Report

Sample Table

Sample Name	1020189
Data File Name	107SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T18:56:40-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4105

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	56.761	56.761	20.63	1754400	0.00	1000	
Cr	52	1	No Gas	56.507	56.507	21.50	1580195	0.00	1000	
Mn	55	1	No Gas	78.750	78.750	20.60	2699095	0.00	1000	
Co	59	1	No Gas	45.735	45.735	22.04	1402153	0.00	1000	
Ni	60	1	No Gas	44.733	44.733	24.41	327707	0.01	1000	
Cu	63	1	No Gas	49.058	49.058	21.41	811227	0.01	1000	
Sr	88	1	No Gas	49.799	49.799	20.15	1934058	0.00	1000	
Ag	107	1	No Gas	17.278	17.278	19.09	277779	0.01	1000	
Al	27	1	No Gas	10540.776	10540.776	21.05	192713570	0.01	100000	
Sn	118	1	No Gas	40.781	40.781	19.20	382432	0.01	100	
Ti	47	1	No Gas	134.628	134.628	21.00	342400	0.04	2000	
Zn	66	1	No Gas	492.917	492.917	21.00	2067918	0.02	1000	
As	75	3	HeHe	37.261	37.261	2.66	13291	0.28	1000	
As	75	1	No Gas	40.416	40.416	23.10	202349	0.02	1000	
Sb	121	1	No Gas	28.379	28.379	20.31	357785	0.01	100	
Hg	201	1	No Gas	0.562	0.562	23.43	705	0.08	4	
Be	9	1	No Gas	42.393	42.393	20.37	135935	0.03	1000	
Pb	208	1	No Gas	62.499	62.499	17.27	1625478	0.00	1000	
Se	82	1	No Gas	39.773	39.773	19.86	8978	0.44	1000	
Mo	98	1	No Gas	40.626	40.626	19.34	412642	0.01	2000	
Ba	137	1	No Gas	480.222	480.222	18.05	2033196	0.02	1000	
Tl	205	1	No Gas	41.965	41.965	17.25	800835	0.01	1000	
U	238	1	No Gas	0.827	0.827	18.41	19951	0.00	1000	
Na	23	2	he	485.495	485.495	4.57	1400348	0.03	100000	
Mg	24	2	he	1014.274	1014.274	4.05	1593743	0.06	100000	
K	39	2	he	1051.516	1051.516	4.03	2836180	0.04	100000	
Se	82	3	HeHe	37.855	37.855	9.24	703	5.39	1000	
Fe	57	3	HeHe	6817.715	6817.715	1.33	548130	1.24	100000	
Cd	114	1	No Gas	42.457	42.457	19.42	312389	0.01	1000	
Ca	44	1	No Gas	685.474	685.474	25.49	666240	0.10	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5920280	16.80	5896472	100.40	70	120	
Sc	45	2	he	1322280	3.44	1271268	104.01	70	120	
Ge	72	1	No Gas	623474	9.90	682805	91.31	70	120	

In	115	1	No Gas	3291245	15.55	3697856	89.00	70	120	
Tb	159	1	No Gas	3877141	14.75	4404848	88.02	70	120	
Bi	209	1	No Gas	1973458	14.34	1997135	98.81	70	120	
Sc	45	3	HeHe	136532	0.40	132951	102.69	70	120	

Sample Report

Sample Table

Sample Name	1020190
Data File Name	108SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T19:00:07-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4106

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	50.977	50.977	0.91	1759326	0.00	1000	
Cr	52	1	No Gas	48.538	48.538	2.66	1518246	0.00	1000	
Mn	55	1	No Gas	61.661	61.661	1.14	2366332	0.00	1000	
Co	59	1	No Gas	40.107	40.107	3.53	1374424	0.00	1000	
Ni	60	1	No Gas	38.257	38.257	0.69	316753	0.01	1000	
Cu	63	1	No Gas	52.227	52.227	1.41	964957	0.01	1000	
Sr	88	1	No Gas	43.236	43.236	1.64	1873810	0.00	1000	
Ag	107	1	No Gas	15.474	15.474	1.31	276226	0.01	1000	
Al	27	1	No Gas	8317.914	8317.914	1.78	169884001	0.00	100000	
Sn	118	1	No Gas	38.483	38.483	0.82	400681	0.01	100	
Ti	47	1	No Gas	162.863	162.863	0.97	462546	0.04	2000	
Zn	66	1	No Gas	419.835	419.835	1.73	1967498	0.02	1000	
As	75	3	HeHe	35.751	35.751	0.65	13146	0.27	1000	
As	75	1	No Gas	36.131	36.131	0.78	204654	0.02	1000	
Sb	121	1	No Gas	34.290	34.290	1.48	480501	0.01	100	
Hg	201	1	No Gas	0.476	0.476	4.70	672	0.07	4	
Be	9	1	No Gas	37.981	37.981	1.11	135930	0.03	1000	
Pb	208	1	No Gas	52.058	52.058	1.14	1503146	0.00	1000	
Se	82	1	No Gas	36.707	36.707	0.93	9235	0.40	1000	
Mo	98	1	No Gas	38.395	38.395	0.75	433175	0.01	2000	
Ba	137	1	No Gas	427.597	427.597	1.09	1993980	0.02	1000	
Tl	205	1	No Gas	37.625	37.625	0.94	797140	0.00	1000	
U	238	1	No Gas	0.656	0.656	2.33	17589	0.00	1000	
Na	23	2	he	448.678	448.678	1.85	1380428	0.03	100000	
Mg	24	2	he	863.272	863.272	3.39	1439612	0.06	100000	
K	39	2	he	879.421	879.421	2.95	2553226	0.03	100000	
Se	82	3	HeHe	36.676	36.676	2.05	704	5.21	1000	
Fe	57	3	HeHe	4809.329	4809.329	1.35	398618	1.21	100000	
Cd	114	1	No Gas	38.416	38.416	1.58	313928	0.01	1000	
Ca	44	1	No Gas	539.222	539.222	0.49	614151	0.09	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6457922	0.76	5896472	109.52	70	120	
Sc	45	2	he	1402280	0.82	1271268	110.31	70	120	
Ge	72	1	No Gas	685530	0.98	682805	100.40	70	120	

In	115	1	No Gas	3582284	0.97	3697856	96.87	70	120	
Tb	159	1	No Gas	4195404	1.43	4404848	95.25	70	120	
Bi	209	1	No Gas	2154947	2.07	1997135	107.90	70	120	
Sc	45	3	HeHe	140742	1.34	132951	105.86	70	120	

Sample Report

Sample Table

Sample Name	9980614014
Data File Name	110SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T19:06:57-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4108

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	7.358	7.358	1.35	257651	0.00	1000	
Cr	52	1	No Gas	10.377	10.377	1.25	337371	0.00	1000	
Mn	55	1	No Gas	14.526	14.526	0.97	590175	0.00	1000	
Co	59	1	No Gas	0.939	0.939	2.74	32783	0.00	1000	
Ni	60	1	No Gas	1.838	1.838	2.78	35277	0.01	1000	
Cu	63	1	No Gas	2.933	2.933	1.48	55356	0.01	1000	
Sr	88	1	No Gas	4.312	4.312	1.02	188933	0.00	1000	
Ag	107	1	No Gas	0.187	0.187	5.09	3426	0.01	1000	
Al	27	1	No Gas	6290.068	6290.068	1.82	129803124	0.00	100000	
Sn	118	1	No Gas	0.892	0.892	11.85	9651	0.01	100	
Ti	47	1	No Gas	93.661	93.661	1.38	268921	0.03	2000	
Zn	66	1	No Gas	71.330	71.330	0.38	338502	0.02	1000	
As	75	3	HeHe	1.488	1.488	5.72	551	0.27	1000	
As	75	1	No Gas	1.235	1.235	20.10	31958	0.00	1000	
Sb	121	1	No Gas	2.261	2.261	9.97	32414	0.01	100	
Hg	201	1	No Gas	0.062	0.062	42.53	119	0.05	4	
Be	9	1	No Gas	0.176	0.176	8.87	661	0.03	1000	
Pb	208	1	No Gas	37.553	37.553	0.19	1081609	0.00	1000	
Se	82	1	No Gas	1.654	1.654	25.61	322	0.51	1000	
Mo	98	1	No Gas	1.538	1.538	23.32	18532	0.01	2000	
Ba	137	1	No Gas	17.885	17.885	1.39	82918	0.02	1000	
Tl	205	1	No Gas	0.064	0.064	16.61	1374	0.00	1000	
U	238	1	No Gas	0.617	0.617	12.80	16539	0.00	1000	
Na	23	2	he	22.168	22.168	5.64	157174	0.01	100000	
Mg	24	2	he	329.012	329.012	1.50	552440	0.06	100000	
K	39	2	he	237.431	237.431	2.94	856067	0.03	100000	
Se	82	3	HeHe	1.415	1.415	24.48	90	1.57	1000	
Fe	57	3	HeHe	2338.842	2338.842	1.16	192734	1.21	100000	
Cd	114	1	No Gas	0.185	0.185	7.41	1590	0.01	1000	
Ca	44	1	No Gas	207.821	207.821	1.94	323186	0.06	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6525195	2.13	5896472	110.66	70	120	
Sc	45	2	he	1411585	1.25	1271268	111.04	70	120	
Ge	72	1	No Gas	690176	1.22	682805	101.08	70	120	

In	115	1	No Gas	3649240	1.40	3697856	98.69	70	120	
Tb	159	1	No Gas	4168398	1.71	4404848	94.63	70	120	
Bi	209	1	No Gas	2149161	1.33	1997135	107.61	70	120	
Sc	45	3	HeHe	139855	0.92	132951	105.19	70	120	

Sample Report

Sample Table

Sample Name	9980614015
Data File Name	111SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T19:10:26-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4109

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	3.914	3.914	4.65	139054	0.00	1000	
Cr	52	1	No Gas	3.538	3.538	2.30	124102	0.00	1000	
Mn	55	1	No Gas	4.877	4.877	1.73	223820	0.00	1000	
Co	59	1	No Gas	0.202	0.202	2.89	7350	0.00	1000	
Ni	60	1	No Gas	-1.429	-1.429	-2.65	9833	-0.01	1000	
Cu	63	1	No Gas	2.118	2.118	1.09	40567	0.01	1000	
Sr	88	1	No Gas	2.499	2.499	0.67	110618	0.00	1000	
Ag	107	1	No Gas	0.069	0.069	10.39	1296	0.01	1000	
Al	27	1	No Gas	2799.014	2799.014	0.29	58346490	0.00	100000	
Sn	118	1	No Gas	0.854	0.854	3.29	9336	0.01	100	
Ti	47	1	No Gas	41.463	41.463	1.40	120435	0.03	2000	
Zn	66	1	No Gas	7.377	7.377	1.99	36150	0.02	1000	
As	75	3	HeHe	0.872	0.872	10.79	328	0.27	1000	
As	75	1	No Gas	1.043	1.043	12.54	31304	0.00	1000	
Sb	121	1	No Gas	0.997	0.997	13.15	14500	0.01	100	
Hg	201	1	No Gas	0.079	0.079	15.11	143	0.06	4	
Be	9	1	No Gas	0.043	0.043	18.39	184	0.02	1000	
Pb	208	1	No Gas	13.032	13.032	0.18	380037	0.00	1000	
Se	82	1	No Gas	1.411	1.411	43.33	262	0.54	1000	
Mo	98	1	No Gas	0.679	0.679	29.49	8737	0.01	2000	
Ba	137	1	No Gas	5.930	5.930	1.37	27954	0.02	1000	
Tl	205	1	No Gas	0.025	0.025	8.23	567	0.00	1000	
U	238	1	No Gas	0.257	0.257	5.00	6983	0.00	1000	
Na	23	2	he	16.825	16.825	9.26	140999	0.01	100000	
Mg	24	2	he	124.905	124.905	3.21	208706	0.06	100000	
K	39	2	he	129.619	129.619	2.75	565240	0.02	100000	
Se	82	3	HeHe	0.017	0.017	2808.08	66	0.03	1000	
Fe	57	3	HeHe	1213.674	1213.674	1.23	100776	1.20	100000	
Cd	114	1	No Gas	0.081	0.081	3.13	727	0.01	1000	
Ca	44	1	No Gas	142.628	142.628	2.33	267426	0.05	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6591007	0.55	5896472	111.78	70	120	
Sc	45	2	he	1404254	1.44	1271268	110.46	70	120	
Ge	72	1	No Gas	697315	0.80	682805	102.13	70	120	

In	115	1	No Gas	3687321	0.57	3697856	99.72	70	120	
Tb	159	1	No Gas	4233544	0.99	4404848	96.11	70	120	
Bi	209	1	No Gas	2174820	0.02	1997135	108.90	70	120	
Sc	45	3	HeHe	140805	1.02	132951	105.91	70	120	

Sample Report

Sample Table

Sample Name	9980614015L
Data File Name	112SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T19:13:56-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF25
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4110

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	0.769	0.769	1.48	28095	0.00	1000	
Cr	52	1	No Gas	0.780	0.780	3.66	36349	0.00	1000	
Mn	55	1	No Gas	1.079	1.079	5.11	76437	0.00	1000	
Co	59	1	No Gas	0.033	0.033	16.06	1404	0.00	1000	
Ni	60	1	No Gas	-2.189	-2.189	-1.50	3791	-0.06	1000	
Cu	63	1	No Gas	0.460	0.460	2.76	9242	0.00	1000	
Sr	88	1	No Gas	0.497	0.497	3.69	21841	0.00	1000	
Ag	107	1	No Gas	0.014	0.014	10.43	296	0.00	1000	
Al	27	1	No Gas	545.454	545.454	1.83	11258846	0.00	100000	
Sn	118	1	No Gas	0.237	0.237	3.26	2752	0.01	100	
Ti	47	1	No Gas	8.290	8.290	1.12	24089	0.03	2000	
Zn	66	1	No Gas	1.528	1.528	2.74	8100	0.02	1000	
As	75	3	HeHe	0.229	0.229	11.84	92	0.25	1000	
As	75	1	No Gas	0.700	0.700	25.86	29254	0.00	1000	
Sb	121	1	No Gas	0.318	0.318	18.39	4760	0.01	100	
Hg	201	1	No Gas	0.032	0.032	15.35	79	0.04	4	
Be	9	1	No Gas	0.007	0.007	24.71	50	0.01	1000	
Pb	208	1	No Gas	2.565	2.565	1.39	74598	0.00	1000	
Se	82	1	No Gas	0.881	0.881	61.05	123	0.72	1000	
Mo	98	1	No Gas	0.230	0.230	50.43	3554	0.01	2000	
Ba	137	1	No Gas	1.217	1.217	5.39	5701	0.02	1000	
Tl	205	1	No Gas	0.011	0.011	9.12	256	0.00	1000	
U	238	1	No Gas	0.056	0.056	12.54	1552	0.00	1000	
Na	23	2	he	9.576	9.576	7.07	121168	0.01	100000	
Mg	24	2	he	24.415	24.415	3.50	41270	0.06	100000	
K	39	2	he	25.734	25.734	16.11	291566	0.01	100000	
Se	82	3	HeHe	-0.652	-0.652	-28.63	55	-1.19	1000	
Fe	57	3	HeHe	235.458	235.458	1.06	19782	1.19	100000	
Cd	114	1	No Gas	0.025	0.025	29.35	260	0.01	1000	
Ca	44	1	No Gas	9.187	9.187	9.66	144949	0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6521485	0.69	5896472	110.60	70	120	
Sc	45	2	he	1415895	2.58	1271268	111.38	70	120	

Ge	72	1	No Gas	698785	1.43	682805	102.34	70	120	
In	115	1	No Gas	3716215	1.69	3697856	100.50	70	120	
Tb	159	1	No Gas	4180833	0.65	4404848	94.91	70	120	
Bi	209	1	No Gas	2162167	0.64	1997135	108.26	70	120	
Sc	45	3	HeHe	141378	0.83	132951	106.34	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	113_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T19:17:25-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	99.259	2.513	3414829	2.01	100	99.3	90	110	
Cr	52	1	No Gas	96.814	3.400	3008294	2.86	100	96.8	90	110	
Mn	55	1	No Gas	101.100	2.405	3846794	1.74	100	101.1	90	110	
Co	59	1	No Gas	96.789	1.449	3307703	1.24	100	96.8	90	110	
Ni	60	1	No Gas	93.754	0.918	744219	1.26	100	93.8	90	110	
Cu	63	1	No Gas	98.845	1.196	1820770	1.90	100	98.8	90	110	
Sr	88	1	No Gas	99.718	1.668	4309672	1.65	100	99.7	90	110	
Ag	107	1	No Gas	102.550	2.145	1847952	2.36	100	102.6	90	110	
Al	27	1	No Gas	100.068	0.660	2047289	0.19	100	100.1	90	110	
Sn	118	1	No Gas	98.433	1.993	1034281	1.04	100	98.4	90	110	
Tl	47	1	No Gas	89.092	0.957	252477	0.39	100	89.1	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	96.609	2.722	452222	3.19	100	96.6	90	110	
As	75	3	HeHe	92.894	1.255	34512	0.47	100	92.9	90	110	
As	75	1	No Gas	94.986	1.861	495124	1.62	100	95.0	90	110	
Sb	121	1	No Gas	98.579	0.870	1394432	1.15	100	98.6	90	110	
Hg	201	1	No Gas	1.961	2.371	2632	1.01	2	98.1	90	110	
Be	9	1	No Gas	93.259	0.917	332814	0.66	100	93.3	90	110	
Pb	208	1	No Gas	95.242	0.157	2729030	1.56	100	95.2	90	110	
Se	82	1	No Gas	94.157	0.551	23783	1.23	100	94.2	90	110	
Mo	98	1	No Gas	98.369	1.381	1119004	0.56	100	98.4	90	110	
Ba	137	1	No Gas	99.011	0.236	462641	0.30	100	99.0	90	110	
Tl	205	1	No Gas	97.592	0.678	2051989	2.07	100	97.6	90	110	
U	238	1	No Gas	104.943	1.958	2788661	2.15	100	104.9	90	110	
Na	23	2	he	1013.811	1.629	3090664	1.03	1000	101.4	90	110	
Mg	24	2	he	1008.676	1.604	1731538	1.19	1000	100.9	90	110	
K	39	2	he	992.035	2.160	2935693	1.54	1000	99.2	90	110	
Se	82	3	HeHe	87.143	3.120	1598	3.52	100	87.1	90	110	CCV Main CR1 Failed
Fe	57	3	HeHe	1015.513	1.836	85239	2.93	1000	101.6	90	110	
Cd	114	1	No Gas	96.676	0.797	797566	1.58	100	96.7	90	110	
Ca	44	1	No Gas	967.727	0.727	991883	0.32	1000	96.8	90	110	

N/A

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6440284	0.71	5896472	109.22	70	120	
Sc	45	2	he	1443349	0.60	1271268	113.54	70	120	
Ge	72	1	No Gas	704084	1.13	682805	103.12	70	120	
In	115	1	No Gas	3616519	1.00	3697856	97.80	70	120	
Tb	159	1	No Gas	4203274	0.32	4404848	95.42	70	120	
Bi	209	1	No Gas	2138425	1.41	1997135	107.07	70	120	
Sc	45	3	HeHe	142257	1.13	132951	107.00	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	114_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T19:20:50-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.107	37.4	4923	26.8	9	
Cr	52	1	No Gas	0.101	16.3	14788	2.9	4	
Mn	55	1	No Gas	0.269	17.6	44701	3.1	25	
Co	59	1	No Gas	0.006	52.7	474	21.8	1	
Ni	60	1	No Gas	-2.362	-0.6	2394	5.2	25	
Cu	63	1	No Gas	0.181	5.8	3967	3.9	25	
Sr	88	1	No Gas	0.011	39.1	563	31.2	25	
Ag	107	1	No Gas	0.015	35.1	326	30.9	9	
Al	27	1	No Gas	0.822	5.6	26053	4.5	1000000	
Sn	118	1	No Gas	1.138	21.8	12661	21.5	25	
Ti	47	1	No Gas	0.420	21.7	1506	18.0	10000	
Zn	66	1	No Gas	0.462	4.6	3000	2.8	25	
As	75	3	HeHe	0.517	18.0	200	17.1	9	
As	75	1	No Gas	0.895	27.3	29722	5.0	9	
Sb	121	1	No Gas	0.363	24.6	5486	24.4	4	
Hg	201	1	No Gas	0.017	81.9	59	29.5	0.04	
Be	9	1	No Gas	0.003	106.8	35	29.0	1	
Pb	208	1	No Gas	0.053	9.1	1889	8.8	4	
Se	82	1	No Gas	1.299	15.0	227	22.6	25	
Mo	98	1	No Gas	0.932	29.7	11928	27.6	10000	
Ba	137	1	No Gas	0.071	12.3	387	13.3	25	
Tl	205	1	No Gas	0.048	16.0	1067	15.8	1	
U	238	1	No Gas	0.192	24.1	5264	22.8	25	
Na	23	2	he	10.580	12.5	123079	1.9	2500000	
Mg	24	2	he	0.341	11.9	737	9.1	2500000	
K	39	2	he	5.586	22.7	235878	0.2	5000000	
Se	82	3	HeHe	0.584	73.8	77	9.4	25	
Fe	57	3	HeHe	8.699	20.1	919	17.5	2500000	
Cd	114	1	No Gas	0.040	17.2	397	13.9	1	
Ca	44	1	No Gas	-13.241	-9.9	122680	1.9	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6408508	0.96	5896472	108.68	70	120	
Sc	45	2	he	1404748	1.60	1271268	110.50	70	120	
Ge	72	1	No Gas	704976	0.46	682805	103.25	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3769349	1.56	3697856	101.93	70	120	
Tb	159	1	No Gas	4261300	2.64	4404848	96.74	70	120	
Bi	209	1	No Gas	2197583	2.18	1997135	110.04	70	120	
Sc	45	3	HeHe	142587	1.62	132951	107.25	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	115LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T19:24:20-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.223	3.107	78237	2.23	2	111.1	70	130	
Cr	52	1	No Gas	2.212	1.524	80759	2.48	2	110.6	70	130	
Mn	55	1	No Gas	5.275	1.138	235280	2.02	5	105.5	70	130	
Co	59	1	No Gas	4.952	0.888	170618	0.76	5	99.0	70	130	
Ni	60	1	No Gas	2.520	5.118	40347	2.02	5	50.4	70	130	LLCCV Main CR1 Failed
Cu	63	1	No Gas	5.027	1.084	93827	0.44	5	100.5	70	130	
Sr	88	1	No Gas	4.638	1.011	201846	0.30	5	92.8	70	130	
Ag	107	1	No Gas	2.099	4.975	38241	4.95	2	104.9	70	130	
Al	27	1	No Gas	82.779	1.757	1706737	2.75	80	103.5	70	130	
Sn	118	1	No Gas	2.515	7.056	26886	7.42	2	125.7	70	130	
Ti	47	1	No Gas	4.775	4.469	13935	5.62	5	95.5	70	130	
Zn	66	1	No Gas	5.326	1.619	25910	1.90	5	106.5	70	130	
As	75	3	HeHe	3.079	3.313	1162	3.64	3	102.6	70	130	
As	75	1	No Gas	3.688	12.282	43948	4.22	3	122.9	70	130	
Sb	121	1	No Gas	2.238	2.180	32098	2.40	2	111.9	70	130	
Hg	201	1	No Gas	0.179	17.300	273	15.51	0.2	89.4	70	130	
Be	9	1	No Gas	0.978	0.670	3540	0.85	1	97.8	70	130	
Pb	208	1	No Gas	2.032	1.882	58671	1.52	2	101.6	70	130	
Se	82	1	No Gas	5.773	5.361	1372	5.48	5	115.5	70	130	
Mo	98	1	No Gas	2.386	6.428	28253	6.66	2	119.3	70	130	
Ba	137	1	No Gas	5.270	2.760	24255	2.16	5	105.4	70	130	
Tl	205	1	No Gas	0.998	4.384	21063	4.52	1	99.8	70	130	
U	238	1	No Gas	4.836	1.526	128849	1.21	5	96.7	70	130	
Na	23	2	he	108.326	3.127	417157	1.45	100	108.3	70	130	
Mg	24	2	he	100.344	0.175	173216	1.52	100	100.3	70	130	
K	39	2	he	108.557	3.007	525886	0.07	100	108.6	70	130	
Se	82	3	HeHe	5.339	11.460	162	5.33	5	106.8	70	130	
Fe	57	3	HeHe	57.361	2.098	5038	3.96	50	114.7	70	130	
Cd	114	1	No Gas	1.069	0.237	8959	0.62	1	106.9	70	130	
Ca	44	1	No Gas	83.629	1.236	210446	0.97	100	83.6	70	130	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6483246	1.26	5896472	109.95	70	120	
Sc	45	2	he	1450055	1.70	1271268	114.06	70	120	
Ge	72	1	No Gas	705944	1.26	682805	103.39	70	120	
In	115	1	No Gas	3653091	0.42	3697856	98.79	70	120	
Tb	159	1	No Gas	4133487	2.07	4404848	93.84	70	120	
Bi	209	1	No Gas	2143604	0.53	1997135	107.33	70	120	
Sc	45	3	HeHe	143589	2.04	132951	108.00	70	120	

Sample Report

Sample Table

Sample Name	9980614016
Data File Name	116SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T19:27:51-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4111

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	8.254	8.254	0.34	289734	0.00	1000	
Cr	52	1	No Gas	8.177	8.177	0.20	269106	0.00	1000	
Mn	55	1	No Gas	6.190	6.190	1.01	272472	0.00	1000	
Co	59	1	No Gas	0.436	0.436	1.39	15426	0.00	1000	
Ni	60	1	No Gas	4.318	4.318	3.08	54833	0.01	1000	
Cu	63	1	No Gas	5.833	5.833	0.67	109781	0.01	1000	
Sr	88	1	No Gas	11.442	11.442	0.54	502562	0.00	1000	
Ag	107	1	No Gas	0.018	0.018	17.03	370	0.00	1000	
Al	27	1	No Gas	6862.255	6862.255	0.65	142004513	0.00	100000	
Sn	118	1	No Gas	1.072	1.072	16.08	11812	0.01	100	
Ti	47	1	No Gas	205.916	205.916	0.26	592462	0.03	2000	
Zn	66	1	No Gas	77.209	77.209	0.53	367363	0.02	1000	
As	75	3	HeHe	0.571	0.571	15.62	224	0.26	1000	
As	75	1	No Gas	1.170	1.170	22.71	31730	0.00	1000	
Sb	121	1	No Gas	0.284	0.284	17.07	4267	0.01	100	
Hg	201	1	No Gas	0.074	0.074	46.89	135	0.05	4	
Be	9	1	No Gas	0.097	0.097	9.33	379	0.03	1000	
Pb	208	1	No Gas	10.716	10.716	0.94	310640	0.00	1000	
Se	82	1	No Gas	0.816	0.816	64.49	108	0.76	1000	
Mo	98	1	No Gas	0.581	0.581	21.55	7685	0.01	2000	
Ba	137	1	No Gas	13.332	13.332	0.63	62539	0.02	1000	
Tl	205	1	No Gas	0.045	0.045	10.37	989	0.00	1000	
U	238	1	No Gas	0.536	0.536	5.50	14437	0.00	1000	
Na	23	2	he	29.926	29.926	3.97	180658	0.02	100000	
Mg	24	2	he	209.831	209.831	1.96	354472	0.06	100000	
K	39	2	he	226.151	226.151	1.93	830856	0.03	100000	
Se	82	3	HeHe	0.139	0.139	262.12	70	0.20	1000	
Fe	57	3	HeHe	1921.763	1921.763	3.36	163402	1.18	100000	
Cd	114	1	No Gas	0.723	0.723	2.65	6191	0.01	1000	
Ca	44	1	No Gas	419.184	419.184	0.48	514304	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6543326	1.66	5896472	110.97	70	120	
Sc	45	2	he	1419847	0.46	1271268	111.69	70	120	
Ge	72	1	No Gas	697714	0.55	682805	102.18	70	120	

In	115	1	No Gas	3726549	1.19	3697856	100.78	70	120	
Tb	159	1	No Gas	4217012	1.55	4404848	95.74	70	120	
Bi	209	1	No Gas	2161395	1.51	1997135	108.22	70	120	
Sc	45	3	HeHe	144338	2.20	132951	108.57	70	120	

Sample Report

Sample Table

Sample Name	9980614017
Data File Name	117SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T19:31:21-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4112

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	7.964	7.964	0.72	281804	0.00	1000	
Cr	52	1	No Gas	11.396	11.396	1.65	373261	0.00	1000	
Mn	55	1	No Gas	35.049	35.049	3.54	1388997	0.00	1000	
Co	59	1	No Gas	0.822	0.822	2.81	29040	0.00	1000	
Ni	60	1	No Gas	0.575	0.575	23.51	25683	0.00	1000	
Cu	63	1	No Gas	43.608	43.608	1.38	822915	0.01	1000	
Sr	88	1	No Gas	6.272	6.272	1.80	277650	0.00	1000	
Ag	107	1	No Gas	0.481	0.481	3.79	8947	0.01	1000	
Al	27	1	No Gas	4838.341	4838.341	0.94	100903955	0.00	100000	
Sn	118	1	No Gas	8.381	8.381	1.77	90688	0.01	100	
Ti	47	1	No Gas	90.340	90.340	0.87	262158	0.03	2000	
Zn	66	1	No Gas	54.136	54.136	2.01	259859	0.02	1000	
As	75	3	HeHe	2.274	2.274	8.38	864	0.26	1000	
As	75	1	No Gas	2.156	2.156	4.50	36967	0.01	1000	
Sb	121	1	No Gas	2.304	2.304	4.93	33620	0.01	100	
Hg	201	1	No Gas	0.243	0.243	7.47	362	0.07	4	
Be	9	1	No Gas	0.130	0.130	10.11	503	0.03	1000	
Pb	208	1	No Gas	175.635	175.635	2.47	5091664	0.00	1000	
Se	82	1	No Gas	1.014	1.014	34.69	160	0.63	1000	
Mo	98	1	No Gas	0.933	0.933	12.39	11777	0.01	2000	
Ba	137	1	No Gas	30.259	30.259	0.67	141330	0.02	1000	
Tl	205	1	No Gas	0.041	0.041	6.05	896	0.00	1000	
U	238	1	No Gas	0.509	0.509	7.26	13729	0.00	1000	
Na	23	2	he	27.710	27.710	6.75	173006	0.02	100000	
Mg	24	2	he	313.556	313.556	2.96	525955	0.06	100000	
K	39	2	he	327.671	327.671	4.06	1095843	0.03	100000	
Se	82	3	HeHe	0.575	0.575	66.33	78	0.74	1000	
Fe	57	3	HeHe	7073.535	7073.535	0.83	600551	1.18	100000	
Cd	114	1	No Gas	0.446	0.446	4.49	3834	0.01	1000	
Ca	44	1	No Gas	391.648	391.648	0.69	493357	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6594963	1.12	5896472	111.85	70	120	
Sc	45	2	he	1410472	2.00	1271268	110.95	70	120	
Ge	72	1	No Gas	704967	1.37	682805	103.25	70	120	

In	115	1	No Gas	3715832	1.32	3697856	100.49	70	120	
Tb	159	1	No Gas	4200314	0.94	4404848	95.36	70	120	
Bi	209	1	No Gas	2163993	0.98	1997135	108.35	70	120	
Sc	45	3	HeHe	144177	0.31	132951	108.44	70	120	

Sample Report

Sample Table

Sample Name	9980614018
Data File Name	118SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T19:34:52-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4201

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	7.026	7.026	1.19	246034	0.00	1000	
Cr	52	1	No Gas	7.365	7.365	0.70	242794	0.00	1000	
Mn	55	1	No Gas	6.460	6.460	1.68	281979	0.00	1000	
Co	59	1	No Gas	0.400	0.400	2.21	14125	0.00	1000	
Ni	60	1	No Gas	1.336	1.336	4.31	31349	0.00	1000	
Cu	63	1	No Gas	58.204	58.204	1.13	1086114	0.01	1000	
Sr	88	1	No Gas	3.871	3.871	3.63	169523	0.00	1000	
Ag	107	1	No Gas	0.214	0.214	6.09	3938	0.01	1000	
Al	27	1	No Gas	4511.668	4511.668	1.16	93072393	0.00	100000	
Sn	118	1	No Gas	2.429	2.429	4.23	25980	0.01	100	
Ti	47	1	No Gas	70.478	70.478	2.92	202360	0.03	2000	
Zn	66	1	No Gas	123.998	123.998	2.32	587607	0.02	1000	
As	75	3	HeHe	2.514	2.514	3.77	931	0.27	1000	
As	75	1	No Gas	2.766	2.766	15.14	39619	0.01	1000	
Sb	121	1	No Gas	3.810	3.810	1.46	54557	0.01	100	
Hg	201	1	No Gas	0.348	0.348	4.85	493	0.07	4	
Be	9	1	No Gas	0.205	0.205	11.55	766	0.03	1000	
Pb	208	1	No Gas	363.726	363.726	0.33	10335892	0.00	1000	
Se	82	1	No Gas	0.497	0.497	136.82	25	1.95	1000	
Mo	98	1	No Gas	0.840	0.840	12.44	10508	0.01	2000	
Ba	137	1	No Gas	32.553	32.553	1.05	149789	0.02	1000	
Tl	205	1	No Gas	0.028	0.028	10.27	611	0.00	1000	
U	238	1	No Gas	0.398	0.398	1.59	10538	0.00	1000	
Na	23	2	he	23.485	23.485	3.06	157845	0.01	100000	
Mg	24	2	he	148.530	148.530	1.07	244646	0.06	100000	
K	39	2	he	156.551	156.551	1.44	627622	0.02	100000	
Se	82	3	HeHe	0.344	0.344	257.19	72	0.48	1000	
Fe	57	3	HeHe	2795.905	2795.905	2.34	231828	1.21	100000	
Cd	114	1	No Gas	0.634	0.634	8.23	5331	0.01	1000	
Ca	44	1	No Gas	167.596	167.596	2.59	287033	0.06	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6522888	0.56	5896472	110.62	70	120	
Sc	45	2	he	1383919	1.08	1271268	108.86	70	120	
Ge	72	1	No Gas	689840	1.01	682805	101.03	70	120	

In	115	1	No Gas	3652611	1.61	3697856	98.78	70	120	
Tb	159	1	No Gas	4138175	0.80	4404848	93.95	70	120	
Bi	209	1	No Gas	2121012	1.24	1997135	106.20	70	120	
Sc	45	3	HeHe	140760	0.98	132951	105.87	70	120	

Sample Report

Sample Table

Sample Name	9980614019
Data File Name	119SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T19:38:20-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4202

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	5.474	5.474	0.98	193535	0.00	1000	
Cr	52	1	No Gas	4.338	4.338	1.65	149086	0.00	1000	
Mn	55	1	No Gas	52.787	52.787	0.35	2067952	0.00	1000	
Co	59	1	No Gas	0.729	0.729	4.11	25705	0.00	1000	
Ni	60	1	No Gas	0.054	0.054	280.83	21490	0.00	1000	
Cu	63	1	No Gas	90.295	90.295	1.51	1698180	0.01	1000	
Sr	88	1	No Gas	8.062	8.062	0.99	355834	0.00	1000	
Ag	107	1	No Gas	0.271	0.271	3.36	4842	0.01	1000	
Al	27	1	No Gas	2746.677	2746.677	2.08	57118957	0.00	100000	
Sn	118	1	No Gas	0.949	0.949	12.16	9992	0.01	100	
Ti	47	1	No Gas	64.349	64.349	1.68	186290	0.03	2000	
Zn	66	1	No Gas	145.542	145.542	1.29	695076	0.02	1000	
As	75	3	HeHe	2.014	2.014	9.18	638	0.32	1000	
As	75	1	No Gas	1.856	1.856	10.82	35339	0.01	1000	
Sb	121	1	No Gas	0.941	0.941	8.04	13221	0.01	100	
Hg	201	1	No Gas	0.183	0.183	11.69	269	0.07	4	
Be	9	1	No Gas	0.100	0.100	10.26	389	0.03	1000	
Pb	208	1	No Gas	41.902	41.902	1.64	1161948	0.00	1000	
Se	82	1	No Gas	1.144	1.144	59.89	194	0.59	1000	
Mo	98	1	No Gas	0.542	0.542	12.74	6897	0.01	2000	
Ba	137	1	No Gas	61.146	61.146	1.23	279610	0.02	1000	
Tl	205	1	No Gas	0.029	0.029	4.65	626	0.00	1000	
U	238	1	No Gas	0.313	0.313	4.82	8091	0.00	1000	
Na	23	2	he	31.739	31.739	17.60	196419	0.02	100000	
Mg	24	2	he	196.606	196.606	9.18	350790	0.06	100000	
K	39	2	he	142.150	142.150	13.29	639506	0.02	100000	
Se	82	3	HeHe	0.560	0.560	178.86	64	0.87	1000	
Fe	57	3	HeHe	37642.345	37642.345	9.11	2654701	1.42	100000	
Cd	114	1	No Gas	0.322	0.322	3.65	2664	0.01	1000	
Ca	44	1	No Gas	772.071	772.071	1.64	835873	0.09	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6575713	0.73	5896472	111.52	70	120	
Sc	45	2	he	1506829	7.97	1271268	118.53	70	120	
Ge	72	1	No Gas	686590	0.55	682805	100.55	70	120	

In	115	1	No Gas	3558032	0.21	3697856	96.22	70	120	
Tb	159	1	No Gas	4113296	0.28	4404848	93.38	70	120	
Bi	209	1	No Gas	2069827	2.73	1997135	103.64	70	120	
Sc	45	3	HeHe	120425	8.77	132951	90.58	70	120	

Sample Report

Sample Table

Sample Name	9980614020
Data File Name	120SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T19:41:46-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4203

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	10.562	10.562	1.85	365971	0.00	1000	
Cr	52	1	No Gas	13.226	13.226	2.41	422807	0.00	1000	
Mn	55	1	No Gas	19.527	19.527	2.56	774132	0.00	1000	
Co	59	1	No Gas	0.570	0.570	3.25	19842	0.00	1000	
Ni	60	1	No Gas	0.001	0.001	16086.25	20716	0.00	1000	
Cu	63	1	No Gas	6.081	6.081	1.70	113053	0.01	1000	
Sr	88	1	No Gas	7.246	7.246	2.02	314467	0.00	1000	
Ag	107	1	No Gas	0.048	0.048	8.53	893	0.01	1000	
Al	27	1	No Gas	7337.087	7337.087	1.96	150013742	0.00	100000	
Sn	118	1	No Gas	0.649	0.649	8.90	7013	0.01	100	
Ti	47	1	No Gas	138.712	138.712	2.40	394466	0.04	2000	
Zn	66	1	No Gas	81.616	81.616	1.70	383620	0.02	1000	
As	75	3	HeHe	0.663	0.663	9.12	252	0.26	1000	
As	75	1	No Gas	0.896	0.896	46.25	30000	0.00	1000	
Sb	121	1	No Gas	0.152	0.152	18.46	2271	0.01	100	
Hg	201	1	No Gas	0.082	0.082	1.95	143	0.06	4	
Be	9	1	No Gas	0.268	0.268	6.29	987	0.03	1000	
Pb	208	1	No Gas	6.166	6.166	1.88	175273	0.00	1000	
Se	82	1	No Gas	1.082	1.082	23.32	173	0.63	1000	
Mo	98	1	No Gas	0.273	0.273	14.01	3952	0.01	2000	
Ba	137	1	No Gas	35.879	35.879	1.84	164660	0.02	1000	
Tl	205	1	No Gas	0.026	0.026	22.50	574	0.00	1000	
U	238	1	No Gas	0.870	0.870	1.83	22944	0.00	1000	
Na	23	2	he	31.896	31.896	4.07	184000	0.02	100000	
Mg	24	2	he	208.438	208.438	1.66	347620	0.06	100000	
K	39	2	he	181.704	181.704	1.40	702447	0.03	100000	
Se	82	3	HeHe	0.815	0.815	120.45	80	1.01	1000	
Fe	57	3	HeHe	2371.463	2371.463	2.38	197023	1.20	100000	
Cd	114	1	No Gas	0.161	0.161	5.33	1373	0.01	1000	
Ca	44	1	No Gas	266.477	266.477	1.79	372459	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6466164	1.62	5896472	109.66	70	120	
Sc	45	2	he	1401858	1.53	1271268	110.27	70	120	
Ge	72	1	No Gas	691032	1.10	682805	101.20	70	120	

In	115	1	No Gas	3618133	0.83	3697856	97.84	70	120	
Tb	159	1	No Gas	4127050	0.98	4404848	93.69	70	120	
Bi	209	1	No Gas	2118137	1.22	1997135	106.06	70	120	
Sc	45	3	HeHe	141026	1.18	132951	106.07	70	120	

Sample Report

Sample Table

Sample Name	9980614021
Data File Name	121SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T19:45:15-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4204

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	5.389	5.389	2.29	187420	0.00	1000	
Cr	52	1	No Gas	8.890	8.890	2.24	288143	0.00	1000	
Mn	55	1	No Gas	5.219	5.219	1.80	232554	0.00	1000	
Co	59	1	No Gas	0.222	0.222	2.31	7906	0.00	1000	
Ni	60	1	No Gas	-1.194	-1.194	-2.36	11471	-0.01	1000	
Cu	63	1	No Gas	3.109	3.109	2.78	58139	0.01	1000	
Sr	88	1	No Gas	3.397	3.397	0.77	147540	0.00	1000	
Ag	107	1	No Gas	0.013	0.013	36.00	270	0.00	1000	
Al	27	1	No Gas	6159.358	6159.358	2.36	125968258	0.00	100000	
Sn	118	1	No Gas	0.668	0.668	4.96	7287	0.01	100	
Ti	47	1	No Gas	93.982	93.982	1.48	267443	0.04	2000	
Zn	66	1	No Gas	3.390	3.390	3.69	16768	0.02	1000	
As	75	3	HeHe	0.734	0.734	18.45	278	0.26	1000	
As	75	1	No Gas	0.913	0.913	15.92	30076	0.00	1000	
Sb	121	1	No Gas	0.132	0.132	7.22	2019	0.01	100	
Hg	201	1	No Gas	0.152	0.152	7.49	238	0.06	4	
Be	9	1	No Gas	0.103	0.103	24.43	395	0.03	1000	
Pb	208	1	No Gas	7.440	7.440	2.72	214473	0.00	1000	
Se	82	1	No Gas	0.898	0.898	16.42	127	0.71	1000	
Mo	98	1	No Gas	0.322	0.322	24.36	4562	0.01	2000	
Ba	137	1	No Gas	8.233	8.233	2.28	38783	0.02	1000	
Tl	205	1	No Gas	0.023	0.023	20.70	504	0.00	1000	
U	238	1	No Gas	0.540	0.540	3.74	14467	0.00	1000	
Na	23	2	he	17.093	17.093	9.28	143205	0.01	100000	
Mg	24	2	he	140.452	140.452	0.88	237112	0.06	100000	
K	39	2	he	112.126	112.126	2.25	524102	0.02	100000	
Se	82	3	HeHe	0.008	0.008	6702.15	66	0.01	1000	
Fe	57	3	HeHe	835.154	835.154	2.78	69601	1.20	100000	
Cd	114	1	No Gas	0.052	0.052	11.65	480	0.01	1000	
Ca	44	1	No Gas	41.506	41.506	4.55	172469	0.02	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6466990	0.39	5896472	109.68	70	120	
Sc	45	2	he	1418578	1.20	1271268	111.59	70	120	
Ge	72	1	No Gas	697300	0.57	682805	102.12	70	120	

In	115	1	No Gas	3655488	0.97	3697856	98.85	70	120	
Tb	159	1	No Gas	4233172	1.22	4404848	96.10	70	120	
Bi	209	1	No Gas	2149066	1.70	1997135	107.61	70	120	
Sc	45	3	HeHe	141206	0.49	132951	106.21	70	120	

Sample Report

Sample Table

Sample Name	9980614022
Data File Name	122SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T19:48:45-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4205

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	11.781	11.781	1.63	408507	0.00	1000	
Cr	52	1	No Gas	9.040	9.040	1.59	293023	0.00	1000	
Mn	55	1	No Gas	10.087	10.087	2.05	417214	0.00	1000	
Co	59	1	No Gas	0.502	0.502	3.10	17532	0.00	1000	
Ni	60	1	No Gas	-0.058	-0.058	-231.62	20289	0.00	1000	
Cu	63	1	No Gas	4.937	4.937	1.26	92010	0.01	1000	
Sr	88	1	No Gas	4.717	4.717	1.71	204975	0.00	1000	
Ag	107	1	No Gas	0.009	0.009	34.44	193	0.00	1000	
Al	27	1	No Gas	8021.620	8021.620	2.24	164160801	0.00	100000	
Sn	118	1	No Gas	0.744	0.744	12.80	7973	0.01	100	
Ti	47	1	No Gas	196.211	196.211	1.97	558559	0.04	2000	
Zn	66	1	No Gas	3.874	3.874	1.87	19051	0.02	1000	
As	75	3	HeHe	0.970	0.970	9.61	364	0.27	1000	
As	75	1	No Gas	1.182	1.182	5.64	31437	0.00	1000	
Sb	121	1	No Gas	0.129	0.129	6.26	1934	0.01	100	
Hg	201	1	No Gas	0.093	0.093	15.33	159	0.06	4	
Be	9	1	No Gas	0.103	0.103	5.53	394	0.03	1000	
Pb	208	1	No Gas	7.051	7.051	0.80	202289	0.00	1000	
Se	82	1	No Gas	0.206	0.206	363.36	-52	-0.40	1000	
Mo	98	1	No Gas	0.356	0.356	15.42	4873	0.01	2000	
Ba	137	1	No Gas	11.813	11.813	1.06	53685	0.02	1000	
Tl	205	1	No Gas	0.038	0.038	31.66	822	0.00	1000	
U	238	1	No Gas	0.493	0.493	4.40	13125	0.00	1000	
Na	23	2	he	22.067	22.067	2.69	156940	0.01	100000	
Mg	24	2	he	259.617	259.617	1.86	436091	0.06	100000	
K	39	2	he	182.024	182.024	1.33	708360	0.03	100000	
Se	82	3	HeHe	-0.574	-0.574	-111.46	56	-1.03	1000	
Fe	57	3	HeHe	1928.208	1928.208	2.02	159841	1.21	100000	
Cd	114	1	No Gas	0.051	0.051	25.83	467	0.01	1000	
Ca	44	1	No Gas	32.133	32.133	3.42	164292	0.02	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6473357	2.17	5896472	109.78	70	120	
Sc	45	2	he	1411883	0.91	1271268	111.06	70	120	
Ge	72	1	No Gas	690286	0.68	682805	101.10	70	120	

In	115	1	No Gas	3599067	1.40	3697856	97.33	70	120	
Tb	159	1	No Gas	4084894	1.34	4404848	92.74	70	120	
Bi	209	1	No Gas	2138214	1.69	1997135	107.06	70	120	
Sc	45	3	HeHe	140679	1.62	132951	105.81	70	120	

Sample Report

Sample Table

Sample Name	9980614022L
Data File Name	123SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T19:52:15-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF25
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4206

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	2.332	2.332	2.55	82813	0.00	1000	
Cr	52	1	No Gas	1.882	1.882	1.75	71136	0.00	1000	
Mn	55	1	No Gas	2.127	2.127	4.16	116836	0.00	1000	
Co	59	1	No Gas	0.090	0.090	7.36	3412	0.00	1000	
Ni	60	1	No Gas	-1.923	-1.923	-2.73	5885	-0.03	1000	
Cu	63	1	No Gas	0.969	0.969	0.71	18789	0.01	1000	
Sr	88	1	No Gas	0.891	0.891	4.51	39235	0.00	1000	
Ag	107	1	No Gas	0.009	0.009	27.22	200	0.00	1000	
Al	27	1	No Gas	1544.063	1544.063	1.45	31956907	0.00	100000	
Sn	118	1	No Gas	0.232	0.232	14.64	2652	0.01	100	
Ti	47	1	No Gas	37.208	37.208	1.43	107327	0.03	2000	
Zn	66	1	No Gas	0.716	0.716	6.76	4271	0.02	1000	
As	75	3	HeHe	0.210	0.210	22.20	85	0.25	1000	
As	75	1	No Gas	0.615	0.615	59.24	28919	0.00	1000	
Sb	121	1	No Gas	0.058	0.058	38.90	952	0.01	100	
Hg	201	1	No Gas	0.016	0.016	45.69	57	0.03	4	
Be	9	1	No Gas	0.022	0.022	37.46	105	0.02	1000	
Pb	208	1	No Gas	1.342	1.342	0.86	39139	0.00	1000	
Se	82	1	No Gas	0.511	0.511	73.17	28	1.81	1000	
Mo	98	1	No Gas	0.101	0.101	33.62	2015	0.01	2000	
Ba	137	1	No Gas	2.267	2.267	2.67	10514	0.02	1000	
Tl	205	1	No Gas	0.006	0.006	7.46	156	0.00	1000	
U	238	1	No Gas	0.097	0.097	8.16	2637	0.00	1000	
Na	23	2	he	10.284	10.284	10.50	122346	0.01	100000	
Mg	24	2	he	49.872	49.872	1.27	83559	0.06	100000	
K	39	2	he	38.268	38.268	2.60	323019	0.01	100000	
Se	82	3	HeHe	-0.704	-0.704	-53.70	54	-1.31	1000	
Fe	57	3	HeHe	380.387	380.387	2.01	31677	1.20	100000	
Cd	114	1	No Gas	0.018	0.018	24.12	200	0.01	1000	
Ca	44	1	No Gas	-13.049	-13.049	-18.25	125418	-0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6543398	0.99	5896472	110.97	70	120	
Sc	45	2	he	1405934	1.28	1271268	110.59	70	120	
Ge	72	1	No Gas	693695	0.57	682805	101.59	70	120	

In	115	1	No Gas	3653151	0.42	3697856	98.79	70	120	
Tb	159	1	No Gas	4154961	0.95	4404848	94.33	70	120	
Bi	209	1	No Gas	2159112	1.02	1997135	108.11	70	120	
Sc	45	3	HeHe	140666	1.95	132951	105.80	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	126_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:02:44-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	98.276	0.942	3413244	2.12	100	98.3	90	110	
Cr	52	1	No Gas	96.380	2.155	3023709	3.23	100	96.4	90	110	
Mn	55	1	No Gas	99.665	1.572	3829026	2.75	100	99.7	90	110	
Co	59	1	No Gas	97.008	0.800	3346519	1.94	100	97.0	90	110	
Ni	60	1	No Gas	92.840	0.852	744104	2.03	100	92.8	90	110	
Cu	63	1	No Gas	97.621	1.155	1814919	1.48	100	97.6	90	110	
Sr	88	1	No Gas	98.746	0.879	4307427	0.72	100	98.7	90	110	
Ag	107	1	No Gas	100.773	1.570	1820075	0.55	100	100.8	90	110	
Al	27	1	No Gas	99.982	1.495	2064552	1.00	100	100.0	90	110	
Sn	118	1	No Gas	98.283	2.630	1035101	1.47	100	98.3	90	110	
Tl	47	1	No Gas	88.575	1.283	253400	2.45	100	88.6	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	94.322	0.664	445637	1.37	100	94.3	90	110	
As	75	3	HeHe	93.882	2.123	35127	2.96	100	93.9	90	110	
As	75	1	No Gas	93.653	0.419	493120	1.30	100	93.7	90	110	
Sb	121	1	No Gas	98.552	3.100	1397081	1.97	100	98.6	90	110	
Hg	201	1	No Gas	1.955	0.941	2582	1.25	2	97.8	90	110	
Be	9	1	No Gas	92.932	0.201	334756	1.12	100	92.9	90	110	
Pb	208	1	No Gas	95.676	1.072	2697622	1.17	100	95.7	90	110	
Se	82	1	No Gas	93.956	1.305	23952	0.98	100	94.0	90	110	
Mo	98	1	No Gas	97.441	1.788	1111051	0.62	100	97.4	90	110	
Ba	137	1	No Gas	100.248	1.046	458087	0.59	100	100.2	90	110	
Tl	205	1	No Gas	95.700	0.831	1980040	1.58	100	95.7	90	110	
U	238	1	No Gas	104.340	1.362	2728510	1.61	100	104.3	90	110	
Na	23	2	he	1028.065	1.924	3126082	0.75	1000	102.8	90	110	
Mg	24	2	he	1031.330	1.655	1766833	1.85	1000	103.1	90	110	
K	39	2	he	1023.482	2.474	3015071	1.39	1000	102.3	90	110	
Se	82	3	HeHe	90.911	2.748	1676	3.31	100	90.9	90	110	
Fe	57	3	HeHe	1011.687	0.505	85500	1.61	1000	101.2	90	110	
Cd	114	1	No Gas	95.372	1.337	788604	0.84	100	95.4	90	110	
Ca	44	1	No Gas	958.829	1.518	993212	1.55	1000	95.9	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6500541	1.20	5896472	110.24	70	120	
Sc	45	2	he	1440384	1.17	1271268	113.30	70	120	
Ge	72	1	No Gas	702990	0.73	682805	102.96	70	120	
In	115	1	No Gas	3625219	1.29	3697856	98.04	70	120	
Tb	159	1	No Gas	4110901	1.41	4404848	93.33	70	120	
Bi	209	1	No Gas	2104283	0.80	1997135	105.37	70	120	
Sc	45	3	HeHe	143243	1.12	132951	107.74	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	127_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:06:10-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.134	42.5	5931	33.2	9	
Cr	52	1	No Gas	0.099	19.5	14862	3.7	4	
Mn	55	1	No Gas	0.039	206.1	36389	7.9	25	
Co	59	1	No Gas	0.010	26.4	607	15.2	1	
Ni	60	1	No Gas	-2.329	-0.5	2670	4.3	25	
Cu	63	1	No Gas	0.176	1.8	3905	1.1	25	
Sr	88	1	No Gas	0.013	20.7	670	17.6	25	
Ag	107	1	No Gas	0.018	13.6	367	10.5	9	
Al	27	1	No Gas	0.847	2.9	26799	2.1	1000000	
Sn	118	1	No Gas	1.772	23.8	19617	23.9	25	
Ti	47	1	No Gas	0.561	25.8	1918	21.4	10000	
Zn	66	1	No Gas	0.470	10.7	3067	8.3	25	
As	75	3	HeHe	0.715	12.1	278	8.8	9	
As	75	1	No Gas	1.038	26.4	30683	5.0	9	
Sb	121	1	No Gas	0.359	24.4	5427	24.7	4	
Hg	201	1	No Gas	0.014	117.6	54	39.0	0.04	
Be	9	1	No Gas	0.012	38.8	71	24.1	1	
Pb	208	1	No Gas	0.047	18.8	1641	14.1	4	
Se	82	1	No Gas	1.278	70.1	223	102.1	25	
Mo	98	1	No Gas	1.436	25.9	17915	25.0	10000	
Ba	137	1	No Gas	0.068	43.1	370	38.1	25	
Tl	205	1	No Gas	0.040	23.7	856	24.3	1	
U	238	1	No Gas	0.266	20.7	7054	21.1	25	
Na	23	2	he	9.819	9.2	121807	2.6	2500000	
Mg	24	2	he	0.472	2.4	963	1.3	2500000	
K	39	2	he	6.751	6.4	240749	1.6	5000000	
Se	82	3	HeHe	0.749	81.9	81	11.2	25	
Fe	57	3	HeHe	11.783	20.1	1193	14.9	2500000	
Cd	114	1	No Gas	0.078	20.9	717	18.9	1	
Ca	44	1	No Gas	-15.802	-13.3	121443	1.5	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6463263	0.61	5896472	109.61	70	120	
Sc	45	2	he	1414962	1.40	1271268	111.30	70	120	
Ge	72	1	No Gas	720845	1.41	682805	105.57	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3771921	1.64	3697856	102.00	70	120	
Tb	159	1	No Gas	4249135	0.74	4404848	96.46	70	120	
Bi	209	1	No Gas	2121704	1.34	1997135	106.24	70	120	
Sc	45	3	HeHe	144953	3.05	132951	109.03	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	128LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:09:40-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	2.348	7.801	78788	1.12	2	117.4	70	130		
Cr	52	1	No Gas	2.350	8.792	81134	1.13	2	117.5	70	130		
Mn	55	1	No Gas	5.464	9.143	231210	1.32	5	109.3	70	130		
Co	59	1	No Gas	5.193	8.205	170622	1.69	5	103.9	70	130		
Ni	60	1	No Gas	2.857	11.879	41009	0.49	5	57.1	70	130	LLCCV Main CR1 Failed	N/A
Cu	63	1	No Gas	5.238	8.145	93213	1.56	5	104.8	70	130		
Sr	88	1	No Gas	4.808	5.451	199802	1.20	5	96.2	70	130		
Ag	107	1	No Gas	2.175	5.581	37598	2.20	2	108.8	70	130		
Al	27	1	No Gas	86.520	9.403	1699573	2.78	80	108.1	70	130		
Sn	118	1	No Gas	3.034	13.298	30648	8.63	2	151.7	70	130	LLCCV Main CR1 Failed	N/A
Tl	47	1	No Gas	5.236	8.457	14535	1.77	5	104.7	70	130		
Zn	66	1	No Gas	5.331	7.562	24746	2.89	5	106.6	70	130		
As	75	3	HeHe	3.210	5.021	1207	5.40	3	107.0	70	130		
As	75	1	No Gas	4.197	8.548	44423	2.89	3	139.9	70	130	LLCCV Main CR1 Failed	N/A
Sb	121	1	No Gas	2.302	9.320	31267	4.02	2	115.1	70	130		
Hg	201	1	No Gas	0.210	26.294	293	20.97	0.2	105.2	70	130		
Be	9	1	No Gas	1.006	11.366	3467	5.07	1	100.6	70	130		
Pb	208	1	No Gas	2.111	4.693	56873	0.70	2	105.6	70	130		
Se	82	1	No Gas	5.707	12.168	1303	18.06	5	114.1	70	130		
Mo	98	1	No Gas	2.726	10.044	30464	5.38	2	136.3	70	130	LLCCV Main CR1 Failed	N/A
Ba	137	1	No Gas	5.580	7.303	24606	3.59	5	111.6	70	130		
Tl	205	1	No Gas	1.018	4.578	20051	0.31	1	101.8	70	130		
U	238	1	No Gas	5.033	6.538	125082	2.34	5	100.7	70	130		
Na	23	2	he	113.700	2.426	418668	1.88	100	113.7	70	130		
Mg	24	2	he	102.905	1.037	171675	0.88	100	102.9	70	130		
K	39	2	he	115.292	3.414	526184	1.77	100	115.3	70	130		
Se	82	3	HeHe	4.090	24.098	139	12.11	5	81.8	70	130		
Fe	57	3	HeHe	56.576	7.102	4953	7.03	50	113.2	70	130		
Cd	114	1	No Gas	1.157	14.780	9156	9.61	1	115.7	70	130		
Ca	44	1	No Gas	95.809	19.245	211101	0.85	100	95.8	70	130		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6204101	6.49	5896472	105.22	70	120	
Sc	45	2	he	1401413	0.33	1271268	110.24	70	120	
Ge	72	1	No Gas	667705	4.90	682805	97.79	70	120	
In	115	1	No Gas	3472149	5.54	3697856	93.90	70	120	
Tb	159	1	No Gas	3969209	5.27	4404848	90.11	70	120	
Bi	209	1	No Gas	2003070	4.38	1997135	100.30	70	120	
Sc	45	3	HeHe	143070	0.66	132951	107.61	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	170_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:35:44-04:00
Sample Type	CCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	97.951	1.155	3486349	0.51	100	98.0	90	110	
Cr	52	1	No Gas	95.873	1.509	3082667	2.24	100	95.9	90	110	
Mn	55	1	No Gas	100.453	1.055	3954785	1.23	100	100.5	90	110	
Co	59	1	No Gas	97.154	0.416	3435058	1.27	100	97.2	90	110	
Ni	60	1	No Gas	92.702	0.421	761514	0.89	100	92.7	90	110	
Cu	63	1	No Gas	96.244	0.279	1834031	1.06	100	96.2	90	110	
Sr	88	1	No Gas	99.913	0.871	4467544	1.71	100	99.9	90	110	
Ag	107	1	No Gas	101.835	1.635	1896100	0.61	100	101.8	90	110	
Al	27	1	No Gas	100.524	0.429	2127654	0.72	100	100.5	90	110	
Sn	118	1	No Gas	97.991	1.256	1064085	1.05	100	98.0	90	110	
Tl	47	1	No Gas	87.895	0.605	257712	1.37	100	87.9	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	94.285	0.770	456597	1.61	100	94.3	90	110	
As	75	3	HeHe	93.285	1.385	36012	1.89	100	93.3	90	110	
As	75	1	No Gas	93.800	0.758	506191	1.48	100	93.8	90	110	
Sb	121	1	No Gas	101.211	0.553	1479481	1.26	100	101.2	90	110	
Hg	201	1	No Gas	1.917	4.800	2569	3.06	2	95.8	90	110	
Be	9	1	No Gas	93.570	0.591	345477	1.34	100	93.6	90	110	
Pb	208	1	No Gas	96.007	0.333	2747629	1.76	100	96.0	90	110	
Se	82	1	No Gas	92.626	1.274	24203	2.01	100	92.6	90	110	
Mo	98	1	No Gas	96.782	1.747	1137659	0.37	100	96.8	90	110	
Ba	137	1	No Gas	99.897	0.471	471266	1.37	100	99.9	90	110	
Tl	205	1	No Gas	97.010	2.227	2036830	1.46	100	97.0	90	110	
U	238	1	No Gas	104.398	0.978	2770723	0.86	100	104.4	90	110	
Na	23	2	he	1030.576	2.352	3240430	1.15	1000	103.1	90	110	
Mg	24	2	he	1022.357	3.342	1811231	3.31	1000	102.2	90	110	
K	39	2	he	1025.564	2.452	3123985	1.52	1000	102.6	90	110	
Se	82	3	HeHe	90.465	2.321	1721	1.39	100	90.5	90	110	
Fe	57	3	HeHe	1026.911	0.457	89542	1.02	1000	102.7	90	110	
Cd	114	1	No Gas	94.669	1.367	807010	1.13	100	94.7	90	110	
Ca	44	1	No Gas	962.506	0.669	1021422	1.43	1000	96.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6662739	0.86	5896472	113.00	70	120	
Sc	45	2	he	1489897	2.73	1271268	117.20	70	120	
Ge	72	1	No Gas	717825	2.32	682805	105.13	70	120	
In	115	1	No Gas	3737385	1.51	3697856	101.07	70	120	
Tb	159	1	No Gas	4243515	0.91	4404848	96.34	70	120	
Bi	209	1	No Gas	2135894	1.77	1997135	106.95	70	120	
Sc	45	3	HeHe	147802	1.03	132951	111.17	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	171_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:39:09-04:00
Sample Type	CCB
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.105	33.9	4941	25.0	9	
Cr	52	1	No Gas	0.102	20.2	15070	2.9	4	
Mn	55	1	No Gas	0.290	22.1	46265	4.0	25	
Co	59	1	No Gas	0.015	39.9	793	24.7	1	
Ni	60	1	No Gas	-2.413	-0.7	2040	5.2	25	
Cu	63	1	No Gas	0.186	1.2	4117	2.2	25	
Sr	88	1	No Gas	0.018	21.8	885	17.8	25	
Ag	107	1	No Gas	0.020	41.4	411	35.8	9	
Al	27	1	No Gas	0.872	1.5	27522	1.8	1000000	
Sn	118	1	No Gas	1.320	21.0	14752	22.6	25	
Ti	47	1	No Gas	0.414	25.7	1513	21.0	10000	
Zn	66	1	No Gas	0.504	18.7	3247	12.3	25	
As	75	3	HeHe	0.476	0.4	186	2.8	9	
As	75	1	No Gas	0.787	13.2	29679	2.8	9	
Sb	121	1	No Gas	0.308	23.6	4708	25.4	4	
Hg	201	1	No Gas	0.021	32.5	66	13.9	0.04	
Be	9	1	No Gas	0.017	35.5	89	26.1	1	
Pb	208	1	No Gas	0.081	7.2	2734	5.7	4	
Se	82	1	No Gas	0.848	107.1	115	203.8	25	
Mo	98	1	No Gas	0.913	28.9	11788	28.9	10000	
Ba	137	1	No Gas	0.079	27.4	427	25.8	25	
Tl	205	1	No Gas	0.038	18.7	856	18.9	1	
U	238	1	No Gas	0.190	24.0	5312	24.5	25	
Na	23	2	he	9.537	3.1	122702	2.0	2500000	
Mg	24	2	he	0.423	23.0	893	17.8	2500000	
K	39	2	he	6.863	16.9	244434	1.5	5000000	
Se	82	3	HeHe	-0.765	-18.7	54	2.4	25	
Fe	57	3	HeHe	14.803	0.6	1441	2.9	2500000	
Cd	114	1	No Gas	0.051	43.0	490	41.3	1	
Ca	44	1	No Gas	-17.972	-8.4	120500	0.6	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6517073	1.38	5896472	110.52	70	120	
Sc	45	2	he	1434900	1.33	1271268	112.87	70	120	
Ge	72	1	No Gas	728329	0.40	682805	106.67	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3785985	2.64	3697856	102.38	70	120	
Tb	159	1	No Gas	4317763	1.61	4404848	98.02	70	120	
Bi	209	1	No Gas	2233380	0.92	1997135	111.83	70	120	
Sc	45	3	HeHe	143721	2.40	132951	108.10	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	172LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:42:40-04:00
Sample Type	LLCCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.058	3.338	73217	3.15	2	102.9	70	130	
Cr	52	1	No Gas	2.147	1.622	79467	1.00	2	107.4	70	130	
Mn	55	1	No Gas	5.315	0.676	238951	0.25	5	106.3	70	130	
Co	59	1	No Gas	4.863	2.923	169098	2.73	5	97.3	70	130	
Ni	60	1	No Gas	2.329	1.489	39225	1.07	5	46.6	70	130	LLCCV Main CR1 Failed
Cu	63	1	No Gas	4.977	1.294	93750	1.13	5	99.5	70	130	
Sr	88	1	No Gas	4.586	2.243	201466	1.90	5	91.7	70	130	
Ag	107	1	No Gas	2.003	1.318	36366	1.78	2	100.2	70	130	
Al	27	1	No Gas	82.404	0.580	1714486	0.21	80	103.0	70	130	
Sn	118	1	No Gas	2.549	7.457	27145	8.00	2	127.4	70	130	
Tl	47	1	No Gas	4.726	3.164	13917	2.78	5	94.5	70	130	
Zn	66	1	No Gas	5.509	2.952	27017	2.55	5	110.2	70	130	
As	75	3	HeHe	3.125	1.340	1160	0.52	3	104.2	70	130	
As	75	1	No Gas	3.409	4.623	42965	1.88	3	113.6	70	130	
Sb	121	1	No Gas	2.202	4.642	31475	5.06	2	110.1	70	130	
Hg	201	1	No Gas	0.215	2.494	313	2.88	0.2	107.6	70	130	
Be	9	1	No Gas	0.955	1.235	3488	0.86	1	95.5	70	130	
Pb	208	1	No Gas	2.056	1.823	57677	0.39	2	102.8	70	130	
Se	82	1	No Gas	5.592	18.835	1338	20.30	5	111.8	70	130	
Mo	98	1	No Gas	2.415	2.116	28481	2.66	2	120.8	70	130	
Ba	137	1	No Gas	5.207	2.765	23945	2.80	5	104.1	70	130	
Tl	205	1	No Gas	0.989	4.596	20269	2.76	1	98.9	70	130	
U	238	1	No Gas	4.744	4.496	122804	2.88	5	94.9	70	130	
Na	23	2	he	114.936	2.401	428593	1.21	100	114.9	70	130	
Mg	24	2	he	101.831	0.568	172465	0.22	100	101.8	70	130	
K	39	2	he	113.647	2.373	529733	0.61	100	113.6	70	130	
Se	82	3	HeHe	4.891	16.873	151	9.85	5	97.8	70	130	
Fe	57	3	HeHe	57.291	6.256	4945	5.35	50	114.6	70	130	
Cd	114	1	No Gas	1.079	4.902	9006	4.33	1	107.9	70	130	
Ca	44	1	No Gas	84.364	7.153	213045	2.46	100	84.4	70	130	

PIA

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6542879	0.38	5896472	110.96	70	120	
Sc	45	2	he	1422717	0.78	1271268	111.91	70	120	
Ge	72	1	No Gas	700131	1.31	682805	102.54	70	120	
In	115	1	No Gas	3639207	0.61	3697856	98.41	70	120	
Tb	159	1	No Gas	4129130	0.98	4404848	93.74	70	120	
Bi	209	1	No Gas	2083587	2.08	1997135	104.33	70	120	
Sc	45	3	HeHe	141190	0.86	132951	106.20	70	120	

Sample Report

Sample Table

Sample Name	30 PPM LDR
Data File Name	174SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081312C.b
Acq Date Time	2012-08-13T22:56:07-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4511

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag	
V	51	1	No Gas	0.085	0.085	130.10	4416	0.00	1000		
Cr	52	1	No Gas	0.345	0.345	3.99	23583	0.00	1000		
Mn	55	1	No Gas	-0.011	-0.011	-180.30	36151	0.00	1000		
Co	59	1	No Gas	0.007	0.007	31.29	544	0.00	1000		
Ni	60	1	No Gas	-2.495	-2.495	-0.50	1453	-0.17	1000		
Cu	63	1	No Gas	0.095	0.095	5.43	2522	0.00	1000		
Sr	88	1	No Gas	0.015	0.015	7.25	785	0.00	1000		
Ag	107	1	No Gas	0.016	0.016	33.56	326	0.00	1000		
Al	27	1	No Gas	28283.977	28283.977	0.58	605851843	0.00	100000		94%
Sn	118	1	No Gas	0.341	0.341	33.79	3897	0.01	100		
Ti	47	1	No Gas	0.122	0.122	20.40	704	0.02	2000		
Zn	66	1	No Gas	0.616	0.616	5.73	3929	0.02	1000		
As	75	3	HeHe	0.062	0.062	61.23	32	0.19	1000		
As	75	1	No Gas	0.909	0.909	7.94	31477	0.00	1000		
Sb	121	1	No Gas	0.063	0.063	29.36	1048	0.01	100		
Hg	201	1	No Gas	0.006	0.006	160.42	44	0.01	4		
Be	9	1	No Gas	0.001	0.001	276.27	31	0.00	1000		
Pb	208	1	No Gas	0.043	0.043	29.41	1559	0.00	1000		
Se	82	1	No Gas	0.678	0.678	44.52	75	0.91	1000		
Mo	98	1	No Gas	0.148	0.148	46.68	2603	0.01	2000		
Ba	137	1	No Gas	0.232	0.232	11.22	1137	0.02	1000		
Tl	205	1	No Gas	0.002	0.002	78.44	70	0.00	1000		
U	238	1	No Gas	0.014	0.014	27.61	426	0.00	1000		
Na	23	2	he	9.297	9.297	7.91	123653	0.01	100000		
Mg	24	2	he	0.448	0.448	16.61	948	0.05	100000		
K	39	2	he	2.656	2.656	37.26	236210	0.00	100000		
Se	82	3	HeHe	-0.050	-0.050	-980.66	69	-0.07	1000		
Fe	57	3	HeHe	43.578	43.578	3.90	3997	1.09	100000		
Cd	114	1	No Gas	0.015	0.015	45.70	173	0.01	1000		
Ca	44	1	No Gas	-38.180	-38.180	-6.41	106426	-0.04	100000		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6773953	1.32	5896472	114.88	70	120	
Sc	45	2	he	1454676	1.33	1271268	114.43	70	120	
Ge	72	1	No Gas	707192	1.08	682805	103.57	70	120	

In	115	1	No Gas	3736186	1.13	3697856	101.04	70	120	
Tb	159	1	No Gas	4221245	1.56	4404848	95.83	70	120	
Bi	209	1	No Gas	2152041	0.92	1997135	107.76	70	120	
Sc	45	3	HeHe	148272	1.34	132951	111.52	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	176_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081312C.b
Acq Date Time	2012-08-13T23:11:53-04:00
Sample Type	CCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	98.980	2.302	3555900	1.02	100	99.0	90	110	
Cr	52	1	No Gas	96.886	0.774	3144266	0.60	100	96.9	90	110	
Mn	55	1	No Gas	100.547	1.620	3995914	1.79	100	100.5	90	110	
Co	59	1	No Gas	95.565	1.648	3410828	2.04	100	95.6	90	110	
Ni	60	1	No Gas	91.888	2.193	762049	1.02	100	91.9	90	110	
Cu	63	1	No Gas	96.307	2.189	1852437	1.86	100	96.3	90	110	
Sr	88	1	No Gas	97.963	2.006	4421129	1.37	100	98.0	90	110	
Ag	107	1	No Gas	100.244	1.943	1864812	2.65	100	100.2	90	110	
Al	27	1	No Gas	99.326	0.814	2122333	1.24	100	99.3	90	110	
Sn	118	1	No Gas	96.711	1.178	1049045	0.69	100	96.7	90	110	
Tl	47	1	No Gas	88.195	1.484	261010	0.81	100	88.2	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	93.657	1.646	457783	0.49	100	93.7	90	110	
As	75	3	HeHe	92.592	1.736	35134	0.75	100	92.6	90	110	
As	75	1	No Gas	92.152	0.982	502427	0.60	100	92.2	90	110	
Sb	121	1	No Gas	99.121	1.267	1447259	0.87	100	99.1	90	110	
Hg	201	1	No Gas	1.869	4.928	2512	4.60	2	93.4	90	110	
Be	9	1	No Gas	92.851	1.855	346023	1.14	100	92.9	90	110	
Pb	208	1	No Gas	93.178	0.223	2671481	0.65	100	93.2	90	110	
Se	82	1	No Gas	90.630	2.985	23897	1.72	100	90.6	90	110	
Mo	98	1	No Gas	96.013	1.161	1127482	0.49	100	96.0	90	110	
Ba	137	1	No Gas	100.003	1.969	464237	2.00	100	100.0	90	110	
Tl	205	1	No Gas	96.100	0.999	2021863	1.82	100	96.1	90	110	
U	238	1	No Gas	102.287	1.084	2719961	1.58	100	102.3	90	110	
Na	23	2	he	1055.023	2.205	3265449	2.25	1000	105.5	90	110	
Mg	24	2	he	1031.410	1.861	1799536	0.46	1000	103.1	90	110	
K	39	2	he	1029.143	0.957	3087070	0.77	1000	102.9	90	110	
Se	82	3	HeHe	90.773	2.133	1697	2.46	100	90.8	90	110	
Fe	57	3	HeHe	1016.582	1.989	87152	2.86	1000	101.7	90	110	
Cd	114	1	No Gas	92.902	0.379	791116	0.41	100	92.9	90	110	
Ca	44	1	No Gas	938.083	1.138	1008411	0.43	1000	93.8	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6725963	1.33	5896472	114.07	70	120	
Sc	45	2	he	1467190	1.66	1271268	115.41	70	120	
Ge	72	1	No Gas	717091	0.51	682805	105.02	70	120	
In	115	1	No Gas	3733156	0.78	3697856	100.95	70	120	
Tb	159	1	No Gas	4176703	2.43	4404848	94.82	70	120	
Bi	209	1	No Gas	2139762	0.87	1997135	107.14	70	120	
Sc	45	3	HeHe	145315	2.03	132951	109.30	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	177_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081312C.b
Acq Date Time	2012-08-13T23:15:17-04:00
Sample Type	CCB
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.125	50.6	5645	36.9	9	
Cr	52	1	No Gas	0.172	16.4	17369	3.6	4	
Mn	55	1	No Gas	-0.010	-325.3	35042	1.4	25	
Co	59	1	No Gas	0.016	2.3	837	1.5	1	
Ni	60	1	No Gas	-2.451	-0.7	1754	7.3	25	
Cu	63	1	No Gas	0.199	3.8	4392	0.6	25	
Sr	88	1	No Gas	0.021	21.2	1030	19.1	25	
Ag	107	1	No Gas	0.025	6.2	500	3.8	9	
Al	27	1	No Gas	0.932	4.7	28935	3.1	1000000	
Sn	118	1	No Gas	1.401	23.8	15441	24.6	25	
Ti	47	1	No Gas	0.386	28.2	1447	24.3	10000	
Zn	66	1	No Gas	0.579	4.7	3630	3.6	25	
As	75	3	HeHe	0.442	28.3	176	23.0	9	
As	75	1	No Gas	0.912	26.7	30513	5.9	9	
Sb	121	1	No Gas	0.302	29.9	4549	29.6	4	
Hg	201	1	No Gas	0.019	95.2	61	40.8	0.04	
Be	9	1	No Gas	0.018	21.0	91	13.4	1	
Pb	208	1	No Gas	0.049	21.4	1708	18.7	4	
Se	82	1	No Gas	1.553	26.4	298	36.7	25	
Mo	98	1	No Gas	0.926	29.4	11773	27.8	10000	
Ba	137	1	No Gas	0.101	0.5	523	1.1	25	
Tl	205	1	No Gas	0.046	23.3	982	21.5	1	
U	238	1	No Gas	0.224	29.5	5946	28.5	25	
Na	23	2	he	9.768	5.4	124179	1.8	2500000	
Mg	24	2	he	0.548	12.9	1115	12.0	2500000	
K	39	2	he	5.797	7.9	243129	1.3	5000000	
Se	82	3	HeHe	-1.125	-20.0	49	10.8	25	
Fe	57	3	HeHe	12.057	11.3	1237	10.2	2500000	
Cd	114	1	No Gas	0.069	17.2	640	16.9	1	
Ca	44	1	No Gas	-31.978	-10.4	108621	1.3	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6559872	2.79	5896472	111.25	70	120	
Sc	45	2	he	1444279	1.07	1271268	113.61	70	120	
Ge	72	1	No Gas	708080	2.44	682805	103.70	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3736818	2.10	3697856	101.05	70	120	
Tb	159	1	No Gas	4232484	0.68	4404848	96.09	70	120	
Bi	209	1	No Gas	2122934	1.34	1997135	106.30	70	120	
Sc	45	3	HeHe	147150	4.06	132951	110.68	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	178LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081312C.b
Acq Date Time	2012-08-13T23:18:46-04:00
Sample Type	LLCCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.107	1.389	75854	1.83	2	105.4	70	130	
Cr	52	1	No Gas	2.232	4.820	83121	4.58	2	111.6	70	130	
Mn	55	1	No Gas	5.175	1.564	236460	2.44	5	103.5	70	130	
Co	59	1	No Gas	4.889	0.495	172046	0.82	5	97.8	70	130	
Ni	60	1	No Gas	2.476	0.619	40865	1.33	5	49.5	70	130	LLCCV Main CR1 Failed
Cu	63	1	No Gas	4.932	0.618	94041	1.24	5	98.6	70	130	
Sr	88	1	No Gas	4.526	0.339	201253	1.53	5	90.5	70	130	
Ag	107	1	No Gas	2.020	1.031	37064	0.25	2	101.0	70	130	
Al	27	1	No Gas	82.789	0.920	1743261	0.99	80	103.5	70	130	
Sn	118	1	No Gas	2.541	5.892	27360	7.15	2	127.0	70	130	
Tl	47	1	No Gas	4.675	3.379	13940	4.24	5	93.5	70	130	
Zn	66	1	No Gas	5.408	1.373	26863	2.62	5	108.2	70	130	
As	75	3	HeHe	3.140	3.029	1224	3.85	3	104.7	70	130	
As	75	1	No Gas	3.879	7.104	45864	1.82	3	129.3	70	130	
Sb	121	1	No Gas	2.110	2.905	30499	4.16	2	105.5	70	130	
Hg	201	1	No Gas	0.186	22.296	274	19.36	0.2	93.2	70	130	
Be	9	1	No Gas	0.970	0.766	3585	1.03	1	97.0	70	130	
Pb	208	1	No Gas	1.970	3.501	55004	3.02	2	98.5	70	130	
Se	82	1	No Gas	5.787	5.600	1405	5.39	5	115.7	70	130	
Mo	98	1	No Gas	2.300	1.599	27459	2.76	2	115.0	70	130	
Ba	137	1	No Gas	5.147	3.107	23731	3.63	5	102.9	70	130	
Tl	205	1	No Gas	0.977	3.156	19928	2.12	1	97.7	70	130	
U	238	1	No Gas	4.762	1.645	122725	1.90	5	95.2	70	130	
Na	23	2	he	116.631	2.401	445813	0.29	100	116.6	70	130	
Mg	24	2	he	102.185	1.556	177968	0.92	100	102.2	70	130	
K	39	2	he	117.418	1.999	555210	0.45	100	117.4	70	130	
Se	82	3	HeHe	4.154	9.202	146	3.97	5	83.1	70	130	
Fe	57	3	HeHe	55.573	11.818	5049	11.99	50	111.1	70	130	
Cd	114	1	No Gas	1.009	0.558	8516	1.37	1	100.9	70	130	
Ca	44	1	No Gas	70.394	5.118	202913	2.11	100	70.4	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6622192	1.31	5896472	112.31	70	120	
Sc	45	2	he	1463181	1.59	1271268	115.10	70	120	
Ge	72	1	No Gas	714673	1.65	682805	104.67	70	120	
In	115	1	No Gas	3679167	1.27	3697856	99.49	70	120	
Tb	159	1	No Gas	4139629	1.18	4404848	93.98	70	120	
Bi	209	1	No Gas	2073101	1.30	1997135	103.80	70	120	
Sc	45	3	HeHe	148320	1.01	132951	111.56	70	120	

Digestion Logbook

Microwave 3051 Prep (Soil) (Version 1 - 6/1/2010)

Batch: 37420	Queue: MDIG	HBN: 475031	RULE: D3051/6020	ALSI SOP: 09-3051
File Name: 37420_120808-120034			METHOD: SW3051	Microwave ID: MARS

COMMENTS:	Comment Codes:	Reagents:		Pipettes:		Start	Finish
	1. Sample failed initial digestion due to a weight loss >5g	HNO3:	L02030 JT BAKER		Date:	08/08/2012	08/08/2012
	2. Sample reacts with reagent	HCl:	K25031 MALLINCKRODT		Time:	12:55:00	13:21:00
	3. Less sample used due to high metal conten	Boiling Stones:	D1069103		Tech:	KMK	KMK
	4. Less sample used to result in successful microwave digestion				Reviewed/Approved By:		N/A
	5. Sample does not digest by microwave, digest by method 3050				Date:		

Sample ID	Cont ID	Samp Type	Vessel Initial WT, grams	Vessel Final WT, grams	Difference grams	Spike Amt uL of Each	Spike Lot#	Sample Size, grams	Final Vol mL	Parent Sample ID	Comment Code
1020187		MB	107.31	106.06	1.25			0.50	50		
1020188		LCS	109.60	108.07	1.53	40/50/500/500	/MS0360/MS0359/	0.50	50		
9980395010	A	S	108.02	105.78	2.24			0.54	50		
9980395011	A	S	107.35	106.08	1.27			0.53	50		
9980395012	A	S	107.06	105.29	1.77			0.55	50		
9980395013	A	S	106.46	104.98	1.48			0.52	50		
9980395014	A	S	107.04	105.89	1.15			0.58	50		
9980614001	A	S	106.41	105.00	1.41			0.53	50		
9980614002	A	S	106.89	104.74	2.15			0.58	50		
9980614003	A	S	107.47	106.19	1.28			0.52	50		
9980614004	A	S	107.74	105.58	2.16			0.56	50		
9980614005	A	S	107.21	105.67	1.54			0.57	50		
9980614006	A	S	106.64	104.50	2.14			0.53	50		
9980614007	A	S	107.17	105.79	1.38			0.52	50		
9980614008	A	S	106.65	104.22	2.43			0.57	50		
9980614009	A	S	107.55	105.61	1.94			0.52	50		
9980614010	A	S	106.50	105.64	0.86			0.52	50		
9980614011	A	S	107.44	105.89	1.55			0.56	50		
9980614012	A	S	108.82	106.64	2.18			0.53	50		
9980614013	A	S	107.08	104.78	2.30			0.53	50		
1020189		MS	108.02	105.50	2.52	40/50/500/500	/MS0360/MS0359/	0.56	50	9980614013	
1020190		MSD	108.81	106.95	1.86	40/50/500/500	/MS0360/MS0359/	0.59	50	9980614013	
9980614014	A	S	106.90	104.86	2.04			0.54	50		
9980614015	A	S	106.93	105.41	1.52			0.54	50		

End

Microwave 3051 Prep (Soil) (Version 1 - 6/1/2010)

Batch: 37421	Queue: MDIG	HBN: 475032	RULE: D3051/6020	ALSI SOP: 09-3051
File Name: 37421_120808-122837			METHOD: SW3051	Microwave ID: MARS

COMMENTS:	Comment Codes:	Reagents:		Pipettes:		Start	Finish
	1. Sample failed initial digestion due to a weight loss >5g	HNO3:	L02030 JT BAKER		Date:	08/08/2012	08/08/2012
	2. Sample reacts with reagent	HCl:	K25031 MALLINCKRODT		Time:	14:13:00	14:42:00
	3. Less sample used due to high metal conten	Boiling Stones:	D1069103		Tech:	KMK	KMK
	4. Less sample used to result in successful microwave digestion				Reviewed/Approved By:		N/A
	5. Sample does not digest by microwave, digest by method 3050				Date:		

Sample ID	Cont ID	Samp Type	Vessel Initial WT, grams	Vessel Final WT, grams	Difference grams	Spike Amt uL of Each	Spike Lot#	Sample Size, grams	Final Vol mL	Parent Sample ID	Comment Code
1020191		MB	107.41	106.10	1.31			0.50	50		
1020192		LCS	109.23	107.11	2.12	40/50/500/500	/MS0360/MS0359/	0.50	50		
9980614016	A	S	107.88	105.73	2.15			0.55	50		
9980614017	A	S	107.45	104.93	2.52			0.52	50		
9980614018	A	S	107.02	105.49	1.53			0.59	50		
9980614019	A	S	106.69	104.83	1.86			0.55	50		
9980614020	A	S	107.80	105.30	2.50			0.52	50		
9980614021	A	S	106.65	104.81	1.84			0.51	50		
9980614022	A	S	106.58	104.50	2.08			0.60	50		
9980875001	A	S	108.19	105.59	2.60			0.54	50		
1020193		MS	107.23	104.78	2.45	40/50/500/500	/MS0360/MS0359/	0.55	50	9980875001	
1020194		MSD	107.46	105.10	2.36	40/50/500/500	/MS0360/MS0359/	0.54	50	9980875001	
9980875002	A	S	106.42	104.64	1.78			0.52	50		
9980875003	A	S	106.78	104.73	2.05			0.55	50		
9980875004	A	S	106.12	104.08	2.04			0.51	50		
9980875005	A	S	106.58	104.67	1.91			0.60	50		
9980875006	A	S	106.39	104.65	1.74			0.57	50		
9980875007	A	S	107.09	105.22	1.87			0.57	50		
9980875008	A	S	105.78	104.82	0.96			0.52	50		
9980875009	A	S	106.92	104.32	2.60			0.54	50		
9980875010	A	S	107.04	104.96	2.08			0.52	50		
9980875011	A	S	107.27	104.55	2.72			0.51	50		
9980875012	A	S	107.59	105.94	1.65			0.53	50		
9980875013	A	S	107.24	105.09	2.15			0.53	50		

End

Analytical Logbook

Batch Log

#	Acquired Date and Time	Sample Type	Sample Name	File Name	Comment	Vial#	Dilution Result	Operator
1	8/13/2012 12:11	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A081312C.b\001CALB.d		1101	1	Matthew Olley
2	8/13/2012 12:14	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A081312C.b\002CALB.d		1101	1	Matthew Olley
3	8/13/2012 12:18	CalStd	Standard 1	C:\Agilent\ICPMH\1\DATA\A081312C.b\003CALS.d		2101	1	Matthew Olley
4	8/13/2012 12:22	CalStd	Standard 2	C:\Agilent\ICPMH\1\DATA\A081312C.b\004CALS.d		2102	1	Matthew Olley
5	8/13/2012 12:25	CalStd	Standard 3	C:\Agilent\ICPMH\1\DATA\A081312C.b\005CALS.d		2103	1	Matthew Olley
6	8/13/2012 12:29	CalStd	Standard 4	C:\Agilent\ICPMH\1\DATA\A081312C.b\006CALS.d		2104	1	Matthew Olley
7	8/13/2012 12:32	CalStd	Standard 5	C:\Agilent\ICPMH\1\DATA\A081312C.b\007CALS.d		2105	1	Matthew Olley
8	8/13/2012 12:35	ICV	ICV	C:\Agilent\ICPMH\1\DATA\A081312C.b\008_ICV.d		1307	1	Matthew Olley
9	8/13/2012 12:39	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A081312C.b\009_ICB.d		1101	1	Matthew Olley
10	8/13/2012 12:42	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A081312C.b\010_ICB.d		1101	1	Matthew Olley
11	8/13/2012 12:46	LLICV	LLICV	C:\Agilent\ICPMH\1\DATA\A081312C.b\011LICV.d		1305	1	Matthew Olley
12	8/13/2012 12:49	ICSA	ICSA	C:\Agilent\ICPMH\1\DATA\A081312C.b\012ICSA.d		2111	1	Matthew Olley
13	8/13/2012 12:49							Matthew Olley
14	8/13/2012 12:59	ICSB	ICSAB	C:\Agilent\ICPMH\1\DATA\A081312C.b\013ICSB.d		2112	1	Matthew Olley
15	8/13/2012 13:02	Sample	1020719	C:\Agilent\ICPMH\1\DATA\A081312C.b\014SMPL.d	37991 LAMDF5	3101	1	Matthew Olley
16	8/13/2012 13:06	Sample	1020720	C:\Agilent\ICPMH\1\DATA\A081312C.b\015SMPL.d	37991 LAMDF5	3102	1	Matthew Olley
17	8/13/2012 13:09	Sample	9981408002	C:\Agilent\ICPMH\1\DATA\A081312C.b\016SMPL.d	37991 LAMDF5	3103	1	Matthew Olley
18	8/13/2012 13:13	Sample	9981430001	C:\Agilent\ICPMH\1\DATA\A081312C.b\017SMPL.d	37991 LAMDF5	3104	1	Matthew Olley
19	8/13/2012 13:16	Sample	1020721	C:\Agilent\ICPMH\1\DATA\A081312C.b\018SMPL.d	37991 LAMDF5	3105	1	Matthew Olley
20	8/13/2012 13:20	Sample	1020722	C:\Agilent\ICPMH\1\DATA\A081312C.b\019SMPL.d	37991 LAMDF5	3106	1	Matthew Olley

Batch Log

21	8/13/2012 13:23	Sample	9981430001PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\020SMPL.d	3107	1	Matthew Olley
22	8/13/2012 13:26	Sample	9981517002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\021SMPL.d	3108	1	Matthew Olley
23	8/13/2012 13:30	Sample	9981517003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\022SMPL.d	3109	1	Matthew Olley
24	8/13/2012 13:33	Sample	9981517003L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\023SMPL.d	3110	1	Matthew Olley
25	8/13/2012 13:37						Matthew Olley
26	8/13/2012 13:37	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\024_CCV.d	1307	1	Matthew Olley
27	8/13/2012 13:37						Matthew Olley
28	8/13/2012 13:49	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\025_CCB.d	1101	1	Matthew Olley
29	8/13/2012 13:53	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\026LCCV.d	1305	1	Matthew Olley
30	8/13/2012 13:56	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\027_CCV.d	1307	1	Matthew Olley
31	8/13/2012 14:00	Sample	1021781	C:\Agilent\ICPMH\1\DAT 37995 LAMDF5 A\A081312C.b\028SMPL.d	3111	1	Matthew Olley
32	8/13/2012 14:03						Matthew Olley
33	8/13/2012 14:03	Sample	1021782	C:\Agilent\ICPMH\1\DAT 37995 LAMDF5 A\A081312C.b\029SMPL.d	3112	1	Matthew Olley
34	8/13/2012 14:07						Matthew Olley
35	8/13/2012 14:07	Sample	1020183	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\030SMPL.d	3201	1	Matthew Olley
36	8/13/2012 14:10						Matthew Olley
37	8/13/2012 14:10	Sample	1020184	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\031SMPL.d	3202	1	Matthew Olley
38	8/13/2012 14:10						Matthew Olley
39	8/13/2012 14:14						Matthew Olley
40	8/13/2012 14:30	Sample	1020187	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\032SMPL.d	3203	1	Matthew Olley
41	8/13/2012 14:34						Matthew Olley
42	8/13/2012 14:34	Sample	1020188	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\033SMPL.d	3204	1	Matthew Olley
43	8/13/2012 14:37						Matthew Olley
44	8/13/2012 14:37	Sample	1020191	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\034SMPL.d	3205	1	Matthew Olley

Batch Log

45	8/13/2012 14:41						Matthew Olley
46	8/13/2012 14:41	Sample	1020192	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\035SMPL.d	3206	1	Matthew Olley
47	8/13/2012 14:44						Matthew Olley
48	8/13/2012 14:44	Sample	1020195	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\036SMPL.d	3207	1	Matthew Olley
49	8/13/2012 14:48						Matthew Olley
50	8/13/2012 14:48	Sample	1020196	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\037SMPL.d	3208	1	Matthew Olley
51	8/13/2012 14:51						Matthew Olley
52	8/13/2012 14:51	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\038_CCV.d	1307	1	Matthew Olley
53	8/13/2012 14:54	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\039_CCB.d	1101	1	Matthew Olley
54	8/13/2012 14:58	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\040LCCV.d	1305	1	Matthew Olley
55	8/13/2012 15:01	Sample	9980394001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\041SMPL.d	3209	1	Matthew Olley
56	8/13/2012 15:05						Matthew Olley
57	8/13/2012 15:05	Sample	9980394002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\042SMPL.d	3210	1	Matthew Olley
58	8/13/2012 15:08						Matthew Olley
59	8/13/2012 15:08	Sample	9980394003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\043SMPL.d	3211	1	Matthew Olley
60	8/13/2012 15:12						Matthew Olley
61	8/13/2012 15:12	Sample	9980394004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\044SMPL.d	3212	1	Matthew Olley
62	8/13/2012 15:15						Matthew Olley
63	8/13/2012 15:15	Sample	9980394005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\045SMPL.d	3301	1	Matthew Olley
64	8/13/2012 15:19						Matthew Olley
65	8/13/2012 15:19	Sample	9980394007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\046SMPL.d	3302	1	Matthew Olley
66	8/13/2012 15:22						Matthew Olley
67	8/13/2012 15:22	Sample	9980394008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\047SMPL.d	3303	1	Matthew Olley
68	8/13/2012 15:26						Matthew Olley

Batch Log

69	8/13/2012 15:26	Sample	9980394009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\048SMPL.d	3304	1	Matthew Olley
70	8/13/2012 15:29						Matthew Olley
71	8/13/2012 15:29	Sample	9980394010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\049SMPL.d	3305	1	Matthew Olley
72	8/13/2012 15:33						Matthew Olley
73	8/13/2012 15:33	Sample	9980394011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\050SMPL.d	3306	1	Matthew Olley
74	8/13/2012 15:36						Matthew Olley
75	8/13/2012 15:36	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\051_CCV.d	1307	1	Matthew Olley
76	8/13/2012 15:40	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\052_CCB.d	1101	1	Matthew Olley
77	8/13/2012 15:43	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\053LCCV.d	1305	1	Matthew Olley
78	8/13/2012 15:43						Matthew Olley
79	8/13/2012 15:49	Sample	1020719	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\054SMPL.d	3101	1	Matthew Olley
80	8/13/2012 15:52						Matthew Olley
81	8/13/2012 15:52	Sample	1020720	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\055SMPL.d	3102	1	Matthew Olley
82	8/13/2012 15:56						Matthew Olley
83	8/13/2012 15:56	Sample	9981430001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\056SMPL.d	3104	1	Matthew Olley
84	8/13/2012 15:59						Matthew Olley
85	8/13/2012 15:59	Sample	1020721	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\057SMPL.d	3105	1	Matthew Olley
86	8/13/2012 16:02						Matthew Olley
87	8/13/2012 16:02	Sample	1020722	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\058SMPL.d	3106	1	Matthew Olley
88	8/13/2012 16:06						Matthew Olley
89	8/13/2012 16:06	Sample	9981430001PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\059SMPL.d	3107	1	Matthew Olley
90	8/13/2012 16:09						Matthew Olley
91	8/13/2012 16:09	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\060_CCV.d	1307	1	Matthew Olley
92	8/13/2012 16:13	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\061_CCB.d	1101	1	Matthew Olley

Batch Log

93	8/13/2012 16:16	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\062LCCV.d	1305	1	Matthew Olley
94	8/13/2012 16:20	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\063_CCV.d	1307	1	Matthew Olley
95	8/13/2012 16:23	Sample	9980394012	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\064SMPL.d	3307	1	Matthew Olley
96	8/13/2012 16:26						Matthew Olley
97	8/13/2012 16:26	Sample	9980394013	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\065SMPL.d	3308	1	Matthew Olley
98	8/13/2012 16:30						Matthew Olley
99	8/13/2012 16:30	Sample	9980394013L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\066SMPL.d	3309	1	Matthew Olley
100	8/13/2012 16:33						Matthew Olley
101	8/13/2012 16:33	Sample	9980395001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\067SMPL.d	3310	1	Matthew Olley
102	8/13/2012 16:37						Matthew Olley
103	8/13/2012 16:37	Sample	9980395002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\068SMPL.d	3311	1	Matthew Olley
104	8/13/2012 16:40						Matthew Olley
105	8/13/2012 16:40	Sample	9980395003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\069SMPL.d	3312	1	Matthew Olley
106	8/13/2012 16:44						Matthew Olley
107	8/13/2012 16:44	Sample	1020185	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\070SMPL.d	3401	1	Matthew Olley
108	8/13/2012 16:47						Matthew Olley
109	8/13/2012 16:47	Sample	1020186	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\071SMPL.d	3402	1	Matthew Olley
110	8/13/2012 16:51						Matthew Olley
111	8/13/2012 16:51	Sample	9980395003PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\072SMPL.d	3403	1	Matthew Olley
112	8/13/2012 16:54						Matthew Olley
113	8/13/2012 16:54	Sample	9980395004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\073SMPL.d	3404	1	Matthew Olley
114	8/13/2012 16:58						Matthew Olley
115	8/13/2012 16:58	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\074_CCV.d	1307	1	Matthew Olley
116	8/13/2012 16:58						Matthew Olley

Batch Log

117	8/13/2012 17:03	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A081312C.b\075_CCB.d	1101	1	Matthew Olley
118	8/13/2012 17:07	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DATA\A081312C.b\076LCCV.d	1305	1	Matthew Olley
119	8/13/2012 17:10	Sample	9980395005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\077SMPL.d	3405	1	Matthew Olley
120	8/13/2012 17:14						Matthew Olley
121	8/13/2012 17:14	Sample	9980395007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\078SMPL.d	3406	1	Matthew Olley
122	8/13/2012 17:17						Matthew Olley
123	8/13/2012 17:17	Sample	9980395008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\079SMPL.d	3407	1	Matthew Olley
124	8/13/2012 17:21						Matthew Olley
125	8/13/2012 17:21	Sample	9980395009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\080SMPL.d	3408	1	Matthew Olley
126	8/13/2012 17:24						Matthew Olley
127	8/13/2012 17:24	Sample	9980395009L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25A\A081312C.b\081SMPL.d	3409	1	Matthew Olley
128	8/13/2012 17:28						Matthew Olley
129	8/13/2012 17:28	Sample	9980395010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\082SMPL.d	3410	1	Matthew Olley
130	8/13/2012 17:31						Matthew Olley
131	8/13/2012 17:31	Sample	9980395011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\083SMPL.d	3411	1	Matthew Olley
132	8/13/2012 17:35						Matthew Olley
133	8/13/2012 17:35	Sample	9980395012	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\084SMPL.d	3412	1	Matthew Olley
134	8/13/2012 17:38						Matthew Olley
135	8/13/2012 17:38	Sample	9980395013	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\085SMPL.d	3501	1	Matthew Olley
136	8/13/2012 17:42						Matthew Olley
137	8/13/2012 17:42	Sample	9980395014	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\086SMPL.d	3502	1	Matthew Olley
138	8/13/2012 17:45						Matthew Olley
139	8/13/2012 17:45	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A081312C.b\087_CCV.d	1307	1	Matthew Olley
140	8/13/2012 17:49	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A081312C.b\088_CCB.d	1101	1	Matthew Olley

Batch Log

141	8/13/2012 17:52	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\089LCCV.d	1305	1	Matthew Olley
142	8/13/2012 17:56	Sample	9980395014L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\090SMPL.d	3503	1	Matthew Olley
143	8/13/2012 17:59						Matthew Olley
144	8/13/2012 17:59	Sample	9980614001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\091SMPL.d	3504	1	Matthew Olley
145	8/13/2012 18:02						Matthew Olley
146	8/13/2012 18:02	Sample	9980614002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\092SMPL.d	3505	1	Matthew Olley
147	8/13/2012 18:06						Matthew Olley
148	8/13/2012 18:06	Sample	9980614003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\093SMPL.d	3506	1	Matthew Olley
149	8/13/2012 18:09						Matthew Olley
150	8/13/2012 18:09	Sample	9980614004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\094SMPL.d	3507	1	Matthew Olley
151	8/13/2012 18:13						Matthew Olley
152	8/13/2012 18:13	Sample	9980614005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\095SMPL.d	3508	1	Matthew Olley
153	8/13/2012 18:16						Matthew Olley
154	8/13/2012 18:16	Sample	9980614006	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\096SMPL.d	3509	1	Matthew Olley
155	8/13/2012 18:20						Matthew Olley
156	8/13/2012 18:20	Sample	9980614007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\097SMPL.d	3510	1	Matthew Olley
157	8/13/2012 18:23						Matthew Olley
158	8/13/2012 18:23	Sample	9980614008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\098SMPL.d	3511	1	Matthew Olley
159	8/13/2012 18:27						Matthew Olley
160	8/13/2012 18:27	Sample	9980614009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\099SMPL.d	3512	1	Matthew Olley
161	8/13/2012 18:30						Matthew Olley
162	8/13/2012 18:30	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\100_CCV.d	1307	1	Matthew Olley
163	8/13/2012 18:34	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\101_CCB.d	1101	1	Matthew Olley
164	8/13/2012 18:37	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\102LCCV.d	1305	1	Matthew Olley

Batch Log

165	8/13/2012 18:41	Sample	9980614010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\103SMPL.d	4101	1	Matthew Olley
166	8/13/2012 18:44						Matthew Olley
167	8/13/2012 18:44	Sample	9980614011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\104SMPL.d	4102	1	Matthew Olley
168	8/13/2012 18:48						Matthew Olley
169	8/13/2012 18:48	Sample	9980614012	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\105SMPL.d	4103	1	Matthew Olley
170	8/13/2012 18:51						Matthew Olley
171	8/13/2012 18:51	Sample	9980614013	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\106SMPL.d	4104	1	Matthew Olley
172	8/13/2012 18:55						Matthew Olley
173	8/13/2012 18:55	Sample	1020189	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\107SMPL.d	4105	1	Matthew Olley
174	8/13/2012 18:58						Matthew Olley
175	8/13/2012 18:58	Sample	1020190	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\108SMPL.d	4106	1	Matthew Olley
176	8/13/2012 19:02						Matthew Olley
177	8/13/2012 19:02	Sample	9980614013PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\109SMPL.d	4107	1	Matthew Olley
178	8/13/2012 19:05						Matthew Olley
179	8/13/2012 19:05	Sample	9980614014	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\110SMPL.d	4108	1	Matthew Olley
180	8/13/2012 19:09						Matthew Olley
181	8/13/2012 19:09	Sample	9980614015	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\111SMPL.d	4109	1	Matthew Olley
182	8/13/2012 19:12						Matthew Olley
183	8/13/2012 19:12	Sample	9980614015L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\112SMPL.d	4110	1	Matthew Olley
184	8/13/2012 19:16						Matthew Olley
185	8/13/2012 19:16	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\113_CCV.d	1307	1	Matthew Olley
186	8/13/2012 19:19	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\114_CCB.d	1101	1	Matthew Olley
187	8/13/2012 19:22	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\115LCCV.d	1305	1	Matthew Olley
188	8/13/2012 19:26	Sample	9980614016	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\116SMPL.d	4111	1	Matthew Olley

Batch Log

189	8/13/2012 19:29						Matthew Olley
190	8/13/2012 19:29	Sample	9980614017	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\117SMPL.d	4112	1	Matthew Olley
191	8/13/2012 19:33						Matthew Olley
192	8/13/2012 19:33	Sample	9980614018	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\118SMPL.d	4201	1	Matthew Olley
193	8/13/2012 19:36						Matthew Olley
194	8/13/2012 19:36	Sample	9980614019	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\119SMPL.d	4202	1	Matthew Olley
195	8/13/2012 19:40						Matthew Olley
196	8/13/2012 19:40	Sample	9980614020	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\120SMPL.d	4203	1	Matthew Olley
197	8/13/2012 19:43						Matthew Olley
198	8/13/2012 19:43	Sample	9980614021	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\121SMPL.d	4204	1	Matthew Olley
199	8/13/2012 19:47						Matthew Olley
200	8/13/2012 19:47	Sample	9980614022	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\122SMPL.d	4205	1	Matthew Olley
201	8/13/2012 19:50						Matthew Olley
202	8/13/2012 19:50	Sample	9980614022L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\123SMPL.d	4206	1	Matthew Olley
203	8/13/2012 19:54						Matthew Olley
204	8/13/2012 19:54	Sample	9980875001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\124SMPL.d	4207	1	Matthew Olley
205	8/13/2012 19:57						Matthew Olley
206	8/13/2012 19:57	Sample	1020193	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\125SMPL.d	4208	1	Matthew Olley
207	8/13/2012 20:01						Matthew Olley
208	8/13/2012 20:01	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\126_CCV.d	1307	1	Matthew Olley
209	8/13/2012 20:04	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\127_CCB.d	1101	1	Matthew Olley
210	8/13/2012 20:08	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\128LCCV.d	1305	1	Matthew Olley
211	8/13/2012 20:11	Sample	1020194	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\129SMPL.d	4209	1	Matthew Olley
212	8/13/2012 20:15						Matthew Olley

Batch Log

213	8/13/2012 20:15	Sample	9980875001PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\130SMPL.d	4210	1	Matthew Olley
214	8/13/2012 20:18						Matthew Olley
215	8/13/2012 20:18	Sample	9980875002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\131SMPL.d	4211	1	Matthew Olley
216	8/13/2012 20:22						Matthew Olley
217	8/13/2012 20:22	Sample	9980875003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\132SMPL.d	4212	1	Matthew Olley
218	8/13/2012 20:25						Matthew Olley
219	8/13/2012 20:25	Sample	9980875004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\133SMPL.d	4301	1	Matthew Olley
220	8/13/2012 20:29						Matthew Olley
221	8/13/2012 20:29	Sample	9980875005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\134SMPL.d	4302	1	Matthew Olley
222	8/13/2012 20:32						Matthew Olley
223	8/13/2012 20:32	Sample	9980875006	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\135SMPL.d	4303	1	Matthew Olley
224	8/13/2012 20:36						Matthew Olley
225	8/13/2012 20:36	Sample	9980875007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\136SMPL.d	4304	1	Matthew Olley
226	8/13/2012 20:39						Matthew Olley
227	8/13/2012 20:39	Sample	9980875008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\137SMPL.d	4305	1	Matthew Olley
228	8/13/2012 20:43						Matthew Olley
229	8/13/2012 20:43	Sample	9980875009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\138SMPL.d	4306	1	Matthew Olley
230	8/13/2012 20:46						Matthew Olley
231	8/13/2012 20:46	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\139_CCV.d	1307	1	Matthew Olley
232	8/13/2012 20:49	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\140_CCB.d	1101	1	Matthew Olley
233	8/13/2012 20:53	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\141LCCV.d	1305	1	Matthew Olley
234	8/13/2012 20:56	Sample	9980875010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\142SMPL.d	4307	1	Matthew Olley
235	8/13/2012 21:00						Matthew Olley
236	8/13/2012 21:00	Sample	9980875011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\143SMPL.d	4308	1	Matthew Olley

Batch Log

237	8/13/2012 21:03						Matthew Olley
238	8/13/2012 21:03	Sample	9980875012	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\144SMPL.d	4309	1	Matthew Olley
239	8/13/2012 21:07						Matthew Olley
240	8/13/2012 21:07	Sample	9980875013	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\145SMPL.d	4310	1	Matthew Olley
241	8/13/2012 21:10						Matthew Olley
242	8/13/2012 21:10	Sample	9980875013L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\146SMPL.d	4311	1	Matthew Olley
243	8/13/2012 21:14						Matthew Olley
244	8/13/2012 21:14	Sample	9980875014	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\147SMPL.d	4312	1	Matthew Olley
245	8/13/2012 21:17						Matthew Olley
246	8/13/2012 21:17	Sample	9980875014L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\148SMPL.d	4401	1	Matthew Olley
247	8/13/2012 21:21						Matthew Olley
248	8/13/2012 21:21	Sample	9981198001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\149SMPL.d	4402	1	Matthew Olley
249	8/13/2012 21:24						Matthew Olley
250	8/13/2012 21:24	Sample	9981198002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\150SMPL.d	4403	1	Matthew Olley
251	8/13/2012 21:28						Matthew Olley
252	8/13/2012 21:28	Sample	9981198003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\151SMPL.d	4404	1	Matthew Olley
253	8/13/2012 21:31						Matthew Olley
254	8/13/2012 21:31	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\152_CCV.d	1306	1	Matthew Olley
255	8/13/2012 21:35	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\153_CCB.d	1101	1	Matthew Olley
256	8/13/2012 21:38	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\154LCCV.d	1304	1	Matthew Olley
257	8/13/2012 21:42	Sample	1020197	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\155SMPL.d	4405	1	Matthew Olley
258	8/13/2012 21:45						Matthew Olley
259	8/13/2012 21:45	Sample	1020198	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\156SMPL.d	4406	1	Matthew Olley
260	8/13/2012 21:49						Matthew Olley

Batch Log

261	8/13/2012 21:49	Sample	9981198003PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\157SMPL.d	4407	1	Matthew Olley
262	8/13/2012 21:52						Matthew Olley
263	8/13/2012 21:52	Sample	9981198004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\158SMPL.d	4408	1	Matthew Olley
264	8/13/2012 21:55						Matthew Olley
265	8/13/2012 21:55	Sample	9981198005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\159SMPL.d	4409	1	Matthew Olley
266	8/13/2012 21:59						Matthew Olley
267	8/13/2012 21:59	Sample	9981198006	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\160SMPL.d	4410	1	Matthew Olley
268	8/13/2012 22:02						Matthew Olley
269	8/13/2012 22:02	Sample	9981198007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\161SMPL.d	4411	1	Matthew Olley
270	8/13/2012 22:06						Matthew Olley
271	8/13/2012 22:06	Sample	9981198008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\162SMPL.d	4412	1	Matthew Olley
272	8/13/2012 22:09						Matthew Olley
273	8/13/2012 22:09	Sample	9981198009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\163SMPL.d	4501	1	Matthew Olley
274	8/13/2012 22:13						Matthew Olley
275	8/13/2012 22:13	Sample	9981198010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\164SMPL.d	4502	1	Matthew Olley
276	8/13/2012 22:16						Matthew Olley
277	8/13/2012 22:16	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\165_CCV.d	1306	1	Matthew Olley
278	8/13/2012 22:20	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\166_CCB.d	1101	1	Matthew Olley
279	8/13/2012 22:23	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\167LCCV.d	1304	1	Matthew Olley
280	8/13/2012 22:27	Sample	9981198011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\168SMPL.d	4503	1	Matthew Olley
281	8/13/2012 22:30						Matthew Olley
282	8/13/2012 22:30	Sample	9981198011L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\169SMPL.d	4504	1	Matthew Olley
283	8/13/2012 22:34						Matthew Olley
284	8/13/2012 22:34	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\170_CCV.d	1306	1	Matthew Olley

Batch Log

285	8/13/2012 22:37	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\171_CCB.d	37991 LAMDF5	1101	1 Matthew Olley
286	8/13/2012 22:41	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\172LCCV.d	37991 LAMDF5	1304	1 Matthew Olley
287	8/13/2012 22:44	Sample	50 PPM LDR	C:\Agilent\ICPMH\1\DAT A\A081312C.b\173SMPL.d		4512	1 Matthew Olley
288	8/13/2012 22:48						Matthew Olley
289	8/13/2012 22:54	CalBlk	blk			1101	Matthew Olley
290	8/13/2012 22:54	CalBlk	blk			1101	Matthew Olley
291	8/13/2012 22:54	CalStd	Standard 1			2101	Matthew Olley
292	8/13/2012 22:54	CalStd	Standard 2			2102	Matthew Olley
293	8/13/2012 22:54	CalStd	Standard 3			2103	Matthew Olley
294	8/13/2012 22:54	CalStd	Standard 4			2104	Matthew Olley
295	8/13/2012 22:54	CalStd	Standard 5			2105	Matthew Olley
296	8/13/2012 22:54	ICV	ICV			1307	Matthew Olley
297	8/13/2012 22:54	ICB	ICB			1101	Matthew Olley
298	8/13/2012 22:54	ICB	ICB			1101	Matthew Olley
299	8/13/2012 22:54	LLICV	LLICV			1305	Matthew Olley
300	8/13/2012 22:54	ICSA	ICSA			2111	Matthew Olley
301	8/13/2012 22:54	ICSB	ICSAB			2112	Matthew Olley
302	8/13/2012 22:54	Sample	30 PPM LDR	C:\Agilent\ICPMH\1\DAT A\A081312C.b\174SMPL.d		4511	1 Matthew Olley
303	8/13/2012 22:58	Sample	1020719	C:\Agilent\ICPMH\1\DAT A\A081312C.b\175SMPL.d	37991 LAMDF5	3101	1 Matthew Olley
304	8/13/2012 22:58						Matthew Olley
305	8/13/2012 22:58	Sample	1020720		37991 LAMDF5	3102	Matthew Olley
306	8/13/2012 22:58	Sample	9981408002		37991 LAMDF5	3103	Matthew Olley
307	8/13/2012 22:58	Sample	9981430001		37991 LAMDF5	3104	Matthew Olley
308	8/13/2012 22:58	Sample	1020721		37991 LAMDF5	3105	Matthew Olley
309	8/13/2012 22:58	Sample	1020722		37991 LAMDF5	3106	Matthew Olley
310	8/13/2012 22:58	Sample	9981430001PS		37991 LAMDF5	3107	Matthew Olley
311	8/13/2012 22:58	Sample	9981517002		37991 LAMDF5	3108	Matthew Olley
312	8/13/2012 22:58	Sample	9981517003		37991 LAMDF5	3109	Matthew Olley
313	8/13/2012 22:58	Sample	9981517003L		37991 LAMDF5	3110	Matthew Olley

Batch Log

314	8/13/2012 23:10	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\176_CCV.d	1306	1	Matthew Olley
315	8/13/2012 23:13	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\177_CCB.d	1101	1	Matthew Olley
316	8/13/2012 23:17	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\178LCCV.d	1304	1	Matthew Olley
317	8/13/2012 23:17						Matthew Olley
318	8/13/2012 23:26	Sample	9980875009	C:\Agilent\ICPMH\1\DAT 37996 LAMDF25 A\A081312C.b\179SMPL.d	2501	1	Matthew Olley
319	8/13/2012 23:29	Sample	1021781	C:\Agilent\ICPMH\1\DAT 37995 LAMDF5 A\A081312C.b\180SMPL.d	2502	1	Matthew Olley
320	8/13/2012 23:29						Matthew Olley
321	8/13/2012 23:38	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\181_CCV.d	1306	1	Matthew Olley
322	8/13/2012 23:41	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\182_CCB.d	1101	1	Matthew Olley
323	8/13/2012 23:45	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\183LCCV.d	1304	1	Matthew Olley
324	8/13/2012 23:45						Matthew Olley
325	8/14/2012 0:01	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\184_CCB.d	1101	1	Matthew Olley

Total Solids Summary Forms

Sample Description
FTSW-HR-SO-13

Form 7
Duplicate Summary

Analysis Method: 2540G
SDG No.: ERT-004

Matrix (soil/water): soil
Units: %
Instrument ID: N/A
GC Column: N/A
Sample % Moisture: N/A

Lab Sample ID: 9980614003
Lab File ID: N/A
Lab Sample Dup. ID: 1018169
Dup. Lab File ID: N/A
Dup. % Moisture: N/A

Analyte	Sample Concentration	Duplicate Concentration	Relative Percent Difference (RPD)	(1)	Acceptable Limit
Total Solids	91.2	91.0	0.3		5%

(1) The following qualifiers are used:
* : Values outside of acceptable limits

Comments:

Sample Description
FTSW-HR-SO-22 (04)

Form 7
Duplicate Summary

Analysis Method: 2540G
SDG No.: ERT-004

Matrix (soil/water): soil
Units: %
Instrument ID: N/A
GC Column: N/A
Sample % Moisture: N/A

Lab Sample ID: 9980614013
Lab File ID: N/A
Lab Sample Dup. ID: 1018170
Dup. Lab File ID: N/A
Dup. % Moisture: N/A

Analyte	Sample Concentration	Duplicate Concentration	Relative Percent Difference (RPD)	(1)	Acceptable Limit
Total Solids	88.0	88.0	0.0		5%

(1) The following qualifiers are used:
* : Values outside of acceptable limits

Comments:

Total Solids Raw Data

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Total Solids

Batch: 113892 Queue: WETC Analyst: KED

File Name: 113892_120802-091854 Date/Time: 08/02/12 11:30

Misc:		1st Time In	11:30	2nd Time In	8:50	3rd Time In	10:05	4th Time In	
		1st Temp In °C	104	2nd Temp In °C	104	3rd Temp In °C	104	4th Temp In °C	
		1st Time Out	8:30	2nd Time Out	9:50	3rd Time Out	12:45	4th Time Out	
		1st Temp Out °C	104	2nd Temp Out °C	104	3rd Temp Out °C	104	4th Temp Out °C	

Sample ID	Cont ID	Samp Type	TVS	Weight of dish and sample (g) or Volume of sample (ml)	Dish Wt. (g)	1st Dish + Sample Wt (g)	2nd Dish + Sample Wt (g)	3rd Dish + Sample Wt (g)	4th Dish + Sample Wt (g)	TS (%) or (mg/l)	Result1 TARE (g)	Result2 IWT (g)	Result3 FWT (g)
1018167	BALCHK			0.1000	0.1000	0.1000	0.1000	0.1000		#DIV/0!	0.1000	0.1000	0.1000
1018168	A	DUP	1.3	5.8931	1.1649	4.2677	4.2783			65.8475	1.1649	5.8931	4.2783
9980451001	A	S		5.9998	1.1556	4.2999	4.3053			65.0200	1.1556	5.9998	4.3053
9980451002	A	S		7.3232	1.1715	5.1382	5.1491			64.6585	1.1715	7.3232	5.1491
9980451003	A	S		8.7619	1.1806	5.7222	5.7304			60.0135	1.1806	8.7619	5.7304
9980451004	A	S		8.4454	1.1627	5.5407	5.4173	5.4151		58.3904	1.1627	8.4454	5.4151
9980451005	A	S		5.6354	1.1638	3.9287	3.9371			62.0203	1.1638	5.6354	3.9371
9980451006	A	S		6.1147	1.1583	4.3188	4.3259			63.9093	1.1583	6.1147	4.3259
9980451007	A	S		7.5084	1.1586	5.0803	5.0887			61.8933	1.1586	7.5084	5.0887
9980611001	A	S		10.2287	1.1604	10.1901	10.1914			99.5887	1.1604	10.2287	10.1914
9980614001	A	S		21.2734	1.1564	16.9174	16.9195			78.3571	1.1564	21.2734	16.9195
9980614002	A	S		15.1664	1.1538	14.2225	14.2233			93.2696	1.1538	15.1664	14.2233
1018169	A	DUP	0.3	15.3775	1.1502	14.0919	14.0937			90.9765	1.1502	15.3775	14.0937
9980614003	A	S		14.0375	1.1604	12.9070	12.9093			91.2387	1.1604	14.0375	12.9093
9980614004	A	S		17.4706	1.1567	16.1400	16.1408			91.8487	1.1567	17.4706	16.1408
9980614005	A	S		17.1460	1.1636	15.9786	15.9804			92.7070	1.1636	17.1460	15.9804
9980614006	A	S		13.7771	1.1720	12.3865	12.3909			89.0029	1.1720	13.7771	12.3909
9980614007	A	S		17.7254	1.1580	16.4119	16.4131			92.0790	1.1580	17.7254	16.4131
9980614008	A	S		19.9562	1.1768	17.9850	17.9804			89.4789	1.1768	19.9562	17.9804
9980614009	A	S		11.2178	1.1736	9.8550	9.8603			86.4847	1.1736	11.2178	9.8603
9980614010	A	S		15.7837	1.1712	13.9817	13.9852			87.6920	1.1712	15.7837	13.9852
9980614011	A	S		20.1895	1.1800	19.4185	19.4198			95.9510	1.1800	20.1895	19.4198
9980614012	A	S		15.9771	1.1836	13.5899	13.5946			83.8950	1.1836	15.9771	13.5946
1018170	A	DUP	0	19.6635	1.1545	17.4239	17.4333			87.9507	1.1545	19.6635	17.4333
9980614013	A	S		19.3129	1.1533	17.1204	17.1302			87.9805	1.1533	19.3129	17.1302
9980614014	A	S		16.1765	1.1561	15.0340	15.0382			92.4216	1.1561	16.1765	15.0382
9980614015	A	S		20.0411	1.1698	17.6969	17.6973			87.5801	1.1698	20.0411	17.6973
9980614016	A	S		27.4565	1.1513	23.4572	23.4745			84.8623	1.1513	27.4565	23.4745
9980614017	A	S		16.3999	1.1614	14.7816	14.7956			89.4721	1.1614	16.3999	14.7956
9980614018	A	S		17.2443	1.1764	16.3349	16.3426			94.3882	1.1764	17.2443	16.3426
9980614019	A	S		12.2360	1.1718	11.2540	11.2687			91.2574	1.1718	12.2360	11.2687

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9980614020	A	S		20.0585	1.1577	18.5584	18.5721			92.1358	1.1577	20.0585	18.5721
9980614021	A	S		19.2180	1.1552	17.6150	17.6281			91.1979	1.1552	19.2180	17.6281
9980614022	A	S		15.6550	1.1726	14.8120	14.8215			94.2447	1.1726	15.6550	14.8215
1018171	A	DUP	3-4	11.6912	1.1708	1.9432	1.9522			7.4275	1.1708	11.6912	1.9522
9980627001	A	S		11.8716	1.1615	1.9211	1.9301			7.1764	1.1615	11.8716	1.9301
9980640001	A	S		2.4420	1.1584	1.5780	1.5816			32.9698	1.1584	2.4420	1.5816
9980640002	A	S		3.1202	1.1713	1.6076	1.6352			23.8032	1.1713	3.1202	1.6352
9980640003	A	S		2.4807	1.1586	1.4938	1.4754			23.9619	1.1586	2.4807	1.4754
9980665001	A	S		5.4258	1.1535	3.1264	3.1296			46.2538	1.1535	5.4258	3.1296
9980710001	A	S	XX	24.9668	1.1613	21.2399	21.2180			84.2524	1.1613	24.9668	21.2180
9980730001	A	S		15.2647	1.1626	12.9120	12.9259			83.4152	1.1626	15.2647	12.9259
9980730002	A	S		17.2166	1.1542	14.9437	14.9613			85.9591	1.1542	17.2166	14.9613
9980730003	A	S		14.9977	1.1753	13.1603	13.1727			86.7968	1.1753	14.9977	13.1727
9980730004	A	S		33.6575	1.1654	25.7981	25.8166			75.8683	1.1654	33.6575	25.8166
1018172	A	DUP	1-2	13.1040	1.1728	11.3949	11.4084			85.7885	1.1728	13.1040	11.4084
9980730005	A	S		18.9278	1.1778	16.6468	16.6620			87.2349	1.1778	18.9278	16.6620
9980730006	A	S		24.3319	1.1537	20.2776	20.2964			82.5892	1.1537	24.3319	20.2964
9980731001	A	S		18.1974	1.1646	16.4466	16.4671			89.8414	1.1646	18.1974	16.4671
9980732001	A	S		20.9546	1.1570	17.2824	17.2994			81.5372	1.1570	20.9546	17.2994
9980733001	A	S		20.9005	1.1552	15.8140	15.8675	15.8286		74.3134	1.1552	20.9005	15.8286
9980734001	A	S		15.5520	1.1605	14.5499	14.5655			93.1453	1.1605	15.5520	14.5655
9980735001	A	S		16.5384	1.1528	15.6076	15.6223			94.0457	1.1528	16.5384	15.6223
9980736001	A	S		18.0431	1.1667	15.7651	15.8046			86.7359	1.1667	18.0431	15.8046
9980738001	A	S		22.3820	1.1676	20.8795	20.8900			92.9670	1.1676	22.3820	20.8900
9980738002	A	S		18.0876	1.1729	16.3992	16.4103			90.0838	1.1729	18.0876	16.4103
1018173	A	DUP	3-9	22.7026	1.1745	20.6238	20.6341			90.3916	1.1745	22.7026	20.6341
9980738003	A	S		26.8044	1.1686	23.4438	23.4584			86.9479	1.1686	26.8044	23.4584
9980739001	A	S		15.6456	1.1674	15.6138	15.6213			99.8322	1.1674	15.6456	15.6213
9980763001	A	S		20.3332	1.1673	18.3708	18.3896			89.8591	1.1673	20.3332	18.3896
9980763002	A	S		21.6258	1.1546	20.1580	20.1725			92.9008	1.1546	21.6258	20.1725
9980763003	A	S		17.6474	1.1817	16.7255	16.7435			94.5104	1.1817	17.6474	16.7435
9980763004	A	S		34.6161	1.1500	32.3524	32.3752			93.3040	1.1500	34.6161	32.3752
9980763005	A	S		44.5793	1.1639	38.6584	38.6760			86.4028	1.1639	44.5793	38.6760
9980775001	A	S		26.3550	1.1846	7.0743	7.0865			23.4478	1.1846	26.3550	7.0865
9980775002	A	S		19.8036	1.1585	5.7268	5.7359			24.5501	1.1585	19.8036	5.7359
9980775003	A	S		16.2358	1.1542	5.1915	5.1995			26.8228	1.1542	16.2358	5.1995
1018174	A	DUP	18-5	18.5374	1.1496	2.1744	2.1760			5.9030	1.1496	18.5374	2.1760
9980776001	A	S		15.0587	1.1495	1.8237	1.8247			4.8543	1.1495	15.0587	1.8247
9980796001	A	S		23.1899	1.1583	20.3063	20.3335			87.0350	1.1583	23.1899	20.3335
9980796002	A	S		22.4761	1.1698	20.0011	20.0221			88.4823	1.1698	22.4761	20.0221
9980797001	A	S		21.6575	1.1685	20.5343	20.5401			94.5463	1.1685	21.6575	20.5401
9980799001	A	S		18.4922	1.1503	16.8399	16.8566			90.5685	1.1503	18.4922	16.8566
9980806001	A	S		11.3076	1.1564	1.4445	1.4463			2.8558	1.1564	11.3076	1.4463
9980806002	A	S		12.4132	1.1583	1.3979	1.3991			2.1395	1.1583	12.4132	1.3991
9980806003	A	S		9.3174	1.1852	1.3139	1.3145			1.5900	1.1852	9.3174	1.3145
1018175	BALCHK			0.1000	0.1000	0.1000	0.1000	0.1000		#DIV/0!	0.1000	0.1000	0.1000

End

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Subcontracting Data

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL REPORT

Report Date: August 16, 2012

Vicki Forney
ALS Environmental-Middletown
34 Dogwood Lane
Middletown, PA 17057

Phone: (717) 944-5541 x 3162
Fax: (717) 944-1430
E-mail: vicki.forney@ALSglobal.com

Workorder: 34-1221564
Project ID: ALS Middletown 080212
Purchase Order: NA

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
FTSW-HR-SO-11	1221564001	07/31/12	08/02/12	
FTSW-HR-SO-12 (01.5)	1221564002	07/31/12	08/02/12	
FTSW-HR-SO-13	1221564003	07/31/12	08/02/12	
FTSW-HR-SO-14 (01.5)	1221564004	07/31/12	08/02/12	
FTSW-HR-SO-14 (01.5) Dup	1221564005	07/31/12	08/02/12	
FTSW-HR-SO-15	1221564006	07/31/12	08/02/12	
FTSW-HR-SO-16 (01.5)	1221564007	07/31/12	08/02/12	
FTSW-HR-SO-17	1221564008	07/31/12	08/02/12	
FTSW-HR-SO-18 (02)	1221564009	07/31/12	08/02/12	
FTSW-HR-SO-19	1221564010	07/31/12	08/02/12	
FTSW-HR-SO-20 (01.5)	1221564011	07/31/12	08/02/12	
FTSW-HR-SO-21	1221564012	07/31/12	08/02/12	
FTSW-HR-SO-22(04)	1221564013	07/31/12	08/02/12	
FTSW-HR-SO-22(04) Dup	1221564016	07/31/12	08/02/12	
FTSW-HR-SO-23	1221564017	07/31/12	08/02/12	
FTSW-HR-SO-24 (06)	1221564018	07/31/12	08/02/12	
FTSW-HR-SO-25	1221564019	07/31/12	08/02/12	
FTSW-HR-SO-26 (04)	1221564020	07/31/12	08/02/12	
FTSW-HR-SO-27	1221564021	07/31/12	08/02/12	
FTSW-HR-SO-28 (05)	1221564022	07/31/12	08/02/12	
FTSW-HR-SO-29	1221564023	07/31/12	08/02/12	
FTSW-HR-SO-30 (05)	1221564024	07/31/12	08/02/12	

Client QC ID	Lab ID	Collect Date	Receive Date	Sampling Site
FTSW-HR-SO-22(04) MS	1221564014	07/31/12	08/02/12	
FTSW-HR-SO-22(04) MSD	1221564015	07/31/12	08/02/12	

*Client QC is reported as part of the Quality Control results report, if requested.

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-11 9980614 001 Sampling Site: NA Collected: 07/31/2012
Lab ID: 1221564001 Media: 8 oz Glass Jar Wide Mouth Received: 08/02/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1.04 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: 78.7
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/14/2012 20:32	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.032	0.032	0.61	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.38 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 78.7
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/13/2012 13:11	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.9	7.9	210	1	U
1,4-Dithiane	6.0	6.0	210	1	U

Sample ID: FTSW-HR-SO-12 (01.5) 9980614 002 Sampling Site: NA Collected: 07/31/2012
Lab ID: 1221564002 Media: 8 oz Glass Jar Wide Mouth Received: 08/02/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: 91.3
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/14/2012 22:21	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.55	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 91.3
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/10/2012 12:22	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: FTSW-HR-SO-13 9980614 003 Sampling Site: NA Collected: 07/31/2012
Lab ID: 1221564003 Media: 8 oz Glass Jar Wide Mouth Received: 08/02/2012
Matrix: Soil/Solid/Sediment. Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1.01 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: 91.1
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/14/2012 22:57	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.54	1	U

Results Continued on Next Page

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ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-13 | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564003 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.04 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 91.1
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/10/2012 12:51	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: FTSW-HR-SO-14 (01.5) 9980614 004 | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564004 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1.08 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: 92.3
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/14/2012 23:33	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.027	0.027	0.51	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.18 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 92.3
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/13/2012 13:41	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.8	6.8	180	1	U
1,4-Dithiane	5.1	5.1	180	1	U

Sample ID: FTSW-HR-SO-14 (01.5) Dup 9980614 005 | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564005 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1.01 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: NA
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/15/2012 00:10	Report Basis: Wet

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.54	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.02 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: NA
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/13/2012 14:10	Report Basis: Wet

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.8	6.8	180	1	U

Results Continued on Next Page

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ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-14 (01.5) Dup | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564005 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.02 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: NA
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/13/2012 14:10	Report Basis: Wet

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: FTSW-HR-SO-15 9980614 006 | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564006 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1.02 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: 88.5
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/15/2012 00:46	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.029	0.029	0.55	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.61 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 88.5
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/10/2012 13:20	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.0	7.0	180	1	U
1,4-Dithiane	5.3	5.3	180	1	U

Sample ID: FTSW-HR-SO-16 (01.5) 9980614 007 | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564007 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1.06 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: 93.4
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/15/2012 01:59	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.026	0.026	0.50	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.46 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 93.4
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/13/2012 14:40	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.6	6.6	180	1	U
1,4-Dithiane	5.0	5.0	180	1	U

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ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-17 9980614 008 | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564008 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1.02 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: 89.9
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/15/2012 02:35	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.55	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.38 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 89.9
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/10/2012 13:50	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: FTSW-HR-SO-18 (02) 9980614 009 | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564009 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1.05 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: 82.2
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/15/2012 03:12	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.030	0.030	0.58	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.17 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 82.2
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/10/2012 14:20	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.6	7.6	200	1	U
1,4-Dithiane	5.8	5.8	200	1	U

Sample ID: FTSW-HR-SO-19 9980614 010 | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564010 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1.04 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: 90.9
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/15/2012 03:48	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.027	0.027	0.53	1	U

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ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-19 | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564010 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.22 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 90.9
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/10/2012 14:49	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: FTSW-HR-SO-20 (01.5) 9980614 011 | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564011 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1.02 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: 97
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/15/2012 04:24	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.026	0.026	0.51	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.11 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 97
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/13/2012 15:10	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.5	6.5	170	1	U
1,4-Dithiane	4.9	4.9	170	1	U

Sample ID: FTSW-HR-SO-21 9980614 012 | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564012 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1.03 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: 87.1
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/15/2012 05:01	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.029	0.029	0.56	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.15 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 87.1
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/10/2012 15:19	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.2	7.2	190	1	U

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ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-21 | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564012 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.15 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 87.1
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/10/2012 15:19	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Dithiane	5.4	5.4	190	1	U

Sample ID: FTSW-HR-SO-22(04) 998061 4 013 | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564013 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1.05 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: 90.4
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/15/2012 06:50	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.027	0.027	0.53	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.35 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 90.4
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/10/2012 15:48	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: FTSW-HR-SO-22(04) Dup 998061404 | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564016 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1.03 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: 89.4
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/15/2012 09:15	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.54	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.36 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 89.4
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/10/2012 17:16	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.0	7.0	180	1	U
1,4-Dithiane	5.3	5.3	180	1	U

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ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-23 9980614 015 Sampling Site: NA Collected: 07/31/2012
Lab ID: 1221564017 Media: 8 oz Glass Jar Wide Mouth Received: 08/02/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1.05 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: 84.6
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/15/2012 09:52	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.029	0.029	0.56	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.21 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 84.6
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/10/2012 17:45	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.4	7.4	200	1	U
1,4-Dithiane	5.6	5.6	200	1	U

Sample ID: FTSW-HR-SO-24 (06) 9980614 016 Sampling Site: NA Collected: 07/31/2012
Lab ID: 1221564018 Media: 8 oz Glass Jar Wide Mouth Received: 08/02/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1.03 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: 88.6
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/15/2012 10:28	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.029	0.029	0.55	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.22 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 88.6
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/10/2012 18:15	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.1	7.1	190	1	U
1,4-Dithiane	5.3	5.3	190	1	U

Sample ID: FTSW-HR-SO-25 9980614 017 Sampling Site: NA Collected: 07/31/2012
Lab ID: 1221564019 Media: 8 oz Glass Jar Wide Mouth Received: 08/02/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1.05 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: 81
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/15/2012 11:05	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.031	0.031	0.59	1	U

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ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-25 | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564019 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.5 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 81
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/10/2012 18:44	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.7	7.7	200	1	U
1,4-Dithiane	5.8	5.8	200	1	U

Sample ID: FTSW-HR-SO-26 (04) 9980614 018 | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564020 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1.05 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: 92.5
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/15/2012 11:41	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.027	0.027	0.51	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.09 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 92.5
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/10/2012 19:14	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.8	6.8	180	1	U
1,4-Dithiane	5.1	5.1	180	1	U

Sample ID: FTSW-HR-SO-27 9980614 019 | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564021 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1.04 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: 84.9
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/15/2012 12:17	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.029	0.029	0.57	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.17 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 84.9
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/10/2012 19:43	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.4	7.4	200	1	U

Results Continued on Next Page

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-27 9980614 019 | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564021 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.17 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 84.9
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/10/2012 19:43	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Dithiane	5.6	5.6	200	1	U

Sample ID: FTSW-HR-SO-28 (05) 9980614 020 | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564022 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1.02 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: 91.9
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/15/2012 12:54	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.53	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.01 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 91.9
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/10/2012 20:13	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: FTSW-HR-SO-29 9980614 021 | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564023 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1.01 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: 91.4
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/15/2012 13:30	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.54	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.62 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 91.4
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/10/2012 20:42	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.8	6.8	180	1	U
1,4-Dithiane	5.1	5.1	180	1	U

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ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-30 (05) 9980614-022 Sampling Site: NA Collected: 07/31/2012
Lab ID: 1221564024 Media: 8 oz Glass Jar Wide Mouth Received: 08/02/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method: Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1292 (HBN: 91709)	Initial: 1.08 grams	Batch: ELMS/1294 (HBN: 91854)	Percent Solid: 93.3
Prepared: 08/13/2012	Final: 10 mL	Analyzed: 08/15/2012 14:07	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.026	0.026	0.50	1	U

Analysis Method: SW/8270

Preparation: EPA 3550, Sonic Ext; SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15741 (HBN: 91073)	Initial: 30.47 grams	Batch: ESVO/3816 (HBN: 91657)	Percent Solid: 93.3
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/10/2012 21:11	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.6	6.6	180	1	U
1,4-Dithiane	5.0	5.0	180	1	U

Comments

Quality Control: SW 8270 - (HBN: 91657)

Outliers in the MS/MSD are attributed to matrix effect. Since recoveries are within limits in the LCS, the method is deemed to be in control for this batch.

Recovery of surrogate 2,4,6-tribromophenol was below QC limits in Sample 1221564011. With the large number of analytes reported by Method 8270, it is to be expected that occasional outliers will occur. Based on the rule of marginal exceedences, the ALS SOP makes allowances for the data to be considered acceptable with one base/neutral surrogate and one acid surrogate outside control limits.

Report Authorization

Method	Analyst	Peer Review
Chemical Agent Breakdown	Thomas T. McKay	Thomas J. Masolan
SW 8270	Reed A. Hendricks	Matt Garvin
Solids/Moisture Determination	Ilse J. Ovalle	Ashley Waganheim

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ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

General Lab Comments

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Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 378	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint, Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.
RL = Reporting Limit, a verified value of method/media/instrument sensitivity.
CRDL = Contract Required Detection Limit.
Reg. Limit = Regulatory Limit.
ND = Not Detected, testing result not detected above the MDL or RL.
< This testing result is less than the numerical value.
** No result could be reported, see sample comments for details.

Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.
J = Qualifier indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds calibration range.
P = Qualifier indicates that the RPD between the two columns is greater than 40%.

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ANALYTICAL REPORT

Report Date: August 20, 2012

Vicki Forney
ALS Environmental-Middletown
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Phone: (717) 944-5541 x 3162
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E-mail: vicki.forney@ALSglobal.com

Workorder: 34-1222302
Project ID: ALS Middletown 080912
Purchase Order: NA

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
FTSW-HR-SO-61 (9.5)	1222302001	08/07/12	08/09/12	ERT, Inc
FTSW-HR-SO-62 (10)	1222302002	08/07/12	08/09/12	ERT, Inc

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ANALYTICAL REPORT

Workorder: 34-1222302
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-61 (9.5) | Sampling Site: ERT, Inc | Collected: 08/07/2012
Lab ID: 1222302001 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/09/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1296 (HBN: 91939)	Initial: 1.13 grams	Batch: ELMS/1297 (HBN: 92002)	Percent Solid: 82.8
Prepared: 08/14/2012	Final: 10 mL	Analyzed: 08/18/2012 11:02	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.53	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15840 (HBN: 91685)	Initial: 30.67 grams	Batch: ESVO/3827 (HBN: 91984)	Percent Solid: 82.8
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/16/2012 17:07	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.4	7.4	200	1	U
1,4-Dithiane	5.6	5.6	200	1	U

Sample ID: FTSW-HR-SO-62 (10) | Sampling Site: ERT, Inc | Collected: 08/07/2012
Lab ID: 1222302002 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/09/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1296 (HBN: 91939)	Initial: 1.55 grams	Batch: ELMS/1297 (HBN: 92002)	Percent Solid: 82.5
Prepared: 08/14/2012	Final: 10 mL	Analyzed: 08/18/2012 11:39	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.020	0.020	0.39	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15840 (HBN: 91685)	Initial: 30.73 grams	Batch: ESVO/3827 (HBN: 91984)	Percent Solid: 82.5
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/16/2012 17:36	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.5	7.5	200	1	U
1,4-Dithiane	5.6	5.6	200	1	U

Report Authorization

Method	Analyst	Peer Review
Chemical Agent Breakdown	Thomas T. McKay	Thomas J. Masolan
SW 8270	Reed A. Hendricks	Matt Garvin
Solids/Moisture Determination	Ilse J. Ovalle	Ashley Waganheim

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ANALYTICAL REPORT

Workorder: 34-1222302
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

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	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
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Reg. Limit = Regulatory Limit.
ND = Not Detected, testing result not detected above the MDL or RL.
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U = Qualifier indicates that the analyte was not detected above the MDL.
J = Qualifier indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.
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Case Narrative

Method: ALS-LC/MS
Analysis: Agent Breakdown Products
ALS WO ID(s): 1221555

Client: ALS Laboratory Group
Account: 08001
Matrix: Soil
HBN #: 91624

General Set Information: There were 11 field samples in this workorder. The samples were analyzed for thiodiglycol (TDG).

Method Summary: Each sample was prepared as noted below and analyzed using an Agilent 1200 LC/MSD system in select ion monitoring (SIM) mode at m/z 97, 125, 139, 146, 181, 105 and 113. ChemStation software was used for instrument control and data analysis.

Sample Preparation: Approximately 1.00g of each sample was weighed into a 15-mL centrifuge tube, and 9.9mL of ASTM Type II water was added to each tube. 100µL of internal standard solution was then added to each sample, bringing the total extract volume to 10mL. The samples were capped, vortexed, rotated for at least 30 minutes, and filtered with Phenomenex Phenex 0.45µm PES syringe filters.

Holding Times: Holding times were met for all samples.

Dilutions: No dilutions were necessary.

Method QC data: The method blank criteria were met. The method blank (LMB 289795) was less than 1/2 the RL of 0.5ug/g for all analytes. The recoveries for LCS 289796 were within acceptable parameters.

MS/MSD Analysis: The matrix spike and matrix spike duplicate were performed on parent sample 1221555001. Recoveries and RPDs were within acceptable limits for all analytes.

Instrument QC: Instrument initial and continuing calibrations were performed in accordance with established procedures.

NC/CAR(s): None.

Sample Calculation: Samples were reported in µg/g. Results were calculated in µg/g by the equation (A)x(B)x(C)/(D).

where: A = Analyte concentration from the standard curve (µg/mL)
B = Dilution performed at time of analysis
C = Volume of extract (10mL)
D = Actual weight of sample aliquot (g)

Miscellaneous Comments: None.

Thomas T. McKay — August 14, 2012
Date

Case Narrative

Method: ALS-LC/MS
Analysis: Agent Breakdown Products
ALS WO ID(s): 1221555

Client: ALS Laboratory Group
Account: 08001
Matrix: Water
HBN #: 91545

General Set Information: There was one field sample in this workorder. The sample was analyzed for thiodiglycol (TDG).

Method Summary: Each sample was prepared as noted below and analyzed using an Agilent 1200 LC/MSD system in select ion monitoring (SIM) mode at m/z 97, 125, 139, 146, 181, 105 and 113. ChemStation software was used for instrument control and data analysis.

Sample Preparation: 9.9mL of each sample was transferred into a 15-mL centrifuge tube. 100µL of an internal standard solution was then added to each sample. The samples were capped, vortexed, and filtered with Phenomenex Phenex 0.45µm PES syringe filters.

Holding Times: All samples were analyzed within holding times.

Dilutions: No dilutions were necessary.

Method QC data: The method blank criteria were met. The method blank (LMB 289537) was less than 1/2 the RL of 50ug/L for all analytes. The recovery for LCS 289538 was within acceptable limits.

MS/MSD Analysis: A matrix spike and matrix spike duplicate were performed on parent sample 1221555006. The recovery and RPD were within acceptable parameters.

Instrument QC: Instrument initial and continuing calibrations were performed in accordance with established procedures.

NC/CAR(s): None were required for this set.

Sample Calculation: Samples were reported in µg/L. Results were calculated in µg/L by the equation (A)x(B)x(C),

where: A = Analyte concentration from the standard curve (µg/mL)
B = Dilution performed at time of analysis
C = Conversion factor from µg/mL to µg/L (1000)

Miscellaneous Comments: None.

Thomas T. McKay — August 15, 2012
Date

Case Narrative

Method: 8270D
Analysis: Semivolatiles by GC/MS
SOP ref: OE-SW-3550, OE-SW-3510, OS-SW-8270D

Set ID: 1221555
Client: ALS Laboratory Group
Matrix: Soil and Water

General Set Information: There are twelve field samples plus MS/MSD in this reporting group.

Method Summary: This is a GC/MS method for determination of semivolatile organic compounds in soil according to the SW-846 Guidelines. Thirty grams of soil were extracted by sonication and then concentrated to final volume of 1.0 mL. One liter of water is extracted by separatory funnel and then concentrated to a final volume of 1.0 mL. The resulting extract is analyzed using an Agilent model 5975 GC/MS system with an electron impact ionization source and a quadrapole mass-filter detector.

Sample Preparation: All samples were prepared in accordance with method 3550 or 3510.

Holding Times: All preparation and analysis holding times were met for most samples; however, the water sample was extracted two days past the Method-prescribed holding time. The reason for the out-of-hold extraction is that an incorrect spiking solution was used in the original extraction (which was within holding time). A re-extraction was performed as soon as the error was discovered, but it was not possible to initiate this second extraction within the 7-day holding time.

Dilutions: None were needed.

Method and Sample QC data: All target compounds were within recovery limits for the laboratory control sample. The method blank met the acceptance criteria with no target compounds detected above the reporting limit. All sample met pertinent internal standard area criteria. In some instances the latter-eluting internal standard areas were low due to a likely matrix effect, but the requested target analytes do not reference those internal standards. Most surrogate recoveries were within QC limits. In the soil analysis, surrogate terphenyl-d14 was above the QC limits and 2,4,6-tribromophenol below the limit in Sample 1221555010. In the water extraction batch, surrogate terphenyl-d14 had high recovery in three of the samples. This surrogate has a tendency to precipitate out of solution when stored under refrigeration, and it is prone to becoming concentrated in the solution. The old solution has since been discarded and replaced with a fresh one. With the large number of analytes reported by Method 8270, it is to be expected that occasional outliers will occur. Based on the rule of marginal exceedences, the ALS SOP makes allowances for the data to be considered acceptable with one base/neutral surrogate and one acid surrogate outside control limits. Of the six surrogates used in Method 8270, the two eluting closest to oxathiane and dithiane are 2-fluorophenol and phenol-d6, both of which were within limits in all samples.

MS/MSD Analysis: Matrix spiking was performed on soil Sample 1221555001 (FTSW-HR-SO-01). There was not enough sample to perform matrix spiking on the water samples. All recoveries were within expected ranges.

Instrument QC: The instrument was tuned with 50 ng DFTPP. A six-point initial calibration curve was analyzed prior to sample analysis. The concentrations of the standards were: 5, 20, 35, 50, 65 and 80 µg/mL. A calibration verification standard at a concentration of 50 ug/mL was analyzed to verify instrument response against the initial calibration. The initial calibration and continuing calibration verification passed all method criteria.

Miscellaneous Comments: None.

8-13-12

Reed A. Hendricks August 13, 2012

ANALYTICAL REPORT

Report Date: August 15, 2012

Vicki Forney
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Workorder: **34-1221555**
Project ID: ALS Middletown 080212
Purchase Order: NA

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
FTSW-HR-SO-01	1221555001	07/30/12	08/01/12	
FTSW-HR-SO-01 Dup	1221555004	07/30/12	08/01/12	
FTSW-HR-SO-02(01.5)	1221555005	07/30/12	08/01/12	
FTSW-HR-SO-02(01.5)ERB	1221555006	07/30/12	08/01/12	
FTSW-HR-SO-03	1221555007	07/30/12	08/01/12	
FTSW-HR-SO-04 (02)	1221555008	07/30/12	08/01/12	
FTSW-HR-SO-05	1221555009	07/30/12	08/01/12	
FTSW-HR-SO-06	1221555010	07/30/12	08/01/12	
FTSW-HR-SO-07	1221555011	07/30/12	08/01/12	
FTSW-HR-SO-08 (02)	1221555012	07/30/12	08/01/12	
FTSW-HR-SO-09	1221555013	07/30/12	08/01/12	
FTSW-HR-SO-10 (01.5)	1221555014	07/30/12	08/01/12	

Client QC ID *	Lab ID	Collect Date	Receive Date	Sampling Site
FTSW-HR-SO-01 MS	1221555002	07/30/12	08/01/12	
FTSW-HR-SO-01 MSD	1221555003	07/30/12	08/01/12	

***Client QC is reported as part of the Quality Control results report, if requested.**

ANALYTICAL REPORT

Workorder: 34-1221555
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-01** | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555001 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/01/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1290 (HBN: 91618)	**Initial:** 1.01 grams	**Batch:**	ELMS/1291 (HBN: 91624)	**Percent Solid:** 90.6
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/13/2012 20:27	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.55	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15748 (HBN: 91114)	**Initial:** 30.01 grams	**Batch:**	ESVO/3809 (HBN: 91368)	**Percent Solid:** 90.6
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/08/2012 16:58	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.0	7.0	180	1	U
1,4-Dithiane	5.3	5.3	180	1	U

Sample ID: **FTSW-HR-SO-01 Dup** | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555004 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/01/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1290 (HBN: 91618)	**Initial:** 1.02 grams	**Batch:**	ELMS/1291 (HBN: 91624)	**Percent Solid:** 91.7
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/13/2012 22:16	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.53	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15748 (HBN: 91114)	**Initial:** 30.04 grams	**Batch:**	ESVO/3809 (HBN: 91368)	**Percent Solid:** 91.7
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/08/2012 18:26	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: **FTSW-HR-SO-02(01.5)** | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555005 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/01/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1290 (HBN: 91618)	**Initial:** 1.03 grams	**Batch:**	ELMS/1291 (HBN: 91624)	**Percent Solid:** 95.6
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/13/2012 22:53	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.026	0.026	0.51	1	U

Results Continued on Next Page

ANALYTICAL REPORT

Workorder: 34-1221555
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-02(01.5)** | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555005 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/01/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15748 (HBN: 91114)	**Initial:** 30 grams	**Batch:**	ESVO/3809 (HBN: 91368)	**Percent Solid:** 95.6
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/08/2012 18:55	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.6	6.6	170	1	U
1,4-Dithiane	5.0	5.0	170	1	U

Sample ID: **FTSW-HR-SO-02(01.5)ERB** | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555006 | Media: 1000 mL Amber Glass | Received: 08/01/2012
Matrix: Water | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Not Applicable	**Analysis:**	Chemical Agent Breakdown, Water	**Instrument ID:** LCMS03
		Batch:	ELMS/1288 (HBN: 91545)	**Percent Solid:** NA
		Analyzed:	08/13/2012 14:07	**Report Basis:** Wet

Analyte	ug/L	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual.
Thiodiglycol	2.6	2.6	50	1	U

Analysis Method - SW 8270

Preparation:	EPA 3510, Sep Funnel SVOA	**Weight/Volume**	**Analysis:**	SW 8270D, Water	**Instrument ID:** 5975-H
Batch:	ENVX/15783 (HBN: 91345)	**Initial:** 1000 mL	**Batch:**	ESVO/3811 (HBN: 91473)	**Percent Solid:** NA
Prepared:	08/08/2012	**Final:** 1 mL	**Analyzed:**	08/09/2012 12:03	**Report Basis:** Wet

Analyte	ug/L	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual.
1,4-Oxathiane	1.5	1.5	5.0	1	U
1,4-Dithiane	1.5	1.5	5.0	1	U

Sample ID: **FTSW-HR-SO-03** | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555007 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/01/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1290 (HBN: 91618)	**Initial:** 1 grams	**Batch:**	ELMS/1291 (HBN: 91624)	**Percent Solid:** 89.1
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/13/2012 23:29	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.029	0.029	0.56	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15748 (HBN: 91114)	**Initial:** 30.17 grams	**Batch:**	ESVO/3809 (HBN: 91368)	**Percent Solid:** 89.1
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/08/2012 19:24	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.0	7.0	190	1	U

Results Continued on Next Page

ANALYTICAL REPORT

Workorder: 34-1221555
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-03** | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555007 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/01/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15748 (HBN: 91114)	**Initial:** 30.17 grams	**Batch:**	ESVO/3809 (HBN: 91368)	**Percent Solid:** 89.1
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/08/2012 19:24	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Dithiane	5.3	5.3	190	1	U

Sample ID: **FTSW-HR-SO-04 (02)** | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555008 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/01/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1290 (HBN: 91618)	**Initial:** 1 grams	**Batch:**	ELMS/1291 (HBN: 91624)	**Percent Solid:** 93.6
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/14/2012 00:06	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.53	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15748 (HBN: 91114)	**Initial:** 30.08 grams	**Batch:**	ESVO/3809 (HBN: 91368)	**Percent Solid:** 93.6
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/08/2012 19:54	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.7	6.7	180	1	U
1,4-Dithiane	5.1	5.1	180	1	U

Sample ID: **FTSW-HR-SO-05** | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555009 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/01/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1290 (HBN: 91618)	**Initial:** 1.03 grams	**Batch:**	ELMS/1291 (HBN: 91624)	**Percent Solid:** 91.4
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/14/2012 01:18	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.53	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15748 (HBN: 91114)	**Initial:** 30.03 grams	**Batch:**	ESVO/3809 (HBN: 91368)	**Percent Solid:** 91.4
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/08/2012 20:24	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

ANALYTICAL REPORT

Workorder: 34-1221555
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-06** | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555010 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/01/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1290 (HBN: 91618)	**Initial:** 1.04 grams	**Batch:**	ELMS/1291 (HBN: 91624)	**Percent Solid:** 96.4
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/14/2012 01:55	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.026	0.026	0.50	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15748 (HBN: 91114)	**Initial:** 30.11 grams	**Batch:**	ESVO/3809 (HBN: 91368)	**Percent Solid:** 96.4
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/08/2012 20:53	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.5	6.5	170	1	U
1,4-Dithiane	4.9	4.9	170	1	U

Sample ID: **FTSW-HR-SO-07** | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555011 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/01/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1290 (HBN: 91618)	**Initial:** 1 grams	**Batch:**	ELMS/1291 (HBN: 91624)	**Percent Solid:** 80.5
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/14/2012 02:31	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.032	0.032	0.62	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15748 (HBN: 91114)	**Initial:** 30.05 grams	**Batch:**	ESVO/3809 (HBN: 91368)	**Percent Solid:** 80.5
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/08/2012 21:23	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.8	7.8	210	1	U
1,4-Dithiane	5.9	5.9	210	1	U

Sample ID: **FTSW-HR-SO-08 (02)** | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555012 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/01/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1290 (HBN: 91618)	**Initial:** 1.02 grams	**Batch:**	ELMS/1291 (HBN: 91624)	**Percent Solid:** 89
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/14/2012 03:07	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.029	0.029	0.55	1	U

Results Continued on Next Page

ANALYTICAL REPORT

Workorder: 34-1221555
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-08 (02)** | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555012 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/01/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15748 (HBN: 91114)	**Initial:** 30.07 grams	**Batch:**	ESVO/3809 (HBN: 91368)	**Percent Solid:** 89
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/08/2012 21:52	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.1	7.1	190	1	U
1,4-Dithiane	5.3	5.3	190	1	U

Sample ID: **FTSW-HR-SO-09** | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555013 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/01/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1290 (HBN: 91618)	**Initial:** 1.01 grams	**Batch:**	ELMS/1291 (HBN: 91624)	**Percent Solid:** 88
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/14/2012 08:22	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.029	0.029	0.56	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15748 (HBN: 91114)	**Initial:** 30 grams	**Batch:**	ESVO/3809 (HBN: 91368)	**Percent Solid:** 88
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/08/2012 22:22	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.2	7.2	190	1	U
1,4-Dithiane	5.4	5.4	190	1	U

Sample ID: **FTSW-HR-SO-10 (01.5)** | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555014 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/01/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1290 (HBN: 91618)	**Initial:** 1 grams	**Batch:**	ELMS/1291 (HBN: 91624)	**Percent Solid:** 93.9
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/14/2012 08:58	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.53	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15748 (HBN: 91114)	**Initial:** 30.1 grams	**Batch:**	ESVO/3809 (HBN: 91368)	**Percent Solid:** 93.9
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/08/2012 22:51	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.7	6.7	180	1	U

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ANALYTICAL REPORT

Workorder: 34-1221555
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-10 (01.5)** | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555014 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/01/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15748 (HBN: 91114)	**Initial:** 30.1 grams	**Batch:**	ESVO/3809 (HBN: 91368)	**Percent Solid:** 93.9
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/08/2012 22:51	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Dithiane	5.1	5.1	180	1	U

Comments

Quality Control: SW 8270 - (HBN: 91368)

Surrogate terphenyl-d14 was above the QC limits and 2,4,6-tribromophenol below the limit in Sample 1221555010. With the large number of analytes reported by Method 8270, it is to be expected that occasional outliers will occur. Based on the rule of marginal exceedences, the ALS SOP makes allowances for the data to be considered acceptable with one base/neutral surrogate and one acid surrogate outside control limits.

Quality Control: SW 8270 - (HBN: 91473)

Surrogate terphenyl-d14 was above the QC limits in some samples. With the large number of analytes reported by Method 8270, it is to be expected that occasional outliers will occur. Based on the rule of marginal exceedences, the ALS SOP makes allowances for the data to be considered acceptable with one base/neutral surrogate and one acid surrogate outside control limits.

Report Authorization

Method	Analyst	Peer Review
Chemical Agent Breakdown	Thomas T. McKay	Thomas J. Masoian
SW 8270	Reed A. Hendricks	Guy Barker
SW 8270	Reed A. Hendricks	Matt Garvin
Solids/Moisture Determination	Ilse J. Ovalle	Ashley Waganheim

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alsslc.com

ANALYTICAL REPORT

Workorder: 34-1221555
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint ,Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.
RL = Reporting Limit, a verified value of method/media/instrument sensitivity.
CRDL = Contract Required Detection Limit
Reg. Limit = Regulatory Limit.
ND = Not Detected, testing result not detected above the MDL or RL.
< This testing result is less than the numerical value.
** No result could be reported, see sample comments for details.

Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.
J = Qualifier Indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds calibration range.
P = Qualifier indicates that the RPD between the two columns is greater than 40%.

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1221555**

Limits: Historical/Performance	**Preparation:** NA	**Analysis:** Chemical Agent Breakdown
Basis: ALS Laboratory Group	**Batch:** NA	**Batch:** ELMS/1288 (HBN: 91545)
	Prepared By: NA	**Analyzed By:** Thomas T. McKay

Blank

LMB: 289537
Analyzed: 08/13/2012 12:17
Units: ug/L

Analyte	Result	RL
Thiodiglycol	ND	50

Laboratory Control Sample

LCS: 289538
Analyzed: 08/13/2012 12:54
Units: ug/L

Analyte	Result	Target	% Recovery	QC Limits	
Thiodiglycol	2270	2000	113	73	131.2

Matrix Spike - Matrix Spike Duplicate

Sample: 1221555006
Analyzed: 08/13/2012 14:07
Units: ug/L

MS: 289539
Analyzed: 08/13/2012 14:43

MSD: 289540
Analyzed: 08/13/2012 15:19

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
Thiodiglycol	ND	5260	5000	105	80	120	5850	117	10.5	0	20

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1221555**

Limits: Historical/Performance	**Preparation:** NA	**Analysis:** Chemical Agent Breakdown
Basis: ALS Laboratory Group	**Batch:** NA	**Batch:** ELMS/1288 (HBN: 91545)
	Prepared By: NA	**Analyzed By:** Thomas T. McKay

QC Data Approved and Reviewed by

Thomas T. McKay	Thomas J. Masoian	8/15/2012
Analyst	**Peer Review**	**Date**

Symbols and Definitions

* - Analyte above reporting limit or outside of control limits
▲ - Sample result is greater than 4 times the spike added
◓ - Sample and Matrix Duplicate less than 5 times the reporting limit

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1221555**

Limits: Historical/Performance	**Preparation:** Chemical Agent Breakdown, Soil Prep	**Analysis:** Chemical Agent Breakdown
Basis: ALS Laboratory Group	**Batch:** ELMS/1290 (HBN: 91618)	**Batch:** ELMS/1291 (HBN: 91624)
	Prepared By: Thomas T. McKay	**Analyzed By:** Thomas T. McKay

Blank

LMB: 289795
Analyzed: 08/13/2012 18:38
Units: ug/g

Analyte	Result	RL
Thiodiglycol	ND	0.5

Laboratory Control Sample

LCS: 289796
Analyzed: 08/13/2012 19:15
Units: ug/g

Analyte	Result	Target	% Recovery	QC Limits	
Thiodiglycol	21.7	20	108	80	120

Matrix Spike - Matrix Spike Duplicate

Sample: 1221555001	**MS:** 1221555002	**MSD:** 1221555003
Analyzed: 08/13/2012 20:27	**Analyzed:** 08/13/2012 21:04	**Analyzed:** 08/13/2012 21:40
Units: ug/g		

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
Thiodiglycol	ND	49.9	50.5	98.7	80	120	52.1	104	4.36	0	20

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1221555**

Limits: Historical/Performance	**Preparation:** Chemical Agent Breakdown, Soil Prep	**Analysis:** Chemical Agent Breakdown
Basis: ALS Laboratory Group	**Batch:** ELMS/1290 (HBN: 91618)	**Batch:** ELMS/1291 (HBN: 91624)
	Prepared By: Thomas T. McKay	**Analyzed By:** Thomas T. McKay

QC Data Approved and Reviewed by

Thomas T. McKay	Thomas J. Masoian	8/14/2012
Analyst	**Peer Review**	**Date**

Symbols and Definitions

* - Analyte above reporting limit or outside of control limits
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RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable

Quality Control Sample
Batch Report

Analysis Information

Workorder: 1221555

Limits:	Historical/Performance	**Preparation:**	EPA 3550, Sonic Ext, SVOA Soil	**Analysis:**	SW 8270
Basis:	ALS Laboratory Group	**Batch:**	ENVX/15748 (HBN: 91114)	**Batch:**	ESVO/3809 (HBN: 91368)
		Prepared By:	Dustin Calder	**Analyzed By:**	Reed A. Hendricks

Blank

MB: 288238
Analyzed: 08/08/2012 15:58
Units: ug/Kg

Analyte	Result	RL
1,4-Oxathiane	ND	167
1,4-Dithiane	ND	167

Laboratory Control Sample

LCS: 288239
Analyzed: 08/08/2012 15:28
Units: ug/Kg

Analyte	Result	Target	% Recovery	QC Limits	
1,4-Oxathiane	732	1330	54.9	30	170
1,4-Dithiane	887	1330	66.5	30	170

Matrix Spike - Matrix Spike Duplicate

Sample: 1221555001
Analyzed: 08/08/2012 16:58
Units: ug/Kg

MS: 1221555002
Analyzed: 08/08/2012 17:28

MSD: 1221555003
Analyzed: 08/08/2012 17:56

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
1,4-Oxathiane	ND	708	1330	53.2	30	170	889	66.7	22.7	0	50
1,4-Dithiane	ND	723	1330	54.3	30	170	886	66.5	20.3	0	50

Surrogate Recoveries

Surrogate	2-Fluorobiphenyl			2-Fluorophenol			Phenol-d5		
QC Limits	38.1	125.1		15.3	128.2		14.5	131.9	
Units	ug/Kg			ug/Kg			ug/Kg		
Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
288238-MB	975	1670	58.5	876	1670	52.6	1140	1670	68.1
288239-LCS	1210	1670	72.7	1100	1670	65.8	1440	1670	86.7
1221555001	1240	1670	74.6	1010	1670	60.5	1310	1670	78.6
1221555002-MS	1340	1660	80.9	1100	1660	66	1450	1660	87.3
1221555003-MSD	1410	1670	84.6	1180	1670	70.6	1540	1670	92.2
1221555004-DUP	1240	1660	74.2	1030	1660	62	1330	1660	80.2
1221555005	1240	1670	74.2	1030	1670	61.6	1310	1670	78.9
1221555007	1370	1660	82.4	1150	1660	69.1	1440	1660	87.2
1221555008	1260	1660	75.6	1120	1660	67.1	1400	1660	84.5
1221555009	1120	1670	67.3	987	1670	59.3	1260	1670	75.8
1221555010	1370	1660	82.7	522	1660	31.4	357	1660	21.5
1221555011	1300	1660	78	1050	1660	63.3	1240	1660	74.7
1221555012	1240	1660	74.7	950	1660	57.1	1110	1660	67
1221555013	1200	1670	71.8	967	1670	58	1210	1670	72.4

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1221555**

Limits:	Historical/Performance	**Preparation:**	EPA 3550, Sonic Ext, SVOA Soil	**Analysis:**	SW 8270
Basis:	ALS Laboratory Group	**Batch:**	ENVX/15748 (HBN: 91114)	**Batch:**	ESVO/3809 (HBN: 91368)
		Prepared By:	Dustin Calder	**Analyzed By:**	Reed A. Hendricks

Surrogate Recoveries

Surrogate	2-Fluorobiphenyl			2-Fluorophenol			Phenol-d5		
QC Limits	38.1	125.1		15.3	128.2		14.5	131.9	
Units	ug/Kg			ug/Kg			ug/Kg		
Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
1221555014	1260	1660	76.1	1050	1660	63.2	1350	1660	81.3

Surrogate	Terphenyl-d14			Nitrobenzene-d5			2,4,6-Tribromophenol		
QC Limits	17.7	171.2		17.4	135.5		22.1	146.8	
Units	ug/Kg			ug/Kg			ug/Kg		
Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
288238-MB	1090	1670	65.6	914	1670	54.8	1190	1670	71.4
288239-LCS	1280	1670	76.7	1100	1670	65.9	1440	1670	86.3
1221555001	1050	1670	62.9	1120	1670	67.2	1320	1670	79
1221555002-MS	1170	1660	70.6	1200	1660	72.2	1470	1660	88.4
1221555003-MSD	1220	1670	73.5	1290	1670	77.5	1540	1670	92.6
1221555004-DUP	1050	1660	63.2	1130	1660	67.9	1290	1660	77.7
1221555005	1240	1670	74.6	1100	1670	66	1210	1670	72.6
1221555007	1140	1660	68.8	1260	1660	76	1380	1660	83.2
1221555008	1280	1660	77	1180	1660	71	1430	1660	85.8
1221555009	1050	1670	63.3	1060	1670	63.5	1190	1670	71.6
1221555010	3160	1660	*190	681	1660	41	41.4	1660	*2.49
1221555011	1370	1660	82.5	1030	1660	62	1390	1660	83.3
1221555012	1600	1660	96.2	995	1660	59.9	1020	1660	61.3
1221555013	1260	1670	75.7	1040	1670	62.4	1250	1670	74.9
1221555014	1410	1660	84.8	1090	1660	65.9	1330	1660	80.4

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1221555**

Limits: Historical/Performance	**Preparation:** EPA 3550, Sonic Ext, SVOA Soil	**Analysis:** SW 8270
Basis: ALS Laboratory Group	**Batch:** ENVX/15748 (HBN: 91114)	**Batch:** ESVO/3809 (HBN: 91368)
	Prepared By: Dustin Calder	**Analyzed By:** Reed A. Hendricks

Comments

Surrogate terphenyl-d14 was above the QC limits and 2,4,6-tribromophenol below the limit in Sample 1221555010. With the large number of analytes reported by Method 8270, it is to be expected that occasional outliers will occur. Based on the rule of marginal exceedences, the ALS SOP makes allowances for the data to be considered acceptable with one base/neutral surrogate and one acid surrogate outside control limits.

QC Data Approved and Reviewed by

Reed A. Hendricks	Matt Garvin	8/14/2012
Analyst	**Peer Review**	**Date**

Symbols and Definitions

* - Analyte above reporting limit or outside of control limits
▲ - Sample result is greater than 4 times the spike added
◆ - Sample and Matrix Duplicate less than 5 times the reporting limit

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1221555**

Limits: Historical/Performance	**Preparation:** EPA 3510, Sep Funnel SVOA	**Analysis:** SW 8270
Basis: ALS Laboratory Group	**Batch:** ENVX/15783 (HBN: 91345)	**Batch:** ESVO/3811 (HBN: 91473)
	Prepared By: Dustin Calder	**Analyzed By:** Reed A. Hendricks

Blank

MB: 289024
Analyzed: 08/09/2012 10:35
Units: ug/L

Analyte	Result	RL
1,4-Oxathiane	ND	5
1,4-Dithiane	ND	5

Laboratory Control Sample - Laboratory Control Sample Duplicate

LCS: 289025
Analyzed: 08/09/2012 11:05
Units: ug/L

LCSD: 289026
Analyzed: 08/09/2012 11:34

Analyte	Result	Target	% Recovery	QC Limits		Result	RPD	QC Limits	
1,4-Oxathiane	28.5	40	71.2	36.2	101.4	23.8	17.8	0	50
1,4-Dithiane	30.4	40	75.9	50.7	98.8	25.7	16.6	0	50

Surrogate Recoveries

Surrogate	2-Fluorophenol		Nitrobenzene-d5		Phenol-d5	
QC Limits	0	121	22	130.3	0	145
Units	ug/L		ug/L		ug/L	

Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
289024-MB	18.6	50	37.3	37.2	50	74.4	15.8	50	31.5
289025-LCS	21.4	50	42.9	38.6	50	77.2	16.6	50	33.1
289026-LCSD	16.8	50	33.5	30.4	50	60.8	13.1	50	26.2
1221555006	20.9	50	41.7	37.6	50	75.2	16.1	50	32.2
1221656017	18.1	50	36.2	32.7	50	65.5	14.3	50	28.7

Surrogate	2,4,6-Tribromophenol		Terphenyl-d14		2-Fluorobiphenyl	
QC Limits	12.1	139.9	16.2	143.5	35.1	113.6
Units	ug/L		ug/L		ug/L	

Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
289024-MB	35.4	50	70.8	85.3	50	*171	37.3	50	74.6
289025-LCS	40.1	50	80.2	93.7	50	*187	40.2	50	80.4
289026-LCSD	32.5	50	65.1	61.9	50	124	31.7	50	63.4
1221555006	39.5	50	79	84.8	50	*170	39.3	50	78.6
1221656017	35.5	50	71	60.1	50	120	34.5	50	69

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1221555**

Limits: Historical/Performance	**Preparation:** EPA 3510, Sep Funnel SVOA	**Analysis:** SW 8270
Basis: ALS Laboratory Group	**Batch:** ENVX/15783 (HBN: 91345)	**Batch:** ESVO/3811 (HBN: 91473)
	Prepared By: Dustin Calder	**Analyzed By:** Reed A. Hendricks

Comments

Surrogate terphenyl-d14 was above the QC limits in some samples. With the large number of analytes reported by Method 8270, it is to be expected that occasional outliers will occur. Based on the rule of marginal exceedences, the ALS SOP makes allowances for the data to be considered acceptable with one base/neutral surrogate and one acid surrogate outside control limits.

QC Data Approved and Reviewed by

Reed A. Hendricks	Guy Barker	8/16/2012
Analyst	**Peer Review**	**Date**

Symbols and Definitions

* - Analyte above reporting limit or outside of control limits
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RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable

SUBCONTRACT to ALS ~~PL Collins~~ Salt Lake City UT

0855 / ... -2-3-4

1221555

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

.17057 • 717.944.5541 • Fax: 717.944.1430

1221555

Page 1 of 2

Courier:

Tracking #: 7938 4634 5791

9980395

Co. Name: ERT, inC

Contact (Report to): Mike Gearheart

Phone: 301-323-1403

Address: 6100 Frost PL
Suite A
Laurel MD 20707

Bill to (if different than Report to): ALS Middletown

PO#:

Project Name/#: Ft. Stewart 3153-004

ALS Quote #:

TAT: ☐ Normal-Standard TAT is 10 business days. ☐ Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? ✓ -Y Mike.Gearheart@ertcorp.com

Fax? -Y No.:

***Container Type	CG	AG	AG	AG	PL										
***Container Size	4oz	8oz	8oz	1L	250ml										
*** Preservative	N/A	N/A	N/A	N/A	HNO3										

ANALYSES/METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	SW-846 6020	SW-846 8330B	SW-846 8270D/8330	SW-846 8270D/8330 ~~6020~~	SW-846 6020		HR samples require only arsenic per Mcgearheart SS	07/31/12 SK		
1	FTSW-AA-SO-28		7/30/12	940	G	So	1									
2	FTSW-AA-SO-29		7/30/12	0942	G	So	1									
3	FTSW-HR-SO-01		7/30/12	1132	G	So		1	1							
4	FTSW-HR-SO-01 Dup		7/30/12	1134	G	So		1	1							
5	FTSW-HR-SO-01 MS		7/30/12	1136	G	So		1	1							
6	FTSW-HR-SO-01 MSD		7/30/12	1138	G	So		1	1							
7	FTSW-HR-SO-02 (01.5)		7/30/12	1144	G	So		1	1							
8	FTSW-HR-SO-02 (01.5) ERB		7/30/12	1204	G	[illegible]		1	1	2	1					

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)

Performed by: [illegible]

Cooler Temp: 2°C

Therm. ID: TH215

No. of Coolers:

Notes:

Sample Description/Location	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
1 FTSW-AA-SO-28	Y	Y	Y	Y	N
2 FTSW-AA-SO-29	N	N	N	N	N
3 FTSW-HR-SO-01	Y	Y	Y	Y	Y
4 FTSW-HR-SO-01 Dup	Y	Y	Y	Y	Y
5 FTSW-HR-SO-01 MS	Y	Y	Y	Y	Y
6 FTSW-HR-SO-01 MSD	Y	Y	Y	Y	Y
7 FTSW-HR-SO-02 (01.5)	Y	Y	Y	Y	Y
8 FTSW-HR-SO-02 (01.5) ERB	Y	Y	Y	Y	Y

SAMPLED BY (Please Print): Rebekah McCoy

LOGGED BY (signature): [signature] DATE 7/31/12 TIME 1414

REVIEWED BY (signature): DATE TIME

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature] ERT	7/30/12	1630	2	[signature] ALS	7/31/12	0925
3	[signature]	7-31-12	1700	4	[signature] ALS	8/1/12	1004
5				6			
7				8			
9				10			

Data Deliverables: ☐ Standard ✓ CLP-like ☐ NJ-Reduced ☐ NJ-Full ✓ DOD (other)

EDDs Required? ✓ If yes, format type: SEDD7 per QAPP

SOWA Forms?⇒ yes ☐ yes ☐ yes ☐ yes ☐

State Samples Collected In? MD ☐ NJ ☐ NY ☐ PA ☐ Other GA

DOD Criteria Required?

ALS FIELD SERVICES: ☐ Pickup ☐ Labor ☐ Composite Sampling ☐ Rental Equipment ☐ Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 6/2011

SUBCONTRACT TO ALS SALT LAKE CITY UT

ALS Environmental

Ship to: 34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier:

Tracking #: 7935 4634 5791

99180395

Co. Name: ERT, inc

Contact (Report to): Mike Gearheart Phone: 301-323-1403

Address: 6100 Frost PL
Suite A
Laurel MD 20707

Bill to (if different than Report to): ALS Middletown PO#:

Project Name/#: Ft. Sheridan 3153-004 ALS Quote #:

TAT: ☐ Normal-Standard TAT is 10 business days. Date Required:
☐ Rush-Subject to ALS approval and surcharges. Approved By:

Email? X -Y Mike.Gearheart@ertcorp.com

Fax? -Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	***Container Type	***Container Size	*** Preservative	SW-846 6020	SW-846 8270D/8321	1,4-Dithiane	1,4-Oxathiane	Thiodiglycol
						CG	AG						
						4oz	8oz						
						-	-						
1 FTSW-HR-SO-03		7/30/12	1233	G	So	1	1						
2 FTSW-HR-SO-04 (02)		7/30/12	1237	G	So	1	1						
3 FTSW-HR-SO-05		7/30/12	1310	G	So	1	1						
4 FTSW-HR-SO-06		7/30/12	1315	G	So	1	1						
5 FTSW-HR-SO-07		7/30/12	1349	G	So	1	1						
6 FTSW-HR-SO-08 (02)		7/30/12	1354	G	So	1	1						
7 FTSW-HR-SO-09		7/30/12	1408	G	So	1	1						
8 FTSW-HR-SO-10 (01.5)		7/30/12	1420	G	So	1	1						

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis

SAMPLED BY (Please Print): Rebekah McCoy

LOGGED BY(signature): DATE 7/31/12 TIME 1414

REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 ERT	7/30/12	1630	2 ALS	7/31/12	0825
3	7-31-12	NW	4 ALS	8/1/12	1604
5			6		
7			8		
9			10		

Data Deliverables: ☐ Standard ☐ CLP-like ☐ NJ-Reduced ☐ NJ-Full ☐ (other)

EDDs Required? ☐ If yes, format type:

SDWA Forms?⇒ yes ☐ yes ☐ yes ☐

State Samples Collected In? MD ☐ NJ ☐ NY ☐ PA ☐

Other: GA

DOD Criteria Required?

Receipt Information (completed by Sample Receiving)

Performed by:

Cooler Temp: 2°C

Therm. ID: TH 25

No. of Coolers:

Notes:

Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
N	N	N	N	
(N)	N	N	N	N
Y	Y	(Y)	(Y)	(Y)

Custody seals Present?	(If present) Seals Intact?	Received on Ice?	COC/Labels complete/accurate?	Container in good condition?

ALS FIELD SERVICES

☐ Pickup
☐ Labor
☐ Composite Sampling
☐ Rental Equipment
☐ Other:

* G=Grab; C=Composite

**Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; Oil=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task: | ***Split:*** | **Workorder ID:** 1221555

Client: ALS Laboratory Group | **Account:** 8001 | **Type:** 1000AG

Comments:

Preservatives: COOL

Containers: ID(s) | Count

Requested Analysis: Chemical Agent Breakdown | SW8270

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	ID(s)	Count	Chemical Agent Breakdown	SW8270
1	07/30/2012 12:04	FTSW-HR-SO-02(01.5)ERB	1221555006		Water	A,B	2	A	A
2									
3									
4									
5									
6									
7									
8									
9									
10									

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Edwards, Meredith D.	08/01/2012 10:04	ALS Sample Receiving	Sample Login
Meredith Edwards	8/2/12 16:10	R-33-1 cart	Storage
R-33-1 CP	8/10/12 12:00	Challis P	Ext
Challis P	8/10/12 14:00	R-33-1 cart	Storage
R-33-1	8-8-12 16:00	Dusti Calder	Ext
Sample Consumed			DC 8-13-12
Dusti Calder	8-8-12 1730	R-33-1	Storage
R-33-1 m	08/13/12 1130		TDC
— Sample Consumed — m			

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: _____ Lab Notebook No.: _____

Prepared / Analyzed by: _____ Date / Time: _____

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location

ALS Environmental
CHAIN-OF-CUSTODY

Project / Job / Task: | *Split:* | **Workorder ID:** 1221555

Client: ALS Laboratory Group | **Account:** 8001 | **Type:** 8ozGWM

Comments:

Preservatives: COOL

Containers

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	ID(s)	Count	Chemical Agent Breakdown	SW8270
1	07/30/2012 11:32	FTSW-HR-SO-01	1221555001		Soil/Solid/Sediment	A	1	A	A
2	07/30/2012 11:36	FTSW-HR-SO-01 MS	1221555002	MS	Soil/Solid/Sediment	A	1	A	A
3	07/30/2012 11:38	FTSW-HR-SO-01 MSD	1221555003	MSD	Soil/Solid/Sediment	A	1	A	A
4	07/30/2012 11:34	FTSW-HR-SO-01 Dup	1221555004	DUP	Soil/Solid/Sediment	A	1	A	A
5	07/30/2012 11:44	FTSW-HR-SO-02(01.5)	1221555005		Soil/Solid/Sediment	A	1	A	A
6	07/30/2012 12:33	FTSW-HR-SO-03	1221555007		Soil/Solid/Sediment	A	1	A	A
7	07/30/2012 12:37	FTSW-HR-SO-04 (02)	1221555008		Soil/Solid/Sediment	A	1	A	A
8	07/30/2012 13:10	FTSW-HR-SO-05	1221555009		Soil/Solid/Sediment	A	1	A	A
9	07/30/2012 13:15	FTSW-HR-SO-06	1221555010		Soil/Solid/Sediment	A	1	A	A
10	07/30/2012 13:49	FTSW-HR-SO-07	1221555011		Soil/Solid/Sediment	A	1	A	A

Requested Analysis

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Edwards, Meredith D.	08/01/2012 10:04	ALS Sample Receiving	Sample Login
[signature]	8/2/12 1614		Storage
R-33-1 IJO	8/6/12 9:00	[signature]	Solid
[signature]	8/6/12 13:40	[signature]	Ext
[signature]	8/6/12		

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: SV | Lab Notebook No.:

Prepared / Analyzed by: | Date / Time:

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
[signature]	08/07/12 7:40	[signature]	[illegible]
[signature]	08/07/12 9:40	[signature]	STOR

ALS Environmental
CHAIN-OF-CUSTODY

Project / Job / Task:	Split:	Workorder ID: 1221555
Client: ALS Laboratory Group		Account: 8001
Comments:		

Type: 8ozGWM

Preservatives: COOL

Containers

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	ID(s)	Count	Chemical Agent Breakdown	SW8270
11	07/30/2012 13:54	FTSW-HR-SO-08 (02)	1221555012		Soil/Solid/Sediment	A	1	A	A
12	07/30/2012 14:08	FTSW-HR-SO-09	1221555013		Soil/Solid/Sediment	A	1	A	A
13	07/30/2012 14:20	FTSW-HR-SO-10 (01.5)	1221555014		Soil/Solid/Sediment	A	1	A	A
14									
15									
16									
17									
18									
19									
20									

Requested Analysis

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Edwards, Meredith D.	08/01/2012 10:04	ALS Sample Receiving	Sample Login
Meredith Edwards	8/2/12 1614		Storage
R-33-1 IJO	8/6/12 9:00	[signature]	Solid
[signature]	8/6/12 13:40	[signature]	Ext
[signature]	8/6/12 [illegible]		

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: SV

Lab Notebook No.:

Prepared / Analyzed by:

Date / Time:

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
[signature]	08/07/12 9:40	[signature]	cone
[signature]	08/07/12 9:40	[signature]	STOR

Thu, 08/02/12 4:10 PM

ALSCOCV2.4

Analyte Name	Analyte Label (CAS)	Lower Rejection (%)	Lower Recovery (%)	Upper Recovery (%)	Upper Rejection (%)	RPD (%)
Method: 6020 **Matrix: Water**						
QC Type: Matrix_Spike						
ZINC	7440-66-6	30.00	80.00	120.00		20.00
Method: 8270D **Matrix: Soil**						
QC Type: Laboratory_Control_Sample						
1,4-Dithiane	505-29-3	10	75	125		20
1,4-Oxathiane	15980-15-1	10	75	125		20
Thiodiglycol	111-48-8	10	80	120		20
QC Type: Matrix_Spike						
1,4-Dithiane	505-29-3	10	75	125		20
1,4-Oxathiane	15980-15-1	10	75	125		20
Thiodiglycol	111-48-8	10	80	120		20
Method: 8270D **Matrix: Water**						
QC Type: Laboratory_Control_Sample						
1,4-Dithiane	505-29-3	10	75	125		20
1,4-Oxathiane	15980-15-1	10	75	125		20
Thiodiglycol	111-48-8	10	80	120		20
QC Type: Matrix_Spike						
1,4-Dithiane	505-29-3	10	75	125		20
1,4-Oxathiane	15980-15-1	10	75	125		20
Thiodiglycol	111-48-8	10	80	120		20
Method: 8330 **Matrix: Soil**						
QC Type: Laboratory_Control_Sample						
1,3,5-TRINITROBENZENE	99-35-4	10.00	75.00	125.00		20.00
1,3-DINITROBENZENE	99-65-0	10.00	80.00	125.00		20.00
2,4,6-TRINITROTOLUENE	118-96-7	10.00	55.00	140.00		20.00
2,4-DINITROTOLUENE	121-14-2	10.00	80.00	125.00		20.00

Project Criteria for Instrument Calibration

eQapp Name: Ft Stewart_v4
Description: Per DoD QSM V4.2

Target Analyte Name	Analyte Label (CAS)	Initial Calibration			Initial Calibration Verification					Continuing Calibration				
		Relative Response Factor	RSD (%)	Correlation Coefficient	Relative Response Factor	Lower Rejection Limit	Lower Limit	Upper Limit	Upper Rejection Limit	Relative Response Factor	Lower Rejection Limit	Lower Limit	Upper Limit	Upper Rejection Limit
Method: 6020														
ALUMINUM	7429-90-5		5	0.995		-25.00	-10.00	10.00	25.00		-25.00	-10.00	10.00	25.00
ARSENIC	7440-38-2		5	0.995		-25.00	-10.00	10.00	25.00		-25.00	-10.00	10.00	25.00
COPPER	7440-50-8		5	0.995		-25.00	-10.00	10.00	25.00		-25.00	-10.00	10.00	25.00
LEAD	7439-92-1		5	0.995		-25.00	-10.00	10.00	25.00		-25.00	-10.00	10.00	25.00
ZINC	7440-66-6		5	0.995		-25.00	-10.00	10.00	25.00		-25.00	-10.00	10.00	25.00
Method: 8270D														
1,4-Dithiane	505-29-3			0.99			-15	15				-15	15	
1,4-Oxathiane	15980-15-1			0.99			-15	15				-15	15	
Thiodiglycol	111-48-8			0.99			-15	15				-15	15	
Method: 8330														
1,3,5-TRINITROBENZENE	99-35-4		15	.995		-50.00	-20.00	20.00	50.00		-50.00	-20.00	20.00	50.00
1,3-DINITROBENZENE	99-65-0		15	.995		-50.00	-20.00	20.00	50.00		-50.00	-20.00	20.00	50.00
2,4,6-TRINITROTOLUENE	118-96-7		15	.995		-50.00	-20.00	20.00	50.00		-50.00	-20.00	20.00	50.00
2,4-DINITROTOLUENE	121-14-2		15	.995		-50.00	-20.00	20.00	50.00		-50.00	-20.00	20.00	50.00
2,6-DINITROTOLUENE	606-20-2		15	.995		-50.00	-20.00	20.00	50.00		-50.00	-20.00	20.00	50.00
2-AMINO-4,6-DINITROTOLUENE	35572-78-2		15	.995		-50.00	-20.00	20.00	50.00		-50.00	-20.00	20.00	50.00
2-NITROTOLUENE	88-72-2		15	.995		-50.00	-20.00	20.00	50.00		-50.00	-20.00	20.00	50.00
3,5-Dinitroaniline	618-87-1		15	.995		-50.00	-20.00	20.00	50.00		-50.00			
3-NITROTOLUENE	99-08-1		15	.995		-50.00	-20.00	20.00	50.00		-50.00	-20.00	20.00	50.00
4-AMINO-2,6-DINITROTOLUENE	19406-51-0		15	.995		-50.00	-20.00	20.00	50.00		-50.00	-20.00	20.00	50.00
4-NITROTOLUENE	99-99-0		15	.995		-50.00	-20.00	20.00	50.00		-50.00	-20.00	20.00	50.00
Hexahydro-1,3,5-Trinitro-1,3,5-	121-82-4		15	.995		-50.00	-20.00	20.00	50.00		-50.00	-20.00	20.00	50.00
Methyl-2,4,6-Trinitrophenylnitramine	479-45-8		15	.995		-50.00	-20.00	20.00	50.00		-50.00	-20.00	20.00	50.00
NITROBENZENE	98-95-3		15	.995		-50.00	-20.00	20.00	50.00		-50.00	-20.00	20.00	50.00

From: (717) 944-5541
Steve Smith

34 DOGWOOD LANE

MIDDLETOWN, PA 17057

Origin ID: MDTA

FedEx Express

J122012071603 25

Ship Date: 31JUL12
ActWgt: 54.0 LB
CAD: 7121996/INET3300

Delivery Address Bar Code

SHIP TO: (000) 000-0000

BILL SENDER

ALS - UT
ALS - UT
960 LEVOY DR

SALT LAKE CITY, UT 84123

Ref # Summa's
Invoice #
PO #
Dept #

WED - 01 AUG A1
PRIORITY OVERNIGHT

TRK# 0201 7986 8335 7204

84123
UT-US
SLC

XH NPHA

515G1/A270/AA44

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ALS LABORATORY GROUP SALT LAKE CITY-RELATED INFORMATION REPORT (CRIR)

COOLER OR CONTAINER INFORMATION CHECKLIST (Fill In or Circle)

Client Name: ALS Middletown

Project/Task/Site: 122555

Date/Time of Receipt: 9/1/21 1004

Number of Coolers Received: 1

Condition of Coolers:	Acceptable/Unacceptable	Temperature Control:	Present/Not Included
Custody Seals:	Present/Absent/NA	Location Temp Taken:	Control/Between Samples
	Intact/Broken/NA	Are all temperatures within	
Tamper Evident:	Yes/No/NA	project specific guidelines?	Yes/No/NA
Ice Present:	Yes/No/NA	Are all applicable pHs within	
	Frozen/Melted/NA	specific guidelines?	Yes/No/NA

pH Check Performed:	Metals	Yes/No/NA	Total Phenolics	Yes/No/NA	NO3/NO2	Yes/No/NA
	Cyanide	Yes/No/NA	TPH – 418.1	Yes/No/NA	Oil & Grease	Yes/No/NA
	Sulfide	Yes/No/NA	COD	Yes/No/NA	Total Phosphorous	Yes/No/NA
	Ammonia	Yes/No/NA	TKN	Yes/No/NA	Gross A.B, Gamma Spec	Yes/No/NA
Residual Chlorine Check Performed:	8270	Yes/No/NA	8310	Yes/No/NA	8330	Yes/No/NA
	8081	Yes/No/NA	8151	Yes/No/NA		

Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.
1	C12- 8420	6 °C	4	C12-	°C	7	C12-	°C
2	C12-	°C	5	C12-	°C	8	C12-	°C
3	C12-	°C	6	C12-	°C	9	C12-	°C

Taken By: Meredith Edwards (Signature) Meredith Edwards (Printed Name) 9/1/21 (Date)

CLIENT-RELATED INFORMATION

☐ Missing Cooler	☐ Missing Samples/Bottles	☐ Incorrect Preservation	☐ Insufficient Sample Volume
☐ Cooler Conditions	☐ Broken/Leaking Samples	☐ pH Criteria Not Met	☐ Chain of Custody Problems
☐ Missing Paperwork	☐ Incorrect Bottle Type	☐ Residual Chlorine Present	☐ Other:
☐ Missing/Incorrect Bottle Labels	☐ Cooler Temperatures Out of Range	☐ Head Space in Bottles	EPA Custody Seal:

BRIEFLY DESCRIBE THE PROBLEM AND THE ACTION TAKEN:

Faxed to Client? YES ☐ NO ☐ (if yes, attach Fax Cover Sheet)

Response Required Within 24 Hours

PROJECT MANAGEMENT

PROJECT MANAGER COMMENTS:

ALS Project Manager: _____ (Printed Name) Returned to Sample Receipt by: _____ (Signature) Date: _____



ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Analytical Documentation

ALS WO ID #(S):1221555

ALS Sample #(S):1221555001-014

ALS Account #(s). 8001 Method: ALS LC/MS Matrix: Soil

Sequence: \\CHEM:2\1\SEQUENCE\13AUG12-ABB-S.S

Prep Date: 08/06/2012 Analysis Date: 08/13/12 - 08/14/12

Prep/Analysis HBN #s: 91618/91624 Instrument LOD: 0.050µg/mL

Analyte: Thiodiglycol (TDG)

Reported MDL: See Report Reported LOD: See Report

SAMPLE PREPARATION: All ALS sample #'s agreed with field ID #'s. Samples were prepared by TTM. Approximately 1.00g of each sample was weighed into a 15-mL centrifuge tube, and 9.9mL of ASTM Type II water was added to each tube. 100µL of internal standard solution was then added to each sample, bringing the total extraction volume to 10.0mL. The samples were capped, vortexed, rotated for at least 30 minutes, and filtered with Pall 0.45µm Ion Chromatography Acrodiscs prior to analysis.

REAGENTS: Eluent A: 100% ASTM Type II water/0.1% glacial acetic acid.
Eluent B: 95% ACN/ 5% ASTM Type II water/0.1% glacial acetic acid.

HORIZON STANDARD(S): TDG (14169); MPA (14170); IMPA (14172); EMPA (14174); DIMP (14179)
All standards are at 1000µg/mL. Standards used to create calibration standards and those used for CCVs (target = 5.00µg/mL) and RLVS (target = 0.050µg/mL).
Internal Standard Solution: TDG-D8 (14177) at 100ug/mL.

CALIBRATION CURVE: Run 05/01/2012.
Raw data can be found in \\Alsltws013\DataReview\85766.

INSTRUMENT CONDITIONS: Samples were analyzed with an Agilent 1200 LC/MSD system, in positive SIM mode, monitoring m/z 97, 125, 139, 146, 181, 105 and 113.
Instrument ID: LCMS03 Run Time: 35.00 min. Flow Rate: 0.8mL/min Temp: 30°C
Output Gain: 3 Injection Volume: 10µL Fragmentor Voltage: 75 & 125
Column: Phenomenex Synergi Hydro-RP 4 micron (4.6 x 250mm) s/n: 245485-24

GRADIENT:

Time(min)	%Eluent A	%Eluent B
0.00	100.0	0.0
15.00	100.0	0.0
17.00	50.0	50.0
25.00	50.0	50.0
25.01	100.0	0.0

QC DATA: LMB/LCS **289795/96** were run with the batch. 1.00g of washed sand (EMD Lot# 36211706) was prepared in the same manner as the samples. 20µl of Horizon QC standard 13383 was added to 10.0mL of sample preparation for the LCS. Target = 20.0ug/g. ASTM Type II water was used for LMB extraction.

MS/MSD: MS/MSD was performed on sample 1221555001. 50µl of Horizon standard 14169 was added to 10.0mL of sample preparation. Spike target = 50.0µg/g.

COMMENTS: 1) Quantitation was done using m/z 105 for TDG. No confirmation ions were available for TDG. Results are reported in ug/g.
2) All CCV, LMB, LCS and MS/MSD results were within acceptable limits.

Batch Worklist

Batch: ELMS/ 1291 **Created:** 8/13/2012 19:28 **Instrument:** HBN: 91624

Rule: Chemical Agent BD, Soil **Analyst:** T. McKay **Status:** WP

Workorder: 1221555

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	289795	LMB for HBN 91618 [ELMS/1290]	1 grams	10 mL	4	LMB		DCAB....4Q	5948	10/16/2012	8/14/2012	
2	289796	LCS for HBN 91618 [ELMS/1290]	1 grams	10 mL	4	LCS		DCAB....4Q	5948	10/16/2012	8/14/2012	
3	289797	RLVS for HBN 91618 [ELMS/1290]	1 grams	10 mL	3	RLVS		DCAB...C4Q	5948		8/14/2012	
4	1221555001	FTSW-HR-SO-01	1.01 grams	10 mL	4	SAMPLE	1221555001-A	DCAB.....4	5480	10/16/2012	8/14/2012	
5	1221555002	FTSW-HR-SO-01 MS	.99 grams	10 mL	4	MS	1221555002-A	DCAB....4Q	5480	10/16/2012	8/14/2012	
6	1221555003	FTSW-HR-SO-01 MSD	1 grams	10 mL	4	MSD	1221555003-A	DCAB....4Q	5480	10/16/2012	8/14/2012	
7	1221555004	FTSW-HR-SO-01 Dup	1.02 grams	10 mL	4	DUP	1221555004-A	DCAB.....4	5480	10/16/2012	8/14/2012	
8	1221555005	FTSW-HR-SO-02(01.5)	1.03 grams	10 mL	4	SAMPLE	1221555005-A	DCAB.....4	5480	10/16/2012	8/14/2012	
9	1221555007	FTSW-HR-SO-03	1 grams	10 mL	4	SAMPLE	1221555007-A	DCAB.....4	5480	10/16/2012	8/14/2012	
10	1221555008	FTSW-HR-SO-04 (02)	1 grams	10 mL	4	SAMPLE	1221555008-A	DCAB.....4	5480	10/16/2012	8/14/2012	
11	1221555009	FTSW-HR-SO-05	1.03 grams	10 mL	4	SAMPLE	1221555009-A	DCAB.....4	5480	10/16/2012	8/14/2012	
12	1221555010	FTSW-HR-SO-06	1.04 grams	10 mL	4	SAMPLE	1221555010-A	DCAB.....4	5480	10/16/2012	8/14/2012	
13	1221555011	FTSW-HR-SO-07	1 grams	10 mL	4	SAMPLE	1221555011-A	DCAB.....4	5480	10/16/2012	8/14/2012	
14	1221555012	FTSW-HR-SO-08 (02)	1.02 grams	10 mL	4	SAMPLE	1221555012-A	DCAB.....4	5480	10/16/2012	8/14/2012	
15	1221555013	FTSW-HR-SO-09	1.01 grams	10 mL	4	SAMPLE	1221555013-A	DCAB.....4	5480	10/16/2012	8/14/2012	
16	1221555014	FTSW-HR-SO-10 (01.5)	1 grams	10 mL	4	SAMPLE	1221555014-A	DCAB.....4	5480	10/16/2012	8/14/2012	

Batch Worklist

Batch: ELMS/ 1290 Created: 8/13/2012 17:41 Instrument: HBN: 91618

Rule: Chemical Agent BD, Soil Prep Analyst: T. McKay Status: NA

Workorder: 1221555

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	289795	LMB for HBN 91618 [ELMS/1290]			4	LMB		DCAB....4P	5948	8/27/2012	8/6/2012	
2	289796	LCS for HBN 91618 [ELMS/1290]			4	LCS		DCAB....4P	5948	8/27/2012	8/6/2012	
3	289797	RLVS for HBN 91618 [ELMS/1290]			3	RLVS		DCAB....4P	5948	8/27/2012	8/6/2012	
4	1221555001	FTSW-HR-SO-01			4	SAMPLE	1221555001-A	DCAB....4P	5480	8/13/2012	8/6/2012	
5	1221555002	FTSW-HR-SO-01 MS			4	MS	1221555002-A	DCAB....4P	5480	8/13/2012	8/6/2012	
6	1221555003	FTSW-HR-SO-01 MSD			4	MSD	1221555003-A	DCAB....4P	5480	8/13/2012	8/6/2012	
7	1221555004	FTSW-HR-SO-01 Dup			4	DUP	1221555004-A	DCAB....4P	5480	8/13/2012	8/6/2012	
8	1221555005	FTSW-HR-SO-02(01.5)			4	SAMPLE	1221555005-A	DCAB....4P	5480	8/13/2012	8/6/2012	
9	1221555007	FTSW-HR-SO-03			4	SAMPLE	1221555007-A	DCAB....4P	5480	8/13/2012	8/6/2012	
10	1221555008	FTSW-HR-SO-04 (02)			4	SAMPLE	1221555008-A	DCAB....4P	5480	8/13/2012	8/6/2012	
11	1221555009	FTSW-HR-SO-05			4	SAMPLE	1221555009-A	DCAB....4P	5480	8/13/2012	8/6/2012	
12	1221555010	FTSW-HR-SO-06			4	SAMPLE	1221555010-A	DCAB....4P	5480	8/13/2012	8/6/2012	
13	1221555011	FTSW-HR-SO-07			4	SAMPLE	1221555011-A	DCAB....4P	5480	8/13/2012	8/6/2012	
14	1221555012	FTSW-HR-SO-08 (02)			4	SAMPLE	1221555012-A	DCAB....4P	5480	8/13/2012	8/6/2012	
15	1221555013	FTSW-HR-SO-09			4	SAMPLE	1221555013-A	DCAB....4P	5480	8/13/2012	8/6/2012	
16	1221555014	FTSW-HR-SO-10 (01.5)			4	SAMPLE	1221555014-A	DCAB....4P	5480	8/13/2012	8/6/2012	

STANDARD REPORT

Working Standard - TDG WRK

TDG WRK				Description - Thiodiglycol Working Std.	
Standard:	14169	Expires:	01/31/2013	Usable:	Yes
Lab Lot:	TDG WRK	Created By:	T. McKay	Amount:	12.15 mL
Part ID:		Create Date:	01/31/2012	Validated By:	
MFG:		MFG Lot:		Validated Date:	

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume Added	Expires
3824	TDG STOCK		TDG STK	12.15 mg	1/1/2025

STANDARD REPORT

Constituent

Stock Standard - TDG STOCK

TDG STOCK					Description - (Thiodiglycol Stock Std.)
Standard:	3824	Expires:	1/1/2025	Usable:	Yes
Lab Lot:	TDG STK	Created By:	T. McKay	Amount:	100 grams
Part ID:	166782	Create Date:	4/1/2009	Validated By:	T. Bosch
MFG:	Aldrich	MFG Lot:	11613AR	Validated Date:	4/19/2009

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 mg/g

S 3824

Certificate of Analysis

SIGMA-ALDRICH

Product Name	2,2'-Thiodiethanol, ≥99%
Product Number	166782
Product Brand	Aldrich
CAS Number	111-48-8
Molecular Formula	$S(CH_2CH_2OH)_2$
Molecular Weight	122.19

TEST	SPECIFICATION	LOT 11613AR RESULTS
APPEARANCE	COLORLESS LIQUID	COLORLESS LIQUID
INFRARED SPECTRUM	CONFORMS TO STRUCTURE.	CONFORMS TO STRUCTURE AND STANDARD AS ILLUSTRATED ON PAGE 276B OF EDITION I, VOLUME 1 OF "THE ALDRICH LIBRARY OF FT-IR SPECTRA".
GAS LIQUID CHROMATOGRAPHY	99.0% (MINIMUM)	99.6 %
QUALITY CONTROL ACCEPTANCE DATE		JANUARY 1997

Barbara Rajzer

Barbara Rajzer, Supervisor
Quality Control
Milwaukee, Wisconsin USA

STANDARD REPORT

Working Standard - TDG QC WRK

TDG QC WRK					Description - Thiodiglycol QC Wrk
Standard:	13383	Expires:	11/21/2012	Usable:	Yes
Lab Lot:	TDG QC WRK	Created By:	T. McKay	Amount:	8.44 mL
Part ID:		Create Date:	11/21/2011	Validated By:	
MFG:		MFG Lot:		Validated Date:	

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume Added	Expires
5844	TDG QC STK	Thiodiglycol QC Stock	TDG QC STK	8.44 mg	1/1/2025

STANDARD REPORT

Constituent

Stock Standard - TDG QC STK

TDG QC STK					Description - Thiodiglycol QC Stock
Standard:	5844	Expires:	1/1/2025	Usable:	Yes
Lab Lot:	TDG QC STK	Created By:	T. McKay	Amount:	50 grams
Part ID:	88559	Create Date:	10/7/2009	Validated By:	T. Bosch
MFG:	Fluka	MFG Lot:	1410377	Validated Date:	10/7/2009

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 mg/g

2009-10-08-5844-01

5844

SIGMA-ALDRICH

Fluka

Sigma-Aldrich Production GmbH
CH-9471 Buchs/Schweiz
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Telefon +41 81 755 2611
Telefax +41 81 755 2272
Email fluka@sial.com

Certificate of Analysis

Product Brand	Fluka
PRODUCT-NO	88559
PRODUCT	2,2'-THIODIETHANOL *BioChemika*
FORMULA	$C_4H_{10}O_2S$
MOLECULAR MASS	122.19
CAS NUMBER	111-48-8
LOT	1410377

Test	Specification	Result
APPEARANCE (COLOR)	COLORLESS	COLORLESS
APPEARANCE (FORM)	CLEAR TO CLEAR VISCOUS LIQUID	CLEAR VISCOUS LIQUID
PURITY (GC AREA %)	≥ 99.0 % REL	99.9 % REL
GC (METHOD)	--	100% POLYETHYLENEGLYCOL (30 M X 0.32 MM X 0.25 UM), IN DICHLORMETHANE
REFRACTIVE INDEX N20/D	1.520 - 1.522	1.522
RESIDUE ON IGNITION	≤ 0.1 %	< 0.05 %
CARBON CONTENT	39.32 % (THEORY)	38.90 %
HYDROGEN CONTENT	8.25 % (THEORY)	8.49 %
INFRARED SPECTRUM	CONFORMS TO STRUCTURE	CONFORMS
QC RELEASE DATE	28/OCT/08	

Edeltraud Schwärzler, Manager
Quality Control
Buchs, Switzerland

Sigma-Aldrich guarantees the 'Sales-Specification' values only, additional lot specific tests may be included for further information. The current 'Sales-Specifications' sheet is available on request. For further inquiries, please contact our Technical Service.Sigma-Aldrich warrants, that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice for additional terms and conditions of sale. The values given on the 'Certificate of Analysis' are the results determined at the time of analysis.



ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

Batch Report: C:\CHEM32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG12-ABP-S.B

Batch Review Method: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M

['#' ==> Run has not been reprocessed with Batch Review Method
'*' ==> Run has been saved with batch file]

#	Sample	Location	Inj	Dilution	Thiodiglycol-D8 RT	Thiodiglycol-D8 Area	Thiodiglycol-D8 Amount
*	CCV1	Vial 51	1	1	13.010	3.01784e6	10.00000
*	289795 LMB	Vial 52	1	1	12.987	2.50872e6	100.00000
*	289796 LCS	Vial 53	1	1	13.032	2.58664e6	100.00000
*	289797 RLVS	Vial 54	1	1	13.047	2.32755e6	100.00000
*	1221555001	Vial 55	1	1	13.007	1.97003e6	100.00000
*	1221555002 MS	Vial 56	1	1	13.009	2.22994e6	100.00000
*	1221555003 MSD	Vial 57	1	1	13.014	2.14585e6	100.00000
*	1221555004	Vial 58	1	1	13.007	2.04730e6	100.00000
*	1221555005	Vial 59	1	1	13.004	2.19967e6	100.00000
*	1221555007	Vial 60	1	1	13.021	1.92891e6	100.00000
*	1221555008	Vial 61	1	1	13.005	2.17200e6	100.00000
*	CCV2	Vial 51	1	1	12.994	2.97228e6	10.00000
*	1221555009	Vial 62	1	1	13.021	2.08774e6	100.00000
*	1221555010	Vial 63	1	1	13.003	2.26761e6	100.00000
*	1221555011	Vial 64	1	1	12.990	2.03781e6	100.00000
*	1221555012	Vial 65	1	1	13.008	2.26034e6	100.00000

#	Sample	Location	Inj	Dilution	Thiodiglycol RT	Thiodiglycol Area	Thiodiglycol Amount
*	CCV1	Vial 51	1	1	13.595	1.28792e7	5.06592
*	289795 LMB	Vial 52	1	1	0.000	0.00000	0.00000
*	289796 LCS	Vial 53	1	1	13.618	4.86039e6	21.65416
*	289797 RLVS	Vial 54	1	1	13.664	1.33862e5	7.39662e-1
*	1221555001	Vial 55	1	1	0.000	0.00000	0.00000
*	1221555002 MS	Vial 56	1	1	13.601	9.28486e6	49.35494
*	1221555003 MSD	Vial 57	1	1	13.604	9.39953e6	52.07669
*	1221555004	Vial 58	1	1	0.000	0.00000	0.00000
*	1221555005	Vial 59	1	1	0.000	0.00000	0.00000
*	1221555007	Vial 60	1	1	0.000	0.00000	0.00000
*	1221555008	Vial 61	1	1	0.000	0.00000	0.00000
*	CCV2	Vial 51	1	1	13.581	1.21123e7	4.82463
*	1221555009	Vial 62	1	1	0.000	0.00000	0.00000
*	1221555010	Vial 63	1	1	0.000	0.00000	0.00000
*	1221555011	Vial 64	1	1	0.000	0.00000	0.00000
*	1221555012	Vial 65	1	1	0.000	0.00000	0.00000

*** End of Report ***

Batch Review Method: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M

['#' ==> Run has not been reprocessed with Batch Review Method
'*' ==> Run has been saved with batch file]

#	Sample	Location	Inj	Dilution	Thiodiglycol-D8 RT	Thiodiglycol-D8 Area	Thiodiglycol-D8 Amount
*	CCV3	Vial 51	1	1	13.432	3.15655e6	10.00000
*	1221555013	Vial 66	1	1	13.208	2.43734e6	100.00000
*	1221555014	Vial 67	1	1	13.192	2.61338e6	100.00000
*	CCV4	Vial 51	1	1	13.204	3.36073e6	10.00000

#	Sample	Location	Inj	Dilution	Thiodiglycol RT	Thiodiglycol Area	Thiodiglycol Amount
*	CCV3	Vial 51	1	1	14.043	1.33043e7	4.99957
*	1221555013	Vial 66	1	1	0.000	0.00000	0.00000
*	1221555014	Vial 67	1	1	0.000	0.00000	0.00000
*	CCV4	Vial 51	1	1	13.809	1.38887e7	4.89658

*** End of Report ***

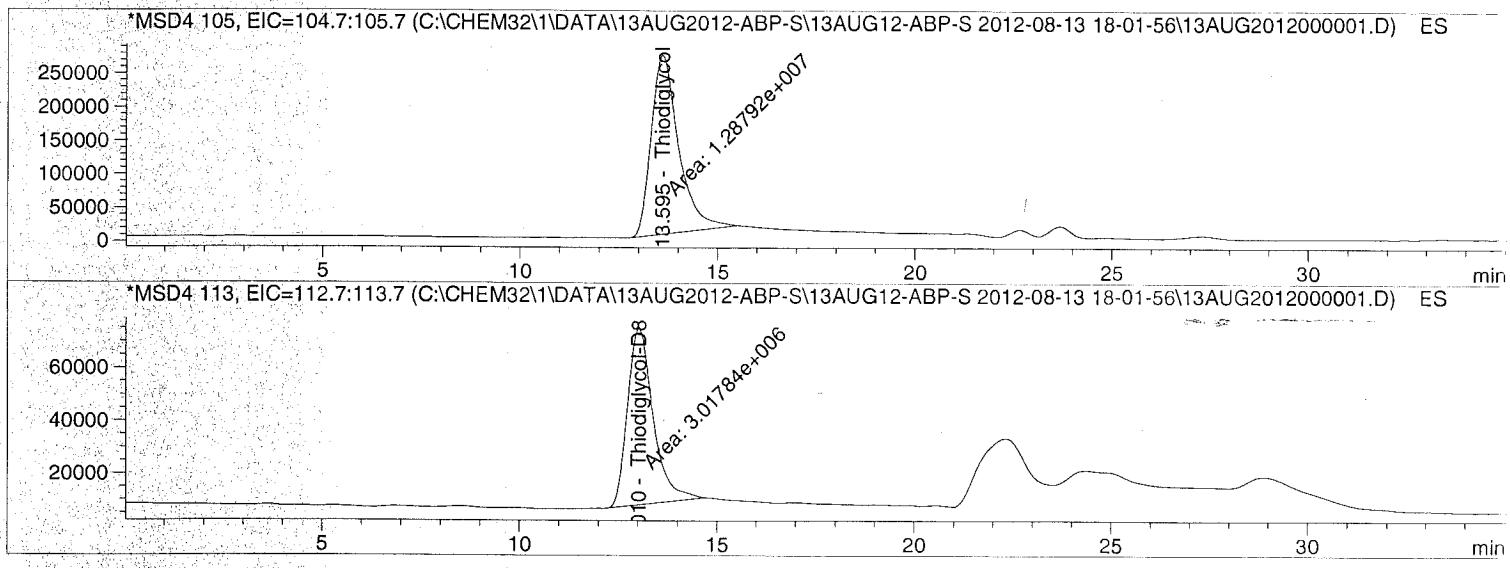
Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 51	CCV1	ABP-ON	1	Ctrl Samp	
2	Vial 52	289795 LMB	ABP-ON	1	Ctrl Samp	
3	Vial 53	289796 LCS	ABP-ON	1	Ctrl Samp	
4	Vial 54	289797 RLVS	ABP-ON	1	Ctrl Samp	
5	Vial 55	1221555001	ABP-ON	1	Sample	
6	Vial 56	1221555002 MS	ABP-ON	1	Ctrl Samp	
7	Vial 57	1221555003 MSD	ABP-ON	1	Ctrl Samp	
8	Vial 58	1221555004	ABP-ON	1	Sample	
9	Vial 59	1221555005	ABP-ON	1	Sample	
10	Vial 60	1221555007	ABP-ON	1	Sample	
11	Vial 61	1221555008	ABP-ON	1	Sample	
12	Vial 51	CCV2	ABP-ON	1	Ctrl Samp	
13	Vial 62	1221555009	ABP-ON	1	Sample	
14	Vial 63	1221555010	ABP-ON	1	Sample	
15	Vial 64	1221555011	ABP-ON	1	Sample	
16	Vial 65	1221555012	ABP-ON	1	Sample	
17	Vial 51	CCV3	ABP-ON	1	Ctrl Samp	
18	Vial 66	1221555013	ABP-ON	1	Sample	
19	Vial 67	1221555014	ABP-ON	1	Sample	
20	Vial 51	CCV4	ABP-ON	1	Ctrl Samp	

Batch Run # 1 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000001.D
Sample Name: CCV1

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/13/2012 6:02:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M		
Last changed	: 8/13/2012 6:01:54 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 5.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

Batch Run # 1 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000001.D
Sample Name: CCV1

==========

Acq. Operator : TTM Seq. Line : 1
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/13/2012 6:02:21 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M
Last changed : 8/13/2012 6:01:54 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

==========

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.595	MM	1	1.28792e7	1.18704e-1	5.06592		Thiodiglycol

Totals without ISTD(s) : 5.06592

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.010	MM I	1	3.01784e6	1.00000	10.00000		Thiodiglycol-D8

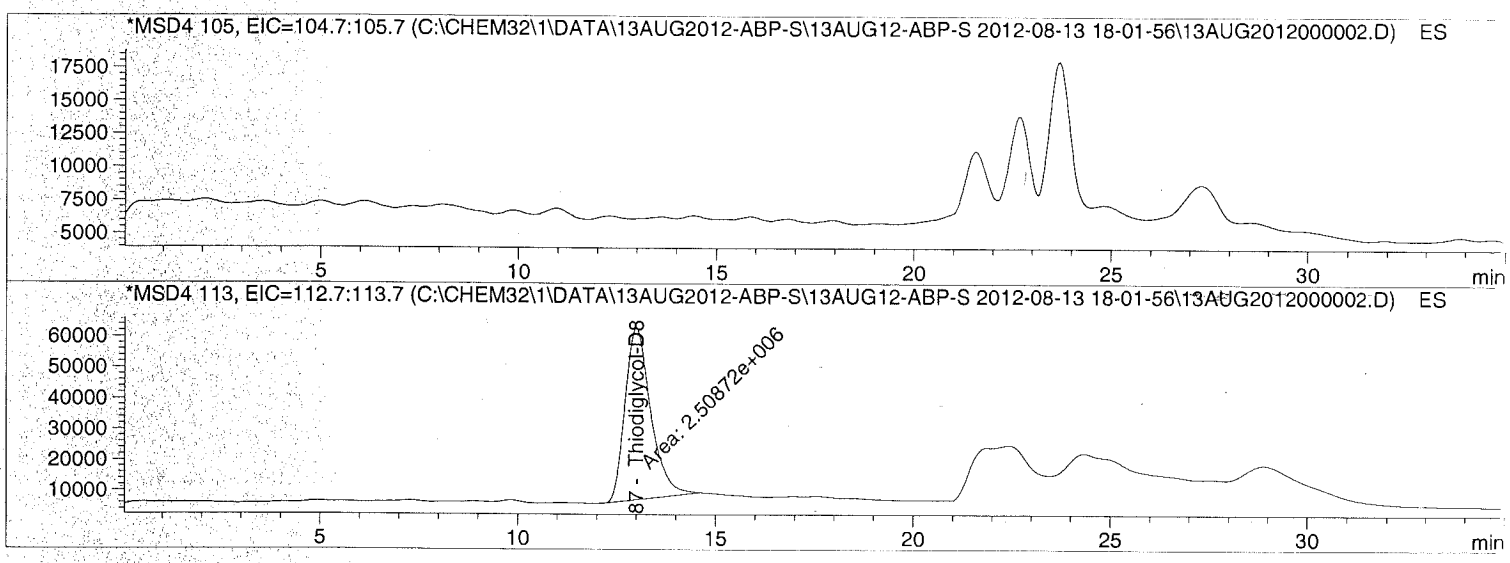
Totals without ISTD(s) : 0.00000

==========

*** End of Report ***

Batch Run # 2 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000002.D
Sample Name: 289795 LMB

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 52
Injection Date	: 8/13/2012 6:38:45 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M		
Last changed	: 8/13/2012 7:03:05 PM by TTM (modified after loading)		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Batch Run # 2 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000002.D
Sample Name: 289795 LMB

Acq. Operator : TTM
Seq. Line : 2
Acq. Instrument : LCMS3
Location : Vial 52
Injection Date : 8/13/2012 6:38:45 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M
Last changed : 8/13/2012 7:03:05 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 0.00000

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.987	MM	I	1 2.50872e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

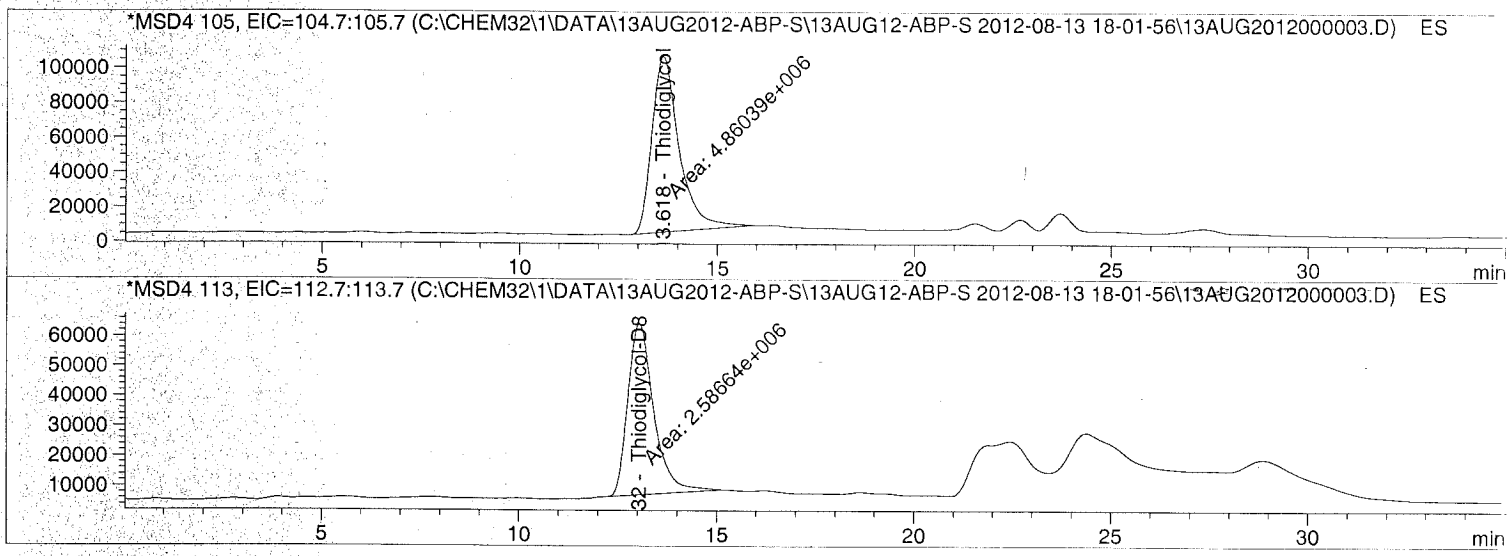
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 3 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000003.D
Sample Name: 289796 LCS

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 53
Injection Date	: 8/13/2012 7:15:08 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M		
Last changed	: 8/13/2012 7:14:55 PM by TTM (modified after loading)		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000
Sample Amount	: 20.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

Batch Run # 3 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000003.D
Sample Name: 289796 LCS

Acq. Operator : TTM
Seq. Line : 3
Acq. Instrument : LCMS3
Location : Vial 53
Injection Date : 8/13/2012 7:15:08 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M
Last changed : 8/13/2012 7:14:55 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.618	MM	1	4.86039e6	1.15241e-1	21.65416		Thiodiglycol

Totals without ISTD(s) : 21.65416

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

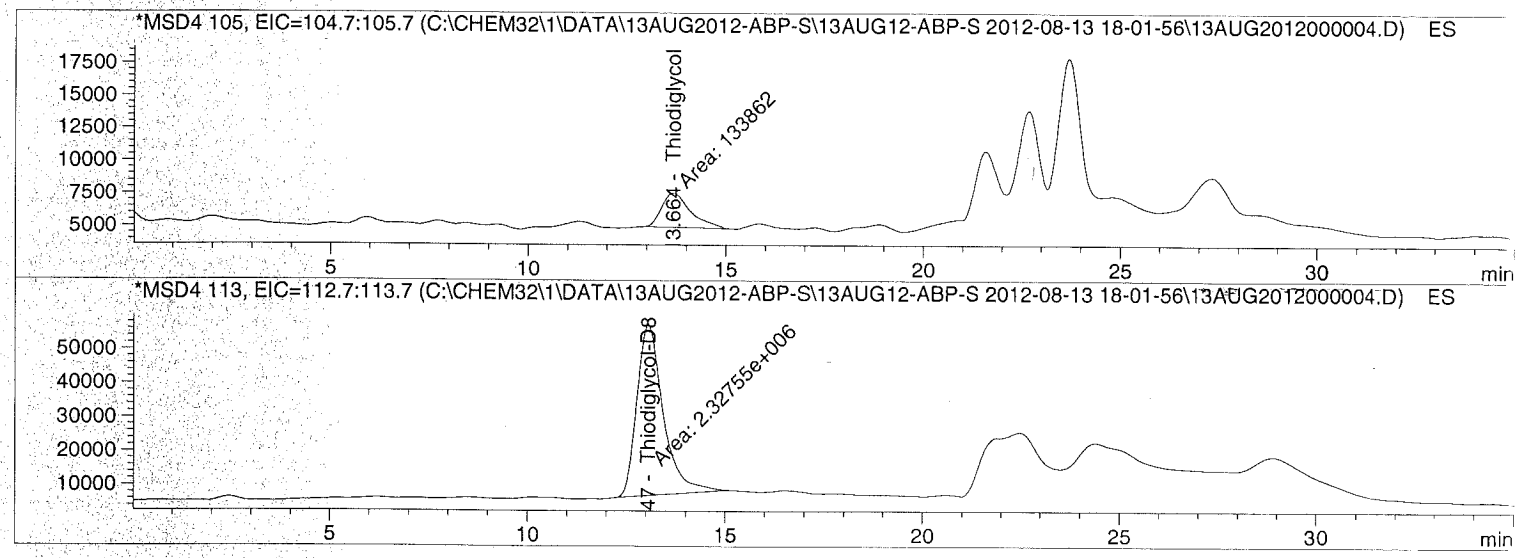
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.032	MM I	1	2.58664e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 4 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000004.D
Sample Name: 289797 RLVS

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 54
Injection Date	: 8/13/2012 7:51:30 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M		
Last changed	: 8/13/2012 7:51:17 PM by TTM (modified after loading)		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000
Sample Amount	: 5.00000e-1 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

Batch Run # 4 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000004.D
Sample Name: 289797 RLVS

Acq. Operator : TTM Seq. Line : 4
Acq. Instrument : LCMS3 Location : Vial 54
Injection Date : 8/13/2012 7:51:30 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M
Last changed : 8/13/2012 7:51:17 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.664	MM	1	1.33862e5	1.28610e-1	7.39662e-1		Thiodiglycol

Totals without ISTD(s) : 7.39662e-1

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

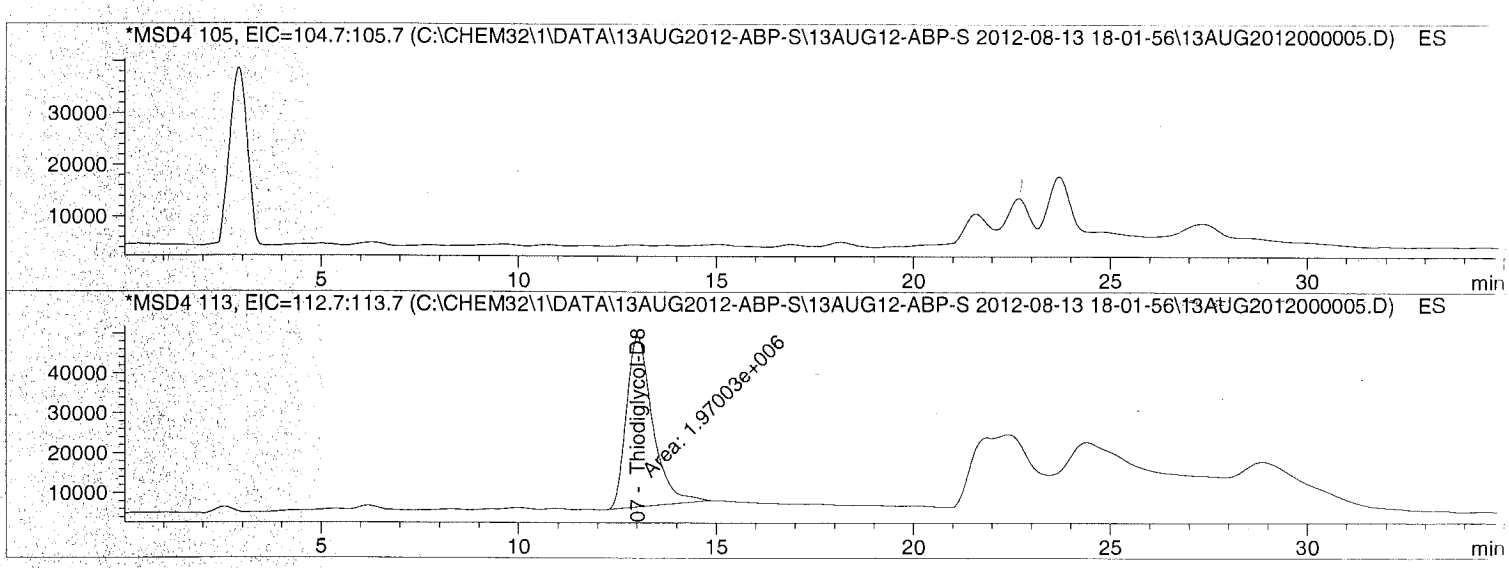
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.047	MM I	1	2.32755e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 5 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000005.D
Sample Name: 1221555001

Acq. Operator : TTM
Seq. Line : 5
Acq. Instrument : LCMS3
Location : Vial 55
Injection Date : 8/13/2012 8:27:51 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M
Last changed : 8/13/2012 8:27:38 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Batch Run # 5 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000005.D
Sample Name: 1221555001

Acq. Operator : TTM
Seq. Line : 5
Acq. Instrument : LCMS3
Location : Vial 55
Injection Date : 8/13/2012 8:27:51 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M
Last changed : 8/13/2012 8:27:38 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 0.00000

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.007	MM	I	1 1.97003e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

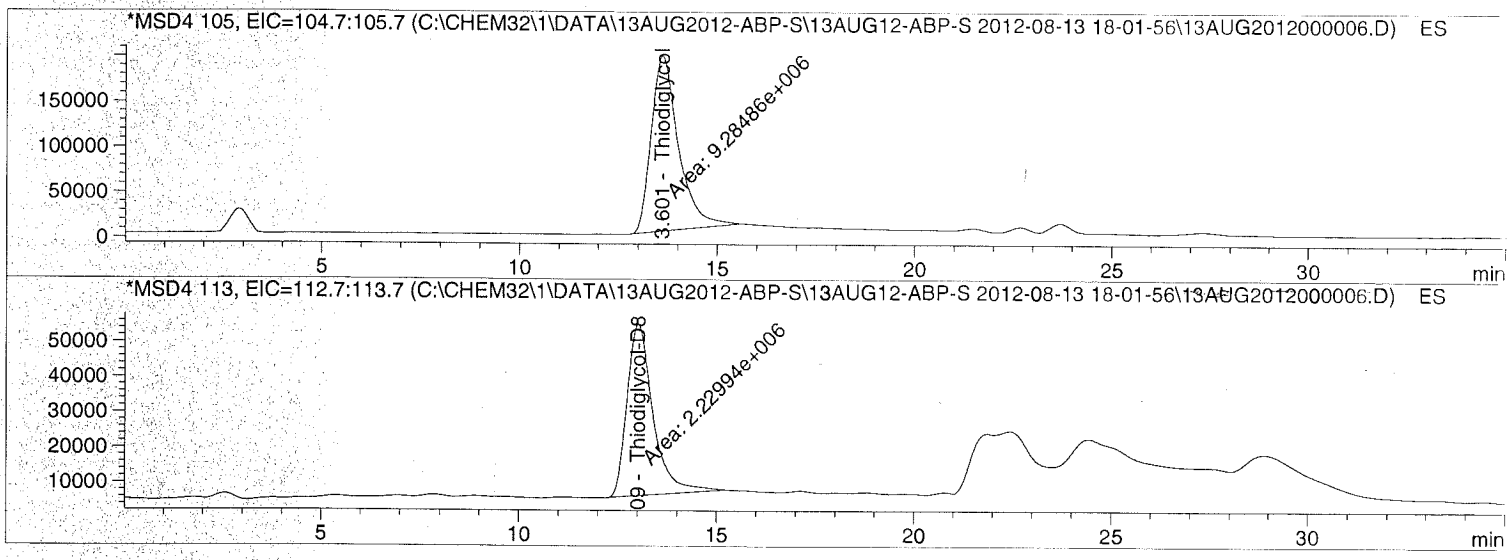
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 6 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000006.D
Sample Name: 1221555002 MS

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 56
Injection Date	: 8/13/2012 9:04:13 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M		
Last changed	: 8/13/2012 9:04:00 PM by TTM (modified after loading)		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.601	MM	1	9.28486e6	1.18536e-1	49.35494		Thiodiglycol

Batch Run # 6 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000006.D
Sample Name: 1221555002 MS

Acq. Operator : TTM Seq. Line : 6
Acq. Instrument : LCMS3 Location : Vial 56
Injection Date : 8/13/2012 9:04:13 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M
Last changed : 8/13/2012 9:04:00 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 49.35494

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.009	MM	I	1 2.22994e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 7 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000007.D
Sample Name: 1221555003 MSD

==========

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 8/13/2012 9:40:35 PM

Seq. Line : 7
Location : Vial 57
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M
Last changed : 8/13/2012 9:40:22 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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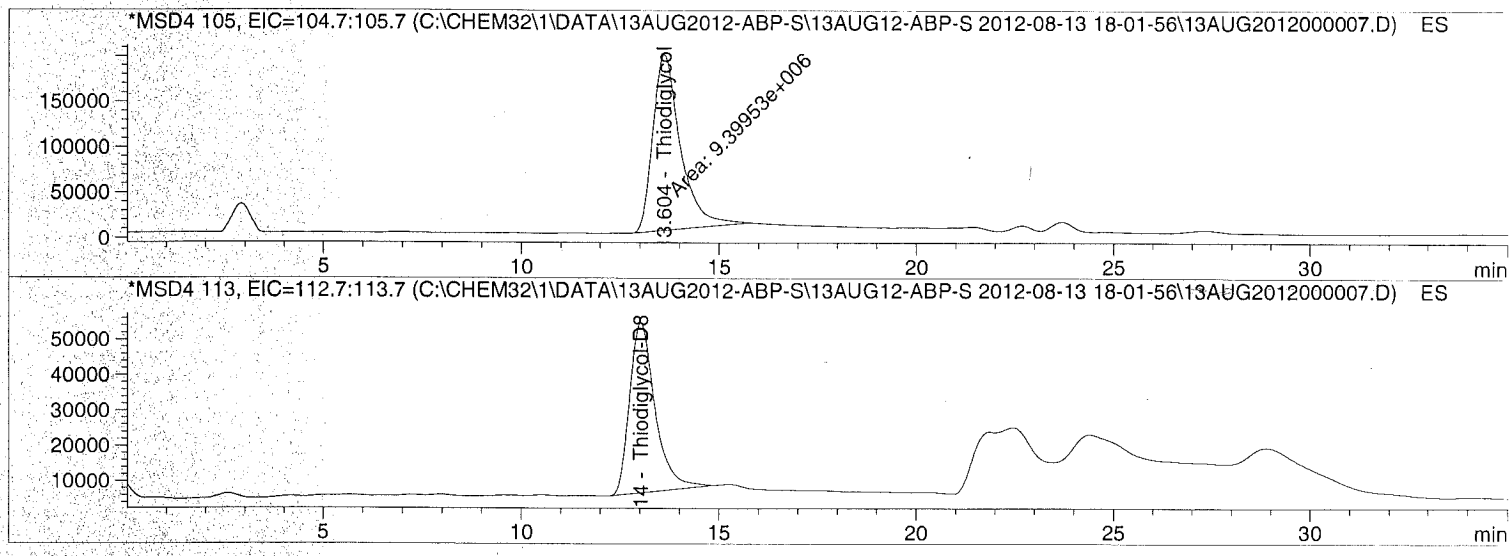

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Internal Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.604	MM	1	9.39953e6	1.18887e-1	52.07669		Thiodiglycol

Batch Run # 7 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000007.D
Sample Name: 1221555003 MSD

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 57
Injection Date	: 8/13/2012 9:40:35 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M		
Last changed	: 8/13/2012 9:40:22 PM by TTM (modified after loading)		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Totals without ISTD(s) : 52.07669

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

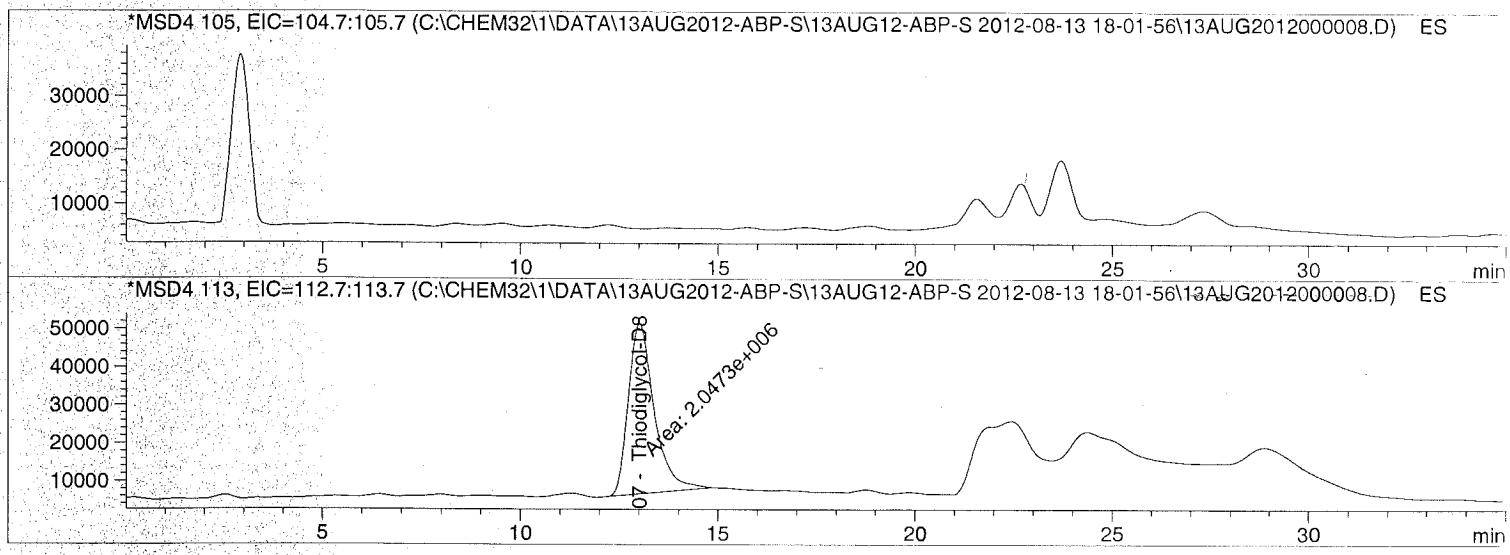
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.014	BB	I	1 2.14585e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 8 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000008.D
Sample Name: 1221555004

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 58
Injection Date	: 8/13/2012 10:16:56 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M		
Last changed	: 8/13/2012 10:16:43 PM by TTM (modified after loading)		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Batch Run # 8 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000008.D
Sample Name: 1221555004

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Acq. Operator : TTM Seq. Line : 8
Acq. Instrument : LCMS3 Location : Vial 58
Injection Date : 8/13/2012 10:16:56 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M
Last changed : 8/13/2012 10:16:43 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

==========

Totals without ISTD(s) : 0.00000

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.007	MM	I	1 2.04730e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

1 Warnings or Errors :

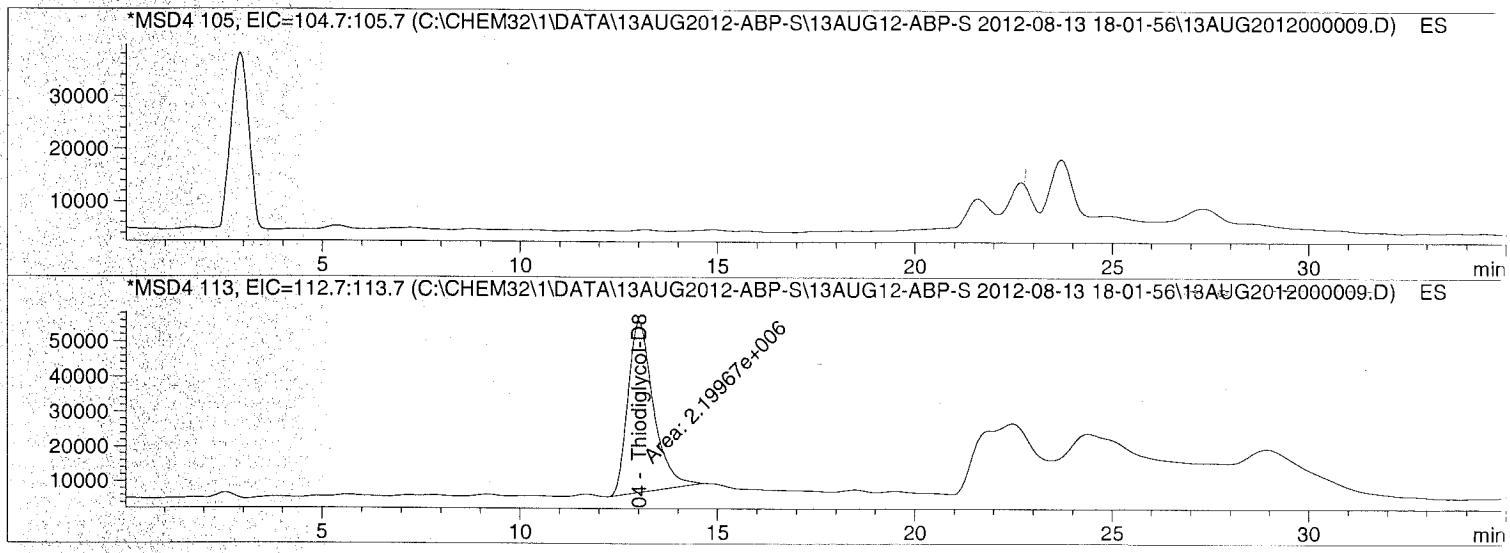
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Batch Run # 9 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000009.D
Sample Name: 1221555005

Acq. Operator	: TTM	Seq. Line	: 9
Acq. Instrument	: LCMS3	Location	: Vial 59
Injection Date	: 8/13/2012 10:53:16 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M		
Last changed	: 8/13/2012 10:53:04 PM by TTM (modified after loading)		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Batch Run # 9 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000009.D
Sample Name: 1221555005

==========

Acq. Operator : TTM Seq. Line : 9
Acq. Instrument : LCMS3 Location : Vial 59
Injection Date : 8/13/2012 10:53:16 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M
Last changed : 8/13/2012 10:53:04 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

==========

Totals without ISTD(s) : 0.00000

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.004	MM	I	1 2.19967e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

1 Warnings or Errors :

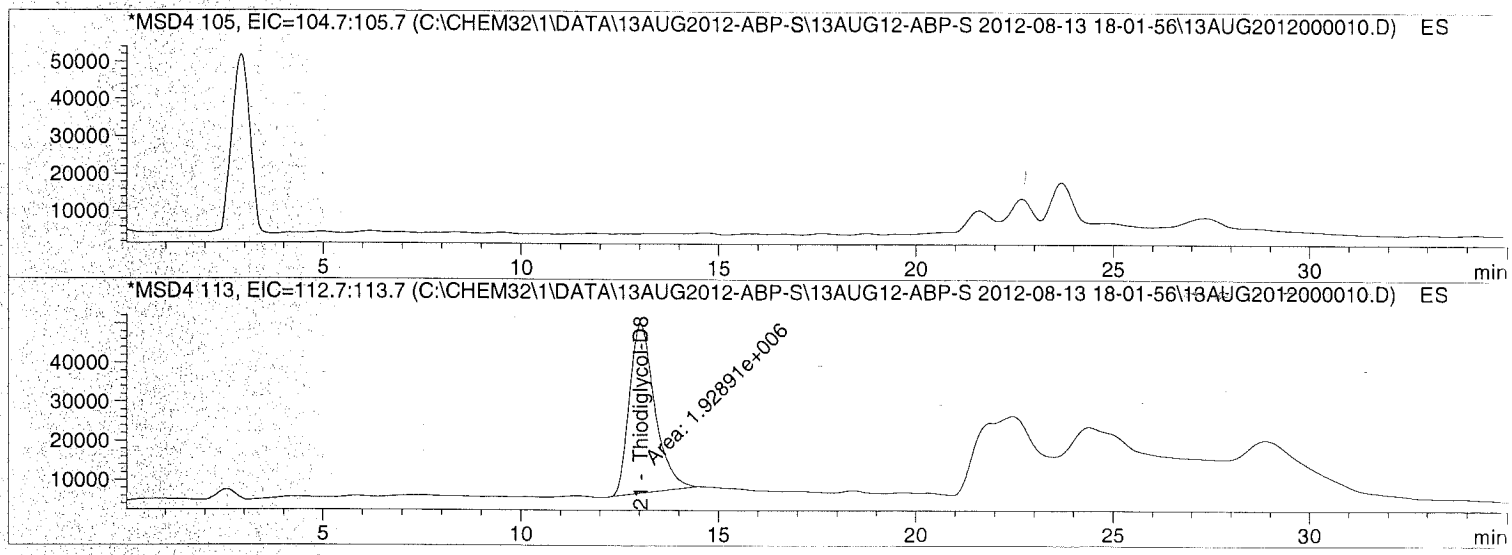
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Batch Run # 10 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000010.D
Sample Name: 1221555007

Acq. Operator	: TTM	Seq. Line	: 10
Acq. Instrument	: LCMS3	Location	: Vial 60
Injection Date	: 8/13/2012 11:29:38 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M		
Last changed	: 8/13/2012 11:29:25 PM by TTM (modified after loading)		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Batch Run # 10 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000010.D
Sample Name: 1221555007

Acq. Operator : TTM
Seq. Line : 10
Acq. Instrument : LCMS3
Location : Vial 60
Injection Date : 8/13/2012 11:29:38 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M
Last changed : 8/13/2012 11:29:25 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 0.00000

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.021	MM	I	1 1.92891e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

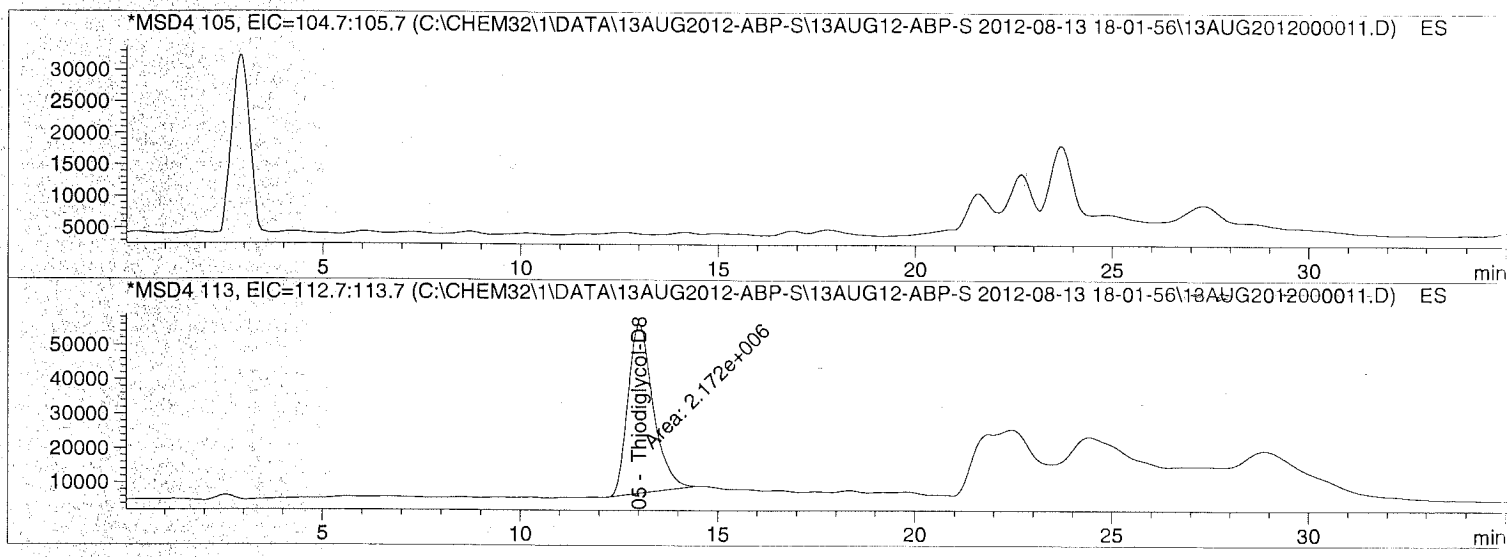
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 11 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000011.D
Sample Name: 1221555008

Acq. Operator	: TTM	Seq. Line	: 11
Acq. Instrument	: LCMS3	Location	: Vial 61
Injection Date	: 8/14/2012 12:06:00 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M		
Last changed	: 8/14/2012 12:05:47 AM by TTM (modified after loading)		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Batch Run # 11 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000011.D
Sample Name: 1221555008

==========

Acq. Operator : TTM
Seq. Line : 11
Acq. Instrument : LCMS3
Location : Vial 61
Injection Date : 8/14/2012 12:06:00 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M
Last changed : 8/14/2012 12:05:47 AM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

==========

Totals without ISTD(s) : 0.00000

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.005	MM	I	1 2.17200e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

1 Warnings or Errors :

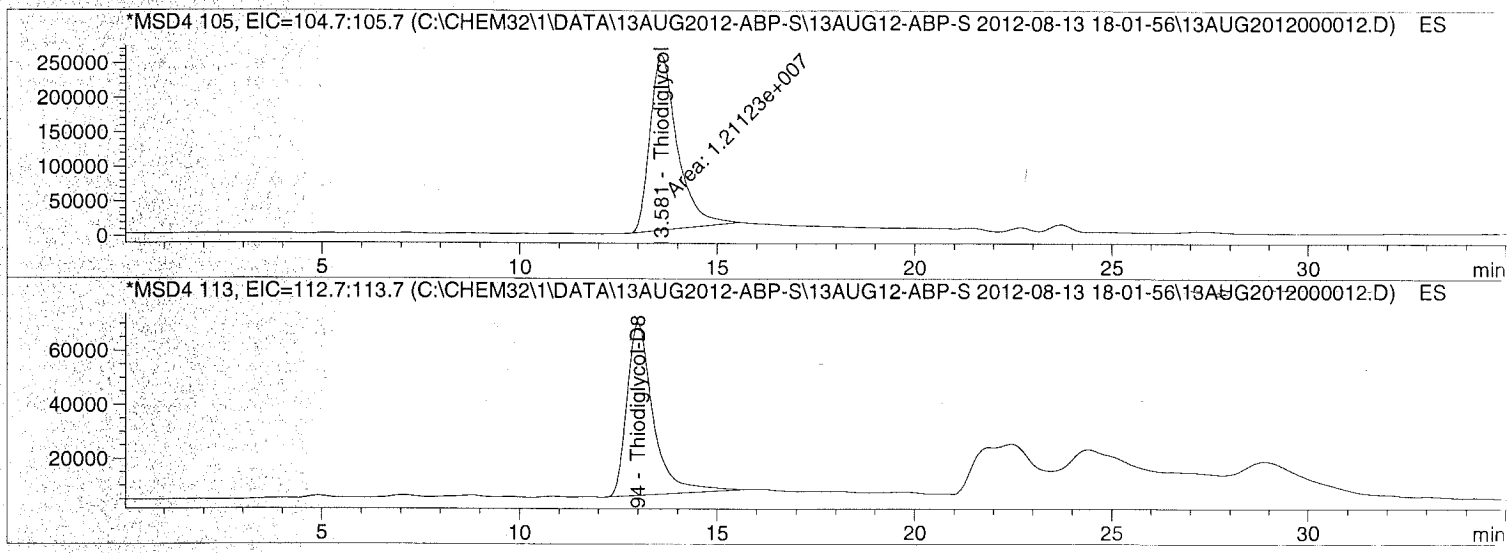
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Batch Run # 12 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000012.D
Sample Name: CCV2

Acq. Operator	: TTM	Seq. Line	: 12
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/14/2012 12:42:22 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M		
Last changed	: 8/14/2012 12:42:09 AM by TTM (modified after loading)		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 5.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

Batch Run # 12 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000012.D
Sample Name: CCV2

Acq. Operator : TTM Seq. Line : 12
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/14/2012 12:42:22 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M
Last changed : 8/14/2012 12:42:09 AM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.581	MM	1	1.21123e7	1.18394e-1	4.82463		Thiodiglycol

Totals without ISTD(s) : 4.82463

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

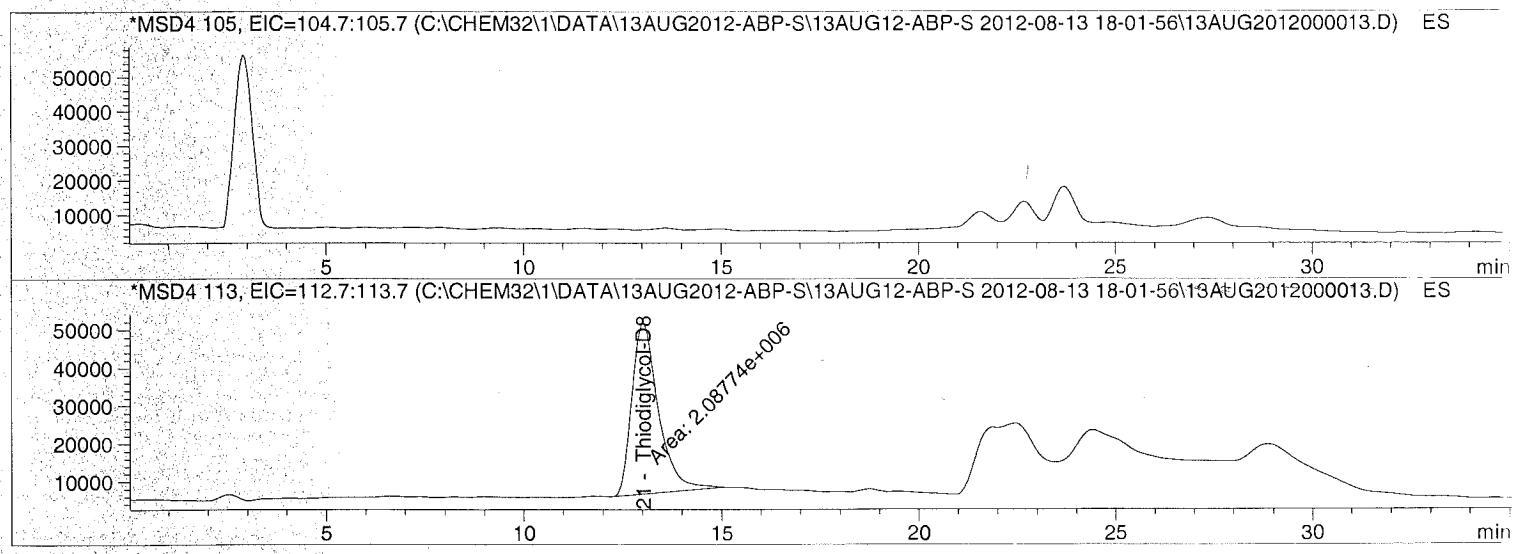
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.994	BB I	1	2.97228e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 13 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000013.D
Sample Name: 1221555009

Acq. Operator : TTM Seq. Line : 13
Acq. Instrument : LCMS3 Location : Vial 62
Injection Date : 8/14/2012 1:18:43 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M
Last changed : 8/14/2012 1:18:30 AM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Batch Run # 13 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000013.D
Sample Name: 1221555009

Acq. Operator	: TTM	Seq. Line	: 13
Acq. Instrument	: LCMS3	Location	: Vial 62
Injection Date	: 8/14/2012 1:18:43 AM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M
Last changed : 8/14/2012 1:18:30 AM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 0.00000

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.021	MM	I	1 2.08774e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

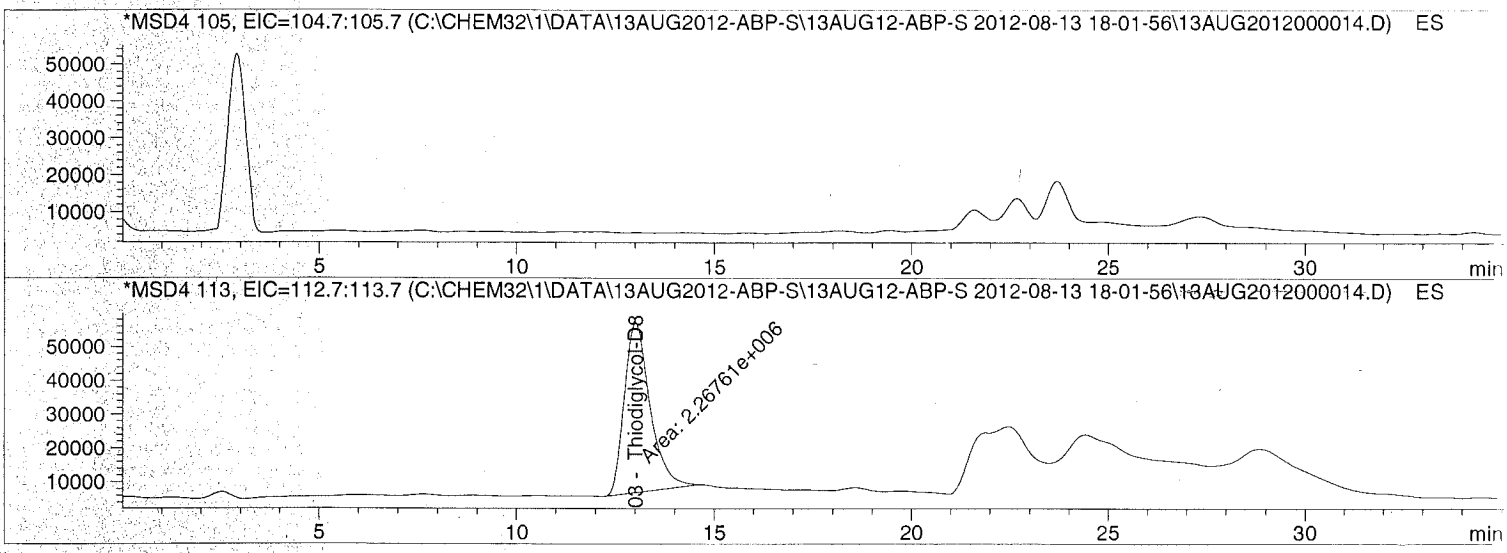
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 14 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000014.D
Sample Name: 1221555010

Acq. Operator	: TTM	Seq. Line	: 14
Acq. Instrument	: LCMS3	Location	: Vial 63
Injection Date	: 8/14/2012 1:55:06 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M		
Last changed	: 8/14/2012 1:54:53 AM by TTM (modified after loading)		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Batch Run # 14 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000014.D
Sample Name: 1221555010

Acq. Operator : TTM Seq. Line : 14
Acq. Instrument : LCMS3 Location : Vial 63
Injection Date : 8/14/2012 1:55:06 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M
Last changed : 8/14/2012 1:54:53 AM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 0.00000

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.003	MM	I	1 2.26761e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

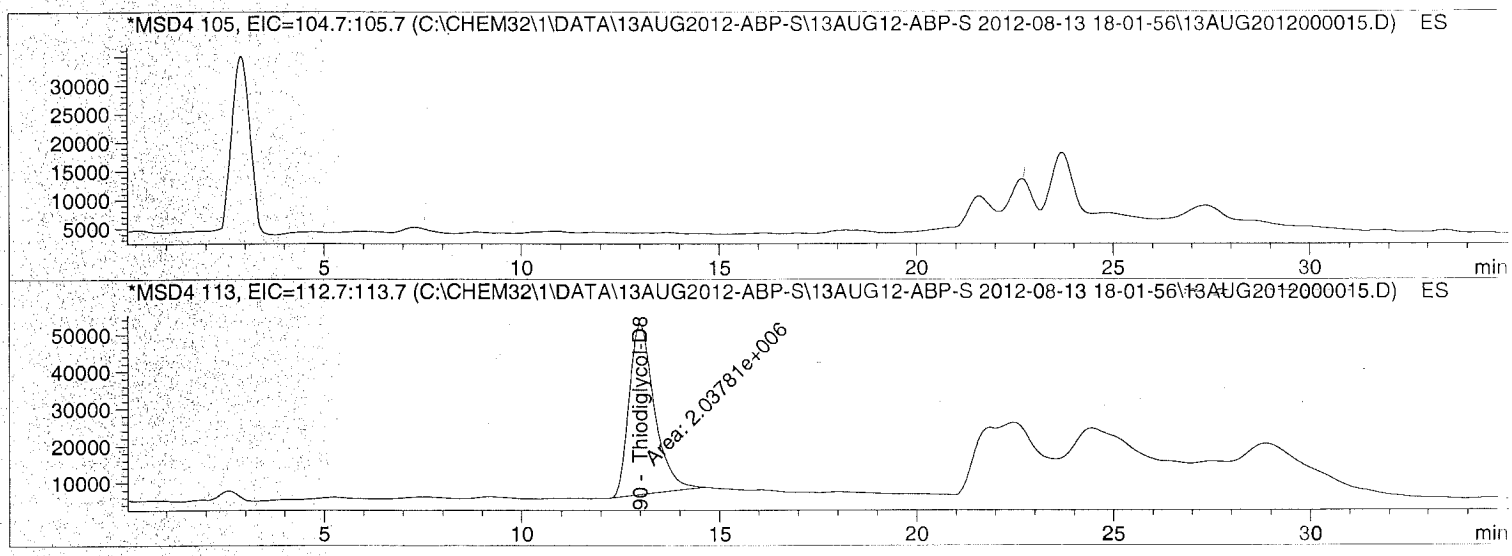
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 15 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000015.D
Sample Name: 1221555011

Acq. Operator	: TTM	Seq. Line	: 15
Acq. Instrument	: LCMS3	Location	: Vial 64
Injection Date	: 8/14/2012 2:31:28 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M		
Last changed	: 8/14/2012 2:31:15 AM by TTM (modified after loading)		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Batch Run # 15 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000015.D
Sample Name: 1221555011

Acq. Operator	: TTM	Seq. Line	: 15
Acq. Instrument	: LCMS3	Location	: Vial 64
Injection Date	: 8/14/2012 2:31:28 AM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M
Last changed : 8/14/2012 2:31:15 AM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 0.00000

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.990	MM	I	1 2.03781e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 16 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000016.D
Sample Name: 1221555012

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Acq. Operator : TTM Seq. Line : 16
Acq. Instrument : LCMS3 Location : Vial 65
Injection Date : 8/14/2012 3:07:50 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M
Last changed : 8/14/2012 3:07:36 AM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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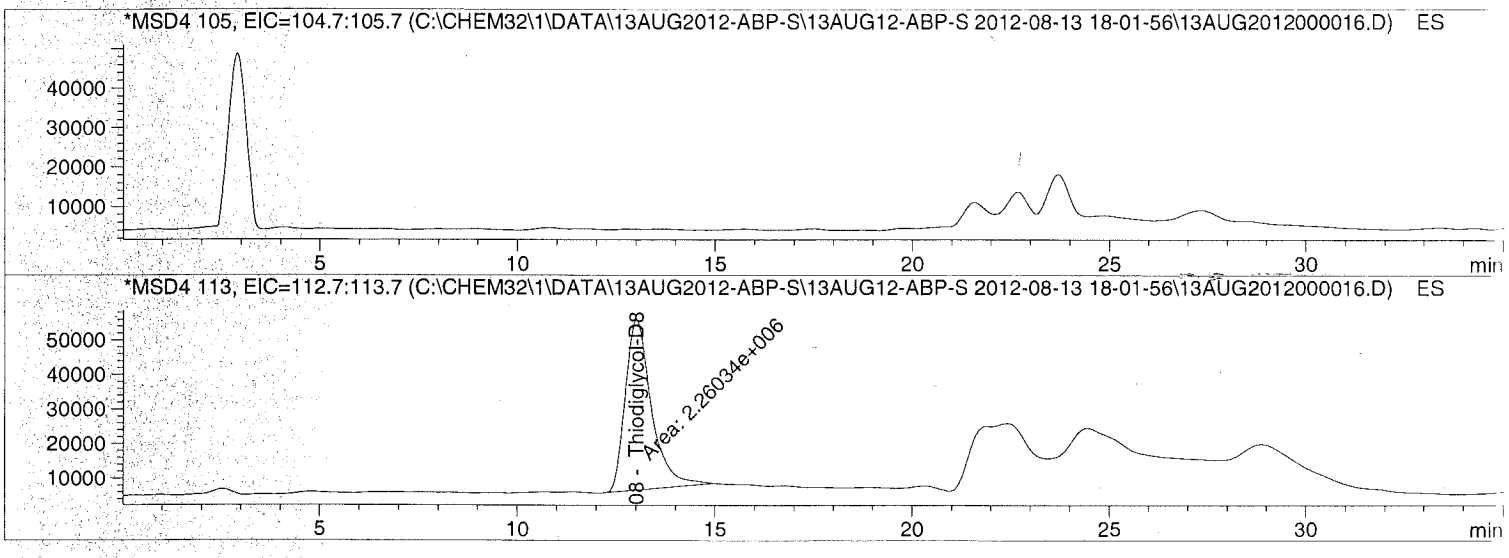

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Internal Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Batch Run # 16 of 16
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\13AUG2012000016.D
Sample Name: 1221555012

==========

Acq. Operator : TTM Seq. Line : 16
Acq. Instrument : LCMS3 Location : Vial 65
Injection Date : 8/14/2012 3:07:50 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-13 18-01-56\ABP-ON.M
Last changed : 8/14/2012 3:07:36 AM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

==========

Totals without ISTD(s) : 0.00000

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.008	MM	I	1 2.26034e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

1 Warnings or Errors :

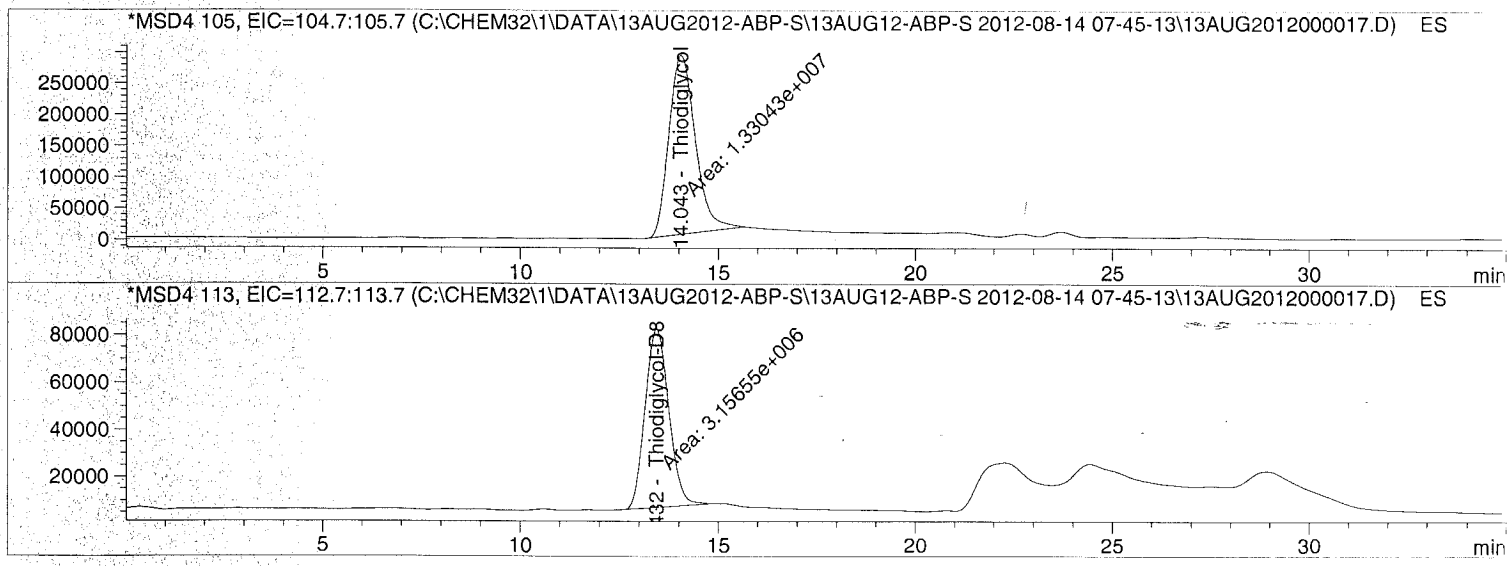
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Batch Run # 1 of 4
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-14 07-45-13\13AUG2012000017.D
Sample Name: CCV3

Acq. Operator	: TTM	Seq. Line	: 17
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/14/2012 7:46:00 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-14 07-45-13\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

Batch Run # 1 of 4
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-14 07-45-13\13AUG2012000017.D
Sample Name: CCV3

Acq. Operator : TTM
Seq. Line : 17
Acq. Instrument : LCMS3
Location : Vial 51
Injection Date : 8/14/2012 7:46:00 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-14 07-45-13\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
14.043	MM	1	1.33043e7	1.18618e-1	4.99957		Thiodiglycol

Totals without ISTD(s) : 4.99957

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

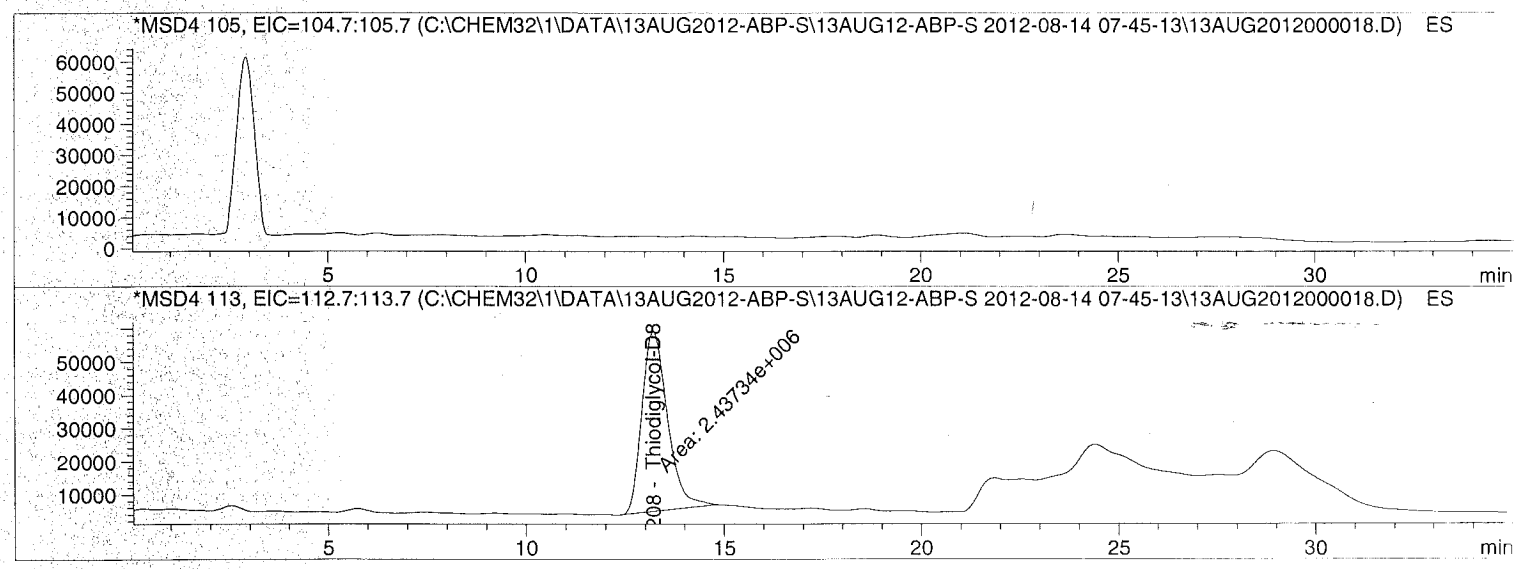
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.432	MM I	1	3.15655e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 2 of 4
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-14 07-45-13\13AUG2012000018.D
Sample Name: 1221555013

Acq. Operator	: TTM	Seq. Line	: 18
Acq. Instrument	: LCMS3	Location	: Vial 66
Injection Date	: 8/14/2012 8:22:24 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-14 07-45-13\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Batch Run # 2 of 4
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-14 07-45-13\13AUG2012000018.D
Sample Name: 1221555013

Acq. Operator	: TTM	Seq. Line	: 18
Acq. Instrument	: LCMS3	Location	: Vial 66
Injection Date	: 8/14/2012 8:22:24 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-14 07-45-13\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Totals without ISTD(s) : 0.00000

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.208	MM	I	1 2.43734e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

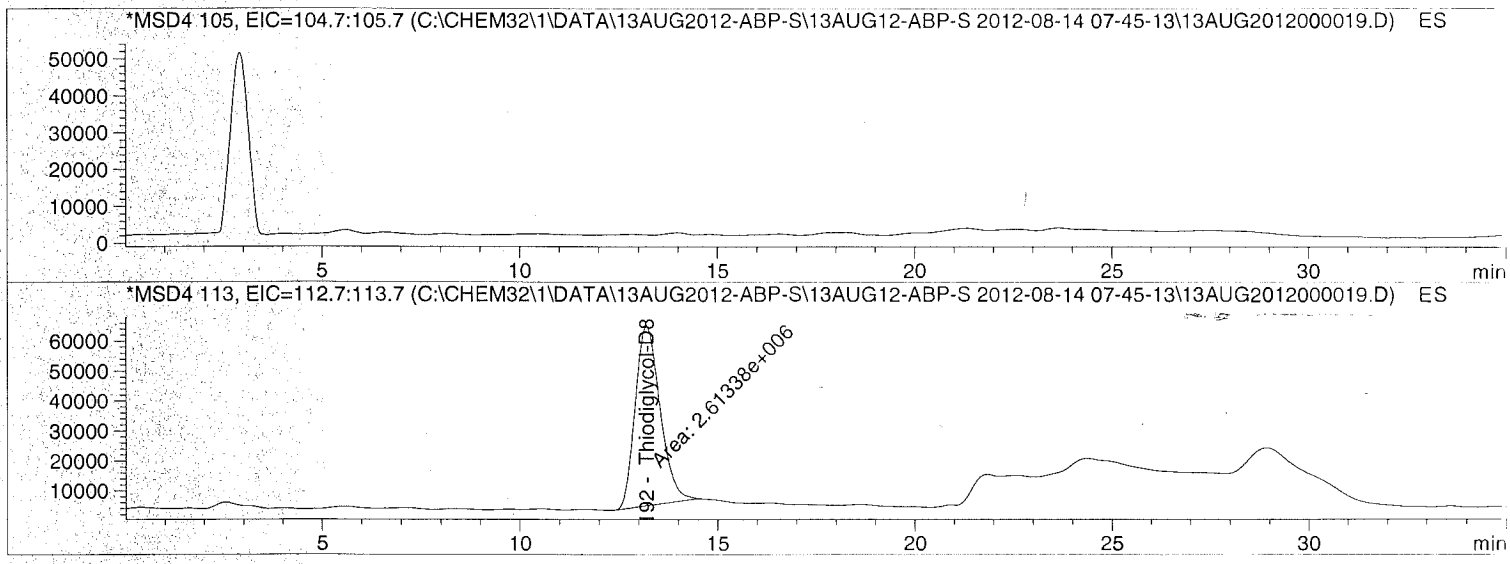
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 3 of 4
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-14 07-45-13\13AUG2012000019.D
Sample Name: 1221555014

Acq. Operator : TTM Seq. Line : 19
Acq. Instrument : LCMS3 Location : Vial 67
Injection Date : 8/14/2012 8:58:46 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-14 07-45-13\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Batch Run # 3 of 4
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-14 07-45-13\13AUG2012000019.D
Sample Name: 1221555014

Acq. Operator : TTM Seq. Line : 19
Acq. Instrument : LCMS3 Location : Vial 67
Injection Date : 8/14/2012 8:58:46 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-14 07-45-13\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 0.00000

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.192	MM	I	1 2.61338e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

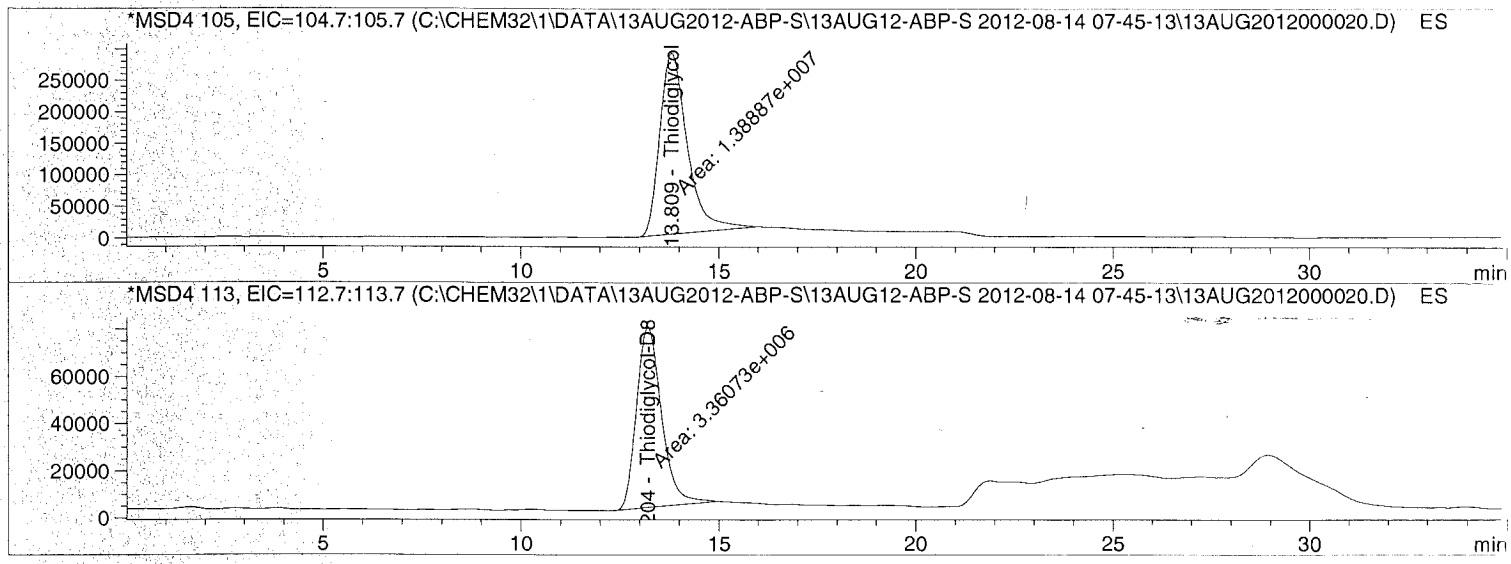
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 4 of 4
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-14 07-45-13\13AUG2012000020.D
Sample Name: CCV4

Acq. Operator	: TTM	Seq. Line	: 20
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/14/2012 9:35:08 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-14 07-45-13\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 5.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

Batch Run # 4 of 4
Data File C:\CHEM32\...13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-14 07-45-13\13AUG2012000020.D
Sample Name: CCV4

Acq. Operator : TTM Seq. Line : 20
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/14/2012 9:35:08 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP-S\13AUG12-ABP-S 2012-08-14 07-45-13\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.809	MM	1	1.38887e7	1.18486e-1	4.89658		Thiodiglycol

Totals without ISTD(s) : 4.89658

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.204	MM I	1	3.36073e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Calibration

Raw Data

Calibration Table

Agent Breakdown Products

Calib. Data Modified : 7/9/2012 11:13:05 AM

Calculate : Internal Standard
Based on : Peak Area

Rel. Reference Window : 10.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 10.000 %
Abs. Non-ref. Window : 0.000 min
Use Multiplier & Dilution Factor with ISTDs
Uncalibrated Peaks : not reported
Partial Calibration : No recalibration if peaks missing

Curve Type : Quadratic (some peaks differ, see below)
Origin : Ignored (some peaks differ, see below)
Weight : Linear (Amnt) (some peaks differ, see below)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Default Sample ISTD Information (if not set in sample table):

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal 2: MSD4 113, EIC=112.7:113.7

RetTime [min]	Lvl Sig		Amount	Area	Amt/Area	Ref	Grp	Name
12.890	2	1	10.00000	2.44245e6	4.09425e-6	I2		Thiodiglycol-D8
		2	10.00000	2.37259e6	4.21481e-6			
		3	10.00000	2.75981e6	3.62344e-6			
		4	10.00000	2.61922e6	3.81792e-6			
		5	10.00000	2.65549e6	3.76579e-6			
		6	10.00000	2.67017e6	3.74508e-6			
13.460	1	6	5.00000e-2	1.14698e5	4.35926e-7	2		Thiodiglycol
		5	1.00000e-1	2.17683e5	4.59383e-7			
		4	5.00000e-1	1.04468e6	4.78617e-7			
		3	1.00000	2.09084e6	4.78276e-7			
		2	5.00000	1.06254e7	4.70571e-7			
		1	10.00000	1.91630e7	5.21840e-7			

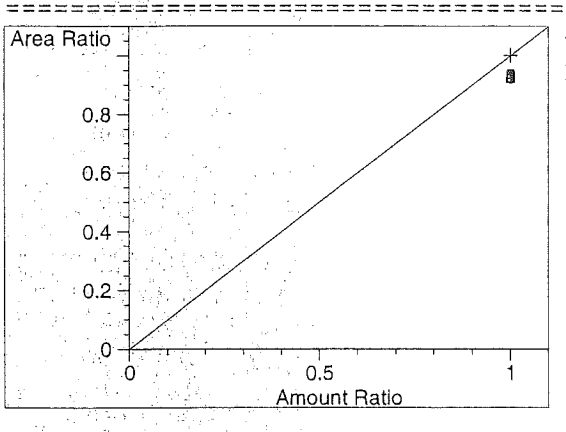
More compound-specific settings:

Compound: Thiodiglycol-D8
  Curve Type : Linear
  Origin : Included
  Calibration Level Weights:/
    Level 1 : 1
    Level 2 : 1
    Level 3 : 1
    Level 4 : 1
    Level 5 : 1
    Level 6 : 1

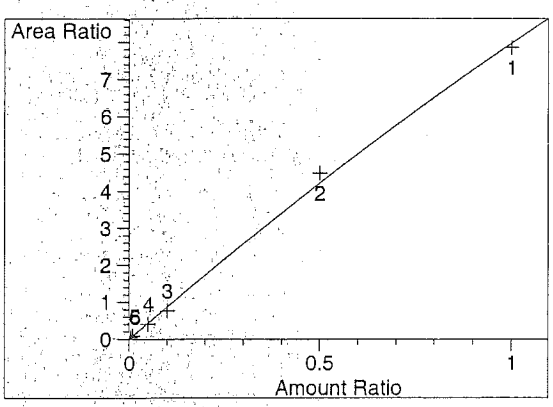
Peak Sum Table

No Entries in table

Calibration Curves



Thiodiglycol-D8 at exp. RT: 12.890
MSD4 113, EIC=112.7:113.7
Correlation: 1.00000
Residual Std. Dev.: 0.00000
Formula: y = mx + b
  m: 1.00000
  b: 0.00000
  x: Amount
  y: Area
Calibration Level Weights:
  Level 1 : 1
  Level 2 : 1
  Level 3 : 1
  Level 4 : 1
  Level 5 : 1
  Level 6 : 1



Thiodiglycol at exp. RT: 13.460
MSD4 105, EIC=104.7:105.7
Correlation: 0.99844
Residual Std. Dev.: 0.15671
Formula: y = ax² + bx + c
  a: -9.49682e-1
  b: 8.92207
  c: -8.42930e-3
  x: Amount
  y: Area
Calibration Level Weights:
  Level 6 : 1
  Level 5 : 0.5
  Level 4 : 0.1
  Level 3 : 0.05
  Level 2 : 0.01
  Level 1 : 0.005

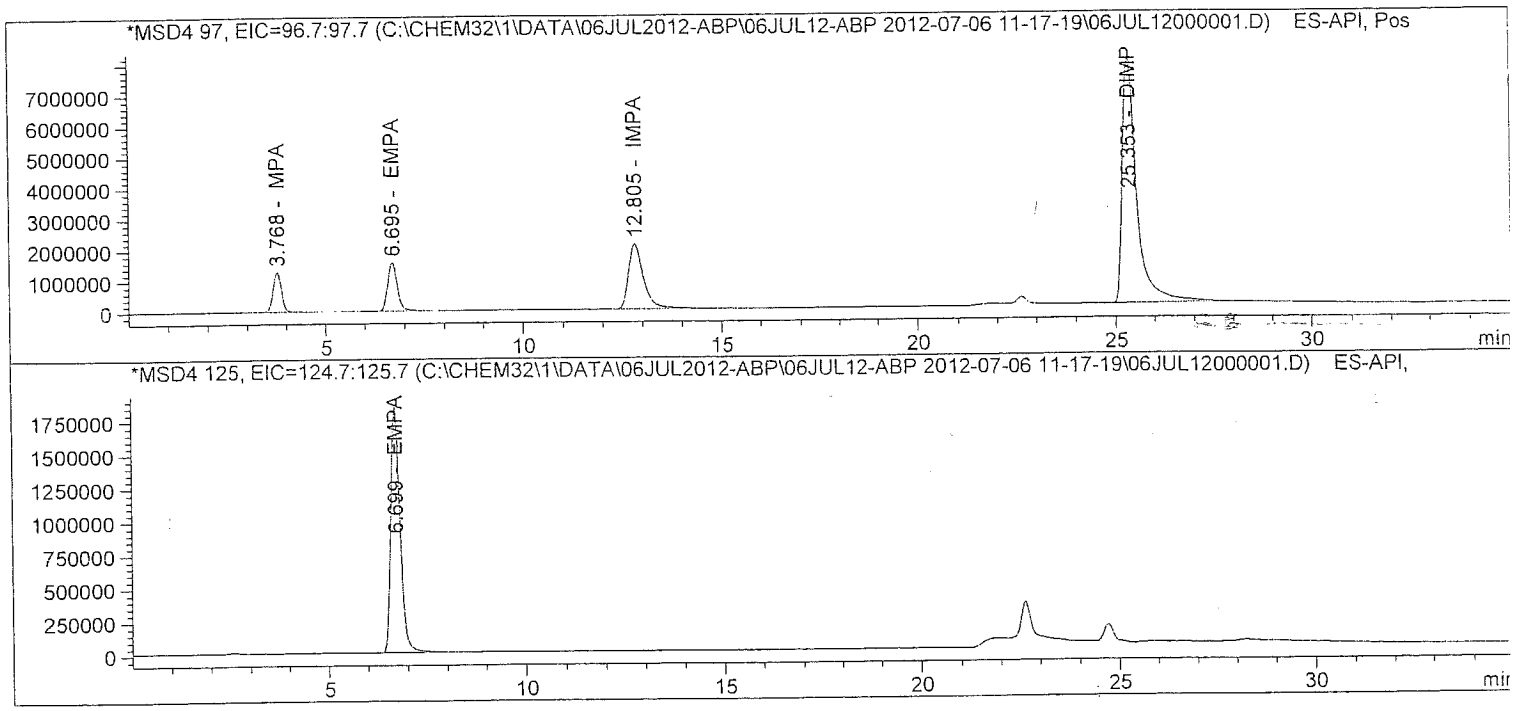
Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 1	PRIME	ABP-ON	1	Ctrl Samp	
2	Vial 1	$10	ABP-ON	1	Ctrl Samp	
3	Vial 2	$5	ABP-ON	1	Ctrl Samp	
4	Vial 3	$1	ABP-ON	1	Ctrl Samp	
5	Vial 4	$05	ABP-ON	1	Ctrl Samp	
6	Vial 5	$0.1	ABP-ON	1	Ctrl Samp	
7	Vial 6	$0.05	ABP-ON	1	Ctrl Samp	
8	Vial 7	ICV	ABP-ON	1	Ctrl Samp	
9	Vial 8	283055 LMB	ABP-ON	1	Ctrl Samp	
10	Vial 9	283056 LCS	ABP-ON	1	Ctrl Samp	
11	Vial 10	283057 RLVS	ABP-ON	1	Ctrl Samp	
12	Vial 11	1217861001	ABP-ON	1	Sample	
13	Vial 12	1217861002 MS	ABP-ON	1	Ctrl Samp	
14	Vial 13	1217861003 MSD	ABP-ON	1	Ctrl Samp	
15	Vial 2	CCV	ABP-ON	1	Ctrl Samp	

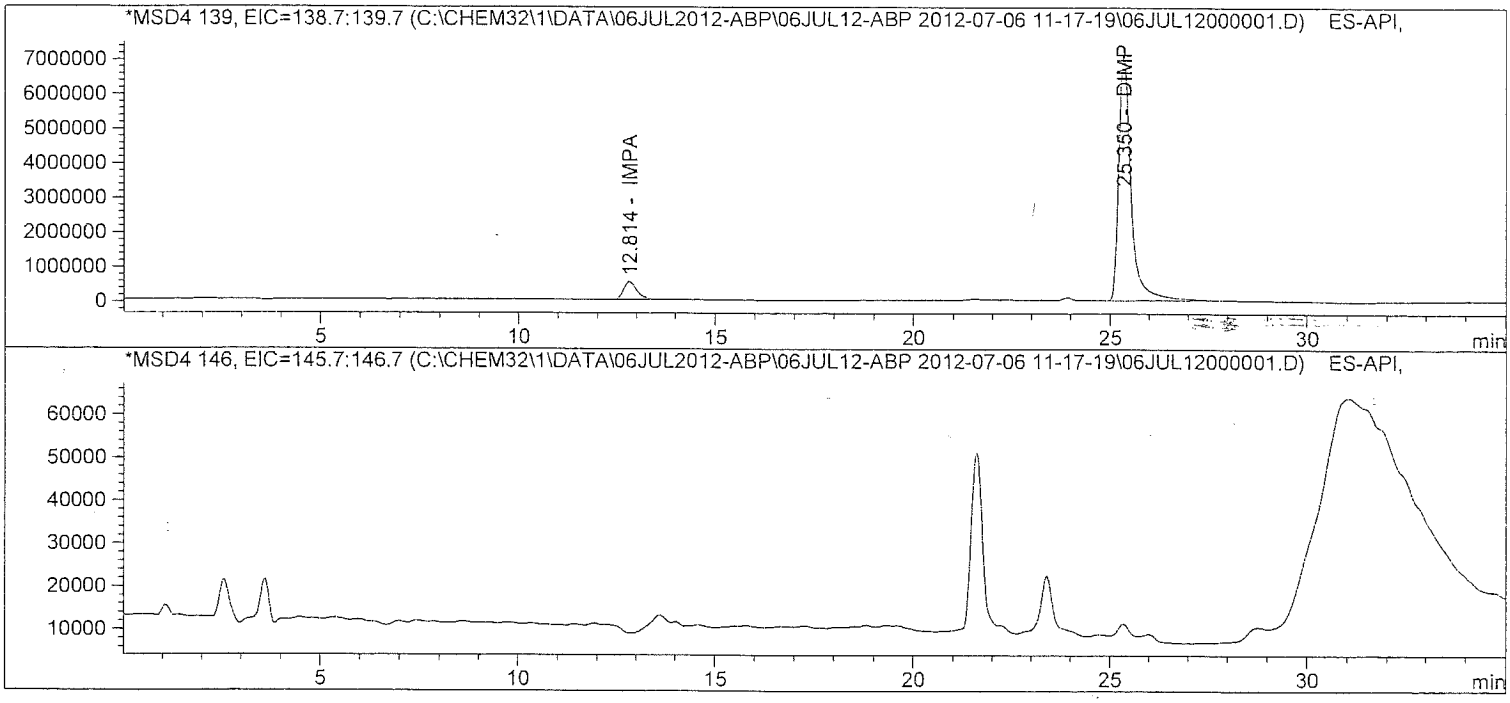
atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



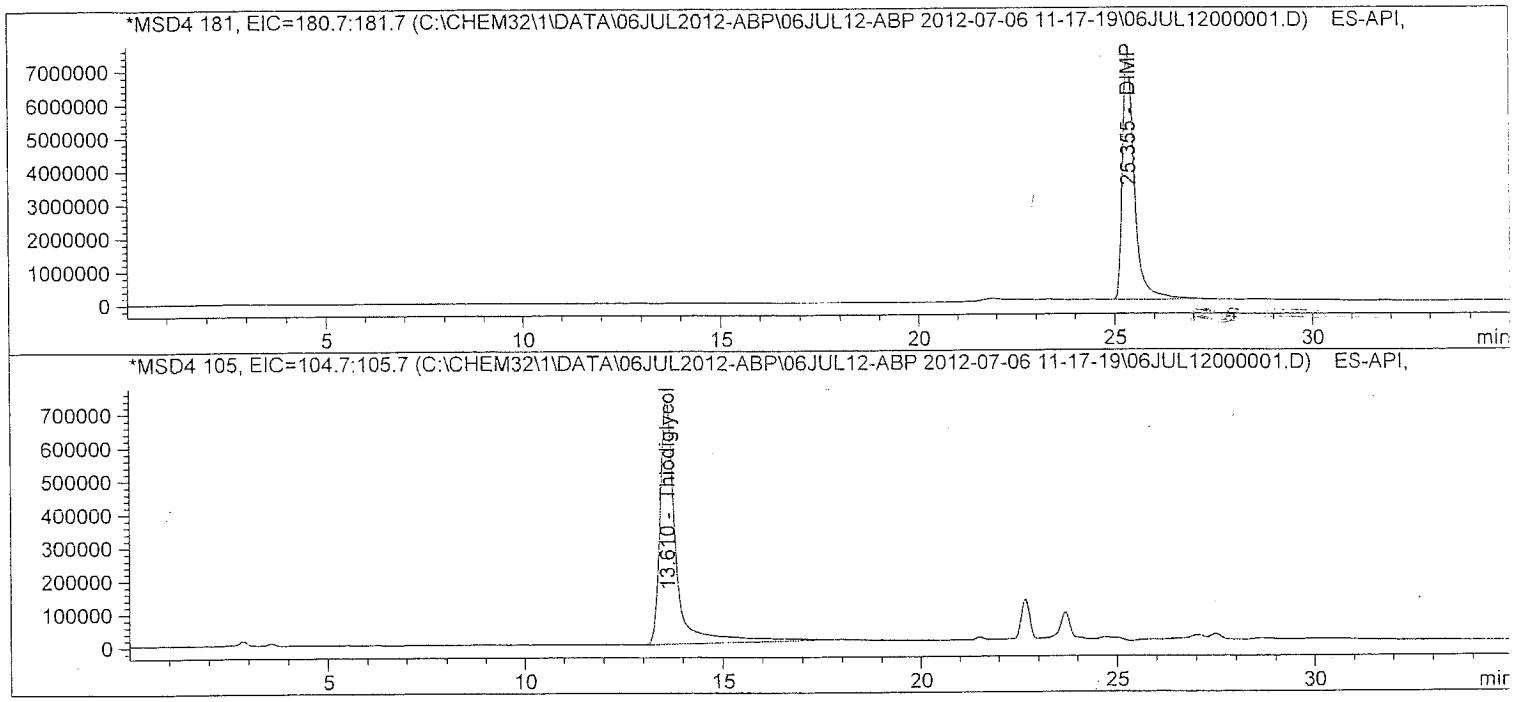
Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

==========

Acq. Operator : TTM
Seq. Line : 1
Acq. Instrument : LCMS3
Location : Vial 1
Injection Date : 7/6/2012 11:17:43 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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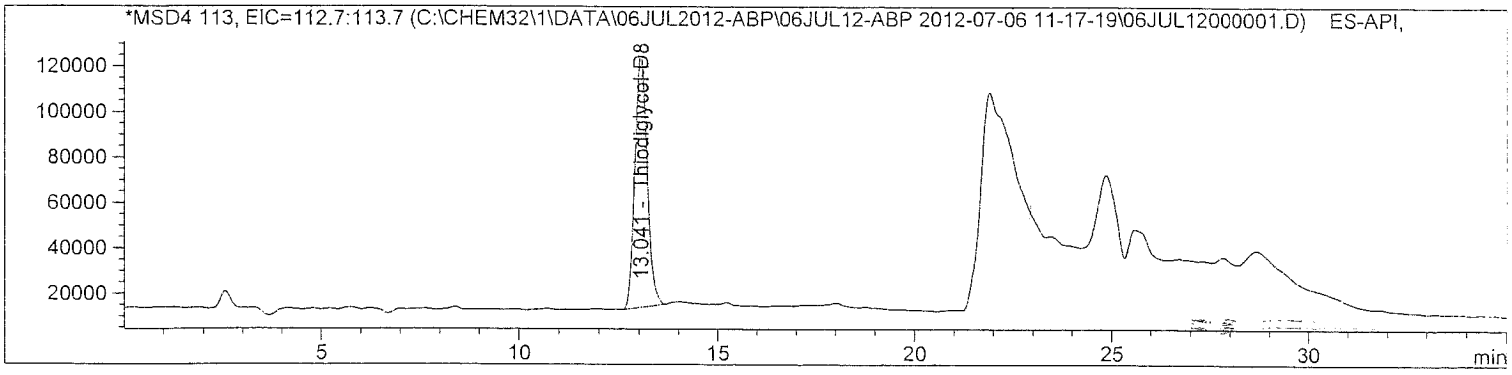

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Internal Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 10.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.768	BB	1	1.91978e7	1.32528e-1	10.64848		MPA
12.805	BBA	1	5.64639e7	4.37087e-2	10.32924		IMPA

Totals without ISTD(s) : 20.97773

atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator : TTM
Seq. Line : 1
Acq. Instrument : LCMS3
Location : Vial 1
Injection Date : 7/6/2012 11:17:43 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.699	BB	1	3.05963e7	7.98724e-2	10.22810		EMPA

Totals without ISTD(s) : 10.22810

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.355	BBA	1	1.54432e8	1.54383e-2	9.97853		DIMP

Totals without ISTD(s) : 9.97853

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.610	BBA	1	2.03461e7	1.26756e-1	10.79391		Thiodiglycol

Totals without ISTD(s) : 10.79391

Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

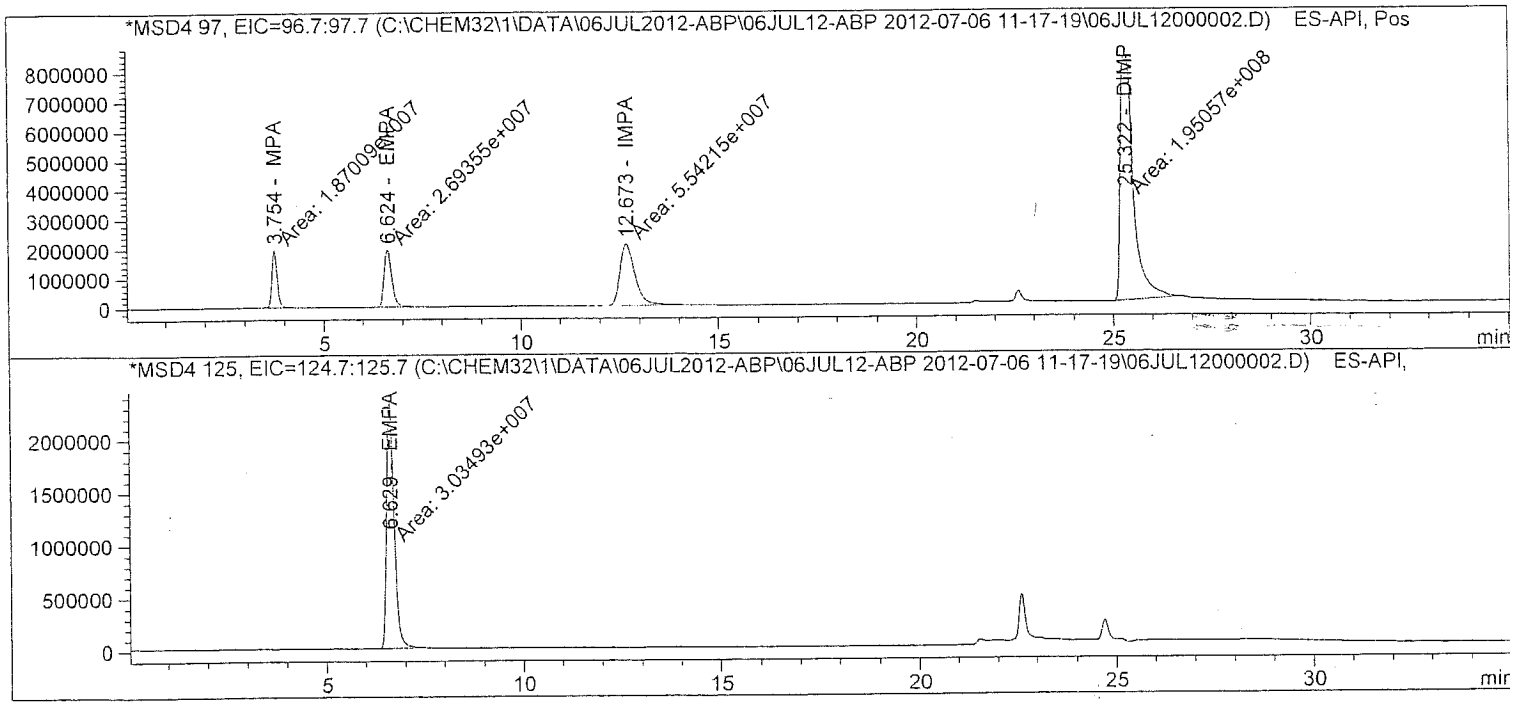
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.041	BB	I	1 2.38930e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

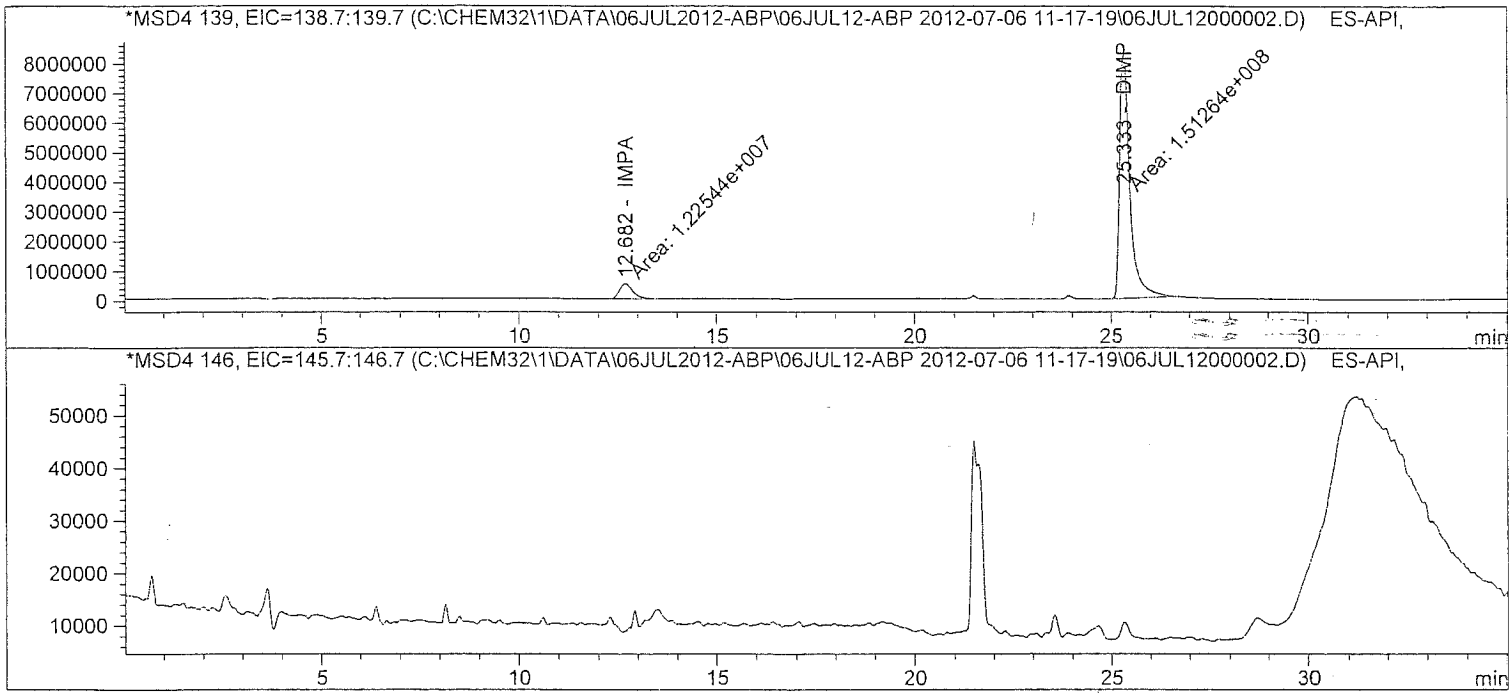
Batch Run # 2 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
Sample Name: S10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



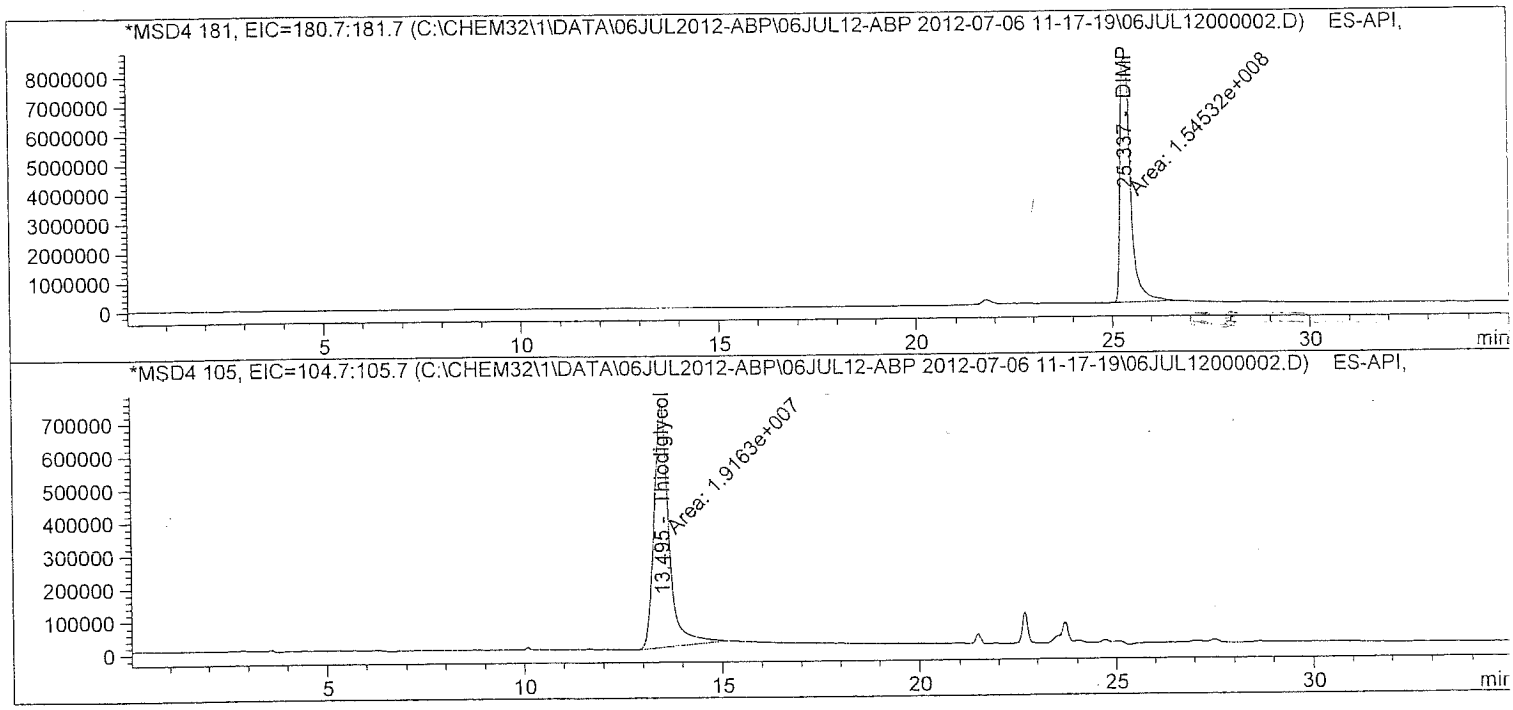
Batch Run # 2 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
Sample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 2 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
Sample Name: $10

==========

Acq. Operator : TTM Seq. Line : 2
Acq. Instrument : LCMS3 Location : Vial 1
Injection Date : 7/6/2012 11:54:02 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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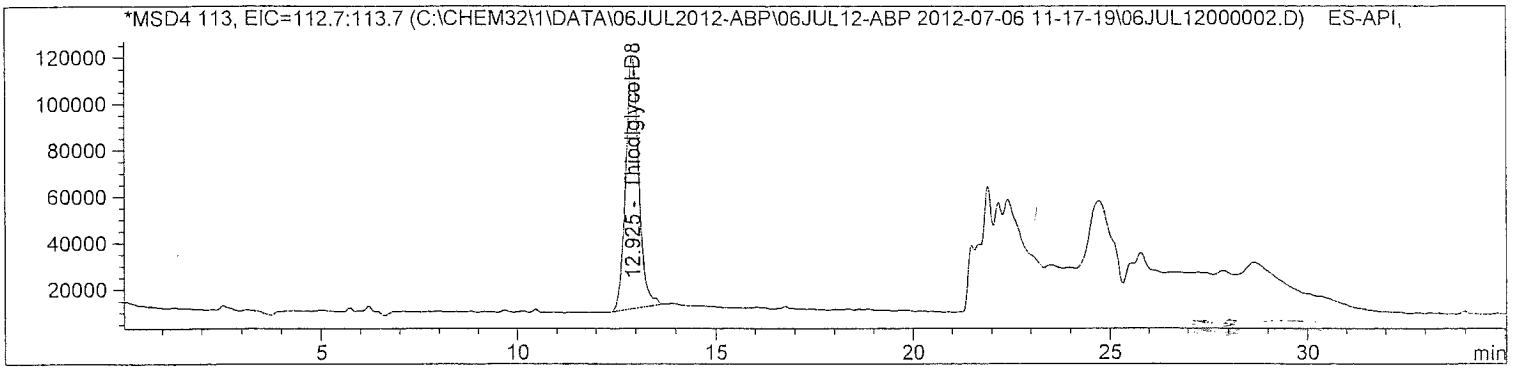

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Internal Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 10.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.754	MM	1	1.87009e7	1.29739e-1	9.93363		MPA
12.673	MM	1	5.54215e7	4.36500e-2	9.90458		IMPA

Totals without ISTD(s) : 19.83821

atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator : TTM
Seq. Line : 2
Acq. Instrument : LCMS3
Location : Vial 1
Injection Date : 7/6/2012 11:54:02 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.629	MM	1	3.03493e7	7.97357e-2	9.90775		EMPA

Totals without ISTD(s) : 9.90775

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.337	MM	1	1.54532e8	1.48417e-2	9.39024		DIMP

Totals without ISTD(s) : 9.39024

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.495	MM	1	1.91630e7	1.25317e-1	9.83212		Thiodiglycol

Totals without ISTD(s) : 9.83212

ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator : TTM
Seq. Line : 2
Acq. Instrument : LCMS3
Location : Vial 1
Injection Date : 7/6/2012 11:54:02 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

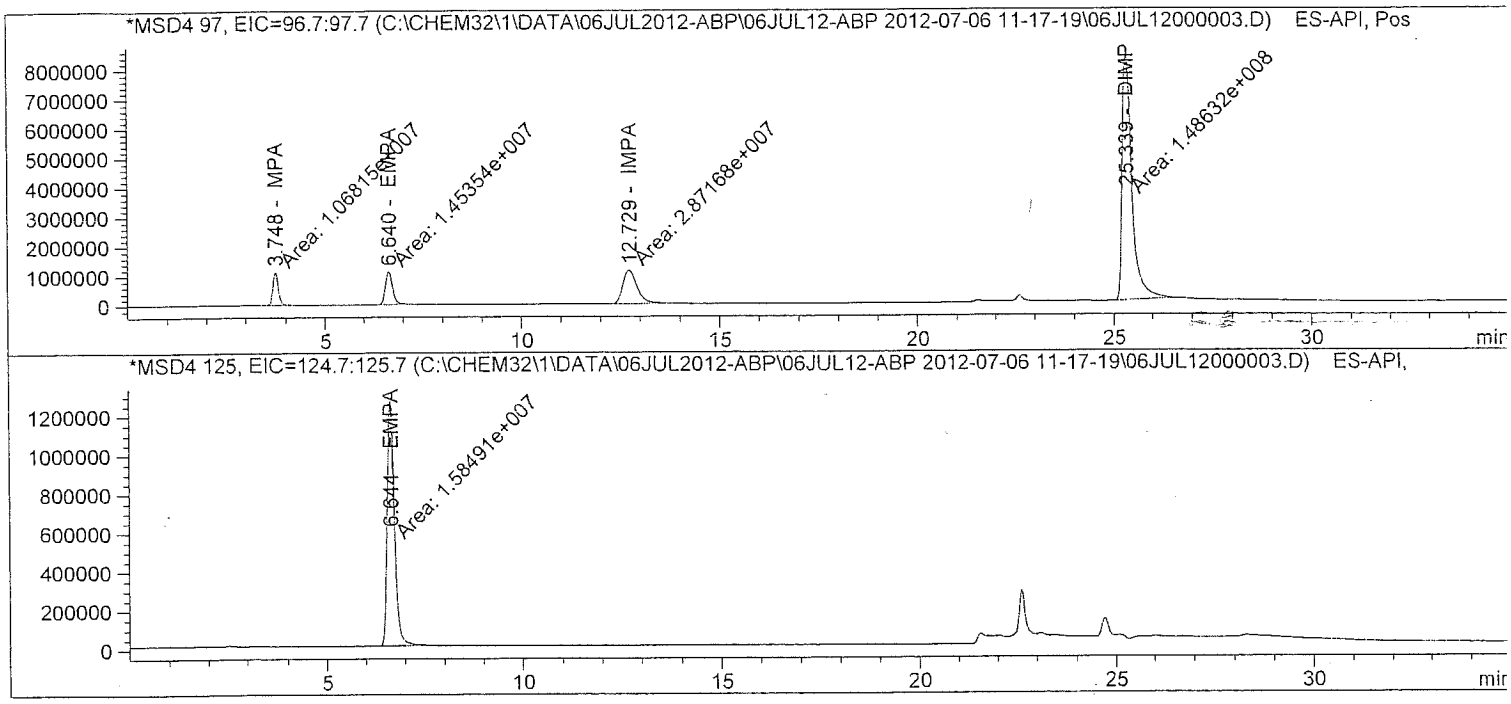
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.925	BB	I	1 2.44245e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

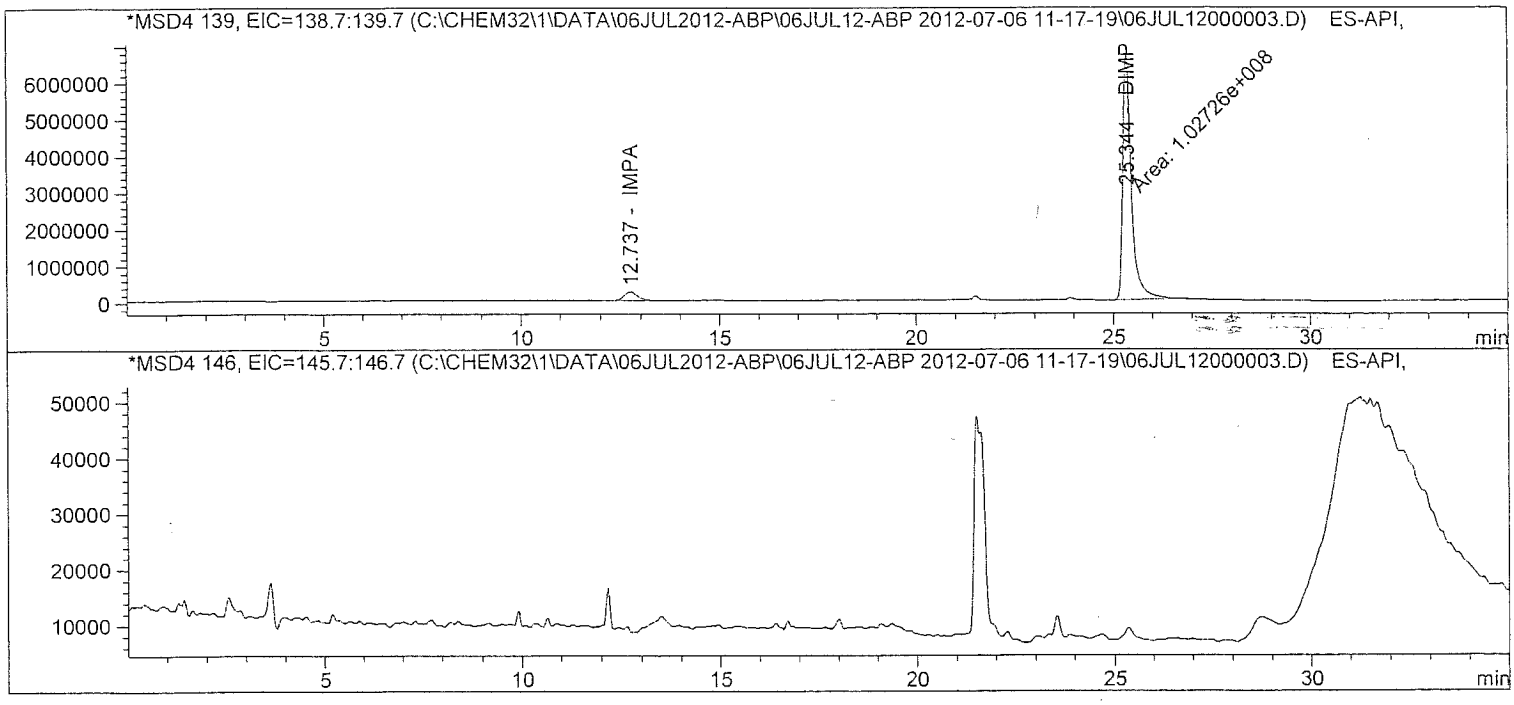
Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

==========

Acq. Operator : TTM
Seq. Line : 3
Acq. Instrument : LCMS3
Location : Vial 2
Injection Date : 7/6/2012 12:30:22 PM
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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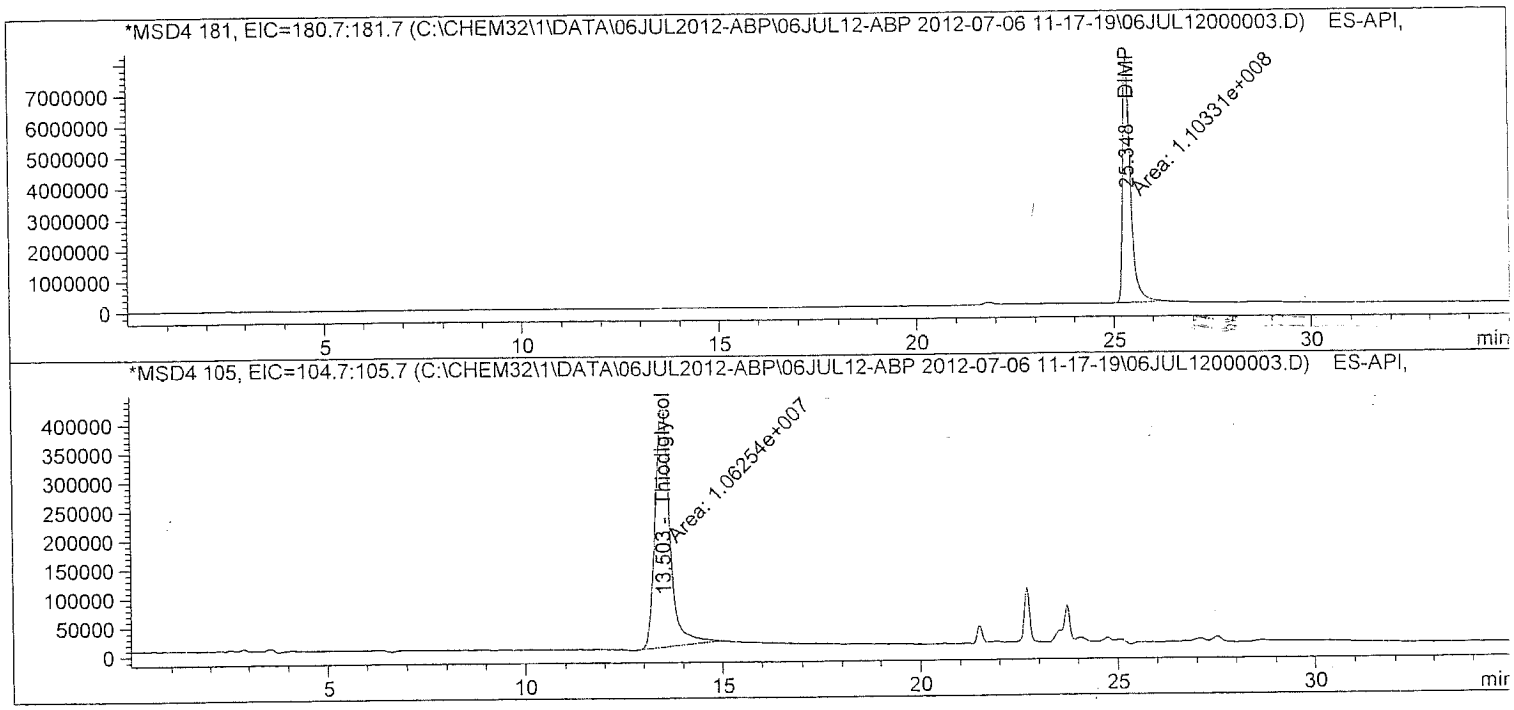

Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

==========

Acq. Operator : TTM Seq. Line : 3
Acq. Instrument : LCMS3 Location : Vial 2
Injection Date : 7/6/2012 12:30:22 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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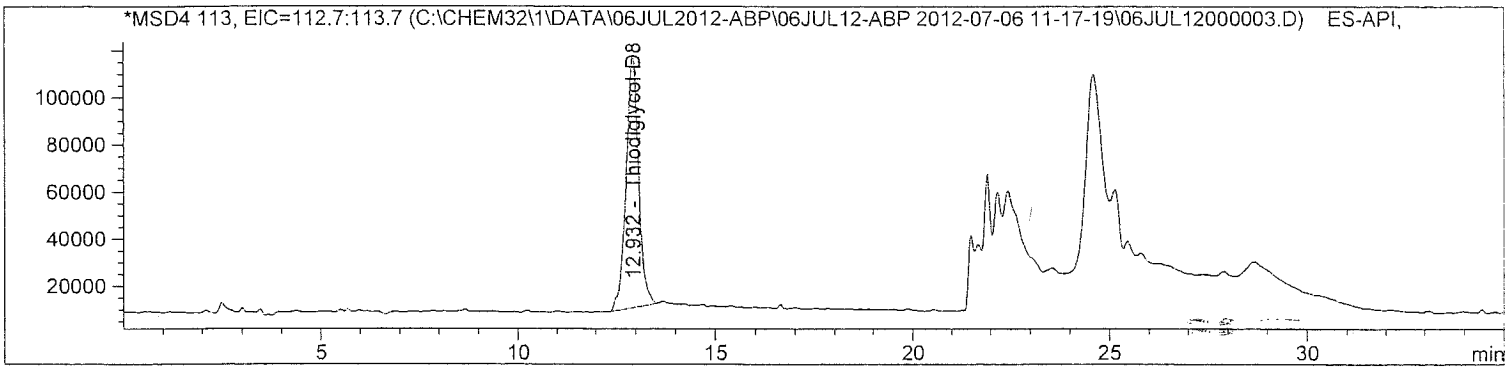

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Internal Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.748	MM	1	1.06815e7	1.13483e-1	5.10907		MPA
12.729	MM	1	2.87168e7	4.30231e-2	5.20733		IMPA

Totals without ISTD(s) : 10.31641

atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

Acq. Operator : TTM Seq. Line : 3
Acq. Instrument : LCMS3 Location : Vial 2
Injection Date : 7/6/2012 12:30:22 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.644	MM	1	1.58491e7	7.77744e-2	5.19540		EMPA

Totals without ISTD(s) : 5.19540

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	MM	1	1.10331e8	1.18266e-2	5.49964		DIMP

Totals without ISTD(s) : 5.49964

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.503	MM	1	1.06254e7	1.19049e-1	5.33146		Thiodiglycol

Totals without ISTD(s) : 5.33146

atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

Acq. Operator : TTM
Seq. Line : 3
Acq. Instrument : LCMS3
Location : Vial 2
Injection Date : 7/6/2012 12:30:22 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

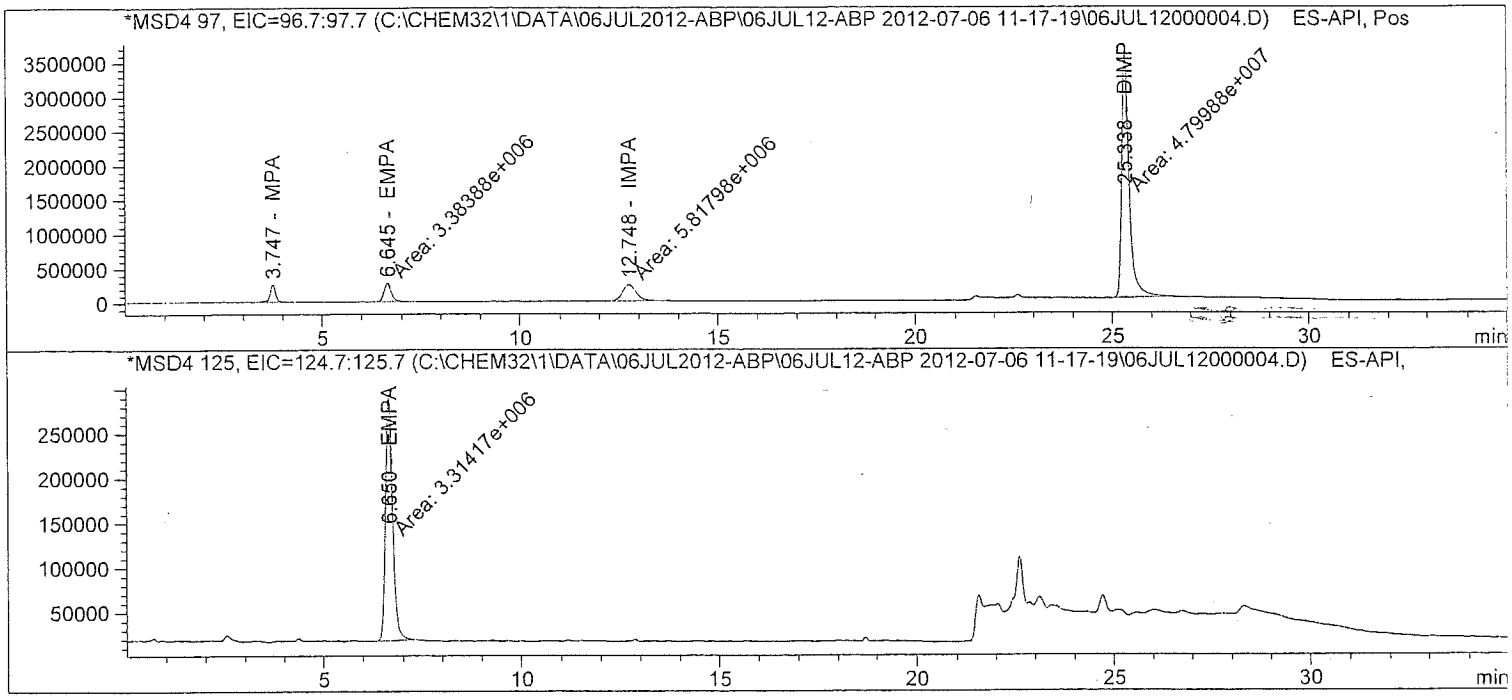
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.932	BB	I	1 2.37259e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

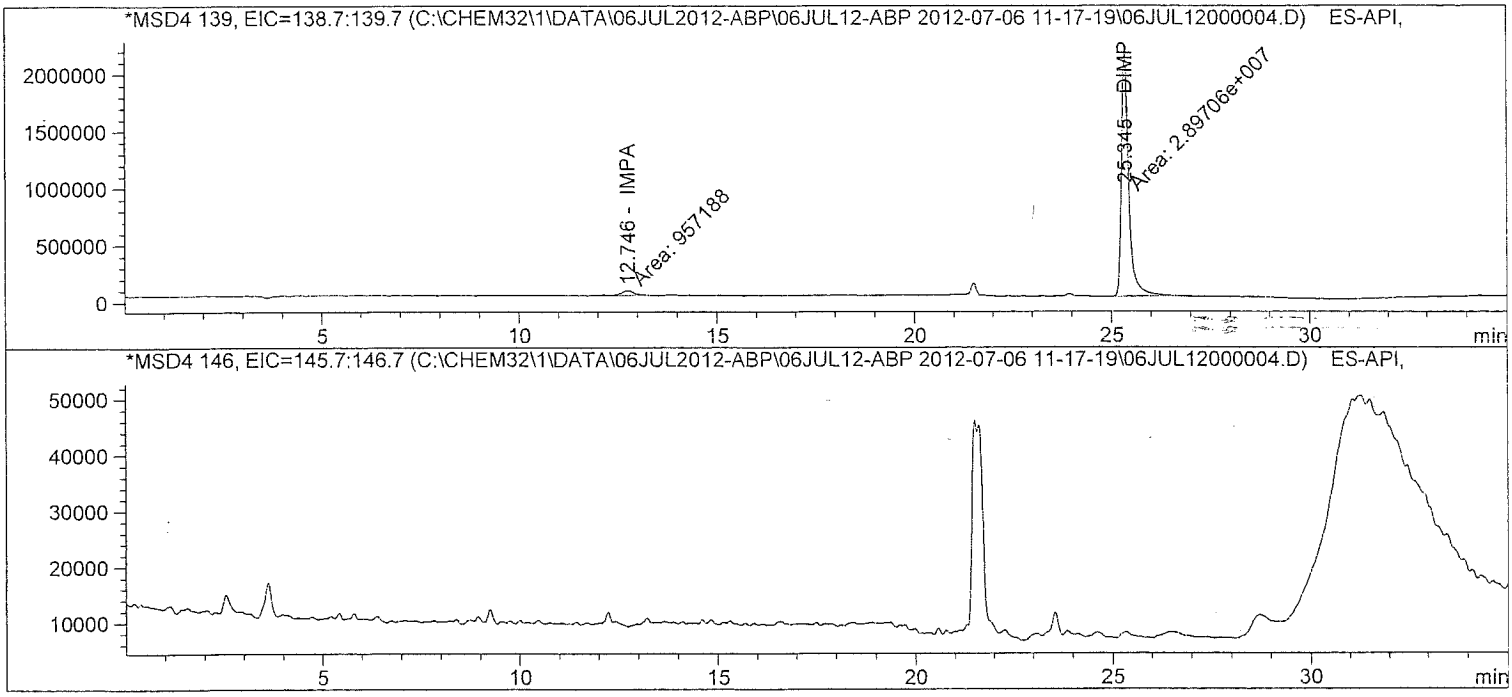
atch Run # 4 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
ample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

==========

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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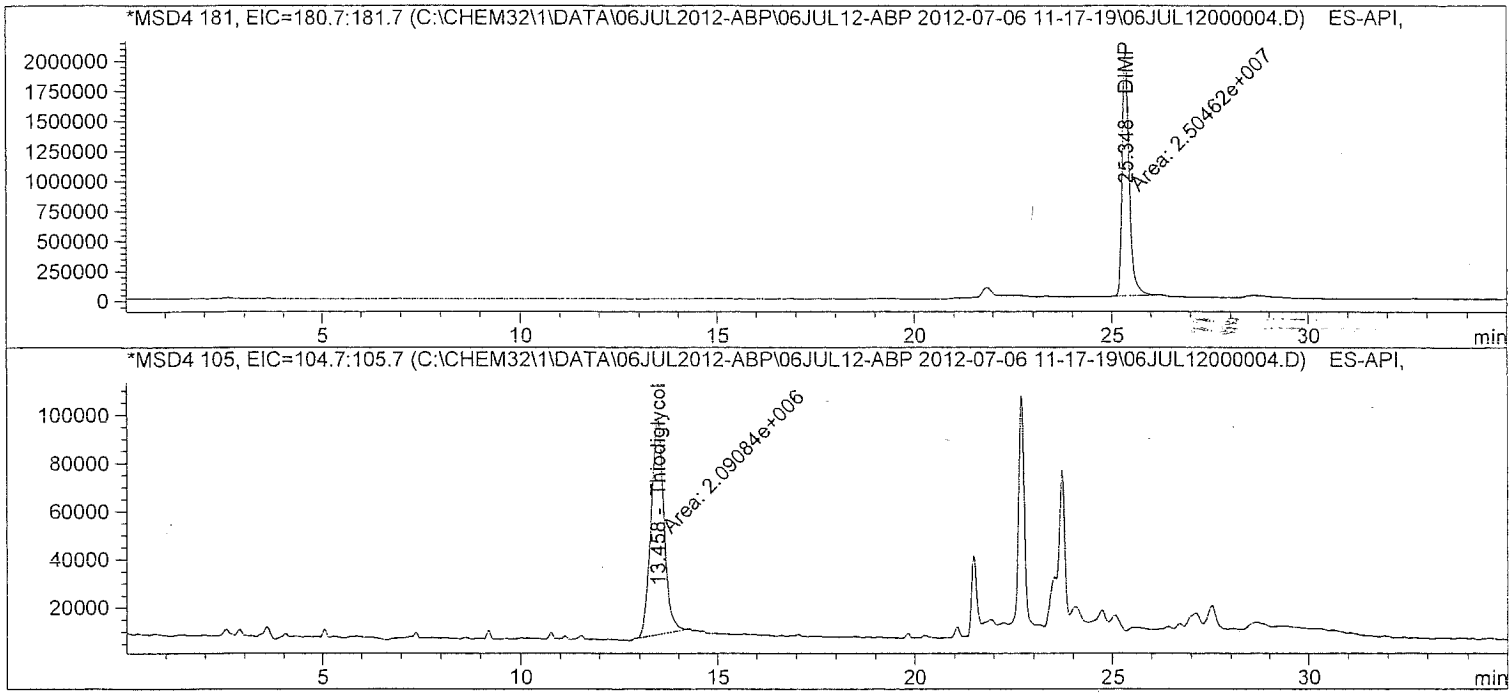
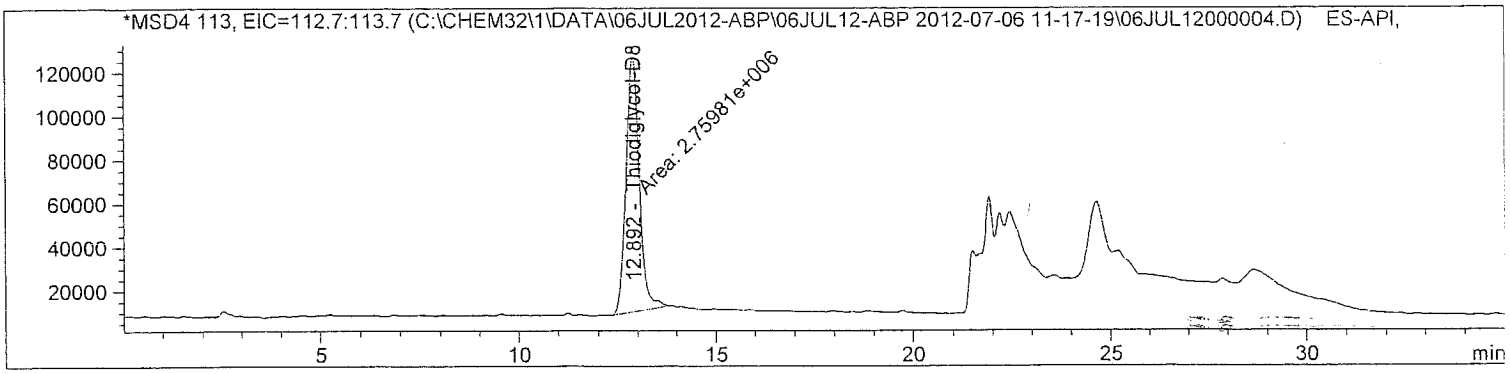


Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

Acq. Operator : TTM Seq. Line : 4
Acq. Instrument : LCMS3 Location : Vial 3
Injection Date : 7/6/2012 1:06:42 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 1.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.747	BB	1	2.56450e6	1.00803e-1	9.36694e-1		MPA
12.748	MM	1	5.81798e6	4.26904e-2	8.99961e-1		IMPA

Totals without ISTD(s) : 1.83665

atch Run # 4 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
ample Name: $1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 1:06:42 PM
Seq. Line : 4
Location : Vial 3
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.650	MM	1	3.31417e6	7.60313e-2	9.13037e-1		EMPA

Totals without ISTD(s) : 9.13037e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	MM	1	2.50462e7	9.62641e-3	8.73631e-1		DIMP

Totals without ISTD(s) : 8.73631e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.458	MM	1	2.09084e6	1.14384e-1	8.66577e-1		Thiodiglycol

Totals without ISTD(s) : 8.66577e-1

Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.892	MM	I	1 2.75981e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

==========

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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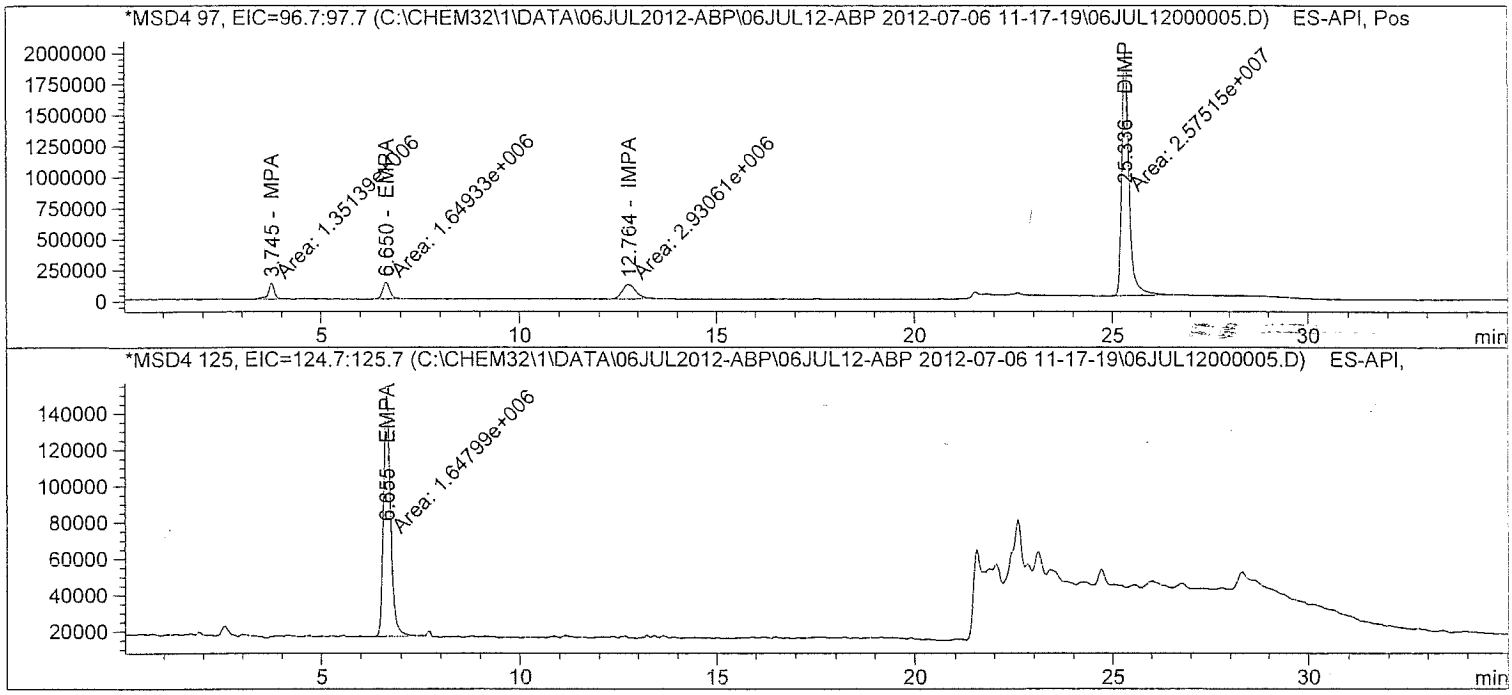
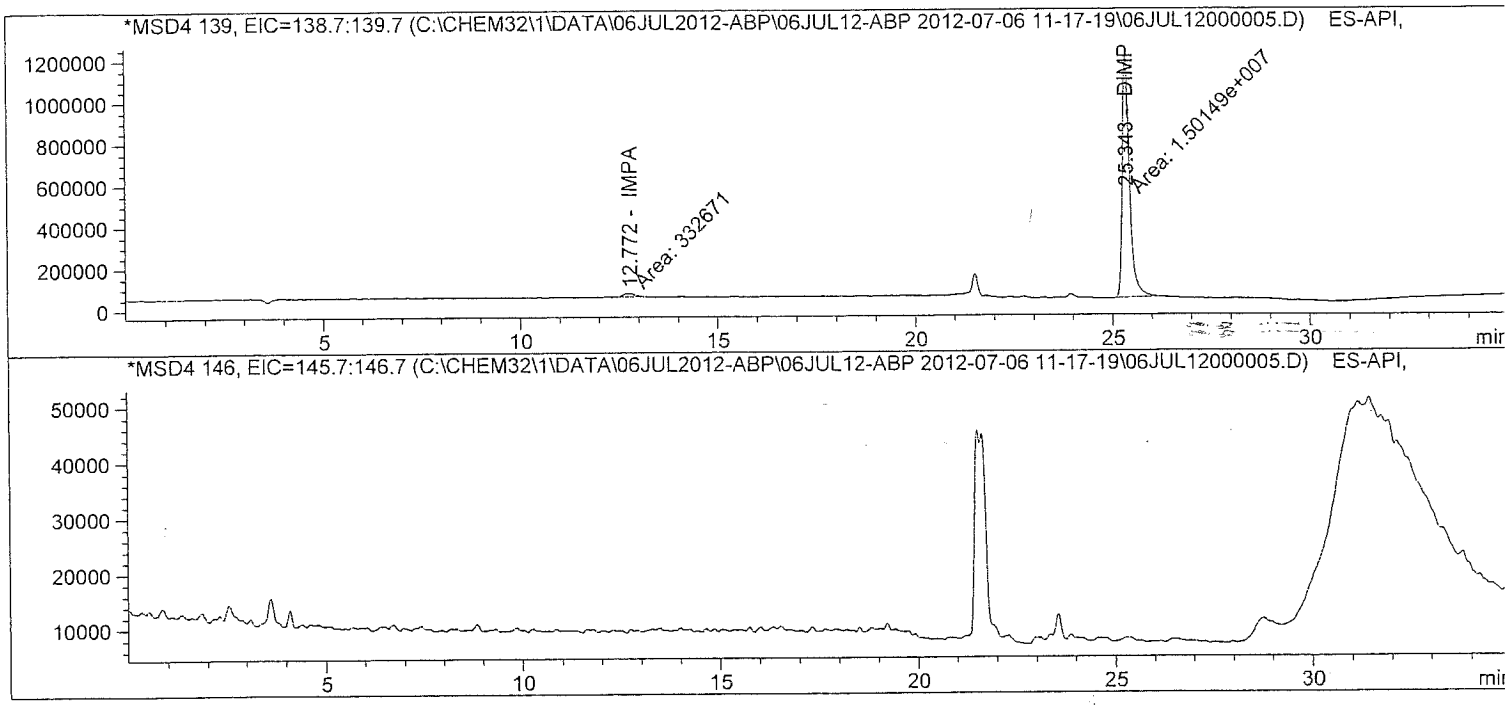


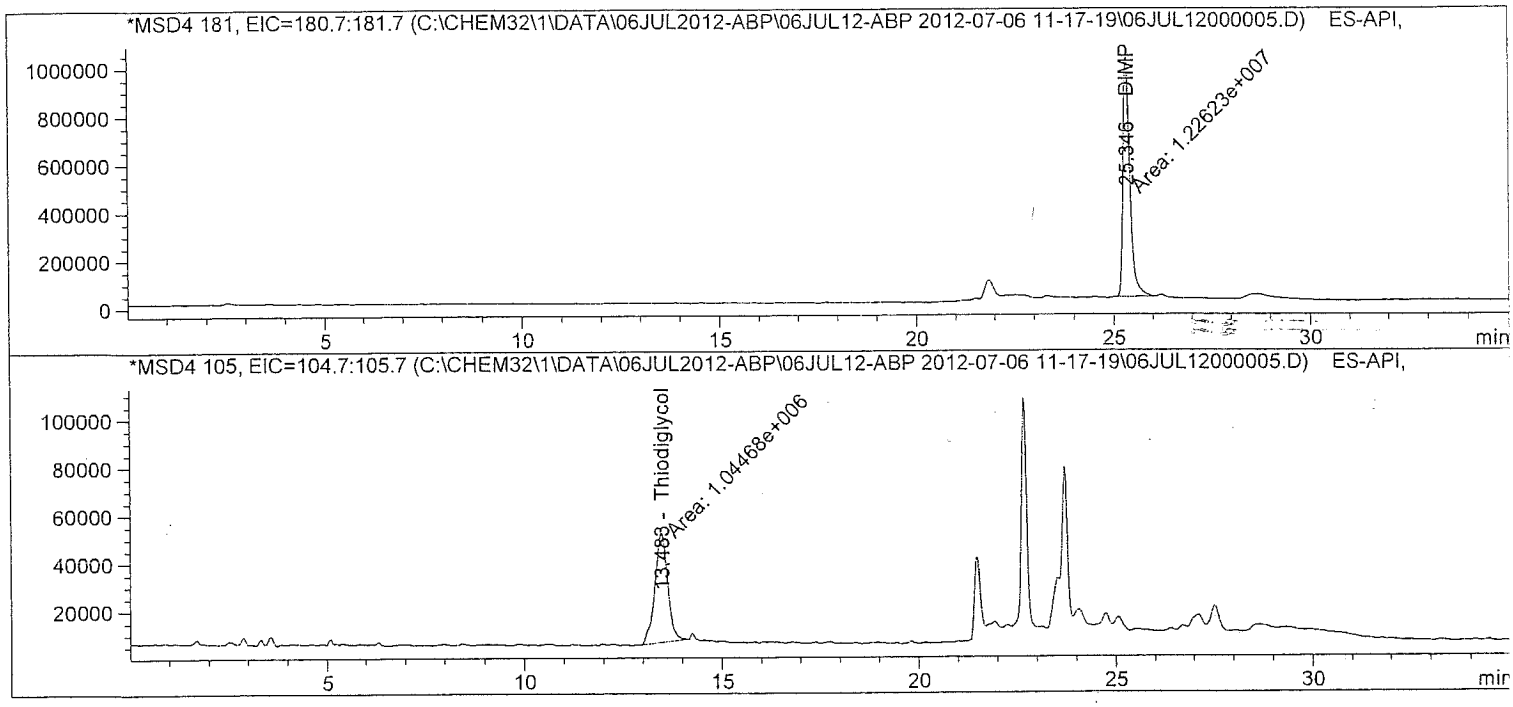
Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



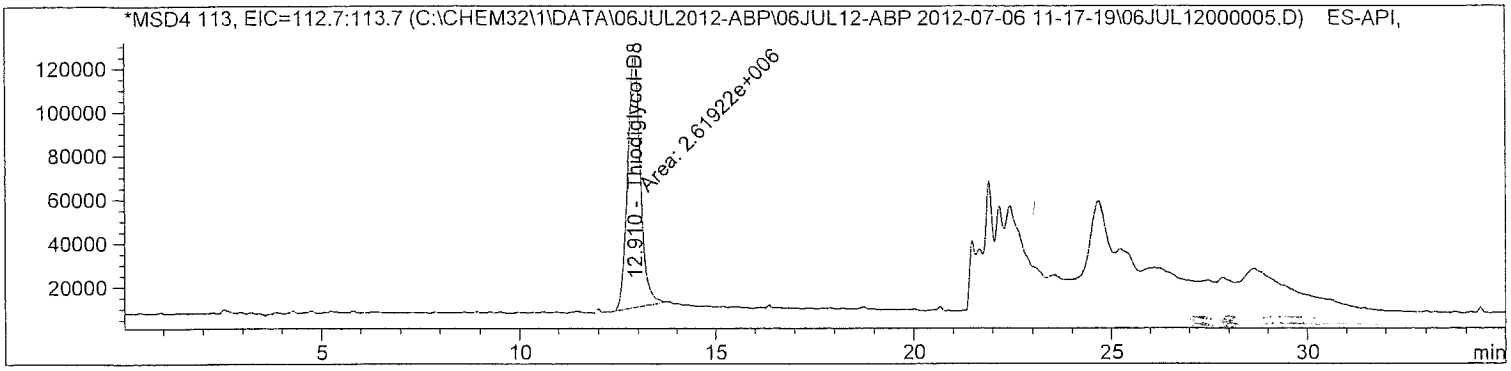
Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 5.00000e-1 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.745	MM	1	1.35139e6	9.80980e-2	5.06138e-1		MPA
12.764	MM	1	2.93061e6	4.28998e-2	4.79999e-1		IMPA

Totals without ISTD(s) : 9.86138e-1

atch Run # 5 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: $05

Acq. Operator : TTM Seq. Line : 5
Acq. Instrument : LCMS3 Location : Vial 4
Injection Date : 7/6/2012 1:43:01 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.655	MM	1	1.64799e6	7.58113e-2	4.76997e-1		EMPA

Totals without ISTD(s) : 4.76997e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.346	MM	1	1.22623e7	9.57834e-3	4.48425e-1		DIMP

Totals without ISTD(s) : 4.48425e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.483	MM	1	1.04468e6	1.15012e-1	4.58725e-1		Thiodiglycol

Totals without ISTD(s) : 4.58725e-1

Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

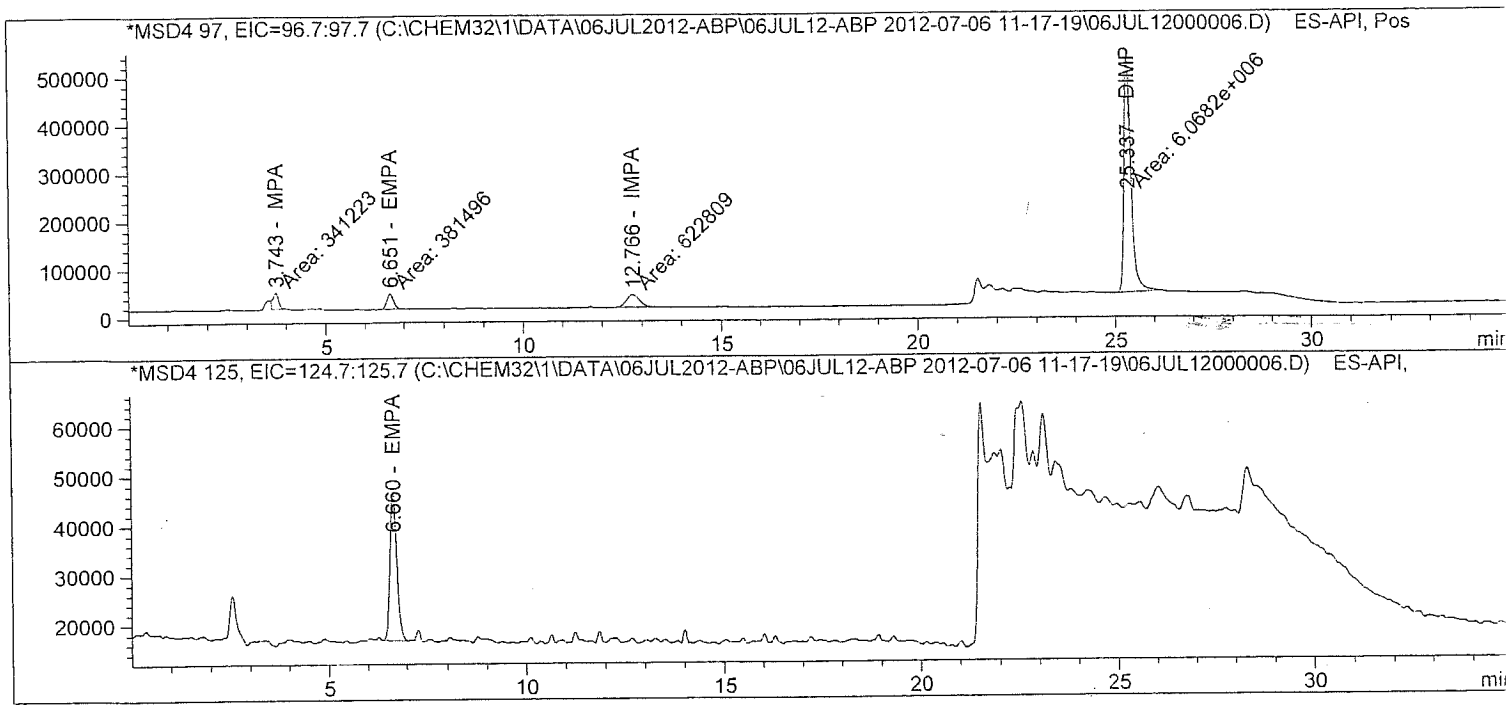
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.910	MM	I	1 2.61922e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

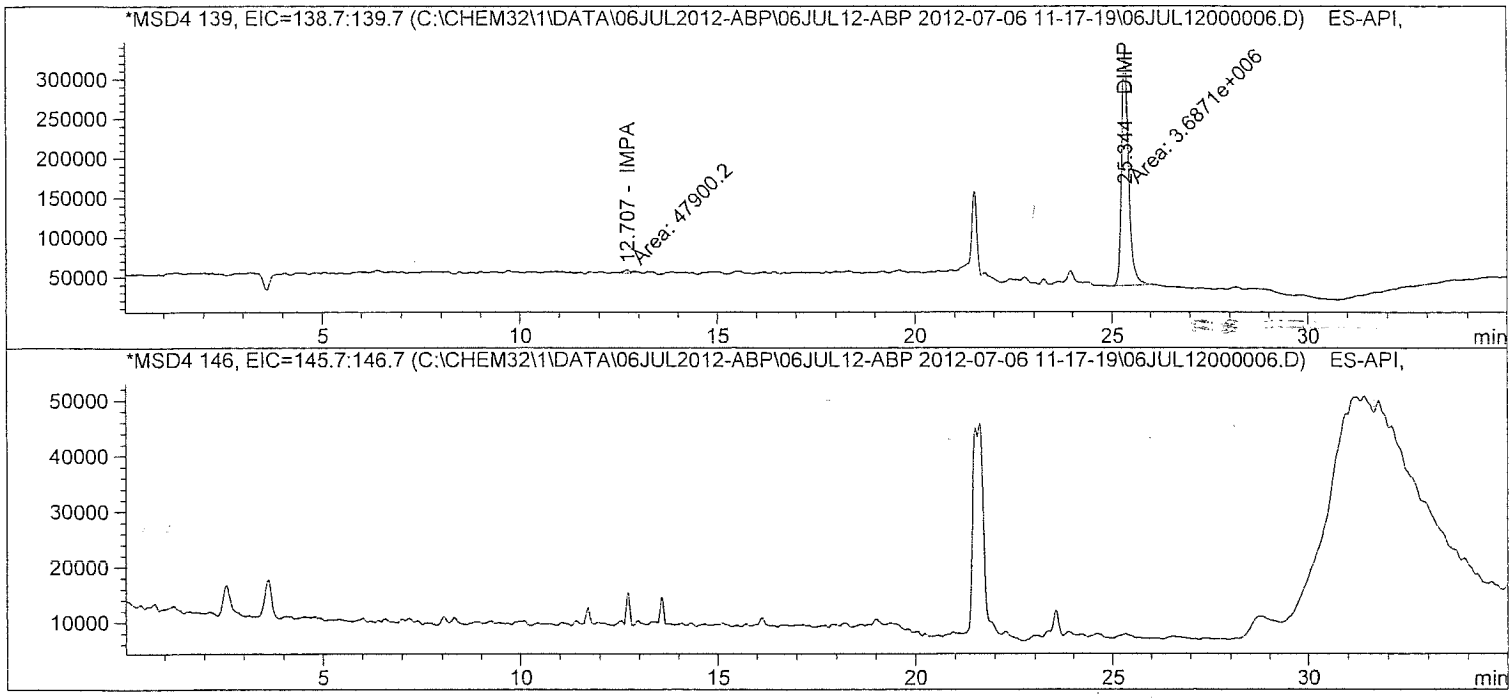
Batch Run # 6 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



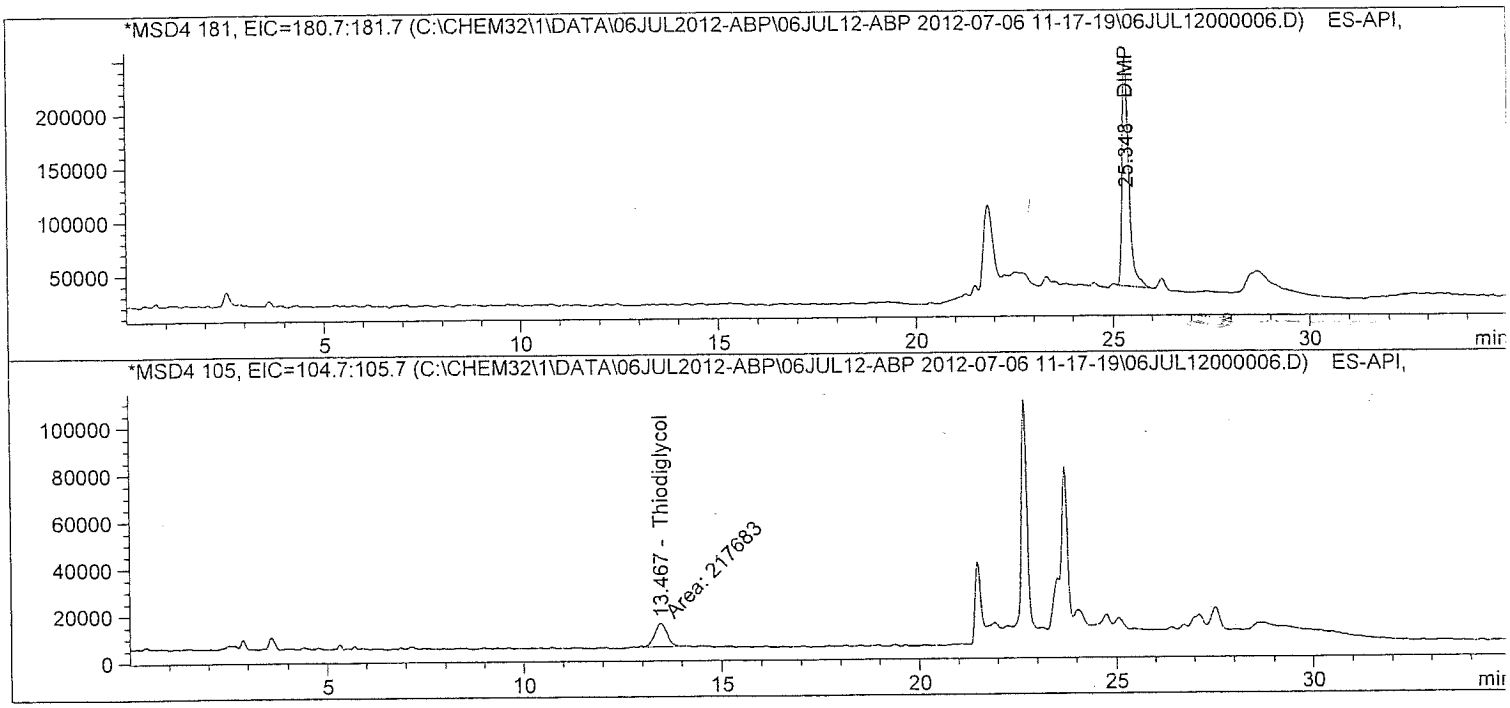
Batch Run # 6 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



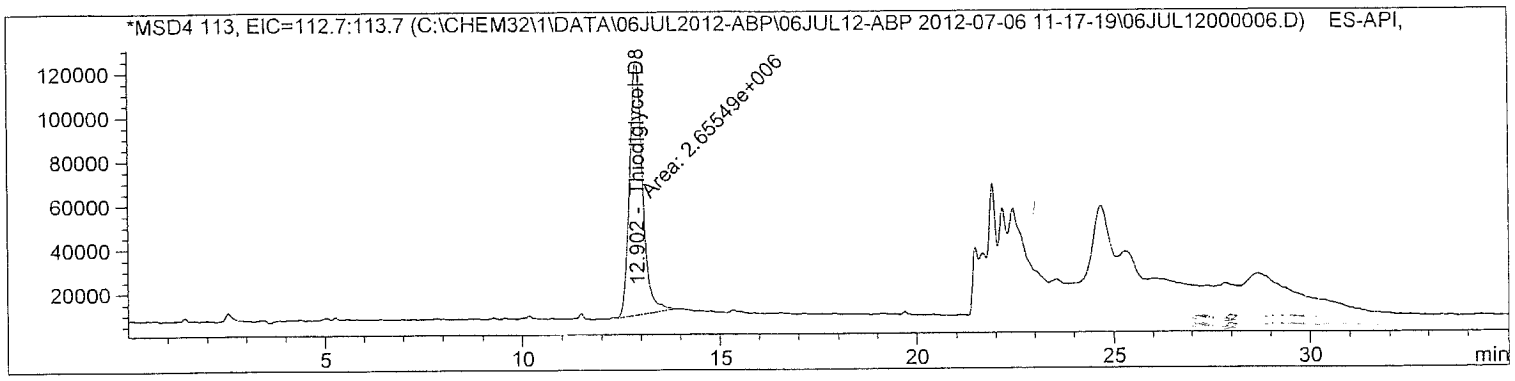
atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator : TTM
Seq. Line : 6
Acq. Instrument : LCMS3
Location : Vial 5
Injection Date : 7/6/2012 2:19:21 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 1.00000e-1 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.743	FM	1	3.41223e5	8.57299e-2	1.10161e-1		MPA
12.766	MM	1	6.22808e5	4.49809e-2	1.05497e-1		IMPA

Totals without ISTD(s) : 2.15657e-1

Acq. Operator : TTM
Seq. Line : 6
Acq. Instrument : LCMS3
Location : Vial 5
Injection Date : 7/6/2012 2:19:21 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.660	BB	1	3.63294e5	7.52785e-2	1.02988e-1		EMPA

Totals without ISTD(s) : 1.02988e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	BB	1	2.58087e6	1.03862e-2	1.00944e-1		DIMP

Totals without ISTD(s) : 1.00944e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.467	MM	1	2.17683e5	1.23740e-1	1.01436e-1		Thiodiglycol

Totals without ISTD(s) : 1.01436e-1

atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator : TTM
Seq. Line : 6
Acq. Instrument : LCMS3
Location : Vial 5
Injection Date : 7/6/2012 2:19:21 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

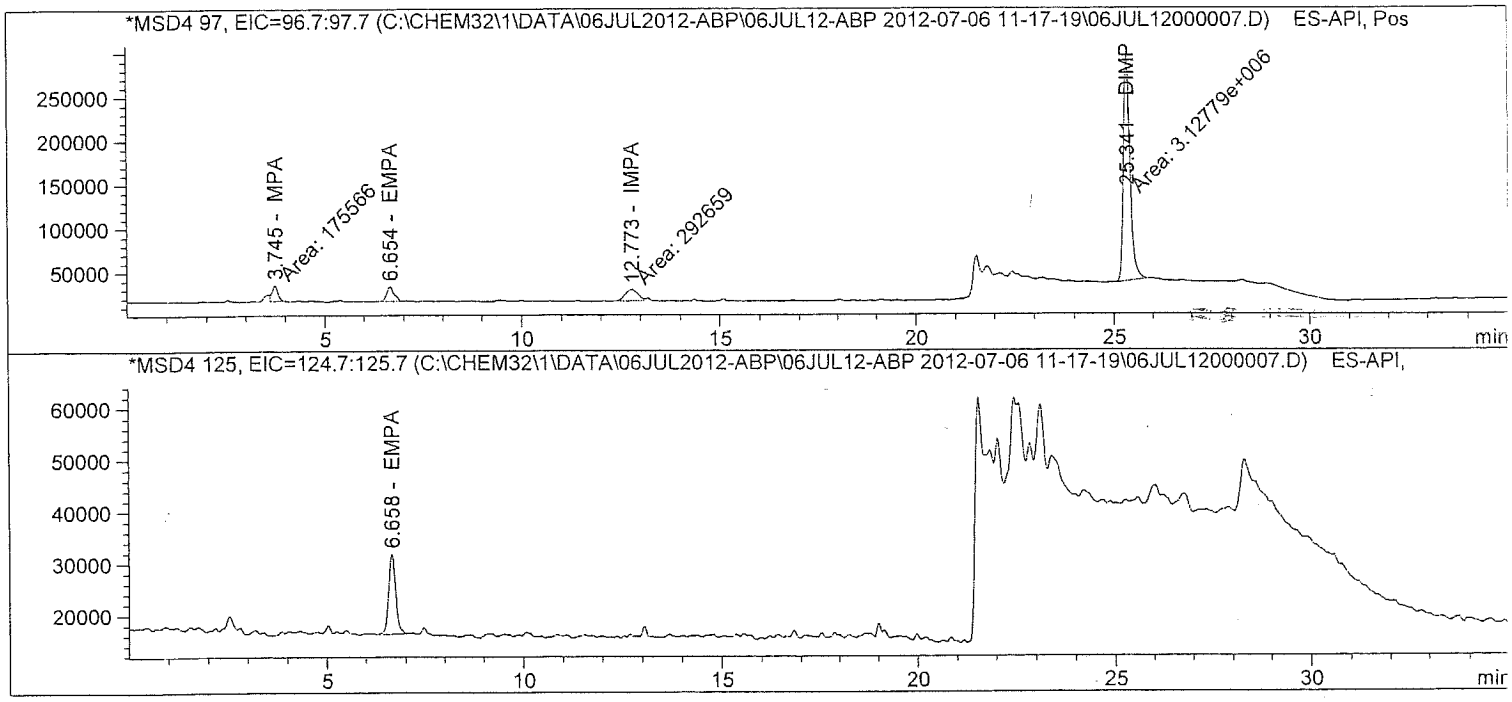
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.902	MM	I	1 2.65549e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

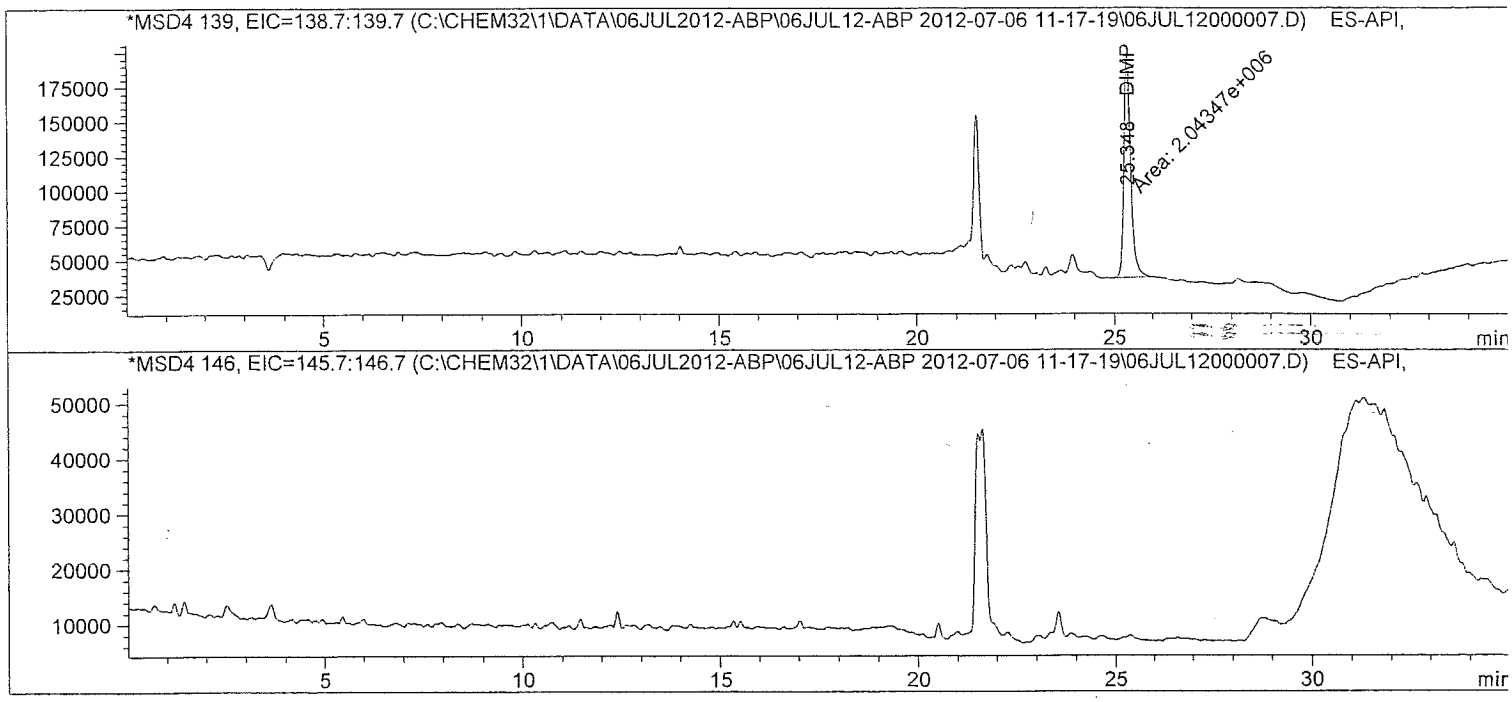
Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

==========

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:55:42 PM

Seq. Line : 7
Location : Vial 6
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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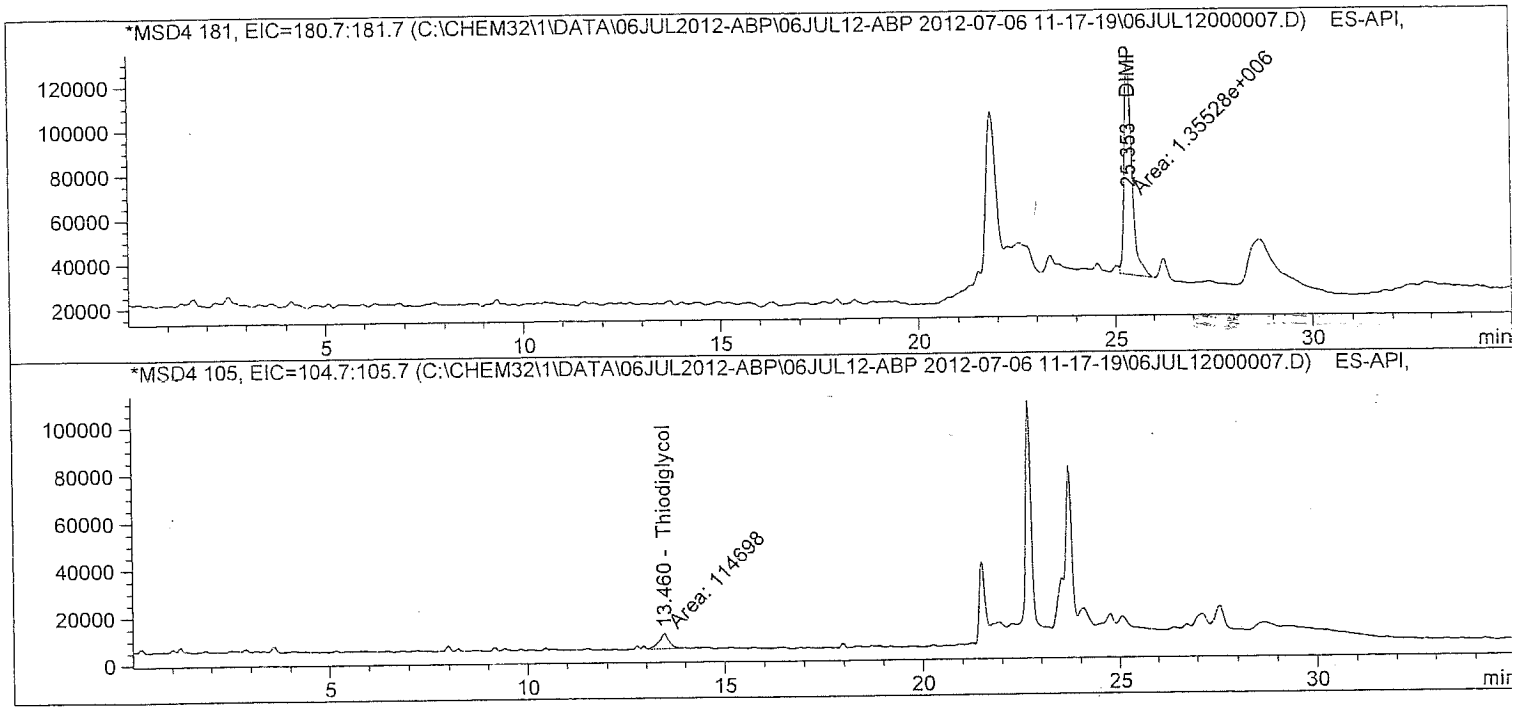
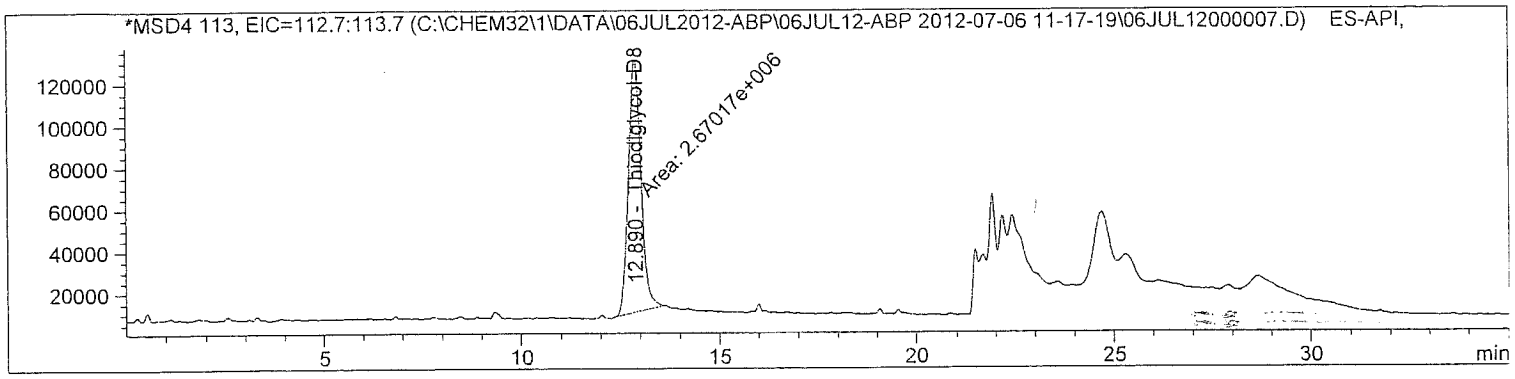


atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator : TTM
Seq. Line : 7
Acq. Instrument : LCMS3
Location : Vial 6
Injection Date : 7/6/2012 2:55:42 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000e-2 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.745	FM	1	1.75566e5	7.10322e-2	4.67042e-2		MPA
12.773	MF	1	2.92659e5	4.80467e-2	5.26608e-2		IMPA

Totals without ISTD(s) : 9.93650e-2

atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator : TTM Seq. Line : 7
Acq. Instrument : LCMS3 Location : Vial 6
Injection Date : 7/6/2012 2:55:42 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.658	BB	1	1.91552e5	7.48089e-2	5.36662e-2		EMPA

Totals without ISTD(s) : 5.36662e-2

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.353	FM	1	1.35528e6	1.14558e-2	5.81454e-2		DIMP

Totals without ISTD(s) : 5.81454e-2

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460	MM	1	1.14698e5	1.34158e-1	5.76283e-2		Thiodiglycol

Totals without ISTD(s) : 5.76283e-2

Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

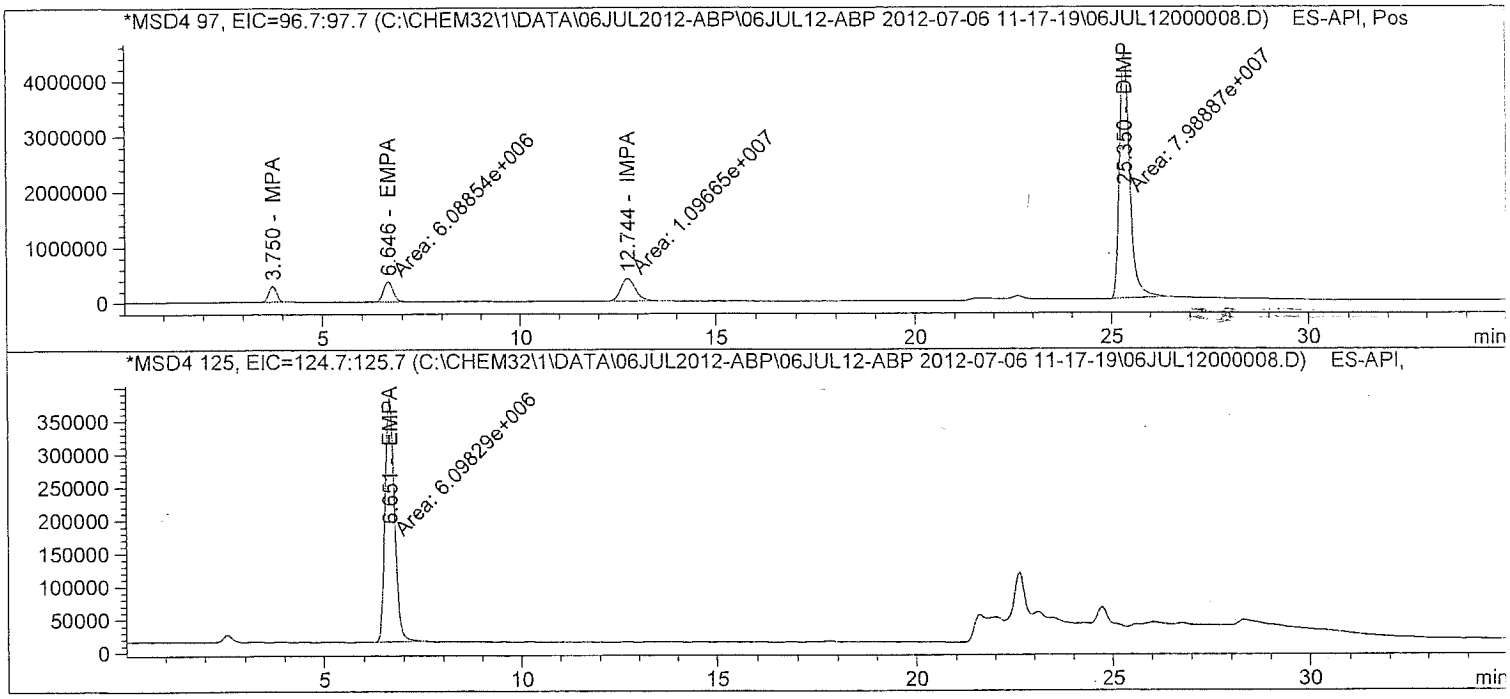
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.890	MM	I	1 2.67017e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

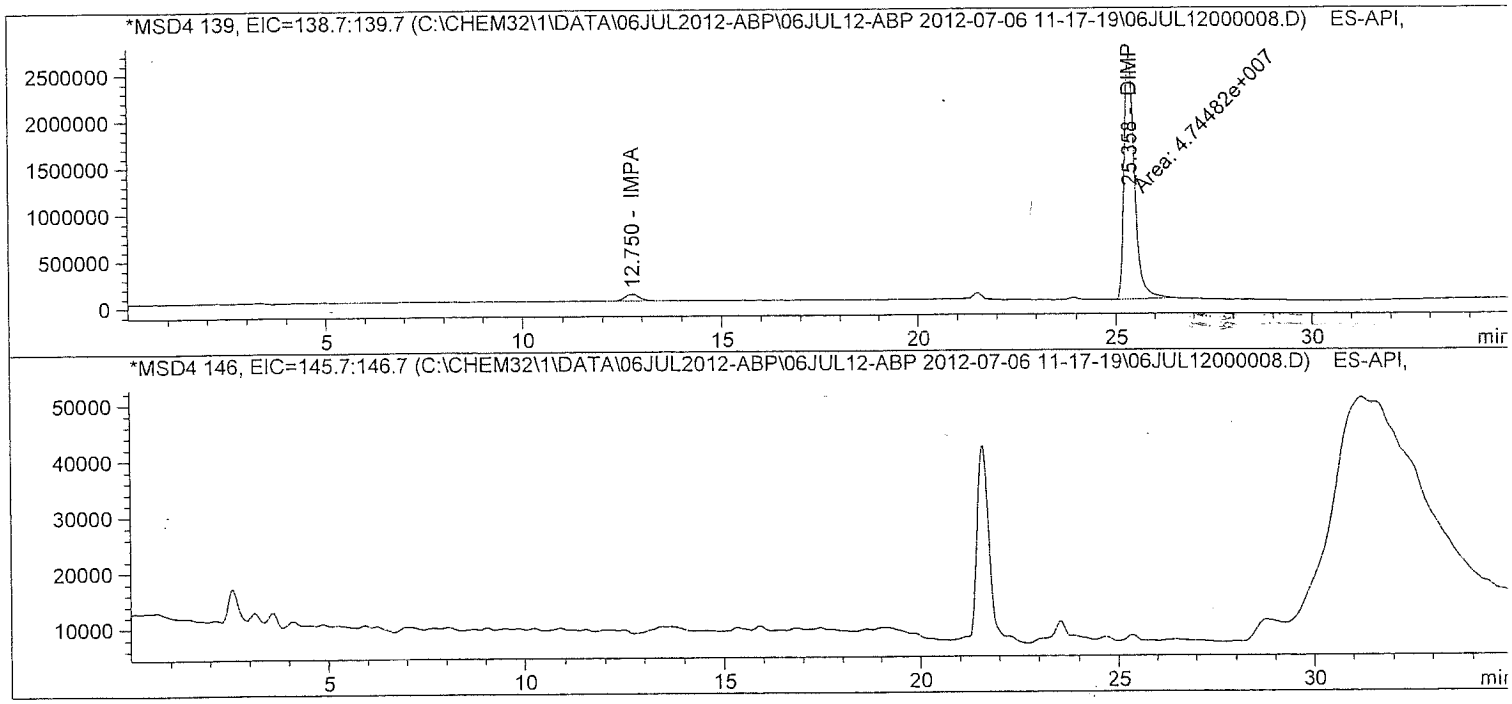
Batch Run # 8 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
Sample Name: ICV

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

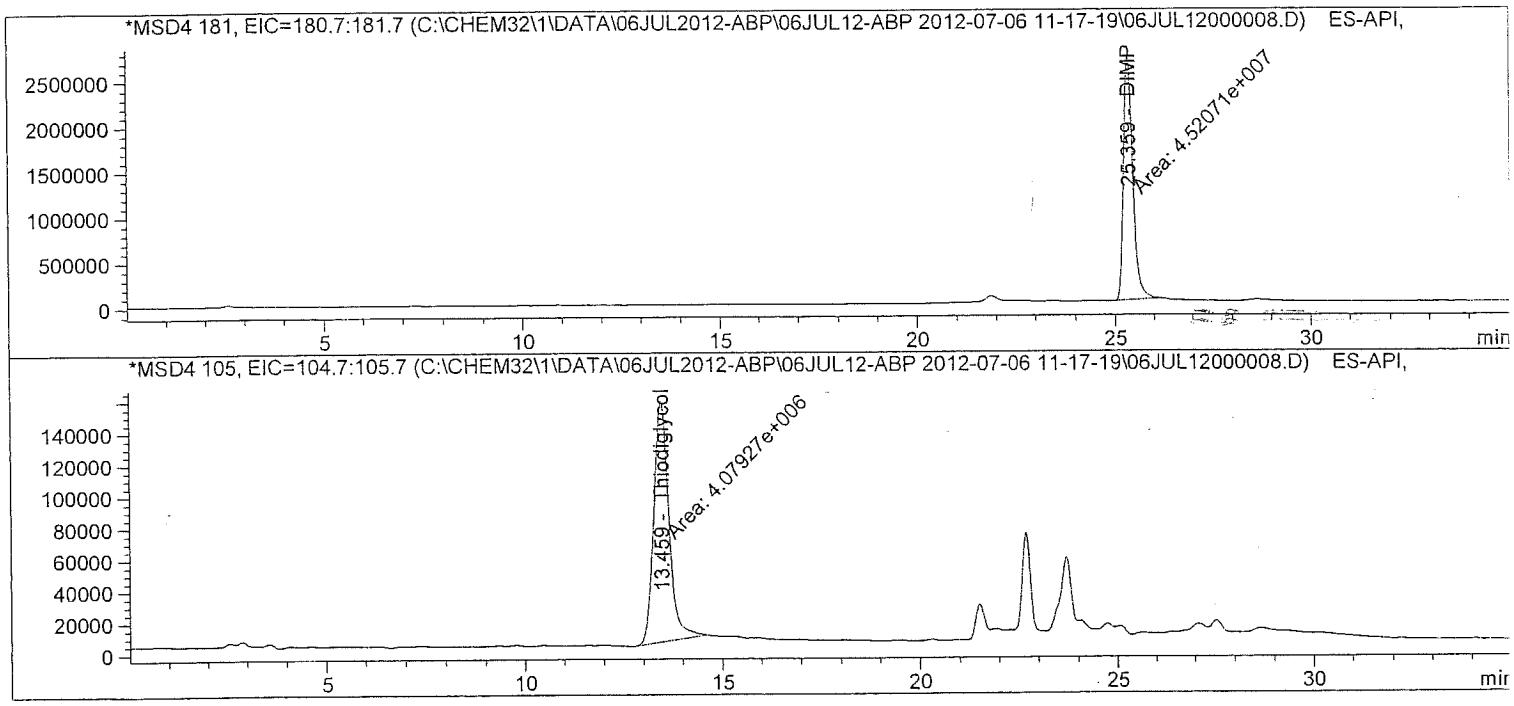
Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

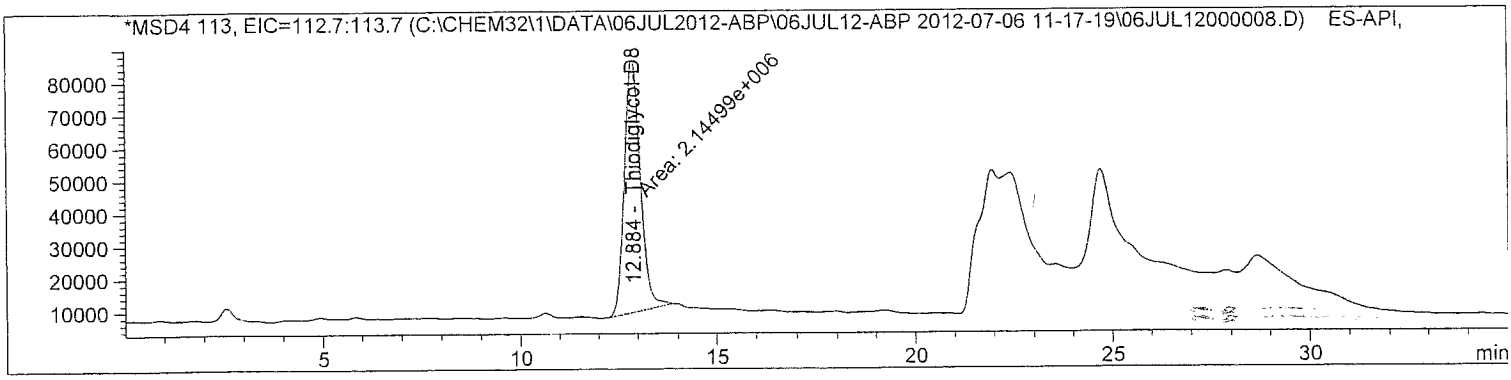
Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator : TTM
Seq. Line : 8
Acq. Instrument : LCMS3
Location : Vial 7
Injection Date : 7/6/2012 3:32:02 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 2.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.750	BB	1	4.04355e6	1.04390e-1	1.96787		MPA
12.744	MM	1	1.09665e7	4.26853e-2	2.18233		IMPA

Totals without ISTD(s) : 4.15020

atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator : TTM
Seq. Line : 8
Acq. Instrument : LCMS3
Location : Vial 7
Injection Date : 7/6/2012 3:32:02 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.651	MM	1	6.09829e6	7.65569e-2	2.17655		EMPA

Totals without ISTD(s) : 2.17655

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.359	MM	1	4.52071e7	1.00834e-2	2.12514		DIMP

Totals without ISTD(s) : 2.12514

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.459	MM	1	4.07927e6	1.15268e-1	2.19214		Thiodiglycol

Totals without ISTD(s) : 2.19214

Batch Run # 8 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
Sample Name: ICV

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 3:32:02 PM
Seq. Line : 8
Location : Vial 7
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.884	MM	I	1 2.14499e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***



ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Analytical Documentation

ALS WO ID #(S):1221555; 1221656; 1222142
ALS Sample #(S):1221555006; 1221656017; 1222142012
ALS Account #(s): 8001 Method: ALS LC/MS Matrix: Water
Sequence: \\CHEM32\1\SEQUENCE\13AUG12-ABP.S
Prep Date: 08/13/2012 Analysis Date: 08/13/2012
HBN #: 91545 Instrument LOD: 0.050µg/mL
Analyte: **Thiodiglycol (TDG)**
Reported MDL: See Report Reported LOD: 50µg/L

SAMPLE PREPARATION: All ALS sample #'s agreed with field ID #'s. Samples were prepared by TTM. 9.9mL of each sample was transferred into a 15-mL centrifuge tube. 100µL of an internal standard solution was then added to each sample. The samples were capped, vortexed, and filtered with Phenex 0.45µm PES filters prior to analysis.

REAGENTS: Eluent A: 100% ASTM Type II water/0.1% glacial acetic acid.
Eluent B: 95% ACN/ 5% ASTM Type II water/0.1% glacial acetic acid.

HORIZON STANDARD(S): TDG (14169); MPA (14170); IMPA (14172); EMPA (14174); DIMP (14179)
All standards are at 1000µg/mL. Standards used to create calibration standards and those used for CCVs (target = 5.00µg/mL) and RLVS (target = 0.050µg/mL).
Internal Standard Solution: TDG-D8 (14177) at 100ug/mL.

CALIBRATION CURVE: Run 03/05/2012.
Raw data can be found in \\Alsltws013\DataReview\82050

INSTRUMENT CONDITIONS: Samples were analyzed with an Agilent 1200 LC/MSD system, in positive SIM mode, monitoring m/z 97, 125, 139, 146, 181, 105 and 113.
Instrument ID: LCMS03 Run Time: 35.00 min. Flow Rate: 0.8mL/min Temp: 30°C
Output Gain: 3 Injection Volume: 10µL Fragmentor Voltage: 75 & 125
Column: Phenomenex Synergi Hydro-RP 4 micron (4.6 x 250mm) s/n: 245485-24

GRADIENT:

Time(min)	%Eluent A	%Eluent B
0.00	100.0	0.0
15.00	100.0	0.0
17.00	50.0	50.0
25.00	50.0	50.0
25.01	100.0	0.0

QC DATA: 20µl of Horizon QC standard 13383 were used to spike LCS 289538; target = 2000µg/L. ASTM type II water was used for LMB 289537.

MS/MSD: MS/MSD was performed on sample 1221555006. 50µl of Horizon standard 14169 was added to 10.0mL of sample preparation. Spike target = 5000µg/L.

COMMENTS: 1) Quantitation was done using m/z 105 for TDG. No confirmation ions were available for TDG. Results are reported in ug/L.
2) All CCV, Blank, LCS and MS/MSD results were within acceptable limits.

Batch Worklist

Batch: ELMS/ 1288
Rule: Chemical Agent BD, Water

Created: 8/13/2012 10:16
Analyst: T. McKay

Instrument:
Status: WP

HBN: 91545

Workorder: 1221555
Workorder: 1221656
Workorder: 1222142

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	289537	LMB for HBN 91545 [ELMS/1288]			3	LMB		DCAB....3Q	5948	8/27/2012	8/13/2012	
2	289538	LCS for HBN 91545 [ELMS/1288]			3	LCS		DCAB...3Q	5948	8/27/2012	8/13/2012	
3	289539	FTSW-HR-SO-02...(1221555006MS)			3	MS		DCAB....3Q	5948	8/13/2012	8/13/2012	
4	289540	FTSW-HR-SO-0...(1221555006MSD)			3	MSD		DCAB....3Q	5948	8/13/2012	8/13/2012	
5	289541	RLVS for HBN 91545 [ELMS/1288]			3	RLVS		DCAB...C3Q	5948		8/13/2012	
6	1221555006	FTSW-HR-SO-02(01.5)ERB			3	SAMPLE	1221555006-A	DCAB....3	5480	8/13/2012	8/13/2012	
7	1221656017	FTSW-HR-SO-37(09.5)ERB			3	SAMPLE	1221656017-A	DCAB.....3	5480	8/15/2012	8/15/2012	
8	1222142012	FTSW-HR-SO-60 (7.5) ERB			3	SAMPLE	1222142012-A	DCAB....3	5480	8/20/2012	8/20/2012	

STANDARD REPORT

Working Standard - TDG WRK

TDG WRK — Description - Thiodiglycol Working Std.

Standard:	14169	Expires:	01/31/2013	Usable:	Yes
Lab Lot:	TDG WRK	Created By:	T. McKay	Amount:	12.15 mL
Part ID:		Create Date:	01/31/2012	Validated By:	
MFG:		MFG Lot:		Validated Date:	

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume Added	Expires
3824	TDG STOCK		TDG STK	12.15 mg	1/1/2025

Stock Standard - TDG STOCK

TDG STOCK				Description - (Thiodiglycol Stock Std.)	
Standard:	3824	Expires:	1/1/2025	Usable:	Yes
Lab Lot:	TDG STK	Created By:	T. McKay	Amount:	100 grams
Part ID:	166782	Create Date:	4/1/2009	Validated By:	T. Bosch
MFG:	Aldrich	MFG Lot:	11613AR	Validated Date:	4/19/2009

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 mg/g

S 3824

Certificate of Analysis

SIGMA-ALDRICH

Product Name	2,2'-Thiodiethanol, ≥99%
Product Number	166782
Product Brand	Aldrich
CAS Number	111-48-8
Molecular Formula	$S(CH_2CH_2OH)_2$
Molecular Weight	122.19

TEST	SPECIFICATION	LOT 11613AR RESULTS
APPEARANCE	COLORLESS LIQUID	COLORLESS LIQUID
INFRARED SPECTRUM	CONFORMS TO STRUCTURE.	CONFORMS TO STRUCTURE AND STANDARD AS ILLUSTRATED ON PAGE 276B OF EDITION I, VOLUME 1 OF "THE ALDRICH LIBRARY OF FT-IR SPECTRA".
GAS LIQUID CHROMATOGRAPHY	99.0% (MINIMUM)	99.6 %
QUALITY CONTROL ACCEPTANCE DATE		JANUARY 1997

Barbara Rajzer, Supervisor
Quality Control
Milwaukee, Wisconsin USA

STANDARD REPORT

Working Standard - TDG QC WRK

TDG QC WRK					Description - Thiodiglycol QC Wrk
Standard:	13383	Expires:	11/21/2012	Usable:	Yes
Lab Lot:	TDG QC WRK	Created By:	T. McKay	Amount:	8.44 mL
Part ID:		Create Date:	11/21/2011	Validated By:	
MFG:		MFG Lot:		Validated Date:	

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume Added	Expires
5844	TDG QC STK	Thiodiglycol QC Stock	TDG QC STK	8.44 mg	1/1/2025

STANDARD REPORT

Constituent

Stock Standard - TDG QC STK

TDG QC STK					Description - Thiodiglycol QC Stock
Standard:	5844	Expires:	1/1/2025	Usable:	Yes
Lab Lot:	TDG QC STK	Created By:	T. McKay	Amount:	50 grams
Part ID:	88559	Create Date:	10/7/2009	Validated By:	T. Bosch
MFG:	Fluka	MFG Lot:	1410377	Validated Date:	10/7/2009

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 mg/g

5844

SIGMA-ALDRICH

Fluka

Sigma-Aldrich Production GmbH
CH-9471 Buchs/Schweiz
www.sigma-aldrich.com

Telefon +41 81 755 2511
Telefax +41 81 755 2272
Email fluka@sial.com

Certificate of Analysis

Product Brand	Fluka
PRODUCT-NO	88559
PRODUCT	2,2'-THIODIETHANOL *BioChemika*
FORMULA	$C_4H_{10}O_2S$
MOLECULAR MASS	122.19
CAS NUMBER	111-48-8
LOT	1410377

Test	Specification	Result
APPEARANCE (COLOR)	COLORLESS	COLORLESS
APPEARANCE (FORM)	CLEAR TO CLEAR VISCOUS LIQUID	CLEAR VISCOUS LIQUID
PURITY (GC AREA %)	≥ 99.0 % REL	99.9 % REL
GC (METHOD)	--	100% POLYETHYLENEGLYCOL (30 M X 0.32 MM X 0.25 UM), IN DICHLORMETHANE
REFRACTIVE INDEX N20/D	1.520 - 1.522	1.522
RESIDUE ON IGNITION	≤ 0.1 %	< 0.05 %
CARBON CONTENT	39.32 % (THEORY)	38.90 %
HYDROGEN CONTENT	8.25 % (THEORY)	8.49 %
INFRARED SPECTRUM	CONFORMS TO STRUCTURE	CONFORMS
QC RELEASE DATE	28/OCT/08	

E. Schwärzler

Edeltraud Schwärzler, Manager
Quality Control
Buchs, Switzerland

Sigma-Aldrich guarantees the 'Sales-Specification' values only, additional lot specific tests may be included for further information. The current 'Sales-Specifications' sheet is available on request. For further inquiries, please contact our Technical Service.Sigma-Aldrich warrants, that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice for additional terms and conditions of sale. The values given on the 'Certificate of Analysis' are the results determined at the time of analysis.



ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

Batch Report: C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG12-ABP.B

Batch Review Method: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M

['#' ==> Run has not been reprocessed with Batch Review Method
'*' ==> Run has been saved with batch file]

#	Sample	Location	Inj	Dilution	Thiodiglycol-D8 RT	Thiodiglycol-D8 Area	Thiodiglycol-D8 Amount
#*	CCV1	Vial 51	1	1	12.443	2.66277e6	10.00000
#*	289537 LMB	Vial 52	1	1	12.469	2.27023e6	10.00000
#*	289538 LCS	Vial 53	1	1	12.548	2.32108e6	10.00000
#*	289541 RLVS	Vial 54	1	1	12.594	2.31433e6	10.00000
#*	1221555006	Vial 55	1	1	12.666	2.59930e6	10.00000
#*	289539 MS	Vial 56	1	1	12.719	2.27916e6	10.00000
#*	289540 MSD	Vial 57	1	1	12.773	2.12715e6	10.00000
#*	1221656017	Vial 58	1	1	12.827	2.49470e6	10.00000
#*	1222142012	Vial 59	1	1	12.866	3.07357e6	10.00000
#*	CCV2	Vial 51	1	1	12.939	2.85012e6	10.00000

#	Sample	Location	Inj	Dilution	Thiodiglycol RT	Thiodiglycol Area	Thiodiglycol Amount (ng/mL)
#*	CCV1	Vial 51	1	1	12.990	1.14519e7	5.10747
#*	289537 LMB	Vial 52	1	1	0.000	0.00000	0.00000
#*	289538 LCS	Vial 53	1	1	13.102	4.56238e6	2.26727
#*	289541 RLVS	Vial 54	1	1	13.189	1.10307e5	6.29108e-2
#*	1221555006	Vial 55	1	1	0.000	0.00000	0.00000
#*	289539 MS	Vial 56	1	1	13.286	1.00825e7	5.26247
#*	289540 MSD	Vial 57	1	1	13.343	1.03868e7	5.84614
#*	1221656017	Vial 58	1	1	0.000	0.00000	0.00000
#*	1222142012	Vial 59	1	1	0.000	0.00000	0.00000
#*	CCV2	Vial 51	1	1	13.524	1.29505e7	5.41429

*** End of Report ***

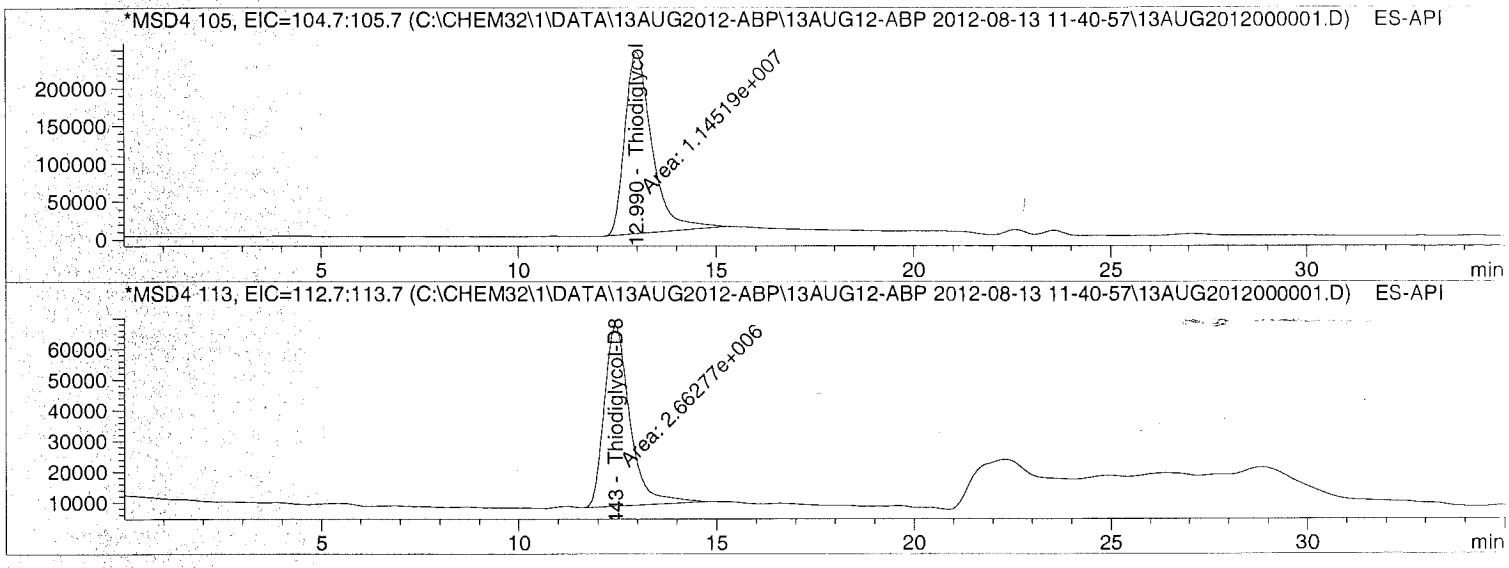
Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 51	CCV1	ABP-ON	1	Ctrl Samp	
2	Vial 52	289537 LMB	ABP-ON	1	Ctrl Samp	
3	Vial 53	289538 LCS	ABP-ON	1	Ctrl Samp	
4	Vial 54	289541 RLVS	ABP-ON	1	Ctrl Samp	
5	Vial 55	1221555006	ABP-ON	1	Sample	
6	Vial 56	289539 MS	ABP-ON	1	Ctrl Samp	
7	Vial 57	289540 MSD	ABP-ON	1	Ctrl Samp	
8	Vial 58	1221656017	ABP-ON	1	Sample	
9	Vial 59	1222142012	ABP-ON	1	Sample	
10	Vial 51	CCV2	ABP-ON	1	Ctrl Samp	

Batch Run # 1 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000001.D
Sample Name: CCV1

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/13/2012 11:41:25 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M		
Last changed	: 8/13/2012 11:42:34 AM by TTM (modified after loading)		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/15/2012 1:40:59 PM by TTM (modified after loading) (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 5.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

Batch Run # 1 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000001.D
Sample Name: CCV1

Acq. Operator : TTM Seq. Line : 1
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/13/2012 11:41:25 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 11:42:34 AM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.990	MM	1	1.14519e7	1.18758e-1	5.10747		Thiodiglycol

Totals without ISTD(s) : 5.10747

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

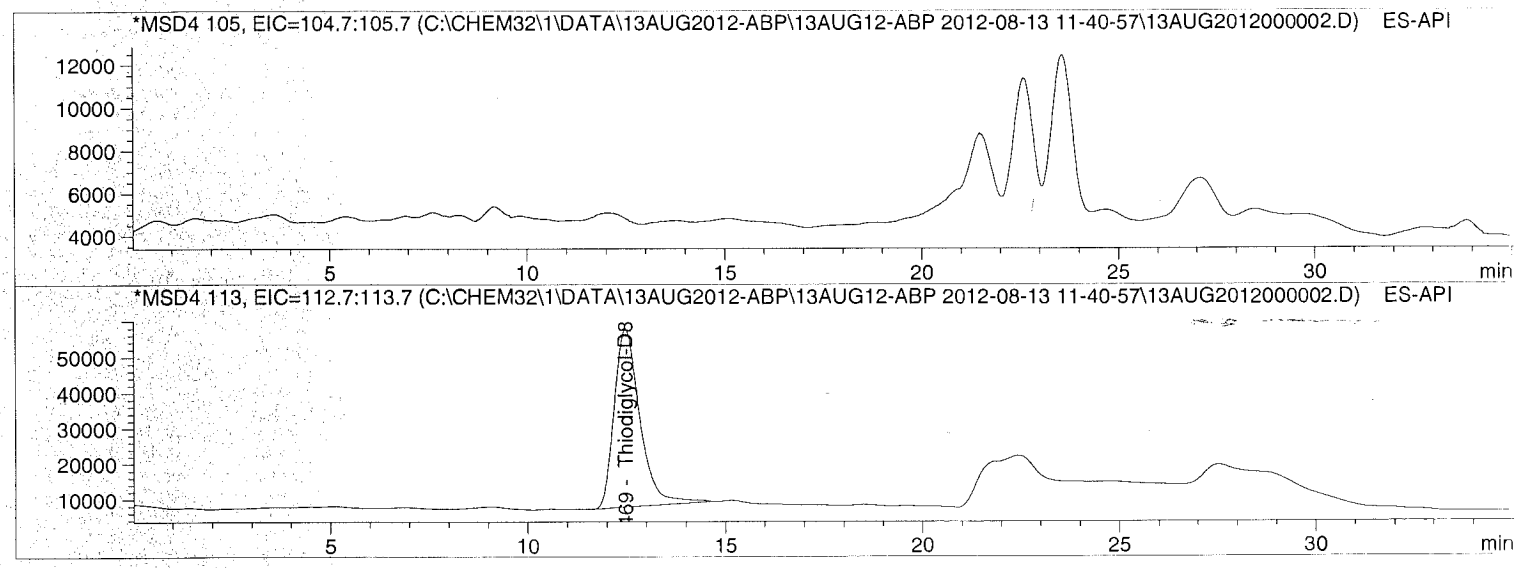
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.443	MM I	1	2.66277e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 2 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000002.D
Sample Name: 289537 LMB

Acq. Operator : TTM Seq. Line : 2
Acq. Instrument : LCMS3 Location : Vial 52
Injection Date : 8/13/2012 12:17:54 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 12:17:34 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Batch Run # 2 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000002.D
Sample Name: 289537 LMB

Acq. Operator : TTM Seq. Line : 2
Acq. Instrument : LCMS3 Location : Vial 52
Injection Date : 8/13/2012 12:17:54 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 12:17:34 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 0.00000

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.469	BB	I	1 2.27023e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

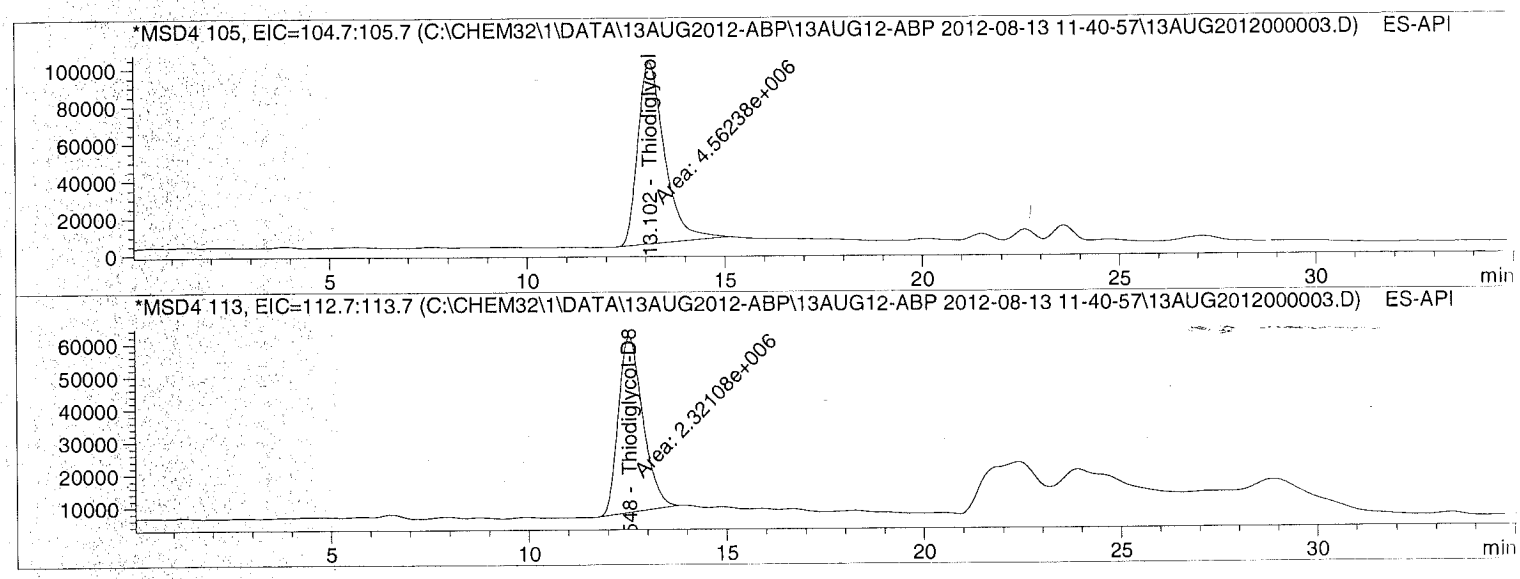
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 3 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000003.D
Sample Name: 289538 LCS

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 53
Injection Date	: 8/13/2012 12:54:19 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M		
Last changed	: 8/13/2012 12:54:07 PM by TTM (modified after loading)		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/15/2012 1:40:59 PM by TTM (modified after loading) (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 2.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

Batch Run # 3 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000003.D
Sample Name: 289538 LCS

Acq. Operator : TTM Seq. Line : 3
Acq. Instrument : LCMS3 Location : Vial 53
Injection Date : 8/13/2012 12:54:19 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 12:54:07 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.102	MM	1	4.56238e6	1.15346e-1	2.26727		Thiodiglycol

Totals without ISTD(s) : 2.26727

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

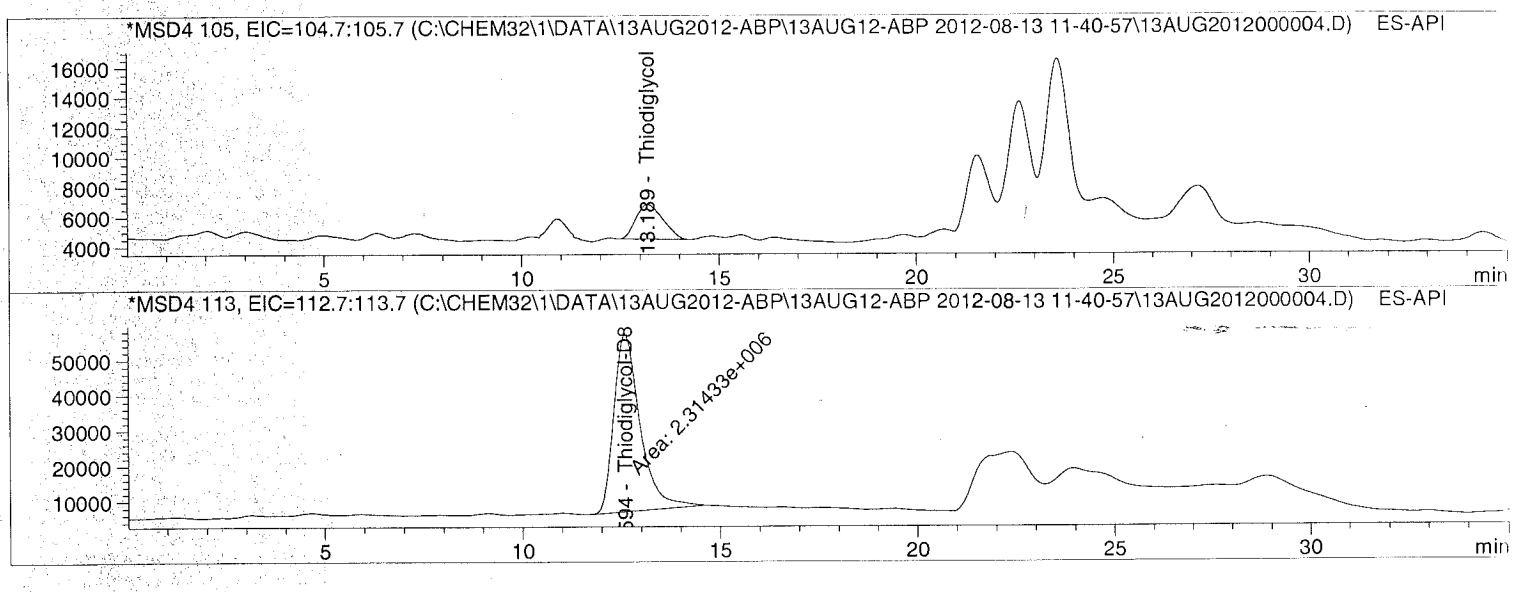
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.548	MM I	1	2.32108e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 4 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000004.D
Sample Name: 289541 RLVS

Acq. Operator : TTM
Seq. Line : 4
Acq. Instrument : LCMS3
Location : Vial 54
Injection Date : 8/13/2012 1:30:40 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 1:30:28 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000e-2 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

Batch Run # 4 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000004.D
Sample Name: 289541 RLVS

Acq. Operator : TTM Seq. Line : 4
Acq. Instrument : LCMS3 Location : Vial 54
Injection Date : 8/13/2012 1:30:40 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 1:30:28 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.189	BB	1	1.10307e5	1.31992e-1	6.29108e-2		Thiodiglycol

Totals without ISTD(s) : 6.29108e-2

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

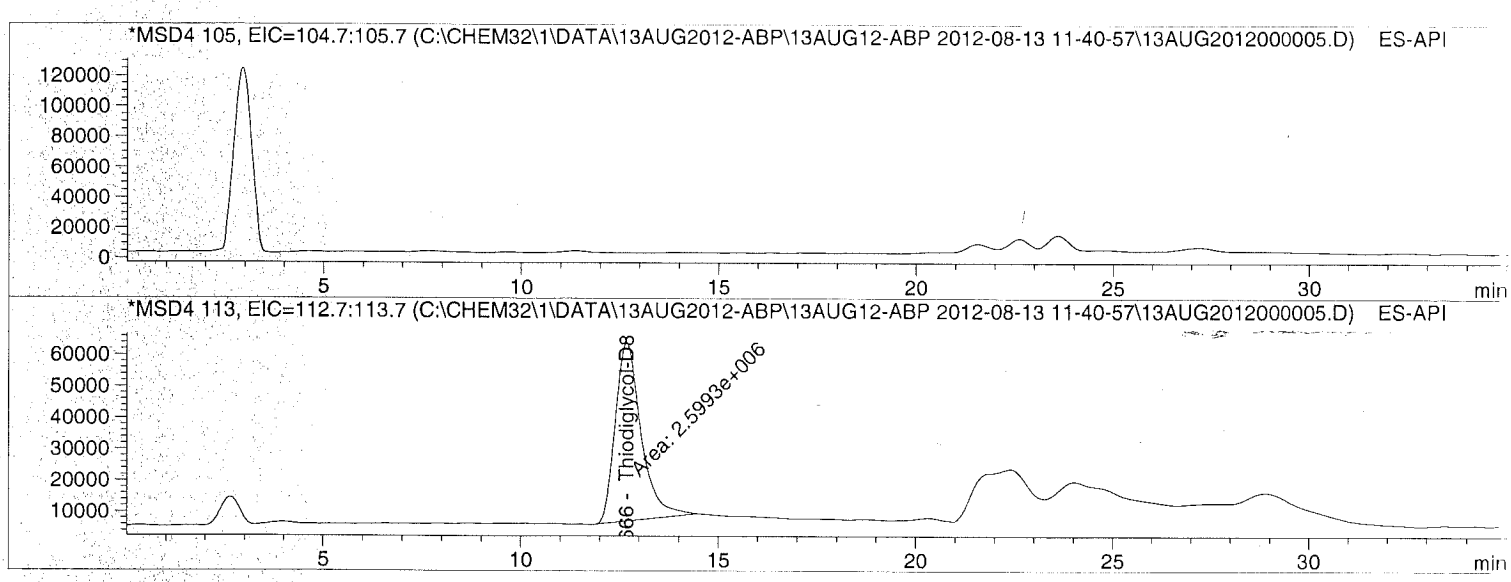
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.594	MM	I 1	2.31433e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 5 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000005.D
Sample Name: 1221555006

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 55
Injection Date	: 8/13/2012 2:07:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M		
Last changed	: 8/13/2012 2:06:49 PM by TTM (modified after loading)		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/15/2012 1:40:59 PM by TTM (modified after loading) (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Batch Run # 5 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000005.D
Sample Name: 1221555006

Acq. Operator : TTM Seq. Line : 5
Acq. Instrument : LCMS3 Location : Vial 55
Injection Date : 8/13/2012 2:07:02 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 2:06:49 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 0.00000

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.666	MM	I	1 2.59930e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 6 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000006.D
Sample Name: 289539 MS

==========

Acq. Operator : TTM Seq. Line : 6
Acq. Instrument : LCMS3 Location : Vial 56
Injection Date : 8/13/2012 2:43:24 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 2:43:11 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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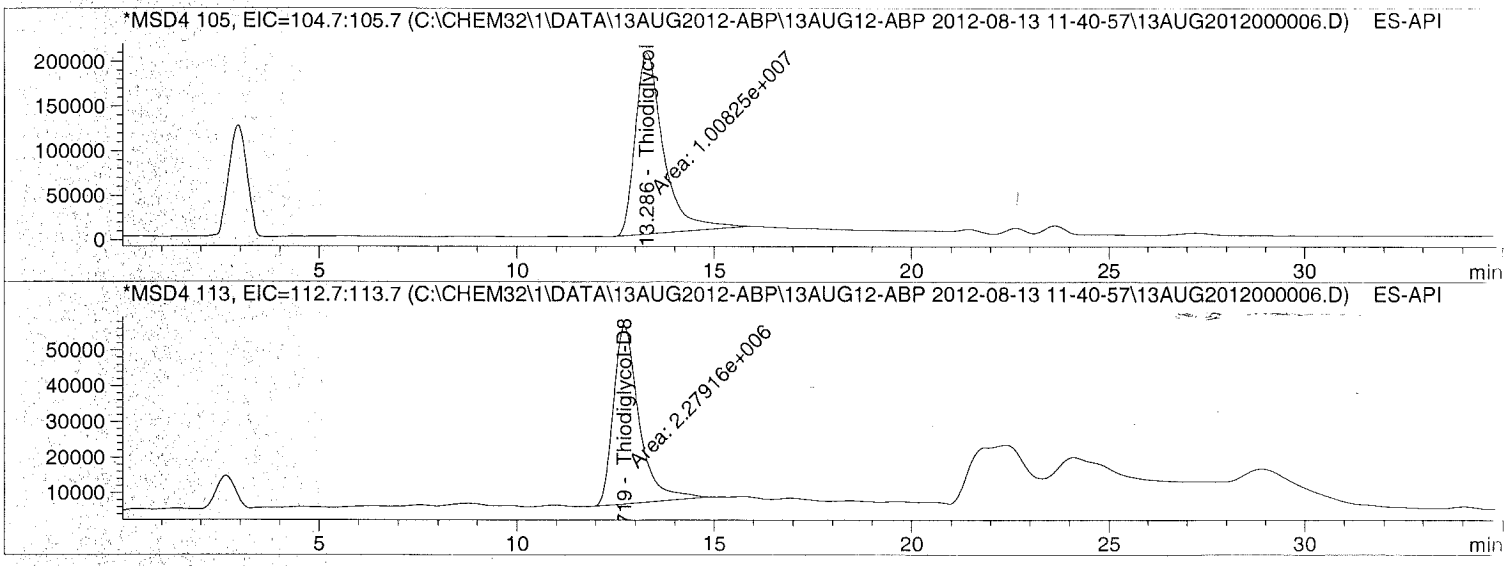

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Internal Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.286	MM	1	1.00825e7	1.18959e-1	5.26247		Thiodiglycol

Batch Run # 6 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000006.D
Sample Name: 289539 MS

Acq. Operator : TTM Seq. Line : 6
Acq. Instrument : LCMS3 Location : Vial 56
Injection Date : 8/13/2012 2:43:24 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 2:43:11 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 5.26247

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.719	MM	I	1 2.27916e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 7 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000007.D
Sample Name: 289540 MSD

==========

Acq. Operator : TTM Seq. Line : 7
Acq. Instrument : LCMS3 Location : Vial 57
Injection Date : 8/13/2012 3:19:49 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 3:19:36 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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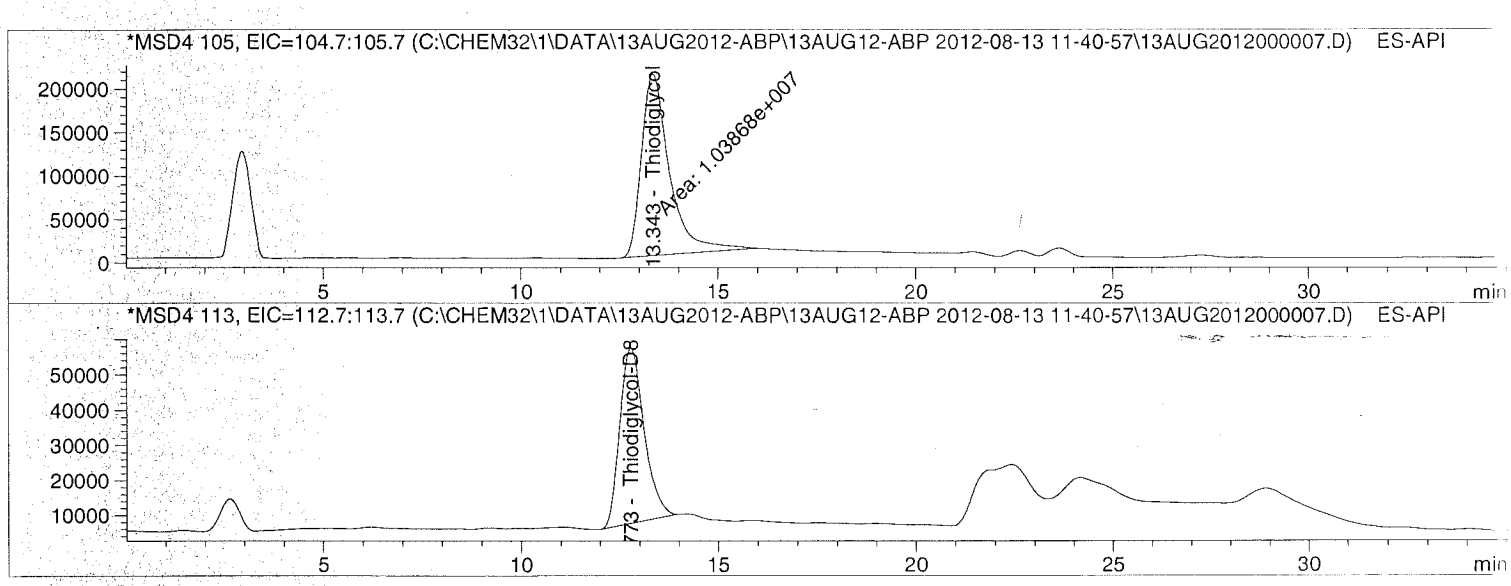

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Internal Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.343	MM	1	1.03868e7	1.19725e-1	5.84614		Thiodiglycol

Batch Run # 7 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000007.D
Sample Name: 289540 MSD

Acq. Operator : TTM Seq. Line : 7
Acq. Instrument : LCMS3 Location : Vial 57
Injection Date : 8/13/2012 3:19:49 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 3:19:36 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 5.84614

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

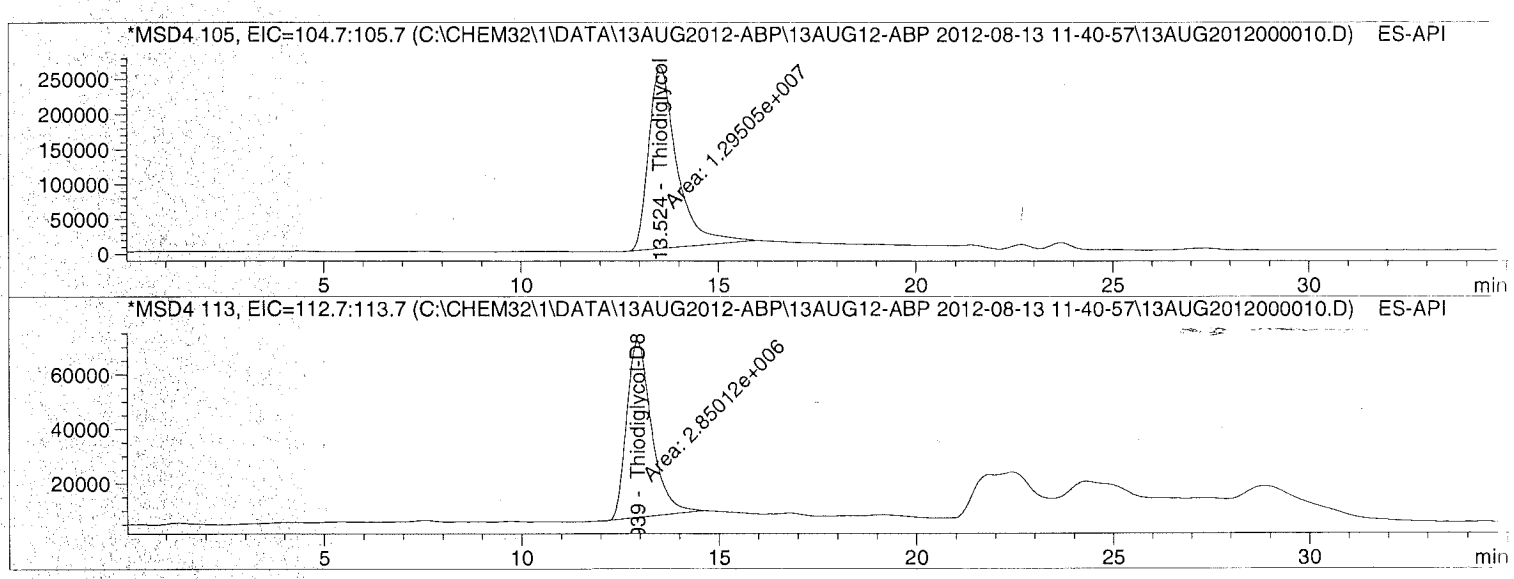
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.773	BB	I	1 2.12715e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 10 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000010.D
Sample Name: CCV2

Acq. Operator	: TTM	Seq. Line	: 10
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/13/2012 5:08:54 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M		
Last changed	: 8/13/2012 5:08:41 PM by TTM (modified after loading)		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/15/2012 1:40:59 PM by TTM (modified after loading) (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 5.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

Batch Run # 10 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000010.D
Sample Name: CCV2

Acq. Operator : TTM Seq. Line : 10
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/13/2012 5:08:54 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 5:08:41 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.524	MM	1	1.29505e7	1.19157e-1	5.41429		Thiodiglycol

Totals without ISTD(s) : 5.41429

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.939	MM I	1	2.85012e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Calibration

Raw Data

Calibration Table

Agent Breakdown Products

Calib. Data Modified : 7/9/2012 11:13:05 AM

Calculate : Internal Standard
Based on : Peak Area

Rel. Reference Window : 10.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 10.000 %
Abs. Non-ref. Window : 0.000 min
Use Multiplier & Dilution Factor with ISTDs
Uncalibrated Peaks : not reported
Partial Calibration : No recalibration if peaks missing

Curve Type : Quadratic (some peaks differ, see below)
Origin : Ignored (some peaks differ, see below)
Weight : Linear (Amnt) (some peaks differ, see below)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Default Sample ISTD Information (if not set in sample table):

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal 2: MSD4 113, EIC=112.7:113.7

RetTime [min]	Sig	Lvl	Amount	Area	Amt/Area	Ref	Grp	Name
12.890	2	1	10.00000	2.44245e6	4.09425e-6	I2		Thiodiglycol-D8
		2	10.00000	2.37259e6	4.21481e-6			
		3	10.00000	2.75981e6	3.62344e-6			
		4	10.00000	2.61922e6	3.81792e-6			
		5	10.00000	2.65549e6	3.76579e-6			
		6	10.00000	2.67017e6	3.74508e-6			
13.460	1	6	5.00000e-2	1.14698e5	4.35926e-7	2		Thiodiglycol
		5	1.00000e-1	2.17683e5	4.59383e-7			
		4	5.00000e-1	1.04468e6	4.78617e-7			
		3	1.00000	2.09084e6	4.78276e-7			
		2	5.00000	1.06254e7	4.70571e-7			
		1	10.00000	1.91630e7	5.21840e-7			

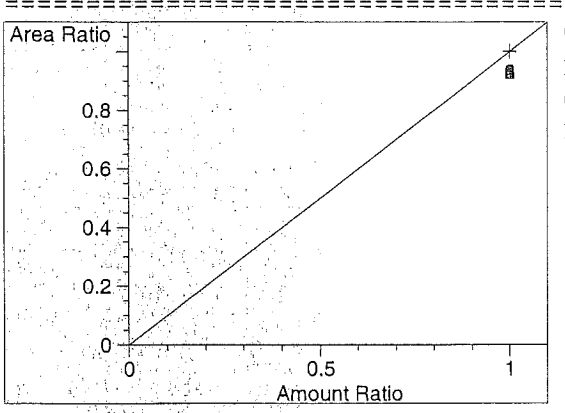
More compound-specific settings:

Compound: Thiodiglycol-D8
  Curve Type : Linear
  Origin : Included
  Calibration Level Weights:/
    Level 1 : 1
    Level 2 : 1
    Level 3 : 1
    Level 4 : 1
    Level 5 : 1
    Level 6 : 1

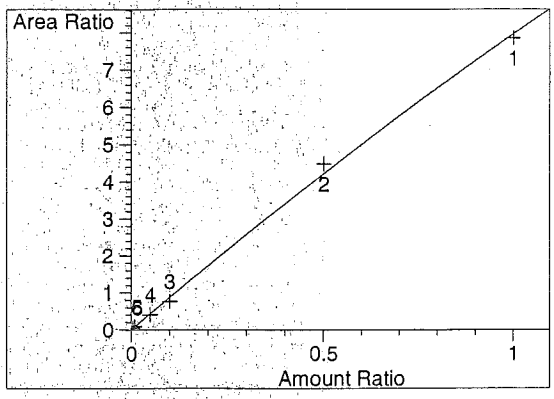
Peak Sum Table

No Entries in table

Calibration Curves



Thiodiglycol-D8 at exp. RT: 12.890
MSD4 113, EIC=112.7:113.7
Correlation: 1.00000
Residual Std. Dev.: 0.00000
Formula: y = mx + b
  m: 1.00000
  b: 0.00000
  x: Amount
  y: Area
Calibration Level Weights:
  Level 1 : 1
  Level 2 : 1
  Level 3 : 1
  Level 4 : 1
  Level 5 : 1
  Level 6 : 1



Thiodiglycol at exp. RT: 13.460
MSD4 105, EIC=104.7:105.7
Correlation: 0.99844
Residual Std. Dev.: 0.15671
Formula: y = ax² + bx + c
  a: -9.49682e-1
  b: 8.92207
  c: -8.42930e-3
  x: Amount
  y: Area
Calibration Level Weights:
  Level 6 : 1
  Level 5 : 0.5
  Level 4 : 0.1
  Level 3 : 0.05
  Level 2 : 0.01
  Level 1 : 0.005

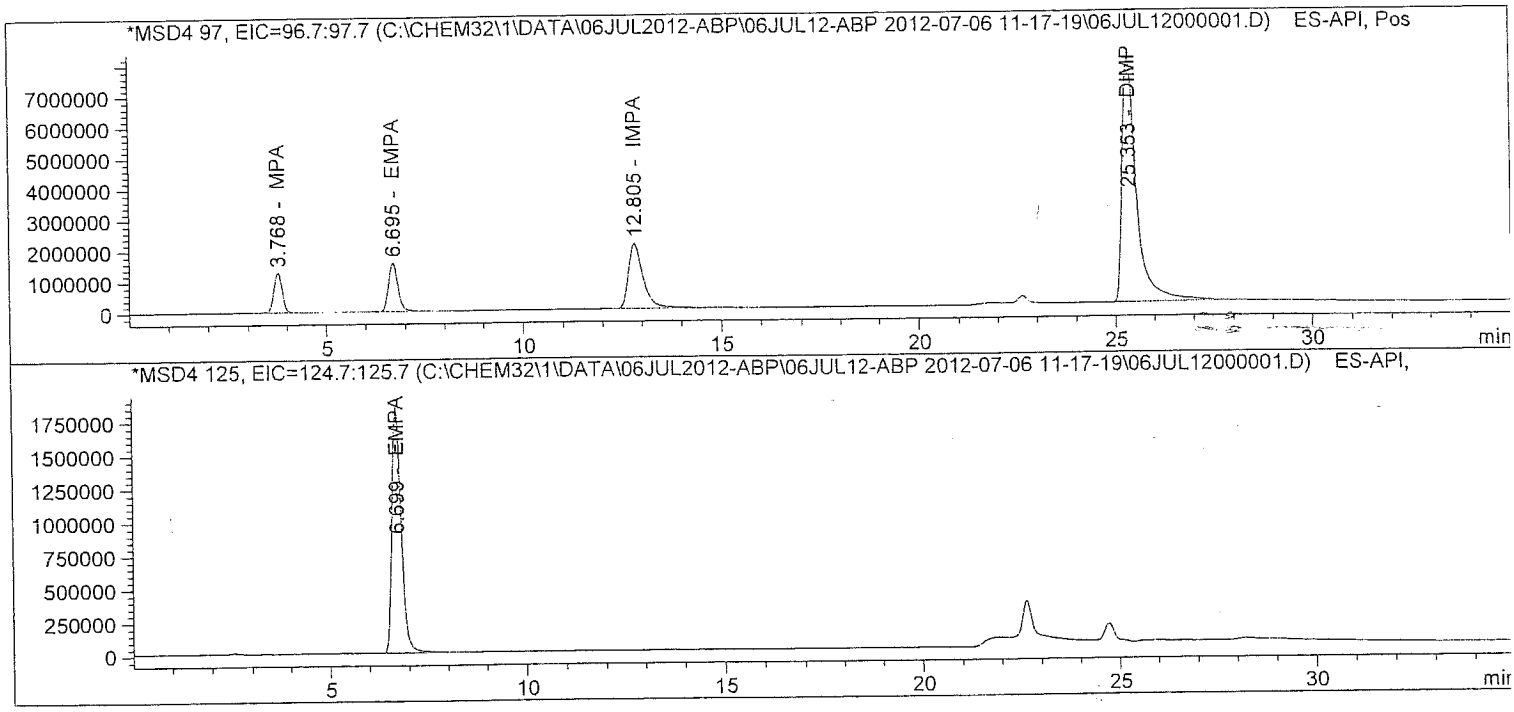
Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 1	PRIME	ABP-ON	1	Ctrl Samp	
2	Vial 1	$10	ABP-ON	1	Ctrl Samp	
3	Vial 2	$5	ABP-ON	1	Ctrl Samp	
4	Vial 3	$1	ABP-ON	1	Ctrl Samp	
5	Vial 4	$05	ABP-ON	1	Ctrl Samp	
6	Vial 5	$0.1	ABP-ON	1	Ctrl Samp	
7	Vial 6	$0.05	ABP-ON	1	Ctrl Samp	
8	Vial 7	ICV	ABP-ON	1	Ctrl Samp	
9	Vial 8	283055 LMB	ABP-ON	1	Ctrl Samp	
10	Vial 9	283056 LCS	ABP-ON	1	Ctrl Samp	
11	Vial 10	283057 RLVS	ABP-ON	1	Ctrl Samp	
12	Vial 11	1217861001	ABP-ON	1	Sample	
13	Vial 12	1217861002 MS	ABP-ON	1	Ctrl Samp	
14	Vial 13	1217861003 MSD	ABP-ON	1	Ctrl Samp	
15	Vial 2	CCV	ABP-ON	1	Ctrl Samp	

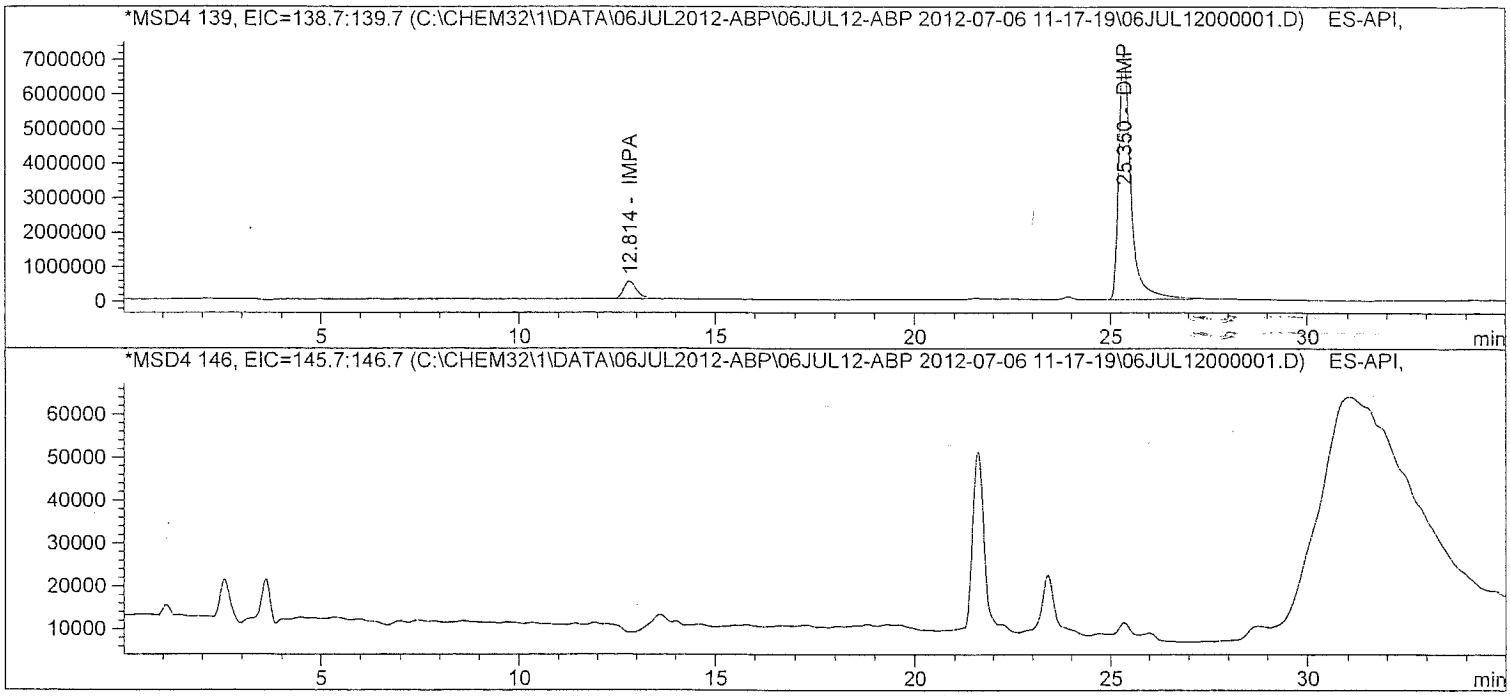
atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

==========

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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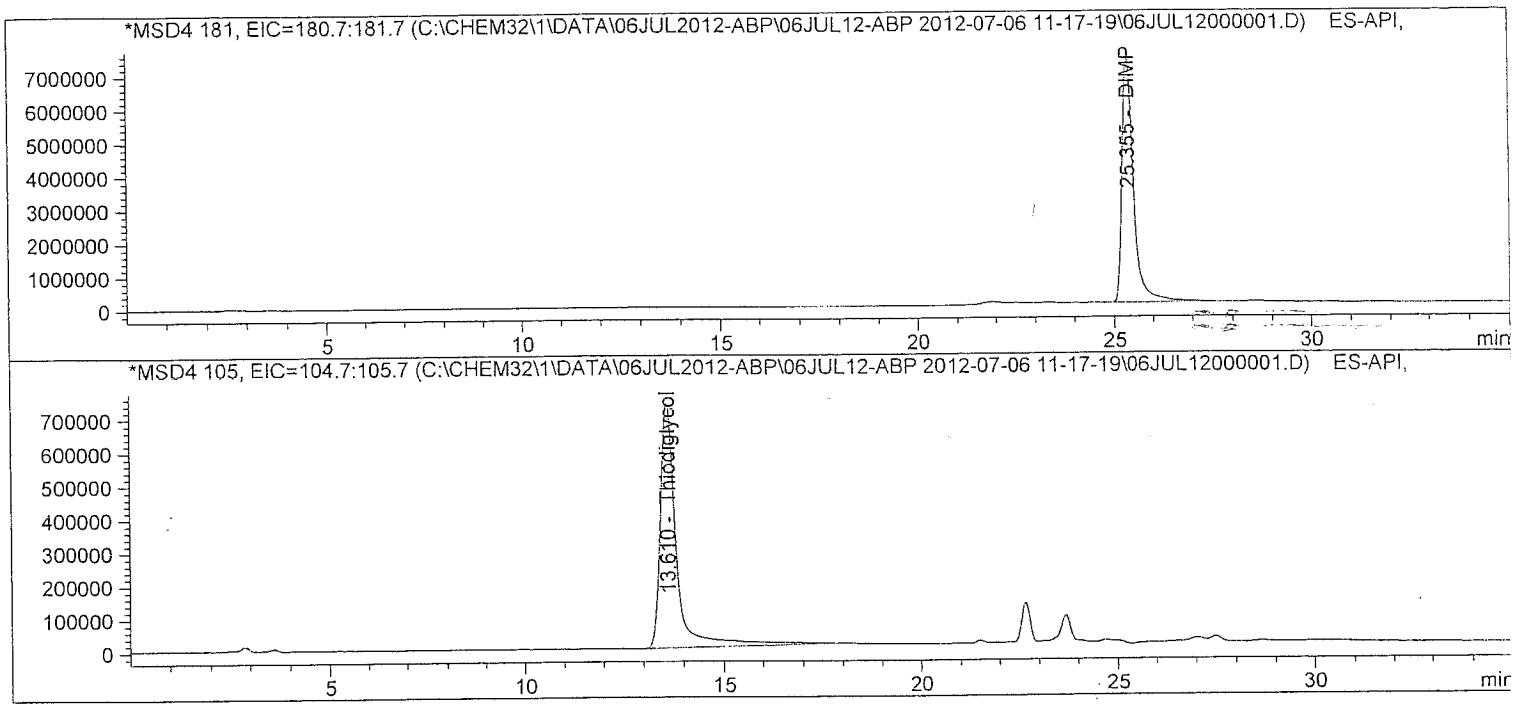
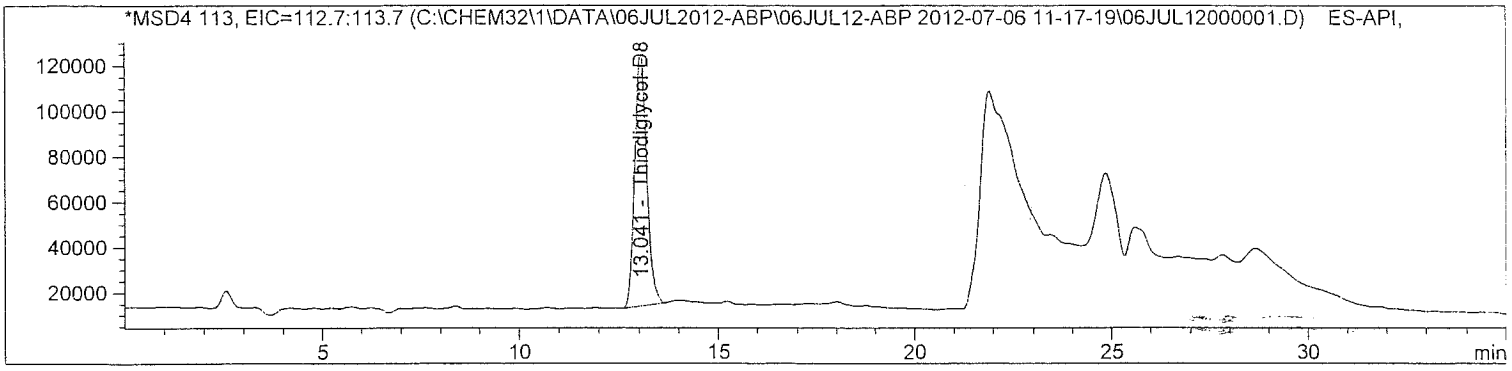


Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 10.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.768	BB	1	1.91978e7	1.32528e-1	10.64848		MPA
12.805	BBA	1	5.64639e7	4.37087e-2	10.32924		IMPA

Totals without ISTD(s) : 20.97773

atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator : TTM
Seq. Line : 1
Acq. Instrument : LCMS3
Location : Vial 1
Injection Date : 7/6/2012 11:17:43 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.699	BB	1	3.05963e7	7.98724e-2	10.22810		EMPA

Totals without ISTD(s) : 10.22810

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.355	BBA	1	1.54432e8	1.54383e-2	9.97853		DIMP

Totals without ISTD(s) : 9.97853

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.610	BBA	1	2.03461e7	1.26756e-1	10.79391		Thiodiglycol

Totals without ISTD(s) : 10.79391

Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

Acq. Operator : TTM Seq. Line : 1
Acq. Instrument : LCMS3 Location : Vial 1
Injection Date : 7/6/2012 11:17:43 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

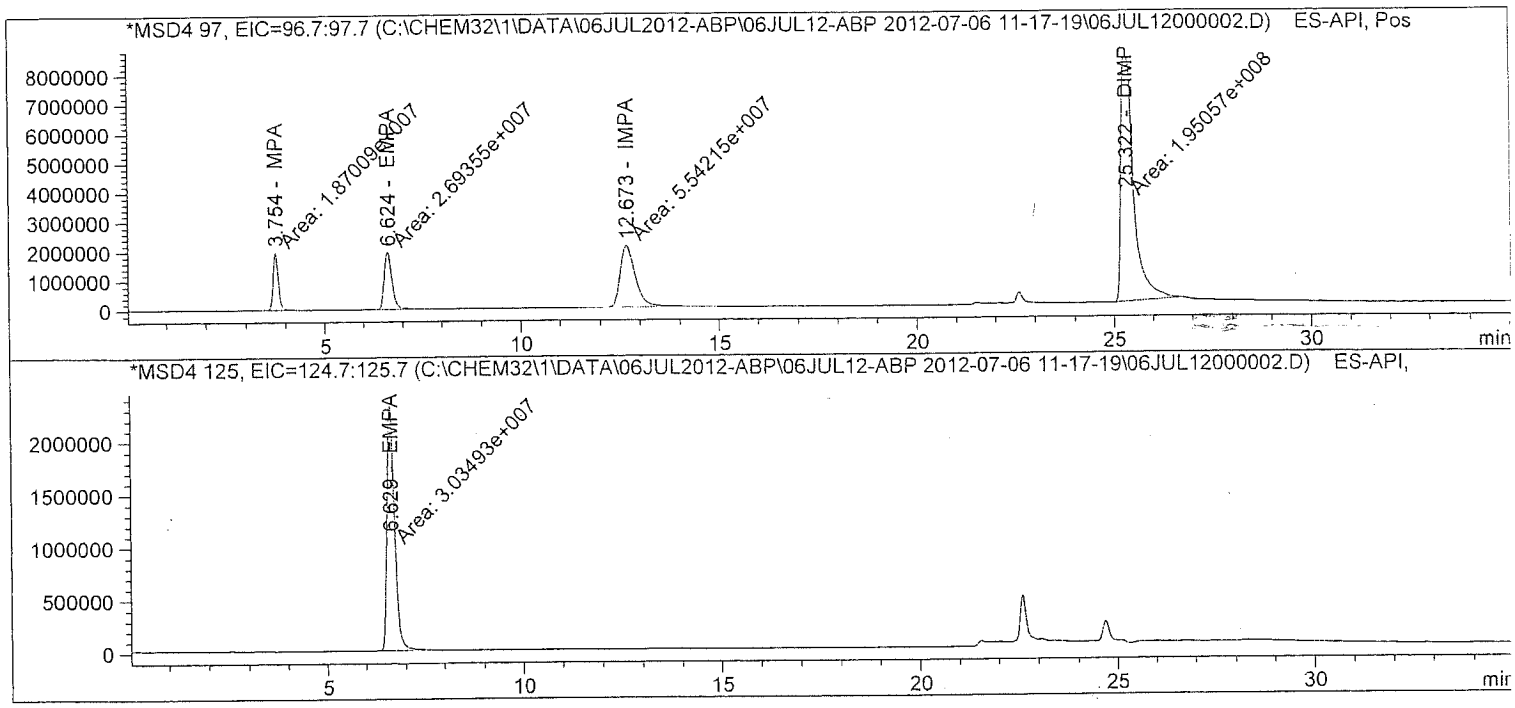
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.041	BB	I	1 2.38930e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 2 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
Sample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 2 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
Sample Name: $10

==========

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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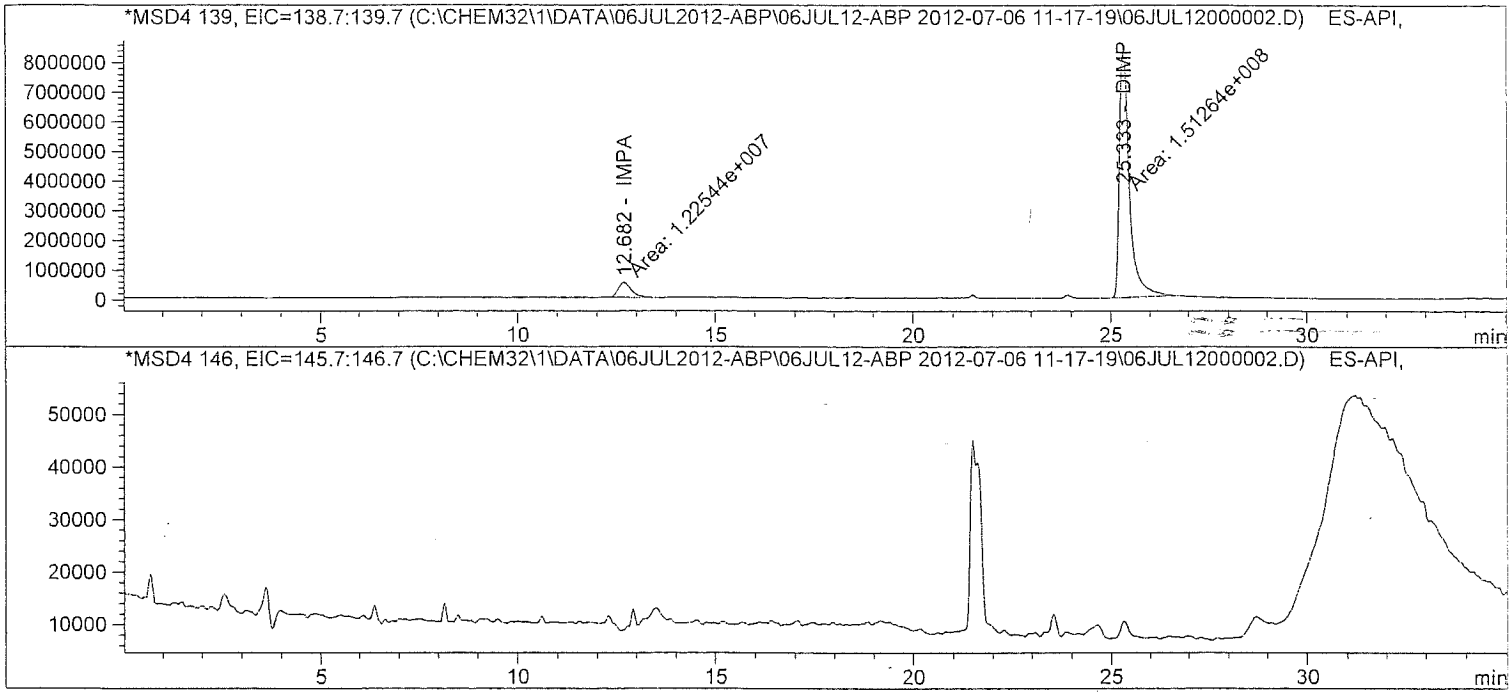
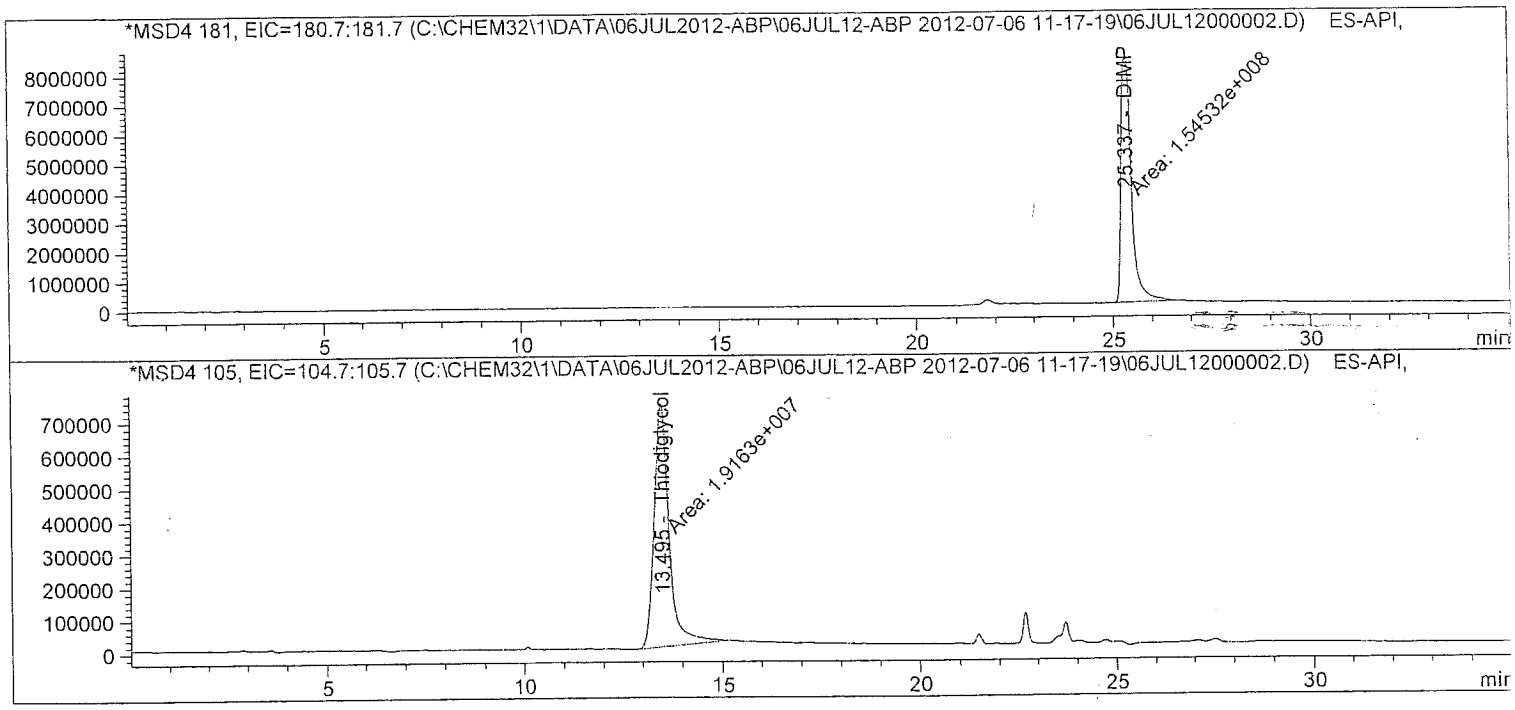


atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Batch Run # 2 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
Sample Name: $10

==========

Acq. Operator : TTM Seq. Line : 2
Acq. Instrument : LCMS3 Location : Vial 1
Injection Date : 7/6/2012 11:54:02 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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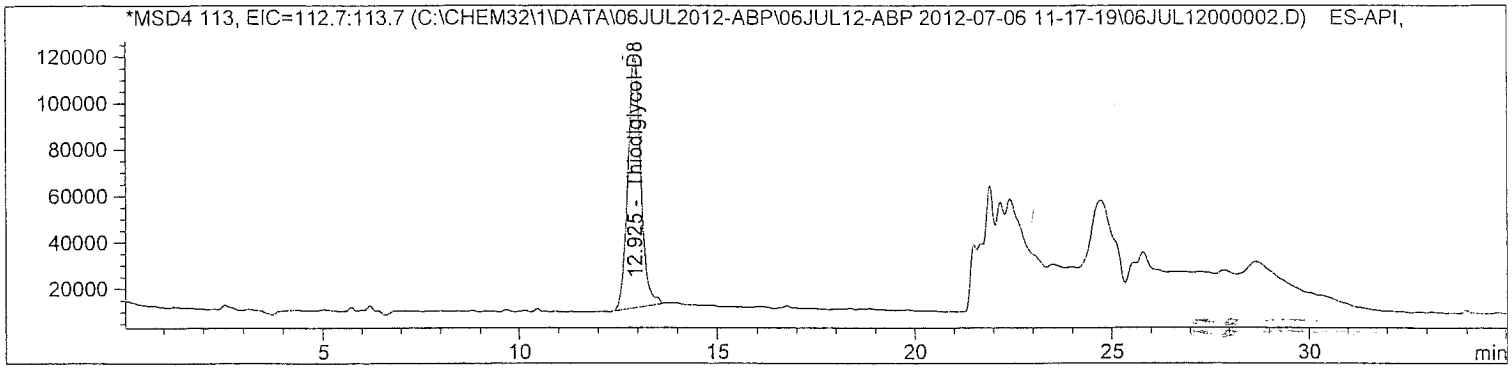

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Internal Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 10.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.754	MM	1	1.87009e7	1.29739e-1	9.93363		MPA
12.673	MM	1	5.54215e7	4.36500e-2	9.90458		IMPA

Totals without ISTD(s) : 19.83821

atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator : TTM
Seq. Line : 2
Acq. Instrument : LCMS3
Location : Vial 1
Injection Date : 7/6/2012 11:54:02 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.629	MM	1	3.03493e7	7.97357e-2	9.90775		EMPA

Totals without ISTD(s) : 9.90775

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.337	MM	1	1.54532e8	1.48417e-2	9.39024		DIMP

Totals without ISTD(s) : 9.39024

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.495	MM	1	1.91630e7	1.25317e-1	9.83212		Thiodiglycol

Totals without ISTD(s) : 9.83212

atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

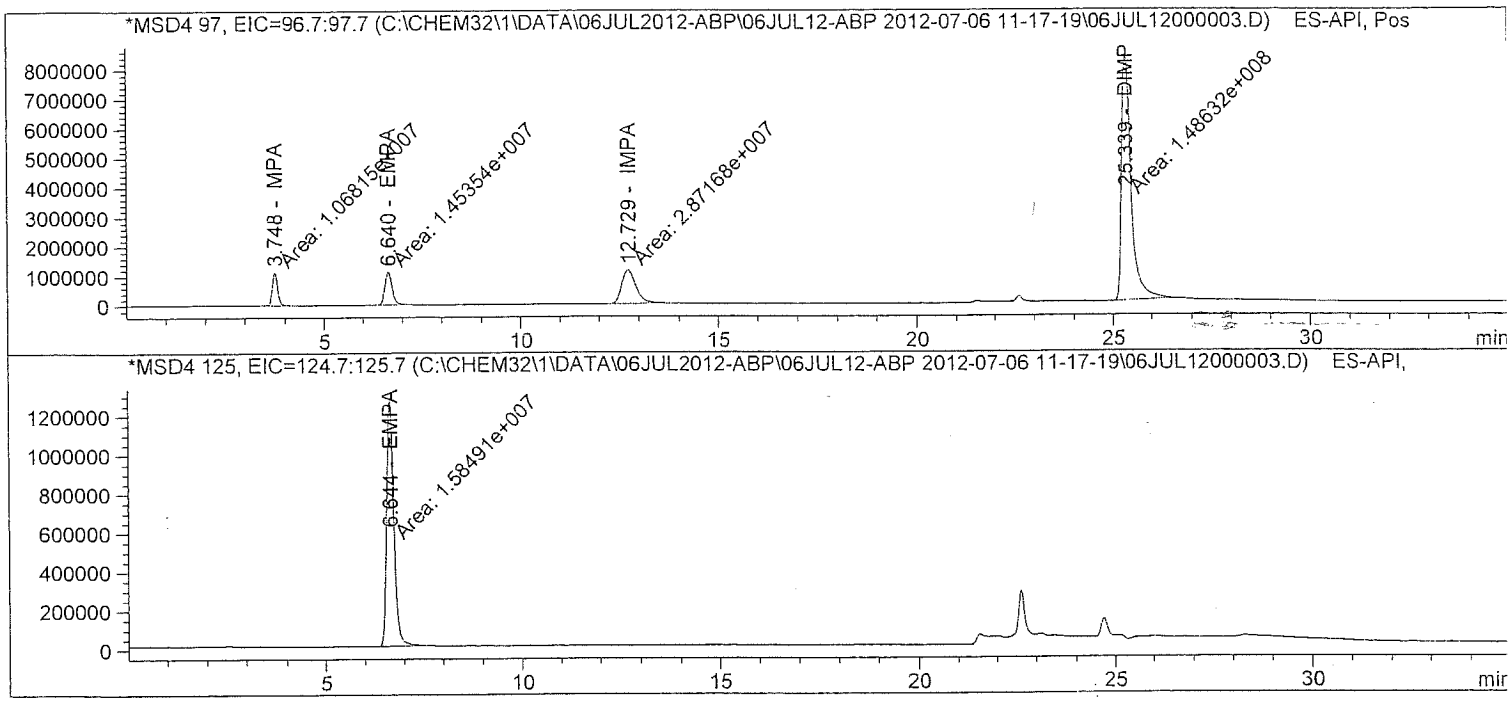
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.925	BB	I	1 2.44245e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

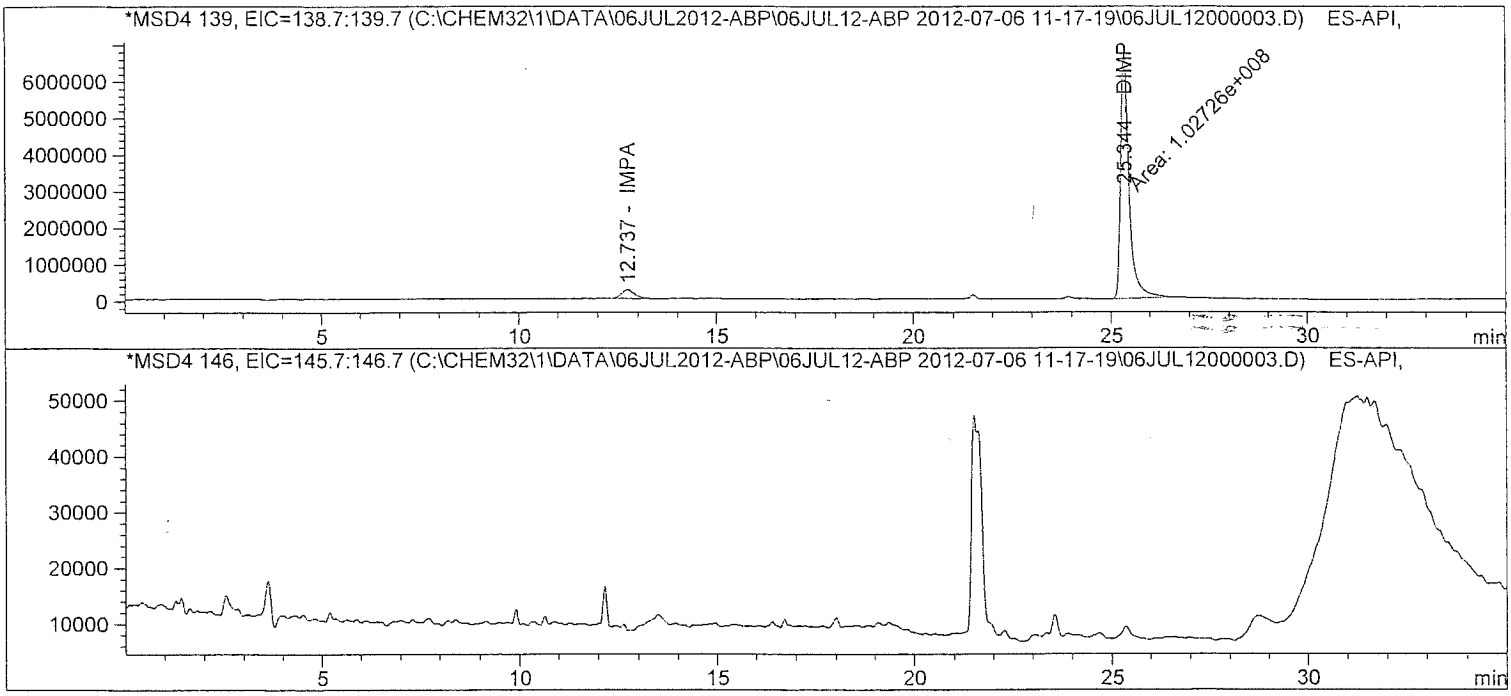
Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

==========

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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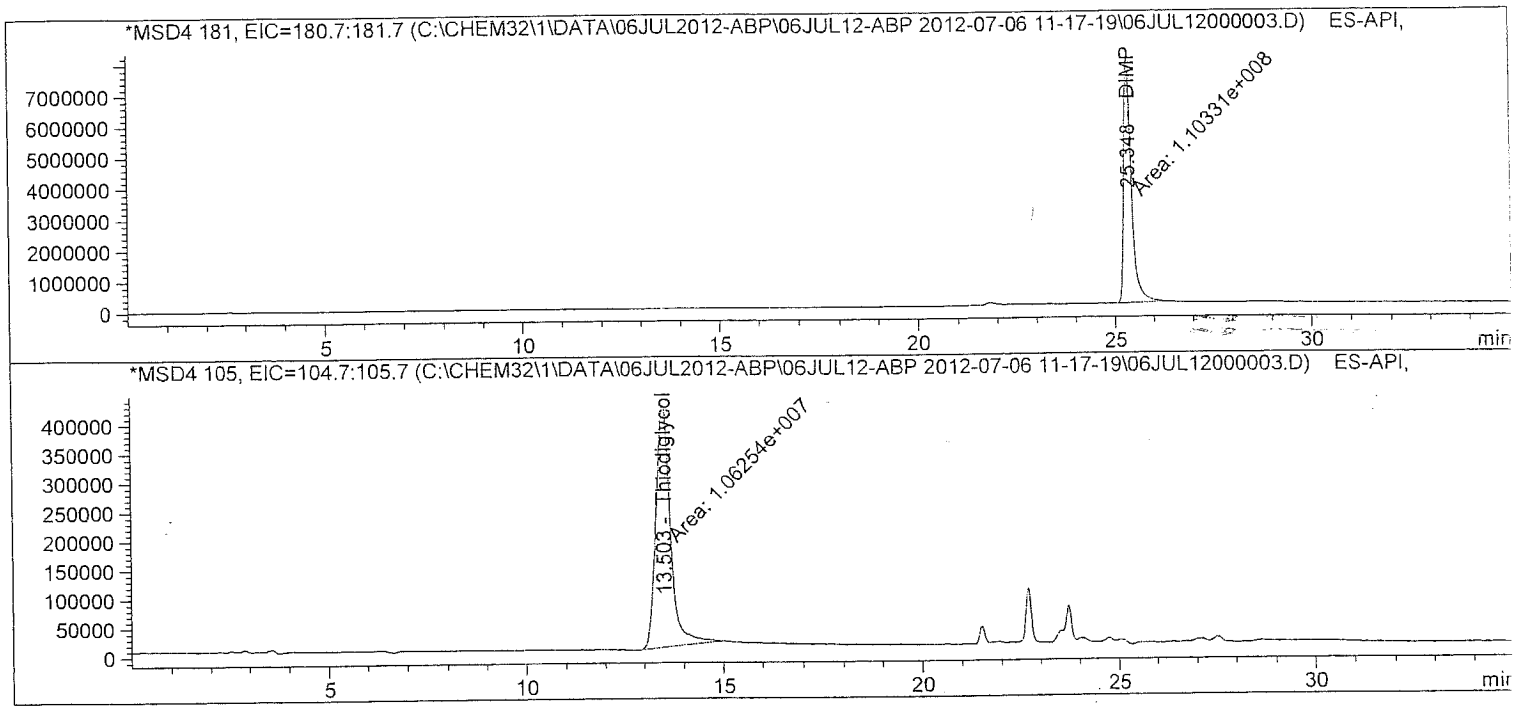

Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

==========

Acq. Operator : TTM Seq. Line : 3
Acq. Instrument : LCMS3 Location : Vial 2
Injection Date : 7/6/2012 12:30:22 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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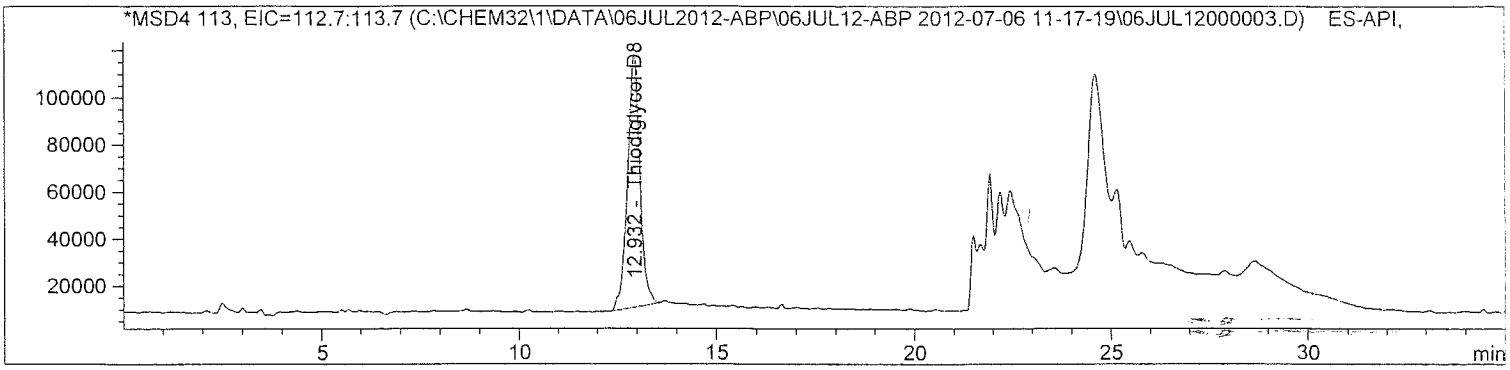

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Internal Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.748	MM	1	1.06815e7	1.13483e-1	5.10907		MPA
12.729	MM	1	2.87168e7	4.30231e-2	5.20733		IMPA

Totals without ISTD(s) : 10.31641

atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

Acq. Operator : TTM Seq. Line : 3
Acq. Instrument : LCMS3 Location : Vial 2
Injection Date : 7/6/2012 12:30:22 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.644	MM	1	1.58491e7	7.77744e-2	5.19540		EMPA

Totals without ISTD(s) : 5.19540

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	MM	1	1.10331e8	1.18266e-2	5.49964		DIMP

Totals without ISTD(s) : 5.49964

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.503	MM	1	1.06254e7	1.19049e-1	5.33146		Thiodiglycol

Totals without ISTD(s) : 5.33146

ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

Acq. Operator : TTM
Seq. Line : 3
Acq. Instrument : LCMS3
Location : Vial 2
Injection Date : 7/6/2012 12:30:22 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.932	BB	I	1 2.37259e6	1.00000	10.00000		Thiodiglycol-D8

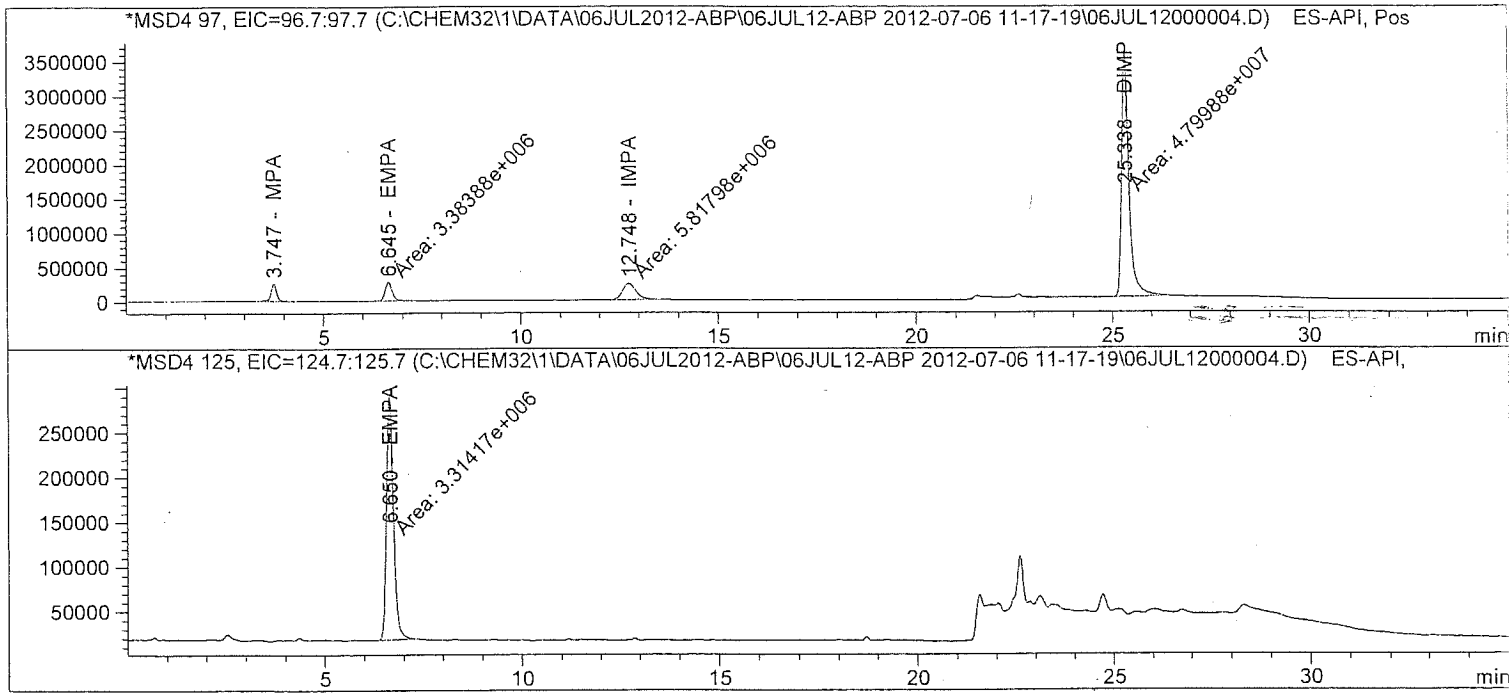
Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 4 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
ample Name: $1

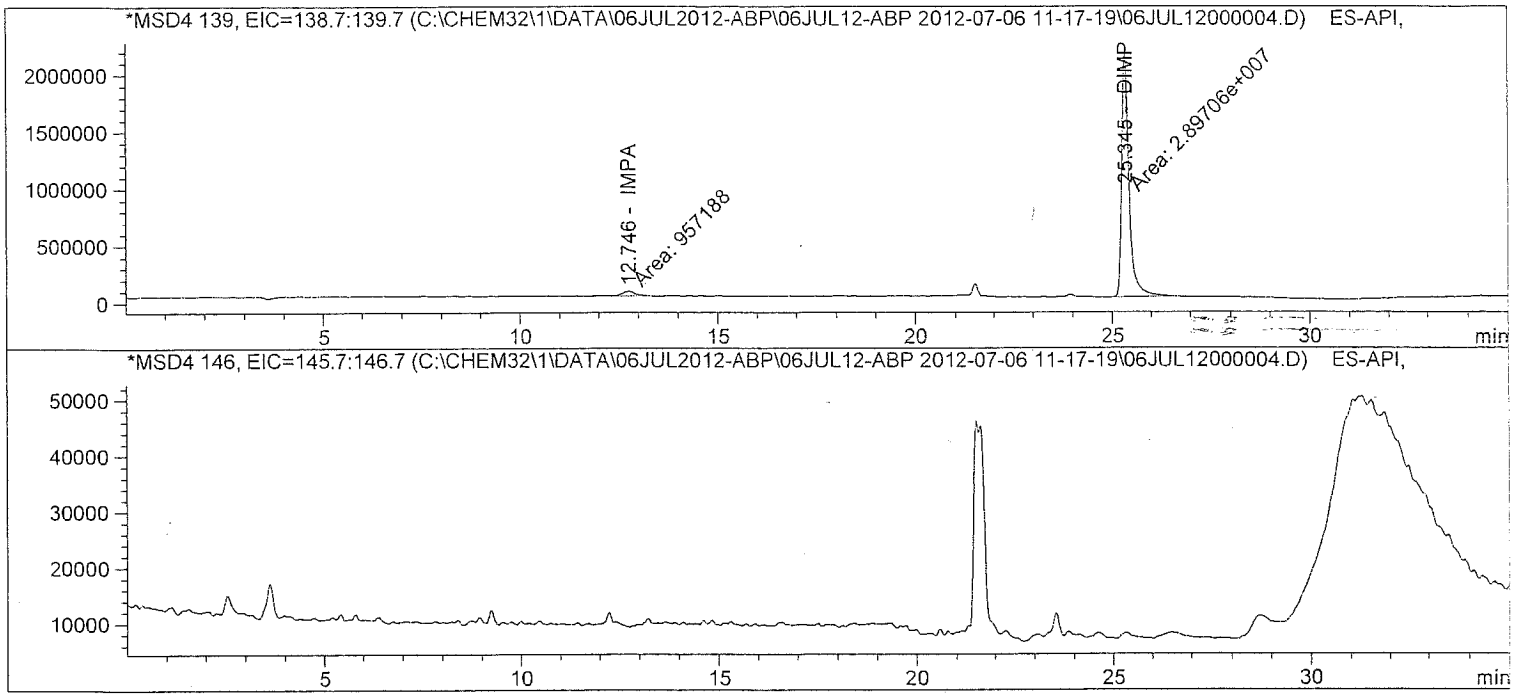
Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

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Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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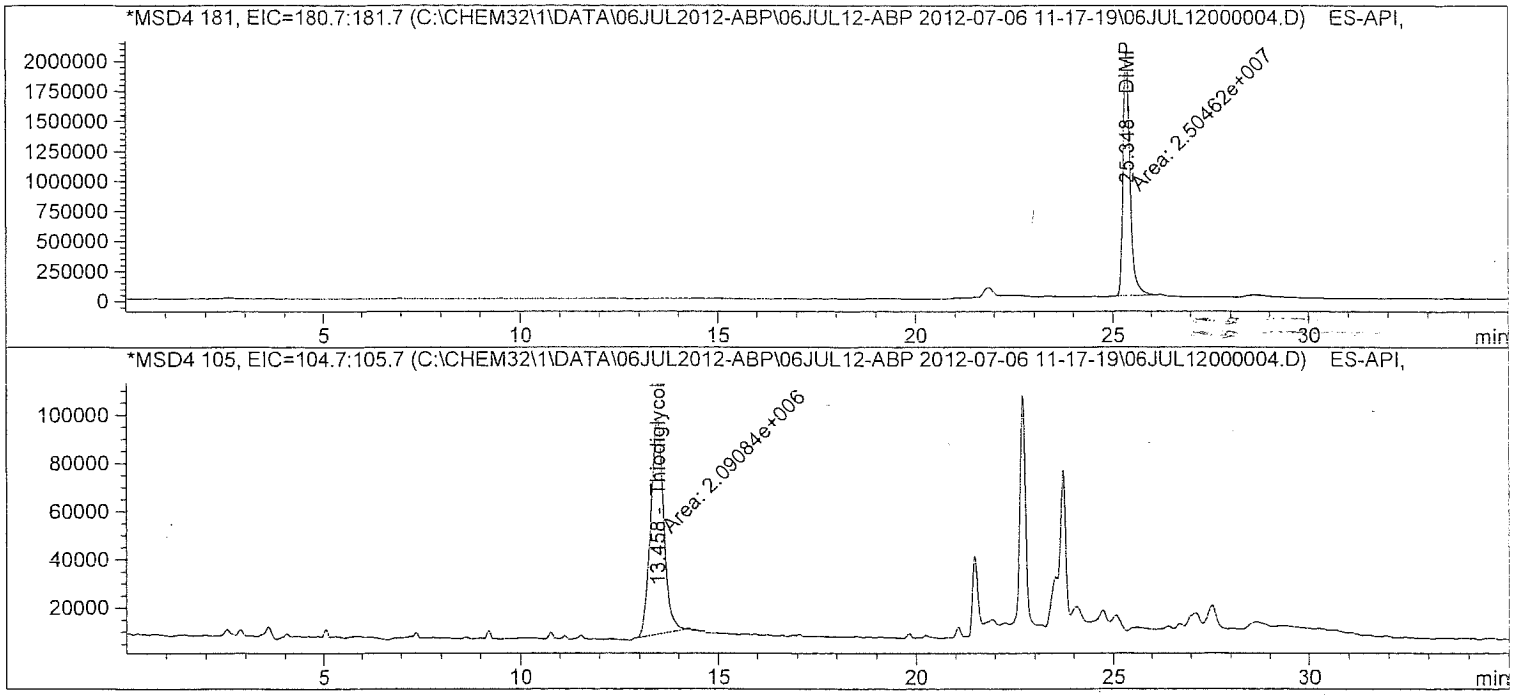
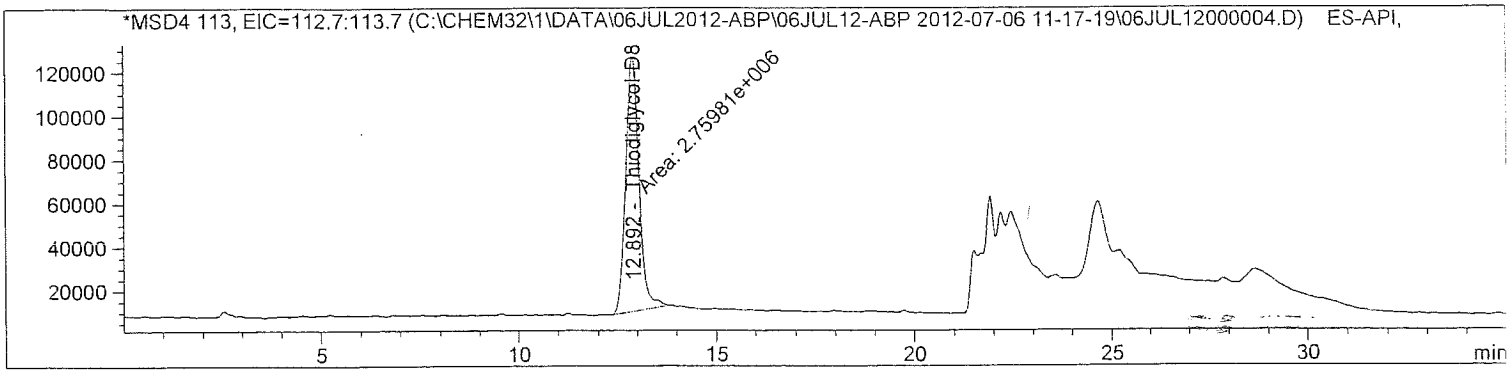


Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 1.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.747	BB	1	2.56450e6	1.00803e-1	9.36694e-1		MPA
12.748	MM	1	5.81798e6	4.26904e-2	8.99961e-1		IMPA

Totals without ISTD(s) : 1.83665

atch Run # 4 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
ample Name: $1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 1:06:42 PM
Seq. Line : 4
Location : Vial 3
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.650	MM	1	3.31417e6	7.60313e-2	9.13037e-1		EMPA

Totals without ISTD(s) : 9.13037e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	MM	1	2.50462e7	9.62641e-3	8.73631e-1		DIMP

Totals without ISTD(s) : 8.73631e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.458	MM	1	2.09084e6	1.14384e-1	8.66577e-1		Thiodiglycol

Totals without ISTD(s) : 8.66577e-1

Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

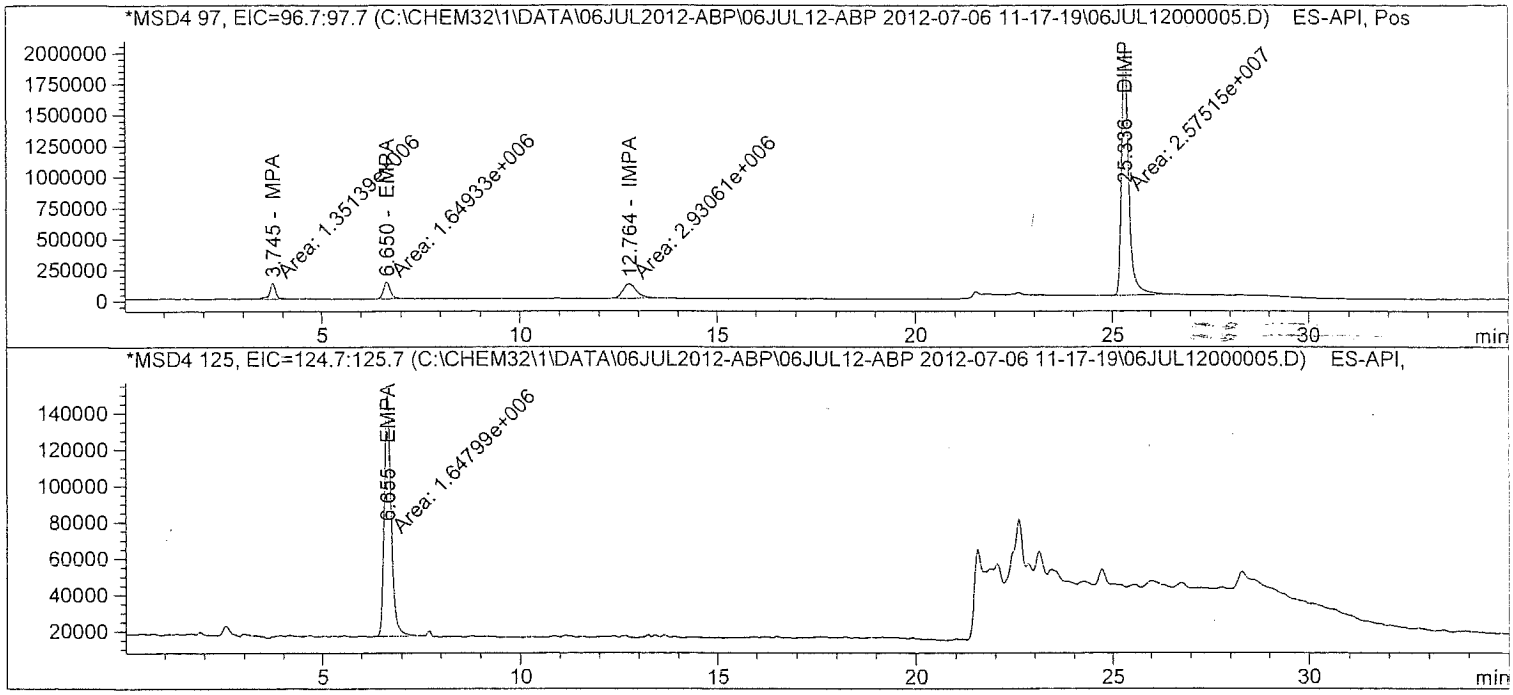
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.892	MM	I	1 2.75981e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

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Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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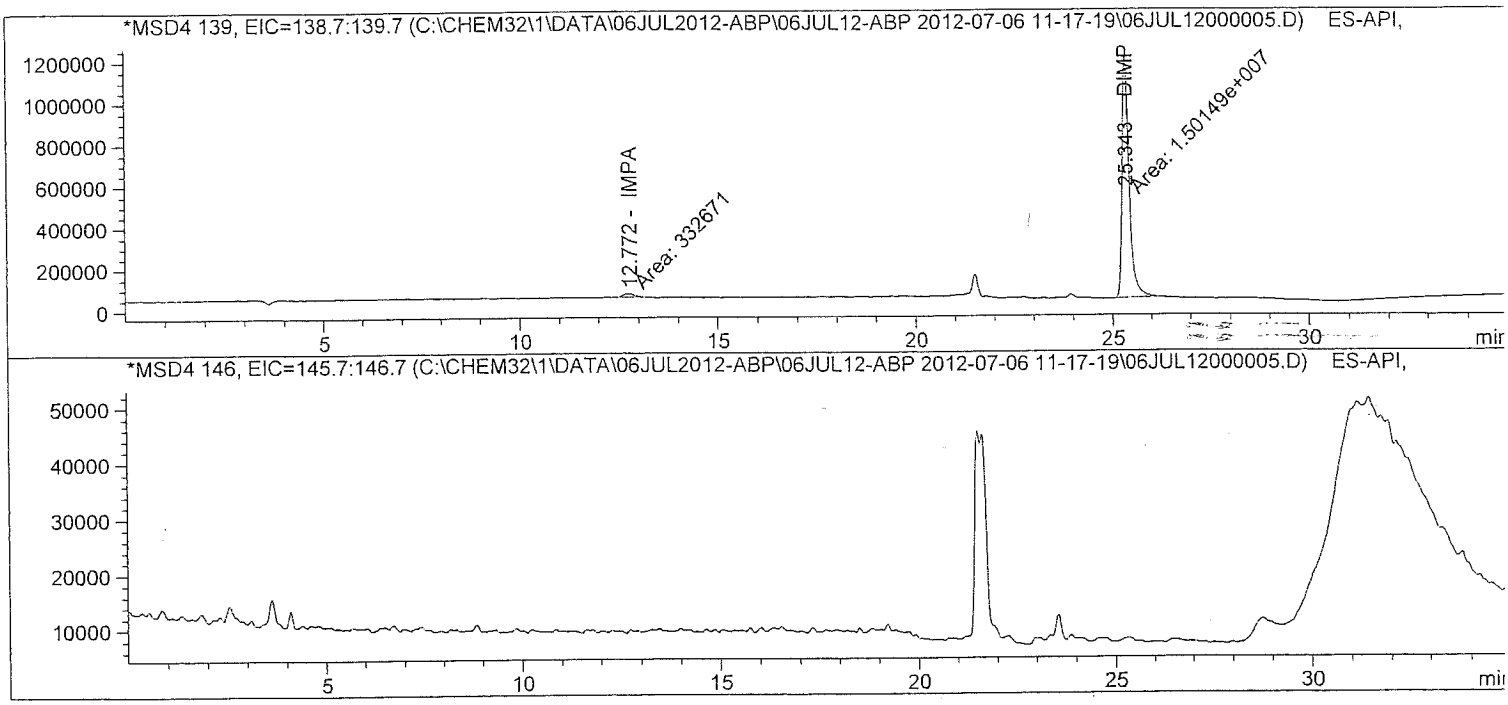

Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

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Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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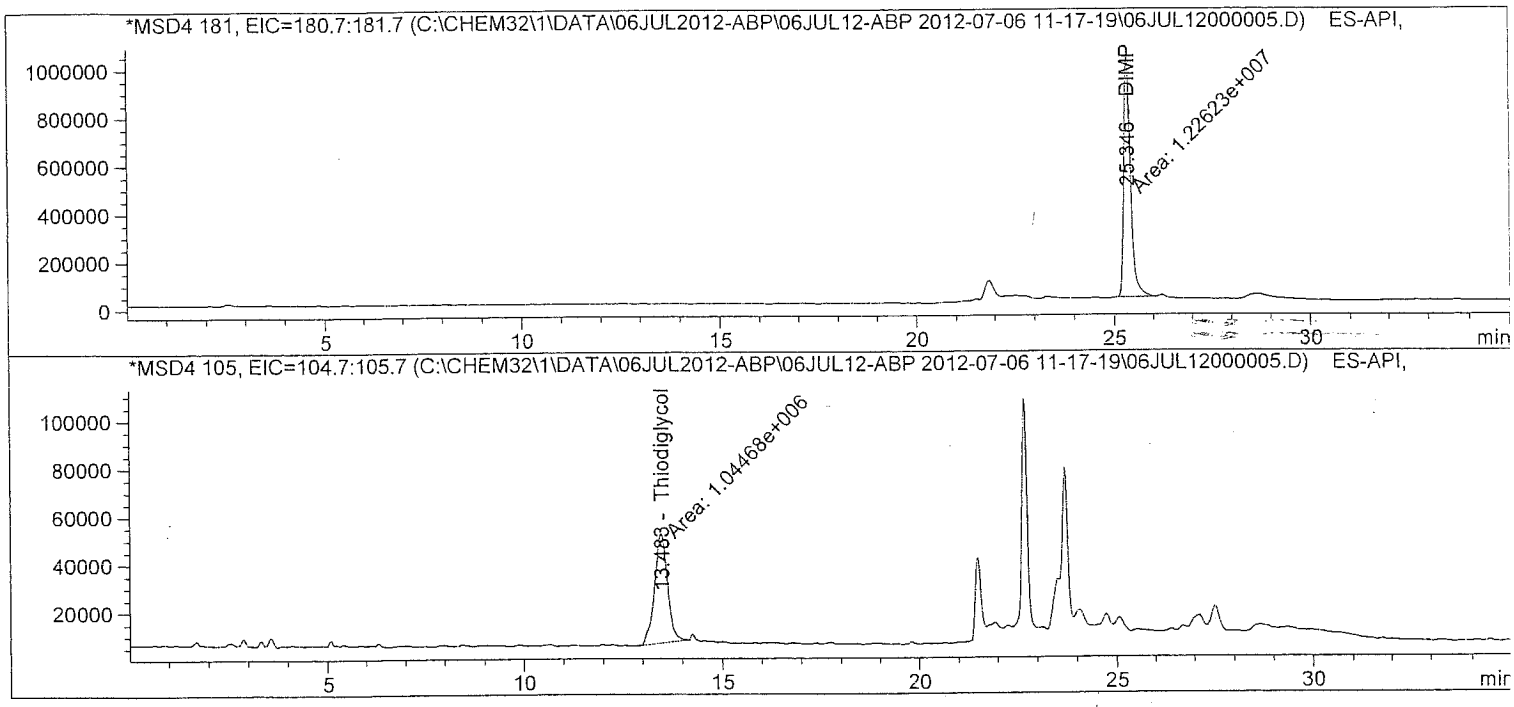

Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

==========

Acq. Operator : TTM
Seq. Line : 5
Acq. Instrument : LCMS3
Location : Vial 4
Injection Date : 7/6/2012 1:43:01 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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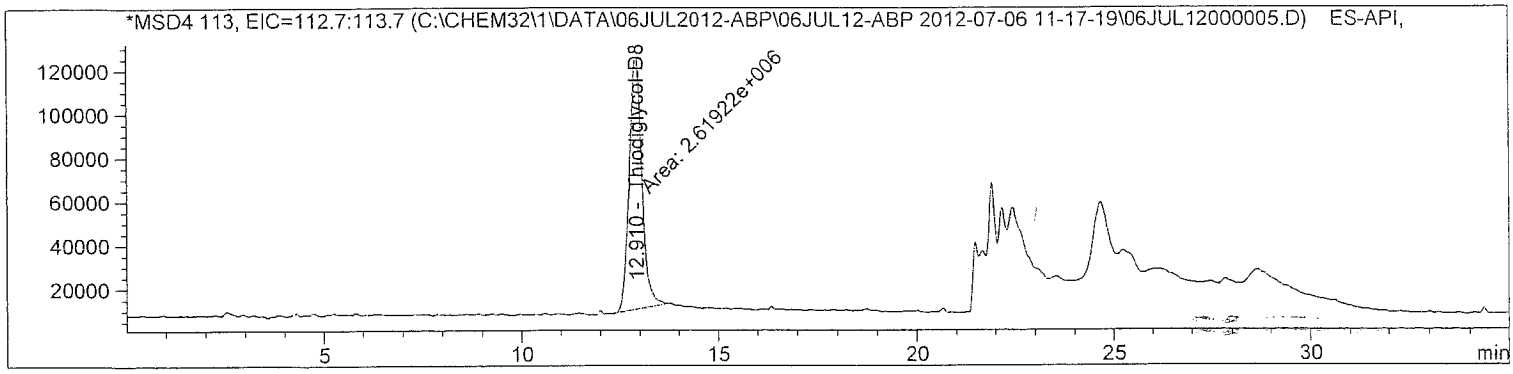

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Internal Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000e-1 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.745	MM	1	1.35139e6	9.80980e-2	5.06138e-1		MPA
12.764	MM	1	2.93061e6	4.28998e-2	4.79999e-1		IMPA

Totals without ISTD(s) : 9.86138e-1

atch Run # 5 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: $05

Acq. Operator : TTM Seq. Line : 5
Acq. Instrument : LCMS3 Location : Vial 4
Injection Date : 7/6/2012 1:43:01 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.655	MM	1	1.64799e6	7.58113e-2	4.76997e-1		EMPA

Totals without ISTD(s) : 4.76997e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.346	MM	1	1.22623e7	9.57834e-3	4.48425e-1		DIMP

Totals without ISTD(s) : 4.48425e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.483	MM	1	1.04468e6	1.15012e-1	4.58725e-1		Thiodiglycol

Totals without ISTD(s) : 4.58725e-1

Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

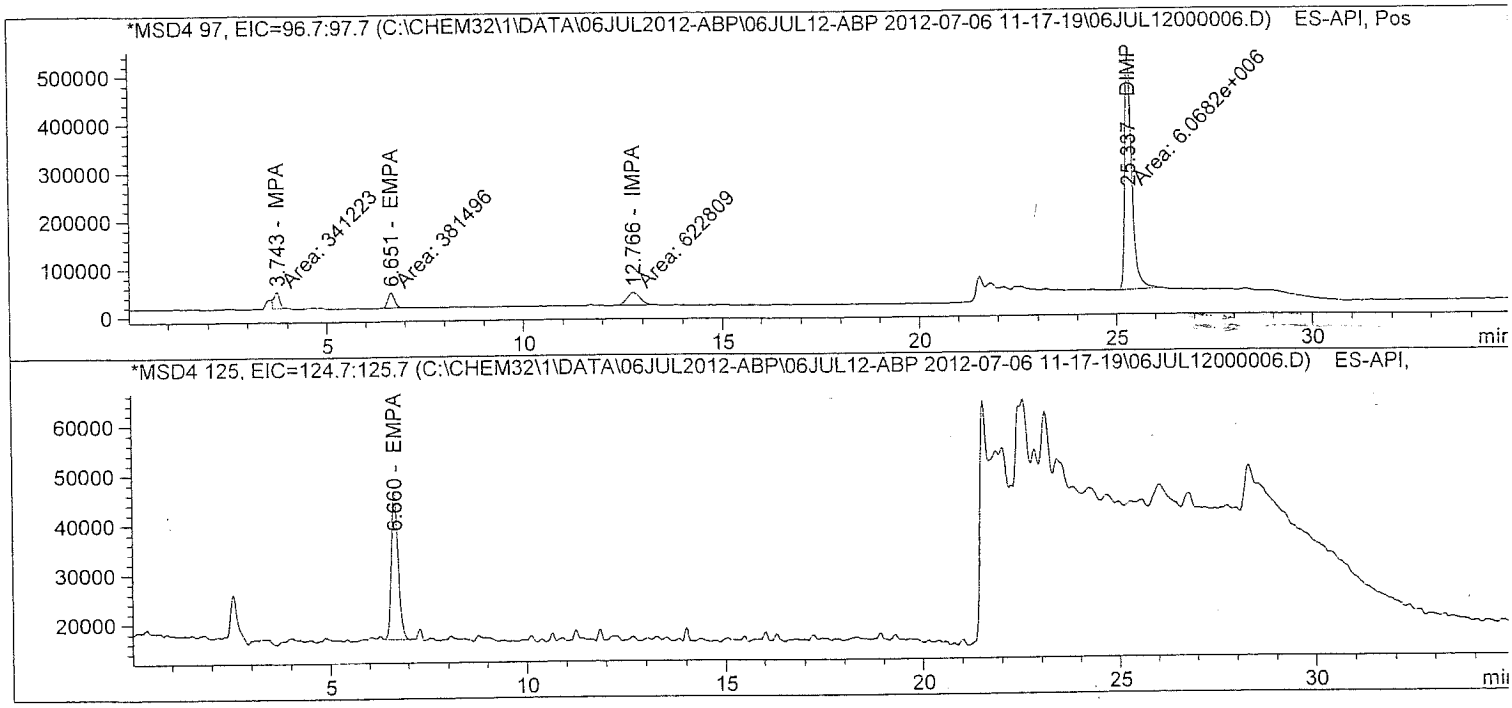
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.910	MM	I	1 2.61922e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 6 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 6 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

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Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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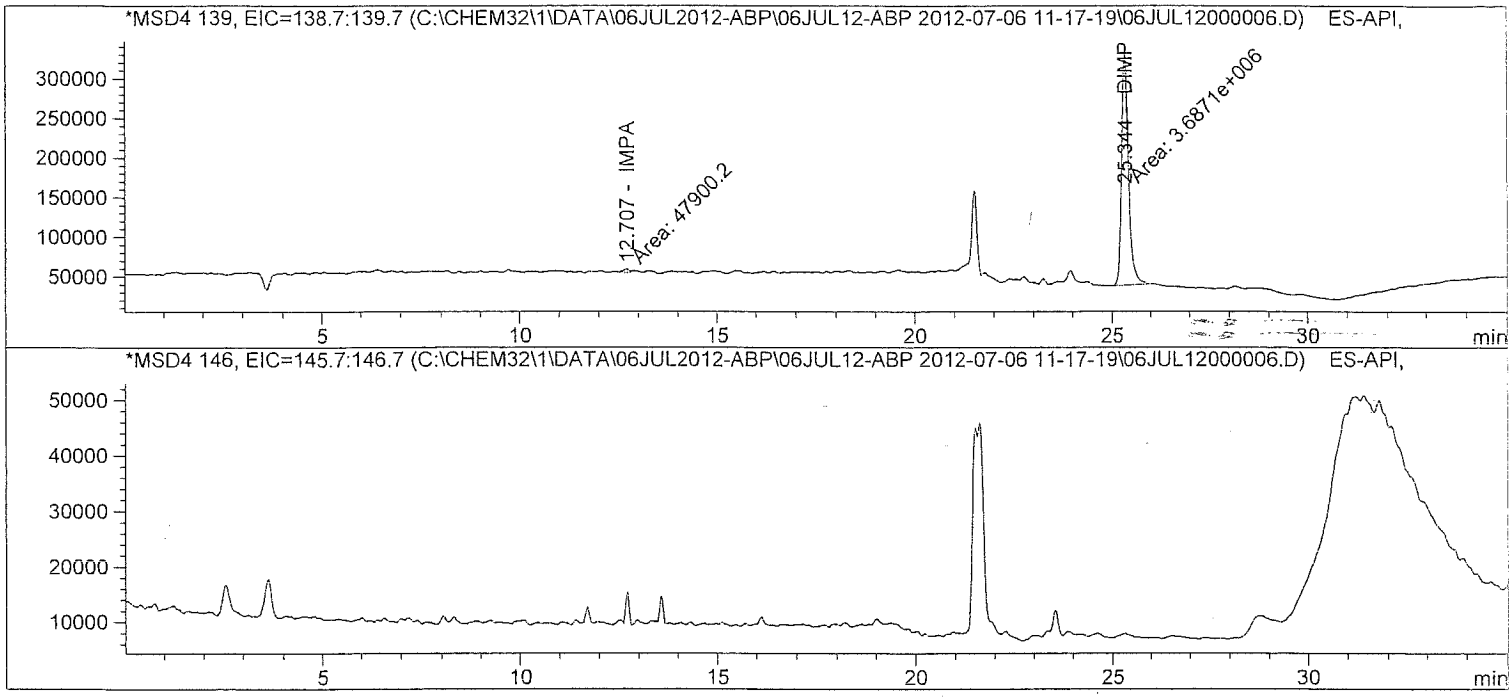
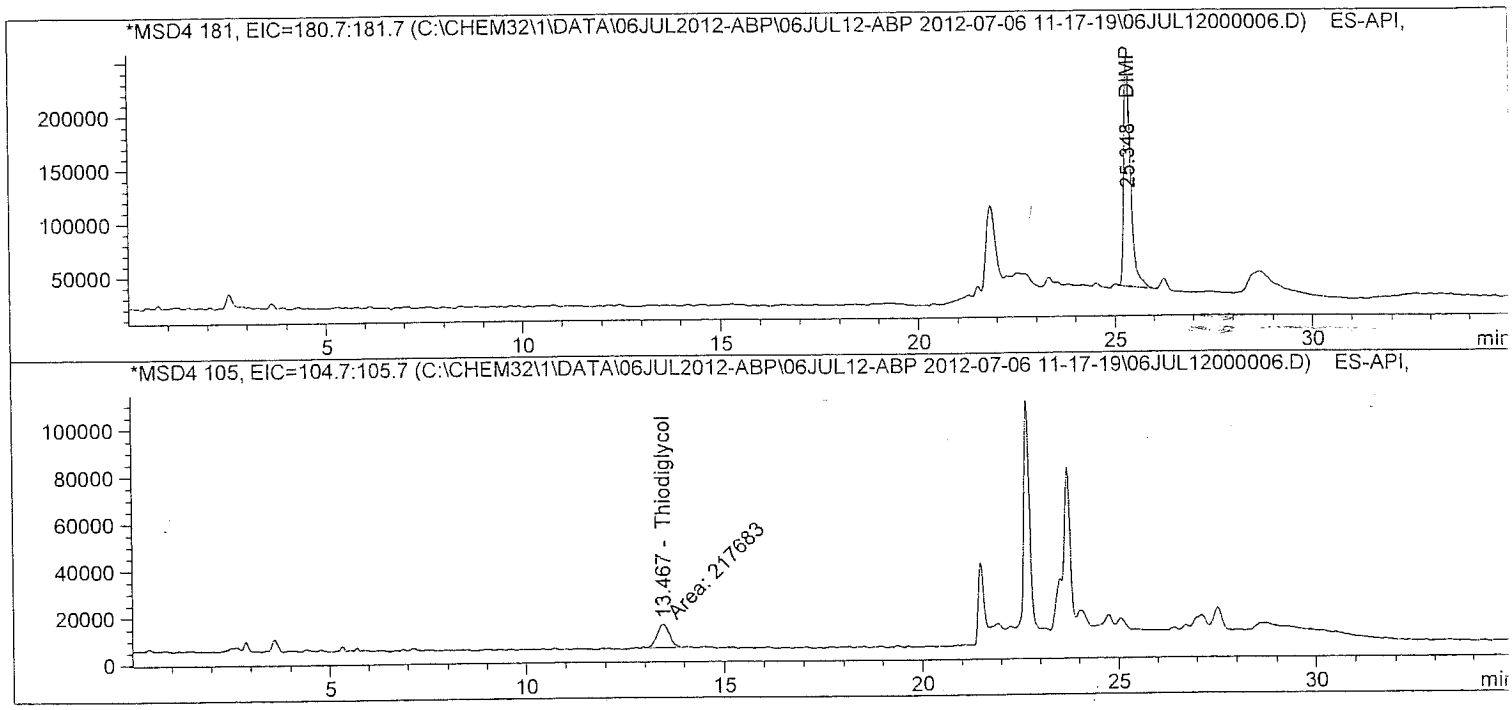


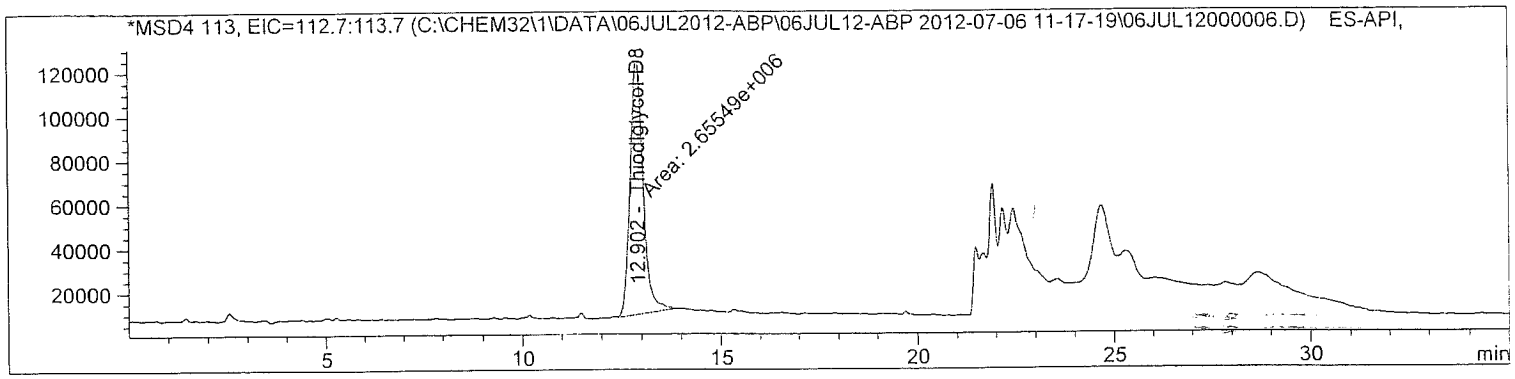
atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 1.00000e-1 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.743	FM	1	3.41223e5	8.57299e-2	1.10161e-1		MPA
12.766	MM	1	6.22808e5	4.49809e-2	1.05497e-1		IMPA

Totals without ISTD(s) : 2.15657e-1

atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator : TTM
Seq. Line : 6
Acq. Instrument : LCMS3
Location : Vial 5
Injection Date : 7/6/2012 2:19:21 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.660	BB	1	3.63294e5	7.52785e-2	1.02988e-1		EMPA

Totals without ISTD(s) : 1.02988e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	BB	1	2.58087e6	1.03862e-2	1.00944e-1		DIMP

Totals without ISTD(s) : 1.00944e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.467	MM	1	2.17683e5	1.23740e-1	1.01436e-1		Thiodiglycol

Totals without ISTD(s) : 1.01436e-1

atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator : TTM
Seq. Line : 6
Acq. Instrument : LCMS3
Location : Vial 5
Injection Date : 7/6/2012 2:19:21 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.902	MM	I	1 2.65549e6	1.00000	10.00000		Thiodiglycol-D8

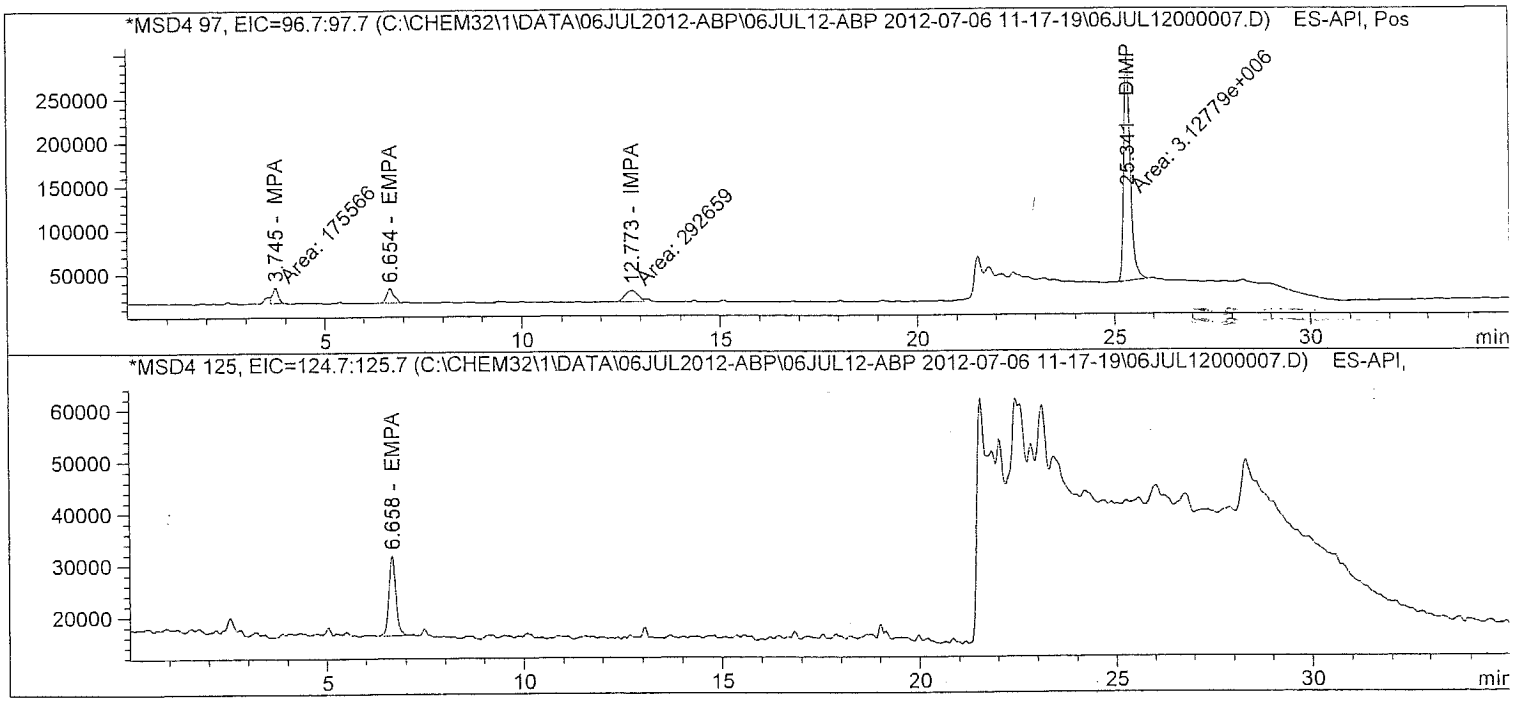
Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

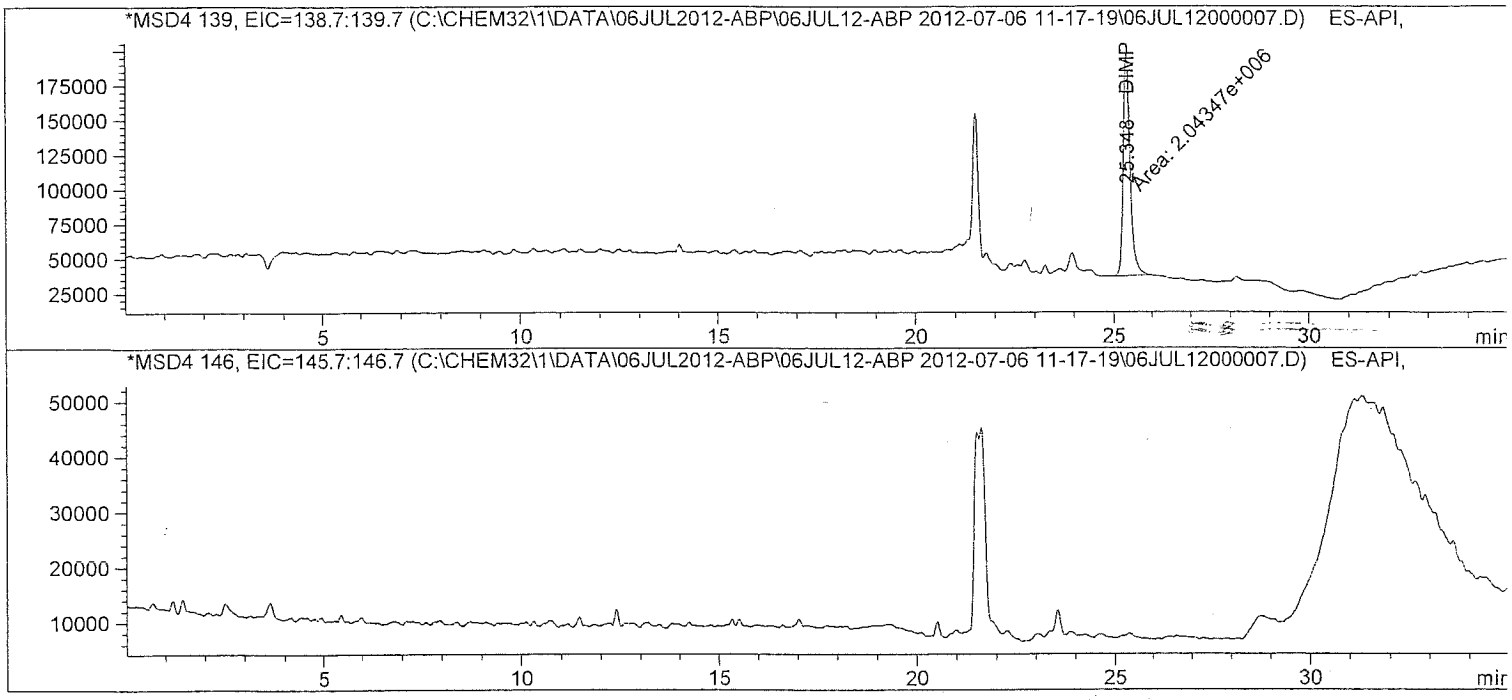
Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

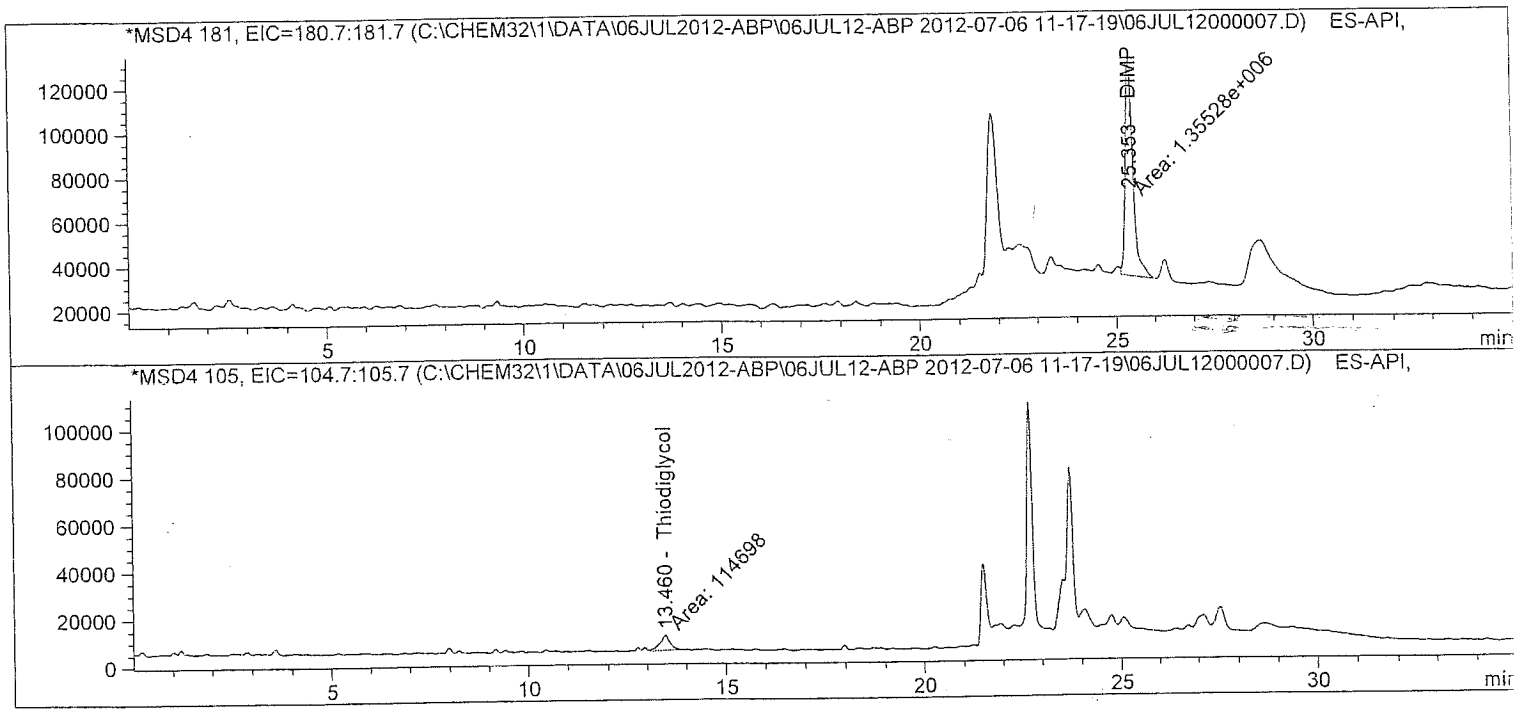
Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

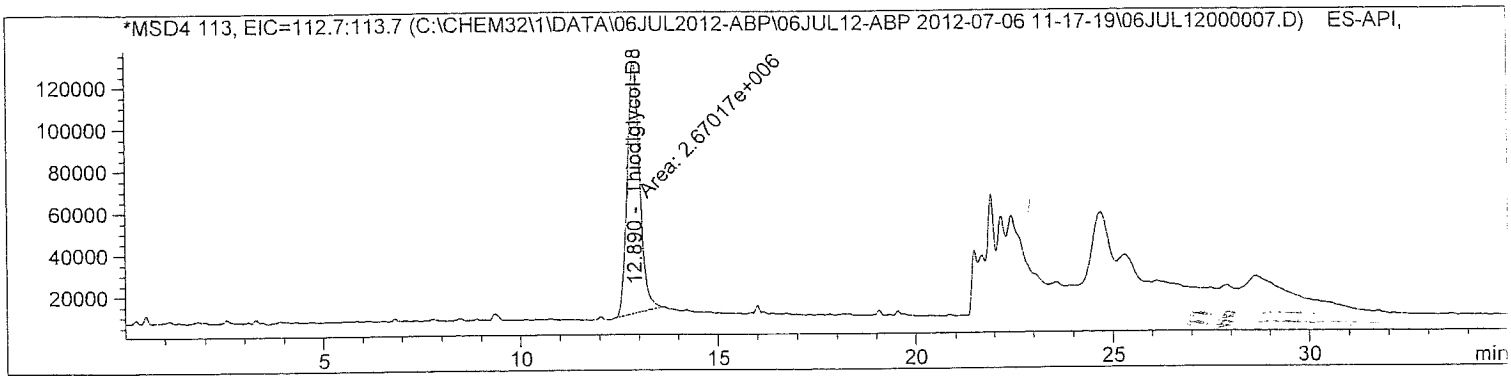
Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:55:42 PM
Seq. Line : 7
Location : Vial 6
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000e-2 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.745	FM	1	1.75566e5	7.10322e-2	4.67042e-2		MPA
12.773	MF	1	2.92659e5	4.80467e-2	5.26608e-2		IMPA

Totals without ISTD(s) : 9.93650e-2

atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator : TTM
Seq. Line : 7
Acq. Instrument : LCMS3
Location : Vial 6
Injection Date : 7/6/2012 2:55:42 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.658	BB	1	1.91552e5	7.48089e-2	5.36662e-2		EMPA

Totals without ISTD(s) : 5.36662e-2

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.353	FM	1	1.35528e6	1.14558e-2	5.81454e-2		DIMP

Totals without ISTD(s) : 5.81454e-2

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460	MM	1	1.14698e5	1.34158e-1	5.76283e-2		Thiodiglycol

Totals without ISTD(s) : 5.76283e-2

Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

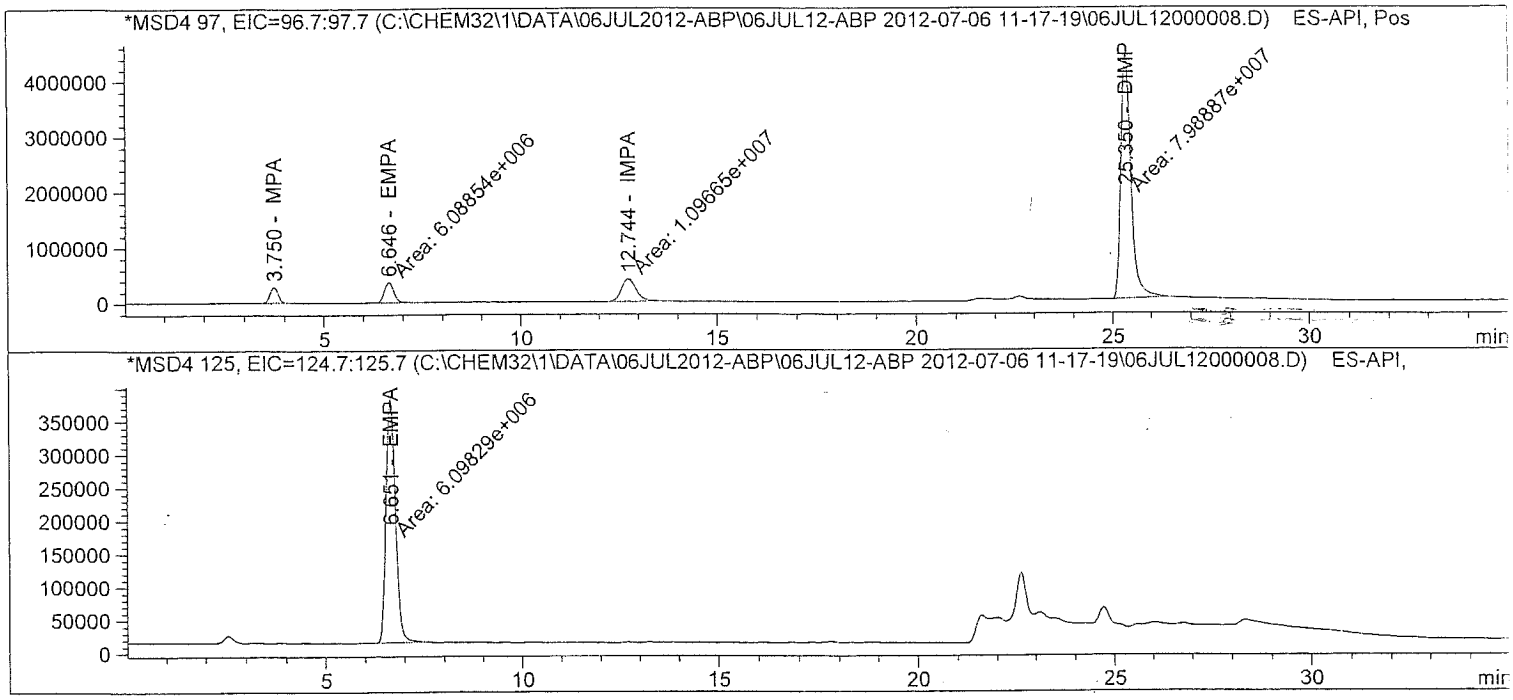
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.890	MM	I	1 2.67017e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 8 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
Sample Name: ICV

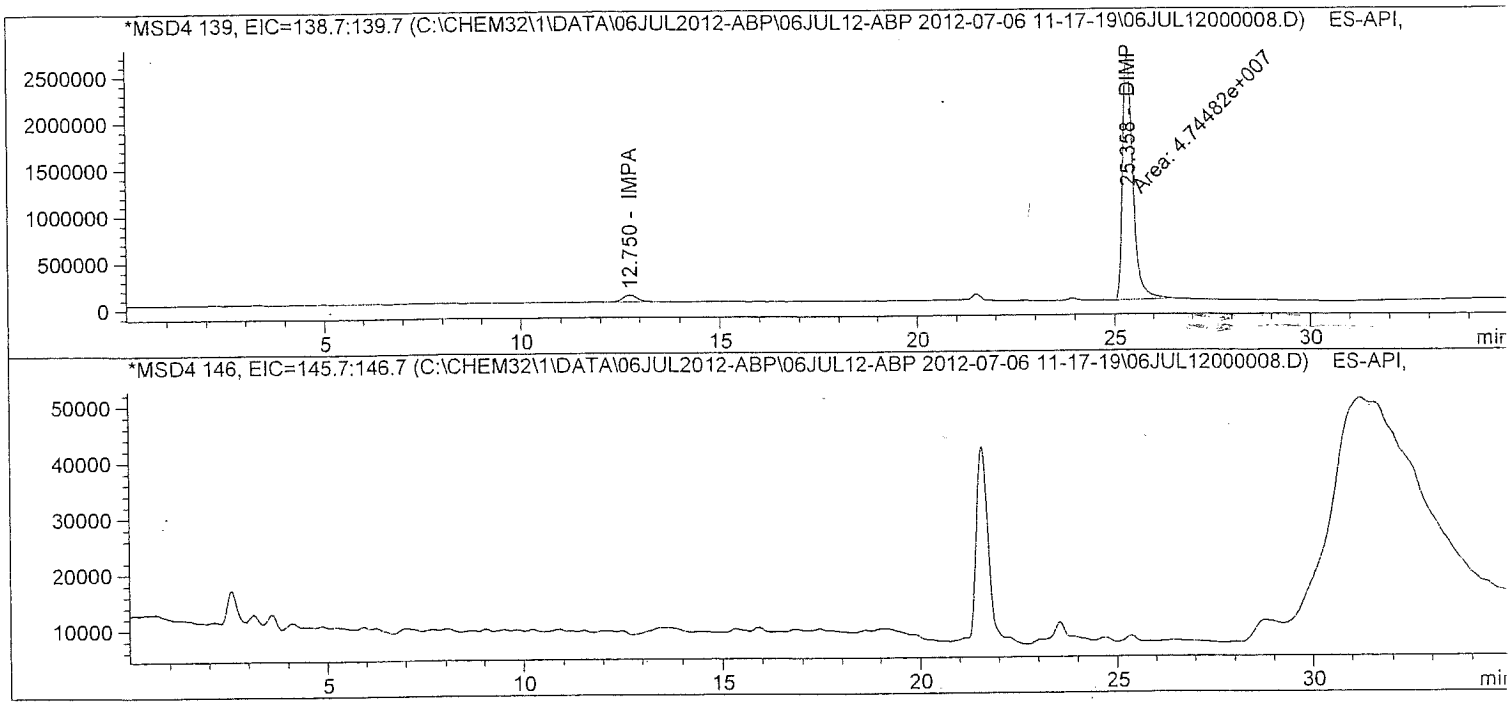
Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



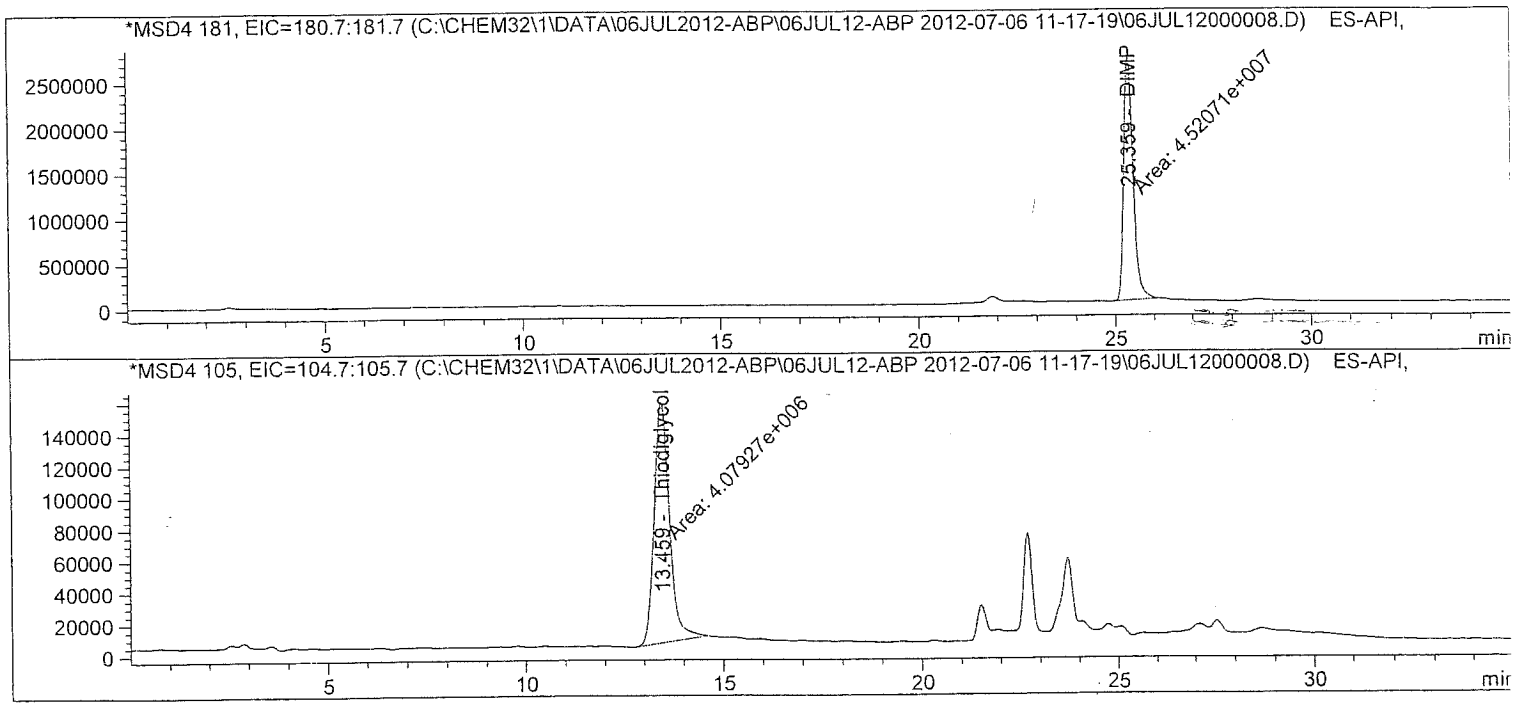
atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

==========

Acq. Operator : TTM
Seq. Line : 8
Acq. Instrument : LCMS3
Location : Vial 7
Injection Date : 7/6/2012 3:32:02 PM
Inj : 1
Inj Volume : 10 µl

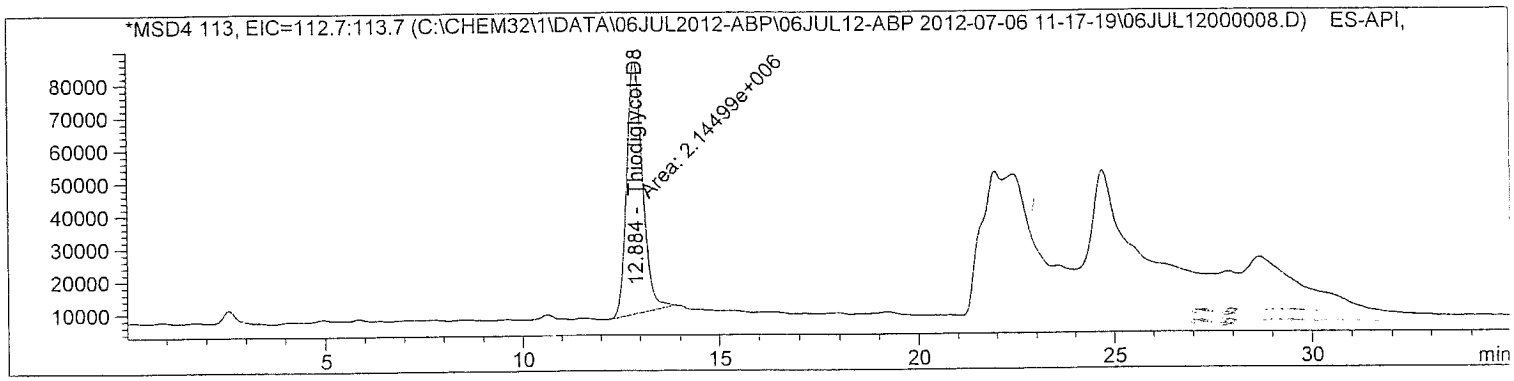
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

==========



atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator : TTM
Seq. Line : 8
Acq. Instrument : LCMS3
Location : Vial 7
Injection Date : 7/6/2012 3:32:02 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 2.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.750	BB	1	4.04355e6	1.04390e-1	1.96787		MPA
12.744	MM	1	1.09665e7	4.26853e-2	2.18233		IMPA

Totals without ISTD(s) : 4.15020

atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 3:32:02 PM
Seq. Line : 8
Location : Vial 7
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.651	MM	1	6.09829e6	7.65569e-2	2.17655		EMPA

Totals without ISTD(s) : 2.17655

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.359	MM	1	4.52071e7	1.00834e-2	2.12514		DIMP

Totals without ISTD(s) : 2.12514

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.459	MM	1	4.07927e6	1.15268e-1	2.19214		Thiodiglycol

Totals without ISTD(s) : 2.19214

Batch Run # 8 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
Sample Name: ICV

Acq. Operator	: TTM	Seq. Line :	8
Acq. Instrument	: LCMS3	Location :	Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj :	1
		Inj Volume :	10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.884	MM	I	1 2.14499e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***



ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

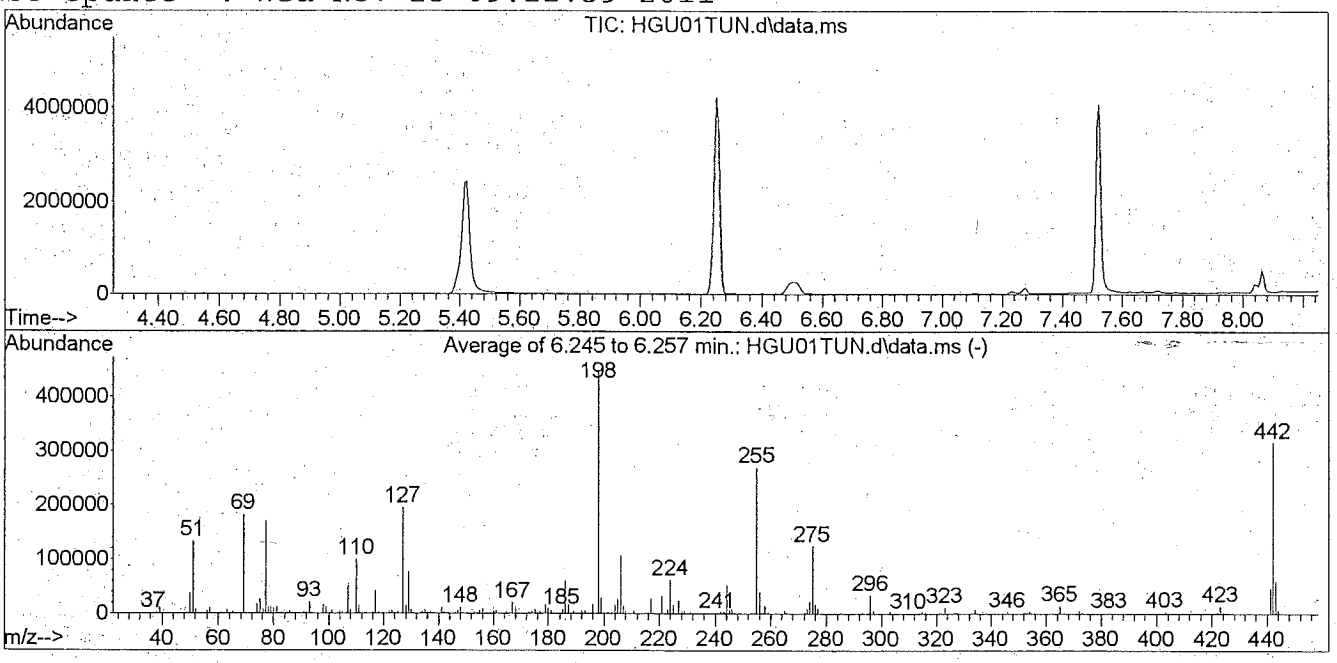
Environmental Division

Analytical Documentation

Data Path : D:\1\DATA\2012\AUG12\08AUG12H\
Data File : HGU01TUN.d
Acq On : 08/08/2012 10:06
Operator : RAH
Sample : 8270 DFTPP 13808
Inst : 5975-H
Misc : X:1/11/13
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : D:\1\METHODS\8270DTUN.M
Title : EPA/CLP SOM01
Last Update : Wed Nov 23 09:22:39 2011



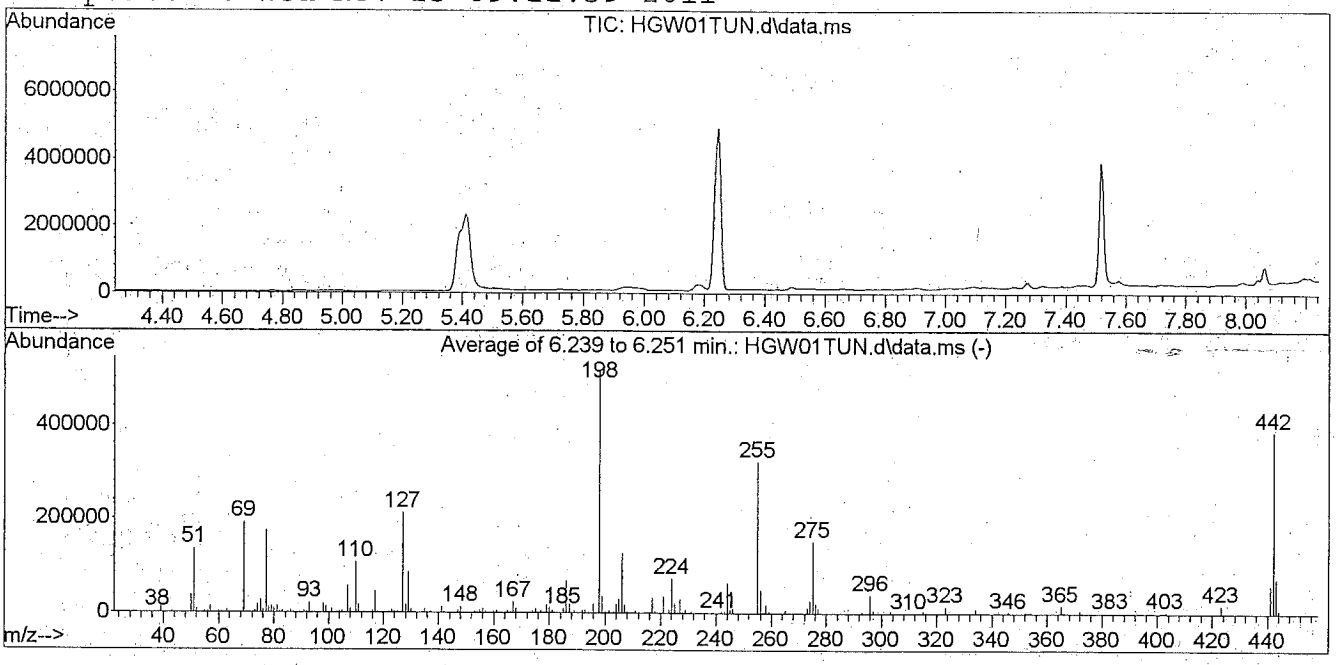
AutoFind: Scans 775, 776, 777; Background Corrected with Scan 767

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.6	133016	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	40.5	182007	PASS
70	69	0.00	2	0.5	863	PASS
127	198	10	80	43.3	194795	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	449451	PASS
199	198	5	9	6.7	30245	PASS
275	198	10	60	27.8	124987	PASS
365	198	1	100	3.0	13675	PASS
441	443	0.01	100	78.8	47803	PASS
442	198	50	100	70.3	315904	PASS
443	442	15	24	19.2	60693	PASS

Data Path : D:\1\DATA\2012\AUG12\09AUG12H\
Data File : HGW01TUN.d
Acq On : 08/09/2012 09:47
Operator : RAH
Sample : 8270 DFTPP 13808
Inst : 5975-H
Misc : X:1/11/13
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : D:\1\METHODS\8270DTUN.M
Title : EPA/CLP SOM01
Last Update : Wed Nov 23 09:22:39 2011



AutoFind: Scans 774, 775, 776; Background Corrected with Scan 761

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	26.1	135702	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	36.9	191394	PASS
70	69	0.00	2	0.9	1708	PASS
127	198	10	80	40.8	211858	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	519373	PASS
199	198	5	9	6.9	35650	PASS
275	198	10	60	29.2	151723	PASS
365	198	1	100	3.0	15653	PASS
441	443	0.01	100	78.9	58533	PASS
442	198	50	100	74.5	387008	PASS
443	442	15	24	19.2	74211	PASS

Form 6 Equivalent

Initial Calibration Report

EPA Method 8270D

90 percent must meet criteria -- min RF and [RSD<15% or correlation coefficient > 0.990]

SSTD005 = HGU07S05.D
SSTD020 = HGU06S20.D
SSTD035 = HGU05S35.D
SSTD050 = HGU02S50.D
SSTD065 = HGU04S65.D
SSTD080 = HGU03S80.D

percent meeting criteria: **100.0**
PASSED

	RRF005	RRF020	RRF035	RRF050	RRF065	RRF080	RF-AVE	RSD	MIN RF	use quad regression?	correlation coefficient	meets criteria?
2) 2-Fluorophenol	1.161	1.359	1.371	1.386	1.399	1.387	1.344	**6.7**	0.001			ok
3) 1,4-Oxathiane	0.735	0.667	0.673	0.695	0.687	0.710	0.694	**3.6**	0.001			ok
4) Phenol-d5	1.548	1.771	1.805	1.792	1.838	1.821	1.762	**6.1**	0.001			ok
5) 1,4-Dithiane	1.194	1.078	1.092	1.125	1.117	1.144	1.125	**3.7**	0.001			ok
7) Nitrobenzene-d5	0.303	0.345	0.355	0.350	0.356	0.349	0.343	**5.7**	0.001			ok
9) 2-Fluorobiphenyl	1.357	1.493	1.522	1.504	1.512	1.514	1.484	**4.2**	0.001			ok
11) 2,4,6-Tribromophenol	0.109	0.132	0.140	0.141	0.143	0.143	0.135	**9.7**	0.001			ok
13) Terphenyl-d14	0.706	0.771	0.809	0.779	0.789	0.779	0.772	**4.5**	0.001			ok

Form 7 Equivalent

8270D Calibration Verification Report

Calibration Verification File: **HGV02S50.D** Initial Calibration: HGU

80 percent must meet criteria (%D<20 and min RF)
percent meeting criteria: **100.0** PASSED

	AVG RF	CCV RF	MIN RF	CCV conc	target conc	%difference *	%drift *	flag
2-Fluorophenol	1.343	1.364	0.001			**1.5**		ok
1,4-Oxathiane	0.694	0.673	0.001			**3.1**		ok
Phenol-d5	1.762	1.816	0.001			**3.0**		ok
1,4-Dithiane	1.125	1.100	0.001			**2.2**		ok
Nitrobenzene-d5	0.343	0.353	0.001			**2.9**		ok
2-Fluorobiphenyl	1.484	1.542	0.001			**3.9**		ok
2,4,6-Tribromophenol	0.135	0.140	0.001			**4.0**		ok
Terphenyl-d14	0.772	0.806	0.001			**4.4**		ok

* Percent difference is used for compounds quantitated by average response factor.
Percent drift is used for compounds quantitated by regression fits

Form 7 Equivalent

8270D Calibration Verification Report

Calibration Verification File: **HGW02S50.D** Initial Calibration: HGU

80 percent must meet criteria (%D<20 and min RF)
percent meeting criteria: **100.0** PASSED

	AVG RF	CCV RF	MIN RF	CCV conc	target conc	%difference *	%drift *	flag
2-Fluorophenol	1.343	1.364	0.001			**1.5**		ok
1,4-Oxathiane	0.694	0.656	0.001			**5.5**		ok
Phenol-d5	1.762	1.838	0.001			**4.3**		ok
1,4-Dithiane	1.125	1.094	0.001			**2.8**		ok
Nitrobenzene-d5	0.343	0.356	0.001			**3.8**		ok
2-Fluorobiphenyl	1.484	1.508	0.001			**1.7**		ok
2,4,6-Tribromophenol	0.135	0.141	0.001			**4.6**		ok
Terphenyl-d14	0.772	0.781	0.001			**1.2**		ok

* Percent difference is used for compounds quantitated by average response factor.
Percent drift is used for compounds quantitated by regression fits

INTERNAL STANDARD AREA SUMMARY

Form 8 equivalent

Continuing Standard Filename	HGV02S50.D	Area 1,4-dcb	Area nap-d8	Area ace-d10	Area phe-d10	Area chry-d12	Area per-d12	
8270 50 std 15952		609521	2629302	1488967	2790138	3164308	2739599	
	Upper Limit	1219042	5258604	2977934	5580276	6328616	5479198	
	Lower limit	304761	1314651	744484	1395069	1582154	1369800	
CLIENT Sample No.	**DCL Sample No.**	**Area 1,4-dcb**	**Area nap-d8**	**Area ace-d10**	**Area phe-d10**	**Area chry-d12**	**Area per-d12**	
BLANK	288238	634176	2866601	1694689	3167645	3538626	3042581	
LCS	288239	616951	2811974	1666876	3175254	3540751	2974482	
SO-01	1221555001	596768	2629186	1557816	3010151	3399345	2546365	
SO-01MS	1221555002	593158	2639556	1547208	2977423	3239774	2209800	
SO-01MSD	1221555003	604358	2687758	1590717	3039200	3349830	2207304	
SO-01 Dup	1221555004	631143	2825623	1662613	3258961	3490255	2157610	
SO-02(01.5)	1221555005	613549	2703945	1582176	3007949	2863901	1708219	
SO-03	1221555007	617155	2700903	1551458	3014594	3178521	1831914	
SO-04(02)	1221555008	632379	2803918	1652363	3207177	3414191	2124120	
SO-05	1221555009	603088	2670637	1607553	3085419	2939522	1495095	
SO-06	1221555010	631428	2801088	1504840	2771233	596418 *	58946	*
SO-07	1221555011	611625	2695024	1582335	2999810	2535334	1144263	*
SO-08(02)	1221555012	624183	2720537	1571900	2922975	2040019	868270	*
SO-09	1221555013	584589	2517463	1482306	2785376	2420441	1154325	*
SO-10(01.5)	1221555014	632757	2749034	1622936	3057148	2688514	1165193	*

* This internals standard is not pertinent to the analysis. It does not reference the requested target analytes

LIMITS: Areas should be within 50 to 200 percent of the corresponding area in the calibration standard.

INTERNAL STANDARD RETENTION-TIME SUMMARY

Form 8 equivalent

Continuing Standard Filename	HGV02S50.D	RT 1,4-dcb	RT nap-d8	RT ace-d10	RT phe-d10	RT chry-d12	RT per-d12
8270 50 std 15952		4.03	5.34	7.86	10.45	14.92	16.98
	Upper Limit	4.53	5.84	8.36	10.95	15.42	17.48
	Lower limit	3.53	4.84	7.36	9.95	14.42	16.48
CLIENT Sample No.	**DCL Sample No.**	**RT 1,4-dcb**	**RT nap-d8**	**RT ace-d10**	**RT phe-d10**	**RT chry-d12**	**RT per-d12**
BLANK	288238	4.03	5.34	7.85	10.44	14.92	16.97
LCS	288239	4.03	5.34	7.86	10.44	14.92	16.97
SO-01	1221555001	4.03	5.33	7.85	10.44	14.92	16.97
SO-01MS	1221555002	4.03	5.33	7.85	10.44	14.92	16.97
SO-01MSD	1221555003	4.03	5.33	7.85	10.44	14.92	16.98
SO-01 Dup	1221555004	4.03	5.34	7.86	10.44	14.92	16.98
SO-02(01.5)	1221555005	4.03	5.34	7.85	10.44	14.92	16.97
SO-03	1221555007	4.03	5.34	7.86	10.44	14.92	16.98
SO-04(02)	1221555008	4.03	5.34	7.86	10.44	14.92	16.97
SO-05	1221555009	4.04	5.34	7.86	10.44	14.92	16.99
SO-06	1221555010	4.03	5.34	7.86	10.44	14.91	16.97
SO-07	1221555011	4.03	5.34	7.86	10.45	14.92	16.98
SO-08(02)	1221555012	4.04	5.34	7.86	10.45	14.92	16.97
SO-09	1221555013	4.04	5.34	7.86	10.45	14.92	16.99
SO-10(01.5)	1221555014	4.04	5.34	7.86	10.45	14.92	16.98

LIMITS: Retention times should be within 30 seconds of the corresponding time in the calibration standard.

INTERNAL STANDARD AREA SUMMARY

Form 8 equivalent

Continuing Standard Filename	HGW02S50.D	Area 1,4-dcb	Area nap-d8	Area ace-d10	Area phe-d10	Area chry-d12	Area per-d12
8270 50 std 15952		617440	2748326	1665713	3295873	3959164	3437480
	Upper Limit	1234880	5496652	3331426	6591746	7918328	6874960
	Lower limit	308720	1374163	832857	1647937	1979582	1718740

CLIENT Sample No.	DCL Sample No.	Area 1,4-dcb	Area nap-d8	Area ace-d10	Area phe-d10	Area chry-d12	Area per-d12
BLANK	289024	662265	2960502	1742167	3344079	3897327	3482876
LCS	289025	654888	2883649	1628301	3156371	3521185	3155976
LCS (DUP)	289026	835574	3763165	2206399	4300599	4926060	4356509
SO-02(01.5)ERB	1221555006	654210	2919579	1705329	3308929	3686258	3181948
SO-37(09.5)ERB	1221656017	765811	3442945	1987125	3782071	4341900	3787157

LIMITS: Areas should be within 50 to 200 percent of the corresponding area in the calibration standard.

INTERNAL STANDARD RETENTION-TIME SUMMARY

Form 8 equivalent

Continuing Standard Filename	HGW02S50.D	RT 1,4-dcb	RT nap-d8	RT ace-d10	RT phe-d10	RT chry-d12	RT per-d12
8270 50 std 15952		4.03	5.34	7.86	10.45	14.93	16.99
	Upper Limit	4.53	5.84	8.36	10.95	15.43	17.49
	Lower limit	3.53	4.84	7.36	9.95	14.43	16.49
CLIENT Sample No.	**DCL Sample No.**	**RT 1,4-dcb**	**RT nap-d8**	**RT ace-d10**	**RT phe-d10**	**RT chry-d12**	**RT per-d12**
BLANK	289024	4.03	5.34	7.86	10.45	14.92	16.99
LCS	289025	4.03	5.34	7.86	10.45	14.92	16.99
LCS (DUP)	289026	4.03	5.34	7.86	10.45	14.92	16.99
SO-02(01.5)ERB	1221555006	4.03	5.34	7.86	10.45	14.92	16.98
SO-37(09.5)ERB	1221656017	4.03	5.34	7.86	10.45	14.92	16.99

LIMITS: Retention times should be within 30 seconds of the corresponding time in the calibration standard.

ONS

Batch Worklist

Batch: ENVX/ 15748 Created: 8/6/2012 13:10 Instrument: HBN: 91114

Rule: EPA 3550, Sonic SVOA Soil Analyst: L. Edwards Status: NA

Workorder: 1221555

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	288238	MB for HBN 91114 [ENVX/15748]			4	MB		E3550SV.4P	6158	8/20/2012	8/6/2012	
2	288239	LCS for HBN 91114 [ENVX/15748]			4	LCS		E3550SV.4P	6158	8/20/2012	8/6/2012	
3	288240	RLVS for HBN 91114 [ENVX/15748			4	RLVS		E3550SV.4P	6158	8/20/2012	8/6/2012	
4	1221555001	FTSW-HR-SO-01			4	SAMPLE	1221555001-A	E3550SV.4P	5480	8/13/2012	8/6/2012	
5	1221555002	FTSW-HR-SO-01 MS			4	MS	1221555002-A	E3550SV.4P	5480	8/13/2012	8/6/2012	
6	1221555003	FTSW-HR-SO-01 MSD			4	MSD	1221555003-A	E3550SV.4P	5480	8/13/2012	8/6/2012	
7	1221555004	FTSW-HR-SO-01 Dup			4	DUP	1221555004-A	E3550SV.4P	5480	8/13/2012	8/6/2012	
8	1221555005	FTSW-HR-SO-02(01.5)			4	SAMPLE	1221555005-A	E3550SV.4P	5480	8/13/2012	8/6/2012	
9	1221555007	FTSW-HR-SO-03			4	SAMPLE	1221555007-A	E3550SV.4P	5480	8/13/2012	8/6/2012	
10	1221555008	FTSW-HR-SO-04 (02)			4	SAMPLE	1221555008-A	E3550SV.4P	5480	8/13/2012	8/6/2012	
11	1221555009	FTSW-HR-SO-05			4	SAMPLE	1221555009-A	E3550SV.4P	5480	8/13/2012	8/6/2012	
12	1221555010 BS	FTSW-HR-SO-06			4	SAMPLE	1221555010-A	E3550SV.4P	5480	8/13/2012	8/6/2012	
13	1221555011 BS	FTSW-HR-SO-07			4	SAMPLE	1221555011-A	E3550SV.4P	5480	8/13/2012	8/6/2012	
14	1221555012 BS	FTSW-HR-SO-08 (02)			4	SAMPLE	1221555012-A	E3550SV.4P	5480	8/13/2012	8/6/2012	
15	1221555013 BS	FTSW-HR-SO-09			4	SAMPLE	1221555013-A	E3550SV.4P	5480	8/13/2012	8/6/2012	
16	1221555014 BS	FTSW-HR-SO-10 (01.5)			4	SAMPLE	1221555014-A	E3550SV.4P	5480	8/13/2012	8/6/2012	

8270 SV

Batch Worklist

Batch: ENVX/ 15783
Rule: EPA 3510, Sep Funnel SVOA

Created: 8/8/2012 17:07
Analyst: D. Calder

Instrument:
Status: NA

HBN: 91345

Workorder: 1221555
Workorder: 1221656

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	✓ 289024 TPH!	MB for HBN 91345 [ENVX/15783]			3	MB		E3510SV.3P	6141	8/15/2012	8/6/2012	
2	✓ 289025 TPH!	LCS for HBN 91345 [ENVX/15783]			3	LCS		E3510SV.3P	6141	8/15/2012	8/6/2012	
3	✓ 289026	LCSD for HBN 91345 [ENVX/15783			3	LCSD		E3510SV.3P	6141	8/15/2012	8/6/2012	
4	✓ 1221555006 TPH	FTSW-HR-SO-02(01.5)ERB			3	SAMPLE	1221555006-A	E3510SV.3P	5480	8/6/2012	8/6/2012	
	*RERUN[5195,RX]											
5	✓ 1221656017	FTSW-HR-SO-37(09.5)ERB			3	SAMPLE	1221656017-A	E3510SV.3P	5480	8/8/2012	8/8/2012	
	*RERUN[5195,RX]											

8270 SV

ONP

EVO: 91316

Batch Worklist

Batch: ENVX/ 15743
Rule: EPA 3510, Sep Funnel SVOA

Created: 8/6/2012 11:47
Analyst: L. Edwards

Instrument:
Status: NA

HBN: 91101

Workorder: 1221555
Workorder: 1221656

This batch not used - wrong spike in LCS

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	288217	RLVS for HBN 91101 [ENVX/15743			3	RLVS		E3510SV.3P	6158	8/13/2012	8/6/2012	
2	288218	MB for HBN 91101 [ENVX/15743]			3	MB		E3510SV.3P	6158	8/13/2012	8/6/2012	
3	288219	LCS for HBN 91101 [ENVX/15743]			3	LCS		E3510SV.3P	6158	8/13/2012	8/6/2012	
4	288220	LCSD for HBN 91101 [ENVX/15743			3	LCSD		E3510SV.3P	6158	8/13/2012	8/6/2012	
5	1221555006	FTSW-HR-SO-02(01.5)ERB			3	SAMPLE	1221555006-A	E3510SV.3P	5480	8/6/2012	8/6/2012	
6	1221656017	FTSW-HR-SO-37(09.5)ERB			3	SAMPLE	1221656017-A	E3510SV.3P	5480	8/8/2012	8/8/2012	

8270 SV

Batch Worklist

Batch: ESVO/ 3811
Rule: SW 8270, Water

Created: 8/10/2012 13:37
Analyst: R. Hendricks

Instrument:
Status: WP

HBN: 91473
%R91473

Workorder: 1221555
Workorder: 1221656

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	289024	MB for HBN 91345 [ENVX/15783]	1000 mL	1 mL	3	MB		S8270...3Q	6141		8/14/2012	
2	289025	LCS for HBN 91345 [ENVX/15783]	1000 mL	1 mL	3	LCS		S8270...3Q	6141		8/14/2012	
3	289026	LCSD for HBN 91345 [ENVX/15783	1000 mL	1 mL	3	LCSD		S8270...3Q	6141		8/14/2012	
4	1221555006 *RERUN[5195,RX]	FTSW-HR-SO-02(01.5)ERB	1000 mL	1 mL	3	SAMPLE	1221555006-A	S8270D...3	5480	9/17/2012	8/14/2012	
5	1221656017 *RERUN[5195,RX]	FTSW-HR-SO-37(09.5)ERB	1000 mL	1 mL	3	SAMPLE	1221656017-A	S8270D...3	5480	9/17/2012	8/17/2012	

Batch Worklist

Batch: ESVO/ 3809
Rule: SW 8270, Soil

Created: 8/9/2012 11:14
Analyst: R. Hendricks

Instrument:
Status: WP

HBN: 91368

Workorder: 1221555

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	288238	MB for HBN 91114 [ENVX/15748]	30 grams	1 mL	4	MB		S827050.4Q	6158		8/13/2012	
2	288239	LCS for HBN 91114 [ENVX/15748]	30 grams	1 mL	4	LCS		S827050.4Q	6158		8/13/2012	
3	288240	RLVS for HBN 91114 [ENVX/15748	30 grams	1 mL	4	RLVS		S827050.4Q	6158		8/13/2012	
4	1221555001	FTSW-HR-SO-01	30.01 grams	1 mL	4	SAMPLE	1221555001-A	S8270D...4	5480	9/15/2012	8/14/2012	
5	1221555002	FTSW-HR-SO-01 MS	30.08 grams	1 mL	4	MS	1221555002-A	S827050.4Q	5480		8/14/2012	
6	1221555003	FTSW-HR-SO-01 MSD	30.02 grams	1 mL	4	MSD	1221555003-A	S827050.4Q	5480		8/14/2012	
7	1221555004	FTSW-HR-SO-01 Dup	30.04 grams	1 mL	4	DUP	1221555004-A	S8270D...4	5480	9/15/2012	8/14/2012	
8	1221555005	FTSW-HR-SO-02(01.5)	30 grams	1 mL	4	SAMPLE	1221555005-A	S8270D...4	5480	9/15/2012	8/14/2012	
9	1221555007	FTSW-HR-SO-03	30.17 grams	1 mL	4	SAMPLE	1221555007-A	S8270D...4	5480	9/15/2012	8/14/2012	
10	1221555008	FTSW-HR-SO-04 (02)	30.08 grams	1 mL	4	SAMPLE	1221555008-A	S8270D...4	5480	9/15/2012	8/14/2012	
11	1221555009	FTSW-HR-SO-05	30.03 grams	1 mL	4	SAMPLE	1221555009-A	S8270D...4	5480	9/15/2012	8/14/2012	
12	1221555010	FTSW-HR-SO-06	30.11 grams	1 mL	4	SAMPLE	1221555010-A	S8270D...4	5480	9/15/2012	8/14/2012	
13	1221555011	FTSW-HR-SO-07	30.05 grams	1 mL	4	SAMPLE	1221555011-A	S8270D...4	5480	9/15/2012	8/14/2012	
14	1221555012	FTSW-HR-SO-08 (02)	30.07 grams	1 mL	4	SAMPLE	1221555012-A	S8270D...4	5480	9/15/2012	8/14/2012	
15	1221555013	FTSW-HR-SO-09	30 grams	1 mL	4	SAMPLE	1221555013-A	S8270D...4	5480	9/15/2012	8/14/2012	
16	1221555014	FTSW-HR-SO-10 (01.5)	30.1 grams	1 mL	4	SAMPLE	1221555014-A	S8270D...4	5480	9/15/2012	8/14/2012	

DATACHEM LABORATORIES - GC\MS SEMIVOLATILE ANALYSIS
INJECTION LOGBOOK
INSTRUMENT 5975-H

File Name	Date and Time Injected	OP	Method	ALS BOT	Run Length	Dil Fac	Sample name	Misc info
HGU01TUN	08/08/2012 10:06	RAH	8270DTUN	1	11.53	1	8270 DFTPP 13808	1/11/13
HGU02S50	08/08/2012 10:26	RAH	8270D07	2	20.49	1	8270 50 std 15952	X:1/9/13
HGU03S80	08/08/2012 11:01	RAH	8270D07	3	20.49	1	8270 80 std 15970	X:1/9/13
HGU04S65	08/08/2012 11:30	RAH	8270D07	4	20.49	1	8270 65 std 15971	X:1/9/13
HGU05S35	08/08/2012 12:00	RAH	8270D07	5	20.49	1	8270 35 std 15972	X:1/9/13
HGU06S20	08/08/2012 12:29	RAH	8270D07	6	20.49	1	8270 20 std 15973	X:1/9/13
HGU07S05	08/08/2012 12:59	RAH	8270D07	7	20.49	1	8270 5 std 15974	X:1/9/13
HGU08ICV	08/08/2012 13:29	RAH	8270D07	8	20.49	1	8270 ICV 15975	X:1/9/13
HGV01TUN	08/08/2012 14:07	RAH	8270DTUN	1	11.53	1	8270 DFTPP 13808	1/11/13
HGV02S50	08/08/2012 14:28	RAH	8270DOND	2	20.49	1	8270 50 std 15952	X:1/9/13
HGV03LCS	08/08/2012 14:58	RAH	8270DOND	3	20.49	1	288219	WATER 8270
HGV04LCS	08/08/2012 15:28	RAH	8270DOND	4	20.49	1	288239	SOIL 8270
HGV05BLK	08/08/2012 15:58	RAH	8270DOND	5	20.49	1	288238	SOIL 8270
HGV06RLV	08/08/2012 16:29	RAH	8270DOND	6	20.49	1	288240	SOIL 8270
HGV07C01	08/08/2012 16:58	RAH	8270DOND	7	20.49	1	1221555001	SOIL 8270
HGV08M02	08/08/2012 17:28	RAH	8270DOND	8	20.49	1	1221555002	SOIL 8270
HGV09M03	08/08/2012 17:56	RAH	8270DOND	9	20.49	1	1221555003	SOIL 8270
HGV10C04	08/08/2012 18:26	RAH	8270DOND	10	20.49	1	1221555004	SOIL 8270
HGV11C05	08/08/2012 18:55	RAH	8270DOND	11	20.49	1	1221555005	SOIL 8270
HGV12C07	08/08/2012 19:24	RAH	8270DOND	12	20.49	1	1221555007	SOIL 8270
HGV13C08	08/08/2012 19:54	RAH	8270DOND	13	20.49	1	1221555008	SOIL 8270
HGV14C09	08/08/2012 20:24	RAH	8270DOND	14	20.49	1	1221555009	SOIL 8270
HGV15C10	08/08/2012 20:53	RAH	8270DOND	15	20.49	1	1221555010	SOIL 8270
HGV16C11	08/08/2012 21:23	RAH	8270DOND	16	20.49	1	1221555011	SOIL 8270
HGV17C12	08/08/2012 21:52	RAH	8270DOND	17	20.49	1	1221555012	SOIL 8270
HGV18C13	08/08/2012 22:22	RAH	8270DOND	18	20.49	1	1221555013	SOIL 8270
HGV19C14	08/08/2012 22:51	RAH	8270DOND	19	20.49	1	1221555014	SOIL 8270

DATACHEM LABORATORIES - GC\MS SEMIVOLATILE ANALYSIS
INJECTION LOGBOOK
INSTRUMENT 5975-H

File Name	Date and Time Injected	OP	Method	ALS BOT	Run Length	Dil Fac	Sample name	Misc info
HGW01TUN	08/09/2012 09:47	RAH	8270DTUN	1	11.53	1	8270 DFTPP 13808	1/11/13
HGW02S50	08/09/2012 10:07	RAH	8270DOND	2	20.49	1	8270 50 std 15952	X:1/9/13
HGW03BLK	08/09/2012 10:35	RAH	8270DOND	3	20.49	1	289024	WATER 8270
HGW04LCS	08/09/2012 11:05	RAH	8270DOND	4	20.49	1	289025	WATER 8270
HGW05LCD	08/09/2012 11:34	RAH	8270DOND	5	20.49	1	289026	WATER 8270
HGW06C06	08/09/2012 12:03	RAH	8270DOND	6	20.49	1	1221555006	WATER 8270
HGW07C17	08/09/2012 12:33	RAH	8270DOND	7	20.49	1	1221656017	WATER 8270
HGW08BLK	08/09/2012 13:02	RAH	8270DOND	8	20.49	1	288277	SOIL 8270
HGW09LCS	08/09/2012 13:32	RAH	8270DOND	9	20.49	1	288278	SOIL 8270
HGW10C01	08/09/2012 14:01	RAH	8270DOND	10	20.49	1	1221656001	SOIL 8270
HGW11M02	08/09/2012 14:31	RAH	8270DOND	11	20.49	1	1221656002	SOIL 8270
HGW12M03	08/09/2012 15:01	RAH	8270DOND	12	20.49	1	1221656003	SOIL 8270
HGW13C04	08/09/2012 15:31	RAH	8270DOND	13	20.49	1	1221656004	SOIL 8270
HGW14C05	08/09/2012 16:01	RAH	8270DOND	14	20.49	1	1221656005	SOIL 8270
HGW15C06	08/09/2012 16:30	RAH	8270DOND	15	20.49	1	1221656006	SOIL 8270
HGW16C08	08/09/2012 17:00	RAH	8270DOND	16	20.49	1	1221656008	SOIL 8270
HGW17C09	08/09/2012 17:29	RAH	8270DOND	17	20.49	1	1221656009	SOIL 8270
HGW18C10	08/09/2012 17:58	RAH	8270DOND	18	20.49	1	1221656010	SOIL 8270
HGW19C12	08/09/2012 18:27	RAH	8270DOND	19	20.49	1	1221656012	SOIL 8270
HGW20C13	08/09/2012 18:56	RAH	8270DOND	20	20.49	1	1221656013	SOIL 8270
HGW21C16	08/09/2012 19:25	RAH	8270DOND	21	20.49	1	1221656016	SOIL 8270
HGW22C11	08/09/2012 19:54	RAH	8270DOND	22	20.49	1	1221656011	SOIL 8270
HGW23C14	08/09/2012 20:24	RAH	8270DOND	23	20.49	1	1221656014	SOIL 8270
HGW24C15	08/09/2012 20:53	RAH	8270DOND	24	20.49	1	1221656015	SOIL 8270
HGW25C07	08/09/2012 21:22	RAH	8270DOND	25	20.49	1	1221656007	SOIL 8270
HGW26RLV	08/09/2012 21:51	RAH	8270DOND	26	20.49	1	288279	SOIL 8270

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

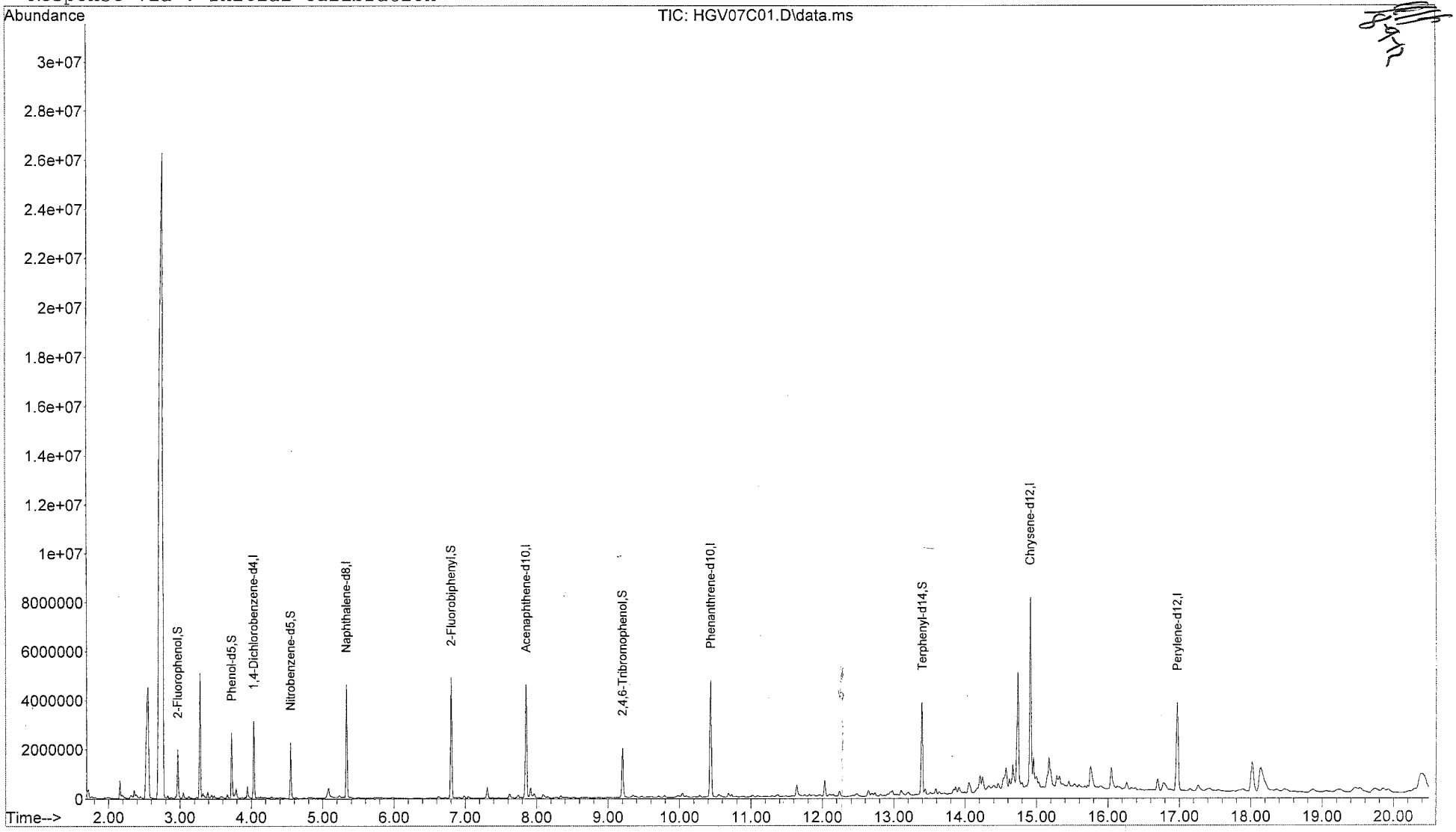
Raw Data

Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV07C01.D Vial: 7
Acq On : 08/08/2012 16:58 Operator: RAH
Sample : 1221555001 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 10:56:54 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV07C01.D Vial: 7
Acq On : 08/08/2012 16:58 Operator: RAH
Sample : 1221555001 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 10:56:54 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	596768	40.00 ug/mL
6) Naphthalene-d8	5.33	136	2629186	40.00 ug/mL
8) Acenaphthene-d10	7.85	164	1557816	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	3010151	40.00 ug/mL
12) Chrysene-d12	14.92	240	3399345	40.00 ug/mL
14) Perylene-d12	16.97	264	2546365	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	606165	30.244ug/mL
4) Phenol-d5	3.72	99	1032850	39.281ug/mL
7) Nitrobenzene-d5	4.55	82	757260	33.599ug/mL
9) 2-Fluorobiphenyl	6.80	172	2155636	37.308ug/mL
11) 2,4,6-Tribromophenol	9.20	330	400305	39.502ug/mL
13) Terphenyl-d14	13.40	244	2063963	31.450ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104	Not Detected	
5) 1,4-Dithiane	0.00	120	Not Detected	

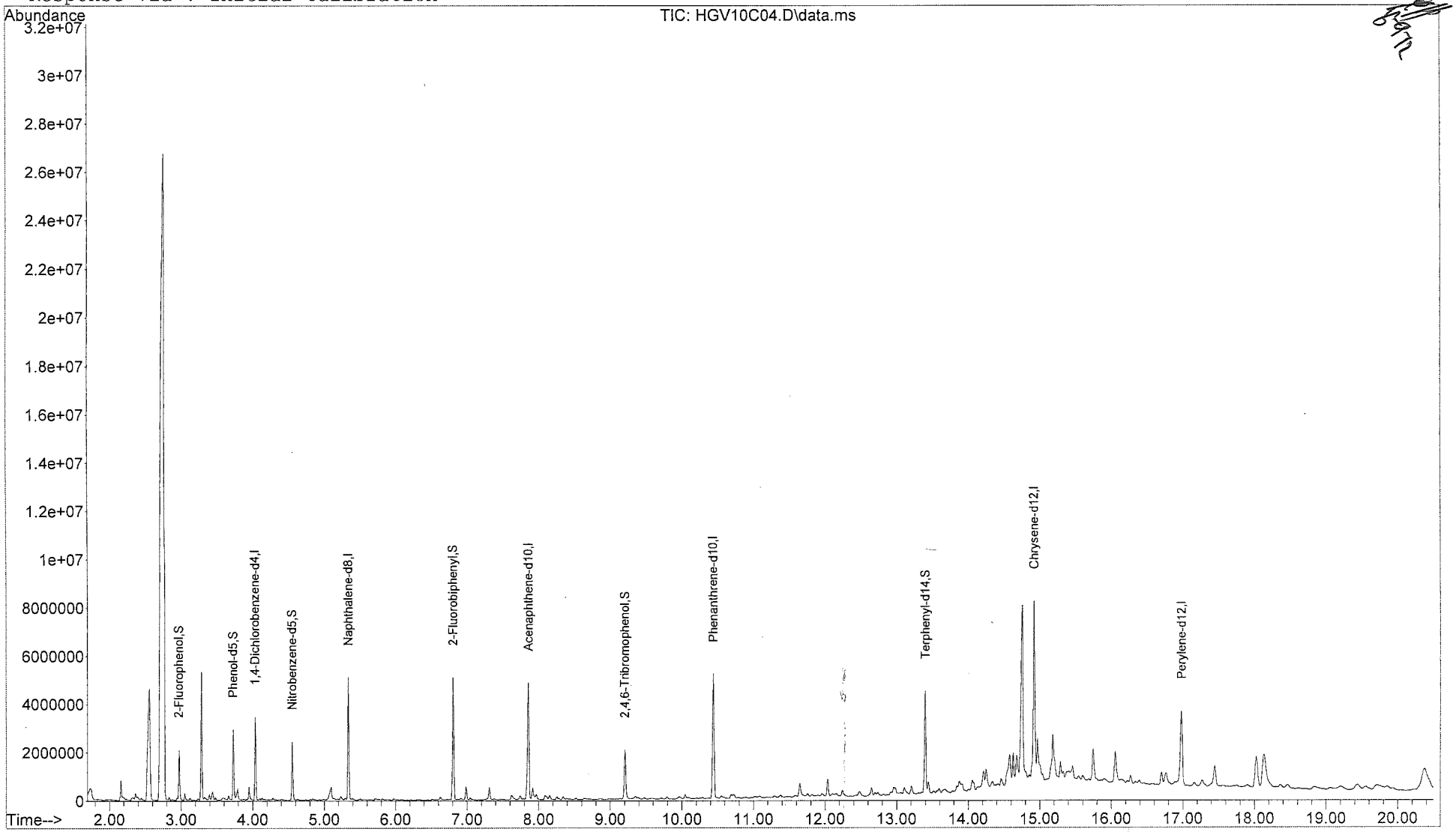
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV10C04.D Vial: 10
Acq On : 08/08/2012 18:26 Operator: RAH
Sample : 1221555004 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 10:57:30 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV10C04.D Vial: 10
Acq On : 08/08/2012 18:26 Operator: RAH
Sample : 1221555004 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 10:57:30 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	631143	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2825623	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1662613	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	3258961	40.00 ug/mL
12) Chrysene-d12	14.92	240	3490255	40.00 ug/mL
14) Perylene-d12	16.98	264	2157610	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	656780	30.984ug/mL
4) Phenol-d5	3.73	99	1115054	40.098ug/mL
7) Nitrobenzene-d5	4.55	82	822359	33.951ug/mL
9) 2-Fluorobiphenyl	6.80	172	2288516	37.111ug/mL
11) 2,4,6-Tribromophenol	9.20	330	426458	38.870ug/mL
13) Terphenyl-d14	13.40	244	2128465	31.588ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

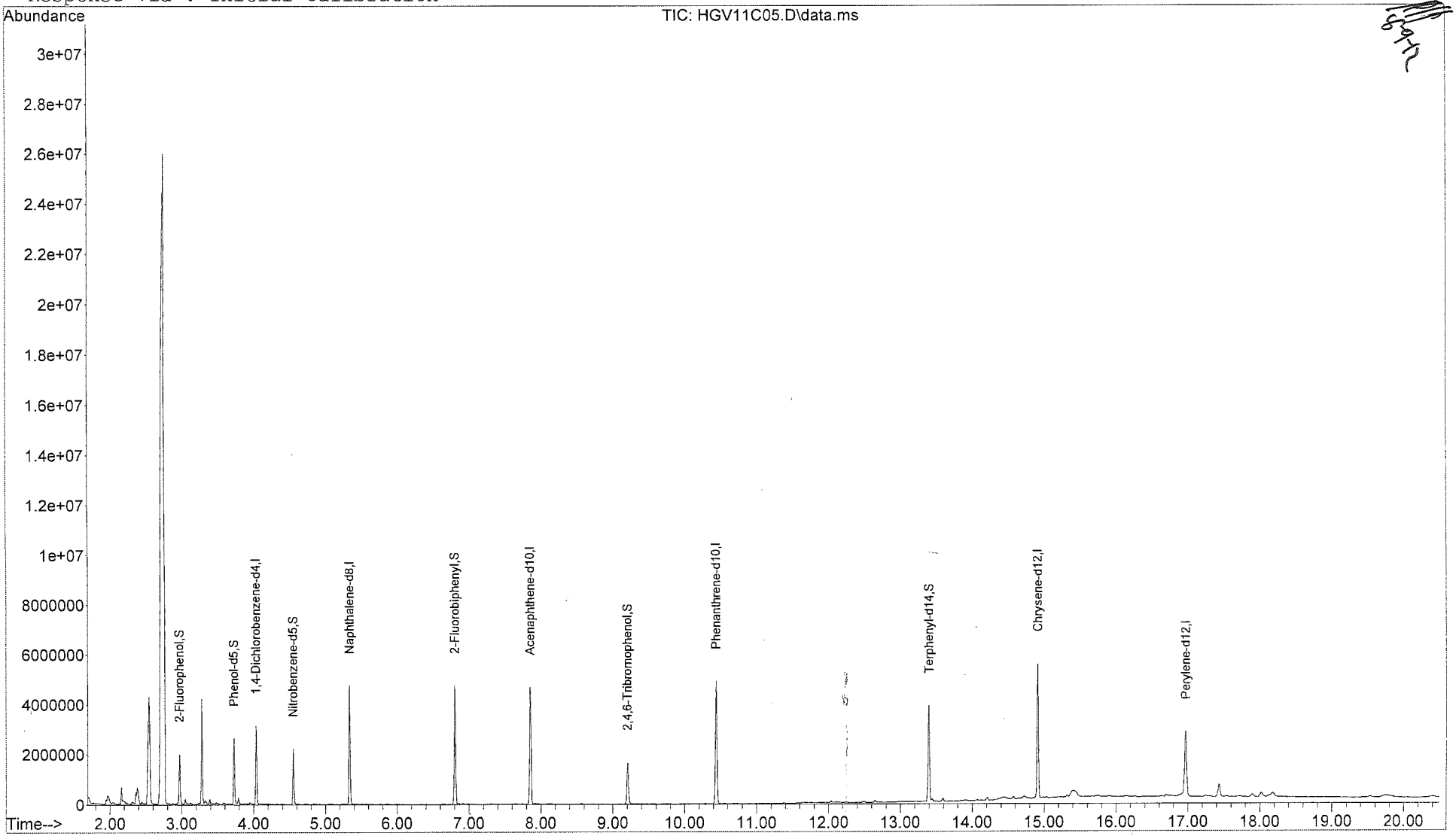
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV11C05.D Vial: 11
Acq On : 08/08/2012 18:55 Operator: RAH
Sample : 1221555005 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 10:57:43 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV11C05.D Vial: 11
Acq On : 08/08/2012 18:55 Operator: RAH
Sample : 1221555005 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 10:57:43 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	613549	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2703945	40.00 ug/mL
8) Acenaphthene-d10	7.85	164	1582176	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	3007949	40.00 ug/mL
12) Chrysene-d12	14.92	240	2863901	40.00 ug/mL
14) Perylene-d12	16.97	264	1708219	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	634973	30.814ug/mL
4) Phenol-d5	3.73	99	1066359	39.446ug/mL
7) Nitrobenzene-d5	4.55	82	765415	33.022ug/mL
9) 2-Fluorobiphenyl	6.80	172	2177606	37.108ug/mL
11) 2,4,6-Tribromophenol	9.21	330	367752	36.316ug/mL
13) Terphenyl-d14	13.40	244	2062291	37.299ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

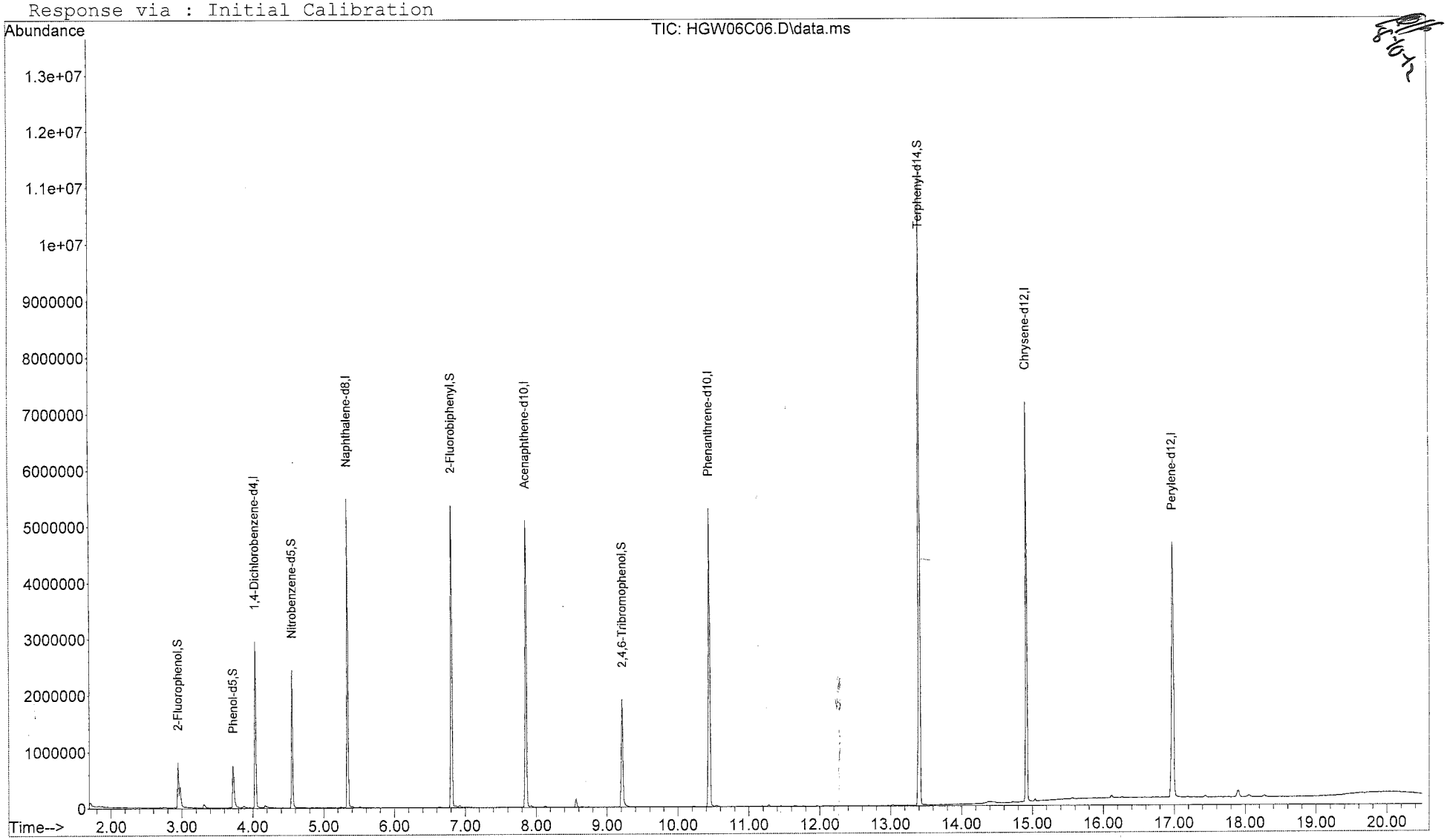
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221555wa\HGW06C06.D Vial: 6
Acq On : 08/09/2012 12:03 Operator: RAH
Sample : 1221555006 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 13:35:39 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221555wa\HGW06C06.D Vial: 6
Acq On : 08/09/2012 12:03 Operator: RAH
Sample : 1221555006 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 13:35:39 2012 Results File: 8270DOND.RES

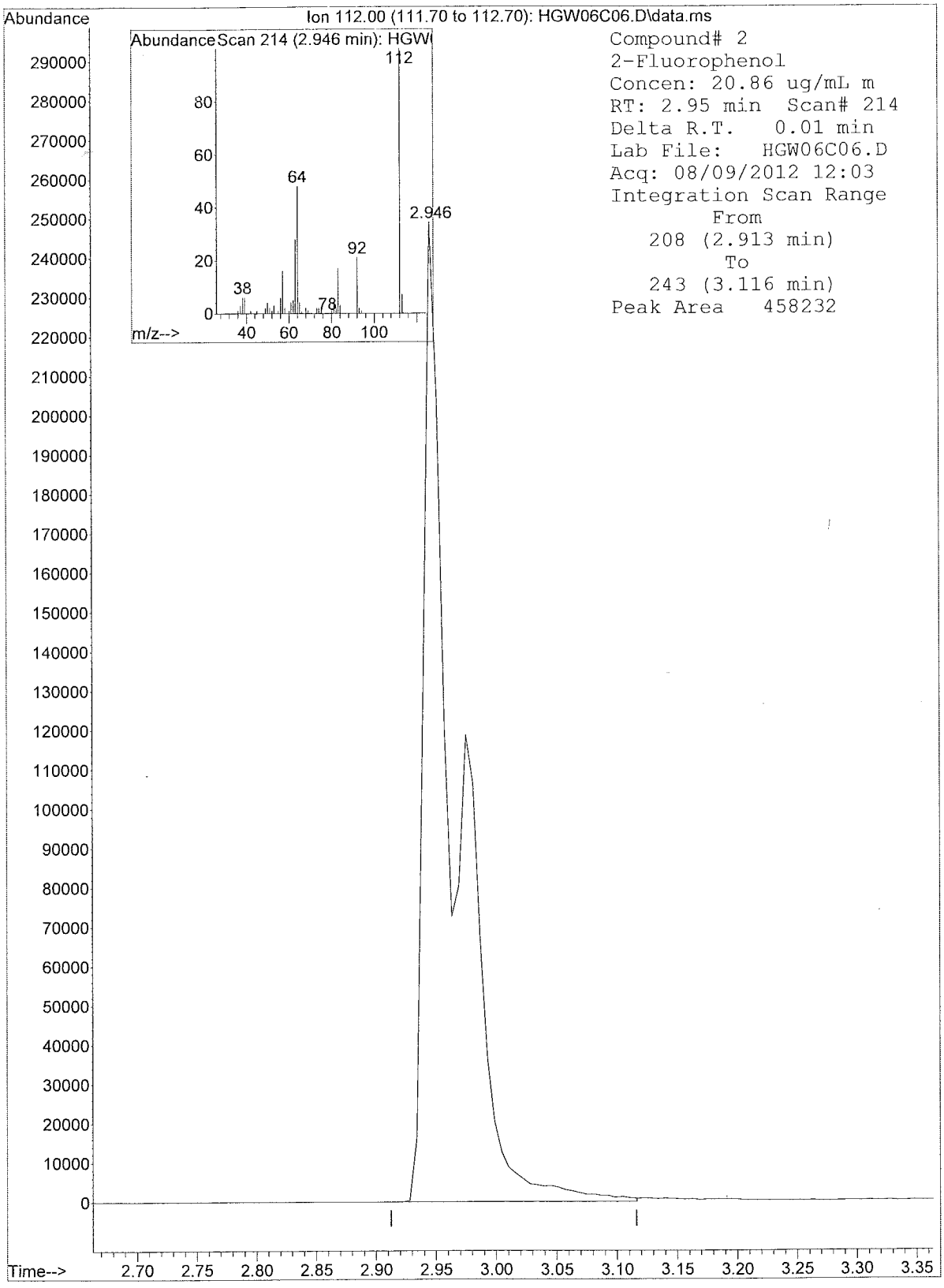
Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	654210	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2919579	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1705329	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3308929	40.00 ug/mL
12) Chrysene-d12	14.92	240	3686258	40.00 ug/mL
14) Perylene-d12	16.98	264	3181948	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	458232	20.855ug/mL m
4) Phenol-d5	3.72	99	463639	16.085ug/mL
7) Nitrobenzene-d5	4.56	82	940590	37.582ug/mL
9) 2-Fluorobiphenyl	6.81	172	2485616	39.298ug/mL
11) 2,4,6-Tribromophenol	9.22	330	439861	39.486ug/mL
13) Terphenyl-d14	13.41	244	6034261	84.790ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

8-10-12

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol

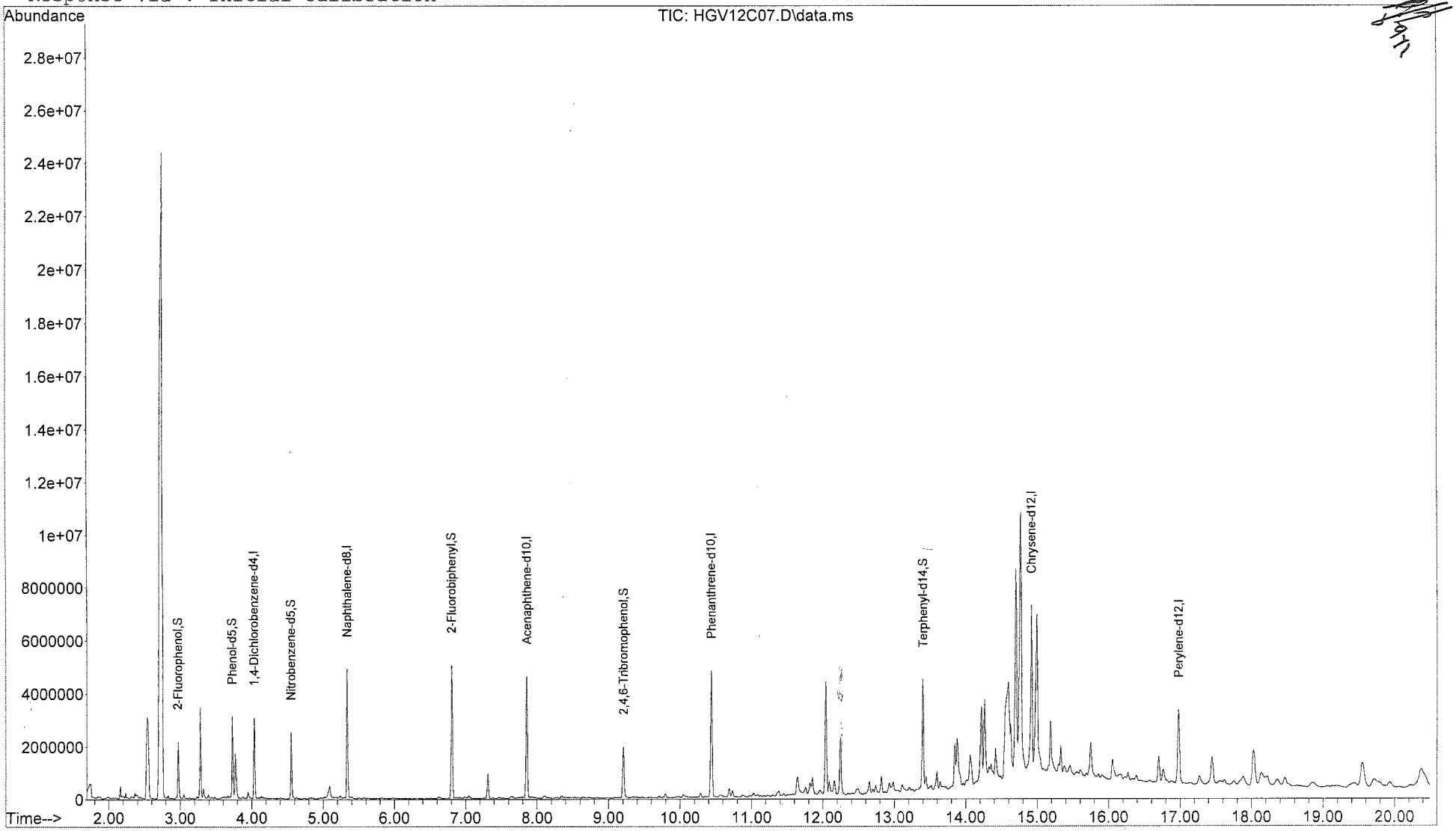


Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV12C07.D Vial: 12
Acq On : 08/08/2012 19:24 Operator: RAH
Sample : 1221555007 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 10:57:54 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV12C07.D Vial: 12
Acq On : 08/08/2012 19:24 Operator: RAH
Sample : 1221555007 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 10:57:54 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	617155	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2700903	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1551458	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	3014594	40.00 ug/mL
12) Chrysene-d12	14.92	240	3178521	40.00 ug/mL
14) Perylene-d12	16.98	264	1831914	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	716141	34.550ug/mL
4) Phenol-d5	3.73	99	1185400	43.594ug/mL
7) Nitrobenzene-d5	4.55	82	880122	38.014ug/mL
9) 2-Fluorobiphenyl	6.81	172	2370632	41.197ug/mL
11) 2,4,6-Tribromophenol	9.21	330	422420	41.623ug/mL
13) Terphenyl-d14	13.40	244	2110054	34.386ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

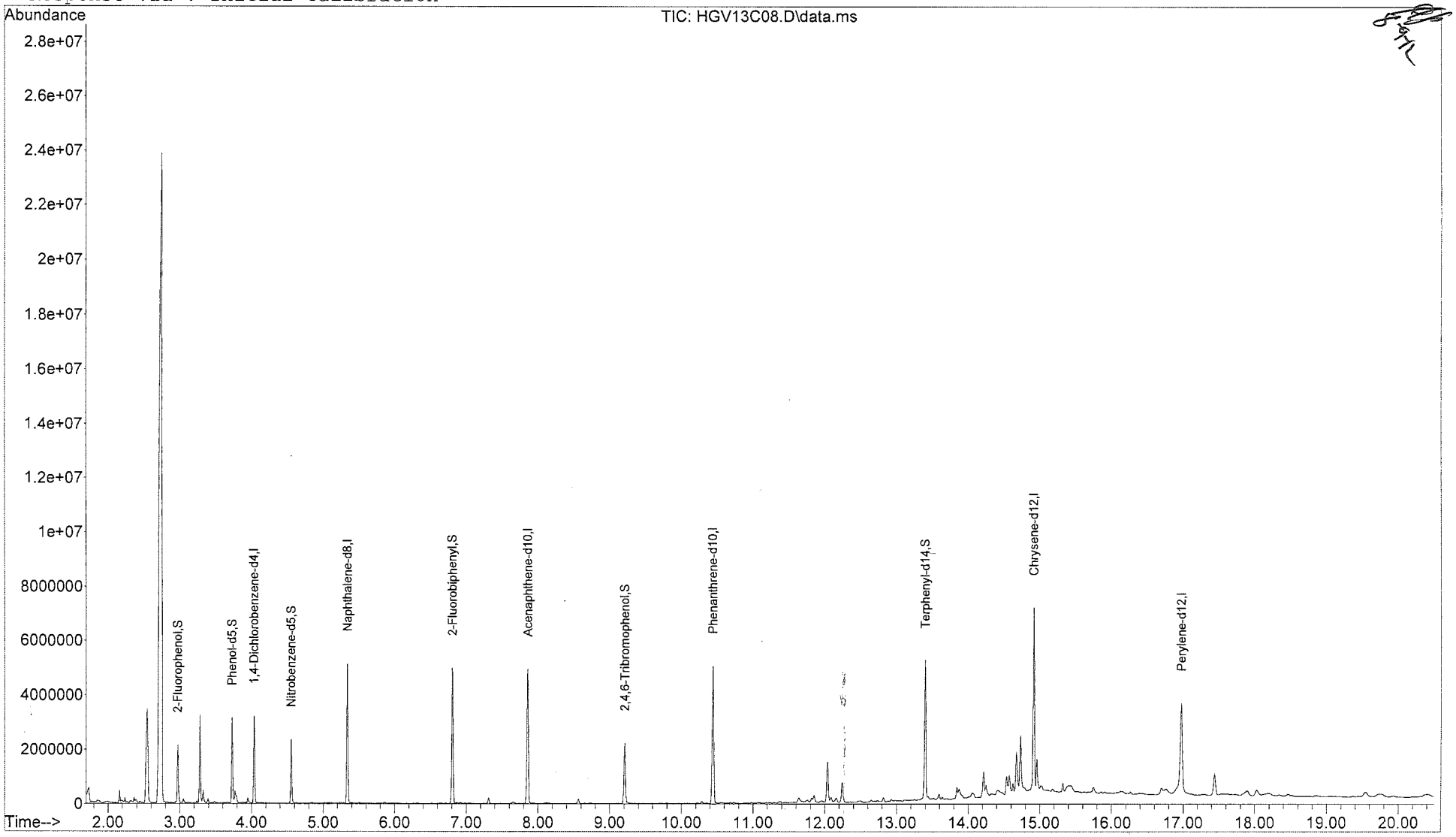
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV13C08.D Vial: 13
Acq On : 08/08/2012 19:54 Operator: RAH
Sample : 1221555008 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 10:58:03 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV13C08.D Vial: 13
Acq On : 08/08/2012 19:54 Operator: RAH
Sample : 1221555008 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 10:58:03 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	632379	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2803918	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1652363	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	3207177	40.00 ug/mL
12) Chrysene-d12	14.92	240	3414191	40.00 ug/mL
14) Perylene-d12	16.97	264	2124120	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	713004	33.571ug/mL
4) Phenol-d5	3.73	99	1176516	42.225ug/mL
7) Nitrobenzene-d5	4.55	82	852918	35.485ug/mL
9) 2-Fluorobiphenyl	6.80	172	2315442	37.781ug/mL
11) 2,4,6-Tribromophenol	9.21	330	463161	42.897ug/mL
13) Terphenyl-d14	13.40	244	2537007	38.489ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104	Not Detected	
5) 1,4-Dithiane	0.00	120	Not Detected	

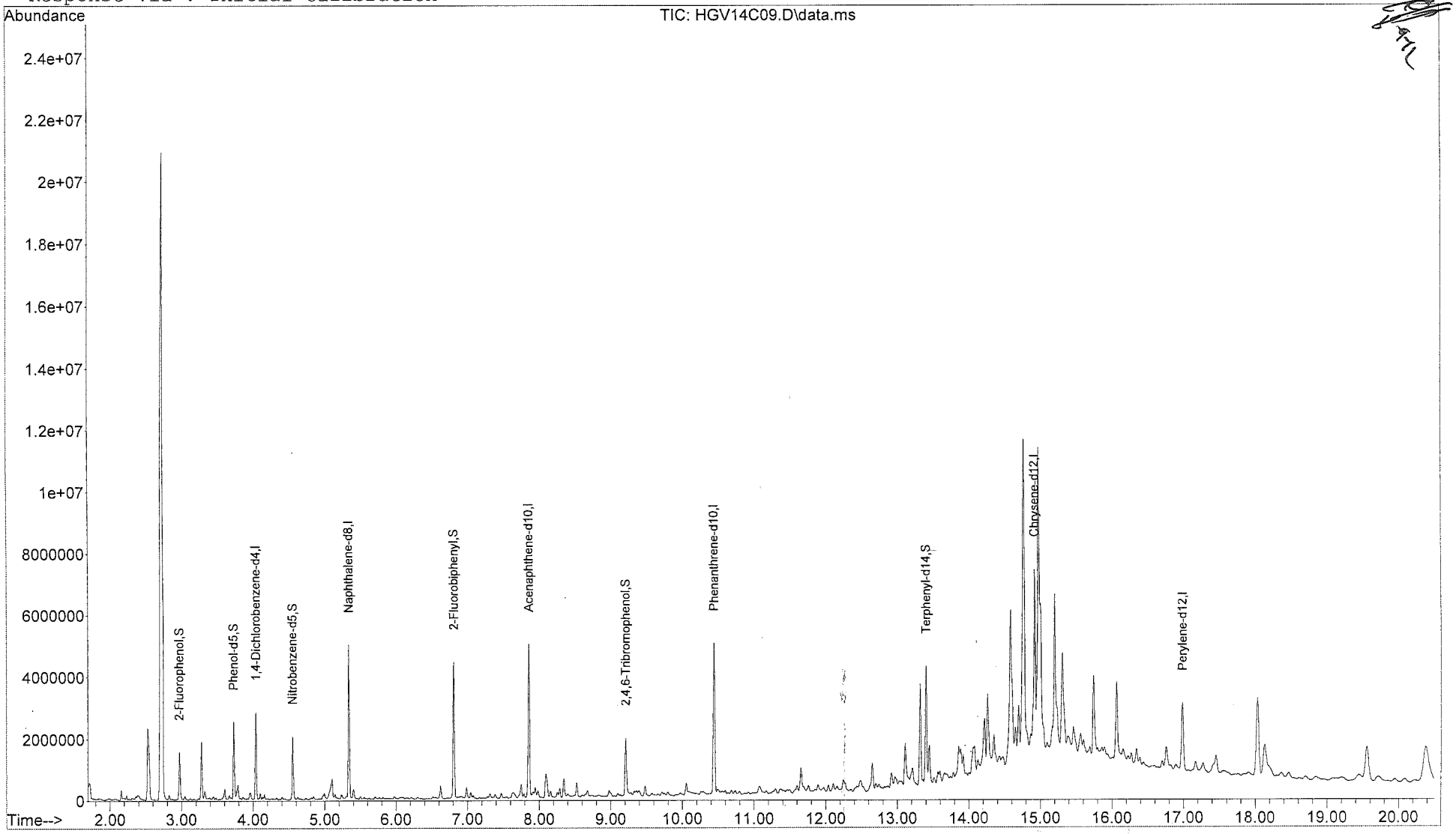
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV14C09.D Vial: 14
Acq On : 08/08/2012 20:24 Operator: RAH
Sample : 1221555009 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 10:58:13 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV14C09.D Vial: 14
Acq On : 08/08/2012 20:24 Operator: RAH
Sample : 1221555009 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 10:58:13 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	603088	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2670637	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1607553	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	3085419	40.00 ug/mL
12) Chrysene-d12	14.92	240	2939522	40.00 ug/mL
14) Perylene-d12	16.99	264	1495095	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	600419	29.643ug/mL
4) Phenol-d5	3.73	99	1007470	37.914ug/mL
7) Nitrobenzene-d5	4.55	82	726667	31.741ug/mL
9) 2-Fluorobiphenyl	6.81	172	2007374	33.667ug/mL
11) 2,4,6-Tribromophenol	9.21	330	371711	35.785ug/mL
13) Terphenyl-d14	13.40	244	1797516	31.674ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104	Not Detected	
5) 1,4-Dithiane	0.00	120	Not Detected	

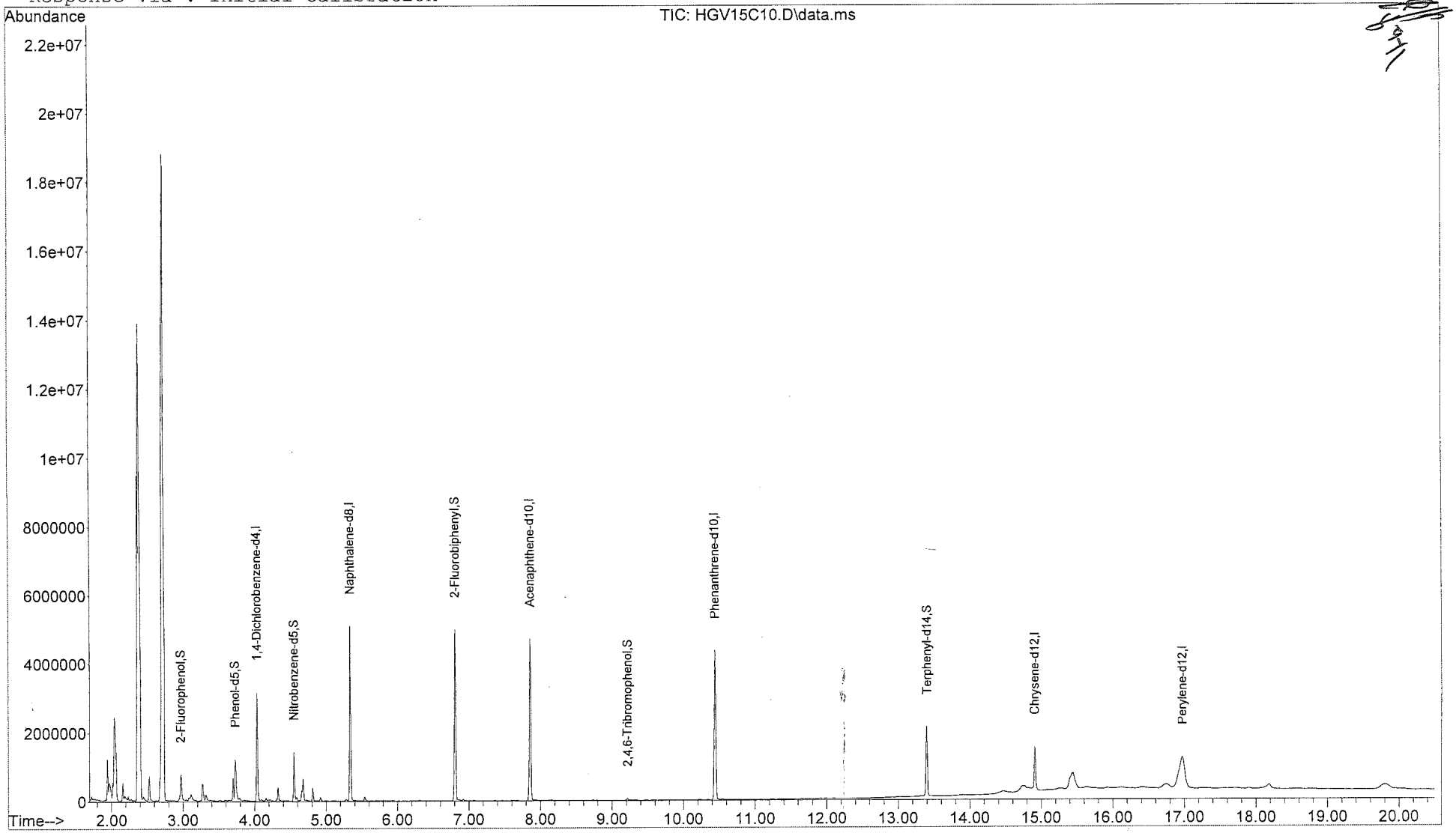
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV15C10.D Vial: 15
Acq On : 08/08/2012 20:53 Operator: RAH
Sample : 1221555010 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 10:58:23 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV15C10.D Vial: 15
Acq On : 08/08/2012 20:53 Operator: RAH
Sample : 1221555010 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 10:58:23 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	631428	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2801088	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1504840	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2771233	40.00 ug/mL
12) Chrysene-d12	14.91	240	596418	40.00 ug/mL
14) Perylene-d12	16.97	264	58946	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	333174	15.711ug/mL
4) Phenol-d5	3.73	99	298665	10.735ug/mL
7) Nitrobenzene-d5	4.55	82	492151	20.496ug/mL
9) 2-Fluorobiphenyl	6.81	172	2307468	41.342ug/mL
11) 2,4,6-Tribromophenol	9.22	330	11629	1.246ug/mL
13) Terphenyl-d14	13.40	244	1095633	95.153ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

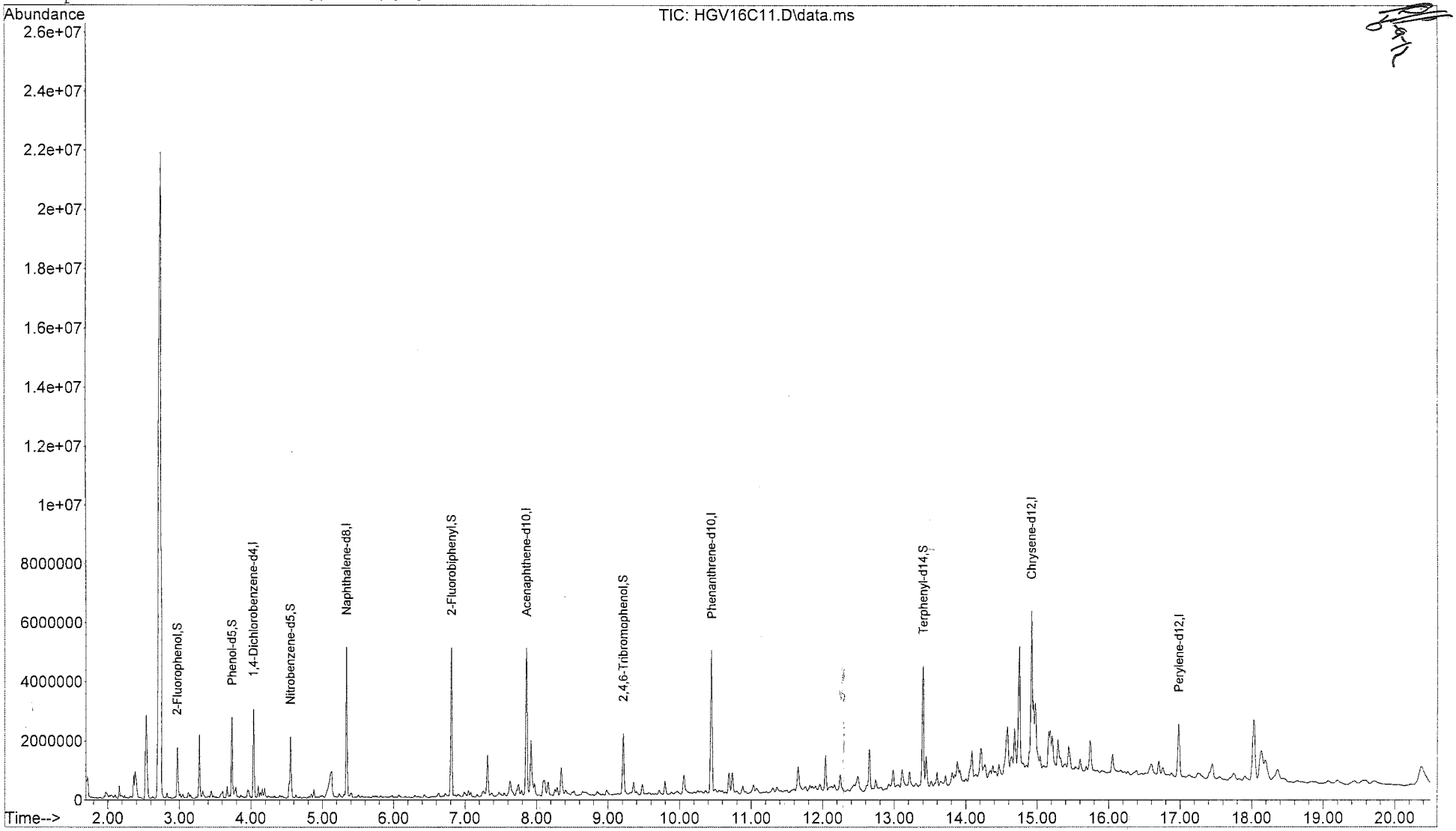
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV16C11.D Vial: 16
Acq On : 08/08/2012 21:23 Operator: RAH
Sample : 1221555011 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 10:58:40 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV16C11.D Vial: 16
Acq On : 08/08/2012 21:23 Operator: RAH
Sample : 1221555011 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 10:58:40 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	611625	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2695024	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1582335	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2999810	40.00 ug/mL
12) Chrysene-d12	14.92	240	2535334	40.00 ug/mL
14) Perylene-d12	16.98	264	1144263	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	649798	31.633ug/mL
4) Phenol-d5	3.73	99	1006330	37.343ug/mL
7) Nitrobenzene-d5	4.55	82	715884	30.987ug/mL
9) 2-Fluorobiphenyl	6.81	172	2288445	38.993ug/mL
11) 2,4,6-Tribromophenol	9.22	330	420624	41.650ug/mL
13) Terphenyl-d14	13.40	244	2019738	41.264ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

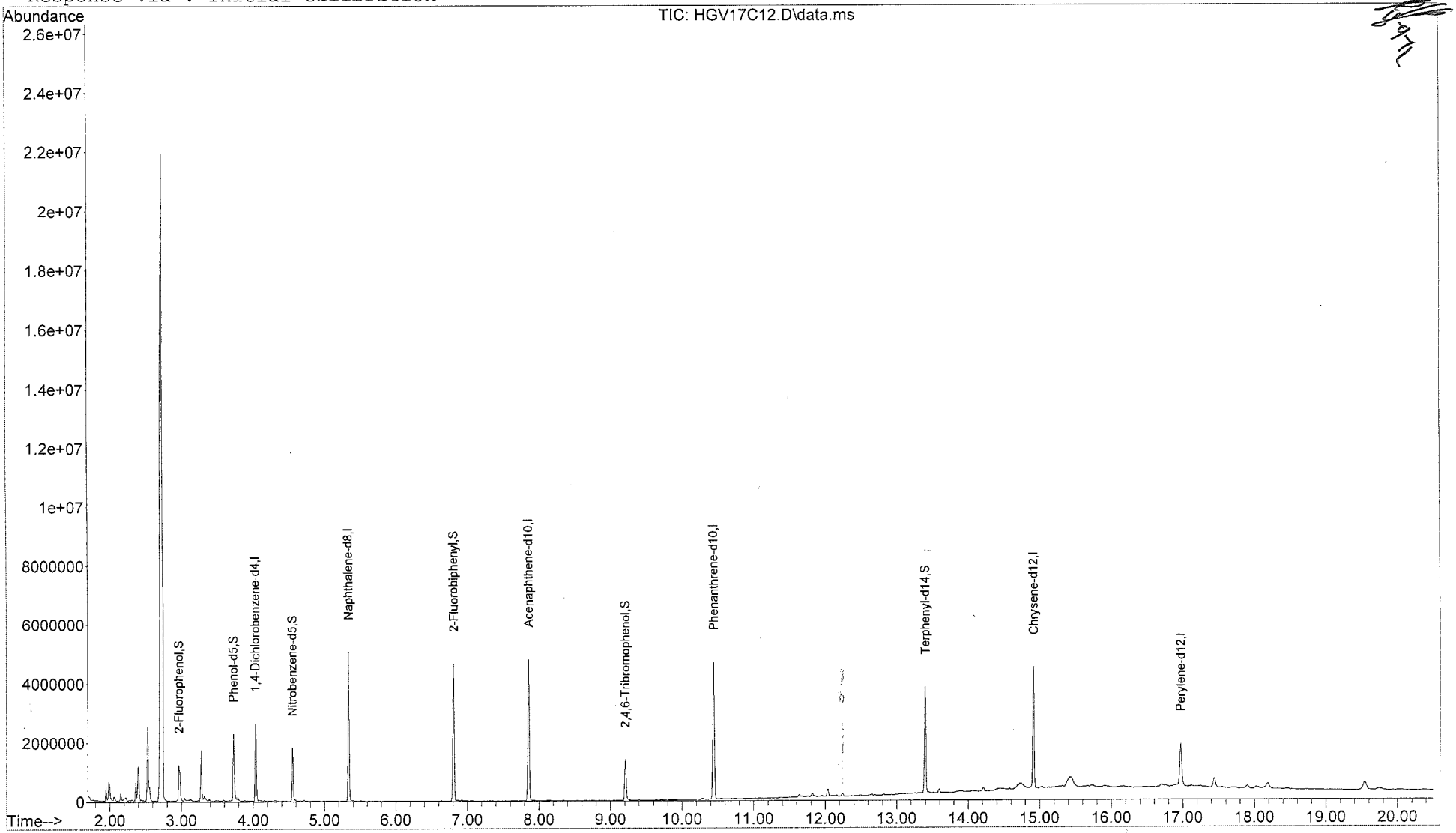
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV17C12.D Vial: 17
Acq On : 08/08/2012 21:52 Operator: RAH
Sample : 1221555012 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 10:58:51 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV17C12.D Vial: 17
Acq On : 08/08/2012 21:52 Operator: RAH
Sample : 1221555012 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 10:58:51 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	624183	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2720537	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1571900	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2922975	40.00 ug/mL
12) Chrysene-d12	14.92	240	2040019	40.00 ug/mL
14) Perylene-d12	16.97	264	868270	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.96	112	598582	28.554ug/mL
4) Phenol-d5	3.73	99	920641	33.476ug/mL
7) Nitrobenzene-d5	4.55	82	697999	29.930ug/mL
9) 2-Fluorobiphenyl	6.81	172	2177379	37.347ug/mL
11) 2,4,6-Tribromophenol	9.21	330	301511	30.640ug/mL
13) Terphenyl-d14	13.40	244	1894778	48.110ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

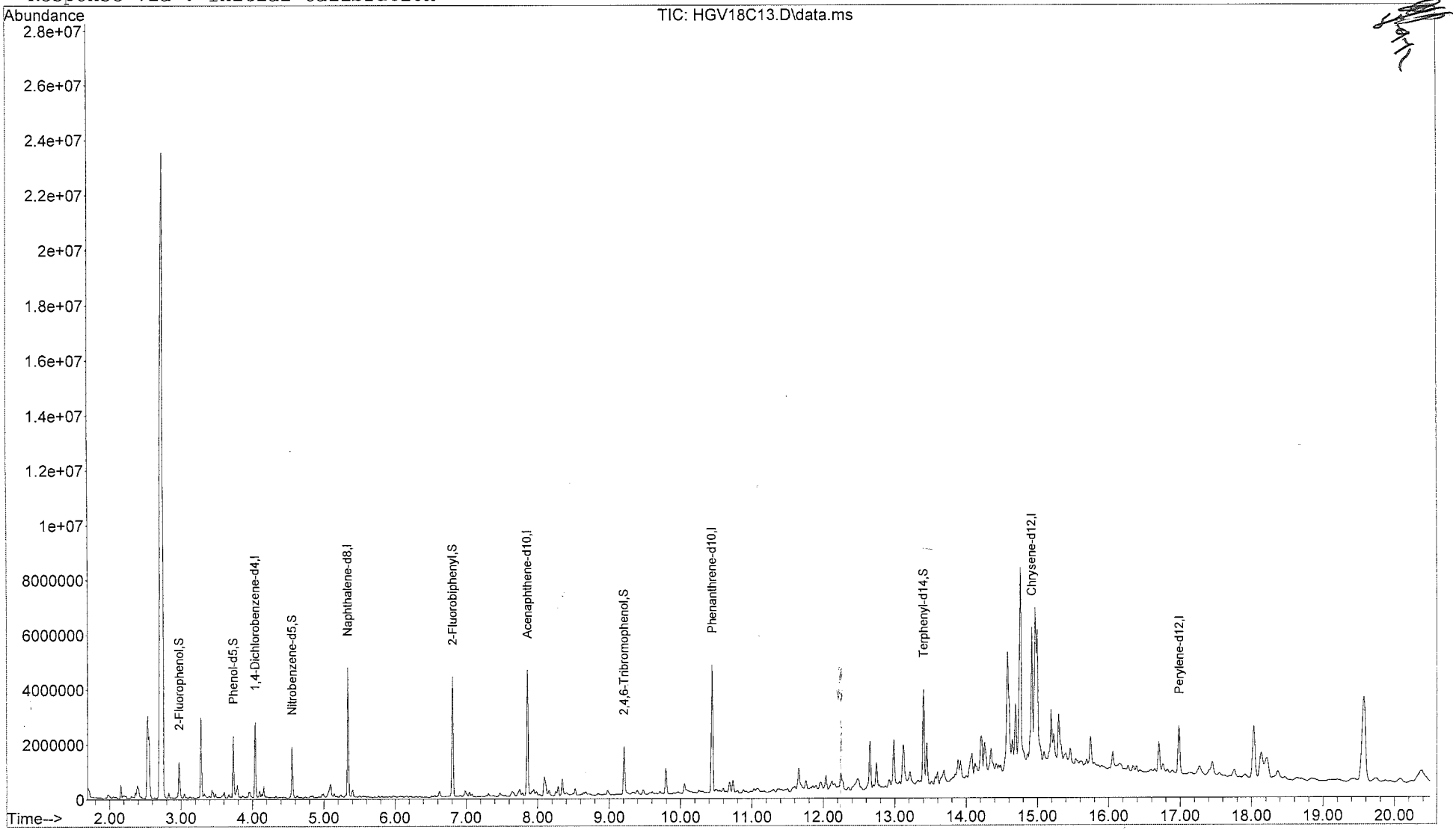
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV18C13.D Vial: 18
Acq On : 08/08/2012 22:22 Operator: RAH
Sample : 1221555013 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 10:59:03 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV18C13.D Vial: 18
Acq On : 08/08/2012 22:22 Operator: RAH
Sample : 1221555013 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 10:59:03 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	584589	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2517463	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1482306	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2785376	40.00 ug/mL
12) Chrysene-d12	14.92	240	2420441	40.00 ug/mL
14) Perylene-d12	16.99	264	1154325	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	569541	29.008ug/mL
4) Phenol-d5	3.73	99	932747	36.213ug/mL
7) Nitrobenzene-d5	4.56	82	672791	31.176ug/mL
9) 2-Fluorobiphenyl	6.81	172	1973961	35.904ug/mL
11) 2,4,6-Tribromophenol	9.22	330	351366	37.470ug/mL
13) Terphenyl-d14	13.40	244	1767668	37.828ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

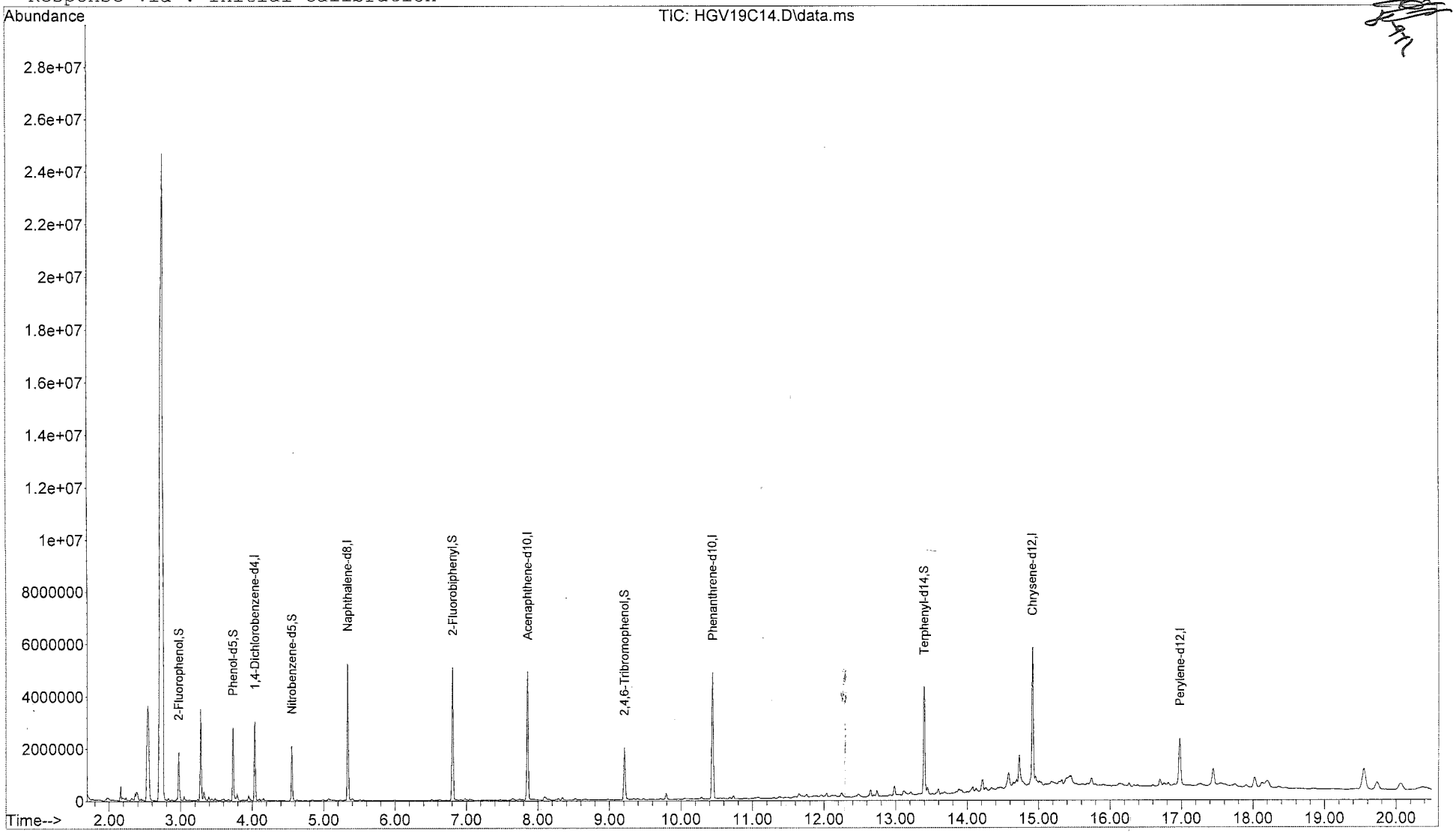
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV19C14.D Vial: 19
Acq On : 08/08/2012 22:51 Operator: RAH
Sample : 1221555014 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 10:59:13 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV19C14.D Vial: 19
Acq On : 08/08/2012 22:51 Operator: RAH
Sample : 1221555014 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 10:59:13 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	632757	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2749034	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1622936	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3057148	40.00 ug/mL
12) Chrysene-d12	14.92	240	2688514	40.00 ug/mL
14) Perylene-d12	16.98	264	1165193	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	671236	31.585ug/mL
4) Phenol-d5	3.73	99	1133366	40.652ug/mL
7) Nitrobenzene-d5	4.55	82	776111	32.934ug/mL
9) 2-Fluorobiphenyl	6.81	172	2289011	38.027ug/mL
11) 2,4,6-Tribromophenol	9.21	330	413495	40.176ug/mL
13) Terphenyl-d14	13.40	244	2200023	42.386ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

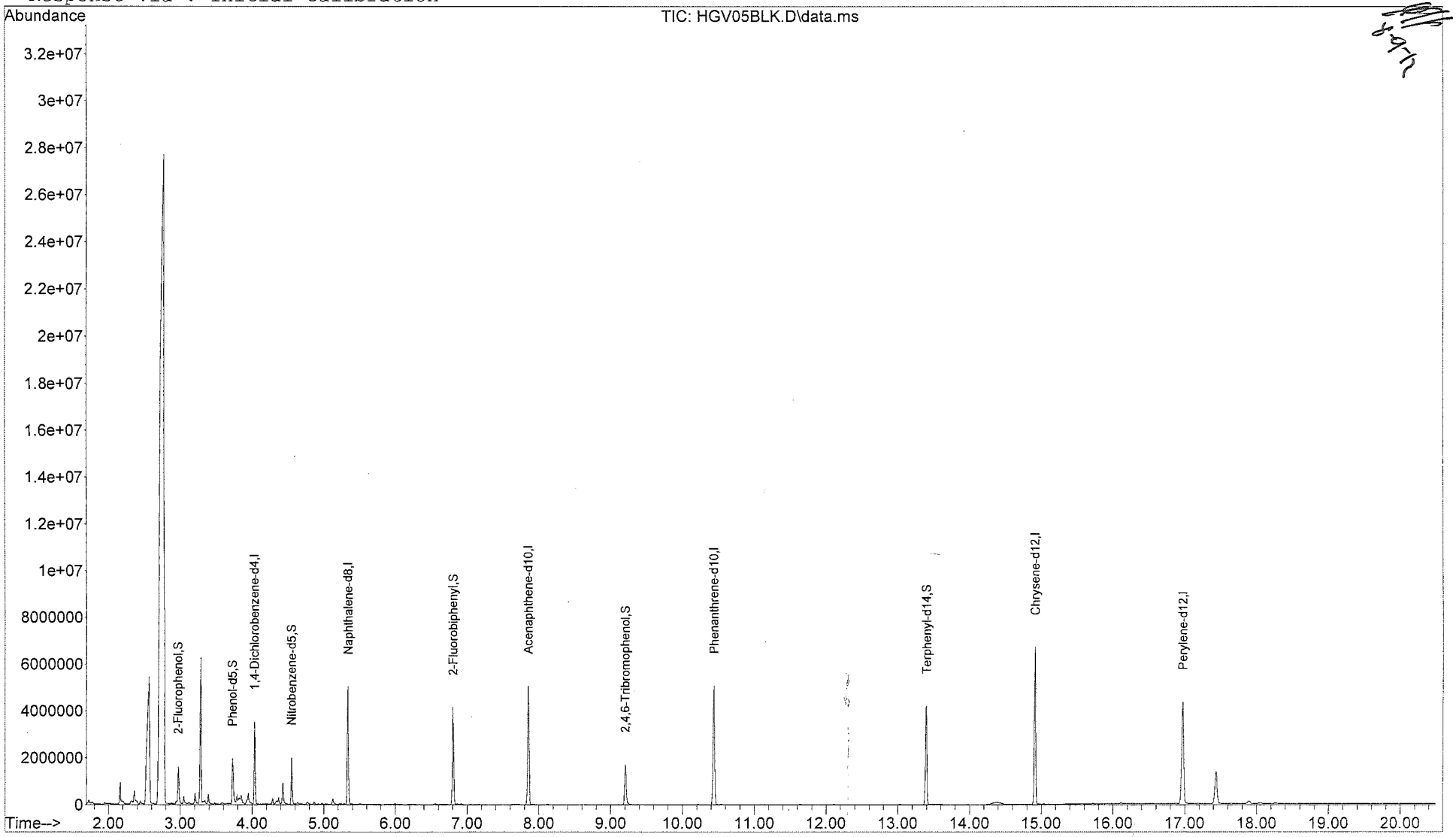
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV05BLK.D Vial: 5
Acq On : 08/08/2012 15:58 Operator: RAH
Sample : 288238 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 10:56:08 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV05BLK.D Vial: 5
Acq On : 08/08/2012 15:58 Operator: RAH
Sample : 288238 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 10:56:08 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	634176	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2866601	40.00 ug/mL
8) Acenaphthene-d10	7.85	164	1694689	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	3167645	40.00 ug/mL
12) Chrysene-d12	14.92	240	3538626	40.00 ug/mL
14) Perylene-d12	16.97	264	3042581	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	559884	26.287ug/mL
4) Phenol-d5	3.73	99	952077	34.073ug/mL
7) Nitrobenzene-d5	4.55	82	673894	27.424ug/mL
9) 2-Fluorobiphenyl	6.80	172	1839234	29.261ug/mL
11) 2,4,6-Tribromophenol	9.20	330	380713	35.700ug/mL
13) Terphenyl-d14	13.40	244	2241556	32.811ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

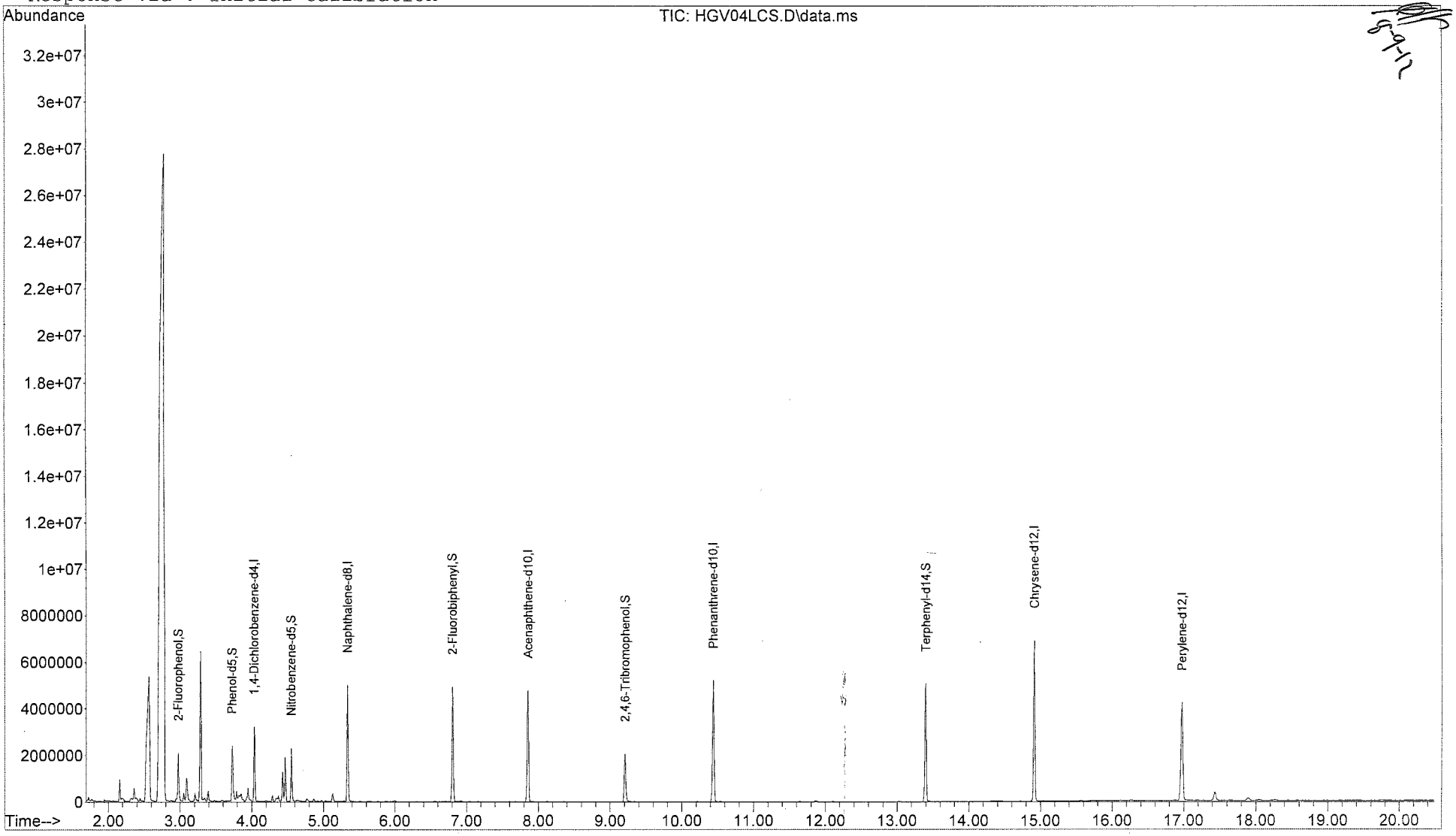
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV04LCS.D Vial: 4
Acq On : 08/08/2012 15:28 Operator: RAH
Sample : 288239 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 15:49:37 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV04LCS.D Vial: 4
Acq On : 08/08/2012 15:28 Operator: RAH
Sample : 288239 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 08 15:49:37 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	616951	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2811974	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1666876	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	3175254	40.00 ug/mL
12) Chrysene-d12	14.92	240	3540751	40.00 ug/mL
14) Perylene-d12	16.97	264	2974482	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	681645	32.897ug/mL
4) Phenol-d5	3.73	99	1178014	43.336ug/mL
7) Nitrobenzene-d5	4.55	82	794448	32.958ug/mL
9) 2-Fluorobiphenyl	6.80	172	2248632	36.371ug/mL
11) 2,4,6-Tribromophenol	9.21	330	461416	43.165ug/mL
13) Terphenyl-d14	13.40	244	2622075	38.358ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.09	104	235152	21.959ug/mL 99
5) 1,4-Dithiane	4.46	120	461897	26.618ug/mL 98

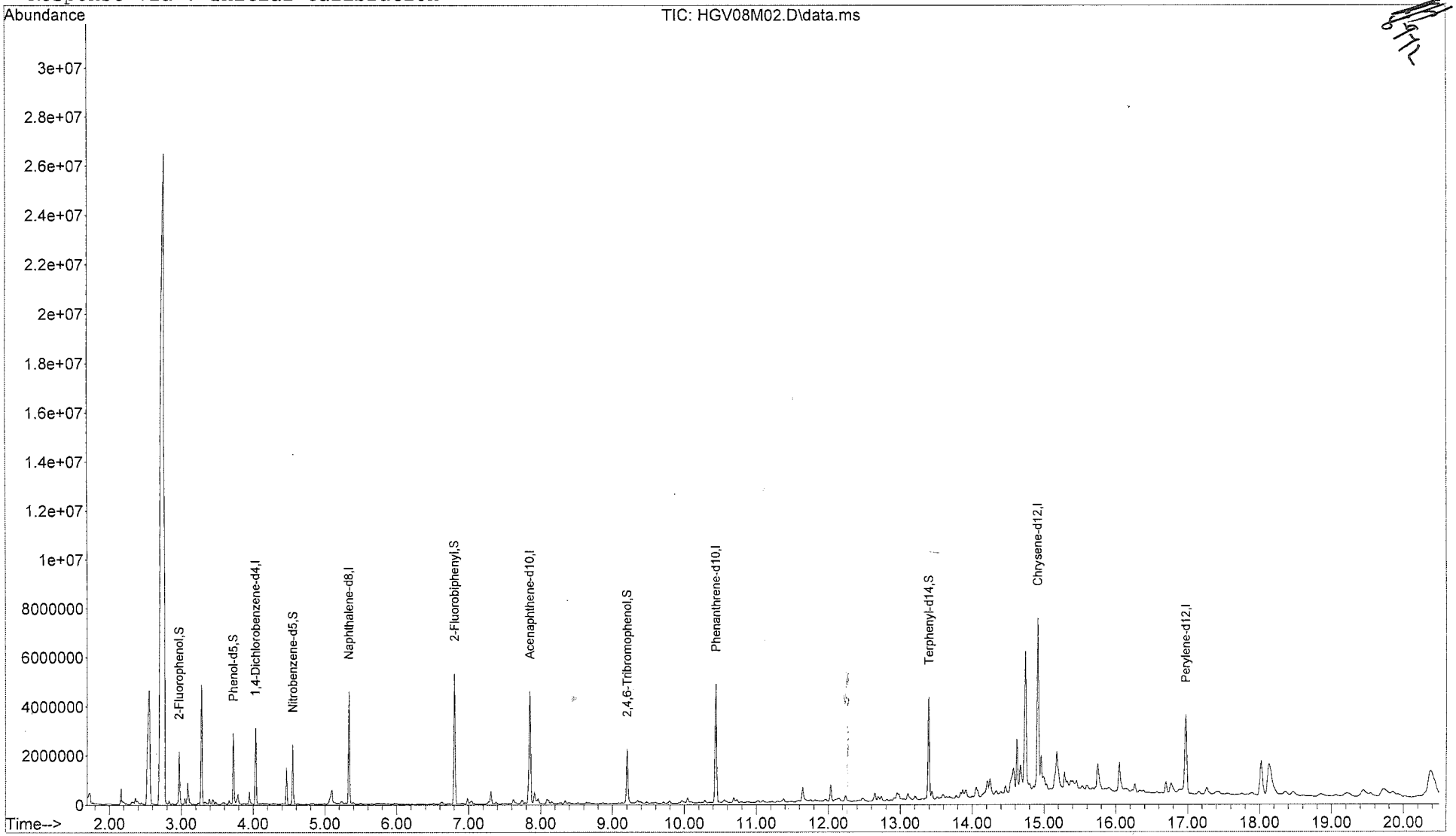
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV08M02.D Vial: 8
Acq On : 08/08/2012 17:28 Operator: RAH
Sample : 1221555002 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 17:48:52 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV08M02.D Vial: 8
Acq On : 08/08/2012 17:28 Operator: RAH
Sample : 1221555002 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 08 17:48:52 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	593158	40.00 ug/mL
6) Naphthalene-d8	5.33	136	2639556	40.00 ug/mL
8) Acenaphthene-d10	7.85	164	1547208	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2977423	40.00 ug/mL
12) Chrysene-d12	14.92	240	3239774	40.00 ug/mL
14) Perylene-d12	16.97	264	2209800	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	657066	32.983ug/mL
4) Phenol-d5	3.72	99	1141299	43.670ug/mL
7) Nitrobenzene-d5	4.55	82	816507	36.086ug/mL
9) 2-Fluorobiphenyl	6.80	172	2320236	40.432ug/mL
11) 2,4,6-Tribromophenol	9.20	330	442846	44.180ug/mL
13) Terphenyl-d14	13.40	244	2208590	35.311ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.09	104	219158	21.286ug/mL 94
5) 1,4-Dithiane	4.46	120	362635	21.736ug/mL 98

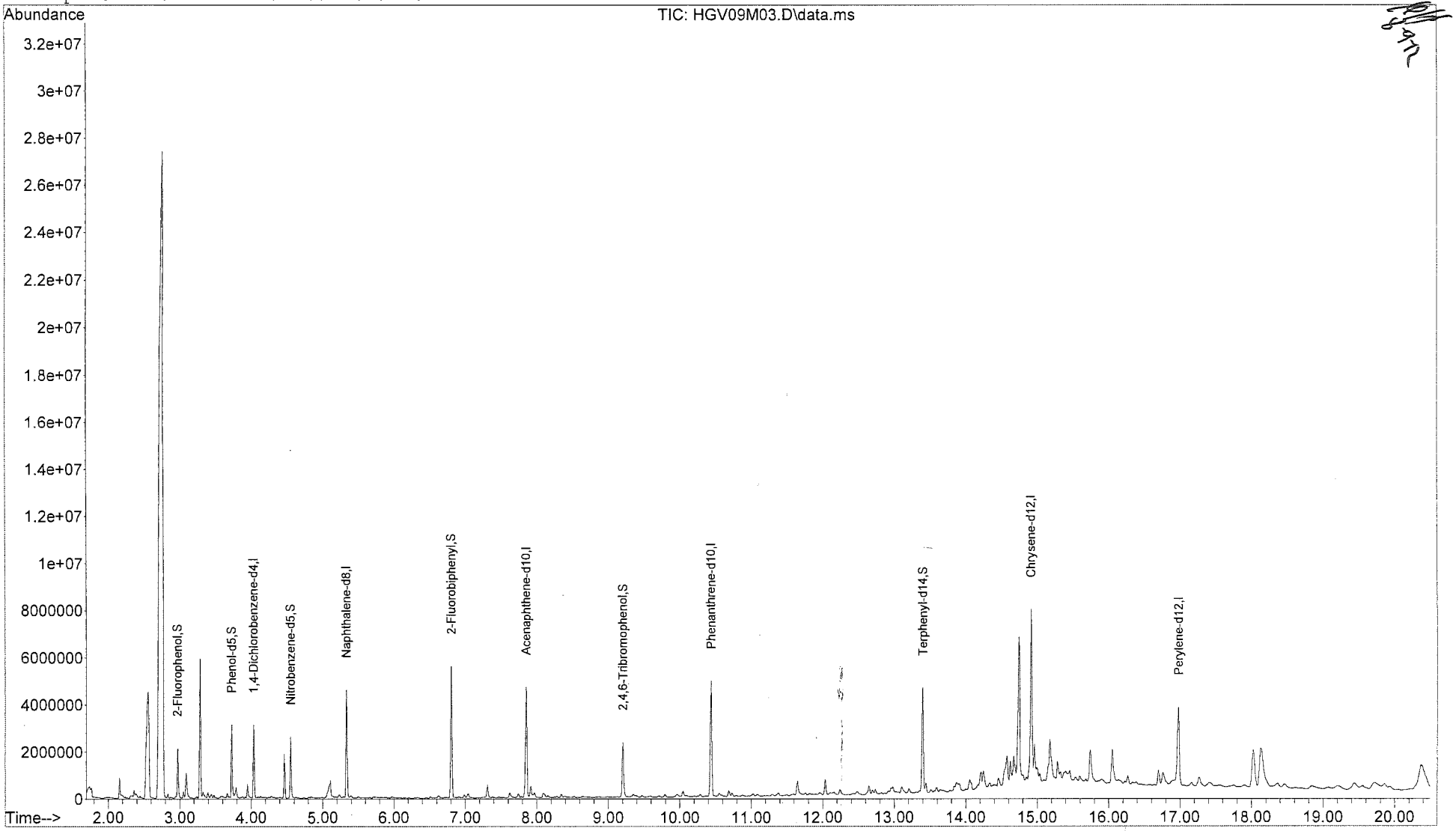
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV09M03.D Vial: 9
Acq On : 08/08/2012 17:56 Operator: RAH
Sample : 1221555003 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 18:17:23 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221555\HGV09M03.D Vial: 9
Acq On : 08/08/2012 17:56 Operator: RAH
Sample : 1221555003 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 08 18:17:23 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	604358	40.00 ug/mL
6) Naphthalene-d8	5.33	136	2687758	40.00 ug/mL
8) Acenaphthene-d10	7.85	164	1590717	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	3039200	40.00 ug/mL
12) Chrysene-d12	14.92	240	3349830	40.00 ug/mL
14) Perylene-d12	16.98	264	2207304	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	716496	35.299ug/mL
4) Phenol-d5	3.73	99	1227947	46.115ug/mL
7) Nitrobenzene-d5	4.55	82	892576	38.740ug/mL
9) 2-Fluorobiphenyl	6.80	172	2494247	42.276ug/mL
11) 2,4,6-Tribromophenol	9.20	330	473752	46.303ug/mL
13) Terphenyl-d14	13.40	244	2375429	36.731ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.09	104	279981	26.690ug/mL 94
5) 1,4-Dithiane	4.46	120	452140	26.599ug/mL 98

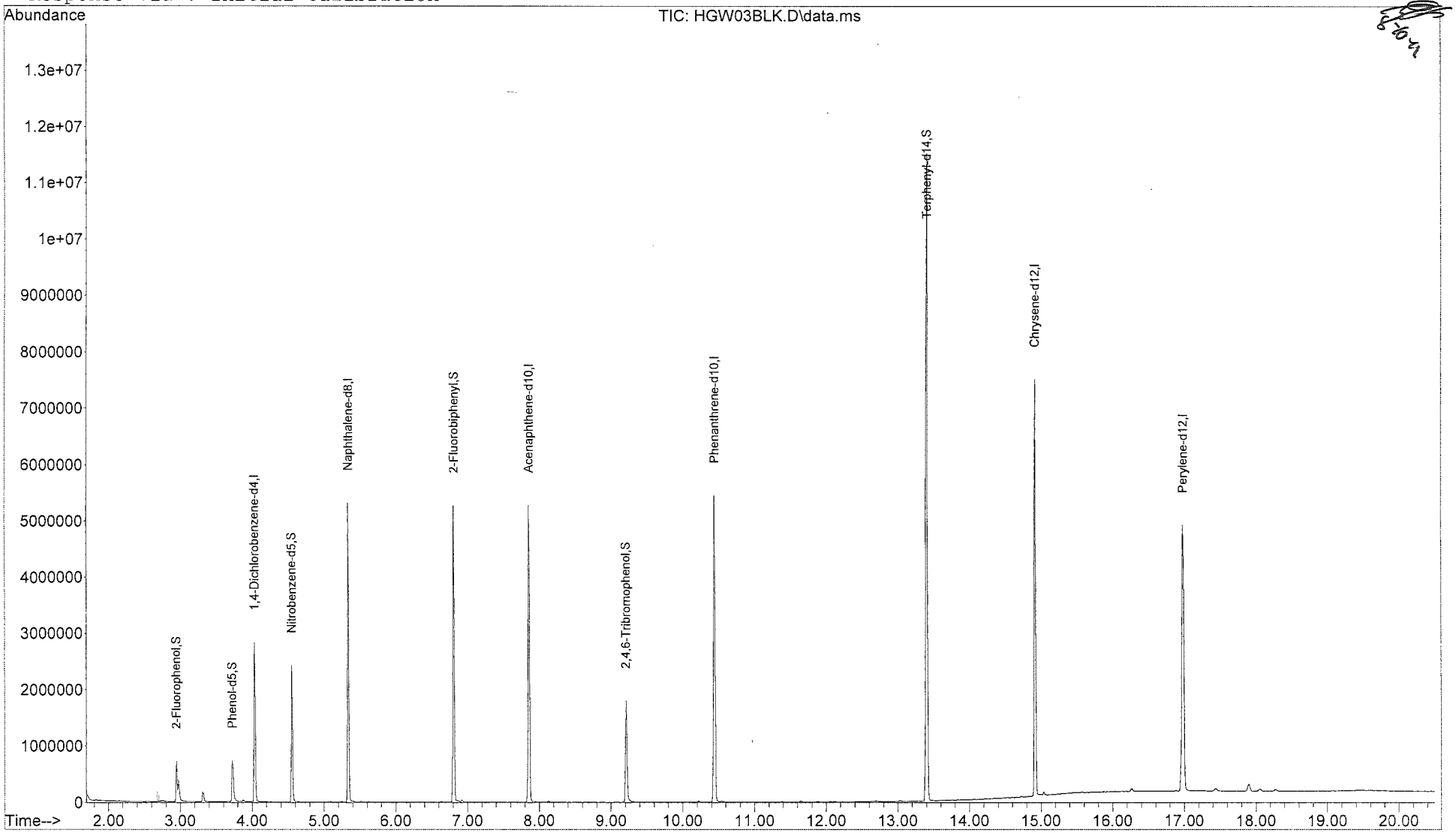
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221555wa\HGW03BLK.D Vial: 3
Acq On : 08/09/2012 10:35 Operator: RAH
Sample : 289024 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 11:02:02 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221555wa\HGW03BLK.D Vial: 3
Acq On : 08/09/2012 10:35 Operator: RAH
Sample : 289024 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 11:02:02 2012 Results File: 8270DOND.RES

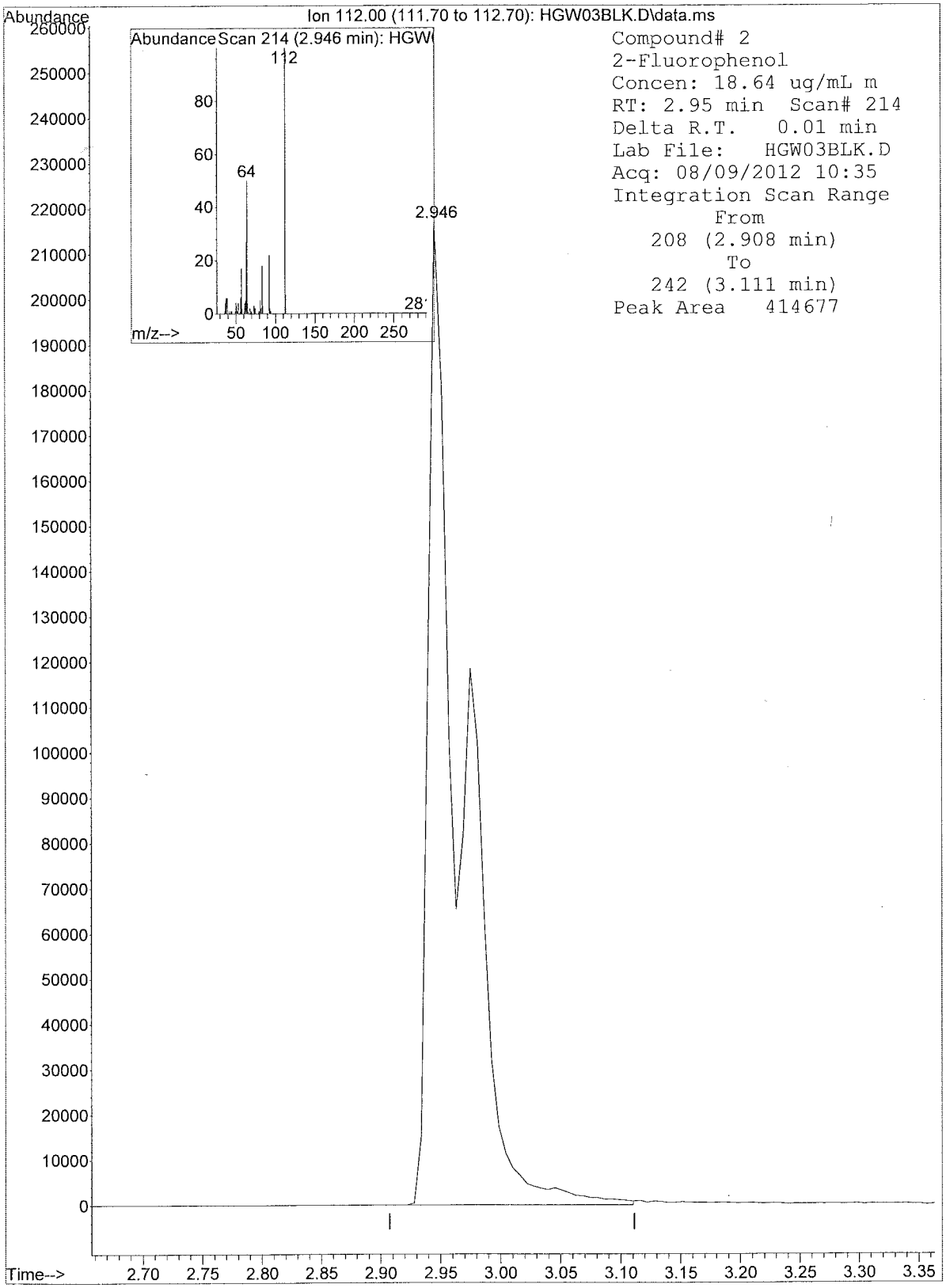
Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	662265	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2960502	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1742167	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3344079	40.00 ug/mL
12) Chrysene-d12	14.92	240	3897327	40.00 ug/mL
14) Perylene-d12	16.99	264	3482876	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	414677	18.643ug/mL m
4) Phenol-d5	3.72	99	460256	15.773ug/mL
7) Nitrobenzene-d5	4.55	82	943940	37.195ug/mL
9) 2-Fluorobiphenyl	6.81	172	2410285	37.301ug/mL
11) 2,4,6-Tribromophenol	9.22	330	398551	35.401ug/mL
13) Terphenyl-d14	13.41	244	6414924	85.257ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

8-10-12

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol

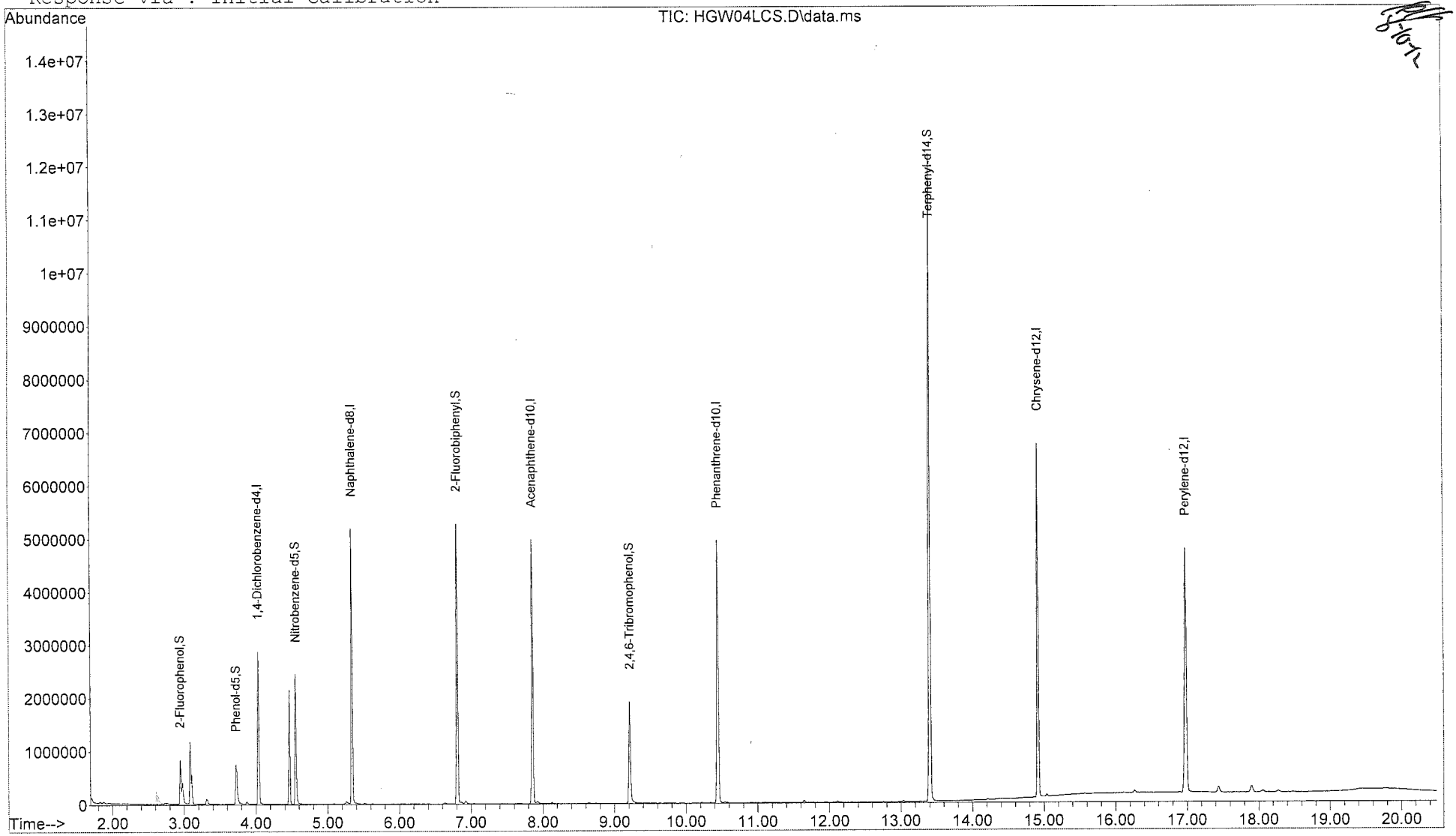


Quantitation Report

Data File : C:\msdchem\1\data\1221555wa\HGW04LCS.D Vial: 4
Acq On : 08/09/2012 11:05 Operator: RAH
Sample : 289025 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 11:46:14 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221555wa\HGW04LCS.D Vial: 4
Acq On : 08/09/2012 11:05 Operator: RAH
Sample : 289025 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 11:46:14 2012 Results File: 8270DOND.RES

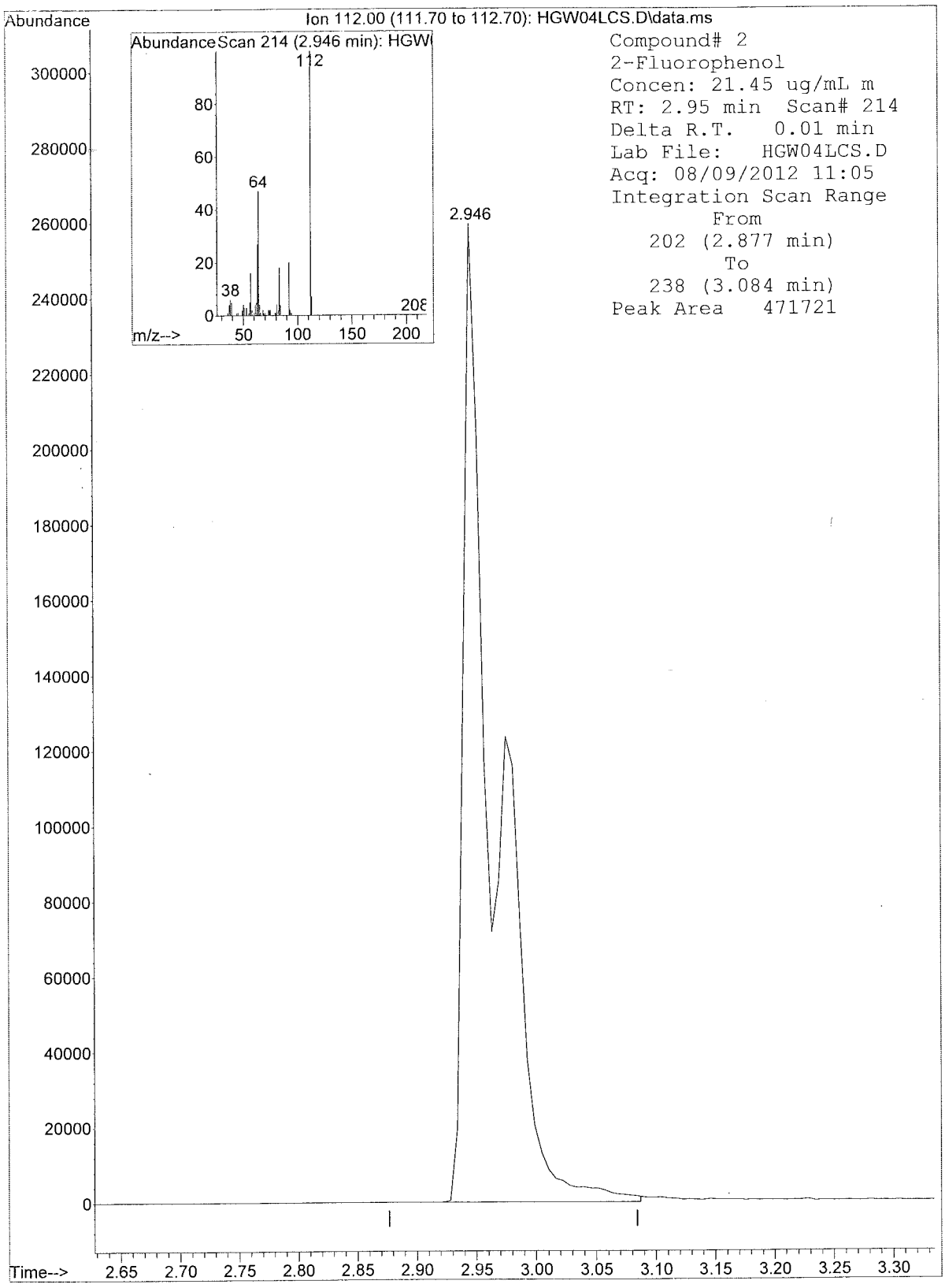
Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	654888	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2883649	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1628301	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3156371	40.00 ug/mL
12) Chrysene-d12	14.92	240	3521185	40.00 ug/mL
14) Perylene-d12	16.99	264	3155976	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	471721	21.447ug/mL m
4) Phenol-d5	3.72	99	477787	16.558ug/mL
7) Nitrobenzene-d5	4.56	82	953990	38.593ug/mL
9) 2-Fluorobiphenyl	6.81	172	2427422	40.193ug/mL
11) 2,4,6-Tribromophenol	9.22	330	425993	40.089ug/mL
13) Terphenyl-d14	13.41	244	6368023	93.675ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.09	104	323729	28.479ug/mL 99
5) 1,4-Dithiane	4.47	120	559425	30.371ug/mL 97

8-10-12

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



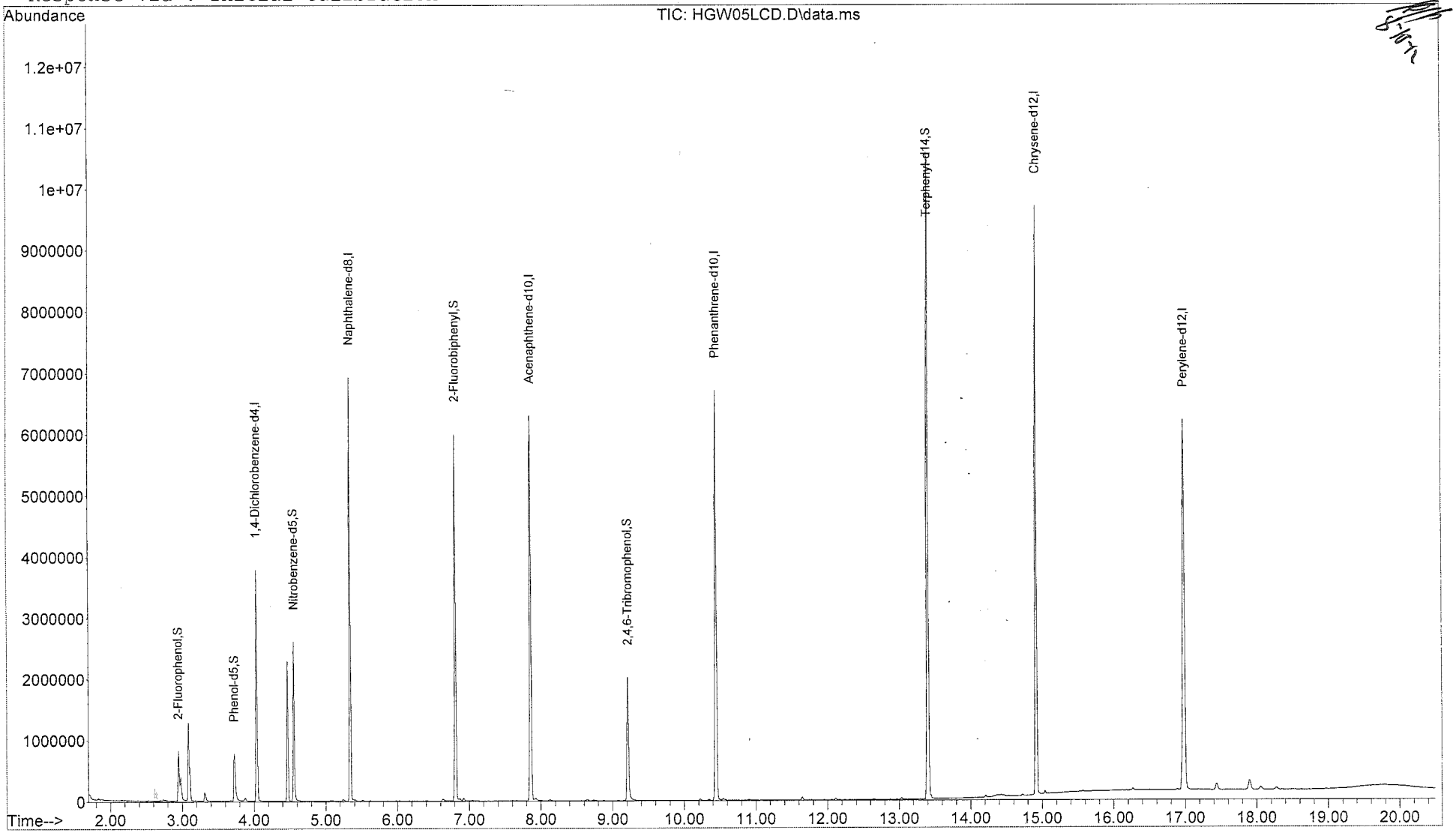
8270DOND.M 5975-H 8270DOND.M 289025 . WATER 8270

Quantitation Report

Data File : C:\msdchem\1\data\1221555wa\HGW05LCD.D Vial: 5
Acq On : 08/09/2012 11:34 Operator: RAH
Sample : 289026 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 12:10:21 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221555wa\HGW05LCD.D Vial: 5
Acq On : 08/09/2012 11:34 Operator: RAH
Sample : 289026 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 12:10:21 2012 Results File: 8270DOND.RES

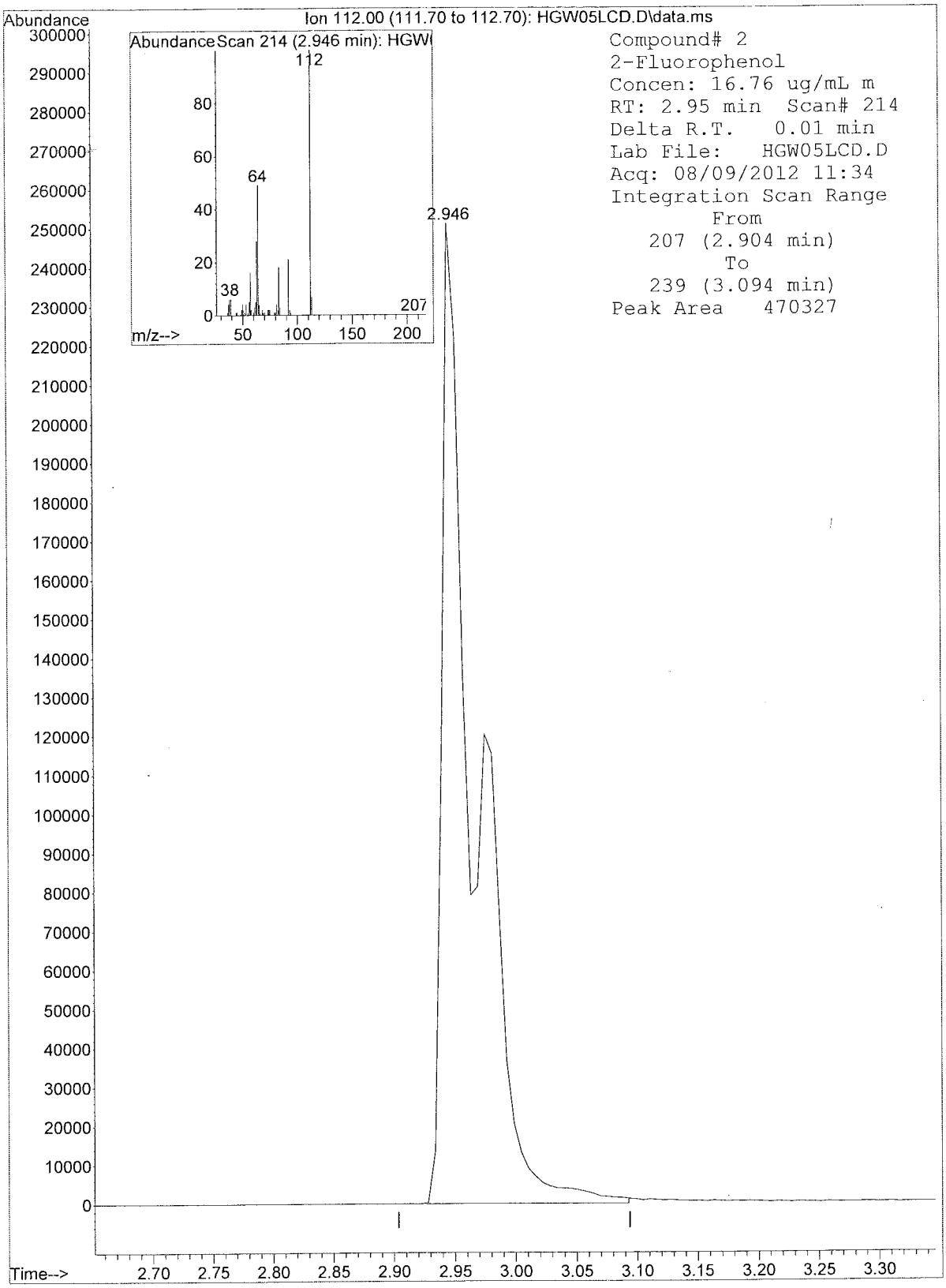
Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	835574	40.00 ug/mL
6) Naphthalene-d8	5.34	136	3763165	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	2206399	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	4300599	40.00 ug/mL
12) Chrysene-d12	14.92	240	4926060	40.00 ug/mL
14) Perylene-d12	16.99	264	4356509	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	470327	16.760ug/mL m
4) Phenol-d5	3.72	99	482896	13.117ug/mL
7) Nitrobenzene-d5	4.56	82	980354	30.390ug/mL
9) 2-Fluorobiphenyl	6.81	172	2593150	31.688ug/mL
11) 2,4,6-Tribromophenol	9.22	330	471185	32.544ug/mL
13) Terphenyl-d14	13.40	244	5885996	61.891ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.09	104	345647	23.832ug/mL 98
5) 1,4-Dithiane	4.47	120	604189	25.708ug/mL 97

8-10-12

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 289026 . WATER 8270

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.90	210	47.95	110	60.00	204	73.00	1416
37.00	789	49.10	1366	61.00	2048	74.00	16658
38.00	2065	50.10	37069	62.00	2129	75.00	26072
39.05	11447	51.10	133016	63.05	5870	76.10	8806
40.00	553	52.05	6888	64.05	797	77.10	169557
41.00	409	53.00	317	65.10	2951	78.10	11912
41.95	8	55.00	774	66.00	245	79.00	12159
43.00	174	56.00	4604	67.00	41	80.00	9544
43.95	213	56.95	9649	69.00	182007	80.95	12627
44.95	498	57.95	474	69.95	863	82.05	2981
46.90	50	59.05	212	71.00	84	83.00	2757

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
83.95	505	96.00	1100	107.00	51061	119.05	580
85.00	2076	96.95	164	108.00	7952	119.95	624
86.00	3686	98.00	15285	110.00	99453	120.90	137
86.95	1503	99.00	11947	111.00	14899	121.10	236
88.00	668	100.00	1055	112.00	1808	122.00	3851
88.95	332	100.95	6366	113.00	564	123.00	5511
91.00	2779	101.95	411	113.95	125	124.00	2550
92.00	3243	102.95	2332	115.00	255	125.00	2380
93.00	20146	104.00	4550	116.05	3193	127.00	194795
93.95	1286	105.00	4189	117.00	41283	128.00	14880
95.00	369	106.10	1215	118.00	2979	129.00	77256

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
130.00	6368	139.95	881	150.95	941	160.00	3180
130.95	1208	141.00	9687	151.20	517	161.00	4674
132.05	708	142.00	3150	151.70	439	161.95	1330
132.80	252	143.00	2120	152.00	274	162.80	161
133.00	135	143.95	625	153.00	3192	163.05	274
134.00	2181	145.00	646	154.00	2288	164.00	668
134.95	5754	146.05	1877	155.00	5190	164.95	3521
136.00	2380	147.00	4767	156.05	8000	166.05	2851
137.05	2966	148.00	10934	157.05	1896	166.95	19745
137.95	736	148.95	2140	157.95	1883	168.00	8501
138.95	478	150.05	661	159.00	1302	169.05	1743

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
170.05	659	181.00	5020	192.00	5090	205.00	26323
170.95	942	182.00	946	193.00	5198	206.00	108360
171.95	1888	183.00	572	194.00	1397	207.00	14246
173.00	2312	184.00	1287	195.05	970	208.00	3479
174.00	4313	185.00	7511	196.00	16758	208.95	1198
175.00	7834	186.00	59352	198.00	449451	210.30	703
176.05	2966	187.00	15865	199.00	30245	210.95	4542
177.00	3955	188.05	1696	200.00	2429	212.95	335
178.00	859	189.00	3403	201.45	3070	215.00	1191
179.00	15556	189.95	600	202.95	2845	216.05	2349
180.00	10462	191.00	1758	204.00	15477	217.00	27032

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
218.00	3469	230.00	769	240.95	1460	252.00	534
218.95	280	231.00	2262	242.00	3478	253.05	1166
219.20	106	231.95	384	243.10	4047	255.00	269404
221.00	32173	232.95	580	244.00	51989	256.00	38803
223.00	6700	234.00	1735	245.05	7448	257.00	3231
224.00	61472	234.95	1711	246.00	9407	258.00	14382
225.00	15875	235.95	1100	246.95	2002	259.00	2277
226.05	1856	237.00	2076	248.05	411	259.95	452
227.00	24363	238.05	341	249.00	1736	260.95	518
228.00	3479	238.95	964	250.00	378	263.00	155
229.00	5244	240.00	804	251.05	421	263.80	387

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
264.10	160	276.00	16781	288.00	125	299.00	58
265.00	5592	277.00	9464	288.90	438	300.95	468
265.90	1371	278.00	1550	289.95	375	301.95	650
266.90	202	278.80	76	291.05	236	303.05	4040
267.85	19	278.95	278	291.90	98	304.05	968
269.90	381	281.00	201	292.10	306	305.00	88
270.95	583	282.05	293	293.05	2240	308.00	529
272.05	745	283.00	1149	293.95	535	308.95	363
273.00	8812	284.00	800	296.00	33656	309.95	517
274.00	21501	285.00	1731	297.00	4977	311.00	52
275.00	124987	285.95	376	297.90	387	312.20	67

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
312.95	387	326.05	153	341.00	1397	365.95	2022
314.00	1732	327.00	2246	342.00	324	366.90	53
315.00	3856	328.00	1118	346.00	2412	369.95	327
316.00	2135	329.10	116	347.00	412	371.10	748
317.00	363	331.95	909	351.00	86	372.05	5254
319.90	179	333.00	1200	352.05	3088	373.00	1217
321.05	1110	334.05	7150	353.05	2118	374.05	166
322.05	618	335.05	1830	354.05	3337	383.05	1223
323.05	11178	336.05	286	355.05	607	383.95	469
324.05	2118	339.00	115	358.95	270	384.90	58
325.05	158	340.00	124	365.00	13675	390.00	645

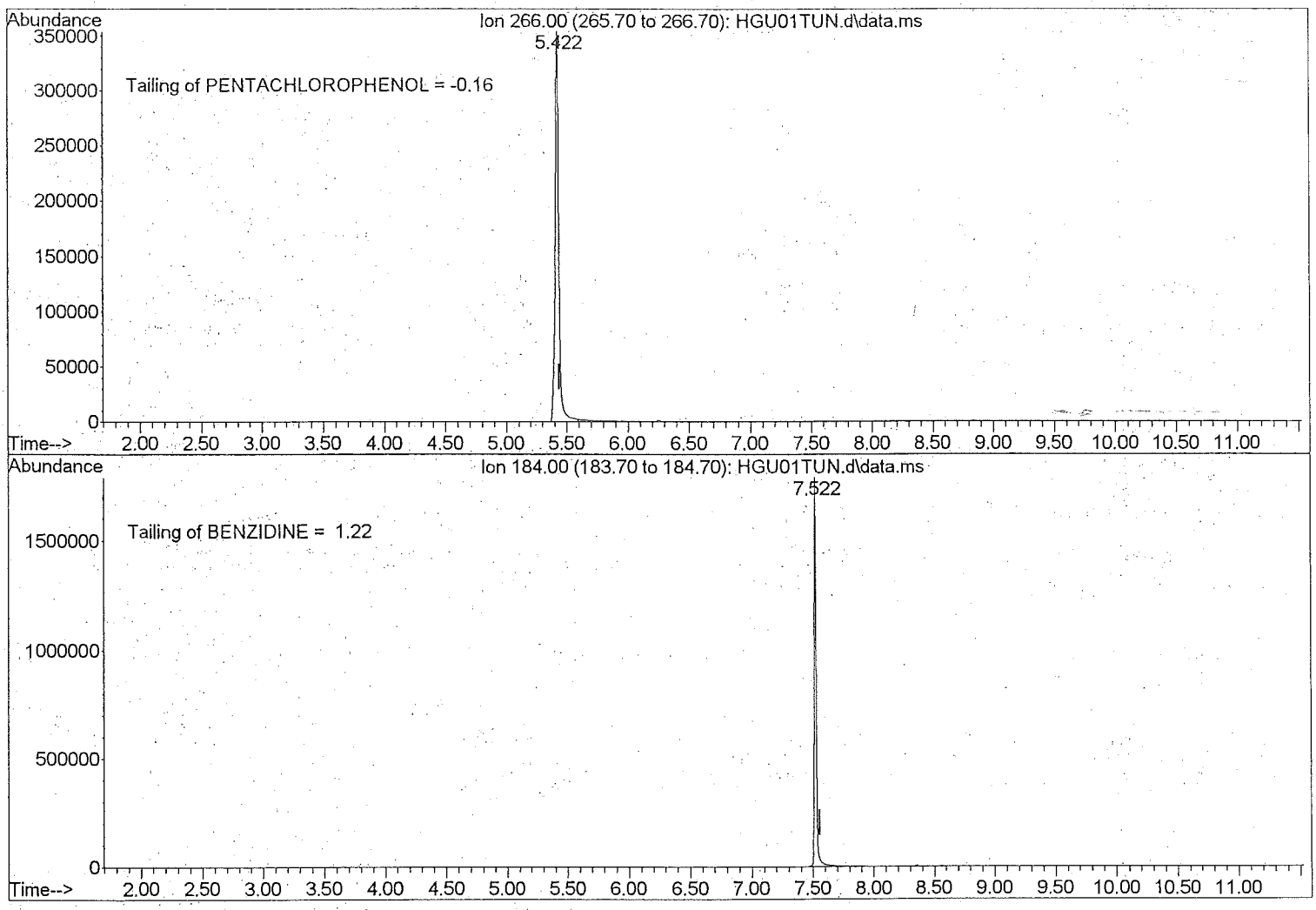
Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
391.05	452	425.05	302	444.10	5675		
392.05	336	435.45	112	445.00	368		
400.90	274	436.10	52				
402.00	1684	437.00	72				
403.00	2553	437.50	61				
404.00	801	437.70	106				
410.10	50	438.10	252				
421.00	1998	438.85	543				
422.05	1989	441.10	47803				
423.10	13843	442.10	315904				
424.05	2863	443.10	60693				

Data File: HGU01TUN.d
Date Acquired: 08/08/2012 10:06
Operator ID: RAH
Name: 8270 DFTPP 13808
Misc: X:1/11/13

Instrument: 5975-H
Acq Method: 8270DTUN.M
DA Method: 8270DTUN.M

Cal Title: EPA/CLP SOM01
Last Cal Update: Wed Nov 23 09:22:39 2011
X:1/11/13

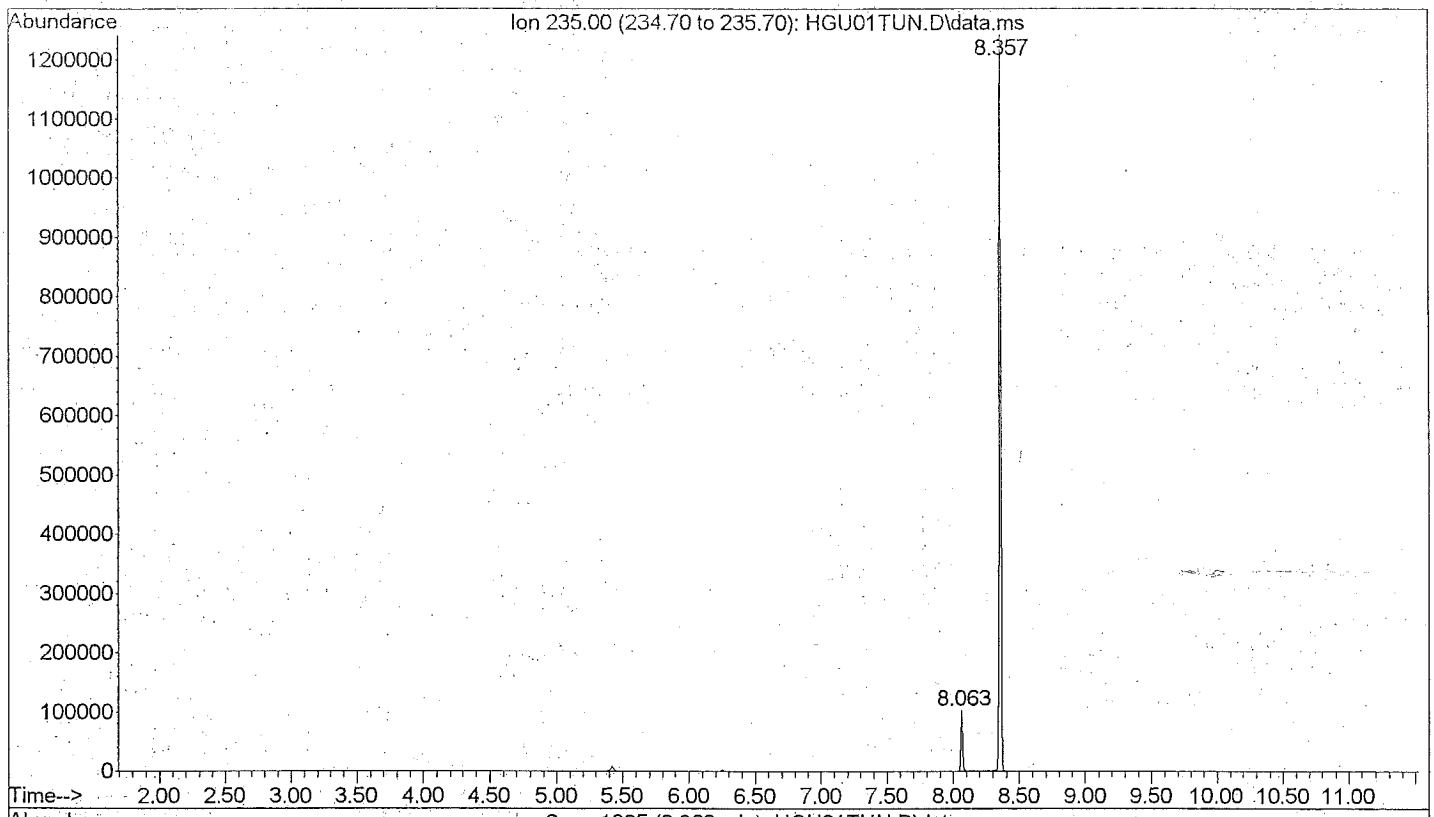


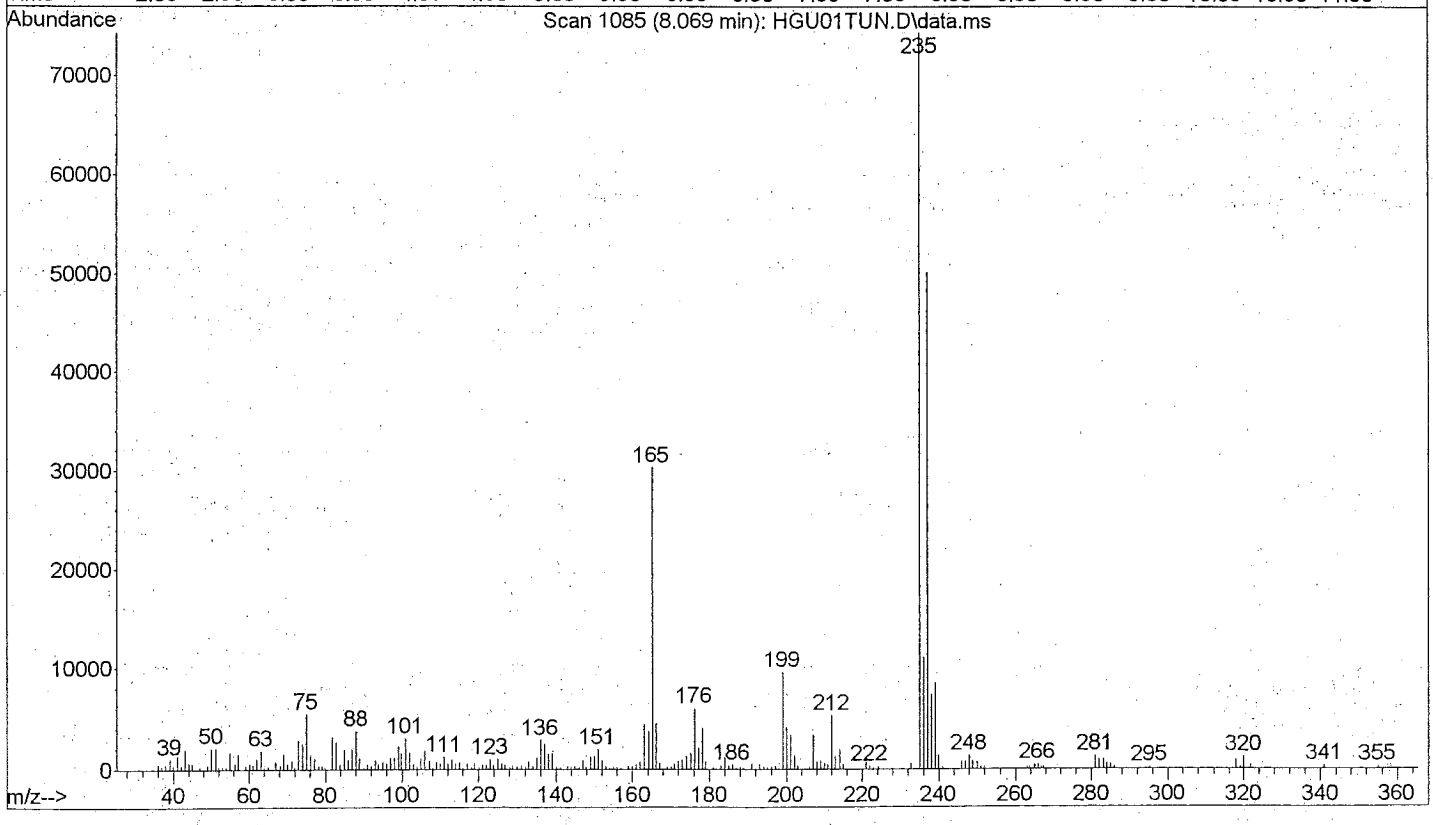
Ion 235.00 (234.70 to 235.70): HGU01TUN.D\data.ms
8270 DFTPP 13808

Peak #	Ret Time	Type	Width	Area	Start Time	End Time
1	8.063	rBV	0.082	94255	8.027	8.110
2	8.357	rVB	0.112	1143185	8.286	8.398

DDT degradation = $\frac{94255}{94255 + 1143185}$ = 7.6%

File : D:\1\DATA\2012\AUG12\08AUG12H\HGU01TUN.D
Operator : RAH
Acquired : 8 Aug 2012 10:06 am using AcqMethod 8270DTUN.M
Instrument : 5975-H
Sample Name: 8270 DFTPP 13808
Misc Info : X:1/11/13
Vial Number: 1



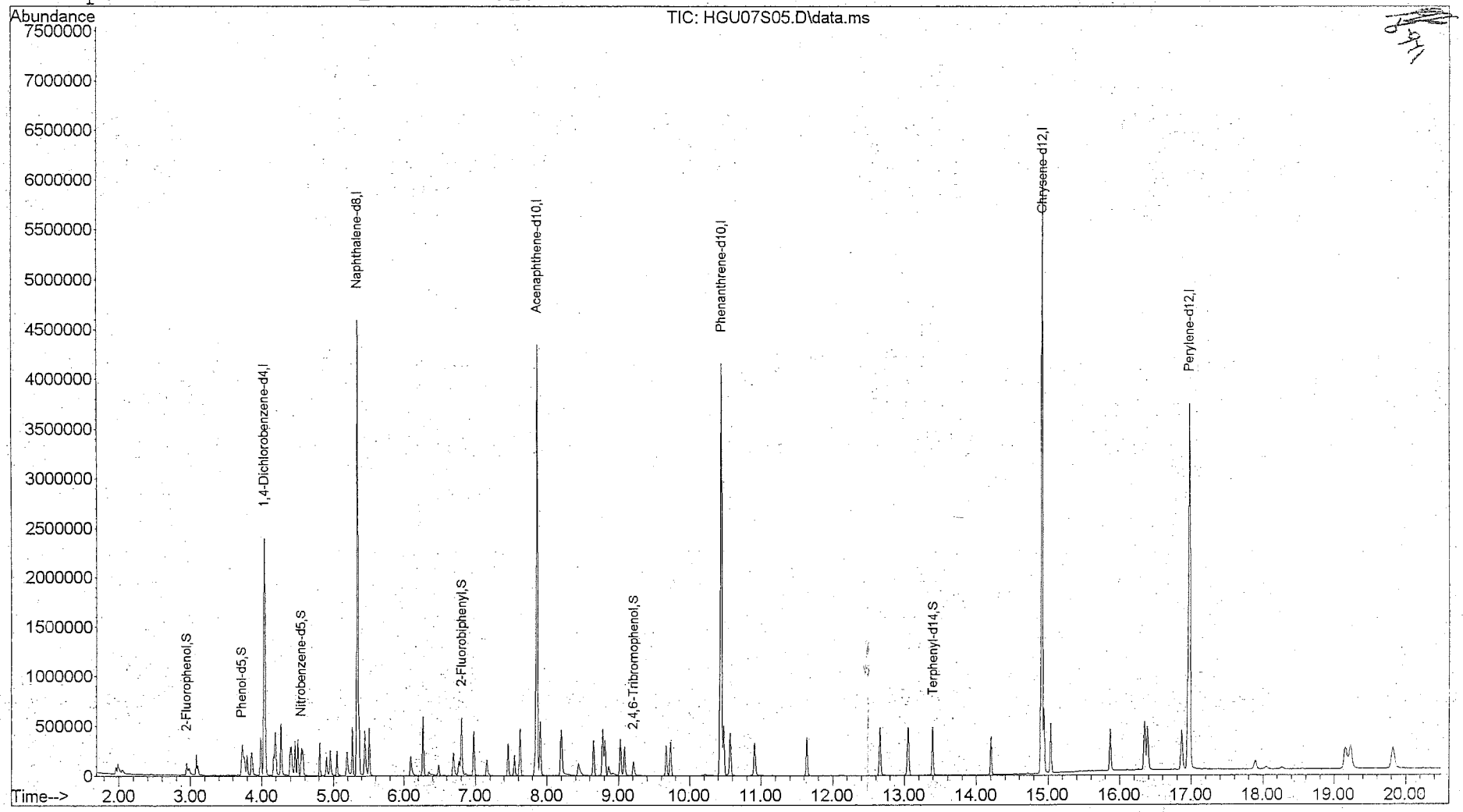


Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU07S05.D Vial: 7
Acq On : 08/08/2012 12:59 Operator: RAH
Sample : 8270 5 std 15974 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:23:28 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

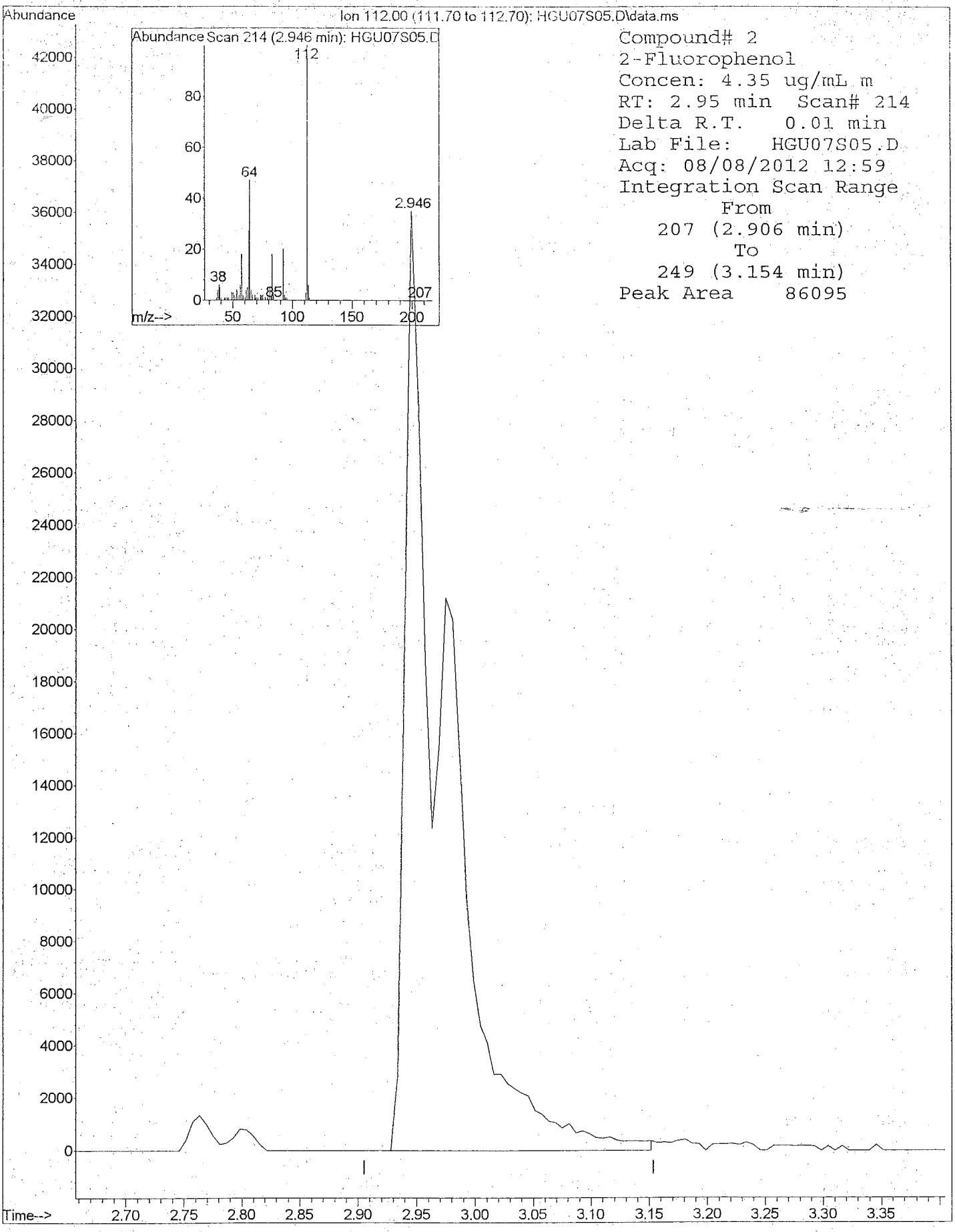
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU07S05.D Vial: 7
Acq On : 08/08/2012 12:59 Operator: RAH
Sample : 8270 5 std 15974 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:23:28 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	588867	40.00 ug/mL
6) Naphthalene-d8	5.33	136	2620860	40.00 ug/mL
8) Acenaphthene-d10	7.85	164	1436514	40.00 ug/mL
10) Phenanthrene-d10	10.43	188	2595047	40.00 ug/mL
12) Chrysene-d12	14.91	240	2776807	40.00 ug/mL
14) Perylene-d12	16.97	264	2442971	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	86095	4.352ug/mL m
4) Phenol-d5	3.72	99	113950	4.392ug/mL
7) Nitrobenzene-d5	4.55	82	99427	4.426ug/mL
9) 2-Fluorobiphenyl	6.80	172	243673	4.573ug/mL
11) 2,4,6-Tribromophenol	9.21	330	35477	4.061ug/mL
13) Terphenyl-d14	13.39	244	245085	4.572ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	54091	5.291ug/mL 99
5) 1,4-Dithiane	4.46	120	87903	5.307ug/mL 98

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



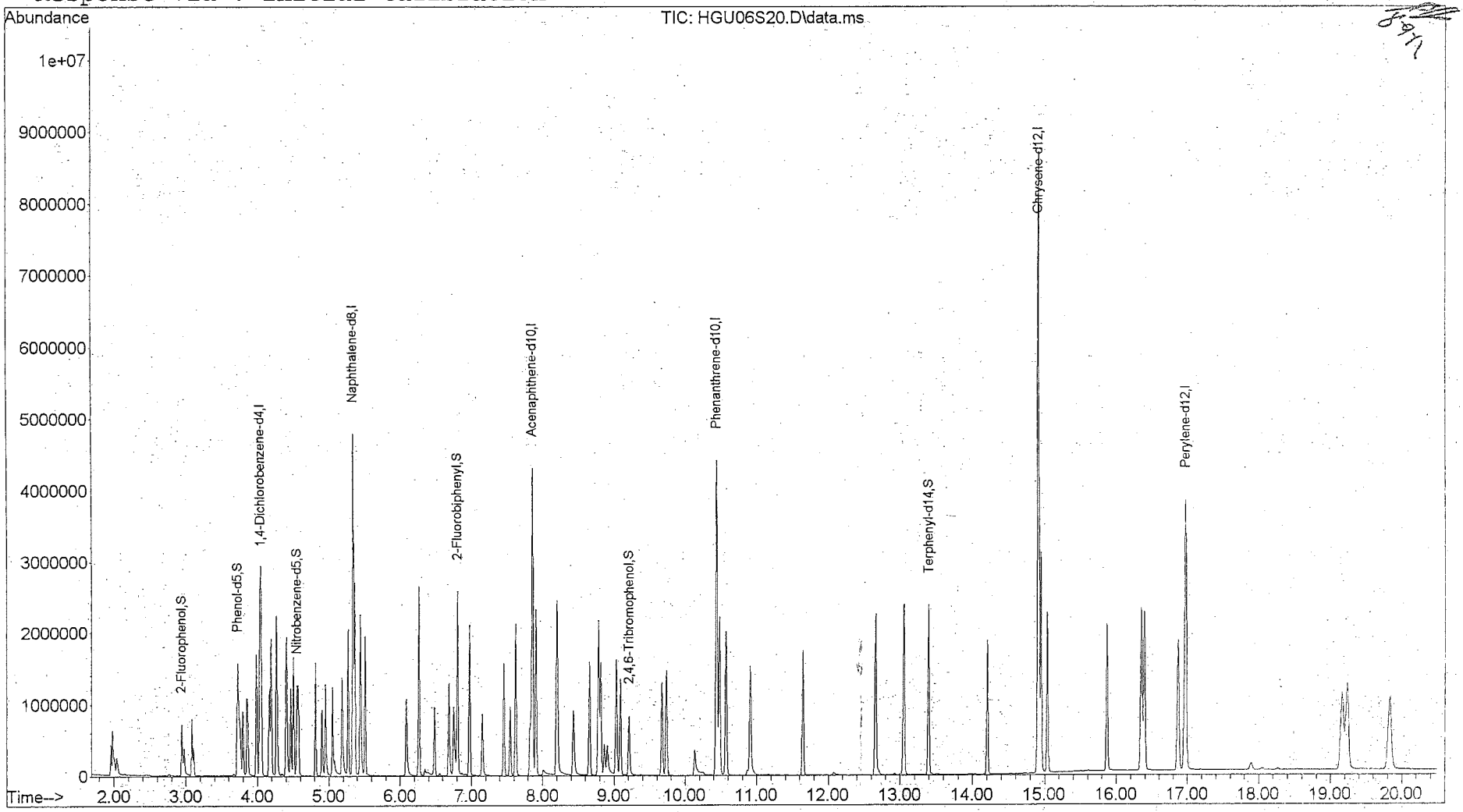
8270DOND.M 5975-H 8270DOND.M 8270 5 std 15974 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU06S20.D Vial: 6
Acq On : 08/08/2012 12:29 Operator: RAH
Sample : 8270 20 std 15973 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:23:14 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

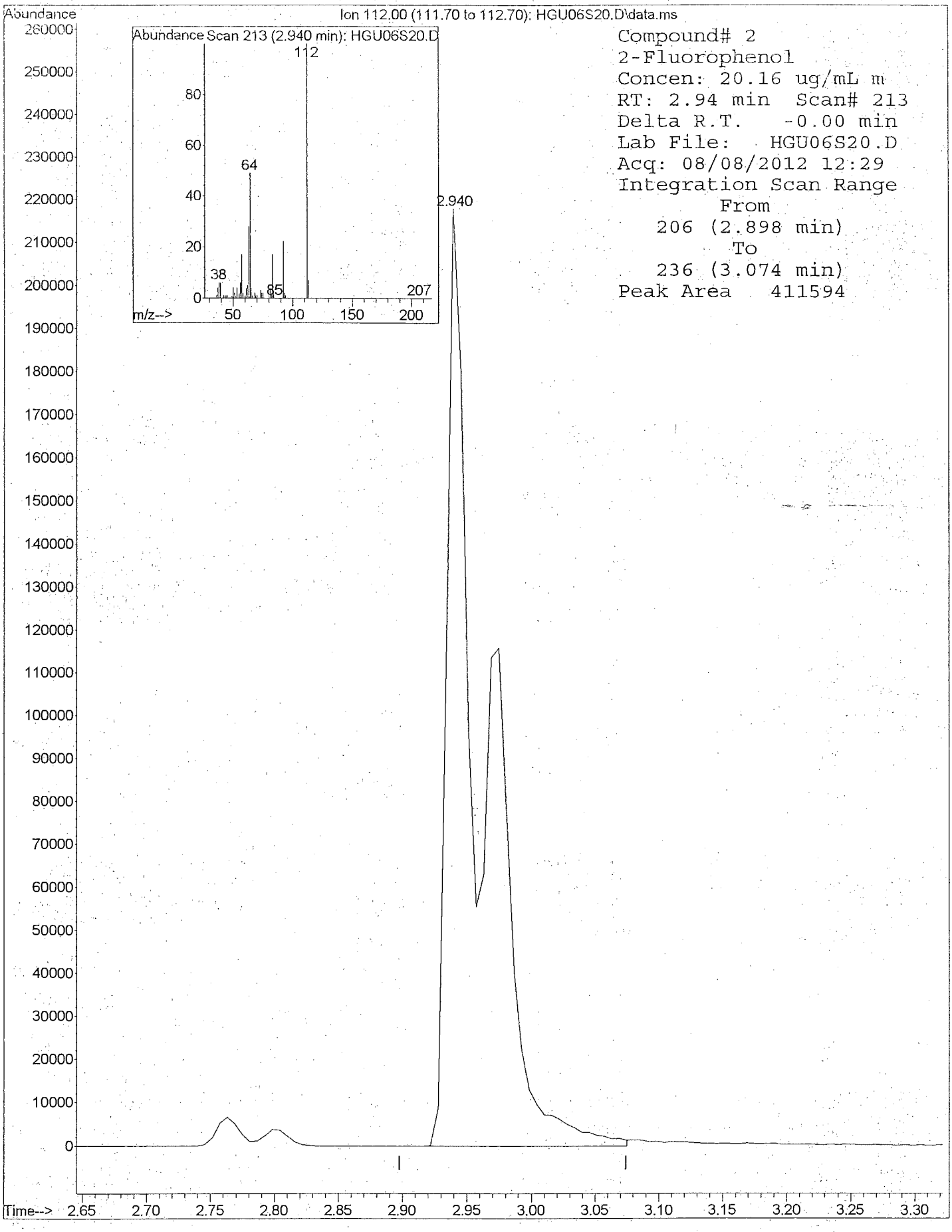
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU06S20.D Vial: 6
Acq On : 08/08/2012 12:29 Operator: RAH
Sample : 8270 20 std 15973 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:23:14 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	607773	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2617015	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1459213	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2715173	40.00 ug/mL
12) Chrysene-d12	14.92	240	3091127	40.00 ug/mL
14) Perylene-d12	16.97	264	2675827	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	411594	20.158ug/mL m
4) Phenol-d5	3.72	99	538093	20.094ug/mL
7) Nitrobenzene-d5	4.55	82	451447	20.124ug/mL
9) 2-Fluorobiphenyl	6.80	172	1088983	20.121ug/mL
11) 2,4,6-Tribromophenol	9.21	330	178946	19.577ug/mL
13) Terphenyl-d14	13.39	244	1191516	19.966ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	202599	19.200ug/mL m 99
5) 1,4-Dithiane	4.46	120	327670	19.168ug/mL 99

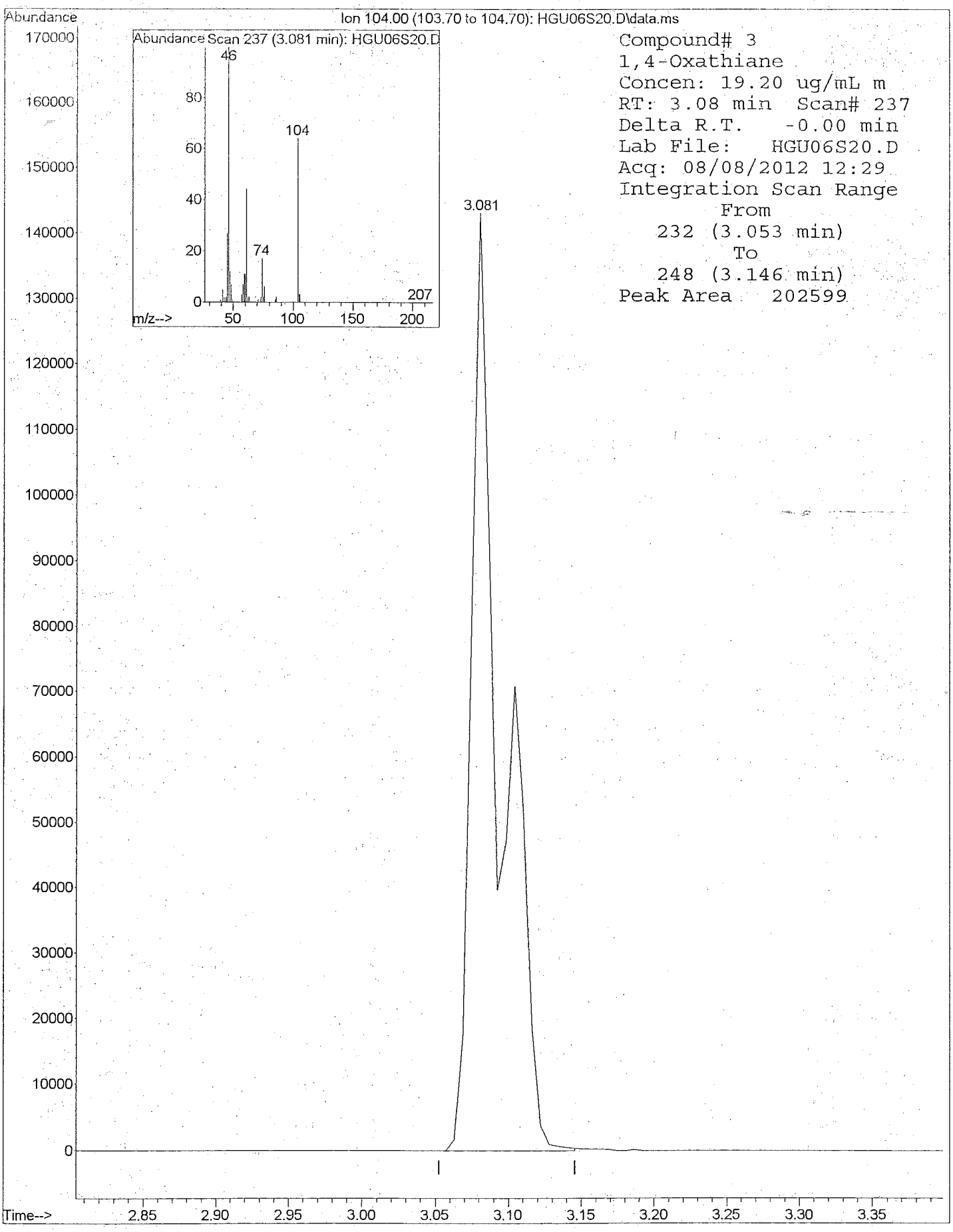
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 20 std 15973 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



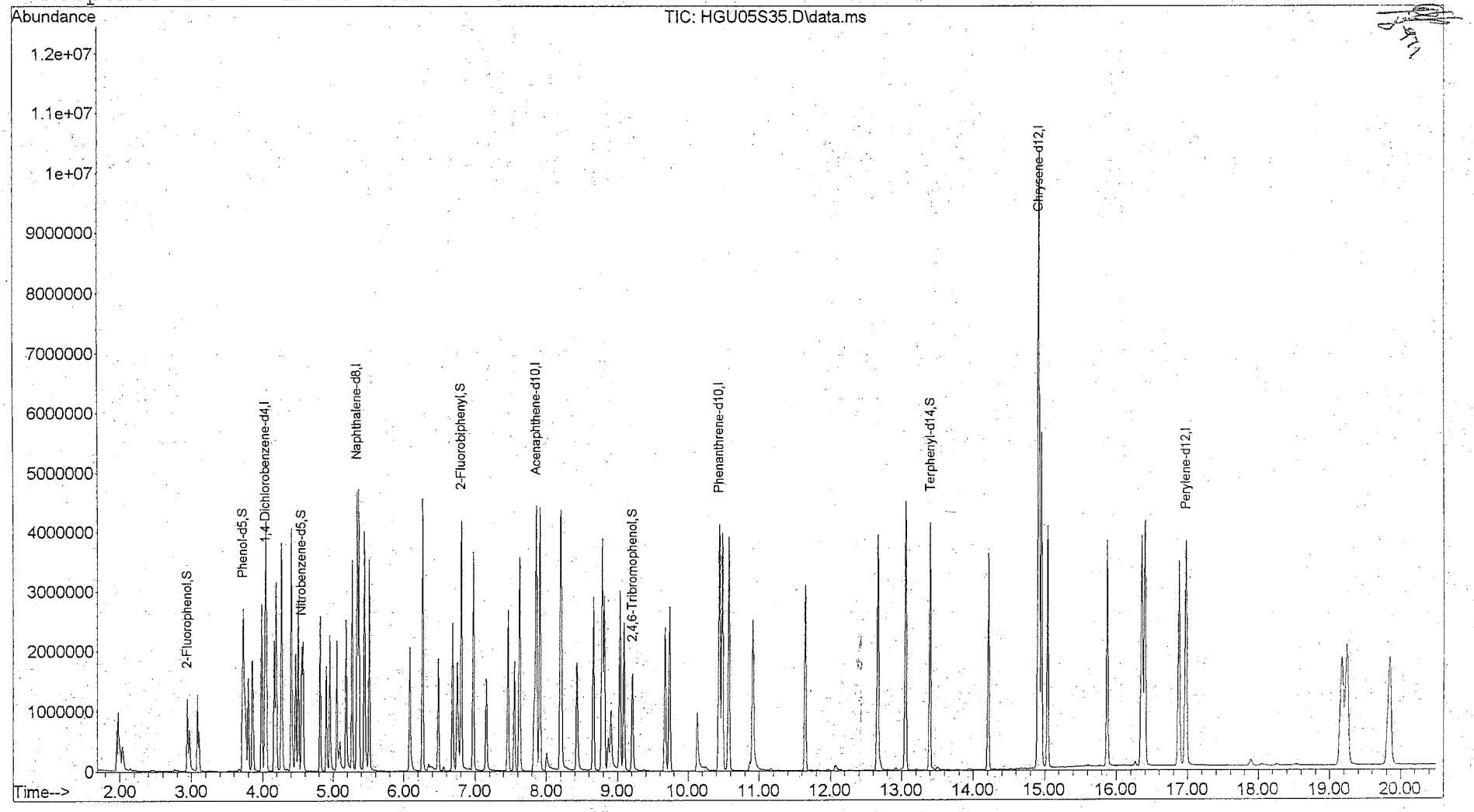
8270DOND.M 5975-H 8270DOND.M 8270 20 std 15973 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU05S35.D Vial: 5
Acq On : 08/08/2012 12:00 Operator: RAH
Sample : 8270 35 std 15972 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:57 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

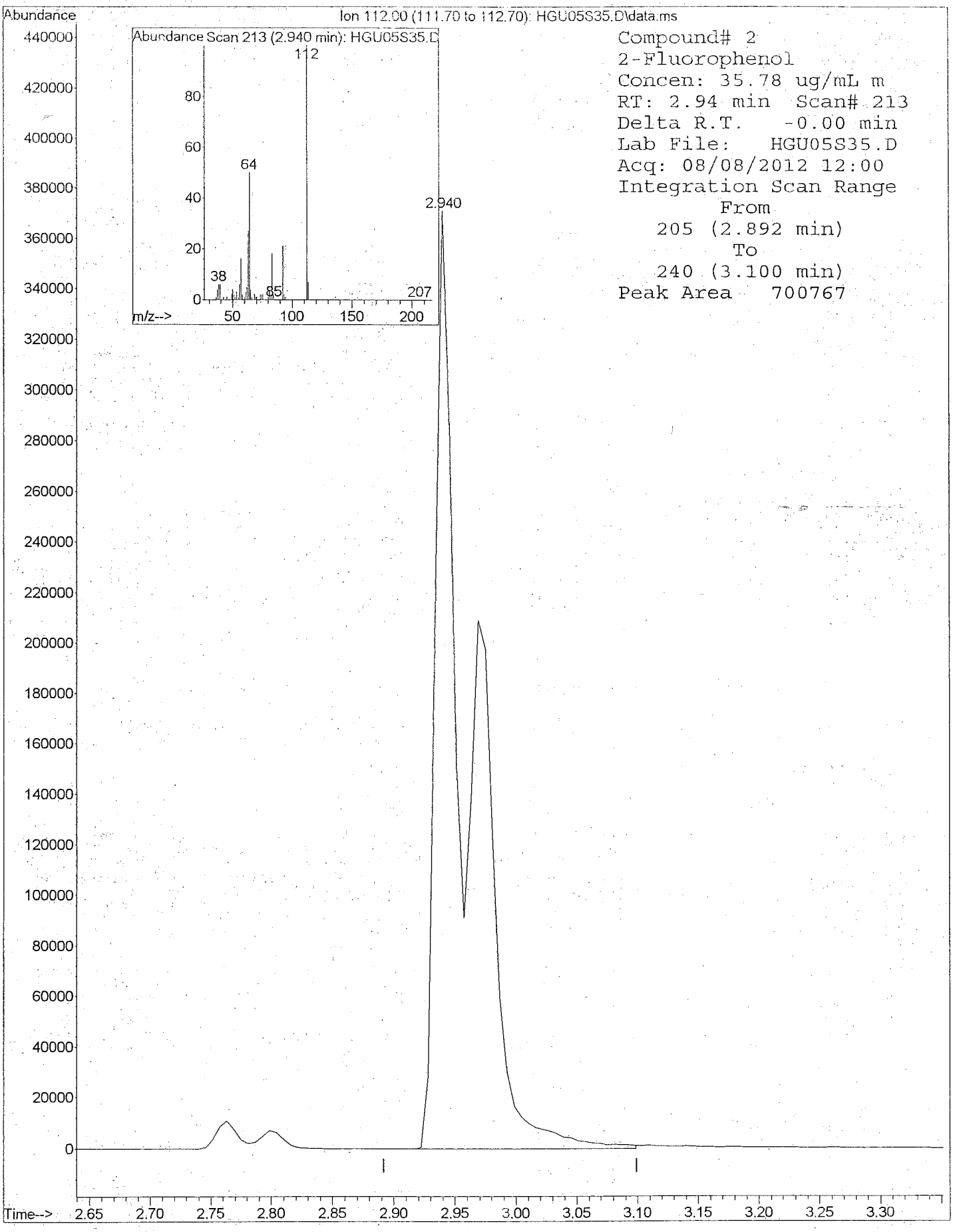
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU05S35.D Vial: 5
Acq On : 08/08/2012 12:00 Operator: RAH
Sample : 8270 35 std 15972 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:57 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	582911	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2556097	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1465004	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2738820	40.00 ug/mL
12) Chrysene-d12	14.92	240	3035266	40.00 ug/mL
14) Perylene-d12	16.97	264	2627498	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	700767	35.784ug/mL m
4) Phenol-d5	3.72	99	920516	35.841ug/mL
7) Nitrobenzene-d5	4.55	82	793614	36.219ug/mL
9) 2-Fluorobiphenyl	6.81	172	1951088	35.907ug/mL
11) 2,4,6-Tribromophenol	9.21	330	335739	36.413ug/mL
13) Terphenyl-d14	13.40	244	2149311	36.678ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	343846	33.975ug/mL m 99
5) 1,4-Dithiane	4.47	120	556869	33.965ug/mL 98

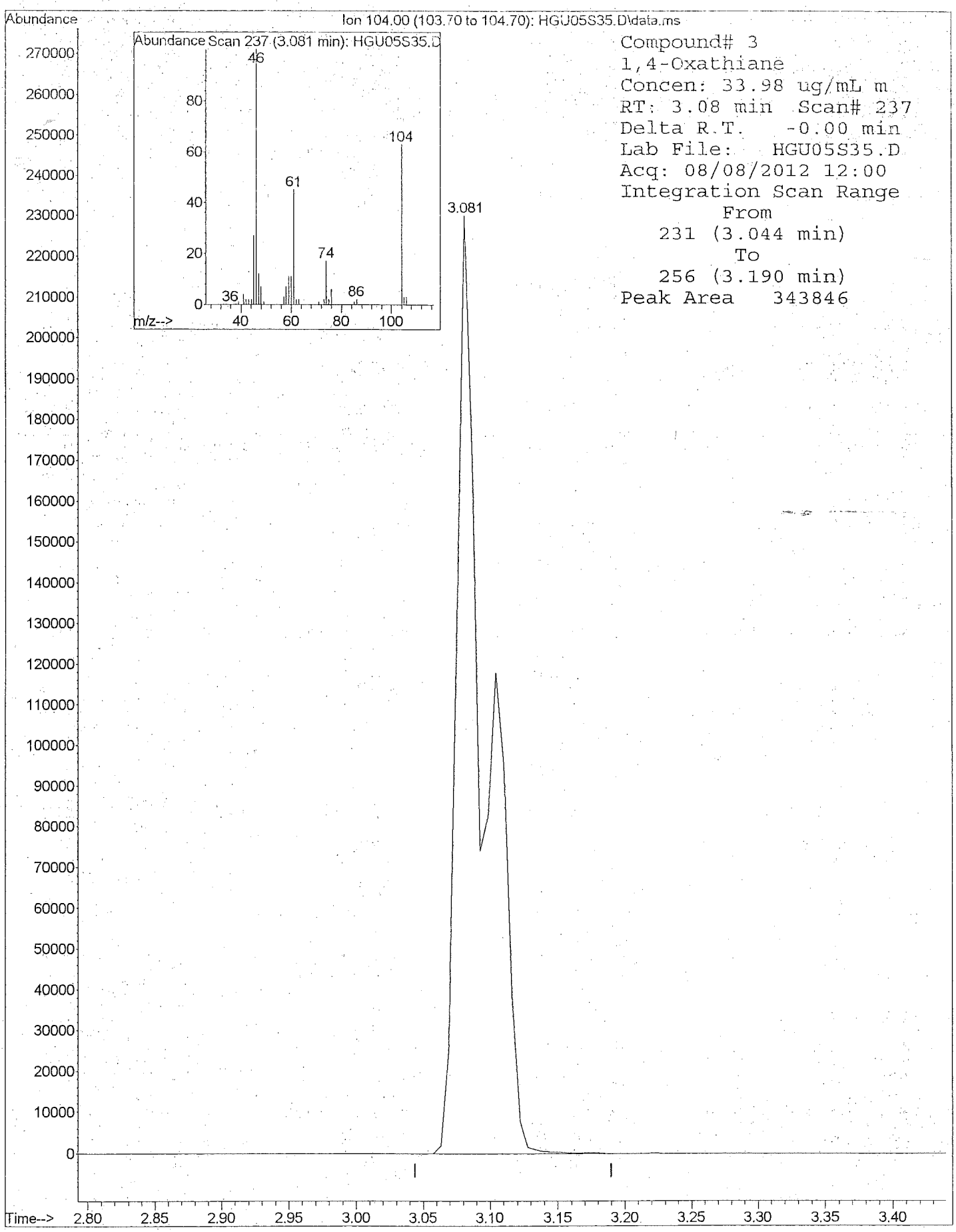
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 35 std 15972 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



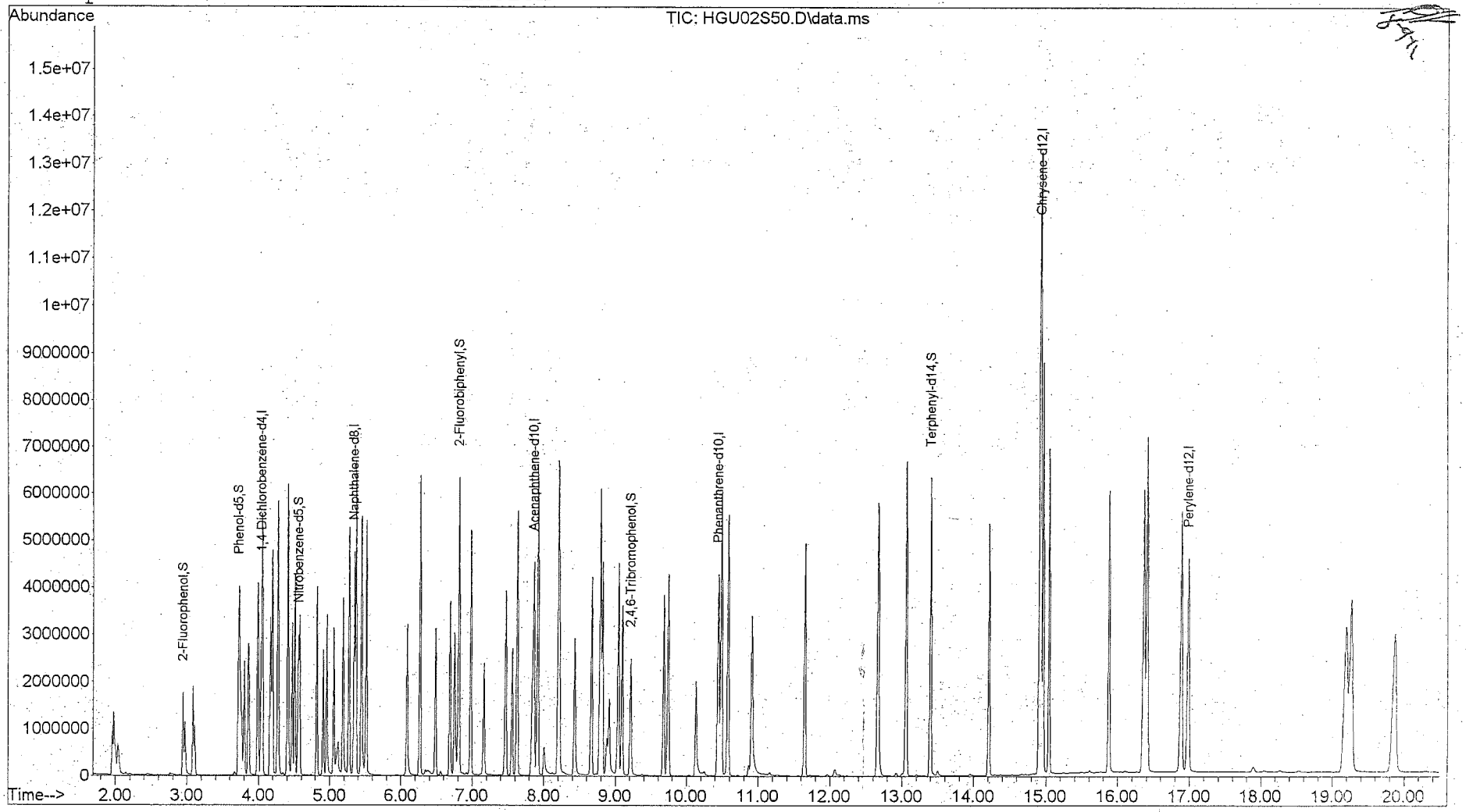
8270DOND.M 5975-H 8270DOND.M 8270 35 std 15972 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU02S50.D Vial: 2
Acq On : 08/08/2012 10:26 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:00 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

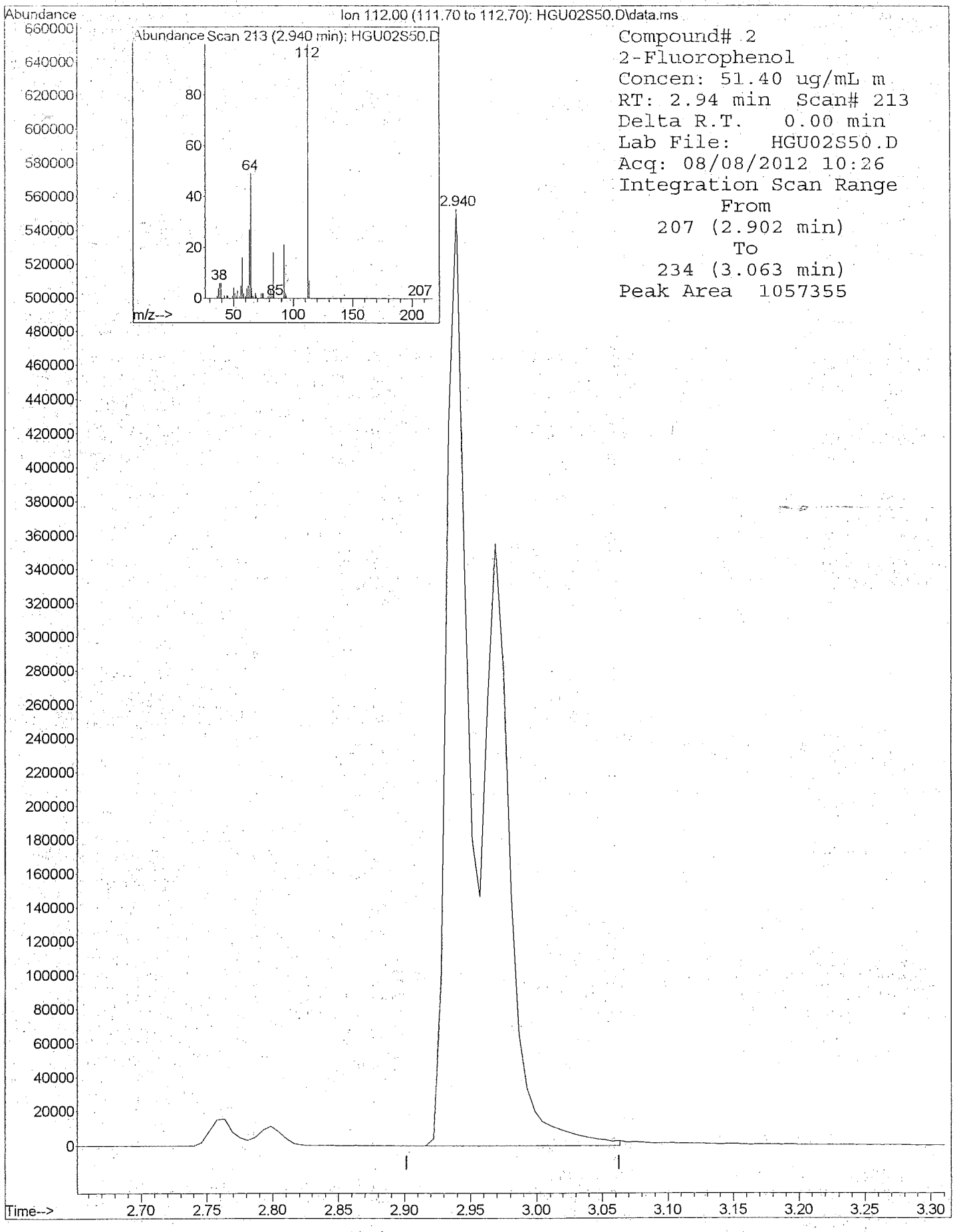
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU02S50.D Vial: 2
Acq On : 08/08/2012 10:26 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:00 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	
1) 1,4-Dichlorobenzene-d4	4.03	152	612345	40.00 ug/mL	
6) Naphthalene-d8	5.34	136	2685634	40.00 ug/mL	
8) Acenaphthene-d10	7.86	164	1537458	40.00 ug/mL	
10) Phenanthrene-d10	10.44	188	2905275	40.00 ug/mL	
12) Chrysene-d12	14.92	240	3449311	40.00 ug/mL	
14) Perylene-d12	16.98	264	3127477	40.00 ug/mL	
System Monitoring Compounds					
2) 2-Fluorophenol	2.94	112	1057355	51.398ug/mL	m
4) Phenol-d5	3.72	99	1371889	50.848ug/mL	
7) Nitrobenzene-d5	4.56	82	1173697	50.982ug/mL	
9) 2-Fluorobiphenyl	6.81	172	2890739	50.693ug/mL	
11) 2,4,6-Tribromophenol	9.21	330	511120	52.257ug/mL	
13) Terphenyl-d14	13.40	244	3359400	50.447ug/mL	
Target Compounds					Qvalue
3) 1,4-Oxathiane	3.08	104	531164	49.961ug/mL	m 98
5) 1,4-Dithiane	4.47	120	861261	50.006ug/mL	99

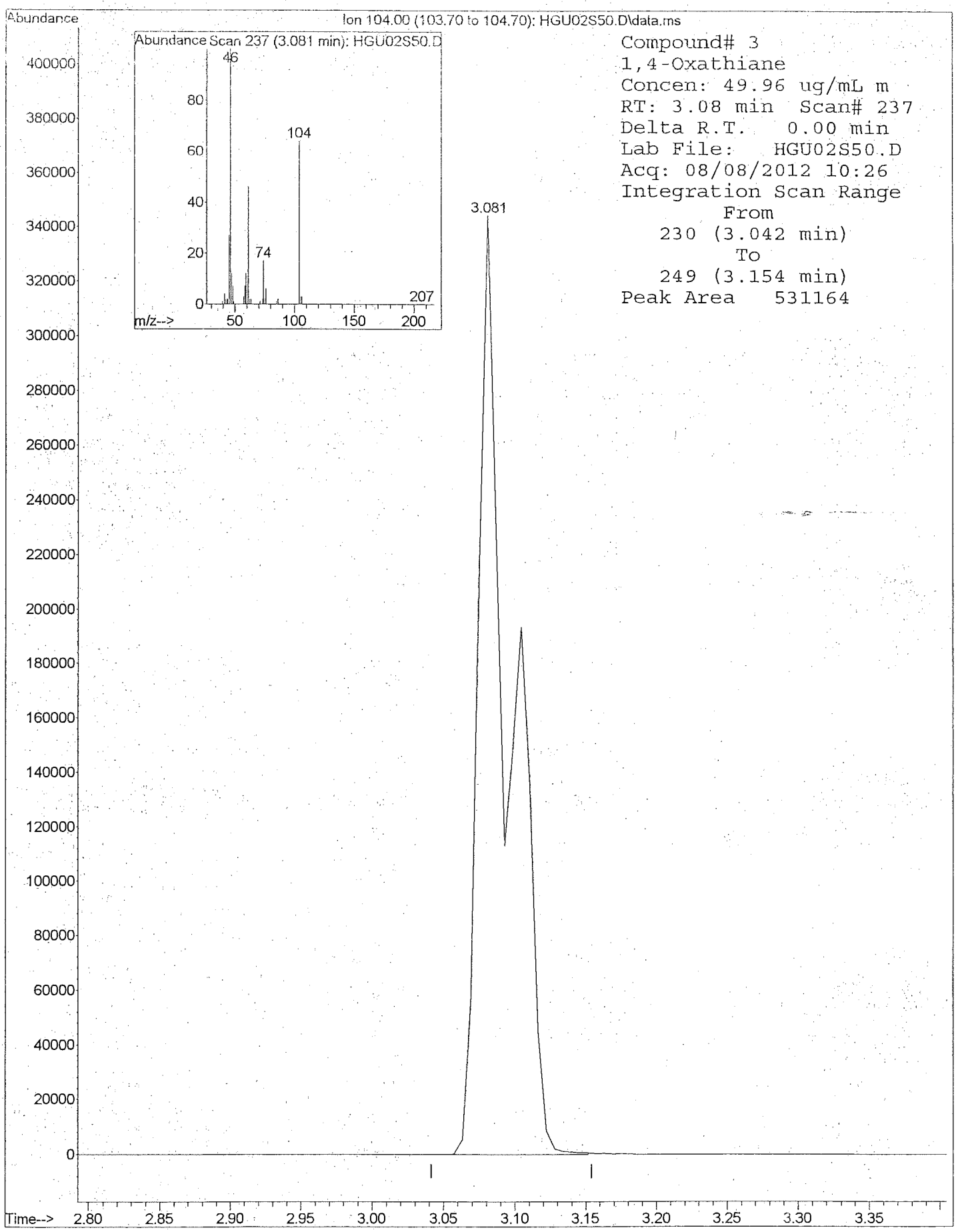
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



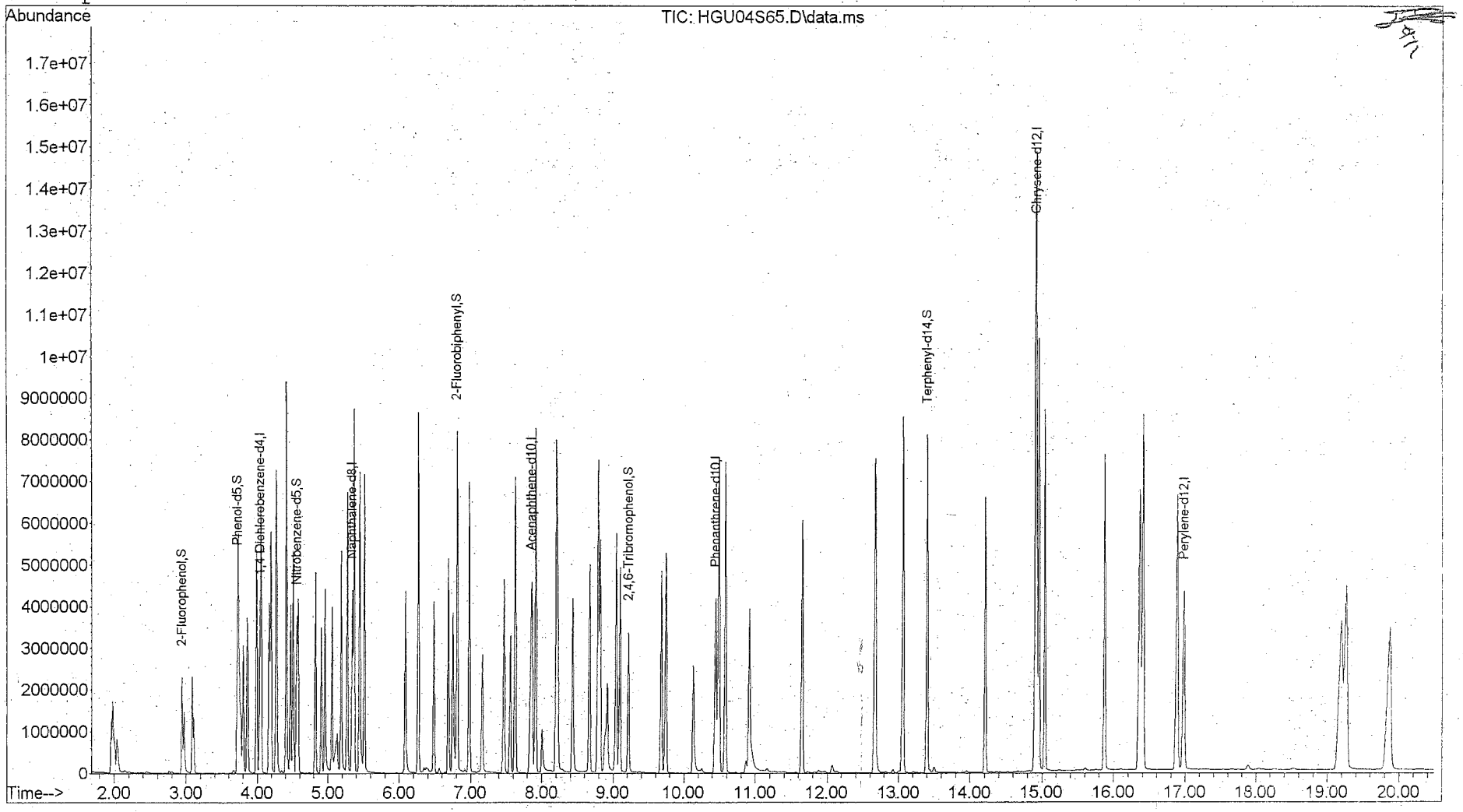
8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU04S65.D Vial: 4
Acq On : 08/08/2012 11:30 Operator: RAH
Sample : 8270 65 std 15971 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:39 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

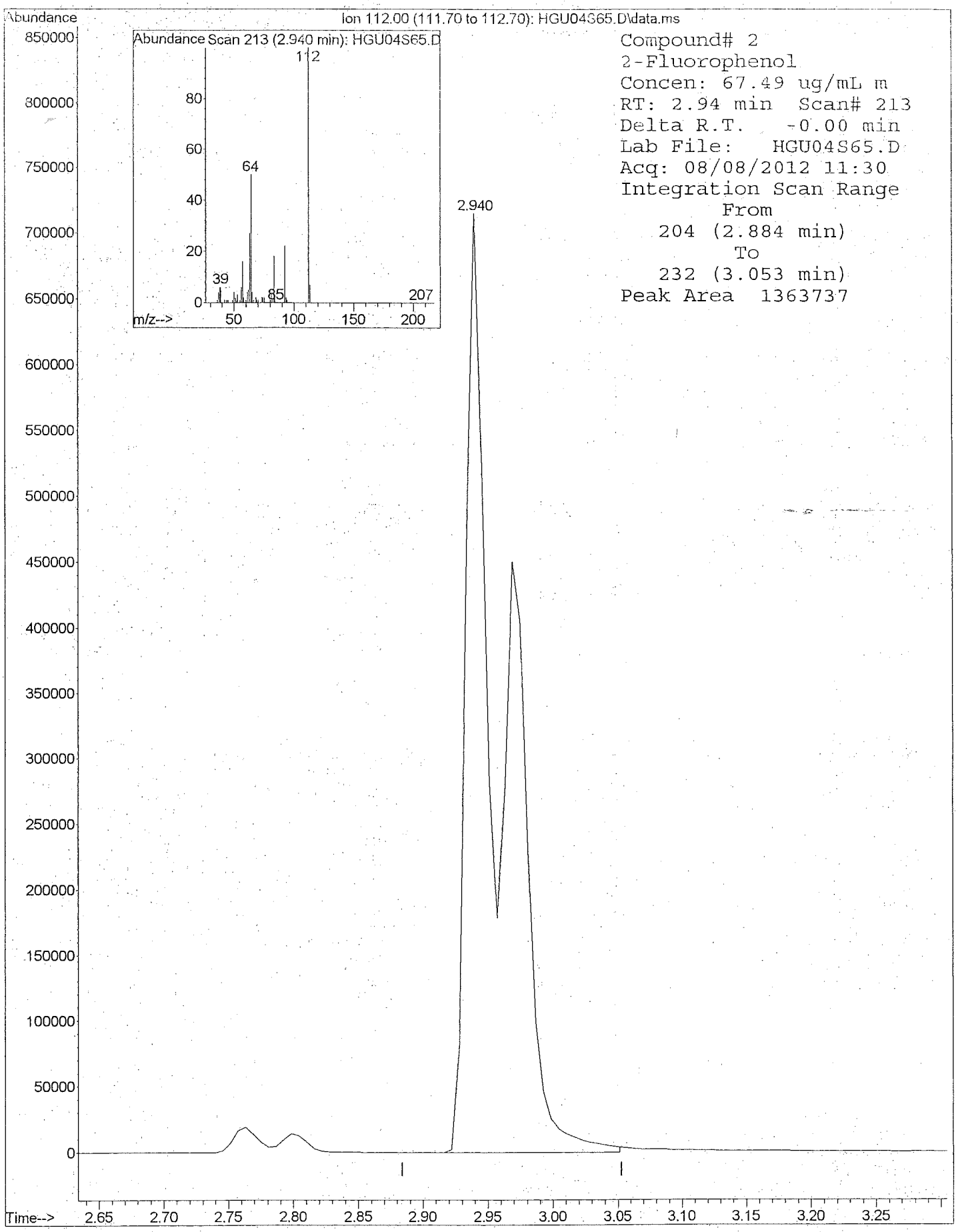
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU04S65.D Vial: 4
Acq On : 08/08/2012 11:30 Operator: RAH
Sample : 8270 65 std 15971 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:39 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	601456	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2621070	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1527619	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2869288	40.00 ug/mL
12) Chrysene-d12	14.92	240	3336798	40.00 ug/mL
14) Perylene-d12	16.98	264	2949965	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	1363737	67.491ug/mL m
4) Phenol-d5	3.72	99	1796093	67.776ug/mL
7) Nitrobenzene-d5	4.56	82	1514769	67.417ug/mL
9) 2-Fluorobiphenyl	6.81	172	3752969	66.238ug/mL
11) 2,4,6-Tribromophenol	9.22	330	665537	68.899ug/mL
13) Terphenyl-d14	13.40	244	4279647	66.433ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	671622	64.317ug/mL m 98
5) 1,4-Dithiane	4.47	120	1091903	64.545ug/mL 99

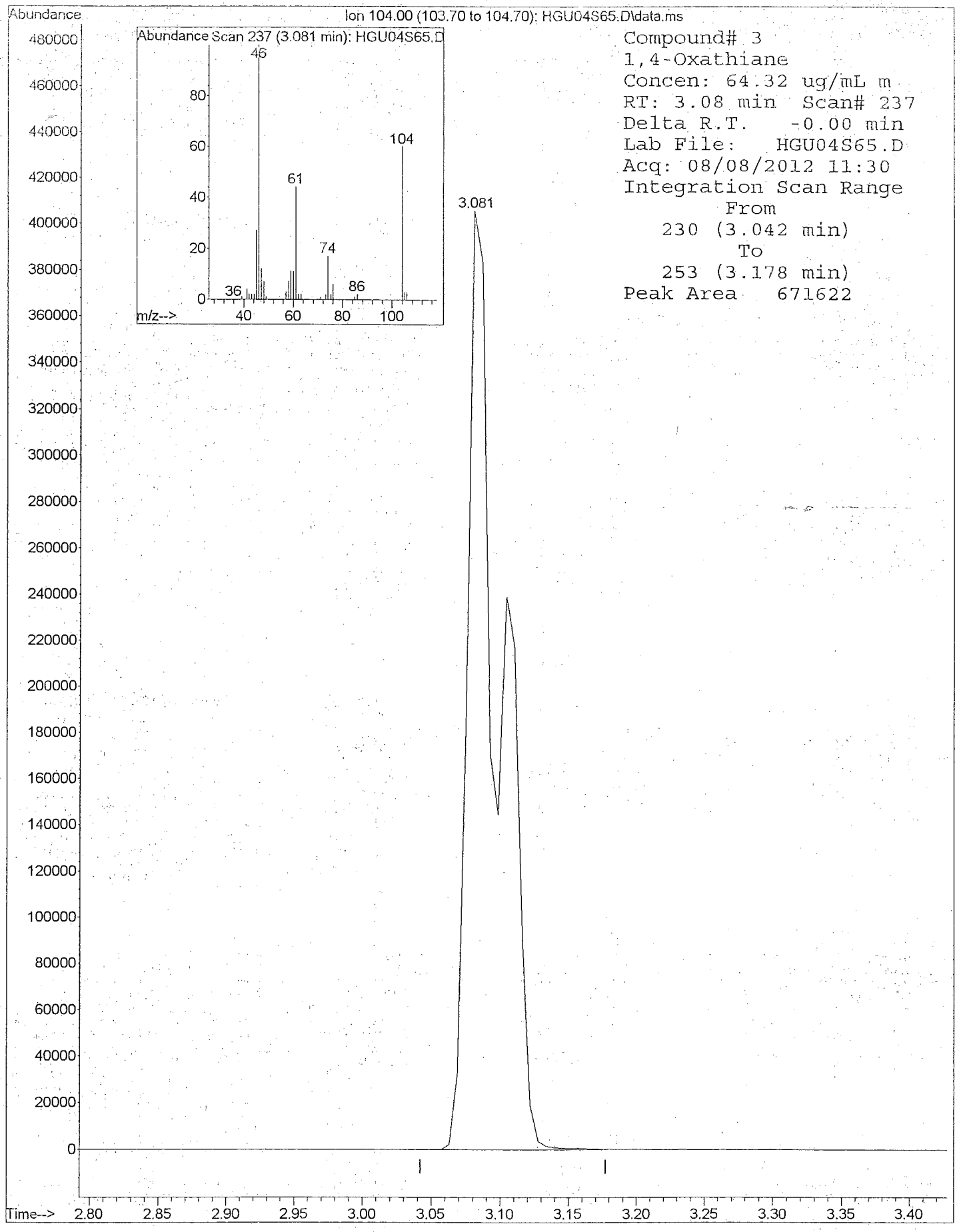
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

MANUAL INTEGRATION FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 65 std 15971 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



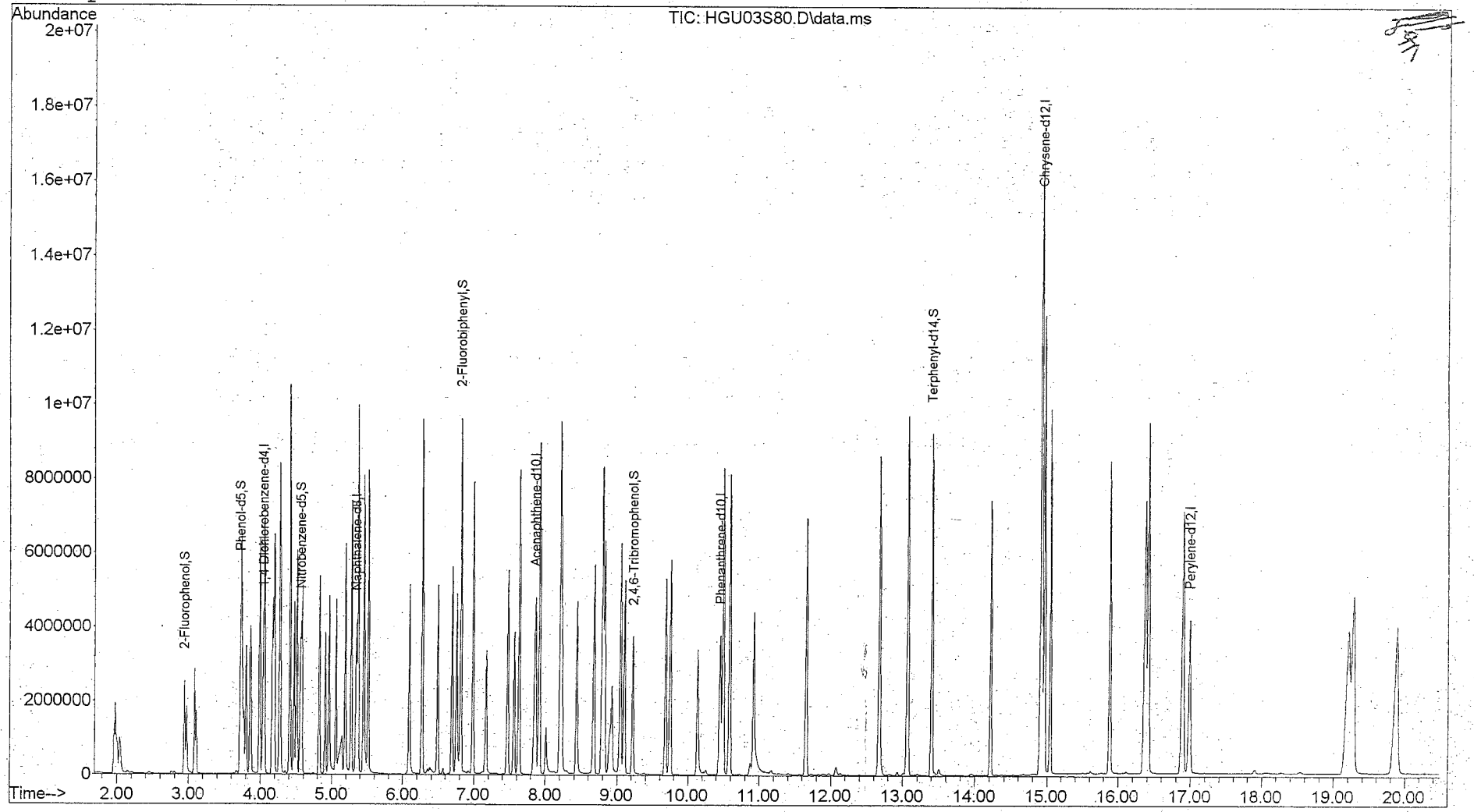
8270DOND.M 5975-H 8270DOND.M 8270 65 std 15971 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU03S80.D Vial: 3
Acq On : 08/08/2012 11:01 Operator: RAH
Sample : 8270 80 std 15970 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:20 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

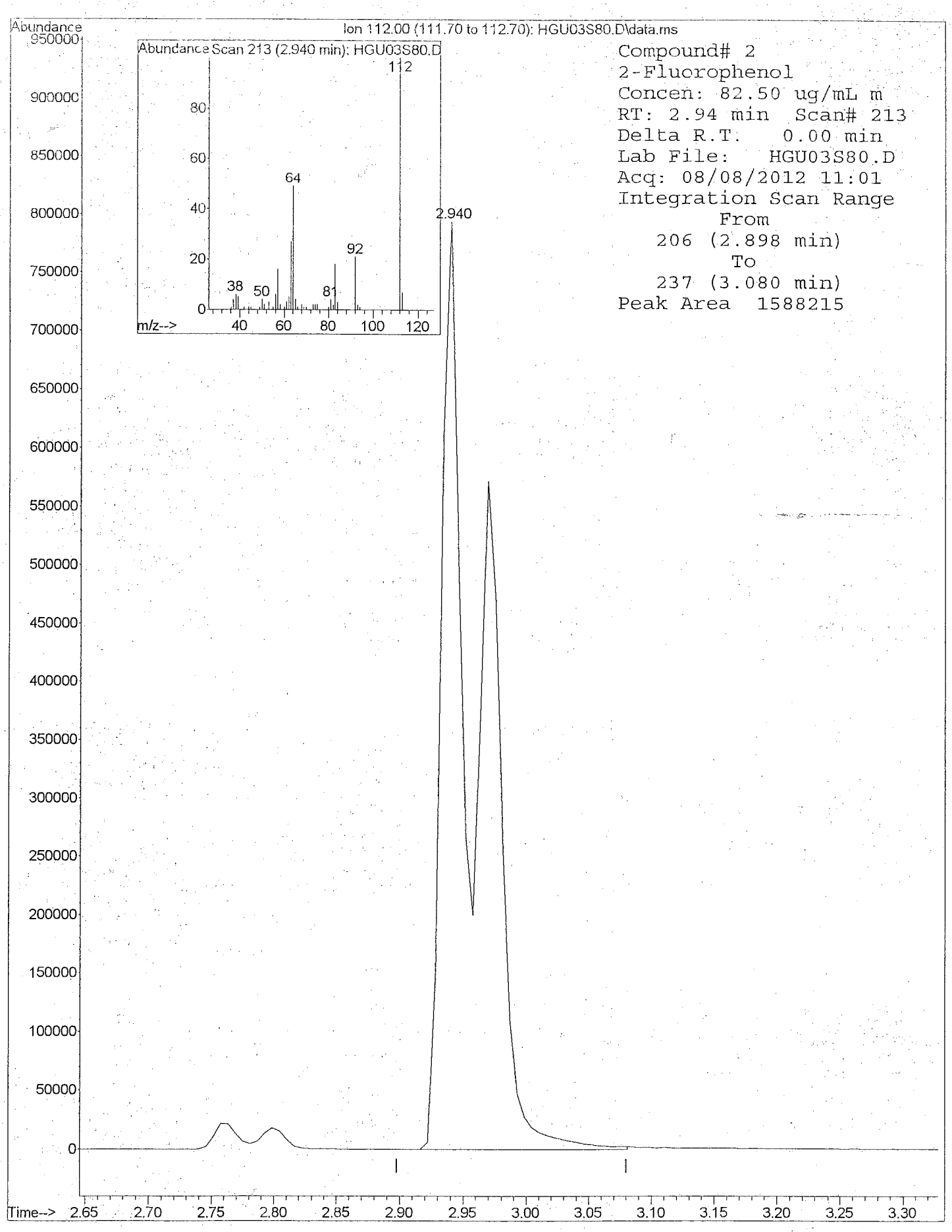
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU03S80.D Vial: 3
Acq On : 08/08/2012 11:01 Operator: RAH
Sample : 8270 80 std 15970 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:20 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	573029	40.00 ug/mL
6) Naphthalene-d8	5.35	136	2477577	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1435287	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2700617	40.00 ug/mL
12) Chrysene-d12	14.93	240	3115162	40.00 ug/mL
14) Perylene-d12	16.99	264	2729963	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	1588215	82.500ug/mL m
4) Phenol-d5	3.72	99	2086917	82.657ug/mL
7) Nitrobenzene-d5	4.56	82	1728073	81.365ug/mL
9) 2-Fluorobiphenyl	6.82	172	4345820	81.635ug/mL
11) 2,4,6-Tribromophenol	9.22	330	773542	85.081ug/mL
13) Terphenyl-d14	13.40	244	4851775	80.673ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	812617	81.679ug/mL m 92
5) 1,4-Dithiane	4.47	120	1310784	81.328ug/mL 99

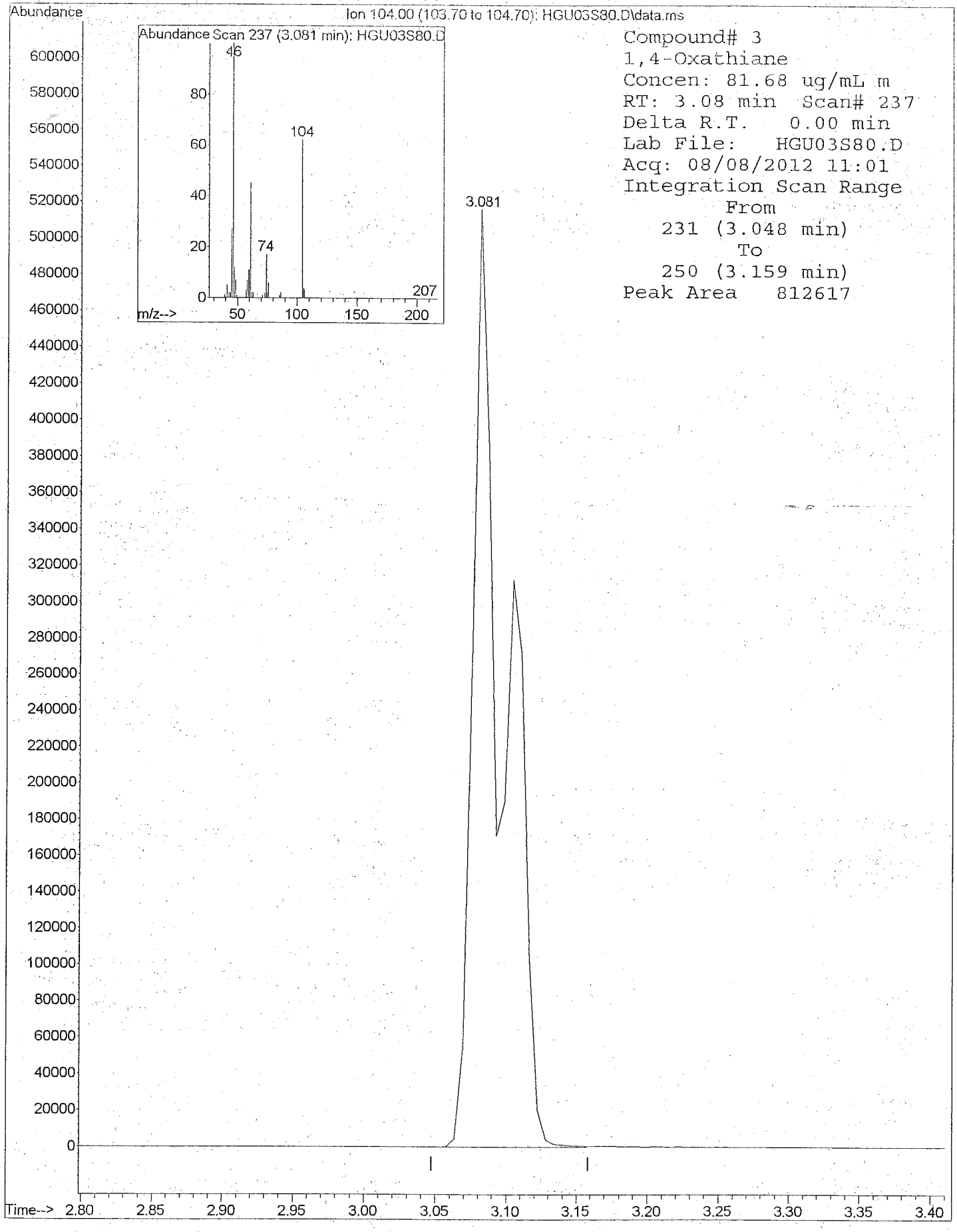
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 80 std 15970 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



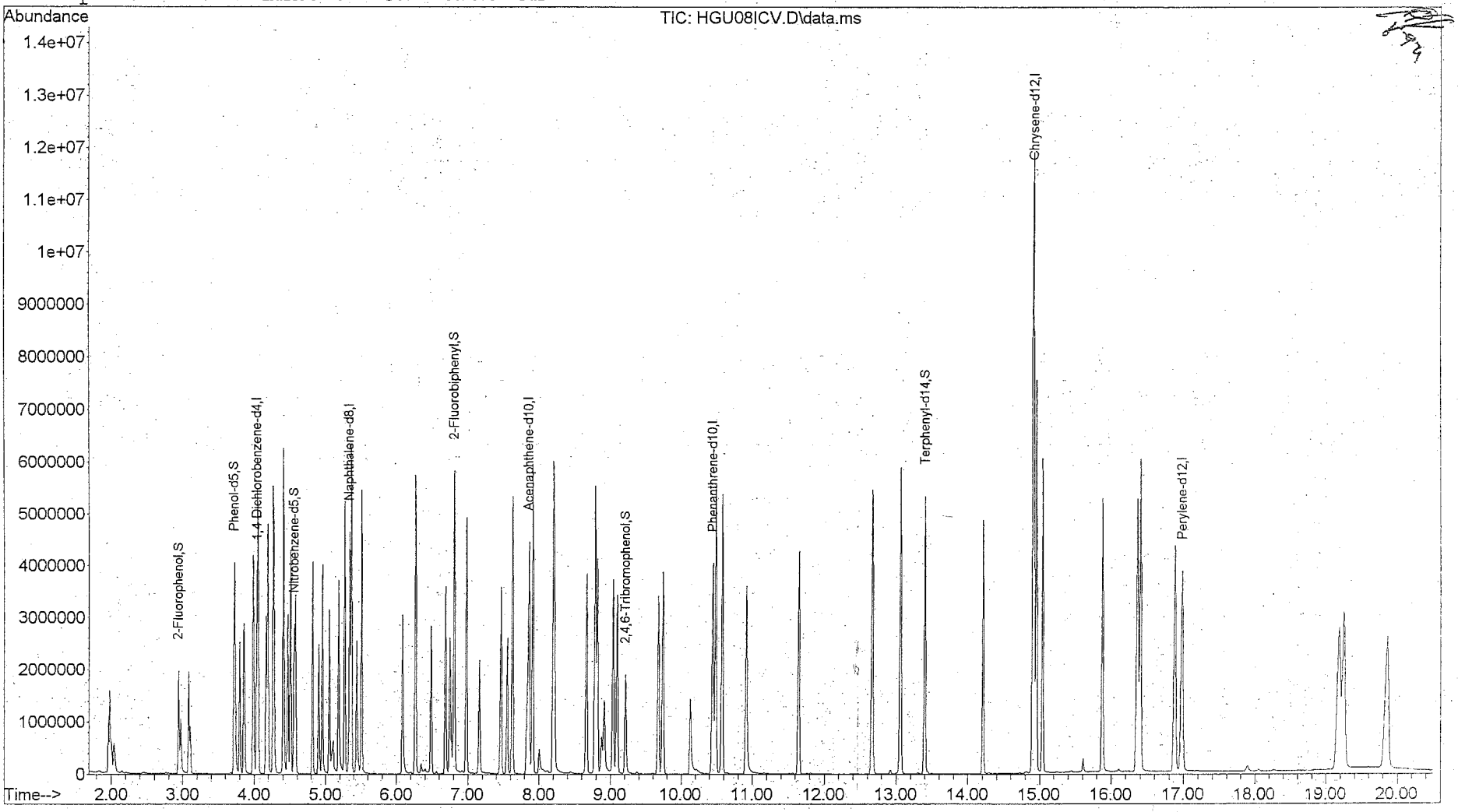
8270DOND.M 5975-H 8270DOND.M 8270 80 std 15970 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU08ICV.D Vial: 8
Acq On : 08/08/2012 13:29 Operator: RAH
Sample : 8270 ICV 15975 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 14:02:13 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

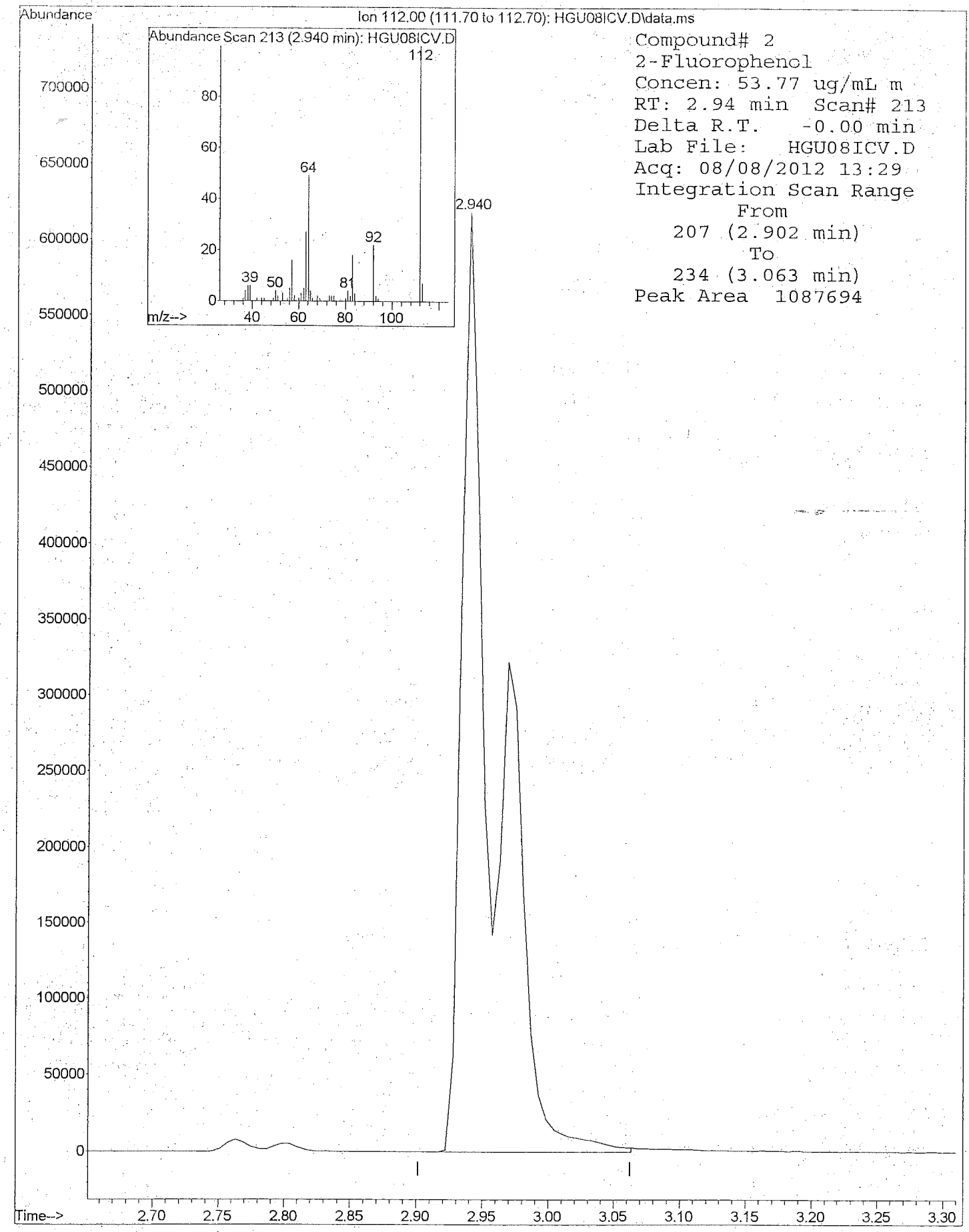
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU08ICV.D Vial: 8
Acq On : 08/08/2012 13:29 Operator: RAH
Sample : 8270 ICV 15975 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 14:02:13 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	602341	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2573963	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1459085	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2725972	40.00 ug/mL
12) Chrysene-d12	14.92	240	3150498	40.00 ug/mL
14) Perylene-d12	16.98	264	2694862	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	1087694	53.767ug/mL m
4) Phenol-d5	3.72	99	1280207	48.238ug/mL
7) Nitrobenzene-d5	4.56	82	1077669	48.841ug/mL
9) 2-Fluorobiphenyl	6.81	172	2644191	48.860ug/mL
11) 2,4,6-Tribromophenol	9.22	330	397803	43.347ug/mL
13) Terphenyl-d14	13.40	244	2731708	44.912ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	517926	49.537ug/mL m 99
5) 1,4-Dithiane	4.47	120	833107	49.175ug/mL 98

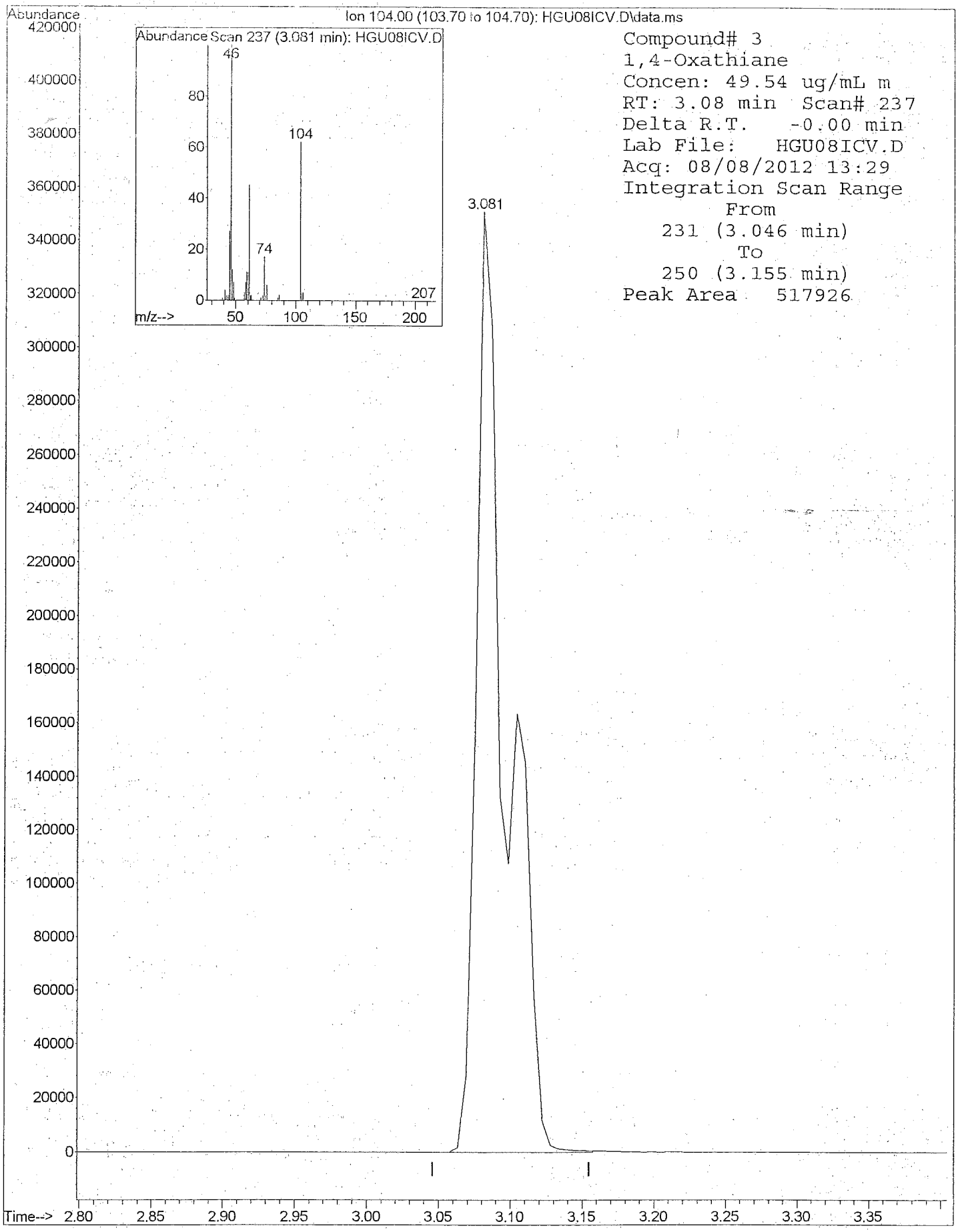
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

MANUAL INTEGRATION FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 ICV 15975 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



8270DOND.M 5975-H 8270DOND.M 8270 ICV 15975 . X:1/9/13

Average of 6.239 to 6.251 min.: HGV01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.90	136	48.95	1049	61.00	1487	73.05	1256
37.00	687	50.05	28941	62.05	1720	74.00	13299
38.10	1586	51.00	103055	63.00	4498	75.00	20248
39.05	9238	52.05	5139	64.05	719	76.10	6802
39.95	364	52.95	227	65.05	2271	77.10	133075
41.00	236	54.95	611	66.00	213	78.10	9523
42.95	123	56.00	3566	66.90	106	79.00	10048
43.90	209	57.00	7688	67.10	99	80.00	7584
44.95	288	57.95	343	69.00	142021	81.00	10298
46.90	6	58.95	111	70.00	682	82.00	2371
47.90	217	59.90	57	71.00	52	83.00	2256

Average of 6.239 to 6.251 min.: HGV01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
83.90	164	96.00	737	107.00	41157	118.00	2586
85.00	1708	97.10	102	108.00	6462	118.95	364
85.95	3059	98.00	12376	110.00	78984	119.95	550
87.00	1289	99.00	9497	111.00	11553	121.00	226
87.95	588	99.95	800	112.00	1401	122.00	3273
89.00	243	101.00	5368	113.00	467	123.00	4426
91.00	2424	102.00	315	113.90	126	123.95	2049
92.00	2633	103.00	2091	114.40	56	124.95	1811
93.00	16146	104.00	3577	114.95	151	127.00	156331
94.00	999	105.00	3216	116.05	2525	128.00	12141
95.05	382	106.10	523	117.00	33541	129.00	62469

Average of 6.239 to 6.251 min.: HGV01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
130.00	5045	140.00	886	151.10	1232	160.00	2501
131.00	875	141.00	8065	151.60	327	161.00	3736
131.95	657	142.00	2521	151.80	305	161.90	1227
133.05	261	142.95	1643	152.00	216	162.95	321
133.95	1534	143.95	511	153.00	2463	164.00	666
135.00	4760	145.00	482	154.00	2142	165.00	3048
136.00	2000	145.95	1537	155.00	4410	166.05	2385
136.95	2341	147.00	4138	156.00	6515	166.95	16451
137.75	430	148.00	8596	157.05	1520	168.00	7357
138.00	224	149.00	1707	157.95	1663	168.95	1312
138.85	338	149.90	507	158.95	1026	169.95	654

Average of 6.239 to 6.251 min.: HGV01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
170.95	754	182.05	687	193.00	4317	206.00	89240
172.00	1531	183.00	465	193.95	907	207.00	11780
172.95	1776	183.95	1066	194.90	450	208.00	2996
174.00	3472	185.05	6071	196.00	13780	209.00	1128
175.05	6115	186.00	48309	198.00	362709	211.00	3962
176.05	2112	187.00	12741	199.00	24061	212.90	219
177.00	3083	188.00	1326	200.00	1948	214.90	1001
178.05	1130	188.95	2770	201.50	2421	216.00	1824
179.00	12719	189.95	491	203.00	2584	217.00	22672
180.00	8806	191.00	1371	204.00	12268	218.00	2747
181.00	4242	192.00	4230	205.00	21704	218.90	214

Average of 6.239 to 6.251 min.: HGV01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
219.10	65	231.00	1909	242.00	2839	252.95	951
219.70	120	232.00	399	243.05	3392	255.00	224128
221.00	24536	233.00	398	244.00	43459	256.00	32675
223.00	5711	233.95	1359	245.05	5772	257.00	2668
224.00	50736	234.95	1435	246.00	7245	258.00	12164
225.00	13188	235.95	929	247.00	1702	259.00	1993
226.10	853	236.95	1665	247.95	338	260.05	358
227.00	19824	237.90	227	248.95	1528	261.00	368
228.00	2945	238.95	860	249.95	304	263.00	60
229.00	4314	239.95	618	250.90	395	263.85	334
230.00	698	240.95	1220	252.05	418	265.00	5171

Average of 6.239 to 6.251 min.: HGV01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
265.85	406	278.70	75	290.90	196	305.00	53
266.80	69	278.95	195	292.00	432	307.95	435
269.90	343	281.10	133	292.95	1859	308.90	249
270.95	439	282.00	236	293.95	453	309.95	362
271.95	603	283.00	1036	296.00	27829	312.90	307
273.00	6954	283.95	626	297.00	4009	314.00	1521
274.00	17511	285.05	1334	297.95	278	315.00	2735
275.00	104869	286.00	277	300.90	378	316.00	1684
276.00	13747	287.80	51	301.95	625	316.95	304
277.00	8462	288.95	342	303.00	3198	321.00	975
277.95	1349	289.95	325	304.00	822	321.90	108

Average of 6.239 to 6.251 min.: HGV01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
322.10	436	335.00	1396	354.05	2647	373.90	52
323.05	9450	336.00	242	355.05	601	383.00	1165
324.00	1707	339.00	65	359.05	106	384.00	328
324.90	160	340.05	166	363.00	50	390.05	444
326.05	210	340.95	1071	365.00	10681	390.80	95
326.95	1705	341.90	274	365.95	1507	391.05	231
327.95	1046	346.00	1919	366.90	59	392.00	224
328.95	201	346.95	370	370.00	266	400.95	190
332.00	657	350.90	75	371.05	726	402.05	1360
333.05	937	352.05	2632	372.00	4448	403.00	1836
334.00	5649	353.00	1939	373.00	1017	404.05	700

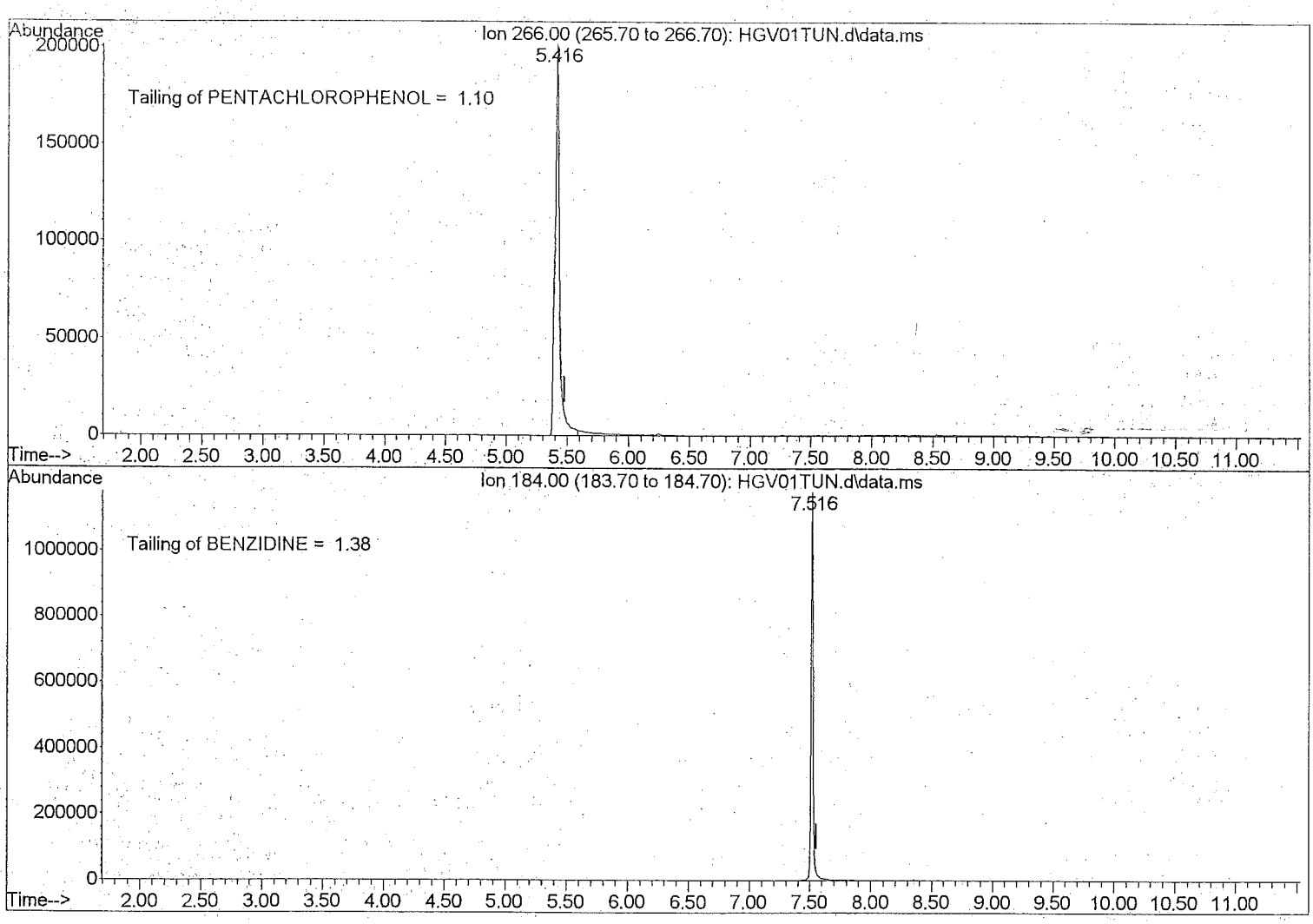
Average of 6.239 to 6.251 min.: HGV01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
421.05	1645	442.10	261653				
422.00	1623	443.10	52288				
423.05	11505	444.05	4717				
424.00	2491	444.95	243				
425.00	288						
437.40	107						
437.60	100						
438.20	217						
438.65	361						
439.30	225						
441.10	40531						

Data File: HGV01TUN.d
Date Acquired: 08/08/2012 14:07
Operator ID: RAH
Name: 8270 DFTPP 13808
Misc: X:1/11/13

Instrument: 5975-H
Acq Method: 8270DTUN.M
DA Method: 8270DTUN.M

Cal Title: EPA/CLP SOM01
Last Cal Update: Wed Nov 23 09:22:39 2011
X:1/11/13

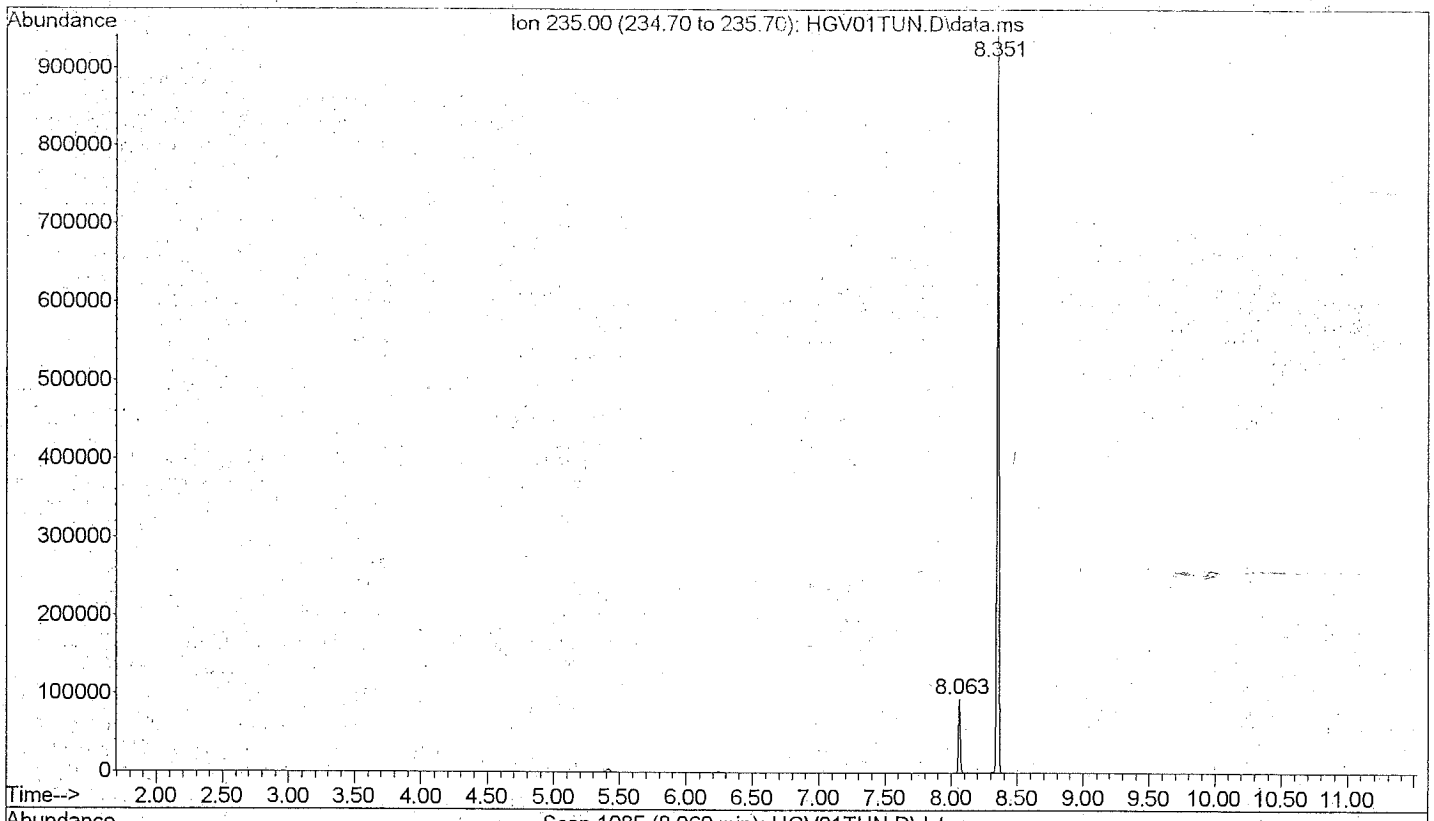


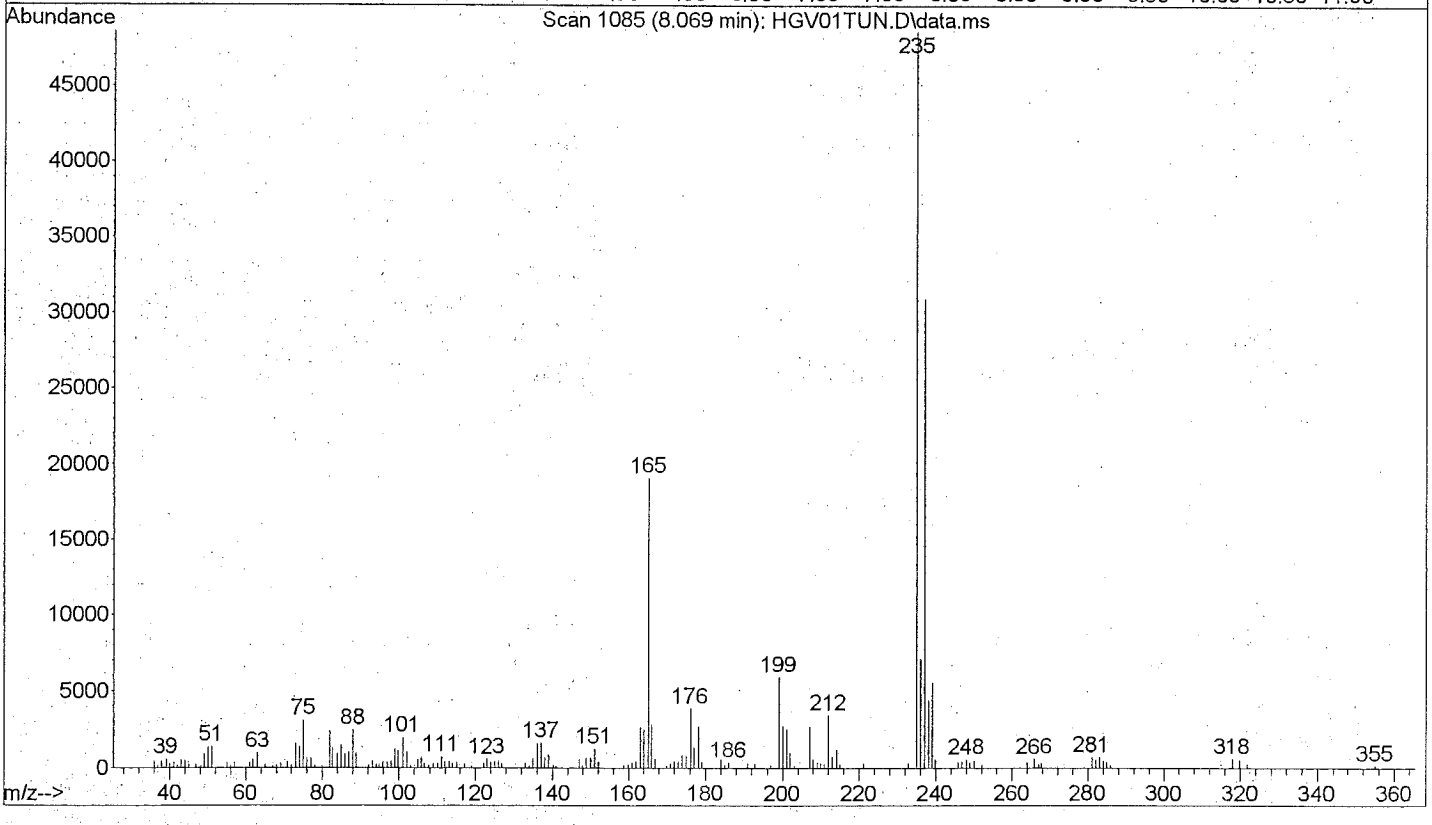
Ion 235.00 (234.70 to 235.70): HGV01TUN.D\data.ms
8270 DFTPP 13808

Peak #	Ret Time	Type	Width	Area	Start Time	End Time
1	8.063	rBV	0.100	94937	8.027	8.127
2	8.351	rVB	0.076	841725	8.316	8.392

DDT degradation = $\frac{94937}{94937 + 841725}$ = 10.1%

File :D:\1\DATA\2012\AUG12\08AUG12H\HGV01TUN.D
Operator : RAH
Acquired : 8 Aug 2012 2:07 pm using AcqMethod 8270DTUN.M
Instrument : 5975-H
Sample Name: 8270 DFTPP 13308
Misc Info : X:1/11/13
Vial Number: 1





Average of 6.239 to 6.251 min.: HGW01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.95	117	48.00	47	58.90	63	70.00	1708
37.00	700	49.00	1346	59.10	179	71.00	1696
38.00	1964	50.00	37352	60.00	2419	72.00	85
39.05	11339	51.05	135702	61.00	2496	73.00	4555
40.00	512	52.00	7208	62.00	2312	74.00	16870
41.05	612	52.95	410	63.00	5703	75.00	26040
42.00	607	54.00	201	64.00	635	76.05	7375
43.10	2983	55.05	3397	65.00	1292	77.05	175196
44.00	285	56.00	4457	66.00	108	78.00	12490
45.00	643	57.00	11966	67.05	796	79.00	13238
46.90	27	58.00	479	69.00	191394	80.00	9733

Average of 6.239 to 6.251 min.: HGW01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
81.00	13898	92.00	3235	103.00	2510	115.00	645
82.00	3457	93.00	20585	104.00	2683	116.05	3687
83.00	4560	94.00	1305	105.00	3481	116.95	44818
83.95	874	95.00	954	106.05	56	117.95	3372
85.00	3068	96.05	1210	107.00	56603	119.05	937
86.00	4102	97.10	1494	108.00	8422	120.00	872
87.00	2139	98.00	17249	110.00	107108	122.00	3377
87.95	622	99.00	12314	111.00	16515	123.00	5536
89.00	443	99.95	1101	112.00	2194	124.00	2951
89.95	152	101.00	7335	113.05	846	125.00	2642
91.00	3177	101.95	518	114.00	420	127.00	211858

Average of 6.239 to 6.251 min.: HGW01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
128.00	16192	139.00	473	151.90	1026	163.05	412
129.00	85923	140.00	1245	153.00	3362	164.05	963
130.00	7317	141.00	10727	153.95	2805	165.00	4319
131.00	1288	142.00	3532	155.00	6037	166.05	3435
132.00	614	143.00	2357	156.00	8863	167.00	23002
133.05	606	144.00	764	157.00	2518	168.00	9335
134.00	2454	145.05	625	158.00	2268	169.00	1663
135.00	6484	146.00	2162	159.00	1573	170.00	888
136.00	2523	147.00	5522	160.00	3071	171.05	1363
137.00	3069	148.00	12295	161.00	4965	172.00	2123
137.95	1097	151.00	1182	162.00	1605	173.05	2949

Average of 6.239 to 6.251 min.: HGW01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
174.00	5084	184.95	9179	196.00	19373	209.05	1136
175.00	9031	186.00	66890	198.00	519373	210.15	1450
176.05	3541	187.00	18475	199.00	35650	211.05	5298
177.00	4037	188.05	2056	200.00	2690	213.05	871
178.00	1482	188.95	3821	201.45	3558	214.05	467
178.95	17276	190.05	802	203.00	3531	215.00	1364
180.00	11710	191.05	2021	204.00	17298	216.00	2830
181.00	5474	192.00	5548	205.00	29449	217.00	31777
182.05	943	193.00	5882	206.00	126702	218.00	4156
183.05	618	194.05	1333	207.00	16058	219.05	556
183.95	1587	195.05	556	208.00	4287	221.00	36387

Average of 6.239 to 6.251 min.: HGW01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
223.00	6648	234.00	1922	245.05	8415	257.05	3770
224.00	73022	235.00	1942	246.00	10533	258.00	16773
225.00	19002	236.00	1497	246.95	2152	259.00	2809
226.05	2049	237.00	2194	247.95	564	260.05	581
227.00	28591	238.05	538	248.95	2336	261.05	585
227.95	3770	239.00	1107	250.00	478	263.00	160
229.00	6558	240.05	910	250.95	615	263.90	524
229.90	749	241.05	1673	252.05	641	265.00	6731
231.00	2788	242.05	4149	252.95	1307	265.90	893
231.95	630	243.05	4872	255.00	322595	266.95	91
233.00	586	244.00	62728	256.00	47921	269.00	172

Average of 6.239 to 6.251 min.: HGW01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
269.90	567	282.00	464	292.00	397	303.00	4786
271.05	705	283.00	1553	292.20	136	304.05	1305
272.10	1071	283.90	278	293.00	2805	304.95	120
273.00	10614	284.10	663	294.05	648	307.95	583
274.00	25917	285.00	1865	296.00	39485	308.95	405
275.00	151723	286.00	432	297.00	6051	310.00	527
276.00	19869	287.15	239	298.00	495	310.90	60
277.00	11406	288.00	95	299.00	214	311.90	98
278.00	1914	288.95	511	300.15	128	313.00	434
278.95	483	290.00	415	300.95	570	314.00	2010
281.05	136	290.95	315	302.05	573	315.00	4231

Average of 6.239 to 6.251 min.: HGW01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
316.00	2513	328.00	1287	342.00	435	365.00	15653
316.95	414	328.95	291	345.95	2747	365.95	2233
320.00	71	332.00	989	347.00	436	367.00	140
320.95	1377	333.00	1268	350.95	163	369.95	378
322.10	497	334.00	8093	352.05	3525	371.05	930
323.10	13750	335.05	2090	353.00	2675	372.05	5816
324.05	2575	335.95	254	354.05	3745	373.05	1548
324.95	263	338.80	64	355.05	852	374.10	223
326.00	213	339.05	176	356.00	59	377.00	146
326.20	91	339.95	200	358.95	298	383.00	1445
327.00	2542	341.05	1633	363.70	93	383.95	414

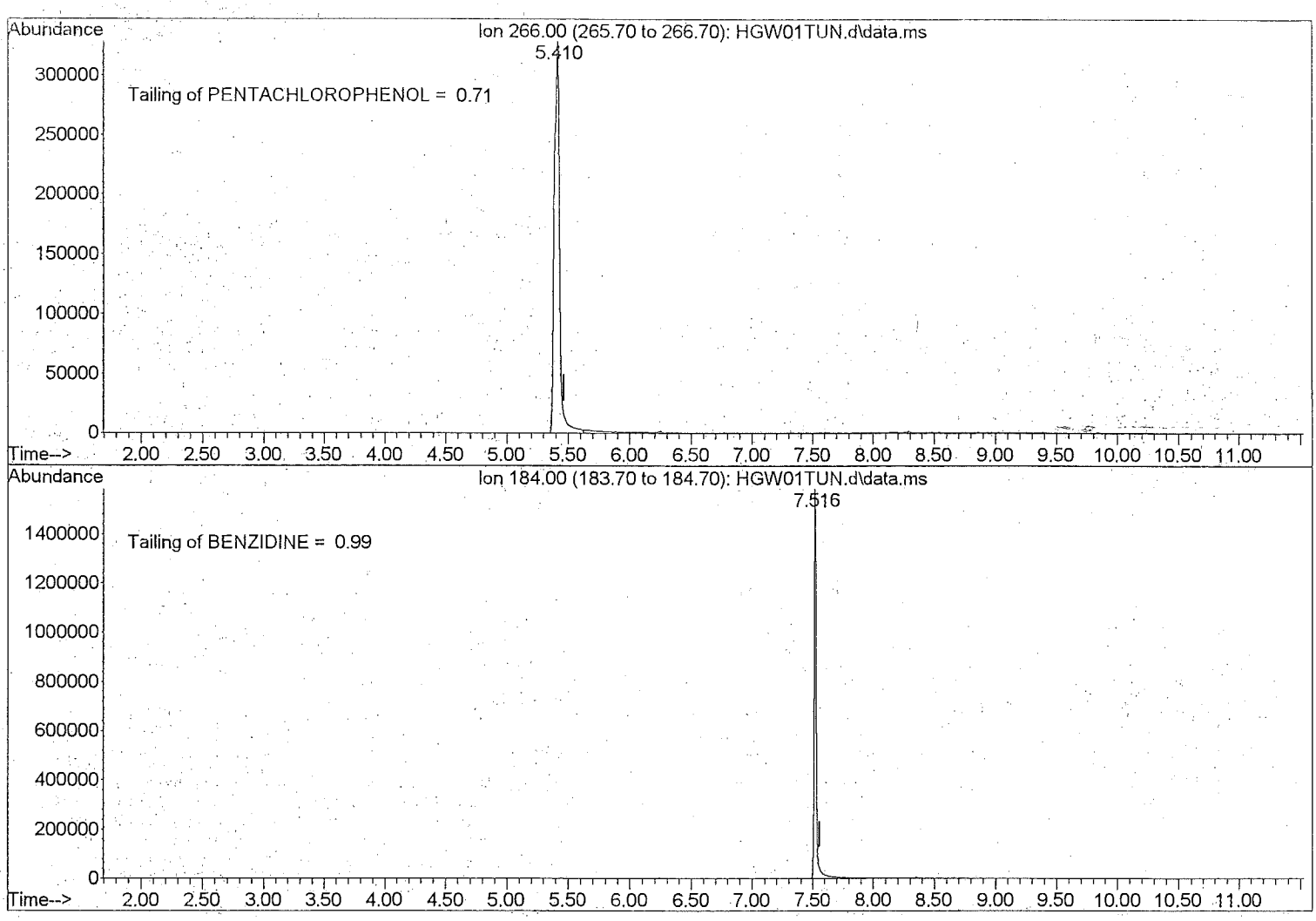
Average of 6.239 to 6.251 min.: HGW01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
385.00	58	423.10	16744	441.10	58533		
389.95	724	424.05	3322	442.10	387008		
391.00	517	425.00	325	443.10	74211		
392.00	396	435.50	57	444.10	6722		
401.05	376	436.40	67	444.95	399		
402.05	2019	436.75	153				
403.00	2782	437.45	202				
404.00	833	438.00	236				
414.90	83	438.80	267				
421.00	2359	439.25	537				
422.10	2125	439.50	395				

Data File: HGW01TUN.d
Date Acquired: 08/09/2012 09:47
Operator ID: RAH
Name: 8270 DFTPP 13808
Misc: X:1/11/13

Instrument: 5975-H
Acq Method: 8270DTUN.M
DA Method: 8270DTUN.M

Cal Title: EPA/CLP SOM01
Last Cal Update: Wed Nov 23 09:22:39 2011
X:1/11/13

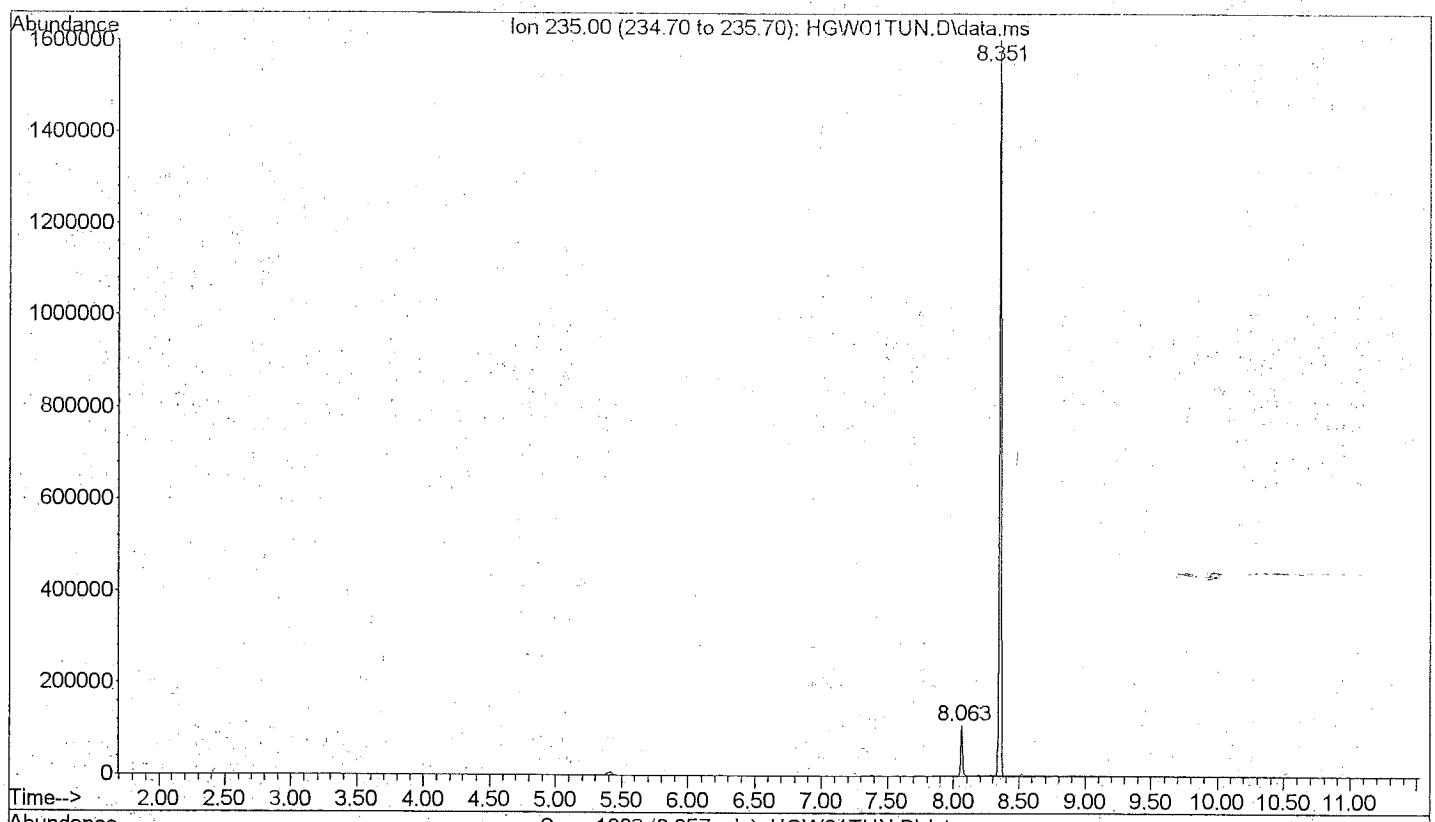


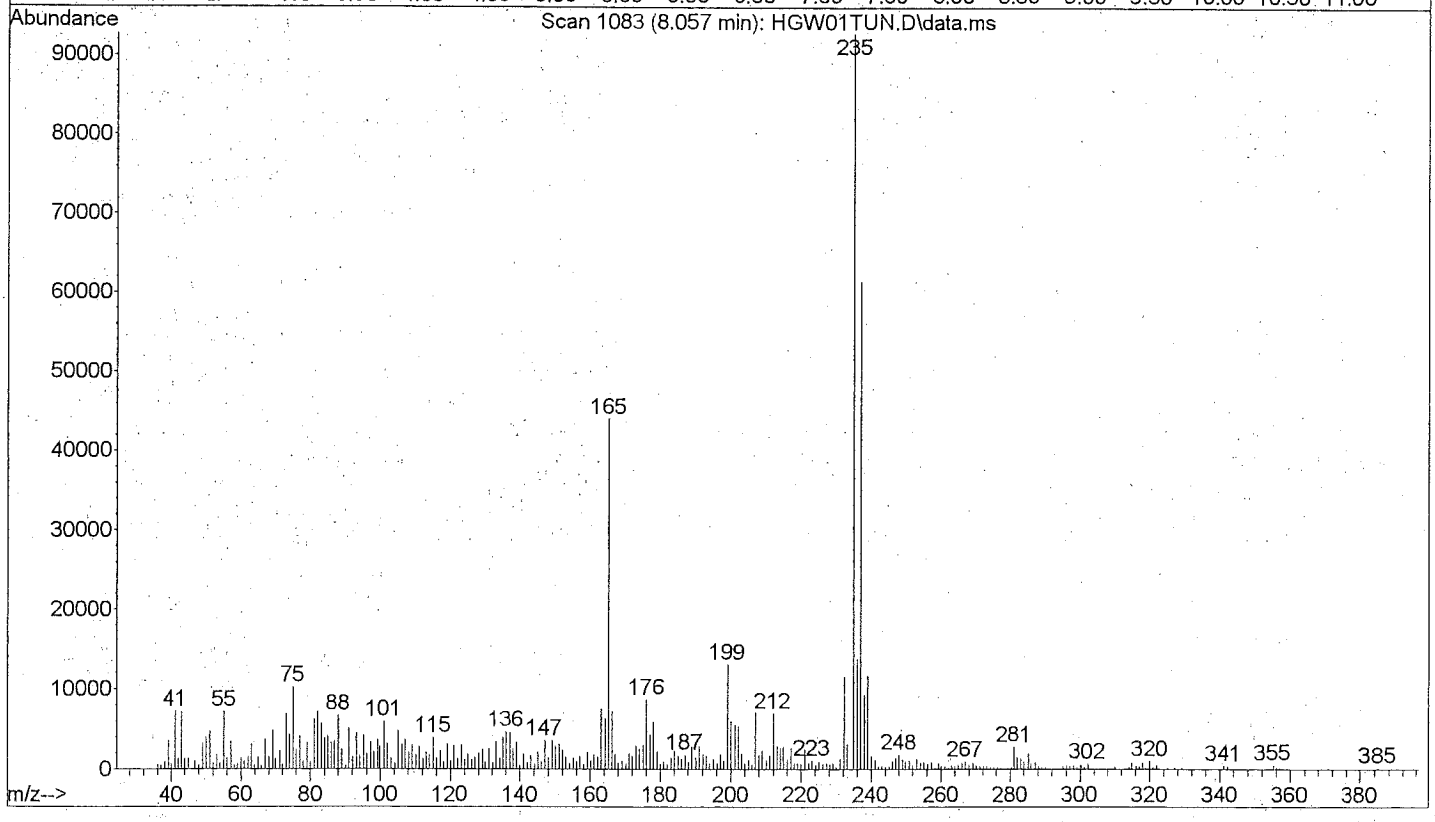
Ion 235.00 (234.70 to 235.70): HGW01TUN.D\data.ms
8270 DFTPP 13808

Peak #	Ret Time	Type	Width	Area	Start Time	End Time
1	8.063	rBV	0.094	109410	8.016	8.110
2	8.351	rVB	0.112	1544042	8.322	8.433

$$\text{DDT Degradation} = \frac{109410}{109410 + 1544042} = 6.6\%$$

File :D:\1\DATA\2012\AUG12\09AUG12H\HGW01TUN.D
Operator : RAH
Acquired : 9 Aug 2012 9:47 am using AcqMethod 8270DTUN.M
Instrument : 5975-H
Sample Name: 8270 DFTPP 13808
Misc Info : X:1/11/13
Vial Number: 1



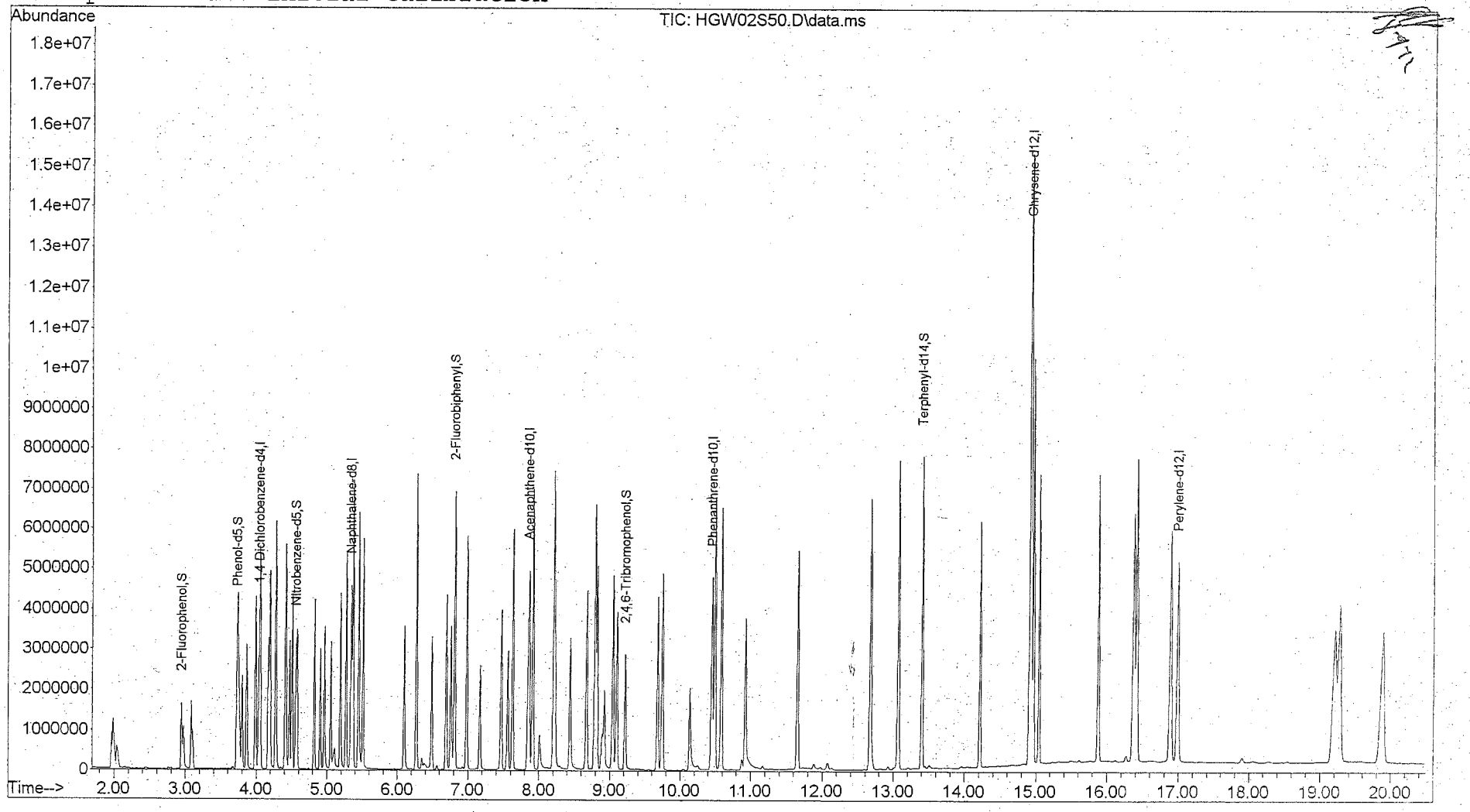


Quantitation Report

Data File : D:\1\DATA\2012\AUG12\09AUG12H\HGW02S50.D Vial: 2
Acq On : 08/09/2012 10:07 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 10:29:48 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

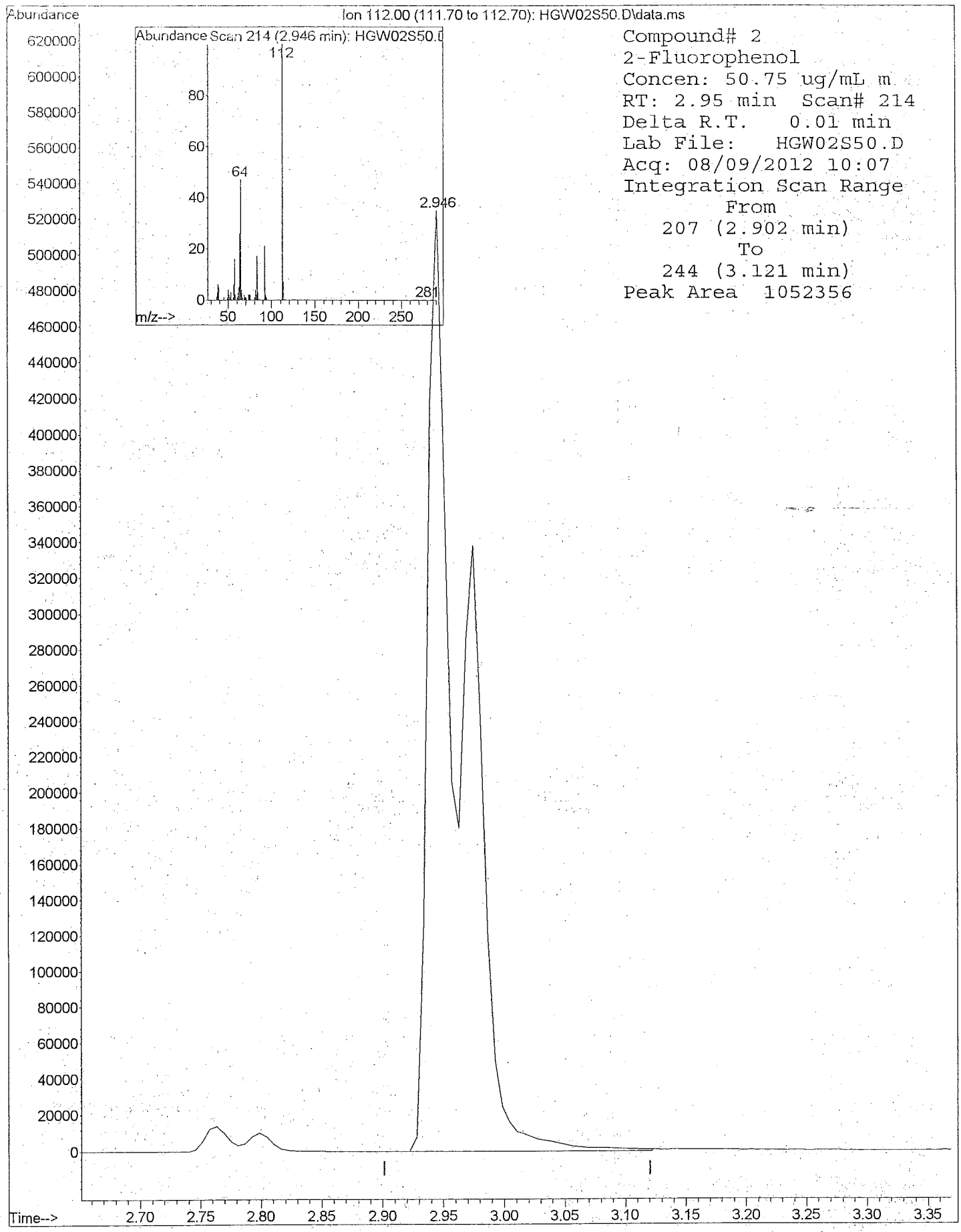
Data File : D:\1\DATA\2012\AUG12\09AUG12H\HGW02S50.D Vial: 2
Acq On : 08/09/2012 10:07 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 09 10:29:48 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	617440	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2748326	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1665713	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3295873	40.00 ug/mL
12) Chrysene-d12	14.93	240	3959164	40.00 ug/mL
14) Perylene-d12	16.99	264	3437480	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	1052356	50.748ug/mL m
4) Phenol-d5	3.72	99	1418613	52.146ug/mL
7) Nitrobenzene-d5	4.56	82	1222779	51.902ug/mL
9) 2-Fluorobiphenyl	6.81	172	3140140	50.827ug/mL
11) 2,4,6-Tribromophenol	9.22	330	580564	52.323ug/mL
13) Terphenyl-d14	13.40	244	3866750	50.588ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	506249	47.236ug/mL m 78
5) 1,4-Dithiane	4.47	120	844222	48.612ug/mL 97

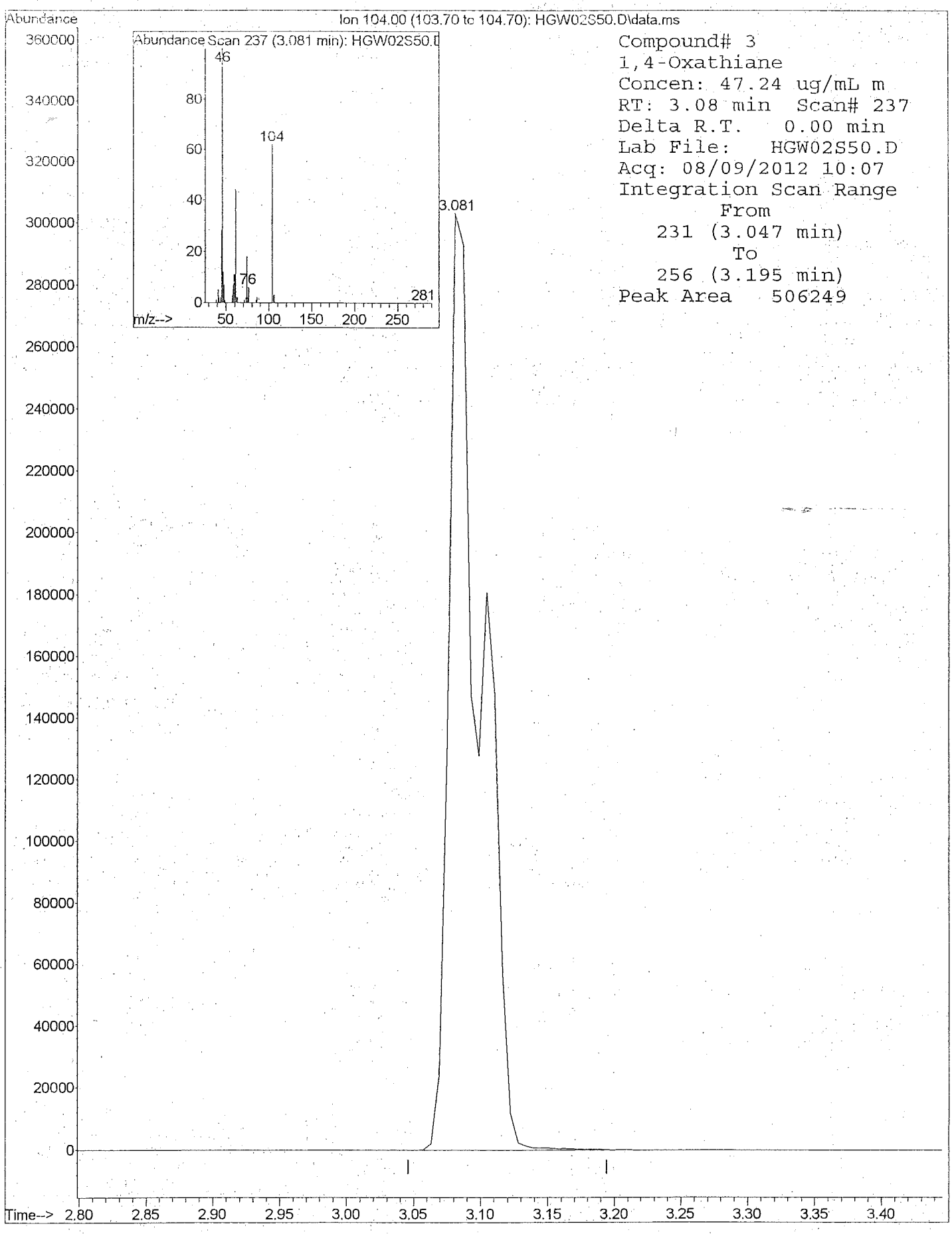
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

MANUAL INTEGRATION FOR 1,4-Oxathiane



8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

PROJECT TITLE:
Fort Stewart

Earth Resources Technology, Inc.
6100 Frost Place
Laurel, MD 20707

Data Deliverable Group ERT-003
ALS#9980395

DoD QSM V.4.2
DATA PACKAGE

SAMPLES COLLECTED
July 30, 2012

Total Number of Pages 324

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Case Narrative

Earth Resources Technology, Inc.
Fort Stewart

ALS-Middletown
Case Narrative
ERT-003

Sample Management

This report contains the results of the analysis of one (1) water sample and thirteen (13) solid samples collected on July 30, 2012. Analytical results and quality control information are summarized in this data package.

Qualifier Symbol Definitions:

U = Qualifier indicates that the analyte was not detected above the LOD.
J = Qualifier indicates that the analyte value is between the DL and the LOQ.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds the calibration range.
P = Qualifier indicates that the RPD between the two analytical columns is greater than 40%.
NSC = Qualifier indicates that spike recoveries were not calculated based on the spiking concentration.

Result Symbol Definitions:

DL = The smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence.
LOD = The smallest analyte concentration that must be present in a sample in order to be detected at a high level of confidence.
LOQ = The lowest concentration that produces a quantitative result within specified limits of precision or bias.

Sample Receipt

Samples arrived at ALS via courier on July 31, 2012. Upon receipt, the samples were inspected and compared to the Chain of Custody. Sample temperature was documented on the enclosed Chain of Custody. Samples were received intact and properly preserved, unless noted on the enclosed Certificate of Analysis and/or Chain of Custody.

Subcontracting

Twelve (12) samples were subcontracted for Method 8270 analysis. Results are provided at the end of this report.

Totals Metals by SW-846 Method 6020A

Sample handling. One (1) water samples was analyzed for total metals on the Agilent 7700x using SW-846 Method 6020A. The sample was analyzed within the six-month holding time established for this method.

Calibration. All criteria associated with the calibration were within method control limits.

Blanks. Metals were not detected in the blanks, except as follows:

- In 1017577 arsenic was detected at 0.00108Jmg/L.

Laboratory Control Samples. Recoveries were within method control limits.

Matrix Spike/Matrix Spike Duplicate. A matrix spike and matrix spike were performed on sample FTSW-HR-SO-02 (01.5) ER (9980395006) in this data deliverable. The MS and MSD recoveries and their RPDs were within method control limits.

Totals Metals by SW-846 Method 6020A

Sample handling. Thirteen (13) solid samples were digested and analyzed for total metals on the Agilent 7700x using SW-846 Method 6020A. The samples were analyzed within the six-month holding time established for this method.

Calibration. All criteria associated with the calibration were within method control limits.

Blanks. Metals were not detected in the blanks.

Laboratory Control Samples. Recoveries were within method control limits.

Matrix Spike/Matrix Spike Duplicate. A matrix spike and matrix spike duplicate were performed on sample FTSW-HR-SO-01 (9980395003) in this data deliverable. The MS and MSD recoveries and their RPDs were within method control limits for all target analytes. The Aluminum concentration in the sample was greater than four times the spiking concentration; therefore, the spike recoveries were not evaluated for aluminum.

Total Solids by SM 2540G

Sample handling. Fourteen (14) solid samples were analyzed for total solids by Standard Method 2540G for dry weight reporting purposes. The samples were analyzed within the 14-day method recommended hold time for dry weight reporting.

Duplicate. A duplicate analysis, identified as 1017717, was performed on sample 9980395009 (FTSW-HR-SO-05). The relative percent difference between the results was within the QC limit of 5%.

Chain of Custody

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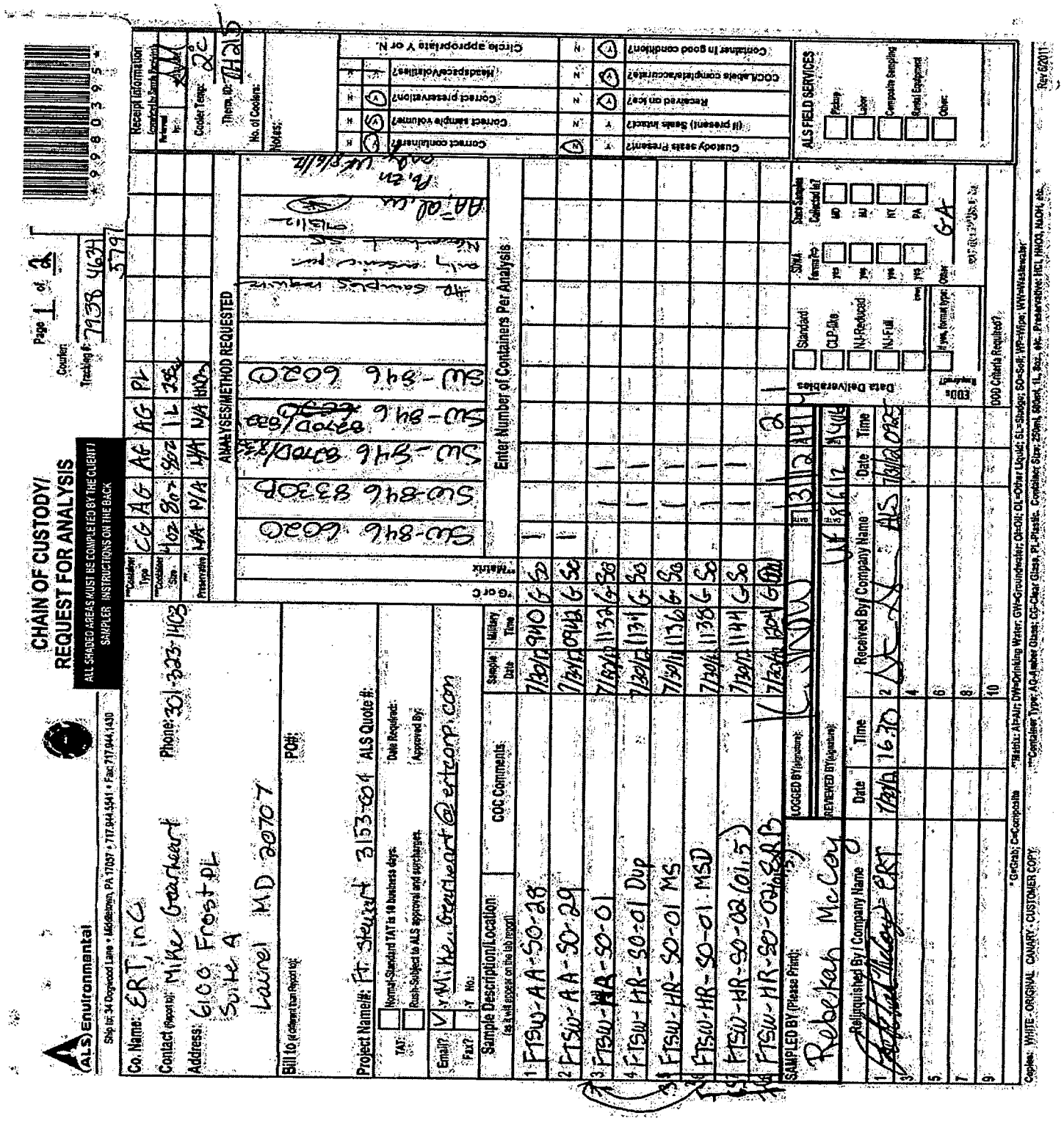
NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



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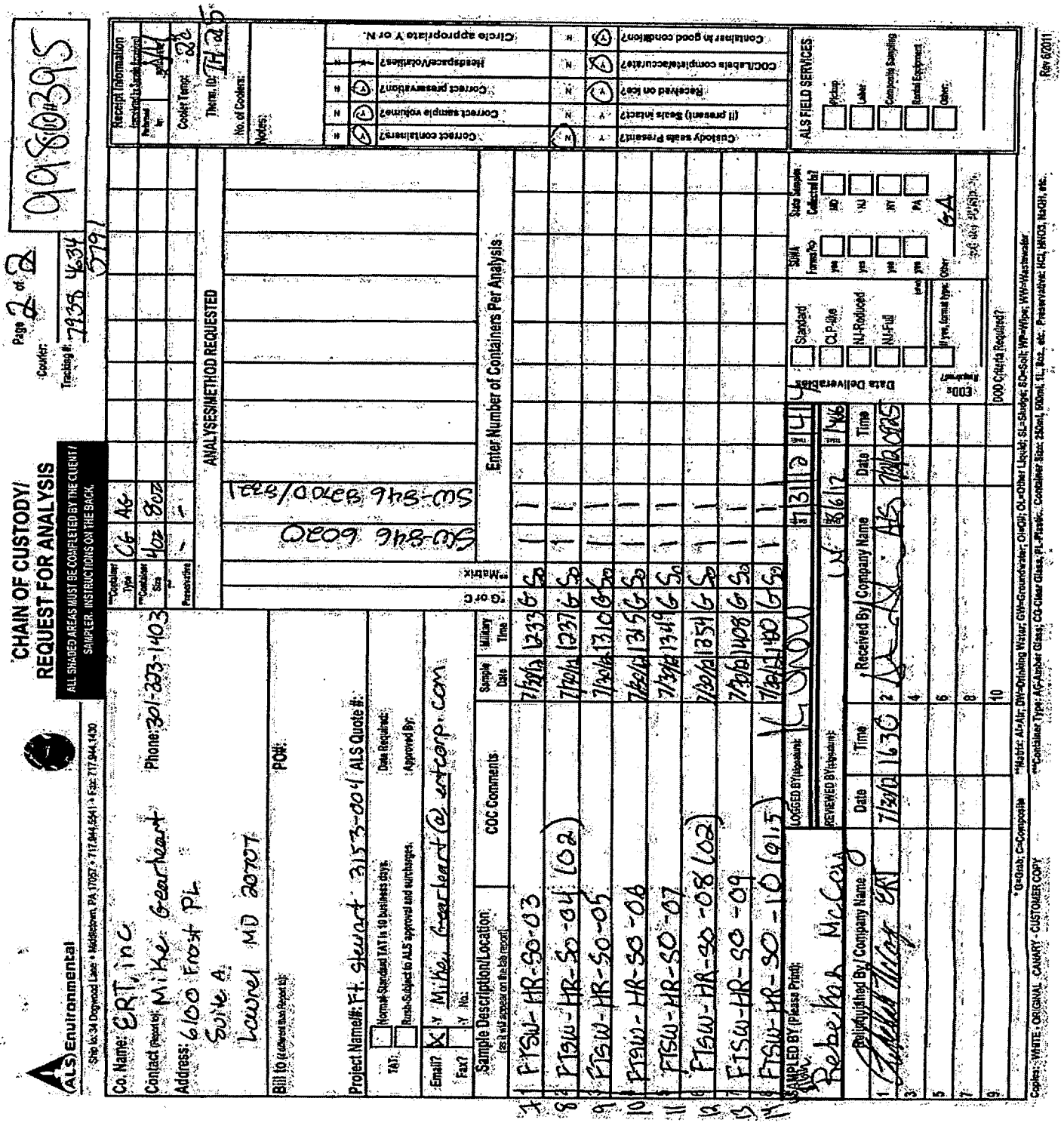
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
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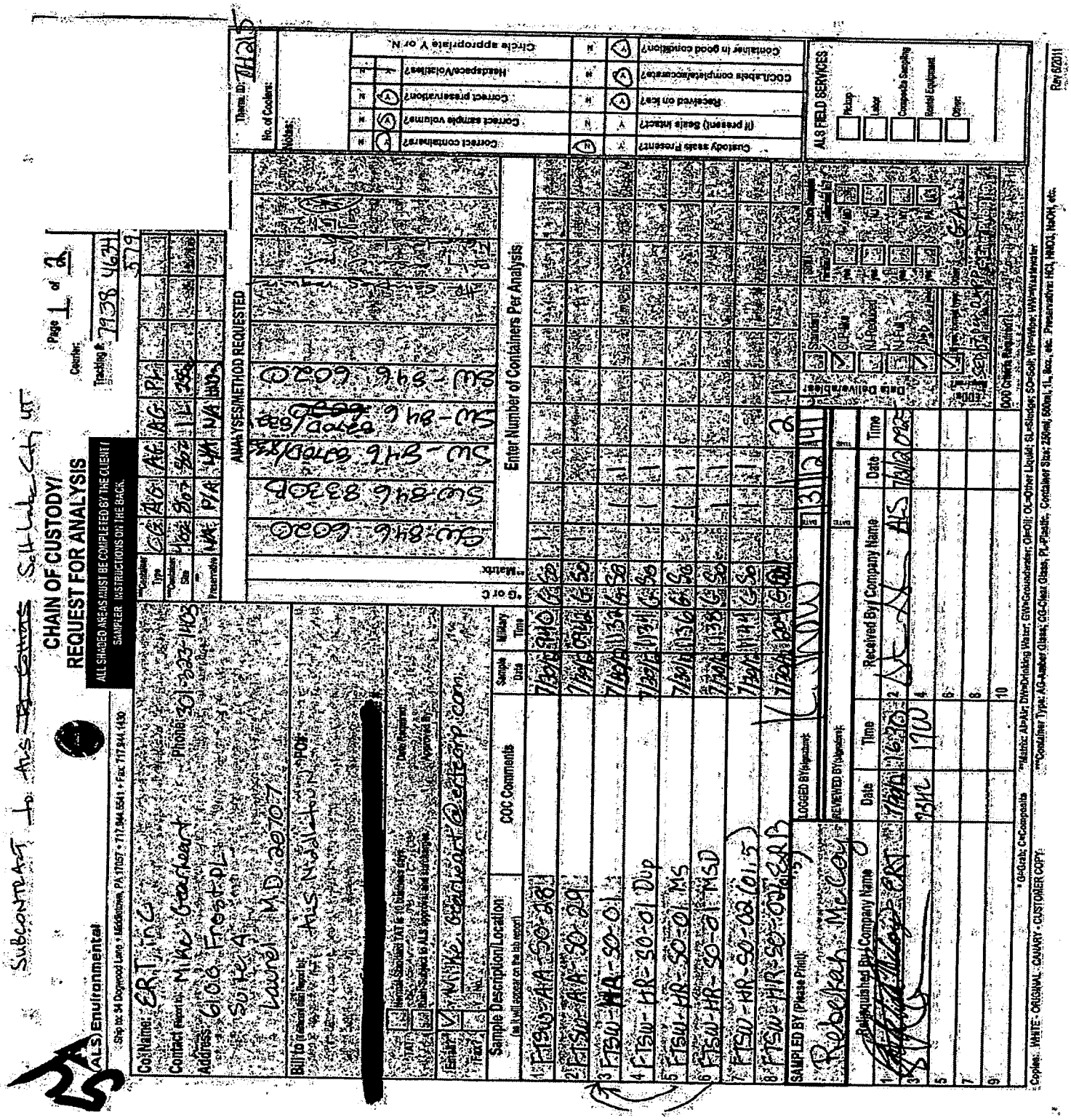

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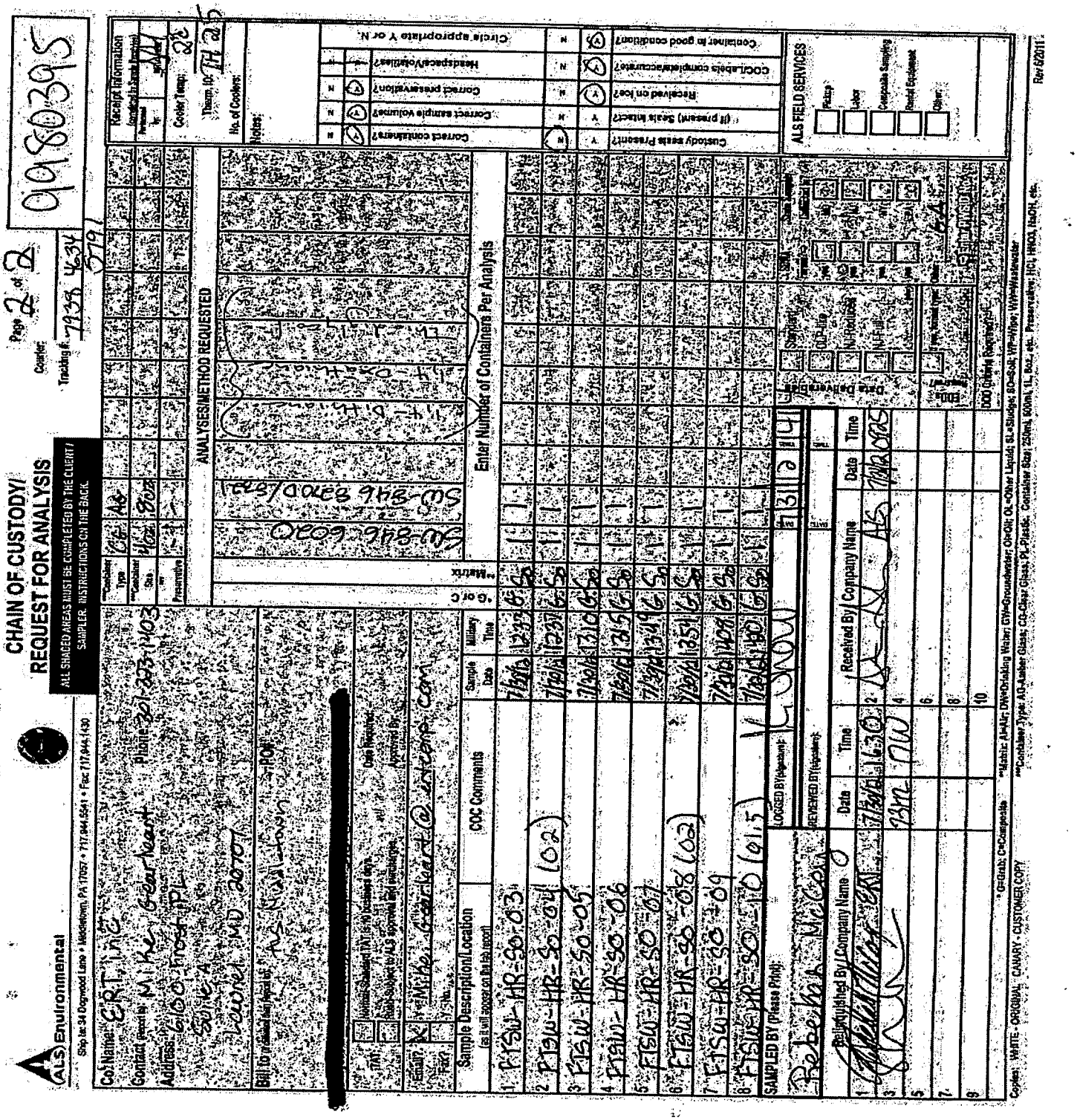
NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



Subcontract TO ALS SALT LAKE CITY UT

ALS Environmental Laboratory Locations Across North America

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Internal Chain of Custody

Work Order: 9980395

9980395001-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395001-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:57	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395001-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:19	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395001-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395002-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395002-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:57	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395002-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:19	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395002-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395003-A1	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 08:37	GCMS_LAB	8330S	Selgrath, Ms. Samantha A.
08-07-12 11:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980395003-A11	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:00	GC/MS-LAB	ANALYSIS	Lopez, Mr. Alan J
08-08-12 08:39	GCMS_LAB	8330S	Selgrath, Ms. Samantha A.

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Internal Chain of Custody
Work Order: 9980395

9980395003-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:57	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395003-A3	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:19	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395003-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395003-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395003-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:44	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395003-E	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:44	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395003-F	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:44	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395003-G	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:44	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395004-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

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Internal Chain of Custody
Work Order: 9980395

9980395004-A1	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 08:37	GCMS_LAB	8330S	Selgrath, Ms. Samantha A.
08-07-12 11:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980395004-A11	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:00	GC/MS-LAB	ANALYSIS	Lopez, Mr. Alan J
08-08-12 08:39	GCMS_LAB	8330S	Selgrath, Ms. Samantha A.

9980395004-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:57	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395004-A3	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:19	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395004-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395004-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395005-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395005-A1	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 08:37	GCMS_LAB	8330S	Selgrath, Ms. Samantha A.
08-06-12 14:00	WETC-LAB	sample storage	Selgrath, Ms. Samantha A.
08-06-12 06:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980395005-A11	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:00	GC/MS-LAB	ANALYSIS	Lopez, Mr. Alan J
08-08-12 08:39	GCMS_LAB	8330S	Selgrath, Ms. Samantha A.

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Internal Chain of Custody
Work Order: 9980395

9980395005-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:57	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395005-A3	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:19	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395005-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395005-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395006-A	P - PLASTIC		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:07	META-LAB	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395006-A1	P - PLASTIC		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:56	META-LAB		Miller, Lisa

9980395006-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 12:40	META-LAB	6020/3015 ANALYSIS	Olley, Mr. Matthew W.
08-01-12 06:03	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395006-B	A - AMBER GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:07	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395006-C	A - AMBER GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:07	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395006-D	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

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Internal Chain of Custody

Work Order: 9980395

9980395007-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395007-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:57	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395007-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:19	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395007-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395007-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395008-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395008-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:57	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395008-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:19	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395008-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395008-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

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Internal Chain of Custody

Work Order: 9980395

9980395009-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395009-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:57	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395009-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:19	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395009-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395009-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395010-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395010-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:58	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395010-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:20	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395010-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395010-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

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Internal Chain of Custody

Work Order: 9980395

9980395011-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395011-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:58	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395011-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:20	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395011-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395011-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395012-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395012-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:58	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395012-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:20	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395012-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395012-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

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Internal Chain of Custody
Work Order: 9980395

9980395013-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395013-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:58	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395013-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:20	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395013-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395013-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395014-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395014-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:58	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395014-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:20	INORPREP-LAB		Kauffman, Mr. Kevin M

9980395014-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980395014-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:14	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

Certificate of Analysis

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August 31, 2012

Mr. Mike Gearhart
Earth Resources Technology, Inc.
6100 Frost Place
Suite A
Laurel, MD 20707

Certificate of Analysis

Project Name:	**Ft. Stewart GA project**	Workorder:	**9980395**
Purchase Order:		Workorder ID:	**ERT003|Ft. Stewart 3153-004**

Dear Mr. Gearhart,

Enclosed are the analytical results for samples received by the laboratory on Tuesday, July 31, 2012.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Vicki Forney (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

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SAMPLE SUMMARY

Workorder: 9980395 ERT003|Ft. Stewart 3153-004

Discard Date: 09/14/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9980395001	FTSW-AA-SO-28	Solid	7/30/12 09:40	7/31/12 09:25	Customer
9980395002	FTSW-AA-SO-29	Solid	7/30/12 09:42	7/31/12 09:25	Customer
9980395003	FTSW-HR-SO-01	Solid	7/30/12 11:32	7/31/12 09:25	Customer
9980395004	FTSW-HR-SO-01 DUP	Solid	7/30/12 11:34	7/31/12 09:25	Customer
9980395005	FTSW-HR-SO-02 (01.5)	Solid	7/30/12 11:44	7/31/12 09:25	Customer
9980395006	FTSW-HR-SO-02 (01.5) ERB	Water	7/30/12 12:04	7/31/12 09:25	Customer
9980395007	FTSW-HR-SO-03	Solid	7/30/12 12:33	7/31/12 09:25	Customer
9980395008	FTSW-HR-SO-04 (02)	Solid	7/30/12 12:37	7/31/12 09:25	Customer
9980395009	FTSW-HR-SO-05	Solid	7/30/12 13:10	7/31/12 09:25	Customer
9980395010	FTSW-HR-SO-06	Solid	7/30/12 13:15	7/31/12 09:25	Customer
9980395011	FTSW-HR-SO-07	Solid	7/30/12 13:49	7/31/12 09:25	Customer
9980395012	FTSW-HR-SO-08 (02)	Solid	7/30/12 13:54	7/31/12 09:25	Customer
9980395013	FTSW-HR-SO-09	Solid	7/30/12 14:08	7/31/12 09:25	Customer
9980395014	FTSW-HR-SO-10 (01.5)	Solid	7/30/12 14:20	7/31/12 09:25	Customer

Workorder Comments:

Analytical results attached from ALS-Salt Lake City for 8270/8321 results. VLF

This report was modified on 8/20/12 to omit explosives and some metals from 003, 004 and 005 per client e-mail. VLF

These reports were modified on 8/31/12 to replace the subcontracting data with updated reports. VLF

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SAMPLE SUMMARY

Workorder: 9980395 ERT003|Ft. Stewart 3153-004 Discard Date: 09/14/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

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ANALYTICAL RESULTS

Workorder: 9980395 ERT003|Ft. Stewart 3153-004

Lab ID: **9980395001** Date Collected: 7/30/2012 09:40 Matrix: Solid

Sample ID: **FTSW-AA-SO-28** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	5.3	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	94.7	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Aluminum, Total	2300	mg/kg		37.7	25.0	12.3	SW846 6020A	8/8/12	8/13/12 16:35	LAM	A2
Copper, Total	1.0J	mg/kg		2.4	1.6	0.75	SW846 6020A	8/8/12	8/13/12 16:35	LAM	A2
Lead, Total	3.3	mg/kg		0.94	0.61	0.31	SW846 6020A	8/8/12	8/13/12 16:35	LAM	A2
Zinc, Total	7.8	mg/kg		2.4	1.6	0.75	SW846 6020A	8/8/12	8/13/12 16:35	LAM	A2

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9980395 ERT003|Ft. Stewart 3153-004

Lab ID: **9980395002** Date Collected: 7/30/2012 09:42 Matrix: Solid

Sample ID: **FTSW-AA-SO-29** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	6.1	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	93.9	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Aluminum, Total	3000	mg/kg		39.4	26.1	12.8	SW846 6020A	8/8/12	8/13/12 16:38	LAM	A2
Copper, Total	1.5J	mg/kg		2.5	1.6	0.79	SW846 6020A	8/8/12	8/13/12 16:38	LAM	A2
Lead, Total	4.8	mg/kg		0.99	0.64	0.33	SW846 6020A	8/8/12	8/13/12 16:38	LAM	A2
Zinc, Total	6.8	mg/kg		2.5	1.6	0.79	SW846 6020A	8/8/12	8/13/12 16:38	LAM	A2

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9980395 ERT003|Ft. Stewart 3153-004

Lab ID: **9980395003** Date Collected: 7/30/2012 11:32 Matrix: Solid

Sample ID: **FTSW-HR-SO-01** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	9.5	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	90.5	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Arsenic, Total	1.0U	mg/kg		1.5	1.0	0.51	SW846 6020A	8/8/12	8/13/12 16:42	LAM	A3
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/13/12 20:27	CLT	A

Sample Comments:

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Technical Manager

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ANALYTICAL RESULTS

Workorder: 9980395 ERT003|Ft. Stewart 3153-004

Lab ID: **9980395004** Date Collected: 7/30/2012 11:34 Matrix: Solid

Sample ID: **FTSW-HR-SO-01 DUP** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	9.3	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	90.7	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Arsenic, Total	0.85J	mg/kg		1.5	1.0	0.50	SW846 6020A	8/8/12	8/13/12 16:56	LAM	A3
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/13/12 22:16	CLT	A

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980395 ERT003|Ft. Stewart 3153-004

Lab ID: **9980395005** Date Collected: 7/30/2012 11:44 Matrix: Solid

Sample ID: **FTSW-HR-SO-02 (01.5)** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	3.5	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	96.5	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Arsenic, Total	0.96U	mg/kg		1.4	0.96	0.48	SW846 6020A	8/8/12	8/13/12 17:12	LAM	A3
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/13/12 22:53	CLT	A

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9980395 ERT003|Ft. Stewart 3153-004

Lab ID: **9980395006** Date Collected: 7/30/2012 12:04 Matrix: Water

Sample ID: **FTSW-HR-SO-02 (01.5) ERB** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
METALS											
Arsenic, Total	0.0019J	mg/L		0.0030	0.0020	0.0010	SW846 6020A	8/1/12	8/7/12 14:25	MWO	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/13/12 14:07	CLT	B

Sample Comments:

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Technical Manager

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ANALYTICAL RESULTS

Workorder: 9980395 ERT003|Ft. Stewart 3153-004

Lab ID: **9980395007** Date Collected: 7/30/2012 12:33 Matrix: Solid
Sample ID: **FTSW-HR-SO-03** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	13.6	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	86.4	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Arsenic, Total	1.0U	mg/kg		1.5	1.0	0.50	SW846 6020A	8/8/12	8/13/12 17:15	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/13/12 23:29	CLT	C

Sample Comments:

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Technical Manager

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ANALYTICAL RESULTS

Workorder: 9980395 ERT003|Ft. Stewart 3153-004

Lab ID: **9980395008** Date Collected: 7/30/2012 12:37 Matrix: Solid

Sample ID: **FTSW-HR-SO-04 (02)** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	3.6	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	96.4	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Arsenic, Total	0.96U	mg/kg		1.4	0.96	0.48	SW846 6020A	8/8/12	8/13/12 17:19	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/14/12 00:06	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9980395 ERT003|Ft. Stewart 3153-004

Lab ID: **9980395009** Date Collected: 7/30/2012 13:10 Matrix: Solid

Sample ID: **FTSW-HR-SO-05** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	9.4	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	90.6	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Arsenic, Total	0.59J	mg/kg		1.6	1.1	0.53	SW846 6020A	8/8/12	8/13/12 17:22	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/14/12 01:18	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9980395 ERT003|Ft. Stewart 3153-004

Lab ID: **9980395010** Date Collected: 7/30/2012 13:15 Matrix: Solid

Sample ID: **FTSW-HR-SO-06** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	4.4	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	95.6	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Arsenic, Total	0.57J	mg/kg		1.5	0.97	0.48	SW846 6020A	8/8/12	8/13/12 17:29	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/14/12 01:55	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9980395 ERT003|Ft. Stewart 3153-004

Lab ID: **9980395011** Date Collected: 7/30/2012 13:49 Matrix: Solid

Sample ID: **FTSW-HR-SO-07** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	15.7	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	84.3	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Arsenic, Total	1.1U	mg/kg		1.7	1.1	0.56	SW846 6020A	8/8/12	8/13/12 17:33	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/14/12 02:31	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9980395 ERT003|Ft. Stewart 3153-004

Lab ID: **9980395012** Date Collected: 7/30/2012 13:54 Matrix: Solid

Sample ID: **FTSW-HR-SO-08 (02)** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	9.7	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	90.3	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Arsenic, Total	1.0U	mg/kg		1.5	1.0	0.50	SW846 6020A	8/8/12	8/13/12 17:36	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/14/12 03:07	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9980395 ERT003|Ft. Stewart 3153-004

Lab ID: **9980395013** Date Collected: 7/30/2012 14:08 Matrix: Solid

Sample ID: **FTSW-HR-SO-09** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	12.1	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	87.9	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Arsenic, Total	1.1U	mg/kg		1.6	1.1	0.55	SW846 6020A	8/8/12	8/13/12 17:40	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/14/12 08:22	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9980395 ERT003|Ft. Stewart 3153-004

Lab ID: **9980395014** Date Collected: 7/30/2012 14:20 Matrix: Solid

Sample ID: **FTSW-HR-SO-10 (01.5)** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	5.8	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	94.2	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Arsenic, Total	0.92U	mg/kg		1.4	0.92	0.46	SW846 6020A	8/8/12	8/13/12 17:43	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/14/12 08:58	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

Total Metals in Water by 6020A Summary Forms

6020 3015
- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, Inc

SDG No.: ERT-003 Method Type: 6020 3015 SOW No.:

Contract: ERT003|Ft. Stewart 3 Lab Code: CAS Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
9980395006	FTSW-HR-SO-02 (01.5) ER	
9980395006S	FTSW-HR-SO-02 (01.5) ER	Matrix Spike
9980395006SD	FTSW-HR-SO-02 (01.5) ER	Matrix Spike Duplicate

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: Lisa Miller

Date: Title: Metals Manager

6020 3015

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-003 **Method Type:** 6020 3015

Sample ID: 9980395006 **Client ID:** FTSW-HR-SO-02 (01.5) ERB

Matrix: WATER **Date Received:** 7/31/2012 **Level:** LOW

% Solids: **Sample Wt/Vol:** 45.00 **Final Vol:** 50.0

Prep Batch ID: 473767 **Prep Date:** 8/1/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.0019	mg/L	J		M	0.0030	0.0020	0.0010	1.00	8/7/2012	14:25:10

Comments:

6020 3015

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
ICV	Arsenic	0.1038	0.1000	104		90 - 110	M	8/7/2012	08:39	A080712
LLICV	Arsenic	0.0033	0.0030	110		70 - 130	M	8/7/2012	08:51	A080712
LLCCV	Arsenic	0.0031	0.0030	103		70 - 130	M	8/7/2012	13:00	A080712
CCV	Arsenic	0.0979	0.1000	98		90 - 110	M	8/7/2012	13:04	A080712
LLCCV	Arsenic	0.0032	0.0030	107		70 - 130	M	8/7/2012	14:17	A080712
CCV	Arsenic	0.0985	0.1000	98		90 - 110	M	8/7/2012	14:21	A080712
LLCCV	Arsenic	0.0034	0.0030	113		70 - 130	M	8/7/2012	15:17	A080712
CCV	Arsenic	0.1011	0.1000	101		90 - 110	M	8/7/2012	15:28	A080712

6020 3015
- 3a -
INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Conc Qual	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
ICB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/7/2012	08:47	A080712
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/7/2012	12:52	A080712
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/7/2012	14:13	A080712
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/7/2012	15:13	A080712

6020 3015
- 3b -
PREPARATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result (mg/L)	Conc Qual	Q	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
1017577			**QC-WATER**								
	Arsenic	0.00108	J		0.0015	0.00100	0.00300	M	8/7/2012	13:08	A080712

6020 3015
- 4 -
INTERFERENCE CHECK SAMPLE

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

ICS Source: Inorganic Ventures **Instrument ID:** AGILENT 7700 ICPMS

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	Analysis Date	Analysis Time	Run Number
ICSA									
	Arsenic	0.0005				-0.00300 - -0.00300	8/7/2012	08:57	A080712
ICSAB									
	Arsenic	0.0192	0.02000	96		80 - 120%	8/7/2012	09:01	A080712

6020 3015
- 5a -
MATRIX SPIKE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: WATER **Sample ID:** 9980395006 **Client ID:** FTSW-HR-SO-02 (01.5) ERBS **LIMS ID:** 1017579

Percent Solids for Sample: 0.00 **Spiked ID:** 9980395006S **Percent Solids for Spike Sample:** 0.00

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/L	80 - 120	0.210		0.002		0.222	94		M

6020 3015

- 5a -

MATRIX SPIKE DUPLICATE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Matrix: WATER **Sample ID:** 9980395006 **Client ID:** FTSW-HR-SO-02 (01.5) **LIMS ID:** 1017580

Percent Solids for Sample: 0.00 **Spiked ID:** 9980395006SD ERBSD **Percent Solids for Spike Sample:** 0.00

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/L	80 - 120	0.205		0.002		0.222	91		M

6020 3015

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: WATER **Sample ID:** 9980395006S **Client ID:** FTSW-HR-SO-02 (01.5) ERBSD **LIMS ID:** 1017580

Percent Solids for Sample: 0.00 **Duplicate ID:** 9980395006SD **Percent Solids for Duplicate:** 0.00

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/L	0 - 20	0.210		0.205		2		M

6020 3015

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Q	QC Criteria	M
1017578									
	Arsenic	mg/L	0.2220	0.2057		93		80 - 120	M

6020 3015

- 12 -
LINEAR RANGES

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Instrument ID: AGILENT 7700 ICPMS **Date:** 1/19/2012

Analyte	Integration Time (sec)	LDR mg/L
Arsenic	1.00	5

6020 3015
- 13 -
SAMPLE PREPARATION SUMMARY

Client: ERT Earth Resources Technology, Inc.

SDG No.: ERT-003

Contract: ERT003|Ft. Stewart 3153-004

Lab Code: CAS

Method: MS

Case No.:

SAS No.:

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	473767						
1017577	MB for HBN 473767 [MDIG/3732	MB	QC-WAT	8/1/12	45.0	50.0	
1017578	LCS for HBN 473767 [MDIG/3732	LCS	QC-WAT	8/1/12	45.0	50.0	
9980395006	FTSW-HR-SO-02 (01.5) ERB	SAM	WATER	8/1/12	45.0	50.0	
9980395006S	FTSW-HR-SO-02 (01.5) ERBS	MS	WATER	8/1/12	45.0	50.0	
9980395006SD	FTSW-HR-SO-02 (01.5) ERBSD	MSD	WATER	8/1/12	45.0	50.0	

6020 3015
14
ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT003|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-003

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A080712

Start Date: 8/7/2012 End Date: 8/7/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1.00	0812																												
BLK	1.00	0816				X																								
STANDARD 1	1.00	0820				X																								
STANDARD 2	1.00	0824				X																								
STANDARD 3	1.00	0827				X																								
STANDARD 4	1.00	0831				X																								
STANDARD 5	1.00	0835				X																								
ICV	1.00	0839				X																								
ZZZZZZ	1.00	0843																												
ICB2	1.00	0847				X																								
LLICV	1.00	0851				X																								
ICS-A1	1.00	0857				X																								
ICS-AB1	1.00	0901				X																								
ZZZZZZ	5.00	0908																												
ZZZZZZ	5.00	0912																												
ZZZZZZ	5.00	0916																												
ZZZZZZ	5.00	0920																												
ZZZZZZ	5.00	0924																												
ZZZZZZ	5.00	0927																												
ZZZZZZ	5.00	0931																												
ZZZZZZ	5.00	0935																												
ZZZZZZ	5.00	0939																												
ZZZZZZ	5.00	0943																												
ZZZZZZ	1.00	0946																												
ZZZZZZ	1.00	0950																												
ZZZZZZ	1.00	0954																												
ZZZZZZ	25.00	0959																												
ZZZZZZ	1.00	1003																												
ZZZZZZ	1.00	1009																												
ZZZZZZ	5.00	1014																												
ZZZZZZ	5.00	1019																												
ZZZZZZ	5.00	1023																												
ZZZZZZ	5.00	1027																												
ZZZZZZ	5.00	1031																												
ZZZZZZ	5.00	1035																												
ZZZZZZ	5.00	1039																												

6020 3015
14
ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT003|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-003

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A080712

Start Date: 8/7/2012 End Date: 8/7/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1043																								
ZZZZZZ	1.00	1047																								
ZZZZZZ	1.00	1050																								
ZZZZZZ	5.00	1054																								
ZZZZZZ	5.00	1058																								
ZZZZZZ	5.00	1102																								
ZZZZZZ	5.00	1106																								
ZZZZZZ	5.00	1110																								
ZZZZZZ	5.00	1114																								
ZZZZZZ	5.00	1118																								
ZZZZZZ	5.00	1122																								
ZZZZZZ	5.00	1125																								
ZZZZZZ	5.00	1129																								
ZZZZZZ	1.00	1133																								
ZZZZZZ	1.00	1137																								
ZZZZZZ	1.00	1141																								
ZZZZZZ	5.00	1145																								
ZZZZZZ	5.00	1149																								
ZZZZZZ	5.00	1153																								
ZZZZZZ	5.00	1157																								
ZZZZZZ	5.00	1201																								
ZZZZZZ	5.00	1204																								
ZZZZZZ	5.00	1208																								
ZZZZZZ	5.00	1212																								
ZZZZZZ	5.00	1216																								
ZZZZZZ	25.00	1220																								
ZZZZZZ	1.00	1224																								
ZZZZZZ	1.00	1231																								
ZZZZZZ	1.00	1234																								
ZZZZZZ	1.00	1239																								
ZZZZZZ	1.00	1243																								
ZZZZZZ	1.00	1248																								
CCB5	1.00	1252				X																				
LLCCV	1.00	1300				X																				
CCV6	1.00	1304				X																				
1017577	1.00	1308				X																				

6020 3015
14
ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT003|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-003

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A080712

Start Date: 8/7/2012 End Date: 8/7/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
1017578	1.00	1329				X																								
ZZZZZZ	1.00	1333																												
ZZZZZZ	1.00	1337																												
ZZZZZZ	1.00	1340																												
ZZZZZZ	1.00	1344																												
ZZZZZZ	5.00	1348																												
ZZZZZZ	1.00	1352																												
ZZZZZZ	1.00	1359																												
ZZZZZZ	1.00	1409																												
CCB6	1.00	1413				X																								
LLCCV	1.00	1417				X																								
CCV8	1.00	1421				X																								
9980395006	1.00	1425				X																								
9980395006S	1.00	1447				X																								
9980395006SD	1.00	1450				X																								
ZZZZZZ	1.00	1454																												
ZZZZZZ	1.00	1458																												
ZZZZZZ	1.00	1502																												
ZZZZZZ	5.00	1506																												
ZZZZZZ	1.00	1510																												
CCB7	1.00	1513				X																								
LLCCV	1.00	1517				X																								
CCV10	1.00	1528				X																								
ZZZZZZ	5.00	1549																												
ZZZZZZ	5.00	1553																												
ZZZZZZ	1.00	1558																												
ZZZZZZ	1.00	1602																												
ZZZZZZ	1.00	1606																												
ZZZZZZ	5.00	1642																												
ZZZZZZ	5.00	1646																												
ZZZZZZ	5.00	1650																												
ZZZZZZ	5.00	1654																												
ZZZZZZ	5.00	1658																												
ZZZZZZ	5.00	1702																												
ZZZZZZ	5.00	1706																												
ZZZZZZ	1.00	1710																												

6020 3015
14
ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT003|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-003

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A080712

Start Date: 8/7/2012 End Date: 8/7/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1713																								
ZZZZZZ	1.00	1717																								
ZZZZZZ	1.00	1721																								
ZZZZZZ	1.00	1725																								
ZZZZZZ	5.00	1729																								
ZZZZZZ	5.00	1733																								
ZZZZZZ	1.00	1737																								
ZZZZZZ	1.00	1741																								
ZZZZZZ	1.00	1745																								
ZZZZZZ	1.00	1749																								
ZZZZZZ	1.00	1752																								
ZZZZZZ	1.00	1756																								
ZZZZZZ	1.00	1800																								
ZZZZZZ	1.00	1804																								
ZZZZZZ	1.00	1808																								
ZZZZZZ	1.00	1945																								

6020 3015

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT003|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-003

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/07/2012 End Date: 08/07/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
BLK	ZZZZZZ	0812												
BLK	BLK	0816	100		100		100		100		100		100	
STANDARD 1	STANDARD 1	0820	99		98		98		100		101		101	
STANDARD 2	STANDARD 2	0824	104		101		103		104		105		102	
STANDARD 3	STANDARD 3	0827	103		100		104		104		104		101	
STANDARD 4	STANDARD 4	0831	106		105		109		110		109		106	
STANDARD 5	STANDARD 5	0835	104		102		107		108		102		106	
ICV	ICV	0839	105		102		105		105		105		103	
ICB1	ZZZZZZ	0843												
ICB2	ICB	0847	107		102		108		107		111		103	
LLICV	LLICV	0851	103		98		105		107		94		100	
ICS-A1	ICSA	0857	93		99		97		105		109		106	
ICS-AB1	ICSAB	0901	94		102		99		106		109		109	
1015362	ZZZZZZ	0908												
1015363	ZZZZZZ	0912												
1017907	ZZZZZZ	0916												
1017908	ZZZZZZ	0920												
9980583001	ZZZZZZ	0924												
1017909	ZZZZZZ	0927												
1017910	ZZZZZZ	0931												
9980583001P	ZZZZZZ	0935												
9980583002	ZZZZZZ	0939												
9980583004	ZZZZZZ	0943												
CCV1	ZZZZZZ	0946												
CCB1	ZZZZZZ	0950												
LLCCV	ZZZZZZ	0954												
9980583004L	ZZZZZZ	0959												
LDR 2 PPM	ZZZZZZ	1003												
CHECK	ZZZZZZ	1009												
1017046	ZZZZZZ	1014												
1017047	ZZZZZZ	1019												
9980109001	ZZZZZZ	1023												
9980109003	ZZZZZZ	1027												
9980109004	ZZZZZZ	1031												
9980109005	ZZZZZZ	1035												
9980109006	ZZZZZZ	1039												
CCV2	ZZZZZZ	1043												
CCB2	ZZZZZZ	1047												
LLCCV	ZZZZZZ	1050												
9980109007	ZZZZZZ	1054												
9980109008	ZZZZZZ	1058												
9980109009	ZZZZZZ	1102												
9980109010	ZZZZZZ	1106												
9980109011	ZZZZZZ	1110												
1017048	ZZZZZZ	1114												

6020 3015

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT003|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-003

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/07/2012 End Date: 08/07/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
1017049	ZZZZZZ	1118												
9980109011	ZZZZZZ	1122												
9980109012	ZZZZZZ	1125												
9980109013	ZZZZZZ	1129												
CCV3	ZZZZZZ	1133												
CCB3	ZZZZZZ	1137												
LLCCV	ZZZZZZ	1141												
9980109014	ZZZZZZ	1145												
9980109015	ZZZZZZ	1149												
9980109016	ZZZZZZ	1153												
9980109017	ZZZZZZ	1157												
1017050	ZZZZZZ	1201												
1017051	ZZZZZZ	1204												
9980109017P	ZZZZZZ	1208												
9980109018	ZZZZZZ	1212												
9980109019	ZZZZZZ	1216												
9980109019L	ZZZZZZ	1220												
CCV4	ZZZZZZ	1224												
CCB4	ZZZZZZ	1231												
LLCCV	ZZZZZZ	1234												
LDR 50 PPM	ZZZZZZ	1239												
CHECK	ZZZZZZ	1243												
CCV5	ZZZZZZ	1248												
CCB5	CCB	1252	101		101		103		105		106		103	
LLCCV	LLCCV	1300	101		101		103		106		107		100	
CCV6	CCV	1304	102		101		104		107		106		102	
1017577	MB for HBN 47376	1308	101		102		101		102		103		101	
1017578	LCS for HBN 4737	1329	99		102		101		104		103		102	
1019627	ZZZZZZ	1333												
1019628	ZZZZZZ	1337												
9980109002	ZZZZZZ	1340												
9980394006	ZZZZZZ	1344												
9980394006L	ZZZZZZ	1348												
9980394014	ZZZZZZ	1352												
9980394006P	ZZZZZZ	1359												
CCV7	ZZZZZZ	1409												
CCB6	CCB	1413	103		102		104		104		105		101	
LLCCV	LLCCV	1417	100		99		102		98		107		102	
CCV8	CCV	1421	101		99		102		100		107		102	
9980395006	FTSW-HR-SO-02 (0	1425	103		102		102		100		100		98	
9980395006S	FTSW-HR-SO-02 (0	1447	100		101		99		100		98		98	
9980395006S	FTSW-HR-SO-02 (0	1450	102		100		100		101		98		98	
9980875015	ZZZZZZ	1454												
1019629	ZZZZZZ	1458												
1019630	ZZZZZZ	1502												

6020 3015

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT003|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-003

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/07/2012 End Date: 08/07/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980875015L	ZZZZZZ	1506												
CCV9	ZZZZZZ	1510												
CCB7	CCB	1513	105		98		104		100		102		96	
LLCCV	LLCCV	1517	105		99		103		103		102		98	
CCV10	CCV	1528	103		98		103		103		101		95	
9979663004	ZZZZZZ	1549												
9979678003	ZZZZZZ	1553												
CCV11	ZZZZZZ	1558												
CCB8	ZZZZZZ	1602												
LLCCV	ZZZZZZ	1606												
9980477001	ZZZZZZ	1642												
9980477002	ZZZZZZ	1646												
9980478001	ZZZZZZ	1650												
9980478002	ZZZZZZ	1654												
9980478003	ZZZZZZ	1658												
9980478004	ZZZZZZ	1702												
9980478004L	ZZZZZZ	1706												
CCV12	ZZZZZZ	1710												
CCB9	ZZZZZZ	1713												
LLCCV	ZZZZZZ	1717												
9975539001	ZZZZZZ	1721												
9975539002	ZZZZZZ	1725												
9975539001	ZZZZZZ	1729												
9975539002	ZZZZZZ	1733												
CHECK	ZZZZZZ	1737												
CHECK	ZZZZZZ	1741												
CHECK	ZZZZZZ	1745												
CHECK	ZZZZZZ	1749												
CHECK	ZZZZZZ	1752												
CHECK	ZZZZZZ	1756												
CCV13	ZZZZZZ	1800												
CCB10	ZZZZZZ	1804												
LLCCV	ZZZZZZ	1808												
LLCCV	ZZZZZZ	1945												

Total Metals in Water by 6020A Raw Data

Dataset: A080712 2nd Review Lam

First Review: MWO Approval: Lam 8.7.12

Internal Standards: **ICPMS9190**

200	60-125%	**6020Qc:**	70-130%	**6020A**	30-130%	**DOD:**	70-120%

Standards :
Tuning MS0361
Daily Standard: MS0361

Calibration Standards
MS0343
MS0344

PIPETTES:

03-028	10.0 mL
03-202	.200 mL
03-201	1.0 mL
03-031	1.0 mL

ICSA: MS0341
ICSAB:MS0340

GOLD: MS0346
DW LCS: MS0358
Second Source

MA1393	MA1388	MA1360
MA1342	MS0345	MA1381
MS0309	MA1359	

Internal Standards/ Target Analytes

Sc-Al,V,Cr,Mn,Co,Ni,Cu,Na, K, Ti, Mg, Ca, Fe, As, Zn, Se,
Y
In-Sr, Mo, Ag, Cd, Sn, Sb, Ba
Tb
Bi-Hg, Tl, Pb, U

Fe out in opening QC.

Case Narrative:

*D: *D at the beginning of the Dataset Denotes that the samples were run on the Elan DRCe ICP-MS*

200.8 Tune Check Sample Report

Batch Folder C:\Agilent\ICPMH\1\DATA\A080612 TUNE.b
Report Comment
Instrument Name G3281A JP11040846

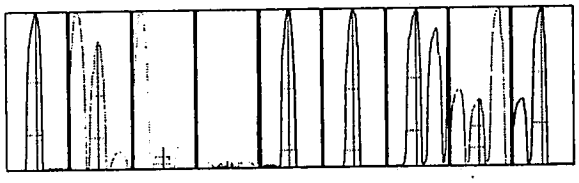
[no Gas]

Mass	Count (Actual)
9	48981
24	156895
25	21828
26	26320
59	336983
115	438792
206	102692
207	95589
208	202094

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	0.72	5.00	
24	0.79	5.00	
25	1.10	5.00	
26	0.48	5.00	
59	1.19	5.00	
115	0.82	5.00	
206	1.24	5.00	
207	2.29	5.00	
208	0.55	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	49517	48977	48772	49057	48581
24	158720	157559	156215	156388	155590
25	22019	21960	21791	21944	21423
26	26506	26367	26289	26190	26247
59	342220	339661	336783	333396	332855
115	443308	440284	438250	438724	433395
206	104659	102986	102654	101485	101678
207	98827	96854	94434	94117	93711
208	203164	202058	203261	200775	201211

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	7425	9.00	6.9 - 9.1		0.792	0.850	
24	25341	23.90	23.9 - 24.1		0.786	0.850	
25	3445	24.95	24.9 - 25.1		0.787	0.850	
26	4225	25.95	25.9 - 26.1		0.773	0.850	
59	54681	58.95	58.9 - 59.1		0.771	0.850	
115	74884	115.00	114.9 - 115.1		0.725	0.850	
206	16322	205.95	205.9 - 206.1		0.747	0.850	
207	14151	206.95	206.9 - 207.1		0.738	0.850	
208	33931	207.95	207.9 - 208.1		0.737	0.850	

X% = 10 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 235.1 **Y Axis =** Linear

Tune Parameters

Plasma Paramters

RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
RF Matching	1.80 V	Optional Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	DilutionGas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	9.7 V	Deflect	15.4 V
Extract 2	-190.0 V	Cell Entrance	-34 V	Plate Bias	-50 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

OctP Bias	-8.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	200 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	001CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:12:17-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	21852	0.14
Cr	52	1	No Gas	34572	0.01
Mn	55	1	No Gas	30791	0.02
Co	59	1	No Gas	244	14.04
Ni	60	1	No Gas	500	2.80
Cu	63	1	No Gas	11909	0.00
Sr	88	1	No Gas	248	10.26
Ag	107	1	No Gas	85	31.88
Al	27	1	No Gas	10403	0.02
Sn	118	1	No Gas	13077	0.23
Ti	47	1	No Gas	3264	0.80
Zn	66	1	No Gas	1003	0.40
As	75	3	HeHe	100	16.05
As	75	1	No Gas	26028	0.07
Sb	121	1	No Gas	5731	0.49
Hg	201	1	No Gas	36	131.85
Be	9	1	No Gas	14	269.97
Pb	208	1	No Gas	21200	0.00
Se	82	1	No Gas	179	60.64
Mo	98	1	No Gas	37245	0.09
Ba	137	1	No Gas	83	59.96
Tl	205	1	No Gas	107	62.66
U	238	1	No Gas	1371	2.25
Na	23	2	he	112860	0.00
Mg	24	2	he	470	6.14
K	39	2	he	253444	0.00
Se	82	3	HeHe	87	22.26
Fe	57	3	HeHe	474	6.73
Cd	114	1	No Gas	703	5.28
Ca	44	1	No Gas	65587	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	9318028	0.91
Sc	45	2	he	1766521	1.57
Ge	72	1	No Gas	1005789	0.47
In	115	1	No Gas	5661518	1.48
Tb	159	1	No Gas	6831155	0.65

Calibration Blank Report

Bi	209	1	No Gas	3774501	0.92
Sc	45	3	HeHe	172918	0.76

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	002CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:16:15-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	21094	0.14
Cr	52	1	No Gas	34138	0.01
Mn	55	1	No Gas	36389	0.00
Co	59	1	No Gas	159	48.25
Ni	60	1	No Gas	510	2.69
Cu	63	1	No Gas	11740	0.00
Sr	88	1	No Gas	193	19.95
Ag	107	1	No Gas	70	56.46
Al	27	1	No Gas	10326	0.02
Sn	118	1	No Gas	6861	0.34
Ti	47	1	No Gas	1316	1.88
Zn	66	1	No Gas	993	1.13
As	75	3	HeHe	39	99.57
As	75	1	No Gas	26735	0.04
Sb	121	1	No Gas	2856	0.80
Hg	201	1	No Gas	23	97.96
Be	9	1	No Gas	22	180.12
Pb	208	1	No Gas	17529	0.02
Se	82	1	No Gas	64	27.91
Mo	98	1	No Gas	11922	0.33
Ba	137	1	No Gas	93	35.07
Tl	205	1	No Gas	56	108.00
U	238	1	No Gas	285	11.78
Na	23	2	he	111386	0.00
Mg	24	2	he	374	4.65
K	39	2	he	243446	0.00
Se	82	3	HeHe	113	7.35
Fe	57	3	HeHe	374	0.46
Cd	114	1	No Gas	360	8.59
Ca	44	1	No Gas	64419	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	9248342	1.26
Sc	45	2	he	1744643	1.17
Ge	72	1	No Gas	1012122	1.06
In	115	1	No Gas	5760110	0.77
Tb	159	1	No Gas	6952439	1.03

Calibration Blank Report

Bi	209	1	No Gas	3846945	0.42
Sc	45	3	HeHe	171212	2.47

Calibration Standard Report

Sample Table

Sample Name	Standard 1
Data File Name	003CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:20:10-04:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	18063	0.07
Cr	52	1	No Gas	38963	0.01
Mn	55	1	No Gas	49023	0.00
Co	59	1	No Gas	5383	0.09
Ni	60	1	No Gas	1580	0.11
Cu	63	1	No Gas	15285	0.01
Sr	88	1	No Gas	6524	0.12
Ag	107	1	No Gas	3104	0.22
Al	27	1	No Gas	59462	0.00
Sn	118	1	No Gas	6709	0.35
Ti	47	1	No Gas	1652	0.72
Zn	66	1	No Gas	1780	0.74
As	75	3	HeHe	68	24.13
As	75	1	No Gas	26543	0.06
Sb	121	1	No Gas	4705	0.18
Hg	201	1	No Gas	38	49.94
Be	9	1	No Gas	661	1.29
Pb	208	1	No Gas	20348	0.03
Se	82	1	No Gas	132	106.96
Mo	98	1	No Gas	10414	0.29
Ba	137	1	No Gas	893	1.26
Tl	205	1	No Gas	3982	0.08
U	238	1	No Gas	4697	0.16
Na	23	2	he	117342	0.00
Mg	24	2	he	3408	0.35
K	39	2	he	261549	0.00
Se	82	3	HeHe	89	12.06
Fe	57	3	HeHe	293	11.04
Cd	114	1	No Gas	1547	1.11
Ca	44	1	No Gas	69431	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9230482	1.11	9248342	99.81	70	120	
Sc	45	2	he	1761372	0.68	1744643	100.96	70	120	
Ge	72	1	No Gas	991031	1.22	1012122	97.92	70	120	

Calibration Standard Report

In	115	1	No Gas	5660258	1.42	5760110	98.27	70	120	
Tb	159	1	No Gas	6804369	1.26	6952439	97.87	70	120	
Bi	209	1	No Gas	3791147	2.08	3846945	98.55	70	120	
Sc	45	3	HeHe	172414	2.77	171212	100.70	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 2
Data File Name	004CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:24:04-04:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	75240	0.01
Cr	52	1	No Gas	79879	0.00
Mn	55	1	No Gas	97795	0.00
Co	59	1	No Gas	50904	0.00
Ni	60	1	No Gas	12542	0.01
Cu	63	1	No Gas	41498	0.00
Sr	88	1	No Gas	67816	0.00
Ag	107	1	No Gas	31349	0.01
Al	27	1	No Gas	140284	0.00
Sn	118	1	No Gas	23599	0.02
Ti	47	1	No Gas	5303	0.05
Zn	66	1	No Gas	12980	0.00
As	75	3	HeHe	484	0.89
As	75	1	No Gas	32611	0.01
Sb	121	1	No Gas	26036	0.02
Hg	201	1	No Gas	93	35.35
Be	9	1	No Gas	6422	0.04
Pb	208	1	No Gas	81148	0.00
Se	82	1	No Gas	320	7.94
Mo	98	1	No Gas	26675	0.05
Ba	137	1	No Gas	9030	0.04
Tl	205	1	No Gas	42273	0.01
U	238	1	No Gas	51558	0.00
Na	23	2	he	158442	0.00
Mg	24	2	he	24922	0.02
K	39	2	he	304695	0.00
Se	82	3	HeHe	123	10.00
Fe	57	3	HeHe	1474	0.83
Cd	114	1	No Gas	13716	0.00
Ca	44	1	No Gas	87487	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9606577	0.99	9248342	103.87	70	120	
Sc	45	2	he	1830837	0.65	1744643	104.94	70	120	
Ge	72	1	No Gas	1021767	0.80	1012122	100.95	70	120	

Calibration Standard Report

In	115	1	No Gas	5934139	0.96	5760110	103.02	70	120	
Tb	159	1	No Gas	7112799	0.83	6952439	102.31	70	120	
Bi	209	1	No Gas	3993179	0.68	3846945	103.80	70	120	
Sc	45	3	HeHe	174349	0.65	171212	101.83	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 3
Data File Name	005CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:27:58-04:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	536384	0.00
Cr	52	1	No Gas	499471	0.00
Mn	55	1	No Gas	607526	0.00
Co	59	1	No Gas	513478	0.00
Ni	60	1	No Gas	115198	0.00
Cu	63	1	No Gas	291757	0.00
Sr	88	1	No Gas	673644	0.00
Ag	107	1	No Gas	302621	0.00
Al	27	1	No Gas	419330	0.00
Sn	118	1	No Gas	180565	0.00
Ti	47	1	No Gas	41510	0.00
Zn	66	1	No Gas	78050	0.00
As	75	3	HeHe	4653	0.12
As	75	1	No Gas	92057	0.00
Sb	121	1	No Gas	236636	0.00
Hg	201	1	No Gas	544	0.31
Be	9	1	No Gas	64582	0.00
Pb	208	1	No Gas	585512	0.00
Se	82	1	No Gas	3813	0.30
Mo	98	1	No Gas	185502	0.00
Ba	137	1	No Gas	83581	0.00
Tl	205	1	No Gas	422428	0.00
U	238	1	No Gas	512538	0.00
Na	23	2	he	496695	0.00
Mg	24	2	he	224038	0.00
K	39	2	he	599398	0.00
Se	82	3	HeHe	317	2.40
Fe	57	3	HeHe	11456	0.02
Cd	114	1	No Gas	138636	0.00
Ca	44	1	No Gas	202707	0.00

QC ISTD-Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9599585	0.21	9248342	103.80	70	120	
Sc	45	2	he	1819752	1.49	1744643	104.31	70	120	
Ge	72	1	No Gas	1016046	0.79	1012122	100.39	70	120	

Calibration Standard Report

In	115	1	No Gas	5960241	0.35	5760110	103.47	70	120	
Tb	159	1	No Gas	7215156	0.72	6952439	103.78	70	120	
Bi	209	1	No Gas	3949111	0.62	3846945	102.66	70	120	
Sc	45	3	HeHe	172939	1.30	171212	101.01	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 4
Data File Name	006CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:31:52-04:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	5638942	0.00
Cr	52	1	No Gas	4979669	0.00
Mn	55	1	No Gas	6192129	0.00
Co	59	1	No Gas	5447044	0.00
Ni	60	1	No Gas	1182013	0.00
Cu	63	1	No Gas	2985102	0.00
Sr	88	1	No Gas	6997417	0.00
Ag	107	1	No Gas	3174830	0.00
Al	27	1	No Gas	3653098	0.00
Sn	118	1	No Gas	1886235	0.00
Tl	47	1	No Gas	418509	0.00
Zn	66	1	No Gas	721550	0.00
As	75	3	HeHe	49452	0.00
As	75	1	No Gas	739186	0.00
Sb	121	1	No Gas	2555108	0.00
Hg	201	1	No Gas	5250	0.01
Be	9	1	No Gas	666474	0.00
Pb	208	1	No Gas	5859721	0.00
Se	82	1	No Gas	38718	0.00
Mo	98	1	No Gas	1996551	0.00
Ba	137	1	No Gas	841402	0.00
Tl	205	1	No Gas	4323264	0.00
U	238	1	No Gas	5263199	0.00
Na	23	2	he	4611890	0.00
Mg	24	2	he	2551831	0.00
K	39	2	he	3991640	0.00
Se	82	3	HeHe	2508	0.14
Fe	57	3	HeHe	117956	0.00
Cd	114	1	No Gas	1480140	0.00
Ca	44	1	No Gas	1479565	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	10207257	1.85	9248342	110.37	70	120	
Sc	45	2	he	1908011	1.86	1744643	109.36	70	120	
Ge	72	1	No Gas	1060324	1.35	1012122	104.76	70	120	

Calibration Standard Report

In	115	1	No Gas	6277627	0.94	5760110	108.98	70	120	
Tb	159	1	No Gas	7433190	0.78	6952439	106.91	70	120	
Bi	209	1	No Gas	4079951	1.27	3846945	106.06	70	120	
Sc	45	3	HeHe	181248	0.69	171212	105.86	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 5
Data File Name	007CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:35:41-04:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	10826451	0.00
Cr	52	1	No Gas	9637889	0.00
Mn	55	1	No Gas	11866703	0.00
Co	59	1	No Gas	10711214	0.00
Ni	60	1	No Gas	2413544	0.00
Cu	63	1	No Gas	5819480	0.00
Sr	88	1	No Gas	13751395	0.00
Ag	107	1	No Gas	6225088	0.00
Al	27	1	No Gas	6829165	0.00
Sn	118	1	No Gas	3750576	0.00
Tl	47	1	No Gas	823588	0.00
Zn	66	1	No Gas	1429052	0.00
As	75	3	HeHe	96786	0.00
As	75	1	No Gas	1481593	0.00
Sb	121	1	No Gas	4866586	0.00
Hg	201	1	No Gas	10743	0.02
Be	9	1	No Gas	1447602	0.00
Pb	208	1	No Gas	11462241	0.00
Se	82	1	No Gas	76676	0.00
Mo	98	1	No Gas	3907993	0.00
Ba	137	1	No Gas	1694987	0.00
Tl	205	1	No Gas	8390950	0.00
U	238	1	No Gas	10428690	0.00
Na	23	2	he	8720906	0.00
Mg	24	2	he	4821494	0.00
K	39	2	he	7360101	0.00
Se	82	3	HeHe	4959	0.02
Fe	57	3	HeHe	233280	0.00
Cd	114	1	No Gas	2908805	0.00
Ca	44	1	No Gas	2795845	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9993227	0.18	9248342	108.05	70	120	
Sc	45	2	he	1774489	1.33	1744643	101.71	70	120	
Ge	72	1	No Gas	1031020	0.52	1012122	101.87	70	120	

Calibration Standard Report

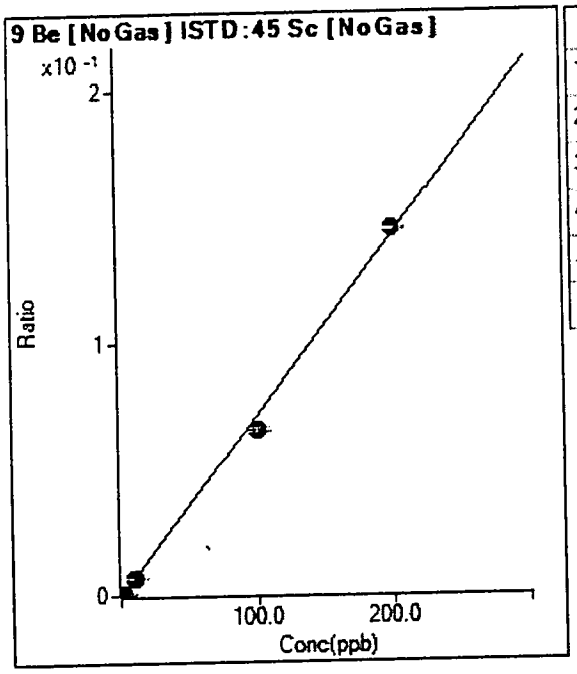
In	115	1	No Gas	6133321	1.61	5760110	106.48	70	120	
Tb	159	1	No Gas	7274529	1.23	6952439	104.63	70	120	
Bi	209	1	No Gas	4005913	0.87	3846945	104.13	70	120	
Sc	45	3	HeHe	182051	0.95	171212	106.33	70	120	

Calibration for 071_CCV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\A080712.b\
Analysis File: A080712.batch.bin
DA Date-Time: 8/7/2012 1:05:32 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	002CALB.d	blk	8/7/2012 8:16:15 AM
2	003CALS.d	Standard 1	8/7/2012 8:20:10 AM
3	004CALS.d	Standard 2	8/7/2012 8:24:04 AM
4	005CALS.d	Standard 3	8/7/2012 8:27:58 AM
5	006CALS.d	Standard 4	8/7/2012 8:31:52 AM
6	007CALS.d	Standard 5	8/7/2012 8:35:41 AM

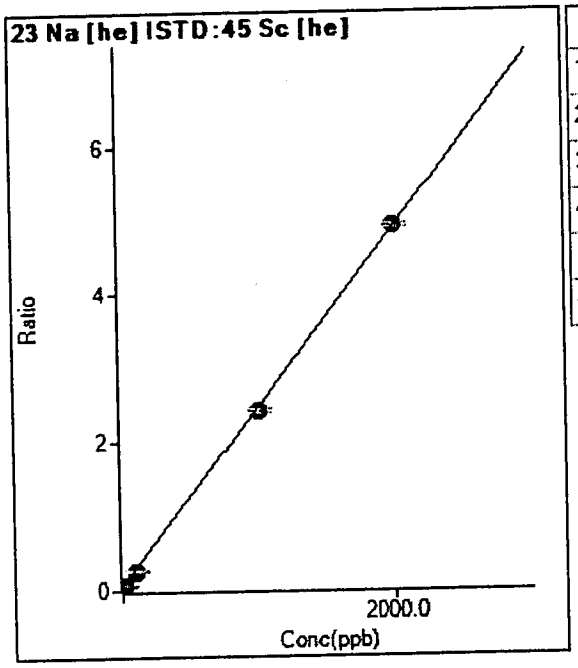
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.00	0.0000	P	40.0
2	☐	0.100	0.098	661.35	0.0001	P	8.4
3	☐	1.000	0.938	6422.49	0.0007	P	2.3
4	☐	10.000	9.473	64581.75	0.0067	P	1.2
5	☐	100.000	91.991	666474.04	0.0653	P	2.3
6	☐	200.000	204.031	1447602.42	0.1449	A	0.8

y = 7.0996E-004 * x + 2.3808E-006
R = 0.9989
DL = 0.004029
BEC = 0.003353

Weight: <None>
Min Conc: <None>

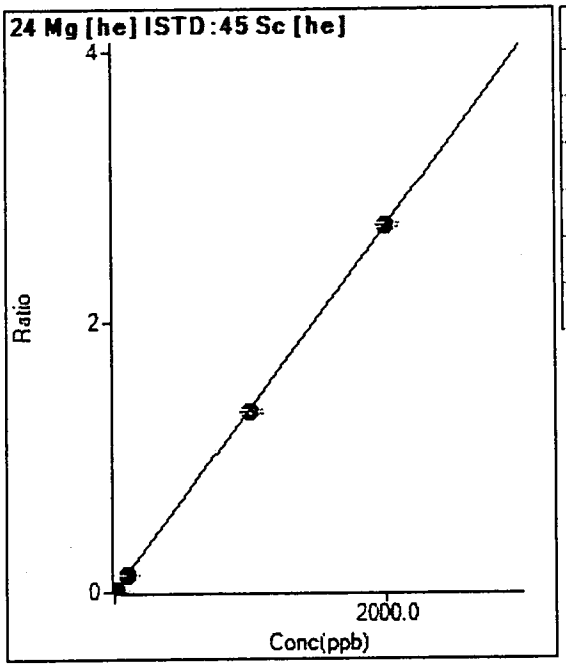


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	111385.71	0.0639	P	4.6
2	☐			117342.24	0.0666	P	1.3
3	☐	10.000	9.407	158441.63	0.0865	P	1.3
4	☐	100.000	86.740	496695.47	0.2730	P	1.2
5	☐	1000.000	976.358	4611889.86	2.4174	A	1.7
6	☐	2000.000	2012.487	8720906.27	4.9150	A	1.0

y = 0.0024 * x + 0.0639
R = 0.9999
DL = 3.687
BEC = 26.49

Weight: <None>
Min Conc: <None>

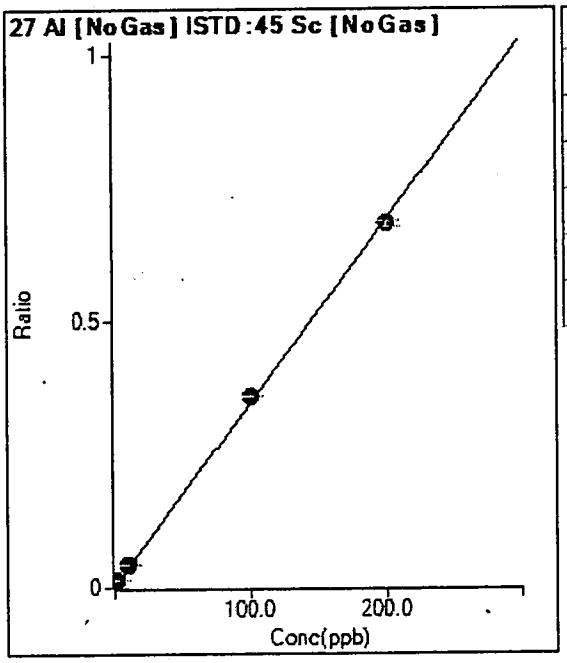
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	374.10	0.0002	P	16.5
2	☐			3407.90	0.0019	P	11.9
3	☐	10.000	9.897	24921.94	0.0136	P	6.1
4	☐	100.000	90.757	224037.56	0.1231	P	0.7
5	☐	1000.000	987.738	2551831.50	1.3377	A	2.2
6	☐	2000.000	2006.594	4821493.91	2.7174	A	1.2

y = 0.0014 * x + 2.1419E-004
R = 1.0000
DL = 0.07847
BEC = 0.1582

Weight: <None>
Min Conc: <None>

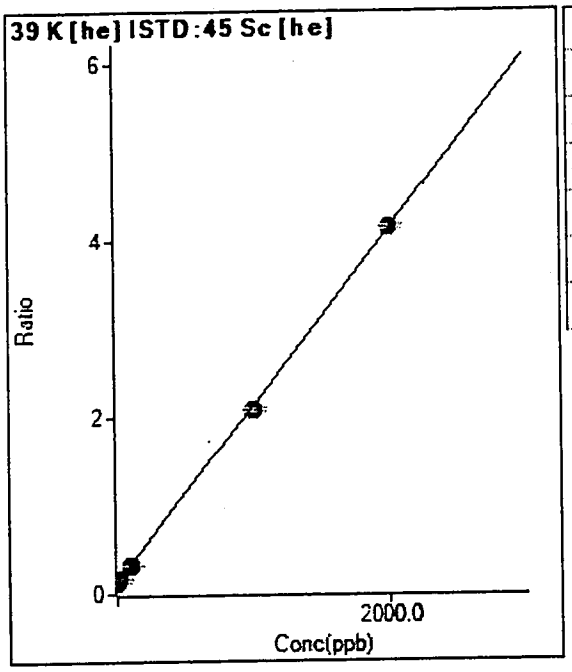


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10325.69	0.0011	P	3.2
2	☐			59461.87	0.0064	P	2.9
3	☐	1.000	3.916	140283.57	0.0146	P	1.6
4	☐	10.000	12.358	419330.09	0.0437	P	1.3
5	☐	100.000	103.580	3653098.12	0.3579	A	0.6
6	☐	200.000	198.078	6829164.54	0.6834	A	1.4

y = 0.0034 * x + 0.0011
R = 0.9998
DL = 0.03075
BEC = 0.3242

Weight: <None>
Min Conc: <None>

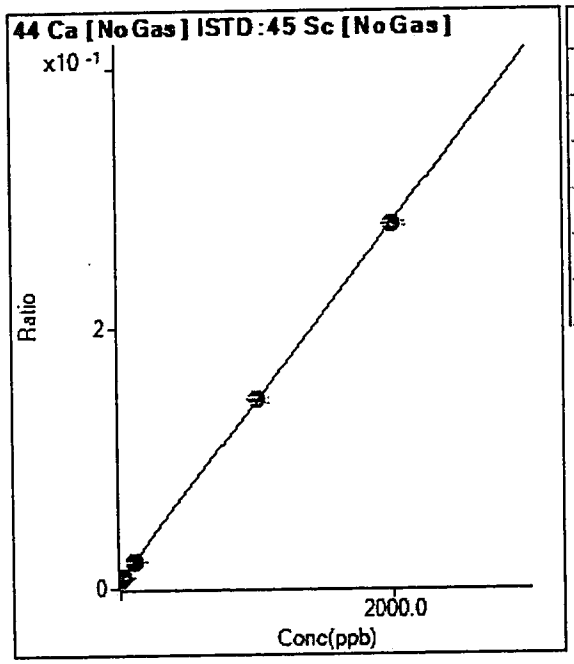
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	243445.55	0.1396	P	2.7
2	☐			261549.24	0.1485	P	0.7
3	☐	10.000	13.468	304695.36	0.1664	P	0.6
4	☐	100.000	95.209	599397.65	0.3294	P	2.1
5	☐	1000.000	979.526	3991640.12	2.0926	A	2.1
6	☐	2000.000	2010.459	7360101.33	4.1480	A	1.1

y = 0.0020 * x + 0.1396
R = 0.9999
DL = 5.695
BEC = 70

Weight: <None>
Min Conc: <None>

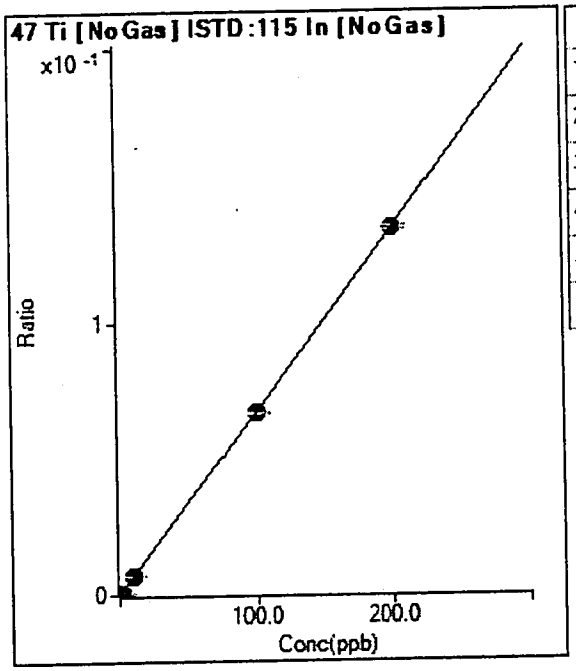


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	64419.26	0.0070	P	2.5
2	☐			69430.84	0.0075	P	8.6
3	☐	10.000	15.649	87487.23	0.0091	P	4.2
4	☐	100.000	103.491	202707.19	0.0211	P	1.7
5	☐	1000.000	1009.457	1479564.93	0.1450	A	3.2
6	☐	2000.000	1995.069	2795845.17	0.2798	A	1.1

y = 1.3674E-004 * x + 0.0070
R = 1.0000
DL = 3.8
BEC = 50.93

Weight: <None>
Min Conc: <None>

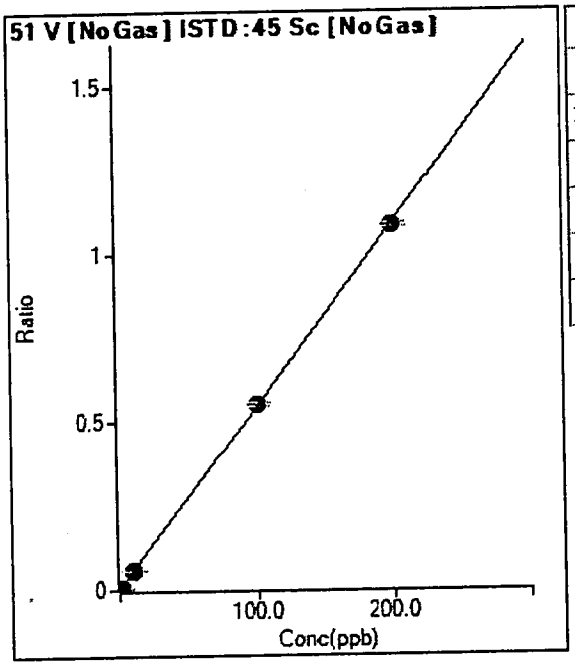
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1315.75	0.0002	P	24.7
2	☐	0.100	0.095	1651.73	0.0003	P	13.3
3	☐	1.000	0.995	5303.43	0.0009	P	3.6
4	☐	10.000	10.067	41510.48	0.0070	P	1.7
5	☐	100.000	99.291	418508.63	0.0667	P	1.1
6	☐	200.000	200.351	823588.40	0.1343	P	1.2

y = 6.6917E-004 * x + 2.2834E-004
R = 1.0000
DL = 0.2524
BEC = 0.3412

Weight: <None>
Min Conc: <None>

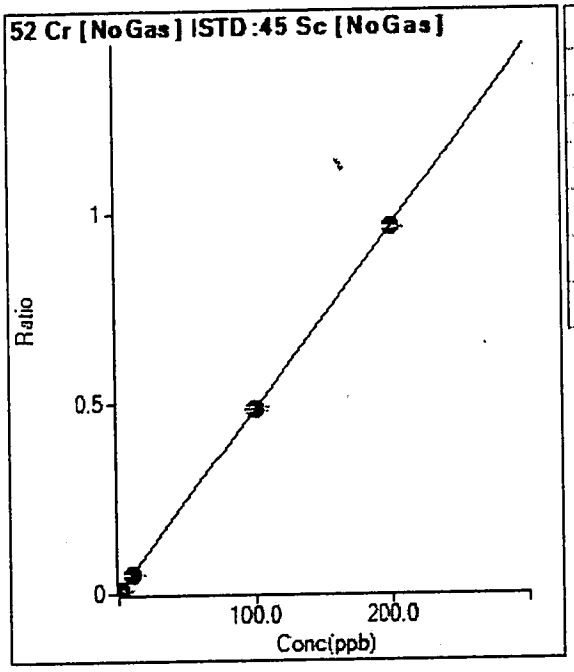


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21093.76	0.0023	P	29.5
2	☐	0.100	-0.061	18063.48	0.0020	P	11.4
3	☐	1.000	1.022	75239.91	0.0078	P	8.3
4	☐	10.000	9.879	536384.01	0.0559	P	2.7
5	☐	100.000	101.444	5638942.05	0.5526	A	2.4
6	☐	200.000	199.284	10826451.35	1.0834	A	1.1

y = 0.0054 * x + 0.0023
R = 1.0000
DL = 0.3732
BEC = 0.4215

Weight: <None>
Min Conc: <None>

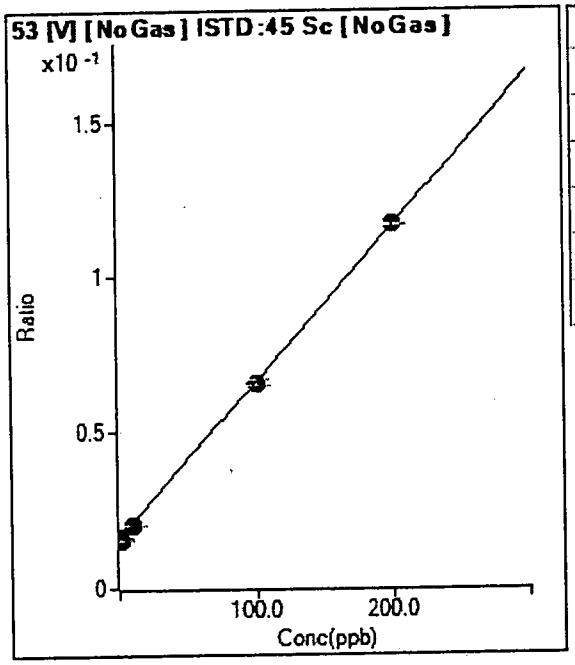
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34138.23	0.0037	P	5.7
2	☐	0.100	0.110	38962.87	0.0042	P	3.2
3	☐	1.000	0.961	79879.22	0.0083	P	2.2
4	☐	10.000	10.046	499471.34	0.0520	P	1.1
5	☐	100.000	100.638	4979668.67	0.4879	A	2.0
6	☐	200.000	199.679	9637888.74	0.9644	A	0.6

y = 0.0048 * x + 0.0037
R = 1.0000
DL = 0.1302
BEC = 0.7675

Weight: <None>
Min Conc: <None>

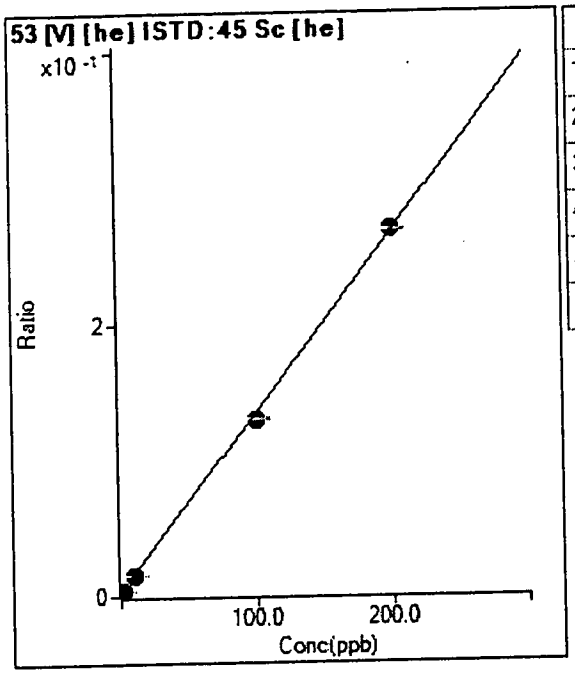


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	149554.69	0.0162	P	0.5
2	☐	0.100	1.015	153951.55	0.0167	P	1.7
3	☐	1.000	-1.133	149877.05	0.0156	P	2.0
4	☐	10.000	8.414	195723.03	0.0204	P	2.1
5	☐	100.000	98.717	669822.89	0.0656	P	2.8
6	☐	200.000	200.731	1166872.46	0.1168	P	0.5

y = 5.0114E-004 * x + 0.0162
R = 0.9999
DL = 0.4835
BEC = 32.27

Weight: <None>
Min Conc: <None>

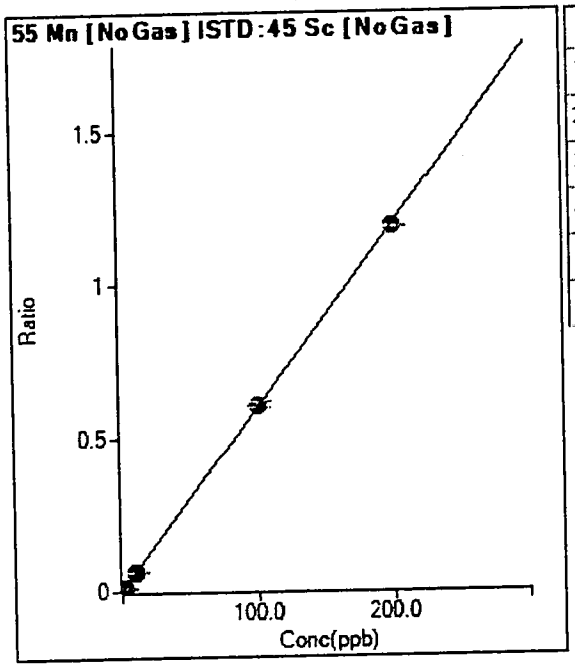
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6523.76	0.0037	P	2.7
2	☐	0.100	0.178	7001.69	0.0040	P	5.9
3	☐	1.000	0.660	8439.50	0.0046	P	3.8
4	☐	10.000	9.229	28935.89	0.0159	P	2.5
5	☐	100.000	96.246	249133.30	0.1306	P	1.3
6	☐	200.000	201.917	478832.97	0.2699	P	0.5

y = 0.0013 * x + 0.0037
R = 0.9998
DL = 0.2296
BEC = 2.838

Weight: <None>
Min Conc: <None>

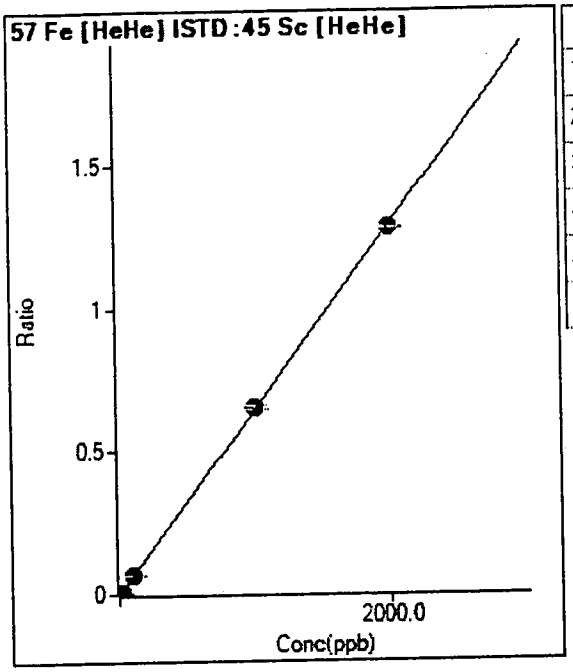


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36389.16	0.0039	P	2.5
2	☐	0.100	0.232	49022.90	0.0053	P	2.6
3	☐	1.000	1.052	97794.51	0.0102	P	3.7
4	☐	10.000	9.992	607526.39	0.0633	P	0.9
5	☐	100.000	101.501	6192129.38	0.6068	A	3.1
6	☐	200.000	199.249	11866703.23	1.1875	A	0.4

y = 0.0059 * x + 0.0039
R = 1.0000
DL = 0.04907
BEC = 0.6625

Weight: <None>
Min Conc: <None>

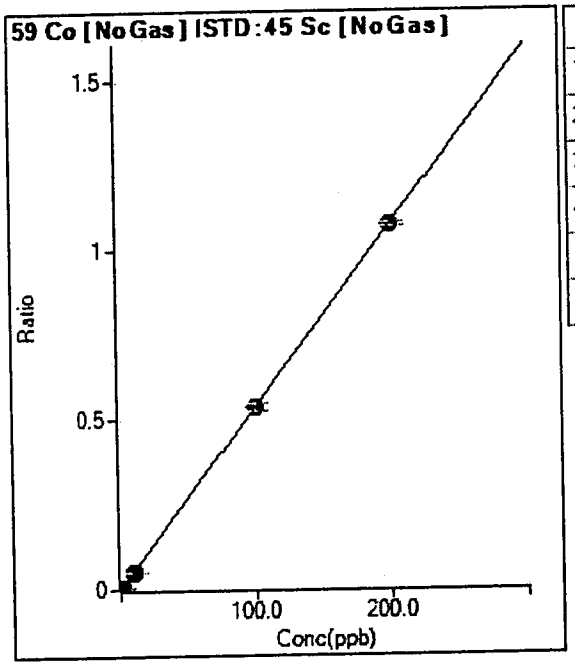
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	3.400	374.10	0.0022	P	2.1
2	☐			292.61	0.0017	P	29.7
3	☐	10.000	13.155	1474.21	0.0085	P	12.3
4	☐	100.000	103.056	11456.05	0.0662	P	1.6
5	☐	1000.000	1012.524	117955.50	0.6508	P	2.3
6	☐	2000.000	1993.570	233280.34	1.2814	P	0.4

y = 6.4275E-004 * x
R = 1.0000
DL = 0.2166
BEC = 0

Weight: <None>
Min Conc: <None>

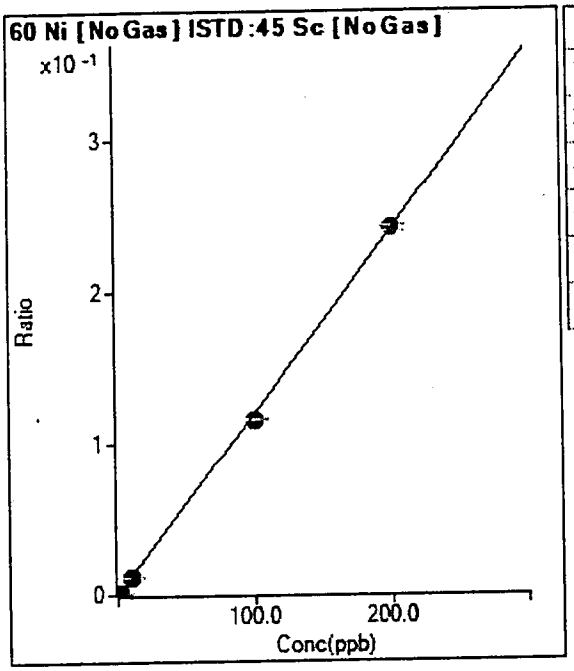


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	159.27	0.0000	P	75.6
2	☐	0.100	0.106	5382.58	0.0006	P	4.0
3	☐	1.000	0.986	50904.40	0.0053	P	2.9
4	☐	10.000	9.985	513478.35	0.0535	P	0.7
5	☐	100.000	99.702	5447043.65	0.5339	A	4.4
6	☐	200.000	200.150	10711213.93	1.0718	A	1.0

y = 0.0054 * x + 1.7113E-005
R = 1.0000
DL = 0.007244
BEC = 0.003196

Weight: <None>
Min Conc: <None>

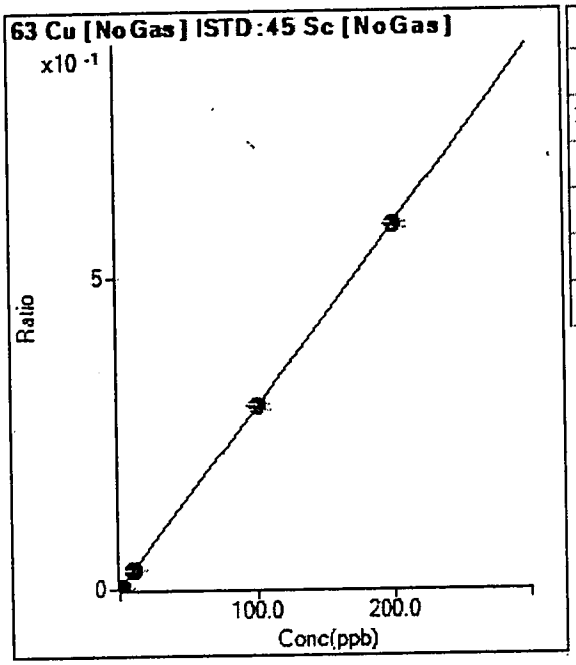
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	510.03	0.0001	P	13.6
2	☐	0.100	0.097	1580.14	0.0002	P	2.7
3	☐	1.000	1.044	12541.64	0.0013	P	1.1
4	☐	10.000	9.976	115198.15	0.0120	P	0.8
5	☐	100.000	96.689	1182012.74	0.1158	P	2.0
6	☐	200.000	201.656	2413544.03	0.2415	A	1.8

y = 0.0012 * x + 5.5141E-005
R = 0.9998
DL = 0.01879
BEC = 0.04605

Weight: <None>
Min Conc: <None>

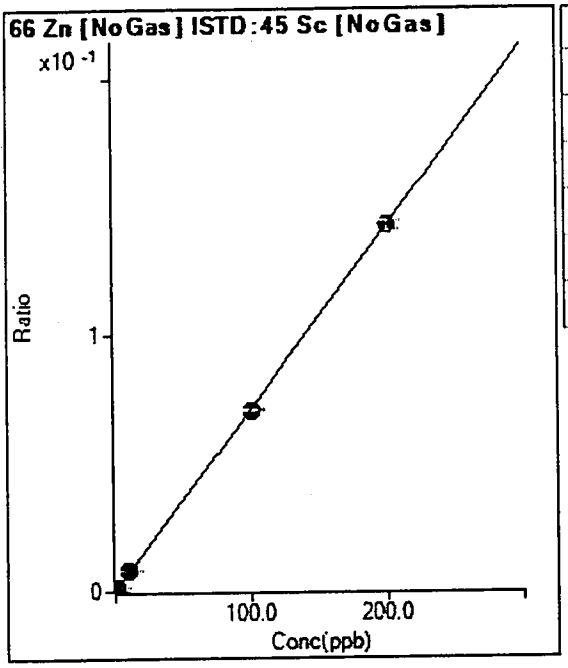


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11739.95	0.0013	P	1.5
2	☐	0.100	0.133	15285.32	0.0017	P	1.6
3	☐	1.000	1.049	41498.26	0.0043	P	0.4
4	☐	10.000	10.019	291757.45	0.0304	P	0.6
5	☐	100.000	100.204	2985102.00	0.2926	A	2.9
6	☐	200.000	199.897	5819480.00	0.5823	A	1.3

y = 0.0029 * x + 0.0013
R = 1.0000
DL = 0.01912
BEC = 0.4367

Weight: <None>
Min Conc: <None>

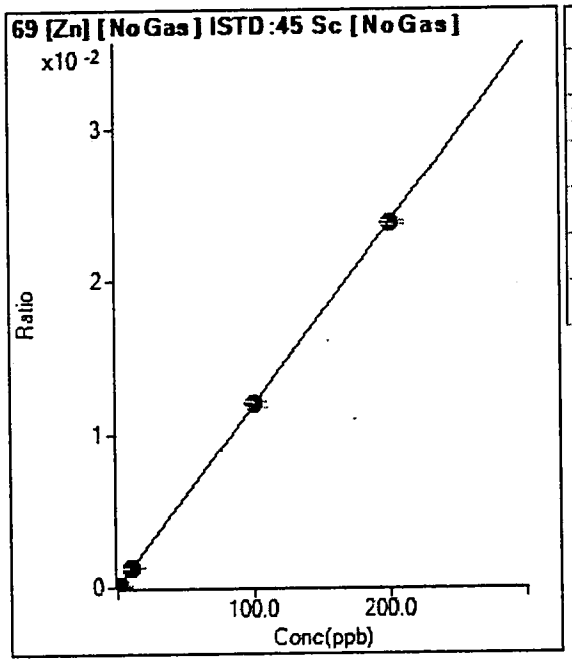
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	993.30	0.0001	P	11.9
2		0.100	0.120	1779.98	0.0002	P	14.2
3		1.000	1.745	12980.00	0.0014	P	1.6
4		10.000	11.253	78050.21	0.0081	P	0.6
5		100.000	99.016	721549.68	0.0707	P	1.3
6		200.000	200.426	1429051.62	0.1430	M	2.8

y = 7.1295E-004 * x + 1.0747E-004
R = 1.0000
DL = 0.05375
BEC = 0.1507

Weight: <None>
Min Conc: <None>

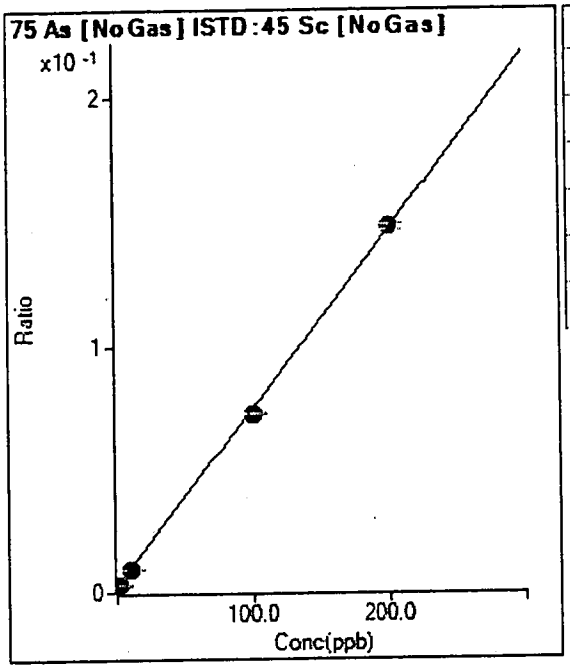


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	77.78	0.0000	P	38.2
2		0.100	0.061	144.45	0.0000	P	32.5
3		1.000	1.161	1407.54	0.0001	P	5.4
4		10.000	10.400	11956.58	0.0012	P	3.1
5		100.000	100.273	121816.85	0.0119	P	2.7
6		200.000	199.843	237644.60	0.0238	P	1.2

y = 1.1895E-004 * x + 8.4155E-006
R = 1.0000
DL = 0.081
BEC = 0.07075

Weight: <None>
Min Conc: <None>

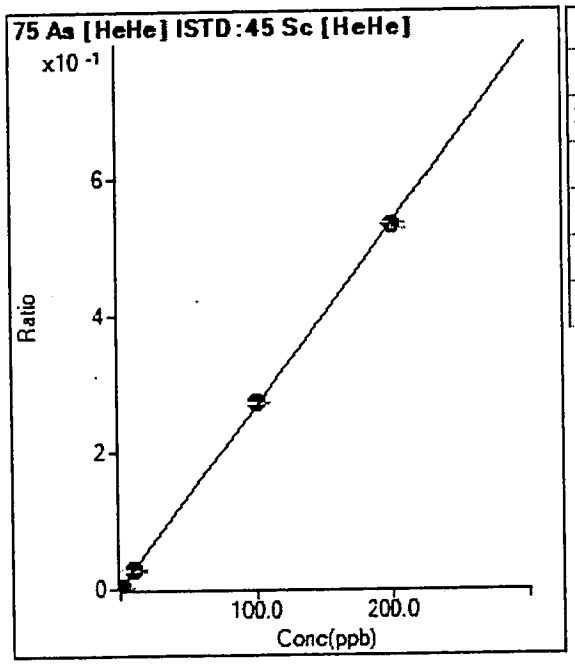
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26735.37	0.0029	P	11.7
2	☐	0.100	-0.023	26542.86	0.0029	P	16.6
3	☐	1.000	0.697	32610.52	0.0034	P	2.9
4	☐	10.000	9.295	92057.25	0.0096	P	0.3
5	☐	100.000	96.521	739186.23	0.0724	P	1.4
6	☐	200.000	201.776	1481592.55	0.1483	A	1.5

y = 7.2043E-004 * x + 0.0029
R = 0.9998
DL = 1.407
BEC = 4.016

Weight: <None>
Min Conc: <None>

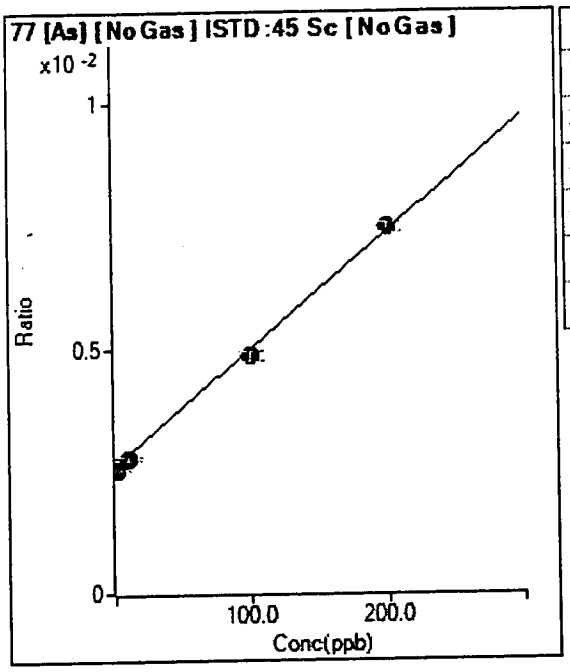


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	39.22	0.0002	P	38.4
2	☐	0.100	0.063	67.97	0.0004	P	18.9
3	☐	1.000	0.953	483.67	0.0028	P	3.8
4	☐	10.000	9.985	4652.94	0.0269	P	4.4
5	☐	100.000	102.077	49451.53	0.2728	P	0.8
6	☐	200.000	198.962	96786.09	0.5316	P	1.4

y = 0.0027 * x + 2.2845E-004
R = 0.9999
DL = 0.09864
BEC = 0.08554

Weight: <None>
Min Conc: <None>

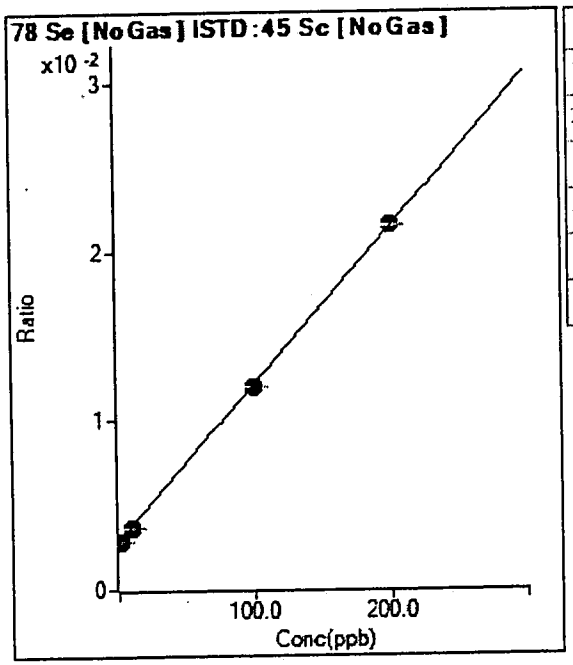
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24210.54	0.0026	P	2.3
2	☐	0.100	2.024	24603.69	0.0027	P	5.3
3	☐	1.000	-3.740	24291.98	0.0025	P	0.3
4	☐	10.000	6.064	26513.84	0.0028	P	2.0
5	☐	100.000	93.540	49411.89	0.0048	P	3.8
6	☐	200.000	203.449	74527.42	0.0075	P	2.4

y = 2.3790E-005 * x + 0.0026
R = 0.9990
DL = 7.636
BEC = 110

Weight: <None>
Min Conc: <None>

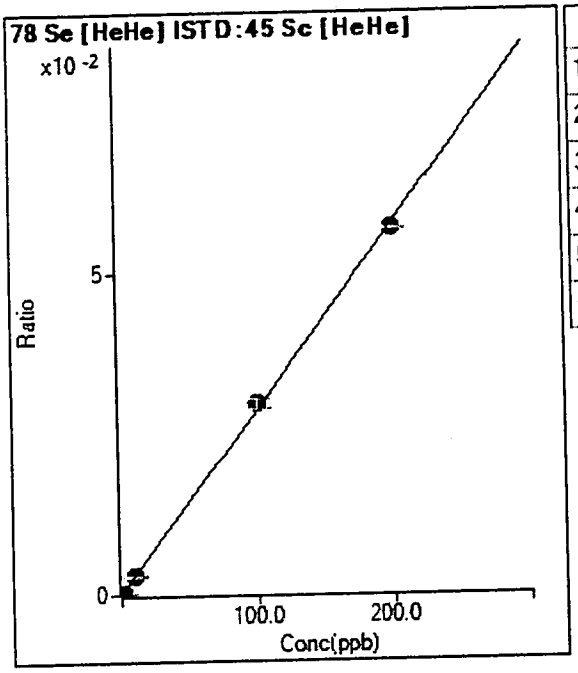


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26343.91	0.0028	P	2.2
2	☐	0.100	0.320	26569.76	0.0029	P	1.3
3	☐	1.000	-0.037	27335.03	0.0028	P	0.9
4	☐	10.000	8.456	34905.20	0.0036	P	1.5
5	☐	100.000	98.162	122331.43	0.0120	P	0.7
6	☐	200.000	201.001	215431.20	0.0216	P	0.6

y = 9.3077E-005 * x + 0.0028
R = 0.9999
DL = 2.022
BEC = 30.61

Weight: <None>
Min Conc: <None>

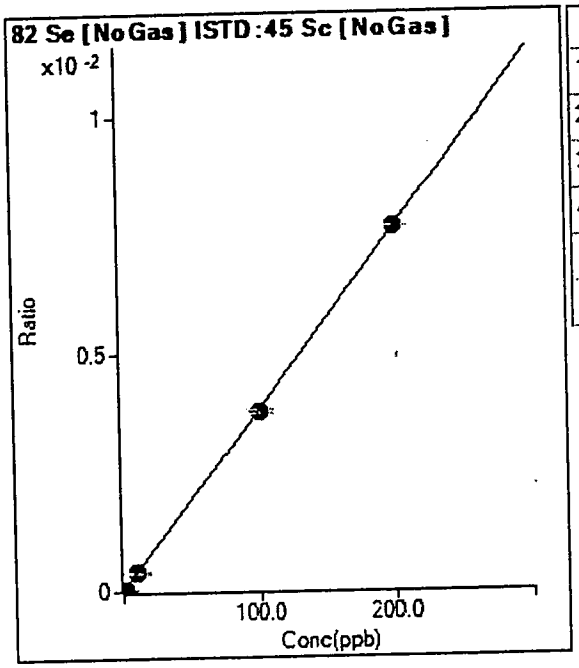
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5.23	0.0000	P	57.8
2	☐	0.100	0.278	18.96	0.0001	P	11.9
3	☐	1.000	1.019	56.21	0.0003	P	7.6
4	☐	10.000	10.023	501.97	0.0029	P	6.4
5	☐	100.000	103.649	5387.14	0.0297	P	5.3
6	☐	200.000	198.174	10339.07	0.0568	P	0.7

y = 2.8642E-004 * x + 3.0497E-005
R = 0.9998
DL = 0.1846
BEC = 0.1065

Weight: <None>
Min Conc: <None>

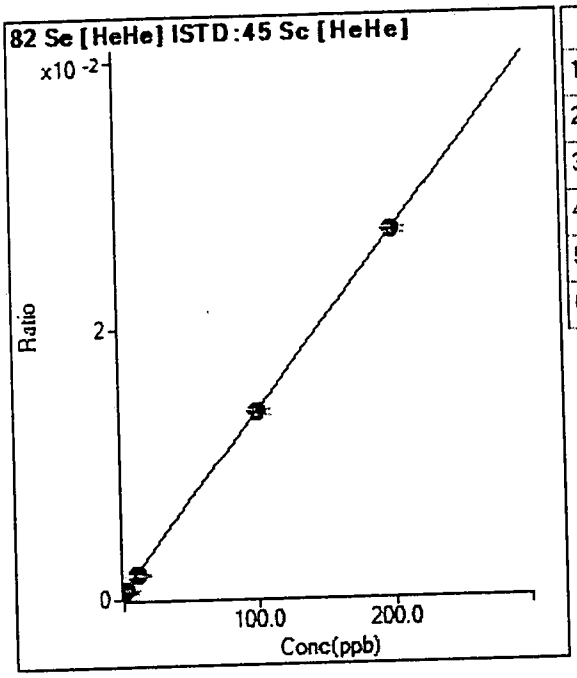


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	64.08	0.0000	P	18.3
2	☐	0.100	0.193	131.66	0.0000	P	140.0
3	☐	1.000	0.691	319.83	0.0000	P	26.2
4	☐	10.000	10.206	3813.38	0.0004	P	11.4
5	☐	100.000	99.040	38717.56	0.0038	P	2.2
6	☐	200.000	200.471	76676.06	0.0077	P	0.1

y = 3.8239E-005 * x + 6.9315E-006
R = 1.0000
DL = 0.09932
BEC = 0.1813

Weight: <None>
Min Conc: <None>

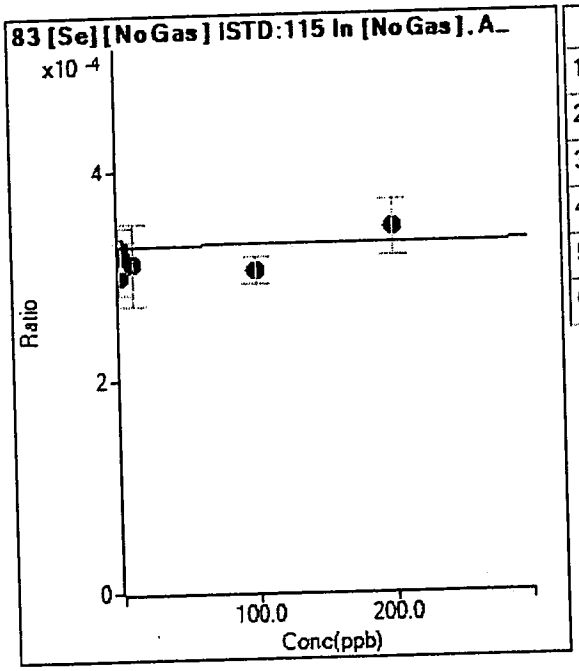
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	112.59	0.0007	P	9.8
2	☐	0.100	-1.098	88.52	0.0005	P	7.9
3	☐	1.000	0.351	122.96	0.0007	P	11.7
4	☐	10.000	8.836	316.67	0.0018	P	6.7
5	☐	100.000	99.349	2508.34	0.0138	P	3.0
6	☐	200.000	200.388	4959.24	0.0272	P	1.3

y = 1.3266E-004 * x + 6.5835E-004
R = 1.0000
DL = 1.454
BEC = 4.963

Weight: <None>
Min Conc: <None>

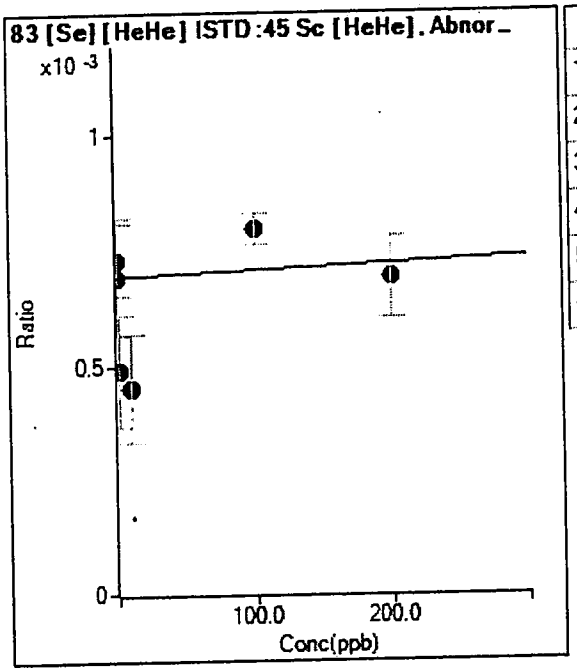


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1892.79	0.0003	P	10.9
2	☐	0.100	-3730.420	1689.05	0.0003	P	10.4
3	☐	1.000	-1145.853	1896.51	0.0003	P	8.5
4	☐	10.000	-2114.365	1855.75	0.0003	P	25.4
5	☐	100.000	-3045.833	1907.62	0.0003	P	8.5
6	☐	200.000	1886.734	2107.65	0.0003	P	15.4

y = 8.1625E-009 * x + 3.2878E-004
R = 0.5535
DL = 1.313E+04
BEC = 4.028E+04

Weight: <None>
Min Conc: <None>

Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	118.52	0.0007	P	37.1
2	☐	0.100	273.424	125.93	0.0007	P	20.8
3	☐	1.000	-1480.379	85.19	0.0005	P	49.9
4	☐	10.000	-1750.027	77.78	0.0005	P	52.8
5	☐	100.000	735.343	144.45	0.0008	P	8.4
6	☐	200.000	-22.400	125.93	0.0007	P	25.6

y = 1.3900E-007 * x + 6.9509E-004

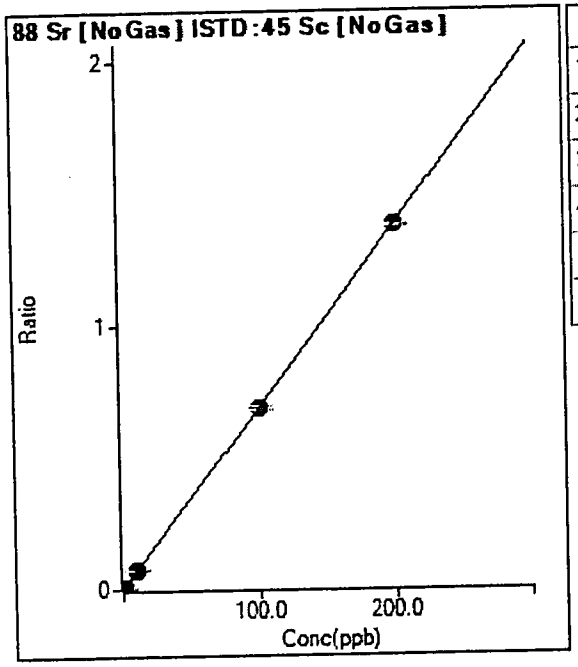
R = 0.4026

DL = 5563

BEC = 5001

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	192.60	0.0000	P	39.3
2	☐	0.100	0.100	6523.87	0.0007	P	7.8
3	☐	1.000	1.024	67815.96	0.0071	P	1.5
4	☐	10.000	10.203	673643.91	0.0702	P	0.6
5	☐	100.000	99.721	6997417.08	0.6857	A	1.9
6	☐	200.000	200.129	13751394.82	1.3761	A	0.8

y = 0.0069 * x + 2.0867E-005

R = 1.0000

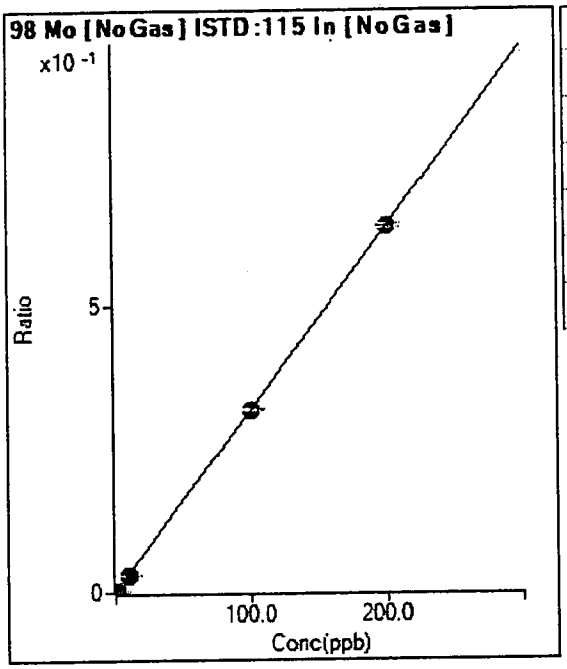
DL = 0.003578

BEC = 0.003035

Weight: <None>

Min Conc: <None>

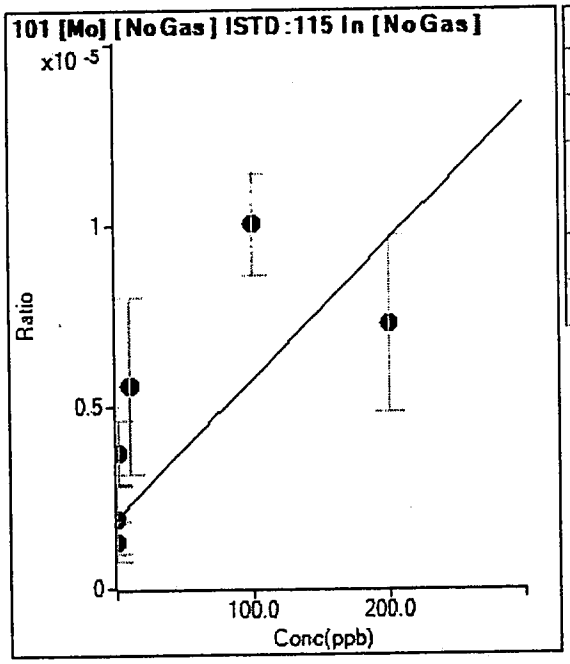
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11922.35	0.0021	P	38.8
2	☐	0.100	-0.070	10414.07	0.0018	P	30.9
3	☐	1.000	0.766	26675.06	0.0045	P	13.1
4	☐	10.000	9.159	185501.65	0.0311	P	1.7
5	☐	100.000	99.614	1996550.72	0.3181	A	1.0
6	☐	200.000	200.236	3907993.07	0.6372	A	1.1

y = 0.0032 * x + 0.0021
R = 1.0000
DL = 0.7586
BEC = 0.652

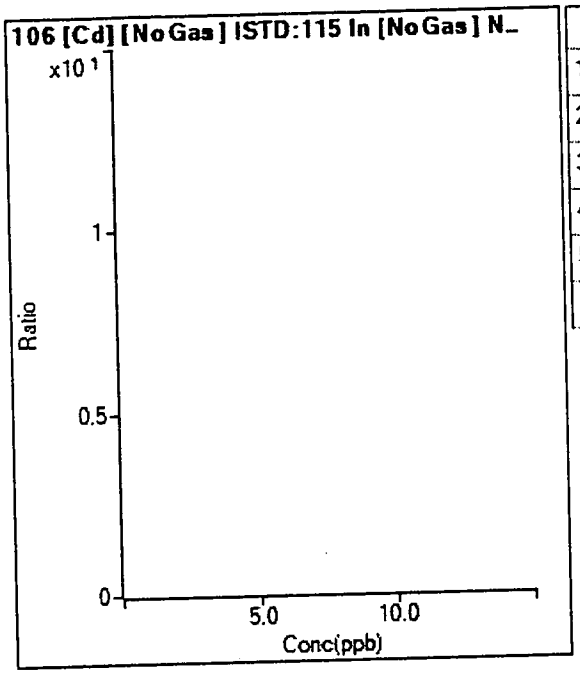
Weight: <None>
Min Conc: <None>



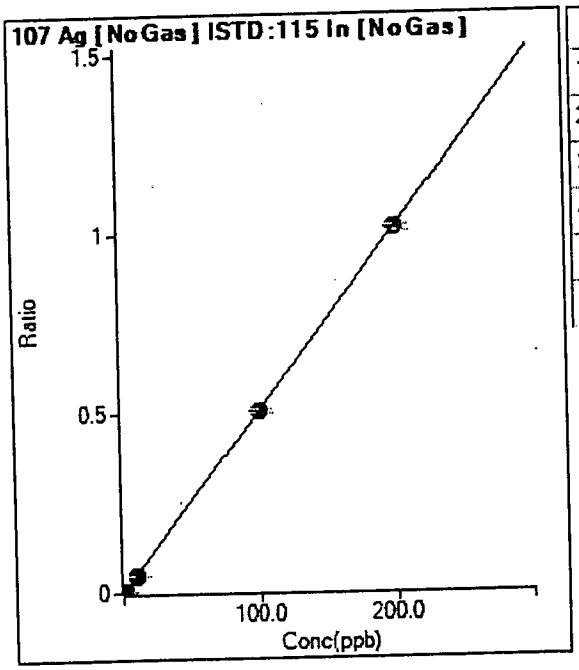
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11.11	0.0000	P	99.8
2	☐	0.100	-16.512	7.41	0.0000	P	86.6
3	☐	1.000	46.903	22.22	0.0000	P	49.2
4	☐	10.000	95.059	33.34	0.0000	P	88.2
5	☐	100.000	211.476	62.97	0.0000	P	27.8
6	☐	200.000	139.788	44.45	0.0000	P	66.8

y = 3.8363E-008 * x + 1.9349E-006
R = 0.7075
DL = 151
BEC = 50.44

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.100					
3	☐	1.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					

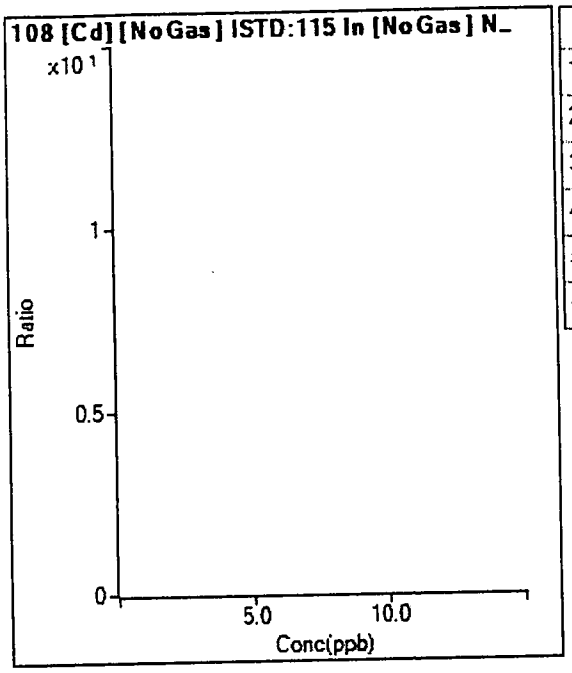


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.37	0.0000	P	39.0
2	☐	0.100	0.106	3104.18	0.0005	P	5.8
3	☐	1.000	1.039	31348.53	0.0053	P	1.7
4	☐	10.000	10.008	302621.10	0.0508	P	1.3
5	☐	100.000	99.715	3174830.08	0.5058	A	1.6
6	☐	200.000	200.142	6225088.41	1.0152	A	1.9

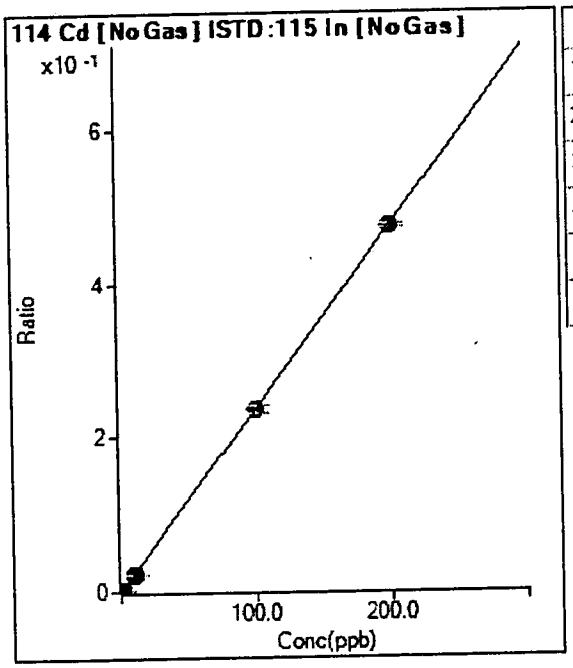
y = 0.0051 * x + 1.2193E-005
R = 1.0000
DL = 0.002811
BEC = 0.002404

Weight: <None>
Min Conc: <None>

Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.100					
3	☐	1.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					

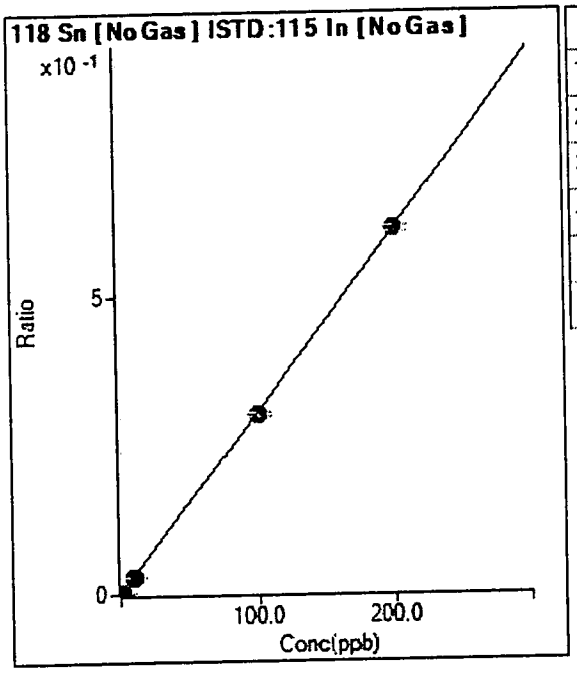


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	360.02	0.0001	P	30.5
2	☐	0.100	0.089	1546.80	0.0003	P	17.7
3	☐	1.000	0.950	13716.25	0.0023	P	1.2
4	☐	10.000	9.794	138635.90	0.0233	P	1.7
5	☐	100.000	99.547	1480139.82	0.2358	M	3.8
6	☐	200.000	200.237	2908805.06	0.4743	A	1.1

y = 0.0024 * x + 6.2458E-005
R = 1.0000
DL = 0.02414
BEC = 0.02637

Weight: <None>
Min Conc: <None>

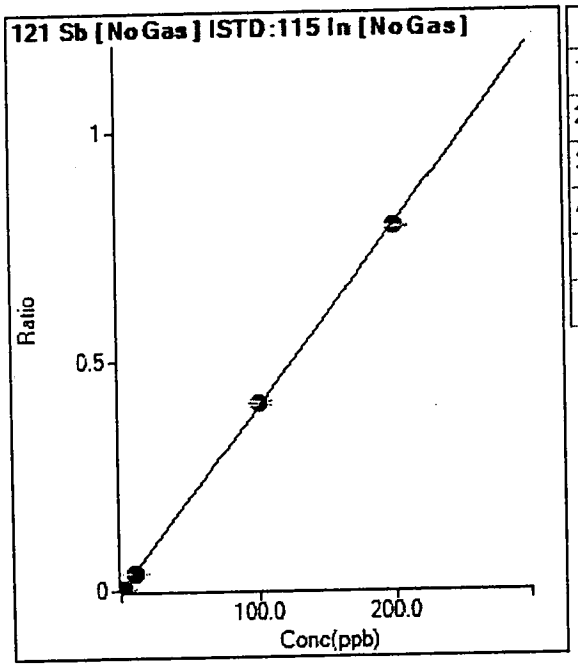
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6861.06	0.0012	P	22.9
2	☐	0.100	-0.001	6709.16	0.0012	P	24.9
3	☐	1.000	0.917	23599.10	0.0040	P	4.5
4	☐	10.000	9.573	180564.67	0.0303	P	1.4
5	☐	100.000	98.455	1886234.53	0.3005	A	1.8
6	☐	200.000	200.794	3750575.89	0.6116	A	1.7

y = 0.0030 * x + 0.0012
R = 1.0000
DL = 0.269
BEC = 0.3916

Weight: <None>
Min Conc: <None>

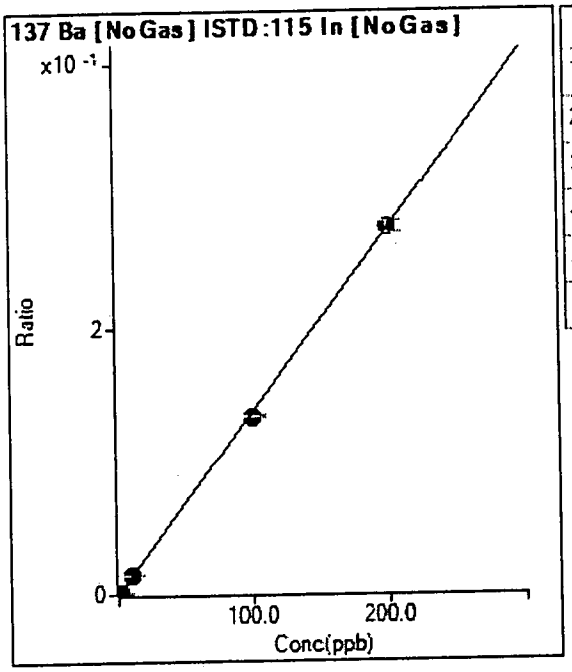


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2855.95	0.0005	P	22.8
2	☐	0.100	0.084	4704.59	0.0008	P	9.7
3	☐	1.000	0.977	26036.13	0.0044	P	6.2
4	☐	10.000	9.839	236636.34	0.0397	P	0.6
5	☐	100.000	102.030	2555108.35	0.4071	A	2.1
6	☐	200.000	198.993	4866585.80	0.7934	A	0.5

y = 0.0040 * x + 4.9561E-004
R = 0.9999
DL = 0.085
BEC = 0.1244

Weight: <None>
Min Conc: <None>

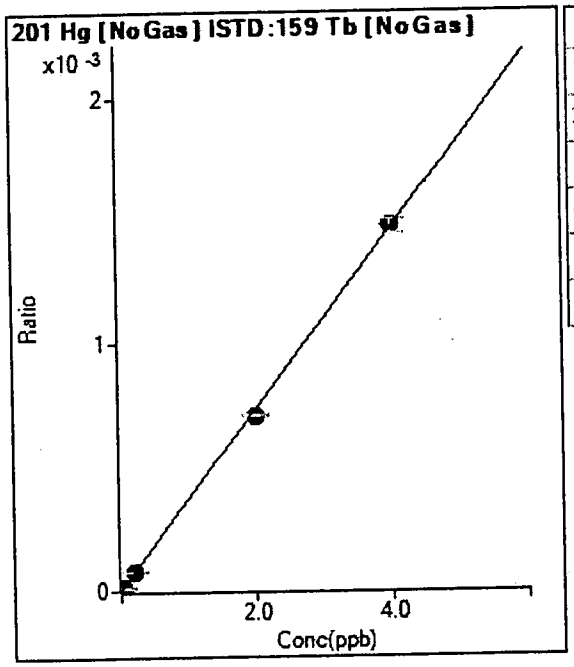
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.34	0.0000	P	33.0
2	☐	0.100	0.103	893.40	0.0002	P	12.5
3	☐	1.000	1.096	9029.55	0.0015	P	3.7
4	☐	10.000	10.196	83581.16	0.0140	P	0.9
5	☐	100.000	97.570	841402.25	0.1340	P	2.1
6	☐	200.000	201.205	1694987.47	0.2764	A	3.2

y = 0.0014 * x + 1.6210E-005
R = 0.9999
DL = 0.01168
BEC = 0.0118

Weight: <None>
Min Conc: <None>

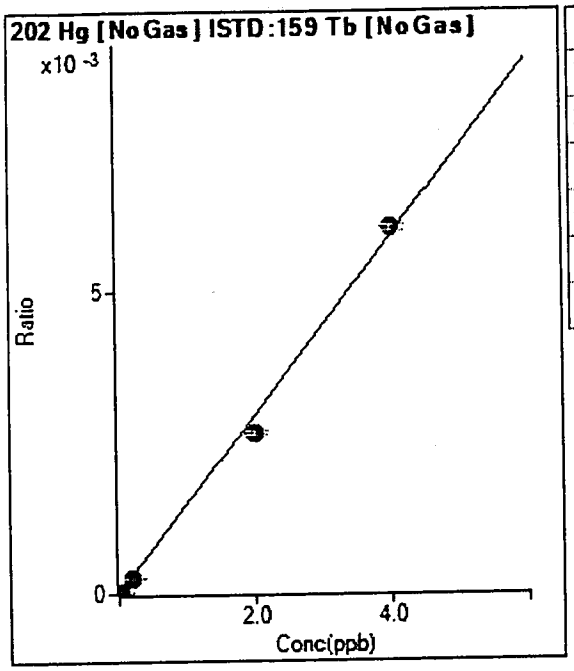


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.67	0.0000	P	21.2
2	☐			38.00	0.0000	P	18.8
3	☐	0.020	0.027	92.67	0.0000	P	32.3
4	☐	0.200	0.198	544.01	0.0001	P	1.0
5	☐	2.000	1.926	5249.57	0.0007	P	1.5
6	☐	4.000	4.037	10743.02	0.0015	P	3.6

y = 3.6509E-004 * x + 3.2556E-006
R = 0.9997
DL = 0.005662
BEC = 0.008917

Weight: <None>
Min Conc: <None>

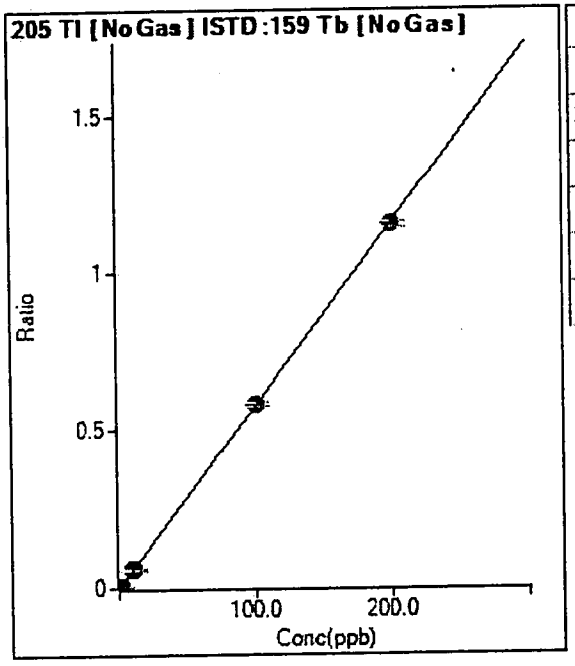
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	44.00	0.0000	P	36.7
2	☐			56.00	0.0000	P	23.2
3	☐	0.020	0.018	231.33	0.0000	P	1.9
4	☐	0.200	0.174	1894.80	0.0003	P	7.0
5	☐	2.000	1.796	19738.35	0.0027	P	2.1
6	☐	4.000	4.103	44068.81	0.0061	P	1.6

y = 0.0015 * x + 6.3210E-006
R = 0.9981
DL = 0.004714
BEC = 0.004286

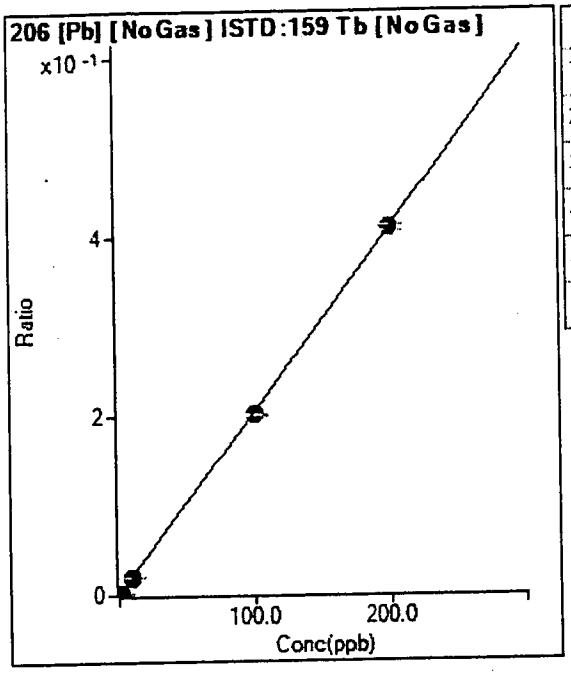
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55.56	0.0000	P	60.1
2	☐	0.100	0.100	3982.22	0.0006	P	4.0
3	☐	1.000	1.027	42273.29	0.0059	P	4.3
4	☐	10.000	10.133	422428.46	0.0586	P	1.8
5	☐	100.000	100.671	4323263.95	0.5817	A	1.6
6	☐	200.000	199.658	8390949.67	1.1536	A	1.5

y = 0.0058 * x + 7.9818E-006
R = 1.0000
DL = 0.002491
BEC = 0.001381

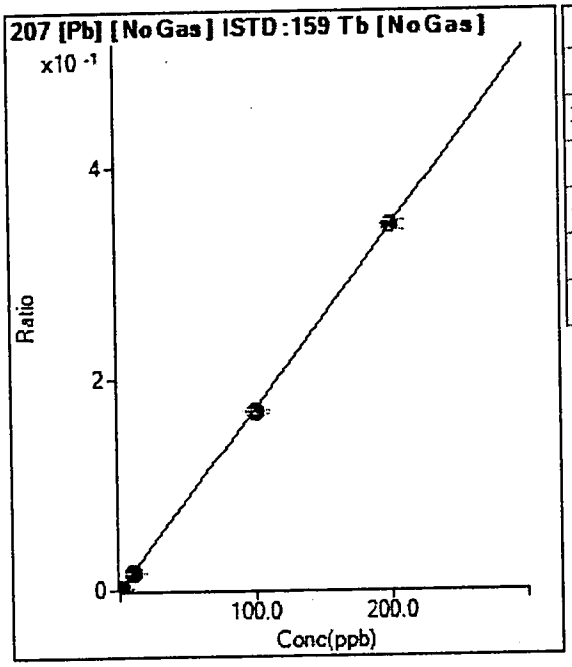
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	162.98	0.0000	P	63.8
2	☐	0.100	0.091	1426.06	0.0002	P	15.0
3	☐	1.000	0.994	14585.33	0.0021	P	3.5
4	☐	10.000	9.891	145726.66	0.0202	P	0.7
5	☐	100.000	98.456	1492734.84	0.2008	M	0.3
6	☐	200.000	200.778	2978569.21	0.4095	A	1.7

y = 0.0020 * x + 2.3543E-005
R = 1.0000
DL = 0.02208
BEC = 0.01154

Weight: <None>
Min Conc: <None>

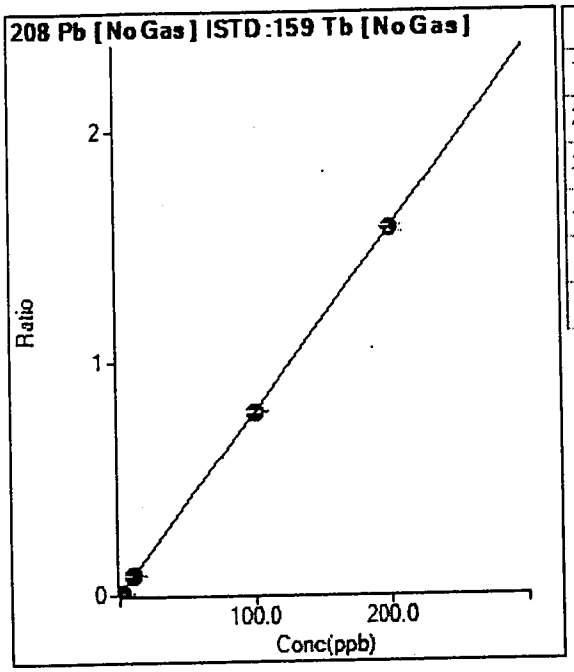


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	137.05	0.0000	P	41.7
2	☐	0.100	0.100	1296.42	0.0002	P	0.6
3	☐	1.000	1.036	12783.59	0.0018	P	0.5
4	☐	10.000	9.748	120751.66	0.0167	P	1.4
5	☐	100.000	98.151	1251344.91	0.1684	P	1.8
6	☐	200.000	200.937	2506560.95	0.3446	A	2.7

y = 0.0017 * x + 1.9709E-005
R = 0.9999
DL = 0.01439
BEC = 0.01149

Weight: <None>
Min Conc: <None>

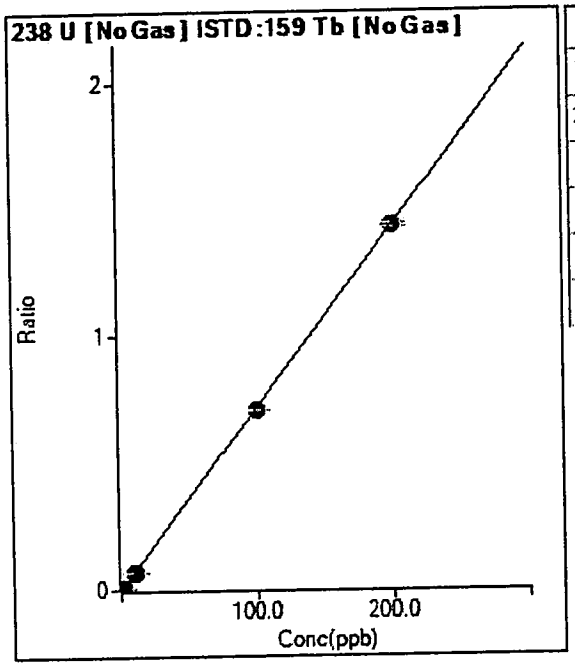
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17528.94	0.0025	P	4.6
2	☐	0.100	0.060	20348.15	0.0030	P	4.9
3	☐	1.000	1.130	81148.00	0.0114	P	2.5
4	☐	10.000	9.997	585511.81	0.0812	P	1.1
5	☐	100.000	99.911	5859720.94	0.7883	A	1.2
6	☐	200.000	200.044	11462240.81	1.5759	A	1.8

y = 0.0079 * x + 0.0025
R = 1.0000
DL = 0.04449
BEC = 0.3207

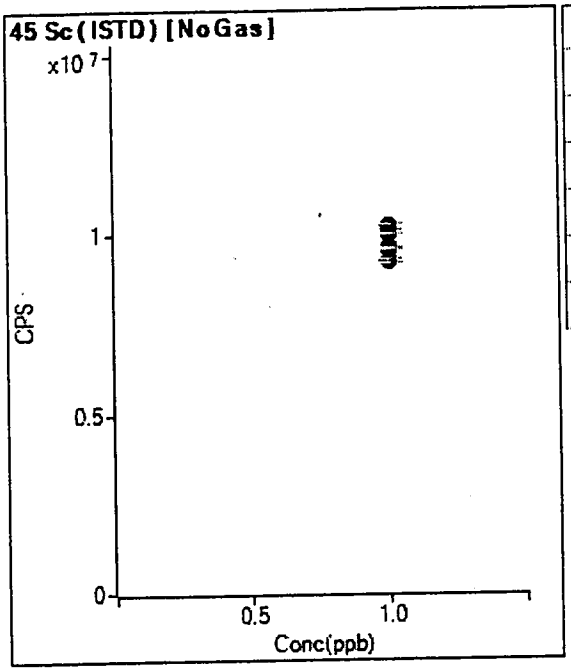
Weight: <None>
Min Conc: <None>



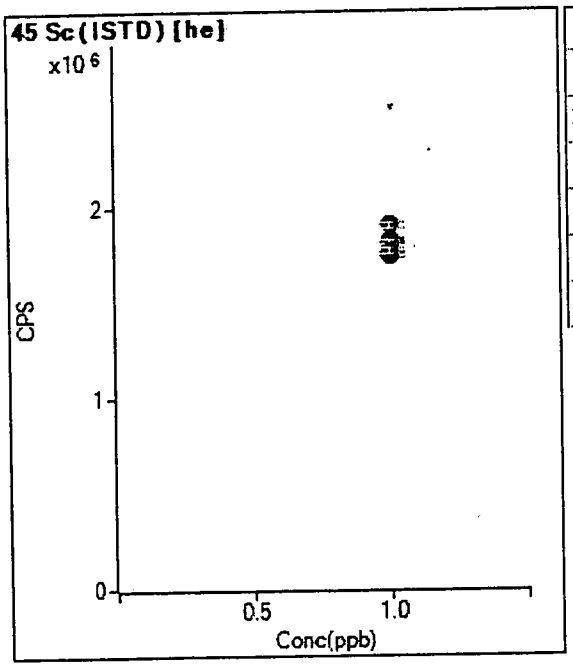
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	285.20	0.0000	P	32.7
2	☐	0.100	0.091	4697.27	0.0007	P	6.2
3	☐	1.000	1.008	51557.87	0.0072	P	0.4
4	☐	10.000	9.929	512538.03	0.0710	P	0.8
5	☐	100.000	99.018	5263199.44	0.7081	A	0.5
6	☐	200.000	200.495	10428690.33	1.4337	A	1.1

y = 0.0072 * x + 4.0951E-005
R = 1.0000
DL = 0.005613
BEC = 0.005727

Weight: <None>
Min Conc: <None>

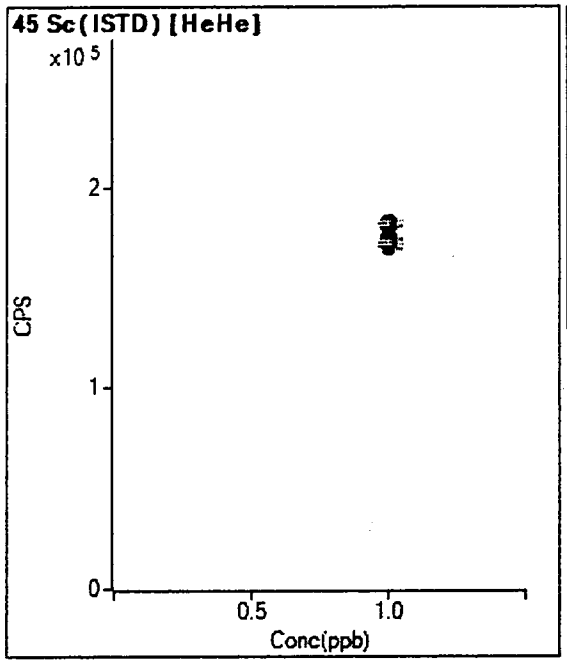


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9248342.15		A	1.3
2	☐	1.000		9230482.15		A	1.1
3	☐	1.000		9606577.15		A	1.0
4	☐	1.000		9599584.86		A	0.2
5	☐	1.000		10207256.51		A	1.9
6	☐	1.000		9993226.93		A	0.2

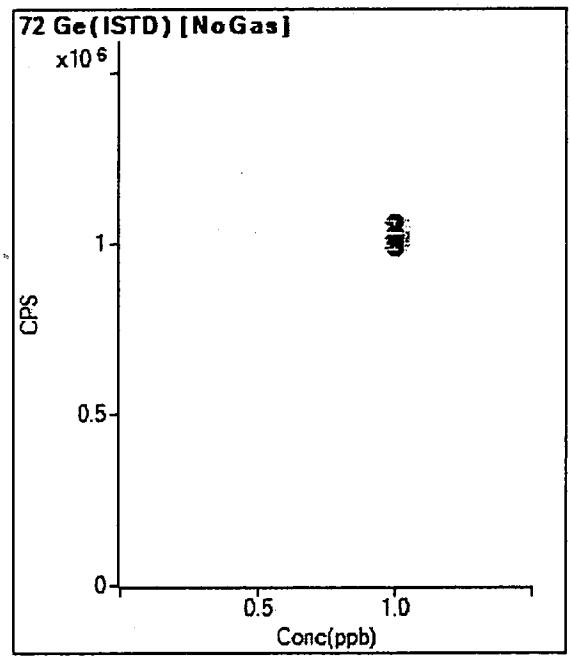


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1744642.74		A	1.2
2	☐	1.000		1761371.59		A	0.7
3	☐	1.000		1830836.90		A	0.7
4	☐	1.000		1819752.47		A	1.5
5	☐	1.000		1908010.65		A	1.9
6	☐	1.000		1774489.14		A	1.3

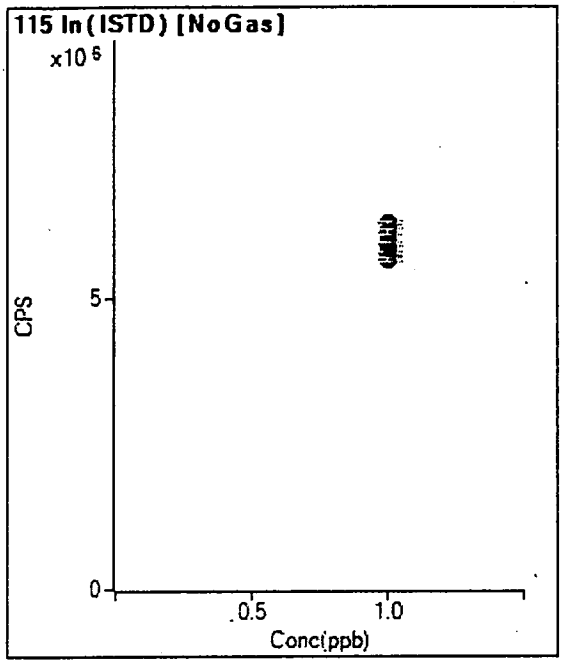
Calibration for 071_CCV.d



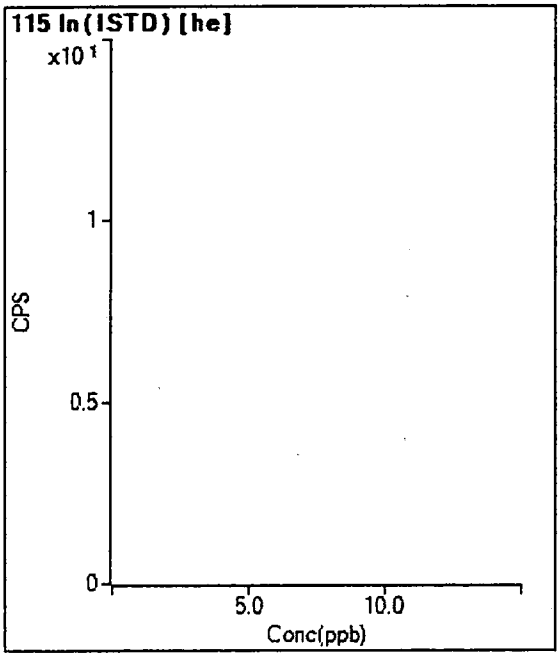
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		171212.05		P	2.5
2	☐	1.000		172413.77		P	2.8
3	☐	1.000		174348.69		P	0.7
4	☐	1.000		172938.55		P	1.3
5	☐	1.000		181247.61		P	0.7
6	☐	1.000		182051.31		P	0.9



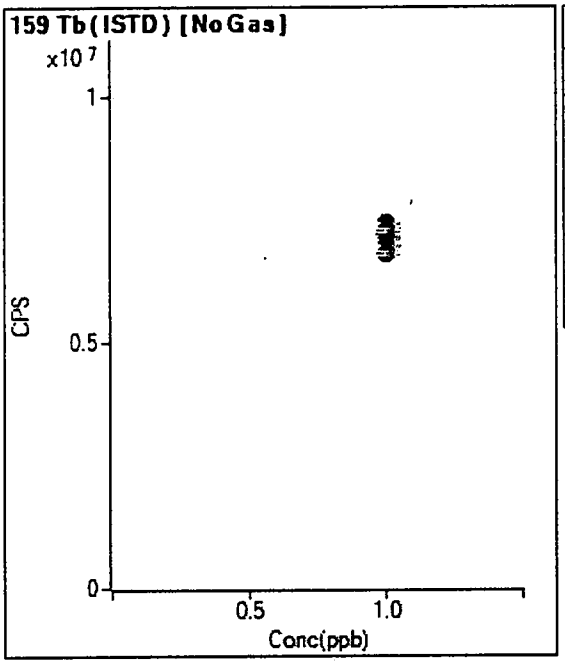
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1012122.41		P	1.1
2	☐	1.000		991031.21		P	1.2
3	☐	1.000		1021766.60		P	0.8
4	☐	1.000		1016045.53		P	0.8
5	☐	1.000		1060324.32		P	1.3
6	☐	1.000		1031019.78		P	0.5



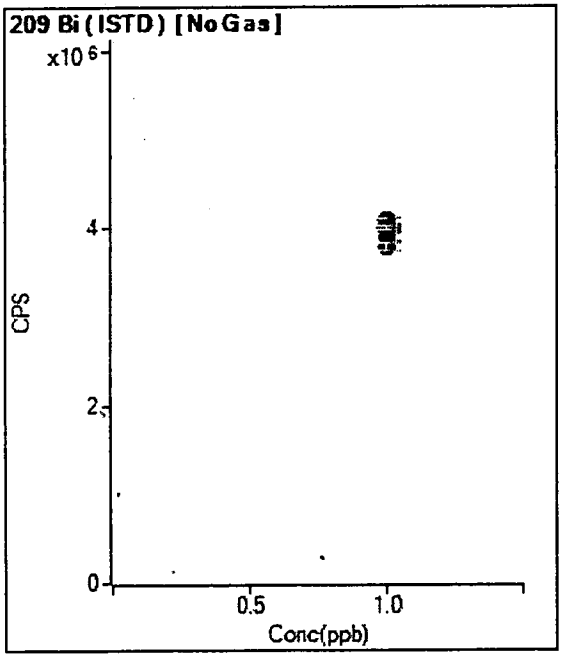
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5760109.93		A	0.8
2	☐	1.000		5660257.78		A	1.4
3	☐	1.000		5934138.78		A	1.0
4	☐	1.000		5960241.09		A	0.4
5	☐	1.000		6277626.82		A	0.9
6	☐	1.000		6133320.70		A	1.6



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000					
2	☐	1.000					
3	☐	1.000					
4	☐	1.000					
5	☐	1.000					
6	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6952439.08		A	1.0
2	☐	1.000		6804368.71		A	1.3
3	☐	1.000		7112798.56		A	0.8
4	☐	1.000		7215155.50		A	0.7
5	☐	1.000		7433189.75		A	0.8
6	☐	1.000		7274528.88		A	1.2



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3846945.10		A	0.4
2	☐	1.000		3791147.42		A	2.1
3	☐	1.000		3993178.89		A	0.7
4	☐	1.000		3949111.19		A	0.6
5	☐	1.000		4079951.34		A	1.3
6	☐	1.000		4005913.04		A	0.9

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	008_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:39:25-04:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	108.179	2.709	5710375	1.80	100	108.2	90	110	
Cr	52	1	No Gas	105.830	2.653	4971760	2.29	100	105.8	90	110	
Mn	55	1	No Gas	107.755	1.182	6242864	0.99	100	107.8	90	110	
Co	59	1	No Gas	104.761	2.670	5437450	0.71	100	104.8	90	110	
Ni	60	1	No Gas	102.457	1.892	1189685	0.67	100	102.5	90	110	
Cu	63	1	No Gas	106.175	3.458	3003279	1.38	100	106.2	90	110	
Sr	88	1	No Gas	107.029	2.725	7132974	1.46	100	107.0	90	110	
Ag	107	1	No Gas	105.943	2.149	3247896	0.58	100	105.9	90	110	
Al	27	1	No Gas	105.462	1.641	3532024	0.55	100	105.5	90	110	
Sn	118	1	No Gas	109.712	1.569	2023323	1.40	100	109.7	90	110	
Tl	47	1	No Gas	95.360	0.803	387126	1.08	100	95.4	90	110	
Zn	66	1	No Gas	101.792	1.795	704513	0.97	100	101.8	90	110	
As	75	3	HeHe	103.827	1.129	48839	0.75	100	103.8	90	110	
As	75	1	No Gas	102.010	1.477	740450	0.91	100	102.0	90	110	
Sb	121	1	No Gas	94.059	0.519	2268852	1.61	100	94.1	90	110	
Hg	201	1	No Gas	2.186	1.811	5791	2.32	2	109.3	90	110	
Be	9	1	No Gas	98.115	0.934	675312	1.20	100	98.1	90	110	
Pb	208	1	No Gas	104.590	0.978	5961329	0.61	100	104.6	90	110	
Se	82	1	No Gas	107.144	1.831	39781	0.89	100	107.1	90	110	
Mo	98	1	No Gas	107.705	2.634	2077591	2.05	100	107.7	90	110	
Ba	137	1	No Gas	101.442	0.784	842492	1.25	100	101.4	90	110	
Tl	205	1	No Gas	103.196	0.236	4307888	0.86	100	103.2	90	110	
U	238	1	No Gas	113.386	1.420	5858268	1.71	100	113.4	90	110	ICV Main CR1 Failed
Na	23	2	he	1005.870	1.299	4539165	0.92	1000	100.6	90	110	
Mg	24	2	he	1021.926	0.258	2524588	0.52	1000	102.2	90	110	
K	39	2	he	1006.474	2.495	3914766	1.98	1000	100.6	90	110	
Se	82	3	HeHe	108.537	1.617	2650	1.59	100	108.5	90	110	
Fe	57	3	HeHe	1108.579	1.499	125514	1.06	1000	110.9	90	110	ICV Main CR1 Failed
Cd	114	1	No Gas	104.693	1.043	1499274	0.85	100	104.7	90	110	
Ca	44	1	No Gas	1082.944	3.117	1502683	0.98	1000	108.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9695488	2.06	9248342	104.83	70	120	
Sc	45	2	he	1824095	0.70	1744643	104.55	70	120	
Ge	72	1	No Gas	1029221	0.98	1012122	101.69	70	120	
In	115	1	No Gas	6045633	1.87	5760110	104.96	70	120	
Tb	159	1	No Gas	7224955	0.73	6952439	103.92	70	120	
Bi	209	1	No Gas	4025671	1.37	3846945	104.65	70	120	
Sc	45	3	HeHe	175990	0.55	171212	102.79	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	009_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:43:14-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	-0.081	-2.8	17532	1.6	9	
Cr	52	1	No Gas	-0.074	-2.7	31678	1.2	4	
Mn	55	1	No Gas	0.246	6.2	51233	2.6	25	
Co	59	1	No Gas	0.006	14.8	485	10.8	1	
Ni	60	1	No Gas	0.009	32.3	630	5.7	25	
Cu	63	1	No Gas	0.075	13.7	14116	1.1	25	
Sr	88	1	No Gas	0.006	13.5	559	8.3	25	
Ag	107	1	No Gas	0.020	21.4	663	20.0	9	
Al	27	1	No Gas	0.011	112.2	10956	4.0	1000000	
Sn	118	1	No Gas	2.619	32.6	54438	27.4	25	
Ti	47	1	No Gas	0.478	47.9	3260	27.0	10000	
Zn	66	1	No Gas	0.000	-4630.7	1017	13.2	25	
As	75	3	HeHe	0.995	10.0	513	9.2	9	
As	75	1	No Gas	0.377	108.8	30020	8.8	9	
Sb	121	1	No Gas	1.986	15.4	50073	13.5	4	
Hg	201	1	No Gas	0.032	10.9	107	7.8	0.04	
Be	9	1	No Gas	0.011	14.3	100	10.6	1	
Pb	208	1	No Gas	0.134	13.7	25658	4.0	4	
Se	82	1	No Gas	1.568	46.7	636	42.2	25	
Mo	98	1	No Gas	1.355	41.9	37865	27.3	10000	
Ba	137	1	No Gas	0.009	45.3	170	20.4	25	
Tl	205	1	No Gas	0.029	13.2	1256	12.4	1	
U	238	1	No Gas	0.360	22.4	18824	22.9	25	
Na	23	2	he	-0.993	-107.2	113339	3.9	2500000	
Mg	24	2	he	0.030	115.7	470	19.2	2500000	
K	39	2	he	6.181	1.7	280084	0.9	5000000	
Se	82	3	HeHe	0.813	80.5	136	11.6	25	
Fe	57	3	HeHe	22.555	6.7	2578	6.4	2500000	
Cd	114	1	No Gas	0.087	13.4	1593	9.4	1	
Ca	44	1	No Gas	0.780	245.6	67097	3.1	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9490102	0.93	9248342	102.61	70	120	
Sc	45	2	he	1843980	1.02	1744643	105.69	70	120	
Ge	72	1	No Gas	1022478	0.29	1012122	101.02	70	120	

Initial Calibration Blank (ICB) Report

In	115	1	No Gas	5960261	1.04	5760110	103.47	70	120	
Tb	159	1	No Gas	7178623	1.54	6952439	103.25	70	120	
Bi	209	1	No Gas	3964814	2.06	3846945	103.06	70	120	
Sc	45	3	HeHe	177859	1.13	171212	103.88	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	010_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:47:09-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	-0.082	-187.1	18158	43.9	9	
Cr	52	1	No Gas	-0.114	-36.7	31143	4.8	4	
Mn	55	1	No Gas	0.124	53.5	46226	6.8	25	
Co	59	1	No Gas	0.002	117.7	300	51.5	1	
Ni	60	1	No Gas	0.003	372.1	577	19.0	25	
Cu	63	1	No Gas	0.013	139.3	12943	2.4	25	
Sr	88	1	No Gas	0.001	133.2	281	34.5	25	
Ag	107	1	No Gas	0.012	22.0	441	17.7	9	
Al	27	1	No Gas	0.004	58.7	11208	1.0	1000000	
Sn	118	1	No Gas	1.085	36.8	27914	26.5	25	
Ti	47	1	No Gas	0.089	101.3	1792	20.5	10000	
Zn	66	1	No Gas	0.035	73.0	1307	12.2	25	
As	75	3	HeHe	0.387	13.8	222	13.1	9	
As	75	1	No Gas	-0.105	-334.7	27881	7.5	9	
Sb	121	1	No Gas	0.664	21.1	19535	17.0	4	
Hg	201	1	No Gas	0.013	23.0	61	14.9	0.04	
Be	9	1	No Gas	0.003	22.5	43	11.8	1	
Pb	208	1	No Gas	0.230	6.2	32315	4.3	4	
Se	82	1	No Gas	0.285	323.9	176	196.5	25	
Mo	98	1	No Gas	0.267	119.5	18133	34.1	10000	
Ba	137	1	No Gas	0.003	149.1	130	33.5	25	
Tl	205	1	No Gas	0.011	29.2	519	26.4	1	
U	238	1	No Gas	0.088	38.8	4997	35.3	25	
Na	23	2	he	-3.213	-75.3	108189	2.3	2500000	
Mg	24	2	he	-0.043	-70.1	304	31.1	2500000	
K	39	2	he	-1.040	-597.4	265253	0.8	5000000	
Se	82	3	HeHe	0.712	132.6	132	15.7	25	
Fe	57	3	HeHe	7.980	14.3	900	15.0	2500000	
Cd	114	1	No Gas	0.045	35.7	1050	22.0	1	
Ca	44	1	No Gas	-0.531	-496.7	68240	3.9	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9906263	1.73	9248342	107.11	70	120	
Sc	45	2	he	1939137	8.60	1744643	111.15	70	120	
Ge	72	1	No Gas	1034853	2.32	1012122	102.25	70	120	

Initial Calibration Blank (ICB) Report

In	115	1	No Gas	6223600	1.77	5760110	108.05	70	120	
Tb	159	1	No Gas	7453756	1.79	6952439	107.21	70	120	
Bi	209	1	No Gas	4097513	1.57	3846945	106.51	70	120	
Sc	45	3	HeHe	175440	2.93	171212	102.47	70	120	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV
Data File Name	011LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:51:04-04:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	1.888	6.549	123562	3.30	2	94.4	70	130	
Cr	52	1	No Gas	1.902	4.742	126733	1.61	2	95.1	70	130	
Mn	55	1	No Gas	5.198	5.144	343367	2.56	5	104.0	70	130	
Co	59	1	No Gas	4.868	3.211	257370	1.26	5	97.4	70	130	
Ni	60	1	No Gas	5.046	2.217	60156	0.30	5	100.9	70	130	
Cu	63	1	No Gas	4.912	1.893	153432	0.56	5	98.2	70	130	
Sr	88	1	No Gas	4.577	1.484	310777	1.04	5	91.5	70	130	
Ag	107	1	No Gas	2.072	3.978	63461	2.45	2	103.6	70	130	
Al	27	1	No Gas	81.097	3.237	2766965	1.93	80	101.4	70	130	
Sn	118	1	No Gas	2.221	6.778	47910	5.58	2	111.0	70	130	
Tl	47	1	No Gas	4.671	1.044	20238	1.93	5	93.4	70	130	
Zn	66	1	No Gas	5.327	2.204	38534	0.31	5	106.5	70	130	
As	75	3	HeHe	3.338	7.180	1564	4.33	3	111.3	70	130	
As	75	1	No Gas	2.759	7.719	48166	3.16	3	92.0	70	130	
Sb	121	1	No Gas	2.370	3.581	59965	2.64	2	118.5	70	130	
Hg	201	1	No Gas	0.209	3.501	573	6.07	0.2	104.3	70	130	
Be	9	1	No Gas	0.984	5.708	6911	3.69	1	98.4	70	130	
Pb	208	1	No Gas	2.202	4.037	142892	1.20	2	110.1	70	130	
Se	82	1	No Gas	4.627	10.783	1812	8.24	5	92.5	70	130	
Mo	98	1	No Gas	1.837	10.684	47616	6.68	2	91.9	70	130	
Ba	137	1	No Gas	5.050	1.016	41954	2.05	5	101.0	70	130	
Tl	205	1	No Gas	1.027	5.946	42804	4.29	1	102.7	70	130	
U	238	1	No Gas	5.057	3.278	260762	1.18	5	101.1	70	130	
Na	23	2	he	105.890	20.966	512463	1.89	100	105.9	70	130	
Mg	24	2	he	105.193	16.306	229184	1.36	100	105.2	70	130	
K	39	2	he	121.763	25.859	614153	1.48	100	121.8	70	130	
Se	82	3	HeHe	4.972	3.369	226	5.44	5	99.4	70	130	
Fe	57	3	HeHe	57.454	7.586	6316	3.96	50	114.9	70	130	
Cd	114	1	No Gas	1.066	4.748	15611	5.75	1	106.6	70	130	
Ca	44	1	No Gas	96.240	3.208	198569	0.33	100	96.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9869984	2.25	9248342	106.72	70	120	
Sc	45	2	he	1631911	14.38	1744643	93.54	70	120	
Ge	72	1	No Gas	994170	2.25	1012122	98.23	70	120	
In	115	1	No Gas	6033756	1.88	5760110	104.75	70	120	
Tb	159	1	No Gas	7207597	3.16	6952439	103.67	70	120	
Bi	209	1	No Gas	3955991	0.95	3846945	102.83	70	120	
Sc	45	3	HeHe	171360	3.89	171212	100.09	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	012ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:57:04-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.069	100.9	25883	12.1	9	
Cr	52	1	No Gas	0.875	8.4	76952	2.5	4	
Mn	55	1	No Gas	1.383	2.6	118312	0.7	25	
Co	59	1	No Gas	1.318	3.3	68913	1.6	1	ICSA Main CR1 Failed
Ni	60	1	No Gas	1.779	4.8	21270	2.6	5	
Cu	63	1	No Gas	0.725	3.3	32914	3.8	5	
Ag	107	1	No Gas	0.313	6.8	8914	6.7	9	
Al	27	1	No Gas	91092.374	3.8	3054773805	1.8	110000	
Sn	118	1	No Gas	0.381	43.5	13102	21.5	25	
Tl	47	1	No Gas	1987.139	0.6	7420386	1.0	2200	
Zn	66	1	No Gas	2.478	3.1	18252	2.4	5	
As	75	3	HeHe	0.535	10.2	302	9.2	9	
As	75	1	No Gas	0.328	184.1	30434	12.4	9	
Sb	121	1	No Gas	1.027	22.9	25595	20.3	4	
Hg	201	1	No Gas	0.026	17.3	87	12.6	0.04	
Be	9	1	No Gas	0.007	19.3	74	15.0	1	
Pb	208	1	No Gas	0.345	3.3	36343	1.4	4	
Se	82	1	No Gas	0.301	148.1	180	92.7	25	
Mo	98	1	No Gas	2043.986	1.8	36184089	1.1	2200	
Ba	137	1	No Gas	0.145	9.5	1200	7.9	25	
Tl	205	1	No Gas	0.023	23.7	967	22.2	1	
U	238	1	No Gas	0.046	31.9	2571	28.8	25	
Na	23	2	he	87602.701	1.2	402491965	0.7	110000	
Mg	24	2	he	89786.071	1.9	231657739	1.2	110000	
K	39	2	he	87734.642	0.9	333588053	1.0	110000	
Se	82	3	HeHe	-0.198	-387.9	115	13.9	25	
Fe	57	3	HeHe	96996.857	1.0	11353561	1.6	110000	
Cd	114	1	No Gas	0.899	3.4	12232	3.3	1	
Ca	44	1	No Gas	87923.254	1.3	117159318	0.7	110000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9740728	2.02	9248342	105.32	70	120	
Sc	45	2	he	1905649	1.54	1744643	109.23	70	120	
Ge	72	1	No Gas	1000038	0.21	1012122	98.81	70	120	
In	115	1	No Gas	5579503	1.14	5760110	96.86	70	120	
Tb	159	1	No Gas	6938038	0.55	6952439	99.79	70	120	
Bi	209	1	No Gas	3590926	0.94	3846945	93.34	70	120	
Sc	45	3	HeHe	182138	2.50	171212	106.38	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	013ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T09:01:05-04:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	39.555	0.949	2122524	1.39	40	98.9	80	120		
Cr	52	1	No Gas	18.427	0.839	903873	1.04	20	92.1	80	120		
Mn	55	1	No Gas	19.453	2.088	1169466	2.29	20	97.3	80	120		
Co	59	1	No Gas	36.923	0.752	1935255	0.22	40	92.3	80	120		
Ni	60	1	No Gas	34.784	2.562	408157	2.45	40	87.0	80	120		
Cu	63	1	No Gas	17.329	2.085	505390	1.51	20	86.6	80	120		
Ag	107	1	No Gas	18.509	0.538	533985	0.74	20	92.5	80	120		
Al	27	1	No Gas	88937.217	3.298	2997864948	2.88	100000	88.9	90	110	ICSB Main CR1 Failed	OK
Tl	47	1	No Gas	1955.453	0.846	7443662	1.43	2000	97.8	90	110		
Zn	66	1	No Gas	20.410	1.049	143463	0.58	20	102.1	80	120		
As	75	3	HeHe	19.195	1.701	9605	1.97	20	96.0	80	120		
As	75	1	No Gas	19.233	2.359	163911	1.52	20	96.2	80	120		
Sb	121	1	No Gas	0.677	15.156	18166	12.43	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Hg	201	1	No Gas	0.014	10.238	59	5.21	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Be	9	1	No Gas	0.004	51.279	54	29.63	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Pb	208	1	No Gas	0.419	3.277	41674	2.51	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Se	82	1	No Gas	19.234	3.486	7267	3.98	20	96.2	80	120		
Mo	98	1	No Gas	2015.635	1.722	36377624	2.12	2000	100.8	90	110		
Ba	137	1	No Gas	0.185	5.927	1540	6.19	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Tl	205	1	No Gas	0.020	8.888	885	7.14	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
U	238	1	No Gas	0.022	23.670	1433	20.67	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Na	23	2	he	86138.637	1.876	394590809	1.24	100000	86.1	90	110	ICSB Main CR1 Failed	OK
Mg	24	2	he	88611.427	1.607	227968124	1.45	100000	88.6	90	110	ICSB Main CR1 Failed	OK
K	39	2	he	87486.841	1.339	331652461	0.63	100000	87.5	90	110	ICSB Main CR1 Failed	OK
Se	82	3	HeHe	18.828	6.911	589	4.63	20	94.1	80	120		
Fe	57	3	HeHe	93298.201	1.093	11185401	0.25	100000	93.3	90	110		
Cd	114	1	No Gas	9.576	2.163	129339	1.56	10	95.8	80	120		
Ca	44	1	No Gas	86786.790	1.704	116213412	1.63	100000	86.8	90	110	ICSB Main CR1 Failed	OK

80-120

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9786977	0.53	9248342	105.82	70	120	
Sc	45	2	he	1899930	0.70	1744643	108.90	70	120	
Ge	72	1	No Gas	1032635	1.10	1012122	102.03	70	120	
In	115	1	No Gas	5687437	0.80	5760110	98.74	70	120	
Tb	159	1	No Gas	7167544	1.87	6952439	103.09	70	120	
Bi	209	1	No Gas	3604212	0.69	3846945	93.69	70	120	
Sc	45	3	HeHe	186537	0.98	171212	108.95	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	069_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T12:52:37-04:00
Sample Type	CCB
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	-0.268	-37.0	8099	65.8	9	
Cr	52	1	No Gas	-0.097	-9.1	31325	0.1	4	
Mn	55	1	No Gas	0.391	2.4	60756	2.0	25	
Co	59	1	No Gas	0.006	48.8	496	31.4	1	
Ni	60	1	No Gas	0.004	231.7	580	17.9	25	
Cu	63	1	No Gas	-0.240	-2.4	5556	2.2	25	
Sr	88	1	No Gas	0.005	20.9	556	12.2	25	
Ag	107	1	No Gas	0.016	12.3	567	11.8	9	
Al	27	1	No Gas	0.290	3.6	20535	2.9	1000000	
Sn	118	1	No Gas	1.870	30.3	40746	24.7	25	
Ti	47	1	No Gas	0.358	43.4	2774	22.0	10000	
Zn	66	1	No Gas	-0.001	-1496.9	1037	7.8	25	
As	75	3	HeHe	0.655	11.0	347	9.2	9	
As	75	1	No Gas	0.253	40.2	29856	1.2	9	
Sb	121	1	No Gas	1.713	13.4	43425	12.3	4	
Hg	201	1	No Gas	0.018	33.2	71	21.0	0.04	
Be	9	1	No Gas	0.011	14.7	102	10.2	1	
Pb	208	1	No Gas	-0.172	-9.1	8432	8.7	4	
Se	82	1	No Gas	1.172	58.6	501	50.6	25	
Mo	98	1	No Gas	0.768	50.8	26701	27.2	10000	
Ba	137	1	No Gas	0.008	29.9	160	12.5	25	
Tl	205	1	No Gas	0.026	6.5	1148	7.4	1	
U	238	1	No Gas	0.311	21.6	16369	22.8	25	
Na	23	2	he	0.918	30.4	122432	1.8	2500000	
Mg	24	2	he	0.013	131.9	430	11.9	2500000	
K	39	2	he	-0.778	-145.2	255691	1.0	5000000	
Se	82	3	HeHe	0.016	3482.2	116	11.4	25	
Fe	57	3	HeHe	17.138	10.1	1934	10.5	2500000	
Cd	114	1	No Gas	0.073	30.3	1390	22.0	1	
Ca	44	1	No Gas	-9.123	-10.7	55522	3.2	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9710532	1.19	9248342	105.00	70	120	
Sc	45	2	he	1852940	1.95	1744643	106.21	70	120	
Ge	72	1	No Gas	1020074	1.24	1012122	100.79	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	5931519	1.02	5760110	102.98	70	120	
Tb	159	1	No Gas	7198771	1.74	6952439	103.54	70	120	
Bi	209	1	No Gas	3879305	2.29	3846945	100.84	70	120	
Sc	45	3	HeHe	175486	0.64	171212	102.50	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	070LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:00:08-04:00
Sample Type	LLCCV
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	1.754	4.471	115299	2.25	2	87.7	70	130	
Cr	52	1	No Gas	1.880	4.742	124463	0.87	2	94.0	70	130	
Mn	55	1	No Gas	5.282	2.716	345009	0.11	5	105.6	70	130	
Co	59	1	No Gas	4.931	2.917	258153	1.34	5	98.6	70	130	
Ni	60	1	No Gas	4.972	2.213	58712	1.42	5	99.4	70	130	
Cu	63	1	No Gas	4.664	2.194	144900	0.74	5	93.3	70	130	
Sr	88	1	No Gas	4.584	2.520	308189	0.54	5	91.7	70	130	
Ag	107	1	No Gas	2.050	1.881	61636	0.64	2	102.5	70	130	
Al	27	1	No Gas	84.005	1.384	2839190	2.62	80	105.0	70	130	
Sn	118	1	No Gas	2.145	13.963	45612	10.26	2	107.3	70	130	
Tl	47	1	No Gas	4.740	0.190	20133	1.46	5	94.8	70	130	
Zn	66	1	No Gas	5.307	3.168	38014	0.85	5	106.1	70	130	
As	75	3	HeHe	3.086	4.381	1453	2.98	3	102.9	70	130	
As	75	1	No Gas	3.321	12.504	51624	3.62	3	110.7	70	130	
Sb	121	1	No Gas	2.499	5.689	61863	3.88	2	124.9	70	130	
Hg	201	1	No Gas	0.185	7.895	504	8.10	0.2	92.5	70	130	
Be	9	1	No Gas	0.948	1.752	6599	2.74	1	94.8	70	130	
Pb	208	1	No Gas	1.846	2.049	121306	1.29	2	92.3	70	130	
Se	82	1	No Gas	3.992	21.021	1558	19.29	5	79.8	70	130	
Mo	98	1	No Gas	1.775	7.478	45561	3.98	2	88.8	70	130	
Ba	137	1	No Gas	5.025	1.503	40975	3.01	5	100.5	70	130	
Tl	205	1	No Gas	0.968	1.094	39863	2.40	1	96.8	70	130	
U	238	1	No Gas	5.112	1.361	260510	0.28	5	102.2	70	130	
Na	23	2	he	90.605	0.630	525217	0.72	100	90.6	70	130	
Mg	24	2	he	92.476	1.448	233410	1.81	100	92.5	70	130	
K	39	2	he	97.706	2.901	622130	1.19	100	97.7	70	130	
Se	82	3	HeHe	4.870	11.736	224	8.36	5	97.4	70	130	
Fe	57	3	HeHe	56.379	5.850	6220	6.52	50	112.8	70	130	
Cd	114	1	No Gas	0.992	2.343	14277	1.58	1	99.2	70	130	
Ca	44	1	No Gas	87.034	5.532	184308	1.11	100	87.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9774994	2.54	9248342	105.69	70	120	
Sc	45	2	he	1860682	0.52	1744643	106.65	70	120	
Ge	72	1	No Gas	1023845	1.17	1012122	101.16	70	120	
In	115	1	No Gas	5921225	1.58	5760110	102.80	70	120	
Tb	159	1	No Gas	7118830	1.32	6952439	102.39	70	120	
Bi	209	1	No Gas	3884486	0.47	3846945	100.98	70	120	
Sc	45	3	HeHe	171623	2.48	171212	100.24	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	071_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:04:04-04:00
Sample Type	CCV
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	104.313	1.131	5608981	0.43	100	104.3	90	110	
Cr	52	1	No Gas	102.136	1.366	4888446	2.06	100	102.1	90	110	
Mn	55	1	No Gas	102.979	2.280	6078469	2.96	100	103.0	90	110	
Co	59	1	No Gas	99.751	0.652	5274049	1.36	100	99.8	90	110	
Ni	60	1	No Gas	97.719	0.452	1155685	0.26	100	97.7	90	110	
Cu	63	1	No Gas	100.944	0.199	2909426	0.52	100	100.9	90	110	
Sr	88	1	No Gas	102.149	0.766	6934255	0.76	100	102.1	90	110	
Ag	107	1	No Gas	103.306	1.699	3129874	1.21	100	103.3	90	110	
Al	27	1	No Gas	104.516	0.749	3565265	1.39	100	104.5	90	110	
Sn	118	1	No Gas	103.323	0.938	1883441	1.16	100	103.3	90	110	
Tl	47	1	No Gas	93.027	0.952	373206	0.46	100	93.0	90	110	
Zn	66	1	No Gas	98.262	0.557	692676	0.15	100	98.3	90	110	
As	75	3	HeHe	97.916	1.301	45707	1.09	100	97.9	90	110	
As	75	1	No Gas	95.677	1.241	709064	1.24	100	95.7	90	110	
Sb	121	1	No Gas	93.821	1.555	2236111	1.20	100	93.8	90	110	
Hg	201	1	No Gas	2.002	1.904	5256	0.62	2	100.1	90	110	
Be	9	1	No Gas	90.950	0.809	637488	0.12	100	91.0	90	110	
Pb	208	1	No Gas	99.521	1.552	5620664	0.39	100	99.5	90	110	
Se	82	1	No Gas	99.092	1.481	37475	0.96	100	99.1	90	110	
Mo	98	1	No Gas	102.963	0.277	1963362	0.37	100	103.0	90	110	
Ba	137	1	No Gas	98.494	1.591	808278	1.25	100	98.5	90	110	
Tl	205	1	No Gas	98.661	1.136	4080533	1.23	100	98.7	90	110	
U	238	1	No Gas	113.568	1.307	5813068	0.19	100	113.6	90	110	CCV Main CR1 Failed
Na	23	2	he	986.366	1.543	4498375	1.47	1000	98.6	90	110	
Mg	24	2	he	997.598	2.433	2488982	1.40	1000	99.8	90	110	
K	39	2	he	985.482	1.772	3877099	1.13	1000	98.5	90	110	
Se	82	3	HeHe	96.509	2.035	2351	0.52	100	96.5	90	110	
Fe	57	3	HeHe	1033.798	3.458	116045	3.65	1000	103.4	90	110	
Cd	114	1	No Gas	96.467	1.302	1365187	1.39	100	96.5	90	110	
Ca	44	1	No Gas	1035.556	0.218	1466786	0.86	1000	103.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9872611	0.70	9248342	106.75	70	120	
Sc	45	2	he	1842695	2.01	1744643	105.62	70	120	
Ge	72	1	No Gas	1021483	1.09	1012122	100.92	70	120	
In	115	1	No Gas	5973461	0.49	5760110	103.70	70	120	
Tb	159	1	No Gas	7158631	1.29	6952439	102.97	70	120	
Bi	209	1	No Gas	3938738	1.43	3846945	102.39	70	120	
Sc	45	3	HeHe	174651	1.66	171212	102.01	70	120	

Sample Report

Sample Table

Sample Name	1017577
Data File Name	072SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:08:28-04:00
Sample Type	Sample
Dilution	1
Comment	37932 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3407

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	-0.114	-0.114	-32.21	15711	0.00	1000	
Cr	52	1	No Gas	0.411	0.411	11.32	53463	0.00	1000	
Mn	55	1	No Gas	0.438	0.438	9.47	61599	0.00	1000	
Co	59	1	No Gas	0.133	0.133	6.71	6887	0.00	1000	
Ni	60	1	No Gas	0.244	0.244	8.05	3270	0.01	1000	
Cu	63	1	No Gas	0.036	0.036	11.00	12954	0.00	1000	
Sr	88	1	No Gas	0.472	0.472	1.37	30785	0.00	1000	
Ag	107	1	No Gas	0.040	0.040	7.13	1241	0.00	1000	
Al	27	1	No Gas	5.130	5.130	2.50	177189	0.00	100000	
Sn	118	1	No Gas	3.485	3.485	29.50	68180	0.01	100	
Ti	47	1	No Gas	0.806	0.806	41.51	4439	0.02	2000	
Zn	66	1	No Gas	1.998	1.998	4.89	14439	0.01	1000	
As	75	3	HeHe	0.973	0.973	7.76	488	0.20	1000	
As	75	1	No Gas	0.768	0.768	66.95	32528	0.00	1000	
Sb	121	1	No Gas	3.838	3.838	18.88	91400	0.00	100	
Hg	201	1	No Gas	0.032	0.032	30.54	105	0.03	4	
Be	9	1	No Gas	0.036	0.036	9.60	266	0.01	1000	
Pb	208	1	No Gas	-0.099	-0.099	-3.32	12374	0.00	1000	
Se	82	1	No Gas	-0.159	-0.159	-532.03	12	-1.34	1000	
Mo	98	1	No Gas	2.083	2.083	37.50	50192	0.00	2000	
Ba	137	1	No Gas	0.571	0.571	5.98	4648	0.01	1000	
Tl	205	1	No Gas	0.038	0.038	11.19	1593	0.00	1000	
U	238	1	No Gas	0.387	0.387	21.31	19877	0.00	1000	
Na	23	2	he	9.645	9.645	8.89	155896	0.01	100000	
Mg	24	2	he	2.015	2.015	0.57	5268	0.04	100000	
K	39	2	he	0.533	0.533	57.88	251711	0.00	100000	
Se	82	3	HeHe	0.087	0.087	577.76	116	0.08	1000	
Fe	57	3	HeHe	34.343	34.343	5.48	3808	0.90	100000	
Cd	114	1	No Gas	0.146	0.146	12.18	2367	0.01	1000	
Ca	44	1	No Gas	8.619	8.619	34.24	76728	0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9428621	2.04	9248342	101.95	70	120	
Sc	45	2	he	1789903	1.78	1744643	102.59	70	120	

Ge	72	1	No Gas	1027614	0.97	1012122	101.53	70	120	
In	115	1	No Gas	5797312	1.33	5760110	100.65	70	120	
Tb	159	1	No Gas	7087372	1.83	6952439	101.94	70	120	
Bi	209	1	No Gas	3870538	0.32	3846945	100.61	70	120	
Sc	45	3	HeHe	172686	2.80	171212	100.86	70	120	

Sample Report

Sample Table

Sample Name	1017578
Data File Name	073SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:29:18-04:00
Sample Type	Sample
Dilution	1
Comment	37932 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass
Vial	3408

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	195.626	195.626	1.45	10255040	0.00	1000	
Cr	52	1	No Gas	197.781	197.781	1.28	9211369	0.00	1000	
Mn	55	1	No Gas	198.723	198.723	0.53	11419837	0.00	1000	
Co	59	1	No Gas	193.288	193.288	1.47	9980419	0.00	1000	
Ni	60	1	No Gas	195.137	195.137	0.80	2253498	0.01	1000	
Cu	63	1	No Gas	186.807	186.807	1.22	5248119	0.00	1000	
Sr	88	1	No Gas	178.341	178.341	1.31	11823812	0.00	1000	
Ag	107	1	No Gas	100.308	100.308	1.19	2947870	0.00	1000	
Al	27	1	No Gas	1967.628	1967.628	0.62	65362099	0.00	100000	
Sn	118	1	No Gas	192.439	192.439	2.11	3396229	0.01	100	>LDR
Ti	47	1	No Gas	185.301	185.301	1.70	719724	0.03	2000	
Zn	66	1	No Gas	179.864	179.864	0.71	1237495	0.01	1000	
As	75	3	HeHe	185.172	185.172	2.09	86085	0.22	1000	
As	75	1	No Gas	179.436	179.436	0.49	1274368	0.01	1000	
Sb	121	1	No Gas	196.319	196.319	1.71	4535236	0.00	100	>LDR
Hg	201	1	No Gas	1.871	1.871	4.79	4856	0.04	4	
Be	9	1	No Gas	190.758	190.758	1.79	1305919	0.01	1000	
Pb	208	1	No Gas	193.197	193.197	1.07	10776459	0.00	1000	
Se	82	1	No Gas	185.762	185.762	1.67	68560	0.27	1000	
Mo	98	1	No Gas	201.306	201.306	1.97	3711493	0.01	2000	
Ba	137	1	No Gas	1877.666	1877.666	1.23	14945024	0.01	1000	>LDR
Tl	205	1	No Gas	189.238	189.238	2.45	7739469	0.00	1000	
U	238	1	No Gas	0.039	0.039	22.80	2267	0.00	1000	
Na	23	2	he	1918.627	1918.627	0.94	8433710	0.02	100000	
Mg	24	2	he	1928.328	1928.328	0.90	4697058	0.04	100000	
K	39	2	he	1888.571	1888.571	1.46	7023621	0.03	100000	
Se	82	3	HeHe	179.396	179.396	3.08	4256	4.22	1000	
Fe	57	3	HeHe	2035.332	2035.332	1.98	227618	0.89	100000	
Cd	114	1	No Gas	190.082	190.082	0.77	2608906	0.01	1000	
Ca	44	1	No Gas	1973.856	1973.856	1.44	2669660	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9642395	0.42	9248342	104.26	70	120	
Sc	45	2	he	1798775	1.08	1744643	103.10	70	120	
Ge	72	1	No Gas	1032842	0.99	1012122	102.05	70	120	

In	115	1	No Gas	5794529	1.49	5760110	100.60	70	120	
Tb	159	1	No Gas	7081088	2.26	6952439	101.85	70	120	
Bi	209	1	No Gas	3817907	1.07	3846945	99.25	70	120	
Sc	45	3	HeHe	174023	1.38	171212	101.64	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	082_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T14:13:31-04:00
Sample Type	CCB
Dilution	1
Comment	37932 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.302	25.7	37553	10.4	9	
Cr	52	1	No Gas	-0.096	-28.5	30913	2.7	4	
Mn	55	1	No Gas	0.331	17.5	56508	5.5	25	
Co	59	1	No Gas	0.006	42.1	489	26.2	1	
Ni	60	1	No Gas	0.425	3.7	5401	1.9	25	
Cu	63	1	No Gas	-0.176	-2.1	7263	3.2	25	
Sr	88	1	No Gas	0.007	22.8	659	17.7	25	
Ag	107	1	No Gas	0.022	12.5	756	13.1	9	
Al	27	1	No Gas	3.656	2.0	131288	2.9	1000000	
Sn	118	1	No Gas	1.785	32.3	39732	26.0	25	
Ti	47	1	No Gas	0.283	56.5	2509	25.4	10000	
Zn	66	1	No Gas	0.079	30.5	1573	12.7	25	
As	75	3	HeHe	0.780	7.0	401	7.4	9	
As	75	1	No Gas	0.212	49.6	29156	0.9	9	
Sb	121	1	No Gas	1.886	17.5	48112	16.1	4	
Hg	201	1	No Gas	0.018	25.1	71	15.6	0.04	
Be	9	1	No Gas	0.014	19.7	118	13.9	1	
Pb	208	1	No Gas	-0.105	-16.7	12108	6.3	4	
Se	82	1	No Gas	0.164	369.4	124	175.8	25	
Mo	98	1	No Gas	0.838	48.5	28371	26.6	10000	
Ba	137	1	No Gas	0.018	19.7	243	10.3	25	
Tl	205	1	No Gas	0.026	4.0	1111	5.2	1	
U	238	1	No Gas	0.377	20.2	19562	21.6	25	
Na	23	2	he	-0.568	-126.9	113990	2.7	2500000	
Mg	24	2	he	0.071	44.3	567	13.6	2500000	
K	39	2	he	-3.377	-28.6	242296	1.8	5000000	
Se	82	3	HeHe	0.818	45.3	133	5.4	25	
Fe	57	3	HeHe	23.653	2.7	2637	3.4	2500000	
Cd	114	1	No Gas	0.073	34.8	1407	24.6	1	
Ca	44	1	No Gas	-8.848	-4.2	55098	1.3	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9575561	2.24	9248342	103.54	70	120	
Sc	45	2	he	1823982	0.49	1744643	104.55	70	120	
Ge	72	1	No Gas	1030800	0.62	1012122	101.85	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	6007535	1.77	5760110	104.30	70	120	
Tb	159	1	No Gas	7132871	1.72	6952439	102.60	70	120	
Bi	209	1	No Gas	3949172	0.63	3846945	102.66	70	120	
Sc	45	3	HeHe	173458	1.12	171212	101.31	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	083LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T14:17:26-04:00
Sample Type	LLCCV
Dilution	1
Comment	37932 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	2.346	6.718	135419	7.68	2	117.3	70	130		
Cr	52	1	No Gas	2.079	8.832	123254	1.12	2	104.0	70	130		
Mn	55	1	No Gas	5.847	8.398	347793	1.25	5	116.9	70	130		
Co	59	1	No Gas	5.307	5.564	256006	1.60	5	106.1	70	130		
Ni	60	1	No Gas	5.402	6.169	58712	0.66	5	108.0	70	130		
Cu	63	1	No Gas	5.101	6.483	144875	0.78	5	102.0	70	130		
Sr	88	1	No Gas	4.918	6.684	304476	0.15	5	98.4	70	130		
Ag	107	1	No Gas	2.059	4.622	61052	1.81	2	102.9	70	130		
Al	27	1	No Gas	89.398	7.084	2780330	1.10	80	111.7	70	130		
Sn	118	1	No Gas	2.032	1.595	43072	3.32	2	101.6	70	130		
Tl	47	1	No Gas	4.754	1.609	19922	1.36	5	95.1	70	130		
Zn	66	1	No Gas	5.707	6.626	37581	0.24	5	114.1	70	130		
As	75	3	HeHe	3.162	1.257	1511	1.55	3	105.4	70	130		
As	75	1	No Gas	3.927	14.818	51484	2.61	3	130.9	70	130	LLCCV Main CR1 Failed	N/A
Sb	121	1	No Gas	2.746	1.666	66886	4.42	2	137.3	70	130	LLCCV Main CR1 Failed	N/A
Hg	201	1	No Gas	0.193	12.204	517	12.58	0.2	96.5	70	130		
Be	9	1	No Gas	1.022	6.179	6554	1.89	1	102.2	70	130		
Pb	208	1	No Gas	1.914	2.901	123082	1.43	2	95.7	70	130		
Se	82	1	No Gas	5.762	24.793	2030	17.51	5	115.2	70	130		
Mo	98	1	No Gas	1.916	3.968	47642	5.67	2	95.8	70	130		
Ba	137	1	No Gas	5.049	1.253	40628	1.90	5	101.0	70	130		
Tl	205	1	No Gas	1.026	2.214	41560	2.00	1	102.6	70	130		
U	238	1	No Gas	5.286	1.588	265009	0.35	5	105.7	70	130		
Na	23	2	he	85.688	1.171	502691	0.32	100	85.7	70	130		
Mg	24	2	he	90.216	0.873	227494	0.20	100	90.2	70	130		
K	39	2	he	89.652	1.780	591738	0.78	100	89.7	70	130		
Se	82	3	HeHe	4.438	31.187	217	13.80	5	88.8	70	130		
Fe	57	3	HeHe	60.438	2.885	6765	1.60	50	120.9	70	130		
Cd	114	1	No Gas	1.026	1.834	14574	2.88	1	102.6	70	130		
Ca	44	1	No Gas	98.871	8.187	184419	1.27	100	98.9	70	130		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9023869	6.48	9248342	97.57	70	120	
Sc	45	2	he	1859008	0.68	1744643	106.56	70	120	
Ge	72	1	No Gas	1000366	0.96	1012122	98.84	70	120	
In	115	1	No Gas	5845025	2.83	5760110	101.47	70	120	
Tb	159	1	No Gas	7004733	1.26	6952439	100.75	70	120	
Bi	209	1	No Gas	3842730	1.67	3846945	99.89	70	120	
Sc	45	3	HeHe	174190	1.86	171212	101.74	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	084_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T14:21:21-04:00
Sample Type	CCV
Dilution	1
Comment	37932 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	112.062	9.650	5596580	1.93	100	112.1	90	110	CCV Main CR1 Failed
Cr	52	1	No Gas	109.929	9.855	4884488	1.98	100	109.9	90	110	
Mn	55	1	No Gas	112.777	10.045	6178074	1.01	100	112.8	90	110	CCV Main CR1 Failed
Co	59	1	No Gas	109.270	9.990	5365252	1.05	100	109.3	90	110	
Ni	60	1	No Gas	103.974	9.922	1142019	0.86	100	104.0	90	110	
Cu	63	1	No Gas	110.688	8.695	2964043	0.97	100	110.7	90	110	CCV Main CR1 Failed
Sr	88	1	No Gas	110.699	9.770	6979742	0.58	100	110.7	90	110	CCV Main CR1 Failed
Ag	107	1	No Gas	105.584	8.422	3129492	0.89	100	105.6	90	110	
Al	27	1	No Gas	110.162	9.379	3490674	1.06	100	110.2	90	110	CCV Main CR1 Failed
Sn	118	1	No Gas	106.972	8.830	1907158	2.20	100	107.0	90	110	
Tl	47	1	No Gas	95.700	8.549	375536	1.01	100	95.7	90	110	
Zn	66	1	No Gas	105.026	8.695	688033	0.48	100	105.0	90	110	
As	75	3	HeHe	98.529	1.029	45854	1.61	100	98.5	90	110	
As	75	1	No Gas	105.030	9.957	720451	0.53	100	105.0	90	110	
Sb	121	1	No Gas	97.762	8.028	2279812	1.13	100	97.8	90	110	
Hg	201	1	No Gas	2.086	9.031	5422	1.23	2	104.3	90	110	
Be	9	1	No Gas	97.262	10.860	632810	1.62	100	97.3	90	110	
Pb	208	1	No Gas	103.260	8.625	5776936	0.53	100	103.3	90	110	
Se	82	1	No Gas	108.991	11.454	38244	2.32	100	109.0	90	110	
Mo	98	1	No Gas	106.946	9.418	1993709	2.19	100	106.9	90	110	
Ba	137	1	No Gas	101.912	7.813	818409	0.58	100	101.9	90	110	
Tl	205	1	No Gas	102.136	9.030	4183817	1.28	100	102.1	90	110	
U	238	1	No Gas	115.082	9.999	5831745	2.21	100	115.1	90	110	CCV Main CR1 Failed
Na	23	2	he	948.858	2.604	4401935	1.26	1000	94.9	90	110	
Mg	24	2	he	969.750	3.490	2458659	1.74	1000	97.0	90	110	
K	39	2	he	952.918	1.686	3819121	1.58	1000	95.3	90	110	
Se	82	3	HeHe	95.856	1.614	2329	2.24	100	95.9	90	110	
Fe	57	3	HeHe	1012.432	1.402	113294	1.64	1000	101.2	90	110	
Cd	114	1	No Gas	100.505	7.727	1391850	0.65	100	100.5	90	110	
Ca	44	1	No Gas	1136.240	9.538	1489429	2.40	1000	113.6	90	110	CCV Main CR1 Failed

All samples ND. Incl OK 10%

OK

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9222142	8.73	9248342	99.72	70	120	
Sc	45	2	he	1872800	1.89	1744643	107.35	70	120	
Ge	72	1	No Gas	998859	5.41	1012122	98.69	70	120	
In	115	1	No Gas	5867485	7.27	5760110	101.86	70	120	
Tb	159	1	No Gas	7122545	7.69	6952439	102.45	70	120	
Bi	209	1	No Gas	3879956	5.83	3846945	100.86	70	120	
Sc	45	3	HeHe	174099	0.73	171212	101.69	70	120	

Sample Report

Sample Table

Sample Name	9980395006
Data File Name	085SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T14:25:10-04:00
Sample Type	Sample
Dilution	1
Comment	37932 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3504

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	5.689	5.689	1.08	307445	0.00	1000	
Cr	52	1	No Gas	0.860	0.860	0.79	72623	0.00	1000	
Mn	55	1	No Gas	0.571	0.571	2.93	67936	0.00	1000	
Co	59	1	No Gas	0.202	0.202	2.07	10185	0.00	1000	
Ni	60	1	No Gas	0.592	0.592	2.72	7088	0.01	1000	
Cu	63	1	No Gas	0.529	0.529	6.42	26016	0.00	1000	
Sr	88	1	No Gas	208.386	208.386	2.03	13285977	0.00	1000	
Ag	107	1	No Gas	0.054	0.054	8.58	1685	0.00	1000	
Al	27	1	No Gas	7.362	7.362	1.37	245493	0.00	100000	
Sn	118	1	No Gas	3.447	3.447	28.36	68495	0.01	100	
Tl	47	1	No Gas	0.963	0.963	25.63	5121	0.02	2000	
Zn	66	1	No Gas	1.844	1.844	4.03	13186	0.01	1000	
As	75	3	HeHe	1.723	1.723	5.24	812	0.21	1000	
As	75	1	No Gas	1.290	1.290	48.95	35418	0.00	1000	
Sb	121	1	No Gas	3.901	3.901	15.81	94135	0.00	100	
Hg	201	1	No Gas	0.044	0.044	25.41	139	0.03	4	
Be	9	1	No Gas	0.026	0.026	14.16	195	0.01	1000	
Pb	208	1	No Gas	-0.073	-0.073	-16.58	14087	0.00	1000	
Se	82	1	No Gas	2.391	2.391	19.16	913	0.26	1000	
Mo	98	1	No Gas	9.541	9.541	6.88	189762	0.01	2000	
Ba	137	1	No Gas	5.572	5.572	0.09	45013	0.01	1000	
Tl	205	1	No Gas	0.068	0.068	5.04	2904	0.00	1000	
U	238	1	No Gas	1.258	1.258	6.74	65237	0.00	1000	
Na	23	2	he	6258.615	6258.615	1.53	26357246	0.02	100000	
Mg	24	2	he	3733.615	3733.615	1.62	8796012	0.04	100000	
K	39	2	he	380.141	380.141	1.30	1561410	0.02	100000	
Se	82	3	HeHe	1.740	1.740	89.61	150	1.16	1000	
Fe	57	3	HeHe	38.741	38.741	3.33	4190	0.92	100000	
Cd	114	1	No Gas	0.179	0.179	21.45	2850	0.01	1000	
Ca	44	1	No Gas	53406.278	53406.278	1.55	67781251	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9274062	1.70	9248342	100.28	70	120	
Sc	45	2	he	1739844	0.85	1744643	99.72	70	120	
Ge	72	1	No Gas	1029732	1.59	1012122	101.74	70	120	

In	115	1	No Gas	5868579	0.13	5760110	101.88	70	120	
Tb	159	1	No Gas	7219601	0.66	6952439	103.84	70	120	
Bi	209	1	No Gas	3974546	1.27	3846945	103.32	70	120	
Sc	45	3	HeHe	168251	0.77	171212	98.27	70	120	

Sample Report

Sample Table

Sample Name	1017579
Data File Name	086SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T14:47:10-04:00
Sample Type	Sample
Dilution	1
Comment	37932 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass
Vial	3505

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	207.999	207.999	1.02	10480563	0.00	1000	
Cr	52	1	No Gas	199.765	199.765	1.63	8943507	0.00	1000	
Mn	55	1	No Gas	201.330	201.330	0.68	11122057	0.00	1000	
Co	59	1	No Gas	192.683	192.683	0.25	9565083	0.00	1000	
Ni	60	1	No Gas	193.980	193.980	1.40	2153489	0.01	1000	
Cu	63	1	No Gas	191.264	191.264	1.25	5165340	0.00	1000	
Sr	88	1	No Gas	388.490	388.490	0.78	24762614	0.00	1000	
Ag	107	1	No Gas	99.082	99.082	1.24	2858360	0.00	1000	
Al	27	1	No Gas	2006.150	2006.150	1.48	64061046	0.00	100000	
Sn	118	1	No Gas	195.892	195.892	1.46	3394645	0.01	100	>LDR
Ti	47	1	No Gas	186.547	186.547	0.62	711326	0.03	2000	
Zn	66	1	No Gas	181.870	181.870	0.99	1202937	0.02	1000	
As	75	3	HeHe	189.298	189.298	0.85	84939	0.22	1000	
As	75	1	No Gas	186.836	186.836	0.97	1274516	0.01	1000	
Sb	121	1	No Gas	203.273	203.273	0.39	4610301	0.00	100	>LDR
Hg	201	1	No Gas	2.013	2.013	2.98	5228	0.04	4	
Be	9	1	No Gas	198.961	198.961	0.62	1309420	0.02	1000	
Pb	208	1	No Gas	199.015	199.015	1.19	11100163	0.00	1000	
Se	82	1	No Gas	193.777	193.777	1.79	68745	0.28	1000	
Mo	98	1	No Gas	213.794	213.794	1.68	3869334	0.01	2000	
Ba	137	1	No Gas	1930.459	1930.459	1.48	15085263	0.01	1000	>LDR
Tl	205	1	No Gas	195.698	195.698	0.42	8005957	0.00	1000	
U	238	1	No Gas	0.801	0.801	4.03	40849	0.00	1000	
Na	23	2	he	8281.223	8281.223	0.31	34266550	0.02	100000	
Mg	24	2	he	5719.143	5719.143	1.26	13251319	0.04	100000	
K	39	2	he	2266.645	2266.645	0.58	7971611	0.03	100000	
Se	82	3	HeHe	187.949	187.949	3.90	4298	4.37	1000	
Fe	57	3	HeHe	2038.935	2038.935	2.72	220075	0.93	100000	
Cd	114	1	No Gas	191.527	191.527	1.12	2580828	0.01	1000	
Ca	44	1	No Gas	54853.347	54853.347	1.00	69599439	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9269743	0.92	9248342	100.23	70	120	
Sc	45	2	he	1711119	0.71	1744643	98.08	70	120	
Ge	72	1	No Gas	1018148	1.83	1012122	100.60	70	120	

In	115	1	No Gas	5688233	1.58	5760110	98.75	70	120	
Tb	159	1	No Gas	7080733	2.09	6952439	101.85	70	120	
Bi	209	1	No Gas	3854807	2.85	3846945	100.20	70	120	
Sc	45	3	HeHe	167936	0.37	171212	98.09	70	120	

Sample Report

Sample Table

Sample Name	1017580
Data File Name	087SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T14:50:56-04:00
Sample Type	Sample
Dilution	1
Comment	37932 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass
Vial	3506

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	204.481	204.481	2.28	10362534	0.00	1000	
Cr	52	1	No Gas	196.695	196.695	0.77	8858165	0.00	1000	
Mn	55	1	No Gas	197.628	197.628	1.80	10980320	0.00	1000	
Co	59	1	No Gas	188.545	188.545	1.36	9413270	0.00	1000	
Ni	60	1	No Gas	191.103	191.103	3.14	2133424	0.01	1000	
Cu	63	1	No Gas	184.295	184.295	2.07	5005880	0.00	1000	
Sr	88	1	No Gas	388.704	388.704	0.99	24920256	0.00	1000	
Ag	107	1	No Gas	95.168	95.168	1.15	2775938	0.00	1000	
Al	27	1	No Gas	1971.708	1971.708	1.50	63326083	0.00	100000	
Sn	118	1	No Gas	193.076	193.076	0.99	3382468	0.01	100	>LDR
Ti	47	1	No Gas	181.265	181.265	1.58	698825	0.03	2000	
Zn	66	1	No Gas	176.998	176.998	2.40	1177317	0.02	1000	
As	75	3	HeHe	184.270	184.270	1.38	82615	0.22	1000	
As	75	1	No Gas	181.742	181.742	1.86	1247578	0.01	1000	
Sb	121	1	No Gas	196.463	196.463	0.34	4505135	0.00	100	>LDR
Hg	201	1	No Gas	1.998	1.998	2.16	5272	0.04	4	
Be	9	1	No Gas	194.139	194.139	1.54	1285205	0.02	1000	
Pb	208	1	No Gas	195.129	195.129	1.25	11060207	0.00	1000	
Se	82	1	No Gas	188.480	188.480	1.09	67260	0.28	1000	
Mo	98	1	No Gas	211.534	211.534	1.58	3870549	0.01	2000	
Ba	137	1	No Gas	1876.331	1876.331	0.77	14822786	0.01	1000	>LDR
Tl	205	1	No Gas	191.079	191.079	1.18	7943295	0.00	1000	
U	238	1	No Gas	0.761	0.761	1.44	39453	0.00	1000	
Na	23	2	he	8075.326	8075.326	1.54	33367279	0.02	100000	
Mg	24	2	he	5603.649	5603.649	0.61	12964687	0.04	100000	
K	39	2	he	2223.187	2223.187	2.04	7810819	0.03	100000	
Se	82	3	HeHe	181.292	181.292	1.34	4146	4.37	1000	
Fe	57	3	HeHe	2032.426	2032.426	0.76	219206	0.93	100000	
Cd	114	1	No Gas	188.769	188.769	0.41	2571551	0.01	1000	
Ca	44	1	No Gas	55270.307	55270.307	0.09	70536004	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9324290	1.69	9248342	100.82	70	120	
Sc	45	2	he	1708553	1.13	1744643	97.93	70	120	
Ge	72	1	No Gas	1009502	1.38	1012122	99.74	70	120	

In	115	1	No Gas	5751103	1.15	5760110	99.84	70	120	
Tb	159	1	No Gas	7195190	0.47	6952439	103.49	70	120	
Bi	209	1	No Gas	3929210	0.79	3846945	102.14	70	120	
Sc	45	3	HeHe	167810	1.06	171212	98.01	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	093_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T15:13:53-04:00
Sample Type	CCB
Dilution	1
Comment	37932 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.008	689.2	21609	12.1	9	
Cr	52	1	No Gas	-0.088	-16.3	30346	3.1	4	
Mn	55	1	No Gas	0.413	5.4	59310	2.1	25	
Co	59	1	No Gas	0.009	51.3	619	37.4	1	
Ni	60	1	No Gas	0.477	10.0	5808	8.3	25	
Cu	63	1	No Gas	-0.144	-1.8	7888	1.9	25	
Sr	88	1	No Gas	0.008	27.9	707	21.2	25	
Ag	107	1	No Gas	0.023	20.1	759	16.1	9	
Al	27	1	No Gas	3.916	2.4	135559	1.2	1000000	
Sn	118	1	No Gas	2.081	28.5	45061	25.5	25	
Ti	47	1	No Gas	0.413	43.9	3025	25.4	10000	
Zn	66	1	No Gas	0.060	16.1	1397	3.5	25	
As	75	3	HeHe	0.874	5.2	422	4.9	9	
As	75	1	No Gas	0.724	17.1	31705	3.7	9	
Sb	121	1	No Gas	2.011	12.3	50935	12.7	4	
Hg	201	1	No Gas	0.023	17.4	85	13.8	0.04	
Be	9	1	No Gas	0.018	7.4	139	7.2	1	
Pb	208	1	No Gas	-0.183	-1.3	7932	3.2	4	
Se	82	1	No Gas	0.814	60.3	354	49.3	25	
Mo	98	1	No Gas	0.835	42.2	28257	24.9	10000	
Ba	137	1	No Gas	0.028	6.3	323	6.4	25	
Tl	205	1	No Gas	0.031	20.2	1348	17.2	1	
U	238	1	No Gas	0.393	24.8	20842	22.4	25	
Na	23	2	he	-2.182	-12.0	104118	2.1	2500000	
Mg	24	2	he	0.055	143.8	511	35.6	2500000	
K	39	2	he	-3.524	-61.6	235367	0.4	5000000	
Se	82	3	HeHe	0.556	261.2	120	25.9	25	
Fe	57	3	HeHe	19.952	11.0	2111	12.0	2500000	
Cd	114	1	No Gas	0.074	42.0	1423	32.2	1	
Ca	44	1	No Gas	-7.194	-13.1	55530	3.1	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9283288	1.09	9248342	100.38	70	120	
Sc	45	2	he	1776963	3.03	1744643	101.85	70	120	
Ge	72	1	No Gas	990483	1.46	1012122	97.86	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	5982989	2.32	5760110	103.87	70	120	
Tb	159	1	No Gas	7330064	2.05	6952439	105.43	70	120	
Bi	209	1	No Gas	4028595	1.44	3846945	104.72	70	120	
Sc	45	3	HeHe	164511	1.84	171212	96.09	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	094LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T15:17:48-04:00
Sample Type	LLCCV
Dilution	1
Comment	37932 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.054	0.913	128431	0.75	2	102.7	70	130	
Cr	52	1	No Gas	1.894	2.778	122511	2.67	2	94.7	70	130	
Mn	55	1	No Gas	5.283	1.729	337795	0.66	5	105.7	70	130	
Co	59	1	No Gas	4.867	1.622	249450	0.86	5	97.3	70	130	
Ni	60	1	No Gas	4.863	1.778	56228	1.93	5	97.3	70	130	
Cu	63	1	No Gas	4.783	0.899	145138	0.33	5	95.7	70	130	
Sr	88	1	No Gas	4.622	1.388	304196	0.52	5	92.4	70	130	
Ag	107	1	No Gas	1.993	0.271	60264	0.65	2	99.7	70	130	
Al	27	1	No Gas	83.026	2.030	2746052	1.59	80	103.8	70	130	
Sn	118	1	No Gas	2.189	9.381	46722	8.74	2	109.4	70	130	
Ti	47	1	No Gas	4.621	1.771	19771	2.53	5	92.4	70	130	
Zn	66	1	No Gas	5.240	2.625	36755	1.50	5	104.8	70	130	
As	75	3	HeHe	3.355	9.553	1543	8.26	3	111.8	70	130	
As	75	1	No Gas	3.183	3.266	49610	1.83	3	106.1	70	130	
Sb	121	1	No Gas	2.818	6.633	69847	7.24	2	140.9	70	130	LLCCV Main CR1 Failed
Hg	201	1	No Gas	0.197	0.925	545	1.18	0.2	98.3	70	130	
Be	9	1	No Gas	0.972	2.369	6623	3.24	1	97.2	70	130	
Pb	208	1	No Gas	1.778	1.289	119967	0.60	2	88.9	70	130	
Se	82	1	No Gas	4.961	10.538	1880	9.13	5	99.2	70	130	
Mo	98	1	No Gas	1.824	7.557	46770	6.39	2	91.2	70	130	
Ba	137	1	No Gas	5.033	0.309	41263	0.95	5	100.7	70	130	
Tl	205	1	No Gas	1.006	0.903	42299	0.21	1	100.6	70	130	
U	238	1	No Gas	5.219	2.173	271431	1.08	5	104.4	70	130	
Na	23	2	he	87.067	1.763	486770	0.70	100	87.1	70	130	
Mg	24	2	he	91.372	0.155	220418	1.17	100	91.4	70	130	
K	39	2	he	90.892	0.309	570481	1.15	100	90.9	70	130	
Se	82	3	HeHe	4.265	8.520	206	1.95	5	85.3	70	130	
Fe	57	3	HeHe	55.518	4.804	5998	6.06	50	111.0	70	130	
Cd	114	1	No Gas	1.032	3.643	14930	4.29	1	103.2	70	130	
Ca	44	1	No Gas	87.475	1.375	181033	0.51	100	87.5	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9565731	1.04	9248342	103.43	70	120	
Sc	45	2	he	1778385	1.27	1744643	101.93	70	120	
Ge	72	1	No Gas	1003538	0.16	1012122	99.15	70	120	
In	115	1	No Gas	5953828	0.92	5760110	103.36	70	120	
Tb	159	1	No Gas	7266788	1.09	6952439	104.52	70	120	
Bi	209	1	No Gas	4022852	1.10	3846945	104.57	70	120	
Sc	45	3	HeHe	168017	2.06	171212	98.13	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	095_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A080712.b
Acq Date Time	2012-08-07T15:28:52-04:00
Sample Type	CCV
Dilution	1
Comment	37932 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	104.607	0.775	5421985	0.55	100	104.6	90	110	
Cr	52	1	No Gas	102.549	2.193	4730315	1.60	100	102.5	90	110	
Mn	55	1	No Gas	106.090	2.091	6034097	1.71	100	106.1	90	110	
Co	59	1	No Gas	101.247	1.009	5159726	0.70	100	101.2	90	110	
Ni	60	1	No Gas	97.610	0.819	1112766	0.88	100	97.6	90	110	
Cu	63	1	No Gas	102.431	1.914	2845448	1.36	100	102.4	90	110	
Sr	88	1	No Gas	103.862	1.130	6795992	0.61	100	103.9	90	110	
Ag	107	1	No Gas	101.791	0.911	3063273	1.12	100	101.8	90	110	
Al	27	1	No Gas	104.574	1.123	3438360	0.90	100	104.6	90	110	
Sn	118	1	No Gas	103.339	1.376	1870840	0.72	100	103.3	90	110	
Tl	47	1	No Gas	91.710	1.126	365443	0.52	100	91.7	90	110	
Zn	66	1	No Gas	97.943	0.840	665520	0.58	100	97.9	90	110	
As	75	3	HeHe	101.113	1.466	43749	1.04	100	101.1	90	110	
As	75	1	No Gas	96.932	0.582	692103	1.10	100	96.9	90	110	
Sb	121	1	No Gas	94.127	0.509	2228342	1.17	100	94.1	90	110	
Hg	201	1	No Gas	2.029	2.900	5377	3.37	2	101.5	90	110	
Be	9	1	No Gas	95.455	0.751	644941	0.74	100	95.5	90	110	
Pb	208	1	No Gas	100.983	0.703	5756834	0.06	100	101.0	90	110	
Se	82	1	No Gas	99.626	1.534	36318	1.12	100	99.6	90	110	
Mo	98	1	No Gas	101.478	1.226	1922015	0.56	100	101.5	90	110	
Ba	137	1	No Gas	98.604	0.096	803735	0.72	100	98.6	90	110	
Tl	205	1	No Gas	98.918	1.185	4129636	1.39	100	98.9	90	110	
U	238	1	No Gas	114.960	2.032	5939458	1.39	100	115.0	90	110	CCV Main CR1 Failed
Na	23	2	he	981.370	0.821	4297385	1.46	1000	98.1	90	110	
Mg	24	2	he	1014.201	0.091	2429584	0.93	1000	101.4	90	110	
K	39	2	he	973.256	1.225	3679122	1.22	1000	97.3	90	110	
Se	82	3	HeHe	96.843	2.361	2186	1.70	100	96.8	90	110	
Fe	57	3	HeHe	1046.507	1.366	108878	0.18	1000	104.7	90	110	
Cd	114	1	No Gas	95.613	1.023	1343979	1.54	100	95.6	90	110	
Ca	44	1	No Gas	1030.147	3.088	1406778	2.84	1000	103.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9516435	0.58	9248342	102.90	70	120	
Sc	45	2	he	1768801	0.90	1744643	101.38	70	120	
Ge	72	1	No Gas	994049	0.91	1012122	98.21	70	120	
In	115	1	No Gas	5933018	0.66	5760110	103.00	70	120	
Tb	159	1	No Gas	7225503	0.66	6952439	103.93	70	120	
Bi	209	1	No Gas	3957481	0.90	3846945	102.87	70	120	
Sc	45	3	HeHe	161884	1.19	171212	94.55	70	120	

Digestion Logbook

Microwave 3015 Prep (Water) (Version 1- 6/1/2010)

Note: All TCLP matrix spikes are spiked prior to preservation as noted in the TCLP logbook.

Batch: 37326	**Queue:** MDIG	**HBN:** 473767	**RULE:** D3015/6020	**ALSI SOP:**	09-3015
File Name: 37326_120801-073155			**METHOD:** 3015	**Microwave ID:**	MARS

Batch Type:	**Comment Codes:**	**Reagents:**		**Pipettes:**		**Start**	**Finish**
T: TCLP	1. Sample failed initial digestion due to a weight loss >5g	HNO3:	L12065 JT BAKER		**Date:**	08/01/2012	08/01/2012
S: SPLP	2. Sample reacts with reagent				**Time:**	09:40:00	10:06:00
M: 6020	3. Less sample used due to high metal content				**Tech:**	KMK	KMK
W: 6010	4. Less sample used to result in successful microwave digestion				**Reviewed/Approved By:**		N/A
A: ASTM	5. Sample does not digest by microwave, digest by method 3050				**Date:**		

Sample ID	Cont ID	Samp Type	Vessel Initial WT, grams	Vessel Final WT, grams	Difference grams	Spike Amt uL of Each	Spike Lot#	Sample Size, mL	Final Vol mL	Batch Type	Parent Sample ID	Comment Code
1017577		MB	209.72	209.60	0.12			45	50	M		
1017578		LCS	211.59	211.43	0.16	40/50/50/50	/MR2788/MA1346/	45	50	M		
9980109002	A	S	210.48	210.36	0.12			45	50	M		
9980394006	A	S	211.61	211.52	0.09			45	50	M		
9980394014	A	S	213.48	213.46	0.02			45	50	M		
9980395006	A	S	212.08	212.03	0.05			45	50	M		
1017579		MS	210.93	210.90	0.03	40/50/50/50	/MR2788/MA1346/	45	50	M	9980395006	
1017580		MSD	212.43	212.39	0.04	40/50/50/50	/MR2788/MA1346/	45	50	M	9980395006	

End

Analytical Logbook

Batch Log

#	Acquired Date and Time	Sample Type	Sample Name	File Name	Comment	Vial#	Dilution Result	Operator
1	8/7/2012 8:10	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A080712.b\001CALB.d		1101	1	Matthew Olley
2	8/7/2012 8:14	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A080712.b\002CALB.d		1101	1	Matthew Olley
3	8/7/2012 8:18	CalStd	Standard 1	C:\Agilent\ICPMH\1\DATA\A080712.b\003CALS.d		2101	1	Matthew Olley
4	8/7/2012 8:22	CalStd	Standard 2	C:\Agilent\ICPMH\1\DATA\A080712.b\004CALS.d		2102	1	Matthew Olley
5	8/7/2012 8:26	CalStd	Standard 3	C:\Agilent\ICPMH\1\DATA\A080712.b\005CALS.d		2103	1	Matthew Olley
6	8/7/2012 8:30	CalStd	Standard 4	C:\Agilent\ICPMH\1\DATA\A080712.b\006CALS.d		2104	1	Matthew Olley
7	8/7/2012 8:34	CalStd	Standard 5	C:\Agilent\ICPMH\1\DATA\A080712.b\007CALS.d		2105	1	Matthew Olley
8	8/7/2012 8:38	ICV	ICV	C:\Agilent\ICPMH\1\DATA\A080712.b\008_ICV.d		1307	1	Matthew Olley
9	8/7/2012 8:41	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A080712.b\009_ICB.d		1101	1	Matthew Olley
10	8/7/2012 8:45	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A080712.b\010_ICB.d		1101	1	Matthew Olley
11	8/7/2012 8:49	LLICV	LLICV	C:\Agilent\ICPMH\1\DATA\A080712.b\011LICV.d		1305	1	Matthew Olley
12	8/7/2012 8:49							Matthew Olley
13	8/7/2012 8:55	ICSA	ICSA	C:\Agilent\ICPMH\1\DATA\A080712.b\012ICSA.d		2111	1	Matthew Olley
14	8/7/2012 8:59	ICSB	ICSAB	C:\Agilent\ICPMH\1\DATA\A080712.b\013ICSB.d		2112	1	Matthew Olley
15	8/7/2012 8:59							Matthew Olley
16	8/7/2012 9:07	Sample	1015362	C:\Agilent\ICPMH\1\DATA\A080712.b\014SMPL.d	37925 MWODF5	3101	1	Matthew Olley
17	8/7/2012 9:11	Sample	1015363	C:\Agilent\ICPMH\1\DATA\A080712.b\015SMPL.d	37925 MWODF5	3102	1	Matthew Olley
18	8/7/2012 9:14	Sample	1017907	C:\Agilent\ICPMH\1\DATA\A080712.b\016SMPL.d	37925 MWODF5	3103	1	Matthew Olley
19	8/7/2012 9:18	Sample	1017908	C:\Agilent\ICPMH\1\DATA\A080712.b\017SMPL.d	37925 MWODF5	3104	1	Matthew Olley
20	8/7/2012 9:22	Sample	9980583001	C:\Agilent\ICPMH\1\DATA\A080712.b\018SMPL.d	37925 MWODF5	3105	1	Matthew Olley
21	8/7/2012 9:26	Sample	1017909	C:\Agilent\ICPMH\1\DATA\A080712.b\019SMPL.d	37925 MWODF5	3106	1	Matthew Olley

Batch Log

22	8/7/2012 9:30	Sample	1017910	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\020SMPL.d	3107	1	Matthew Olley
23	8/7/2012 9:34	Sample	9980583001PS	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\021SMPL.d	3108	1	Matthew Olley
24	8/7/2012 9:37	Sample	9980583002	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\022SMPL.d	3109	1	Matthew Olley
25	8/7/2012 9:41	Sample	9980583004	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\023SMPL.d	3110	1	Matthew Olley
26	8/7/2012 9:45						Matthew Olley
27	8/7/2012 9:45	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37925 MWO A\A080712.b\024_CCV.d	1307	1	Matthew Olley
28	8/7/2012 9:49	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37925 MWO A\A080712.b\025_CCB.d	1101	1	Matthew Olley
29	8/7/2012 9:53	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37925 MWO A\A080712.b\026LCCV.d	1305	1	Matthew Olley
30	8/7/2012 9:53						Matthew Olley
31	8/7/2012 9:58	Sample	9980583004L	C:\Agilent\ICPMH\1\DAT 37925 MWODF25 A\A080712.b\027SMPL.d	3111	1	Matthew Olley
32	8/7/2012 10:02						Matthew Olley
33	8/7/2012 10:02	Sample	LDR 2 PPM	C:\Agilent\ICPMH\1\DAT 37925 MWO A\A080712.b\028SMPL.d	3112	1	Matthew Olley
34	8/7/2012 10:02						Matthew Olley
35	8/7/2012 10:05						Matthew Olley
36	8/7/2012 10:08	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\029SMPL.d	3201	1	Matthew Olley
37	8/7/2012 10:08						Matthew Olley
38	8/7/2012 10:12						Matthew Olley
39	8/7/2012 10:13	Sample	1017046	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\030SMPL.d	3202	1	Matthew Olley
40	8/7/2012 10:13						Matthew Olley
41	8/7/2012 10:17						Matthew Olley
42	8/7/2012 10:18	Sample	1017047	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\031SMPL.d	3203	1	Matthew Olley
43	8/7/2012 10:22						Matthew Olley
44	8/7/2012 10:22	Sample	9980109001	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\032SMPL.d	3204	1	Matthew Olley
45	8/7/2012 10:26						Matthew Olley

Batch Log

46	8/7/2012 10:26	Sample	9980109003	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\033SMPL.d	3205	1	Matthew Olley
47	8/7/2012 10:30						Matthew Olley
48	8/7/2012 10:30	Sample	9980109004	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\034SMPL.d	3206	1	Matthew Olley
49	8/7/2012 10:33						Matthew Olley
50	8/7/2012 10:33	Sample	9980109005	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\035SMPL.d	3207	1	Matthew Olley
51	8/7/2012 10:37						Matthew Olley
52	8/7/2012 10:37	Sample	9980109006	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\036SMPL.d	3208	1	Matthew Olley
53	8/7/2012 10:41						Matthew Olley
54	8/7/2012 10:41	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\037_CCV.d	1307	1	Matthew Olley
55	8/7/2012 10:45	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\038_CCB.d	1101	1	Matthew Olley
56	8/7/2012 10:49	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\039LCCV.d	1305	1	Matthew Olley
57	8/7/2012 10:53	Sample	9980109007	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\040SMPL.d	3209	1	Matthew Olley
58	8/7/2012 10:57						Matthew Olley
59	8/7/2012 10:57	Sample	9980109008	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\041SMPL.d	3210	1	Matthew Olley
60	8/7/2012 11:01						Matthew Olley
61	8/7/2012 11:01	Sample	9980109009	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\042SMPL.d	3211	1	Matthew Olley
62	8/7/2012 11:05						Matthew Olley
63	8/7/2012 11:05	Sample	9980109010	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\043SMPL.d	3212	1	Matthew Olley
64	8/7/2012 11:09						Matthew Olley
65	8/7/2012 11:09	Sample	9980109011	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\044SMPL.d	3301	1	Matthew Olley
66	8/7/2012 11:12						Matthew Olley
67	8/7/2012 11:12	Sample	1017048	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\045SMPL.d	3302	1	Matthew Olley
68	8/7/2012 11:16						Matthew Olley
69	8/7/2012 11:16	Sample	1017049	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\046SMPL.d	3303	1	Matthew Olley

Batch Log

70	8/7/2012 11:20						Matthew Olley
71	8/7/2012 11:20	Sample	9980109011	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\047SMPL.d	3304	1	Matthew Olley
72	8/7/2012 11:24						Matthew Olley
73	8/7/2012 11:24	Sample	9980109012	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\048SMPL.d	3305	1	Matthew Olley
74	8/7/2012 11:28						Matthew Olley
75	8/7/2012 11:28	Sample	9980109013	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\049SMPL.d	3306	1	Matthew Olley
76	8/7/2012 11:32						Matthew Olley
77	8/7/2012 11:32	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\050_CCV.d	1307	1	Matthew Olley
78	8/7/2012 11:36	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\051_CCB.d	1101	1	Matthew Olley
79	8/7/2012 11:39	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\052LCCV.d	1305	1	Matthew Olley
80	8/7/2012 11:43	Sample	9980109014	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\053SMPL.d	3307	1	Matthew Olley
81	8/7/2012 11:47						Matthew Olley
82	8/7/2012 11:47	Sample	9980109015	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\054SMPL.d	3308	1	Matthew Olley
83	8/7/2012 11:51						Matthew Olley
84	8/7/2012 11:51	Sample	9980109016	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\055SMPL.d	3309	1	Matthew Olley
85	8/7/2012 11:55						Matthew Olley
86	8/7/2012 11:55	Sample	9980109017	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\056SMPL.d	3310	1	Matthew Olley
87	8/7/2012 11:59						Matthew Olley
88	8/7/2012 11:59	Sample	1017050	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\057SMPL.d	3311	1	Matthew Olley
89	8/7/2012 12:03						Matthew Olley
90	8/7/2012 12:03	Sample	1017051	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\058SMPL.d	3312	1	Matthew Olley
91	8/7/2012 12:07						Matthew Olley
92	8/7/2012 12:07	Sample	9980109017PS	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\059SMPL.d	3401	1	Matthew Olley
93	8/7/2012 12:11						Matthew Olley

Batch Log

94	8/7/2012 12:11	Sample	9980109018	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\060SMPL.d	3402	1	Matthew Olley
95	8/7/2012 12:15						Matthew Olley
96	8/7/2012 12:15	Sample	9980109019	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\061SMPL.d	3403	1	Matthew Olley
97	8/7/2012 12:19						Matthew Olley
98	8/7/2012 12:19	Sample	9980109019L	C:\Agilent\ICPMH\1\DAT 37926 MWODF25 A\A080712.b\062SMPL.d	3404	1	Matthew Olley
99	8/7/2012 12:22						Matthew Olley
100	8/7/2012 12:22	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\063_CCV.d	1307	1	Matthew Olley
101	8/7/2012 12:22						Matthew Olley
102	8/7/2012 12:29	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\064_CCB.d	1101	1	Matthew Olley
103	8/7/2012 12:33	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\065LCCV.d	1305	1	Matthew Olley
104	8/7/2012 12:33						Matthew Olley
105	8/7/2012 12:37	Sample	LDR 50 PPM	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\066SMPL.d	3405	1	Matthew Olley
106	8/7/2012 12:37						Matthew Olley
107	8/7/2012 12:41						Matthew Olley
108	8/7/2012 12:42	Sample	CHECK	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\067SMPL.d	3406	1	Matthew Olley
109	8/7/2012 12:42						Matthew Olley
110	8/7/2012 12:46						Matthew Olley
111	8/7/2012 12:47	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\068_CCV.d	1307	1	Matthew Olley
112	8/7/2012 12:51	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\069_CCB.d	1101	1	Matthew Olley
113	8/7/2012 12:51						Matthew Olley
114	8/7/2012 12:58	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\070LCCV.d	1305	1	Matthew Olley
115	8/7/2012 13:02	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\071_CCV.d	1307	1	Matthew Olley
116	8/7/2012 13:02						Matthew Olley
117	8/7/2012 13:07	Sample	1017577	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\072SMPL.d	3407	1	Matthew Olley
118	8/7/2012 13:07						Matthew Olley

Batch Log

119	8/7/2012 13:10						Matthew Olley
120	8/7/2012 13:27	Sample	1017578	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\073SMPL.d	3408	1	Matthew Olley
121	8/7/2012 13:31						Matthew Olley
122	8/7/2012 13:31	Sample	1019627	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\074SMPL.d	3409	1	Matthew Olley
123	8/7/2012 13:35						Matthew Olley
124	8/7/2012 13:35	Sample	1019628	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\075SMPL.d	3410	1	Matthew Olley
125	8/7/2012 13:39						Matthew Olley
126	8/7/2012 13:39	Sample	9980109002	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\076SMPL.d	3411	1	Matthew Olley
127	8/7/2012 13:43						Matthew Olley
128	8/7/2012 13:43	Sample	9980394006	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\077SMPL.d	3412	1	Matthew Olley
129	8/7/2012 13:47						Matthew Olley
130	8/7/2012 13:47	Sample	9980394006L	C:\Agilent\ICPMH\1\DAT 37932 MWODF5 A\A080712.b\078SMPL.d	3501	1	Matthew Olley
131	8/7/2012 13:51						Matthew Olley
132	8/7/2012 13:51	Sample	9980394014	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\079SMPL.d	3502	1	Matthew Olley
133	8/7/2012 13:51						Matthew Olley
134	8/7/2012 13:54						Matthew Olley
135	8/7/2012 13:58	Sample	9980394006PS	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\080SMPL.d	3503	1	Matthew Olley
136	8/7/2012 13:58						Matthew Olley
137	8/7/2012 14:02						Matthew Olley
138	8/7/2012 14:08	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\081_CCV.d	1307	1	Matthew Olley
139	8/7/2012 14:12	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\082_CCB.d	1101	1	Matthew Olley
140	8/7/2012 14:16	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\083LCCV.d	1305	1	Matthew Olley
141	8/7/2012 14:19	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\084_CCV.d	1307	1	Matthew Olley
142	8/7/2012 14:23	Sample	9980395006	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\085SMPL.d	3504	1	Matthew Olley
143	8/7/2012 14:23						Matthew Olley

Batch Log

144	8/7/2012 14:27						Matthew Olley
145	8/7/2012 14:45	Sample	1017579	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\086SMPL.d	3505	1	Matthew Olley
146	8/7/2012 14:49						Matthew Olley
147	8/7/2012 14:49	Sample	1017580	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\087SMPL.d	3506	1	Matthew Olley
148	8/7/2012 14:53						Matthew Olley
149	8/7/2012 14:53	Sample	9980875015	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\088SMPL.d	3507	1	Matthew Olley
150	8/7/2012 14:57						Matthew Olley
151	8/7/2012 14:57	Sample	1019629	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\089SMPL.d	3508	1	Matthew Olley
152	8/7/2012 15:00						Matthew Olley
153	8/7/2012 15:00	Sample	1019630	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\090SMPL.d	3509	1	Matthew Olley
154	8/7/2012 15:04						Matthew Olley
155	8/7/2012 15:04	Sample	9980875015L	C:\Agilent\ICPMH\1\DAT 37932 MWODF5 A\A080712.b\091SMPL.d	3510	1	Matthew Olley
156	8/7/2012 15:08						Matthew Olley
157	8/7/2012 15:08	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\092_CCV.d	1307	1	Matthew Olley
158	8/7/2012 15:12	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\093_CCB.d	1101	1	Matthew Olley
159	8/7/2012 15:16	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\094LCCV.d	1305	1	Matthew Olley
160	8/7/2012 15:26	CalBlk	blk		1101		Matthew Olley
161	8/7/2012 15:26	CalBlk	blk		1101		Matthew Olley
162	8/7/2012 15:26	CalStd	Standard 1		2101		Matthew Olley
163	8/7/2012 15:26	CalStd	Standard 2		2102		Matthew Olley
164	8/7/2012 15:26	CalStd	Standard 3		2103		Matthew Olley
165	8/7/2012 15:26	CalStd	Standard 4		2104		Matthew Olley
166	8/7/2012 15:26	CalStd	Standard 5		2105		Matthew Olley
167	8/7/2012 15:26	ICV	ICV		1307		Matthew Olley
168	8/7/2012 15:26	ICB	ICB		1101		Matthew Olley
169	8/7/2012 15:26	ICB	ICB		1101		Matthew Olley
170	8/7/2012 15:26	LLICV	LLICV		1305		Matthew Olley

Batch Log

171	8/7/2012 15:26	ICSA	ICSA		2111		Matthew Olley
172	8/7/2012 15:26	ICSB	ICSAB		2112		Matthew Olley
173	8/7/2012 15:27	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\095_CCV.d	1307	1	Matthew Olley
174	8/7/2012 15:27						Matthew Olley
175	8/7/2012 15:47	Sample	9979663004	C:\Agilent\ICPMH\1\DAT 37936 MWODF5 A\A080712.b\096SMPL.d	3101	1	Matthew Olley
176	8/7/2012 15:51	Sample	9979678003	C:\Agilent\ICPMH\1\DAT 37936 MWODF5 A\A080712.b\097SMPL.d	3102	1	Matthew Olley
177	8/7/2012 15:51						Matthew Olley
178	8/7/2012 15:57	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\098_CCV.d	1307	1	Matthew Olley
179	8/7/2012 16:01	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\099_CCB.d	1101	1	Matthew Olley
180	8/7/2012 16:05	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\100LCCV.d	1305	1	Matthew Olley
181	8/7/2012 16:05						Matthew Olley
182	8/7/2012 16:41	Sample	9980477001	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\101SMPL.d	3101	1	Matthew Olley
183	8/7/2012 16:45	Sample	9980477002	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\102SMPL.d	3102	1	Matthew Olley
184	8/7/2012 16:49	Sample	9980478001	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\103SMPL.d	3103	1	Matthew Olley
185	8/7/2012 16:53	Sample	9980478002	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\104SMPL.d	3104	1	Matthew Olley
186	8/7/2012 16:56	Sample	9980478003	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\105SMPL.d	3105	1	Matthew Olley
187	8/7/2012 17:00	Sample	9980478004	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\106SMPL.d	3106	1	Matthew Olley
188	8/7/2012 17:04	Sample	9980478004L	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\107SMPL.d	3107	1	Matthew Olley
189	8/7/2012 17:08	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\108_CCV.d	1307	1	Matthew Olley
190	8/7/2012 17:12	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\109_CCB.d	1101	1	Matthew Olley
191	8/7/2012 17:16	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\110LCCV.d	1305	1	Matthew Olley
192	8/7/2012 17:20	Sample	9975539001	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A080712.b\111SMPL.d	3108	1	Matthew Olley

Batch Log

193	8/7/2012 17:24	Sample	9975539002	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A080712.b\112SMPL.d	3109	1	Matthew Olley
194	8/7/2012 17:28	Sample	9975539001	C:\Agilent\ICPMH\1\DAT 99999 MWODF5 A\A080712.b\113SMPL.d	3110	1	Matthew Olley
195	8/7/2012 17:32	Sample	9975539002	C:\Agilent\ICPMH\1\DAT 99999 MWODF5 A\A080712.b\114SMPL.d	3111	1	Matthew Olley
196	8/7/2012 17:35	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\115SMPL.d	3112	1	Matthew Olley
197	8/7/2012 17:39	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\116SMPL.d	3201	1	Matthew Olley
198	8/7/2012 17:43	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\117SMPL.d	3202	1	Matthew Olley
199	8/7/2012 17:47	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\118SMPL.d	3203	1	Matthew Olley
200	8/7/2012 17:51	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\119SMPL.d	3204	1	Matthew Olley
201	8/7/2012 17:55	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\120SMPL.d	3205	1	Matthew Olley
202	8/7/2012 17:59						Matthew Olley
203	8/7/2012 17:59	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A080712.b\121_CCV.d	1307	1	Matthew Olley
204	8/7/2012 18:03	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A080712.b\122_CCB.d	1101	1	Matthew Olley
205	8/7/2012 18:07	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A080712.b\123LCCV.d	1305	1	Matthew Olley

Total Metals in Solid by 6020A Summary Forms

6020 3051
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INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, Inc

SDG No.: ERT-003 **Method Type:** 6020 3051 **SOW No.:**

Contract: ERT003|Ft. Stewart 3 **Lab Code:** CAS **Case No.:** **SAS No.:**

Lab Sample ID	Client Sample ID	QC Description
9980395001	FTSW-AA-SO-28	
9980395002	FTSW-AA-SO-29	
9980395003	FTSW-HR-SO-01	
9980395003S	FTSW-HR-SO-01S	Matrix Spike
9980395003SD	FTSW-HR-SO-01SD	Matrix Spike Duplicate
9980395004	FTSW-HR-SO-01 DUP	
9980395005	FTSW-HR-SO-02 (01.5)	
9980395007	FTSW-HR-SO-03	
9980395008	FTSW-HR-SO-04 (02)	
9980395009	FTSW-HR-SO-05	
9980395010	FTSW-HR-SO-06	
9980395011	FTSW-HR-SO-07	
9980395012	FTSW-HR-SO-08 (02)	
9980395013	FTSW-HR-SO-09	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: **Lisa Miller**

Date: Title: **Metals Manager**

6020 3051
- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, Inc

SDG No.: ERT-003 **Method Type:** 6020 3051 **SOW No.:**

Contract: ERT003|Ft. Stewart 3 **Lab Code:** CAS **Case No.:** **SAS No.:**

Lab Sample ID	Client Sample ID	QC Description
9980395014	FTSW-HR-SO-10 (01.5)	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: **Lisa Miller**

Date: Title: **Metals Manager**

6020 3051

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INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-003 **Method Type:** 6020 3051

Sample ID: 9980395001 **Client ID:** FTSW-AA-SO-28

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 94.7 **Sample Wt/Vol:** 0.56 **Final Vol:** 50.0

Prep Batch ID: 475030 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	2300	mg/Kg			M	37.7	25.0	12.3	5.00	8/13/2012	16:35:19
Copper	7440-50-8	1.0	mg/Kg	J		M	2.4	1.56	0.75	5.00	8/13/2012	16:35:19
Lead	7439-92-1	3.3	mg/Kg			M	0.94	0.61	0.31	5.00	8/13/2012	16:35:19
Zinc	7440-66-6	7.8	mg/Kg			M	2.4	1.56	0.75	5.00	8/13/2012	16:35:19

Comments:

6020 3051

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INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-003 **Method Type:** 6020 3051

Sample ID: 9980395002 **Client ID:** FTSW-AA-SO-29

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 93.9 **Sample Wt/Vol:** 0.54 **Final Vol:** 50.0

Prep Batch ID: 475030 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	3000	mg/Kg			M	39.4	26.1	12.8	5.00	8/13/2012	16:38:50
Copper	7440-50-8	1.5	mg/Kg	J		M	2.5	1.63	0.79	5.00	8/13/2012	16:38:50
Lead	7439-92-1	4.8	mg/Kg			M	0.99	0.64	0.33	5.00	8/13/2012	16:38:50
Zinc	7440-66-6	6.8	mg/Kg			M	2.5	1.63	0.79	5.00	8/13/2012	16:38:50

Comments:

6020 3051

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INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-003 **Method Type:** 6020 3051

Sample ID: 9980395003 **Client ID:** FTSW-HR-SO-01

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 90.5 **Sample Wt/Vol:** 0.54 **Final Vol:** 50.0

Prep Batch ID: 475030 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.02	mg/Kg	U		M	1.5	1.02	0.51	5.00	8/13/2012	16:42:19

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-003 **Method Type:** 6020 3051

Sample ID: 9980395004 **Client ID:** FTSW-HR-SO-01 DUP

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 90.7 **Sample Wt/Vol:** 0.55 **Final Vol:** 50.0

Prep Batch ID: 475030 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.85	mg/Kg	J		M	1.5	1.00	0.50	5.00	8/13/2012	16:56:06

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-003 **Method Type:** 6020 3051

Sample ID: 9980395005 **Client ID:** FTSW-HR-SO-02 (01.5)

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 96.5 **Sample Wt/Vol:** 0.54 **Final Vol:** 50.0

Prep Batch ID: 475030 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.96	mg/Kg	U		M	1.4	0.96	0.48	5.00	8/13/2012	17:12:00

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-003 **Method Type:** 6020 3051

Sample ID: 9980395007 **Client ID:** FTSW-HR-SO-03

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 86.4 **Sample Wt/Vol:** 0.58 **Final Vol:** 50.0

Prep Batch ID: 475030 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.00	mg/Kg	U		M	1.5	1.00	0.50	5.00	8/13/2012	17:15:31

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-003 **Method Type:** 6020 3051

Sample ID: 9980395008 **Client ID:** FTSW-HR-SO-04 (02)

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 96.4 **Sample Wt/Vol:** 0.54 **Final Vol:** 50.0

Prep Batch ID: 475030 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.96	mg/Kg	U		M	1.4	0.96	0.48	5.00	8/13/2012	17:19:00

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-003 **Method Type:** 6020 3051

Sample ID: 9980395009 **Client ID:** FTSW-HR-SO-05

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 90.6 **Sample Wt/Vol:** 0.52 **Final Vol:** 50.0

Prep Batch ID: 475030 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.59	mg/Kg	J		M	1.6	1.06	0.53	5.00	8/13/2012	17:22:30

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-003 **Method Type:** 6020 3051

Sample ID: 9980395010 **Client ID:** FTSW-HR-SO-06

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 95.6 **Sample Wt/Vol:** 0.54 **Final Vol:** 50.0

Prep Batch ID: 475031 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.57	mg/Kg	J		M	1.5	0.97	0.48	5.00	8/13/2012	17:29:31

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-003 **Method Type:** 6020 3051

Sample ID: 9980395011 **Client ID:** FTSW-HR-SO-07

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 84.3 **Sample Wt/Vol:** 0.53 **Final Vol:** 50.0

Prep Batch ID: 475031 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.12	mg/Kg	U		M	1.7	1.12	0.56	5.00	8/13/2012	17:33:00

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-003 **Method Type:** 6020 3051

Sample ID: 9980395012 **Client ID:** FTSW-HR-SO-08 (02)

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 90.3 **Sample Wt/Vol:** 0.55 **Final Vol:** 50.0

Prep Batch ID: 475031 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.01	mg/Kg	U		M	1.5	1.01	0.50	5.00	8/13/2012	17:36:29

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-003 **Method Type:** 6020 3051

Sample ID: 9980395013 **Client ID:** FTSW-HR-SO-09

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 87.9 **Sample Wt/Vol:** 0.52 **Final Vol:** 50.0

Prep Batch ID: 475031 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.09	mg/Kg	U		M	1.6	1.09	0.55	5.00	8/13/2012	17:40:00

Comments:

6020 3051

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INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-003 **Method Type:** 6020 3051

Sample ID: 9980395014 **Client ID:** FTSW-HR-SO-10 (01.5)

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 94.2 **Sample Wt/Vol:** 0.58 **Final Vol:** 50.0

Prep Batch ID: 475031 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.92	mg/Kg	U		M	1.4	0.92	0.46	5.00	8/13/2012	17:43:30

Comments:

6020 3051

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
ICV										
	Aluminum	0.0994	0.1000	99		90 - 110	M	8/13/2012	12:37	A081312C
	Arsenic	0.0984	0.1000	98		90 - 110	M	8/13/2012	12:37	A081312C
	Copper	0.0996	0.1000	100		90 - 110	M	8/13/2012	12:37	A081312C
	Lead	0.0969	0.1000	97		90 - 110	M	8/13/2012	12:37	A081312C
	Zinc	0.0971	0.1000	97		90 - 110	M	8/13/2012	12:37	A081312C
LLICV										
	Aluminum	0.0819	0.0800	102		70 - 130	M	8/13/2012	12:47	A081312C
	Arsenic	0.0033	0.0030	110		70 - 130	M	8/13/2012	12:47	A081312C
	Copper	0.0051	0.0050	102		70 - 130	M	8/13/2012	12:47	A081312C
	Lead	0.0021	0.0020	105		70 - 130	M	8/13/2012	12:47	A081312C
	Zinc	0.0051	0.0050	102		70 - 130	M	8/13/2012	12:47	A081312C
LLCCV										
	Aluminum	0.4059	0.4000	101		70 - 130	M	8/13/2012	13:54	A081312C
	Arsenic	0.0154	0.0150	103		70 - 130	M	8/13/2012	13:54	A081312C
	Copper	0.0255	0.0250	102		70 - 130	M	8/13/2012	13:54	A081312C
	Lead	0.0100	0.0100	100		70 - 130	M	8/13/2012	13:54	A081312C
	Zinc	0.0254	0.0250	102		70 - 130	M	8/13/2012	13:54	A081312C
CCV										
	Aluminum	0.0994	0.1000	99		90 - 110	M	8/13/2012	13:58	A081312C
	Arsenic	0.0940	0.1000	94		90 - 110	M	8/13/2012	13:58	A081312C
	Copper	0.0977	0.1000	98		90 - 110	M	8/13/2012	13:58	A081312C
	Lead	0.0958	0.1000	96		90 - 110	M	8/13/2012	13:58	A081312C
	Zinc	0.0958	0.1000	96		90 - 110	M	8/13/2012	13:58	A081312C
CCV										
	Aluminum	0.1018	0.1000	102		90 - 110	M	8/13/2012	14:52	A081312C
	Arsenic	0.0930	0.1000	93		90 - 110	M	8/13/2012	14:52	A081312C
	Copper	0.1001	0.1000	100		90 - 110	M	8/13/2012	14:52	A081312C
	Lead	0.0967	0.1000	97		90 - 110	M	8/13/2012	14:52	A081312C
	Zinc	0.0972	0.1000	97		90 - 110	M	8/13/2012	14:52	A081312C

6020 3051

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
LLCCV										
	Aluminum	0.0802	0.0800	100		70 - 130	M	8/13/2012	14:59	A081312C
	Arsenic	0.0032	0.0030	107		70 - 130	M	8/13/2012	14:59	A081312C
	Copper	0.0051	0.0050	102		70 - 130	M	8/13/2012	14:59	A081312C
	Lead	0.0020	0.0020	100		70 - 130	M	8/13/2012	14:59	A081312C
	Zinc	0.0051	0.0050	102		70 - 130	M	8/13/2012	14:59	A081312C
LLCCV										
	Aluminum	0.4024	0.4000	101		70 - 130	M	8/13/2012	16:18	A081312C
	Arsenic	0.0161	0.0150	107		70 - 130	M	8/13/2012	16:18	A081312C
	Copper	0.0254	0.0250	102		70 - 130	M	8/13/2012	16:18	A081312C
	Lead	0.0100	0.0100	100		70 - 130	M	8/13/2012	16:18	A081312C
	Zinc	0.0252	0.0250	101		70 - 130	M	8/13/2012	16:18	A081312C
CCV										
	Aluminum	0.4984	0.5000	100		90 - 110	M	8/13/2012	16:21	A081312C
	Arsenic	0.4816	0.5000	96		90 - 110	M	8/13/2012	16:21	A081312C
	Copper	0.4939	0.5000	99		90 - 110	M	8/13/2012	16:21	A081312C
	Lead	0.4847	0.5000	97		90 - 110	M	8/13/2012	16:21	A081312C
	Zinc	0.4834	0.5000	97		90 - 110	M	8/13/2012	16:21	A081312C
CCV										
	Aluminum	0.1021	0.1000	102		90 - 110	M	8/13/2012	16:59	A081312C
	Arsenic	0.0944	0.1000	94		90 - 110	M	8/13/2012	16:59	A081312C
	Copper	0.0985	0.1000	98		90 - 110	M	8/13/2012	16:59	A081312C
	Lead	0.0968	0.1000	97		90 - 110	M	8/13/2012	16:59	A081312C
	Zinc	0.0964	0.1000	96		90 - 110	M	8/13/2012	16:59	A081312C
LLCCV										
	Aluminum	0.0821	0.0800	103		70 - 130	M	8/13/2012	17:08	A081312C
	Arsenic	0.0030	0.0030	100		70 - 130	M	8/13/2012	17:08	A081312C
	Copper	0.0050	0.0050	100		70 - 130	M	8/13/2012	17:08	A081312C
	Lead	0.0020	0.0020	100		70 - 130	M	8/13/2012	17:08	A081312C
	Zinc	0.0052	0.0050	104		70 - 130	M	8/13/2012	17:08	A081312C

6020 3051

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
CCV										
	Aluminum	0.0986	0.1000	99		90 - 110	M	8/13/2012	17:46	A081312C
	Arsenic	0.0950	0.1000	95		90 - 110	M	8/13/2012	17:46	A081312C
	Copper	0.0965	0.1000	96		90 - 110	M	8/13/2012	17:46	A081312C
	Lead	0.0973	0.1000	97		90 - 110	M	8/13/2012	17:46	A081312C
	Zinc	0.0939	0.1000	94		90 - 110	M	8/13/2012	17:46	A081312C
LLCCV										
	Aluminum	0.0824	0.0800	103		70 - 130	M	8/13/2012	17:53	A081312C
	Arsenic	0.0030	0.0030	100		70 - 130	M	8/13/2012	17:53	A081312C
	Copper	0.0050	0.0050	100		70 - 130	M	8/13/2012	17:53	A081312C
	Lead	0.0020	0.0020	100		70 - 130	M	8/13/2012	17:53	A081312C
	Zinc	0.0052	0.0050	104		70 - 130	M	8/13/2012	17:53	A081312C
CCV										
	Aluminum	0.1013	0.1000	101		90 - 110	M	8/13/2012	18:32	A081312C
	Arsenic	0.0922	0.1000	92		90 - 110	M	8/13/2012	18:32	A081312C
	Copper	0.0984	0.1000	98		90 - 110	M	8/13/2012	18:32	A081312C
	Lead	0.0948	0.1000	95		90 - 110	M	8/13/2012	18:32	A081312C
	Zinc	0.0956	0.1000	96		90 - 110	M	8/13/2012	18:32	A081312C
LLCCV										
	Aluminum	0.0826	0.0800	103		70 - 130	M	8/13/2012	18:39	A081312C
	Arsenic	0.0031	0.0030	103		70 - 130	M	8/13/2012	18:39	A081312C
	Copper	0.0050	0.0050	100		70 - 130	M	8/13/2012	18:39	A081312C
	Lead	0.0020	0.0020	100		70 - 130	M	8/13/2012	18:39	A081312C
	Zinc	0.0051	0.0050	102		70 - 130	M	8/13/2012	18:39	A081312C
CCV										
	Aluminum	0.1001	0.1000	100		90 - 110	M	8/13/2012	19:17	A081312C
	Arsenic	0.0929	0.1000	93		90 - 110	M	8/13/2012	19:17	A081312C
	Copper	0.0988	0.1000	99		90 - 110	M	8/13/2012	19:17	A081312C
	Lead	0.0952	0.1000	95		90 - 110	M	8/13/2012	19:17	A081312C
	Zinc	0.0966	0.1000	97		90 - 110	M	8/13/2012	19:17	A081312C

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
LLCCV										
	Aluminum	0.0828	0.0800	104		70 - 130	M	8/13/2012	19:24	A081312C
	Arsenic	0.0031	0.0030	103		70 - 130	M	8/13/2012	19:24	A081312C
	Copper	0.0050	0.0050	100		70 - 130	M	8/13/2012	19:24	A081312C
	Lead	0.0020	0.0020	100		70 - 130	M	8/13/2012	19:24	A081312C
	Zinc	0.0053	0.0050	106		70 - 130	M	8/13/2012	19:24	A081312C

6020 3051

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Conc Qual	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
ICB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/13/2012	12:44	A081312C
	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	12:44	A081312C
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	12:44	A081312C
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/13/2012	12:44	A081312C
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	12:44	A081312C
CCB										
	Aluminum	0.4000	U	0.33	0.1500	0.4000	M	8/13/2012	13:51	A081312C
	Arsenic	0.0135	U	0.011	0.0050	0.0135	M	8/13/2012	13:51	A081312C
	Copper	0.0250	U	0.021	0.0095	0.0250	M	8/13/2012	13:51	A081312C
	Lead	0.0100	U	0.0081	0.0037	0.0100	M	8/13/2012	13:51	A081312C
	Zinc	0.0250	U	0.021	0.0095	0.0250	M	8/13/2012	13:51	A081312C
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/13/2012	14:56	A081312C
	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	14:56	A081312C
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	14:56	A081312C
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/13/2012	14:56	A081312C
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	14:56	A081312C
CCB										
	Aluminum	0.4000	U	0.33	0.1500	0.4000	M	8/13/2012	16:14	A081312C
	Arsenic	0.0135	U	0.011	0.0050	0.0135	M	8/13/2012	16:14	A081312C
	Copper	0.0250	U	0.021	0.0095	0.0250	M	8/13/2012	16:14	A081312C
	Lead	0.0100	U	0.0081	0.0037	0.0100	M	8/13/2012	16:14	A081312C
	Zinc	0.0250	U	0.021	0.0095	0.0250	M	8/13/2012	16:14	A081312C
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/13/2012	17:05	A081312C
	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	17:05	A081312C
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	17:05	A081312C
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/13/2012	17:05	A081312C
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	17:05	A081312C

6020 3051

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Conc Qual	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/13/2012	17:50	A081312C
	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	17:50	A081312C
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	17:50	A081312C
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/13/2012	17:50	A081312C
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	17:50	A081312C
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/13/2012	18:35	A081312C
	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	18:35	A081312C
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	18:35	A081312C
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/13/2012	18:35	A081312C
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	18:35	A081312C
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/13/2012	19:20	A081312C
	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	19:20	A081312C
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	19:20	A081312C
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/13/2012	19:20	A081312C
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	19:20	A081312C

6020 3051
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PREPARATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result (mg/Kg)	Conc Qual	Q	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
1020183			**QC-SOLID**								
	Aluminum	40.0000	U		20	13.0000	40.0000	M	8/13/2012	14:08	A081312C
	Arsenic	1.50000	U		0.75	0.50000	1.50000	M	8/13/2012	14:08	A081312C
	Copper	2.50000	U		1.3	0.80000	2.50000	M	8/13/2012	14:08	A081312C
	Lead	1.00000	U		0.50	0.33000	1.00000	M	8/13/2012	14:08	A081312C
	Zinc	2.50000	U		1.3	0.80000	2.50000	M	8/13/2012	14:08	A081312C
1020187			**QC-SOLID**								
	Arsenic	1.50000	U		0.75	0.50000	1.50000	M	8/13/2012	14:32	A081312C

6020 3051
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INTERFERENCE CHECK SAMPLE

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

ICS Source: Inorganic Ventures **Instrument ID:** AGILENT 7700 ICPMS

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	Analysis Date	Analysis Time	Run Number
ICSA									
	Aluminum	86.2	100.0000	86		80 - 120%	8/13/2012	12:51	A081312C
	Arsenic	0.0006				-0.00300 - -0.00300	8/13/2012	12:51	A081312C
	Copper	0.0011				-0.00500 - -0.00500	8/13/2012	12:51	A081312C
	Lead	0.0005				-0.00200 - -0.00200	8/13/2012	12:51	A081312C
	Zinc	0.0035				-0.01000 - -0.01000	8/13/2012	12:51	A081312C
ICSAB									
	Aluminum	87.4	100.0000	87		80 - 120%	8/13/2012	13:00	A081312C
	Arsenic	0.0201	0.02000	100		80 - 120%	8/13/2012	13:00	A081312C
	Copper	0.0193	0.02000	96		80 - 120%	8/13/2012	13:00	A081312C
	Lead	0.0004				-0.00200 - -0.00200	8/13/2012	13:00	A081312C
	Zinc	0.0239	0.02000	120		80 - 120%	8/13/2012	13:00	A081312C

6020 3051
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INTERFERENCE CHECK SAMPLE

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

ICS Source: Inorganic Ventures **Instrument ID:** AGILENT 7700 ICPMS

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	Analysis Date	Analysis Time	Run Number
ICSA									
	Aluminum	86.2	100.0000	86		80 - 120%	8/13/2012	12:51	A081312C
	Arsenic	0.0006				-0.00300 - -0.00300	8/13/2012	12:51	A081312C
	Copper	0.0011				-0.00500 - -0.00500	8/13/2012	12:51	A081312C
	Lead	0.0005				-0.00200 - -0.00200	8/13/2012	12:51	A081312C
	Zinc	0.0035				-0.01000 - -0.01000	8/13/2012	12:51	A081312C
ICSAB									
	Aluminum	87.4	100.0000	87		80 - 120%	8/13/2012	13:00	A081312C
	Arsenic	0.0201	0.02000	100		80 - 120%	8/13/2012	13:00	A081312C
	Copper	0.0193	0.02000	96		80 - 120%	8/13/2012	13:00	A081312C
	Lead	0.0004				-0.00200 - -0.00200	8/13/2012	13:00	A081312C
	Zinc	0.0239	0.02000	120		80 - 120%	8/13/2012	13:00	A081312C

6020 3051
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MATRIX SPIKE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: SOIL **Sample ID:** 9980395003 **Client ID:** FTSW-HR-SO-01S **LIMS ID:** 1020185

Percent Solids for Sample: 90.54 **Spiked ID:** 9980395003S **Percent Solids for Spike Sample:** 90.54

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	80 - 120	2769.72		2316.52		200.808	NSC		M
Arsenic	mg/Kg	80 - 120	18.92		1.51	U	20.081	94		M
Copper	mg/Kg	80 - 120	20.761		1.109		20.081	98		M
Lead	mg/Kg	80 - 120	26.328		6.213		20.081	100		M
Zinc	mg/Kg	80 - 120	202.297		3.954		200.808	99		M

6020 3051
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: SOIL **Sample ID:** 9980395003 **Client ID:** FTSW-HR-SO-01SD **LIMS ID:** 1020186

Percent Solids for Sample: 90.54 **Spiked ID:** 9980395003SD **Percent Solids for Spike Sample:** 90.54

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	80 - 120	2637.34		2316.52		190.422	NSC		M
Arsenic	mg/Kg	80 - 120	19.15		1.43	U	19.042	101		M
Copper	mg/Kg	80 - 120	20.893		1.109		19.042	104		M
Lead	mg/Kg	80 - 120	26.075		6.213		19.042	104		M
Zinc	mg/Kg	80 - 120	199.832		3.954		190.422	103		M

6020 3051

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DUPLICATE SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: SOIL **Sample ID:** 9980395003S **Client ID:** FTSW-HR-SO-01SD **LIMS ID:** 1020186

Percent Solids for Sample: 90.54 **Duplicate ID:** 9980395003SD **Percent Solids for Duplicate:** 90.54

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	0 - 20	2769.72		2637.34		4.90		M
Arsenic	mg/Kg	0 - 20	18.92		19.15		1		M
Copper	mg/Kg	0 - 20	20.761		20.893		1		M
Lead	mg/Kg	0 - 20	26.328		26.075		1		M
Zinc	mg/Kg	0 - 20	202.297		199.832		1		M

6020 3051
- 7 -
LABORATORY CONTROL SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Aqueous LCS Source: **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Q	QC Criteria	M
1020184									
	Aluminum	mg/Kg	200.0	202.4		101.2		80 - 120	M
	Arsenic	mg/Kg	20.0	18.6		93.0		80 - 120	M
	Copper	mg/Kg	20.0	19.5		97.5		80 - 120	M
	Lead	mg/Kg	20.0	19.6		98.0		80 - 120	M
	Zinc	mg/Kg	200.0	195.1		97.6		80 - 120	M

6020 3051
- 7 -
LABORATORY CONTROL SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Aqueous LCS Source: **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Q	QC Criteria	M
1020188									
	Arsenic	mg/Kg	20.0	19.7		98.5		80 - 120	M

6020 3051

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SERIAL DILUTION SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Matrix: WATER **Level:** LOW **Client ID:** FTSW-HR-SO-05L

Sample ID: 9980395009 **Serial Dilution ID:** 9980395009L

Analyte	Initial Result mg/L	C	Serial Result mg/L	C	% Difference	Qual	Acceptance Limits	M
Arsenic	0.0010	U	0.0010	U			10.00 %	M

6020 3051

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SERIAL DILUTION SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Matrix: WATER **Level:** LOW **Client ID:** FTSW-HR-SO-10 (01.5)L

Sample ID: 9980395014 **Serial Dilution ID:** 9980395014L

Analyte	Initial Result mg/L	C	Serial Result mg/L	C	% Difference	Qual	Acceptance Limits	M
Aluminum	0.0300	U	15.2992		100.0		10.00 %	M
Arsenic	0.0010	U	0.0010	U			10.00 %	M
Copper	0.0019	U	0.0019	U			10.00 %	M
Lead	0.0007	U	0.0007	U			10.00 %	M
Zinc	0.0019	U	0.0019	U			10.00 %	M

6020 3051

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LINEAR RANGES

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Instrument ID: AGILENT 7700 ICPMS **Date:** 1/19/2012

Analyte	Integration Time (sec)	LDR mg/L
Aluminum	1.00	90
Arsenic	1.00	5
Copper	1.00	50
Lead	1.00	5
Zinc	1.00	50

6020 3051
- 13 -
SAMPLE PREPARATION SUMMARY

Client: ERT Earth Resources Technology, Inc.

SDG No.: ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS

Method: MS

Case No.: _____ **SAS No.:** _____

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	475030						
1020183	MB for HBN 475030 [MDIG/3741	MB	QC-SOLI	8/8/12	0.50	50.0	100.00
1020184	LCS for HBN 475030 [MDIG/3741	LCS	QC-SOLI	8/8/12	0.50	50.0	100.00
9980395001	FTSW-AA-SO-28	SAM	SOIL	8/8/12	0.56	50.0	94.70
9980395002	FTSW-AA-SO-29	SAM	SOIL	8/8/12	0.54	50.0	93.90
9980395003	FTSW-HR-SO-01	SAM	SOIL	8/8/12	0.54	50.0	90.54
9980395003S	FTSW-HR-SO-01S	MS	SOIL	8/8/12	0.55	50.0	90.54
9980395003SD	FTSW-HR-SO-01SD	MSD	SOIL	8/8/12	0.58	50.0	90.54
9980395004	FTSW-HR-SO-01 DUP	SAM	SOIL	8/8/12	0.55	50.0	90.75
9980395005	FTSW-HR-SO-02 (01.5)	SAM	SOIL	8/8/12	0.54	50.0	96.55
9980395007	FTSW-HR-SO-03	SAM	SOIL	8/8/12	0.58	50.0	86.40
9980395008	FTSW-HR-SO-04 (02)	SAM	SOIL	8/8/12	0.54	50.0	96.37
9980395009	FTSW-HR-SO-05	SAM	SOIL	8/8/12	0.52	50.0	90.62

6020 3051
- 13 -
SAMPLE PREPARATION SUMMARY

Client: ERT Earth Resources Technology, Inc.

SDG No.: ERT-003

Contract: ERT003|Ft. Stewart 3153-004 **Lab Code:** CAS

Method: MS

Case No.: _____ **SAS No.:** _____

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	475031						
1020187	MB for HBN 475031 [MDIG/3742	MB	QC-SOLI	8/8/12	0.50	50.0	100.00
1020188	LCS for HBN 475031 [MDIG/3742	LCS	QC-SOLI	8/8/12	0.50	50.0	100.00
9980395010	FTSW-HR-SO-06	SAM	SOIL	8/8/12	0.54	50.0	95.57
9980395011	FTSW-HR-SO-07	SAM	SOIL	8/8/12	0.53	50.0	84.35
9980395012	FTSW-HR-SO-08 (02)	SAM	SOIL	8/8/12	0.55	50.0	90.27
9980395013	FTSW-HR-SO-09	SAM	SOIL	8/8/12	0.52	50.0	87.93
9980395014	FTSW-HR-SO-10 (01.5)	SAM	SOIL	8/8/12	0.58	50.0	94.16
9980614013S	FTSW-HR-SO-22 (04)S	MS	SOIL	8/8/12	0.56	50.0	87.98
9980614013SD	FTSW-HR-SO-22 (04)SD	MSD	SOIL	8/8/12	0.59	50.0	87.98

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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT003|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-003

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1212																												
BLK	1.00	1216		X		X							X		X											X				
STANDARD 1	1.00	1219		X		X							X		X											X				
STANDARD 2	1.00	1223		X		X							X		X											X				
STANDARD 3	1.00	1226		X		X							X		X											X				
STANDARD 4	1.00	1230		X		X							X		X											X				
STANDARD 5	1.00	1233		X		X							X		X											X				
ICV	1.00	1237		X		X							X		X											X				
ZZZZZZ	1.00	1240																												
ICB2	1.00	1244		X		X							X		X											X				
LLICV	1.00	1247		X		X							X		X											X				
ICS-A1	1.00	1251		X		X							X		X											X				
ICS-AB1	1.00	1300		X		X							X		X											X				
ZZZZZZ	5.00	1304																												
ZZZZZZ	5.00	1307																												
ZZZZZZ	5.00	1311																												
ZZZZZZ	5.00	1314																												
ZZZZZZ	5.00	1318																												
ZZZZZZ	5.00	1321																												
ZZZZZZ	5.00	1324																												
ZZZZZZ	5.00	1328																												
ZZZZZZ	5.00	1331																												
ZZZZZZ	5.00	1335																												
ZZZZZZ	5.00	1338																												
CCB1	5.00	1351		X		X							X		X											X				
LLCCV	5.00	1354		X		X							X		X											X				
CCV2	1.00	1358		X		X							X		X											X				
ZZZZZZ	5.00	1401																												
ZZZZZZ	5.00	1405																												
1020183	5.00	1408		X		X							X		X											X				
1020184	5.00	1412		X		X							X		X											X				
1020187	5.00	1432				X																								
1020188	5.00	1435				X																								
ZZZZZZ	5.00	1438																												
ZZZZZZ	5.00	1442																												
ZZZZZZ	5.00	1445																												

6020 3051
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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT003|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-003

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	1449																										
CCV3	1.00	1452		X		X							X		X											X	
CCB2	1.00	1456		X		X							X		X											X	
LLCCV	1.00	1459		X		X							X		X											X	
ZZZZZZ	5.00	1503																										
ZZZZZZ	5.00	1506																										
ZZZZZZ	5.00	1510																										
ZZZZZZ	5.00	1513																										
ZZZZZZ	5.00	1517																										
ZZZZZZ	5.00	1520																										
ZZZZZZ	5.00	1524																										
ZZZZZZ	5.00	1527																										
ZZZZZZ	5.00	1531																										
ZZZZZZ	5.00	1534																										
ZZZZZZ	1.00	1538																										
ZZZZZZ	1.00	1541																										
ZZZZZZ	1.00	1545																										
ZZZZZZ	5.00	1550																										
ZZZZZZ	5.00	1554																										
ZZZZZZ	5.00	1557																										
ZZZZZZ	5.00	1600																										
ZZZZZZ	5.00	1604																										
ZZZZZZ	5.00	1607																										
ZZZZZZ	5.00	1611																										
CCB4	5.00	1614		X		X							X		X											X	
LLCCV	5.00	1618		X		X							X		X											X	
CCV6	5.00	1621		X		X							X		X											X	
ZZZZZZ	5.00	1624																										
ZZZZZZ	5.00	1628																										
ZZZZZZ	25.00	1631																										
9980395001	5.00	1635		X									X		X											X	
9980395002	5.00	1638		X									X		X											X	
9980395003	5.00	1642				X																						
9980395003S	5.00	1645		X		X							X		X											X	
9980395003SD	5.00	1649		X		X							X		X											X	
ZZZZZZ	5.00	1652																										

6020 3051
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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT003|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-003

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
9980395004	5.00	1656				X																								
CCV7	1.00	1659		X		X							X		X										X					
CCB5	1.00	1705		X		X							X		X										X					
LLCCV	1.00	1708		X		X							X		X										X					
9980395005	5.00	1712				X																								
9980395007	5.00	1715				X																								
9980395008	5.00	1719				X																								
9980395009	5.00	1722				X																								
9980395009L	25.00	1726				X																								
9980395010	5.00	1729				X																								
9980395011	5.00	1733				X																								
9980395012	5.00	1736				X																								
9980395013	5.00	1740				X																								
9980395014	5.00	1743				X																								
CCV8	1.00	1746		X		X							X		X										X					
CCB6	1.00	1750		X		X							X		X										X					
LLCCV	1.00	1753		X		X							X		X										X					
9980395014L	25.00	1757		X		X							X		X										X					
ZZZZZZ	5.00	1800																												
ZZZZZZ	5.00	1804																												
ZZZZZZ	5.00	1807																												
ZZZZZZ	5.00	1811																												
ZZZZZZ	5.00	1814																												
ZZZZZZ	5.00	1818																												
ZZZZZZ	5.00	1821																												
ZZZZZZ	5.00	1825																												
ZZZZZZ	5.00	1828																												
ZZZZZZ	1.00	1832																												
ZZZZZZ	1.00	1835																												
ZZZZZZ	1.00	1839																												
ZZZZZZ	5.00	1842																												
ZZZZZZ	5.00	1846																												
ZZZZZZ	5.00	1849																												
ZZZZZZ	5.00	1853																												
ZZZZZZ	5.00	1856																												
ZZZZZZ	5.00	1900																												

6020 3051
14
ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT003|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-003

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	1903																								
ZZZZZZ	5.00	1906																								
ZZZZZZ	5.00	1910																								
ZZZZZZ	25.00	1913																								
ZZZZZZ	1.00	1917																								
ZZZZZZ	1.00	1920																								
ZZZZZZ	1.00	1924																								
ZZZZZZ	5.00	1927																								
ZZZZZZ	5.00	1931																								
ZZZZZZ	5.00	1934																								
ZZZZZZ	5.00	1938																								
ZZZZZZ	5.00	1941																								
ZZZZZZ	5.00	1945																								
ZZZZZZ	5.00	1948																								
ZZZZZZ	25.00	1952																								
ZZZZZZ	5.00	1955																								
ZZZZZZ	5.00	1959																								
ZZZZZZ	1.00	2002																								
ZZZZZZ	1.00	2006																								
ZZZZZZ	1.00	2009																								
ZZZZZZ	5.00	2013																								
ZZZZZZ	5.00	2016																								
ZZZZZZ	5.00	2020																								
ZZZZZZ	5.00	2023																								
ZZZZZZ	5.00	2026																								
ZZZZZZ	5.00	2030																								
ZZZZZZ	5.00	2033																								
ZZZZZZ	5.00	2037																								
ZZZZZZ	5.00	2040																								
ZZZZZZ	5.00	2044																								
ZZZZZZ	1.00	2047																								
ZZZZZZ	1.00	2051																								
ZZZZZZ	1.00	2054																								
ZZZZZZ	5.00	2058																								
ZZZZZZ	5.00	2101																								
ZZZZZZ	5.00	2105																								

6020 3051
14
ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT003|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-003

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	2108																								
ZZZZZZ	25.00	2112																								
ZZZZZZ	5.00	2115																								
ZZZZZZ	25.00	2119																								
ZZZZZZ	5.00	2122																								
ZZZZZZ	5.00	2126																								
ZZZZZZ	5.00	2129																								
ZZZZZZ	1.00	2133																								
ZZZZZZ	1.00	2136																								
ZZZZZZ	1.00	2140																								
ZZZZZZ	5.00	2143																								
ZZZZZZ	5.00	2147																								
ZZZZZZ	5.00	2150																								
ZZZZZZ	5.00	2153																								
ZZZZZZ	5.00	2157																								
ZZZZZZ	5.00	2200																								
ZZZZZZ	5.00	2204																								
ZZZZZZ	5.00	2207																								
ZZZZZZ	5.00	2211																								
ZZZZZZ	5.00	2214																								
ZZZZZZ	5.00	2218																								
ZZZZZZ	5.00	2221																								
ZZZZZZ	5.00	2225																								
ZZZZZZ	5.00	2228																								
ZZZZZZ	25.00	2232																								
ZZZZZZ	5.00	2235																								
ZZZZZZ	5.00	2239																								
ZZZZZZ	5.00	2242																								
ZZZZZZ	1.00	2246																								
ZZZZZZ	1.00	2256																								
ZZZZZZ	5.00	2259																								
ZZZZZZ	5.00	2311																								
ZZZZZZ	5.00	2315																								
ZZZZZZ	5.00	2318																								
ZZZZZZ	25.00	2327																								
ZZZZZZ	5.00	2330																								

6020 3051
14
ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT003|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-003

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	2339																												
ZZZZZZ	5.00	2343																												
ZZZZZZ	5.00	2346																												

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT003|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-003

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For: Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
BLK	ZZZZZZ	1212												
BLK	BLK	1216	100		100		100		100		100		100	
STANDARD 1	STANDARD 1	1219	112		99		97		102		91		95	
STANDARD 2	STANDARD 2	1223	113		100		98		103		102		102	
STANDARD 3	STANDARD 3	1226	116		100		101		101		102		105	
STANDARD 4	STANDARD 4	1230	114		100		99		105		103		104	
STANDARD 5	STANDARD 5	1233	117		101		101		104		103		105	
ICV	ICV	1237	115		99		99		104		102		103	
ICB1	ZZZZZZ	1240												
ICB2	ICB	1244	102		99		98		98		99		98	
LLICV	LLICV	1247	111		100		97		103		104		100	
ICS-A1	ICSA	1251	106		96		92		101		99		96	
ICS-AB1	ICSAB	1300	107		102		95		107		106		102	
1020719	ZZZZZZ	1304												
1020720	ZZZZZZ	1307												
9981408002	ZZZZZZ	1311												
9981430001	ZZZZZZ	1314												
1020721	ZZZZZZ	1318												
1020722	ZZZZZZ	1321												
9981430001P	ZZZZZZ	1324												
9981517002	ZZZZZZ	1328												
9981517003	ZZZZZZ	1331												
9981517003L	ZZZZZZ	1335												
CCV1	ZZZZZZ	1338												
CCB1	CCB	1351	112		107		104		111		112		112	
LLCCV	LLCCV	1354	109		105		100		109		113		109	
CCV2	CCV	1358	108		104		99		110		112		109	
1021781	ZZZZZZ	1401												
1021782	ZZZZZZ	1405												
1020183	MB for HBN 47503	1408	104		102		95		106		108		104	
1020184	LCS for HBN 4750	1412	107		101		97		108		110		107	
1020187	MB for HBN 47503	1432	105		102		97		106		111		111	
1020188	LCS for HBN 4750	1435	107		103		97		109		111		109	
1020191	ZZZZZZ	1438												
1020192	ZZZZZZ	1442												
1020195	ZZZZZZ	1445												
1020196	ZZZZZZ	1449												
CCV3	CCV	1452	115		110		106		114		116		116	
CCB2	CCB	1456	117		112		108		115		116		116	
LLCCV	LLCCV	1459	111		107		105		114		113		114	
9980394001	ZZZZZZ	1503												
9980394002	ZZZZZZ	1506												
9980394003	ZZZZZZ	1510												
9980394004	ZZZZZZ	1513												
9980394005	ZZZZZZ	1517												

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT003|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-003

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980394007	ZZZZZZ	1520												
9980394008	ZZZZZZ	1524												
9980394009	ZZZZZZ	1527												
9980394010	ZZZZZZ	1531												
9980394011	ZZZZZZ	1534												
CCV4	ZZZZZZ	1538												
CCB3	ZZZZZZ	1541												
LLCCV	ZZZZZZ	1545												
1020719	ZZZZZZ	1550												
1020720	ZZZZZZ	1554												
9981430001	ZZZZZZ	1557												
1020721	ZZZZZZ	1600												
1020722	ZZZZZZ	1604												
9981430001P	ZZZZZZ	1607												
CCV5	ZZZZZZ	1611												
CCB4	CCB	1614	112		109		105		113		115		114	
LLCCV	LLCCV	1618	111		106		102		112		114		111	
CCV6	CCV	1621	110		107		102		112		114		110	
9980394012	ZZZZZZ	1624												
9980394013	ZZZZZZ	1628												
9980394013L	ZZZZZZ	1631												
9980395001	FTSW-AA-SO-28	1635	109		106		102		114		117		113	
9980395002	FTSW-AA-SO-29	1638	109		104		102		114		117		112	
9980395003	FTSW-HR-SO-01	1642	111		104		103		114		115		112	
9980395003S	FTSW-HR-SO-01S	1645	108		104		101		112		113		110	
9980395003S	FTSW-HR-SO-01SD	1649	107		102		99		111		113		108	
9980395003P	ZZZZZZ	1652												
9980395004	FTSW-HR-SO-01 DU	1656	110		102		100		111		113		107	
CCV7	CCV	1659	106		103		97		108		112		105	
CCB5	CCB	1705	109		103		100		110		111		107	
LLCCV	LLCCV	1708	107		103		99		109		112		108	
9980395005	FTSW-HR-SO-02 (0	1712	109		102		98		111		111		105	
9980395007	FTSW-HR-SO-03	1715	109		102		100		111		111		107	
9980395008	FTSW-HR-SO-04 (0	1719	111		103		101		112		113		110	
9980395009	FTSW-HR-SO-05	1722	111		104		102		112		115		110	
9980395009L	FTSW-HR-SO-05L	1726	111		104		102		110		112		122	
9980395010	FTSW-HR-SO-06	1729	109		103		99		112		111		109	
9980395011	FTSW-HR-SO-07	1733	109		103		100		109		113		107	
9980395012	FTSW-HR-SO-08 (0	1736	112		104		100		111		111		107	
9980395013	FTSW-HR-SO-09	1740	110		103		102		110		111		109	
9980395014	FTSW-HR-SO-10 (0	1743	110		101		99		109		111		107	
CCV8	CCV	1746	107		103		100		110		111		105	
CCB6	CCB	1750	108		103		100		109		109		105	
LLCCV	LLCCV	1753	107		103		98		109		112		107	
9980395014L	FTSW-HR-SO-10 (0	1757	106		101		97		108		110		105	

6020 3051

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT003|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-003

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980614001	ZZZZZZ	1800												
9980614002	ZZZZZZ	1804												
9980614003	ZZZZZZ	1807												
9980614004	ZZZZZZ	1811												
9980614005	ZZZZZZ	1814												
9980614006	ZZZZZZ	1818												
9980614007	ZZZZZZ	1821												
9980614008	ZZZZZZ	1825												
9980614009	ZZZZZZ	1828												
CCV9	ZZZZZZ	1832												
CCB7	ZZZZZZ	1835												
LLCCV	ZZZZZZ	1839												
9980614010	ZZZZZZ	1842												
9980614011	ZZZZZZ	1846												
9980614012	ZZZZZZ	1849												
9980614013	ZZZZZZ	1853												
9980614013S	ZZZZZZ	1856												
9980614013S	ZZZZZZ	1900												
9980614013P	ZZZZZZ	1903												
9980614014	ZZZZZZ	1906												
9980614015	ZZZZZZ	1910												
9980614015L	ZZZZZZ	1913												
CCV10	ZZZZZZ	1917												
CCB8	ZZZZZZ	1920												
LLCCV	ZZZZZZ	1924												
9980614016	ZZZZZZ	1927												
9980614017	ZZZZZZ	1931												
9980614018	ZZZZZZ	1934												
9980614019	ZZZZZZ	1938												
9980614020	ZZZZZZ	1941												
9980614021	ZZZZZZ	1945												
9980614022	ZZZZZZ	1948												
9980614022L	ZZZZZZ	1952												
9980875001	ZZZZZZ	1955												
1020193	ZZZZZZ	1959												
CCV11	ZZZZZZ	2002												
CCB9	ZZZZZZ	2006												
LLCCV	ZZZZZZ	2009												
1020194	ZZZZZZ	2013												
9980875001P	ZZZZZZ	2016												
9980875002	ZZZZZZ	2020												
9980875003	ZZZZZZ	2023												
9980875004	ZZZZZZ	2026												
9980875005	ZZZZZZ	2030												
9980875006	ZZZZZZ	2033												

6020 3051

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT003|Ft. Stewart 3153-004

Lab Code: CAS Case No.: _____ NRAS No.: _____ SDG NO.: ERT-003

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For:													
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980875007	ZZZZZZ	2037												
9980875008	ZZZZZZ	2040												
9980875009	ZZZZZZ	2044												
CCV12	ZZZZZZ	2047												
CCB10	ZZZZZZ	2051												
LLCCV	ZZZZZZ	2054												
9980875010	ZZZZZZ	2058												
9980875011	ZZZZZZ	2101												
9980875012	ZZZZZZ	2105												
9980875013	ZZZZZZ	2108												
9980875013L	ZZZZZZ	2112												
9980875014	ZZZZZZ	2115												
9980875014L	ZZZZZZ	2119												
9981198001	ZZZZZZ	2122												
9981198002	ZZZZZZ	2126												
9981198003	ZZZZZZ	2129												
CCV13	ZZZZZZ	2133												
CCB11	ZZZZZZ	2136												
LLCCV	ZZZZZZ	2140												
1020197	ZZZZZZ	2143												
1020198	ZZZZZZ	2147												
9981198003P	ZZZZZZ	2150												
9981198004	ZZZZZZ	2153												
9981198005	ZZZZZZ	2157												
9981198006	ZZZZZZ	2200												
9981198007	ZZZZZZ	2204												
9981198008	ZZZZZZ	2207												
9981198009	ZZZZZZ	2211												
9981198010	ZZZZZZ	2214												
CCV14	ZZZZZZ	2218												
CCB12	ZZZZZZ	2221												
LLCCV	ZZZZZZ	2225												
9981198011	ZZZZZZ	2228												
9981198011L	ZZZZZZ	2232												
CCV15	ZZZZZZ	2235												
CCB13	ZZZZZZ	2239												
LLCCV	ZZZZZZ	2242												
50 PPM LDR	ZZZZZZ	2246												
30 PPM LDR	ZZZZZZ	2256												
1020719	ZZZZZZ	2259												
CCV16	ZZZZZZ	2311												
CCB14	ZZZZZZ	2315												
LLCCV	ZZZZZZ	2318												
9980875009	ZZZZZZ	2327												
1021781	ZZZZZZ	2330												

6020 3051

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT003|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-003

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
CCV17	ZZZZZZ	2339												
CCB15	ZZZZZZ	2343												
LLCCV	ZZZZZZ	2346												

Total Metals in Solid by 6020A Raw Data

Dataset: A081312C 2nd Review MWO/ MM

First Review: MM/MWO Approval: MWO/ MM

Internal Standards: **ICPMS9190**

200	60-125%	**6020Qc:**	70-130%	**6020A**	30-130%	**DOD:**	70-120%

Standards :
Tuning MS0361
Daily Standard: MS0361

Calibration Standards
MS0343
MS0344

PIPETTES:

03-028	10.0 mL
03-202	.200 mL
03-201	1.0 mL
03-031	1.0 mL

ICSA: MS0341
ICSAB:MS0340

Al LDR 30 ppm

GOLD: MS0346
DW LCS: MS0358
Second Source

MA1393	MA1388	MA1360
MA1342	MS0345	MA1381
MS0309	MA1359	

Internal Standards/ Target Analytes

Sc-Al,V,Cr,Mn,Co,Ni,Cu,Na, K, Ti, Mg, Ca, Fe, As, Zn, Se,
Y
In-Sr, Mo, Ag, Cd, Sn, Sb, Ba
Tb
Bi-Hg, Tl, Pb, U

Rerun at Passed

RR. MB 1020719 } Fe } Carry
LCS 1020720 } Mo } over from ICSAB

Case Narrative:

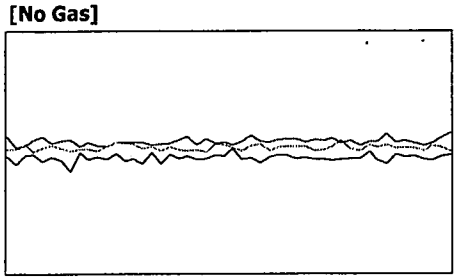
9981430001 - Mo
1020721
1020722 1

***D**: *D at the beginning of the Dataset Denotes that the samples were run on the Elan DRCe ICP-MS*

Tune Report

Batch Folder C:\Agilent\ICPMH\1\DATA\A081312.b
Report Comment
Instrument Name G3281A JP11040846

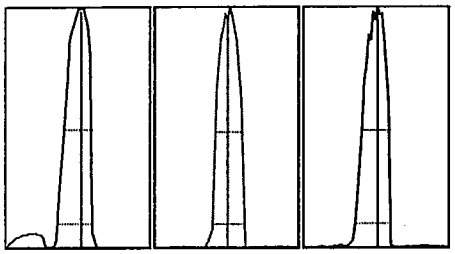
[No Gas]



Mass	Range	Count	RSD%	Background
7	20000	10949	2.467	16.800
89	10000	5213	2.148	10.900
205	5000	2399	3.205	29.500

Ratio (oxide) 156/140 0.448 % **Ratio (2+)** 70/140 12.811 %

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.311



Mass	Peak Height	Axis	W-50%	W-X%
7	10990.74	7.10	0.60	0.728
89	5222.83	89.05	0.59	0.689
205	2456.22	205.05	0.61	0.740

X = 10 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 22.74 **Y Axis** Linear

Tune Parameters

Plasma Paramters

RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	9.2 V	Deflect	16.0 V
Extract 2	-200.0 V	Cell Entrance	-32 V	Plate Bias	-50 V
Omega Bias	-85 V	Cell Exit	-48 V		

Cell Parameters

OctP Bias	-8.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	200 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

[he]

Mass	Range	Count	RSD%	Background
59	2000	1752	4.007	
89	5000	2182	3.418	
51	500	382	7.089	

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.306

Tune Parameters

Tune Report

Plasma Paramters

RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
Mass **Range**	**Count**	**RSD%**	**Background**		
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	9.2 V	Deflect	0.0 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-85 V	Cell Exit	-60 V		

Cell Parameters

OctP Bias	-18.0 V	He Flow	3.5 mL/min	Energy Discrimination	3.0 V
OctP RF	200 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

[HeHe]

Mass	Range	Count	RSD%	Background
59	1000	573	5.217	
89	1000	478	5.792	
51	50	28	27.475	

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.306

Tune Parameters

Plasma Paramters

RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	9.2 V	Deflect	-73.2 V
Extract 2	-200.0 V	Cell Entrance	-140 V	Plate Bias	-150 V
Omega Bias	-85 V	Cell Exit	-150 V		

Cell Parameters

OctP Bias	-100.0 V	He Flow	10.0 mL/min	Energy Discrimination	7.0 V
OctP RF	180 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	001CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:12:50-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	2551	3.61
Cr	52	1	No Gas	9974	0.04
Mn	55	1	No Gas	19045	0.02
Co	59	1	No Gas	330	7.40
Ni	60	1	No Gas	18053	0.01
Cu	63	1	No Gas	601	0.73
Sr	88	1	No Gas	59	210.68
Ag	107	1	No Gas	56	164.96
Al	27	1	No Gas	7669	0.03
Sn	118	1	No Gas	215	1.39
Ti	47	1	No Gas	297	7.26
Zn	66	1	No Gas	660	3.98
As	75	3	HeHe	10	373.51
As	75	1	No Gas	24182	0.01
Sb	121	1	No Gas	167	18.33
Hg	201	1	No Gas	39	65.07
Be	9	1	No Gas	22	71.57
Pb	208	1	No Gas	463	4.16
Se	82	1	No Gas	41	386.23
Mo	98	1	No Gas	923	2.04
Ba	137	1	No Gas	53	162.38
Tl	205	1	No Gas	63	85.61
U	238	1	No Gas	107	53.04
Na	23	2	he	85677	0.00
Mg	24	2	he	200	13.89
K	39	2	he	193930	0.00
Se	82	3	HeHe	48	14.65
Fe	57	3	HeHe	126	26.53
Cd	114	1	No Gas	37	214.72
Ca	44	1	No Gas	123727	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	5836894	3.06
Sc	45	2	he	1293410	1.06
Ge	72	1	No Gas	677402	2.06
In	115	1	No Gas	3685121	2.00
Tb	159	1	No Gas	4485657	1.37

Calibration Blank Report

Bi	209	1	No Gas	2034548	4.06
Sc	45	3	HeHe	136772	1.11

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	002CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:16:22-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	1149	13.25
Cr	52	1	No Gas	10752	0.07
Mn	55	1	No Gas	31947	0.08
Co	59	1	No Gas	248	5.80
Ni	60	1	No Gas	18861	0.01
Cu	63	1	No Gas	595	1.97
Sr	88	1	No Gas	93	45.51
Ag	107	1	No Gas	37	337.22
Al	27	1	No Gas	8628	0.05
Sn	118	1	No Gas	193	6.24
Ti	47	1	No Gas	295	6.58
Zn	66	1	No Gas	783	1.76
As	75	3	HeHe	7	579.68
As	75	1	No Gas	23234	0.03
Sb	121	1	No Gas	126	31.60
Hg	201	1	No Gas	33	81.17
Be	9	1	No Gas	23	265.75
Pb	208	1	No Gas	293	14.59
Mo	98	1	No Gas	864	3.14
Ba	137	1	No Gas	50	105.83
Tl	205	1	No Gas	26	668.06
U	238	1	No Gas	37	247.43
Na	23	2	he	83881	0.00
Mg	24	2	he	152	54.16
K	39	2	he	200065	0.00
Se	82	3	HeHe	62	45.93
Fe	57	3	HeHe	174	12.88
Cd	114	1	No Gas	50	207.84
Ca	44	1	No Gas	123511	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	5896472	4.01
Sc	45	2	he	1271268	0.31
Ge	72	1	No Gas	682805	1.30
In	115	1	No Gas	3697856	1.76
Tb	159	1	No Gas	4404848	1.64
Bi	209	1	No Gas	1997135	4.62

Calibration Blank Report

Sc	45	3	HeHe	132951	0.59

Calibration Standard Report

Sample Table

Sample Name	Standard 1
Data File Name	003CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:19:52-04:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	5673	0.60
Cr	52	1	No Gas	15856	0.04
Mn	55	1	No Gas	38340	0.02
Co	59	1	No Gas	3771	0.10
Ni	60	1	No Gas	21774	0.02
Cu	63	1	No Gas	3188	0.06
Sr	88	1	No Gas	4608	0.25
Ag	107	1	No Gas	1700	0.31
Al	27	1	No Gas	94327	0.00
Sn	118	1	No Gas	1674	1.15
Ti	47	1	No Gas	1051	0.70
Zn	66	1	No Gas	2127	0.49
As	75	3	HeHe	32	48.14
As	75	1	No Gas	25894	0.02
Sb	121	1	No Gas	1559	0.78
Hg	201	1	No Gas	34	105.24
Be	9	1	No Gas	352	4.93
Pb	208	1	No Gas	3630	0.14
Se	82	1	No Gas	49	760.54
Mo	98	1	No Gas	2340	0.68
Ba	137	1	No Gas	527	4.30
Tl	205	1	No Gas	2463	0.17
U	238	1	No Gas	2708	0.13
Na	23	2	he	102533	0.00
Mg	24	2	he	2849	0.21
K	39	2	he	210864	0.00
Se	82	3	HeHe	57	31.86
Fe	57	3	HeHe	233	19.68
Cd	114	1	No Gas	833	2.16
Ca	44	1	No Gas	137356	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6025814	1.84	5896472	102.19	70	120	
Sc	45	2	he	1152938	27.74	1271268	90.69	70	120	
Ge	72	1	No Gas	676306	1.76	682805	99.05	70	120	

Calibration Standard Report

In	115	1	No Gas	3601392	3.13	3697856	97.39	70	120	
Tb	159	1	No Gas	4357156	1.15	4404848	98.92	70	120	
Bi	209	1	No Gas	2230028	3.15	1997135	111.66	70	120	
Sc	45	3	HeHe	126675	2.93	132951	95.28	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 2
Data File Name	004CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:23:22-04:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	36707	0.01
Cr	52	1	No Gas	43016	0.00
Mn	55	1	No Gas	64359	0.00
Co	59	1	No Gas	33047	0.01
Ni	60	1	No Gas	28157	0.01
Cu	63	1	No Gas	19610	0.01
Sr	88	1	No Gas	42535	0.00
Ag	107	1	No Gas	18389	0.02
Al	27	1	No Gas	65426	0.00
Sn	118	1	No Gas	8458	0.07
Ti	47	1	No Gas	2941	0.03
Zn	66	1	No Gas	7561	0.10
As	75	3	HeHe	346	3.44
As	75	1	No Gas	28695	0.01
Sb	121	1	No Gas	13917	0.03
Hg	201	1	No Gas	69	35.57
Be	9	1	No Gas	3490	0.12
Pb	208	1	No Gas	31540	0.01
Se	82	1	No Gas	200	55.45
Mo	98	1	No Gas	10991	0.02
Ba	137	1	No Gas	4901	0.05
Tl	205	1	No Gas	23645	0.02
U	238	1	No Gas	26795	0.01
Na	23	2	he	131719	0.00
Mg	24	2	he	19022	0.02
K	39	2	he	237673	0.00
Se	82	3	HeHe	74	11.51
Fe	57	3	HeHe	930	1.42
Cd	114	1	No Gas	8162	0.07
Ca	44	1	No Gas	141966	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6077153	2.03	5896472	103.06	70	120	
Sc	45	2	he	1293877	1.51	1271268	101.78	70	120	
Ge	72	1	No Gas	684931	2.11	682805	100.31	70	120	

Calibration Standard Report

In	115	1	No Gas	3628326	3.66	3697856	98.12	70	120	
Tb	159	1	No Gas	4313712	2.41	4404848	97.93	70	120	
Bi	209	1	No Gas	2247572	3.62	1997135	112.54	70	120	
Sc	45	3	HeHe	134887	1.50	132951	101.46	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 3
Data File Name	005CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:26:52-04:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	347687	0.00
Cr	52	1	No Gas	324578	0.00
Mn	55	1	No Gas	404655	0.00
Co	59	1	No Gas	336563	0.00
Ni	60	1	No Gas	94971	0.00
Cu	63	1	No Gas	179719	0.00
Sr	88	1	No Gas	419711	0.00
Ag	107	1	No Gas	186331	0.00
Al	27	1	No Gas	225467	0.00
Sn	118	1	No Gas	85168	0.01
Ti	47	1	No Gas	26475	0.01
Zn	66	1	No Gas	46308	0.01
As	75	3	HeHe	3572	0.14
As	75	1	No Gas	69418	0.00
Sb	121	1	No Gas	144398	0.00
Hg	201	1	No Gas	321	3.02
Be	9	1	No Gas	34814	0.00
Pb	208	1	No Gas	311633	0.00
Se	82	1	No Gas	2388	0.35
Mo	98	1	No Gas	105298	0.00
Ba	137	1	No Gas	49424	0.00
Tl	205	1	No Gas	238405	0.00
U	238	1	No Gas	284661	0.00
Na	23	2	he	378460	0.00
Mg	24	2	he	160598	0.00
K	39	2	he	470770	0.00
Se	82	3	HeHe	196	2.49
Fe	57	3	HeHe	8647	0.06
Cd	114	1	No Gas	83808	0.00
Ca	44	1	No Gas	219400	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5975593	2.40	5896472	101.34	70	120	
Sc	45	2	he	1295638	1.95	1271268	101.92	70	120	
Ge	72	1	No Gas	682250	0.93	682805	99.92	70	120	

Calibration Standard Report

In	115	1	No Gas	3734350	0.92	3697856	100.99	70	120	
Tb	159	1	No Gas	4329799	0.59	4404848	98.30	70	120	
Bi	209	1	No Gas	2313155	0.17	1997135	115.82	70	120	
Sc	45	3	HeHe	139923	1.19	132951	105.24	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 4
Data File Name	006CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:30:23-04:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	3327729	0.00
Cr	52	1	No Gas	3025690	0.00
Mn	55	1	No Gas	3711637	0.00
Co	59	1	No Gas	3336506	0.00
Ni	60	1	No Gas	758712	0.00
Cu	63	1	No Gas	1768262	0.00
Sr	88	1	No Gas	4216323	0.00
Ag	107	1	No Gas	1897625	0.00
Al	27	1	No Gas	1994166	0.00
Sn	118	1	No Gas	999552	0.00
Tl	47	1	No Gas	269085	0.00
Zn	66	1	No Gas	455362	0.00
As	75	3	HeHe	35929	0.00
As	75	1	No Gas	493405	0.00
Sb	121	1	No Gas	1435359	0.00
Hg	201	1	No Gas	2804	0.04
Be	9	1	No Gas	344243	0.00
Pb	208	1	No Gas	3113349	0.00
Se	82	1	No Gas	23663	0.00
Mo	98	1	No Gas	1133897	0.00
Ba	137	1	No Gas	484561	0.00
Tl	205	1	No Gas	2284952	0.00
U	238	1	No Gas	2921542	0.00
Na	23	2	he	2821420	0.00
Mg	24	2	he	1615680	0.00
K	39	2	he	2725055	0.00
Se	82	3	HeHe	1791	0.20
Fe	57	3	HeHe	81592	0.00
Cd	114	1	No Gas	835193	0.00
Ca	44	1	No Gas	979919	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6200036	1.53	5896472	105.15	70	120	
Sc	45	2	he	1303185	0.51	1271268	102.51	70	120	
Ge	72	1	No Gas	682451	1.66	682805	99.95	70	120	

Calibration Standard Report

In	115	1	No Gas	3670872	2.59	3697856	99.27	70	120	
Tb	159	1	No Gas	4348184	1.52	4404848	98.71	70	120	
Bi	209	1	No Gas	2283484	4.44	1997135	114.34	70	120	
Sc	45	3	HeHe	138327	1.35	132951	104.04	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 5
Data File Name	007CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:33:47-04:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	6563421	0.00
Cr	52	1	No Gas	5906265	0.00
Mn	55	1	No Gas	7211085	0.00
Co	59	1	No Gas	6504377	0.00
Ni	60	1	No Gas	1495844	0.00
Cu	63	1	No Gas	3519800	0.00
Sr	88	1	No Gas	8227989	0.00
Ag	107	1	No Gas	3678532	0.00
Al	27	1	No Gas	3886184	0.00
Sn	118	1	No Gas	2200502	0.00
Ti	47	1	No Gas	542859	0.00
Zn	66	1	No Gas	890715	0.00
As	75	3	HeHe	72900	0.00
As	75	1	No Gas	972406	0.00
Sb	121	1	No Gas	2915076	0.00
Hg	201	1	No Gas	5833	0.05
Be	9	1	No Gas	681346	0.00
Pb	208	1	No Gas	6208559	0.00
Se	82	1	No Gas	48679	0.00
Mo	98	1	No Gas	2354816	0.00
Ba	137	1	No Gas	968617	0.00
Tl	205	1	No Gas	4555286	0.00
U	238	1	No Gas	5741236	0.00
Na	23	2	he	5414301	0.00
Mg	24	2	he	3082653	0.00
K	39	2	he	5133884	0.00
Se	82	3	HeHe	3501	0.06
Fe	57	3	HeHe	164269	0.00
Cd	114	1	No Gas	1701177	0.00
Ca	44	1	No Gas	1821322	0.00

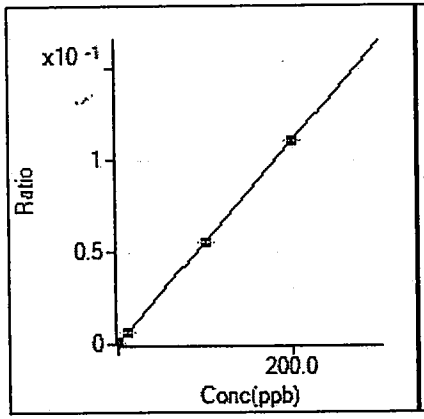
QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6151770	1.24	5896472	104.33	70	120	
Sc	45	2	he	1310111	1.57	1271268	103.06	70	120	
Ge	72	1	No Gas	687781	0.71	682805	100.73	70	120	

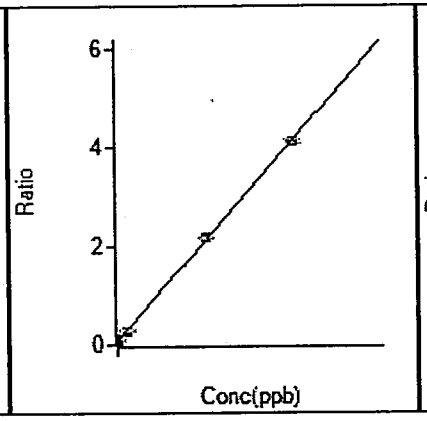
Calibration Standard Report

In	115	1	No Gas	3726710	1.53	3697856	100.78	70	120	
Tb	159	1	No Gas	4360250	1.19	4404848	98.99	70	120	
Bi	209	1	No Gas	2328198	0.87	1997135	116.58	70	120	
Sc	45	3	HeHe	139392	1.58	132951	104.84	70	120	

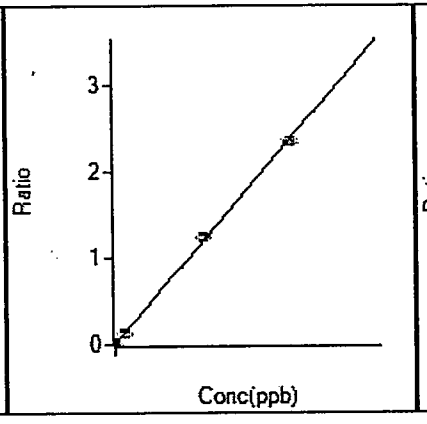
Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



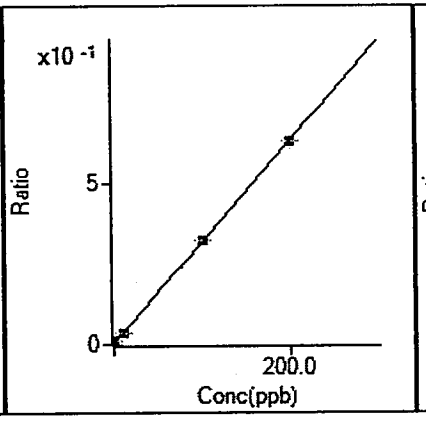
9 Be [No Gas] / ISTD: 45 Sc
y = 5.541E-4 x + 4.025E-6
R 1.0000
DL 0.01445
BEC 0.007265



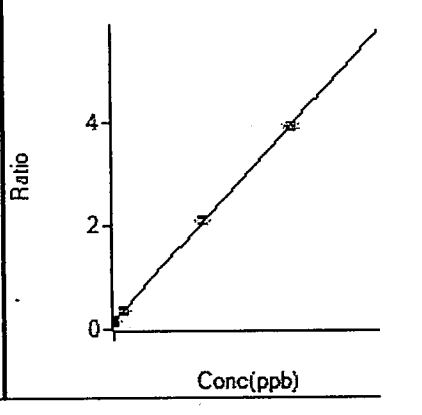
23 Na [he] / ISTD: 45 Sc
y = 2.047E-3 x + 6.598E-2
R 0.9999
DL 2.634
BEC 32.23



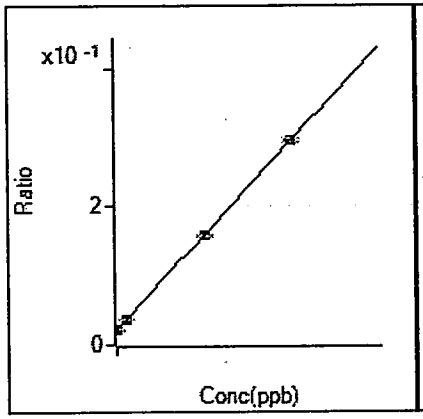
24 Mg [he] / ISTD: 45 Sc
y = 1.189E-3 x + 1.195E-4
R 0.9997
DL 0.2482
BEC 0.1004



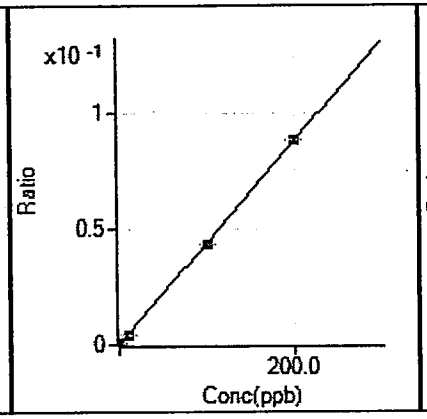
27 Al [No Gas] / ISTD: 45 Sc
y = 3.162E-3 x + 1.467E-3
R 1.0000
DL 0.1167
BEC 0.4638



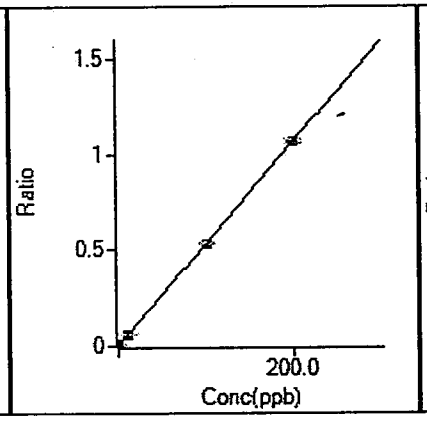
39 K [he] / ISTD: 45 Sc
y = 1.892E-3 x + 1.574E-1
R 0.9999
DL 2.785
BEC 83.19



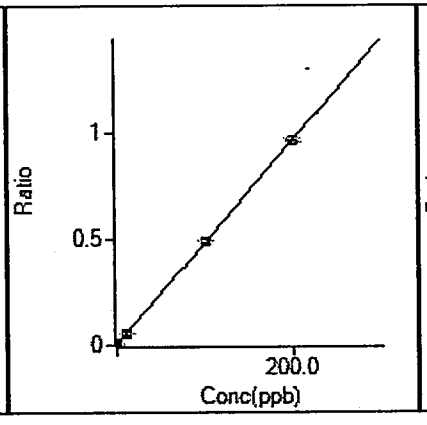
44 Ca [No Gas] / ISTD: 45 Sc
y = 1.375E-4 x + 2.096E-2
R 1.0000
DL 13.36
BEC 152.5



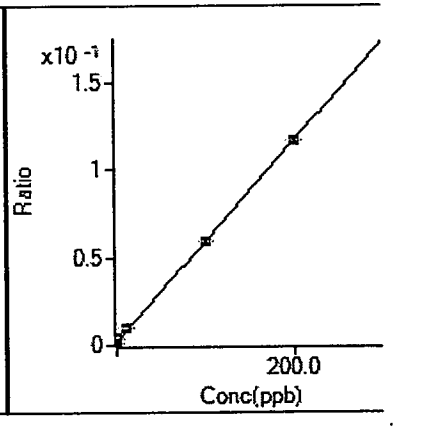
47 Ti [No Gas] / ISTD: 45 Sc
y = 4.395E-4 x + 5.013E-5
R 1.0000
DL 0.0652
BEC 0.1141



51 V [No Gas] / ISTD: 45 Sc
y = 5.340E-3 x + 2.003E-4
R 1.0000
DL 0.1719
BEC 0.03751

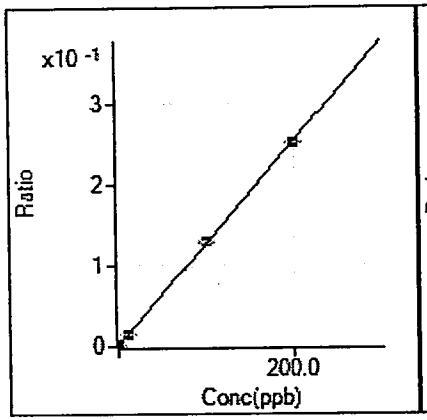


52 Cr [No Gas] / ISTD: 45 Sc
y = 4.807E-3 x + 1.824E-3
R 1.0000
DL 0.08261
BEC 0.3795



53 [V] [No Gas] / ISTD: 45 Sc
y = 5.795E-4 x + 1.368E-3
R 0.9998
DL 0.3926
BEC 2.361

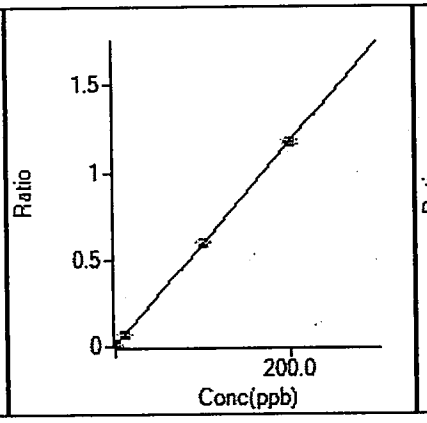
Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



53 [V] [he] / ISTD: 45 Sc

y = 1.270E-3 x + 6.762E-4

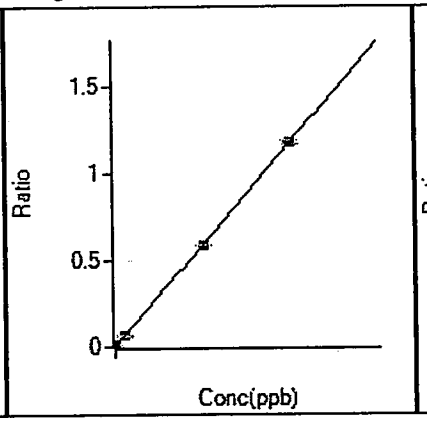
R	0.9999
DL	0.5229
BEC	0.5325



55 Mn [No Gas] / ISTD: 45 Sc

y = 5.855E-3 x + 5.402E-3

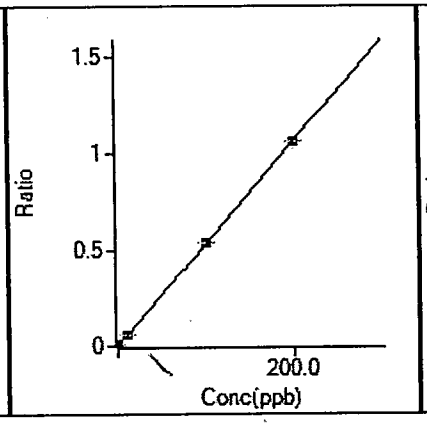
R	1.0000
DL	0.6308
BEC	0.9226



57 Fe [HeHe] / ISTD: 45 Sc

y = 5.887E-4 x + 1.311E-3

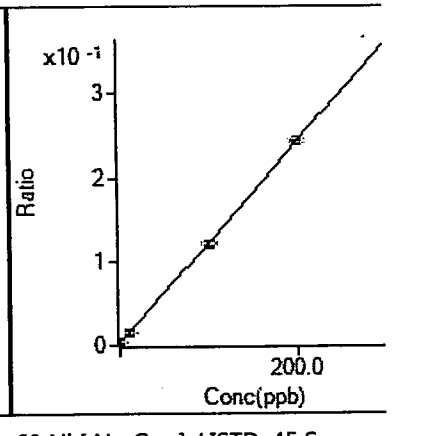
R	1.0000
DL	1.531
BEC	2.226



59 Co [No Gas] / ISTD: 45 Sc

y = 5.306E-3 x + 4.206E-5

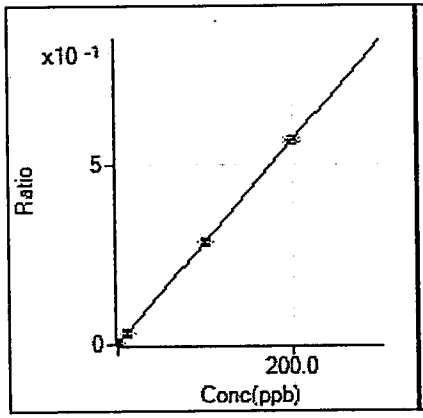
R	1.0000
DL	0.003114
BEC	0.007927



60 Ni [No Gas] / ISTD: 45 Sc

y = 1.198E-3 x + 3.204E-3

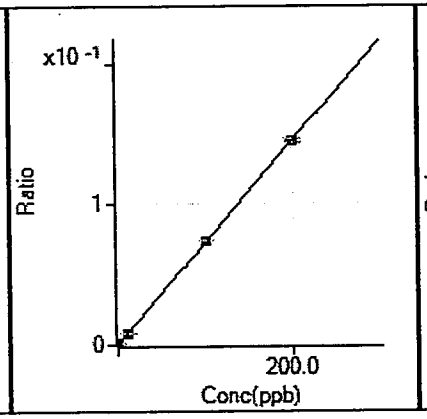
R	1.0000
DL	0.5389
BEC	2.674



63 Cu [No Gas] / ISTD: 45 Sc

y = 2.859E-3 x + 1.007E-4

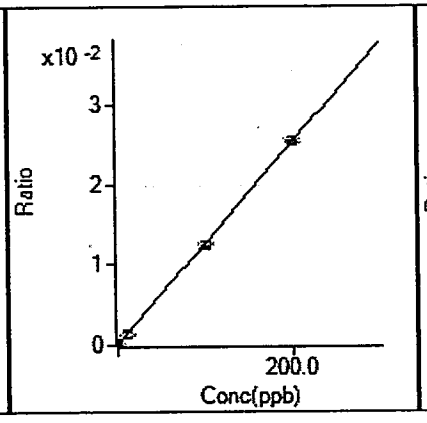
R	1.0000
DL	0.009209
BEC	0.03522



66 Zn [No Gas] / ISTD: 45 Sc

y = 7.254E-4 x + 1.333E-4

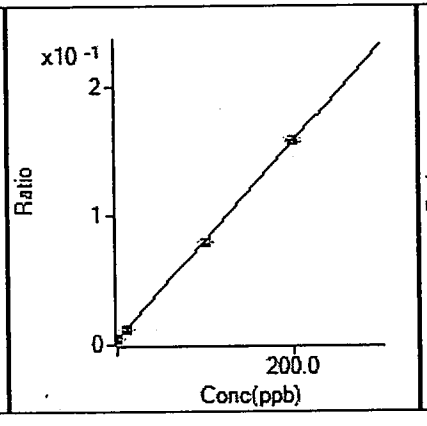
R	1.0000
DL	0.09382
BEC	0.1838



69 [Zn] [No Gas] / ISTD: 45 Sc

y = 1.267E-4 x + 3.180E-5

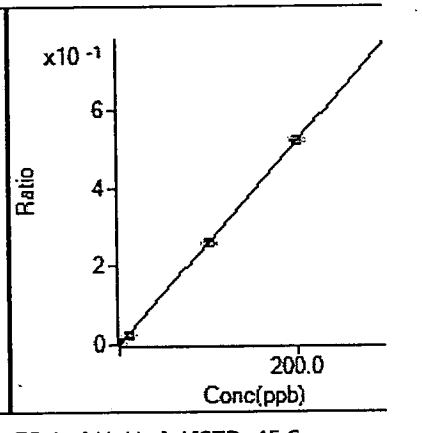
R	1.0000
DL	0.2514
BEC	0.251



75 As [No Gas] / ISTD: 45 Sc

y = 7.678E-4 x + 3.949E-3

R	1.0000
DL	1.424
BEC	5.143

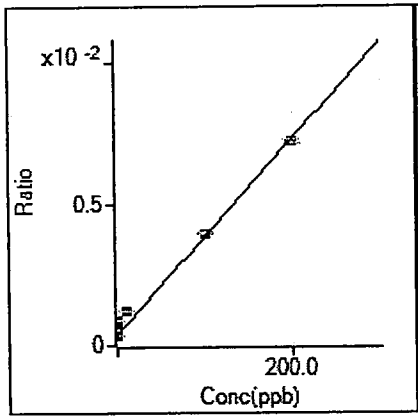


75 As [HeHe] / ISTD: 45 Sc

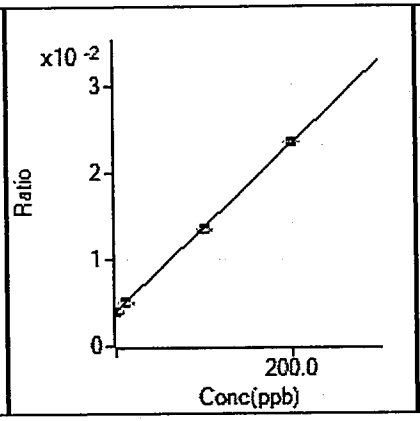
y = 2.611E-3 x + 5.400E-5

R	1.0000
DL	0.02561
BEC	0.02068

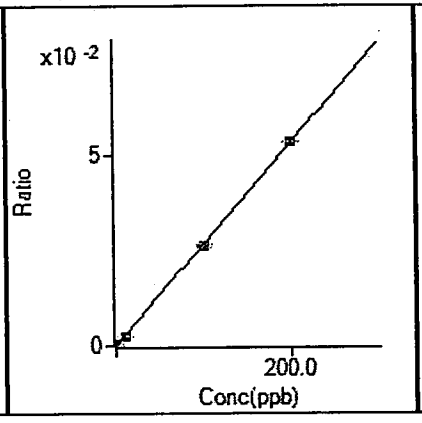
Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



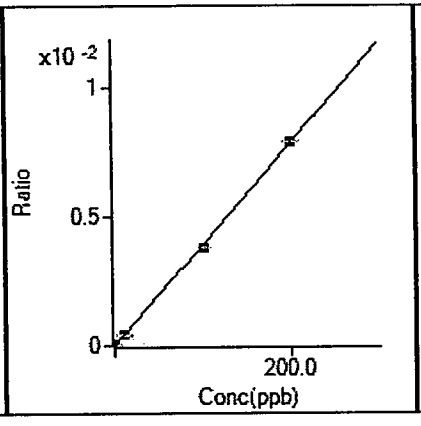
77 [As] [No Gas] / ISTD: 45 Sc
y = 3.487E-5 x + 3.519E-4
R 0.9974
DL 3.908
BEC 10.09



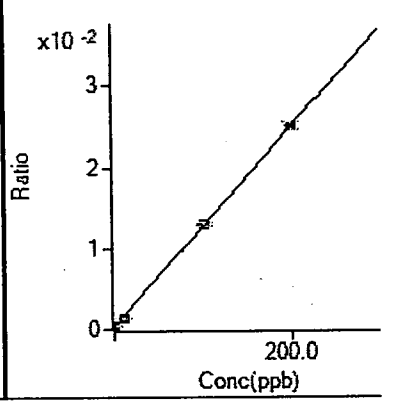
78 Se [No Gas] / ISTD: 45 Sc
y = 9.716E-5 x + 3.968E-3
R 0.9999
DL 5.747
BEC 40.84



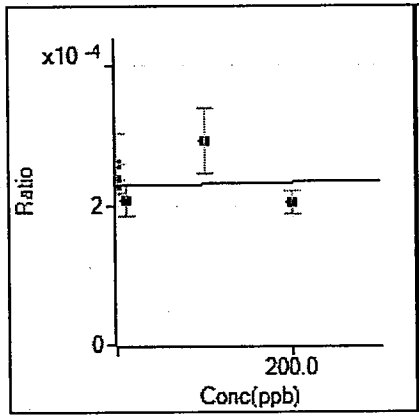
78 Se [HeHe] / ISTD: 45 Sc
y = 2.667E-4 x + 1.669E-5
R 1.0000
DL 0.1883
BEC 0.06256



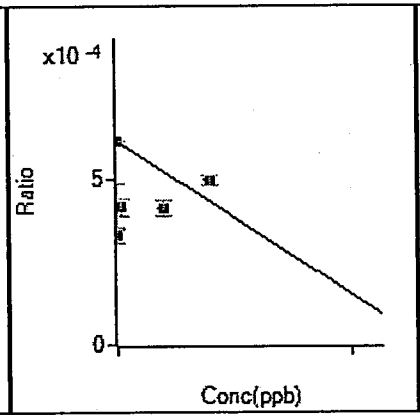
82 Se [No Gas] / ISTD: 45 Sc
y = 3.939E-5 x - 1.575E-5
R 0.9999
DL 0.3858
BEC -0.3998



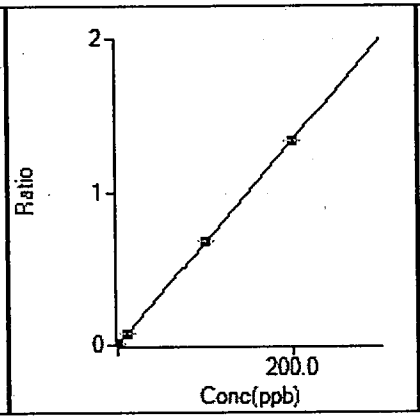
82 Se [HeHe] / ISTD: 45 Sc
y = 1.235E-4 x + 4.684E-4
R 0.9999
DL 3.293
BEC 3.792



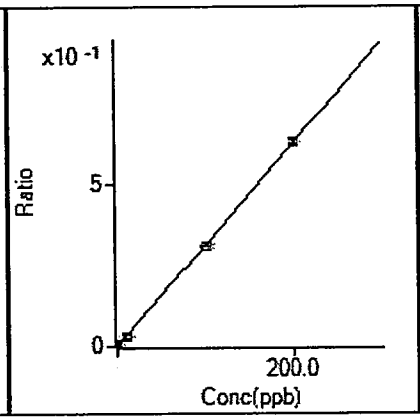
83 [Se] [No Gas] / ISTD: 115 In
y = -2.676E-8 x + 2.284E-4
R -0.1341
DL 2359
BEC 8534



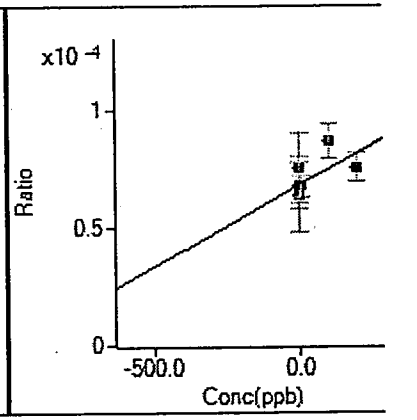
83 [Se] [HeHe] / ISTD: 45 Sc
y = - 9.258E-7 x + 6.156E-4
R 0.1431
DL -12.3
BEC -665



88 Sr [No Gas] / ISTD: 45 Sc
y = 6.711E-3 x + 1.555E-5
R 1.0000
DL 0.002704
BEC 0.002318

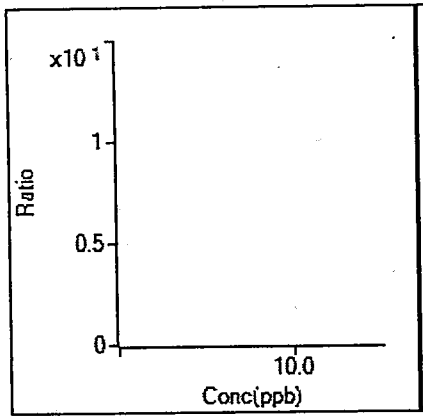


98 Mo [No Gas] / ISTD: 115 In
y = 3.143E-3 x + 2.337E-4
R 0.9999
DL 0.06173
BEC 0.07434



101 [Mo] [No Gas] / ISTD: 115 In
y = 6.819E-8 x + 6.787E-5
R 0.5579
DL 895.1
BEC 995.3

Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



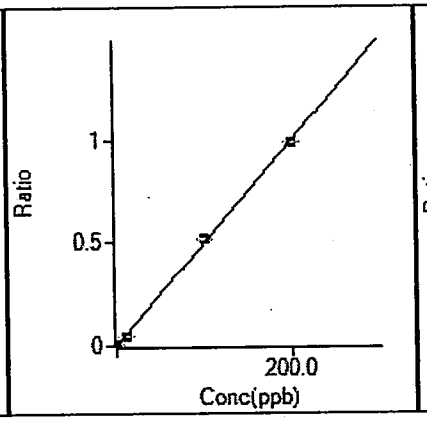
106 [Cd] [No Gas] / ISTD: 115 In

y =

R

DL

BEC



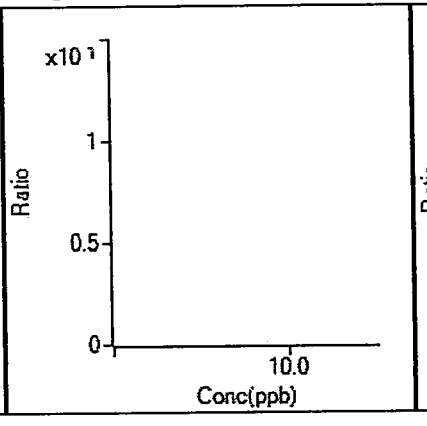
107 Ag [No Gas] / ISTD: 115 In

y = 4.983E-3 x + 1.008E-5

R 0.9997

DL 0.007648

BEC 0.002023



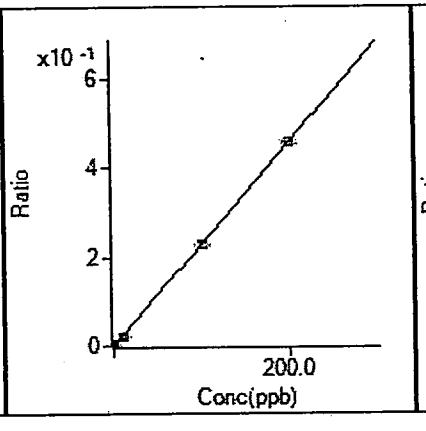
108 [Cd] [No Gas] / ISTD: 115 In

y =

R

DL

BEC



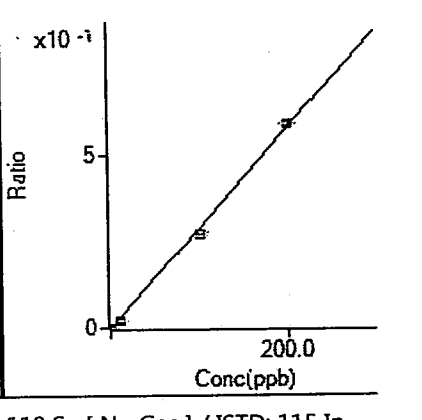
114 Cd [No Gas] / ISTD: 115 In

y = 2.281E-3 x + 1.336E-5

R 1.0000

DL 0.018

BEC 0.005859



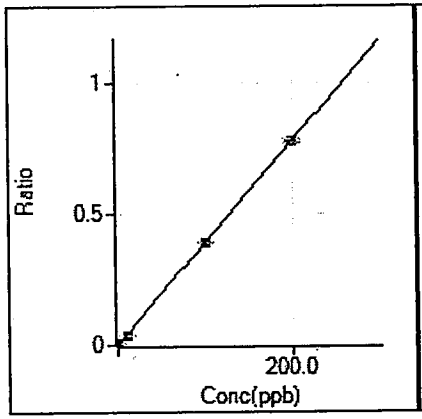
118 Sn [No Gas] / ISTD: 115 In

y = 2.905E-3 x + 5.207E-5

R 0.9993

DL 0.006195

BEC 0.01792



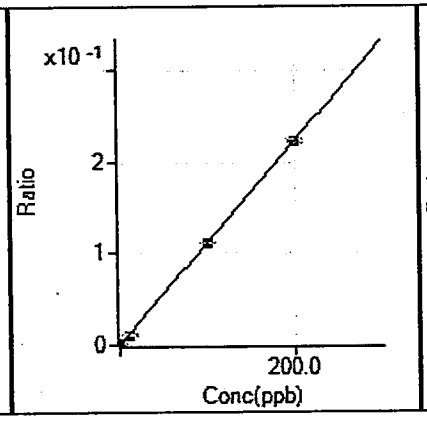
121 Sb [No Gas] / ISTD: 115 In

y = 3.911E-3 x + 3.410E-5

R 1.0000

DL 0.01061

BEC 0.008718



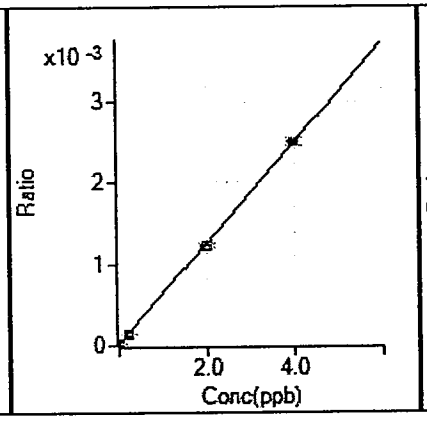
137 Ba [No Gas] / ISTD: 159 Tb

y = 1.112E-3 x + 1.129E-5

R 1.0000

DL 0.01568

BEC 0.01016



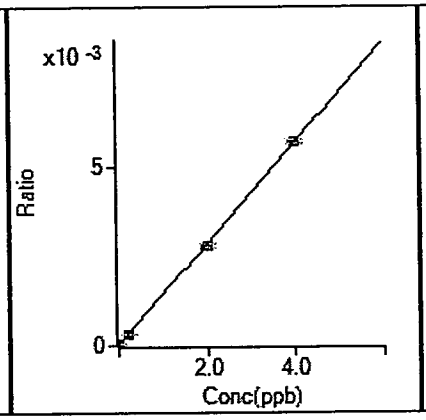
201 Hg [No Gas] / ISTD: 209 Bi

y = 6.191E-4 x + 1.681E-5

R 0.9999

DL 0.02511

BEC 0.02716



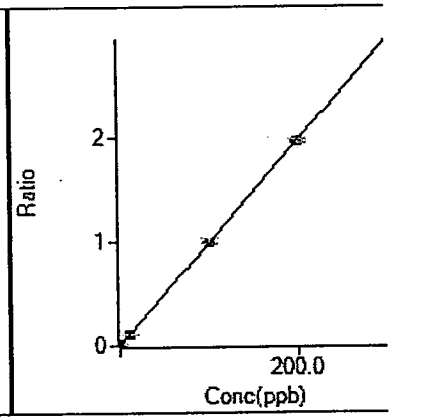
202 Hg [No Gas] / ISTD: 209 Bi

y = 1.413E-3 x + 1.890E-5

R 1.0000

DL 0.01015

BEC 0.01337



205 Tl [No Gas] / ISTD: 209 Bi

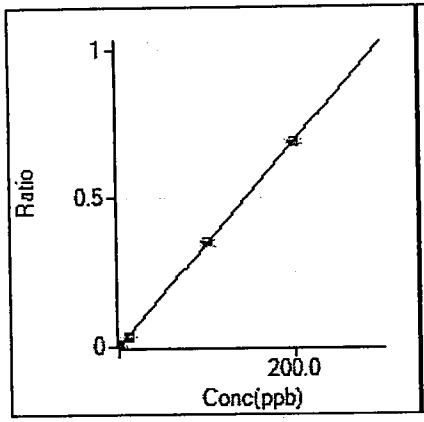
y = 9.832E-3 x + 1.279E-5

R 0.9999

DL 0.00676

BEC 0.001301

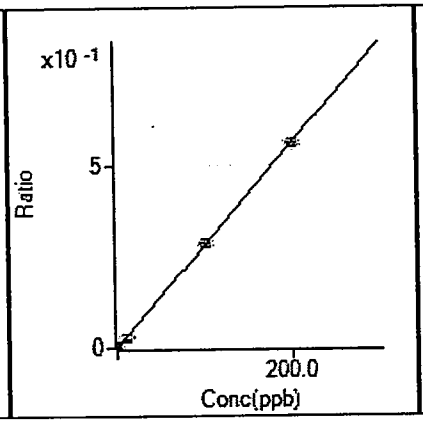
Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



206 [Pb] [No Gas] / ISTD: 209 Bi

y = 3.452E-3 x + 2.751E-5

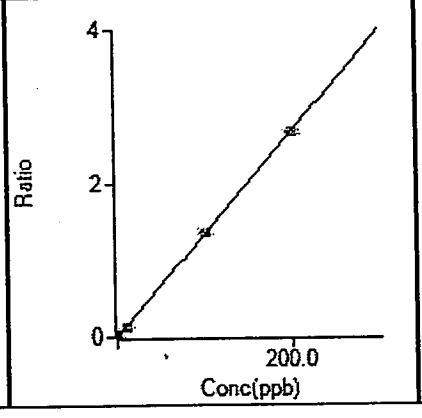
R	1.0000
DL	0.01696
BEC	0.00797



207 [Pb] [No Gas] / ISTD: 209 Bi

y = 2.838E-3 x + 2.212E-5

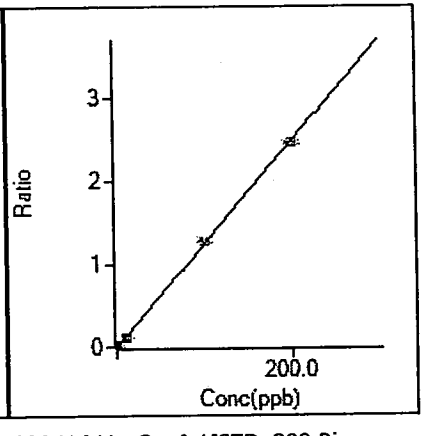
R	1.0000
DL	0.004877
BEC	0.007795



208 Pb [No Gas] / ISTD: 209 Bi

y = 1.340E-2 x + 1.450E-4

R	0.9999
DL	0.01306
BEC	0.01083



238 U [No Gas] / ISTD: 209 Bi

y = 1.243E-2 x + 1.804E-5

R	0.9998
DL	0.00397
BEC	0.001452

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	008_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:37:09-04:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	98.742	1.626	3245310	1.36	100	98.7	90	110	
Cr	52	1	No Gas	97.531	1.079	2895291	0.94	100	97.5	90	110	
Mn	55	1	No Gas	99.658	1.042	3623044	0.49	100	99.7	90	110	
Co	59	1	No Gas	97.852	0.975	3194700	1.50	100	97.9	90	110	
Ni	60	1	No Gas	96.889	1.045	734016	0.49	100	96.9	90	110	
Cu	63	1	No Gas	99.610	1.149	1752874	2.11	100	99.6	90	110	
Sr	88	1	No Gas	99.428	1.067	4104861	0.44	100	99.4	90	110	
Ag	107	1	No Gas	98.743	0.588	1805761	1.29	100	98.7	90	110	
Al	27	1	No Gas	99.447	2.057	1943613	1.74	100	99.4	90	110	
Sn	118	1	No Gas	103.632	0.816	1105279	1.98	100	103.6	90	110	
Tl	47	1	No Gas	89.870	1.572	243295	1.48	100	89.9	90	110	ICV Main CR1 Failed
Zn	66	1	No Gas	97.104	1.054	434159	0.47	100	97.1	90	110	
As	75	3	HeHe	98.358	1.316	35022	1.16	100	98.4	90	110	
As	75	1	No Gas	96.807	1.290	481574	0.51	100	96.8	90	110	
Sb	121	1	No Gas	99.039	0.731	1421867	2.12	100	99.0	90	110	
Hg	201	1	No Gas	1.960	2.785	2832	3.79	2	98.0	90	110	
Be	9	1	No Gas	96.075	0.565	327551	1.32	100	96.1	90	110	
Pb	208	1	No Gas	96.947	0.294	2990417	1.22	100	96.9	90	110	
Se	82	1	No Gas	97.671	1.676	23568	0.48	100	97.7	90	110	
Mo	98	1	No Gas	98.092	0.652	1132499	1.15	100	98.1	90	110	
Ba	137	1	No Gas	96.951	2.061	467348	1.65	100	97.0	90	110	
Tl	205	1	No Gas	96.006	2.060	2172954	2.24	100	96.0	90	110	
U	238	1	No Gas	107.911	0.514	3086981	0.64	100	107.9	90	110	
Na	23	2	he	1016.583	0.510	2782809	1.42	1000	101.7	90	110	
Mg	24	2	he	1031.757	0.765	1590388	0.37	1000	103.2	90	110	
K	39	2	he	993.630	0.651	2640040	0.42	1000	99.4	90	110	
Se	82	3	HeHe	96.572	1.756	1690	2.10	100	96.6	90	110	
Fe	57	3	HeHe	1054.143	1.763	84778	1.53	1000	105.4	90	110	
Cd	114	1	No Gas	96.656	0.453	809269	1.89	100	96.7	90	110	
Ca	44	1	No Gas	975.081	1.456	953715	0.30	1000	97.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6152674	1.51	5896472	104.35	70	120	
Sc	45	2	he	1296036	1.02	1271268	101.95	70	120	
Ge	72	1	No Gas	677632	0.92	682805	99.24	70	120	
In	115	1	No Gas	3670280	1.45	3697856	99.25	70	120	
Tb	159	1	No Gas	4336489	0.63	4404848	98.45	70	120	
Bi	209	1	No Gas	2302057	1.10	1997135	115.27	70	120	
Sc	45	3	HeHe	136339	1.09	132951	102.55	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	009_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:40:33-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.060	46.8	2984	28.2	9	
Cr	52	1	No Gas	-0.024	-100.7	9837	8.5	4	
Mn	55	1	No Gas	0.230	61.8	38897	13.7	25	
Co	59	1	No Gas	0.003	36.1	326	9.8	1	
Ni	60	1	No Gas	-0.970	-3.7	11748	1.2	25	
Cu	63	1	No Gas	0.016	17.0	843	3.8	25	
Sr	88	1	No Gas	0.002	47.7	163	21.9	25	
Ag	107	1	No Gas	0.003	30.2	100	19.2	9	
Al	27	1	No Gas	0.091	32.8	10100	4.3	1000000	
Sn	118	1	No Gas	0.273	9.0	3149	10.0	25	
Ti	47	1	No Gas	0.186	35.1	760	22.6	10000	
Zn	66	1	No Gas	-0.002	-1981.6	760	18.1	25	
As	75	3	HeHe	0.534	5.2	192	5.4	9	
As	75	1	No Gas	0.665	41.1	25663	4.1	9	
Sb	121	1	No Gas	0.317	27.9	4760	28.2	4	
Hg	201	1	No Gas	0.051	15.8	103	5.6	0.04	ICB Main CR1 Failed
Be	9	1	No Gas	0.009	48.8	51	28.0	1	
Pb	208	1	No Gas	0.041	38.8	1467	23.8	4	
Se	82	1	No Gas	1.216	31.7	185	46.4	25	
Mo	98	1	No Gas	0.870	17.2	11068	16.9	10000	
Ba	137	1	No Gas	0.012	45.1	107	23.6	25	
Tl	205	1	No Gas	0.058	16.2	1222	11.2	1	
U	238	1	No Gas	0.091	23.8	2452	28.0	25	
Na	23	2	he	0.911	105.6	86357	2.7	2500000	
Mg	24	2	he	0.022	179.4	185	33.0	2500000	
K	39	2	he	-1.460	-140.0	196775	1.6	5000000	
Se	82	3	HeHe	0.954	58.7	78	10.8	25	
Fe	57	3	HeHe	2.795	28.2	393	16.1	2500000	
Cd	114	1	No Gas	0.017	69.8	190	51.8	1	
Ca	44	1	No Gas	1.853	39.0	122116	1.5	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5755553	1.63	5896472	97.61	70	120	
Sc	45	2	he	1272979	1.57	1271268	100.13	70	120	
Ge	72	1	No Gas	678801	0.96	682805	99.41	70	120	
In	115	1	No Gas	3724033	1.61	3697856	100.71	70	120	

Initial Calibration Blank (ICB) Report

Tb	159	1	No Gas	4391649	2.36	4404848	99.70	70	120	
Bi	209	1	No Gas	2121785	6.49	1997135	106.24	70	120	
Sc	45	3	HeHe	132766	1.09	132951	99.86	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	010_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:44:04-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.060	23.2	2987	12.1	9	
Cr	52	1	No Gas	-0.020	-34.6	9970	2.9	4	
Mn	55	1	No Gas	-0.049	-139.3	29452	4.3	25	
Co	59	1	No Gas	0.001	231.9	282	32.1	1	
Ni	60	1	No Gas	-1.141	-6.8	10577	1.9	25	
Cu	63	1	No Gas	0.009	42.2	726	7.1	25	
Sr	88	1	No Gas	0.001	205.9	133	66.7	25	
Ag	107	1	No Gas	0.004	104.3	111	70.0	9	
Al	27	1	No Gas	0.097	68.0	10207	8.6	1000000	
Sn	118	1	No Gas	0.149	15.1	1756	13.3	25	
Ti	47	1	No Gas	0.097	27.4	537	16.1	10000	
Zn	66	1	No Gas	0.100	43.5	1183	13.1	25	
As	75	3	HeHe	0.233	13.5	86	12.7	9	
As	75	1	No Gas	0.497	37.8	24951	1.1	9	
Sb	121	1	No Gas	0.160	21.8	2389	20.5	4	
Hg	201	1	No Gas	0.021	58.8	60	23.1	0.04	
Be	9	1	No Gas	0.005	33.6	39	15.8	1	
Pb	208	1	No Gas	0.029	16.5	1096	10.2	4	
Se	82	1	No Gas	0.964	56.4	127	94.6	25	
Mo	98	1	No Gas	0.359	24.3	4943	19.9	10000	
Ba	137	1	No Gas	0.015	26.5	123	16.9	25	
Tl	205	1	No Gas	0.018	15.6	393	17.3	1	
U	238	1	No Gas	0.029	18.5	782	21.9	25	
Na	23	2	he	1.101	76.9	85432	2.0	2500000	
Mg	24	2	he	0.054	43.2	230	15.6	2500000	
K	39	2	he	-1.277	-156.7	193999	1.6	5000000	
Se	82	3	HeHe	-0.195	-280.4	58	13.9	25	
Fe	57	3	HeHe	1.010	11.2	248	5.2	2500000	
Cd	114	1	No Gas	0.001	229.3	60	44.1	1	
Ca	44	1	No Gas	-0.233	-2580.8	120570	0.6	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5765949	3.66	5896472	97.79	70	120	
Sc	45	2	he	1252133	0.83	1271268	98.49	70	120	
Ge	72	1	No Gas	672367	1.16	682805	98.47	70	120	

Initial Calibration Blank (ICB) Report

In	115	1	No Gas	3630295	0.40	3697856	98.17	70	120	
Tb	159	1	No Gas	4440065	1.55	4404848	100.80	70	120	
Bi	209	1	No Gas	2035819	5.74	1997135	101.94	70	120	
Sc	45	3	HeHe	130204	1.70	132951	97.93	70	120	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV
Data File Name	011LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:47:33-04:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.091	1.496	69306	1.16	2	104.6	70	130	
Cr	52	1	No Gas	2.203	0.635	75672	0.95	2	110.2	70	130	
Mn	55	1	No Gas	5.045	1.512	212993	1.07	5	100.9	70	130	
Co	59	1	No Gas	5.109	0.804	165513	1.18	5	102.2	70	130	
Ni	60	1	No Gas	3.934	3.998	48267	2.04	5	78.7	70	130	
Cu	63	1	No Gas	5.135	0.980	90105	1.31	5	102.7	70	130	
Sr	88	1	No Gas	4.703	0.815	192472	0.55	5	94.1	70	130	
Ag	107	1	No Gas	2.050	2.058	36540	1.72	2	102.5	70	130	
Al	27	1	No Gas	81.870	0.770	1587082	0.38	80	102.3	70	130	
Sn	118	1	No Gas	3.469	11.534	36237	12.68	2	173.4	70	130	LLICV Main CR1 Failed
Ti	47	1	No Gas	4.796	2.834	13156	3.17	5	95.9	70	130	
Zn	66	1	No Gas	5.054	1.676	23163	1.63	5	101.1	70	130	
As	75	3	HeHe	3.285	4.256	1152	4.98	3	109.5	70	130	
As	75	1	No Gas	3.625	8.318	41043	3.82	3	120.8	70	130	
Sb	121	1	No Gas	2.193	3.231	30770	3.86	2	109.6	70	130	
Hg	201	1	No Gas	0.220	6.167	341	7.00	0.2	110.0	70	130	
Be	9	1	No Gas	0.985	3.574	3352	3.17	1	98.5	70	130	
Pb	208	1	No Gas	2.061	3.918	61758	2.27	2	103.1	70	130	
Se	82	1	No Gas	5.592	26.926	1247	29.10	5	111.8	70	130	
Mo	98	1	No Gas	2.700	5.148	31185	6.35	2	135.0	70	130	LLICV Main CR1 Failed
Ba	137	1	No Gas	4.969	5.073	23564	5.89	5	99.4	70	130	
Tl	205	1	No Gas	1.024	3.850	22424	2.36	1	102.4	70	130	
U	238	1	No Gas	5.078	2.417	140424	0.90	5	101.6	70	130	
Na	23	2	he	106.819	2.456	376395	2.91	100	106.8	70	130	
Mg	24	2	he	102.005	0.843	160538	0.74	100	102.0	70	130	
K	39	2	he	111.098	2.411	485879	0.39	100	111.1	70	130	
Se	82	3	HeHe	6.391	3.045	168	1.15	5	127.8	70	130	
Fe	57	3	HeHe	60.742	8.525	4945	8.57	50	121.5	70	130	
Cd	114	1	No Gas	1.122	5.295	9203	6.69	1	112.2	70	130	
Ca	44	1	No Gas	105.838	0.870	216494	0.06	100	105.8	70	130	

NA

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QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6096014	0.41	5896472	103.38	70	120	
Sc	45	2	he	1322090	1.04	1271268	104.00	70	120	
Ge	72	1	No Gas	679695	1.35	682805	99.54	70	120	
In	115	1	No Gas	3573913	1.49	3697856	96.65	70	120	
Tb	159	1	No Gas	4256462	0.84	4404848	96.63	70	120	
Bi	209	1	No Gas	2225339	1.63	1997135	111.43	70	120	
Sc	45	3	HeHe	133391	0.99	132951	100.33	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	012ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:51:03-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.408	14.9	14217	13.4	9	
Cr	52	1	No Gas	1.305	5.1	48404	3.5	4	
Mn	55	1	No Gas	1.387	6.3	80819	2.6	25	
Co	59	1	No Gas	1.341	6.0	42760	4.7	1	ICSA Main CR1 Failed
Ni	60	1	No Gas	-0.521	-8.8	15424	3.4	5	
Cu	63	1	No Gas	1.138	6.5	20033	4.9	5	
Ag	107	1	No Gas	0.229	8.9	3919	8.4	9	
Al	27	1	No Gas	86238.701	2.3	1629911165	0.9	110000	
Sn	118	1	No Gas	0.745	20.8	7539	20.2	25	
Tl	47	1	No Gas	1706.488	1.7	4483115	0.6	2200	
Zn	66	1	No Gas	3.487	6.4	15910	4.7	5	
As	75	3	HeHe	0.607	16.0	209	14.4	9	
As	75	1	No Gas	1.066	33.9	28487	4.7	9	
Sb	121	1	No Gas	0.449	5.0	6094	5.2	4	
Hg	201	1	No Gas	0.031	39.3	76	20.9	0.04	
Be	9	1	No Gas	0.008	40.2	51	21.5	1	
Pb	208	1	No Gas	0.503	14.0	14655	14.6	4	
Se	82	1	No Gas	0.519	17.6	28	77.8	25	
Mo	98	1	No Gas	1978.830	1.3	21173724	0.9	2200	
Ba	137	1	No Gas	0.155	3.0	763	4.0	25	
Tl	205	1	No Gas	0.027	10.5	589	10.5	1	
U	238	1	No Gas	0.080	20.7	2141	21.1	25	
Na	23	2	he	88481.402	1.0	228143533	0.7	110000	
Mg	24	2	he	88791.717	1.2	132950658	0.3	110000	
K	39	2	he	90634.329	0.7	216072962	0.1	110000	
Se	82	3	HeHe	0.170	252.5	63	11.8	25	
Fe	57	3	HeHe	95975.268	1.0	7219717	0.1	110000	
Cd	114	1	No Gas	0.807	3.6	6315	4.1	1	
Ca	44	1	No Gas	83755.733	1.9	68956089	0.5	110000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5978213	1.44	5896472	101.39	70	120	
Sc	45	2	he	1259096	0.87	1271268	99.04	70	120	
Ge	72	1	No Gas	652515	0.32	682805	95.56	70	120	
In	115	1	No Gas	3404061	0.52	3697856	92.05	70	120	
Tb	159	1	No Gas	4155147	1.57	4404848	94.33	70	120	
Bi	209	1	No Gas	2125630	0.86	1997135	106.43	70	120	
Sc	45	3	HeHe	127793	1.10	132951	96.12	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	013ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T13:00:47-04:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	39.560	1.314	1329992	0.73	40	98.9	80	120	
Cr	52	1	No Gas	19.750	2.876	608506	2.29	20	98.8	80	120	
Mn	55	1	No Gas	20.318	3.116	782143	2.19	20	101.6	80	120	
Co	59	1	No Gas	37.232	2.656	1242688	1.92	40	93.1	80	120	
Ni	60	1	No Gas	34.405	1.343	279478	1.08	40	86.0	80	120	
Cu	63	1	No Gas	19.315	2.159	347936	1.71	20	96.6	80	120	
Ag	107	1	No Gas	19.360	1.453	338694	1.83	20	96.8	80	120	
Al	27	1	No Gas	87401.980	1.778	1738225116	0.91	100000	87.4	90	110	ICSB Main CR1 Failed
Tl	47	1	No Gas	1734.566	1.843	4794854	1.45	2000	86.7	90	110	ICSB Main CR1 Failed
Zn	66	1	No Gas	23.932	2.902	110015	2.13	20	119.7	80	120	
As	75	3	HeHe	20.105	1.202	7128	1.50	20	100.5	80	120	
As	75	1	No Gas	20.392	2.981	123308	1.75	20	102.0	80	120	
Sb	121	1	No Gas	0.544	7.259	7595	7.45	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Hg	201	1	No Gas	0.019	59.638	61	24.91	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Be	9	1	No Gas	0.003	57.299	37	18.81	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Pb	208	1	No Gas	0.437	6.517	12858	6.46	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Se	82	1	No Gas	19.163	4.940	4647	4.00	20	95.8	80	120	
Mo	98	1	No Gas	2022.259	0.332	22316878	0.19	2000	101.1	90	110	
Ba	137	1	No Gas	0.221	7.541	1103	5.54	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Tl	205	1	No Gas	0.022	7.548	482	7.42	0	#DIV/0!	0	0	ICSB Main CR1 Failed
U	238	1	No Gas	0.066	15.781	1800	15.75	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Na	23	2	he	87984.945	1.603	242410011	2.05	100000	88.0	90	110	ICSB Main CR1 Failed
Mg	24	2	he	89548.792	1.071	143263065	0.20	100000	89.5	90	110	ICSB Main CR1 Failed
K	39	2	he	90005.881	0.921	229262169	0.27	100000	90.0	90	110	
Se	82	3	HeHe	19.533	10.748	391	8.56	20	97.7	80	120	
Fe	57	3	HeHe	95616.436	1.635	7634400	0.88	100000	95.6	90	110	
Cd	114	1	No Gas	10.043	3.166	80478	3.55	10	100.4	80	120	
Ca	44	1	No Gas	84131.326	1.047	72885131	0.52	100000	84.1	90	110	ICSB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6289971	1.06	5896472	106.67	70	120	
Sc	45	2	he	1345290	0.96	1271268	105.82	70	120	
Ge	72	1	No Gas	697499	1.87	682805	102.15	70	120	
In	115	1	No Gas	3510678	0.39	3697856	94.94	70	120	
Tb	159	1	No Gas	4306271	1.65	4404848	97.76	70	120	
Bi	209	1	No Gas	2142239	0.30	1997135	107.27	70	120	
Sc	45	3	HeHe	135647	1.32	132951	102.03	70	120	

Sample Report

Sample Table

Sample Name	1020183
Data File Name	030SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:08:31-04:00
Sample Type	Sample
Dilution	1
Comment	37996 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3201

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	0.565	0.565	9.14	20133	0.00	1000	
Cr	52	1	No Gas	0.271	0.271	9.78	19563	0.00	1000	
Mn	55	1	No Gas	0.366	0.366	4.11	47214	0.00	1000	
Co	59	1	No Gas	0.003	0.003	63.64	367	0.00	1000	
Ni	60	1	No Gas	-2.551	-2.551	-0.92	920	-0.28	1000	
Cu	63	1	No Gas	0.170	0.170	8.05	3678	0.00	1000	
Sr	88	1	No Gas	0.076	0.076	18.15	3289	0.00	1000	
Ag	107	1	No Gas	0.016	0.016	31.97	307	0.01	1000	
Al	27	1	No Gas	6.531	6.531	1.97	138427	0.00	100000	
Sn	118	1	No Gas	1.346	1.346	21.84	13951	0.01	100	
Ti	47	1	No Gas	0.926	0.926	31.14	2856	0.03	2000	
Zn	66	1	No Gas	0.852	0.852	4.52	4700	0.02	1000	
As	75	3	HeHe	0.307	0.307	23.89	119	0.26	1000	
As	75	1	No Gas	0.952	0.952	12.87	29295	0.00	1000	
Sb	121	1	No Gas	0.256	0.256	23.77	3641	0.01	100	
Hg	201	1	No Gas	0.030	0.030	56.01	73	0.04	4	
Be	9	1	No Gas	0.002	0.002	171.22	31	0.01	1000	
Pb	208	1	No Gas	0.050	0.050	8.97	1693	0.00	1000	
Se	82	1	No Gas	2.956	2.956	18.14	632	0.47	1000	
Mo	98	1	No Gas	0.640	0.640	26.31	7915	0.01	2000	
Ba	137	1	No Gas	0.281	0.281	6.13	1307	0.02	1000	
Tl	205	1	No Gas	0.020	0.020	48.65	426	0.00	1000	
U	238	1	No Gas	0.030	0.030	30.44	804	0.00	1000	
Na	23	2	he	14.781	14.781	5.65	131606	0.01	100000	
Mg	24	2	he	1.469	1.469	2.36	2552	0.06	100000	
K	39	2	he	6.368	6.368	11.69	231679	0.00	100000	
Se	82	3	HeHe	1.138	1.138	66.91	84	1.35	1000	
Fe	57	3	HeHe	22.770	22.770	10.74	2041	1.12	100000	
Cd	114	1	No Gas	0.074	0.074	9.14	640	0.01	1000	
Ca	44	1	No Gas	8.918	8.918	49.06	138859	0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6260037	1.76	5896472	106.17	70	120	
Sc	45	2	he	1367469	0.78	1271268	107.57	70	120	

Ge	72	1	No Gas	696916	0.94	682805	102.07	70	120	
In	115	1	No Gas	3509222	2.93	3697856	94.90	70	120	
Tb	159	1	No Gas	4031659	1.08	4404848	91.53	70	120	
Bi	209	1	No Gas	2072004	2.63	1997135	103.75	70	120	
Sc	45	3	HeHe	138777	0.89	132951	104.38	70	120	

Sample Report

Sample Table

Sample Name	1020184
Data File Name	031SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:12:01-04:00
Sample Type	Sample
Dilution	1
Comment	37996 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3202

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	40.593	40.593	1.62	1377892	0.00	1000	
Cr	52	1	No Gas	39.532	39.532	0.68	1218325	0.00	1000	
Mn	55	1	No Gas	41.623	41.623	1.33	1582151	0.00	1000	
Co	59	1	No Gas	40.446	40.446	1.97	1363339	0.00	1000	
Ni	60	1	No Gas	36.672	36.672	1.14	299465	0.01	1000	
Cu	63	1	No Gas	38.959	38.959	0.38	708056	0.01	1000	
Sr	88	1	No Gas	37.556	37.556	1.00	1600740	0.00	1000	
Ag	107	1	No Gas	15.815	15.815	0.58	282374	0.01	1000	
Al	27	1	No Gas	404.877	404.877	0.97	8139906	0.00	100000	
Sn	118	1	No Gas	38.626	38.626	1.64	402284	0.01	100	
Ti	47	1	No Gas	37.163	37.163	1.02	104053	0.04	2000	
Zn	66	1	No Gas	390.299	390.299	0.41	1798987	0.02	1000	
As	75	3	HeHe	37.132	37.132	1.78	13800	0.27	1000	
As	75	1	No Gas	38.363	38.363	0.86	212147	0.02	1000	
Sb	121	1	No Gas	39.437	39.437	0.23	552734	0.01	100	
Hg	201	1	No Gas	0.437	0.437	7.14	611	0.07	4	
Be	9	1	No Gas	36.792	36.792	1.36	129508	0.03	1000	
Pb	208	1	No Gas	39.298	39.298	0.90	1120560	0.00	1000	
Se	82	1	No Gas	40.175	40.175	1.00	9950	0.40	1000	
Mo	98	1	No Gas	40.237	40.237	0.14	454004	0.01	2000	
Ba	137	1	No Gas	419.609	419.609	1.30	1924073	0.02	1000	
Tl	205	1	No Gas	38.985	38.985	0.96	815675	0.00	1000	
U	238	1	No Gas	0.012	0.012	57.67	359	0.00	1000	
Na	23	2	he	442.544	442.544	2.71	1355175	0.03	100000	
Mg	24	2	he	411.083	411.083	1.39	681853	0.06	100000	
K	39	2	he	423.140	423.140	1.21	1335620	0.03	100000	
Se	82	3	HeHe	39.341	39.341	5.50	758	5.19	1000	
Fe	57	3	HeHe	429.603	429.603	1.92	36161	1.19	100000	
Cd	114	1	No Gas	38.743	38.743	1.21	316671	0.01	1000	
Ca	44	1	No Gas	409.047	409.047	0.66	490309	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6350993	1.00	5896472	107.71	70	120	
Sc	45	2	he	1394452	1.07	1271268	109.69	70	120	

Ge	72	1	No Gas	691477	0.14	682805	101.27	70	120	
In	115	1	No Gas	3582929	1.04	3697856	96.89	70	120	
Tb	159	1	No Gas	4125239	1.55	4404848	93.65	70	120	
Bi	209	1	No Gas	2127816	1.33	1997135	106.54	70	120	
Sc	45	3	HeHe	142255	0.85	132951	107.00	70	120	

Sample Report

Sample Table

Sample Name	1020187
Data File Name	032SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:32:02-04:00
Sample Type	Sample
Dilution	1
Comment	37996 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3203

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	0.339	0.339	6.80	12557	0.00	1000	
Cr	52	1	No Gas	0.313	0.313	10.27	20813	0.00	1000	
Mn	55	1	No Gas	0.070	0.070	46.71	36336	0.00	1000	
Co	59	1	No Gas	0.002	0.002	126.92	315	0.00	1000	
Ni	60	1	No Gas	-2.555	-2.555	-0.85	890	-0.29	1000	
Cu	63	1	No Gas	0.127	0.127	1.41	2900	0.00	1000	
Sr	88	1	No Gas	0.017	0.017	16.77	830	0.00	1000	
Ag	107	1	No Gas	0.006	0.006	18.93	144	0.00	1000	
Al	27	1	No Gas	2.246	2.246	5.78	53562	0.00	100000	
Sn	118	1	No Gas	0.836	0.836	31.53	8858	0.01	100	
Ti	47	1	No Gas	0.417	0.417	29.64	1460	0.03	2000	
Zn	66	1	No Gas	0.552	0.552	5.33	3334	0.02	1000	
As	75	3	HeHe	0.224	0.224	5.22	94	0.24	1000	
As	75	1	No Gas	1.238	1.238	21.95	30632	0.00	1000	
Sb	121	1	No Gas	0.093	0.093	21.83	1415	0.01	100	
Hg	201	1	No Gas	0.014	0.014	32.80	53	0.03	4	
Be	9	1	No Gas	0.000	0.000	871.38	26	0.00	1000	
Pb	208	1	No Gas	0.019	0.019	28.42	852	0.00	1000	
Se	82	1	No Gas	0.913	0.913	124.37	127	0.72	1000	
Mo	98	1	No Gas	0.784	0.784	45.66	9636	0.01	2000	
Ba	137	1	No Gas	0.095	0.095	10.70	490	0.02	1000	
Tl	205	1	No Gas	0.002	0.002	98.98	74	0.00	1000	
U	238	1	No Gas	0.009	0.009	35.62	282	0.00	1000	
Na	23	2	he	11.382	11.382	20.13	125553	0.01	100000	
Mg	24	2	he	0.889	0.889	8.33	1656	0.05	100000	
K	39	2	he	5.079	5.079	37.12	234852	0.00	100000	
Se	82	3	HeHe	-1.123	-1.123	-90.73	49	-2.31	1000	
Fe	57	3	HeHe	10.435	10.435	14.82	1096	0.95	100000	
Cd	114	1	No Gas	0.032	0.032	7.70	307	0.01	1000	
Ca	44	1	No Gas	5.996	5.996	19.53	136169	0.00	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6250333	1.14	5896472	106.00	70	120	
Sc	45	2	he	1406645	1.09	1271268	110.65	70	120	

Ge	72	1	No Gas	696042	0.52	682805	101.94	70	120	
In	115	1	No Gas	3570512	0.84	3697856	96.56	70	120	
Tb	159	1	No Gas	4179053	2.43	4404848	94.87	70	120	
Bi	209	1	No Gas	2101429	2.54	1997135	105.22	70	120	
Sc	45	3	HeHe	147042	0.64	132951	110.60	70	120	

Sample Report

Sample Table

Sample Name	1020188
Data File Name	033SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:35:31-04:00
Sample Type	Sample
Dilution	1
Comment	37996 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3204

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	41.815	41.815	0.87	1429780	0.00	1000	
Cr	52	1	No Gas	41.435	41.435	0.66	1285725	0.00	1000	
Mn	55	1	No Gas	43.223	43.223	0.19	1653620	0.00	1000	
Co	59	1	No Gas	41.764	41.764	1.37	1417862	0.00	1000	
Ni	60	1	No Gas	38.253	38.253	0.64	313778	0.01	1000	
Cu	63	1	No Gas	40.837	40.837	0.41	747593	0.01	1000	
Sr	88	1	No Gas	38.557	38.557	1.31	1655264	0.00	1000	
Ag	107	1	No Gas	16.432	16.432	1.42	294993	0.01	1000	
Al	27	1	No Gas	418.517	418.517	0.74	8475702	0.00	100000	
Sn	118	1	No Gas	39.898	39.898	1.04	417812	0.01	100	
Ti	47	1	No Gas	38.371	38.371	0.07	108203	0.04	2000	
Zn	66	1	No Gas	412.649	412.649	1.21	1915960	0.02	1000	
As	75	3	HeHe	39.460	39.460	5.25	14880	0.27	1000	
As	75	1	No Gas	39.915	39.915	0.19	221328	0.02	1000	
Sb	121	1	No Gas	40.909	40.909	0.46	576501	0.01	100	
Hg	201	1	No Gas	0.448	0.448	0.28	626	0.07	4	
Be	9	1	No Gas	38.444	38.444	0.64	136309	0.03	1000	
Pb	208	1	No Gas	40.738	40.738	0.82	1162884	0.00	1000	
Se	82	1	No Gas	37.198	37.198	3.32	9269	0.40	1000	
Mo	98	1	No Gas	41.740	41.740	0.51	473519	0.01	2000	
Ba	137	1	No Gas	432.884	432.884	1.46	1999870	0.02	1000	
Tl	205	1	No Gas	40.197	40.197	1.36	841859	0.00	1000	
U	238	1	No Gas	0.005	0.005	37.08	163	0.00	1000	
Na	23	2	he	462.776	462.776	1.79	1431626	0.03	100000	
Mg	24	2	he	430.984	430.984	0.51	724339	0.06	100000	
K	39	2	he	450.420	450.420	1.15	1426262	0.03	100000	
Se	82	3	HeHe	34.780	34.780	5.42	688	5.06	1000	
Fe	57	3	HeHe	446.306	446.306	2.17	38131	1.17	100000	
Cd	114	1	No Gas	40.110	40.110	1.28	329641	0.01	1000	
Ca	44	1	No Gas	422.648	422.648	1.14	505879	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6397464	1.54	5896472	108.50	70	120	
Sc	45	2	he	1412878	0.95	1271268	111.14	70	120	

Ge	72	1	No Gas	701501	1.13	682805	102.74	70	120	
In	115	1	No Gas	3602544	1.23	3697856	97.42	70	120	
Tb	159	1	No Gas	4156161	0.54	4404848	94.35	70	120	
Bi	209	1	No Gas	2130085	0.27	1997135	106.66	70	120	
Sc	45	3	HeHe	144475	2.89	132951	108.67	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	038_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:52:51-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	100.342	0.861	3607283	0.88	100	100.3	90	110	
Cr	52	1	No Gas	98.206	1.673	3188450	0.84	100	98.2	90	110	
Mn	55	1	No Gas	102.665	0.140	4081801	1.62	100	102.7	90	110	
Co	59	1	No Gas	97.691	2.070	3488283	1.72	100	97.7	90	110	
Ni	60	1	No Gas	95.621	1.296	792621	0.65	100	95.6	90	110	
Cu	63	1	No Gas	100.063	2.328	1925718	2.09	100	100.1	90	110	
Sr	88	1	No Gas	101.148	0.948	4567626	0.84	100	101.1	90	110	
Ag	107	1	No Gas	99.440	1.473	1949285	0.65	100	99.4	90	110	
Al	27	1	No Gas	101.775	2.134	2175255	0.90	100	101.8	90	110	
Sn	118	1	No Gas	98.236	1.799	1122983	0.86	100	98.2	90	110	
Tl	47	1	No Gas	89.161	1.635	264018	1.55	100	89.2	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	97.198	1.062	475366	1.47	100	97.2	90	110	
As	75	3	HeHe	93.041	2.372	37531	2.83	100	93.0	90	110	
As	75	1	No Gas	95.419	2.230	519516	0.45	100	95.4	90	110	
Sb	121	1	No Gas	99.710	1.543	1534440	1.72	100	99.7	90	110	
Hg	201	1	No Gas	1.988	3.343	2866	3.78	2	99.4	90	110	
Be	9	1	No Gas	92.661	1.055	345522	0.88	100	92.7	90	110	
Pb	208	1	No Gas	96.714	2.907	2976376	1.55	100	96.7	90	110	
Se	82	1	No Gas	94.700	1.740	24991	0.51	100	94.7	90	110	
Mo	98	1	No Gas	97.240	1.242	1203454	0.59	100	97.2	90	110	
Ba	137	1	No Gas	98.519	0.867	494076	0.19	100	98.5	90	110	
Tl	205	1	No Gas	96.547	0.675	2180762	1.40	100	96.5	90	110	
U	238	1	No Gas	103.411	0.916	2952826	2.73	100	103.4	90	110	
Na	23	2	he	1009.441	0.996	3153775	0.90	1000	100.9	90	110	
Mg	24	2	he	1023.870	2.192	1801121	2.53	1000	102.4	90	110	
K	39	2	he	995.257	1.211	3017136	0.36	1000	99.5	90	110	
Se	82	3	HeHe	91.168	1.627	1812	1.11	100	91.2	90	110	
Fe	57	3	HeHe	1014.418	1.032	92426	1.47	1000	101.4	90	110	
Cd	114	1	No Gas	95.639	1.179	858320	0.86	100	95.6	90	110	
Ca	44	1	No Gas	975.801	1.350	1043939	1.77	1000	97.6	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6729857	1.72	5896472	114.13	70	120	
Sc	45	2	he	1478963	0.94	1271268	116.34	70	120	
Ge	72	1	No Gas	751230	0.64	682805	110.02	70	120	
In	115	1	No Gas	3934751	1.69	3697856	106.41	70	120	
Tb	159	1	No Gas	4511436	0.78	4404848	102.42	70	120	
Bi	209	1	No Gas	2297520	1.88	1997135	115.04	70	120	
Sc	45	3	HeHe	154433	0.45	132951	116.16	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	039_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:56:14-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.174	1.0	7679	2.9	9	
Cr	52	1	No Gas	0.064	23.6	14473	2.3	4	
Mn	55	1	No Gas	0.315	12.0	49189	0.9	25	
Co	59	1	No Gas	0.002	104.2	359	19.9	1	
Ni	60	1	No Gas	-2.561	-0.5	923	12.6	25	
Cu	63	1	No Gas	0.219	3.3	4927	1.4	25	
Sr	88	1	No Gas	0.009	38.3	526	28.7	25	
Ag	107	1	No Gas	0.010	28.4	241	25.4	9	
Al	27	1	No Gas	0.878	2.8	28798	1.3	1000000	
Sn	118	1	No Gas	1.070	22.7	12598	21.3	25	
Ti	47	1	No Gas	0.380	22.4	1479	19.2	10000	
Zn	66	1	No Gas	0.642	5.8	4070	5.5	25	
As	75	3	HeHe	0.682	11.5	283	11.9	9	
As	75	1	No Gas	0.877	3.1	31391	2.1	9	
Sb	121	1	No Gas	0.326	29.4	5223	27.7	4	
Hg	201	1	No Gas	0.011	102.9	55	27.6	0.04	
Be	9	1	No Gas	0.006	95.0	49	39.9	1	
Pb	208	1	No Gas	0.049	10.9	1885	7.1	4	
Se	82	1	No Gas	0.928	133.5	146	229.6	25	
Mo	98	1	No Gas	1.111	27.7	14850	24.6	10000	
Ba	137	1	No Gas	0.050	11.8	303	10.1	25	
Tl	205	1	No Gas	0.039	30.6	933	27.7	1	
U	238	1	No Gas	0.195	20.3	5709	19.2	25	
Na	23	2	he	8.842	4.8	124345	2.4	2500000	
Mg	24	2	he	0.478	26.0	1015	20.3	2500000	
K	39	2	he	2.115	51.8	238599	0.8	5000000	
Se	82	3	HeHe	0.103	846.9	74	21.5	25	
Fe	57	3	HeHe	7.978	7.3	926	6.2	2500000	
Cd	114	1	No Gas	0.041	14.8	423	11.9	1	
Ca	44	1	No Gas	-6.992	-18.3	135814	1.3	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6791089	2.12	5896472	115.17	70	120	
Sc	45	2	he	1478720	1.50	1271268	116.32	70	120	
Ge	72	1	No Gas	763164	2.30	682805	111.77	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3992092	2.76	3697856	107.96	70	120	
Tb	159	1	No Gas	4554022	2.98	4404848	103.39	70	120	
Bi	209	1	No Gas	2337198	2.84	1997135	117.03	70	120	
Sc	45	3	HeHe	154133	0.82	132951	115.93	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	040LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:59:43-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	2.277	5.072	82954	5.53	2	113.8	70	130		
Cr	52	1	No Gas	2.144	2.412	81420	2.66	2	107.2	70	130		
Mn	55	1	No Gas	5.400	1.722	248458	0.66	5	108.0	70	130		
Co	59	1	No Gas	5.004	1.957	178473	2.08	5	100.1	70	130		
Ni	60	1	No Gas	2.301	2.532	40013	0.86	5	46.0	70	130	LLCCV Main CR1 Failed	N/A
Cu	63	1	No Gas	5.051	0.804	97588	0.97	5	101.0	70	130		
Sr	88	1	No Gas	4.695	1.416	211538	0.46	5	93.9	70	130		
Ag	107	1	No Gas	2.028	4.098	39306	3.14	2	101.4	70	130		
Al	27	1	No Gas	80.239	1.554	1712993	2.64	80	100.3	70	130		
Sn	118	1	No Gas	2.665	10.894	30311	11.43	2	133.2	70	130	LLCCV Main CR1 Failed	N/A
Tl	47	1	No Gas	4.875	2.731	14719	3.73	5	97.5	70	130		
Zn	66	1	No Gas	5.117	2.048	25809	2.04	5	102.3	70	130		
As	75	3	HeHe	3.196	1.675	1277	2.34	3	106.5	70	130		
As	75	1	No Gas	3.624	1.522	45181	1.76	3	120.8	70	130		
Sb	121	1	No Gas	2.142	3.901	32707	5.00	2	107.1	70	130		
Hg	201	1	No Gas	0.202	7.605	315	5.75	0.2	100.9	70	130		
Be	9	1	No Gas	0.931	2.046	3490	2.27	1	93.1	70	130		
Pb	208	1	No Gas	2.043	0.682	61231	1.61	2	102.2	70	130		
Se	82	1	No Gas	5.905	2.520	1455	2.37	5	118.1	70	130		
Mo	98	1	No Gas	2.507	5.975	31546	6.40	2	125.3	70	130		
Ba	137	1	No Gas	5.154	2.864	25207	1.80	5	103.1	70	130		
Tl	205	1	No Gas	0.975	4.456	21371	5.64	1	97.5	70	130		
U	238	1	No Gas	4.843	1.143	133946	1.08	5	96.9	70	130		
Na	23	2	he	111.962	2.312	424089	1.81	100	112.0	70	130		
Mg	24	2	he	102.011	0.878	174470	0.91	100	102.0	70	130		
K	39	2	he	112.325	0.830	531372	0.23	100	112.3	70	130		
Se	82	3	HeHe	3.306	2.874	133	2.21	5	66.1	70	130	LLCCV Main CR1 Failed	N/A
Fe	57	3	HeHe	54.935	6.887	5120	7.85	50	109.9	70	130		
Cd	114	1	No Gas	1.086	4.884	9680	3.82	1	108.6	70	130		
Ca	44	1	No Gas	91.211	3.520	224849	0.94	100	91.2	70	130		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6711721	1.15	5896472	113.83	70	120	
Sc	45	2	he	1436675	0.31	1271268	113.01	70	120	
Ge	72	1	No Gas	733028	1.78	682805	107.36	70	120	
In	115	1	No Gas	3887074	1.18	3697856	105.12	70	120	
Tb	159	1	No Gas	4393092	2.33	4404848	99.73	70	120	
Bi	209	1	No Gas	2225007	1.29	1997135	111.41	70	120	
Sc	45	3	HeHe	152061	1.55	132951	114.37	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	061_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T16:14:29-04:00
Sample Type	CCB
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.258	21.5	10449	17.0	9	
Cr	52	1	No Gas	0.085	15.7	14829	1.0	4	
Mn	55	1	No Gas	0.282	18.4	46806	1.9	25	
Co	59	1	No Gas	0.004	52.3	415	15.2	1	
Ni	60	1	No Gas	-2.534	-1.0	1113	15.7	25	
Cu	63	1	No Gas	0.270	3.2	5794	1.4	25	
Sr	88	1	No Gas	0.013	34.8	674	29.7	25	
Ag	107	1	No Gas	0.013	50.2	289	42.8	9	
Al	27	1	No Gas	1.124	7.8	33317	4.2	1000000	
Sn	118	1	No Gas	0.923	28.8	10645	30.5	25	
Ti	47	1	No Gas	0.792	31.8	2656	29.7	10000	
Zn	66	1	No Gas	0.756	7.9	4524	4.7	25	
As	75	3	HeHe	0.476	13.5	195	12.4	9	
As	75	1	No Gas	0.804	48.2	30281	4.1	9	
Sb	121	1	No Gas	0.878	15.7	13473	17.7	4	
Hg	201	1	No Gas	0.029	20.4	77	13.0	0.04	
Be	9	1	No Gas	0.006	18.3	50	6.9	1	
Pb	208	1	No Gas	0.039	35.2	1482	25.2	4	
Se	82	1	No Gas	1.085	52.3	178	82.5	25	
Mo	98	1	No Gas	1.075	26.6	14055	27.1	10000	
Ba	137	1	No Gas	0.074	12.5	427	11.1	25	
Tl	205	1	No Gas	0.037	22.8	837	21.5	1	
U	238	1	No Gas	0.118	24.2	3345	26.6	25	
Na	23	2	he	10.156	8.8	126707	1.9	2500000	
Mg	24	2	he	0.558	23.7	1145	20.5	2500000	
K	39	2	he	5.662	21.5	245434	1.1	5000000	
Se	82	3	HeHe	0.110	951.2	73	25.8	25	
Fe	57	3	HeHe	21.162	3.4	2078	3.7	2500000	
Cd	114	1	No Gas	0.038	8.8	390	6.8	1	
Ca	44	1	No Gas	3.929	76.5	142701	0.9	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6638402	2.50	5896472	112.58	70	120	
Sc	45	2	he	1460240	0.46	1271268	114.86	70	120	
Ge	72	1	No Gas	741448	2.88	682805	108.59	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3876860	2.36	3697856	104.84	70	120	
Tb	159	1	No Gas	4542410	0.70	4404848	103.12	70	120	
Bi	209	1	No Gas	2239048	2.56	1997135	112.11	70	120	
Sc	45	3	HeHe	150931	2.00	132951	113.52	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	062LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T16:18:00-04:00
Sample Type	LLCCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	2.390	2.438	85659	1.28	2	119.5	70	130		
Cr	52	1	No Gas	2.177	2.681	81201	2.03	2	108.8	70	130		
Mn	55	1	No Gas	5.427	0.651	245715	0.95	5	108.5	70	130		
Co	59	1	No Gas	4.895	1.739	171929	0.24	5	97.9	70	130		
Ni	60	1	No Gas	2.354	6.286	39813	2.07	5	47.1	70	130	LLCCV Main CR1 Failed	X N/A
Cu	63	1	No Gas	5.081	1.161	96675	0.44	5	101.6	70	130		
Sr	88	1	No Gas	4.658	0.727	206700	0.98	5	93.2	70	130		
Ag	107	1	No Gas	2.140	2.355	40208	1.37	2	107.0	70	130		
Al	27	1	No Gas	80.477	1.325	1691690	2.03	80	100.6	70	130		
Sn	118	1	No Gas	2.587	4.616	28533	6.90	2	129.3	70	130		
Ti	47	1	No Gas	5.196	3.477	15428	4.67	5	103.9	70	130		
Zn	66	1	No Gas	5.036	1.088	25029	2.21	5	100.7	70	130		
As	75	3	HeHe	3.229	2.446	1254	1.57	3	107.6	70	130		
As	75	1	No Gas	3.742	3.984	45089	1.90	3	124.7	70	130		
Sb	121	1	No Gas	2.703	2.541	39968	4.29	2	135.1	70	130	LLCCV Main CR1 Failed	X N/A
Hg	201	1	No Gas	0.192	1.387	300	1.33	0.2	96.1	70	130		
Be	9	1	No Gas	0.970	4.858	3579	3.55	1	97.0	70	130		
Pb	208	1	No Gas	1.998	2.281	59447	1.72	2	99.9	70	130		
Se	82	1	No Gas	5.456	2.427	1316	2.66	5	109.1	70	130		
Mo	98	1	No Gas	2.599	2.892	31668	4.55	2	129.9	70	130		
Ba	137	1	No Gas	5.304	3.723	25697	3.23	5	106.1	70	130		
Tl	205	1	No Gas	0.968	1.843	21052	1.95	1	96.8	70	130		
U	238	1	No Gas	4.917	0.145	135051	0.63	5	98.3	70	130		
Na	23	2	he	111.786	3.162	427436	0.93	100	111.8	70	130		
Mg	24	2	he	101.514	2.556	175226	2.31	100	101.5	70	130		
K	39	2	he	109.937	4.259	529699	1.57	100	109.9	70	130		
Se	82	3	HeHe	5.601	19.816	171	11.17	5	112.0	70	130		
Fe	57	3	HeHe	69.741	0.988	6264	2.13	50	139.5	70	130	LLCCV Main CR1 Failed	X
Cd	114	1	No Gas	1.043	2.022	9016	2.50	1	104.3	70	130		
Ca	44	1	No Gas	98.773	2.273	228305	1.49	100	98.8	70	130		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6609469	1.49	5896472	112.09	70	120	
Sc	45	2	he	1450134	1.53	1271268	114.07	70	120	
Ge	72	1	No Gas	726466	0.89	682805	106.39	70	120	
In	115	1	No Gas	3768227	2.33	3697856	101.90	70	120	
Tb	159	1	No Gas	4351112	1.00	4404848	98.78	70	120	
Bi	209	1	No Gas	2209519	0.64	1997135	110.63	70	120	
Sc	45	3	HeHe	147868	2.01	132951	111.22	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	063_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T16:21:30-04:00
Sample Type	CCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	98.080	1.671	3473192	0.59	100	98.1	90	110	
Cr	52	1	No Gas	96.228	1.104	3078078	0.50	100	96.2	90	110	
Mn	55	1	No Gas	100.875	1.416	3950975	0.73	100	100.9	90	110	
Co	59	1	No Gas	97.315	1.485	3423549	2.20	100	97.3	90	110	
Ni	60	1	No Gas	93.992	0.524	767947	1.33	100	94.0	90	110	
Cu	63	1	No Gas	98.788	1.146	1872850	0.20	100	98.8	90	110	
Sr	88	1	No Gas	99.909	1.365	4444611	1.63	100	99.9	90	110	
Ag	107	1	No Gas	102.043	1.085	1910900	1.35	100	102.0	90	110	
Al	27	1	No Gas	99.675	1.003	2099115	1.13	100	99.7	90	110	
Sn	118	1	No Gas	99.494	1.658	1086509	1.46	100	99.5	90	110	
Tl	47	1	No Gas	88.201	1.234	257287	1.07	100	88.2	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	96.686	1.457	465842	2.03	100	96.7	90	110	
As	75	3	HeHe	96.326	1.420	36769	1.75	100	96.3	90	110	
As	75	1	No Gas	95.326	0.953	511380	0.94	100	95.3	90	110	
Sb	121	1	No Gas	101.962	2.711	1498814	2.73	100	102.0	90	110	
Hg	201	1	No Gas	1.934	2.488	2660	2.22	2	96.7	90	110	
Be	9	1	No Gas	92.499	1.320	339769	0.72	100	92.5	90	110	
Pb	208	1	No Gas	96.943	1.052	2845479	1.31	100	96.9	90	110	
Se	82	1	No Gas	92.698	1.179	24100	1.81	100	92.7	90	110	
Mo	98	1	No Gas	97.515	0.262	1152878	0.64	100	97.5	90	110	
Ba	137	1	No Gas	100.432	2.243	478900	1.80	100	100.4	90	110	
Tl	205	1	No Gas	97.380	1.276	2097353	1.49	100	97.4	90	110	
U	238	1	No Gas	104.311	2.222	2839683	2.52	100	104.3	90	110	
Na	23	2	he	1036.498	3.184	3177345	0.91	1000	103.6	90	110	
Mg	24	2	he	1036.393	3.501	1789984	0.70	1000	103.6	90	110	
K	39	2	he	1019.966	4.231	3030089	0.76	1000	102.0	90	110	
Se	82	3	HeHe	96.000	1.545	1802	0.70	100	96.0	90	110	
Fe	57	3	HeHe	1029.732	3.202	88763	2.09	1000	103.0	90	110	
Cd	114	1	No Gas	96.789	1.554	829741	1.27	100	96.8	90	110	
Ca	44	1	No Gas	979.921	2.160	1032103	1.99	1000	98.0	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6629376	1.33	5896472	112.43	70	120	
Sc	45	2	he	1453152	3.18	1271268	114.31	70	120	
Ge	72	1	No Gas	727965	1.29	682805	106.61	70	120	
In	115	1	No Gas	3758237	0.49	3697856	101.63	70	120	
Tb	159	1	No Gas	4289899	1.27	4404848	97.39	70	120	
Bi	209	1	No Gas	2190555	0.33	1997135	109.68	70	120	
Sc	45	3	HeHe	146168	2.15	132951	109.94	70	120	

Sample Report

Sample Table

Sample Name	9980395001
Data File Name	067SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T16:35:19-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3310

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	6.879	6.879	1.24	247069	0.00	1000	
Cr	52	1	No Gas	6.539	6.539	1.12	222489	0.00	1000	
Mn	55	1	No Gas	42.283	42.283	1.50	1692528	0.00	1000	
Co	59	1	No Gas	0.417	0.417	2.29	15100	0.00	1000	
Ni	60	1	No Gas	-0.728	-0.728	-9.35	15601	0.00	1000	
Cu	63	1	No Gas	2.144	2.144	1.23	41675	0.01	1000	
Sr	88	1	No Gas	4.103	4.103	1.73	184341	0.00	1000	
Ag	107	1	No Gas	0.016	0.016	13.79	344	0.00	1000	
Al	27	1	No Gas	4887.067	4887.067	0.16	103389322	0.00	100000	
Sn	118	1	No Gas	0.803	0.803	9.02	8992	0.01	100	
Ti	47	1	No Gas	111.003	111.003	0.36	326681	0.03	2000	
Zn	66	1	No Gas	16.548	16.548	0.37	81190	0.02	1000	
As	75	3	HeHe	0.888	0.888	12.21	358	0.25	1000	
As	75	1	No Gas	1.106	1.106	12.28	32100	0.00	1000	
Sb	121	1	No Gas	0.300	0.300	26.21	4564	0.01	100	
Hg	201	1	No Gas	0.050	0.050	5.80	104	0.05	4	
Be	9	1	No Gas	0.096	0.096	10.19	382	0.03	1000	
Pb	208	1	No Gas	6.959	6.959	0.62	202539	0.00	1000	
Se	82	1	No Gas	1.014	1.014	72.67	161	0.63	1000	
Mo	98	1	No Gas	0.593	0.593	24.42	7917	0.01	2000	
Ba	137	1	No Gas	16.753	16.753	2.56	80204	0.02	1000	
Tl	205	1	No Gas	0.039	0.039	13.00	867	0.00	1000	
U	238	1	No Gas	0.387	0.387	3.65	10486	0.00	1000	
Na	23	2	he	24.117	24.117	4.83	171078	0.01	100000	
Mg	24	2	he	294.934	294.934	0.17	520341	0.06	100000	
K	39	2	he	248.470	248.470	0.64	930446	0.03	100000	
Se	82	3	HeHe	-0.362	-0.362	-184.34	64	-0.57	1000	
Fe	57	3	HeHe	2730.317	2730.317	2.47	242206	1.13	100000	
Cd	114	1	No Gas	0.124	0.124	2.51	1117	0.01	1000	
Ca	44	1	No Gas	470.726	470.726	1.63	573223	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6689717	1.38	5896472	113.45	70	120	
Sc	45	2	he	1482943	0.62	1271268	116.65	70	120	
Ge	72	1	No Gas	720582	1.12	682805	105.53	70	120	

In	115	1	No Gas	3770225	1.23	3697856	101.96	70	120	
Tb	159	1	No Gas	4304366	0.66	4404848	97.72	70	120	
Bi	209	1	No Gas	2168894	2.34	1997135	108.60	70	120	
Sc	45	3	HeHe	150608	1.94	132951	113.28	70	120	

Sample Report

Sample Table

Sample Name	9980395002
Data File Name	068SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T16:38:50-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3311

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	7.971	7.971	1.91	286351	0.00	1000	
Cr	52	1	No Gas	9.125	9.125	0.76	305946	0.00	1000	
Mn	55	1	No Gas	14.797	14.797	0.42	616338	0.00	1000	
Co	59	1	No Gas	0.519	0.519	1.12	18722	0.00	1000	
Ni	60	1	No Gas	-0.320	-0.320	-5.46	18891	0.00	1000	
Cu	63	1	No Gas	2.982	2.982	0.49	57759	0.01	1000	
Sr	88	1	No Gas	3.494	3.494	0.77	157133	0.00	1000	
Ag	107	1	No Gas	0.013	0.013	16.81	285	0.00	1000	
Al	27	1	No Gas	6084.105	6084.105	1.84	128833769	0.00	100000	
Sn	118	1	No Gas	0.772	0.772	10.80	8629	0.01	100	
Ti	47	1	No Gas	88.758	88.758	0.69	261557	0.03	2000	
Zn	66	1	No Gas	13.857	13.857	1.41	68193	0.02	1000	
As	75	3	HeHe	1.245	1.245	5.39	493	0.25	1000	
As	75	1	No Gas	1.441	1.441	13.78	33855	0.00	1000	
Sb	121	1	No Gas	0.311	0.311	18.35	4705	0.01	100	
Hg	201	1	No Gas	0.062	0.062	13.26	121	0.05	4	
Be	9	1	No Gas	0.078	0.078	7.56	317	0.02	1000	
Pb	208	1	No Gas	9.768	9.768	0.79	286061	0.00	1000	
Se	82	1	No Gas	0.797	0.797	64.25	106	0.75	1000	
Mo	98	1	No Gas	0.659	0.659	20.08	8678	0.01	2000	
Ba	137	1	No Gas	13.086	13.086	0.99	61693	0.02	1000	
Tl	205	1	No Gas	0.060	0.060	5.70	1311	0.00	1000	
U	238	1	No Gas	0.505	0.505	2.10	13729	0.00	1000	
Na	23	2	he	16.777	16.777	6.27	148548	0.01	100000	
Mg	24	2	he	290.015	290.015	3.02	510773	0.06	100000	
K	39	2	he	247.821	247.821	2.74	927158	0.03	100000	
Se	82	3	HeHe	1.403	1.403	35.58	96	1.47	1000	
Fe	57	3	HeHe	2810.065	2810.065	0.92	246747	1.14	100000	
Cd	114	1	No Gas	0.080	0.080	15.04	737	0.01	1000	
Ca	44	1	No Gas	131.394	131.394	4.32	261297	0.05	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6696503	1.84	5896472	113.57	70	120	
Sc	45	2	he	1481141	2.59	1271268	116.51	70	120	
Ge	72	1	No Gas	707944	1.78	682805	103.68	70	120	

In	115	1	No Gas	3759999	0.83	3697856	101.68	70	120	
Tb	159	1	No Gas	4237777	1.29	4404848	96.21	70	120	
Bi	209	1	No Gas	2183476	0.39	1997135	109.33	70	120	
Sc	45	3	HeHe	149060	1.58	132951	112.12	70	120	

Sample Report

Sample Table

Sample Name	9980395003
Data File Name	069SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T16:42:19-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3312

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	7.368	7.368	0.72	266728	0.00	1000	
Cr	52	1	No Gas	6.869	6.869	0.97	234982	0.00	1000	
Mn	55	1	No Gas	5.716	5.716	1.13	262111	0.00	1000	
Co	59	1	No Gas	0.374	0.374	3.45	13658	0.00	1000	
Ni	60	1	No Gas	-0.925	-0.925	-9.74	14133	-0.01	1000	
Cu	63	1	No Gas	2.168	2.168	0.89	42475	0.01	1000	
Sr	88	1	No Gas	4.480	4.480	0.82	202853	0.00	1000	
Ag	107	1	No Gas	0.015	0.015	3.85	322	0.00	1000	
Al	27	1	No Gas	4530.485	4530.485	1.03	96632085	0.00	100000	
Sn	118	1	No Gas	0.574	0.574	5.51	6520	0.01	100	
Ti	47	1	No Gas	51.594	51.594	0.31	153256	0.03	2000	
Zn	66	1	No Gas	7.733	7.733	1.98	38733	0.02	1000	
As	75	3	HeHe	0.835	0.835	4.20	333	0.25	1000	
As	75	1	No Gas	1.073	1.073	15.50	32191	0.00	1000	
Sb	121	1	No Gas	0.195	0.195	18.92	3019	0.01	100	
Hg	201	1	No Gas	0.081	0.081	16.41	147	0.05	4	
Be	9	1	No Gas	0.066	0.066	7.97	273	0.02	1000	
Pb	208	1	No Gas	12.150	12.150	0.96	359867	0.00	1000	
Se	82	1	No Gas	1.521	1.521	27.20	297	0.51	1000	
Mo	98	1	No Gas	0.442	0.442	23.88	6159	0.01	2000	
Ba	137	1	No Gas	10.895	10.895	1.03	52391	0.02	1000	
Tl	205	1	No Gas	0.040	0.040	23.68	889	0.00	1000	
U	238	1	No Gas	0.334	0.334	4.77	9214	0.00	1000	
Na	23	2	he	31.473	31.473	5.86	189891	0.02	100000	
Mg	24	2	he	236.432	236.432	1.66	409665	0.06	100000	
K	39	2	he	240.223	240.223	4.08	890846	0.03	100000	
Se	82	3	HeHe	-0.456	-0.456	-80.28	61	-0.74	1000	
Fe	57	3	HeHe	1741.786	1741.786	2.19	153089	1.14	100000	
Cd	114	1	No Gas	0.042	0.042	19.42	417	0.01	1000	
Ca	44	1	No Gas	169.405	169.405	1.86	298433	0.06	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6743894	1.27	5896472	114.37	70	120	
Sc	45	2	he	1456579	1.76	1271268	114.58	70	120	
Ge	72	1	No Gas	711681	0.45	682805	104.23	70	120	

In	115	1	No Gas	3788811	1.36	3697856	102.46	70	120	
Tb	159	1	No Gas	4321727	1.47	4404848	98.11	70	120	
Bi	209	1	No Gas	2208774	0.84	1997135	110.60	70	120	
Sc	45	3	HeHe	149124	1.47	132951	112.16	70	120	

Sample Report

Sample Table

Sample Name	1020185
Data File Name	070SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T16:45:49-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3401

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	48.447	48.447	1.77	1711450	0.00	1000	
Cr	52	1	No Gas	47.041	47.041	2.93	1506420	0.00	1000	
Mn	55	1	No Gas	47.720	47.720	1.57	1882380	0.00	1000	
Co	59	1	No Gas	40.931	40.931	1.48	1435778	0.00	1000	
Ni	60	1	No Gas	37.934	37.934	3.24	321613	0.01	1000	
Cu	63	1	No Gas	41.355	41.355	1.52	782130	0.01	1000	
Sr	88	1	No Gas	42.192	42.192	2.55	1871420	0.00	1000	
Ag	107	1	No Gas	15.493	15.493	1.66	286899	0.01	1000	
Al	27	1	No Gas	5517.147	5517.147	2.16	115321425	0.00	100000	
Sn	118	1	No Gas	35.042	35.042	0.20	378496	0.01	100	
Ti	47	1	No Gas	111.003	111.003	1.91	322773	0.03	2000	
Zn	66	1	No Gas	402.965	402.965	0.76	1932906	0.02	1000	
As	75	3	HeHe	37.678	37.678	0.44	14367	0.26	1000	
As	75	1	No Gas	37.912	37.912	1.09	218510	0.02	1000	
Sb	121	1	No Gas	26.998	26.998	1.75	392479	0.01	100	
Hg	201	1	No Gas	0.545	0.545	7.42	763	0.07	4	
Be	9	1	No Gas	37.601	37.601	2.50	137725	0.03	1000	
Pb	208	1	No Gas	52.445	52.445	0.22	1516211	0.00	1000	
Se	82	1	No Gas	38.124	38.124	3.16	9820	0.39	1000	
Mo	98	1	No Gas	37.822	37.822	1.79	442670	0.01	2000	
Ba	137	1	No Gas	430.790	430.790	1.01	2024899	0.02	1000	
Tl	205	1	No Gas	38.960	38.960	1.13	826353	0.00	1000	
U	238	1	No Gas	0.374	0.374	2.63	10074	0.00	1000	
Na	23	2	he	475.590	475.590	1.68	1491977	0.03	100000	
Mg	24	2	he	707.205	707.205	2.62	1207267	0.06	100000	
K	39	2	he	692.327	692.327	0.19	2105477	0.03	100000	
Se	82	3	HeHe	39.583	39.583	3.67	782	5.06	1000	
Fe	57	3	HeHe	2331.821	2331.821	1.74	200491	1.16	100000	
Cd	114	1	No Gas	38.665	38.665	1.90	327765	0.01	1000	
Ca	44	1	No Gas	559.788	559.788	2.54	647270	0.09	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6609813	0.91	5896472	112.10	70	120	
Sc	45	2	he	1435125	0.50	1271268	112.89	70	120	
Ge	72	1	No Gas	709250	1.86	682805	103.87	70	120	

In	115	1	No Gas	3715990	0.79	3697856	100.49	70	120	
Tb	159	1	No Gas	4228241	1.28	4404848	95.99	70	120	
Bi	209	1	No Gas	2157412	1.28	1997135	108.03	70	120	
Sc	45	3	HeHe	145948	1.74	132951	109.78	70	120	

Sample Report

Sample Table

Sample Name	1020186
Data File Name	071SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T16:49:15-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3402

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	51.036	51.036	1.56	1790030	0.00	1000	
Cr	52	1	No Gas	49.024	49.024	3.10	1558470	0.00	1000	
Mn	55	1	No Gas	50.737	50.737	2.41	1985084	0.00	1000	
Co	59	1	No Gas	42.335	42.335	3.34	1474565	0.00	1000	
Ni	60	1	No Gas	39.624	39.624	1.45	332668	0.01	1000	
Cu	63	1	No Gas	43.888	43.888	1.30	824135	0.01	1000	
Sr	88	1	No Gas	43.283	43.283	2.16	1906469	0.00	1000	
Ag	107	1	No Gas	16.135	16.135	2.48	294586	0.01	1000	
Al	27	1	No Gas	5540.009	5540.009	2.33	114985981	0.00	100000	
Sn	118	1	No Gas	39.739	39.739	0.87	423171	0.01	100	
Ti	47	1	No Gas	124.562	124.562	2.18	359602	0.03	2000	
Zn	66	1	No Gas	419.767	419.767	1.83	1999213	0.02	1000	
As	75	3	HeHe	40.230	40.230	1.65	15020	0.27	1000	
As	75	1	No Gas	39.617	39.617	2.49	225559	0.02	1000	
Sb	121	1	No Gas	38.986	38.986	0.67	558743	0.01	100	
Hg	201	1	No Gas	0.523	0.523	3.04	724	0.07	4	
Be	9	1	No Gas	39.344	39.344	1.25	143097	0.03	1000	
Pb	208	1	No Gas	54.773	54.773	1.60	1560304	0.00	1000	
Se	82	1	No Gas	38.177	38.177	2.43	9764	0.39	1000	
Mo	98	1	No Gas	41.316	41.316	2.41	476677	0.01	2000	
Ba	137	1	No Gas	453.277	453.277	0.43	2085423	0.02	1000	
Tl	205	1	No Gas	41.052	41.052	2.64	858013	0.00	1000	
U	238	1	No Gas	0.384	0.384	3.35	10193	0.00	1000	
Na	23	2	he	503.286	503.286	1.79	1578940	0.03	100000	
Mg	24	2	he	736.088	736.088	2.22	1261054	0.06	100000	
K	39	2	he	723.804	723.804	2.55	2198644	0.03	100000	
Se	82	3	HeHe	38.038	38.038	6.21	739	5.15	1000	
Fe	57	3	HeHe	2465.212	2465.212	1.43	207539	1.19	100000	
Cd	114	1	No Gas	40.739	40.739	2.84	340511	0.01	1000	
Ca	44	1	No Gas	561.291	561.291	1.93	644074	0.09	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6562915	0.50	5896472	111.30	70	120	
Sc	45	2	he	1440368	1.25	1271268	113.30	70	120	
Ge	72	1	No Gas	692886	1.07	682805	101.48	70	120	

In	115	1	No Gas	3663607	0.40	3697856	99.07	70	120	
Tb	159	1	No Gas	4138998	1.50	4404848	93.96	70	120	
Bi	209	1	No Gas	2125955	1.02	1997135	106.45	70	120	
Sc	45	3	HeHe	142891	0.66	132951	107.48	70	120	

Sample Report

Sample Table

Sample Name	9980395004
Data File Name	073SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T16:56:06-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3404

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	8.933	8.933	2.03	313596	0.00	1000	
Cr	52	1	No Gas	8.280	8.280	1.40	272475	0.00	1000	
Mn	55	1	No Gas	12.042	12.042	1.76	496890	0.00	1000	
Co	59	1	No Gas	0.498	0.498	0.61	17587	0.00	1000	
Ni	60	1	No Gas	-0.202	-0.202	-12.30	19388	0.00	1000	
Cu	63	1	No Gas	2.353	2.353	0.94	44687	0.01	1000	
Sr	88	1	No Gas	6.574	6.574	2.69	288877	0.00	1000	
Ag	107	1	No Gas	0.038	0.038	5.11	745	0.01	1000	
Al	27	1	No Gas	5832.809	5832.809	1.43	120744699	0.00	100000	
Sn	118	1	No Gas	0.903	0.903	4.73	9926	0.01	100	
Ti	47	1	No Gas	106.374	106.374	0.93	306351	0.03	2000	
Zn	66	1	No Gas	12.882	12.882	3.42	62037	0.02	1000	
As	75	3	HeHe	1.689	1.689	1.16	632	0.27	1000	
As	75	1	No Gas	1.842	1.842	18.26	35106	0.01	1000	
Sb	121	1	No Gas	2.556	2.556	11.01	37217	0.01	100	
Hg	201	1	No Gas	0.098	0.098	14.77	170	0.06	4	
Be	9	1	No Gas	0.265	0.265	6.37	988	0.03	1000	
Pb	208	1	No Gas	22.254	22.254	3.11	653293	0.00	1000	
Se	82	1	No Gas	2.132	2.132	47.78	446	0.48	1000	
Mo	98	1	No Gas	1.800	1.800	17.66	21866	0.01	2000	
Ba	137	1	No Gas	29.152	29.152	1.33	138089	0.02	1000	
Tl	205	1	No Gas	0.065	0.065	8.77	1419	0.00	1000	
U	238	1	No Gas	0.676	0.676	6.58	18441	0.00	1000	
Na	23	2	he	33.432	33.432	0.06	192642	0.02	100000	
Mg	24	2	he	311.118	311.118	0.80	530452	0.06	100000	
K	39	2	he	296.758	296.758	0.81	1030021	0.03	100000	
Se	82	3	HeHe	1.034	1.034	56.33	84	1.22	1000	
Fe	57	3	HeHe	2324.341	2324.341	2.09	193914	1.20	100000	
Cd	114	1	No Gas	0.068	0.068	38.66	627	0.01	1000	
Ca	44	1	No Gas	333.132	333.132	1.07	437048	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6546123	0.30	5896472	111.02	70	120	
Sc	45	2	he	1433088	1.00	1271268	112.73	70	120	
Ge	72	1	No Gas	698418	0.83	682805	102.29	70	120	

In	115	1	No Gas	3708325	0.93	3697856	100.28	70	120	
Tb	159	1	No Gas	4259473	1.62	4404848	96.70	70	120	
Bi	209	1	No Gas	2190311	0.59	1997135	109.67	70	120	
Sc	45	3	HeHe	141602	0.87	132951	106.51	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	074_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T16:59:36-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	98.115	1.001	3338689	1.59	100	98.1	90	110	
Cr	52	1	No Gas	96.956	0.628	2979832	0.89	100	97.0	90	110	
Mn	55	1	No Gas	101.257	0.307	3810601	0.85	100	101.3	90	110	
Co	59	1	No Gas	97.196	1.301	3285259	1.92	100	97.2	90	110	
Ni	60	1	No Gas	93.398	0.743	733309	1.43	100	93.4	90	110	
Cu	63	1	No Gas	98.514	1.020	1794639	1.75	100	98.5	90	110	
Sr	88	1	No Gas	100.261	0.608	4285273	0.16	100	100.3	90	110	
Ag	107	1	No Gas	102.189	0.857	1834412	1.45	100	102.2	90	110	
Al	27	1	No Gas	102.118	1.672	2066199	2.34	100	102.1	90	110	
Sn	118	1	No Gas	99.295	1.506	1039419	1.29	100	99.3	90	110	
Tl	47	1	No Gas	89.296	0.525	250279	1.19	100	89.3	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	96.432	0.476	446388	1.07	100	96.4	90	110	
As	75	3	HeHe	94.372	1.539	34440	0.33	100	94.4	90	110	
As	75	1	No Gas	96.195	0.657	495602	1.31	100	96.2	90	110	
Sb	121	1	No Gas	99.253	2.530	1398719	3.17	100	99.3	90	110	
Hg	201	1	No Gas	1.973	5.980	2614	5.42	2	98.6	90	110	
Be	9	1	No Gas	93.397	0.589	329648	1.33	100	93.4	90	110	
Pb	208	1	No Gas	96.846	0.369	2740434	0.60	100	96.8	90	110	
Se	82	1	No Gas	94.472	0.671	23598	0.23	100	94.5	90	110	
Mo	98	1	No Gas	98.032	0.678	1110943	0.23	100	98.0	90	110	
Ba	137	1	No Gas	99.091	0.636	455263	0.83	100	99.1	90	110	
Tl	205	1	No Gas	97.453	0.948	2023561	1.56	100	97.5	90	110	
U	238	1	No Gas	105.434	2.448	2766909	2.29	100	105.4	90	110	
Na	23	2	he	1023.800	0.473	3067631	1.56	1000	102.4	90	110	
Mg	24	2	he	1014.744	1.475	1712502	1.63	1000	101.5	90	110	
K	39	2	he	1016.756	2.612	2951986	1.25	1000	101.7	90	110	
Se	82	3	HeHe	95.599	4.398	1715	3.01	100	95.6	90	110	
Fe	57	3	HeHe	1029.338	1.883	84848	0.78	1000	102.9	90	110	
Cd	114	1	No Gas	95.912	0.975	788219	1.55	100	95.9	90	110	
Ca	44	1	No Gas	977.277	0.379	989317	0.47	1000	97.7	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6369242	0.75	5896472	108.02	70	120	
Sc	45	2	he	1419045	2.01	1271268	111.62	70	120	
Ge	72	1	No Gas	699667	0.63	682805	102.47	70	120	
In	115	1	No Gas	3602583	0.64	3697856	97.42	70	120	
Tb	159	1	No Gas	4132845	0.23	4404848	93.82	70	120	
Bi	209	1	No Gas	2111865	0.82	1997135	105.74	70	120	
Sc	45	3	HeHe	139745	1.30	132951	105.11	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	075_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T17:05:00-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.162	32.5	6872	25.4	9	
Cr	52	1	No Gas	0.104	28.8	15040	4.4	4	
Mn	55	1	No Gas	0.036	149.8	36310	4.4	25	
Co	59	1	No Gas	0.007	67.6	504	32.1	1	
Ni	60	1	No Gas	-2.486	-0.7	1457	10.9	25	
Cu	63	1	No Gas	0.191	2.8	4189	0.7	25	
Sr	88	1	No Gas	0.011	16.1	563	14.8	25	
Ag	107	1	No Gas	0.014	14.5	300	11.1	9	
Al	27	1	No Gas	0.843	3.3	26739	3.1	1000000	
Sn	118	1	No Gas	0.649	17.1	7143	17.6	25	
Ti	47	1	No Gas	0.228	21.1	974	15.6	10000	
Zn	66	1	No Gas	0.498	8.2	3197	4.2	25	
As	75	3	HeHe	0.308	17.8	122	14.8	9	
As	75	1	No Gas	0.554	37.0	28301	2.0	9	
Sb	121	1	No Gas	0.348	26.2	5146	26.2	4	
Hg	201	1	No Gas	0.016	9.0	59	2.0	0.04	
Be	9	1	No Gas	0.004	20.4	41	7.4	1	
Pb	208	1	No Gas	0.041	13.1	1530	12.9	4	
Se	82	1	No Gas	0.764	61.9	93	131.1	25	
Mo	98	1	No Gas	0.593	35.9	7746	32.7	10000	
Ba	137	1	No Gas	0.049	17.8	280	16.4	25	
Tl	205	1	No Gas	0.019	12.4	444	15.2	1	
U	238	1	No Gas	0.065	31.2	1800	33.1	25	
Na	23	2	he	9.576	6.3	120260	1.4	2500000	
Mg	24	2	he	0.451	26.4	922	21.9	2500000	
K	39	2	he	2.689	29.8	228273	0.2	5000000	
Se	82	3	HeHe	-0.303	-107.5	61	10.9	25	
Fe	57	3	HeHe	6.173	16.2	704	10.3	2500000	
Cd	114	1	No Gas	0.021	6.9	223	6.8	1	
Ca	44	1	No Gas	-5.598	-36.1	130682	0.6	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6472625	1.72	5896472	109.77	70	120	
Sc	45	2	he	1405184	0.89	1271268	110.53	70	120	
Ge	72	1	No Gas	706351	2.17	682805	103.45	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3683033	1.62	3697856	99.60	70	120	
Tb	159	1	No Gas	4233695	1.95	4404848	96.11	70	120	
Bi	209	1	No Gas	2182843	4.02	1997135	109.30	70	120	
Sc	45	3	HeHe	142516	1.71	132951	107.19	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	076LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T17:08:29-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.293	3.716	80112	3.09	2	114.6	70	130	
Cr	52	1	No Gas	2.166	2.730	78786	2.38	2	108.3	70	130	
Mn	55	1	No Gas	5.164	2.246	229457	1.44	5	103.3	70	130	
Co	59	1	No Gas	4.989	2.053	170700	2.04	5	99.8	70	130	
Ni	60	1	No Gas	2.414	4.117	39261	2.23	5	48.3	70	130	LLCCV Main CR1 Failed
Cu	63	1	No Gas	5.018	1.175	93018	0.73	5	100.4	70	130	
Sr	88	1	No Gas	4.536	0.683	196107	1.21	5	90.7	70	130	
Ag	107	1	No Gas	2.066	3.470	37773	3.19	2	103.3	70	130	
Al	27	1	No Gas	82.124	0.713	1681484	0.15	80	102.7	70	130	
Sn	118	1	No Gas	2.263	4.748	24289	4.92	2	113.1	70	130	
Ti	47	1	No Gas	4.792	1.220	13881	0.70	5	95.8	70	130	
Zn	66	1	No Gas	5.174	4.345	25023	4.06	5	103.5	70	130	
As	75	3	HeHe	3.010	4.224	1135	3.70	3	100.3	70	130	
As	75	1	No Gas	3.224	6.105	41369	2.80	3	107.5	70	130	
Sb	121	1	No Gas	2.346	2.155	33750	2.32	2	117.3	70	130	
Hg	201	1	No Gas	0.180	14.564	274	12.47	0.2	90.0	70	130	
Be	9	1	No Gas	0.958	2.092	3444	2.55	1	95.8	70	130	
Pb	208	1	No Gas	1.996	0.306	57436	1.00	2	99.8	70	130	
Se	82	1	No Gas	5.982	12.536	1415	12.98	5	119.6	70	130	
Mo	98	1	No Gas	2.402	4.444	28538	4.67	2	120.1	70	130	
Ba	137	1	No Gas	5.183	2.182	24095	2.59	5	103.7	70	130	
Tl	205	1	No Gas	0.996	3.012	20948	2.73	1	99.6	70	130	
U	238	1	No Gas	4.813	0.708	127798	1.26	5	96.3	70	130	
Na	23	2	he	111.359	0.931	417237	0.22	100	111.4	70	130	
Mg	24	2	he	103.080	0.762	174176	0.49	100	103.1	70	130	
K	39	2	he	109.677	0.652	517891	0.77	100	109.7	70	130	
Se	82	3	HeHe	2.832	38.209	117	16.83	5	56.6	70	130	LLCCV Main CR1 Failed
Fe	57	3	HeHe	55.494	4.521	4871	3.08	50	111.0	70	130	
Cd	114	1	No Gas	1.010	4.421	8489	4.01	1	101.0	70	130	
Ca	44	1	No Gas	93.238	1.963	217510	0.33	100	93.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6438781	0.57	5896472	109.20	70	120	
Sc	45	2	he	1419433	0.61	1271268	111.65	70	120	
Ge	72	1	No Gas	705462	0.38	682805	103.32	70	120	
In	115	1	No Gas	3665171	0.38	3697856	99.12	70	120	
Tb	159	1	No Gas	4173671	0.89	4404848	94.75	70	120	
Bi	209	1	No Gas	2136093	1.23	1997135	106.96	70	120	
Sc	45	3	HeHe	143418	1.28	132951	107.87	70	120	

Sample Report

Sample Table

Sample Name	9980395005
Data File Name	077SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T17:12:00-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3405

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	6.751	6.751	0.66	236240	0.00	1000	
Cr	52	1	No Gas	5.909	5.909	0.43	196947	0.00	1000	
Mn	55	1	No Gas	8.001	8.001	1.18	340459	0.00	1000	
Co	59	1	No Gas	0.466	0.466	3.17	16383	0.00	1000	
Ni	60	1	No Gas	0.112	0.112	74.73	21751	0.00	1000	
Cu	63	1	No Gas	1.044	1.044	1.11	20103	0.01	1000	
Sr	88	1	No Gas	2.206	2.206	1.21	96585	0.00	1000	
Ag	107	1	No Gas	0.014	0.014	24.48	285	0.00	1000	
Al	27	1	No Gas	6432.405	6432.405	1.35	132558491	0.00	100000	
Sn	118	1	No Gas	0.872	0.872	6.13	9381	0.01	100	
Ti	47	1	No Gas	103.062	103.062	1.03	295479	0.03	2000	
Zn	66	1	No Gas	3.989	3.989	2.37	19719	0.02	1000	
As	75	3	HeHe	0.769	0.769	11.93	288	0.27	1000	
As	75	1	No Gas	1.063	1.063	8.81	31051	0.00	1000	
Sb	121	1	No Gas	0.333	0.333	20.58	4864	0.01	100	
Hg	201	1	No Gas	0.091	0.091	38.20	160	0.06	4	
Be	9	1	No Gas	0.066	0.066	12.15	265	0.02	1000	
Pb	208	1	No Gas	4.266	4.266	2.29	124408	0.00	1000	
Se	82	1	No Gas	0.732	0.732	59.11	86	0.85	1000	
Mo	98	1	No Gas	0.642	0.642	24.32	8183	0.01	2000	
Ba	137	1	No Gas	10.373	10.373	1.00	48168	0.02	1000	
Tl	205	1	No Gas	0.041	0.041	24.03	900	0.00	1000	
U	238	1	No Gas	0.263	0.263	5.89	7139	0.00	1000	
Na	23	2	he	23.785	23.785	2.17	161997	0.01	100000	
Mg	24	2	he	269.048	269.048	1.92	452130	0.06	100000	
K	39	2	he	135.771	135.771	3.72	585052	0.02	100000	
Se	82	3	HeHe	0.037	0.037	1540.10	66	0.06	1000	
Fe	57	3	HeHe	1820.422	1820.422	1.22	149638	1.22	100000	
Cd	114	1	No Gas	0.042	0.042	45.27	400	0.01	1000	
Ca	44	1	No Gas	64.516	64.516	0.93	194385	0.03	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6515888	1.27	5896472	110.50	70	120	
Sc	45	2	he	1412790	1.73	1271268	111.13	70	120	
Ge	72	1	No Gas	696745	1.14	682805	102.04	70	120	

In	115	1	No Gas	3627358	1.79	3697856	98.09	70	120	
Tb	159	1	No Gas	4173061	1.36	4404848	94.74	70	120	
Bi	209	1	No Gas	2171447	2.32	1997135	108.73	70	120	
Sc	45	3	HeHe	139473	0.79	132951	104.91	70	120	

Sample Report

Sample Table

Sample Name	9980395007
Data File Name	078SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T17:15:31-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3406

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	5.970	5.970	1.25	210660	0.00	1000	
Cr	52	1	No Gas	6.279	6.279	1.50	210124	0.00	1000	
Mn	55	1	No Gas	10.254	10.254	2.08	429739	0.00	1000	
Co	59	1	No Gas	0.205	0.205	5.64	7409	0.00	1000	
Ni	60	1	No Gas	-1.308	-1.308	-1.20	10747	-0.01	1000	
Cu	63	1	No Gas	1.893	1.893	0.68	36195	0.01	1000	
Sr	88	1	No Gas	7.195	7.195	1.31	317144	0.00	1000	
Ag	107	1	No Gas	0.027	0.027	15.35	526	0.01	1000	
Al	27	1	No Gas	4707.904	4707.904	1.57	97761141	0.00	100000	
Sn	118	1	No Gas	0.865	0.865	10.89	9444	0.01	100	
Ti	47	1	No Gas	75.711	75.711	0.62	218833	0.03	2000	
Zn	66	1	No Gas	8.772	8.772	3.25	42658	0.02	1000	
As	75	3	HeHe	0.749	0.749	15.85	287	0.26	1000	
As	75	1	No Gas	0.940	0.940	35.21	30658	0.00	1000	
Sb	121	1	No Gas	0.297	0.297	14.42	4405	0.01	100	
Hg	201	1	No Gas	0.134	0.134	4.12	218	0.06	4	
Be	9	1	No Gas	0.065	0.065	13.97	262	0.02	1000	
Pb	208	1	No Gas	10.276	10.276	0.83	300856	0.00	1000	
Se	82	1	No Gas	1.455	1.455	52.23	271	0.54	1000	
Mo	98	1	No Gas	0.514	0.514	32.03	6813	0.01	2000	
Ba	137	1	No Gas	14.031	14.031	1.37	65990	0.02	1000	
Tl	205	1	No Gas	0.038	0.038	18.46	848	0.00	1000	
U	238	1	No Gas	0.432	0.432	1.91	11757	0.00	1000	
Na	23	2	he	35.452	35.452	1.29	194821	0.02	100000	
Mg	24	2	he	227.261	227.261	2.30	380086	0.06	100000	
K	39	2	he	213.323	213.323	0.94	788593	0.03	100000	
Se	82	3	HeHe	-0.027	-0.027	-1512.44	66	-0.04	1000	
Fe	57	3	HeHe	1033.274	1033.274	2.44	86951	1.19	100000	
Cd	114	1	No Gas	0.100	0.100	11.32	893	0.01	1000	
Ca	44	1	No Gas	1198.704	1198.704	0.54	1219871	0.10	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6566591	1.26	5896472	111.36	70	120	
Sc	45	2	he	1405960	1.53	1271268	110.60	70	120	
Ge	72	1	No Gas	697806	2.30	682805	102.20	70	120	

In	115	1	No Gas	3681856	0.60	3697856	99.57	70	120	
Tb	159	1	No Gas	4228013	0.65	4404848	95.99	70	120	
Bi	209	1	No Gas	2183067	1.49	1997135	109.31	70	120	
Sc	45	3	HeHe	142664	1.10	132951	107.31	70	120	

Sample Report

Sample Table

Sample Name	9980395008
Data File Name	079SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T17:19:00-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3407

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	6.884	6.884	2.31	244311	0.00	1000	
Cr	52	1	No Gas	9.027	9.027	2.30	298839	0.00	1000	
Mn	55	1	No Gas	5.940	5.940	2.54	265576	0.00	1000	
Co	59	1	No Gas	0.333	0.333	1.94	11953	0.00	1000	
Ni	60	1	No Gas	-1.084	-1.084	-4.37	12595	-0.01	1000	
Cu	63	1	No Gas	2.047	2.047	2.03	39338	0.01	1000	
Sr	88	1	No Gas	4.098	4.098	1.03	181859	0.00	1000	
Ag	107	1	No Gas	0.191	0.191	10.81	3612	0.01	1000	
Al	27	1	No Gas	6339.303	6339.303	1.22	132503158	0.00	100000	
Sn	118	1	No Gas	0.757	0.757	8.93	8447	0.01	100	
Tl	47	1	No Gas	116.622	116.622	3.66	339077	0.03	2000	
Zn	66	1	No Gas	3.908	3.908	2.52	19619	0.02	1000	
As	75	3	HeHe	0.907	0.907	1.57	354	0.26	1000	
As	75	1	No Gas	0.917	0.917	13.92	30753	0.00	1000	
Sb	121	1	No Gas	0.255	0.255	5.29	3867	0.01	100	
Hg	201	1	No Gas	0.106	0.106	15.38	183	0.06	4	
Be	9	1	No Gas	0.104	0.104	16.23	407	0.03	1000	
Pb	208	1	No Gas	7.053	7.053	1.62	210146	0.00	1000	
Se	82	1	No Gas	0.843	0.843	56.65	115	0.73	1000	
Mo	98	1	No Gas	0.431	0.431	26.78	5966	0.01	2000	
Ba	137	1	No Gas	9.464	9.464	2.33	44852	0.02	1000	
Tl	205	1	No Gas	0.045	0.045	15.36	1008	0.00	1000	
U	238	1	No Gas	0.619	0.619	3.43	17136	0.00	1000	
Na	23	2	he	19.933	19.933	3.54	152786	0.01	100000	
Mg	24	2	he	196.462	196.462	2.26	334396	0.06	100000	
K	39	2	he	137.155	137.155	0.54	596356	0.02	100000	
Se	82	3	HeHe	-0.758	-0.758	-73.10	55	-1.38	1000	
Fe	57	3	HeHe	1142.404	1142.404	2.43	98541	1.16	100000	
Cd	114	1	No Gas	0.068	0.068	12.64	633	0.01	1000	
Ca	44	1	No Gas	74.216	74.216	5.95	205994	0.04	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6609636	0.26	5896472	112.09	70	120	
Sc	45	2	he	1430676	1.08	1271268	112.54	70	120	
Ge	72	1	No Gas	701727	1.63	682805	102.77	70	120	

In	115	1	No Gas	3748332	0.79	3697856	101.37	70	120	
Tb	159	1	No Gas	4259618	0.93	4404848	96.70	70	120	
Bi	209	1	No Gas	2221012	2.27	1997135	111.21	70	120	
Sc	45	3	HeHe	146259	0.81	132951	110.01	70	120	

Sample Report

Sample Table

Sample Name	9980395009
Data File Name	080SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T17:22:30-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3408

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	10.742	10.742	2.02	381103	0.00	1000	
Cr	52	1	No Gas	5.671	5.671	1.01	192559	0.00	1000	
Mn	55	1	No Gas	9.460	9.460	2.97	402466	0.00	1000	
Co	59	1	No Gas	0.344	0.344	1.53	12375	0.00	1000	
Ni	60	1	No Gas	-0.032	-0.032	-322.99	20960	0.00	1000	
Cu	63	1	No Gas	1.101	1.101	2.14	21504	0.01	1000	
Sr	88	1	No Gas	6.295	6.295	0.73	279809	0.00	1000	
Ag	107	1	No Gas	0.020	0.020	2.47	411	0.00	1000	
Al	27	1	No Gas	5353.684	5353.684	1.82	112095181	0.00	100000	
Sn	118	1	No Gas	0.820	0.820	6.74	9225	0.01	100	
Ti	47	1	No Gas	155.922	155.922	1.61	454022	0.03	2000	
Zn	66	1	No Gas	14.050	14.050	1.41	68368	0.02	1000	
As	75	3	HeHe	1.106	1.106	2.07	431	0.26	1000	
As	75	1	No Gas	1.384	1.384	21.97	33176	0.00	1000	
Sb	121	1	No Gas	0.367	0.367	13.14	5564	0.01	100	
Hg	201	1	No Gas	0.131	0.131	16.80	217	0.06	4	
Be	9	1	No Gas	0.059	0.059	13.45	245	0.02	1000	
Pb	208	1	No Gas	27.223	27.223	1.88	811276	0.00	1000	
Se	82	1	No Gas	1.886	1.886	38.57	389	0.49	1000	
Mo	98	1	No Gas	0.623	0.623	14.32	8305	0.01	2000	
Ba	137	1	No Gas	16.914	16.914	2.02	81407	0.02	1000	
Tl	205	1	No Gas	0.043	0.043	6.81	959	0.00	1000	
U	238	1	No Gas	0.316	0.316	7.22	8762	0.00	1000	
Na	23	2	he	43.655	43.655	3.46	227730	0.02	100000	
Mg	24	2	he	243.830	243.830	2.51	425252	0.06	100000	
K	39	2	he	131.940	131.940	1.41	596620	0.02	100000	
Se	82	3	HeHe	-0.561	-0.561	-110.72	59	-0.96	1000	
Fe	57	3	HeHe	2425.500	2425.500	0.53	209552	1.16	100000	
Cd	114	1	No Gas	0.070	0.070	4.16	653	0.01	1000	
Ca	44	1	No Gas	485.236	485.236	2.79	580486	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6621104	1.01	5896472	112.29	70	120	
Sc	45	2	he	1466048	0.81	1271268	115.32	70	120	
Ge	72	1	No Gas	710340	1.29	682805	104.03	70	120	

In	115	1	No Gas	3786850	0.75	3697856	102.41	70	120	
Tb	159	1	No Gas	4327015	0.90	4404848	98.23	70	120	
Bi	209	1	No Gas	2223844	1.68	1997135	111.35	70	120	
Sc	45	3	HeHe	146633	0.95	132951	110.29	70	120	

Sample Report

Sample Table

Sample Name	9980395009L
Data File Name	081SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T17:26:01-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF25
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail
Vial	3409

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	2.253	2.253	4.06	79363	0.00	1000	
Cr	52	1	No Gas	1.245	1.245	2.85	50662	0.00	1000	
Mn	55	1	No Gas	2.062	2.062	0.89	113387	0.00	1000	
Co	59	1	No Gas	0.068	0.068	7.17	2604	0.00	1000	
Ni	60	1	No Gas	-1.926	-1.926	-2.83	5815	-0.03	1000	
Cu	63	1	No Gas	0.250	0.250	3.81	5287	0.00	1000	
Sr	88	1	No Gas	1.237	1.237	0.97	53934	0.00	1000	
Ag	107	1	No Gas	0.012	0.012	19.91	267	0.00	1000	
Al	27	1	No Gas	1056.601	1056.601	4.46	21682591	0.00	100000	
Sn	118	1	No Gas	0.287	0.287	9.99	3330	0.01	100	
Ti	47	1	No Gas	30.849	30.849	2.64	88277	0.03	2000	
Zn	66	1	No Gas	2.928	2.928	2.45	14643	0.02	1000	
As	75	3	HeHe	0.217	0.217	4.07	101	0.22	1000	
As	75	1	No Gas	0.718	0.718	60.72	29205	0.00	1000	
Sb	121	1	No Gas	0.168	0.168	15.50	2604	0.01	100	
Hg	201	1	No Gas	0.040	0.040	49.94	91	0.04	4	
Be	9	1	No Gas	0.016	0.016	44.20	83	0.02	1000	
Pb	208	1	No Gas	5.209	5.209	1.78	154513	0.00	1000	
Se	82	1	No Gas	0.498	0.498	75.88	25	1.98	1000	
Mo	98	1	No Gas	0.213	0.213	33.14	3397	0.01	2000	
Ba	137	1	No Gas	3.172	3.172	6.27	15341	0.02	1000	
Tl	205	1	No Gas	0.009	0.009	28.90	226	0.00	1000	
U	238	1	No Gas	0.071	0.071	2.54	1989	0.00	1000	
Na	23	2	he	14.974	14.974	12.84	137964	0.01	100000	
Mg	24	2	he	48.549	48.549	1.73	82618	0.06	100000	
K	39	2	he	26.574	26.574	4.64	296536	0.01	100000	
Se	82	3	HeHe	-0.697	-0.697	-44.97	61	-1.13	1000	
Fe	57	3	HeHe	436.337	436.337	13.56	41376	1.05	100000	
Cd	114	1	No Gas	0.025	0.025	29.99	263	0.01	1000	
Ca	44	1	No Gas	85.530	85.530	3.67	212289	0.04	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6487679	0.64	5896472	110.03	70	120	
Sc	45	2	he	1428275	1.96	1271268	112.35	70	120	
Ge	72	1	No Gas	710517	0.79	682805	104.06	70	120	

In	115	1	No Gas	3760876	1.02	3697856	101.70	70	120	
Tb	159	1	No Gas	4340298	2.28	4404848	98.53	70	120	
Bi	209	1	No Gas	2209107	0.73	1997135	110.61	70	120	
Sc	45	3	HeHe	162471	15.13	132951	122.20	70	120	ISTD Failed

N/A

Sample Report

Sample Table

Sample Name	9980395010
Data File Name	082SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T17:29:31-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3410

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	10.411	10.411	1.58	368542	0.00	1000	
Cr	52	1	No Gas	9.674	9.674	1.23	319190	0.00	1000	
Mn	55	1	No Gas	11.567	11.567	0.96	483008	0.00	1000	
Co	59	1	No Gas	0.757	0.757	1.31	26821	0.00	1000	
Ni	60	1	No Gas	1.300	1.300	9.63	31466	0.00	1000	
Cu	63	1	No Gas	1.178	1.178	1.75	22913	0.01	1000	
Sr	88	1	No Gas	2.578	2.578	2.31	114337	0.00	1000	
Ag	107	1	No Gas	0.009	0.009	7.84	200	0.00	1000	
Al	27	1	No Gas	9075.189	9075.189	1.16	189570278	0.00	100000	
Sn	118	1	No Gas	0.642	0.642	7.93	7035	0.01	100	
Ti	47	1	No Gas	108.672	108.672	1.46	315796	0.03	2000	
Zn	66	1	No Gas	5.283	5.283	3.51	26202	0.02	1000	
As	75	3	HeHe	1.171	1.171	8.27	452	0.26	1000	
As	75	1	No Gas	1.325	1.325	43.41	32780	0.00	1000	
Sb	121	1	No Gas	0.217	0.217	5.76	3245	0.01	100	
Hg	201	1	No Gas	0.016	0.016	64.09	57	0.03	4	
Be	9	1	No Gas	0.092	0.092	9.18	363	0.03	1000	
Pb	208	1	No Gas	5.153	5.153	0.30	150082	0.00	1000	
Se	82	1	No Gas	0.386	0.386	51.87	-4	-9.44	1000	
Mo	98	1	No Gas	0.503	0.503	22.72	6661	0.01	2000	
Ba	137	1	No Gas	18.498	18.498	1.11	87561	0.02	1000	
Tl	205	1	No Gas	0.065	0.065	7.65	1411	0.00	1000	
U	238	1	No Gas	0.487	0.487	2.58	13177	0.00	1000	
Na	23	2	he	24.459	24.459	1.09	163522	0.01	100000	
Mg	24	2	he	417.748	417.748	0.66	700169	0.06	100000	
K	39	2	he	168.944	168.944	1.04	672038	0.03	100000	
Se	82	3	HeHe	-0.688	-0.688	-87.32	56	-1.24	1000	
Fe	57	3	HeHe	5902.002	5902.002	0.77	504984	1.17	100000	
Cd	114	1	No Gas	0.045	0.045	12.86	427	0.01	1000	
Ca	44	1	No Gas	67.024	67.024	6.85	199325	0.03	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6605383	1.65	5896472	112.02	70	120	
Sc	45	2	he	1408989	0.84	1271268	110.83	70	120	
Ge	72	1	No Gas	699920	0.58	682805	102.51	70	120	

Sample Report

In	115	1	No Gas	3668580	0.84	3697856	99.21	70	120	
Tb	159	1	No Gas	4256431	2.42	4404848	96.63	70	120	
Bi	209	1	No Gas	2169509	0.89	1997135	108.63	70	120	
Sc	45	3	HeHe	145308	2.45	132951	109.29	70	120	

Sample Report

Sample Table

Sample Name	9980395011
Data File Name	083SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T17:33:00-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3411

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	4.753	4.753	1.29	164859	0.00	1000	
Cr	52	1	No Gas	3.779	3.779	2.51	128811	0.00	1000	
Mn	55	1	No Gas	5.811	5.811	1.38	254075	0.00	1000	
Co	59	1	No Gas	0.181	0.181	1.75	6446	0.00	1000	
Ni	60	1	No Gas	-1.568	-1.568	-4.58	8539	-0.02	1000	
Cu	63	1	No Gas	1.967	1.967	0.18	36898	0.01	1000	
Sr	88	1	No Gas	2.916	2.916	0.92	126230	0.00	1000	
Ag	107	1	No Gas	0.039	0.039	11.23	763	0.01	1000	
Al	27	1	No Gas	2236.278	2236.278	1.10	45582767	0.00	100000	
Sn	118	1	No Gas	0.904	0.904	10.51	9963	0.01	100	
Ti	47	1	No Gas	38.571	38.571	2.91	109569	0.04	2000	
Zn	66	1	No Gas	6.471	6.471	2.72	31115	0.02	1000	
As	75	3	HeHe	0.653	0.653	4.50	251	0.26	1000	
As	75	1	No Gas	1.271	1.271	23.03	31730	0.00	1000	
Sb	121	1	No Gas	0.227	0.227	16.01	3426	0.01	100	
Hg	201	1	No Gas	0.108	0.108	21.07	183	0.06	4	
Be	9	1	No Gas	0.024	0.024	14.44	112	0.02	1000	
Pb	208	1	No Gas	8.117	8.117	1.16	237813	0.00	1000	
Se	82	1	No Gas	0.720	0.720	65.74	81	0.89	1000	
Mo	98	1	No Gas	0.470	0.470	11.78	6360	0.01	2000	
Ba	137	1	No Gas	6.807	6.807	1.28	32737	0.02	1000	
Tl	205	1	No Gas	0.019	0.019	23.61	426	0.00	1000	
U	238	1	No Gas	0.202	0.202	5.06	5509	0.00	1000	
Na	23	2	he	23.235	23.235	8.52	162851	0.01	100000	
Mg	24	2	he	183.239	183.239	1.73	312707	0.06	100000	
K	39	2	he	146.538	146.538	2.59	623242	0.02	100000	
Se	82	3	HeHe	-0.429	-0.429	-329.19	59	-0.72	1000	
Fe	57	3	HeHe	1034.945	1034.945	1.96	87100	1.19	100000	
Cd	114	1	No Gas	0.061	0.061	9.82	570	0.01	1000	
Ca	44	1	No Gas	610.655	610.655	1.34	676181	0.09	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6444299	0.80	5896472	109.29	70	120	
Sc	45	2	he	1434275	1.52	1271268	112.82	70	120	
Ge	72	1	No Gas	702884	1.22	682805	102.94	70	120	

In	115	1	No Gas	3711427	2.71	3697856	100.37	70	120	
Tb	159	1	No Gas	4320138	1.07	4404848	98.08	70	120	
Bi	209	1	No Gas	2183747	0.25	1997135	109.34	70	120	
Sc	45	3	HeHe	142671	1.23	132951	107.31	70	120	

Sample Report

Sample Table

Sample Name	9980395012
Data File Name	084SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T17:36:29-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3412

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	6.746	6.746	1.04	236714	0.00	1000	
Cr	52	1	No Gas	7.206	7.206	0.77	238221	0.00	1000	
Mn	55	1	No Gas	3.889	3.889	0.70	184062	0.00	1000	
Co	59	1	No Gas	0.255	0.255	1.12	9114	0.00	1000	
Ni	60	1	No Gas	-1.159	-1.159	-2.40	11864	-0.01	1000	
Cu	63	1	No Gas	1.758	1.758	0.27	33493	0.01	1000	
Sr	88	1	No Gas	2.725	2.725	1.47	119572	0.00	1000	
Ag	107	1	No Gas	0.126	0.126	6.90	2360	0.01	1000	
Al	27	1	No Gas	5498.885	5498.885	1.02	113613688	0.00	100000	
Sn	118	1	No Gas	1.312	1.312	7.55	14347	0.01	100	
Ti	47	1	No Gas	27.887	27.887	2.62	80420	0.03	2000	
Zn	66	1	No Gas	5.674	5.674	4.73	27758	0.02	1000	
As	75	3	HeHe	0.640	0.640	10.21	246	0.26	1000	
As	75	1	No Gas	0.973	0.973	14.10	30678	0.00	1000	
Sb	121	1	No Gas	0.150	0.150	15.41	2300	0.01	100	
Hg	201	1	No Gas	0.118	0.118	19.15	200	0.06	4	
Be	9	1	No Gas	0.160	0.160	5.31	605	0.03	1000	
Pb	208	1	No Gas	6.665	6.665	2.08	199054	0.00	1000	
Se	82	1	No Gas	1.208	1.208	15.90	208	0.58	1000	
Mo	98	1	No Gas	0.324	0.324	30.04	4658	0.01	2000	
Ba	137	1	No Gas	8.389	8.389	2.15	40116	0.02	1000	
Tl	205	1	No Gas	0.025	0.025	16.41	578	0.00	1000	
U	238	1	No Gas	0.495	0.495	1.14	13744	0.00	1000	
Na	23	2	he	17.485	17.485	14.55	143441	0.01	100000	
Mg	24	2	he	161.230	161.230	2.85	270513	0.06	100000	
K	39	2	he	152.286	152.286	3.92	628079	0.02	100000	
Se	82	3	HeHe	-0.466	-0.466	-155.14	59	-0.80	1000	
Fe	57	3	HeHe	869.673	869.673	2.90	73275	1.19	100000	
Cd	114	1	No Gas	0.069	0.069	28.29	630	0.01	1000	
Ca	44	1	No Gas	49.273	49.273	5.35	181200	0.03	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6533509	1.44	5896472	110.80	70	120	
Sc	45	2	he	1410478	2.39	1271268	110.95	70	120	
Ge	72	1	No Gas	710827	0.15	682805	104.10	70	120	

In	115	1	No Gas	3712245	1.23	3697856	100.39	70	120	
Tb	159	1	No Gas	4298126	2.24	4404848	97.58	70	120	
Bi	209	1	No Gas	2225956	2.34	1997135	111.46	70	120	
Sc	45	3	HeHe	142789	1.60	132951	107.40	70	120	

Sample Report

Sample Table

Sample Name	9980395013
Data File Name	085SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T17:40:00-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3501

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	4.270	4.270	1.86	149726	0.00	1000	
Cr	52	1	No Gas	2.590	2.590	1.05	92891	0.00	1000	
Mn	55	1	No Gas	3.390	3.390	2.02	164316	0.00	1000	
Co	59	1	No Gas	0.159	0.159	3.01	5753	0.00	1000	
Ni	60	1	No Gas	-1.565	-1.565	-3.08	8649	-0.02	1000	
Cu	63	1	No Gas	0.871	0.871	1.19	16863	0.01	1000	
Sr	88	1	No Gas	2.057	2.057	0.49	89954	0.00	1000	
Ag	107	1	No Gas	0.020	0.020	25.36	422	0.00	1000	
Al	27	1	No Gas	1741.475	1741.475	0.36	35850709	0.00	100000	
Sn	118	1	No Gas	0.764	0.764	12.15	8592	0.01	100	
Ti	47	1	No Gas	44.058	44.058	0.06	126345	0.03	2000	
Zn	66	1	No Gas	4.034	4.034	3.79	19908	0.02	1000	
As	75	3	HeHe	0.687	0.687	7.85	267	0.26	1000	
As	75	1	No Gas	1.164	1.164	19.31	31507	0.00	1000	
Sb	121	1	No Gas	0.216	0.216	1.97	3315	0.01	100	
Hg	201	1	No Gas	0.083	0.083	11.34	150	0.06	4	
Be	9	1	No Gas	0.027	0.027	23.93	123	0.02	1000	
Pb	208	1	No Gas	9.209	9.209	1.20	270813	0.00	1000	
Se	82	1	No Gas	0.653	0.653	139.00	63	1.04	1000	
Mo	98	1	No Gas	0.379	0.379	23.21	5397	0.01	2000	
Ba	137	1	No Gas	6.235	6.235	4.46	29648	0.02	1000	
Tl	205	1	No Gas	0.013	0.013	21.71	307	0.00	1000	
U	238	1	No Gas	0.183	0.183	4.25	5020	0.00	1000	
Na	23	2	he	43.593	43.593	5.60	218876	0.02	100000	
Mg	24	2	he	123.561	123.561	1.32	207408	0.06	100000	
K	39	2	he	116.113	116.113	2.30	531728	0.02	100000	
Se	82	3	HeHe	0.082	0.082	901.23	69	0.12	1000	
Fe	57	3	HeHe	863.525	863.525	2.55	73763	1.17	100000	
Cd	114	1	No Gas	0.035	0.035	34.95	353	0.01	1000	
Ca	44	1	No Gas	72.095	72.095	4.38	200922	0.04	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6508289	1.34	5896472	110.38	70	120	
Sc	45	2	he	1410501	1.84	1271268	110.95	70	120	
Ge	72	1	No Gas	704335	0.55	682805	103.15	70	120	

In	115	1	No Gas	3780292	1.33	3697856	102.23	70	120	
Tb	159	1	No Gas	4269481	1.82	4404848	96.93	70	120	
Bi	209	1	No Gas	2192268	0.20	1997135	109.77	70	120	
Sc	45	3	HeHe	144747	0.65	132951	108.87	70	120	

Sample Report

Sample Table

Sample Name	9980395014
Data File Name	086SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T17:43:30-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3502

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	3.272	3.272	1.01	113692	0.00	1000	
Cr	52	1	No Gas	3.251	3.251	1.91	112254	0.00	1000	
Mn	55	1	No Gas	2.893	2.893	2.97	143745	0.00	1000	
Co	59	1	No Gas	0.105	0.105	5.47	3852	0.00	1000	
Ni	60	1	No Gas	-1.836	-1.836	-2.47	6465	-0.03	1000	
Cu	63	1	No Gas	0.313	0.313	2.82	6410	0.00	1000	
Sr	88	1	No Gas	1.079	1.079	0.22	46673	0.00	1000	
Ag	107	1	No Gas	0.011	0.011	30.80	241	0.00	1000	
Al	27	1	No Gas	3164.814	3164.814	2.26	64394407	0.00	100000	
Sn	118	1	No Gas	0.380	0.380	12.85	4242	0.01	100	
Ti	47	1	No Gas	30.891	30.891	0.41	87665	0.04	2000	
Zn	66	1	No Gas	2.394	2.394	5.69	12032	0.02	1000	
As	75	3	HeHe	0.516	0.516	9.25	199	0.26	1000	
As	75	1	No Gas	1.154	1.154	31.11	31108	0.00	1000	
Sb	121	1	No Gas	0.095	0.095	34.35	1485	0.01	100	
Hg	201	1	No Gas	0.049	0.049	34.60	103	0.05	4	
Be	9	1	No Gas	0.046	0.046	10.71	191	0.02	1000	
Pb	208	1	No Gas	2.911	2.911	1.15	85680	0.00	1000	
Se	82	1	No Gas	0.714	0.714	40.41	80	0.89	1000	
Mo	98	1	No Gas	0.248	0.248	47.62	3707	0.01	2000	
Ba	137	1	No Gas	4.516	4.516	3.95	21311	0.02	1000	
Tl	205	1	No Gas	0.015	0.015	17.54	348	0.00	1000	
U	238	1	No Gas	0.249	0.249	12.04	6809	0.00	1000	
Na	23	2	he	14.737	14.737	2.59	135169	0.01	100000	
Mg	24	2	he	100.248	100.248	0.34	167782	0.06	100000	
K	39	2	he	56.910	56.910	6.20	372524	0.02	100000	
Se	82	3	HeHe	-0.469	-0.469	-114.71	58	-0.81	1000	
Fe	57	3	HeHe	438.519	438.519	1.19	36799	1.19	100000	
Cd	114	1	No Gas	0.043	0.043	34.27	410	0.01	1000	
Ca	44	1	No Gas	11.023	11.023	15.85	144610	0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6433522	0.73	5896472	109.11	70	120	
Sc	45	2	he	1405909	1.48	1271268	110.59	70	120	
Ge	72	1	No Gas	688125	0.51	682805	100.78	70	120	

In	115	1	No Gas	3666526	0.81	3697856	99.15	70	120	
Tb	159	1	No Gas	4236752	1.87	4404848	96.18	70	120	
Bi	209	1	No Gas	2188899	1.37	1997135	109.60	70	120	
Sc	45	3	HeHe	141823	0.91	132951	106.67	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	087_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T17:46:58-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	96.277	1.413	3346622	1.78	100	96.3	90	110	
Cr	52	1	No Gas	94.089	0.846	2954246	0.68	100	94.1	90	110	
Mn	55	1	No Gas	98.093	2.029	3771874	1.68	100	98.1	90	110	
Co	59	1	No Gas	94.925	2.353	3277057	1.72	100	94.9	90	110	
Ni	60	1	No Gas	91.820	1.926	736713	1.37	100	91.8	90	110	
Cu	63	1	No Gas	96.511	2.579	1795791	2.21	100	96.5	90	110	
Sr	88	1	No Gas	99.017	0.949	4323200	0.74	100	99.0	90	110	
Ag	107	1	No Gas	99.540	0.725	1842129	1.53	100	99.5	90	110	
Al	27	1	No Gas	98.628	1.406	2038642	1.16	100	98.6	90	110	
Sn	118	1	No Gas	96.622	0.160	1042807	1.47	100	96.6	90	110	
Tl	47	1	No Gas	87.571	1.419	250713	0.80	100	87.6	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	93.917	2.071	444100	1.86	100	93.9	90	110	
As	75	3	HeHe	95.007	1.432	34660	0.71	100	95.0	90	110	
As	75	1	No Gas	93.233	1.224	491440	0.82	100	93.2	90	110	
Sb	121	1	No Gas	98.466	0.982	1430385	1.25	100	98.5	90	110	
Hg	201	1	No Gas	1.962	4.624	2621	5.45	2	98.1	90	110	
Be	9	1	No Gas	92.991	1.867	335245	1.27	100	93.0	90	110	
Pb	208	1	No Gas	97.324	1.535	2773823	1.36	100	97.3	90	110	
Se	82	1	No Gas	94.990	1.253	24238	0.63	100	95.0	90	110	
Mo	98	1	No Gas	95.110	1.314	1111157	0.91	100	95.1	90	110	
Ba	137	1	No Gas	99.682	0.571	462490	1.20	100	99.7	90	110	
Tl	205	1	No Gas	97.692	1.412	2043157	1.65	100	97.7	90	110	
U	238	1	No Gas	104.691	1.339	2767203	0.06	100	104.7	90	110	
Na	23	2	he	1031.370	1.222	3057558	1.74	1000	103.1	90	110	
Mg	24	2	he	1043.735	1.705	1743067	1.22	1000	104.4	90	110	
K	39	2	he	1010.395	0.915	2904911	0.71	1000	101.0	90	110	
Se	82	3	HeHe	90.493	5.510	1627	4.74	100	90.5	90	110	
Fe	57	3	HeHe	1022.058	1.295	84234	2.11	1000	102.2	90	110	
Cd	114	1	No Gas	93.460	1.823	791696	0.37	100	93.5	90	110	
Ca	44	1	No Gas	950.131	1.589	986297	1.03	1000	95.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6506305	0.64	5896472	110.34	70	120	
Sc	45	2	he	1404268	1.54	1271268	110.46	70	120	
Ge	72	1	No Gas	703336	1.50	682805	103.01	70	120	
In	115	1	No Gas	3714175	1.47	3697856	100.44	70	120	
Tb	159	1	No Gas	4173837	1.69	4404848	94.76	70	120	
Bi	209	1	No Gas	2127246	1.37	1997135	106.51	70	120	
Sc	45	3	HeHe	139691	1.05	132951	105.07	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	088_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T17:50:22-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.080	72.0	4064	51.2	9	
Cr	52	1	No Gas	0.097	14.6	14707	3.5	4	
Mn	55	1	No Gas	0.281	26.9	45217	5.4	25	
Co	59	1	No Gas	0.003	54.0	374	15.0	1	
Ni	60	1	No Gas	-2.423	-1.2	1930	13.1	25	
Cu	63	1	No Gas	0.156	6.7	3509	3.5	25	
Sr	88	1	No Gas	0.008	16.9	456	14.6	25	
Ag	107	1	No Gas	0.014	6.0	296	7.8	9	
Al	27	1	No Gas	0.703	0.9	23687	1.7	1000000	
Sn	118	1	No Gas	1.113	19.1	12161	19.5	25	
Ti	47	1	No Gas	0.427	28.5	1530	24.3	10000	
Zn	66	1	No Gas	0.412	0.7	2773	1.5	25	
As	75	3	HeHe	0.535	18.3	203	17.2	9	
As	75	1	No Gas	0.854	24.3	29579	5.0	9	
Sb	121	1	No Gas	0.278	30.7	4149	30.1	4	
Hg	201	1	No Gas	0.014	54.4	55	16.5	0.04	
Be	9	1	No Gas	0.006	47.8	49	23.4	1	
Pb	208	1	No Gas	0.030	4.2	1189	5.2	4	
Se	82	1	No Gas	1.390	51.1	252	72.7	25	
Mo	98	1	No Gas	0.904	28.6	11386	26.9	10000	
Ba	137	1	No Gas	0.041	67.0	233	54.3	25	
Tl	205	1	No Gas	0.037	9.4	807	10.3	1	
U	238	1	No Gas	0.210	21.5	5661	22.0	25	
Na	23	2	he	9.884	13.0	119814	2.8	2500000	
Mg	24	2	he	0.428	27.6	874	22.8	2500000	
K	39	2	he	3.042	50.3	226686	0.4	5000000	
Se	82	3	HeHe	0.183	474.8	69	22.6	25	
Fe	57	3	HeHe	7.654	13.6	815	9.9	2500000	
Cd	114	1	No Gas	0.037	15.3	360	13.9	1	
Ca	44	1	No Gas	-9.881	-19.0	125869	1.1	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6421494	2.00	5896472	108.90	70	120	
Sc	45	2	he	1389979	2.15	1271268	109.34	70	120	
Ge	72	1	No Gas	699763	0.63	682805	102.48	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3697967	3.53	3697856	100.00	70	120	
Tb	159	1	No Gas	4128851	0.67	4404848	93.73	70	120	
Bi	209	1	No Gas	2156669	2.08	1997135	107.99	70	120	
Sc	45	3	HeHe	140175	0.78	132951	105.43	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	089LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T17:53:52-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.193	3.206	76328	4.73	2	109.7	70	130	
Cr	52	1	No Gas	2.191	0.679	79136	1.96	2	109.5	70	130	
Mn	55	1	No Gas	5.324	2.940	234190	1.00	5	106.5	70	130	
Co	59	1	No Gas	4.884	1.846	166220	1.74	5	97.7	70	130	
Ni	60	1	No Gas	2.372	4.547	38733	3.32	5	47.4	70	130	LLCCV Main CR1 Failed
Cu	63	1	No Gas	5.003	1.329	92244	1.50	5	100.1	70	130	
Sr	88	1	No Gas	4.602	0.591	197885	2.00	5	92.0	70	130	
Ag	107	1	No Gas	2.041	4.579	36971	3.13	2	102.1	70	130	
Al	27	1	No Gas	82.359	1.867	1677597	2.96	80	102.9	70	130	
Sn	118	1	No Gas	2.374	11.346	25257	11.78	2	118.7	70	130	
Ti	47	1	No Gas	4.813	3.084	13874	4.53	5	96.3	70	130	
Zn	66	1	No Gas	5.199	0.478	25009	1.95	5	104.0	70	130	
As	75	3	HeHe	2.953	8.053	1101	6.31	3	98.4	70	130	
As	75	1	No Gas	3.564	6.078	42810	0.93	3	118.8	70	130	
Sb	121	1	No Gas	2.172	1.131	30989	2.00	2	108.6	70	130	
Hg	201	1	No Gas	0.189	10.692	285	7.31	0.2	94.5	70	130	
Be	9	1	No Gas	0.960	2.891	3431	1.52	1	96.0	70	130	
Pb	208	1	No Gas	1.992	3.381	57103	3.01	2	99.6	70	130	
Se	82	1	No Gas	5.042	8.947	1172	10.50	5	100.8	70	130	
Mo	98	1	No Gas	2.334	4.562	27508	5.12	2	116.7	70	130	
Ba	137	1	No Gas	5.168	3.144	24032	2.69	5	103.4	70	130	
Tl	205	1	No Gas	0.989	1.875	20729	3.58	1	98.9	70	130	
U	238	1	No Gas	4.831	2.235	127806	0.22	5	96.6	70	130	
Na	23	2	he	108.296	2.329	410388	0.42	100	108.3	70	130	
Mg	24	2	he	101.032	2.496	171577	1.82	100	101.0	70	130	
K	39	2	he	106.177	2.801	511048	0.67	100	106.2	70	130	
Se	82	3	HeHe	4.419	21.011	144	12.00	5	88.4	70	130	
Fe	57	3	HeHe	56.391	3.955	4901	5.68	50	112.8	70	130	
Cd	114	1	No Gas	1.042	2.845	8689	4.73	1	104.2	70	130	
Ca	44	1	No Gas	89.389	2.573	212968	1.17	100	89.4	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6404916	1.58	5896472	108.62	70	120	
Sc	45	2	he	1426766	1.40	1271268	112.23	70	120	
Ge	72	1	No Gas	700678	2.14	682805	102.62	70	120	
In	115	1	No Gas	3633723	2.02	3697856	98.27	70	120	
Tb	159	1	No Gas	4175467	0.75	4404848	94.79	70	120	
Bi	209	1	No Gas	2128959	2.04	1997135	106.60	70	120	
Sc	45	3	HeHe	141962	1.90	132951	106.78	70	120	

Sample Report

Sample Table

Sample Name	9980395014L
Data File Name	090SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T17:57:22-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF25
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3503

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	0.788	0.788	6.71	28119	0.00	1000	
Cr	52	1	No Gas	0.769	0.769	2.74	35199	0.00	1000	
Mn	55	1	No Gas	0.695	0.695	8.55	60353	0.00	1000	
Co	59	1	No Gas	0.021	0.021	25.29	974	0.00	1000	
Ni	60	1	No Gas	-2.328	-2.328	-0.56	2640	-0.09	1000	
Cu	63	1	No Gas	0.097	0.097	2.53	2414	0.00	1000	
Sr	88	1	No Gas	0.201	0.201	0.72	8691	0.00	1000	
Ag	107	1	No Gas	0.008	0.008	27.29	178	0.00	1000	
Al	27	1	No Gas	611.969	611.969	0.35	12345228	0.00	100000	
Sn	118	1	No Gas	0.460	0.460	30.47	5001	0.01	100	
Ti	47	1	No Gas	5.926	5.926	1.71	16919	0.04	2000	
Zn	66	1	No Gas	0.457	0.457	1.52	2965	0.02	1000	
As	75	3	HeHe	0.263	0.263	17.06	103	0.25	1000	
As	75	1	No Gas	0.907	0.907	12.32	29604	0.00	1000	
Sb	121	1	No Gas	0.108	0.108	15.01	1641	0.01	100	
Hg	201	1	No Gas	0.013	0.013	93.91	53	0.02	4	
Be	9	1	No Gas	0.011	0.011	31.23	63	0.02	1000	
Pb	208	1	No Gas	0.556	0.556	1.88	16037	0.00	1000	
Se	82	1	No Gas	0.330	0.330	119.93	-19	-1.77	1000	
Mo	98	1	No Gas	0.259	0.259	47.27	3773	0.01	2000	
Ba	137	1	No Gas	0.874	0.874	7.38	4007	0.02	1000	
Tl	205	1	No Gas	0.008	0.008	49.29	196	0.00	1000	
U	238	1	No Gas	0.089	0.089	16.98	2382	0.00	1000	
Na	23	2	he	11.691	11.691	8.30	125699	0.01	100000	
Mg	24	2	he	19.985	19.985	6.24	33373	0.06	100000	
K	39	2	he	13.911	13.911	10.52	256726	0.01	100000	
Se	82	3	HeHe	0.225	0.225	402.19	69	0.32	1000	
Fe	57	3	HeHe	90.486	90.486	6.38	7617	1.19	100000	
Cd	114	1	No Gas	0.022	0.022	49.00	230	0.01	1000	
Ca	44	1	No Gas	-4.659	-4.659	-88.02	129500	0.00	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6374401	2.19	5896472	108.11	70	120	
Sc	45	2	he	1397797	1.22	1271268	109.95	70	120	

Ge	72	1	No Gas	689690	0.88	682805	101.01	70	120	
In	115	1	No Gas	3600290	0.18	3697856	97.36	70	120	
Tb	159	1	No Gas	4078576	0.70	4404848	92.59	70	120	
Bi	209	1	No Gas	2113063	0.74	1997135	105.80	70	120	
Sc	45	3	HeHe	139537	0.46	132951	104.95	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	100_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T18:32:17-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	96.478	1.274	3300884	1.82	100	96.5	90	110	
Cr	52	1	No Gas	95.095	0.283	2938787	0.80	100	95.1	90	110	
Mn	55	1	No Gas	100.014	0.273	3784801	1.04	100	100.0	90	110	
Co	59	1	No Gas	95.812	0.770	3256063	1.49	100	95.8	90	110	
Ni	60	1	No Gas	92.279	0.542	728734	1.60	100	92.3	90	110	
Cu	63	1	No Gas	98.406	0.241	1802414	1.30	100	98.4	90	110	
Sr	88	1	No Gas	99.608	1.303	4280385	0.45	100	99.6	90	110	
Ag	107	1	No Gas	103.659	0.165	1841708	1.04	100	103.7	90	110	
Al	27	1	No Gas	101.307	2.173	2060611	1.08	100	101.3	90	110	
Sn	118	1	No Gas	99.002	0.880	1025790	1.35	100	99.0	90	110	
Tl	47	1	No Gas	88.222	1.215	248600	0.58	100	88.2	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	95.551	0.868	444731	1.33	100	95.6	90	110	
As	75	3	HeHe	92.226	2.611	33738	0.32	100	92.2	90	110	
As	75	1	No Gas	93.747	0.084	486261	1.06	100	93.7	90	110	
Sb	121	1	No Gas	100.687	3.087	1403968	2.01	100	100.7	90	110	
Hg	201	1	No Gas	2.002	4.421	2696	4.27	2	100.1	90	110	
Be	9	1	No Gas	94.528	0.494	335460	1.38	100	94.5	90	110	
Pb	208	1	No Gas	94.811	0.974	2726545	0.63	100	94.8	90	110	
Se	82	1	No Gas	92.342	1.624	23190	1.66	100	92.3	90	110	
Mo	98	1	No Gas	97.614	1.455	1094819	0.39	100	97.6	90	110	
Ba	137	1	No Gas	97.165	1.902	454670	0.75	100	97.2	90	110	
Tl	205	1	No Gas	95.469	1.357	2014703	1.86	100	95.5	90	110	
U	238	1	No Gas	103.929	1.075	2771870	0.54	100	103.9	90	110	
Na	23	2	he	1033.751	3.253	3054615	2.10	1000	103.4	90	110	
Mg	24	2	he	1034.281	2.304	1722107	1.62	1000	103.4	90	110	
K	39	2	he	1013.232	2.190	2903566	1.05	1000	101.3	90	110	
Se	82	3	HeHe	93.104	3.753	1677	2.96	100	93.1	90	110	
Fe	57	3	HeHe	1001.606	2.345	82787	2.37	1000	100.2	90	110	
Cd	114	1	No Gas	96.158	1.120	782172	1.94	100	96.2	90	110	
Ca	44	1	No Gas	952.944	0.694	973281	0.67	1000	95.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6404070	1.08	5896472	108.61	70	120	
Sc	45	2	he	1400061	1.09	1271268	110.13	70	120	
Ge	72	1	No Gas	693442	0.67	682805	101.56	70	120	
In	115	1	No Gas	3565749	1.07	3697856	96.43	70	120	
Tb	159	1	No Gas	4209990	1.35	4404848	95.58	70	120	
Bi	209	1	No Gas	2146282	0.57	1997135	107.47	70	120	
Sc	45	3	HeHe	140121	2.36	132951	105.39	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	101_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T18:35:42-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.094	27.6	4079	17.1	9	
Cr	52	1	No Gas	0.140	24.6	14492	3.5	4	
Mn	55	1	No Gas	0.376	14.5	44183	3.8	25	
Co	59	1	No Gas	0.008	14.7	504	3.4	1	
Ni	60	1	No Gas	-2.367	-1.0	2140	6.1	25	
Cu	63	1	No Gas	0.192	9.0	3773	0.8	25	
Sr	88	1	No Gas	0.011	39.4	533	29.5	25	
Ag	107	1	No Gas	0.016	19.4	285	8.1	9	
Al	27	1	No Gas	0.919	14.2	25359	3.5	1000000	
Sn	118	1	No Gas	1.282	31.9	12087	23.9	25	
Ti	47	1	No Gas	0.498	31.1	1546	19.0	10000	
Zn	66	1	No Gas	0.470	9.5	2753	1.7	25	
As	75	3	HeHe	0.390	5.5	146	5.4	9	
As	75	1	No Gas	1.406	62.5	29099	6.8	9	
Sb	121	1	No Gas	0.280	33.8	3612	25.3	4	
Hg	201	1	No Gas	0.014	31.0	49	6.2	0.04	
Be	9	1	No Gas	0.010	14.4	56	9.4	1	
Pb	208	1	No Gas	0.035	9.6	1189	3.7	4	
Se	82	1	No Gas	1.347	19.0	214	20.9	25	
Mo	98	1	No Gas	1.057	33.4	11370	23.3	10000	
Ba	137	1	No Gas	0.049	44.4	243	31.1	25	
Tl	205	1	No Gas	0.046	16.6	900	11.3	1	
U	238	1	No Gas	0.246	26.5	5916	19.0	25	
Na	23	2	he	11.109	3.9	120353	1.4	2500000	
Mg	24	2	he	0.423	23.1	845	19.4	2500000	
K	39	2	he	4.577	9.5	225223	1.3	5000000	
Se	82	3	HeHe	-0.307	-356.4	59	31.6	25	
Fe	57	3	HeHe	7.500	15.9	778	12.2	2500000	
Cd	114	1	No Gas	0.045	33.1	373	20.5	1	
Ca	44	1	No Gas	0.829	1463.8	122268	0.9	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5823362	7.25	5896472	98.76	70	120	
Sc	45	2	he	1356497	1.02	1271268	106.70	70	120	
Ge	72	1	No Gas	631029	8.22	682805	92.42	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3268680	10.95	3697856	88.39	70	120	
Tb	159	1	No Gas	3756696	8.58	4404848	85.29	70	120	
Bi	209	1	No Gas	1957971	10.48	1997135	98.04	70	120	
Sc	45	3	HeHe	135864	0.28	132951	102.19	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	102LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T18:39:11-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.125	5.736	73588	5.54	2	106.3	70	130	
Cr	52	1	No Gas	2.160	0.486	77774	0.36	2	108.0	70	130	
Mn	55	1	No Gas	5.199	0.197	228380	0.57	5	104.0	70	130	
Co	59	1	No Gas	4.865	1.529	164764	1.31	5	97.3	70	130	
Ni	60	1	No Gas	2.478	4.590	39345	2.85	5	49.6	70	130	LLCCV Main CR1 Failed
Cu	63	1	No Gas	4.950	1.534	90832	2.14	5	99.0	70	130	
Sr	88	1	No Gas	4.503	2.249	192630	2.42	5	90.1	70	130	
Ag	107	1	No Gas	1.995	1.162	35464	0.57	2	99.8	70	130	
Al	27	1	No Gas	82.609	0.868	1673794	0.56	80	103.3	70	130	
Sn	118	1	No Gas	2.465	7.756	25698	7.15	2	123.2	70	130	
Ti	47	1	No Gas	4.806	1.793	13779	2.34	5	96.1	70	130	
Zn	66	1	No Gas	5.142	4.340	24620	4.65	5	102.8	70	130	
As	75	3	HeHe	3.099	6.025	1129	5.14	3	103.3	70	130	
As	75	1	No Gas	3.585	10.750	42705	4.74	3	119.5	70	130	
Sb	121	1	No Gas	2.113	2.239	29571	1.71	2	105.6	70	130	
Hg	201	1	No Gas	0.202	6.614	301	6.66	0.2	101.2	70	130	
Be	9	1	No Gas	0.954	1.647	3392	2.07	1	95.4	70	130	
Pb	208	1	No Gas	1.974	1.422	56231	1.15	2	98.7	70	130	
Se	82	1	No Gas	5.647	13.673	1318	15.30	5	112.9	70	130	
Mo	98	1	No Gas	2.263	4.918	26179	4.19	2	113.1	70	130	
Ba	137	1	No Gas	5.150	3.216	23444	3.89	5	103.0	70	130	
Tl	205	1	No Gas	0.948	2.188	19747	2.26	1	94.8	70	130	
U	238	1	No Gas	4.856	3.507	127638	2.52	5	97.1	70	130	
Na	23	2	he	111.927	0.790	410351	0.78	100	111.9	70	130	
Mg	24	2	he	103.169	1.718	170765	1.27	100	103.2	70	130	
K	39	2	he	107.901	1.992	502632	0.70	100	107.9	70	130	
Se	82	3	HeHe	3.472	6.944	124	3.22	5	69.4	70	130	LLCCV Main CR1 Failed
Fe	57	3	HeHe	53.562	5.765	4553	4.27	50	107.1	70	130	
Cd	114	1	No Gas	1.056	2.413	8633	2.96	1	105.6	70	130	
Ca	44	1	No Gas	81.937	0.891	205354	0.40	100	81.9	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6371935	0.65	5896472	108.06	70	120	
Sc	45	2	he	1390484	0.77	1271268	109.38	70	120	
Ge	72	1	No Gas	684714	1.13	682805	100.28	70	120	
In	115	1	No Gas	3564021	0.61	3697856	96.38	70	120	
Tb	159	1	No Gas	4086984	0.76	4404848	92.78	70	120	
Bi	209	1	No Gas	2115228	1.00	1997135	105.91	70	120	
Sc	45	3	HeHe	138691	1.27	132951	104.32	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	170_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:35:44-04:00
Sample Type	CCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	97.951	1.155	3486349	0.51	100	98.0	90	110	
Cr	52	1	No Gas	95.873	1.509	3082667	2.24	100	95.9	90	110	
Mn	55	1	No Gas	100.453	1.055	3954785	1.23	100	100.5	90	110	
Co	59	1	No Gas	97.154	0.416	3435058	1.27	100	97.2	90	110	
Ni	60	1	No Gas	92.702	0.421	761514	0.89	100	92.7	90	110	
Cu	63	1	No Gas	96.244	0.279	1834031	1.06	100	96.2	90	110	
Sr	88	1	No Gas	99.913	0.871	4467544	1.71	100	99.9	90	110	
Ag	107	1	No Gas	101.835	1.635	1896100	0.61	100	101.8	90	110	
Al	27	1	No Gas	100.524	0.429	2127654	0.72	100	100.5	90	110	
Sn	118	1	No Gas	97.991	1.256	1064085	1.05	100	98.0	90	110	
Tl	47	1	No Gas	87.895	0.605	257712	1.37	100	87.9	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	94.285	0.770	456597	1.61	100	94.3	90	110	
As	75	3	HeHe	93.285	1.385	36012	1.89	100	93.3	90	110	
As	75	1	No Gas	93.800	0.758	506191	1.48	100	93.8	90	110	
Sb	121	1	No Gas	101.211	0.553	1479481	1.26	100	101.2	90	110	
Hg	201	1	No Gas	1.917	4.800	2569	3.06	2	95.8	90	110	
Be	9	1	No Gas	93.570	0.591	345477	1.34	100	93.6	90	110	
Pb	208	1	No Gas	96.007	0.333	2747629	1.76	100	96.0	90	110	
Se	82	1	No Gas	92.626	1.274	24203	2.01	100	92.6	90	110	
Mo	98	1	No Gas	96.782	1.747	1137659	0.37	100	96.8	90	110	
Ba	137	1	No Gas	99.897	0.471	471266	1.37	100	99.9	90	110	
Tl	205	1	No Gas	97.010	2.227	2036830	1.46	100	97.0	90	110	
U	238	1	No Gas	104.398	0.978	2770723	0.86	100	104.4	90	110	
Na	23	2	he	1030.576	2.352	3240430	1.15	1000	103.1	90	110	
Mg	24	2	he	1022.357	3.342	1811231	3.31	1000	102.2	90	110	
K	39	2	he	1025.564	2.452	3123985	1.52	1000	102.6	90	110	
Se	82	3	HeHe	90.465	2.321	1721	1.39	100	90.5	90	110	
Fe	57	3	HeHe	1026.911	0.457	89542	1.02	1000	102.7	90	110	
Cd	114	1	No Gas	94.669	1.367	807010	1.13	100	94.7	90	110	
Ca	44	1	No Gas	962.506	0.669	1021422	1.43	1000	96.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6662739	0.86	5896472	113.00	70	120	
Sc	45	2	he	1489897	2.73	1271268	117.20	70	120	
Ge	72	1	No Gas	717825	2.32	682805	105.13	70	120	
In	115	1	No Gas	3737385	1.51	3697856	101.07	70	120	
Tb	159	1	No Gas	4243515	0.91	4404848	96.34	70	120	
Bi	209	1	No Gas	2135894	1.77	1997135	106.95	70	120	
Sc	45	3	HeHe	147802	1.03	132951	111.17	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	171_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:39:09-04:00
Sample Type	CCB
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.105	33.9	4941	25.0	9	
Cr	52	1	No Gas	0.102	20.2	15070	2.9	4	
Mn	55	1	No Gas	0.290	22.1	46265	4.0	25	
Co	59	1	No Gas	0.015	39.9	793	24.7	1	
Ni	60	1	No Gas	-2.413	-0.7	2040	5.2	25	
Cu	63	1	No Gas	0.186	1.2	4117	2.2	25	
Sr	88	1	No Gas	0.018	21.8	885	17.8	25	
Ag	107	1	No Gas	0.020	41.4	411	35.8	9	
Al	27	1	No Gas	0.872	1.5	27522	1.8	1000000	
Sn	118	1	No Gas	1.320	21.0	14752	22.6	25	
Ti	47	1	No Gas	0.414	25.7	1513	21.0	10000	
Zn	66	1	No Gas	0.504	18.7	3247	12.3	25	
As	75	3	HeHe	0.476	0.4	186	2.8	9	
As	75	1	No Gas	0.787	13.2	29679	2.8	9	
Sb	121	1	No Gas	0.308	23.6	4708	25.4	4	
Hg	201	1	No Gas	0.021	32.5	66	13.9	0.04	
Be	9	1	No Gas	0.017	35.5	89	26.1	1	
Pb	208	1	No Gas	0.081	7.2	2734	5.7	4	
Se	82	1	No Gas	0.848	107.1	115	203.8	25	
Mo	98	1	No Gas	0.913	28.9	11788	28.9	10000	
Ba	137	1	No Gas	0.079	27.4	427	25.8	25	
Tl	205	1	No Gas	0.038	18.7	856	18.9	1	
U	238	1	No Gas	0.190	24.0	5312	24.5	25	
Na	23	2	he	9.537	3.1	122702	2.0	2500000	
Mg	24	2	he	0.423	23.0	893	17.8	2500000	
K	39	2	he	6.863	16.9	244434	1.5	5000000	
Se	82	3	HeHe	-0.765	-18.7	54	2.4	25	
Fe	57	3	HeHe	14.803	0.6	1441	2.9	2500000	
Cd	114	1	No Gas	0.051	43.0	490	41.3	1	
Ca	44	1	No Gas	-17.972	-8.4	120500	0.6	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6517073	1.38	5896472	110.52	70	120	
Sc	45	2	he	1434900	1.33	1271268	112.87	70	120	
Ge	72	1	No Gas	728329	0.40	682805	106.67	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3785985	2.64	3697856	102.38	70	120	
Tb	159	1	No Gas	4317763	1.61	4404848	98.02	70	120	
Bi	209	1	No Gas	2233380	0.92	1997135	111.83	70	120	
Sc	45	3	HeHe	143721	2.40	132951	108.10	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	172LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:42:40-04:00
Sample Type	LLCCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.058	3.338	73217	3.15	2	102.9	70	130	
Cr	52	1	No Gas	2.147	1.622	79467	1.00	2	107.4	70	130	
Mn	55	1	No Gas	5.315	0.676	238951	0.25	5	106.3	70	130	
Co	59	1	No Gas	4.863	2.923	169098	2.73	5	97.3	70	130	
Ni	60	1	No Gas	2.329	1.489	39225	1.07	5	46.6	70	130	LLCCV Main CR1 Failed
Cu	63	1	No Gas	4.977	1.294	93750	1.13	5	99.5	70	130	
Sr	88	1	No Gas	4.586	2.243	201466	1.90	5	91.7	70	130	
Ag	107	1	No Gas	2.003	1.318	36366	1.78	2	100.2	70	130	
Al	27	1	No Gas	82.404	0.580	1714486	0.21	80	103.0	70	130	
Sn	118	1	No Gas	2.549	7.457	27145	8.00	2	127.4	70	130	
Ti	47	1	No Gas	4.726	3.164	13917	2.78	5	94.5	70	130	
Zn	66	1	No Gas	5.509	2.952	27017	2.55	5	110.2	70	130	
As	75	3	HeHe	3.125	1.340	1160	0.52	3	104.2	70	130	
As	75	1	No Gas	3.409	4.623	42965	1.88	3	113.6	70	130	
Sb	121	1	No Gas	2.202	4.642	31475	5.06	2	110.1	70	130	
Hg	201	1	No Gas	0.215	2.494	313	2.88	0.2	107.6	70	130	
Be	9	1	No Gas	0.955	1.235	3488	0.86	1	95.5	70	130	
Pb	208	1	No Gas	2.056	1.823	57677	0.39	2	102.8	70	130	
Se	82	1	No Gas	5.592	18.835	1338	20.30	5	111.8	70	130	
Mo	98	1	No Gas	2.415	2.116	28481	2.66	2	120.8	70	130	
Ba	137	1	No Gas	5.207	2.765	23945	2.80	5	104.1	70	130	
Tl	205	1	No Gas	0.989	4.596	20269	2.76	1	98.9	70	130	
U	238	1	No Gas	4.744	4.496	122804	2.88	5	94.9	70	130	
Na	23	2	he	114.936	2.401	428593	1.21	100	114.9	70	130	
Mg	24	2	he	101.831	0.568	172465	0.22	100	101.8	70	130	
K	39	2	he	113.647	2.373	529733	0.61	100	113.6	70	130	
Se	82	3	HeHe	4.891	16.873	151	9.85	5	97.8	70	130	
Fe	57	3	HeHe	57.291	6.256	4945	5.35	50	114.6	70	130	
Cd	114	1	No Gas	1.079	4.902	9006	4.33	1	107.9	70	130	
Ca	44	1	No Gas	84.364	7.153	213045	2.46	100	84.4	70	130	

NA

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6542879	0.38	5896472	110.96	70	120	
Sc	45	2	he	1422717	0.78	1271268	111.91	70	120	
Ge	72	1	No Gas	700131	1.31	682805	102.54	70	120	
In	115	1	No Gas	3639207	0.61	3697856	98.41	70	120	
Tb	159	1	No Gas	4129130	0.98	4404848	93.74	70	120	
Bi	209	1	No Gas	2083587	2.08	1997135	104.33	70	120	
Sc	45	3	HeHe	141190	0.86	132951	106.20	70	120	

Sample Report

Sample Table

Sample Name	30 PPM LDR
Data File Name	174SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081312C.b
Acq Date Time	2012-08-13T22:56:07-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4511

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	0.085	0.085	130.10	4416	0.00	1000	
Cr	52	1	No Gas	0.345	0.345	3.99	23583	0.00	1000	
Mn	55	1	No Gas	-0.011	-0.011	-180.30	36151	0.00	1000	
Co	59	1	No Gas	0.007	0.007	31.29	544	0.00	1000	
Ni	60	1	No Gas	-2.495	-2.495	-0.50	1453	-0.17	1000	
Cu	63	1	No Gas	0.095	0.095	5.43	2522	0.00	1000	
Sr	88	1	No Gas	0.015	0.015	7.25	785	0.00	1000	
Ag	107	1	No Gas	0.016	0.016	33.56	326	0.00	1000	
Al	27	1	No Gas	28283.977	28283.977	0.58	605851843	0.00	100000	
Sn	118	1	No Gas	0.341	0.341	33.79	3897	0.01	100	
Ti	47	1	No Gas	0.122	0.122	20.40	704	0.02	2000	
Zn	66	1	No Gas	0.616	0.616	5.73	3929	0.02	1000	
As	75	3	HeHe	0.062	0.062	61.23	32	0.19	1000	
As	75	1	No Gas	0.909	0.909	7.94	31477	0.00	1000	
Sb	121	1	No Gas	0.063	0.063	29.36	1048	0.01	100	
Hg	201	1	No Gas	0.006	0.006	160.42	44	0.01	4	
Be	9	1	No Gas	0.001	0.001	276.27	31	0.00	1000	
Pb	208	1	No Gas	0.043	0.043	29.41	1559	0.00	1000	
Se	82	1	No Gas	0.678	0.678	44.52	75	0.91	1000	
Mo	98	1	No Gas	0.148	0.148	46.68	2603	0.01	2000	
Ba	137	1	No Gas	0.232	0.232	11.22	1137	0.02	1000	
Tl	205	1	No Gas	0.002	0.002	78.44	70	0.00	1000	
U	238	1	No Gas	0.014	0.014	27.61	426	0.00	1000	
Na	23	2	he	9.297	9.297	7.91	123653	0.01	100000	
Mg	24	2	he	0.448	0.448	16.61	948	0.05	100000	
K	39	2	he	2.656	2.656	37.26	236210	0.00	100000	
Se	82	3	HeHe	-0.050	-0.050	-980.66	69	-0.07	1000	
Fe	57	3	HeHe	43.578	43.578	3.90	3997	1.09	100000	
Cd	114	1	No Gas	0.015	0.015	45.70	173	0.01	1000	
Ca	44	1	No Gas	-38.180	-38.180	-6.41	106426	-0.04	100000	

94%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6773953	1.32	5896472	114.88	70	120	
Sc	45	2	he	1454676	1.33	1271268	114.43	70	120	
Ge	72	1	No Gas	707192	1.08	682805	103.57	70	120	

In	115	1	No Gas	3736186	1.13	3697856	101.04	70	120	
Tb	159	1	No Gas	4221245	1.56	4404848	95.83	70	120	
Bi	209	1	No Gas	2152041	0.92	1997135	107.76	70	120	
Sc	45	3	HeHe	148272	1.34	132951	111.52	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	176_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081312C.b
Acq Date Time	2012-08-13T23:11:53-04:00
Sample Type	CCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	98.980	2.302	3555900	1.02	100	99.0	90	110	
Cr	52	1	No Gas	96.886	0.774	3144266	0.60	100	96.9	90	110	
Mn	55	1	No Gas	100.547	1.620	3995914	1.79	100	100.5	90	110	
Co	59	1	No Gas	95.565	1.648	3410828	2.04	100	95.6	90	110	
Ni	60	1	No Gas	91.888	2.193	762049	1.02	100	91.9	90	110	
Cu	63	1	No Gas	96.307	2.189	1852437	1.86	100	96.3	90	110	
Sr	88	1	No Gas	97.963	2.006	4421129	1.37	100	98.0	90	110	
Ag	107	1	No Gas	100.244	1.943	1864812	2.65	100	100.2	90	110	
Al	27	1	No Gas	99.326	0.814	2122333	1.24	100	99.3	90	110	
Sn	118	1	No Gas	96.711	1.178	1049045	0.69	100	96.7	90	110	
Tl	47	1	No Gas	88.195	1.484	261010	0.81	100	88.2	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	93.657	1.646	457783	0.49	100	93.7	90	110	
As	75	3	HeHe	92.592	1.736	35134	0.75	100	92.6	90	110	
As	75	1	No Gas	92.152	0.982	502427	0.60	100	92.2	90	110	
Sb	121	1	No Gas	99.121	1.267	1447259	0.87	100	99.1	90	110	
Hg	201	1	No Gas	1.869	4.928	2512	4.60	2	93.4	90	110	
Be	9	1	No Gas	92.851	1.855	346023	1.14	100	92.9	90	110	
Pb	208	1	No Gas	93.178	0.223	2671481	0.65	100	93.2	90	110	
Se	82	1	No Gas	90.630	2.985	23897	1.72	100	90.6	90	110	
Mo	98	1	No Gas	96.013	1.161	1127482	0.49	100	96.0	90	110	
Ba	137	1	No Gas	100.003	1.969	464237	2.00	100	100.0	90	110	
Tl	205	1	No Gas	96.100	0.999	2021863	1.82	100	96.1	90	110	
U	238	1	No Gas	102.287	1.084	2719961	1.58	100	102.3	90	110	
Na	23	2	he	1055.023	2.205	3265449	2.25	1000	105.5	90	110	
Mg	24	2	he	1031.410	1.861	1799536	0.46	1000	103.1	90	110	
K	39	2	he	1029.143	0.957	3087070	0.77	1000	102.9	90	110	
Se	82	3	HeHe	90.773	2.133	1697	2.46	100	90.8	90	110	
Fe	57	3	HeHe	1016.582	1.989	87152	2.86	1000	101.7	90	110	
Cd	114	1	No Gas	92.902	0.379	791116	0.41	100	92.9	90	110	
Ca	44	1	No Gas	938.083	1.138	1008411	0.43	1000	93.8	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6725963	1.33	5896472	114.07	70	120	
Sc	45	2	he	1467190	1.66	1271268	115.41	70	120	
Ge	72	1	No Gas	717091	0.51	682805	105.02	70	120	
In	115	1	No Gas	3733156	0.78	3697856	100.95	70	120	
Tb	159	1	No Gas	4176703	2.43	4404848	94.82	70	120	
Bi	209	1	No Gas	2139762	0.87	1997135	107.14	70	120	
Sc	45	3	HeHe	145315	2.03	132951	109.30	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	177_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081312C.b
Acq Date Time	2012-08-13T23:15:17-04:00
Sample Type	CCB
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.125	50.6	5645	36.9	9	
Cr	52	1	No Gas	0.172	16.4	17369	3.6	4	
Mn	55	1	No Gas	-0.010	-325.3	35042	1.4	25	
Co	59	1	No Gas	0.016	2.3	837	1.5	1	
Ni	60	1	No Gas	-2.451	-0.7	1754	7.3	25	
Cu	63	1	No Gas	0.199	3.8	4392	0.6	25	
Sr	88	1	No Gas	0.021	21.2	1030	19.1	25	
Ag	107	1	No Gas	0.025	6.2	500	3.8	9	
Al	27	1	No Gas	0.932	4.7	28935	3.1	1000000	
Sn	118	1	No Gas	1.401	23.8	15441	24.6	25	
Ti	47	1	No Gas	0.386	28.2	1447	24.3	10000	
Zn	66	1	No Gas	0.579	4.7	3630	3.6	25	
As	75	3	HeHe	0.442	28.3	176	23.0	9	
As	75	1	No Gas	0.912	26.7	30513	5.9	9	
Sb	121	1	No Gas	0.302	29.9	4549	29.6	4	
Hg	201	1	No Gas	0.019	95.2	61	40.8	0.04	
Be	9	1	No Gas	0.018	21.0	91	13.4	1	
Pb	208	1	No Gas	0.049	21.4	1708	18.7	4	
Se	82	1	No Gas	1.553	26.4	298	36.7	25	
Mo	98	1	No Gas	0.926	29.4	11773	27.8	10000	
Ba	137	1	No Gas	0.101	0.5	523	1.1	25	
Tl	205	1	No Gas	0.046	23.3	982	21.5	1	
U	238	1	No Gas	0.224	29.5	5946	28.5	25	
Na	23	2	he	9.768	5.4	124179	1.8	2500000	
Mg	24	2	he	0.548	12.9	1115	12.0	2500000	
K	39	2	he	5.797	7.9	243129	1.3	5000000	
Se	82	3	HeHe	-1.125	-20.0	49	10.8	25	
Fe	57	3	HeHe	12.057	11.3	1237	10.2	2500000	
Cd	114	1	No Gas	0.069	17.2	640	16.9	1	
Ca	44	1	No Gas	-31.978	-10.4	108621	1.3	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6559872	2.79	5896472	111.25	70	120	
Sc	45	2	he	1444279	1.07	1271268	113.61	70	120	
Ge	72	1	No Gas	708080	2.44	682805	103.70	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3736818	2.10	3697856	101.05	70	120	
Tb	159	1	No Gas	4232484	0.68	4404848	96.09	70	120	
Bi	209	1	No Gas	2122934	1.34	1997135	106.30	70	120	
Sc	45	3	HeHe	147150	4.06	132951	110.68	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	178LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081312C.b
Acq Date Time	2012-08-13T23:18:46-04:00
Sample Type	LLCCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.107	1.389	75854	1.83	2	105.4	70	130	
Cr	52	1	No Gas	2.232	4.820	83121	4.58	2	111.6	70	130	
Mn	55	1	No Gas	5.175	1.564	236460	2.44	5	103.5	70	130	
Co	59	1	No Gas	4.889	0.495	172046	0.82	5	97.8	70	130	
Ni	60	1	No Gas	2.476	0.619	40865	1.33	5	49.5	70	130	LLCCV Main CR1 Failed
Cu	63	1	No Gas	4.932	0.618	94041	1.24	5	98.6	70	130	
Sr	88	1	No Gas	4.526	0.339	201253	1.53	5	90.5	70	130	
Ag	107	1	No Gas	2.020	1.031	37064	0.25	2	101.0	70	130	
Al	27	1	No Gas	82.789	0.920	1743261	0.99	80	103.5	70	130	
Sn	118	1	No Gas	2.541	5.892	27360	7.15	2	127.0	70	130	
Tl	47	1	No Gas	4.675	3.379	13940	4.24	5	93.5	70	130	
Zn	66	1	No Gas	5.408	1.373	26863	2.62	5	108.2	70	130	
As	75	3	HeHe	3.140	3.029	1224	3.85	3	104.7	70	130	
As	75	1	No Gas	3.879	7.104	45864	1.82	3	129.3	70	130	
Sb	121	1	No Gas	2.110	2.905	30499	4.16	2	105.5	70	130	
Hg	201	1	No Gas	0.186	22.296	274	19.36	0.2	93.2	70	130	
Be	9	1	No Gas	0.970	0.766	3585	1.03	1	97.0	70	130	
Pb	208	1	No Gas	1.970	3.501	55004	3.02	2	98.5	70	130	
Se	82	1	No Gas	5.787	5.600	1405	5.39	5	115.7	70	130	
Mo	98	1	No Gas	2.300	1.599	27459	2.76	2	115.0	70	130	
Ba	137	1	No Gas	5.147	3.107	23731	3.63	5	102.9	70	130	
Tl	205	1	No Gas	0.977	3.156	19928	2.12	1	97.7	70	130	
U	238	1	No Gas	4.762	1.645	122725	1.90	5	95.2	70	130	
Na	23	2	he	116.631	2.401	445813	0.29	100	116.6	70	130	
Mg	24	2	he	102.185	1.556	177968	0.92	100	102.2	70	130	
K	39	2	he	117.418	1.999	555210	0.45	100	117.4	70	130	
Se	82	3	HeHe	4.154	9.202	146	3.97	5	83.1	70	130	
Fe	57	3	HeHe	55.573	11.818	5049	11.99	50	111.1	70	130	
Cd	114	1	No Gas	1.009	0.558	8516	1.37	1	100.9	70	130	
Ca	44	1	No Gas	70.394	5.118	202913	2.11	100	70.4	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6622192	1.31	5896472	112.31	70	120	
Sc	45	2	he	1463181	1.59	1271268	115.10	70	120	
Ge	72	1	No Gas	714673	1.65	682805	104.67	70	120	
In	115	1	No Gas	3679167	1.27	3697856	99.49	70	120	
Tb	159	1	No Gas	4139629	1.18	4404848	93.98	70	120	
Bi	209	1	No Gas	2073101	1.30	1997135	103.80	70	120	
Sc	45	3	HeHe	148320	1.01	132951	111.56	70	120	

Digestion Logbook

Microwave 3051 Prep (Soil) (Version 1 - 6/1/2010)

Batch: 37419	Queue: MDIG	HBN: 475030	RULE: D3051/6020	ALSI SOP: 09-3051
File Name: 37419_120808-114924			METHOD: SW3051	Microwave ID: MARS

COMMENTS:	Comment Codes:	Reagents:		Pipettes:		Start	Finish
	1. Sample failed initial digestion due to a weight loss >5g	HNO3:	L02030 JT BAKER		Date:	08/08/2012	08/08/2012
	2. Sample reacts with reagent	HCl:	K25031 MALLINCKRODT		Time:	12:24:00	12:54:00
	3. Less sample used due to high metal conten	Boiling Stones:	D1069103		Tech:	KMK	KMK
	4. Less sample used to result in successful microwave digestion				Reviewed/Approved By:		N/A
	5. Sample does not digest by microwave, digest by method 3050				Date:		

Sample ID	Cont ID	Samp Type	Vessel Initial WT, grams	Vessel Final WT, grams	Difference grams	Spike Amt uL of Each	Spike Lot#	Sample Size, grams	Final Vol mL	Parent Sample ID	Comment Code
1020183		MB	106.46	104.90	1.56			0.50	50		
1020184		LCS	108.68	107.37	1.31	40/50/500/500	/MS0360/MS0359/	0.50	50		
9980394001	A	S	106.77	104.89	1.88			0.51	50		
9980394002	A	S	107.05	104.57	2.48			0.54	50		
9980394003	A	S	106.64	104.76	1.88			0.55	50		
9980394004	A	S	107.09	105.26	1.83			0.53	50		
9980394005	A	S	106.65	104.53	2.12			0.52	50		
9980394007	A	S	106.79	105.54	1.25			0.57	50		
9980394008	A	S	107.16	105.64	1.52			0.54	50		
9980394009	A	S	106.98	103.97	3.01			0.52	50		
9980394010	A	S	106.60	104.86	1.74			0.52	50		
9980394011	A	S	106.01	101.59	4.42			0.54	50		
9980394012	A	S	107.17	104.39	2.78			0.59	50		
9980394013	A	S	106.64	104.97	1.67			0.57	50		
9980395001	A	S	108.25	105.88	2.37			0.56	50		
9980395002	A	S	106.47	104.89	1.58			0.54	50		
9980395003	A	S	107.71	104.88	2.83			0.54	50		
1020185		MS	107.59	104.89	2.70	40/50/500/500	/MS0360/MS0359/	0.55	50	9980395003	
1020186		MSD	107.19	104.94	2.25	40/50/500/500	/MS0360/MS0359/	0.58	50	9980395003	
9980395004	A	S	108.31	105.96	2.35			0.55	50		
9980395005	A	S	106.42	104.76	1.66			0.54	50		
9980395007	A	S	107.85	105.02	2.83			0.58	50		
9980395008	A	S	106.30	104.17	2.13			0.54	50		
9980395009	A	S	107.61	105.42	2.19			0.52	50		

End

Microwave 3051 Prep (Soil) (Version 1 - 6/1/2010)

Batch: 37420	Queue: MDIG	HBN: 475031	RULE: D3051/6020	ALSI SOP: 09-3051
File Name: 37420_120808-120034			METHOD: SW3051	Microwave ID: MARS

COMMENTS:	Comment Codes:	Reagents:		Pipettes:		Start	Finish
	1. Sample failed initial digestion due to a weight loss >5g	HNO3:	L02030 JT BAKER		Date:	08/08/2012	08/08/2012
	2. Sample reacts with reagent	HCl:	K25031 MALLINCKRODT		Time:	12:55:00	13:21:00
	3. Less sample used due to high metal conten	Boiling Stones:	D1069103		Tech:	KMK	KMK
	4. Less sample used to result in successful microwave digestion				Reviewed/Approved By:		N/A
	5. Sample does not digest by microwave, digest by method 3050				Date:		

Sample ID	Cont ID	Samp Type	Vessel Initial WT, grams	Vessel Final WT, grams	Difference grams	Spike Amt uL of Each	Spike Lot#	Sample Size, grams	Final Vol mL	Parent Sample ID	Comment Code
1020187		MB	107.31	106.06	1.25			0.50	50		
1020188		LCS	109.60	108.07	1.53	40/50/500/500	/MS0360/MS0359/	0.50	50		
9980395010	A	S	108.02	105.78	2.24			0.54	50		
9980395011	A	S	107.35	106.08	1.27			0.53	50		
9980395012	A	S	107.06	105.29	1.77			0.55	50		
9980395013	A	S	106.46	104.98	1.48			0.52	50		
9980395014	A	S	107.04	105.89	1.15			0.58	50		
9980614001	A	S	106.41	105.00	1.41			0.53	50		
9980614002	A	S	106.89	104.74	2.15			0.58	50		
9980614003	A	S	107.47	106.19	1.28			0.52	50		
9980614004	A	S	107.74	105.58	2.16			0.56	50		
9980614005	A	S	107.21	105.67	1.54			0.57	50		
9980614006	A	S	106.64	104.50	2.14			0.53	50		
9980614007	A	S	107.17	105.79	1.38			0.52	50		
9980614008	A	S	106.65	104.22	2.43			0.57	50		
9980614009	A	S	107.55	105.61	1.94			0.52	50		
9980614010	A	S	106.50	105.64	0.86			0.52	50		
9980614011	A	S	107.44	105.89	1.55			0.56	50		
9980614012	A	S	108.82	106.64	2.18			0.53	50		
9980614013	A	S	107.08	104.78	2.30			0.53	50		
1020189		MS	108.02	105.50	2.52	40/50/500/500	/MS0360/MS0359/	0.56	50	9980614013	
1020190		MSD	108.81	106.95	1.86	40/50/500/500	/MS0360/MS0359/	0.59	50	9980614013	
9980614014	A	S	106.90	104.86	2.04			0.54	50		
9980614015	A	S	106.93	105.41	1.52			0.54	50		

End

Analytical Logbook

Batch Log

#	Acquired Date and Time	Sample Type	Sample Name	File Name	Comment	Vial#	Dilution Result	Operator
1	8/13/2012 12:11	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A081312C.b\001CALB.d		1101	1	Matthew Olley
2	8/13/2012 12:14	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A081312C.b\002CALB.d		1101	1	Matthew Olley
3	8/13/2012 12:18	CalStd	Standard 1	C:\Agilent\ICPMH\1\DATA\A081312C.b\003CALS.d		2101	1	Matthew Olley
4	8/13/2012 12:22	CalStd	Standard 2	C:\Agilent\ICPMH\1\DATA\A081312C.b\004CALS.d		2102	1	Matthew Olley
5	8/13/2012 12:25	CalStd	Standard 3	C:\Agilent\ICPMH\1\DATA\A081312C.b\005CALS.d		2103	1	Matthew Olley
6	8/13/2012 12:29	CalStd	Standard 4	C:\Agilent\ICPMH\1\DATA\A081312C.b\006CALS.d		2104	1	Matthew Olley
7	8/13/2012 12:32	CalStd	Standard 5	C:\Agilent\ICPMH\1\DATA\A081312C.b\007CALS.d		2105	1	Matthew Olley
8	8/13/2012 12:35	ICV	ICV	C:\Agilent\ICPMH\1\DATA\A081312C.b\008_ICV.d		1307	1	Matthew Olley
9	8/13/2012 12:39	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A081312C.b\009_ICB.d		1101	1	Matthew Olley
10	8/13/2012 12:42	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A081312C.b\010_ICB.d		1101	1	Matthew Olley
11	8/13/2012 12:46	LLICV	LLICV	C:\Agilent\ICPMH\1\DATA\A081312C.b\011LICV.d		1305	1	Matthew Olley
12	8/13/2012 12:49	ICSA	ICSA	C:\Agilent\ICPMH\1\DATA\A081312C.b\012ICSA.d		2111	1	Matthew Olley
13	8/13/2012 12:49							Matthew Olley
14	8/13/2012 12:59	ICSB	ICSAB	C:\Agilent\ICPMH\1\DATA\A081312C.b\013ICSB.d		2112	1	Matthew Olley
15	8/13/2012 13:02	Sample	1020719	C:\Agilent\ICPMH\1\DATA\A081312C.b\014SMPL.d	37991 LAMDF5	3101	1	Matthew Olley
16	8/13/2012 13:06	Sample	1020720	C:\Agilent\ICPMH\1\DATA\A081312C.b\015SMPL.d	37991 LAMDF5	3102	1	Matthew Olley
17	8/13/2012 13:09	Sample	9981408002	C:\Agilent\ICPMH\1\DATA\A081312C.b\016SMPL.d	37991 LAMDF5	3103	1	Matthew Olley
18	8/13/2012 13:13	Sample	9981430001	C:\Agilent\ICPMH\1\DATA\A081312C.b\017SMPL.d	37991 LAMDF5	3104	1	Matthew Olley
19	8/13/2012 13:16	Sample	1020721	C:\Agilent\ICPMH\1\DATA\A081312C.b\018SMPL.d	37991 LAMDF5	3105	1	Matthew Olley
20	8/13/2012 13:20	Sample	1020722	C:\Agilent\ICPMH\1\DATA\A081312C.b\019SMPL.d	37991 LAMDF5	3106	1	Matthew Olley

Batch Log

21	8/13/2012 13:23	Sample	9981430001PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\020SMPL.d	3107	1	Matthew Olley
22	8/13/2012 13:26	Sample	9981517002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\021SMPL.d	3108	1	Matthew Olley
23	8/13/2012 13:30	Sample	9981517003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\022SMPL.d	3109	1	Matthew Olley
24	8/13/2012 13:33	Sample	9981517003L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\023SMPL.d	3110	1	Matthew Olley
25	8/13/2012 13:37						Matthew Olley
26	8/13/2012 13:37	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\024_CCV.d	1307	1	Matthew Olley
27	8/13/2012 13:37						Matthew Olley
28	8/13/2012 13:49	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\025_CCB.d	1101	1	Matthew Olley
29	8/13/2012 13:53	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\026LCCV.d	1305	1	Matthew Olley
30	8/13/2012 13:56	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\027_CCV.d	1307	1	Matthew Olley
31	8/13/2012 14:00	Sample	1021781	C:\Agilent\ICPMH\1\DAT 37995 LAMDF5 A\A081312C.b\028SMPL.d	3111	1	Matthew Olley
32	8/13/2012 14:03						Matthew Olley
33	8/13/2012 14:03	Sample	1021782	C:\Agilent\ICPMH\1\DAT 37995 LAMDF5 A\A081312C.b\029SMPL.d	3112	1	Matthew Olley
34	8/13/2012 14:07						Matthew Olley
35	8/13/2012 14:07	Sample	1020183	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\030SMPL.d	3201	1	Matthew Olley
36	8/13/2012 14:10						Matthew Olley
37	8/13/2012 14:10	Sample	1020184	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\031SMPL.d	3202	1	Matthew Olley
38	8/13/2012 14:10						Matthew Olley
39	8/13/2012 14:14						Matthew Olley
40	8/13/2012 14:30	Sample	1020187	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\032SMPL.d	3203	1	Matthew Olley
41	8/13/2012 14:34						Matthew Olley
42	8/13/2012 14:34	Sample	1020188	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\033SMPL.d	3204	1	Matthew Olley
43	8/13/2012 14:37						Matthew Olley
44	8/13/2012 14:37	Sample	1020191	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\034SMPL.d	3205	1	Matthew Olley

Batch Log

45	8/13/2012 14:41						Matthew Olley
46	8/13/2012 14:41	Sample	1020192	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\035SMPL.d	3206	1	Matthew Olley
47	8/13/2012 14:44						Matthew Olley
48	8/13/2012 14:44	Sample	1020195	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\036SMPL.d	3207	1	Matthew Olley
49	8/13/2012 14:48						Matthew Olley
50	8/13/2012 14:48	Sample	1020196	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\037SMPL.d	3208	1	Matthew Olley
51	8/13/2012 14:51						Matthew Olley
52	8/13/2012 14:51	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\038_CCV.d	1307	1	Matthew Olley
53	8/13/2012 14:54	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\039_CCB.d	1101	1	Matthew Olley
54	8/13/2012 14:58	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\040LCCV.d	1305	1	Matthew Olley
55	8/13/2012 15:01	Sample	9980394001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\041SMPL.d	3209	1	Matthew Olley
56	8/13/2012 15:05						Matthew Olley
57	8/13/2012 15:05	Sample	9980394002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\042SMPL.d	3210	1	Matthew Olley
58	8/13/2012 15:08						Matthew Olley
59	8/13/2012 15:08	Sample	9980394003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\043SMPL.d	3211	1	Matthew Olley
60	8/13/2012 15:12						Matthew Olley
61	8/13/2012 15:12	Sample	9980394004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\044SMPL.d	3212	1	Matthew Olley
62	8/13/2012 15:15						Matthew Olley
63	8/13/2012 15:15	Sample	9980394005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\045SMPL.d	3301	1	Matthew Olley
64	8/13/2012 15:19						Matthew Olley
65	8/13/2012 15:19	Sample	9980394007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\046SMPL.d	3302	1	Matthew Olley
66	8/13/2012 15:22						Matthew Olley
67	8/13/2012 15:22	Sample	9980394008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\047SMPL.d	3303	1	Matthew Olley
68	8/13/2012 15:26						Matthew Olley

Batch Log

69	8/13/2012 15:26	Sample	9980394009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\048SMPL.d	3304	1	Matthew Olley
70	8/13/2012 15:29						Matthew Olley
71	8/13/2012 15:29	Sample	9980394010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\049SMPL.d	3305	1	Matthew Olley
72	8/13/2012 15:33						Matthew Olley
73	8/13/2012 15:33	Sample	9980394011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\050SMPL.d	3306	1	Matthew Olley
74	8/13/2012 15:36						Matthew Olley
75	8/13/2012 15:36	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\051_CCV.d	1307	1	Matthew Olley
76	8/13/2012 15:40	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\052_CCB.d	1101	1	Matthew Olley
77	8/13/2012 15:43	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\053LCCV.d	1305	1	Matthew Olley
78	8/13/2012 15:43						Matthew Olley
79	8/13/2012 15:49	Sample	1020719	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\054SMPL.d	3101	1	Matthew Olley
80	8/13/2012 15:52						Matthew Olley
81	8/13/2012 15:52	Sample	1020720	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\055SMPL.d	3102	1	Matthew Olley
82	8/13/2012 15:56						Matthew Olley
83	8/13/2012 15:56	Sample	9981430001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\056SMPL.d	3104	1	Matthew Olley
84	8/13/2012 15:59						Matthew Olley
85	8/13/2012 15:59	Sample	1020721	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\057SMPL.d	3105	1	Matthew Olley
86	8/13/2012 16:02						Matthew Olley
87	8/13/2012 16:02	Sample	1020722	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\058SMPL.d	3106	1	Matthew Olley
88	8/13/2012 16:06						Matthew Olley
89	8/13/2012 16:06	Sample	9981430001PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\059SMPL.d	3107	1	Matthew Olley
90	8/13/2012 16:09						Matthew Olley
91	8/13/2012 16:09	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\060_CCV.d	1307	1	Matthew Olley
92	8/13/2012 16:13	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\061_CCB.d	1101	1	Matthew Olley

Batch Log

93	8/13/2012 16:16	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\062LCCV.d	1305	1	Matthew Olley
94	8/13/2012 16:20	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\063_CCV.d	1307	1	Matthew Olley
95	8/13/2012 16:23	Sample	9980394012	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\064SMPL.d	3307	1	Matthew Olley
96	8/13/2012 16:26						Matthew Olley
97	8/13/2012 16:26	Sample	9980394013	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\065SMPL.d	3308	1	Matthew Olley
98	8/13/2012 16:30						Matthew Olley
99	8/13/2012 16:30	Sample	9980394013L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\066SMPL.d	3309	1	Matthew Olley
100	8/13/2012 16:33						Matthew Olley
101	8/13/2012 16:33	Sample	9980395001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\067SMPL.d	3310	1	Matthew Olley
102	8/13/2012 16:37						Matthew Olley
103	8/13/2012 16:37	Sample	9980395002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\068SMPL.d	3311	1	Matthew Olley
104	8/13/2012 16:40						Matthew Olley
105	8/13/2012 16:40	Sample	9980395003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\069SMPL.d	3312	1	Matthew Olley
106	8/13/2012 16:44						Matthew Olley
107	8/13/2012 16:44	Sample	1020185	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\070SMPL.d	3401	1	Matthew Olley
108	8/13/2012 16:47						Matthew Olley
109	8/13/2012 16:47	Sample	1020186	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\071SMPL.d	3402	1	Matthew Olley
110	8/13/2012 16:51						Matthew Olley
111	8/13/2012 16:51	Sample	9980395003PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\072SMPL.d	3403	1	Matthew Olley
112	8/13/2012 16:54						Matthew Olley
113	8/13/2012 16:54	Sample	9980395004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\073SMPL.d	3404	1	Matthew Olley
114	8/13/2012 16:58						Matthew Olley
115	8/13/2012 16:58	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\074_CCV.d	1307	1	Matthew Olley
116	8/13/2012 16:58						Matthew Olley

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117	8/13/2012 17:03	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A081312C.b\075_CCB.d	1101	1	Matthew Olley
118	8/13/2012 17:07	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DATA\A081312C.b\076LCCV.d	1305	1	Matthew Olley
119	8/13/2012 17:10	Sample	9980395005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\077SMPL.d	3405	1	Matthew Olley
120	8/13/2012 17:14						Matthew Olley
121	8/13/2012 17:14	Sample	9980395007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\078SMPL.d	3406	1	Matthew Olley
122	8/13/2012 17:17						Matthew Olley
123	8/13/2012 17:17	Sample	9980395008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\079SMPL.d	3407	1	Matthew Olley
124	8/13/2012 17:21						Matthew Olley
125	8/13/2012 17:21	Sample	9980395009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\080SMPL.d	3408	1	Matthew Olley
126	8/13/2012 17:24						Matthew Olley
127	8/13/2012 17:24	Sample	9980395009L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25A\A081312C.b\081SMPL.d	3409	1	Matthew Olley
128	8/13/2012 17:28						Matthew Olley
129	8/13/2012 17:28	Sample	9980395010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\082SMPL.d	3410	1	Matthew Olley
130	8/13/2012 17:31						Matthew Olley
131	8/13/2012 17:31	Sample	9980395011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\083SMPL.d	3411	1	Matthew Olley
132	8/13/2012 17:35						Matthew Olley
133	8/13/2012 17:35	Sample	9980395012	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\084SMPL.d	3412	1	Matthew Olley
134	8/13/2012 17:38						Matthew Olley
135	8/13/2012 17:38	Sample	9980395013	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\085SMPL.d	3501	1	Matthew Olley
136	8/13/2012 17:42						Matthew Olley
137	8/13/2012 17:42	Sample	9980395014	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\086SMPL.d	3502	1	Matthew Olley
138	8/13/2012 17:45						Matthew Olley
139	8/13/2012 17:45	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A081312C.b\087_CCV.d	1307	1	Matthew Olley
140	8/13/2012 17:49	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A081312C.b\088_CCB.d	1101	1	Matthew Olley

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141	8/13/2012 17:52	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DATA\A081312C.b\089LCCV.d	1305	1	Matthew Olley
142	8/13/2012 17:56	Sample	9980395014L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25A\A081312C.b\090SMPL.d	3503	1	Matthew Olley
143	8/13/2012 17:59						Matthew Olley
144	8/13/2012 17:59	Sample	9980614001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\091SMPL.d	3504	1	Matthew Olley
145	8/13/2012 18:02						Matthew Olley
146	8/13/2012 18:02	Sample	9980614002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\092SMPL.d	3505	1	Matthew Olley
147	8/13/2012 18:06						Matthew Olley
148	8/13/2012 18:06	Sample	9980614003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\093SMPL.d	3506	1	Matthew Olley
149	8/13/2012 18:09						Matthew Olley
150	8/13/2012 18:09	Sample	9980614004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\094SMPL.d	3507	1	Matthew Olley
151	8/13/2012 18:13						Matthew Olley
152	8/13/2012 18:13	Sample	9980614005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\095SMPL.d	3508	1	Matthew Olley
153	8/13/2012 18:16						Matthew Olley
154	8/13/2012 18:16	Sample	9980614006	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\096SMPL.d	3509	1	Matthew Olley
155	8/13/2012 18:20						Matthew Olley
156	8/13/2012 18:20	Sample	9980614007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\097SMPL.d	3510	1	Matthew Olley
157	8/13/2012 18:23						Matthew Olley
158	8/13/2012 18:23	Sample	9980614008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\098SMPL.d	3511	1	Matthew Olley
159	8/13/2012 18:27						Matthew Olley
160	8/13/2012 18:27	Sample	9980614009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\099SMPL.d	3512	1	Matthew Olley
161	8/13/2012 18:30						Matthew Olley
162	8/13/2012 18:30	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A081312C.b\100_CCV.d	1307	1	Matthew Olley
163	8/13/2012 18:34	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A081312C.b\101_CCB.d	1101	1	Matthew Olley
164	8/13/2012 18:37	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DATA\A081312C.b\102LCCV.d	1305	1	Matthew Olley

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165	8/13/2012 18:41	Sample	9980614010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\103SMPL.d	4101	1	Matthew Olley
166	8/13/2012 18:44						Matthew Olley
167	8/13/2012 18:44	Sample	9980614011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\104SMPL.d	4102	1	Matthew Olley
168	8/13/2012 18:48						Matthew Olley
169	8/13/2012 18:48	Sample	9980614012	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\105SMPL.d	4103	1	Matthew Olley
170	8/13/2012 18:51						Matthew Olley
171	8/13/2012 18:51	Sample	9980614013	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\106SMPL.d	4104	1	Matthew Olley
172	8/13/2012 18:55						Matthew Olley
173	8/13/2012 18:55	Sample	1020189	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\107SMPL.d	4105	1	Matthew Olley
174	8/13/2012 18:58						Matthew Olley
175	8/13/2012 18:58	Sample	1020190	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\108SMPL.d	4106	1	Matthew Olley
176	8/13/2012 19:02						Matthew Olley
177	8/13/2012 19:02	Sample	9980614013PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\109SMPL.d	4107	1	Matthew Olley
178	8/13/2012 19:05						Matthew Olley
179	8/13/2012 19:05	Sample	9980614014	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\110SMPL.d	4108	1	Matthew Olley
180	8/13/2012 19:09						Matthew Olley
181	8/13/2012 19:09	Sample	9980614015	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\111SMPL.d	4109	1	Matthew Olley
182	8/13/2012 19:12						Matthew Olley
183	8/13/2012 19:12	Sample	9980614015L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\112SMPL.d	4110	1	Matthew Olley
184	8/13/2012 19:16						Matthew Olley
185	8/13/2012 19:16	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\113_CCV.d	1307	1	Matthew Olley
186	8/13/2012 19:19	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\114_CCB.d	1101	1	Matthew Olley
187	8/13/2012 19:22	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\115LCCV.d	1305	1	Matthew Olley
188	8/13/2012 19:26	Sample	9980614016	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\116SMPL.d	4111	1	Matthew Olley

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189	8/13/2012 19:29						Matthew Olley
190	8/13/2012 19:29	Sample	9980614017	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\117SMPL.d	4112	1	Matthew Olley
191	8/13/2012 19:33						Matthew Olley
192	8/13/2012 19:33	Sample	9980614018	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\118SMPL.d	4201	1	Matthew Olley
193	8/13/2012 19:36						Matthew Olley
194	8/13/2012 19:36	Sample	9980614019	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\119SMPL.d	4202	1	Matthew Olley
195	8/13/2012 19:40						Matthew Olley
196	8/13/2012 19:40	Sample	9980614020	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\120SMPL.d	4203	1	Matthew Olley
197	8/13/2012 19:43						Matthew Olley
198	8/13/2012 19:43	Sample	9980614021	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\121SMPL.d	4204	1	Matthew Olley
199	8/13/2012 19:47						Matthew Olley
200	8/13/2012 19:47	Sample	9980614022	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\122SMPL.d	4205	1	Matthew Olley
201	8/13/2012 19:50						Matthew Olley
202	8/13/2012 19:50	Sample	9980614022L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\123SMPL.d	4206	1	Matthew Olley
203	8/13/2012 19:54						Matthew Olley
204	8/13/2012 19:54	Sample	9980875001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\124SMPL.d	4207	1	Matthew Olley
205	8/13/2012 19:57						Matthew Olley
206	8/13/2012 19:57	Sample	1020193	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\125SMPL.d	4208	1	Matthew Olley
207	8/13/2012 20:01						Matthew Olley
208	8/13/2012 20:01	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\126_CCV.d	1307	1	Matthew Olley
209	8/13/2012 20:04	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\127_CCB.d	1101	1	Matthew Olley
210	8/13/2012 20:08	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\128LCCV.d	1305	1	Matthew Olley
211	8/13/2012 20:11	Sample	1020194	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\129SMPL.d	4209	1	Matthew Olley
212	8/13/2012 20:15						Matthew Olley

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213	8/13/2012 20:15	Sample	9980875001PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\130SMPL.d	4210	1	Matthew Olley
214	8/13/2012 20:18						Matthew Olley
215	8/13/2012 20:18	Sample	9980875002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\131SMPL.d	4211	1	Matthew Olley
216	8/13/2012 20:22						Matthew Olley
217	8/13/2012 20:22	Sample	9980875003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\132SMPL.d	4212	1	Matthew Olley
218	8/13/2012 20:25						Matthew Olley
219	8/13/2012 20:25	Sample	9980875004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\133SMPL.d	4301	1	Matthew Olley
220	8/13/2012 20:29						Matthew Olley
221	8/13/2012 20:29	Sample	9980875005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\134SMPL.d	4302	1	Matthew Olley
222	8/13/2012 20:32						Matthew Olley
223	8/13/2012 20:32	Sample	9980875006	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\135SMPL.d	4303	1	Matthew Olley
224	8/13/2012 20:36						Matthew Olley
225	8/13/2012 20:36	Sample	9980875007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\136SMPL.d	4304	1	Matthew Olley
226	8/13/2012 20:39						Matthew Olley
227	8/13/2012 20:39	Sample	9980875008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\137SMPL.d	4305	1	Matthew Olley
228	8/13/2012 20:43						Matthew Olley
229	8/13/2012 20:43	Sample	9980875009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\138SMPL.d	4306	1	Matthew Olley
230	8/13/2012 20:46						Matthew Olley
231	8/13/2012 20:46	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\139_CCV.d	1307	1	Matthew Olley
232	8/13/2012 20:49	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\140_CCB.d	1101	1	Matthew Olley
233	8/13/2012 20:53	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\141LCCV.d	1305	1	Matthew Olley
234	8/13/2012 20:56	Sample	9980875010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\142SMPL.d	4307	1	Matthew Olley
235	8/13/2012 21:00						Matthew Olley
236	8/13/2012 21:00	Sample	9980875011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\143SMPL.d	4308	1	Matthew Olley

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237	8/13/2012 21:03						Matthew Olley
238	8/13/2012 21:03	Sample	9980875012	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\144SMPL.d	4309	1	Matthew Olley
239	8/13/2012 21:07						Matthew Olley
240	8/13/2012 21:07	Sample	9980875013	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\145SMPL.d	4310	1	Matthew Olley
241	8/13/2012 21:10						Matthew Olley
242	8/13/2012 21:10	Sample	9980875013L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\146SMPL.d	4311	1	Matthew Olley
243	8/13/2012 21:14						Matthew Olley
244	8/13/2012 21:14	Sample	9980875014	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\147SMPL.d	4312	1	Matthew Olley
245	8/13/2012 21:17						Matthew Olley
246	8/13/2012 21:17	Sample	9980875014L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\148SMPL.d	4401	1	Matthew Olley
247	8/13/2012 21:21						Matthew Olley
248	8/13/2012 21:21	Sample	9981198001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\149SMPL.d	4402	1	Matthew Olley
249	8/13/2012 21:24						Matthew Olley
250	8/13/2012 21:24	Sample	9981198002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\150SMPL.d	4403	1	Matthew Olley
251	8/13/2012 21:28						Matthew Olley
252	8/13/2012 21:28	Sample	9981198003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\151SMPL.d	4404	1	Matthew Olley
253	8/13/2012 21:31						Matthew Olley
254	8/13/2012 21:31	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\152_CCV.d	1306	1	Matthew Olley
255	8/13/2012 21:35	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\153_CCB.d	1101	1	Matthew Olley
256	8/13/2012 21:38	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\154LCCV.d	1304	1	Matthew Olley
257	8/13/2012 21:42	Sample	1020197	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\155SMPL.d	4405	1	Matthew Olley
258	8/13/2012 21:45						Matthew Olley
259	8/13/2012 21:45	Sample	1020198	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\156SMPL.d	4406	1	Matthew Olley
260	8/13/2012 21:49						Matthew Olley

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261	8/13/2012 21:49	Sample	9981198003PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\157SMPL.d	4407	1	Matthew Olley
262	8/13/2012 21:52						Matthew Olley
263	8/13/2012 21:52	Sample	9981198004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\158SMPL.d	4408	1	Matthew Olley
264	8/13/2012 21:55						Matthew Olley
265	8/13/2012 21:55	Sample	9981198005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\159SMPL.d	4409	1	Matthew Olley
266	8/13/2012 21:59						Matthew Olley
267	8/13/2012 21:59	Sample	9981198006	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\160SMPL.d	4410	1	Matthew Olley
268	8/13/2012 22:02						Matthew Olley
269	8/13/2012 22:02	Sample	9981198007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\161SMPL.d	4411	1	Matthew Olley
270	8/13/2012 22:06						Matthew Olley
271	8/13/2012 22:06	Sample	9981198008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\162SMPL.d	4412	1	Matthew Olley
272	8/13/2012 22:09						Matthew Olley
273	8/13/2012 22:09	Sample	9981198009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\163SMPL.d	4501	1	Matthew Olley
274	8/13/2012 22:13						Matthew Olley
275	8/13/2012 22:13	Sample	9981198010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\164SMPL.d	4502	1	Matthew Olley
276	8/13/2012 22:16						Matthew Olley
277	8/13/2012 22:16	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\165_CCV.d	1306	1	Matthew Olley
278	8/13/2012 22:20	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\166_CCB.d	1101	1	Matthew Olley
279	8/13/2012 22:23	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\167LCCV.d	1304	1	Matthew Olley
280	8/13/2012 22:27	Sample	9981198011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\168SMPL.d	4503	1	Matthew Olley
281	8/13/2012 22:30						Matthew Olley
282	8/13/2012 22:30	Sample	9981198011L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\169SMPL.d	4504	1	Matthew Olley
283	8/13/2012 22:34						Matthew Olley
284	8/13/2012 22:34	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\170_CCV.d	1306	1	Matthew Olley

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285	8/13/2012 22:37	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\171_CCB.d	37991 LAMDF5	1101	1 Matthew Olley
286	8/13/2012 22:41	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\172LCCV.d	37991 LAMDF5	1304	1 Matthew Olley
287	8/13/2012 22:44	Sample	50 PPM LDR	C:\Agilent\ICPMH\1\DAT A\A081312C.b\173SMPL.d		4512	1 Matthew Olley
288	8/13/2012 22:48						Matthew Olley
289	8/13/2012 22:54	CalBlk	blk			1101	Matthew Olley
290	8/13/2012 22:54	CalBlk	blk			1101	Matthew Olley
291	8/13/2012 22:54	CalStd	Standard 1			2101	Matthew Olley
292	8/13/2012 22:54	CalStd	Standard 2			2102	Matthew Olley
293	8/13/2012 22:54	CalStd	Standard 3			2103	Matthew Olley
294	8/13/2012 22:54	CalStd	Standard 4			2104	Matthew Olley
295	8/13/2012 22:54	CalStd	Standard 5			2105	Matthew Olley
296	8/13/2012 22:54	ICV	ICV			1307	Matthew Olley
297	8/13/2012 22:54	ICB	ICB			1101	Matthew Olley
298	8/13/2012 22:54	ICB	ICB			1101	Matthew Olley
299	8/13/2012 22:54	LLICV	LLICV			1305	Matthew Olley
300	8/13/2012 22:54	ICSA	ICSA			2111	Matthew Olley
301	8/13/2012 22:54	ICSB	ICSAB			2112	Matthew Olley
302	8/13/2012 22:54	Sample	30 PPM LDR	C:\Agilent\ICPMH\1\DAT A\A081312C.b\174SMPL.d		4511	1 Matthew Olley
303	8/13/2012 22:58	Sample	1020719	C:\Agilent\ICPMH\1\DAT A\A081312C.b\175SMPL.d	37991 LAMDF5	3101	1 Matthew Olley
304	8/13/2012 22:58						Matthew Olley
305	8/13/2012 22:58	Sample	1020720		37991 LAMDF5	3102	Matthew Olley
306	8/13/2012 22:58	Sample	9981408002		37991 LAMDF5	3103	Matthew Olley
307	8/13/2012 22:58	Sample	9981430001		37991 LAMDF5	3104	Matthew Olley
308	8/13/2012 22:58	Sample	1020721		37991 LAMDF5	3105	Matthew Olley
309	8/13/2012 22:58	Sample	1020722		37991 LAMDF5	3106	Matthew Olley
310	8/13/2012 22:58	Sample	9981430001PS		37991 LAMDF5	3107	Matthew Olley
311	8/13/2012 22:58	Sample	9981517002		37991 LAMDF5	3108	Matthew Olley
312	8/13/2012 22:58	Sample	9981517003		37991 LAMDF5	3109	Matthew Olley
313	8/13/2012 22:58	Sample	9981517003L		37991 LAMDF5	3110	Matthew Olley

Batch Log

314	8/13/2012 23:10	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\176_CCV.d	1306	1	Matthew Olley
315	8/13/2012 23:13	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\177_CCB.d	1101	1	Matthew Olley
316	8/13/2012 23:17	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\178LCCV.d	1304	1	Matthew Olley
317	8/13/2012 23:17						Matthew Olley
318	8/13/2012 23:26	Sample	9980875009	C:\Agilent\ICPMH\1\DAT 37996 LAMDF25 A\A081312C.b\179SMPL.d	2501	1	Matthew Olley
319	8/13/2012 23:29	Sample	1021781	C:\Agilent\ICPMH\1\DAT 37995 LAMDF5 A\A081312C.b\180SMPL.d	2502	1	Matthew Olley
320	8/13/2012 23:29						Matthew Olley
321	8/13/2012 23:38	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\181_CCV.d	1306	1	Matthew Olley
322	8/13/2012 23:41	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\182_CCB.d	1101	1	Matthew Olley
323	8/13/2012 23:45	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\183LCCV.d	1304	1	Matthew Olley
324	8/13/2012 23:45						Matthew Olley
325	8/14/2012 0:01	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\184_CCB.d	1101	1	Matthew Olley

Total Solids Summary Forms

Sample Description
FTSW-HR-SO-05

Form 7
Duplicate Summary

Analysis Method: 2540G
SDG No.: ERT-003

Matrix (soil/water): soil
Units: %
Instrument ID: N/A
GC Column: N/A
Sample % Moisture: N/A

Lab Sample ID: 9980395009
Lab File ID: N/A
Lab Sample Dup. ID: 1017717
Dup. Lab File ID: N/A
Dup. % Moisture: N/A

Analyte	Sample Concentration	Duplicate Concentration	Relative Percent Difference (RPD)	(1)	Acceptable Limit
Total Solids	90.6	91.1	0.6		5%

(1) The following qualifiers are used:
* : Values outside of acceptable limits

Comments:

Total Solids Raw Data

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Total Solids

Batch: 113844 Queue: WETC Analyst: KED

File Name: 113844_120801-112943 Date/Time: 08/01/12 13:45

Misc:		1st Time In	13:45	2nd Time In	8:20	3rd Time In	11:15	4th Time In	
		1st Temp In °C	104	2nd Temp In °C	104	3rd Temp In °C	104	4th Temp In °C	
		1st Time Out	7:50	2nd Time Out	10:45	3rd Time Out	12:45	4th Time Out	
		1st Temp Out °C	104	2nd Temp Out °C	104	3rd Temp Out °C	104	4th Temp Out °C	

Sample ID	Cont ID	Samp Type	TVS	Weight of dish and sample (g) or Volume of sample (ml)	Dish Wt. (g)	1st Dish + Sample Wt (g)	2nd Dish + Sample Wt (g)	3rd Dish + Sample Wt (g)	4th Dish + Sample Wt (g)	TS (%) or (mg/l)	Result1 TARE (g)	Result2 IWT (g)	Result3 FWT (g)
1017714	BALCHK			0.1000	0.1000	0.1000	0.1000	0.1000		#DIV/0!	0.1000	0.1000	0.1000
1017715	A	DUP	0.1	24.2955	1.1724	21.7529	21.7528			89.0036	1.1724	24.2955	21.7528
9980387001	A	S		22.5774	1.2101	20.2452	20.2430			89.0749	1.2101	22.5774	20.2430
9980394001	A	S		32.8200	1.1583	24.8864	24.8838			74.9344	1.1583	32.8200	24.8838
9980394002	A	S		25.1990	1.1808	19.5919	19.5902			76.6477	1.1808	25.1990	19.5902
9980394003	A	S		28.9347	1.1527	21.8966	21.8889			74.6390	1.1527	28.9347	21.8889
9980394004	A	S		29.1517	1.1547	23.0187	23.0184			78.0930	1.1547	29.1517	23.0184
9980394005	A	S		35.2470	1.1604	27.0224	27.0179			75.8583	1.1604	35.2470	27.0179
9980394007	A	S		32.1281	1.1652	26.2925	26.2912			81.1487	1.1652	32.1281	26.2912
9980394008	A	S		39.2620	1.1646	32.7238	32.7180			82.8230	1.1646	39.2620	32.7180
9980394009	A	S		15.5445	1.1509	15.3085	15.3049			98.3354	1.1509	15.5445	15.3049
9980394010	A	S		22.8068	1.1567	18.9215	18.9188			82.0417	1.1567	22.8068	18.9188
1017716	A	DUP	0.1	12.4223	1.1499	12.2053	12.2037			98.0608	1.1499	12.4223	12.2037
9980394011	A	S		15.0705	1.1686	14.7845	14.7824			97.9276	1.1686	15.0705	14.7824
9980394012	A	S		31.5757	1.1590	23.5951	23.5896			73.7444	1.1590	31.5757	23.5896
9980394013	A	S		32.2829	1.1727	24.2010	24.1936			73.9979	1.1727	32.2829	24.1936
9980395001	A	S		13.7429	1.1579	13.0783	13.0759			94.7000	1.1579	13.7429	13.0759
9980395002	A	S		17.6413	1.1866	16.6704	16.6383			93.9045	1.1866	17.6413	16.6383
9980395003	A	S		11.5310	1.1607	10.5555	10.5503			90.5432	1.1607	11.5310	10.5503
9980395004	A	S		13.2968	1.1668	12.1800	12.1745			90.7477	1.1668	13.2968	12.1745
9980395005	A	S		15.4743	1.1506	14.9857	14.9801			96.5498	1.1506	15.4743	14.9801
9980395007	A	S		10.2497	1.1543	9.0177	9.0126			86.3986	1.1543	10.2497	9.0126
9980395008	A	S		15.0403	1.1931	14.5398	14.5372			96.3668	1.1931	15.0403	14.5372
1017717	A	DUP	0.1	9.9129	1.1842	9.1485	9.1428			91.1774	1.1842	9.9129	9.1428
9980395009	A	S		9.3607	1.1718	8.5989	8.5928			90.6227	1.1718	9.3607	8.5928
9980395010	A	S		17.4877	1.1651	16.7723	16.7638			95.5650	1.1651	17.4877	16.7638
9980395011	A	S		12.8722	1.1882	11.0301	11.0436			84.3495	1.1882	12.8722	11.0436
9980395012	A	S		20.2450	1.1627	18.3782	18.3892			90.2748	1.1627	20.2450	18.3892
9980395013	A	S		12.7318	1.1568	11.3222	11.3345			87.9283	1.1568	12.7318	11.3345
9980395014	A	S		15.2069	1.1650	14.3820	14.3874			94.1639	1.1650	15.2069	14.3874
9980460001	A	S		20.1054	1.1775	17.3400	17.3118			85.2408	1.1775	20.1054	17.3118

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9980462001	A	S		19.8313	1.1790	18.2032	18.2121			91.3190	1.1790	19.8313	18.2121
9980464001	A	S		16.9907	1.1800	16.5466	16.5579			97.2626	1.1800	16.9907	16.5579
9980465001	A	S		19.1817	1.1864	17.3909	17.6546	17.6313		91.3844	1.1864	19.1817	17.6313
1017718	A	DUP	1.0	15.6669	1.1782	14.5259	14.6904	14.6713		93.1284	1.1782	15.6669	14.6713
9980466001	A	S		16.6366	1.1838	15.3997	15.4291			92.1859	1.1838	16.6366	15.4291
9980467001	A	S		18.5130	1.1529	17.3360	17.3474			93.2858	1.1529	18.5130	17.3474
9980469001	A	S		28.7668	1.1657	23.7054	23.7100			81.6790	1.1657	28.7668	23.7100
9980469002	A	S		29.2295	1.1840	23.0258	23.0371			77.9202	1.1840	29.2295	23.0371
9980470001	A	S		26.8472	1.1603	24.6655	24.2483	24.2339		89.8263	1.1603	26.8472	24.2339
9980471001	A	S		27.1911	1.1600	23.6425	23.6541			86.4124	1.1600	27.1911	23.6541
9980472001	A	S		18.8236	1.1651	17.2048	17.2088			90.8554	1.1651	18.8236	17.2088
9980474001	A	S		37.0353	1.1616	25.5043	25.5113			67.8762	1.1616	37.0353	25.5113
9980475001	A	S		17.6038	1.1528	16.3337	16.3375			92.3026	1.1528	17.6038	16.3375
9980475002	A	S		22.2502	1.1538	20.6732	20.6774			92.5447	1.1538	22.2502	20.6774
1017719	A	DUP	2.2	19.2714	1.1578	17.7913	17.2037	17.1865		88.4899	1.1578	19.2714	17.1865
9980475003	A	S		19.8981	1.1803	18.1072	18.1112			90.4535	1.1803	19.8981	18.1112
9980477001	A	S		10.9432	1.1566	1.4412	1.4419			2.9152	1.1566	10.9432	1.4419
9980477002	A	S		9.9135	1.1579	1.2230	1.2234			0.7481	1.1579	9.9135	1.2234
9980477003	A	S		7.7966	1.1586	1.6163	1.6165			6.8982	1.1586	7.7966	1.6165
9980478001	A	S		27.6026	1.1604	2.7834	2.7808			6.1281	1.1604	27.6026	2.7808
9980478002	A	S		20.0480	1.1510	3.3031	3.3096			11.4230	1.1510	20.0480	3.3096
9980478003	A	S		4.9883	1.1512	2.3331	2.3509			31.2658	1.1512	4.9883	2.3509
9980478004	A	S		6.3692	1.1661	3.1000	3.1183			37.5199	1.1661	6.3692	3.1183
9980479001	A	S		17.5229	1.1510	14.9748	14.9989			84.5833	1.1510	17.5229	14.9989
9980479002	A	S		22.8264	1.1597	19.6454	19.6719			85.4408	1.1597	22.8264	19.6719
1017720	A	DUP	1.4	22.8675	1.1634	19.1258	19.1489			82.8668	1.1634	22.8675	19.1489
9980479003	A	S		20.2343	1.1827	16.7358	16.7578			81.7522	1.1827	20.2343	16.7578
9980480001	A	S		49.5766	1.1771	41.3258	41.3465			82.9955	1.1771	49.5766	41.3465
9980480002	A	S		33.1008	1.1646	27.7069	27.7237			83.1630	1.1646	33.1008	27.7237
9980481001	A	S		5.4073	1.1630	5.3155	5.3247			98.0539	1.1630	5.4073	5.3247
9980482001	A	S		18.5107	1.1635	14.7094	14.7386			78.2553	1.1635	18.5107	14.7386
9980482002	A	S		13.7530	1.1704	11.9516	11.9788			85.8996	1.1704	13.7530	11.9788
9980482003	A	S		18.0726	1.1638	15.9480	15.9712			87.5722	1.1638	18.0726	15.9712
9980483001	A	S		26.5436	1.1545	22.2356	22.3072	22.2608		83.1313	1.1545	26.5436	22.2608
9980484001	A	S		25.0897	1.1723	20.9585	20.1062	20.0687		79.0069	1.1723	25.0897	20.0687
9980484002	A	S		28.6364	1.1539	20.6621	20.6839			71.0634	1.1539	28.6364	20.6839
1017721	A	DUP	2.3	18.0355	1.1741	15.3533	15.3784			84.2415	1.1741	18.0355	15.3784
9980484003	A	S		19.5080	1.1618	16.9551	16.9824			86.2337	1.1618	19.5080	16.9824
9980484004	A	S		36.2270	1.1609	30.7049	30.7304			84.3250	1.1609	36.2270	30.7304
9980484005	A	S		34.7730	1.1664	29.1282	29.2191	29.2018		83.4223	1.1664	34.7730	29.2018
9980496001	A	S		10.7887	1.1738	1.4129	1.4193			2.5533	1.1738	10.7887	1.4193
9980496002	A	S		11.1080	1.1731	1.4228	1.4416			2.7026	1.1731	11.1080	1.4416
9980498001	A	S		17.8626	1.1731	17.4371	17.4590			97.5817	1.1731	17.8626	17.4590
9980525001	A	S		21.5702	1.1749	2.3285	2.3540			5.7812	1.1749	21.5702	2.3540
9980527001	A	S		22.2261	1.1621	6.4879	6.4885			25.2867	1.1621	22.2261	6.4885
9980527002	A	S		21.5648	1.1672	6.2728	6.2790			25.0608	1.1672	21.5648	6.2790
9980527003	A	S		23.8395	1.1817	6.7395	6.7462			24.5589	1.1817	23.8395	6.7462
1017722	A	DUP	1.8	22.5790	1.1575	20.0595	20.0541			88.2132	1.1575	22.5790	20.0541
9980564001	A	S		19.4125	1.1648	17.5207	17.5569			89.8310	1.1648	19.4125	17.5569
9980564002	A	S		23.6761	1.1597	20.5648	20.5931			86.3078	1.1597	23.6761	20.5931
9980564003	A	S		21.6005	1.1605	19.0172	19.0503			87.5235	1.1605	21.6005	19.0503

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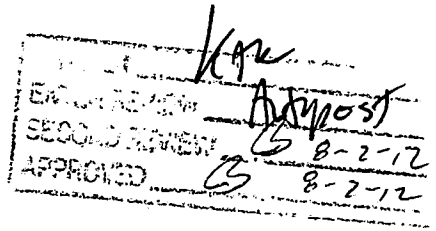
9980564004	A	S		28.9899	1.1603	24.7797	24.8124			84.9890	1.1603	28.9899	24.8124
9980564005	A	S		22.2660	1.1662	19.9191	19.9520			89.0331	1.1662	22.2660	19.9520
9980565001	A	S		40.1939	1.1537	36.8006	36.8263			91.3740	1.1537	40.1939	36.8263
9980565002	A	S		27.5810	1.1631	23.8804	23.9065			86.0909	1.1631	27.5810	23.9065
9980565003	A	S		36.0361	1.1470	30.7800	30.8041			85.0039	1.1470	36.0361	30.8041
9980565004	A	S		28.5674	1.1596	25.4029	25.4331			88.5642	1.1596	28.5674	25.4331
9980565005	A	S		44.2841	1.1582	38.2117	38.2391			85.9829	1.1582	44.2841	38.2391
1017723	A	DUP	0.3	30.0478	1.1587	26.5647	26.5969			88.0547	1.1587	30.0478	26.5969
9980565006	A	S		21.8841	1.1568	19.4387	19.4685			88.3458	1.1568	21.8841	19.4685
9980566001	A	S		25.4679	1.1565	24.3291	24.3121			95.2459	1.1565	25.4679	24.3121
9980566002	A	S		20.4426	1.1628	19.6057	19.5920			95.5881	1.1628	20.4426	19.5920
9980566003	A	S		20.4723	1.1552	19.6672	19.6552			95.7701	1.1552	20.4723	19.6552
9980567001	A	S		23.0881	1.1560	22.4573	22.4461			97.0728	1.1560	23.0881	22.4461
9980567002	A	S		21.5441	1.1504	20.8595	20.8472			96.5828	1.1504	21.5441	20.8472
9980567003	A	S		22.4413	1.1590	21.4643	21.4496			95.3403	1.1590	22.4413	21.4496
9980567004	A	S		23.0130	1.1659	22.1142	22.0977			95.8104	1.1659	23.0130	22.0977
9980568001	A	S		10.7865	1.1687	8.8231	8.8034			79.3809	1.1687	10.7865	8.8034
9980568002	A	S		16.0868	1.1653	14.4632	14.4435			88.9870	1.1653	16.0868	14.4435
1017724	A	DUP	0.1	13.4985	1.1610	12.8486	12.8330			94.6059	1.1610	13.4985	12.8330
9980568003	A	S		17.6691	1.1782	16.7870	16.7697			94.5461	1.1782	17.6691	16.7697
9980568004	A	S		15.7770	1.1565	14.8724	14.8561			93.7013	1.1565	15.7770	14.8561
9980569001	A	S		11.9885	1.1618	11.4015	11.3979			94.5450	1.1618	11.9885	11.3979
1017725	BALCHK			0.1000	0.1000	0.1000	0.1000	0.1001		#DIV/0!	0.1000	0.1000	0.1001

End

ALMDT.NOUSER



Subcontracting Data

ANALYTICAL REPORT

Report Date: August 15, 2012

Vicki Forney
ALS Environmental-Middletown
34 Dogwood Lane
Middletown, PA 17057

Phone: (717) 944-5541 x 3162
Fax: (717) 944-1430
E-mail: vicki.forney@ALSglobal.com

Workorder: 34-1221555
Project ID: ALS Middletown 080212
Purchase Order: NA

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
FTSW-HR-SO-01	1221555001	07/30/12	08/01/12	
FTSW-HR-SO-01 Dup	1221555004	07/30/12	08/01/12	
FTSW-HR-SO-02(01.5)	1221555005	07/30/12	08/01/12	
FTSW-HR-SO-02(01.5)ERB	1221555006	07/30/12	08/01/12	
FTSW-HR-SO-03	1221555007	07/30/12	08/01/12	
FTSW-HR-SO-04 (02)	1221555008	07/30/12	08/01/12	
FTSW-HR-SO-05	1221555009	07/30/12	08/01/12	
FTSW-HR-SO-06	1221555010	07/30/12	08/01/12	
FTSW-HR-SO-07	1221555011	07/30/12	08/01/12	
FTSW-HR-SO-08 (02)	1221555012	07/30/12	08/01/12	
FTSW-HR-SO-09	1221555013	07/30/12	08/01/12	
FTSW-HR-SO-10 (01.5)	1221555014	07/30/12	08/01/12	

Client QC ID *	Lab ID	Collect Date	Receive Date	Sampling Site
FTSW-HR-SO-01 MS	1221555002	07/30/12	08/01/12	
FTSW-HR-SO-01 MSD	1221555003	07/30/12	08/01/12	

*Client QC is reported as part of the Quality Control results report, if requested.

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ANALYTICAL REPORT

Workorder: 34-1221555
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-01 9980395003 | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555001 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/01/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1290 (HBN: 91618)	Initial: 1.01 grams	Batch: ELMS/1291 (HBN: 91624)	Percent Solid: 90.6
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/13/2012 20:27	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.55	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15748 (HBN: 91114)	Initial: 30.01 grams	Batch: ESVO/3809 (HBN: 91368)	Percent Solid: 90.6
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/08/2012 16:58	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.0	7.0	180	1	U
1,4-Dithiane	5.3	5.3	180	1	U

Sample ID: FTSW-HR-SO-01 Dup 9980395004 | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555004 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/01/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1290 (HBN: 91618)	Initial: 1.02 grams	Batch: ELMS/1291 (HBN: 91624)	Percent Solid: 91.7
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/13/2012 22:16	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.53	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15748 (HBN: 91114)	Initial: 30.04 grams	Batch: ESVO/3809 (HBN: 91368)	Percent Solid: 91.7
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/08/2012 18:26	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: FTSW-HR-SO-02(01.5) 9980395005 | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555005 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/01/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1290 (HBN: 91618)	Initial: 1.03 grams	Batch: ELMS/1291 (HBN: 91624)	Percent Solid: 95.8
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/13/2012 22:53	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.026	0.026	0.51	1	U

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ANALYTICAL REPORT

Workorder: 34-1221555
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-02(01.5) Sampling Site: NA Collected: 07/30/2012
Lab ID: 1221555005 Media: 8 oz Glass Jar Wide Mouth Received: 08/01/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15748 (HBN: 91114)	Initial: 30 grams	Batch: ESVO/3809 (HBN: 91368)	Percent Solid: 95.6
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/08/2012 18:55	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.6	6.6	170	1	U
1,4-Dithiane	5.0	5.0	170	1	U

Sample ID: FTSW-HR-SO-02(01.5)ERB 9980395 006 Sampling Site: NA Collected: 07/30/2012
Lab ID: 1221555006 Media: 1000 mL Amber Glass Received: 08/01/2012
Matrix: Water Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Not Applicable		Analysis: Chemical Agent Breakdown, Water	Instrument ID: LCMS03
		Batch: ELMS/1288 (HBN: 91545)	Percent Solid: NA
		Analyzed: 08/13/2012 14:07	Report Basis: Wet

Analyte	ug/L	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual.
Thiodiglycol	2.6	2.6	50	1	U

Analysis Method - SW 8270

Preparation: EPA 3510, Sep Funnel SVOA	Weight/Volume	Analysis: SW 8270D, Water	Instrument ID: 5975-H
Batch: ENVX/15783 (HBN: 91345)	Initial: 1000 mL	Batch: ESVO/3811 (HBN: 91473)	Percent Solid: NA
Prepared: 08/08/2012	Final: 1 mL	Analyzed: 08/09/2012 12:03	Report Basis: Wet

Analyte	ug/L	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual.
1,4-Oxathiane	1.5	1.5	5.0	1	U
1,4-Dithiane	1.5	1.5	5.0	1	U

Sample ID: FTSW-HR-SO-03 9980395 007 Sampling Site: NA Collected: 07/30/2012
Lab ID: 1221555007 Media: 8 oz Glass Jar Wide Mouth Received: 08/01/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1290 (HBN: 91618)	Initial: 1 grams	Batch: ELMS/1291 (HBN: 91624)	Percent Solid: 89.1
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/13/2012 23:29	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.029	0.029	0.56	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15748 (HBN: 91114)	Initial: 30.17 grams	Batch: ESVO/3809 (HBN: 91368)	Percent Solid: 89.1
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/08/2012 19:24	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.0	7.0	190	1	U

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ANALYTICAL REPORT

Workorder: 34-1221555
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-03 | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555007 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/01/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15748 (HBN: 91114)	Initial: 30.17 grams	Batch: ESVO/3809 (HBN: 91368)	Percent Solid: 89.1
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/08/2012 19:24	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Dithiane	5.3	5.3	190	1	U

Sample ID: FTSW-HR-SO-04 (02) 9980395-008 | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555008 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/01/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1290 (HBN: 91618)	Initial: 1 grams	Batch: ELMS/1291 (HBN: 91624)	Percent Solid: 93.6
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/14/2012 00:06	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.53	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15748 (HBN: 91114)	Initial: 30.08 grams	Batch: ESVO/3809 (HBN: 91368)	Percent Solid: 93.6
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/08/2012 19:54	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.7	6.7	180	1	U
1,4-Dithiane	5.1	5.1	180	1	U

Sample ID: FTSW-HR-SO-05 9980395-009 | Sampling Site: NA | Collected: 07/30/2012
Lab ID: 1221555009 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/01/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1290 (HBN: 91618)	Initial: 1.03 grams	Batch: ELMS/1291 (HBN: 91624)	Percent Solid: 91.4
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/14/2012 01:18	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.53	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15748 (HBN: 91114)	Initial: 30.03 grams	Batch: ESVO/3809 (HBN: 91368)	Percent Solid: 91.4
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/08/2012 20:24	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

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ANALYTICAL REPORT

Workorder: 34-1221555
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-06 9980395010 Sampling Site: NA Collected: 07/30/2012
Lab ID: 1221555010 Media: 8 oz Glass Jar Wide Mouth Received: 08/01/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1290 (HBN: 91618)	Initial: 1.04 grams	Batch: ELMS/1291 (HBN: 91624)	Percent Solid: 98.4
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/14/2012 01:55	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.026	0.026	0.50	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15748 (HBN: 91114)	Initial: 30.11 grams	Batch: ESVO/3809 (HBN: 91368)	Percent Solid: 96.4
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/08/2012 20:53	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.5	6.5	170	1	U
1,4-Dithiane	4.9	4.9	170	1	U

Sample ID: FTSW-HR-SO-07 9980395011 Sampling Site: NA Collected: 07/30/2012
Lab ID: 1221555011 Media: 8 oz Glass Jar Wide Mouth Received: 08/01/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1290 (HBN: 91618)	Initial: 1 grams	Batch: ELMS/1291 (HBN: 91624)	Percent Solid: 80.5
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/14/2012 02:31	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.032	0.032	0.62	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15748 (HBN: 91114)	Initial: 30.05 grams	Batch: ESVO/3809 (HBN: 91368)	Percent Solid: 80.5
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/08/2012 21:23	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.8	7.8	210	1	U
1,4-Dithiane	5.9	5.9	210	1	U

Sample ID: FTSW-HR-SO-08 (02) 9980395012 Sampling Site: NA Collected: 07/30/2012
Lab ID: 1221555012 Media: 8 oz Glass Jar Wide Mouth Received: 08/01/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1290 (HBN: 91618)	Initial: 1.02 grams	Batch: ELMS/1291 (HBN: 91624)	Percent Solid: 89
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/14/2012 03:07	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.029	0.029	0.55	1	U

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ANALYTICAL REPORT

Workorder: 34-1221555
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-08 (02) Sampling Site: NA Collected: 07/30/2012
Lab ID: 1221555012 Media: 8 oz Glass Jar Wide Mouth Received: 08/01/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis|Method: SW8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15748 (HBN: 91114)	Initial: 30.07 grams	Batch: ESVO/3809 (HBN: 91368)	Percent Solid: 89
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/08/2012 21:52	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.1	7.1	190	1	U
1,4-Dithiane	5.3	5.3	190	1	U

Sample ID: FTSW-HR-SO-09 9980395 013 Sampling Site: NA Collected: 07/30/2012
Lab ID: 1221555013 Media: 8 oz Glass Jar Wide Mouth Received: 08/01/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis|Method: Chemical/Agent|Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1290 (HBN: 91618)	Initial: 1.01 grams	Batch: ELMS/1291 (HBN: 91624)	Percent Solid: 88
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/14/2012 08:22	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.029	0.029	0.56	1	U

Analysis|Method: SW8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15748 (HBN: 91114)	Initial: 30 grams	Batch: ESVO/3809 (HBN: 91368)	Percent Solid: 88
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/08/2012 22:22	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.2	7.2	190	1	U
1,4-Dithiane	5.4	5.4	190	1	U

Sample ID: FTSW-HR-SO-10 (01.5) 9980395014 Sampling Site: NA Collected: 07/30/2012
Lab ID: 1221555014 Media: 8 oz Glass Jar Wide Mouth Received: 08/01/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis|Method: Chemical/Agent|Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1290 (HBN: 91618)	Initial: 1 grams	Batch: ELMS/1291 (HBN: 91624)	Percent Solid: 93.9
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/14/2012 08:58	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.53	1	U

Analysis|Method: SW8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15748 (HBN: 91114)	Initial: 30.1 grams	Batch: ESVO/3809 (HBN: 91368)	Percent Solid: 93.9
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/08/2012 22:51	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.7	6.7	180	1	U

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ANALYTICAL REPORT

Workorder: 34-1221555
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-10 (01.5)	Sampling Site: NA	Collected: 07/30/2012
Lab ID: 1221555014	Media: 8 oz Glass Jar Wide Mouth	Received: 08/01/2012
Matrix: Soil/Solid/Sediment	Sampling Parameter: NA	

Analysis Method: SW8270

Preparation: EPA 3550, Sonic Ext. SVOA Soil	Weight/Volume:	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15748 (HBN: 91114)	Initial: 30.1 grams	Batch: ESVO/3809 (HBN: 91368)	Percent Solid: 93.9
Prepared: 08/06/2012	Final: 1 mL	Analyzed: 08/08/2012 22:51	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Dithiane	5.1	5.1	180	1	U

Comments

Quality Control: SW 8270 - (HBN: 91368)

Surrogate terphenyl-d14 was above the QC limits and 2,4,6-tribromophenol below the limit in Sample 1221555010. With the large number of analytes reported by Method 8270, it is to be expected that occasional outliers will occur. Based on the rule of marginal exceedences, the ALS SOP makes allowances for the data to be considered acceptable with one base/neutral surrogate and one acid surrogate outside control limits.

Quality Control: SW 8270 - (HBN: 91473)

Surrogate terphenyl-d14 was above the QC limits in some samples. With the large number of analytes reported by Method 8270, it is to be expected that occasional outliers will occur. Based on the rule of marginal exceedences, the ALS SOP makes allowances for the data to be considered acceptable with one base/neutral surrogate and one acid surrogate outside control limits.

Report Authorization

Method	Analyst	Peer Review
Chemical Agent Breakdown	Thomas T. McKay	Thomas J. Masoian
SW 8270	Reed A. Hendricks	Guy Barker
SW 8270	Reed A. Hendricks	Matt Garvin
Solids/Moisture Determination	Ilse J. Ovalle	Ashley Waganheim

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ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL REPORT

Workorder: 34-1221555
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com/
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint, Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.
RL = Reporting Limit, a verified value of method/media/instrument sensitivity.
CRDL = Contract Required Detection Limit
Reg. Limit = Regulatory Limit.
ND = Not Detected, testing result not detected above the MDL or RL.
< This testing result is less than the numerical value.
** No result could be reported, see sample comments for details.

Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.
J = Qualifier indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds calibration range.
P = Qualifier indicates that the RPD between the two columns is greater than 40%.

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PROJECT TITLE:
Fort Stewart

Earth Resources Technology, Inc.
6100 Frost Place
Laurel, MD 20707

Data Deliverable Group ERT-002
ALS#9980394

DoD QSM V.4.2
DATA PACKAGE

SAMPLES COLLECTED
July 27, 2012

Total Number of Pages 635

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    Analytical Logbook..... 613
Total Solids Summary Forms..... 628
Total Solids Raw Data..... 630

Case Narrative

Earth Resources Technology, Inc.
Fort Stewart

ALS-Middletown
Case Narrative
ERT-002

Sample Management

This report contains the results of the analysis of two (2) water samples and twelve (12) solid samples collected on July 27, 2012. Analytical results and quality control information are summarized in this data package.

Qualifier Symbol Definitions:

U = Qualifier indicates that the analyte was not detected above the LOD.
J = Qualifier indicates that the analyte value is between the DL and the LOQ.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds the calibration range.
P = Qualifier indicates that the RPD between the two analytical columns is greater than 40%.
NSC = Qualifier indicates that spike recoveries were not calculated based on the spiking concentration.

Result Symbol Definitions:

DL = The smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence.
LOD = The smallest analyte concentration that must be present in a sample in order to be detected at a high level of confidence.
LOQ = The lowest concentration that produces a quantitative result within specified limits of precision or bias.

Sample Receipt

Samples arrived at ALS via courier on July 31, 2012. Upon receipt, the samples were inspected and compared to the Chain of Custody. Sample temperature was documented on the enclosed Chain of Custody. Samples were received intact and properly preserved, unless noted on the enclosed Certificate of Analysis and/or Chain of Custody.

Explosives in Water by Method 8330B

Sample Handling. Two (2) water samples were extracted and analyzed by SW-846 Method 8330B for explosives. All sample extractions and analyses were performed within the holding times associated with the method.

Reporting. In Method 8330B, each sample extract may be analyzed on two dissimilar columns, an "Acclaim Explosives E1" column and an "Acclaim Explosives E2-Proprietary" column. In general, the final result reported on the Certificate of Analysis is the result from the primary column (E1), provided the target analyte is detected on both columns. For the samples in this deliverable group, no target analytes detected on Column E1. were confirmed by analysis on Column E2.

Initial Calibrations. The initial calibrations for all target analytes were in control.

Calibration Verification. Results for the second source and calibration verification standards were within control limits.

Surrogates. All surrogate recoveries were in within control limits, except as follows:

- In sample FTSW-AA-SW-21 (9980394006), surrogate recoveries were below control limits. The sample was beyond the holding time for re-extraction. Client was notified via email and instructed the laboratory to report the results for this sample with qualification.

Blanks. Target analytes were not detected in the method blank.

Laboratory Control Sample. Spike recoveries for all target analytes were within control limits.

Explosives in Soil by Method 8330B

Sample Handling. Six (6) solid samples were air dried upon receipt. Once received, each sample was completely emptied and broken up onto a large tray lined with aluminum foil. The trays were then placed in a controlled environment to eliminate outside contamination. Samples were allowed to air dry to a constant weight at constant room temperature unexposed to light until all moisture was removed. Once dry, each sample was passed through a clean, dry 10-mesh (2 mm) sieve to remove any oversized fractions or debris.

Once the samples were dried, an aliquot for extraction was removed. The aliquot was laid out on the original tray it was dried on so that it was 1-2 cm thick. 10 grams of each sample, using 30 different increments (portions ~0.3grams) from randomly chosen locations were collected.

The dried samples were then extracted and analyzed by SW-846 Method 8330B for explosives. All sample extractions and analyses were performed within the holding times associated with the method.

Reporting. In Method 8330B, each sample extract may be analyzed on two dissimilar columns, an "Acclaim Explosives E1" column and an "Acclaim Explosives E2-Proprietary" column. In general, the final result reported on the Certificate of Analysis is the result from the primary column (E1), provided the target analyte is detected on both columns. For the samples in this deliverable group, there were no target analytes detected so confirmation on E2 was not warranted.

Initial Calibrations. The initial calibrations for all target analytes were in control.

Calibration Verification. Results for the second source and calibration verification standards were within control limits.

Surrogates. Surrogate recoveries were in within control limits, except as follows:

- Surrogate recoveries were below QC limits in sample FTSW-AA-SW-21 (9980394006). This sample was not re-extracted since the sample was past the holding time once review of the data was completed. The client was contacted and the data qualified.

Blanks. Target analytes were not detected in the method blank.

Laboratory Control Sample. Spike recoveries for all target analytes were within control limits.

Totals Metals by SW-846 Method 6020A

Sample handling. Two (2) water samples were analyzed for total metals on the Agilent 7700x using SW-846 Method 6020A. The samples were analyzed within the six-month holding time established for this method.

Calibration. All criteria associated with the calibration were within method control limits with the exception of the mid-level CCV analyzed at 14:21 on 8/7/12 for copper which was recovered above the method control limits. The associated LLCCV was within method control limits of 90-110%, and the sample did not contain copper. Data were reported.

Blanks. Metals were not detected in the reagent blanks. In the method blank, identified as 1017577, zinc was detected at 0.00222J mg/L.

Laboratory Control Samples. The LCS's, identified as 1017578, spike recoveries were within method control limits.

Matrix Spike/Matrix Spike Duplicate. A matrix spike and matrix spike were performed on a sample not in this data deliverable. The MS and MSD recoveries and their RPDs were within method control limits.

Totals Metals by SW-846 Method 6020A

Sample handling. Twelve (12) solid samples were digested and analyzed for total metals on the Agilent 7700x using SW-846 Method 6020A. The samples were analyzed within the six-month holding time established for this method.

Calibration. All criteria associated with the calibration were within method control limits.

Blanks. Metals were not detected in the reagent blanks or the method blank, identified as 1020183.

Laboratory Control Samples. Recoveries were within method control limits.

Matrix Spike/Matrix Spike Duplicate. A matrix spike and matrix spike duplicate were performed on a non-project sample. The MS and MSD recoveries and their RPDs were within method control limits for the target analytes, with the exception of aluminum and lead which were recovered above method control limits. A post-digestion spike was performed for lead. Recovery was within control limits.

Total Solids by SM 2540G

Sample handling. Thirteen (13) solid samples were analyzed for total solids by Standard Method 2540G for dry weight reporting purposes. The samples were analyzed within the 14-day method recommended hold time for dry weight reporting.

Duplicate. A duplicate analysis, identified as 1017716, was performed on sample 9980394011 (FTSW-AA-SO-25 DUP). The relative percent difference between the results was within the QC limit of 5%.

Chain of Custody

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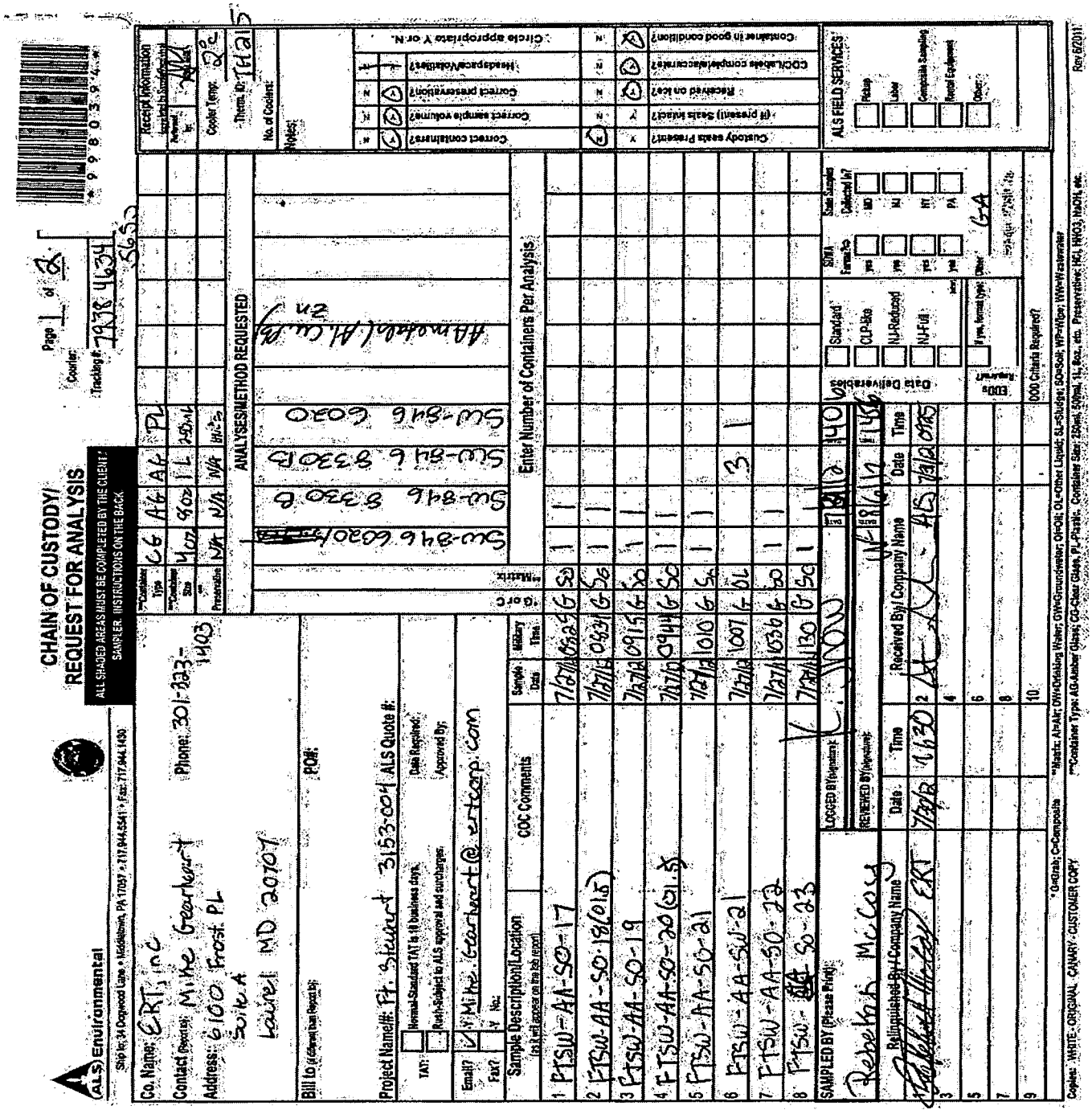
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



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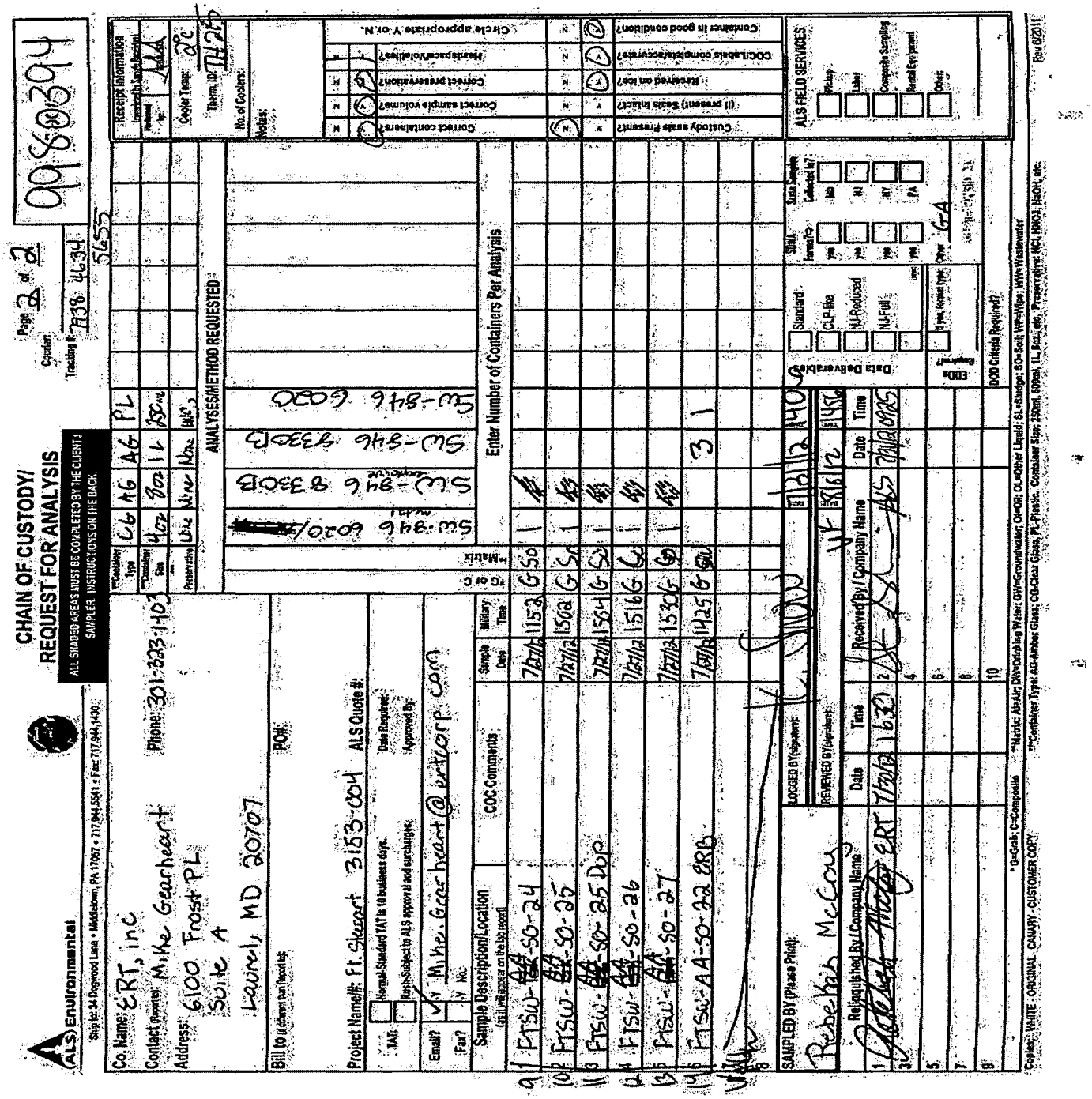

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ALSI Corrective Action Report (CAR)

To be Completed by Laboratory and Submitted to Customer Service:

Date: 7/31/12 CAR Submitted By: SHSS
Dept: SR Supervisor:

Chain of Custody No.(s): 9980394014-A

Problem/Reason for Corrective Action:

- ___ Login Error (2nd reviewed by: _____)
- X Incorrect Preservative
- ___ Missed Holding Time
- ___ Calibration failure
- ___ QC failure due to sample matrix
- ___ QC failure NOT due to sample matrix
- ___ Sample Lost in process
- ___ Reporting Error
- ___ Other _____

Method:

Explanation of Problem: Sample was unpreserved when it should have been preserved w/ nitric acid

Signature(s) where Applicable:
Analyst: Ann Salisbury
1st Review: _____
2nd Review: _____
Result Entered By: _____
Result Approved By: _____
Supervisor: _____

Immediate Corrective Action Taken: By SHSS Date: 7/31/12
Added 2 ml of nitric acid

138606

Are there policies/procedures in place to prevent this from occurring? Yes ___ No ___ Not Applicable ✓
If Yes, What is the procedure, and why didn't it work?

If No, What procedure is needed to prevent this from occurring?
Target Date for Implementation: _____ Person Responsible for Implementation: _____

Customer Service Rep. Notified: _____ Date: _____

To be Completed by Customer Service and submitted to QA:

Date: _____ Customer Service Rep.: _____ Client Contacted? Yes ___ No ___
Project(s) / Client(s) involved: Date: _____ Person: _____

Action Taken (if no action taken, explain why):

Laboratory Notified of Client Response? Yes ___ No ___ Not Applicable ___

To be Completed by QA and filed:

Was action taken appropriate? Yes ___ No ___ Date: _____
Is further action necessary? Yes ___ No ___ QA Initials: _____
If Yes, What action is needed?

Modification of SOP needed? Yes ___ No ___
If Yes, What is the procedure? Has it been instituted? Yes ___ No ___

Rev. 3/00

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Internal Chain of Custody
Work Order: 9980394

9980394001-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394001-A1	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 08:37	GCMS_LAB	8330S	Selgrath, Ms. Samantha A.
08-07-12 11:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980394001-A11	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:00	GC/MS-LAB	ANALYSIS	Lopez, Mr. Alan J
08-08-12 08:39	GCMS_LAB	8330S	Selgrath, Ms. Samantha A.

9980394001-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:57	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394001-A3	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:19	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394001-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394001-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394002-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394002-A1	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 08:37	GCMS_LAB	8330S	Selgrath, Ms. Samantha A.
08-07-12 11:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.

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Internal Chain of Custody
Work Order: 9980394

9980394002-A1 (cont)	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980394002-A11	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:00	GC/MS-LAB	ANALYSIS	Lopez, Mr. Alan J
08-08-12 08:39	GCMS_LAB	8330S	Selgrath, Ms. Samantha A.

9980394002-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:57	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394002-A3	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:19	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394002-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394002-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394003-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394003-A1	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 08:37	GCMS_LAB	8330S	Selgrath, Ms. Samantha A.
08-06-12 14:00	WETC-LAB	sample storage	Selgrath, Ms. Samantha A.
08-06-12 06:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980394003-A11	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:00	GC/MS-LAB	ANALYSIS	Lopez, Mr. Alan J
08-08-12 08:39	GCMS_LAB	8330S	Selgrath, Ms. Samantha A.

9980394003-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**

Internal Chain of Custody

Work Order: 9980394

9980394003-A2 (cont)	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:57	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394003-A3	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:19	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394003-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394003-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394004-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394004-A1	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 08:37	GCMS_LAB	8330S	Selgrath, Ms. Samantha A.
08-07-12 11:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980394004-A11	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:00	GC/MS-LAB	ANALYSIS	Lopez, Mr. Alan J
08-08-12 08:39	GCMS_LAB	8330S	Selgrath, Ms. Samantha A.

9980394004-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:57	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394004-A3	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:19	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394004-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.

Internal Chain of Custody
Work Order: 9980394

9980394004-B (cont)	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 09:25	*Sample Received At Lab*		

9980394004-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394005-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394005-A1	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 08:37	GCMS_LAB	8330S	Selgrath, Ms. Samantha A.
08-07-12 11:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980394005-A11	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:00	GC/MS-LAB	ANALYSIS	Lopez, Mr. Alan J
08-08-12 08:39	GCMS_LAB	8330S	Selgrath, Ms. Samantha A.

9980394005-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:57	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394005-A3	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:19	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394005-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394005-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394006-A	P - PLASTIC		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:07	META-LAB	STORAGE	Snow, Ms. Kelli A.

Internal Chain of Custody
Work Order: 9980394

9980394006-A (cont)	P - PLASTIC		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394006-A1	P - PLASTIC		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:56	META-LAB		Miller, Lisa

9980394006-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 12:40	META-LAB	6020/3015 ANALYSIS	Olley, Mr. Matthew W.
08-01-12 06:03	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394006-B	A - AMBER GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 18:22	DEPLETED	DEPLETED	Kellner, Mr. Joseph E.
08-02-12 11:28	INORPREP-LAB	8330 Extraction (Explosives)	Kellner, Mr. Joseph E.
07-31-12 15:07	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394006-B1	OPOP - Output Container -		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 18:24	SVGC_LAB	8330 Analysis, Explosives	Kellner, Mr. Joseph E.
08-02-12 18:21	DEPLETED	DEPLETED	Kellner, Mr. Joseph E.
08-02-12 16:00	GC/MS-LAB	8330 ANALYSIS	Lopez, Mr. Alan J
08-02-12 11:30	INORPREP-LAB	8330 Extraction (Explosives)	Kellner, Mr. Joseph E.
08-02-12 11:27	INORPREP-LAB		Kellner, Mr. Joseph E.

9980394006-C	A - AMBER GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:07	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394006-D	A - AMBER GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:07	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394006-E	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394007-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**

Internal Chain of Custody
Work Order: 9980394

9980394007-A (cont)	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394007-A1	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 08:37	GCMS_LAB	8330S	Selgrath, Ms. Samantha A.
08-07-12 11:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980394007-A11	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:00	GC/MS-LAB	ANALYSIS	Lopez, Mr. Alan J
08-08-12 08:39	GCMS_LAB	8330S	Selgrath, Ms. Samantha A.

9980394007-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:57	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394007-A3	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:19	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394007-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394007-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394008-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394008-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:57	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394008-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**

Internal Chain of Custody

Work Order: 9980394

9980394008-A2 (cont)	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:19	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394008-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394009-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394009-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:57	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394009-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:19	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394009-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394010-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394010-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:57	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394010-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:19	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394010-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394011-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.

Internal Chain of Custody

Work Order: 9980394

9980394011-A (cont)	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394011-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:57	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394011-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:19	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394011-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394012-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394012-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:57	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394012-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:19	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394012-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394013-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394013-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:57	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394013-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:19	INORPREP-LAB		Kauffman, Mr. Kevin M

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Internal Chain of Custody
Work Order: 9980394

9980394013-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394014-A	P - PLASTIC		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:07	META-LAB	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394014-A1	P - PLASTIC		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:56	META-LAB		Miller, Lisa

9980394014-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 12:40	META-LAB	6020/3015 ANALYSIS	Olley, Mr. Matthew W.
08-01-12 06:03	INORPREP-LAB		Kauffman, Mr. Kevin M

9980394014-B	A - AMBER GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:07	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394014-C	A - AMBER GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 18:22	DEPLETED	DEPLETED	Kellner, Mr. Joseph E.
08-02-12 11:28	INORPREP-LAB	8330 Extraction (Explosives)	Kellner, Mr. Joseph E.
07-31-12 15:07	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

9980394014-C1	OPOP - Output Container -		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 18:24	SVGC_LAB	8330 Analysis, Explosives	Kellner, Mr. Joseph E.
08-02-12 18:21	DEPLETED	DEPLETED	Kellner, Mr. Joseph E.
08-02-12 16:00	GC/MS-LAB	8330 ANALYSIS	Lopez, Mr. Alan J
08-02-12 11:30	INORPREP-LAB	8330 Extraction (Explosives)	Kellner, Mr. Joseph E.
08-02-12 11:27	INORPREP-LAB		Kellner, Mr. Joseph E.

9980394014-D	A - AMBER GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 15:07	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

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Internal Chain of Custody

Work Order: 9980394

9980394014-E	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:06	RECEIVING	LOGIN	Snow, Ms. Kelli A.
07-31-12 09:25	*Sample Received At Lab*		

Certificate of Analysis

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

August 16, 2012

Mr. Mike Gearhart
Earth Resources Technology, Inc.
6100 Frost Place
Suite A
Laurel, MD 20707

Certificate of Analysis

Project Name:	**Ft. Stewart GA project**	Workorder:	**9980394**
Purchase Order:		Workorder ID:	**ERT002|Ft. Stewart 3153-004**

Dear Mr. Gearhart,

Enclosed are the analytical results for samples received by the laboratory on Tuesday, July 31, 2012.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Vicki Forney (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

ALS Environmental

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SAMPLE SUMMARY

Workorder: 9980394 ERT002|Ft. Stewart 3153-004 Discard Date: 08/30/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9980394001	FTSW-AA-SO-17	Solid	7/27/12 08:25	7/31/12 09:25	Customer
9980394002	FTSW-AA-SO-18 (01.5)	Solid	7/27/12 08:34	7/31/12 09:25	Customer
9980394003	FTSW-AA-SO-19	Solid	7/27/12 09:15	7/31/12 09:25	Customer
9980394004	FTSW-AA-SO-20 (01.5)	Solid	7/27/12 09:44	7/31/12 09:25	Customer
9980394005	FTSW-AA-SO-21	Solid	7/27/12 10:10	7/31/12 09:25	Customer
9980394006	FTSW-AA-SW-21	Water	7/27/12 10:07	7/31/12 09:25	Customer
9980394007	FTSW-AA-SO-22	Solid	7/27/12 10:36	7/31/12 09:25	Customer
9980394008	FTSW-AA-SO-23	Solid	7/27/12 11:30	7/31/12 09:25	Customer
9980394009	FTSW-AA-SO-24	Solid	7/27/12 11:52	7/31/12 09:25	Customer
9980394010	FTSW-AA-SO-25	Solid	7/27/12 15:02	7/31/12 09:25	Customer
9980394011	FTSW-AA-SO-25 DUP	Solid	7/27/12 15:04	7/31/12 09:25	Customer
9980394012	FTSW-AA-SO-26	Solid	7/27/12 15:16	7/31/12 09:25	Customer
9980394013	FTSW-AA-SO-27	Solid	7/27/12 15:30	7/31/12 09:25	Customer
9980394014	FTSW-AA-SO-22 ERB	Water	7/27/12 14:25	7/31/12 09:25	Customer

Workorder Comments:

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SAMPLE SUMMARY

Workorder: 9980394 ERT002|Ft. Stewart 3153-004 Discard Date: 08/30/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

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ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID: **9980394001** Date Collected: 7/27/2012 08:25 Matrix: Solid

Sample ID: **FTSW-AA-SO-17** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.097U	mg/kg		0.19	0.097	0.051	SW846 8330B	8/8/12	8/9/12 17:23	AJL	A11
4-Amino-2,6-dinitrotoluene	0.097U	mg/kg		0.19	0.097	0.052	SW846 8330B	8/8/12	8/9/12 17:23	AJL	A11
3,5-Dinitroaniline	0.097U	mg/kg		0.19	0.097	0.051	SW846 8330B	8/8/12	8/9/12 17:23	AJL	A11
1,3-Dinitrobenzene	0.097U	mg/kg		0.19	0.097	0.029	SW846 8330B	8/8/12	8/9/12 17:23	AJL	A11
2,4-Dinitrotoluene	0.097U	mg/kg		0.19	0.097	0.056	SW846 8330B	8/8/12	8/9/12 17:23	AJL	A11
2,6-Dinitrotoluene	0.097U	mg/kg		0.19	0.097	0.060	SW846 8330B	8/8/12	8/9/12 17:23	AJL	A11
HMX	0.097U	mg/kg		0.19	0.097	0.081	SW846 8330B	8/8/12	8/9/12 17:23	AJL	A11
Nitrobenzene	0.097U	mg/kg		0.19	0.097	0.076	SW846 8330B	8/8/12	8/9/12 17:23	AJL	A11
Nitroglycerin	0.97U	mg/kg		1.2	0.97	0.34	SW846 8330B	8/8/12	8/9/12 17:23	AJL	A11
4-Nitrotoluene	0.097U	mg/kg		0.19	0.097	0.063	SW846 8330B	8/8/12	8/9/12 17:23	AJL	A11
2-Nitrotoluene	0.097U	mg/kg		0.19	0.097	0.055	SW846 8330B	8/8/12	8/9/12 17:23	AJL	A11
3-Nitrotoluene	0.097U	mg/kg		0.19	0.097	0.059	SW846 8330B	8/8/12	8/9/12 17:23	AJL	A11
PETN	0.97U	mg/kg		1.2	0.97	0.50	SW846 8330B	8/8/12	8/9/12 17:23	AJL	A11
RDX	0.097U	mg/kg		0.19	0.097	0.024	SW846 8330B	8/8/12	8/9/12 17:23	AJL	A11
Tetryl	0.097U	mg/kg		0.19	0.097	0.073	SW846 8330B	8/8/12	8/9/12 17:23	AJL	A11
1,3,5-Trinitrobenzene	0.097U	mg/kg		0.19	0.097	0.068	SW846 8330B	8/8/12	8/9/12 17:23	AJL	A11
2,4,6-Trinitrotoluene	0.097U	mg/kg		0.19	0.097	0.034	SW846 8330B	8/8/12	8/9/12 17:23	AJL	A11
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	99.5	%		50-150			SW846 8330B	8/8/12	8/9/12 17:23	AJL	A11
1,4-Dinitrobenzene (S)	105	%		50-150			SW846 8330B	8/8/12	8/9/12 17:23	AJL	A11
WET CHEMISTRY											
Moisture	25.1	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	74.9	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Aluminum, Total	4420	mg/kg		52.3	34.7	17.0	SW846 6020A	8/8/12	8/13/12 15:03	LAM	A3
Copper, Total	3.1J	mg/kg		3.3	2.2	1.0	SW846 6020A	8/8/12	8/13/12 15:03	LAM	A3
Lead, Total	4.2	mg/kg		1.3	0.85	0.43	SW846 6020A	8/8/12	8/13/12 15:03	LAM	A3
Zinc, Total	11.1	mg/kg		3.3	2.2	1.0	SW846 6020A	8/8/12	8/13/12 15:03	LAM	A3

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID:	**9980394001**	Date Collected:	7/27/2012 08:25	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-17**	Date Received:	7/31/2012 09:25		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

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ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID: **9980394002** Date Collected: 7/27/2012 08:34 Matrix: Solid

Sample ID: **FTSW-AA-SO-18 (01.5)** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.093U	mg/kg		0.19	0.093	0.050	SW846 8330B	8/8/12	8/9/12 18:08	AJL	A11
4-Amino-2,6-dinitrotoluene	0.093U	mg/kg		0.19	0.093	0.050	SW846 8330B	8/8/12	8/9/12 18:08	AJL	A11
3,5-Dinitroaniline	0.093U	mg/kg		0.19	0.093	0.050	SW846 8330B	8/8/12	8/9/12 18:08	AJL	A11
1,3-Dinitrobenzene	0.093U	mg/kg		0.19	0.093	0.028	SW846 8330B	8/8/12	8/9/12 18:08	AJL	A11
2,4-Dinitrotoluene	0.093U	mg/kg		0.19	0.093	0.054	SW846 8330B	8/8/12	8/9/12 18:08	AJL	A11
2,6-Dinitrotoluene	0.093U	mg/kg		0.19	0.093	0.058	SW846 8330B	8/8/12	8/9/12 18:08	AJL	A11
HMX	0.093U	mg/kg		0.19	0.093	0.078	SW846 8330B	8/8/12	8/9/12 18:08	AJL	A11
Nitrobenzene	0.093U	mg/kg		0.19	0.093	0.073	SW846 8330B	8/8/12	8/9/12 18:08	AJL	A11
Nitroglycerin	0.93U	mg/kg		1.1	0.93	0.33	SW846 8330B	8/8/12	8/9/12 18:08	AJL	A11
4-Nitrotoluene	0.093U	mg/kg		0.19	0.093	0.061	SW846 8330B	8/8/12	8/9/12 18:08	AJL	A11
2-Nitrotoluene	0.093U	mg/kg		0.19	0.093	0.053	SW846 8330B	8/8/12	8/9/12 18:08	AJL	A11
3-Nitrotoluene	0.093U	mg/kg		0.19	0.093	0.057	SW846 8330B	8/8/12	8/9/12 18:08	AJL	A11
PETN	0.93U	mg/kg		1.1	0.93	0.49	SW846 8330B	8/8/12	8/9/12 18:08	AJL	A11
RDX	0.093U	mg/kg		0.19	0.093	0.023	SW846 8330B	8/8/12	8/9/12 18:08	AJL	A11
Tetryl	0.093U	mg/kg		0.19	0.093	0.070	SW846 8330B	8/8/12	8/9/12 18:08	AJL	A11
1,3,5-Trinitrobenzene	0.093U	mg/kg		0.19	0.093	0.065	SW846 8330B	8/8/12	8/9/12 18:08	AJL	A11
2,4,6-Trinitrotoluene	0.093U	mg/kg		0.19	0.093	0.033	SW846 8330B	8/8/12	8/9/12 18:08	AJL	A11
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	93.9	%		50-150			SW846 8330B	8/8/12	8/9/12 18:08	AJL	A11
1,4-Dinitrobenzene (S)	102	%		50-150			SW846 8330B	8/8/12	8/9/12 18:08	AJL	A11
WET CHEMISTRY											
Moisture	23.4	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	76.6	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Aluminum, Total	5370	mg/kg		48.3	32.0	15.7	SW846 6020A	8/8/12	8/13/12 15:06	LAM	A3
Copper, Total	2.0U	mg/kg		3.0	2.0	0.97	SW846 6020A	8/8/12	8/13/12 15:06	LAM	A3
Lead, Total	3.3	mg/kg		1.2	0.79	0.40	SW846 6020A	8/8/12	8/13/12 15:06	LAM	A3
Zinc, Total	2.4J	mg/kg		3.0	2.0	0.97	SW846 6020A	8/8/12	8/13/12 15:06	LAM	A3

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID:	**9980394002**	Date Collected:	7/27/2012 08:34	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-18 (01.5)**	Date Received:	7/31/2012 09:25		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

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ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID: **9980394003** Date Collected: 7/27/2012 09:15 Matrix: Solid

Sample ID: **FTSW-AA-SO-19** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.097U	mg/kg		0.19	0.097	0.052	SW846 8330B	8/8/12	8/9/12 18:52	AJL	A11
4-Amino-2,6-dinitrotoluene	0.097U	mg/kg		0.19	0.097	0.053	SW846 8330B	8/8/12	8/9/12 18:52	AJL	A11
3,5-Dinitroaniline	0.097U	mg/kg		0.19	0.097	0.052	SW846 8330B	8/8/12	8/9/12 18:52	AJL	A11
1,3-Dinitrobenzene	0.097U	mg/kg		0.19	0.097	0.029	SW846 8330B	8/8/12	8/9/12 18:52	AJL	A11
2,4-Dinitrotoluene	0.097U	mg/kg		0.19	0.097	0.057	SW846 8330B	8/8/12	8/9/12 18:52	AJL	A11
2,6-Dinitrotoluene	0.097U	mg/kg		0.19	0.097	0.060	SW846 8330B	8/8/12	8/9/12 18:52	AJL	A11
HMX	0.097U	mg/kg		0.19	0.097	0.081	SW846 8330B	8/8/12	8/9/12 18:52	AJL	A11
Nitrobenzene	0.097U	mg/kg		0.19	0.097	0.076	SW846 8330B	8/8/12	8/9/12 18:52	AJL	A11
Nitroglycerin	0.97U	mg/kg		1.2	0.97	0.34	SW846 8330B	8/8/12	8/9/12 18:52	AJL	A11
4-Nitrotoluene	0.097U	mg/kg		0.19	0.097	0.063	SW846 8330B	8/8/12	8/9/12 18:52	AJL	A11
2-Nitrotoluene	0.097U	mg/kg		0.19	0.097	0.056	SW846 8330B	8/8/12	8/9/12 18:52	AJL	A11
3-Nitrotoluene	0.097U	mg/kg		0.19	0.097	0.059	SW846 8330B	8/8/12	8/9/12 18:52	AJL	A11
PETN	0.97U	mg/kg		1.2	0.97	0.51	SW846 8330B	8/8/12	8/9/12 18:52	AJL	A11
RDX	0.097U	mg/kg		0.19	0.097	0.024	SW846 8330B	8/8/12	8/9/12 18:52	AJL	A11
Tetryl	0.097U	mg/kg		0.19	0.097	0.073	SW846 8330B	8/8/12	8/9/12 18:52	AJL	A11
1,3,5-Trinitrobenzene	0.097U	mg/kg		0.19	0.097	0.068	SW846 8330B	8/8/12	8/9/12 18:52	AJL	A11
2,4,6-Trinitrotoluene	0.097U	mg/kg		0.19	0.097	0.034	SW846 8330B	8/8/12	8/9/12 18:52	AJL	A11
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	96.4	%		50-150			SW846 8330B	8/8/12	8/9/12 18:52	AJL	A11
1,4-Dinitrobenzene (S)	104	%		50-150			SW846 8330B	8/8/12	8/9/12 18:52	AJL	A11
WET CHEMISTRY											
Moisture	25.4	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	74.6	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Aluminum, Total	7870	mg/kg		48.7	32.3	15.8	SW846 6020A	8/8/12	8/13/12 15:10	LAM	A3
Copper, Total	1.0J	mg/kg		3.0	2.0	0.97	SW846 6020A	8/8/12	8/13/12 15:10	LAM	A3
Lead, Total	6.5	mg/kg		1.2	0.79	0.40	SW846 6020A	8/8/12	8/13/12 15:10	LAM	A3
Zinc, Total	11.6	mg/kg		3.0	2.0	0.97	SW846 6020A	8/8/12	8/13/12 15:10	LAM	A3

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID:	**9980394003**	Date Collected:	7/27/2012 09:15	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-19**	Date Received:	7/31/2012 09:25		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

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ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID: **9980394004** Date Collected: 7/27/2012 09:44 Matrix: Solid

Sample ID: **FTSW-AA-SO-20 (01.5)** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.10U	mg/kg		0.20	0.10	0.053	SW846 8330B	8/8/12	8/9/12 19:36	AJL	A11
4-Amino-2,6-dinitrotoluene	0.10U	mg/kg		0.20	0.10	0.054	SW846 8330B	8/8/12	8/9/12 19:36	AJL	A11
3,5-Dinitroaniline	0.10U	mg/kg		0.20	0.10	0.053	SW846 8330B	8/8/12	8/9/12 19:36	AJL	A11
1,3-Dinitrobenzene	0.10U	mg/kg		0.20	0.10	0.030	SW846 8330B	8/8/12	8/9/12 19:36	AJL	A11
2,4-Dinitrotoluene	0.10U	mg/kg		0.20	0.10	0.058	SW846 8330B	8/8/12	8/9/12 19:36	AJL	A11
2,6-Dinitrotoluene	0.10U	mg/kg		0.20	0.10	0.062	SW846 8330B	8/8/12	8/9/12 19:36	AJL	A11
HMX	0.10U	mg/kg		0.20	0.10	0.083	SW846 8330B	8/8/12	8/9/12 19:36	AJL	A11
Nitrobenzene	0.10U	mg/kg		0.20	0.10	0.078	SW846 8330B	8/8/12	8/9/12 19:36	AJL	A11
Nitroglycerin	1.0U	mg/kg		1.2	1.0	0.35	SW846 8330B	8/8/12	8/9/12 19:36	AJL	A11
4-Nitrotoluene	0.10U	mg/kg		0.20	0.10	0.065	SW846 8330B	8/8/12	8/9/12 19:36	AJL	A11
2-Nitrotoluene	0.10U	mg/kg		0.20	0.10	0.057	SW846 8330B	8/8/12	8/9/12 19:36	AJL	A11
3-Nitrotoluene	0.10U	mg/kg		0.20	0.10	0.061	SW846 8330B	8/8/12	8/9/12 19:36	AJL	A11
PETN	1.0U	mg/kg		1.2	1.0	0.52	SW846 8330B	8/8/12	8/9/12 19:36	AJL	A11
RDX	0.10U	mg/kg		0.20	0.10	0.025	SW846 8330B	8/8/12	8/9/12 19:36	AJL	A11
Tetryl	0.10U	mg/kg		0.20	0.10	0.075	SW846 8330B	8/8/12	8/9/12 19:36	AJL	A11
1,3,5-Trinitrobenzene	0.10U	mg/kg		0.20	0.10	0.070	SW846 8330B	8/8/12	8/9/12 19:36	AJL	A11
2,4,6-Trinitrotoluene	0.10U	mg/kg		0.20	0.10	0.035	SW846 8330B	8/8/12	8/9/12 19:36	AJL	A11
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	98.7	%		50-150			SW846 8330B	8/8/12	8/9/12 19:36	AJL	A11
1,4-Dinitrobenzene (S)	104	%		50-150			SW846 8330B	8/8/12	8/9/12 19:36	AJL	A11
WET CHEMISTRY											
Moisture	21.9	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	78.1	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Aluminum, Total	11900	mg/kg		48.3	32.0	15.7	SW846 6020A	8/8/12	8/13/12 15:13	LAM	A3
Copper, Total	1.1J	mg/kg		3.0	2.0	0.97	SW846 6020A	8/8/12	8/13/12 15:13	LAM	A3
Lead, Total	10.8	mg/kg		1.2	0.79	0.40	SW846 6020A	8/8/12	8/13/12 15:13	LAM	A3
Zinc, Total	3.8	mg/kg		3.0	2.0	0.97	SW846 6020A	8/8/12	8/13/12 15:13	LAM	A3

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID:	**9980394004**	Date Collected:	7/27/2012 09:44	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-20 (01.5)**	Date Received:	7/31/2012 09:25		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

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ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID: **9980394005** Date Collected: 7/27/2012 10:10 Matrix: Solid

Sample ID: **FTSW-AA-SO-21** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.099U	mg/kg		0.20	0.099	0.052	SW846 8330B	8/8/12	8/9/12 21:48	AJL	A11
4-Amino-2,6-dinitrotoluene	0.099U	mg/kg		0.20	0.099	0.053	SW846 8330B	8/8/12	8/9/12 21:48	AJL	A11
3,5-Dinitroaniline	0.099U	mg/kg		0.20	0.099	0.052	SW846 8330B	8/8/12	8/9/12 21:48	AJL	A11
1,3-Dinitrobenzene	0.099U	mg/kg		0.20	0.099	0.030	SW846 8330B	8/8/12	8/9/12 21:48	AJL	A11
2,4-Dinitrotoluene	0.099U	mg/kg		0.20	0.099	0.057	SW846 8330B	8/8/12	8/9/12 21:48	AJL	A11
2,6-Dinitrotoluene	0.099U	mg/kg		0.20	0.099	0.061	SW846 8330B	8/8/12	8/9/12 21:48	AJL	A11
HMX	0.099U	mg/kg		0.20	0.099	0.082	SW846 8330B	8/8/12	8/9/12 21:48	AJL	A11
Nitrobenzene	0.099U	mg/kg		0.20	0.099	0.077	SW846 8330B	8/8/12	8/9/12 21:48	AJL	A11
Nitroglycerin	0.99U	mg/kg		1.2	0.99	0.35	SW846 8330B	8/8/12	8/9/12 21:48	AJL	A11
4-Nitrotoluene	0.099U	mg/kg		0.20	0.099	0.064	SW846 8330B	8/8/12	8/9/12 21:48	AJL	A11
2-Nitrotoluene	0.099U	mg/kg		0.20	0.099	0.056	SW846 8330B	8/8/12	8/9/12 21:48	AJL	A11
3-Nitrotoluene	0.099U	mg/kg		0.20	0.099	0.060	SW846 8330B	8/8/12	8/9/12 21:48	AJL	A11
PETN	0.99U	mg/kg		1.2	0.99	0.51	SW846 8330B	8/8/12	8/9/12 21:48	AJL	A11
RDX	0.099U	mg/kg		0.20	0.099	0.025	SW846 8330B	8/8/12	8/9/12 21:48	AJL	A11
Tetryl	0.099U	mg/kg		0.20	0.099	0.074	SW846 8330B	8/8/12	8/9/12 21:48	AJL	A11
1,3,5-Trinitrobenzene	0.099U	mg/kg		0.20	0.099	0.069	SW846 8330B	8/8/12	8/9/12 21:48	AJL	A11
2,4,6-Trinitrotoluene	0.099U	mg/kg		0.20	0.099	0.035	SW846 8330B	8/8/12	8/9/12 21:48	AJL	A11
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	97	%		50-150			SW846 8330B	8/8/12	8/9/12 21:48	AJL	A11
1,4-Dinitrobenzene (S)	105	%		50-150			SW846 8330B	8/8/12	8/9/12 21:48	AJL	A11
WET CHEMISTRY											
Moisture	24.1	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	75.9	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Aluminum, Total	6540	mg/kg		50.7	33.6	16.5	SW846 6020A	8/8/12	8/13/12 15:17	LAM	A3
Copper, Total	1.9J	mg/kg		3.2	2.1	1.0	SW846 6020A	8/8/12	8/13/12 15:17	LAM	A3
Lead, Total	7.1	mg/kg		1.3	0.82	0.42	SW846 6020A	8/8/12	8/13/12 15:17	LAM	A3
Zinc, Total	10.9	mg/kg		3.2	2.1	1.0	SW846 6020A	8/8/12	8/13/12 15:17	LAM	A3

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID:	**9980394005**	Date Collected:	7/27/2012 10:10	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-21**	Date Received:	7/31/2012 09:25		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

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ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID: **9980394006** Date Collected: 7/27/2012 10:07 Matrix: Water

Sample ID: **FTSW-AA-SW-21** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.096U	ug/L		0.19	0.096	0.058	SW846 8330B	8/2/12	8/3/12 08:48	AJL	B1
4-Amino-2,6-dinitrotoluene	0.096U	ug/L		0.19	0.096	0.067	SW846 8330B	8/2/12	8/3/12 08:48	AJL	B1
3,5-Dinitroaniline	0.11U	ug/L		0.24	0.11	0.077	SW846 8330B	8/2/12	8/6/12 16:42	AJL	B1
1,3-Dinitrobenzene	0.096U	ug/L		0.19	0.096	0.029	SW846 8330B	8/2/12	8/3/12 08:48	AJL	B1
2,4-Dinitrotoluene	0.096U	ug/L		0.19	0.096	0.029	SW846 8330B	8/2/12	8/3/12 08:48	AJL	B1
2,6-Dinitrotoluene	0.096U	ug/L		0.19	0.096	0.058	SW846 8330B	8/2/12	8/3/12 08:48	AJL	B1
HMX	0.096U	ug/L		0.19	0.096	0.029	SW846 8330B	8/2/12	8/3/12 08:48	AJL	B1
Nitrobenzene	0.096U	ug/L		0.19	0.096	0.029	SW846 8330B	8/2/12	8/3/12 08:48	AJL	B1
Nitroglycerin	0.77U	ug/L		1.4	0.77	0.26	SW846 8330B	8/2/12	8/6/12 16:42	AJL	B1
4-Nitrotoluene	0.096U	ug/L		0.19	0.096	0.058	SW846 8330B	8/2/12	8/3/12 08:48	AJL	B1
2-Nitrotoluene	0.096U	ug/L		0.19	0.096	0.067	SW846 8330B	8/2/12	8/3/12 08:48	AJL	B1
3-Nitrotoluene	0.096U	ug/L		0.19	0.096	0.077	SW846 8330B	8/2/12	8/3/12 08:48	AJL	B1
PETN	0.77U	ug/L		1.4	0.77	0.24	SW846 8330B	8/2/12	8/6/12 16:42	AJL	B1
RDX	0.096U	ug/L		0.19	0.096	0.029	SW846 8330B	8/2/12	8/3/12 08:48	AJL	B1
Tetryl	0.19U	ug/L		0.29	0.19	0.14	SW846 8330B	8/2/12	8/3/12 08:48	AJL	B1
1,3,5-Trinitrobenzene	0.096U	ug/L		0.19	0.096	0.058	SW846 8330B	8/2/12	8/3/12 08:48	AJL	B1
2,4,6-Trinitrotoluene	0.096U	ug/L		0.19	0.096	0.087	SW846 8330B	8/2/12	8/3/12 08:48	AJL	B1
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	10	%	1	50-150			SW846 8330B	8/2/12	8/3/12 08:48	AJL	B1
1,4-Dinitrobenzene (S)	11.8	%	2	50-150			SW846 8330B	8/2/12	8/6/12 16:42	AJL	B1
METALS											
Aluminum, Total	2.3	mg/L		0.089	0.059	0.030	SW846 6020A	8/1/12	8/7/12 13:44	MWO	A2
Copper, Total	0.0054J	mg/L		0.0056	0.0037	0.0019	SW846 6020A	8/1/12	8/7/12 13:44	MWO	A2
Lead, Total	0.0025	mg/L		0.0022	0.0015	0.00074	SW846 6020A	8/1/12	8/7/12 13:44	MWO	A2
Zinc, Total	0.075	mg/L		0.0056	0.0037	0.0019	SW846 6020A	8/1/12	8/7/12 13:44	MWO	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID:	**9980394006**	Date Collected:	7/27/2012 10:07	Matrix:	Water
Sample ID:	**FTSW-AA-SW-21**	Date Received:	7/31/2012 09:25		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

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ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID: **9980394007** Date Collected: 7/27/2012 10:36 Matrix: Solid

Sample ID: **FTSW-AA-SO-22** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.096U	mg/kg		0.19	0.096	0.051	SW846 8330B	8/8/12	8/9/12 22:32	AJL	A11
4-Amino-2,6-dinitrotoluene	0.096U	mg/kg		0.19	0.096	0.052	SW846 8330B	8/8/12	8/9/12 22:32	AJL	A11
3,5-Dinitroaniline	0.096U	mg/kg		0.19	0.096	0.051	SW846 8330B	8/8/12	8/9/12 22:32	AJL	A11
1,3-Dinitrobenzene	0.096U	mg/kg		0.19	0.096	0.029	SW846 8330B	8/8/12	8/9/12 22:32	AJL	A11
2,4-Dinitrotoluene	0.096U	mg/kg		0.19	0.096	0.056	SW846 8330B	8/8/12	8/9/12 22:32	AJL	A11
2,6-Dinitrotoluene	0.096U	mg/kg		0.19	0.096	0.060	SW846 8330B	8/8/12	8/9/12 22:32	AJL	A11
HMX	0.096U	mg/kg		0.19	0.096	0.080	SW846 8330B	8/8/12	8/9/12 22:32	AJL	A11
Nitrobenzene	0.096U	mg/kg		0.19	0.096	0.075	SW846 8330B	8/8/12	8/9/12 22:32	AJL	A11
Nitroglycerin	0.96U	mg/kg		1.2	0.96	0.34	SW846 8330B	8/8/12	8/9/12 22:32	AJL	A11
4-Nitrotoluene	0.096U	mg/kg		0.19	0.096	0.063	SW846 8330B	8/8/12	8/9/12 22:32	AJL	A11
2-Nitrotoluene	0.096U	mg/kg		0.19	0.096	0.055	SW846 8330B	8/8/12	8/9/12 22:32	AJL	A11
3-Nitrotoluene	0.096U	mg/kg		0.19	0.096	0.059	SW846 8330B	8/8/12	8/9/12 22:32	AJL	A11
PETN	0.96U	mg/kg		1.2	0.96	0.50	SW846 8330B	8/8/12	8/9/12 22:32	AJL	A11
RDX	0.096U	mg/kg		0.19	0.096	0.024	SW846 8330B	8/8/12	8/9/12 22:32	AJL	A11
Tetryl	0.096U	mg/kg		0.19	0.096	0.072	SW846 8330B	8/8/12	8/9/12 22:32	AJL	A11
1,3,5-Trinitrobenzene	0.096U	mg/kg		0.19	0.096	0.067	SW846 8330B	8/8/12	8/9/12 22:32	AJL	A11
2,4,6-Trinitrotoluene	0.096U	mg/kg		0.19	0.096	0.034	SW846 8330B	8/8/12	8/9/12 22:32	AJL	A11
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	91.1	%		50-150			SW846 8330B	8/8/12	8/9/12 22:32	AJL	A11
1,4-Dinitrobenzene (S)	94.3	%		50-150			SW846 8330B	8/8/12	8/9/12 22:32	AJL	A11
WET CHEMISTRY											
Moisture	18.9	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	81.1	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Aluminum, Total	886	mg/kg		43.2	28.6	14.1	SW846 6020A	8/8/12	8/13/12 15:20	LAM	A3
Copper, Total	1.8U	mg/kg		2.7	1.8	0.86	SW846 6020A	8/8/12	8/13/12 15:20	LAM	A3
Lead, Total	1.5	mg/kg		1.1	0.70	0.36	SW846 6020A	8/8/12	8/13/12 15:20	LAM	A3
Zinc, Total	2.3J	mg/kg		2.7	1.8	0.86	SW846 6020A	8/8/12	8/13/12 15:20	LAM	A3

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID:	**9980394007**	Date Collected:	7/27/2012 10:36	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-22**	Date Received:	7/31/2012 09:25		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

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ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID: **9980394008** Date Collected: 7/27/2012 11:30 Matrix: Solid

Sample ID: **FTSW-AA-SO-23** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	17.2	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	82.8	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Aluminum, Total	5140	mg/kg		44.7	29.6	14.5	SW846 6020A	8/8/12	8/13/12 15:24	LAM	A2
Copper, Total	2.7J	mg/kg		2.8	1.8	0.89	SW846 6020A	8/8/12	8/13/12 15:24	LAM	A2
Lead, Total	4.6	mg/kg		1.1	0.73	0.37	SW846 6020A	8/8/12	8/13/12 15:24	LAM	A2
Zinc, Total	12.9	mg/kg		2.8	1.8	0.89	SW846 6020A	8/8/12	8/13/12 15:24	LAM	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID: **9980394009** Date Collected: 7/27/2012 11:52 Matrix: Solid

Sample ID: **FTSW-AA-SO-24** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	1.7	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	98.3	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Aluminum, Total	5060	mg/kg		39.1	25.9	12.7	SW846 6020A	8/8/12	8/13/12 15:27	LAM	A2
Copper, Total	1.9J	mg/kg		2.4	1.6	0.78	SW846 6020A	8/8/12	8/13/12 15:27	LAM	A2
Lead, Total	2.6	mg/kg		0.98	0.64	0.32	SW846 6020A	8/8/12	8/13/12 15:27	LAM	A2
Zinc, Total	12.8	mg/kg		2.4	1.6	0.78	SW846 6020A	8/8/12	8/13/12 15:27	LAM	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID: **9980394010** Date Collected: 7/27/2012 15:02 Matrix: Solid

Sample ID: **FTSW-AA-SO-25** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	18.0	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	82.0	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Aluminum, Total	2080	mg/kg		46.9	31.1	15.2	SW846 6020A	8/8/12	8/13/12 15:31	LAM	A2
Copper, Total	1.6J	mg/kg		2.9	1.9	0.94	SW846 6020A	8/8/12	8/13/12 15:31	LAM	A2
Lead, Total	3.9	mg/kg		1.2	0.76	0.39	SW846 6020A	8/8/12	8/13/12 15:31	LAM	A2
Zinc, Total	1.8J	mg/kg		2.9	1.9	0.94	SW846 6020A	8/8/12	8/13/12 15:31	LAM	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID: **9980394011** Date Collected: 7/27/2012 15:04 Matrix: Solid

Sample ID: **FTSW-AA-SO-25 DUP** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	2.1	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	97.9	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Aluminum, Total	2530	mg/kg		37.8	25.1	12.3	SW846 6020A	8/8/12	8/13/12 15:34	LAM	A2
Copper, Total	2.3J	mg/kg		2.4	1.6	0.76	SW846 6020A	8/8/12	8/13/12 15:34	LAM	A2
Lead, Total	4.6	mg/kg		0.95	0.61	0.31	SW846 6020A	8/8/12	8/13/12 15:34	LAM	A2
Zinc, Total	6.5	mg/kg		2.4	1.6	0.76	SW846 6020A	8/8/12	8/13/12 15:34	LAM	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID: **9980394012** Date Collected: 7/27/2012 15:16 Matrix: Solid

Sample ID: **FTSW-AA-SO-26** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	26.3	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	73.7	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Aluminum, Total	9590	mg/kg		46.0	30.5	14.9	SW846 6020A	8/8/12	8/13/12 16:24	LAM	A2
Copper, Total	1.4J	mg/kg		2.9	1.9	0.92	SW846 6020A	8/8/12	8/13/12 16:24	LAM	A2
Lead, Total	17.0	mg/kg		1.1	0.75	0.38	SW846 6020A	8/8/12	8/13/12 16:24	LAM	A2
Zinc, Total	11.0	mg/kg		2.9	1.9	0.92	SW846 6020A	8/8/12	8/13/12 16:24	LAM	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID: **9980394013** Date Collected: 7/27/2012 15:30 Matrix: Solid

Sample ID: **FTSW-AA-SO-27** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	26.0	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
Total Solids	74.0	%		0.1	0.1	0.01	SM20-2540 G		8/1/12 13:45	KED	A
METALS											
Aluminum, Total	5670	mg/kg		47.4	31.4	15.4	SW846 6020A	8/8/12	8/13/12 16:28	LAM	A2
Copper, Total	1.6J	mg/kg		3.0	2.0	0.95	SW846 6020A	8/8/12	8/13/12 16:28	LAM	A2
Lead, Total	4.0	mg/kg		1.2	0.77	0.39	SW846 6020A	8/8/12	8/13/12 16:28	LAM	A2
Zinc, Total	14.2	mg/kg		3.0	2.0	0.95	SW846 6020A	8/8/12	8/13/12 16:28	LAM	A2

Sample Comments:

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID: **9980394014** Date Collected: 7/27/2012 14:25 Matrix: Water

Sample ID: **FTSW-AA-SO-22 ERB** Date Received: 7/31/2012 09:25

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.096U	ug/L		0.19	0.096	0.058	SW846 8330B	8/2/12	8/3/12 01:45	AJL	C1
4-Amino-2,6-dinitrotoluene	0.096U	ug/L		0.19	0.096	0.067	SW846 8330B	8/2/12	8/3/12 01:45	AJL	C1
3,5-Dinitroaniline	0.11U	ug/L		0.24	0.11	0.077	SW846 8330B	8/2/12	8/6/12 15:58	AJL	C1
1,3-Dinitrobenzene	0.096U	ug/L		0.19	0.096	0.029	SW846 8330B	8/2/12	8/3/12 01:45	AJL	C1
2,4-Dinitrotoluene	0.096U	ug/L		0.19	0.096	0.029	SW846 8330B	8/2/12	8/3/12 01:45	AJL	C1
2,6-Dinitrotoluene	0.096U	ug/L		0.19	0.096	0.058	SW846 8330B	8/2/12	8/3/12 01:45	AJL	C1
HMX	0.096U	ug/L		0.19	0.096	0.029	SW846 8330B	8/2/12	8/3/12 01:45	AJL	C1
Nitrobenzene	0.096U	ug/L		0.19	0.096	0.029	SW846 8330B	8/2/12	8/3/12 01:45	AJL	C1
Nitroglycerin	0.77U	ug/L		1.4	0.77	0.26	SW846 8330B	8/2/12	8/6/12 15:58	AJL	C1
4-Nitrotoluene	0.096U	ug/L		0.19	0.096	0.058	SW846 8330B	8/2/12	8/3/12 01:45	AJL	C1
2-Nitrotoluene	0.096U	ug/L		0.19	0.096	0.067	SW846 8330B	8/2/12	8/3/12 01:45	AJL	C1
3-Nitrotoluene	0.096U	ug/L		0.19	0.096	0.077	SW846 8330B	8/2/12	8/3/12 01:45	AJL	C1
PETN	0.77U	ug/L		1.4	0.77	0.24	SW846 8330B	8/2/12	8/6/12 15:58	AJL	C1
RDX	0.096U	ug/L		0.19	0.096	0.029	SW846 8330B	8/2/12	8/3/12 01:45	AJL	C1
Tetryl	0.19U	ug/L		0.29	0.19	0.14	SW846 8330B	8/2/12	8/15/12 18:26	AJL	C1
1,3,5-Trinitrobenzene	0.096U	ug/L		0.19	0.096	0.058	SW846 8330B	8/2/12	8/3/12 01:45	AJL	C1
2,4,6-Trinitrotoluene	0.20	ug/L		0.19	0.096	0.087	SW846 8330B	8/2/12	8/3/12 01:45	AJL	C1
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	94.5	%		50-150			SW846 8330B	8/2/12	8/3/12 01:45	AJL	C1
1,4-Dinitrobenzene (S)	84.5	%		50-150			SW846 8330B	8/2/12	8/6/12 15:58	AJL	C1
1,4-Dinitrobenzene (S)	82.2	%		50-150			SW846 8330B	8/2/12	8/15/12 18:26	AJL	C1
METALS											
Aluminum, Total	0.059U	mg/L		0.089	0.059	0.030	SW846 6020A	8/1/12	8/7/12 13:52	MWO	A2
Copper, Total	0.0037U	mg/L		0.0056	0.0037	0.0019	SW846 6020A	8/1/12	8/7/12 13:52	MWO	A2
Lead, Total	0.0015U	mg/L		0.0022	0.0015	0.00074	SW846 6020A	8/1/12	8/7/12 13:52	MWO	A2
Zinc, Total	0.0037U	mg/L		0.0056	0.0037	0.0019	SW846 6020A	8/1/12	8/7/12 13:52	MWO	A2

Sample Comments:

The pH of the total metals bottle was adjusted to pH < 2 by the addition of nitric acid upon receipt at the laboratory.

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ANALYTICAL RESULTS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

Lab ID:	**9980394014**	Date Collected:	7/27/2012 14:25	Matrix:	Water
Sample ID:	**FTSW-AA-SO-22 ERB**	Date Received:	7/31/2012 09:25		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder: 9980394 ERT002|Ft. Stewart 3153-004

PARAMETER QUALIFIERS\FLAGS

[1] The surrogate 1,4-Dinitrobenzene for method SW846 8330B was outside of control limits. The % Recovery was reported as 10 and the control limits were 50 to 150. This result was reported at a dilution of 1.

[2] The surrogate 1,4-Dinitrobenzene for method SW846 8330B was outside of control limits. The % Recovery was reported as 11.8 and the control limits were 50 to 150. This result was reported at a dilution of 1.

Explosives in Water by 8330B Summary Forms

2E
SURROGATE RECOVERY

Name: ALS - Middletown Contract:

Code: PA010 CASE No.: SAS No.: SDG No.: ERT-002

Column (1): E1, 254nm GC Column (2): E2, 254nm

CLIENT SAMPLE NO.	SURR1 % REC #	SURR2 % REC #	TOT OUT
1018213(MB)	108	95.1	0
1018214(LCS)	109	95.4	0
FTSW-AA-SO-22 ERB	94.5	82.2	0
FTSW-AA-SW-21	10.0 *		1

	QC LIMITS
1,4-Dinitrobenzene	(50-150)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate Diluted Out

2E
SURROGATE RECOVERY

Name: ALS - Middletown Contract:

Code: PA010 CASE No.: SAS No.: SDG No.: ERT-002

Column (1): E1, 218nm GC Column (2):

CLIENT SAMPLE NO.	SURR1 % REC #	SURR2 % REC #	TOT OUT
1018213(MB)	104		0
1020409(LCS)	112		0
FTSW-AA-SO-22 ERB	84.5		0
FTSW-AA-SW-21	11.8 *		1

	QC LIMITS
1,4-Dinitrobenzene	(50-150)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate Diluted Out

3E

WATER LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

LCS - Sample No.: ICV111411 Column ID: E1, 254nm

COMPOUND	SPIKE ADDED ug/L	ICV CONCENTRATION ug/L	ICV % REC#	QC LIMITS REC
2-Amino-4,6-dinitrotoluene	1.0	0.90	89.6	(80-120)
4-Amino-2,6-dinitrotoluene	1.0	0.87	87.3	(80-120)
1,3-Dinitrobenzene	1.0	0.83	83.2	(80-120)
2,4-Dinitrotoluene	1.0	0.85	84.8	(80-120)
2,6-Dinitrotoluene	1.0	0.90	89.8	(80-120)
HMX	1.0	0.89	88.6	(80-120)
Nitrobenzene	1.0	0.89	88.5	(80-120)
4-Nitrotoluene	1.0	0.97	97.0	(80-120)
2-Nitrotoluene	1.0	0.91	91.2	(80-120)
3-Nitrotoluene	1.0	0.94	93.9	(80-120)
RDX	1.0	0.86	86.4	(80-120)
Tetryl	1.0	0.89	89.4	(80-120)
1,3,5-Trinitrobenzene	1.0	0.90	89.5	(80-120)
2,4,6-Trinitrotoluene	1.0	0.82	81.9	(80-120)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 14 outside limits

3E

WATER LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract: _____

Lab Code: PA010 Case No.: _____ SAS No.: _____ SDG No.: ERT-002

LCS - Sample No.: ICV112011 Column ID: E1, 218nm

COMPOUND	SPIKE ADDED ug/L	ICV CONCENTRATION ug/L	ICV % REC#	QC LIMITS REC
3,5-Dinitroaniline	1.0	1.0	102	(80-120)
Nitroglycerin	5.0	5.6	111	(80-120)
PETN	5.0	4.9	99.0	(80-120)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 3 outside limits

3E

WATER LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

LCS - Sample No.: ICV061412 Column ID: E2, 254nm

COMPOUND	SPIKE ADDED ug/L	ICV CONCENTRATION ug/L	ICV % REC#	QC LIMITS REC
2-Amino-4,6-dinitrotoluene	1.0	1.0	102	(80-120)
4-Amino-2,6-dinitrotoluene	1.0	0.99	99.1	(80-120)
1,3-Dinitrobenzene	1.0	0.97	97.4	(80-120)
2,4-Dinitrotoluene	1.0	1.0	101	(80-120)
2,6-Dinitrotoluene	1.0	1.0	104	(80-120)
HMX	1.0	1.1	110	(80-120)
Nitrobenzene	1.0	1.1	106	(80-120)
4-Nitrotoluene	1.0	0.96	95.6	(80-120)
2-Nitrotoluene	1.0	1.1	106	(80-120)
3-Nitrotoluene	1.0	1.1	106	(80-120)
RDX	1.0	1.0	105	(80-120)
Tetryl	1.0	1.0	99.6	(80-120)
1,3,5-Trinitrobenzene	1.0	1.1	106	(80-120)
2,4,6-Trinitrotoluene	1.0	0.97	97.2	(80-120)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 14 outside limits

3E

WATER LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

LCS - Sample No.: 1018214 Column ID: E1, 254nm

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC#	QC LIMITS REC
2-Amino-4,6-dinitrotoluene	1.0	1.0	102	(50-155)
4-Amino-2,6-dinitrotoluene	1.0	1.0	103	(55-155)
1,3-Dinitrobenzene	1.0	1.1	112	(45-160)
2,4-Dinitrotoluene	1.0	1.0	104	(60-135)
2,6-Dinitrotoluene	1.0	1.0	101	(60-135)
HMX	1.0	1.0	101	(80-115)
Nitrobenzene	1.0	1.1	105	(50-140)
4-Nitrotoluene	1.0	1.1	106	(50-130)
2-Nitrotoluene	1.0	0.98	98.2	(45-135)
3-Nitrotoluene	1.0	1.0	104	(50-130)
RDX	1.0	1.1	107	(50-160)
Tetryl	1.0	0.99	98.6	(20-175)
1,3,5-Trinitrobenzene	1.0	1.0	105	(65-140)
2,4,6-Trinitrotoluene	1.0	1.1	108	(50-145)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 14 outside limits

3E

WATER LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

LCS - Sample No.: 1020409 Column ID: E1, 218nm

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC#	QC LIMITS REC
3,5-Dinitroaniline	1.0	1.0	101	(70-130)
Nitroglycerin	5.0	5.3	106	(70-130)
PETN	5.0	4.9	97.8	(70-130)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 3 outside limits

3E

WATER LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

LCS - Sample No.: 1018214 Column ID: E2, 254nm

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC#	QC LIMITS REC
2-Amino-4,6-dinitrotoluene	1.0	1.0	104	(50-155)
4-Amino-2,6-dinitrotoluene	1.0	1.0	103	(55-155)
1,3-Dinitrobenzene	1.0	1.0	105	(45-160)
2,4-Dinitrotoluene	1.0	0.99	98.8	(60-135)
2,6-Dinitrotoluene	1.0	0.98	98.2	(60-135)
HMX	1.0	0.97	97.3	(80-115)
Nitrobenzene	1.0	1.1	109	(50-140)
4-Nitrotoluene	1.0	0.93	93.3	(50-130)
2-Nitrotoluene	1.0	0.90	90.0	(45-135)
3-Nitrotoluene	1.0	0.99	99.2	(50-130)
RDX	1.0	0.95	94.7	(50-160)
Tetryl	1.0	0.92	92.4	(20-175)
1,3,5-Trinitrobenzene	1.0	1.1	114	(65-140)
2,4,6-Trinitrotoluene	1.0	0.99	99.0	(50-145)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 14 outside limits

4C

METHOD BLANK SUMMARY

SAMPLE NO.

1018213

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

b Sample ID: 1018213 Lab File ID (1): ZH2B003A.d Lab File ID (2): ZHAD002.d

trix: (soil/water) WATER Extraction: (Type) SPE

lfur Cleanup: (Y/N) N Date Extracted: 8/2/2012

te Analyzed (1): 8/2/2012 Date Analyzed (2): 8/10/2012

me Analyzed (1): 19:08 Time Analyzed (2): 16:14

strument ID (1): hpll.i Instrument ID (2): hpll.i

Column (1): E1, 254nm GC Column (2): E2, 254nm

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
1018214(LCS)	1018214	ZH2B004A.d	8/2/2012	8/10/2012
FTSW-AA-SO-22 ERB	9980394014	ZH2B012.d	8/3/2012	8/10/2012
FTSW-AA-SW-21	9980394006	ZH2B020.d	8/3/2012	

COMMENTS:

4C

METHOD BLANK SUMMARY

SAMPLE NO.

1018213

ɔ Name: ALS - Middletown Contract:

ɔ Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

ɔ Sample ID: 1018213 Lab File ID (1): ZH6A002A.d Lab File ID (2):

trix: (soil/water) WATER Extraction: (Type) SPE

lfur Cleanup: (Y/N) N Date Extracted: 8/2/2012

te Analyzed (1): 8/6/2012 Date Analyzed (2):

me Analyzed (1): 13:02 Time Analyzed (2):

strument ID (1): hpl1.i Instrument ID (2):

Column (1): E1, 218nm GC Column (2):

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
1020409(LCS)	1020409	ZH6A003.d	8/6/2012	
FTSW-AA-SO-22 ERB	9980394014	ZH6A006.d	8/6/2012	
FTSW-AA-SW-21	9980394006	ZH6A007.d	8/6/2012	

COMMENTS:

8D

ANALYTICAL SEQUENCE

Name: ALS - Middletown Contract:

Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Column: E1, 254nm Init. Calib. Date(s): 11/14/2011 11/14/2011

trument ID: hpl1.i

ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION

SUR 1: 13.76

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
LEVEL1	LEVEL1	11/14/2011	17:54	13.76
LEVEL2	LEVEL2	11/14/2011	18:37	13.77
LEVEL3	LEVEL3	11/14/2011	19:20	13.77
LEVEL4	LEVEL4	11/14/2011	20:03	13.77
LEVEL5	LEVEL5	11/14/2011	20:46	13.76
LEVEL6	LEVEL6	11/14/2011	21:29	13.75
LEVEL7	LEVEL7	11/14/2011	22:12	13.74
ICV	ICV111411	11/14/2011	22:55	13.75

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk

* Values outside of QC limits

8D

ANALYTICAL SEQUENCE

Name: ALS - Middletown Contract:

Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Column: E1, 218nm Init. Calib. Date(s): 11/14/2011 11/15/2011

Instrument ID: hpl1.i

ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION

SUR 1: 13.75

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
LEVEL1	LEVEL1	11/14/2011	23:38	13.77
LEVEL2	LEVEL2	11/15/2011	00:21	13.75
LEVEL3	LEVEL3	11/15/2011	01:04	13.75
LEVEL4	LEVEL4	11/15/2011	01:46	13.76
LEVEL5	LEVEL5	11/15/2011	02:29	13.76
LEVEL6	LEVEL6	11/15/2011	03:12	13.75
LEVEL7	LEVEL7	11/15/2011	03:55	13.74
ZZZZZZ	ICV111511	11/15/2011	04:38	13.76

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk

* Values outside of QC limits

8D

ANALYTICAL SEQUENCE

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Column: E2, 254nm Init. Calib. Date(s): 6/14/2012 6/14/2012

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION

SUR 1: 14.60

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
LEVEL1	LEVEL1	6/14/2012	13:07	14.52
LEVEL2	LEVEL2	6/14/2012	13:51	14.59
LEVEL3	LEVEL3	6/14/2012	14:34	14.55
LEVEL4	LEVEL4	6/14/2012	15:18	14.53
LEVEL5	LEVEL5	6/14/2012	16:02	14.60
LEVEL6	LEVEL6	6/14/2012	16:46	14.70
LEVEL7	LEVEL7	6/14/2012	17:30	14.69
ICV	ICV061412	6/14/2012	18:14	14.71

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Column: E1, 254nm Cont. Calib. Date(s): 8/2/2012 17:40

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.80

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
ZZZZZZ	1018210	8/2/2012	19:08	13.83
1018213(MB)	1018213	8/2/2012	19:08	13.83
ZZZZZZ	1018211	8/2/2012	19:52	13.82
1018214(LCS)	1018214	8/2/2012	19:52	13.82
ZZZZZZ	9979284032	8/2/2012	21:21	13.81
ZZZZZZ	9979284032	8/2/2012	22:05	13.76
ZZZZZZ	9980086001	8/2/2012	22:49	13.81
ZZZZZZ	9980109002	8/2/2012	23:33	13.80
ZZZZZZ	1018216	8/3/2012	00:17	13.79
ZZZZZZ	1018217	8/3/2012	01:01	13.78
FTSW-AA-SO-22 ERB	9980394014	8/3/2012	01:45	13.79

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Column: E1, 254nm Cont. Calib. Date(s): 8/3/2012 03:57

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.73

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
ZZZZZZ	9978606004	8/3/2012	05:25	13.78
ZZZZZZ	9978607007	8/3/2012	06:09	13.76
ZZZZZZ	9978607009	8/3/2012	06:53	13.76
FTSW-AA-SW-21	9980394006	8/3/2012	08:48	13.79

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits

8D

ANALYTICAL SEQUENCE (CCAL)

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Column: E1, 254nm Cont. Calib. Date(s): 8/3/2012 09:38

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.73

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #

QC LIMITS

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

› Name: ALS - Middletown Contract:

› Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Column: E1, 218nm Cont. Calib. Date(s): 8/6/2012 12:03

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.82

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
1018213(MB)	1018213	8/6/2012	13:02	13.85
1020409(LCS)	1020409	8/6/2012	13:46	13.83
ZZZZZZ	9980086001	8/6/2012	14:30	13.82
ZZZZZZ	9980109002	8/6/2012	15:14	13.82
FTSW-AA-SO-22 ERB	9980394014	8/6/2012	15:58	13.83
FTSW-AA-SW-21	9980394006	8/6/2012	16:42	13.78
ZZZZZZ	9978606007	8/6/2012	17:26	13.80
ZZZZZZ	9978607004	8/6/2012	18:10	13.81

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Column: E1, 218nm Cont. Calib. Date(s): 8/6/2012 18:54

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.75

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #

QC LIMITS

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

) Name: ALS - Middletown Contract:

) Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Column: E2, 254nm Cont. Calib. Date(s): 8/10/2012 15:18

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
) STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.65

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
1018213(MB)	1018213	8/10/2012	16:14	13.68
1018214(LCS)	1018214	8/10/2012	16:58	13.65
ZZZZZZ	9979284032	8/10/2012	17:42	13.65
FTSW-AA-SO-22 ERB	9980394014	8/10/2012	18:26	13.63
ZZZZZZ	9978606006	8/10/2012	19:09	13.63
ZZZZZZ	9978607010	8/10/2012	19:53	13.60
ZZZZZZ	9978607011	8/10/2012	20:37	13.59
ZZZZZZ	1020314	8/10/2012	21:21	13.56
ZZZZZZ	1020315	8/10/2012	22:05	13.56
ZZZZZZ	9980395003	8/10/2012	22:50	13.55
ZZZZZZ	1020321	8/10/2012	23:34	13.55
ZZZZZZ	1020323	8/11/2012	00:18	13.54

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Column: E2, 254nm Cont. Calib. Date(s): 8/11/2012 01:02

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.55

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #

QC LIMITS

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Explosives in Water by 8330B Raw Data

Sample Raw Data

1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SW-21

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): WATER Lab Sample ID: 9980394006

Sample wt/vol: 1040 (g/mL) ML Lab File ID (1): ZH2B020.d

% Moisture: Lab File ID (2):

Extraction: (Type) SPE Date Received: 07/31/2012

Concentrated Extract Volume: 10000 (uL) Date Extracted: 08/02/2012

Injection Volume: 100 (uL) Date Analyzed: 08/03/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.096	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.096	U
99-65-0	1,3-Dinitrobenzene	0.096	U
121-14-2	2,4-Dinitrotoluene	0.096	U
606-20-2	2,6-Dinitrotoluene	0.096	U
2691-41-0	HMX	0.096	U
98-95-3	Nitrobenzene	0.096	U
99-99-0	4-Nitrotoluene	0.096	U
88-72-2	2-Nitrotoluene	0.096	U
99-08-1	3-Nitrotoluene	0.096	U
121-82-4	RDX	0.096	U
479-45-8	Tetryl	0.19	U
99-35-4	1,3,5-Trinitrobenzene	0.096	U
118-96-7	2,4,6-Trinitrotoluene	0.096	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B020.d
Lab Smp Id: 9980394006 Client Smp ID: FTSW-AA-SW-21
Inj Date : 03-AUG-2012 08:48
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980394006;AJL;;;;;1040
Misc Info : ZZ HPLC 3174 D8330W
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_254
Meth Date : 08-Aug-2012 09:59 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1040.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/13/12
REPORTED 8/13/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.790	13.726	0.064	17024	50.2238	0.482921 (RM)
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene (TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: ZH2B020.d
Report Date: 13-Aug-2012 13:07

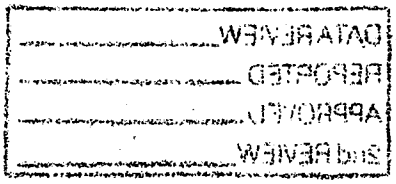
ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: LIQUID
Lab Smp Id: 9980394006
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3174 D8330W

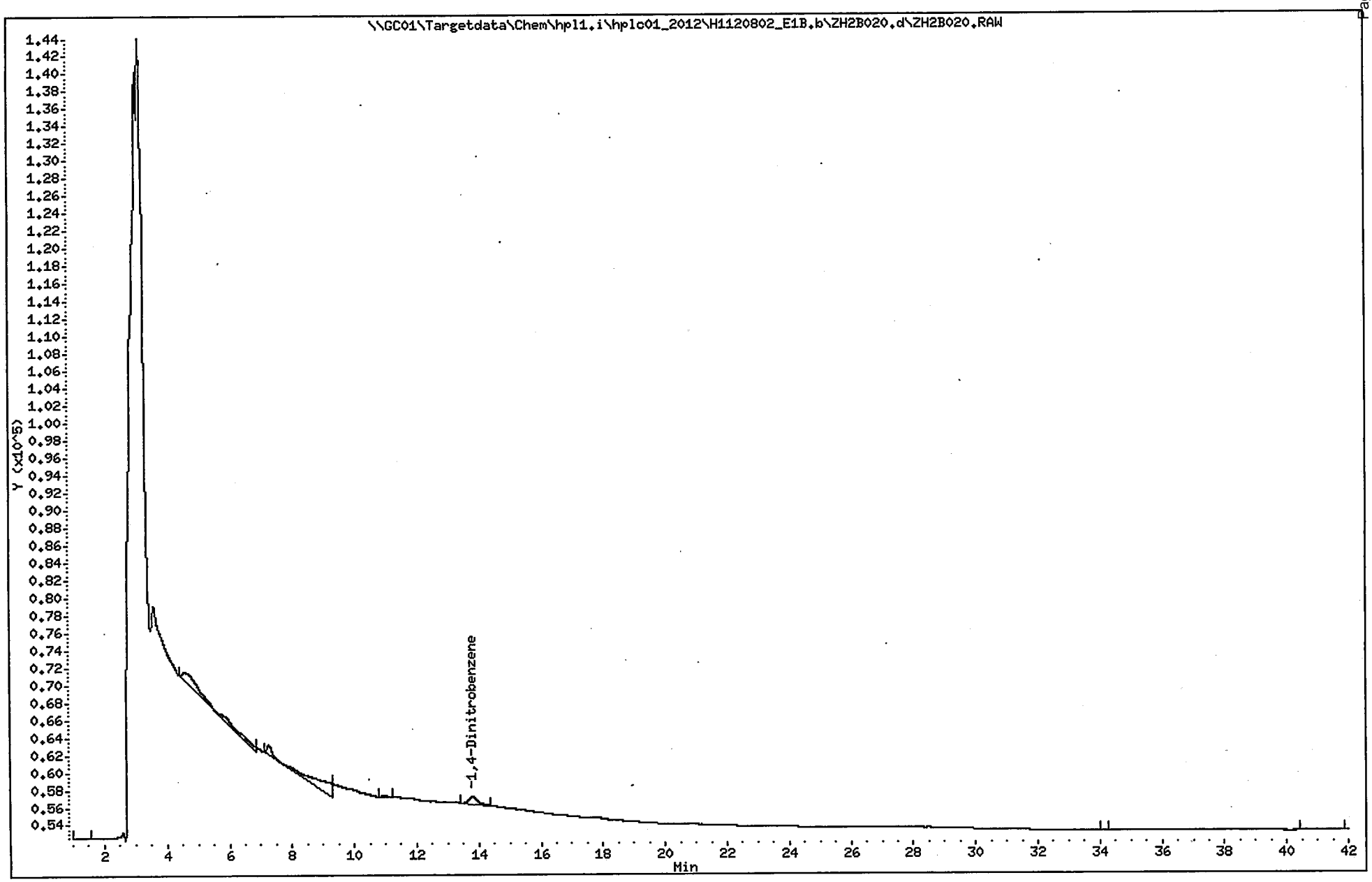
Client SDG: ERT002|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SW-21
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	4.80769	0.482921	10.04*	50-150



Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B020.d
Date : 03-AUG-2012 08:48
Client ID: FTSW-AA-SW-21
Sample Info: 9980394006;AJL;;;;;1040
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SW-21

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): WATER Lab Sample ID: 9980394006

Sample wt/vol: 1040 (g/mL) ML Lab File ID (1): ZH6A007.d

% Moisture: Lab File ID (2):

Extraction: (Type) SPE Date Received: 07/31/2012

Concentrated Extract Volume: 10000 (uL) Date Extracted: 08/02/2012

Injection Volume: 100 (uL) Date Analyzed: 08/06/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
618-87-1	3,5-Dinitroaniline	0.11	U
55-63-0	Nitroglycerin	0.77	U
78-11-5	PETN	0.77	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A007.d
Lab Smp Id: 9980394006 Client Smp ID: FTSW-AA-SW-21
Inj Date : 06-AUG-2012 16:42
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980394006;AJL;;;;;1040
Misc Info : ZZ HPLC 3174 D8330W
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\8330E1_218
Meth Date : 07-Aug-2012 08:51 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1040.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

DATA REVIEW
REPORTED
APPROVED
2nd REVIEW

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
$ 1 1,4-Dinitrobenzene	13.783	13.750	0.033	7812	58.8143	0.565522 (R)
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

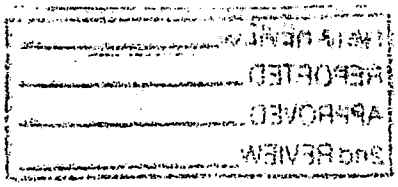
ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: LIQUID
Lab Smp Id: 9980394006
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3174 D8330W

Client SDG: ERT002|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SW-21
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	4.80769	0.565522	11.76*	50-150



Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A007.d

Date : 06-AUG-2012 16:42

Client ID: FTSW-AA-SW-21

Instrument: hpl1.i

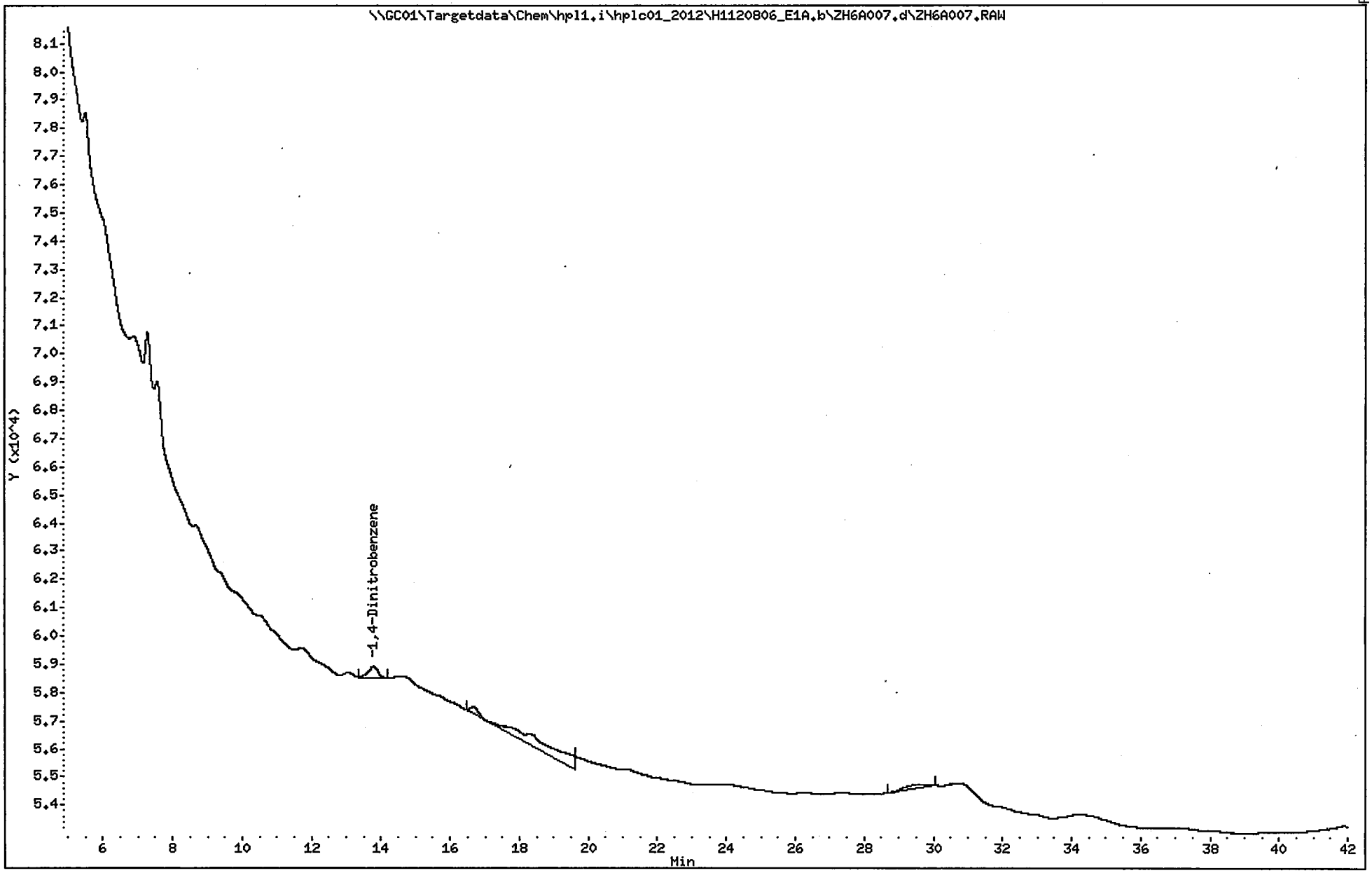
Sample Info: 9980394006;AJL;;;;;1040

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-22 ERB

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): WATER Lab Sample ID: 9980394014

Sample wt/vol: 1040 (g/mL) ML Lab File ID (1): ZH2B012.d

% Moisture: Lab File ID (2): ZHAD005.d

Extraction: (Type) SPE Date Received: 07/31/2012

Concentrated Extract Volume: 10000 (uL) Date Extracted: 08/02/2012

Injection Volume: 100 (uL) Date Analyzed: 08/03/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.096	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.096	U
99-65-0	1,3-Dinitrobenzene	0.096	U
121-14-2	2,4-Dinitrotoluene	0.096	U
606-20-2	2,6-Dinitrotoluene	0.096	U
2691-41-0	HMX	0.096	U
98-95-3	Nitrobenzene	0.096	U
99-99-0	4-Nitrotoluene	0.096	U
88-72-2	2-Nitrotoluene	0.096	U
99-08-1	3-Nitrotoluene	0.096	U
121-82-4	RDX	0.096	U
479-45-8	Tetryl	0.16	J
99-35-4	1,3,5-Trinitrobenzene	0.096	U
118-96-7	2,4,6-Trinitrotoluene	0.20	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B012.d
Lab Smp Id: 9980394014 Client Smp ID: FTSW-AA-SO-22 ERB
Inj Date : 03-AUG-2012 01:45
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980394014;AJL;;;;;1040
Misc Info : ZZ HPLC 3174 D8330W
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_254
Meth Date : 08-Aug-2012 09:59 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1040.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/13/12
REPORTED 8/13/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.786	13.726	0.060	160214	472.660	4.54481
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	18.330	18.403	-0.073	4183	16.2641	0.156386(a)
8	2,4,6-Trinitrotoluene(TNT)	21.236	21.156	0.080	6340	20.7888	0.199893
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

— Does not calc or cc. on Report A after calc 8/15/12

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: ZH2B012.d
Report Date: 13-Aug-2012 13:07

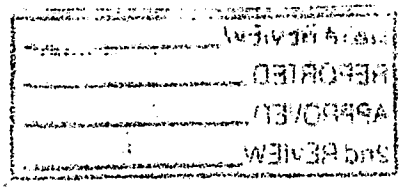
ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: LIQUID
Lab Smp Id: 9980394014
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3174 D8330W

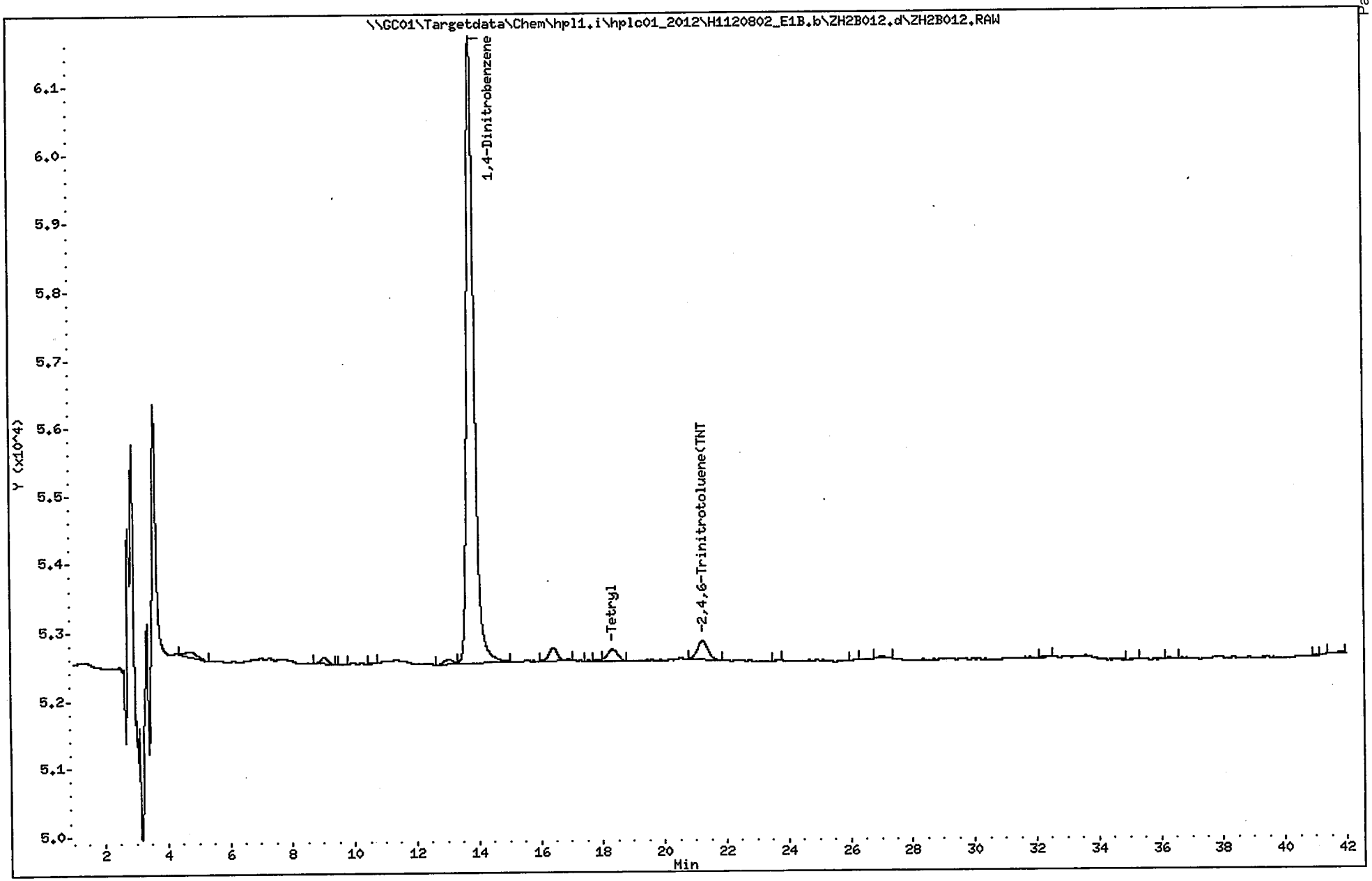
Client SDG: ERT002|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-22 ERB
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	4.80769	4.54481	94.53	50-150



Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B012.d
Date : 03-AUG-2012 01:45
Client ID: FTSW-AA-SO-22 ERB
Sample Info: 9980394014;AJL;;;;;1040
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



Data File: ZHAB005.d SEF 8/21/12
Report Date: 15-Aug-2012 13:14

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120810_E2D.b\ZHAB005.d
Lab Smp Id: 9980394014 Client Smp ID: FTSW-AA-SO-22 ERB
Inj Date : 10-AUG-2012 18:26
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980394014;AJL;;;;;1040
Misc Info : ZZ HPLC 3174 D8330W
Comment : Column: E2, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120810_E2D.b\8330E2_254
Meth Date : 15-Aug-2012 13:11 Lopez Quant Type: ESTD
Cal Date : 14-JUN-2012 17:30 Cal File: ZFED007.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1040.000	Volume of sample extracted (uL)
Cpnd Variable		Local Compound Variable

DATA REVIEW AZ 8/15/12
REPORTED AS 8/15/12
APPROVED CG 8/15/12
2nd REVIEW CG 8/15/12

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 HMX	7.466	7.540	-0.074	1114	8.79231	0.0845414 (a)
2 RDX	Compound Not Detected.					
3 1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4 1,4-Dinitrobenzene	13.626	13.546	0.080	156281	410.766	3.94967
5 1,3-Dinitrobenzene	Compound Not Detected.					
6 Nitrobenzene	Compound Not Detected.					
7 2,4,6-Trinitrotoluene(TNT)	21.190	21.056	0.134	6730	20.8648	0.200623
8 Tetryl	Compound Not Detected.					
9 2,6-Dinitrotoluene	Compound Not Detected.					
10 2,4-Dinitrotoluene	Compound Not Detected.					
11 2-Nitrotoluene	Compound Not Detected.					
12 4-Nitrotoluene	Compound Not Detected.					
13 3-Nitrotoluene	Compound Not Detected.					
14 4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
15 2-Amino-4,6-dinitrotoluene	Compound Not Detected.					

DNC AS 8/15/12

✓ good confirmation
Report lower result
for alt. Column

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ALS - Middletown

RECOVERY REPORT

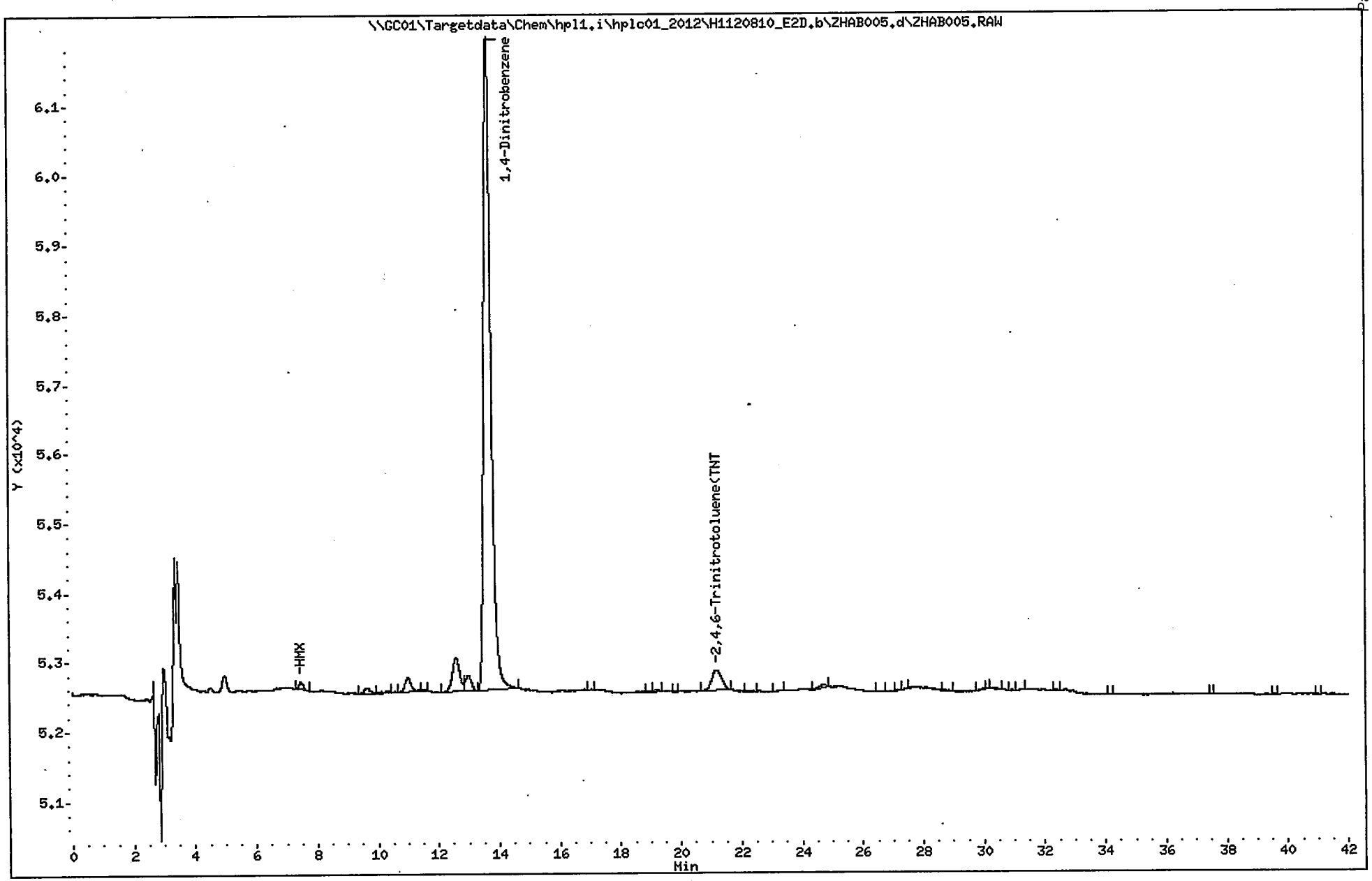
Client Name: ERT Earth Resources
Sample Matrix: LIQUID
Lab Smp Id: 9980394014
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120810_E2D.b\8330E2_25
Misc Info: ZZ HPLC 3174 D8330W

Client SDG: ERT002|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-22 ERB
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	4.80769	3.94967	82.15	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120810_E2D.b\ZHAB005.d
Date : 10-AUG-2012 18:26
Client ID: FTSW-AA-SO-22 ERB
Sample Info: 9980394014;AJL;;;;;1040
Volume Injected (uL): 100.0
Column phase: E2

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-22 ERB

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): WATER Lab Sample ID: 9980394014

Sample wt/vol: 1040 (g/mL) ML Lab File ID (1): ZH6A006.d

% Moisture: Lab File ID (2):

Extraction: (Type) SPE Date Received: 07/31/2012

Concentrated Extract Volume: 10000 (uL) Date Extracted: 08/02/2012

Injection Volume: 100 (uL) Date Analyzed: 08/06/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
618-87-1	3,5-Dinitroaniline	0.11	U
55-63-0	Nitroglycerin	0.77	U
78-11-5	PETN	0.77	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A006.d
Lab Smp Id: 9980394014 Client Smp ID: FTSW-AA-SO-22 ERB
Inj. Date : 06-AUG-2012 15:58
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980394014;AJL;;;;;1040
Misc Info : ZZ HPLC 3174 D8330W
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\8330E1_218
Meth Date : 07-Aug-2012 08:51 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1040.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/13/12
REPORTED 8/13/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
$ 1	1,4-Dinitrobenzene	13.826	13.750	0.076	56099	422.353	4.06109
3	3,5-Dinitroaniline	Compound Not Detected.					
4	Nitroglycerin	Compound Not Detected.					
5	PETN	Compound Not Detected.					

Data File: ZH6A006.d
Report Date: 13-Aug-2012 13:07

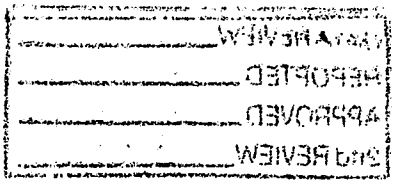
ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: LIQUID
Lab Smp Id: 9980394014
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3174 D8330W

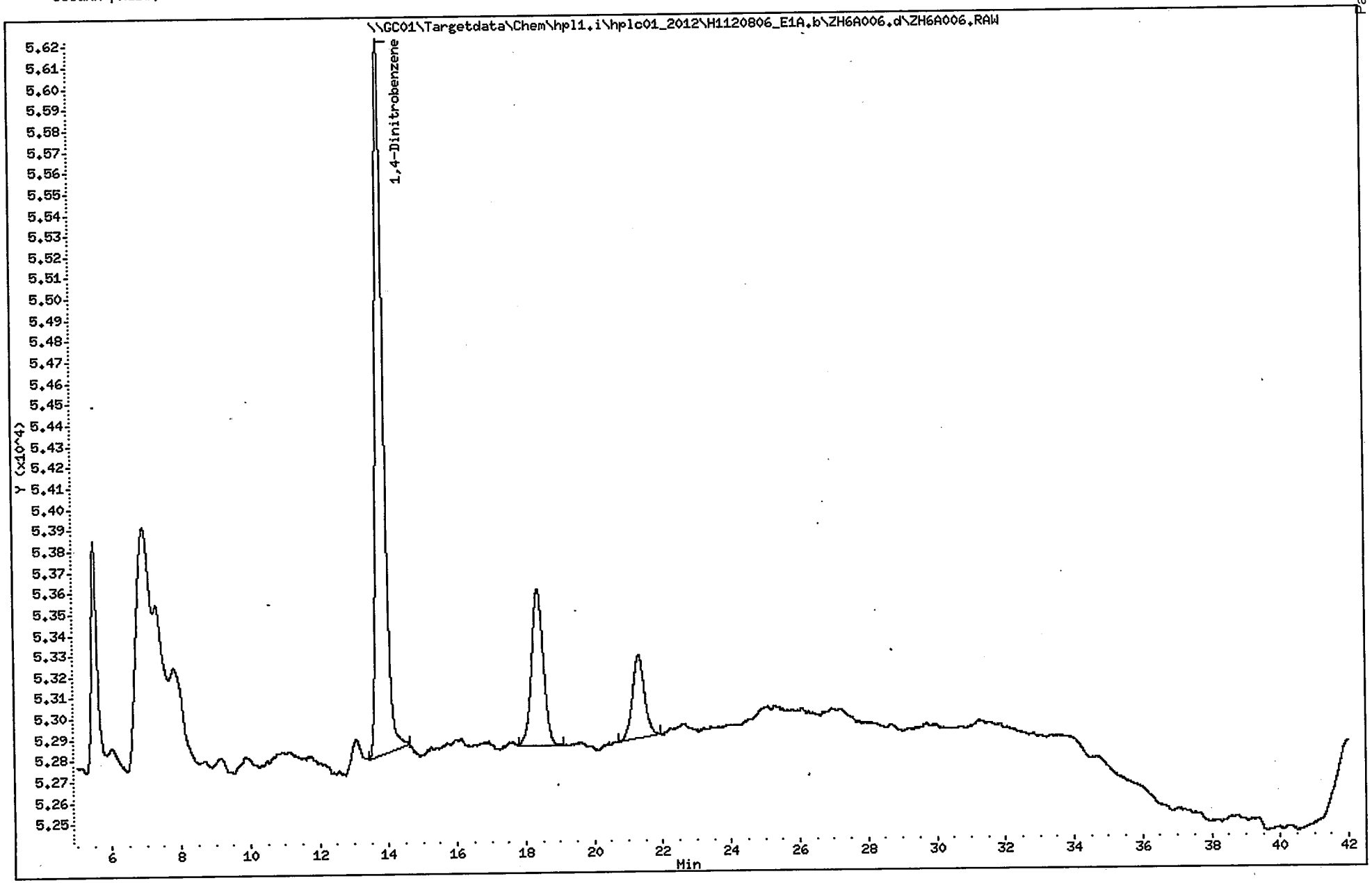
Client SDG: ERT002|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-22 ERB
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	4.80769	4.06109	84.47	50-150



Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A006.d
Date : 06-AUG-2012 15:58
Client ID: FTSW-AA-SO-22 ERB
Sample Info: 9980394014;AJL;;;;;1040
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



Standards Raw Data

Initial Calibrations

6A

RETENTION TIMES OF INITIAL CALIBRATION

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/14/2011

Calibration Times: 17:54 22:12

GC Column: E1, 254nm ID: 4.1 (mm)

LAB FILE ID: RT1 = ZKEB005.d RT2 = ZKEB006.d RT3 = ZKEB007.d

RT4 = ZKEB008.d RT5 = ZKEB009.d RT6 = ZKEB010.d

COMPOUND	RT1	RT2	RT3	RT4	RT5	RT6	MEAN RT	RT WINDOW FROM	RT WINDOW TO
2-Amino-4,6-dinitro	24.790	24.773	24.786	24.770	24.746	24.696	24.744	23.894	25.594
4-Amino-2,6-dinitro	23.606	23.606	23.610	23.600	23.576	23.526	23.572	22.722	24.422
1,3-Dinitrobenzene	15.366	15.363	15.370	15.366	15.356	15.336	15.353	15.063	15.643
2,4-Dinitrotoluene	27.020	27.003	27.006	26.993	26.980	26.933	26.977	26.427	27.527
2,6-Dinitrotoluene	26.070	26.026	26.040	26.030	26.013	25.970	26.013	25.473	26.553
HMX	4.853	4.860	4.866	4.876	4.886	4.906	4.882	4.612	5.152
Nitrobenzene	17.330	17.316	17.320	17.316	17.303	17.276	17.302	16.982	17.622
4-Nitrotoluene	34.210	34.246	34.286	34.270	34.236	34.173	34.222	33.542	34.902
2-Nitrotoluene	31.503	31.446	31.446	31.436	31.420	31.366	31.420	30.840	32.000
3-Nitrotoluene	36.753	36.716	36.720	36.690	36.663	36.613	36.674	35.964	37.384
RDX	8.326	8.336	8.340	8.340	8.340	8.336	8.335	8.055	8.615
Tetryl	18.333	18.326	18.323	18.330	18.316	18.300	18.316	17.656	18.976
1,3,5-Trinitrobenze	11.860	11.866	11.870	11.870	11.870	11.863	11.865	11.665	12.065
2,4,6-Trinitrotolue	21.156	21.166	21.166	21.163	21.150	21.130	21.149	20.689	21.609
1,4-Dinitrobenzene	13.763	13.766	13.773	13.766	13.763	13.750	13.760	12.910	14.610

6A

RETENTION TIMES OF INITIAL CALIBRATION

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/14/2011

Calibration Times: 17:54 22:12

GC Column: E1, 254nm ID: 4.1 (mm)

LAB FILE ID: RT7 = ZKEB011.d

COMPOUND	RT7						MEAN RT	RT WINDOW FROM	RT WINDOW TO
2-Amino-4,6-dinitro	24.650						24.744	23.894	25.594
4-Amino-2,6-dinitro	23.483						23.572	22.722	24.422
1,3-Dinitrobenzene	15.316						15.353	15.063	15.643
2,4-Dinitrotoluene	26.903						26.977	26.427	27.527
2,6-Dinitrotoluene	25.940						26.013	25.473	26.553
HMX	4.930						4.882	4.612	5.152
Nitrobenzene	17.250						17.302	16.982	17.622
4-Nitrotoluene	34.133						34.222	33.542	34.902
2-Nitrotoluene	31.326						31.420	30.840	32.000
3-Nitrotoluene	36.566						36.674	35.964	37.384
RDX	8.330						8.335	8.055	8.615
Tetryl	18.283						18.316	17.656	18.976
1,3,5-Trinitrobenze	11.856						11.865	11.665	12.065
2,4,6-Trinitrotolue	21.110						21.149	20.689	21.609
1,4-Dinitrobenzene	13.736						13.760	12.910	14.610

6B

ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/14/2011

Calibration Time(s): 17:54 22:12

GC Column: E1, 254nm ID: 4.1 (mm)

LAB FILE ID: RRF1 = ZKEB005.d RRF2 = ZKEB006.d RRF3 = ZKEB007.d RRF4 = ZKEB008.d

RRF5 = ZKEB009.d RRF6 = ZKEB010.d RRF7 = ZKEB011.d

COMPOUND	RRF1	RRF2	RRF3	RRF4	RRF5	CT
2-Amino-4,6-dinitrotoluene	230	302	299	313	306	A
4-Amino-2,6-dinitrotoluene	167	241	219	234	227	A
1,3-Dinitrobenzene	372	437	440	464	458	A
2,4-Dinitrotoluene	335	398	411	422	409	A
2,6-Dinitrotoluene	176	227	220	233	223	A
HMX	116	126	130	133	129	A
Nitrobenzene	240	276	267	275	274	A
4-Nitrotoluene	102	121	131	148	144	A
2-Nitrotoluene	128	171	173	182	179	A
3-Nitrotoluene	155	170	191	187	186	A
RDX	131	154	163	160	160	A
Tetryl	248	280	255	268	264	A
1,3,5-Trinitrobenzene	265	336	349	349	347	A
2,4,6-Trinitrotoluene(TNT)	261	316	318	325	323	A
1,4-Dinitrobenzene	288	344	357	362	359	A

CT Column contains the Calibration Type, A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

6B

ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Instrument ID: hpll.i Calibration Date(s): 11/14/2011 11/14/2011

Calibration Time(s): 17:54 22:12

GC Column: E1, 254n ID: 4.1 (mm)

LAB FILE ID: RRF1 = ZKEB005.d RRF2 = ZKEB006.d RRF3 = ZKEB007.d RRF4 = ZKEB008.d

RRF5 = ZKEB009.d RRF6 = ZKEB010.d RRF7 = ZKEB011.d

COMPOUND	RRF6	RRF7	CT	b	m1	m2	% RSD or R^2
2-Amino-4,6-dinitrotoluene	303	260	A		288		10.58960
4-Amino-2,6-dinitrotoluene	225	193	A		215		12.10871
1,3-Dinitrobenzene	450	384	A		429		8.46463
2,4-Dinitrotoluene	413	355	A		392		8.52224
2,6-Dinitrotoluene	224	192	A		213		9.88029
HMX	127	110	A		125		6.74028
Nitrobenzene	272	231	A		262		7.10871
4-Nitrotoluene	143	121	A		130		12.84894
2-Nitrotoluene	177	152	A		166		11.60487
3-Nitrotoluene	186	157	A		176		8.60429
RDX	157	134	A		151		8.73951
Tetryl	262	224	A		257		6.93349
1,3,5-Trinitrobenzene	343	295	A		326		10.19659
2,4,6-Trinitrotoluene(TNT)	319	274	A		305		8.59445
1,4-Dinitrobenzene	357	305	A		339		8.85687

CT (Column contains the Calibration Type: A = Average Response Factor, L = Linear Regression, and Q = Quadratic.

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB005
Lab Smp Id: LEVEL1
Inj Date : 14-NOV-2011 17:54
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL1;AJL;1;1
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 17:54 Cal File: ZKEB005.d
Als bottle: 58 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1	HMX	4.853	4.930	-0.077	2324	20.0000	18.6652(a)
2	RDX	8.326	8.330	-0.004	2616	20.0000	17.2977(a)
3	1,3,5-Trinitrobenzene	11.860	11.857	0.003	5291	20.0000	16.2241(a)
$ 4	1,4-Dinitrobenzene	13.763	13.737	0.026	5751	20.0000	16.9665(a)
5	1,3-Dinitrobenzene	15.366	15.317	0.049	7446	20.0000	17.3484(a)
6	Nitrobenzene	17.330	17.250	0.080	4799	20.0000	18.3004(a)
7	Tetryl	18.333	18.283	0.050	4954	20.0000	19.2619(a)
8	2,4,6-Trinitrotoluene(TNT)	21.156	21.110	0.046	5220	20.0000	17.1164(a)
9	4-Amino-2,6-dinitrotoluene	23.606	23.483	0.123	3347	20.0000	15.5523(a)
10	2-Amino-4,6-dinitrotoluene	24.790	24.650	0.140	4608	20.0000	16.0193(a)
11	2,6-Dinitrotoluene	26.070	25.940	0.130	3522	20.0000	16.4970(a)
12	2,4-Dinitrotoluene	27.020	26.903	0.117	6693	20.0000	17.0880(a)
13	2-Nitrotoluene	31.503	31.327	0.176	2567	20.0000	15.4445(a)
14	4-Nitrotoluene	34.210	34.133	0.077	2031	20.0000	15.6413(aM)
15	3-Nitrotoluene	36.753	36.567	0.186	3100	20.0000	17.6239(aM)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB005.d

Date : 14-NOV-2011 17:54

Client ID:

Instrument: hpl1.i

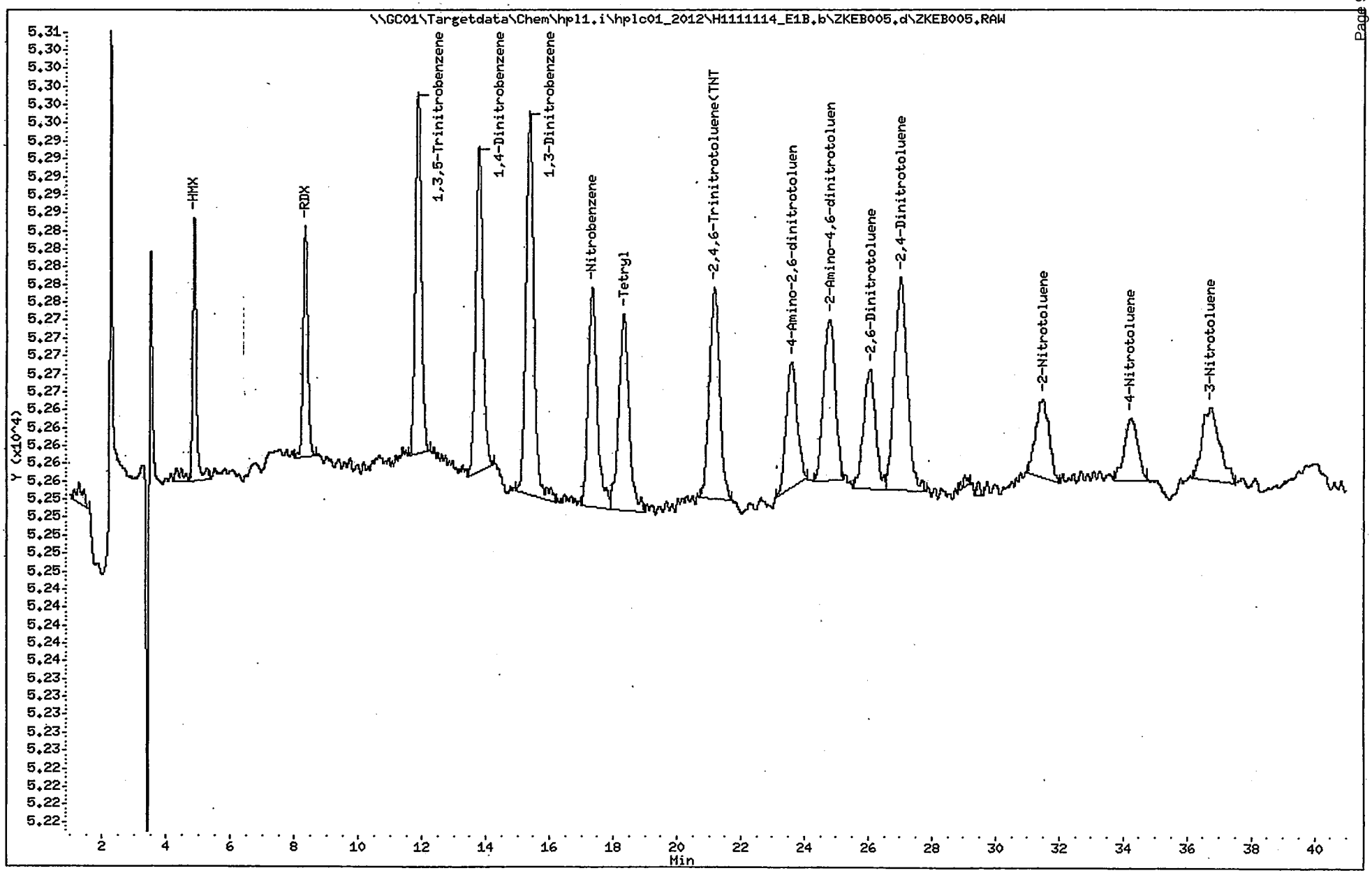
Sample Info: LEVEL1;AJL;1;1

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB006
Lab Smp Id: LEVEL2
Inj Date : 14-NOV-2011 18:37
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL2;AJL;1;2
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 18:37 Cal File: ZKEB006.d
Als bottle: 58 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

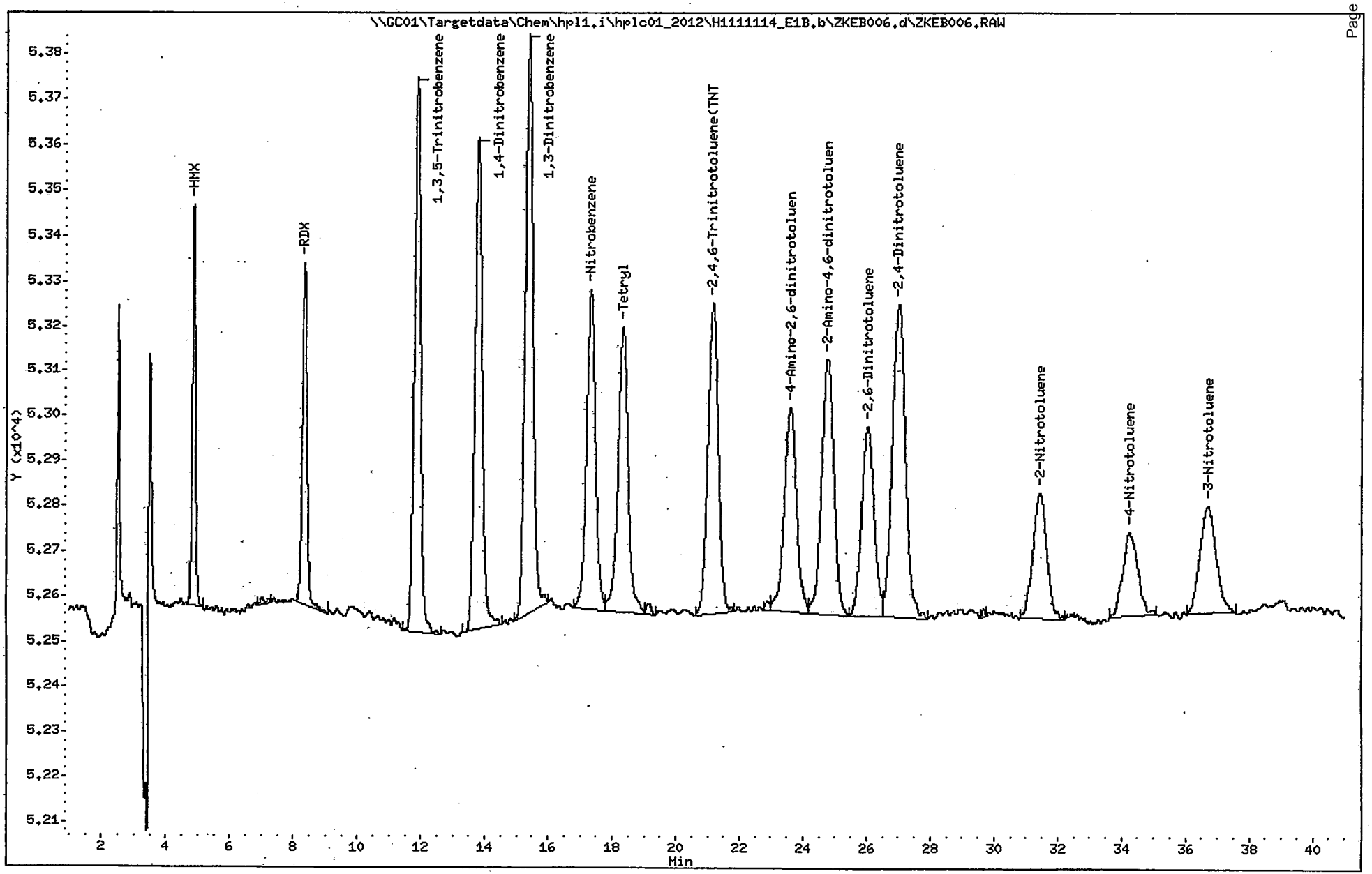
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.860	4.930	-0.070	6302	50.0000	50.6144
2	RDX	8.336	8.330	0.006	7698	50.0000	50.9012
3	1,3,5-Trinitrobenzene	11.866	11.857	0.009	16783	50.0000	51.4625
$ 4	1,4-Dinitrobenzene	13.766	13.737	0.029	17206	50.0000	50.7608
5	1,3-Dinitrobenzene	15.363	15.317	0.046	21850	50.0000	50.9082
6	Nitrobenzene	17.316	17.250	0.066	13791	50.0000	52.5903
7	Tetryl	18.326	18.283	0.043	13993	50.0000	54.4068
8	2,4,6-Trinitrotoluene(TNT)	21.166	21.110	0.056	15775	50.0000	51.7262
9	4-Amino-2,6-dinitrotoluene	23.606	23.483	0.123	12068	50.0000	56.0758
10	2-Amino-4,6-dinitrotoluene	24.773	24.650	0.123	15107	50.0000	52.5180
11	2,6-Dinitrotoluene	26.026	25.940	0.086	11368	50.0000	53.2475
12	2,4-Dinitrotoluene	27.003	26.903	0.100	19896	50.0000	50.7968
13	2-Nitrotoluene	31.446	31.327	0.119	8547	50.0000	51.4234
14	4-Nitrotoluene	34.246	34.133	0.113	6027	50.0000	46.4156
15	3-Nitrotoluene	36.716	36.567	0.149	8485	50.0000	48.2382

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB006.d
Date : 14-NOV-2011 18:37
Client ID:
Sample Info: LEVEL2;AJL;1;2
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB007
Lab Smp Id: LEVEL3
Inj Date : 14-NOV-2011 19:20
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL3;AJL;1;3
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 19:20 Cal File: ZKEB007.d
Als bottle: 58 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

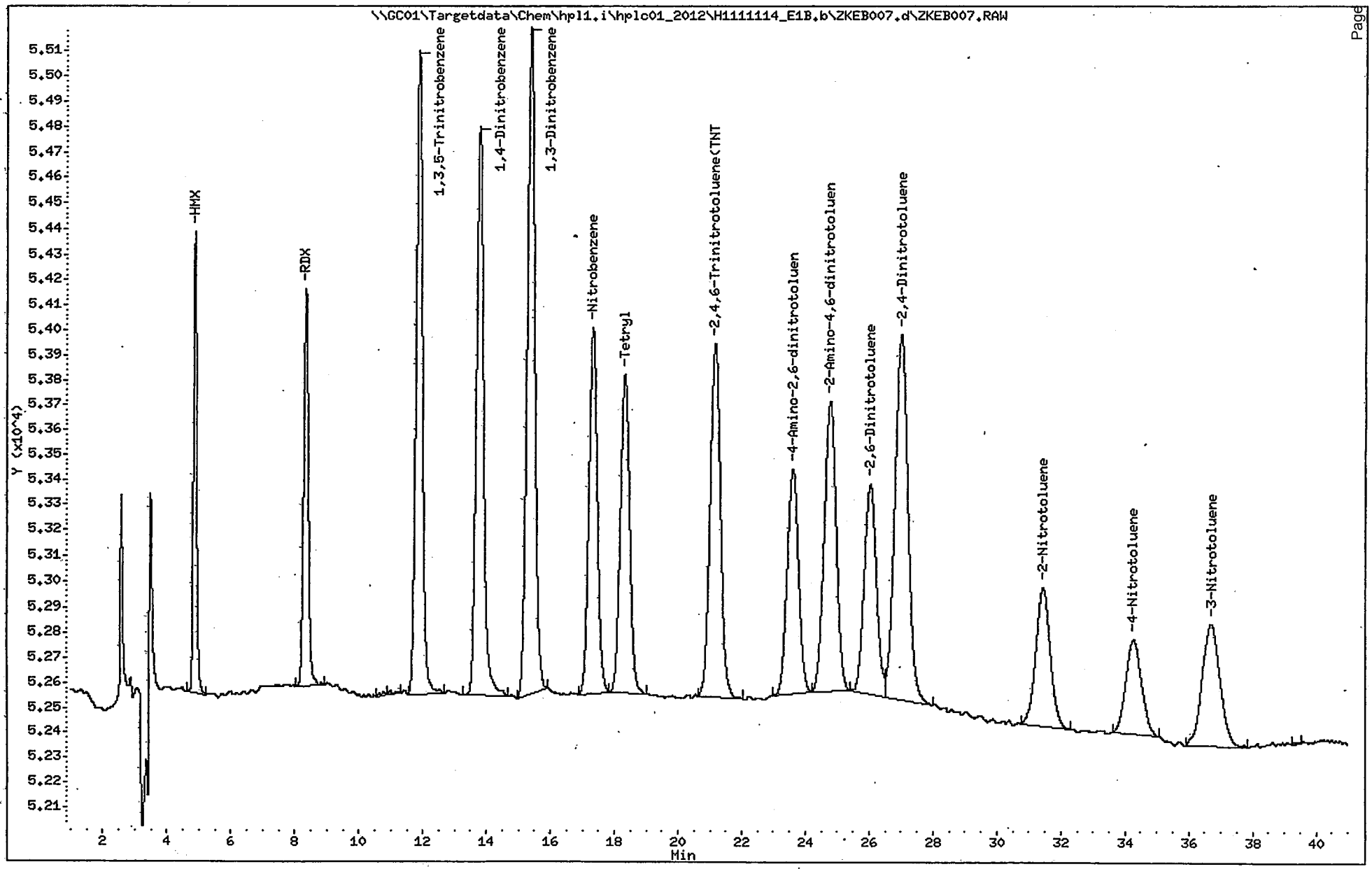
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.866	4.930	-0.064	13031	100.000	104.658
2	RDX	8.340	8.330	0.010	16266	100.000	107.555
3	1,3,5-Trinitrobenzene	11.870	11.857	0.013	34899	100.000	107.013
$ 4	1,4-Dinitrobenzene	13.773	13.737	0.036	35733	100.000	105.419
5	1,3-Dinitrobenzene	15.370	15.317	0.053	44034	100.000	102.595
6	Nitrobenzene	17.320	17.250	0.070	26726	100.000	101.916
7	Tetryl	18.323	18.283	0.040	25540	100.000	99.3032
8	2,4,6-Trinitrotoluene(TNT)	21.166	21.110	0.056	31767	100.000	104.164
9	4-Amino-2,6-dinitrotoluene	23.610	23.483	0.127	21943	100.000	101.962
10	2-Amino-4,6-dinitrotoluene	24.786	24.650	0.136	29905	100.000	103.962
11	2,6-Dinitrotoluene	26.040	25.940	0.100	21955	100.000	102.837
12	2,4-Dinitrotoluene	27.006	26.903	0.103	41109	100.000	104.956
13	2-Nitrotoluene	31.446	31.327	0.119	17335	100.000	104.297
14	4-Nitrotoluene	34.286	34.133	0.153	13069	100.000	100.648
15	3-Nitrotoluene	36.720	36.567	0.153	19059	100.000	108.353

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB007.d
Date : 14-NOV-2011 19:20
Client ID:
Sample Info: LEVEL3;AJL;1;3
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB008
Lab Smp Id: LEVEL4
Inj Date : 14-NOV-2011 20:03
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL4;AJL;1;4
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 20:03 Cal File: ZKEB008.RAW
Als bottle: 58 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

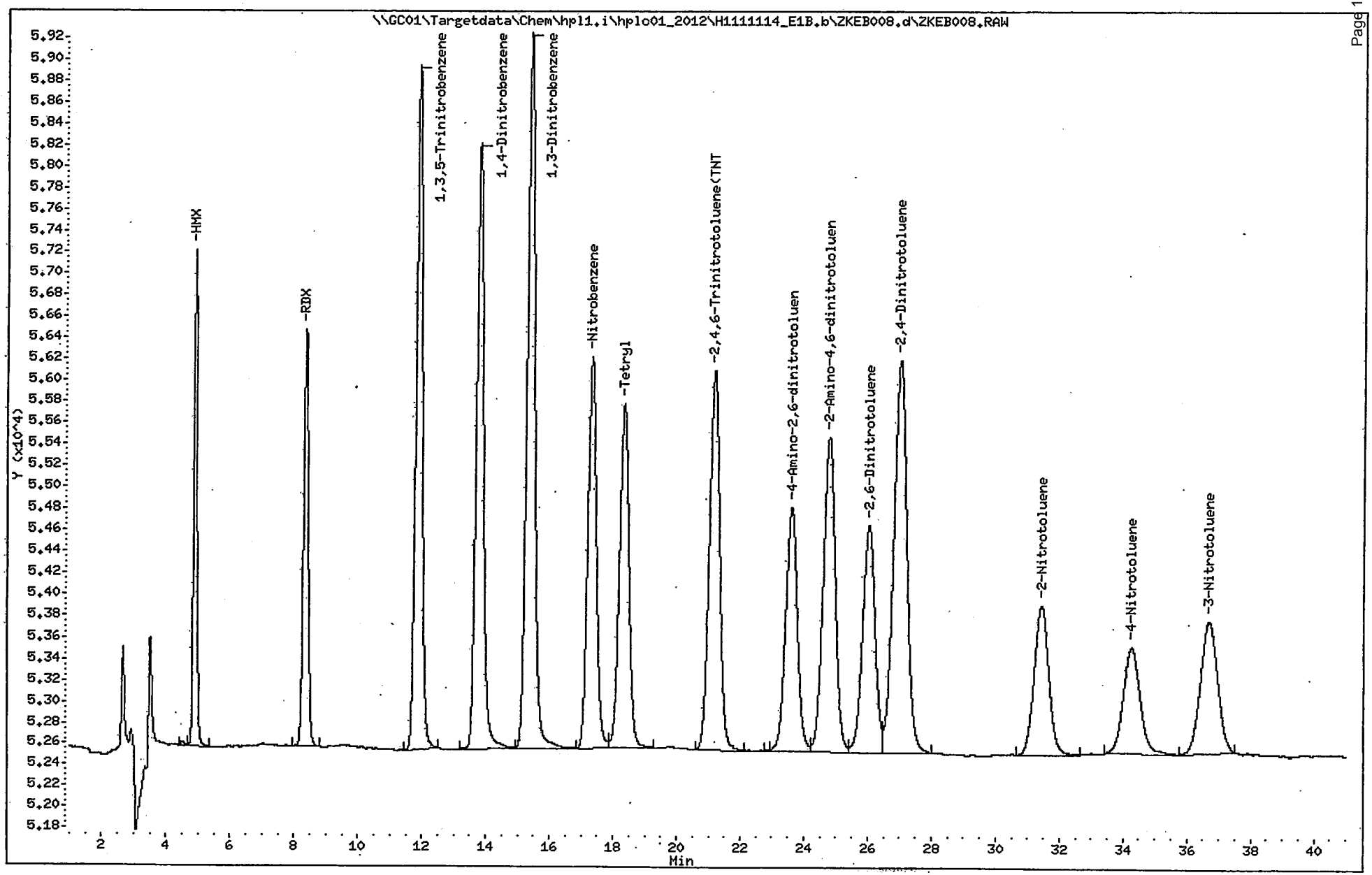
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.876	4.930	-0.054	33176	250.000	266.452
2	RDX	8.340	8.330	0.010	40108	250.000	265.205
3	1,3,5-Trinitrobenzene	11.870	11.857	0.013	87211	250.000	267.419
$ 4	1,4-Dinitrobenzene	13.766	13.737	0.029	90493	250.000	266.970
5	1,3-Dinitrobenzene	15.366	15.317	0.049	115905	250.000	270.046
6	Nitrobenzene	17.316	17.250	0.066	68813	250.000	262.410
7	Tetryl	18.330	18.283	0.047	66925	250.000	260.214
8	2,4,6-Trinitrotoluene(TNT)	21.163	21.110	0.053	81269	250.000	266.481
9	4-Amino-2,6-dinitrotoluene	23.600	23.483	0.117	58474	250.000	271.708
10	2-Amino-4,6-dinitrotoluene	24.770	24.650	0.120	78170	250.000	271.750
11	2,6-Dinitrotoluene	26.030	25.940	0.090	58233	250.000	272.762
12	2,4-Dinitrotoluene	26.993	26.903	0.090	105443	250.000	269.208
13	2-Nitrotoluene	31.436	31.327	0.109	45453	250.000	273.470
14	4-Nitrotoluene	34.270	34.133	0.137	37055	250.000	285.371
15	3-Nitrotoluene	36.690	36.567	0.123	46682	250.000	265.393

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB008.d
Date : 14-NOV-2011 20:03
Client ID:
Sample Info: LEVEL4;AJL;1;4
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB009
Lab Smp Id: LEVEL5
Inj Date : 14-NOV-2011 20:46
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL5;AJL;1;5
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 20:46 Cal File: ZKEB009.d
Als bottle: 58 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

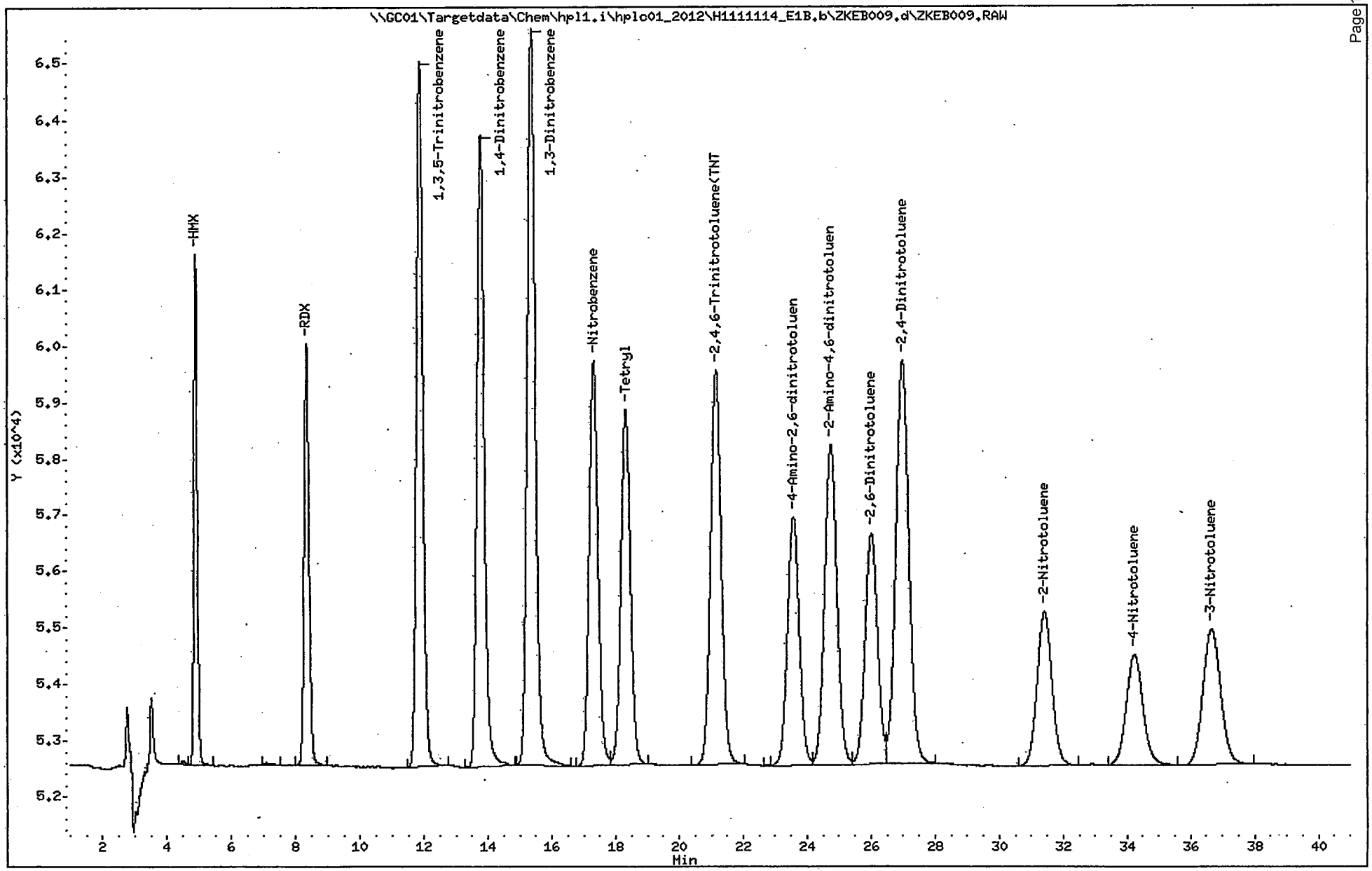
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.886	4.930	-0.044	64611	500.000	518.922
2	RDX	8.340	8.330	0.010	79835	500.000	527.890
3	1,3,5-Trinitrobenzene	11.870	11.857	0.013	173473	500.000	531.929
$ 4	1,4-Dinitrobenzene	13.763	13.737	0.026	179549	500.000	529.701
5	1,3-Dinitrobenzene	15.356	15.317	0.039	228785	500.000	533.045
6	Nitrobenzene	17.303	17.250	0.053	137130	500.000	522.929
7	Tetryl	18.316	18.283	0.033	131907	500.000	512.873
8	2,4,6-Trinitrotoluene(TNT)	21.150	21.110	0.040	161394	500.000	529.210
9	4-Amino-2,6-dinitrotoluene	23.576	23.483	0.093	113416	500.000	527.005
10	2-Amino-4,6-dinitrotoluene	24.746	24.650	0.096	152906	500.000	531.563
11	2,6-Dinitrotoluene	26.013	25.940	0.073	111418	500.000	521.880
12	2,4-Dinitrotoluene	26.980	26.903	0.077	204407	500.000	521.875
13	2-Nitrotoluene	31.420	31.327	0.093	89591	500.000	539.028
14	4-Nitrotoluene	34.236	34.133	0.103	72009	500.000	554.561
15	3-Nitrotoluene	36.663	36.567	0.096	92926	500.000	528.295

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB009.d
Date : 14-NOV-2011 20:46
Client ID:
Sample Info: LEVEL5;AJL;1;5
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB010
Lab Smp Id: LEVEL6
Inj Date : 14-NOV-2011 21:29
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL6;AJL;1;6
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 21:29 Cal File: ZKEB010.d
Als bottle: 58 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

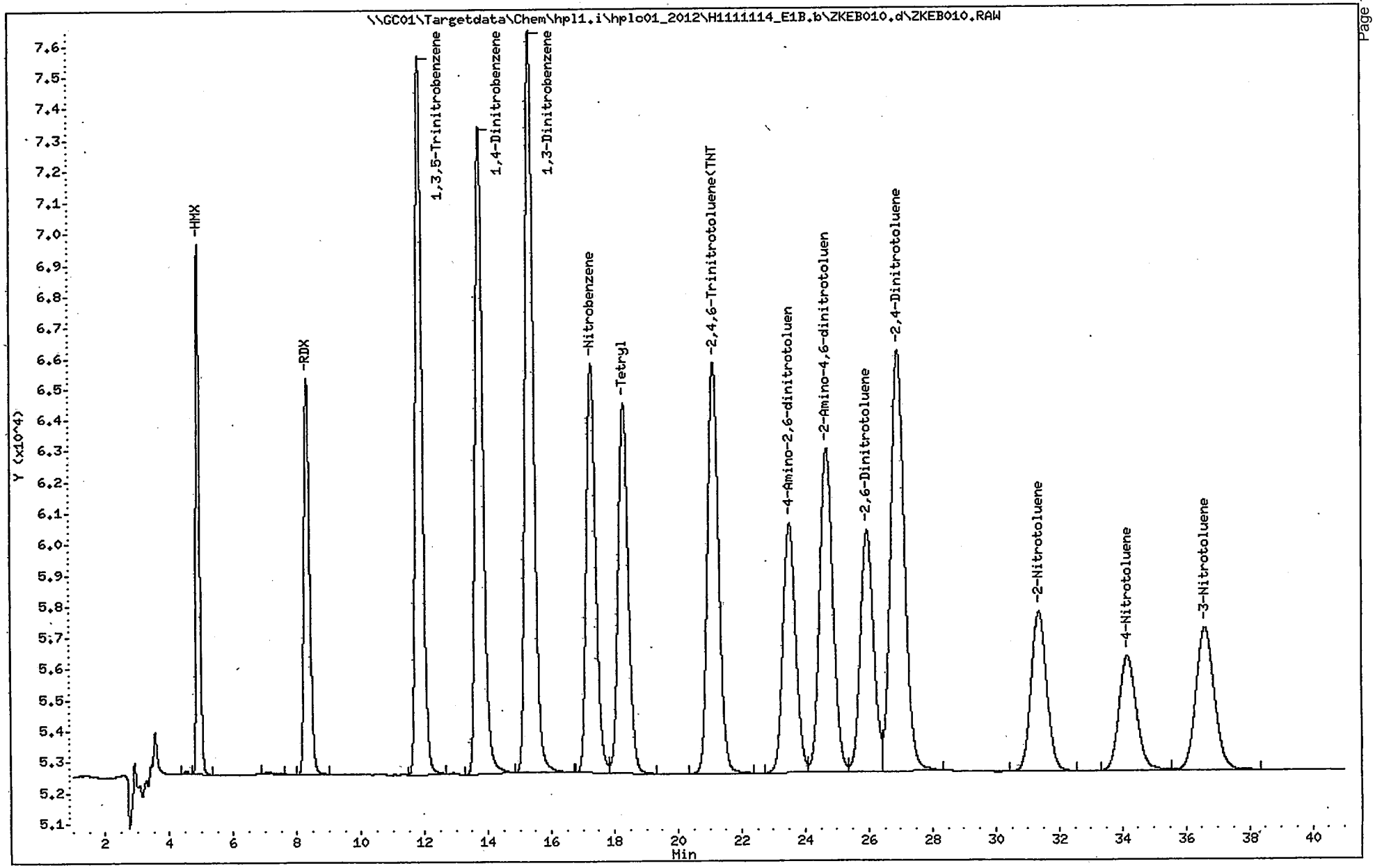
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.906	4.930	-0.024	127410	1000.00	1023.29
2	RDX	8.336	8.330	0.006	157230	1000.00	1039.65
3	1,3,5-Trinitrobenzene	11.863	11.857	0.006	343178	1000.00	1052.30
$ 4	1,4-Dinitrobenzene	13.750	13.737	0.013	357308	1000.00	1054.12
5	1,3-Dinitrobenzene	15.336	15.317	0.019	449964	1000.00	1048.37
6	Nitrobenzene	17.276	17.250	0.026	271997	1000.00	1037.23
7	Tetryl	18.300	18.283	0.017	262172	1000.00	1019.36
8	2,4,6-Trinitrotoluene(TNT)	21.130	21.110	0.020	319265	1000.00	1046.87
9	4-Amino-2,6-dinitrotoluene	23.526	23.483	0.043	224854	1000.00	1044.82
10	2-Amino-4,6-dinitrotoluene	24.696	24.650	0.046	303239	1000.00	1054.18
11	2,6-Dinitrotoluene	25.970	25.940	0.030	223860	1000.00	1048.56
12	2,4-Dinitrotoluene	26.933	26.903	0.030	412840	1000.00	1054.03
13	2-Nitrotoluene	31.366	31.327	0.039	177371	1000.00	1067.16
14	4-Nitrotoluene	34.173	34.133	0.040	142796	1000.00	1099.71
15	3-Nitrotoluene	36.613	36.567	0.046	186402	1000.00	1059.72

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB010.d
Date : 14-NOV-2011 21:29
Client ID:
Sample Info: LEVEL6;AJL;1;6
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB011
Lab Smp Id: LEVEL7
Inj Date : 14-NOV-2011 22:12
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL7;AJL;1;7
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 58 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

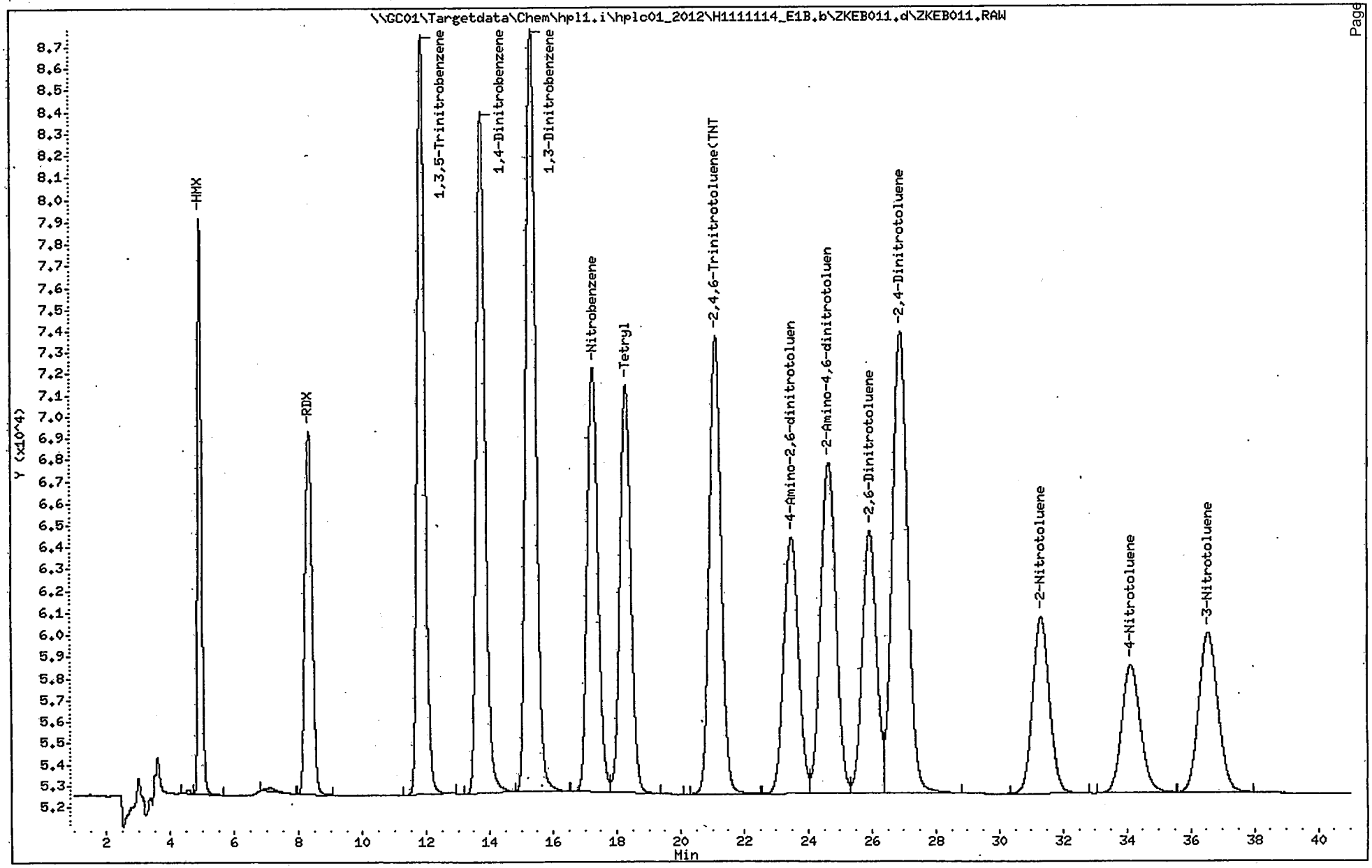
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1	HMX	4.930	4.930	0.000	219369	2000.00	1761.86
2	RDX	8.330	8.330	0.000	267775	2000.00	1770.60
3	1,3,5-Trinitrobenzene	11.856	11.857	-0.001	589354	2000.00	1807.17
$ 4	1,4-Dinitrobenzene	13.736	13.737	-0.001	610721	2000.00	1801.74
5	1,3-Dinitrobenzene	15.316	15.317	-0.001	767270	2000.00	1787.66
6	Nitrobenzene	17.250	17.250	0.000	462204	2000.00	1762.56
7	Tetryl	18.283	18.283	0.000	447399	2000.00	1739.55
8	2,4,6-Trinitrotoluene(TNT)	21.110	21.110	0.000	547000	2000.00	1793.61
9	4-Amino-2,6-dinitrotoluene	23.483	23.483	0.000	385477	2000.00	1791.18
10	2-Amino-4,6-dinitrotoluene	24.650	24.650	0.000	520509	2000.00	1809.50
11	2,6-Dinitrotoluene	25.940	25.940	0.000	383635	2000.00	1796.94
12	2,4-Dinitrotoluene	26.903	26.903	0.000	709325	2000.00	1810.99
13	2-Nitrotoluene	31.326	31.327	-0.001	304908	2000.00	1834.49
14	4-Nitrotoluene	34.133	34.133	0.000	242252	2000.00	1865.65
15	3-Nitrotoluene	36.566	36.567	-0.001	314025	2000.00	1785.27

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB011.d
Date : 14-NOV-2011 22:12
Client ID:
Sample Info: LEVEL7;AJL;1;7
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



6A

RETENTION TIMES OF INITIAL CALIBRATION

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/15/2011

Calibration Times: 23:38 03:55

GC Column: E1, 218nm ID: 4.1 (mm)

LAB FILE ID: RT1 = ZKEA013.d RT2 = ZKEA014.d RT3 = ZKEA015.d

RT4 = ZKEA016.d RT5 = ZKEA017.d RT6 = ZKEA018.d

COMPOUND	RT1	RT2	RT3	RT4	RT5	RT6	MEAN RT	RT WINDOW FROM	RT WINDOW TO
3,5-Dinitroaniline		17.273	17.280	17.290	17.286	17.263	14.805	13.855	15.755
Nitroglycerin	18.623	18.600	18.613	18.620	18.620	18.610	18.613	18.233	18.993
PETN	37.956	37.960	37.960	37.970	37.973	37.980	37.965	37.115	38.815
1,4-Dinitrobenzene	13.770	13.750	13.753	13.760	13.760	13.746	13.754	12.904	14.604

6A

RETENTION TIMES OF INITIAL CALIBRATION

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/15/2011

Calibration Times: 23:38 03:55

GC Column: E1, 218nm ID: 4.1 (mm)

LAB FILE ID: RT7 = ZKEA019.d

COMPOUND	RT7						MEAN RT	RT WINDOW FROM	RT WINDOW TO
3,5-Dinitroaniline	17.240						14.805	13.855	15.755
Nitroglycerin	18.603						18.613	18.233	18.993
PETN	37.953						37.965	37.115	38.815
1,4-Dinitrobenzene	13.740						13.754	12.904	14.604

6B

ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/15/2011

Calibration Time(s): 23:38 03:55

GC Column: E1, 218nm ID: 4.1 (mm)

LAB FILE ID: RRF1 = ZKEA013.d RRF2 = ZKEA014.d RRF3 = ZKEA015.d RRF4 = ZKEA016.d

RRF5 = ZKEA017.d RRF6 = ZKEA018.d RRF7 = ZKEA019.d

COMPOUND	RRF1	RRF2	RRF3	RRF4	RRF5	CT
3,5-Dinitroaniline	753	748	756	761	747	A
Nitroglycerin	59.10000	64.46000	68.10200	68.20240	67.59760	A
PETN	53.02000	82.28400	78.83200	77.27440	77.91920	A
1,4-Dinitrobenzene	123	154	137	134	134	A

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

6B

ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/15/2011

Calibration Time(s): 23:38 03:55

GC Column: E1, 218n ID: 4.1 (mm)

LAB FILE ID: RRF1 = ZKEA013.d RRF2 = ZKEA014.d RRF3 = ZKEA015.d RRF4 = ZKEA016.d

RRF5 = ZKEA017.d RRF6 = ZKEA018.d RRF7 = ZKEA019.d

COMPOUND	RRF6	RRF7	CT	b	m1	m2	% RSD or R^2
3,5-Dinitroaniline	745	650	A		737		5.24410
Nitroglycerin	68.42180	59.25520	A		65.01986		6.47771
PETN	78.06260	67.71130	A		73.58621		13.73671
1,4-Dinitrobenzene	130	118	A		133		8.79295

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

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EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
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Inj Date : 14-NOV-2011 23:38
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL1
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 23:38 Cal File: ZKEA013.RAW
Als bottle: 58 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
$	1 1,4-Dinitrobenzene	13.770	13.740	0.030	2451	20.0000	18.4529(a)
	4 Nitroglycerin	18.623	18.603	0.020	5910	100.000	90.8953(a)
	5 PETN	37.956	37.953	0.003	5302	100.000	71.1054(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA013.d

Page 2

Date : 14-NOV-2011 23:38

Client ID:

Instrument: hpl1.i

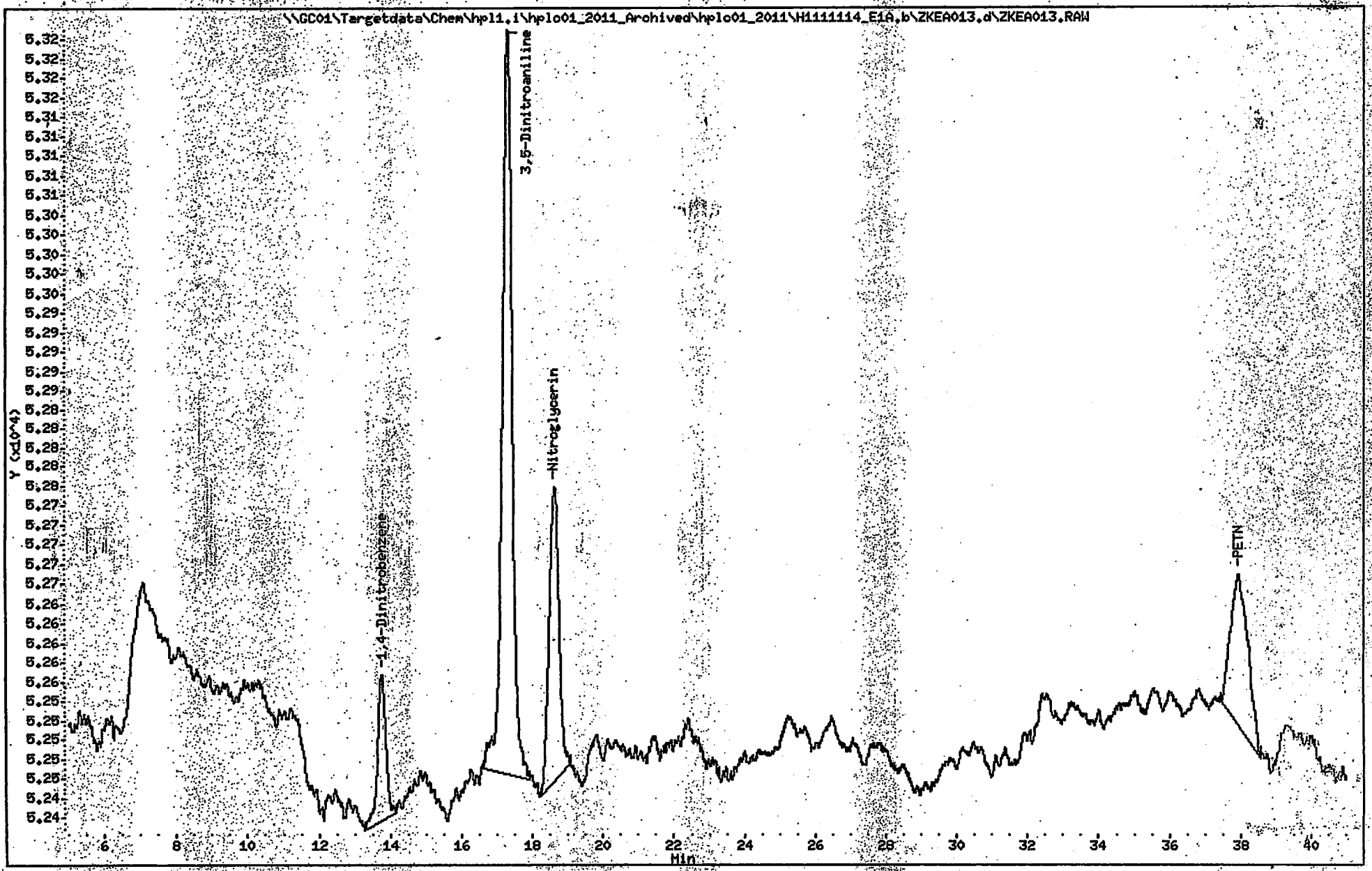
Sample Info: LEVEL1

Operator: AJL

Volume Injected (uL): 100.0

Column diameter: 4.60

Column phase: E1



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: LEVEL2
Inj Date : 15-NOV-2011 00:21
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL2
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 00:21 Cal File: ZKEA014.RAW
Als bottle: 58 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

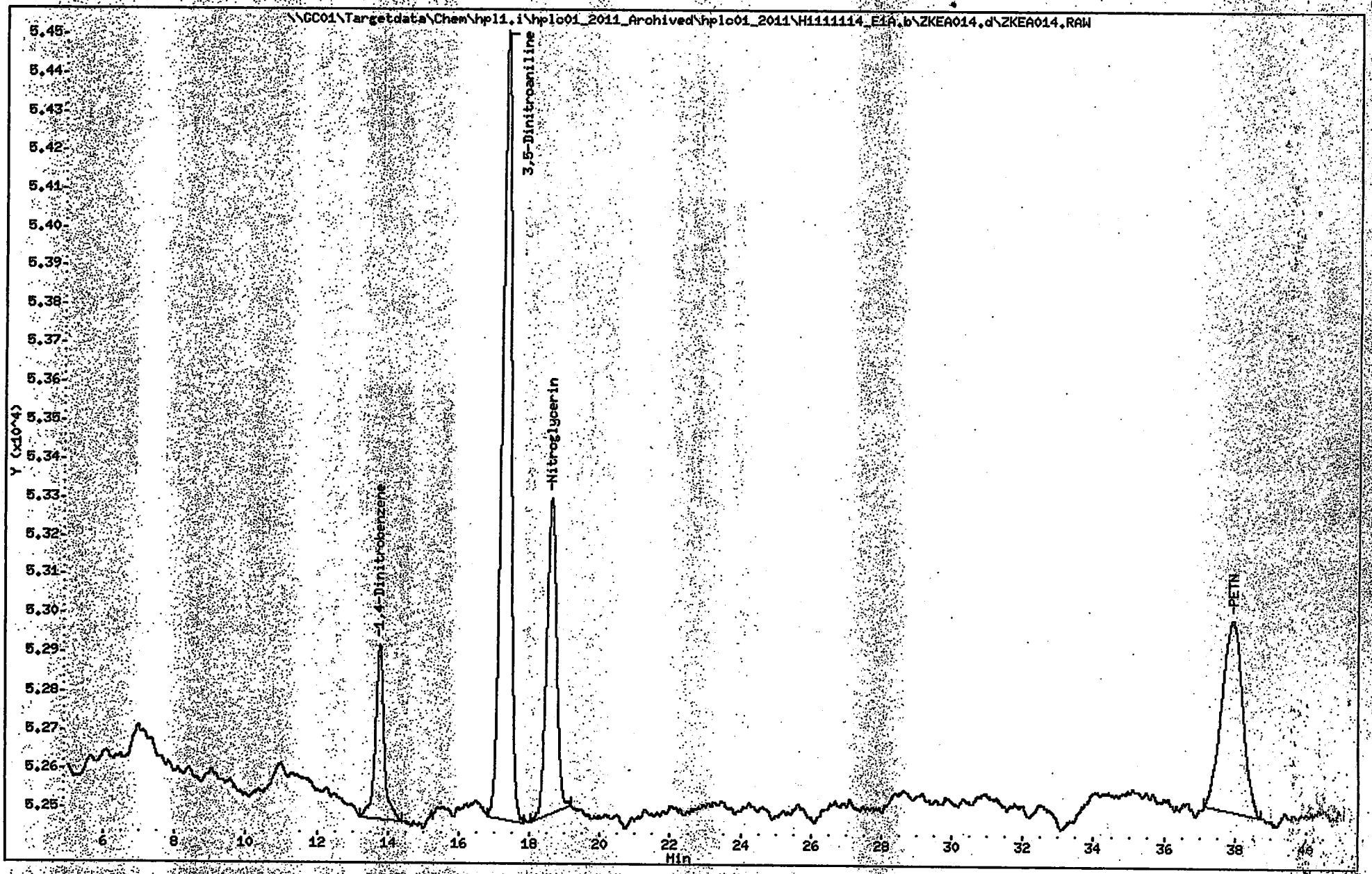
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.750	13.740	0.010	7715	50.0000	58.0840
3	3,5-Dinitroaniline	17.273	17.239	0.034	37401	50.0000	50.7430(a)
4	Nitroglycerin	18.600	18.603	-0.003	16115	250.000	247.847(a)
5	PETN	37.960	37.953	0.007	20571	250.000	275.879(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA014.d
Date : 15-NOV-2011 00:21
Client ID:
Sample Info: LEVEL2
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: LEVEL3
Inj Date : 15-NOV-2011 01:04
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL3
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 01:04 Cal File: ZKEA015.RAW
Als bottle: 58 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$	1 1,4-Dinitrobenzene	13.753	13.740	0.013	13699	100.000	103.136
	3 3,5-Dinitroaniline	17.280	17.239	0.041	75560	100.000	102.514
	4 Nitroglycerin	18.613	18.603	0.010	34051	500.000	523.702
	5 PETN	37.960	37.953	0.007	39416	500.000	528.610

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA015.d

Page 2

Date : 15-NOV-2011 01:04

Client ID:

Instrument: hpl1.i

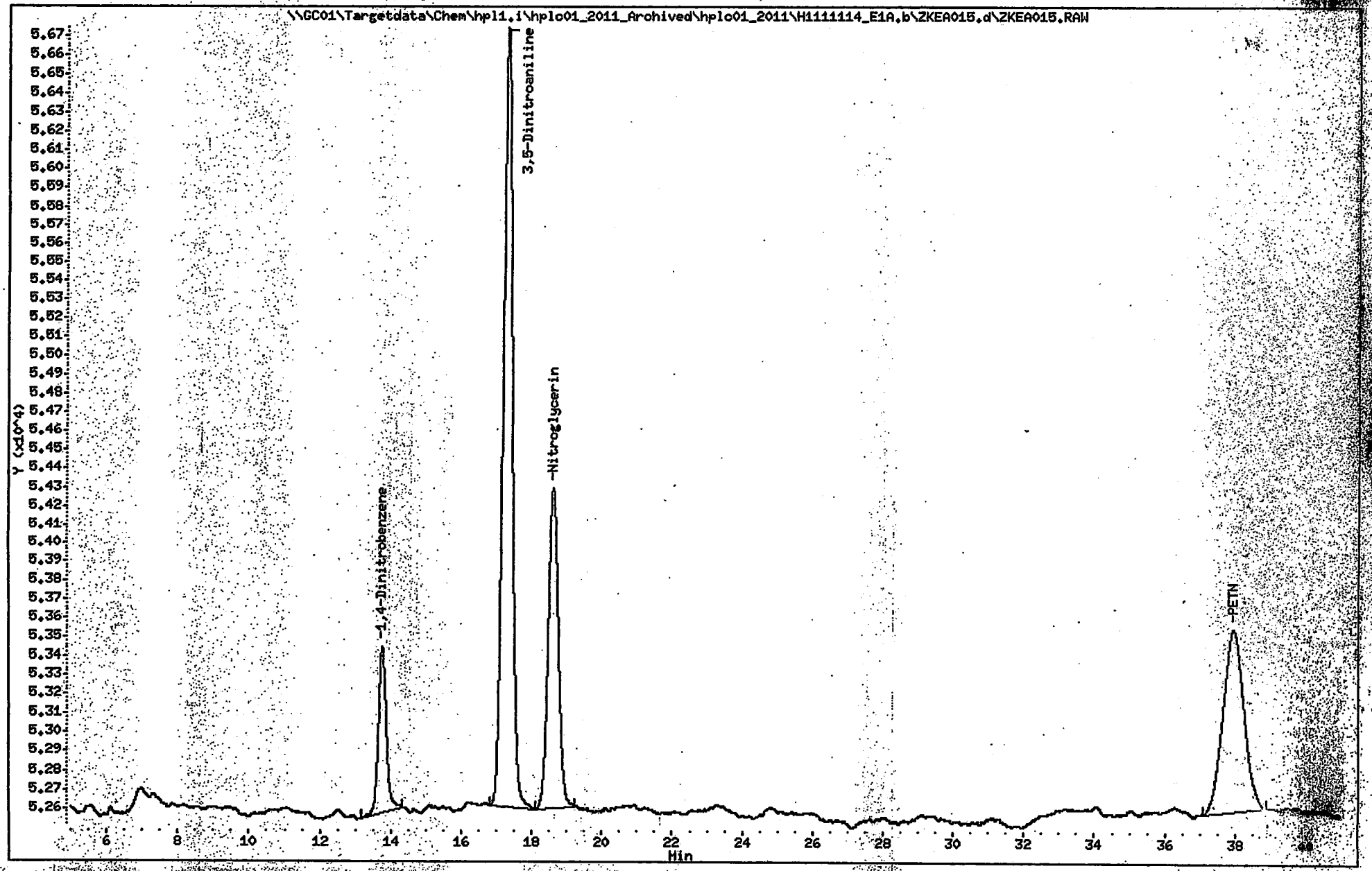
Sample Info: LEVEL3

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: LEVEL4
Inj Date : 15-NOV-2011 01:46
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL4
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 01:46 Cal File: ZKEA016.RAW
Als bottle: 58 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
$	1 1,4-Dinitrobenzene	13.760	13.740	0.020	33422	250.000	251.625
	3 3,5-Dinitroaniline	17.290	17.239	0.051	190204	250.000	258.055
	4 Nitroglycerin	18.620	18.603	0.017	85253	1250.00	1311.18
	5 PETN	37.970	37.953	0.017	96593	1250.00	1295.41

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA016.d

Page 1

Date : 15-NOV-2011 01:46

Client ID:

Instrument: hpl1.i

Sample Info: LEVEL4

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60

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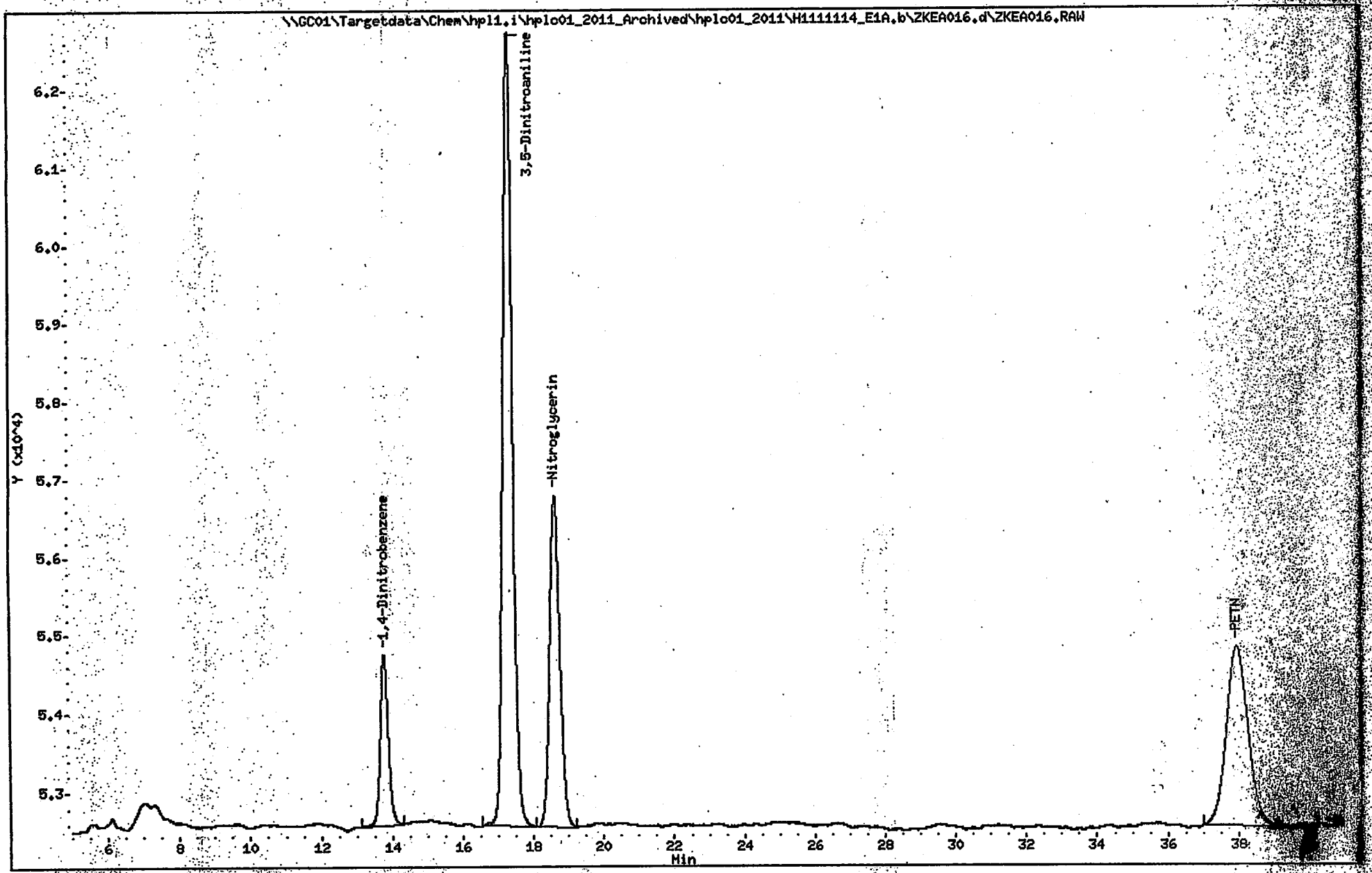


ALS - Middletown

EXPLOSIVES ANALYSIS

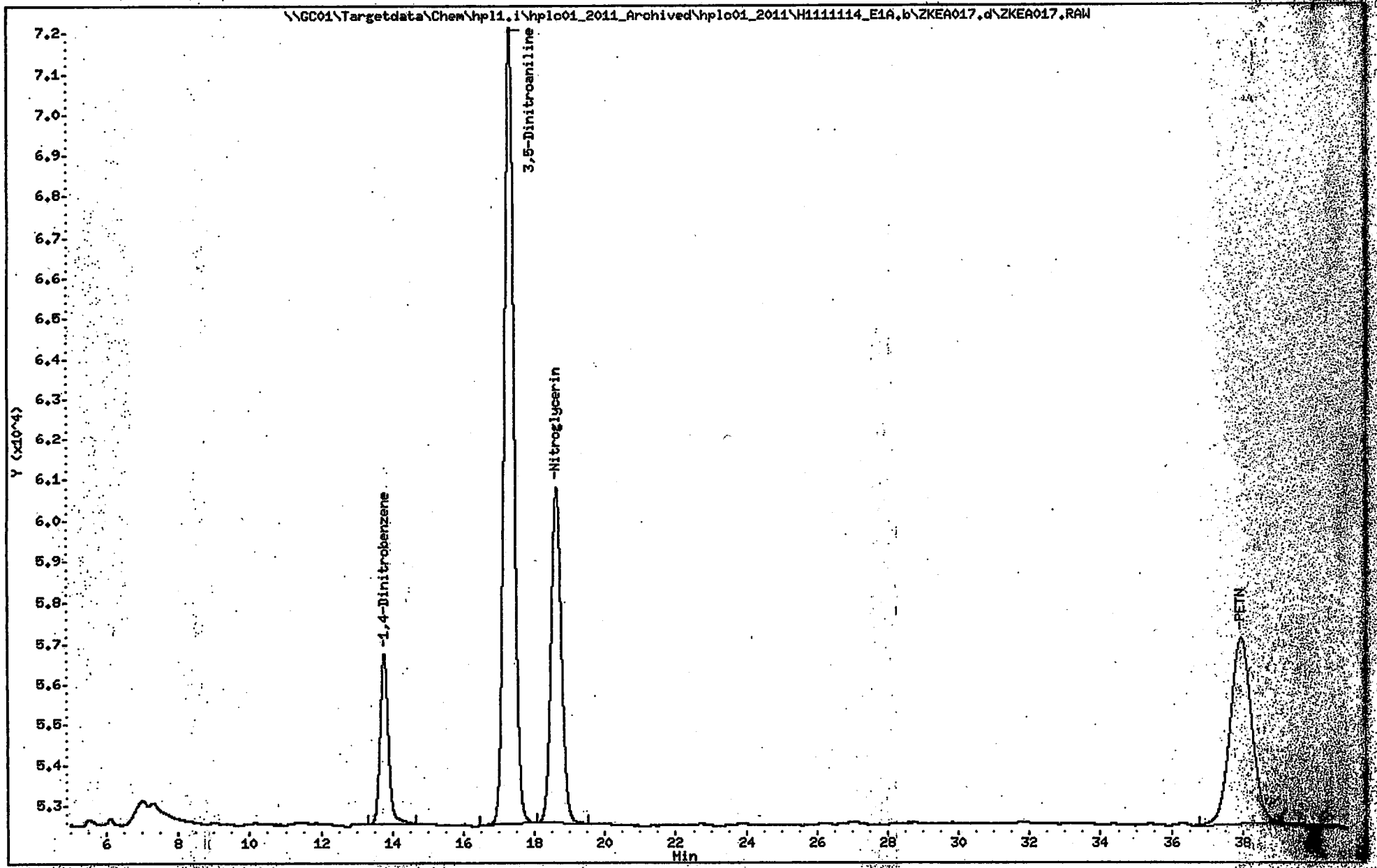
Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: LEVEL5
Inj Date : 15-NOV-2011 02:29
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL5
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 02:29 Cal File: ZKEA017.RAW
Als bottle: 58 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.760	13.740	0.020	67134	500.000	505.433
3	3,5-Dinitroaniline	17.286	17.239	0.047	373417	500.000	506.626
4	Nitroglycerin	18.620	18.603	0.017	168994	2500.00	2599.11
5	PETN	37.973	37.953	0.020	194798	2500.00	2612.45

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA017.d
Date : 15-NOV-2011 02:29
Client ID:
Instrument: hpl1.i
Sample Info: LEVEL5
Volume Injected (uL): 100.0
Operator: AJL
Column phase: E1
Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: LEVEL6
Inj Date : 15-NOV-2011 03:12
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL6
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:12 Cal File: ZKEA018.RAW
Als bottle: 58 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.746	13.740	0.006	130127	1000.00	979.689
3	3,5-Dinitroaniline	17.263	17.239	0.024	745369	1000.00	1011.26
4	Nitroglycerin	18.610	18.603	0.007	342109	5000.00	5261.61
5	PETN	37.980	37.953	0.027	390313	5000.00	5234.51

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA018.d

Date : 15-NOV-2011 03:12

Client ID:

Sample Info: LEVEL6

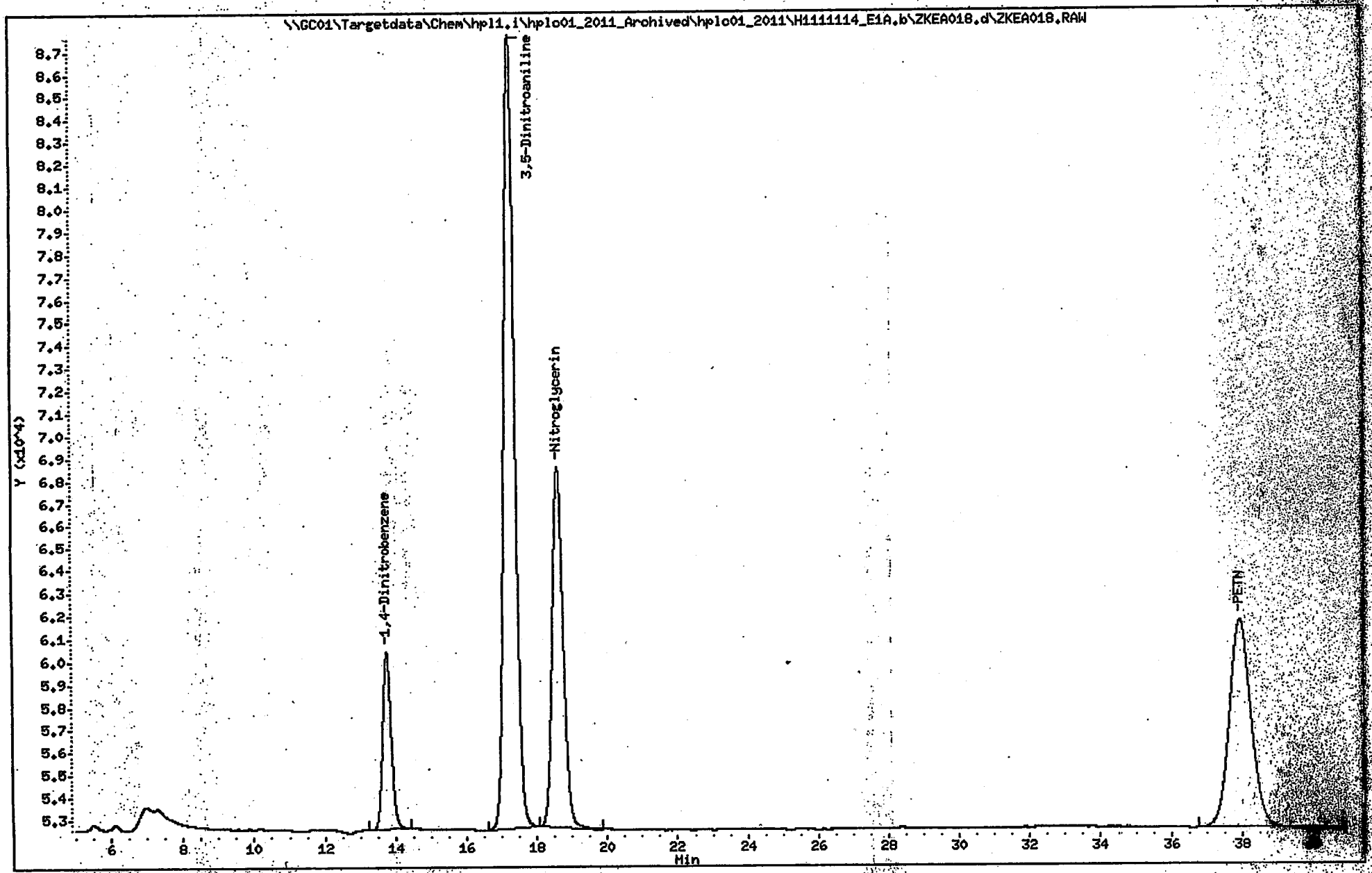
Volume Injected (uL): 100.0

Column phase: E1

Instrument: hpl1.i

Operator: AJL

Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: LEVEL7
Inj Date : 15-NOV-2011 03:55
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL7
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.RAW
Als bottle: 58 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

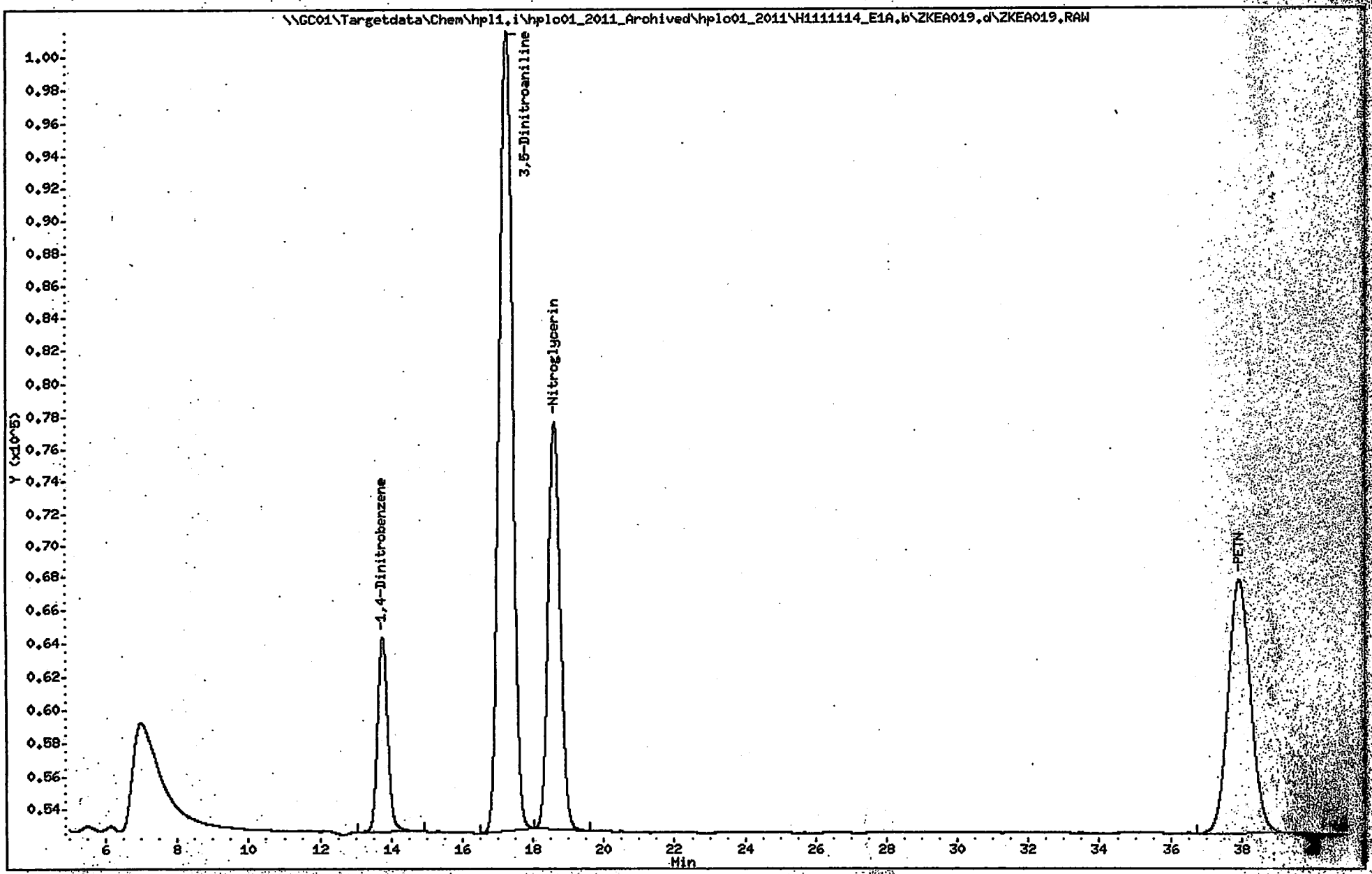
Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.740	13.740	0.000	235702	2000.00	1774.53
3	3,5-Dinitroaniline	17.240	17.239	0.001	1300553	2000.00	1764.50
4	Nitroglycerin	18.603	18.603	0.000	592552	10000.0	9113.40
5	PETN	37.953	37.953	0.000	677113	10000.0	9080.80

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA019.d
Date : 15-NOV-2011 03:55
Client ID:
Sample Info: LEVEL7
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



6A

RETENTION TIMES OF INITIAL CALIBRATION

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Instrument ID: hpl1.i Calibration Date(s): 6/14/2012 6/14/2012

Calibration Times: 13:07 17:30

GC Column: E2, 254nm ID: 4.1 (mm)

LAB FILE ID: RT1 = ZFED001.d RT2 = ZFED002.d RT3 = ZFED003.d

RT4 = ZFED004.d RT5 = ZFED005.d RT6 = ZFED006.d

COMPOUND	RT1	RT2	RT3	RT4	RT5	RT6	MEAN RT	RT WINDOW FROM	RT WINDOW TO
2-Amino-4,6-dinitro	39.320	39.340	39.303	39.220	39.386	39.526	39.365	38.515	40.215
4-Amino-2,6-dinitro	37.023	37.130	37.096	37.006	37.180	37.330	37.147	36.297	37.997
1,3-Dinitrobenzene	16.130	16.203	16.166	16.140	16.220	16.326	16.213	15.923	16.503
2,4-Dinitrotoluene	27.116	27.183	27.166	27.103	27.240	27.386	27.222	26.672	27.772
2,6-Dinitrotoluene	25.926	25.983	25.946	25.903	26.033	26.186	26.020	25.480	26.560
HMX	8.186	8.220	8.190	8.166	8.193	8.243	8.202	7.932	8.472
Nitrobenzene	17.540	17.603	17.573	17.533	17.623	17.733	17.617	17.297	17.937
4-Nitrotoluene	32.443	32.593	32.573	32.483	32.653	32.826	32.623	31.943	33.303
2-Nitrotoluene	29.706	29.773	29.763	29.700	29.853	30.013	29.828	29.248	30.408
3-Nitrotoluene	34.876	34.950	34.966	34.893	35.070	35.236	35.030	34.320	35.740
RDX	12.366	12.423	12.383	12.353	12.400	12.470	12.405	12.125	12.685
Tetryl	23.990	24.080	24.040	23.966	24.083	24.213	24.080	23.420	24.740
1,3,5-Trinitrobenze	13.203	13.263	13.236	13.213	13.283	13.376	13.278	13.078	13.478
2,4,6-Trinitrotolue	22.666	22.766	22.730	22.680	22.803	22.940	22.789	22.329	23.249
1,4-Dinitrobenzene	14.520	14.586	14.553	14.526	14.603	14.703	14.597	13.747	15.447

6A

RETENTION TIMES OF INITIAL CALIBRATION

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Instrument ID: hpl1.i Calibration Date(s): 6/14/2012 6/14/2012

Calibration Times: 13:07 17:30

GC Column: E2, 254nm ID: 4.1 (mm)

LAB FILE ID: RT7 = ZFED007.d

COMPOUND	RT7						MEAN RT	RT WINDOW FROM	RT WINDOW TO
2-Amino-4,6-dinitro	39.460						39.365	38.515	40.215
4-Amino-2,6-dinitro	37.263						37.147	36.297	37.997
1,3-Dinitrobenzene	16.303						16.213	15.923	16.503
2,4-Dinitrotoluene	27.360						27.222	26.672	27.772
2,6-Dinitrotoluene	26.166						26.020	25.480	26.560
HMX	8.213						8.202	7.932	8.472
Nitrobenzene	17.713						17.617	17.297	17.937
4-Nitrotoluene	32.793						32.623	31.943	33.303
2-Nitrotoluene	29.986						29.828	29.248	30.408
3-Nitrotoluene	35.220						35.030	34.320	35.740
RDX	12.440						12.405	12.125	12.685
Tetryl	24.186						24.080	23.420	24.740
1,3,5-Trinitrobenze	13.370						13.278	13.078	13.478
2,4,6-Trinitrotolue	22.936						22.789	22.329	23.249
1,4-Dinitrobenzene	14.690						14.597	13.747	15.447

6B

ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Instrument ID: hpl1.i Calibration Date(s): 6/14/2012 6/14/2012

Calibration Time(s): 13:07 17:30

GC Column: E2, 254nm ID: 4.1 (mm)

LAB FILE ID: RRF1 = ZFED001.d RRF2 = ZFED002.d RRF3 = ZFED003.d RRF4 = ZFED004.d

RRF5 = ZFED005.d RRF6 = ZFED006.d RRF7 = ZFED007.d

COMPOUND	RRF1	RRF2	RRF3	RRF4	RRF5	CT
2-Amino-4,6-dinitrotoluene	301	287	307	312	314	A
4-Amino-2,6-dinitrotoluene	238	248	222	228	231	A
1,3-Dinitrobenzene	439	459	458	455	454	A
2,4-Dinitrotoluene	398	388	400	409	416	A
2,6-Dinitrotoluene	227	228	225	224	229	A
HMX	119	128	127	129	128	A
Nitrobenzene	246	279	269	278	278	A
4-Nitrotoluene	171	149	135	147	144	A
2-Nitrotoluene	194	181	176	186	179	A
3-Nitrotoluene	242	184	179	191	191	A
RDX	155	161	157	159	158	A
Tetryl	232	286	256	262	256	A
1,3,5-Trinitrobenzene	324	358	347	347	346	A
2,4,6-Trinitrotoluene(TNT)	318	336	324	322	317	A
1,4-Dinitrobenzene	383	382	378	379	378	A

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

6B

ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Instrument ID: hpl1.i Calibration Date(s): 6/14/2012 6/14/2012

Calibration Time(s): 13:07 17:30

GC Column: E2, 254n ID: 4.1 (mm)

LAB FILE ID: RRF1 = ZFED001.d RRF2 = ZFED002.d RRF3 = ZFED003.d RRF4 = ZFED004.d

RRF5 = ZFED005.d RRF6 = ZFED006.d RRF7 = ZFED007.d

COMPOUND	RRF6	RRF7	CT	b	m1	m2	% RSD or R^2
2-Amino-4,6-dinitrotoluene	309	310	A		306		3.06675
4-Amino-2,6-dinitrotoluene	223	228	A		231		3.94451
1,3-Dinitrobenzene	453	447	A		452		1.56672
2,4-Dinitrotoluene	417	416	A		406		2.73704
2,6-Dinitrotoluene	228	224	A		227		0.86089
HMX	129	128	A		127		2.91858
Nitrobenzene	279	276	A		272		4.42631
4-Nitrotoluene	144	144	A		148		7.42369
2-Nitrotoluene	183	181	A		183		3.28481
3-Nitrotoluene	188	188	A		195		10.95663
RDX	157	156	A		158		1.08861
Tetryl	264	260	A		260		6.09600
1,3,5-Trinitrobenzene	346	344	A		345		2.99112
2,4,6-Trinitrotoluene (TNT)	323	319	A		323		1.99455
1,4-Dinitrobenzene	384	379	A		380		0.63627

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\ZFED001.d
Lab Smp Id: LEVEL1
Inj Date : 14-JUN-2012 13:07
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL1;AJL;1;1
Misc Info : 045
Comment : Column: E2, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\8330E2_254
Meth Date : 15-Jun-2012 08:33 Lopez Quant Type: ESTD
Cal Date : 14-JUN-2012 13:07 Cal File: ZFED001.RAW
Als bottle: 45 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ICAL.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

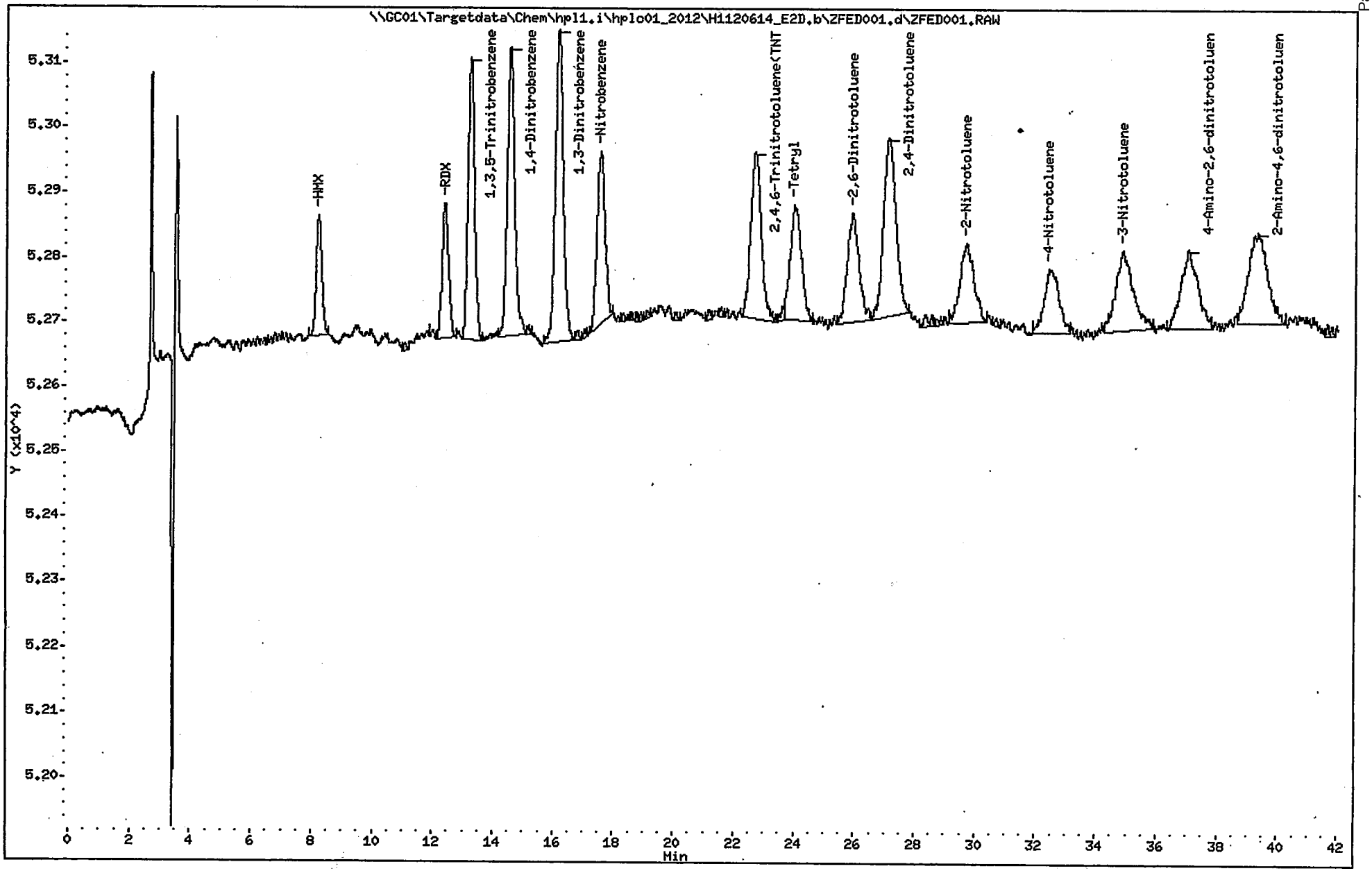
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
	1 HMX	8.186	8.213	-0.027	2371	20.0000	18.7133 (a)
	2 RDX	12.366	12.440	-0.074	3107	20.0000	19.7089 (a)
	3 1,3,5-Trinitrobenzene	13.203	13.370	-0.167	6473	20.0000	18.7833 (a)
$	4 1,4-Dinitrobenzene	14.520	14.690	-0.170	7652	20.0000	20.1123 (a)
	5 1,3-Dinitrobenzene	16.130	16.303	-0.173	8772	20.0000	19.4051 (a)
	6 Nitrobenzene	17.540	17.713	-0.173	4921	20.0000	18.0839 (a)
	7 2,4,6-Trinitrotoluene (TNT)	22.666	22.936	-0.270	6356	20.0000	19.7053 (a)
	8 Tetryl	23.990	24.186	-0.196	4636	20.0000	17.8644 (a)
	9 2,6-Dinitrotoluene	25.926	26.166	-0.240	4548	20.0000	20.0751
	10 2,4-Dinitrotoluene	27.116	27.360	-0.244	7966	20.0000	19.6085 (a)
	11 2-Nitrotoluene	29.706	29.986	-0.280	3888	20.0000	21.2678 (M)
	12 4-Nitrotoluene	32.443	32.793	-0.350	3414	20.0000	23.0909 (M)
	13 3-Nitrotoluene	34.876	35.220	-0.344	4843	20.0000	24.8738 (M)
	14 4-Amino-2,6-dinitrotoluene	37.023	37.263	-0.240	4758	20.0000	20.5883 (M)
	15 2-Amino-4,6-dinitrotoluene	39.320	39.460	-0.140	6023	20.0000	19.7001 (aM)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\ZFED001.d
Date : 14-JUN-2012 13:07
Client ID:
Sample Info: LEVEL1;AJL;1;1
Volume Injected (uL): 100.0
Column phase: E2

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\ZFED002.d
Lab Smp Id: LEVEL2
Inj Date : 14-JUN-2012 13:51
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL2;AJL;1;2
Misc Info : 111
Comment : Column: E2, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\8330E2_254
Meth Date : 15-Jun-2012 08:33 Lopez Quant Type: ESTD
Cal Date : 14-JUN-2012 13:51 Cal File: ZFED002.d
Als bottle: 100 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ICAL.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

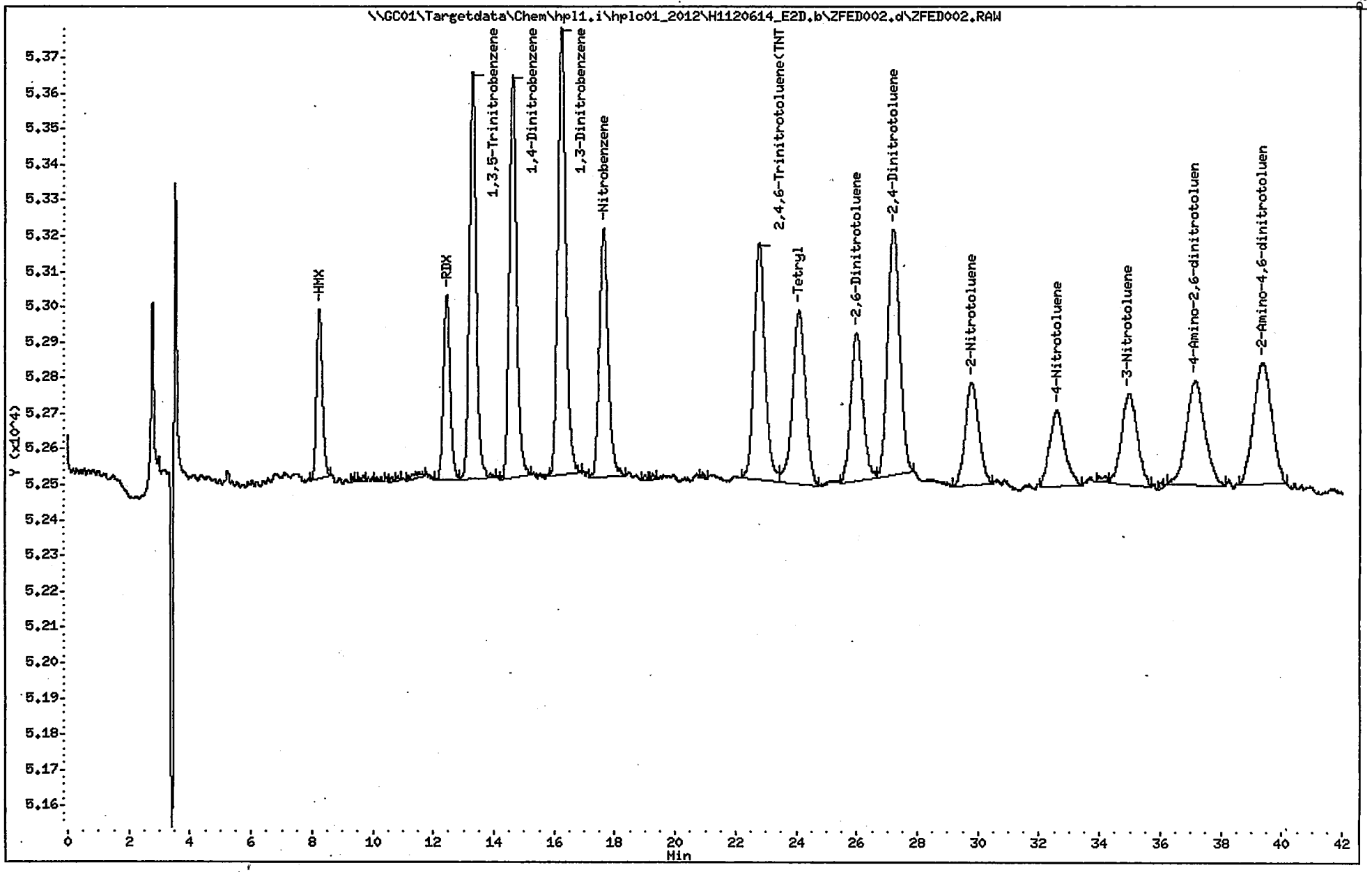
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	8.220	8.213	0.007	6384	50.0000	50.3861
2	RDX	12.423	12.440	-0.017	8033	50.0000	50.9564
3	1,3,5-Trinitrobenzene	13.263	13.370	-0.107	17904	50.0000	51.9537
$ 4	1,4-Dinitrobenzene	14.586	14.690	-0.104	19101	50.0000	50.2046
5	1,3-Dinitrobenzene	16.203	16.303	-0.100	22947	50.0000	50.7626
6	Nitrobenzene	17.603	17.713	-0.110	13963	50.0000	51.3118
7	2,4,6-Trinitrotoluene(TNT)	22.766	22.936	-0.170	16789	50.0000	52.0503
8	Tetryl	24.080	24.186	-0.106	14281	50.0000	55.0305
9	2,6-Dinitrotoluene	25.983	26.166	-0.183	11397	50.0000	50.3068
10	2,4-Dinitrotoluene	27.183	27.360	-0.177	19388	50.0000	47.7240
11	2-Nitrotoluene	29.773	29.986	-0.213	9041	50.0000	49.4553
12	4-Nitrotoluene	32.593	32.793	-0.200	7469	50.0000	50.5173
13	3-Nitrotoluene	34.950	35.220	-0.270	9205	50.0000	47.2772(M)
14	4-Amino-2,6-dinitrotoluene	37.130	37.263	-0.133	12398	50.0000	53.6473(M)
15	2-Amino-4,6-dinitrotoluene	39.340	39.460	-0.120	14328	50.0000	46.8641

QC Flag Legend

M - Compound response manually integrated.

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\ZFED002.d
Date : 14-JUN-2012 13:51
Client ID:
Sample Info: LEVEL2;AJL;1;2
Volume Injected (uL): 100.0
Column phase: E2

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\ZFED003.d
Lab Smp Id: LEVEL3
Inj Date : 14-JUN-2012 14:34
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL3;AJL;1;3
Misc Info : 112
Comment : Column: E2, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\8330E2_254
Meth Date : 15-Jun-2012 08:33 Lopez Quant Type: ESTD
Cal Date : 14-JUN-2012 14:34 Cal File: ZFED003.d
Als bottle: 100 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ICAL.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

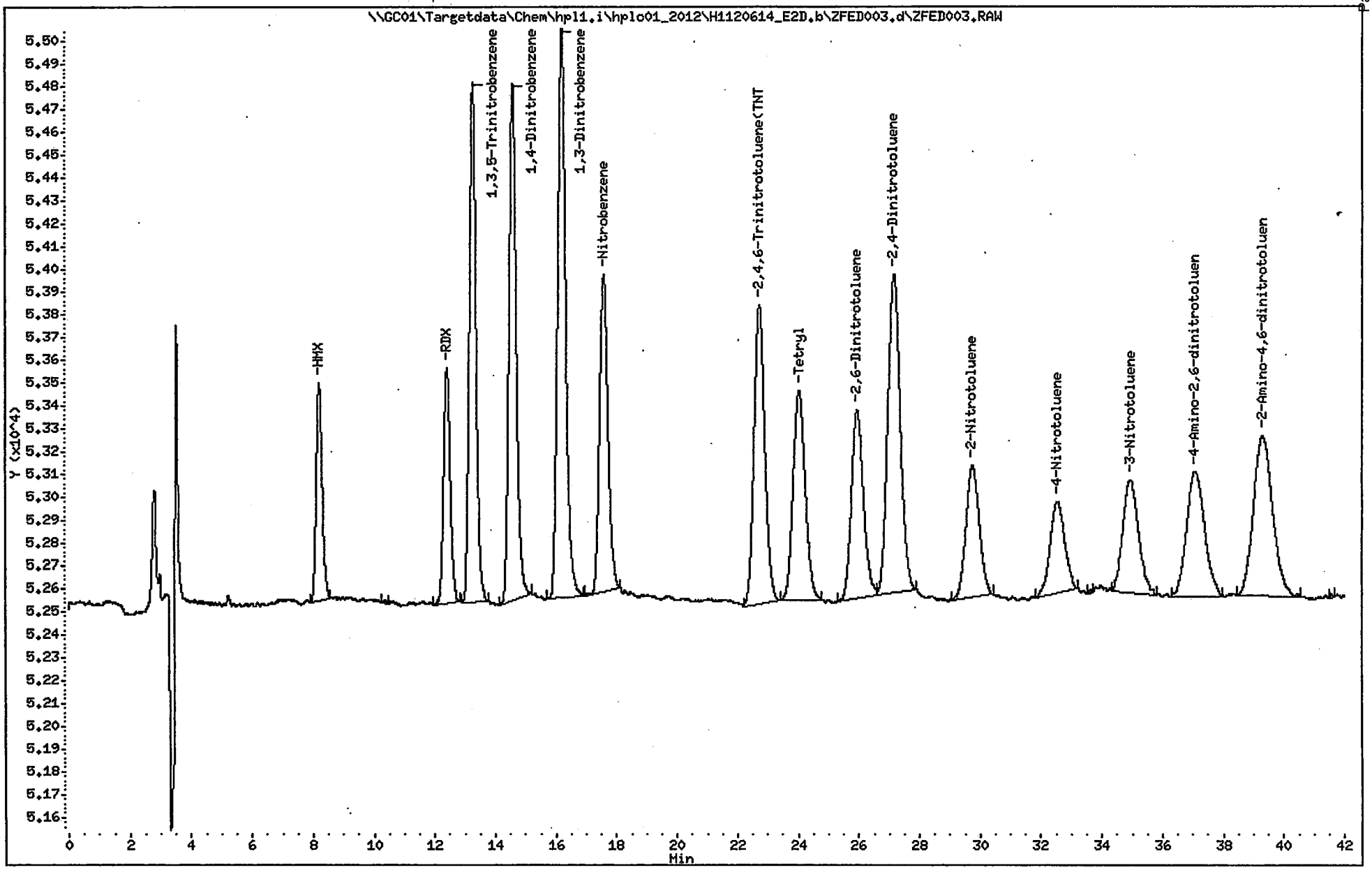
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
	1 HMX	8.190	8.213	-0.023	12660	100.000	99.9198
	2 RDX	12.383	12.440	-0.057	15730	100.000	99.7813
	3 1,3,5-Trinitrobenzene	13.236	13.370	-0.134	34716	100.000	100.739
$	4 1,4-Dinitrobenzene	14.553	14.690	-0.137	37831	100.000	99.4342
	5 1,3-Dinitrobenzene	16.166	16.303	-0.137	45770	100.000	101.251
	6 Nitrobenzene	17.573	17.713	-0.140	26870	100.000	98.7430
	7 2,4,6-Trinitrotoluene(TNT)	22.730	22.936	-0.206	32363	100.000	100.334
	8 Tetryl	24.040	24.186	-0.146	25619	100.000	98.7203
	9 2,6-Dinitrotoluene	25.946	26.166	-0.220	22536	100.000	99.4748
	10 2,4-Dinitrotoluene	27.166	27.360	-0.194	40021	100.000	98.5126
	11 2-Nitrotoluene	29.763	29.986	-0.223	17599	100.000	96.2684
	12 4-Nitrotoluene	32.573	32.793	-0.220	13523	100.000	91.4641
	13 3-Nitrotoluene	34.966	35.220	-0.254	17889	100.000	91.8786(M)
	14 4-Amino-2,6-dinitrotoluene	37.096	37.263	-0.167	22194	100.000	96.0356
	15 2-Amino-4,6-dinitrotoluene	39.303	39.460	-0.157	30735	100.000	100.528

QC Flag Legend

M - Compound response manually integrated.

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\ZFED003.d
Date : 14-JUN-2012 14:34
Client ID:
Sample Info: LEVEL3;AJL;1;3
Volume Injected (uL): 100.0
Column phase: E2

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\ZFED004.d
Lab Smp Id: LEVEL4
Inj Date : 14-JUN-2012 15:18
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL4;AJL;1;4
Misc Info : 113
Comment : Column: E2, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\8330E2_254
Meth Date : 15-Jun-2012 08:33 Lopez Quant Type: ESTD
Cal Date : 14-JUN-2012 15:18 Cal File: ZFED004.d
Als bottle: 100 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ICAL.sub
Target Version: 4.12

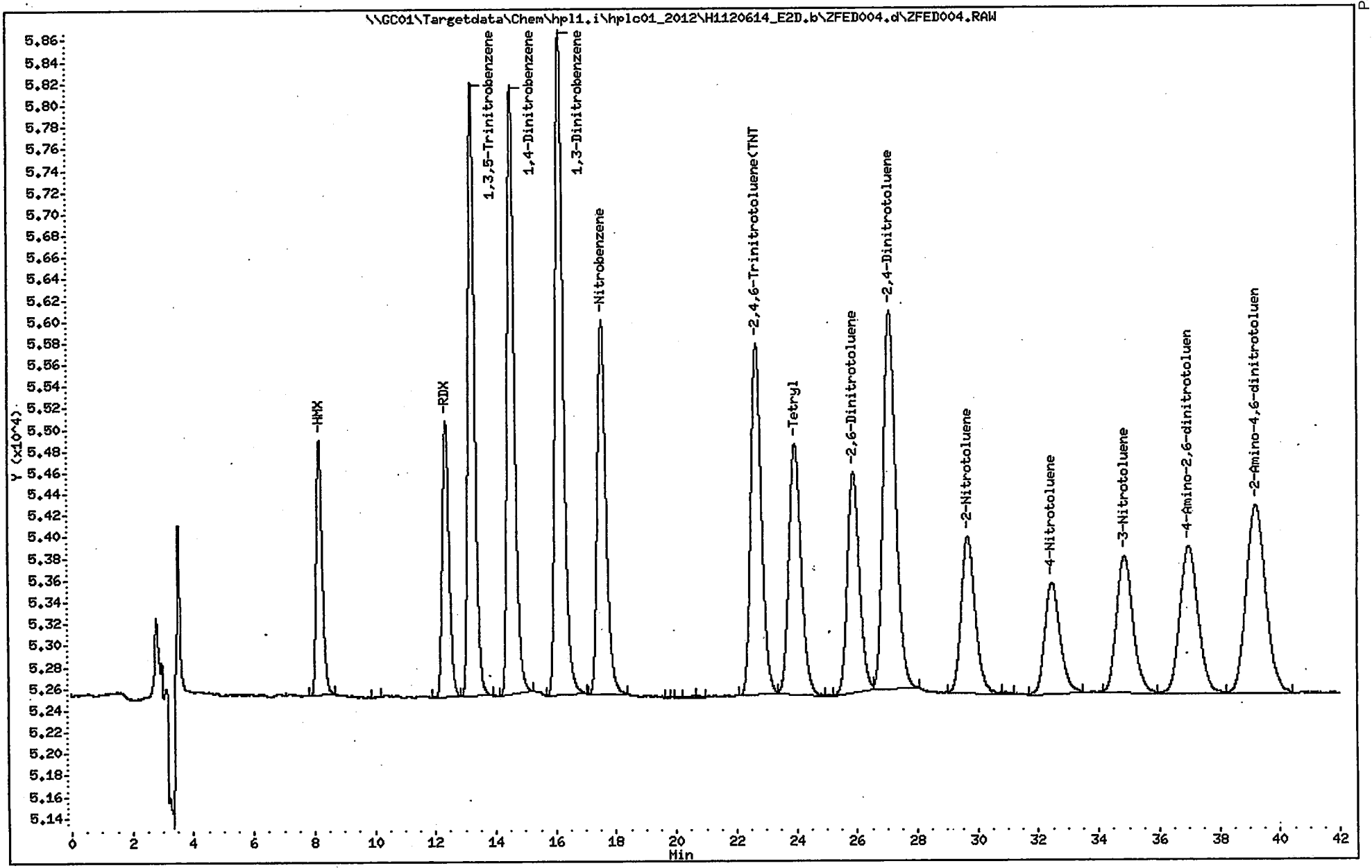
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1	HMX	8.166	8.213	-0.047	32158	250.000	253.809
2	RDX	12.353	12.440	-0.087	39637	250.000	251.432
3	1,3,5-Trinitrobenzene	13.213	13.370	-0.157	86652	250.000	251.446
$ 4	1,4-Dinitrobenzene	14.526	14.690	-0.164	94674	250.000	248.839
5	1,3-Dinitrobenzene	16.140	16.303	-0.163	113795	250.000	251.734
6	Nitrobenzene	17.533	17.713	-0.180	69540	250.000	255.548
7	2,4,6-Trinitrotoluene(TNT)	22.680	22.936	-0.256	80531	250.000	249.667
8	Tetryl	23.966	24.186	-0.220	65612	250.000	252.829
9	2,6-Dinitrotoluene	25.903	26.166	-0.263	56030	250.000	247.319
10	2,4-Dinitrotoluene	27.103	27.360	-0.257	102307	250.000	251.831
11	2-Nitrotoluene	29.700	29.986	-0.286	46574	250.000	254.765
12	4-Nitrotoluene	32.483	32.793	-0.310	36687	250.000	248.136
13	3-Nitrotoluene	34.893	35.220	-0.327	47668	250.000	244.825
14	4-Amino-2,6-dinitrotoluene	37.006	37.263	-0.257	56889	250.000	246.164
15	2-Amino-4,6-dinitrotoluene	39.220	39.460	-0.240	78063	250.000	255.329

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\ZFED004.d
Date : 14-JUN-2012 15:18
Client ID:
Sample Info: LEVEL4;AJL;1;4
Volume Injected (uL): 100.0
Column phase: E2

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\ZFED005.d
Lab Smp Id: LEVEL5
Inj Date : 14-JUN-2012 16:02
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL5;AJL;1;5
Misc Info : 115
Comment : Column: E2, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\8330E2_254
Meth Date : 15-Jun-2012 08:33 Lopez Quant Type: ESTD
Cal Date : 14-JUN-2012 16:02 Cal File: ZFED005.d
Als bottle: 100 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ICAL.sub
Target Version: 4.12

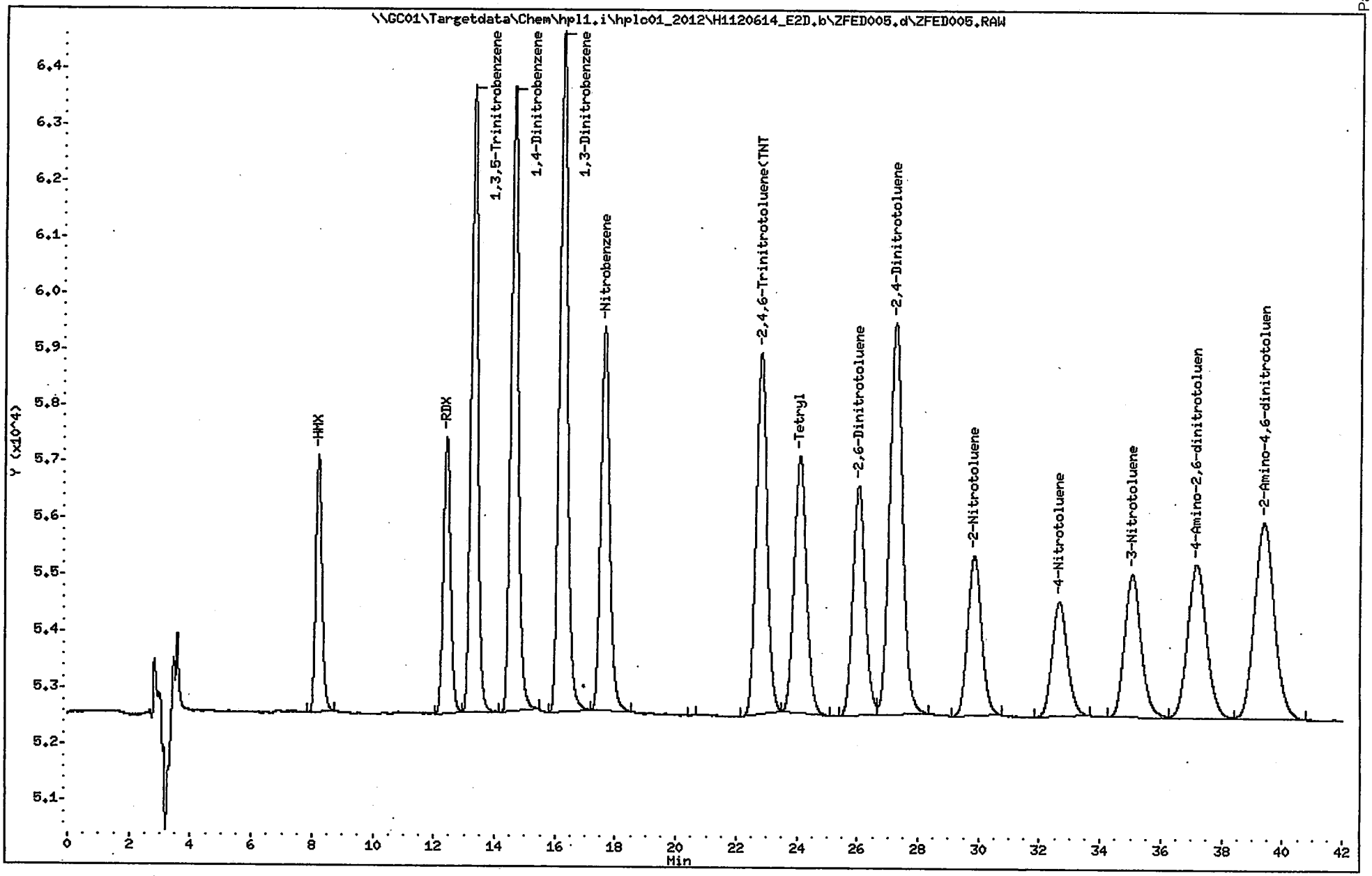
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	1 HMX	8.193	8.213	-0.020	64145	500.000	506.268
	2 RDX	12.400	12.440	-0.040	79070	500.000	501.571
	3 1,3,5-Trinitrobenzene	13.283	13.370	-0.087	173156	500.000	502.463
$	4 1,4-Dinitrobenzene	14.603	14.690	-0.087	189174	500.000	497.221
	5 1,3-Dinitrobenzene	16.220	16.303	-0.083	226907	500.000	501.956
	6 Nitrobenzene	17.623	17.713	-0.090	138799	500.000	510.064
	7 2,4,6-Trinitrotoluene(TNT)	22.803	22.936	-0.133	158369	500.000	490.986
	8 Tetryl	24.083	24.186	-0.103	128172	500.000	493.898
	9 2,6-Dinitrotoluene	26.033	26.166	-0.133	114433	500.000	505.112
	10 2,4-Dinitrotoluene	27.240	27.360	-0.120	207971	500.000	511.925
	11 2-Nitrotoluene	29.853	29.986	-0.133	89506	500.000	489.608
	12 4-Nitrotoluene	32.653	32.793	-0.140	72182	500.000	488.210
	13 3-Nitrotoluene	35.070	35.220	-0.150	95355	500.000	489.747
	14 4-Amino-2,6-dinitrotoluene	37.180	37.263	-0.083	115530	500.000	499.909
	15 2-Amino-4,6-dinitrotoluene	39.386	39.460	-0.074	156903	500.000	513.200

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\ZFED005.d
Date : 14-JUN-2012 16:02
Client ID:
Sample Info: LEVEL5;AJL;1;5
Volume Injected (uL): 100.0
Column phase: E2

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\ZFED006.d
Lab Smp Id: LEVEL6
Inj Date : 14-JUN-2012 16:46
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL6;AJL;1;6
Misc Info : 117
Comment : Column: E2, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\8330E2_254
Meth Date : 15-Jun-2012 08:33 Lopez Quant Type: ESTD
Cal Date : 14-JUN-2012 16:46 Cal File: ZFED006.d
Als bottle: 100 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ICAL.sub
Target Version: 4.12

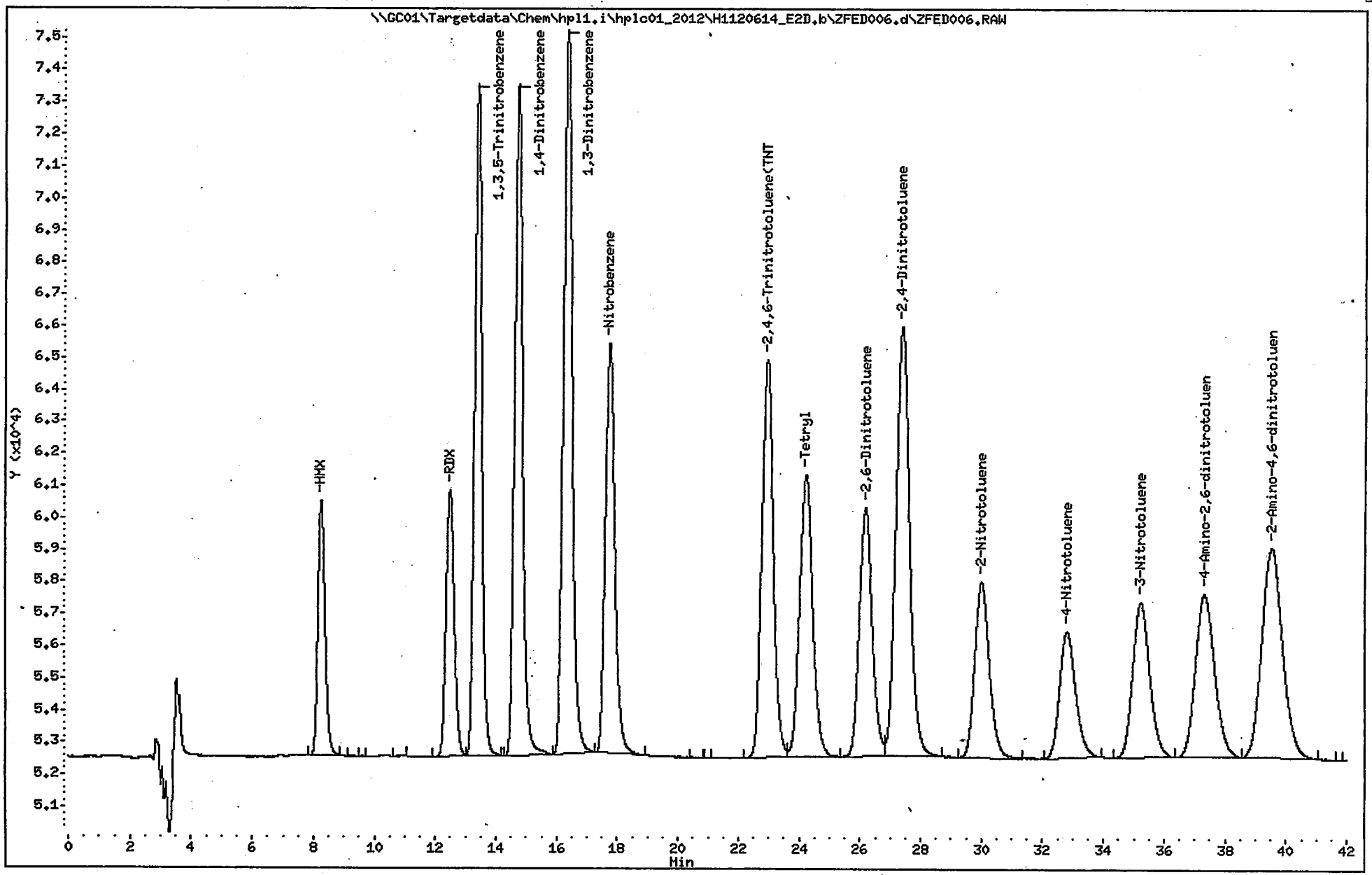
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	8.243	8.213	0.030	129394	1000.00	1021.25
2	RDX	12.470	12.440	0.030	157286	1000.00	997.725
3	1,3,5-Trinitrobenzene	13.376	13.370	0.006	346374	1000.00	1005.11
$ 4	1,4-Dinitrobenzene	14.703	14.690	0.013	384202	1000.00	1009.83
5	1,3-Dinitrobenzene	16.326	16.303	0.023	453178	1000.00	1002.51
6	Nitrobenzene	17.733	17.713	0.020	278754	1000.00	1024.38
7	2,4,6-Trinitrotoluene(TNT)	22.940	22.936	0.004	323156	1000.00	1001.87
8	Tetryl	24.213	24.186	0.027	264215	1000.00	1018.13
9	2,6-Dinitrotoluene	26.186	26.166	0.020	227958	1000.00	1006.22
10	2,4-Dinitrotoluene	27.386	27.360	0.026	416820	1000.00	1026.01
11	2-Nitrotoluene	30.013	29.986	0.027	182574	1000.00	998.700
12	4-Nitrotoluene	32.826	32.793	0.033	144145	1000.00	974.939
13	3-Nitrotoluene	35.236	35.220	0.016	188083	1000.00	966.002
14	4-Amino-2,6-dinitrotoluene	37.330	37.263	0.067	223180	1000.00	965.721
15	2-Amino-4,6-dinitrotoluene	39.526	39.460	0.066	309474	1000.00	1012.23

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\ZFED006.d
Date : 14-JUN-2012 16:46
Client ID:
Sample Info: LEVEL6;AJL;1;6
Volume Injected (uL): 100.0
Column phase: E2

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\ZFED007.d
Lab Smp Id: LEVEL7
Inj Date : 14-JUN-2012 17:30
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL7;AJL;1;7
Misc Info : 118
Comment : Column: E2, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\8330E2_254
Meth Date : 15-Jun-2012 08:33 Lopez Quant Type: ESTD
Cal Date : 14-JUN-2012 17:30 Cal File: ZFED007.d
Als bottle: 100 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

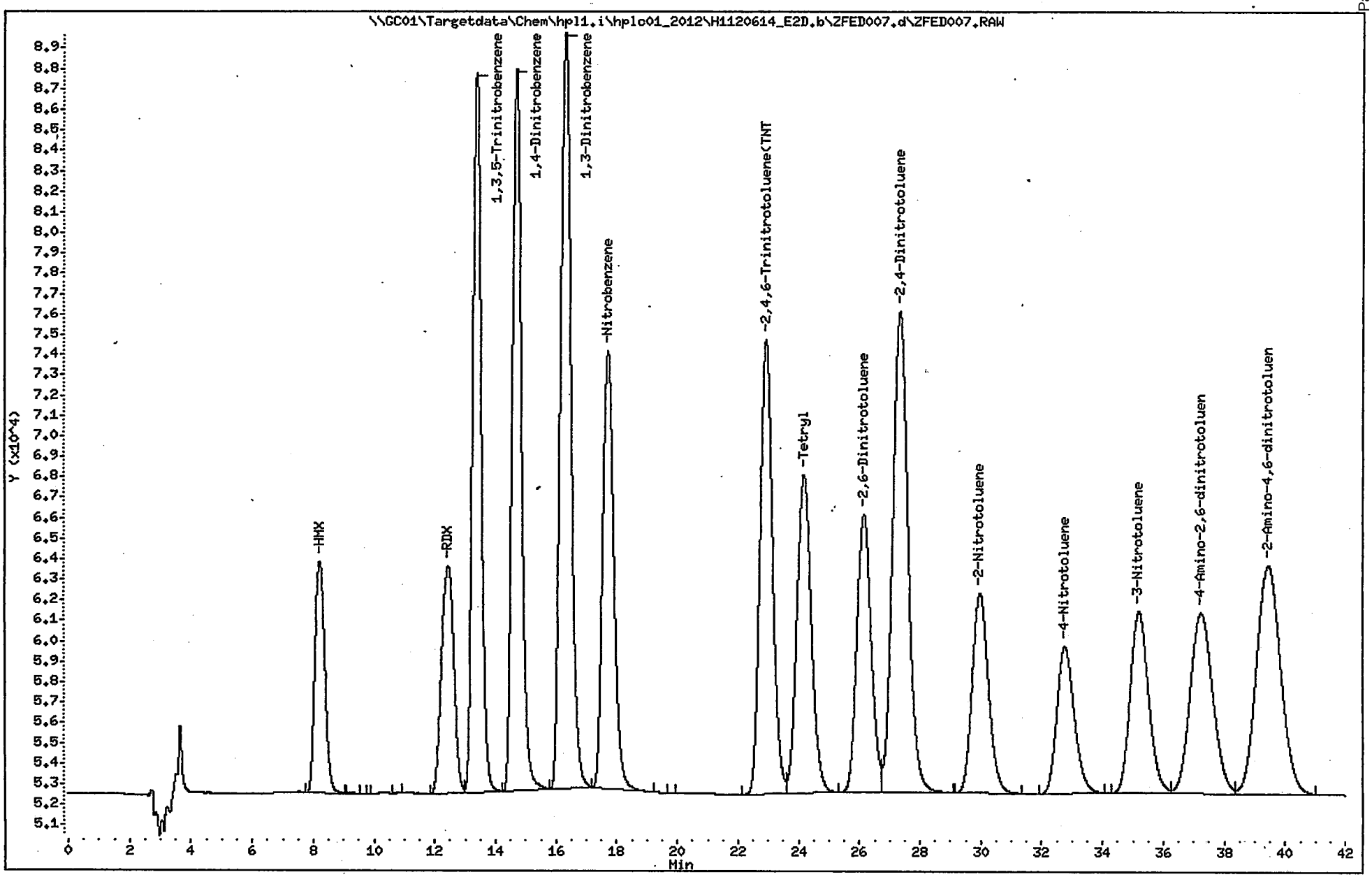
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	1 HMX	8.213	8.213	0.000	255531	2000.00	2016.79(A)
	2 RDX	12.440	12.440	0.000	312458	2000.00	1982.04
	3 1,3,5-Trinitrobenzene	13.370	13.370	0.000	688235	2000.00	1997.12
$	4 1,4-Dinitrobenzene	14.690	14.690	0.000	758127	2000.00	1992.64
	5 1,3-Dinitrobenzene	16.303	16.303	0.000	893809	2000.00	1977.26
	6 Nitrobenzene	17.713	17.713	0.000	552644	2000.00	2030.88(A)
	7 2,4,6-Trinitrotoluene(TNT)	22.936	22.936	0.000	637290	2000.00	1975.77
	8 Tetryl	24.186	24.186	0.000	519918	2000.00	2003.45(A)
	9 2,6-Dinitrotoluene	26.166	26.166	0.000	448409	2000.00	1979.30
	10 2,4-Dinitrotoluene	27.360	27.360	0.000	831019	2000.00	2045.57(A)
	11 2-Nitrotoluene	29.986	29.986	0.000	361180	2000.00	1975.69
	12 4-Nitrotoluene	32.793	32.793	0.000	288770	2000.00	1953.12
	13 3-Nitrotoluene	35.220	35.220	0.000	376626	2000.00	1934.37
	14 4-Amino-2,6-dinitrotoluene	37.263	37.263	0.000	456234	2000.00	1974.17
	15 2-Amino-4,6-dinitrotoluene	39.460	39.460	0.000	619103	2000.00	2024.97(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\ZFED007.d
Date : 14-JUN-2012 17:30
Client ID:
Sample Info: LEVEL7;AJL;1;7
Volume Injected (uL): 100.0
Column phase: E2

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



Continuing Calibrations

7D

CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

GC Column: E1, 254nm ID: 4.1 (mm) Calibration Date: 8/2/2012 Time: 17:40

Sample No.(CC): CCV1 Initi. Calib. Date(s): 11/14/2011 11/14/2011

Lab Sample No.(CC): CCV1 Initi. Calib. Time(s): 17:54 22:12

File ID: ZH2B001.d

Compound	RT	RT Window		Avg. CF	CF	%D
		From	To			
2-Amino-4,6-dinitrotoluene	24.870	24.020	25.720	288	289	0.4
4-Amino-2,6-dinitrotoluene	23.693	22.843	24.543	215	211	-2.0
1,3-Dinitrobenzene	15.383	15.093	15.673	429	397	-7.5
2,4-Dinitrotoluene	27.030	26.480	27.580	392	379	-3.3
2,6-Dinitrotoluene	26.080	25.540	26.620	213	219	2.8
HMX	4.996	4.726	5.266	125	130	4.2
Nitrobenzene	17.286	16.966	17.606	262	261	-0.6
4-Nitrotoluene	34.173	33.493	34.853	130	132	1.4
2-Nitrotoluene	31.413	30.833	31.993	166	179	7.7
3-Nitrotoluene	36.663	35.953	37.373	176	166	-5.5
RDX	8.446	8.166	8.726	151	150	-0.5
Tetryl	18.540	17.880	19.200	257	248	-3.4
1,3,5-Trinitrobenzene	11.940	11.740	12.140	326	340	4.2
2,4,6-Trinitrotoluene	21.286	20.826	21.746	305	282	-7.6
1,4-Dinitrobenzene	13.796	12.946	14.646	339	346	2.2

The Absolute Value of %D must be less than or equal to 20%

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B001.d
Lab Smp Id: CCV1
Inj Date : 02-AUG-2012 17:40
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV1;AJL;2
Misc Info : 045
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_254
Meth Date : 08-Aug-2012 09:59 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 45 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

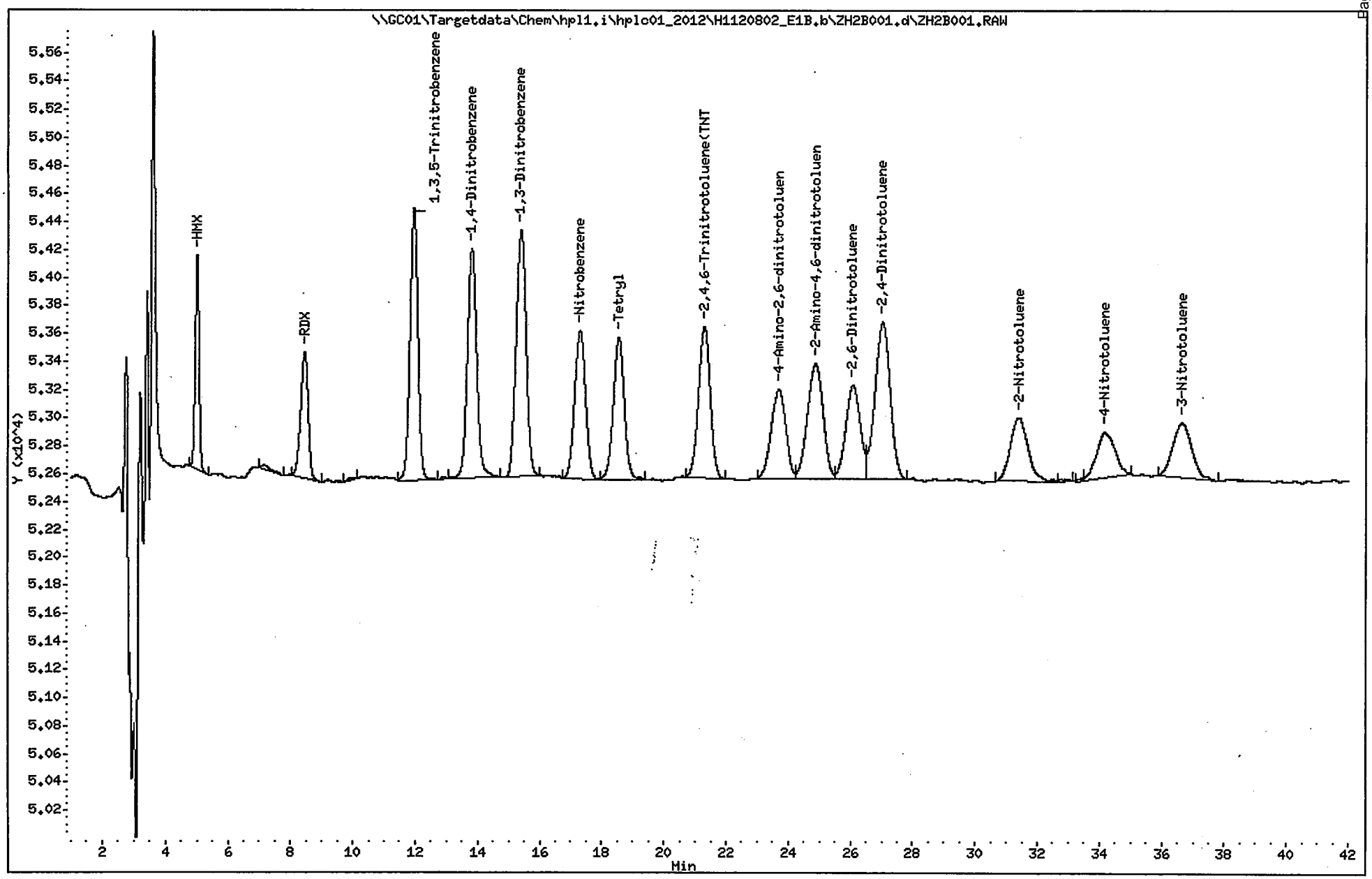
Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1	HMX	4.996	4.980	0.016	12971	100.000	104.176
2	RDX	8.446	8.413	0.033	15044	100.000	99.4748
3	1,3,5-Trinitrobenzene	11.940	11.876	0.064	33991	100.000	104.228
$ 4	1,4-Dinitrobenzene	13.796	13.726	0.070	34630	100.000	102.165
5	1,3-Dinitrobenzene	15.383	15.303	0.080	39719	100.000	92.5410
6	Nitrobenzene	17.286	17.203	0.083	26078	100.000	99.4454
7	Tetryl	18.540	18.403	0.137	24834	100.000	96.5581
8	2,4,6-Trinitrotoluene(TNT)	21.286	21.156	0.130	28189	100.000	92.4317
9	4-Amino-2,6-dinitrotoluene	23.693	23.520	0.173	21099	100.000	98.0397
10	2-Amino-4,6-dinitrotoluene	24.870	24.683	0.187	28892	100.000	100.440
11	2,6-Dinitrotoluene	26.080	25.920	0.160	21941	100.000	102.771
12	2,4-Dinitrotoluene	27.030	26.860	0.170	37882	100.000	96.7171
13	2-Nitrotoluene	31.413	31.183	0.230	17904	100.000	107.720
14	4-Nitrotoluene	34.173	34.036	0.137	13171	100.000	101.434
15	3-Nitrotoluene	36.663	36.456	0.207	16620	100.000	94.4867

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B001.d
Date : 02-AUG-2012 17:40
Client ID:
Sample Info: CCV1;AJL;2
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



7D

CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

GC Column: E1, 254nm ID: 4.1 (mm) Calibration Date: 8/3/2012 Time: 03:57

Sample No.(CC): CCV1 Initi. Calib. Date(s): 11/14/2011 11/14/2011

Lab Sample No.(CC): CCV1 Initi. Calib. Time(s): 17:54 22:12

File ID: ZH2B015.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
2-Amino-4,6-dinitrotoluene	24.703	23.853	25.553	288	283	-1.5
4-Amino-2,6-dinitrotoluene	23.536	22.686	24.386	215	227	5.7
1,3-Dinitrobenzene	15.313	15.023	15.603	429	413	-3.8
2,4-Dinitrotoluene	26.866	26.316	27.416	392	388	-0.9
2,6-Dinitrotoluene	25.943	25.403	26.483	213	224	5.0
HMX	4.986	4.716	5.256	125	131	4.8
Nitrobenzene	17.206	16.886	17.526	262	276	5.4
4-Nitrotoluene	33.990	33.310	34.670	130	132	1.7
2-Nitrotoluene	31.226	30.646	31.806	166	168	1.2
3-Nitrotoluene	36.463	35.753	37.173	176	172	-2.2
RDX	8.416	8.136	8.696	151	155	2.5
Tetryl	18.416	17.756	19.076	257	237	-8.0
1,3,5-Trinitrobenzene	11.883	11.683	12.083	326	338	3.7
2,4,6-Trinitrotoluene	21.160	20.700	21.620	305	285	-6.5
1,4-Dinitrobenzene	13.726	12.876	14.576	339	338	-0.2

The Absolute Value of %D must be less than or equal to 20%

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B015.d
Lab Smp Id: CCV1
Inj Date : 03-AUG-2012 03:57
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV1;AJL;2;;;;
Misc Info : 125
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_254
Meth Date : 08-Aug-2012 09:59 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

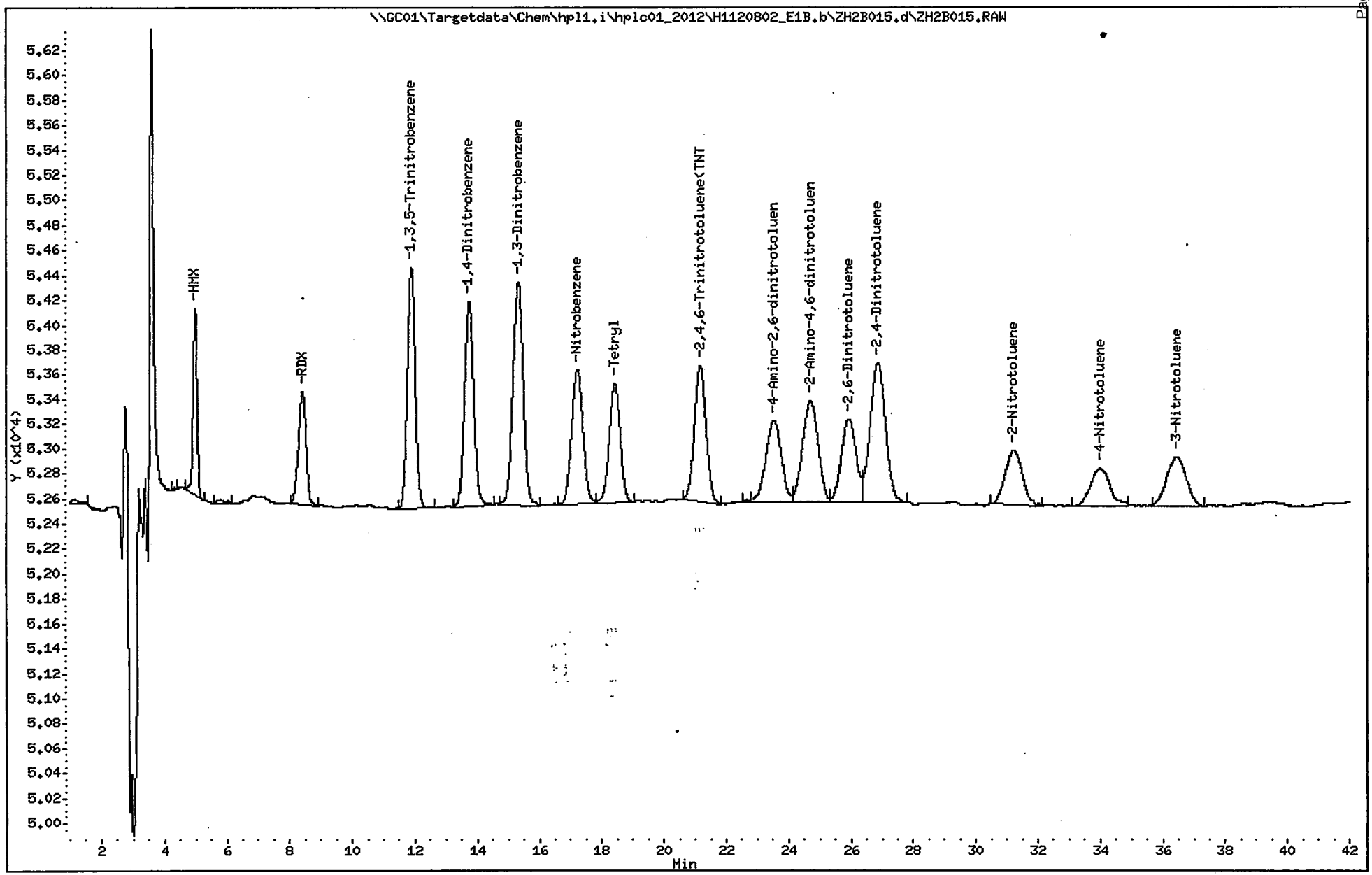
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1	HMX	4.986	4.980	0.006	13051	100.000	104.819
2	RDX	8.416	8.413	0.003	15507	100.000	102.536
3	1,3,5-Trinitrobenzene	11.883	11.876	0.007	33824	100.000	103.716
$ 4	1,4-Dinitrobenzene	13.726	13.726	0.000	33840	100.000	99.8340
5	1,3-Dinitrobenzene	15.313	15.303	0.010	41298	100.000	96.2199
6	Nitrobenzene	17.206	17.203	0.003	27631	100.000	105.368
7	Tetryl	18.416	18.403	0.013	23674	100.000	92.0479
8	2,4,6-Trinitrotoluene(TNT)	21.160	21.156	0.004	28523	100.000	93.5268
9	4-Amino-2,6-dinitrotoluene	23.536	23.520	0.016	22737	100.000	105.651
10	2-Amino-4,6-dinitrotoluene	24.703	24.683	0.020	28325	100.000	98.4691
11	2,6-Dinitrotoluene	25.943	25.920	0.023	22409	100.000	104.963
12	2,4-Dinitrotoluene	26.866	26.860	0.006	38802	100.000	99.0660
13	2-Nitrotoluene	31.226	31.183	0.043	16813	100.000	101.156
14	4-Nitrotoluene	33.990	34.036	-0.046	13203	100.000	101.680(M)
15	3-Nitrotoluene	36.463	36.456	0.007	17201	100.000	97.7897

QC Flag Legend

M - Compound response manually integrated.

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B015.d
Date : 03-AUG-2012 03:57
Client ID:
Sample Info: CCV1;AJL;2;;;;
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



7D

CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

GC Column: E1, 254nm ID: 4.1 (mm) Calibration Date: 8/3/2012 Time: 09:38

Sample No.(CC): CCV1 Initi. Calib. Date(s): 11/14/2011 11/14/2011

Lab Sample No.(CC): CCV1 Initi. Calib. Time(s): 17:54 22:12

File ID: ZH2B021.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
2-Amino-4,6-dinitrotoluene	24.683	23.833	25.533	288	294	2.4
4-Amino-2,6-dinitrotoluene	23.520	22.670	24.370	215	219	1.7
1,3-Dinitrobenzene	15.303	15.013	15.593	429	409	-4.8
2,4-Dinitrotoluene	26.860	26.310	27.410	392	386	-1.5
2,6-Dinitrotoluene	25.920	25.380	26.460	213	211	-1.2
HMX	4.980	4.710	5.250	125	131	5.3
Nitrobenzene	17.203	16.883	17.523	262	269	2.4
4-Nitrotoluene	34.036	33.356	34.716	130	158	21.9 *
2-Nitrotoluene	31.183	30.603	31.763	166	165	-0.8
3-Nitrotoluene	36.456	35.746	37.166	176	181	3.1
RDX	8.413	8.133	8.693	151	150	-0.8
Tetryl	18.403	17.743	19.063	257	248	-3.5
1,3,5-Trinitrobenzene	11.876	11.676	12.076	326	335	2.7
2,4,6-Trinitrotoluene	21.156	20.696	21.616	305	288	-5.4
1,4-Dinitrobenzene	13.726	12.876	14.576	339	336	-0.8

The Absolute Value of %D must be less than or equal to 20%

FORM VII

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B021.d
Lab Smp Id: CCV1
Inj Date : 03-AUG-2012 09:38
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV1
Misc Info : 130
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_254
Meth Date : 08-Aug-2012 09:59 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

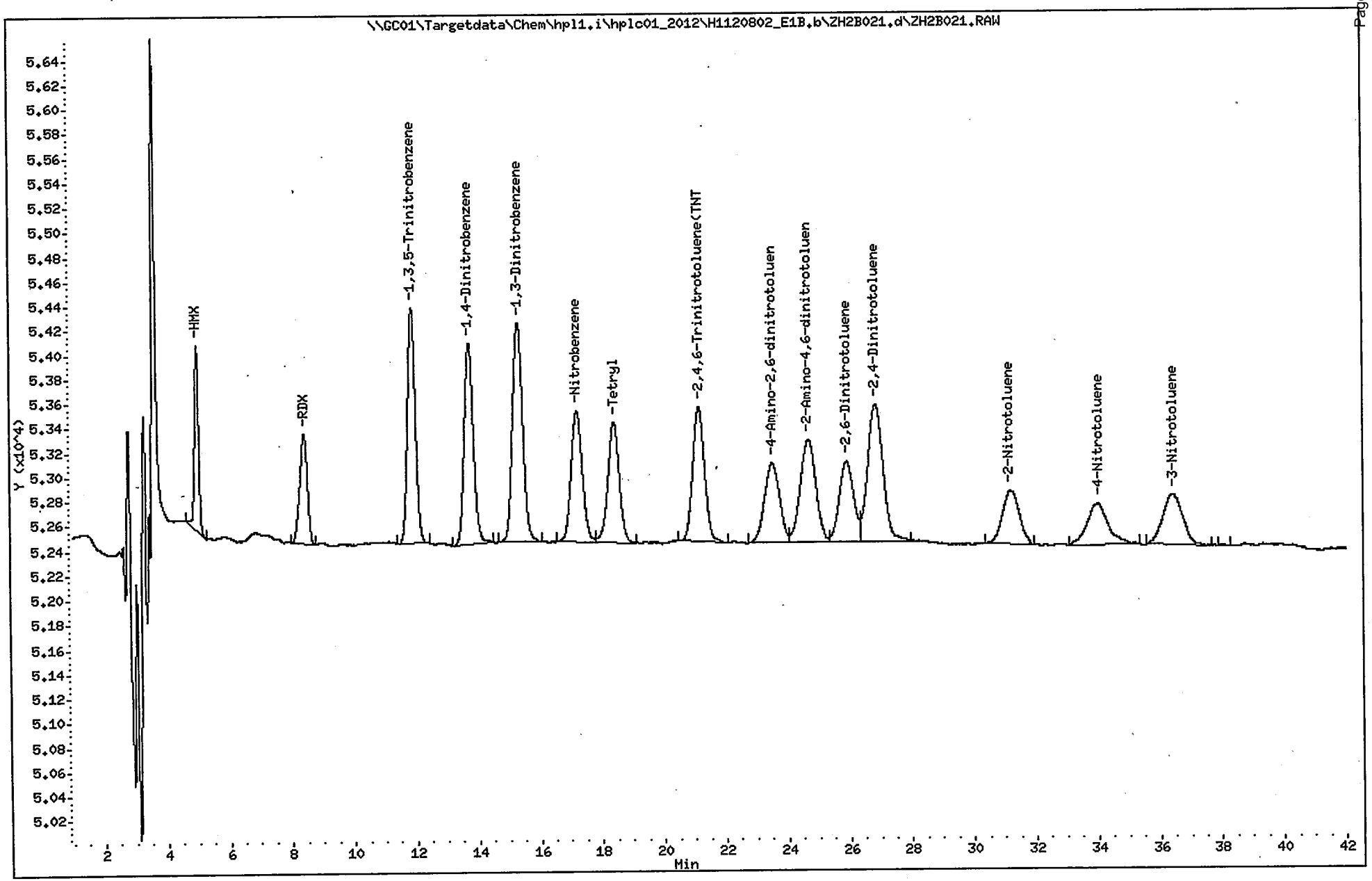
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.980	4.980	0.000	13107	100.000	105.269
2	RDX	8.413	8.413	0.000	14997	100.000	99.1641
3	1,3,5-Trinitrobenzene	11.876	11.876	0.000	33490	100.000	102.692
$ 4	1,4-Dinitrobenzene	13.726	13.726	0.000	33642	100.000	99.2499
5	1,3-Dinitrobenzene	15.303	15.303	0.000	40850	100.000	95.1762
6	Nitrobenzene	17.203	17.203	0.000	26864	100.000	102.443
7	Tetryl	18.403	18.403	0.000	24822	100.000	96.5115
8	2,4,6-Trinitrotoluene(TNT)	21.156	21.156	0.000	28847	100.000	94.5892
9	4-Amino-2,6-dinitrotoluene	23.520	23.520	0.000	21891	100.000	101.720
10	2-Amino-4,6-dinitrotoluene	24.683	24.683	0.000	29443	100.000	102.356
11	2,6-Dinitrotoluene	25.920	25.920	0.000	21100	100.000	98.8320
12	2,4-Dinitrotoluene	26.860	26.860	0.000	38592	100.000	98.5298
13	2-Nitrotoluene	31.183	31.183	0.000	16487	100.000	99.1947(M)
14	4-Nitrotoluene	34.036	34.036	0.000	15829	100.000	121.904
15	3-Nitrotoluene	36.456	36.456	0.000	18129	100.000	103.066

QC Flag Legend

M - Compound response manually integrated.

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B021.d
Date : 03-AUG-2012 09:38
Client ID:
Sample Info: CCV1
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



7D

CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

GC Column: E1, 218nm ID: 4.1 (mm) Calibration Date: 8/6/2012 Time: 12:03

Sample No.(CC): CCV2 Initi. Calib. Date(s): 11/14/2011 11/15/2011

Lab Sample No.(CC): CCV2 Initi. Calib. Time(s): 23:38 03:55

File ID: ZH6A001.d

Compound	RT	RT Window		Avg. CF	CF	%D
		From	To			
3,5-Dinitroaniline	17.380	16.430	18.330	737	709	-3.9
Nitroglycerin	18.933	18.553	19.313	65	67	2.7
PETN	38.823	37.973	39.673	75	65	-12.4
1,4-Dinitrobenzene	13.816	12.966	14.666	133	128	-3.4

The Absolute Value of %D must be less than or equal to 20%

FORM VII

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A001.d
Lab Smp Id: CCV2
Inj Date : 06-AUG-2012 12:03
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV2;AJL;2
Misc Info : 111
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\8330E1_218
Meth Date : 07-Aug-2012 08:51 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

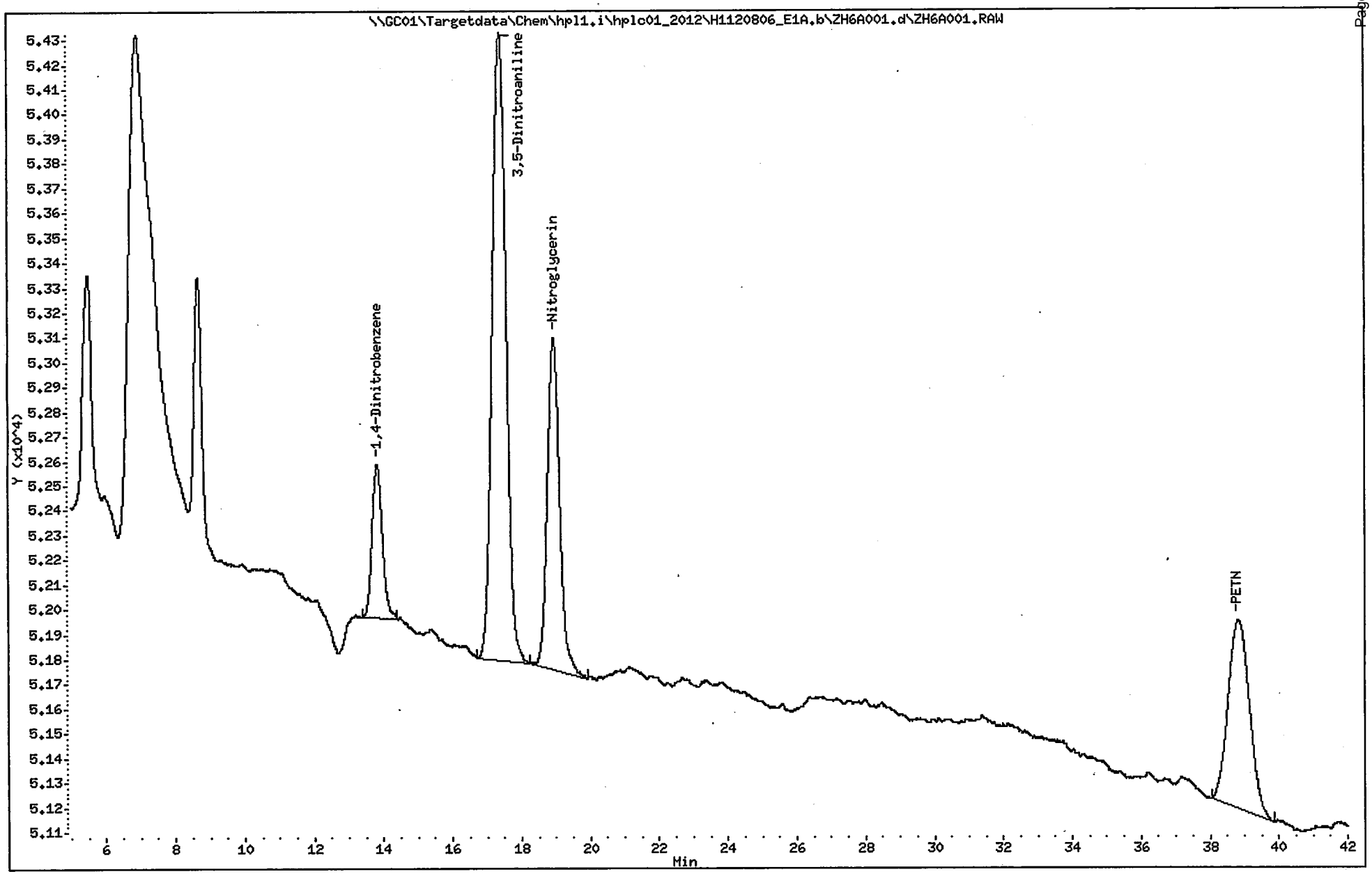
Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.816	13.750	0.066	12836	100.000	96.6385
3	3,5-Dinitroaniline	17.380	17.260	0.120	70865	100.000	96.1446
4	Nitroglycerin	18.933	18.803	0.130	33377	500.000	513.335
5	PETN	38.823	38.503	0.320	32676	500.000	438.220

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A001.d
Date : 06-AUG-2012 12:03
Client ID:
Sample Info: CCV2;AJL;2
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



7D

CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

GC Column: E1, 218nm ID: 4.1 (mm) Calibration Date: 8/6/2012 Time: 18:54

Sample No.(CC): CCV2 Initi. Calib. Date(s): 11/14/2011 11/15/2011

Lab Sample No.(CC): CCV2 Initi. Calib. Time(s): 23:38 03:55

File ID: ZH6A010.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
3,5-Dinitroaniline	17.260	16.310	18.210	737	675	-8.4
Nitroglycerin	18.803	18.423	19.183	65	62	-4.1
PETN	38.503	37.653	39.353	75	66	-11.1
1,4-Dinitrobenzene	13.750	12.900	14.600	133	131	-1.5

The Absolute Value of %D must be less than or equal to 20%

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A010.d
Lab Smp Id: CCV2
Inj Date : 06-AUG-2012 18:54
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV2;AJL;2
Misc Info : 129
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\8330E1_218
Meth Date : 07-Aug-2012 08:51 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

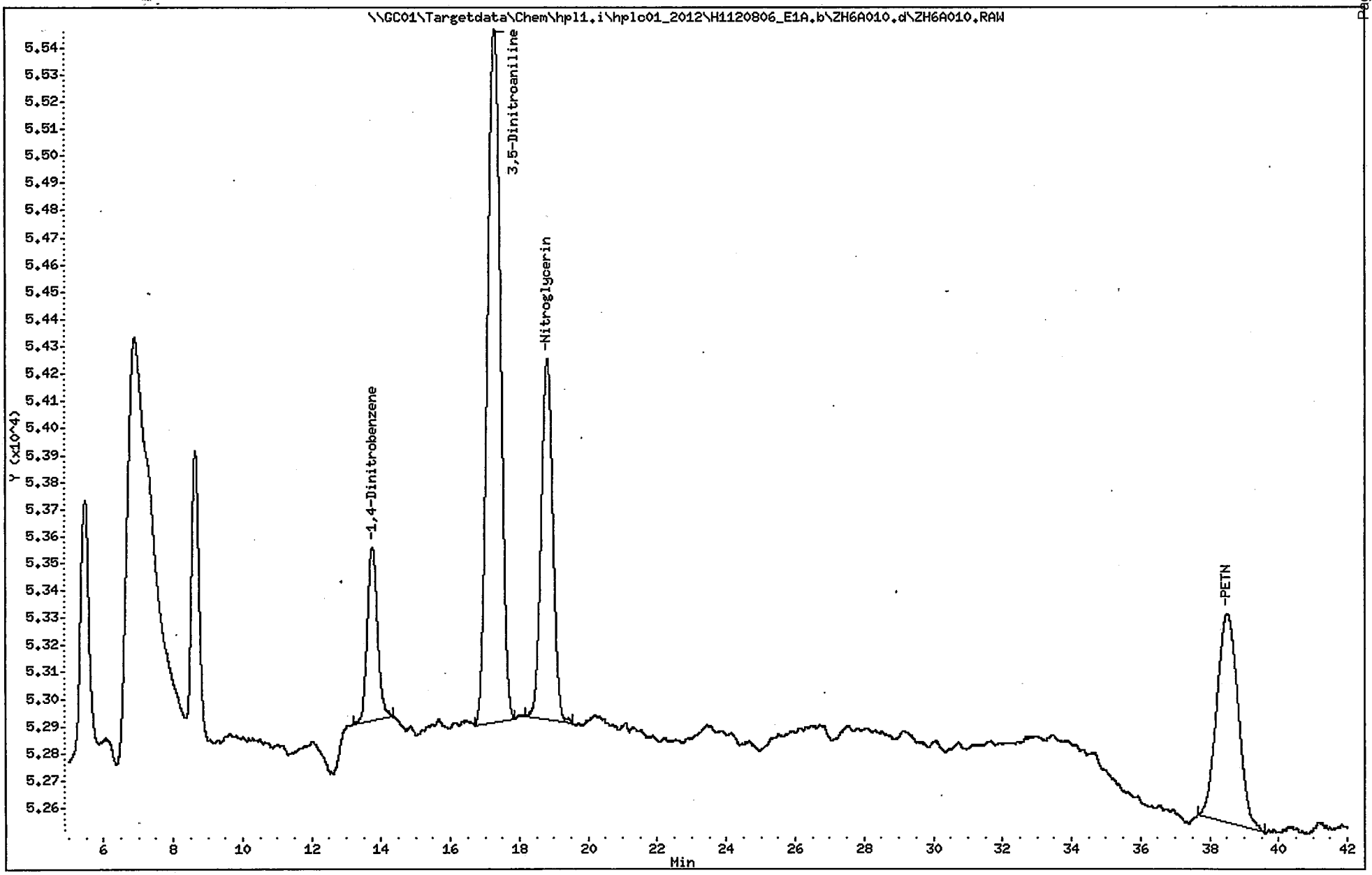
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
$ 1 1,4-Dinitrobenzene	13.750	13.750	0.000	13083	100.000	98.4981
3 3,5-Dinitroaniline	17.260	17.260	0.000	67537	100.000	91.6295
4 Nitroglycerin	18.803	18.803	0.000	31179	500.000	479.530
5 PETN	38.503	38.503	0.000	33146	500.000	444.523

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A010.d
Date : 06-AUG-2012 18:54
Client ID:
Sample Info: CCV2;AJL;2
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

GC Column: E2, 254nm ID: 4.1 (mm) Calibration Date: 8/10/2012 Time: 15:18

Sample No.(CC): CCV1 Initi. Calib. Date(s): 6/14/2012 6/14/2012

Lab Sample No.(CC): CCV1 Initi. Calib. Time(s): 13:07 17:30

File ID: ZHAD001.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
2-Amino-4,6-dinitrotoluene	36.310	35.460	37.160	306	301	-1.5
4-Amino-2,6-dinitrotoluene	34.223	33.373	35.073	231	203	-12.1
1,3-Dinitrobenzene	15.126	14.836	15.416	452	410	-9.3
2,4-Dinitrotoluene	25.306	24.756	25.856	406	375	-7.8
2,6-Dinitrotoluene	24.210	23.670	24.750	227	223	-1.7
HMX	7.656	7.386	7.926	127	125	-1.4
Nitrobenzene	16.413	16.093	16.733	272	268	-1.7
4-Nitrotoluene	30.323	29.643	31.003	148	137	-7.6
2-Nitrotoluene	27.716	27.136	28.296	183	170	-7.2
3-Nitrotoluene	32.560	31.850	33.270	195	176	-9.6
RDX	11.526	11.246	11.806	158	156	-0.9
Tetryl	22.406	21.746	23.066	260	231	-10.9
1,3,5-Trinitrobenzene	12.430	12.230	12.630	345	336	-2.5
2,4,6-Trinitrotoluene	21.256	20.796	21.716	323	291	-9.9
1,4-Dinitrobenzene	13.646	12.796	14.496	380	352	-7.5

The Absolute Value of %D must be less than or equal to 20%

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120810_E2D.b\ZHAB001.d
Lab Smp Id: CCV1
Inj Date : 10-AUG-2012 15:18
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV1;AJL;2
Misc Info : 045
Comment : Column: E2, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120810_E2D.b\8330E2_254
Meth Date : 15-Aug-2012 13:11 Lopez Quant Type: ESTD
Cal Date : 14-JUN-2012 17:30 Cal File: ZFED007.d
Als bottle: 45 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

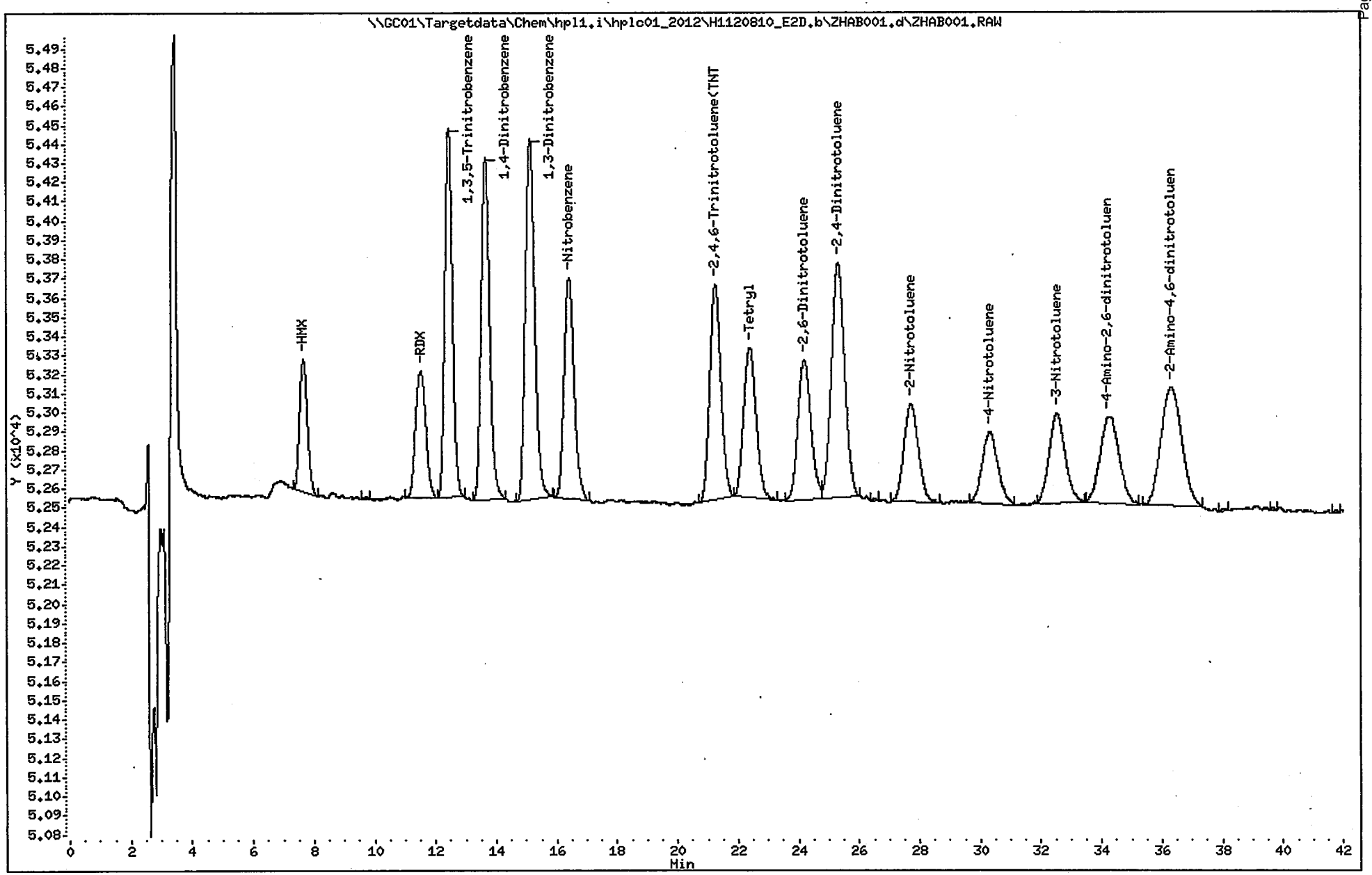
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
	1 HMX	7.656	7.540	0.116	12492	100.000	98.5938
	2 RDX	11.526	11.400	0.126	15620	100.000	99.0836
	3 1,3,5-Trinitrobenzene	12.430	12.340	0.090	33607	100.000	97.5206
$	4 1,4-Dinitrobenzene	13.646	13.546	0.100	35197	100.000	92.5110
	5 1,3-Dinitrobenzene	15.126	15.013	0.113	41015	100.000	90.7321
	6 Nitrobenzene	16.413	16.306	0.107	26756	100.000	98.3241
	7 2,4,6-Trinitrotoluene(TNT)	21.256	21.056	0.200	29068	100.000	90.1184
	8 Tetryl	22.406	22.060	0.346	23116	100.000	89.0753
	9 2,6-Dinitrotoluene	24.210	24.003	0.207	22266	100.000	98.2830
	10 2,4-Dinitrotoluene	25.306	25.070	0.236	37472	100.000	92.2381
	11 2-Nitrotoluene	27.716	27.496	0.220	16959	100.000	92.7676
	12 4-Nitrotoluene	30.323	30.066	0.257	13655	100.000	92.3569
	13 3-Nitrotoluene	32.560	32.250	0.310	17597	100.000	90.3789
	14 4-Amino-2,6-dinitrotoluene	34.223	33.823	0.400	20310	100.000	87.8833(M)
	15 2-Amino-4,6-dinitrotoluene	36.310	35.810	0.500	30103	100.000	98.4612

QC Flag Legend

M - Compound response manually integrated.

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120810_E2D.b\ZHAB001.d
Date : 10-AUG-2012 15:18
Client ID:
Sample Info: CCV1;AJL;2
Volume Injected (uL): 100.0
Column phase: E2

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

GC Column: E2, 254nm ID: 4.1 (mm) Calibration Date: 8/11/2012 Time: 01:02

Sample No.(CC): CCV1 Initi. Calib. Date(s): 6/14/2012 6/14/2012

Lab Sample No.(CC): CCV1 Initi. Calib. Time(s): 13:07 17:30

File ID: ZHAD014.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
2-Amino-4,6-dinitrotoluene	35.810	34.960	36.660	306	298	-2.4
4-Amino-2,6-dinitrotoluene	33.823	32.973	34.673	231 .	234	1.1
1,3-Dinitrobenzene	15.013	14.723	15.303	452	449	-0.6
2,4-Dinitrotoluene	25.070	24.520	25.620	406	431	6.0
2,6-Dinitrotoluene	24.003	23.463	24.543	227	239	5.6
HMX	7.540	7.270	7.810	127	126	-0.4
Nitrobenzene	16.306	15.986	16.626	272	301	10.4
4-Nitrotoluene	30.066	29.386	30.746	148	132	-10.4
2-Nitrotoluene	27.496	26.916	28.076	183	179	-2.0
3-Nitrotoluene	32.250	31.540	32.960	195	184	-5.4
RDX	11.400	11.120	11.680	158	154	-2.6
Tetryl	22.060	21.400	22.720	260	270	4.2
1,3,5-Trinitrobenzene	12.340	12.140	12.540	345	345	0.0
2,4,6-Trinitrotoluene	21.056	20.596	21.516	323	309	-4.0
1,4-Dinitrobenzene	13.546	12.696	14.396	380	363	-4.7

The Absolute Value of %D must be less than or equal to 20%

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120810_E2D.b\ZHAB014.d
Lab Smp Id: CCV1
Inj Date : 11-AUG-2012 01:02
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV1;AJL;2;;;
Misc Info : 124
Comment : Column: E2, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120810_E2D.b\8330E2_254
Meth Date : 15-Aug-2012 13:11 Lopez Quant Type: ESTD
Cal Date : 14-JUN-2012 17:30 Cal File: ZFED007.d
Als bottle: 100 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

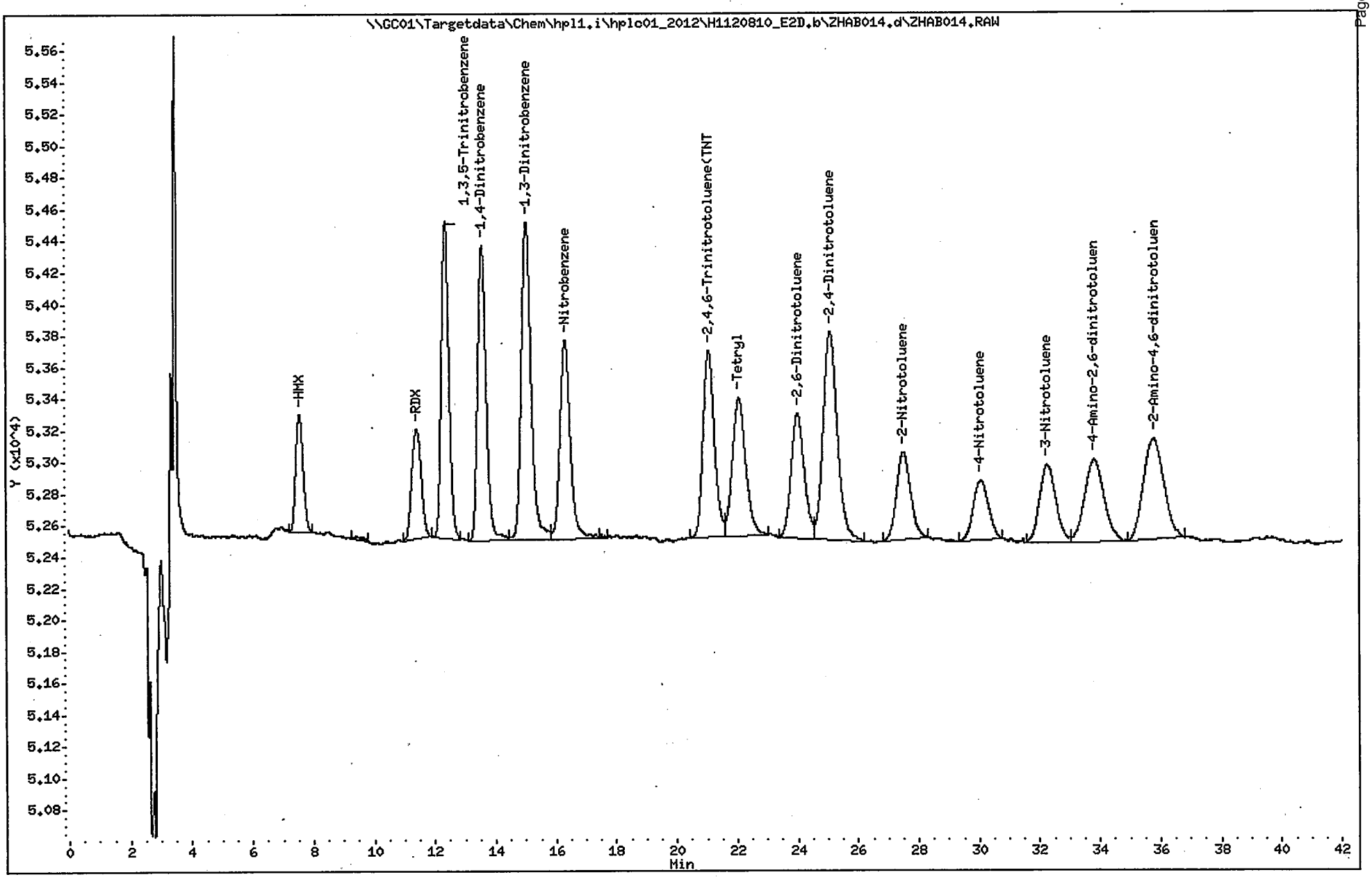
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	7.540	7.540	0.000	12618	100.000	99.5883
2	RDX	11.400	11.400	0.000	15353	100.000	97.3899
3	1,3,5-Trinitrobenzene	12.340	12.340	0.000	34450	100.000	99.9668
$ 4	1,4-Dinitrobenzene	13.546	13.546	0.000	36254	100.000	95.2892
5	1,3-Dinitrobenzene	15.013	15.013	0.000	44933	100.000	99.3993
6	Nitrobenzene	16.306	16.306	0.000	30053	100.000	110.440
7	2,4,6-Trinitrotoluene(TNT)	21.056	21.056	0.000	30949	100.000	95.9500
8	Tetryl	22.060	22.060	0.000	27039	100.000	104.192
9	2,6-Dinitrotoluene	24.003	24.003	0.000	23929	100.000	105.624
10	2,4-Dinitrotoluene	25.070	25.070	0.000	43058	100.000	105.988
11	2-Nitrotoluene	27.496	27.496	0.000	17917	100.000	98.0079
12	4-Nitrotoluene	30.066	30.066	0.000	13241	100.000	89.5568
13	3-Nitrotoluene	32.250	32.250	0.000	18414	100.000	94.5750
14	4-Amino-2,6-dinitrotoluene	33.823	33.823	0.000	23359	100.000	101.077
15	2-Amino-4,6-dinitrotoluene	35.810	35.810	0.000	29848	100.000	97.6271

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120810_E2D.b\ZHAB014.d
Date : 11-AUG-2012 01:02
Client ID:
Sample Info: CCV1;AJL;2;;;
Volume Injected (uL): 100.0
Column phase: E2

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



QC Raw Data

Blank Raw Data

1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1018213(MB)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): WATER Lab Sample ID: 1018213

Sample wt/vol: 1000 (g/mL) ML Lab File ID (1): ZH2B003A.d

% Moisture:

Extraction: (Type) SPE Date Received: 08/02/2012

Concentrated Extract Volume: 10000 (uL) Date Extracted: 08/02/2012

Injection Volume: 100 (uL) Date Analyzed: 08/02/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/L	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.100	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.100	U
99-65-0	1,3-Dinitrobenzene	0.100	U
121-14-2	2,4-Dinitrotoluene	0.100	U
606-20-2	2,6-Dinitrotoluene	0.100	U
2691-41-0	HMX	0.100	U
98-95-3	Nitrobenzene	0.100	U
99-99-0	4-Nitrotoluene	0.100	U
88-72-2	2-Nitrotoluene	0.100	U
99-08-1	3-Nitrotoluene	0.100	U
121-82-4	RDX	0.100	U
479-45-8	Tetryl	0.20	U
99-35-4	1,3,5-Trinitrobenzene	0.100	U
118-96-7	2,4,6-Trinitrotoluene	0.100	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B003A.d
Lab Smp Id: 1018213 Client Smp ID: MB for HBN 474044 [
Inj Date : 02-AUG-2012 19:08
Operator : AJL Inst ID: hpl1.i
Smp Info : 1018213;AJL;3;;BLANK
Misc Info : ZZ HPLC 3174 D8330W
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_254
Meth Date : 08-Aug-2012 09:59 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (m
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/13/12
REPORTED 8/13/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
	1 HMX	Compound Not Detected.					
	2 RDX	Compound Not Detected.					
	3 1,3,5-Trinitrobenzene	Compound Not Detected.					
$	4 1,4-Dinitrobenzene	13.830	13.726	0.104	183364	540.956	5.40956
	5 1,3-Dinitrobenzene	Compound Not Detected.					
	6 Nitrobenzene	Compound Not Detected.					
	7 Tetryl	Compound Not Detected.					
	8 2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
	9 4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
	10 2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
	11 2,6-Dinitrotoluene	Compound Not Detected.					
	12 2,4-Dinitrotoluene	Compound Not Detected.					
	13 2-Nitrotoluene	Compound Not Detected.					
	14 4-Nitrotoluene	Compound Not Detected.					
	15 3-Nitrotoluene	Compound Not Detected.					

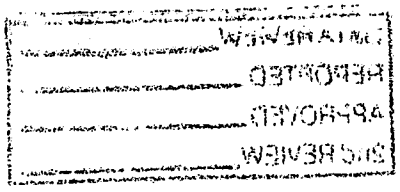
Data File: ZH2B003A.d
Report Date: 13-Aug-2012 13:06

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1018213
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Client SDG: H1120802_E1B.b
Fraction: SV
Client Smp ID: MB for HBN 474044 [
Operator: AJL
SampleType: BLANK
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3174 D8330W

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	5.00000	5.40956	108.19	50-150



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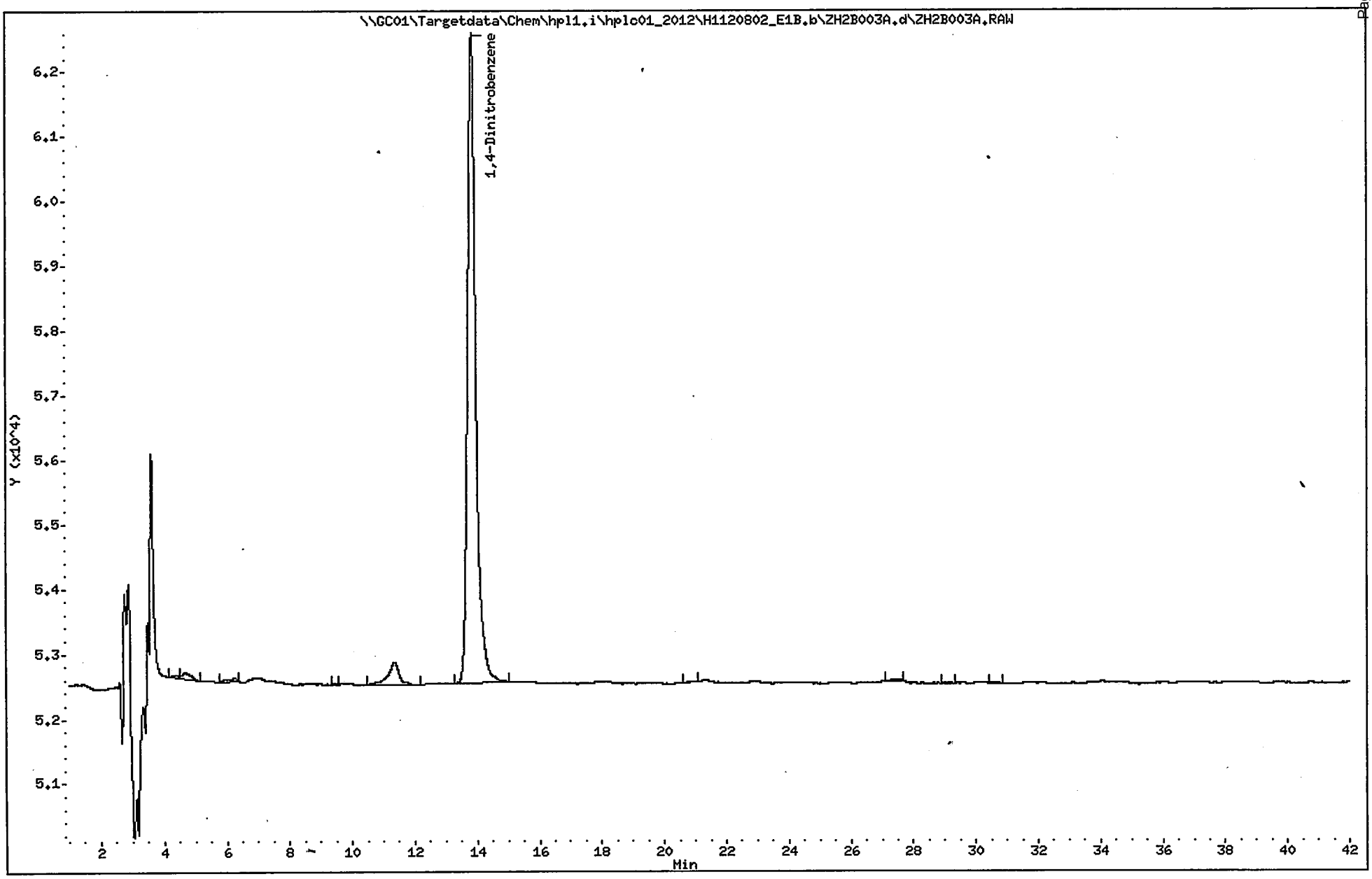
Date : 02-AUG-2012 19:08
Client ID: MB for HBN 474044 [
Sample Info: 1018213;AJL;3;;BLANK
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1018213(MB)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): WATER Lab Sample ID: 1018213

Sample wt/vol: 1000 (g/mL) ML Lab File ID (1): ZH6A002A.d

% Moisture:

Extraction: (Type) SPE Date Received: 08/02/2012

Concentrated Extract Volume: 10000 (uL) Date Extracted: 08/02/2012

Injection Volume: 100 (uL) Date Analyzed: 08/06/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
618-87-1	3,5-Dinitroaniline	0.11	U
55-63-0	Nitroglycerin	0.80	U
78-11-5	PETN	0.80	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A002A.d
Lab Smp Id: 1018213 Client Smp ID: MB for HBN 474044 [
Inj Date : 06-AUG-2012 13:02
Operator : AJL Inst ID: hpl1.i
Smp Info : 1018213;AJL;3;;BLANK
Misc Info : ZZ HPLC 3174 D8330W
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\8330E1_218
Meth Date : 07-Aug-2012 08:51 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/13/12
REPORTED 8/13/12
APPROVED
2nd REVIEW

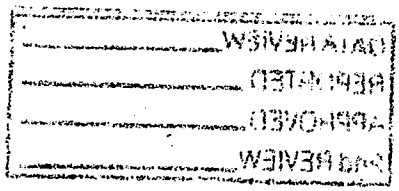
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
$ 1 1,4-Dinitrobenzene	13.853	13.750	0.103	69350	522.116	5.22116
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

Client Name:
Client SDG: H1120806_E1A.b
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: 1018213
Client Smp ID: MB for HBN 474044 [
Level: LOW
Operator: AJL
Data Type: LC DATA
SampleType: BLANK
SpikeList File: 8330LCS.spk
Quant Type: ESTD
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3174 D8330W

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	5.00000	5.22116	104.42	50-150



Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A002A.d

Date : 06-AUG-2012 13:02

Client ID: MB for HBN 474044 [

Sample Info: 1018213;AJL;3;;BLANK

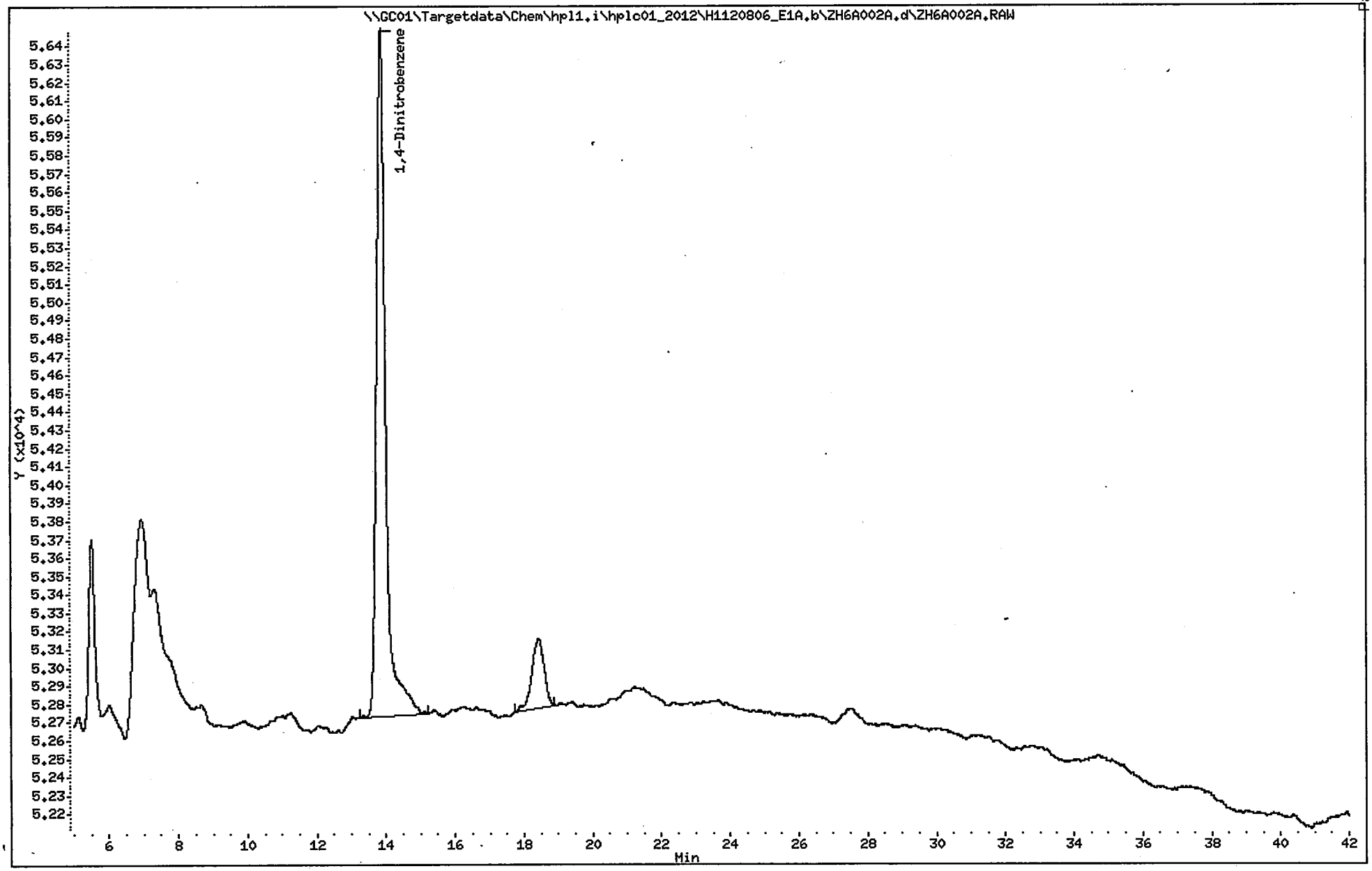
Volume Injected (uL): 100.0

Column phase: E1

Instrument: hpl1.i

Operator: AJL

Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1018213(MB)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): WATER Lab Sample ID: 1018213

Sample wt/vol: 1000 (g/mL) ML Lab File ID (2): ZHAD002.d

% Moisture:

Extraction:(Type) SPE Date Received: 08/02/2012

Concentrated Extract Volume: 10000 (uL) Date Extracted: 08/02/2012

Injection Volume: 100 (uL) Date Analyzed: 8/10/2012

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup:(Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.100	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.100	U
99-65-0	1,3-Dinitrobenzene	0.11	
121-14-2	2,4-Dinitrotoluene	0.100	U
606-20-2	2,6-Dinitrotoluene	0.100	U
2691-41-0	HMX	0.100	U
98-95-3	Nitrobenzene	0.100	U
99-99-0	4-Nitrotoluene	0.100	U
88-72-2	2-Nitrotoluene	0.100	U
99-08-1	3-Nitrotoluene	0.100	U
121-82-4	RDX	0.100	U
479-45-8	Tetryl	0.20	U
99-35-4	1,3,5-Trinitrobenzene	0.100	U
118-96-7	2,4,6-Trinitrotoluene	0.100	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120810_E2D.b\ZHAB002.d
Lab Smp Id: 1018213 Client Smp ID: MB for HBN 474044 [
Inj Date : 10-AUG-2012 16:14
Operator : AJL Inst ID: hpl1.i
Smp Info : 1018213;AJL;3;;BLANK
Misc Info : ZZ HPLC 3174 D8330W
Comment : Column: E2, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120810_E2D.b\8330E2_254
Meth Date : 15-Aug-2012 13:11 Lopez Quant Type: ESTD
Cal Date : 14-JUN-2012 17:30 Cal File: ZFED007.d
Als bottle: 100 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted
Cpnd Variable		Local Compound Variable

DATA REVIEW
REPORTED
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.680	13.546	0.134	180876	475.410	4.75410
5	1,3-Dinitrobenzene	15.043	15.013	0.030	4961	10.9746	0.109746(a)
6	Nitrobenzene	Compound Not Detected.					
7	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
8	Tetryl	Compound Not Detected.					
9	2,6-Dinitrotoluene	Compound Not Detected.					
10	2,4-Dinitrotoluene	Compound Not Detected.					
11	2-Nitrotoluene	Compound Not Detected.					
12	4-Nitrotoluene	Compound Not Detected.					
13	3-Nitrotoluene	Compound Not Detected.					
14	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
15	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: ZHAB002.d
Report Date: 15-Aug-2012 13:14

ALS - Middletown

RECOVERY REPORT

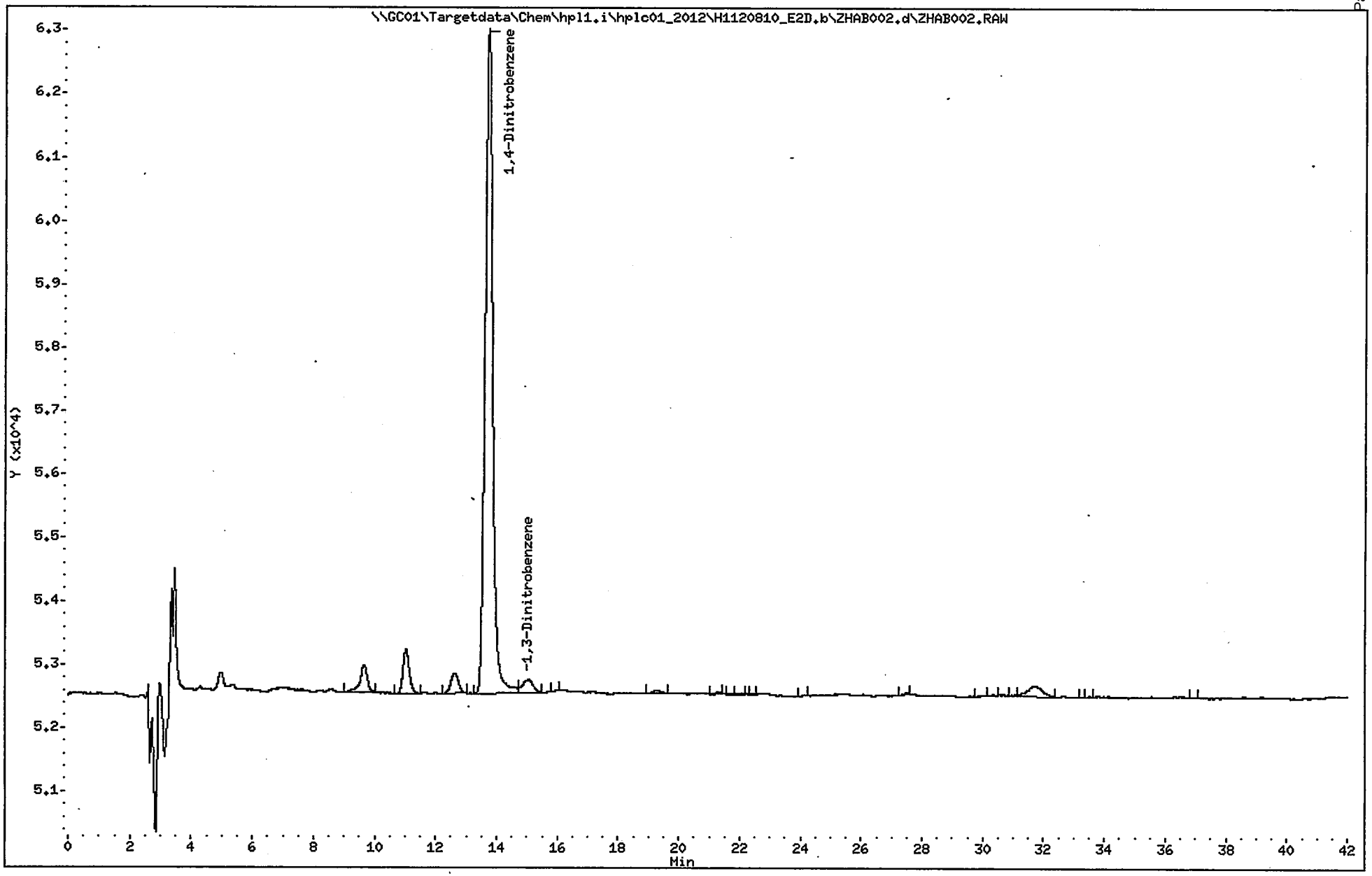
Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1018213
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120810_E2D.b\8330E2_25
Misc Info: ZZ HPLC 3174 D8330W

Client SDG: H1120810_E2D.b
Fraction: SV
Client Smp ID: MB for HBN 474044 [
Operator: AJL
SampleType: BLANK
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	5.00000	4.75410	95.08	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120810_E2D.b\ZHAB002.d
Date : 10-AUG-2012 16:14
Client ID: MB for HBN 474044 [
Sample Info: 1018213;AJL;3;;BLANK
Volume Injected (uL): 100.0
Column phase: E2

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



LCS Raw Data

1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

ICV111411(ICV)

ab Name: ALS - Middletown Contract:

ab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

atrix (soil/water): WATER Lab Sample ID: ICV111411

ample wt/vol: 1000 (g/mL) ML Lab File ID (1): ZKEB012.d

Moisture:

xtraction: (Type) Date Received:

oncentrated Extract Volume: 10000 (uL) Date Extracted:

njection Volume: 100 (uL) Date Analyzed: 11/14/2011

PC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

ulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.90	
1946-51-0	4-Amino-2,6-dinitrotoluene	0.87	
99-65-0	1,3-Dinitrobenzene	0.83	
121-14-2	2,4-Dinitrotoluene	0.85	
606-20-2	2,6-Dinitrotoluene	0.90	
2691-41-0	HMX	0.89	
98-95-3	Nitrobenzene	0.89	
99-99-0	4-Nitrotoluene	0.97	
88-72-2	2-Nitrotoluene	0.91	
99-08-1	3-Nitrotoluene	0.94	
121-82-4	RDX	0.86	
479-45-8	Tetryl	0.89	
99-35-4	1,3,5-Trinitrobenzene	0.90	
118-96-7	2,4,6-Trinitrotoluene	0.82	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB012
Lab Smp Id: ICV
Inj Date : 14-NOV-2011 22:55
Operator : AJL Inst ID: hpl1.i
Smp Info : ICV
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 58 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
	1 HMX	4.940	4.930	0.010	11031	88.5952	0.885952
	2 RDX	8.346	8.330	0.016	13072	86.4355	0.864355
	3 1,3,5-Trinitrobenzene	11.870	11.857	0.013	29196	89.5251	0.895251
$	4 1,4-Dinitrobenzene	13.753	13.737	0.016	28820	85.0241	0.850241
	5 1,3-Dinitrobenzene	15.333	15.317	0.016	35698	83.1725	0.831725
	6 Nitrobenzene	17.270	17.250	0.020	23216	88.5315	0.885315
	7 Tetryl	18.290	18.283	0.007	22992	89.3962	0.893962
	8 2,4,6-Trinitrotoluene(TNT)	21.120	21.110	0.010	24978	81.9028	0.819028
	9 4-Amino-2,6-dinitrotoluene	23.500	23.483	0.017	18794	87.3292	0.873292
	10 2-Amino-4,6-dinitrotoluene	24.656	24.650	0.006	25772	89.5939	0.895939
	11 2,6-Dinitrotoluene	25.943	25.940	0.003	19167	89.7778	0.897778
	12 2,4-Dinitrotoluene	26.910	26.903	0.007	33226	84.8298	0.848298
	13 2-Nitrotoluene	31.340	31.327	0.013	15153	91.1687	0.911687
	14 4-Nitrotoluene	34.143	34.133	0.010	12601	97.0438	0.970438
	15 3-Nitrotoluene	36.616	36.567	0.049	16513	93.8784	0.938784

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: ICV
Level: LOW
Data Type: LC DATA
SpikeList File: ICV.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1
Misc Info: 058

Client SDG: H1111114_E1B.b
Fraction: SV

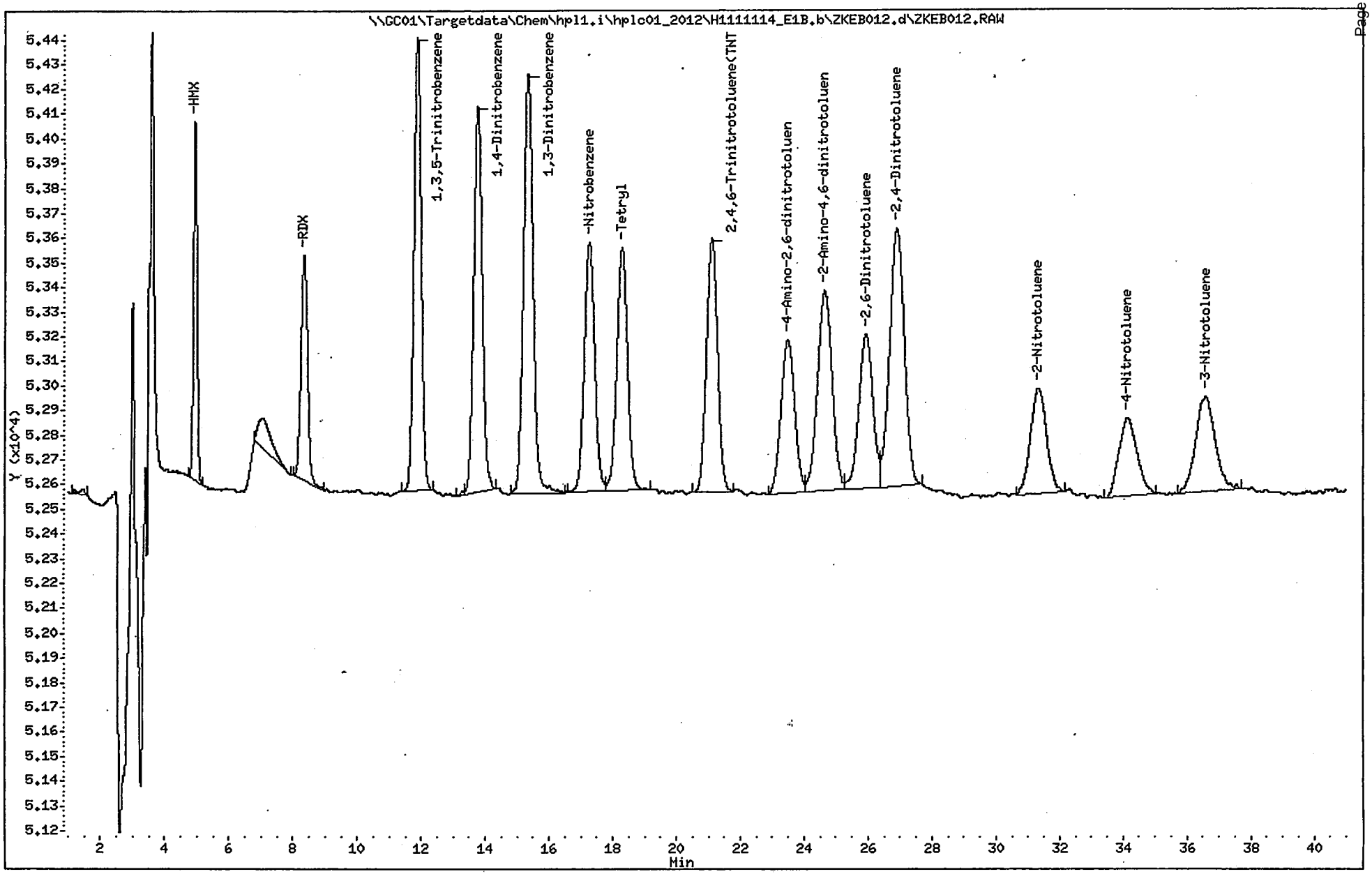
Operator: AJL
SampleType: LCS
Quant Type: ESTD

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1	HMX	1.00000	0.885952	88.60	80-120
2	RDX	1.00000	0.864355	86.44	80-120
3	1,3,5-Trinitrobenz	1.00000	0.895251	89.53	80-120
5	1,3-Dinitrobenzene	1.00000	0.831725	83.17	80-120
7	Tetryl	1.00000	0.893962	89.40	80-120
6	Nitrobenzene	1.00000	0.885315	88.53	80-120
8	2,4,6-Trinitrotolu	1.00000	0.819028	81.90	80-120
9	4-Amino-2,6-dinitr	1.00000	0.873292	87.33	80-120
10	2-Amino-4,6-dinitr	1.00000	0.895939	89.59	80-120
11	2,6-Dinitrotoluene	1.00000	0.897778	89.78	80-120
12	2,4-Dinitrotoluene	1.00000	0.848298	84.83	80-120
13	2-Nitrotoluene	1.00000	0.911687	91.17	80-120
14	4-Nitrotoluene	1.00000	0.970438	97.04	80-120
15	3-Nitrotoluene	1.00000	0.938784	93.88	80-120

	SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4	1,4-Dinitrobenzene	1.00000	0.850241	85.02	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB012.d
Date : 14-NOV-2011 22:55
Client ID:
Sample Info: ICV
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

ICV112011(ICV)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): WATER Lab Sample ID: ICV112011

Sample wt/vol: 1000 (g/mL) ML Lab File ID (1): ZKKA003.d

% Moisture:

Extraction: (Type) Date Received:

Concentrated Extract Volume: 40000 (uL) Date Extracted: /

Injection Volume: 100 (uL) Date Analyzed: 11/20/2011

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
618-87-1	3,5-Dinitroaniline	1.0	J
55-63-0	Nitroglycerin	5:6	
78-11-5	PETN	4.9	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: CCV2
Inj Date : 20-NOV-2011 11:37
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV2;AJL;2
Misc Info : 056
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 20-Aug-2012 13:25 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 56 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
$ 1	1,4-Dinitrobenzene	13.380	13.346	0.034	13685	103.030	1.03030
3	3,5-Dinitroaniline	16.793	16.760	0.033	75392	102.287	1.02287 (M)
4	Nitroglycerin	18.170	18.120	0.050	36109	555.353	5.55353 (M)
5	PETN	37.290	37.110	0.180	36909	494.989	4.94989

QC Flag Legend

M - Compound response manually integrated.

ALS - Middletown

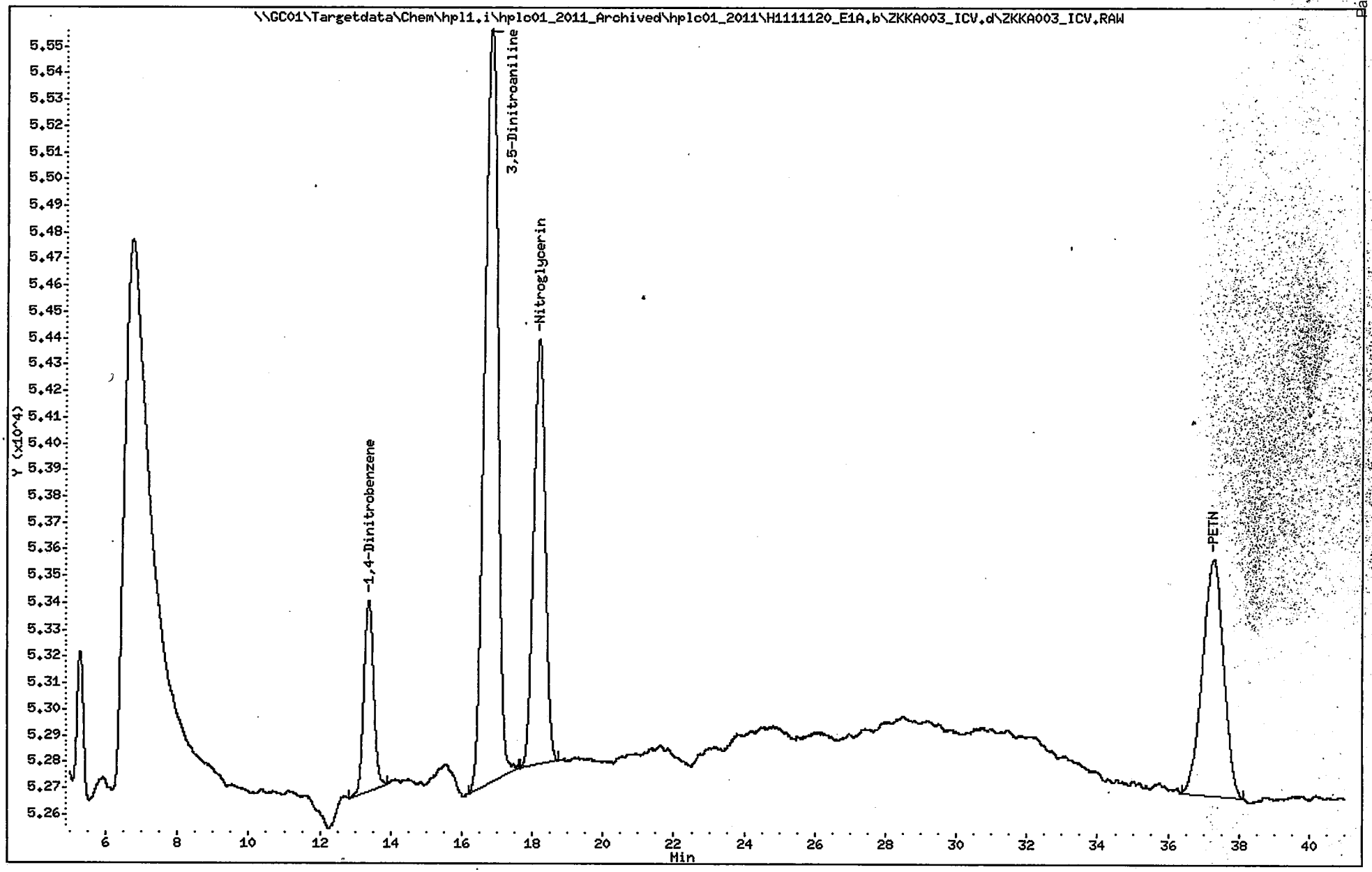
RECOVERY REPORT

Client Name:
Client SDG: H1111120_E1A.b
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: CCV2
Level: LOW
Operator: AJL
Data Type: LC DATA
SampleType: LCS
SpikeList File: ICV.spk
Quant Type: ESTD
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H11
Misc Info: 056

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
4 Nitroglycerin	5.00000	5.55353	111.07	80-120
3 3,5-Dinitroaniline	1.00000	1.02287	102.29	80-120
5 PETN	5.00000	4.94989	99.00	80-120

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.00000	1.03030	103.03	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111120_E1A.b\ZKKA003_ICV.d
Date : 20-NOV-2011 11:37
Client ID:
Instrument: hpl1.i
Sample Info: CCV2;AJL;2
Volume Injected (uL): 100.0
Operator: AJL
Column phase: E1
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

ICV061412(ICV)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): WATER Lab Sample ID: ICV061412

Sample wt/vol: 1000 (g/mL) ML Lab File ID (1): ZFED008.d

% Moisture:

Extraction:(Type) Date Received:

Concentrated Extract Volume: 10000 (uL) Date Extracted:

Injection Volume: 100 (uL) Date Analyzed: 06/14/2012

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup:(Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/L	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	1.0	
1946-51-0	4-Amino-2,6-dinitrotoluene	0.99	
99-65-0	1,3-Dinitrobenzene	0.97	
121-14-2	2,4-Dinitrotoluene	1.0	
606-20-2	2,6-Dinitrotoluene	1.0	
2691-41-0	HMX	1.1	
98-95-3	Nitrobenzene	1.1	
99-99-0	4-Nitrotoluene	0.96	
88-72-2	2-Nitrotoluene	1.1	
99-08-1	3-Nitrotoluene	1.1	
121-82-4	RDX	1.0	
479-45-8	Tetryl	1.0	
99-35-4	1,3,5-Trinitrobenzene	1.1	
118-96-7	2,4,6-Trinitrotoluene	0.97	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\ZFED008.d
Lab Smp Id: ICV
Inj Date : 14-JUN-2012 18:14
Operator : AJL Inst ID: hpl1.i
Smp Info : ICV;AJL;3;;LCS;1
Misc Info : 119
Comment : Column: E2, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\8330E2_254
Meth Date : 15-Jun-2012 08:33 Lopez Quant Type: ESTD
Cal Date : 14-JUN-2012 17:30 Cal File: ZFED007.d
Als bottle: 100 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1	HMX	8.233	8.213	0.020	13919	109.857	1.09857
2	RDX	12.443	12.440	0.003	16516	104.767	1.04767
3	1,3,5-Trinitrobenzene	13.386	13.370	0.016	36563	106.098	1.06098
$ 4	1,4-Dinitrobenzene	14.713	14.690	0.023	37184	97.7336	0.977336
5	1,3-Dinitrobenzene	16.326	16.303	0.023	44015	97.3686	0.973686
6	Nitrobenzene	17.740	17.713	0.027	28736	105.600	1.05600
7	2,4,6-Trinitrotoluene(TNT)	22.953	22.936	0.017	31361	97.2273	0.972273
8	Tetryl	24.200	24.186	0.014	25837	99.5604	0.995604
9	2,6-Dinitrotoluene	26.210	26.166	0.044	23542	103.915	1.03915
10	2,4-Dinitrotoluene	27.390	27.360	0.030	41166	101.331	1.01331
11	2-Nitrotoluene	30.033	29.986	0.047	19290	105.518	1.05518
12	4-Nitrotoluene	32.856	32.793	0.063	14134	95.5967	0.955967
13	3-Nitrotoluene	35.273	35.220	0.053	20574	105.669	1.05669
14	4-Amino-2,6-dinitrotoluene	37.373	37.263	0.110	22896	99.0732	0.990732
15	2-Amino-4,6-dinitrotoluene	39.553	39.460	0.093	31100	101.722	1.01722

ALS - Middletown

RECOVERY REPORT

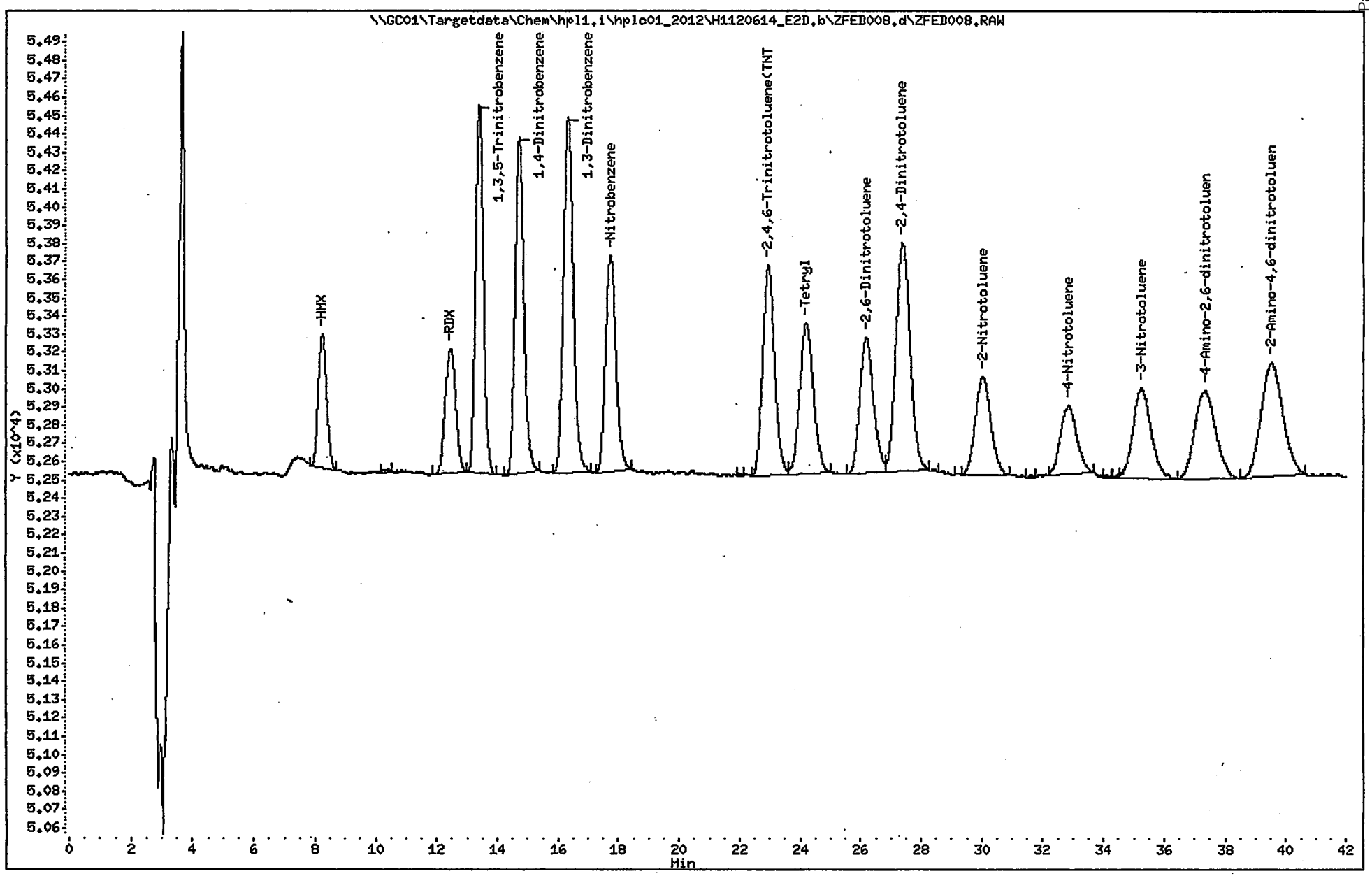
Client Name:
Client SDG: H1120614_E2D.b
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: ICV
Level: LOW
Operator: AJL
Data Type: LC DATA
SampleType: LCS
SpikeList File: ICV.spk
Quant Type: ESTD
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\8330E2_25
Misc Info: 119

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 HMX	1.00000	1.09857	109.86	80-120
2 RDX	1.00000	1.04767	104.77	80-120
3 1,3,5-Trinitrobenz	1.00000	1.06098	106.10	80-120
5 1,3-Dinitrobenzene	1.00000	0.973686	97.37	80-120
8 Tetryl	1.00000	0.995604	99.56	80-120
6 Nitrobenzene	1.00000	1.05600	105.60	80-120
7 2,4,6-Trinitrotolu	1.00000	0.972273	97.23	80-120
14 4-Amino-2,6-dinitr	1.00000	0.990732	99.07	80-120
15 2-Amino-4,6-dinitr	1.00000	1.01722	101.72	80-120
9 2,6-Dinitrotoluene	1.00000	1.03915	103.92	80-120
10 2,4-Dinitrotoluene	1.00000	1.01331	101.33	80-120
11 2-Nitrotoluene	1.00000	1.05518	105.52	80-120
12 4-Nitrotoluene	1.00000	0.955967	95.60	80-120
13 3-Nitrotoluene	1.00000	1.05669	105.67	80-120

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.00000	0.977336	97.73	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120614_E2D.b\ZFED008.d
Date : 14-JUN-2012 18:14
Client ID:
Sample Info: ICV;AJL;3;;LCS;1
Volume Injected (uL): 100.0
Column phase: E2

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1018214(LCS)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): WATER Lab Sample ID: 1018214

Sample wt/vol: 1000 (g/mL) ML Lab File ID (1): ZH2B004A.d

% Moisture:

Extraction: (Type) SPE Date Received: 08/02/2012

Concentrated Extract Volume: 10000 (uL) Date Extracted: 08/02/2012

Injection Volume: 100 (uL) Date Analyzed: 08/02/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	1.0	
1946-51-0	4-Amino-2,6-dinitrotoluene	1.0	
99-65-0	1,3-Dinitrobenzene	1.1	
121-14-2	2,4-Dinitrotoluene	1.0	
606-20-2	2,6-Dinitrotoluene	1.0	
2691-41-0	HMX	1.0	
98-95-3	Nitrobenzene	1.1	
99-99-0	4-Nitrotoluene	1.1	
88-72-2	2-Nitrotoluene	0.98	
99-08-1	3-Nitrotoluene	1.0	
121-82-4	RDX	1.1	
479-45-8	Tetryl	0.99	
99-35-4	1,3,5-Trinitrobenzene	1.0	
118-96-7	2,4,6-Trinitrotoluene	1.1	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B004A.d
Lab Smp Id: 1018214 Client Smp ID: LCS for HBN 474044
Inj Date : 02-AUG-2012 19:52
Operator : AJL Inst ID: hpl1.i
Smp Info : 1018214;AJL;3;;LCS;1
Misc Info : ZZ HPLC 3174 D8330W
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_254
Meth Date : 08-Aug-2012 09:59 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/13/12
REPORTED 8/13/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
	1 HMX	5.010	4.980	0.030	12537	100.691	1.00691
	2 RDX	8.466	8.413	0.053	16176	106.960	1.06960
	3 1,3,5-Trinitrobenzene	11.960	11.876	0.084	34164	104.759	1.04759
$	4 1,4-Dinitrobenzene	13.816	13.726	0.090	185181	546.317	5.46317
	5 1,3-Dinitrobenzene	15.413	15.303	0.110	48276	112.478	1.12478
	6 Nitrobenzene	17.316	17.203	0.113	27594	105.226	1.05226
	7 Tetryl	18.556	18.403	0.153	25348	98.5566	0.985566
	8 2,4,6-Trinitrotoluene(TNT)	21.296	21.156	0.140	33012	108.246	1.08246
	9 4-Amino-2,6-dinitrotoluene	23.720	23.520	0.200	22184	103.081	1.03081
	10 2-Amino-4,6-dinitrotoluene	24.896	24.683	0.213	29431	102.314	1.02314
	11 2,6-Dinitrotoluene	26.093	25.920	0.173	21594	101.146	1.01146
	12 2,4-Dinitrotoluene	27.053	26.860	0.193	40749	104.037	1.04037
	13 2-Nitrotoluene	31.433	31.183	0.250	16316	98.1659	0.981659
	14 4-Nitrotoluene	34.223	34.036	0.187	13795	106.239	1.06239
	15 3-Nitrotoluene	36.660	36.456	0.204	18252	103.765	1.03765

Data File: ZH2B004A.d
Report Date: 13-Aug-2012 13:06

ALS - Middletown

RECOVERY REPORT

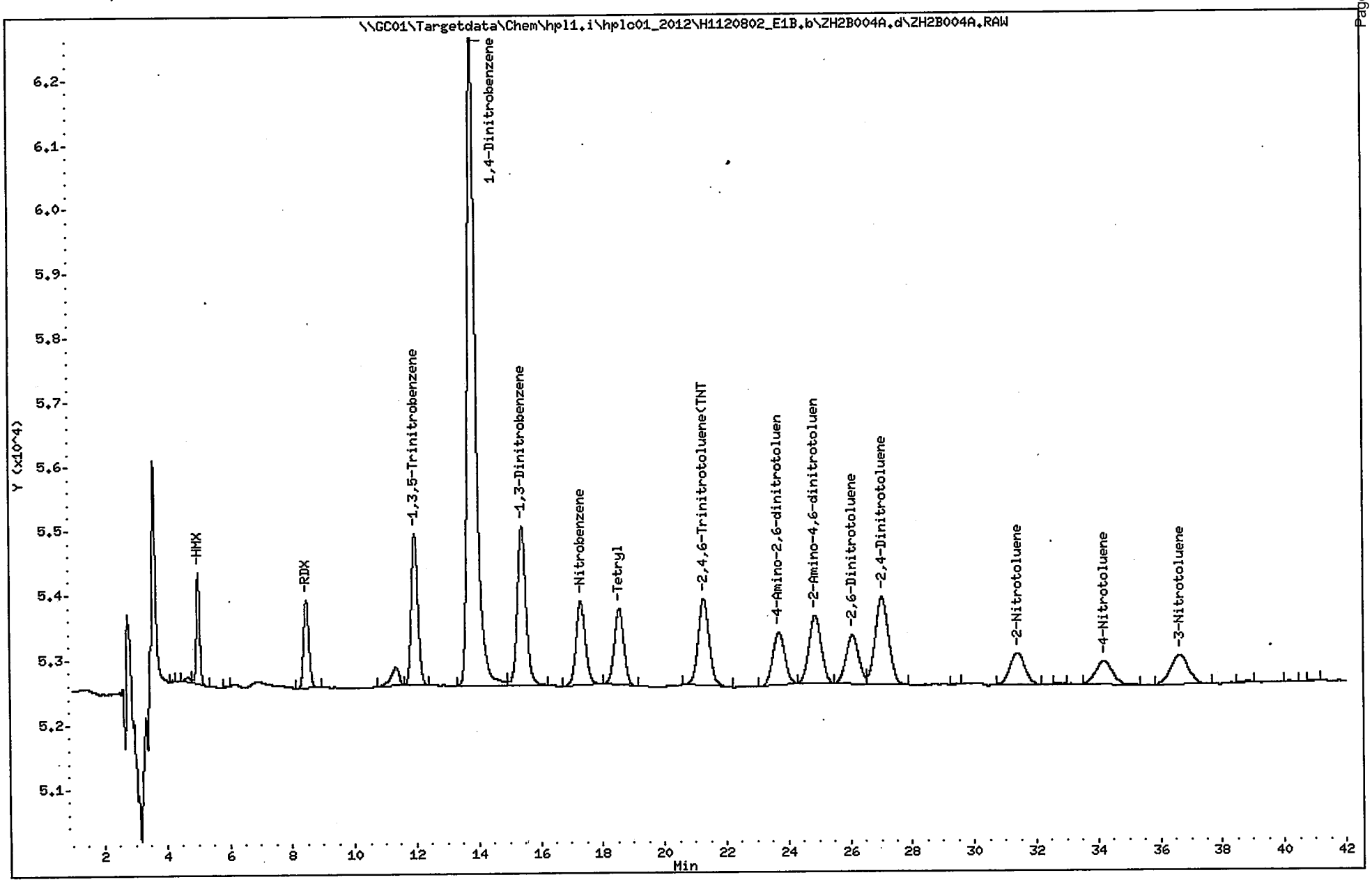
Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1018214
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Client SDG: H1120802_E1B.b
Fraction: SV
Client Smp ID: LCS for HBN 474044
Operator: AJL
SampleType: LCS
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3174 D8330W

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 HMX	1.00000	1.00691	100.69	80-115
2 RDX	1.00000	1.06960	106.96	50-160
3 1,3,5-Trinitrobenz	1.00000	1.04759	104.76	65-140
5 1,3-Dinitrobenzene	1.00000	1.12478	112.48	45-160
7 Tetryl	1.00000	0.985566	98.56	20-175
6 Nitrobenzene	1.00000	1.05226	105.23	50-140
8 2,4,6-Trinitrotolu	1.00000	1.08246	108.25	50-145
9 4-Amino-2,6-dinitr	1.00000	1.03081	103.08	55-155
10 2-Amino-4,6-dinitr	1.00000	1.02314	102.31	50-155
11 2,6-Dinitrotoluene	1.00000	1.01146	101.15	60-135
12 2,4-Dinitrotoluene	1.00000	1.04037	104.04	60-135
13 2-Nitrotoluene	1.00000	0.981659	98.17	45-135
14 4-Nitrotoluene	1.00000	1.06239	106.24	50-130
15 3-Nitrotoluene	1.00000	1.03765	103.76	50-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	5.00000	5.46317	109.26	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B004A.d
Date : 02-AUG-2012 19:52
Client ID: LCS for HBN 474044
Sample Info: 1018214;AJL;3;;LCS;1
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1020409(LCS)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): WATER Lab Sample ID: 1020409

Sample wt/vol: 1000 (g/mL) ML Lab File ID (1): ZH6A003.d

% Moisture:

Extraction: (Type) SPE Date Received: 08/08/2012

Concentrated Extract Volume: 10000 (uL) Date Extracted: 08/02/2012

Injection Volume: 100 (uL) Date Analyzed: 08/06/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/L	Q
618-87-1	3,5-Dinitroaniline	1.0	
55-63-0	Nitroglycerin	5.3	
78-11-5	PETN	4.9	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A003.d
Lab Smp Id: 1020409 Client Smp ID: LCS for HBN 474043
Inj Date : 06-AUG-2012 13:46
Operator : AJL Inst ID: hpl1.i
Smp Info : 1020409;AJL;3;;LCS;1
Misc Info : ZZ HPLC 3174 D8330W
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\8330E1_218
Meth Date : 07-Aug-2012 08:51 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/13/12
REPORTED 8/13/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
$	1 1,4-Dinitrobenzene	13.826	13.750	0.076	74413	560.234	5.60234
	3 3,5-Dinitroaniline	17.396	17.260	0.136	74199	100.668	1.00668
	4 Nitroglycerin	18.926	18.803	0.123	34536	531.161	5.31161
	5 PETN	38.756	38.503	0.253	36464	489.021	4.89021

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1020409
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3174 D8330W

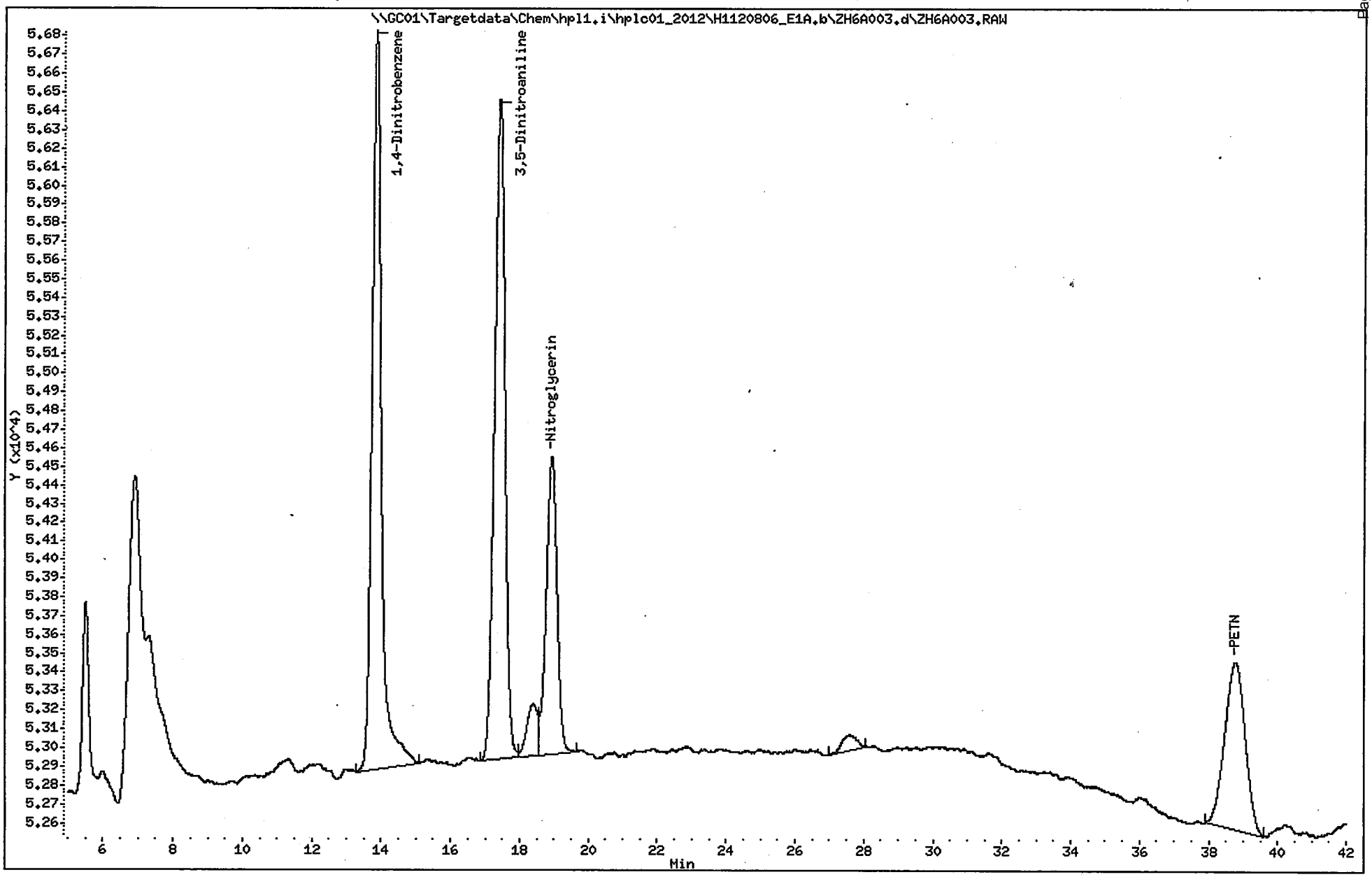
Client SDG: H1120806_E1A.b
Fraction: SV
Client Smp ID: LCS for HBN 474043
Operator: AJL
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
4 Nitroglycerin	5.00000	5.31161	106.23	70-130
3 3,5-Dinitroaniline	1.00000	1.00668	100.67	70-130
5 PETN	5.00000	4.89021	97.80	70-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	5.00000	5.60234	112.05	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A003.d
Date : 06-AUG-2012 13:46
Client ID: LCS for HBN 474043
Sample Info: 1020409;AJL;3;;LCS;1
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1018214(LCS)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): WATER Lab Sample ID: 1018214

Sample wt/vol: 1000 (g/mL) ML Lab File ID (2): ZHAD003.d

% Moisture:

Extraction: (Type) SPE Date Received: 08/02/2012

Concentrated Extract Volume: 10000 (uL) Date Extracted: 08/02/2012

Injection Volume: 100 (uL) Date Analyzed: 8/10/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	1.0	
1946-51-0	4-Amino-2,6-dinitrotoluene	1.0	
99-65-0	1,3-Dinitrobenzene	1.0	
121-14-2	2,4-Dinitrotoluene	0.99	
606-20-2	2,6-Dinitrotoluene	0.98	
2691-41-0	HMX	0.97	
98-95-3	Nitrobenzene	1.1	
99-99-0	4-Nitrotoluene	0.93	
88-72-2	2-Nitrotoluene	0.90	
99-08-1	3-Nitrotoluene	0.99	
121-82-4	RDX	0.95	
479-45-8	Tetryl	0.92	
99-35-4	1,3,5-Trinitrobenzene	1.1	
118-96-7	2,4,6-Trinitrotoluene	0.99	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120810_E2D.b\ZHAB003.d
Lab Smp Id: 1020409 Client Smp ID: LCS for HBN 474044
Inj Date : 10-AUG-2012 16:58
Operator : AJL Inst ID: hpl1.i
Smp Info : 1020409;AJL;3;;LCS;1
Misc Info : ZZ HPLC 3174 D8330W
Comment : Column: E2, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120810_E2D.b\8330E2_254
Meth Date : 15-Aug-2012 13:11 Lopez Quant Type: ESTD
Cal Date : 14-JUN-2012 17:30 Cal File: ZFED007.d
Als bottle: 100 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/15/12
REPORTED
APPROVED
REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1	HMX	7.676	7.540	0.136	12333	97.3389	0.973389
2	RDX	11.546	11.400	0.146	14933	94.7257	0.947257
3	1,3,5-Trinitrobenzene	12.446	12.340	0.106	39334	114.139	1.14139
$ 4	1,4-Dinitrobenzene	13.650	13.546	0.104	181393	476.769	4.76769
5	1,3-Dinitrobenzene	15.136	15.013	0.123	47336	104.715	1.04715
6	Nitrobenzene	16.433	16.306	0.127	29546	108.577	1.08577
7	2,4,6-Trinitrotoluene(TNT)	21.233	21.056	0.177	31943	99.0317	0.990317
8	Tetryl	22.346	22.060	0.286	23967	92.3545	0.923545
9	2,6-Dinitrotoluene	24.193	24.003	0.190	22254	98.2301	0.982301
10	2,4-Dinitrotoluene	25.293	25.070	0.223	40135	98.7932	0.987932
11	2-Nitrotoluene	27.703	27.496	0.207	16447	89.9669	0.899669
12	4-Nitrotoluene	30.266	30.066	0.200	13801	93.3444	0.933444
13	3-Nitrotoluene	32.513	32.250	0.263	19317	99.2129	0.992129
14	4-Amino-2,6-dinitrotoluene	34.206	33.823	0.383	23906	103.444	1.03444
15	2-Amino-4,6-dinitrotoluene	36.263	35.810	0.453	31747	103.838	1.03838

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1020409
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120810_E2D.b\8330E2_25
Misc Info: ZZ HPLC 3174 D8330W

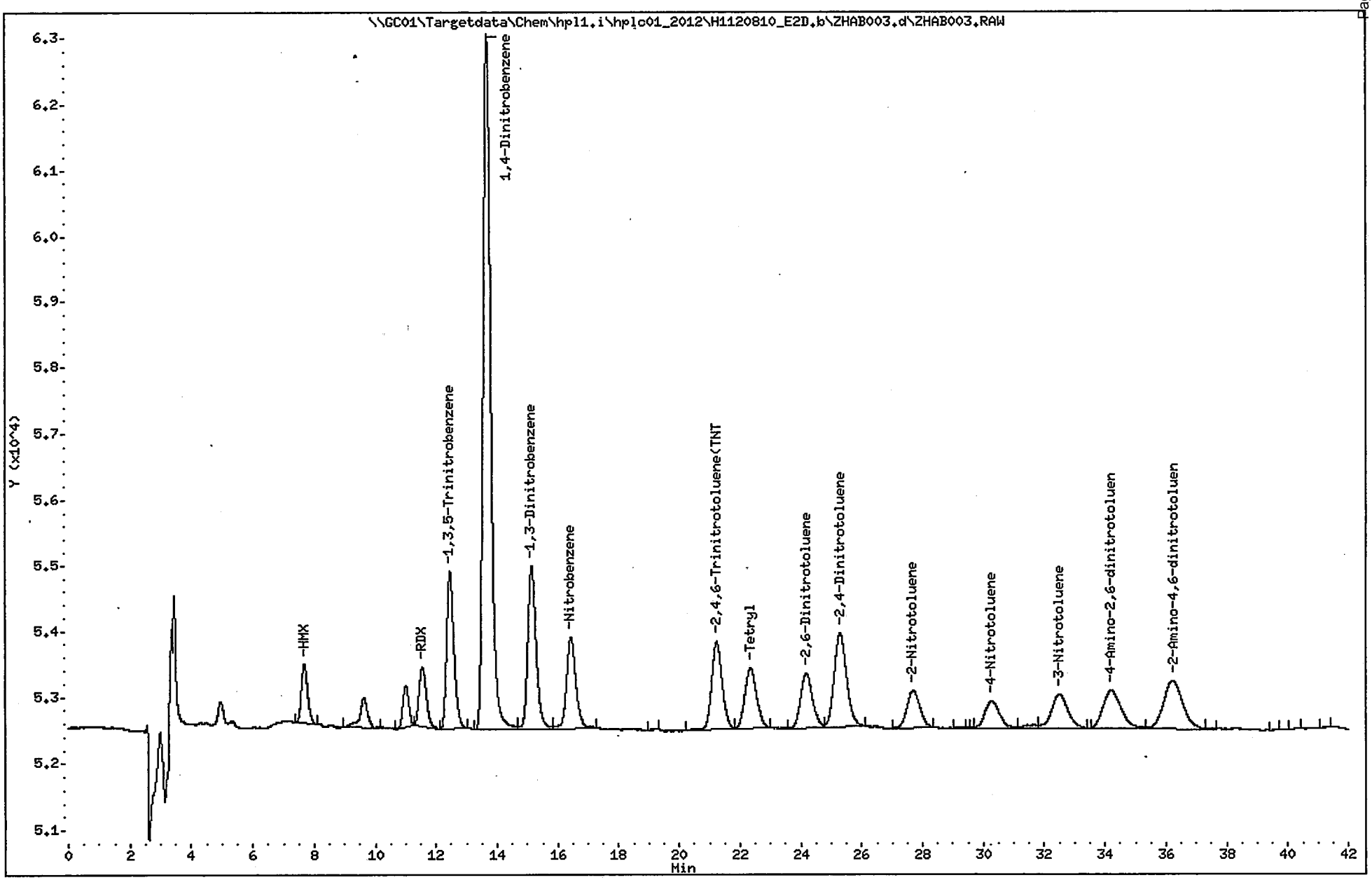
Client SDG: H1120810_E2D.b
Fraction: SV
Client Smp ID: LCS for HBN 474044
Operator: AJL
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 HMX	1.00000	0.973389	97.34	80-115
2 RDX	1.00000	0.947257	94.73	50-160
3 1,3,5-Trinitrobenz	1.00000	1.14139	114.14	65-140
5 1,3-Dinitrobenzene	1.00000	1.04715	104.72	45-160
8 Tetryl	1.00000	0.923545	92.35	20-175
6 Nitrobenzene	1.00000	1.08577	108.58	50-140
7 2,4,6-Trinitrotolu	1.00000	0.990317	99.03	50-145
14 4-Amino-2,6-dinitr	1.00000	1.03444	103.44	55-155
15 2-Amino-4,6-dinitr	1.00000	1.03838	103.84	50-155
9 2,6-Dinitrotoluene	1.00000	0.982301	98.23	60-135
10 2,4-Dinitrotoluene	1.00000	0.987932	98.79	60-135
11 2-Nitrotoluene	1.00000	0.899669	89.97	45-135
12 4-Nitrotoluene	1.00000	0.933444	93.34	50-130
13 3-Nitrotoluene	1.00000	0.992129	99.21	50-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	5.00000	4.76769	95.35	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120810_E2D.b\ZHAB003.d
Date : 10-AUG-2012 16:58
Client ID: LCS for HBN 474044
Sample Info: 1020409;AJL;3;;LCS;1
Volume Injected (uL): 100.0
Column phase: E2

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



Preparation Logbook

HPLC EXTRACTION

Queue: HPLC
Rule: 8330W EXTR / 8330W EXTR
Batch: 3165 / 3166
HBN: 474043 / 474044

Surrogate ID: 110712002
Surrogate Amount: 2.5mL JRK

Extraction:	Date	Time	Tech	Sonication:	Time On	Time Off	Hours	Tech
	8/2/12	12:35	JRK		—	—	—	—

Line #	Sample ID	Sample Amount	QC Type	Spike ID	Spike Amount	Extraction Time	Final Volume	Sample Specific Comments
1.)	1018210 / 1018213	1000mL	MB	—	—	15½min	10mL	8330W / 8330W
2.)	1018211 / 1018214	1000mL	LCS 1	120224001	5mL JRK	17½min	10mL	
3.)	1018212	1000mL	LCS 2	181562 181563 181562	5mL 5mL 5mL	16½min.	10mL	
4.)	9979284032	1000mL	PT	—	—	16min.	10mL	8330W EXTR
5.)	9980086001-P	940mL	—	—	—	15min.	10mL	↓
6.)	9980109002-B	1035mL	—	—	—	17½min.	10mL	8330W EXTR
7.)	1018216	1040mL	MS	120224001	5mL JRK	18½min	10mL	9980109002-C
8.)	1018217	1050mL	MSD	120224001	5mL JRK	20 min.	10mL	9980109002-D
9.)	~~9980396~~							JRK 8/2/12
10.)	9980394006-B	1040mL	—	—	—	~10HRS.	10mL	
11.)	9980394014-C	1040mL	—	—	—	16½min.	10mL	
12.)	—	—	—	—	—	—	—	—
13.)	MIX 1 LOD1	1000mL	LOD1	181576	2.5mL JRK	~20min.	10mL	
14.)	MIX 1 LOQ1	1000mL	LOQ1	181576	5mL JRK	~20min.	10mL	
15.)	MIX 1 LOQ1/2	1000mL	LOQ1	181576	7.5mL JRK	~20min.	10mL	
16.)	MIX 2 LOD1	1000mL	LOD1	181517	8mL JRK	16min.	10mL	
17.)	MIX 2 LOQ1	1000mL	LOQ1	181517	15mL JRK	16½min.	10mL	
18.)								
19.)								
20.)								
21.)								
22.)								
23.)								
24.)								
25.)								
26.)								
27.)								
28.)								
29.)								
30.)								

Reagents:
SOB-RPS OASES (760167, EMPORE), MEOH (120626028), ACN (120507001), FA400 (50111, EMPORE)

Comments:
RW SAMPLES FROM BATCH 3166 TRANSFERRED ON CHAIN ~~417543~~ 417542 JRK 8/2/12 EXTRACTS TRANSFERRED ON CHAIN ~~417544~~ 417543 JRK 8/2/12 -JRK 8/2/12
ACTUAL EFFECTIVE FINAL VOLUME IS 10mL, AS 5mL EXTRACT IS DILUTED 1:1 PRIOR TO ANALYSIS -JRK 8/2/12

Approved By: JRK
Date Approved: 8/2/12
Rev 3/26/10

Page #: 48

Reviewed By: KMB
Date reviewed: 8/7/12

Analytical Logbook

Sequence: 8330_111114.B
Operator: ALMDT.nouser

Printed: 8/20/2012 8:51:04 AM

Title: 8330 Startup Injections
Datasource: D49KVMB1_local
Location: ALS\Vol_Lab_LC\MySequences\8330
Timebase: d49kvmb1_1
#Samples: 21

Created: 11/14/2011 11:45:34 AM by almdt.nouser
Last Update: 11/14/2011 5:42:07 PM by almdt.nouser

No.	Name	Type	Pos.	Inj. Vol.	Inj. Date/Time	Comment
1	CCV1	Unknown	RA1	100.000	11/14/2011 11:50:00 AM	5uL 1b1394 to1mL 1:1 1B1473
2	CCV TEST	Unknown	RA1	100.000	11/14/2011 2:21:26 PM	5uL 1b1394 to1mL 1:1 1B1473
3	CCV TEST	Unknown	RA1	100.000	11/14/2011 3:11:12 PM	5uL 1b1394 to1mL 1:1 1B1473
4	CCV MIX2 TEST	Unknown	RA2	100.000	11/14/2011 4:01:52 PM	.
5	LEVEL1	Unknown	RA1	1.000	11/14/2011 5:12:03 PM	.
6	LEVEL1	Unknown	RA1	1.000	11/14/2011 5:54:58 PM	1B1475
7	LEVEL2	Unknown	RA1	2.500	11/14/2011 6:37:52 PM	MIX1 - 254
8	LEVEL3	Unknown	RA1	5.000	11/14/2011 7:20:46 PM	.
9	LEVEL4	Unknown	RA1	12.500	11/14/2011 8:03:36 PM	.
10	LEVEL5	Unknown	RA1	25.000	11/14/2011 8:46:30 PM	.
11	LEVEL6	Unknown	RA1	50.000	11/14/2011 9:29:29 PM	.
12	LEVEL7	Unknown	RA1	100.000	11/14/2011 10:12:27 PM	.
13	ICV1	Unknown	RA2	100.000	11/14/2011 10:55:30 PM	5uL 1b1394 to1mL 1:1 1B1473
14	LEVEL1	Unknown	RA3	1.000	11/14/2011 11:38:19 PM	1B1476
15	LEVEL2	Unknown	RA3	2.500	11/15/2011 12:21:08 AM	MIX2 - 218
16	LEVEL3	Unknown	RA3	5.000	11/15/2011 1:04:07 AM	.
17	LEVEL4	Unknown	RA3	12.500	11/15/2011 1:47:00 AM	.
18	LEVEL5	Unknown	RA3	25.000	11/15/2011 2:29:54 AM	.
19	LEVEL6	Unknown	RA3	50.000	11/15/2011 3:12:47 AM	.
20	LEVEL7	Unknown	RA3	100.000	11/15/2011 3:55:45 AM	.
21	CCV2	Unknown	RA4	100.000	11/15/2011 4:38:47 AM	5uL 1b1394 to1mL 1:1 1B1413

254

218

Sequence: 8330_111116.B
Operator: ALMDT.nouser
Printed: 8/20/2012 1:26:35 PM

Title: 8330 Startup Injections
Datasource: D49KVMB1_local
Location: ALS\Vol_Lab_LC\MySequences\8330
Timebase: d49kvmb1_1
#Samples: 61
Created: 11/16/2011 9:52:07 AM by almdt.nouser
Last Update: 8/20/2012 1:26:21 PM by ALMDT.nouser

No.	Name	Type	Pos.	Inj. Vol.	Inj. Date/Time	Comment
1	CCV1	Unknown	RA1	100.000	11/16/2011 10:20:36 AM	5uL 1b1473 to1mL 1:1 ACN:WATER
2	CCV2	Unknown	RA1	100.000	11/16/2011 11:04:34 AM	Injected in wrong POS!=1
3	CCV2/ICV	Unknown	RA2	100.000	11/16/2011 12:02:50 PM	5uL 1b1413 to1mL 1:1 acn:water
4	914196MB	Unknown	RA3	100.000	11/16/2011 1:12:21 PM	.
5	914198LCS1	Unknown	RA4	100.000	11/16/2011 2:10:36 PM	.
6	914197LCS2	Unknown	RA5	100.000	11/16/2011 3:08:52 PM	.
7	9935227002	Unknown	RA6	5.000	11/16/2011 4:07:02 PM	20X
8	9935227001	Unknown	RA7	100.000	11/16/2011 5:05:18 PM	.
9	914199MS	Unknown	RA8	100.000	11/16/2011 6:03:33 PM	.
10	914200MSD	Unknown	RB1	100.000	11/16/2011 6:47:36 PM	.
11	TEST1	Unknown	RB2	100.000	11/16/2011 7:31:40 PM	.
12	TEST2	Unknown	RB3	100.000	11/16/2011 8:15:39 PM	.
13	CCV2	Unknown	RA2	100.000	11/16/2011 8:59:47 PM	5uL 1b1413 to1mL 1:1 acn:water
14	CCV1	Unknown	RA1	100.000	11/16/2011 9:58:03 PM	5uL 1b1473 to1mL 1:1 ACN:WATER
15	MB	Unknown	RB4	100.000	11/16/2011 10:42:07 PM	SAS110911
16	DOC1	Unknown	RB5	100.000	11/16/2011 11:26:15 PM	SAS110911
17	DOC2	Unknown	RB6	100.000	11/17/2011 12:10:38 AM	SAS110911
18	DOC3	Unknown	RB7	100.000	11/17/2011 12:55:05 AM	SAS110911
19	DOC4	Unknown	RB8	100.000	11/17/2011 1:39:18 AM	SAS110911
20	914773MB	Unknown	RC1	100.000	11/17/2011 2:23:36 AM	.
21	914774LCS1	Unknown	RC2	100.000	11/17/2011 3:21:56 AM	.
22	914775LCS2	Unknown	RC3	100.000	11/17/2011 4:20:10 AM	.
23	9936126007	Unknown	RC4	100.000	11/17/2011 5:18:20 AM	.
24	9936126001	Unknown	RC5	100.000	11/17/2011 6:16:52 AM	.
25	CCV2	Unknown	RC6	100.000	11/17/2011 7:15:20 AM	5uL 1b1413 to1mL 1:1 acn:water
26	CCV1	Unknown	RC7	100.000	11/17/2011 8:19:07 AM	5uL 1b1473 to1mL 1:1 ACN:WATER
27	9936126002	Unknown	RC8	100.000	11/17/2011 9:03:28 AM	.
28	9936126003	Unknown	RD1	100.000	11/17/2011 9:47:30 AM	.
29	9936126004	Unknown	RD2	100.000	11/17/2011 10:31:28 AM	.
30	9936126005	Unknown	RD3	100.000	11/17/2011 11:15:25 AM	.
31	9936126006	Unknown	RD4	100.000	11/17/2011 11:59:22 AM	.
32	9936396012	Unknown	RD5	100.000	11/17/2011 12:43:23 PM	.
33	9936396001	Unknown	RD6	100.000	11/17/2011 1:27:20 PM	.
34	9936396002	Unknown	RD7	100.000	11/17/2011 2:11:40 PM	.
35	9936396003	Unknown	RD8	100.000	11/17/2011 2:55:42 PM	.
36	9936396004	Unknown	RE1	100.000	11/17/2011 3:39:44 PM	.
37	CCV2	Unknown	RC6	100.000	11/17/2011 4:23:41 PM	.
38	CCV2	Unknown	RC6	100.000	11/17/2011 5:54:44 PM	5uL 1b1413 to1mL 1:1 acn:water
39	CCV1	Unknown	RC7	100.000	11/17/2011 6:52:58 PM	5uL 1b1473 to1mL 1:1 ACN:WATER
40	9936396005	Unknown	RE2	100.000	11/17/2011 7:37:01 PM	
41	9936396006	Unknown	RE3	100.000	11/17/2011 8:21:00 PM	
42	914776DUP	Unknown	RE4	100.000	11/17/2011 9:04:57 PM	

Sequence: 8330_120614.B
Operator: ALMDT.nouser

Printed: 8/20/2012 8:51:27 AM

Title: 8330 Startup Injections
Datasource: D49KVMB1_local
Location: ALS\Vol_Lab_LC\MySequences\8330
Timebase: d49kvmb1_1
#Samples: 17

Created: 6/14/2012 12:25:58 PM by ALMDT.nouser
Last Update: 6/14/2012 1:03:59 PM by ALMDT.nouser

	No.	Name	Type	Pos.	Inj. Vol.	Inj. Date/Time	Comment
254nm	1	LEVEL1	Unknown	RA1	1.000	6/14/2012 1:07:16 PM	Mix1 Cal Std:
	2	LEVEL2	Unknown	RA1	2.500	6/14/2012 1:51:09 PM	2uL 111125002
	3	LEVEL3	Unknown	RA1	5.000	6/14/2012 2:35:01 PM	20uL 110719019
	4	LEVEL4	Unknown	RA1	12.500	6/14/2012 3:18:53 PM	FV: 2mL 1:1 AcN:H2O
	5	LEVEL5	Unknown	RA1	25.000	6/14/2012 4:02:44 PM	Acn: 120507001
	6	LEVEL6	Unknown	RA1	50.000	6/14/2012 4:46:41 PM	
	7	LEVEL7	Unknown	RA1	100.000	6/14/2012 5:30:41 PM	
	8	ICV	Unknown	RA2	100.000	6/14/2012 6:14:41 PM	1B1528 ACN:120507001
218nm	9	LEVEL1	Unknown	RA3	1.000	6/14/2012 6:58:29 PM	MIX2 Cal Std:
	10	LEVEL2	Unknown	RA3	2.500	6/14/2012 7:56:30 PM	2uL 111125002
	11	LEVEL3	Unknown	RA3	5.000	6/14/2012 8:54:34 PM	20 uL 111130003
	12	LEVEL4	Unknown	RA3	12.500	6/14/2012 9:52:39 PM	20 uL 111030002
	13	LEVEL5	Unknown	RA3	25.000	6/14/2012 10:50:42 PM	4 uL 1107120036
	14	LEVEL6	Unknown	RA3	50.000	6/14/2012 11:48:50 PM	FV: 2mL 1:1 AcN:H2O
	15	LEVEL7	Unknown	RA3	100.000	6/15/2012 12:47:01 AM	Acn: 120507001
	16	ICV2	Unknown	RA4	100.000	6/15/2012 1:45:12 AM	1b1486
	17	ICV1	Unknown	RA2	100.000	6/15/2012 2:43:22 AM	

Water-E1-254

Title: 8330 Startup Injections
Datasource: D49KVMB1_local
Location: ALS\Vol_Lab_LC\MySequences\8330
Timebase: d49kvmb1_1
#Samples: 22
Created: 8/2/2012 5:39:14 PM by ALMDT.nouser
Last Update: 8/3/2012 9:37:55 AM by ALMDT.nouser

No.	Name	Type	Pos.	Inj. Vol.	Inj. Date/Time	Comment
1	CCV1	Unknown	RA1	100.000	8/2/2012 5:41:01 PM	1B1528 ACN:120507001
2	CCV2	Unknown	RA2	100.000	8/2/2012 6:25:04 PM	1B1583 ACN:120507001
3	1018210/1018213	Unknown	RA3	100.000	8/2/2012 7:09:02 PM	
4	1018211/1018214	Unknown	RA4	100.000	8/2/2012 7:53:05 PM	
5	1018212	Unknown	RA5	100.000	8/2/2012 8:37:07 PM	
6	9979284032	Unknown	RA6	100.000	8/2/2012 9:21:32 PM	– confirm No Dilution
7	9979284032	Unknown	RA6	20.000	8/2/2012 10:05:29 PM	
8	9980086001	Unknown	RA7	100.000	8/2/2012 10:49:27 PM	
9	9980109002	Unknown	RA8	100.000	8/2/2012 11:33:23 PM	
10	1018216	Unknown	RB1	100.000	8/3/2012 12:17:25 AM	
11	1018217	Unknown	RB2	100.000	8/3/2012 1:01:26 AM	
12	9980314014 (9A08/15/12)	Unknown	RB3	100.000	8/3/2012 1:45:26 AM	– confirm (Tetryl / TNT) 1040
13	M2 - LODV	Unknown	RB4	100.000	8/3/2012 2:29:27 AM	
14	M2 - LOQV	Unknown	RB5	100.000	8/3/2012 3:13:28 AM	
15	CCV1	Unknown	RA1	100.000	8/3/2012 3:57:28 AM	
~~16~~	~~CCV2~~	Unknown	RA2	100.000	8/3/2012 4:41:28 AM	
17	M1 - LODV	Unknown	RB6	100.000	8/3/2012 5:25:27 AM	9978606004
18	M1- LOQVL	Unknown	RB7	100.000	8/3/2012 6:09:27 AM	9978607007
19	M1- LOQVH	Unknown	RB8	100.000	8/3/2012 6:53:31 AM	9978607009
20	9980394006	Unknown	RC1	100.000	8/3/2012 8:48:42 AM	
21	CCV1	Unknown	RA1	100.000	8/3/2012 9:39:05 AM	
~~22~~	~~CCV2~~	Unknown	RA2	100.000	8/3/2012 10:23:12 AM	

3174 D
3175

CaCl Solution

Water El - 218

Sequence: 8330_120806.B
Operator: ALMDT.nouser
Printed: 8/7/2012 5:17:24 PM

Title: 8330 Startup Injections
Datasource: D49KVMB1_local
Location: ALS\Vol_Lab_LC\MySequences\8330
Timebase: d49kvmb1_1
#Samples: 10
Created: 8/6/2012 12:02:31 PM by ALMDT.nouser
Last Update: 8/6/2012 12:58:26 PM by ALMDT.nouser

No.	Name	Type	Pos.	Inj. Vol.	Inj. Date/Time	Comment
1	CCV2	Unknown	RA1	100.000	8/6/2012 12:03:56 PM	1B1583 ACN:120507001
2	1018210/1018213	Unknown	RA2	100.000	8/6/2012 1:02:10 PM	
3	1018212/1020409	Unknown	RA3	100.000	8/6/2012 1:46:10 PM	
4	9980086001	Unknown	RA4	100.000	8/6/2012 2:30:10 PM	
5	9980109002	Unknown	RA5	100.000	8/6/2012 3:14:38 PM	
6	9980314014	Unknown	RA6	100.000	8/6/2012 3:58:39 PM	
7	9980394006	Unknown	RA7	100.000	8/6/2012 4:42:39 PM	
8	M2 - LODV	Unknown	RA8	100.000	8/6/2012 5:26:38 PM	9978666067
9	M2 - LOQV	Unknown	RB1	100.000	8/6/2012 6:10:38 PM	9978670047
10	CCV2	Unknown	RA1	100.000	8/6/2012 6:54:37 PM	

Ca Cl Solution

E2 - confirmation ~~soil~~ ~~218~~ 254 Water

Printed: 8/15/2012 1:17:19 PM

SEF 8/21/12

Sequence: 8330_120810.B
Operator: ALMDT.nouser

Title: 8330 Startup Injections
Datasource: D49KVMB1_local
Location: ALS\Vol_Lab_LC\MySequences\8330
Timebase: d49kvmb1_1
#Samples: 15

Created: 8/10/2012 3:14:22 PM by ALMDT.nouser
Last Update: 8/15/2012 1:17:04 PM by ALMDT.nouser

No.	Name	Type	Pos.	Inj. Vol.	Inj. Date/Time	Comment
1	CCV1	Unknown	RA1	100.000	8/10/2012 3:19:02 PM	1B1568 ACN:120507001
2	1018213	Unknown	RA2	100.000	8/10/2012 4:14:08 PM	
3	1020409	Unknown	RA3	100.000	8/10/2012 4:58:10 PM	
4	9979284032	Unknown	RA4	100.000	8/10/2012 5:42:08 PM	
5	9980394014	Unknown	RA5	100.000	8/10/2012 6:26:06 PM	
6	9978606006	Unknown	RA6	100.000	8/10/2012 7:10:03 PM	
7	9978607010	Unknown	RA7	100.000	8/10/2012 7:54:01 PM	
8	9978607011	Unknown	RA8	100.000	8/10/2012 8:37:58 PM	
9	1020314	Unknown	RB1	100.000	8/10/2012 9:21:59 PM	MB
10	1020315	Unknown	RB2	100.000	8/10/2012 10:06:00 PM	LCS1
11	9980395003	Unknown	RB3	100.000	8/10/2012 10:50:42 PM	
12	1020321	Unknown	RB4	100.000	8/10/2012 11:34:42 PM	MS1
13	1020323	Unknown	RB5	100.000	8/11/2012 12:18:43 AM	MSD1
14	CCV1	Unknown	RA1	100.000	8/11/2012 1:02:43 AM	1B1568 ACN:120507001
15	SHUTDOWN	Unknown	RA2	100.000	8/11/2012 1:46:43 AM	

Explosives in Solid by 8330B Summary Forms

2F

SURROGATE RECOVERY

b Name: ALS - Middletown Contract:

b Code: PA010 CASE No.: SAS No.: SDG No.: ERT-002

Column (1): E1, 254nm GC Column (2):

	CLIENT SAMPLE NO.	SURR1 % REC	#	SURR2 % REC	#	TOT OUT
1	1020314(MB)	108				0
2	1020315(LCS)	106				0
3	FTSW-AA-SO-17	105				0
4	FTSW-AA-SO-18 (01.5	102				0
5	FTSW-AA-SO-19	104				0
6	FTSW-AA-SO-20 (01.5	104				0
7	FTSW-AA-SO-21	105				0
8	FTSW-AA-SO-22	94.3				0

	QC LIMITS
1,4-Dinitrobenzene	(50-150)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate Diluted Out

2F

SURROGATE RECOVERY

Name: ALS - Middletown Contract:

Code: PA010 CASE No.: SAS No.: SDG No.: ERT-002

Column (1): E1, 218nm GC Column (2):

	CLIENT SAMPLE NO.	SURR1 % REC #	SURR2 % REC #	TOT OUT
1	1020314(MB)	101		0
2	1020316(LCS)	93.1		0
3	FTSW-AA-SO-17	99.5		0
4	FTSW-AA-SO-18 (01.5	93.9		0
5	FTSW-AA-SO-19	96.4		0
6	FTSW-AA-SO-20 (01.5	98.7		0
7	FTSW-AA-SO-21	97.0		0
8	FTSW-AA-SO-22	91.1		0

	QC LIMITS
1,4-Dinitrobenzene	(50-150)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate Diluted Out

Page 1 of 1

3E

WATER LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: * SAS No.: SDG No.: ERT-002

LCS - Sample No.: ICV111411 Column ID: E1, 254nm

COMPOUND	SPIKE ADDED ug/L	ICV CONCENTRATION ug/L	ICV % REC#	QC LIMITS REC
2-Amino-4,6-dinitrotoluene	1.0	0.90	89.6	(80-120)
4-Amino-2,6-dinitrotoluene	1.0	0.87	87.3	(80-120)
1,3-Dinitrobenzene	1.0	0.83	83.2	(80-120)
2,4-Dinitrotoluene	1.0	0.85	84.8	(80-120)
2,6-Dinitrotoluene	1.0	0.90	89.8	(80-120)
HMX	1.0	0.89	88.6	(80-120)
Nitrobenzene	1.0	0.89	88.5	(80-120)
4-Nitrotoluene	1.0	0.97	97.0	(80-120)
2-Nitrotoluene	1.0	0.91	91.2	(80-120)
3-Nitrotoluene	1.0	0.94	93.9	(80-120)
RDX	1.0	0.86	86.4	(80-120)
Tetryl	1.0	0.89	89.4	(80-120)
1,3,5-Trinitrobenzene	1.0	0.90	89.5	(80-120)
2,4,6-Trinitrotoluene	1.0	0.82	81.9	(80-120)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 14 outside limits

3E

WATER LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

LCS - Sample No.: ICV112011 Column ID: E1, 218nm

COMPOUND	SPIKE ADDED ug/L	ICV CONCENTRATION ug/L	ICV % REC#	QC LIMITS REC
3,5-Dinitroaniline	1.0	1.0	102	(80-120)
Nitroglycerin	5.0	5.6	111	(80-120)
PETN	5.0	4.9	99.0	(80-120)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 3 outside limits

3F

SOIL LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

LCS - Sample No.: 1020315 Column ID: E1, 254nm

COMPOUND	SPIKE ADDED ug/Kg		LCS CONCENTRATION ug/Kg	LCS % REC#	QC LIMITS REC
2-Amino-4,6-dinitrotol	0.40		0.43	108	(80-125)
4-Amino-2,6-dinitrotol	0.40		0.42	106	(80-125)
1,3-Dinitrobenzene	0.40		0.42	105	(80-125)
2,4-Dinitrotoluene	0.40		0.42	106	(80-125)
2,6-Dinitrotoluene	0.40		0.41	103	(80-120)
HMX	0.40		0.40	100	(75-125)
Nitrobenzene	0.40		0.37	92.9	(75-125)
4-Nitrotoluene	0.40		0.39	98.1	(75-125)
2-Nitrotoluene	0.40		0.40	99.4	(80-125)
3-Nitrotoluene	0.40		0.41	103	(75-120)
RDX	0.40		0.43	107	(70-135)
Tetryl	0.40		0.40	101	(10-150)
1,3,5-Trinitrobenzene	0.40		0.43	109	(75-125)
2,4,6-Trinitrotoluene	0.40		0.41	104	(55-140)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 14 outside limits

3F

SOIL LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

LCS - Sample No.: 1020316 Column ID: E1, 218nm

COMPOUND	SPIKE ADDED ug/Kg		LCS CONCENTRATION ug/Kg	LCS % REC#	QC LIMITS REC
3,5-Dinitroaniline	0.40		0.39	96.6	(70-130)
Nitroglycerin	2.0		2.1	107	(70-130)
PETN	2.0		2.0	97.6	(70-130)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 3 outside limits

4C

METHOD BLANK SUMMARY

SAMPLE NO.

1020314

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

b Sample ID: 1020314 Lab File ID (1): ZH8B031.d Lab File ID (2):

trix: (soil/water) SOIL Extraction: (Type) SONC

lfur Cleanup: (Y/N) N Date Extracted: 8/8/2012

te Analyzed (1): 8/9/2012 Date Analyzed (2):

me Analyzed (1): 11:16 Time Analyzed (2):

strument ID (1): hpl1.i Instrument ID (2):

Column (1): E1, 254nm GC Column (2):

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
1020315(LCS)	1020315	ZH8B032.d	8/9/2012	
FTSW-AA-SO-17	9980394001	ZH8B039.d	8/9/2012	
FTSW-AA-SO-18 (01.5	9980394002	ZH8B040.d	8/9/2012	
FTSW-AA-SO-19	9980394003	ZH8B041.d	8/9/2012	
FTSW-AA-SO-20 (01.5	9980394004	ZH8B042.d	8/9/2012	
FTSW-AA-SO-21	9980394005	ZH8B045.d	8/9/2012	
FTSW-AA-SO-22	9980394007	ZH8B046.d	8/9/2012	

COMMENTS:

4C

METHOD BLANK SUMMARY

SAMPLE NO.

1020314

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

b Sample ID: 1020314 Lab File ID (1): ZH8A031.d Lab File ID (2):

trix: (soil/water) SOIL Extraction: (Type) SONC

lfur Cleanup: (Y/N) N Date Extracted: 8/8/2012

te Analyzed (1): 8/9/2012 Date Analyzed (2):

me Analyzed (1): 11:16 Time Analyzed (2):

strument ID (1): hpl1.i Instrument ID (2):

Column (1): E1, 218nm GC Column (2):

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
1020316(LCS)	1020316	ZH8A033.d	8/9/2012	
FTSW-AA-SO-17	9980394001	ZH8A039.d	8/9/2012	
FTSW-AA-SO-18 (01.5	9980394002	ZH8A040.d	8/9/2012	
FTSW-AA-SO-19	9980394003	ZH8A041.d	8/9/2012	
FTSW-AA-SO-20 (01.5	9980394004	ZH8A042.d	8/9/2012	
FTSW-AA-SO-21	9980394005	ZH8A045.d	8/9/2012	
FTSW-AA-SO-22	9980394007	ZH8A046.d	8/9/2012	

COMMENTS:

8D

ANALYTICAL SEQUENCE

ıb Name: ALS - Middletown Contract:

ıb Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

: Column: E1, 254nm Init. Calib. Date(s): 11/14/2011 11/14/2011

ıstrument ID: hpl1.i

IE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
ID STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION

SUR 1: 13.76

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
LEVEL1	LEVEL1	11/14/2011	17:54	13.76
LEVEL2	LEVEL2	11/14/2011	18:37	13.77
LEVEL3	LEVEL3	11/14/2011	19:20	13.77
LEVEL4	LEVEL4	11/14/2011	20:03	13.77
LEVEL5	LEVEL5	11/14/2011	20:46	13.76
LEVEL6	LEVEL6	11/14/2011	21:29	13.75
LEVEL7	LEVEL7	11/14/2011	22:12	13.74
ICV	ICV111411	11/14/2011	22:55	13.75

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Column: E1, 218nm Init. Calib. Date(s): 11/14/2011 11/15/2011

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION

SUR 1: 13.75

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
LEVEL1	LEVEL1	11/14/2011	23:38	13.77
LEVEL2	LEVEL2	11/15/2011	00:21	13.75
LEVEL3	LEVEL3	11/15/2011	01:04	13.75
LEVEL4	LEVEL4	11/15/2011	01:46	13.76
LEVEL5	LEVEL5	11/15/2011	02:29	13.76
LEVEL6	LEVEL6	11/15/2011	03:12	13.75
LEVEL7	LEVEL7	11/15/2011	03:55	13.74
ZZZZZZ	ICV111511	11/15/2011	04:38	13.76

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

ab Name: ALS - Middletown Contract:

ab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

: Column: E1, 254nm Cont. Calib. Date(s): 8/9/2012 09:26

istrument ID: hpl1.i

IE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
ID STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.67

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
1020314(MB)	1020314	8/9/2012	11:16	13.67
1020315(LCS)	1020315	8/9/2012	12:00	13.66
ZZZZZZ	9980109017	8/9/2012	13:36	13.65
ZZZZZZ	1020317	8/9/2012	14:27	13.65
ZZZZZZ	1020319	8/9/2012	15:11	13.65
FTSW-AA-SO-17	9980394001	8/9/2012	17:23	13.65
FTSW-AA-SO-18 (01.5	9980394002	8/9/2012	18:08	13.64
FTSW-AA-SO-19	9980394003	8/9/2012	18:52	13.65
FTSW-AA-SO-20 (01.5	9980394004	8/9/2012	19:36	13.66

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Column: E1, 254nm Cont. Calib. Date(s): 8/9/2012 20:20

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.65

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
FTSW-AA-SO-21	9980394005	8/9/2012	21:48	13.65
FTSW-AA-SO-22	9980394007	8/9/2012	22:32	13.65
ZZZZZZ	9980395003	8/9/2012	23:16	13.64
ZZZZZZ	1020321	8/10/2012	00:00	13.64
ZZZZZZ	1020323	8/10/2012	00:44	13.62
ZZZZZZ	9980395004	8/10/2012	02:56	13.63
ZZZZZZ	9980395005	8/10/2012	03:40	13.64

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Column: E1, 254nm Cont. Calib. Date(s): 8/10/2012 04:24

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.63

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #

QC LIMITS

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Column: E1, 218nm Cont. Calib. Date(s): 8/9/2012 10:10

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.66

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
1020314(MB)	1020314	8/9/2012	11:16	13.67
1020316(LCS)	1020316	8/9/2012	12:44	13.67
ZZZZZZ	9980109017	8/9/2012	13:36	13.66
ZZZZZZ	1020318	8/9/2012	15:55	13.65
ZZZZZZ	1020320	8/9/2012	16:39	13.67
FTSW-AA-SO-17	9980394001	8/9/2012	17:23	13.66
FTSW-AA-SO-18 (01.5	9980394002	8/9/2012	18:08	13.65
FTSW-AA-SO-19	9980394003	8/9/2012	18:52	13.66
FTSW-AA-SO-20 (01.5	9980394004	8/9/2012	19:36	13.66

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Column: E1, 218nm Cont. Calib. Date(s): 8/9/2012 21:04

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.66

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
FTSW-AA-SO-21	9980394005	8/9/2012	21:48	13.65
FTSW-AA-SO-22	9980394007	8/9/2012	22:32	13.65
ZZZZZZ	9980395003	8/9/2012	23:16	13.64
ZZZZZZ	1020322	8/10/2012	01:28	13.64
ZZZZZZ	1020324	8/10/2012	02:12	13.64
ZZZZZZ	9980395004	8/10/2012	02:56	13.63
ZZZZZZ	9980395005	8/10/2012	03:40	13.64

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Column: E1, 218nm Cont. Calib. Date(s): 8/10/2012 05:08

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.65

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #

QC LIMITS

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Explosives in Solid by 8330B Raw Data

Sample Raw Data

1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-17

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): SOIL Lab Sample ID: 9980394001

Sample wt/vol: 10.3 (g/mL) G Lab File ID (1): ZH8B039.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/31/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.097	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.097	U
99-65-0	1,3-Dinitrobenzene	0.097	U
121-14-2	2,4-Dinitrotoluene	0.097	U
606-20-2	2,6-Dinitrotoluene	0.097	U
2691-41-0	HMX	0.097	U
98-95-3	Nitrobenzene	0.097	U
99-99-0	4-Nitrotoluene	0.097	U
88-72-2	2-Nitrotoluene	0.097	U
99-08-1	3-Nitrotoluene	0.097	U
121-82-4	RDX	0.097	U
479-45-8	Tetryl	0.097	U
99-35-4	1,3,5-Trinitrobenzene	0.097	U
118-96-7	2,4,6-Trinitrotoluene	0.097	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B039.d
Lab Smp Id: 9980394001 Client Smp ID: FTSW-AA-SO-17
Inj Date : 09-AUG-2012 17:23
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980394001;AJL;;;;;;10.3
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_254
Meth Date : 10-Aug-2012 09:44 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.300	Weight of sample extracted
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (mg/kg)
	1 HMX	Compound Not Detected.					
	2 RDX	Compound Not Detected.					
	3 1,3,5-Trinitrobenzene	Compound Not Detected.					
$	4 1,4-Dinitrobenzene	13.653	13.646	0.007	178145	525.559	2.04101
	5 1,3-Dinitrobenzene	Compound Not Detected.					
	6 Nitrobenzene	Compound Not Detected.					
	7 Tetryl	Compound Not Detected.					
	8 2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
	9 4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
	10 2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
	11 2,6-Dinitrotoluene	Compound Not Detected.					
	12 2,4-Dinitrotoluene	Compound Not Detected.					
	13 2-Nitrotoluene	Compound Not Detected.					
	14 4-Nitrotoluene	Compound Not Detected.					
	15 3-Nitrotoluene	Compound Not Detected.					

Data File: ZH8B039.d
Report Date: 10-Aug-2012 10:05

ALS - Middletown

RECOVERY REPORT

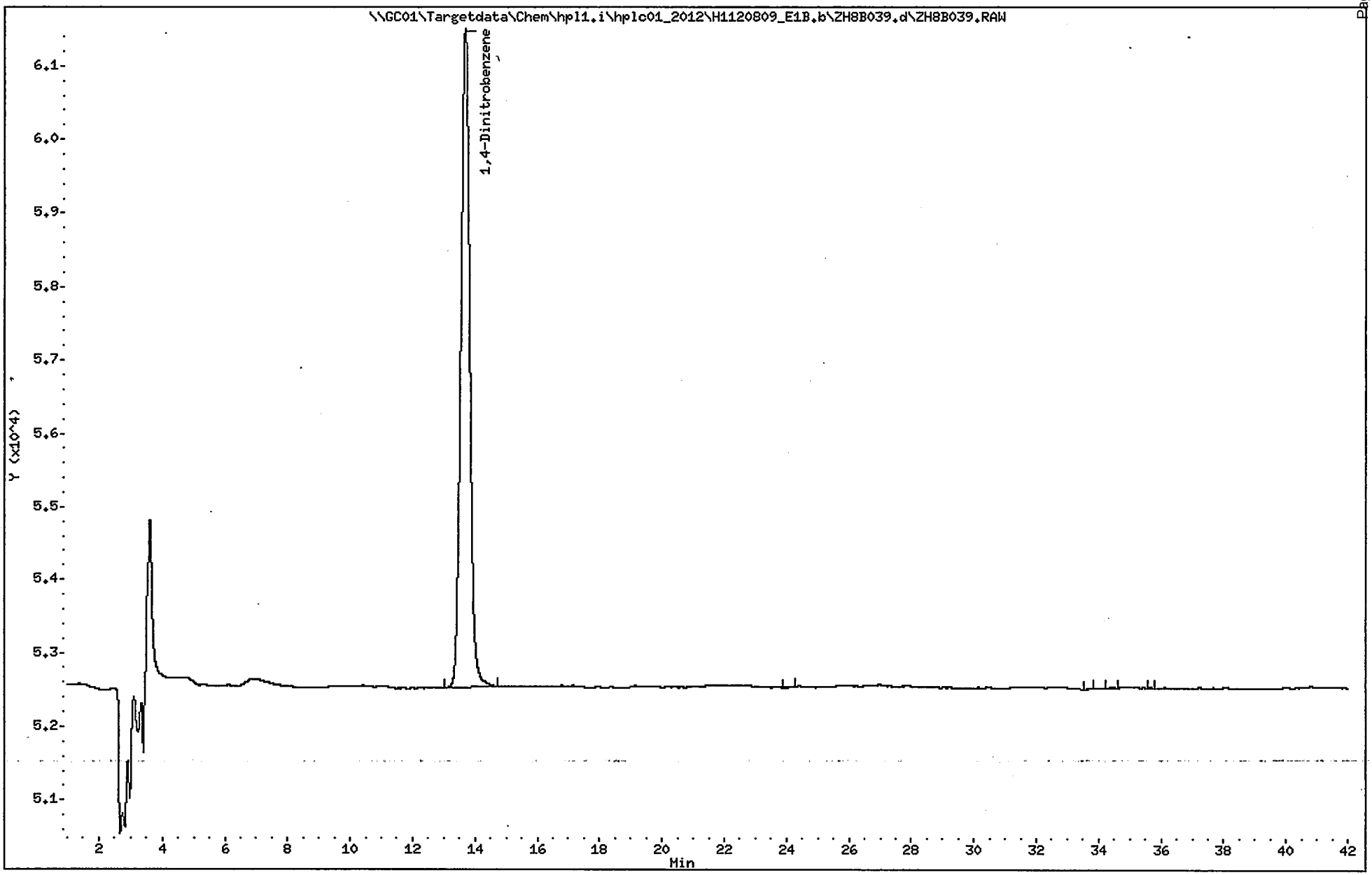
Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980394001
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3178 D8330S

Client SDG: ERT002|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-17
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.94175	2.04101	105.11	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B039.d
Date : 09-AUG-2012 17:23
Client ID: FTSW-AA-SO-17
Sample Info: 9980394001;AJL;;;;;;10.3
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-17

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): SOIL

Sample wt/vol: 10.3 (g/mL) G

% Moisture:

Extraction: (Type) SONC

Concentrated Extract Volume: 40000 (uL)

Injection Volume: 100 (uL)

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

Lab Sample ID: 9980394001

Lab File ID (1): ZH8A039.d

Lab File ID (2):

Date Received: 07/31/2012

Date Extracted: 08/08/2012

Date Analyzed: 08/09/2012

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.097	U
55-63-0	Nitroglycerin	0.97	U
78-11-5	PETN	0.97	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A039.d
Lab Smp Id: 9980394001 Client Smp ID: FTSW-AA-SO-17
Inj Date : 09-AUG-2012 17:23
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980394001;AJL;;;;;;10.3
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_218
Meth Date : 10-Aug-2012 09:34 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.300	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW AJ 8/12/12
REPORTED AJ 8/12/12
APPROVED
2nd REVIEW

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.660	13.663	-0.003	66055	497.309	1.93130
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

ALS - Middletown

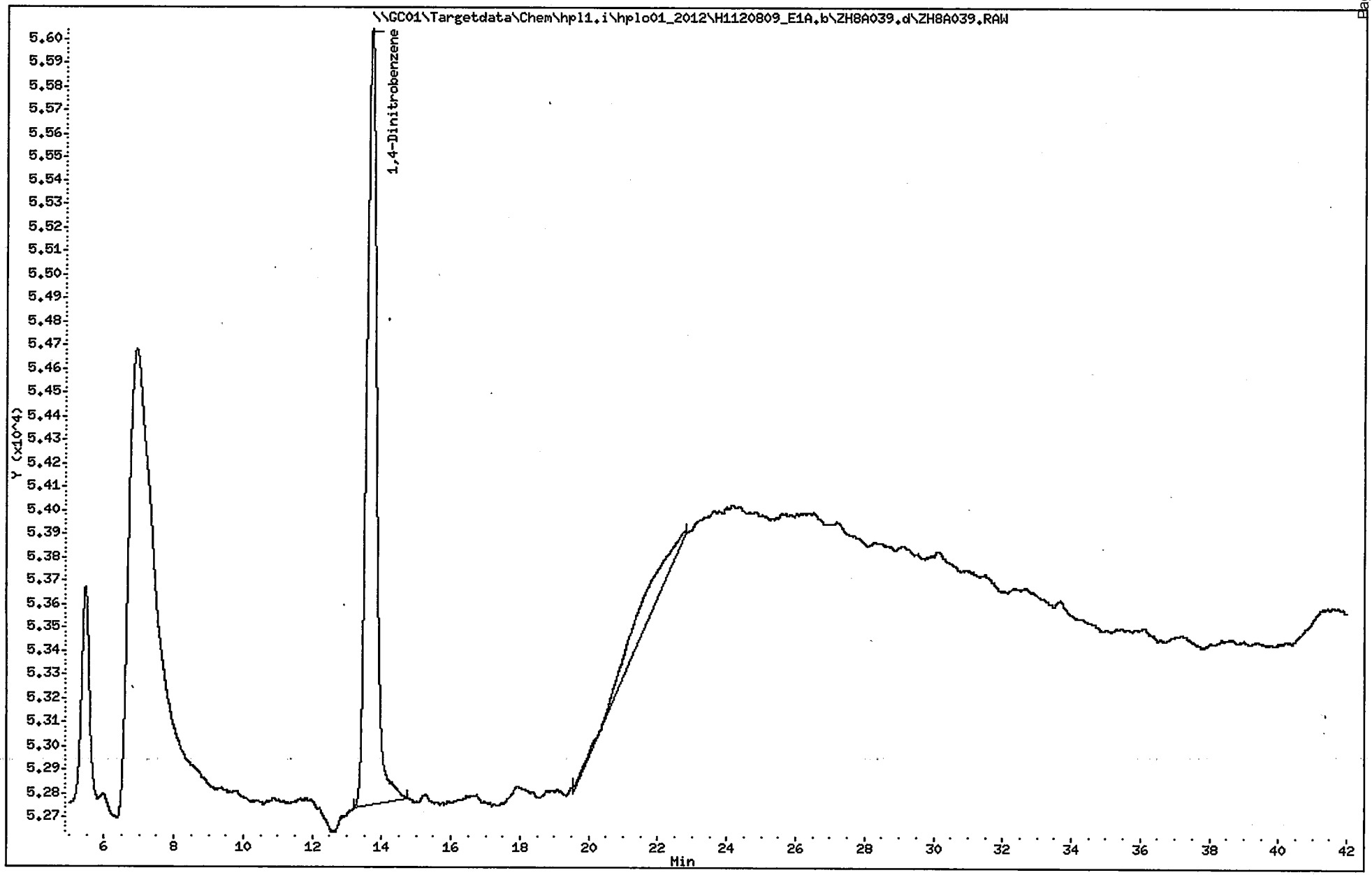
RECOVERY REPORT

Client Name: ERT Earth Resources
Client SDG: ERT002|Ft. Stewart
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: 9980394001
Client Smp ID: FTSW-AA-SO-17
Level: LOW
Operator: AJL
Data Type: LC DATA
SampleType: SAMPLE
SpikeList File: 8330LCS.spk
Quant Type: ESTD
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3178 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.94175	1.93130	99.46	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A039.d
Date : 09-AUG-2012 17:23
Client ID: FTSW-AA-SO-17
Sample Info: 9980394001;AJL;;;;;;10.3
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-18 (01.5

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): SOIL Lab Sample ID: 9980394002

Sample wt/vol: 10.7 (g/mL) G Lab File ID (1): ZH8B040.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/31/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.093	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.093	U
99-65-0	1,3-Dinitrobenzene	0.093	U
121-14-2	2,4-Dinitrotoluene	0.093	U
606-20-2	2,6-Dinitrotoluene	0.093	U
2691-41-0	HMX	0.093	U
98-95-3	Nitrobenzene	0.093	U
99-99-0	4-Nitrotoluene	0.093	U
88-72-2	2-Nitrotoluene	0.093	U
99-08-1	3-Nitrotoluene	0.093	U
121-82-4	RDX	0.093	U
479-45-8	Tetryl	0.093	U
99-35-4	1,3,5-Trinitrobenzene	0.093	U
118-96-7	2,4,6-Trinitrotoluene	0.093	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B040.d
Lab Smp Id: 9980394002 Client Smp ID: FTSW-AA-SO-18 (01.5
Inj Date : 09-AUG-2012 18:08
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980394002;AJL;;;;;;10.7
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_254
Meth Date : 10-Aug-2012 09:44 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.700	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.643	13.646	-0.003	173066	510.575	1.90869
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

ALS - Middletown

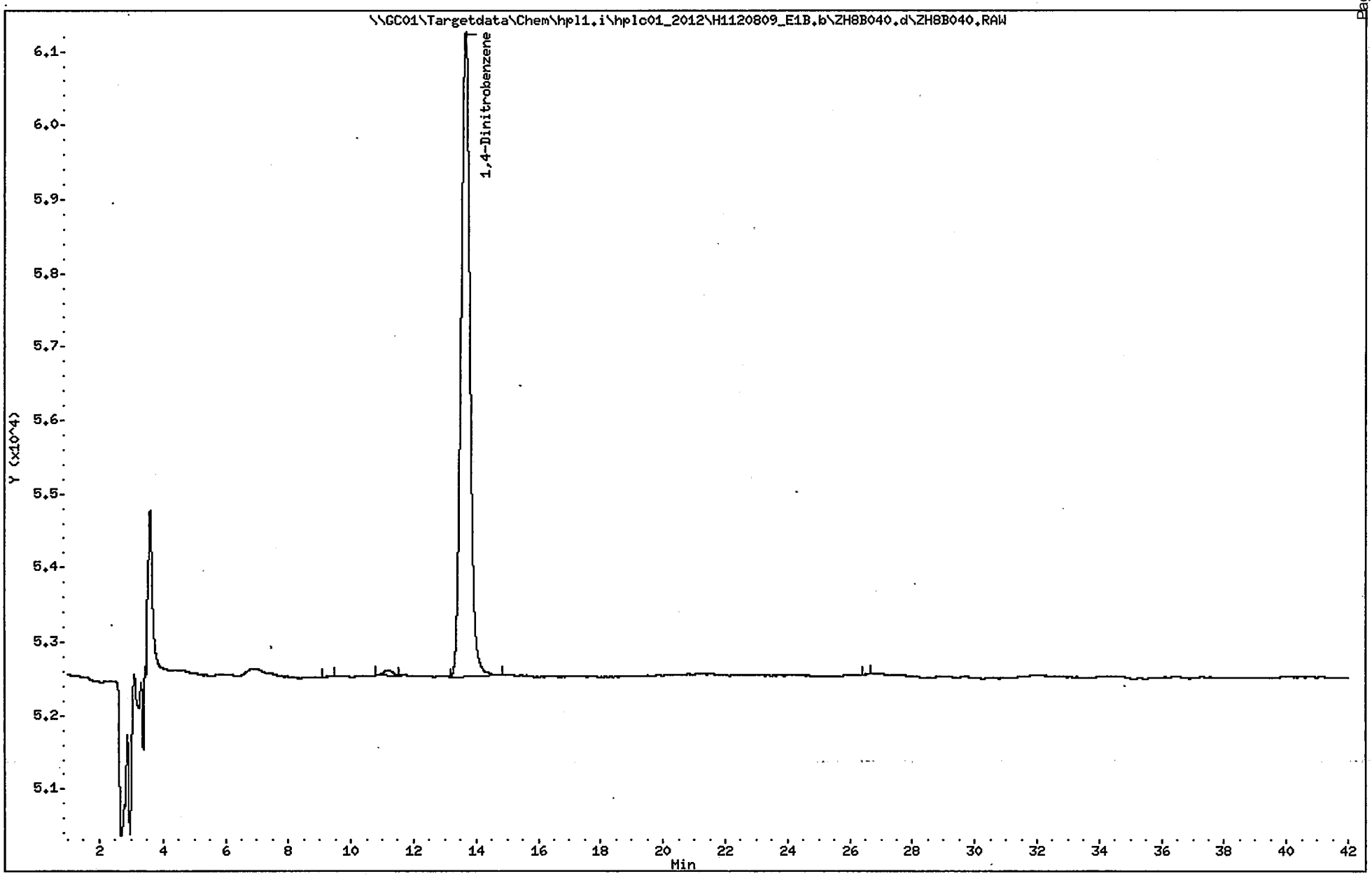
RECOVERY REPORT

Client Name: ERT Earth Resources
Client SDG: ERT002|Ft. Stewart
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: 9980394002
Client Smp ID: FTSW-AA-SO-18 (01.5
Level: LOW
Operator: AJL
Data Type: LC DATA
SampleType: SAMPLE
SpikeList File: DoD_W.spk
Quant Type: ESTD
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3178 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.86916	1.90869	102.12	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B040.d
Date : 09-AUG-2012 18:08
Client ID: FTSW-AA-SO-18 (01.5
Sample Info: 9980394002;AJL;;;;;;10.7
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-18 (01.5

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): SOIL Lab Sample ID: 9980394002

Sample wt/vol: 10.7 (g/mL) G Lab File ID (1): ZH8A040.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/31/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.093	U
55-63-0	Nitroglycerin	0.93	U
78-11-5	PETN	0.93	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A040.d
Lab Smp Id: 9980394002 Client Smp ID: FTSW-AA-SO-18 (01.5
Inj Date : 09-AUG-2012 18:08
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980394002;AJL;;;;;;10.7
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_218
Meth Date : 10-Aug-2012 09:34 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.700	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW A 8/12/12
REPORTED A 8/12/12
APPROVED Griffith
2nd REVIEW Griffith

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.646	13.663	-0.017	62389	469.709	1.75592
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980394002
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3178 D8330S

Client SDG: ERT002|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-18 (01.5
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

	SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1	1,4-Dinitrobenzene	1.86916	1.75592	93.94	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A040.d

Date : 09-AUG-2012 18:08

Client ID: FTSW-AA-SO-18 (01.5

Instrument: hpl1.i

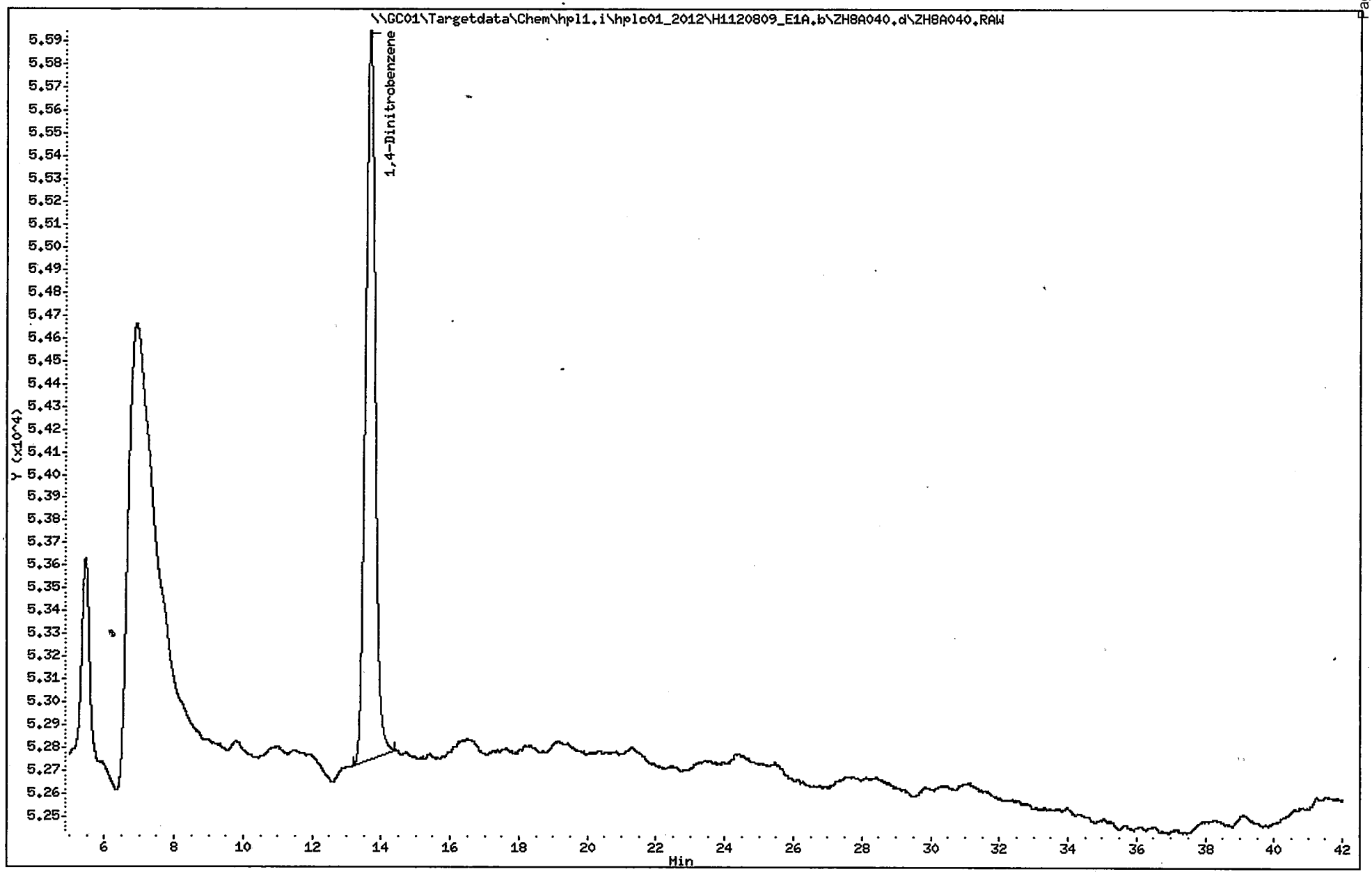
Sample Info: 9980394002;AJL;;;;;;10.7

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-19

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): SOIL Lab Sample ID: 9980394003

Sample wt/vol: 10.3 (g/mL) G Lab File ID (1): ZH8B041.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/31/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.097	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.097	U
99-65-0	1,3-Dinitrobenzene	0.097	U
121-14-2	2,4-Dinitrotoluene	0.097	U
606-20-2	2,6-Dinitrotoluene	0.097	U
2691-41-0	HMX	0.097	U
98-95-3	Nitrobenzene	0.097	U
99-99-0	4-Nitrotoluene	0.097	U
88-72-2	2-Nitrotoluene	0.097	U
99-08-1	3-Nitrotoluene	0.097	U
121-82-4	RDX	0.097	U
479-45-8	Tetryl	0.097	U
99-35-4	1,3,5-Trinitrobenzene	0.097	U
118-96-7	2,4,6-Trinitrotoluene	0.097	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B041.d
Lab Smp Id: 9980394003 Client Smp ID: FTSW-AA-SO-19
Inj Date : 09-AUG-2012 18:52
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980394003;AJL;;;;;;10.26
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_254
Meth Date : 10-Aug-2012 09:44 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.260	Weight of sample extracted g
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.653	13.646	0.007	177034	522.282	2.03619
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

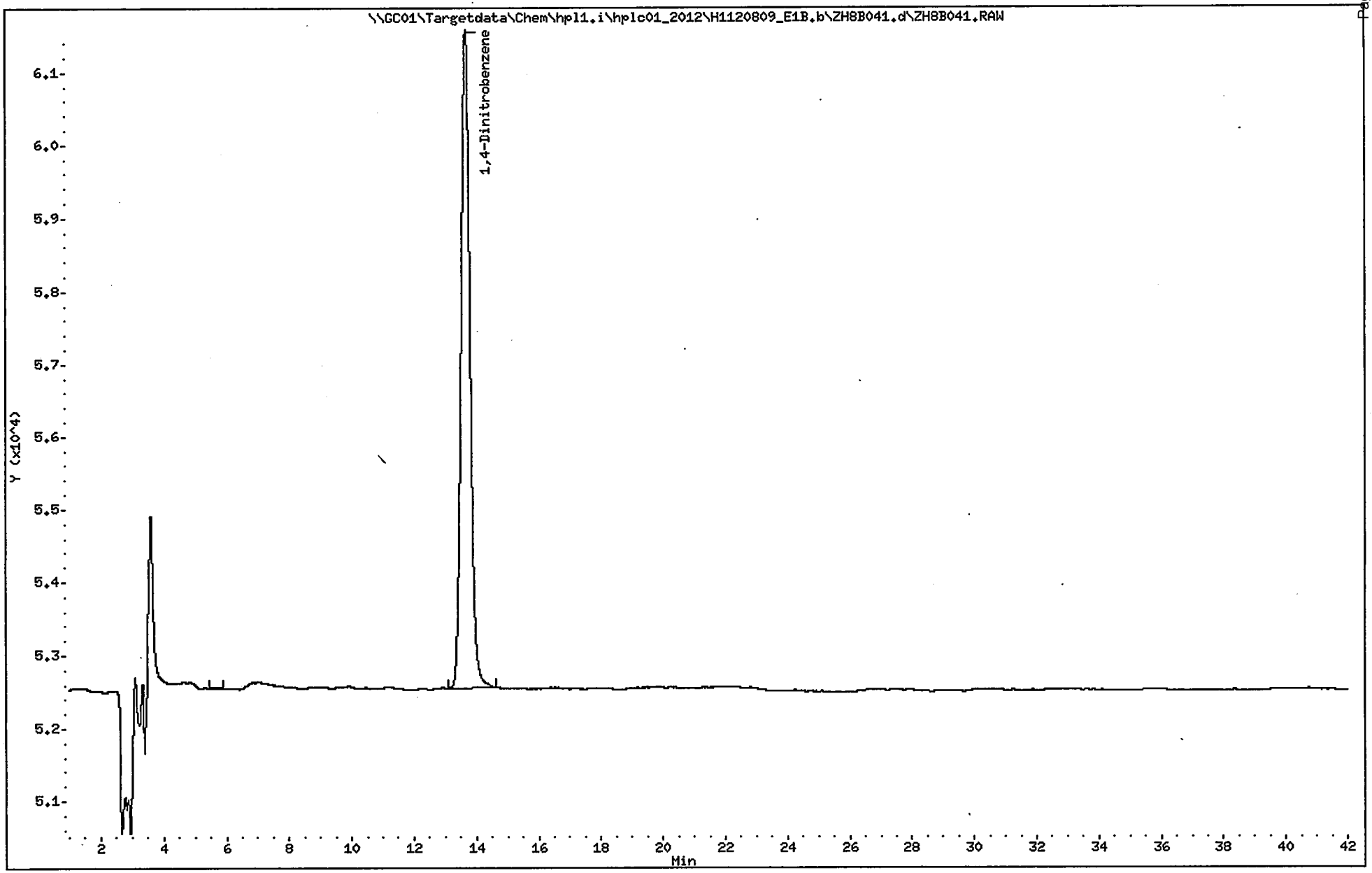
Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980394003
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3178 D8330S

Client SDG: ERT002|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-19
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.94932	2.03619	104.46	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B041.d
Date : 09-AUG-2012 18:52
Client ID: FTSW-AA-SO-19
Sample Info: 9980394003;AJL;;;;;;10.26
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-19

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): SOIL Lab Sample ID: 9980394003

Sample wt/vol: 10.3 (g/mL) G Lab File ID (1): ZH8A041.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/31/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.097	U
55-63-0	Nitroglycerin	0.97	U
78-11-5	PETN	0.97	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A041.d
Lab Smp Id: 9980394003 Client Smp ID: FTSW-AA-SO-19
Inj Date : 09-AUG-2012 18:52
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980394003;AJL;;;;;;10.26
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_218
Meth Date : 10-Aug-2012 09:34 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.260	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW A 8/12/12
REPORTED A 8/12/12
APPROVED
2nd REVIEW

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.656	13.663	-0.007	64026	482.033	1.87927
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980394003
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3178 D8330S

Client SDG: ERT002|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-19
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.94932	1.87927	96.41	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A041.d

Date : 09-AUG-2012 18:52

Client ID: FTSW-AA-SO-19

Sample Info: 9980394003;AJL;;;;;;10.26

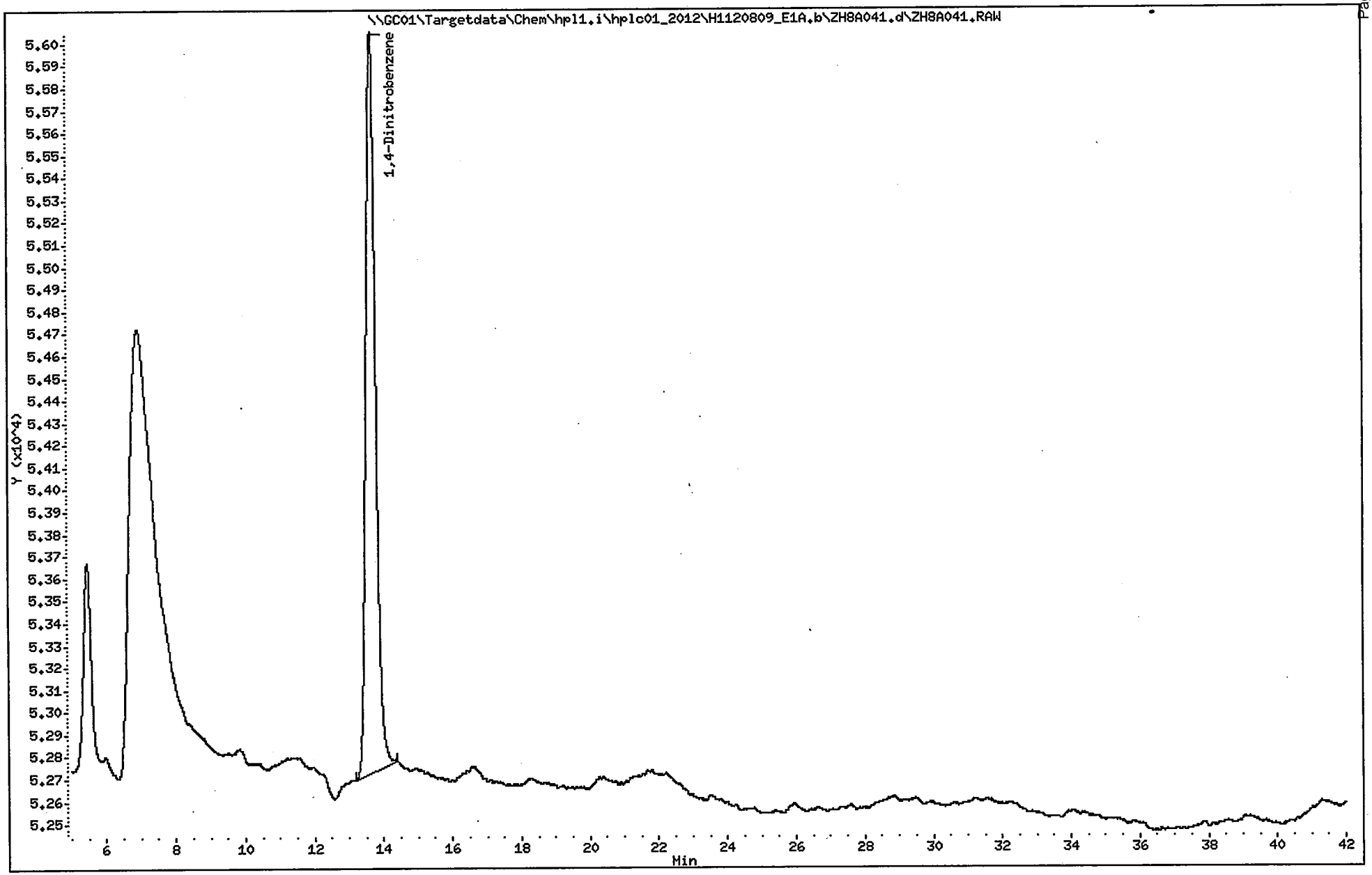
Volume Injected (uL): 100.0

Column phase: E1

Instrument: hpl1.i

Operator: AJL

Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-20 (01.5

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): SOIL Lab Sample ID: 9980394004

Sample wt/vol: 10.0 (g/mL) G Lab File ID (1): ZH8B042.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/31/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.100	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.100	U
99-65-0	1,3-Dinitrobenzene	0.100	U
121-14-2	2,4-Dinitrotoluene	0.100	U
606-20-2	2,6-Dinitrotoluene	0.100	U
2691-41-0	HMX	0.100	U
98-95-3	Nitrobenzene	0.100	U
99-99-0	4-Nitrotoluene	0.100	U
88-72-2	2-Nitrotoluene	0.100	U
99-08-1	3-Nitrotoluene	0.100	U
121-82-4	RDX	0.100	U
479-45-8	Tetryl	0.100	U
99-35-4	1,3,5-Trinitrobenzene	0.100	U
118-96-7	2,4,6-Trinitrotoluene	0.100	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B042.d
Lab Smp Id: 9980394004 Client Smp ID: FTSW-AA-SO-20 (01.5
Inj Date : 09-AUG-2012 19:36
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980394004;AJL;;;;;;10
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_254
Meth Date : 10-Aug-2012 09:44 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW AJL 8/12/12
REPORTED AJL 8/12/12
APPROVED CJ 8/12/12
2nd REVIEW CJ 8/12/12

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (mg/kg)
	1 HMX	Compound Not Detected.					
	2 RDX	Compound Not Detected.					
	3 1,3,5-Trinitrobenzene	Compound Not Detected.					
$	4 1,4-Dinitrobenzene	13.656	13.646	0.010	176060	519.408	2.07763
	5 1,3-Dinitrobenzene	Compound Not Detected.					
	6 Nitrobenzene	Compound Not Detected.					
	7 Tetryl	Compound Not Detected.					
	8 2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
	9 4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
	10 2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
	11 2,6-Dinitrotoluene	Compound Not Detected.					
	12 2,4-Dinitrotoluene	Compound Not Detected.					
	13 2-Nitrotoluene	Compound Not Detected.					
	14 4-Nitrotoluene	Compound Not Detected.					
	15 3-Nitrotoluene	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980394004
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Client SDG: ERT002|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-20 (01.5
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3178 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	2.00000	2.07763	103.88	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B042.d

Date : 09-AUG-2012 19:36

Client ID: FTSW-AA-SO-20 (01.5

Sample Info: 9980394004;AJL;;;;;;10

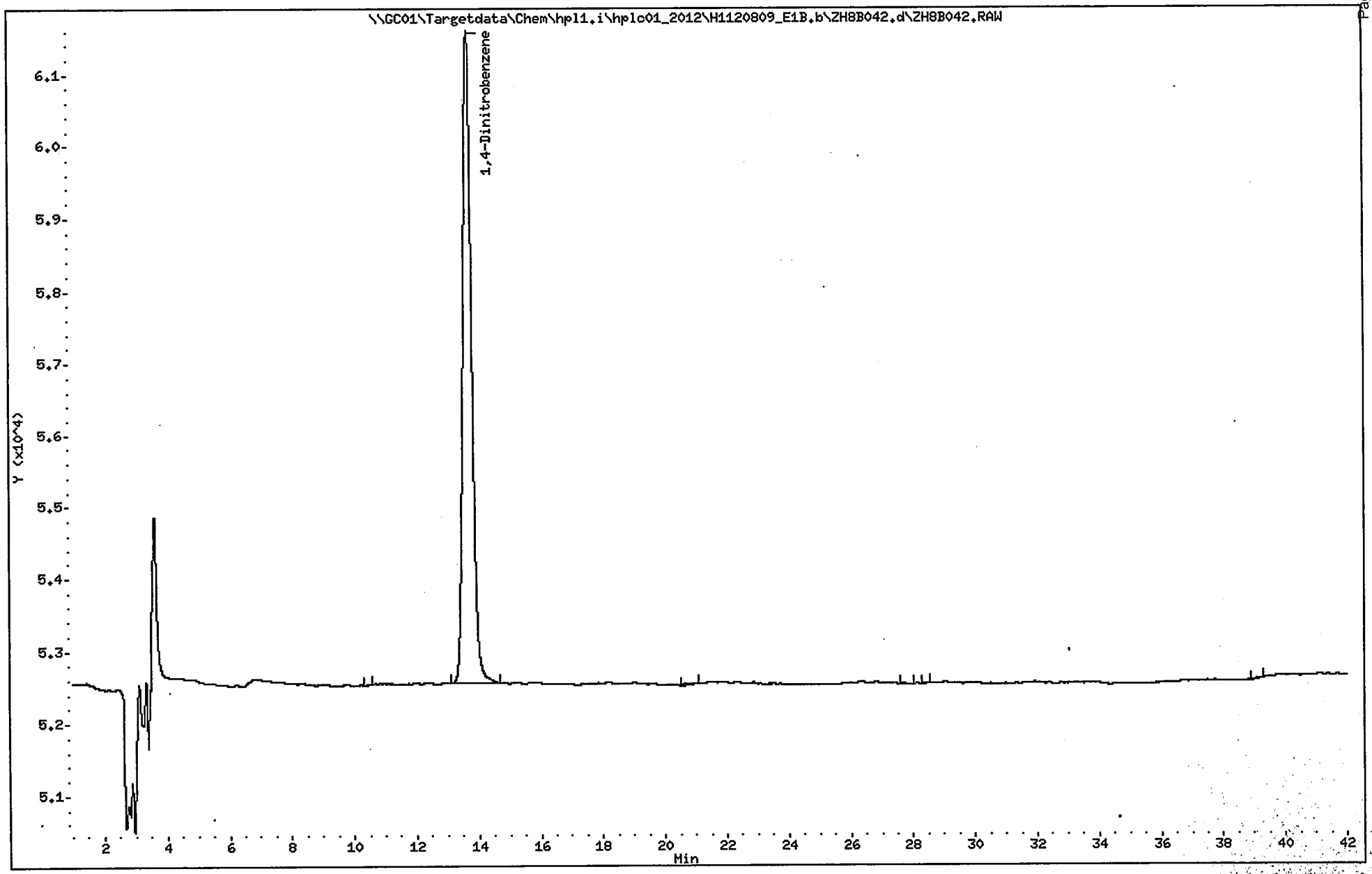
Volume Injected (uL): 100.0

Column phase: E1

Instrument: hpl1.i

Operator: AJL

Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-20 (01.5

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): SOIL Lab Sample ID: 9980394004

Sample wt/vol: 10.0 (g/mL) G Lab File ID (1): ZH8A042.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/31/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.100	U
55-63-0	Nitroglycerin	1.0	U
78-11-5	PETN	1.0	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A042.d
Lab Smp Id: 9980394004 Client Smp ID: FTSW-AA-SO-20 (01.5
Inj Date : 09-AUG-2012 19:36
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980394004;AJL;;;;;;10
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_218
Meth Date : 10-Aug-2012 09:34 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/13/12
REPORTED
2nd REVIEW

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.660	13.663	-0.003	65544	493.462	1.97385
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980394004
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3178 D8330S

Client SDG: ERT002|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-20 (01.5
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	2.00000	1.97385	98.69	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A042.d

Date : 09-AUG-2012 19:36

Client ID: FTSW-AA-SO-20 (01.5

Sample Info: 9980394004;AJL;;;;;;10

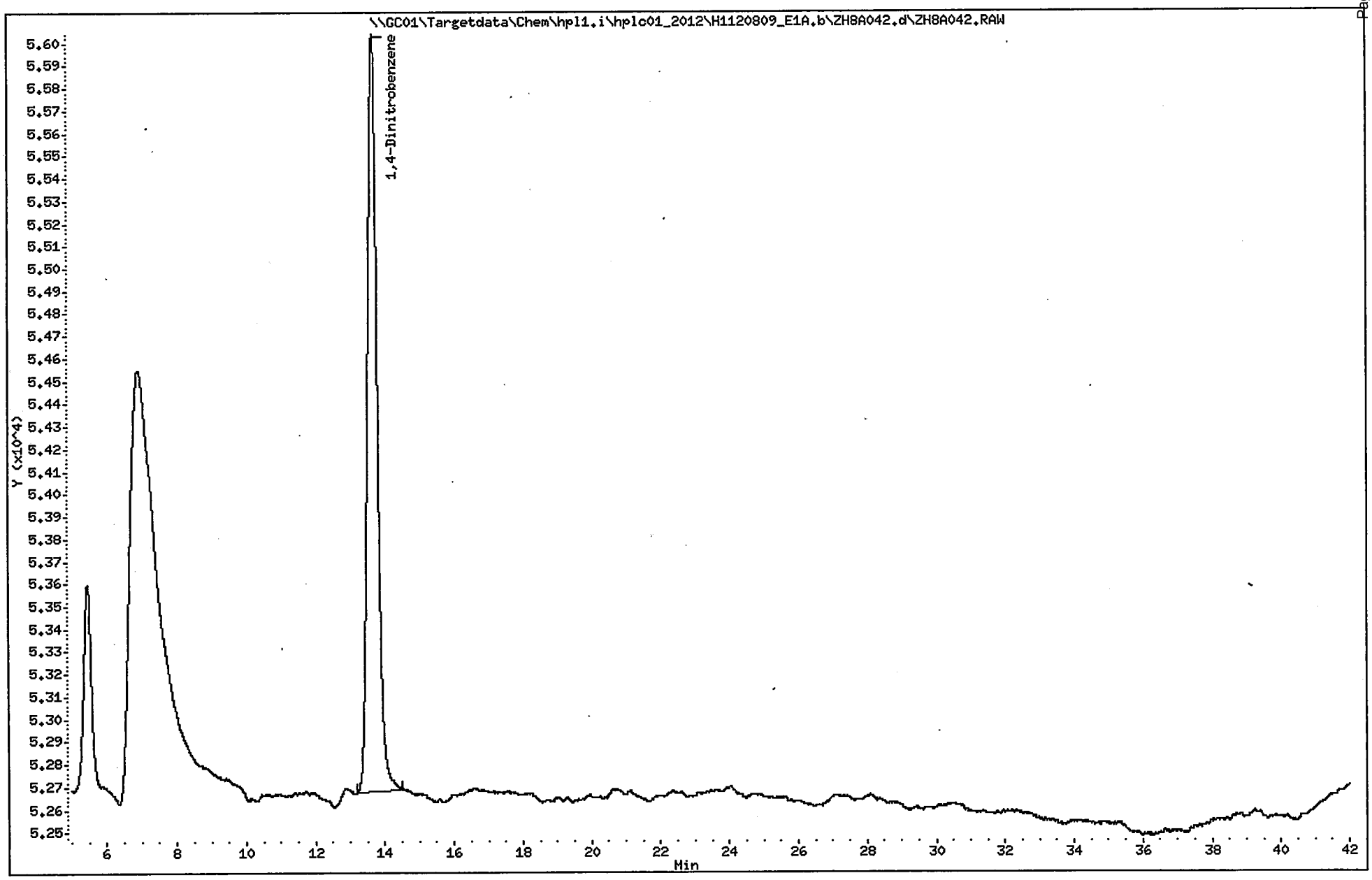
Volume Injected (uL): 100.0

Column phase: E1

Instrument: hpl1.i

Operator: AJL

Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-21

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): SOIL Lab Sample ID: 9980394005

Sample wt/vol: 10.1 (g/mL) G Lab File ID (1): ZH8B045.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/31/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.099	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.099	U
99-65-0	1,3-Dinitrobenzene	0.099	U
121-14-2	2,4-Dinitrotoluene	0.099	U
606-20-2	2,6-Dinitrotoluene	0.099	U
2691-41-0	HMX	0.099	U
98-95-3	Nitrobenzene	0.099	U
99-99-0	4-Nitrotoluene	0.099	U
88-72-2	2-Nitrotoluene	0.099	U
99-08-1	3-Nitrotoluene	0.099	U
121-82-4	RDX	0.099	U
479-45-8	Tetryl	0.099	U
99-35-4	1,3,5-Trinitrobenzene	0.099	U
118-96-7	2,4,6-Trinitrotoluene	0.099	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B045.d
Lab Smp Id: 9980394005 Client Smp ID: FTSW-AA-SO-21
Inj Date : 09-AUG-2012 21:48
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980394005;AJL;;;;;;10.11
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_254
Meth Date : 10-Aug-2012 09:44 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.110	Weight of sample extracted
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW
REPORTED
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.650	13.646	0.004	178267	525.919	2.08079
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

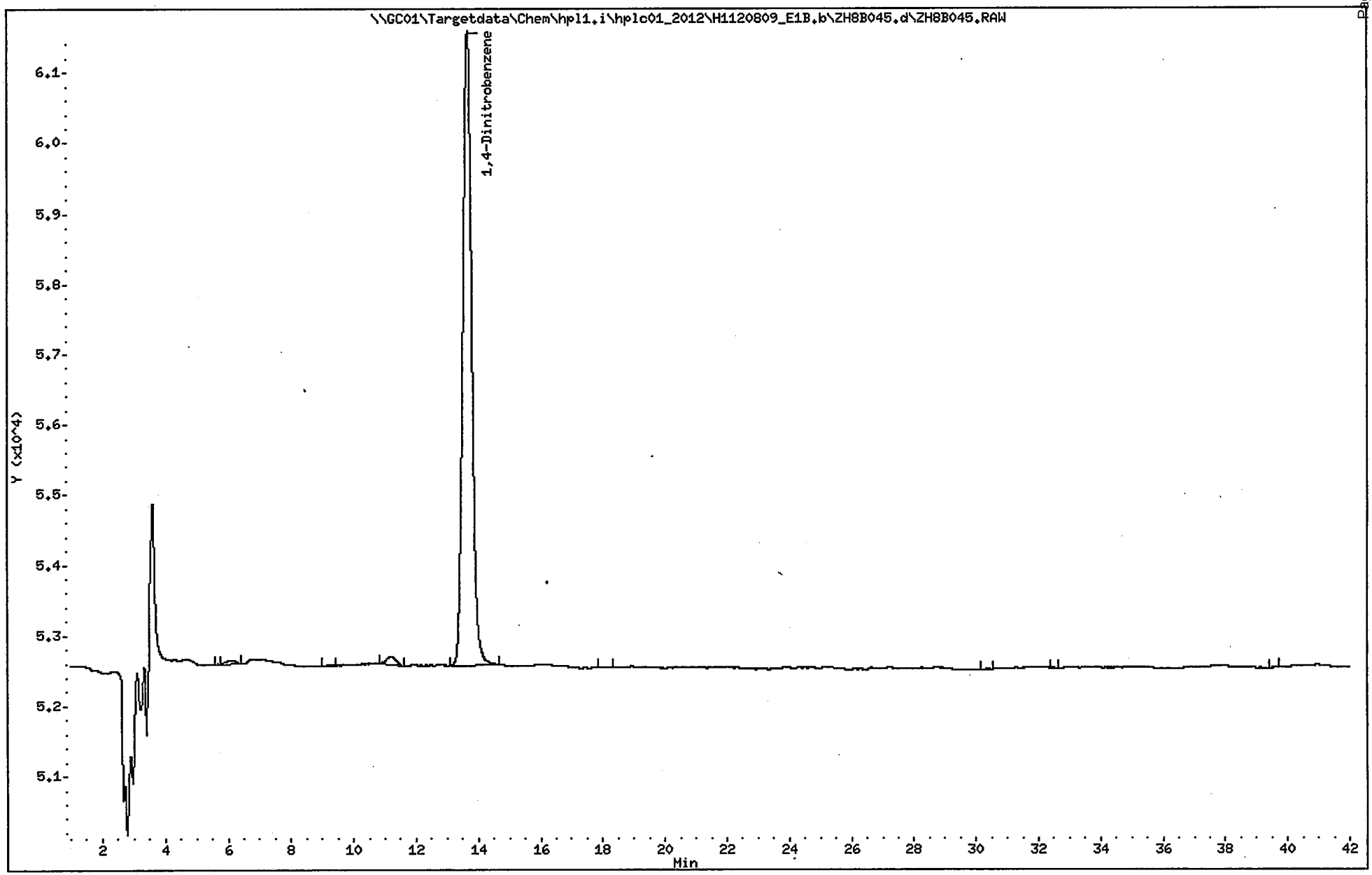
Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980394005
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3178 D8330S

Client SDG: ERT002|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-21
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.97824	2.08079	105.18	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B045.d
Date : 09-AUG-2012 21:48
Client ID: FTSW-AA-SO-21
Sample Info: 9980394005;AJL;;;;;;10.11
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-21

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): SOIL Lab Sample ID: 9980394005

Sample wt/vol: 10.1 (g/mL) G Lab File ID (1): ZH8A045.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/31/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.099	U
55-63-0	Nitroglycerin	0.99	U
78-11-5	PETN	0.99	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A045.d
Lab Smp Id: 9980394005 Client Smp ID: FTSW-AA-SO-21
Inj Date : 09-AUG-2012 21:48
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980394005;AJL;;;;;;10.11
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_218
Meth Date : 10-Aug-2012 09:34 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.110	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW
REPORTED
APPROVED
2ND REVIEW

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.653	13.663	-0.010	64395	484.811	1.91815
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980394005
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3178 D8330S

Client SDG: ERT002|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-21
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.97824	1.91815	96.96	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A045.d

Date : 09-AUG-2012 21:48

Client ID: FTSW-AA-SO-21

Sample Info: 9980394005;AJL;;;;;;10.11

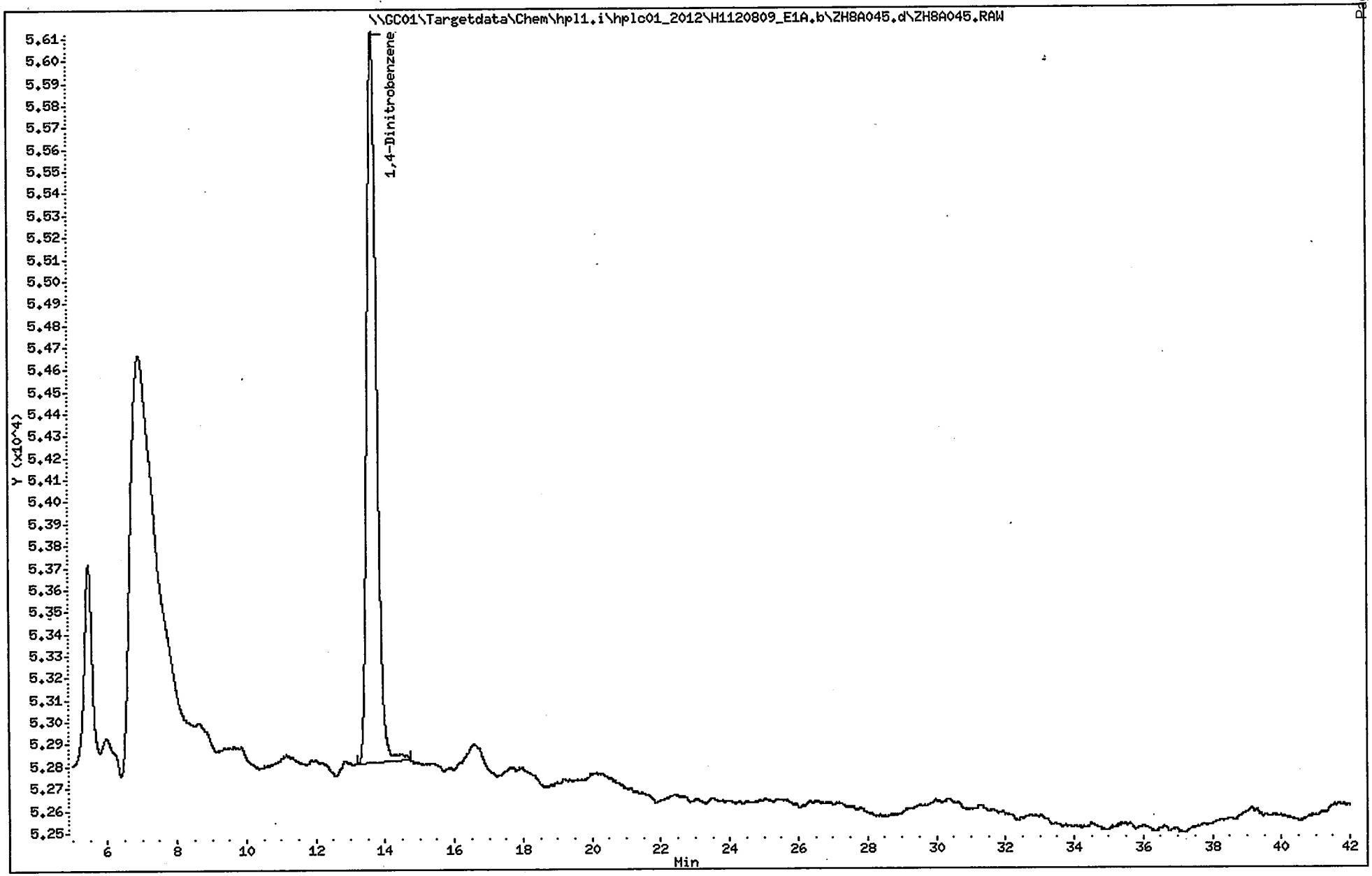
Volume Injected (uL): 100.0

Column phase: E1

Instrument: hpl1.i

Operator: AJL

Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-22

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): SOIL Lab Sample ID: 9980394007

Sample wt/vol: 10.4 (g/mL) G Lab File ID (1): ZH8B046.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/31/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.096	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.096	U
99-65-0	1,3-Dinitrobenzene	0.096	U
121-14-2	2,4-Dinitrotoluene	0.096	U
606-20-2	2,6-Dinitrotoluene	0.096	U
2691-41-0	HMX	0.096	U
98-95-3	Nitrobenzene	0.096	U
99-99-0	4-Nitrotoluene	0.096	U
88-72-2	2-Nitrotoluene	0.096	U
99-08-1	3-Nitrotoluene	0.096	U
121-82-4	RDX	0.096	U
479-45-8	Tetryl	0.096	U
99-35-4	1,3,5-Trinitrobenzene	0.096	U
118-96-7	2,4,6-Trinitrotoluene	0.096	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B046.d
Lab Smp Id: 9980394007 Client Smp ID: FTSW-AA-SO-22
Inj Date : 09-AUG-2012 22:32
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980394007;AJL;;;;;;10.4
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_254
Meth Date : 10-Aug-2012 09:44 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.400	Weight of sample extracted
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (mg/kg)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.646	13.646	0.000	159787	471.400	1.81308
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

ALS - Middletown

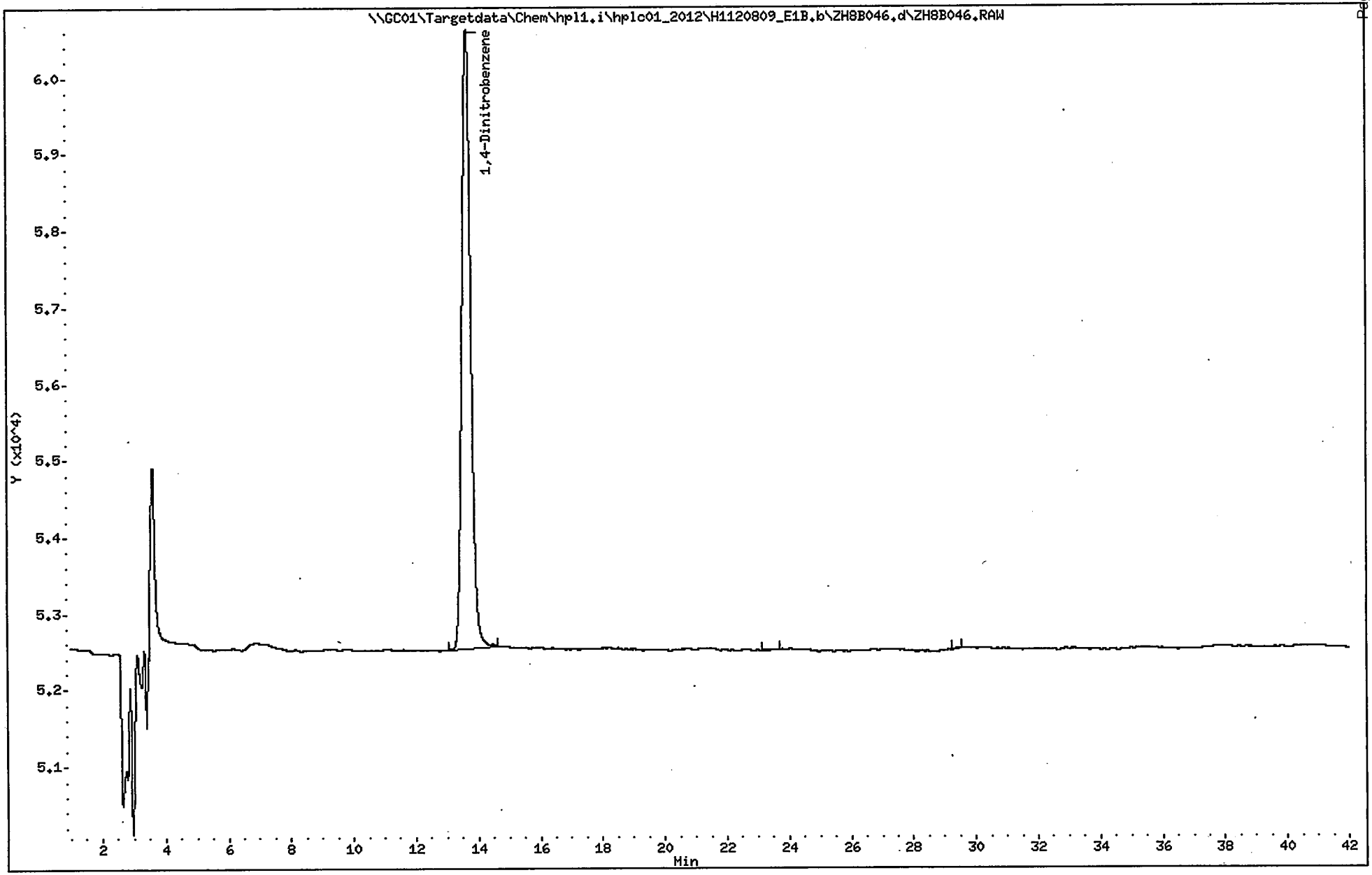
RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980394007
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Client SDG: ERT002|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-22
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3178 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.92308	1.81308	94.28	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B046.d
Date : 09-AUG-2012 22:32
Client ID: FTSW-AA-SO-22
Sample Info: 9980394007;AJL;;;;;;10.4
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-22

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): SOIL Lab Sample ID: 9980394007

Sample wt/vol: 10.4 (g/mL) G Lab File ID (1): ZH8A046.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/31/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.096	U
55-63-0	Nitroglycerin	0.96	U
78-11-5	PETN	0.96	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A046.d
Lab Smp Id: 9980394007 Client Smp ID: FTSW-AA-SO-22
Inj Date : 09-AUG-2012 22:32
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980394007;AJL;;;;;;10.4
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_218
Meth Date : 10-Aug-2012 09:34 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract
Vi	100.000	Volume injected (uL)
Ws	10.400	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED CH 8/13/12
2nd REVIEW CH 8/13/12

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.650	13.663	-0.013	60522	455.653	1.75251
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

ALS - Middletown

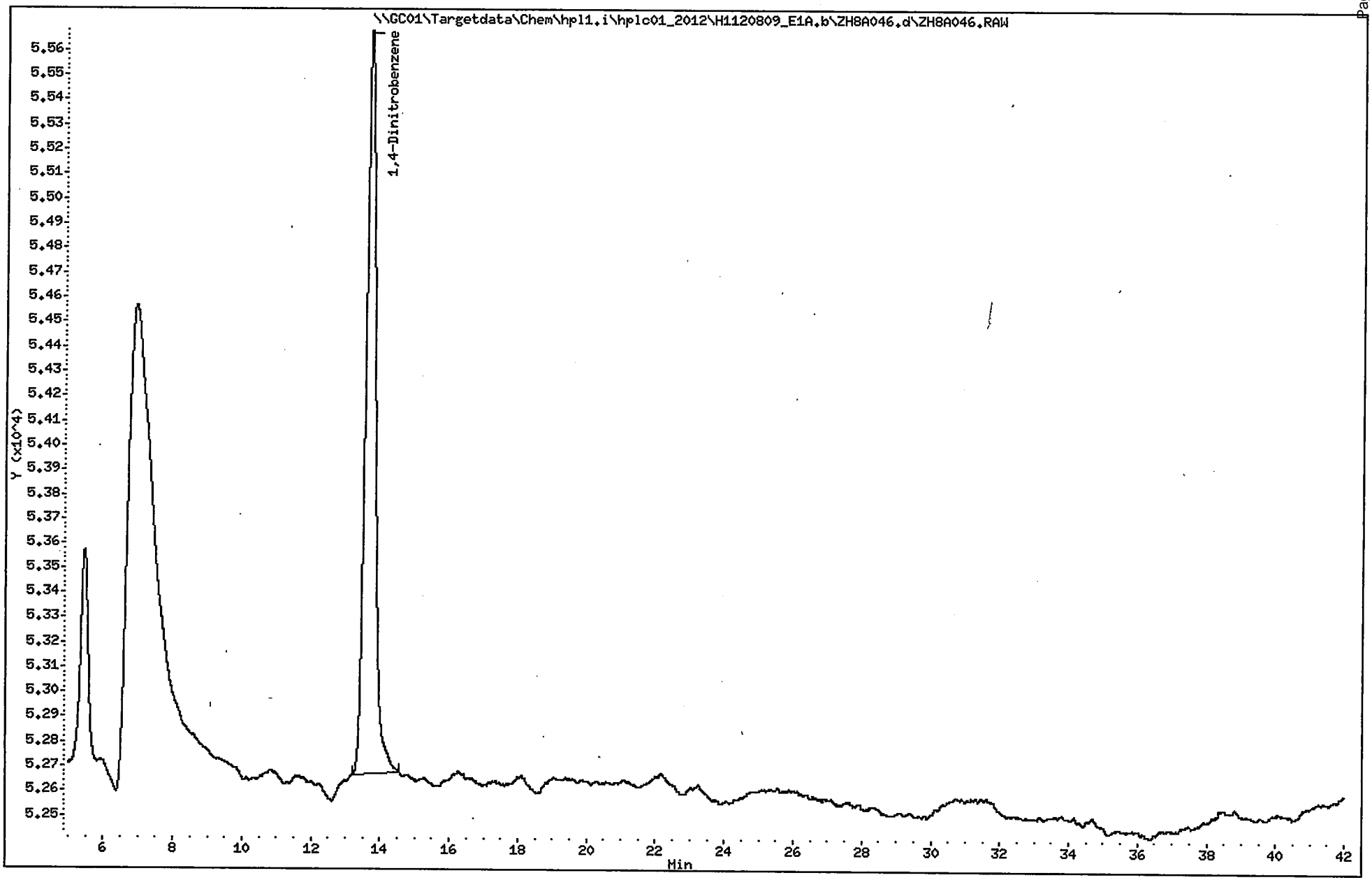
RECOVERY REPORT

Client Name: ERT Earth Resources
Client SDG: ERT002|Ft. Stewart
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: 9980394007
Client Smp ID: FTSW-AA-SO-22
Level: LOW
Operator: AJL
Data Type: LC DATA
SampleType: SAMPLE
SpikeList File: 8330LCS.spk
Quant Type: ESTD
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3178 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.92308	1.75251	91.13	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A046.d
Date : 09-AUG-2012 22:32
Client ID: FTSW-AA-SO-22
Sample Info: 9980394007;AJL;;;;;;10.4
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



Standards Raw Data

Initial Calibrations

6A

RETENTION TIMES OF INITIAL CALIBRATION

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/14/2011

Calibration Times: 17:54 22:12

GC Column: E1, 254nm ID: 4.1 (mm)

LAB FILE ID: RT1 = ZKEB005.d RT2 = ZKEB006.d RT3 = ZKEB007.d

RT4 = ZKEB008.d RT5 = ZKEB009.d RT6 = ZKEB010.d

COMPOUND	RT1	RT2	RT3	RT4	RT5	RT6	MEAN RT	RT WINDOW FROM	RT WINDOW TO
2-Amino-4,6-dinitro	24.790	24.773	24.786	24.770	24.746	24.696	24.744	23.894	25.594
4-Amino-2,6-dinitro	23.606	23.606	23.610	23.600	23.576	23.526	23.572	22.722	24.422
1,3-Dinitrobenzene	15.366	15.363	15.370	15.366	15.356	15.336	15.353	15.063	15.643
2,4-Dinitrotoluene	27.020	27.003	27.006	26.993	26.980	26.933	26.977	26.427	27.527
2,6-Dinitrotoluene	26.070	26.026	26.040	26.030	26.013	25.970	26.013	25.473	26.553
HMX	4.853	4.860	4.866	4.876	4.886	4.906	4.882	4.612	5.152
Nitrobenzene	17.330	17.316	17.320	17.316	17.303	17.276	17.302	16.982	17.622
4-Nitrotoluene	34.210	34.246	34.286	34.270	34.236	34.173	34.222	33.542	34.902
2-Nitrotoluene	31.503	31.446	31.446	31.436	31.420	31.366	31.420	30.840	32.000
3-Nitrotoluene	36.753	36.716	36.720	36.690	36.663	36.613	36.674	35.964	37.384
RDX	8.326	8.336	8.340	8.340	8.340	8.336	8.335	8.055	8.615
Tetryl	18.333	18.326	18.323	18.330	18.316	18.300	18.316	17.656	18.976
1,3,5-Trinitrobenze	11.860	11.866	11.870	11.870	11.870	11.863	11.865	11.665	12.065
2,4,6-Trinitrotolue	21.156	21.166	21.166	21.163	21.150	21.130	21.149	20.689	21.609
1,4-Dinitrobenzene	13.763	13.766	13.773	13.766	13.763	13.750	13.760	12.910	14.610

6A

RETENTION TIMES OF INITIAL CALIBRATION

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/14/2011

Calibration Times: 17:54 22:12

GC Column: E1, 254nm ID: 4.1 (mm)

LAB FILE ID: RT7 = ZKEB011.d

COMPOUND	RT7						MEAN RT	RT WINDOW FROM	RT WINDOW TO
2-Amino-4,6-dinitro	24.650						24.744	23.894	25.594
4-Amino-2,6-dinitro	23.483						23.572	22.722	24.422
1,3-Dinitrobenzene	15.316						15.353	15.063	15.643
2,4-Dinitrotoluene	26.903						26.977	26.427	27.527
2,6-Dinitrotoluene	25.940						26.013	25.473	26.553
HMX	4.930						4.882	4.612	5.152
Nitrobenzene	17.250						17.302	16.982	17.622
4-Nitrotoluene	34.133						34.222	33.542	34.902
2-Nitrotoluene	31.326						31.420	30.840	32.000
3-Nitrotoluene	36.566						36.674	35.964	37.384
RDX	8.330						8.335	8.055	8.615
Tetryl	18.283						18.316	17.656	18.976
1,3,5-Trinitrobenze	11.856						11.865	11.665	12.065
2,4,6-Trinitrotolue	21.110						21.149	20.689	21.609
1,4-Dinitrobenzene	13.736						13.760	12.910	14.610

6B

ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/14/2011

Calibration Time(s): 17:54 22:12

GC Column: E1, 254nm ID: 4.1 (mm)

LAB FILE ID: RRF1 = ZKEB005.d RRF2 = ZKEB006.d RRF3 = ZKEB007.d RRF4 = ZKEB008.d

RRF5 = ZKEB009.d RRF6 = ZKEB010.d RRF7 = ZKEB011.d

COMPOUND	RRF1	RRF2	RRF3	RRF4	RRF5	CT
2-Amino-4,6-dinitrotoluene	230	302	299	313	306	A
4-Amino-2,6-dinitrotoluene	167	241	219	234	227	A
1,3-Dinitrobenzene	372	437	440	464	458	A
2,4-Dinitrotoluene	335	398	411	422	409	A
2,6-Dinitrotoluene	176	227	220	233	223	A
HMX	116	126	130	133	129	A
Nitrobenzene	240	276	267	275	274	A
4-Nitrotoluene	102	121	131	148	144	A
2-Nitrotoluene	128	171	173	182	179	A
3-Nitrotoluene	155	170	191	187	186	A
RDX	131	154	163	160	160	A
Tetryl	248	280	255	268	264	A
1,3,5-Trinitrobenzene	265	336	349	349	347	A
2,4,6-Trinitrotoluene(TNT)	261	316	318	325	323	A
1,4-Dinitrobenzene	288	344	357	362	359	A

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

6B

ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/14/2011

Calibration Time(s): 17:54 22:12

GC Column: E1, 254n ID: 4.1 (mm)

LAB FILE ID: RRF1 = ZKEB005.d RRF2 = ZKEB006.d RRF3 = ZKEB007.d RRF4 = ZKEB008.d

RRF5 = ZKEB009.d RRF6 = ZKEB010.d RRF7 = ZKEB011.d

COMPOUND	RRF6	RRF7	CT	b	m1	m2	% RSD or R^2
2-Amino-4,6-dinitrotoluene	303	260	A		288		10.58960
4-Amino-2,6-dinitrotoluene	225	193	A		215		12.10871
1,3-Dinitrobenzene	450	384	A		429		8.46463
2,4-Dinitrotoluene	413	355	A		392		8.52224
2,6-Dinitrotoluene	224	192	A		213		9.88029
HMX	127	110	A		125		6.74028
Nitrobenzene	272	231	A		262		7.10871
4-Nitrotoluene	143	121	A		130		12.84894
2-Nitrotoluene	177	152	A		166		11.60487
3-Nitrotoluene	186	157	A		176		8.60429
RDX	157	134	A		151		8.73951
Tetryl	262	224	A		257		6.93349
1,3,5-Trinitrobenzene	343	295	A		326		10.19659
2,4,6-Trinitrotoluene(TNT)	319	274	A		305		8.59445
1,4-Dinitrobenzene	357	305	A		339		8.85687

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB005
Lab Smp Id: LEVEL1
Inj Date : 14-NOV-2011 17:54
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL1;AJL;1;1
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 17:54 Cal File: ZKEB005.d
Als bottle: 58 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

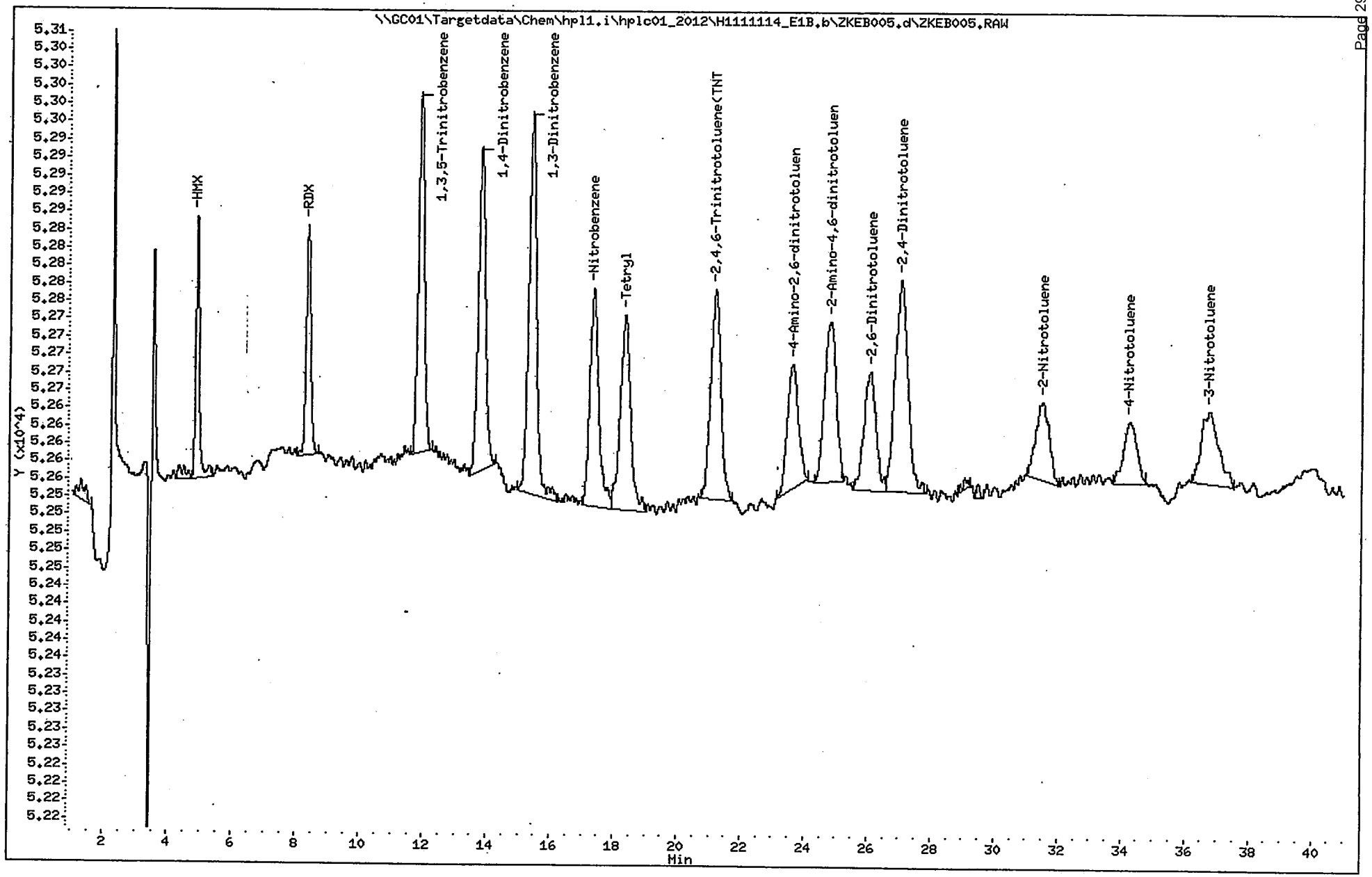
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.853	4.930	-0.077	2324	20.0000	18.6652(a)
2	RDX	8.326	8.330	-0.004	2616	20.0000	17.2977(a)
3	1,3,5-Trinitrobenzene	11.860	11.857	0.003	5291	20.0000	16.2241(a)
$ 4	1,4-Dinitrobenzene	13.763	13.737	0.026	5751	20.0000	16.9665(a)
5	1,3-Dinitrobenzene	15.366	15.317	0.049	7446	20.0000	17.3484(a)
6	Nitrobenzene	17.330	17.250	0.080	4799	20.0000	18.3004(a)
7	Tetryl	18.333	18.283	0.050	4954	20.0000	19.2619(a)
8	2,4,6-Trinitrotoluene(TNT)	21.156	21.110	0.046	5220	20.0000	17.1164(a)
9	4-Amino-2,6-dinitrotoluene	23.606	23.483	0.123	3347	20.0000	15.5523(a)
10	2-Amino-4,6-dinitrotoluene	24.790	24.650	0.140	4608	20.0000	16.0193(a)
11	2,6-Dinitrotoluene	26.070	25.940	0.130	3522	20.0000	16.4970(a)
12	2,4-Dinitrotoluene	27.020	26.903	0.117	6693	20.0000	17.0880(a)
13	2-Nitrotoluene	31.503	31.327	0.176	2567	20.0000	15.4445(a)
14	4-Nitrotoluene	34.210	34.133	0.077	2031	20.0000	15.6413(aM)
15	3-Nitrotoluene	36.753	36.567	0.186	3100	20.0000	17.6239(aM)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB005.d
Date : 14-NOV-2011 17:54
Client ID:
Sample Info: LEVEL1;AJL;1;1
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB006
Lab Smp Id: LEVEL2
Inj Date : 14-NOV-2011 18:37
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL2;AJL;1;2
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 18:37 Cal File: ZKEB006.d
Als bottle: 58 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

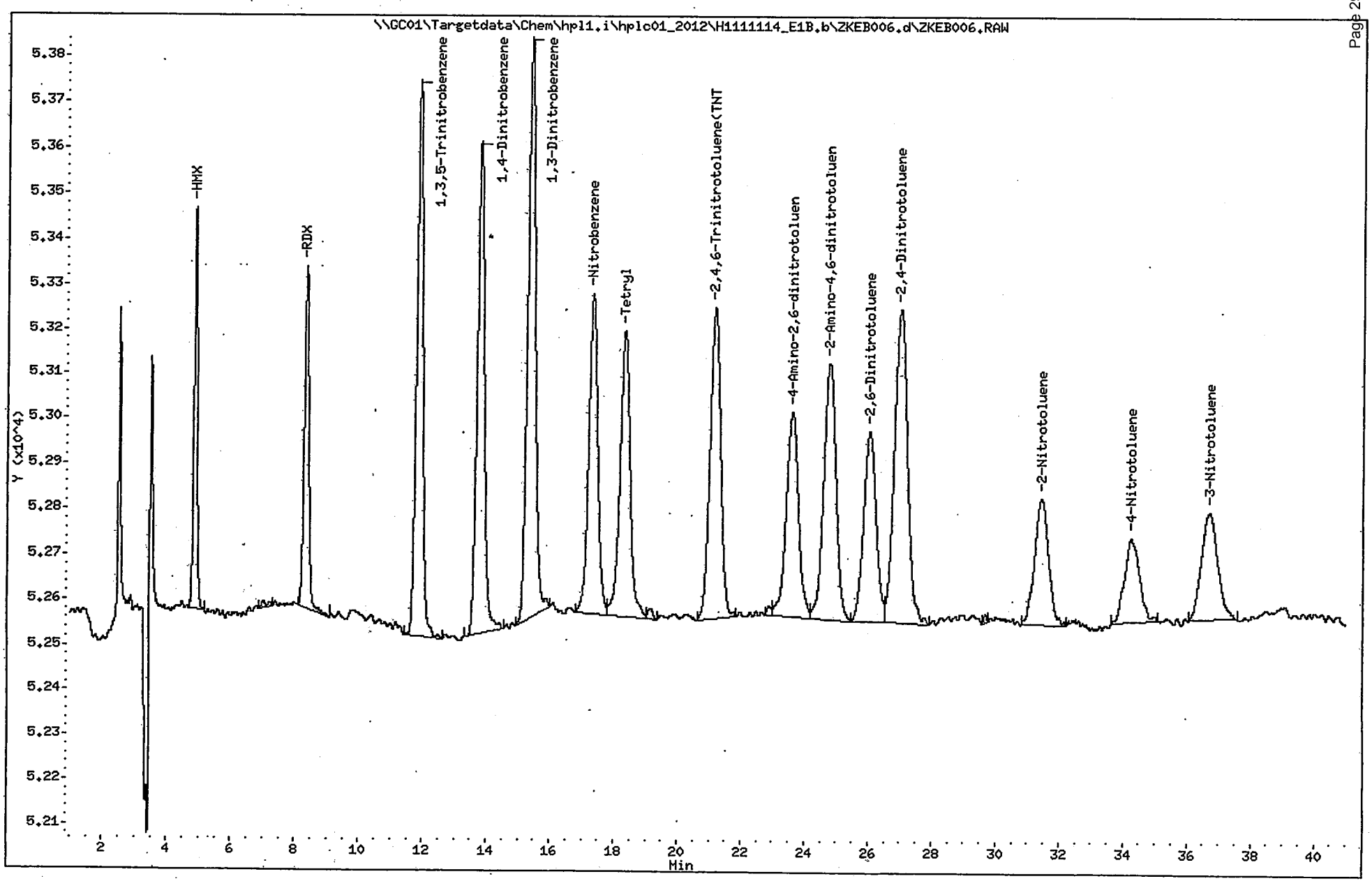
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.860	4.930	-0.070	6302	50.0000	50.6144
2	RDX	8.336	8.330	0.006	7698	50.0000	50.9012
3	1,3,5-Trinitrobenzene	11.866	11.857	0.009	16783	50.0000	51.4625
$ 4	1,4-Dinitrobenzene	13.766	13.737	0.029	17206	50.0000	50.7608
5	1,3-Dinitrobenzene	15.363	15.317	0.046	21850	50.0000	50.9082
6	Nitrobenzene	17.316	17.250	0.066	13791	50.0000	52.5903
7	Tetryl	18.326	18.283	0.043	13993	50.0000	54.4068
8	2,4,6-Trinitrotoluene(TNT)	21.166	21.110	0.056	15775	50.0000	51.7262
9	4-Amino-2,6-dinitrotoluene	23.606	23.483	0.123	12068	50.0000	56.0758
10	2-Amino-4,6-dinitrotoluene	24.773	24.650	0.123	15107	50.0000	52.5180
11	2,6-Dinitrotoluene	26.026	25.940	0.086	11368	50.0000	53.2475
12	2,4-Dinitrotoluene	27.003	26.903	0.100	19896	50.0000	50.7968
13	2-Nitrotoluene	31.446	31.327	0.119	8547	50.0000	51.4234
14	4-Nitrotoluene	34.246	34.133	0.113	6027	50.0000	46.4156
15	3-Nitrotoluene	36.716	36.567	0.149	8485	50.0000	48.2382

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB006.d
Date : 14-NOV-2011 18:37
Client ID:
Sample Info: LEVEL2;AJL;1;2
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB007
Lab Smp Id: LEVEL3
Inj Date : 14-NOV-2011 19:20
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL3;AJL;1;3
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 19:20 Cal File: ZKEB007.d
Als bottle: 58 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

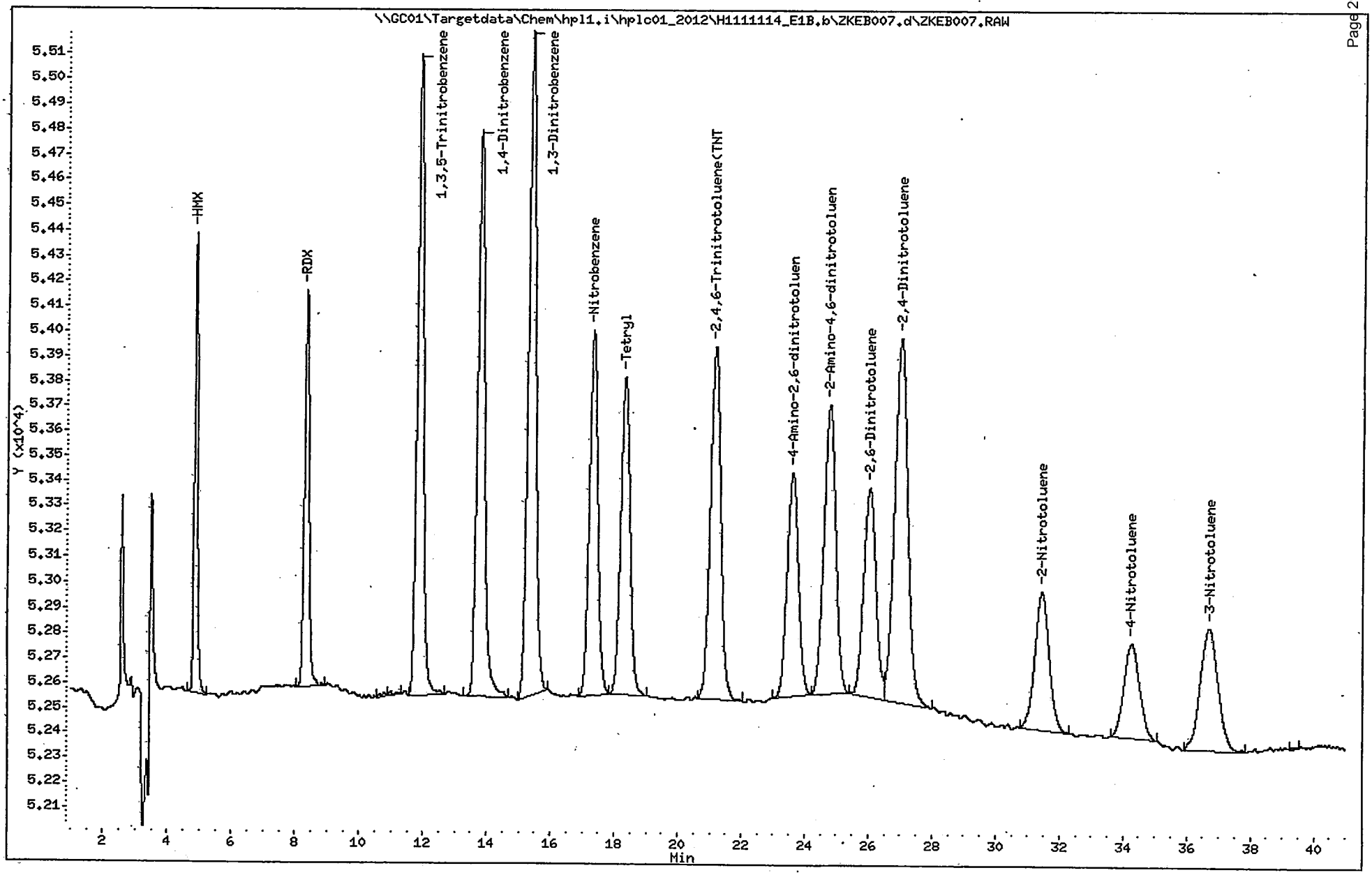
Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.866	4.930	-0.064	13031	100.000	104.658
2	RDX	8.340	8.330	0.010	16266	100.000	107.555
3	1,3,5-Trinitrobenzene	11.870	11.857	0.013	34899	100.000	107.013
$ 4	1,4-Dinitrobenzene	13.773	13.737	0.036	35733	100.000	105.419
5	1,3-Dinitrobenzene	15.370	15.317	0.053	44034	100.000	102.595
6	Nitrobenzene	17.320	17.250	0.070	26726	100.000	101.916
7	Tetryl	18.323	18.283	0.040	25540	100.000	99.3032
8	2,4,6-Trinitrotoluene(TNT)	21.166	21.110	0.056	31767	100.000	104.164
9	4-Amino-2,6-dinitrotoluene	23.610	23.483	0.127	21943	100.000	101.962
10	2-Amino-4,6-dinitrotoluene	24.786	24.650	0.136	29905	100.000	103.962
11	2,6-Dinitrotoluene	26.040	25.940	0.100	21955	100.000	102.837
12	2,4-Dinitrotoluene	27.006	26.903	0.103	41109	100.000	104.956
13	2-Nitrotoluene	31.446	31.327	0.119	17335	100.000	104.297
14	4-Nitrotoluene	34.286	34.133	0.153	13069	100.000	100.648
15	3-Nitrotoluene	36.720	36.567	0.153	19059	100.000	108.353

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB007.d
Date : 14-NOV-2011 19:20
Client ID:
Sample Info: LEVEL3;AJL;1;3
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i

Operator: AJL
Column diameter: 4.60



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EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB008
Lab Smp Id: LEVEL4
Inj Date : 14-NOV-2011 20:03
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL4;AJL;1;4
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 20:03 Cal File: ZKEB008.RAW
Als bottle: 58 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

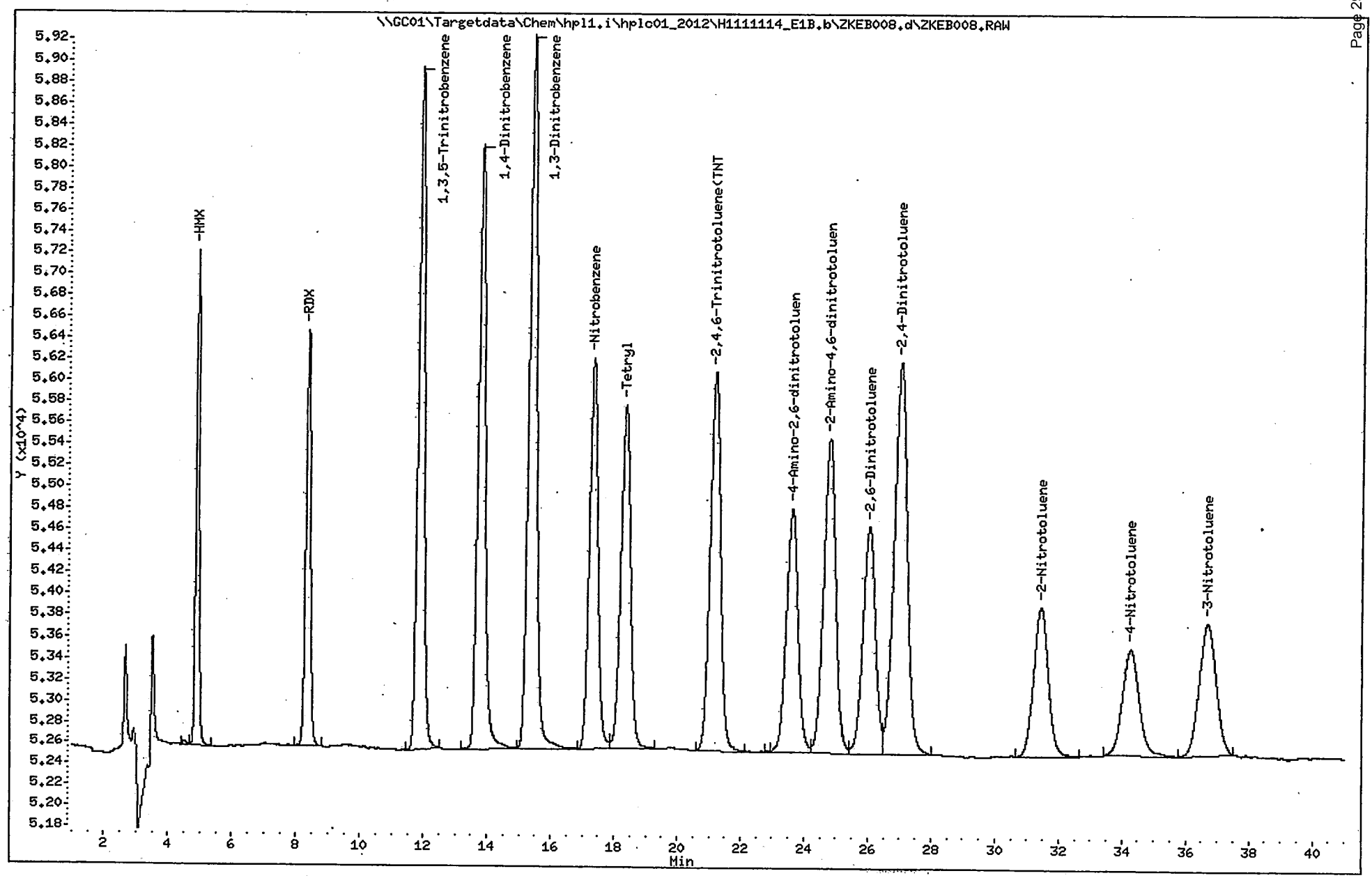
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1	HMX	4.876	4.930	-0.054	33176	250.000	266.452
2	RDX	8.340	8.330	0.010	40108	250.000	265.205
3	1,3,5-Trinitrobenzene	11.870	11.857	0.013	87211	250.000	267.419
$ 4	1,4-Dinitrobenzene	13.766	13.737	0.029	90493	250.000	266.970
5	1,3-Dinitrobenzene	15.366	15.317	0.049	115905	250.000	270.046
6	Nitrobenzene	17.316	17.250	0.066	68813	250.000	262.410
7	Tetryl	18.330	18.283	0.047	66925	250.000	260.214
8	2,4,6-Trinitrotoluene(TNT)	21.163	21.110	0.053	81269	250.000	266.481
9	4-Amino-2,6-dinitrotoluene	23.600	23.483	0.117	58474	250.000	271.708
10	2-Amino-4,6-dinitrotoluene	24.770	24.650	0.120	78170	250.000	271.750
11	2,6-Dinitrotoluene	26.030	25.940	0.090	58233	250.000	272.762
12	2,4-Dinitrotoluene	26.993	26.903	0.090	105443	250.000	269.208
13	2-Nitrotoluene	31.436	31.327	0.109	45453	250.000	273.470
14	4-Nitrotoluene	34.270	34.133	0.137	37055	250.000	285.371
15	3-Nitrotoluene	36.690	36.567	0.123	46682	250.000	265.393

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB008.d
Date : 14-NOV-2011 20:03
Client ID:
Sample Info: LEVEL4;AJL;1;4
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB009
Lab Smp Id: LEVEL5
Inj Date : 14-NOV-2011 20:46
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL5;AJL;1;5
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 20:46 Cal File: ZKEB009.d
Als bottle: 58 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

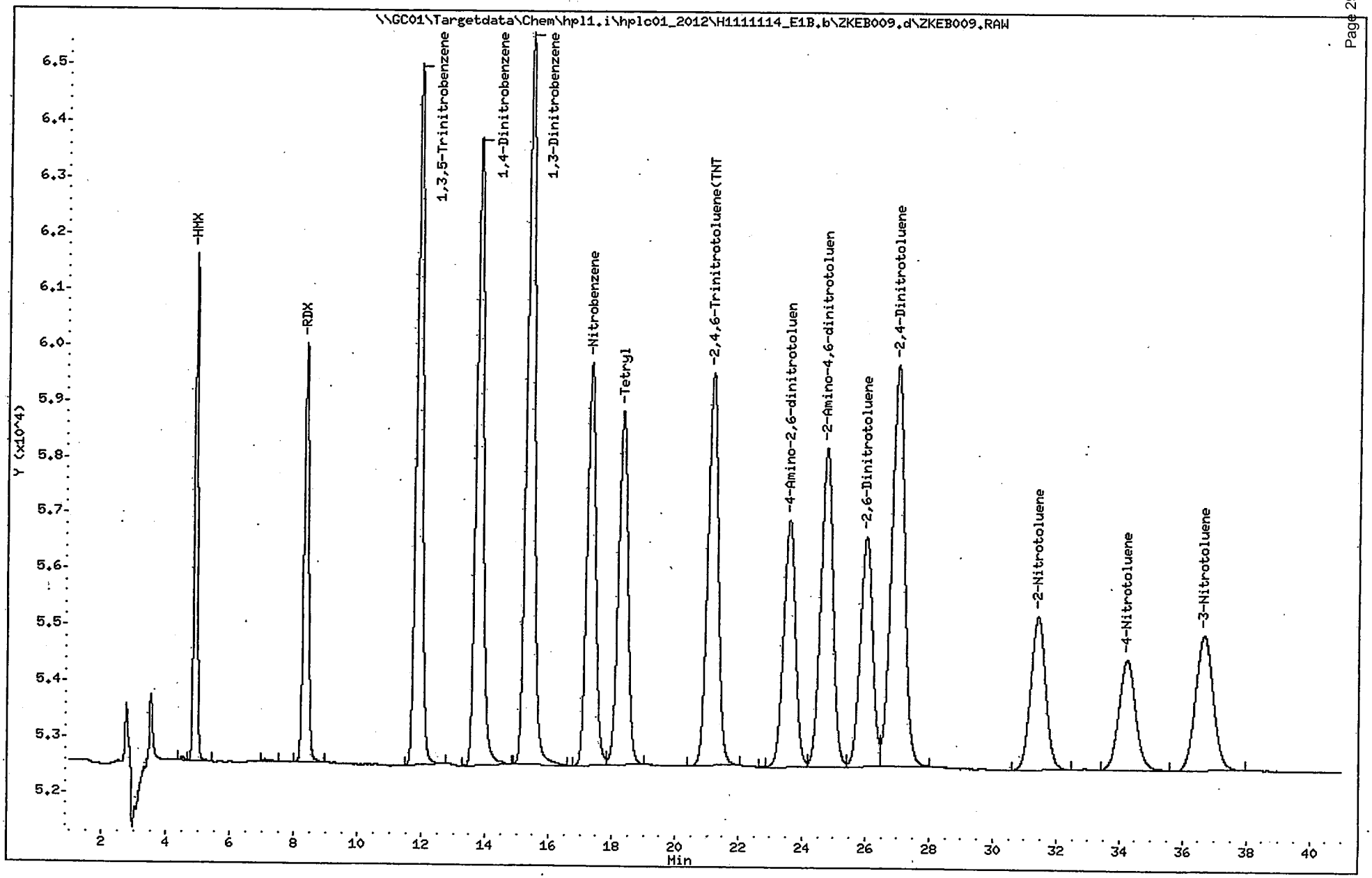
Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	1 HMX	4.886	4.930	-0.044	64611	500.000	518.922
	2 RDX	8.340	8.330	0.010	79835	500.000	527.890
	3 1,3,5-Trinitrobenzene	11.870	11.857	0.013	173473	500.000	531.929
$	4 1,4-Dinitrobenzene	13.763	13.737	0.026	179549	500.000	529.701
	5 1,3-Dinitrobenzene	15.356	15.317	0.039	228785	500.000	533.045
	6 Nitrobenzene	17.303	17.250	0.053	137130	500.000	522.929
	7 Tetryl	18.316	18.283	0.033	131907	500.000	512.873
	8 2,4,6-Trinitrotoluene(TNT)	21.150	21.110	0.040	161394	500.000	529.210
	9 4-Amino-2,6-dinitrotoluene	23.576	23.483	0.093	113416	500.000	527.005
	10 2-Amino-4,6-dinitrotoluene	24.746	24.650	0.096	152906	500.000	531.563
	11 2,6-Dinitrotoluene	26.013	25.940	0.073	111418	500.000	521.880
	12 2,4-Dinitrotoluene	26.980	26.903	0.077	204407	500.000	521.875
	13 2-Nitrotoluene	31.420	31.327	0.093	89591	500.000	539.028
	14 4-Nitrotoluene	34.236	34.133	0.103	72009	500.000	554.561
	15 3-Nitrotoluene	36.663	36.567	0.096	92926	500.000	528.295

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB009.d
Date : 14-NOV-2011 20:46
Client ID:
Sample Info: LEVEL5;AJL;1;5
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i

Operator: AJL
Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB010
Lab Smp Id: LEVEL6
Inj Date : 14-NOV-2011 21:29
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL6;AJL;1;6
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 21:29 Cal File: ZKEB010.d
Als bottle: 58 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

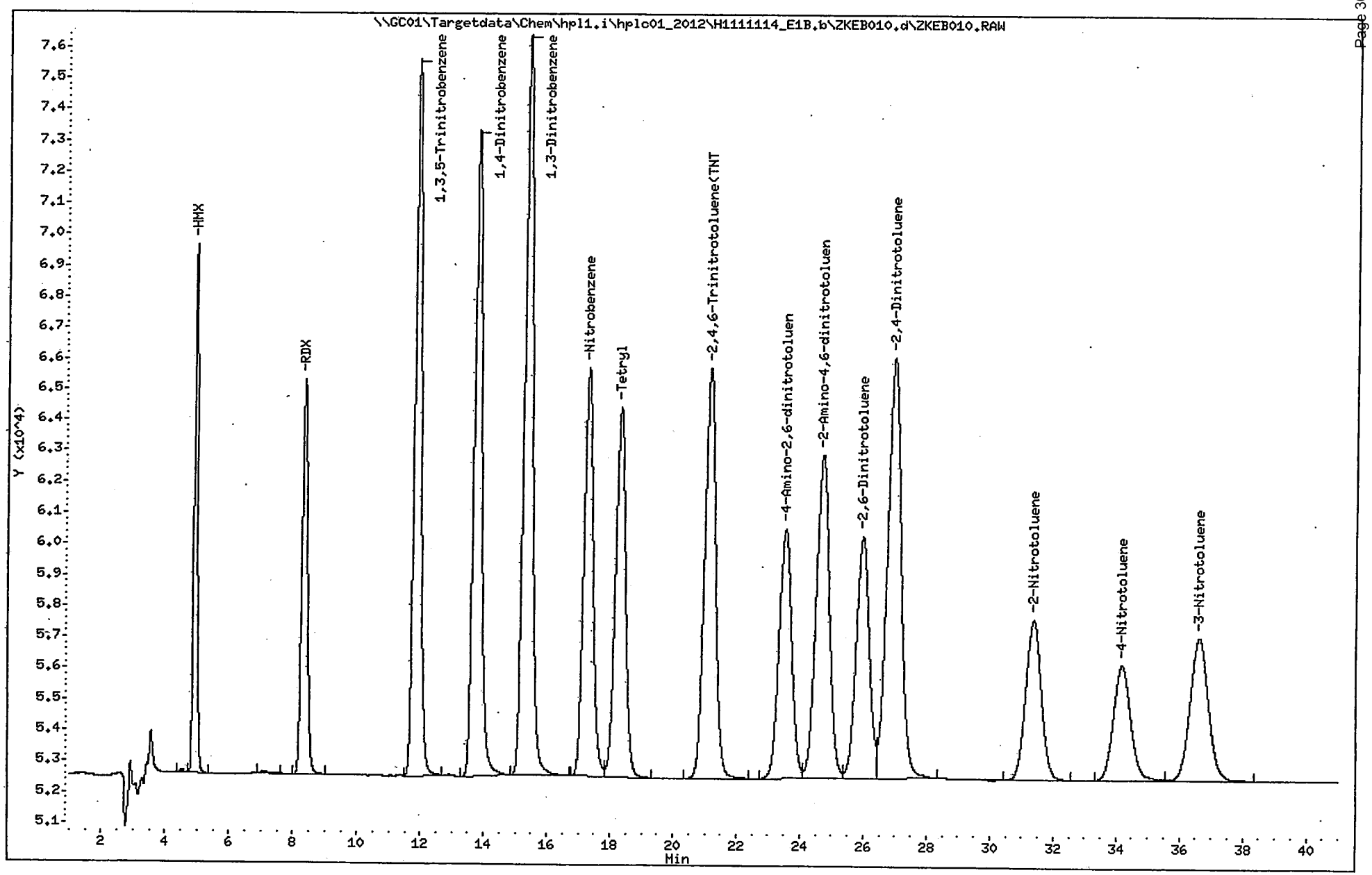
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
	1 HMX	4.906	4.930	-0.024	127410	1000.00	1023.29
	2 RDX	8.336	8.330	0.006	157230	1000.00	1039.65
	3 1,3,5-Trinitrobenzene	11.863	11.857	0.006	343178	1000.00	1052.30
$	4 1,4-Dinitrobenzene	13.750	13.737	0.013	357308	1000.00	1054.12
	5 1,3-Dinitrobenzene	15.336	15.317	0.019	449964	1000.00	1048.37
	6 Nitrobenzene	17.276	17.250	0.026	271997	1000.00	1037.23
	7 Tetryl	18.300	18.283	0.017	262172	1000.00	1019.36
	8 2,4,6-Trinitrotoluene(TNT)	21.130	21.110	0.020	319265	1000.00	1046.87
	9 4-Amino-2,6-dinitrotoluene	23.526	23.483	0.043	224854	1000.00	1044.82
	10 2-Amino-4,6-dinitrotoluene	24.696	24.650	0.046	303239	1000.00	1054.18
	11 2,6-Dinitrotoluene	25.970	25.940	0.030	223860	1000.00	1048.56
	12 2,4-Dinitrotoluene	26.933	26.903	0.030	412840	1000.00	1054.03
	13 2-Nitrotoluene	31.366	31.327	0.039	177371	1000.00	1067.16
	14 4-Nitrotoluene	34.173	34.133	0.040	142796	1000.00	1099.71
	15 3-Nitrotoluene	36.613	36.567	0.046	186402	1000.00	1059.72

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB010.d
Date : 14-NOV-2011 21:29
Client ID:
Sample Info: LEVEL6;AJL;1;6
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB011
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Inj Date : 14-NOV-2011 22:12
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL7;AJL;1;7
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 58 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

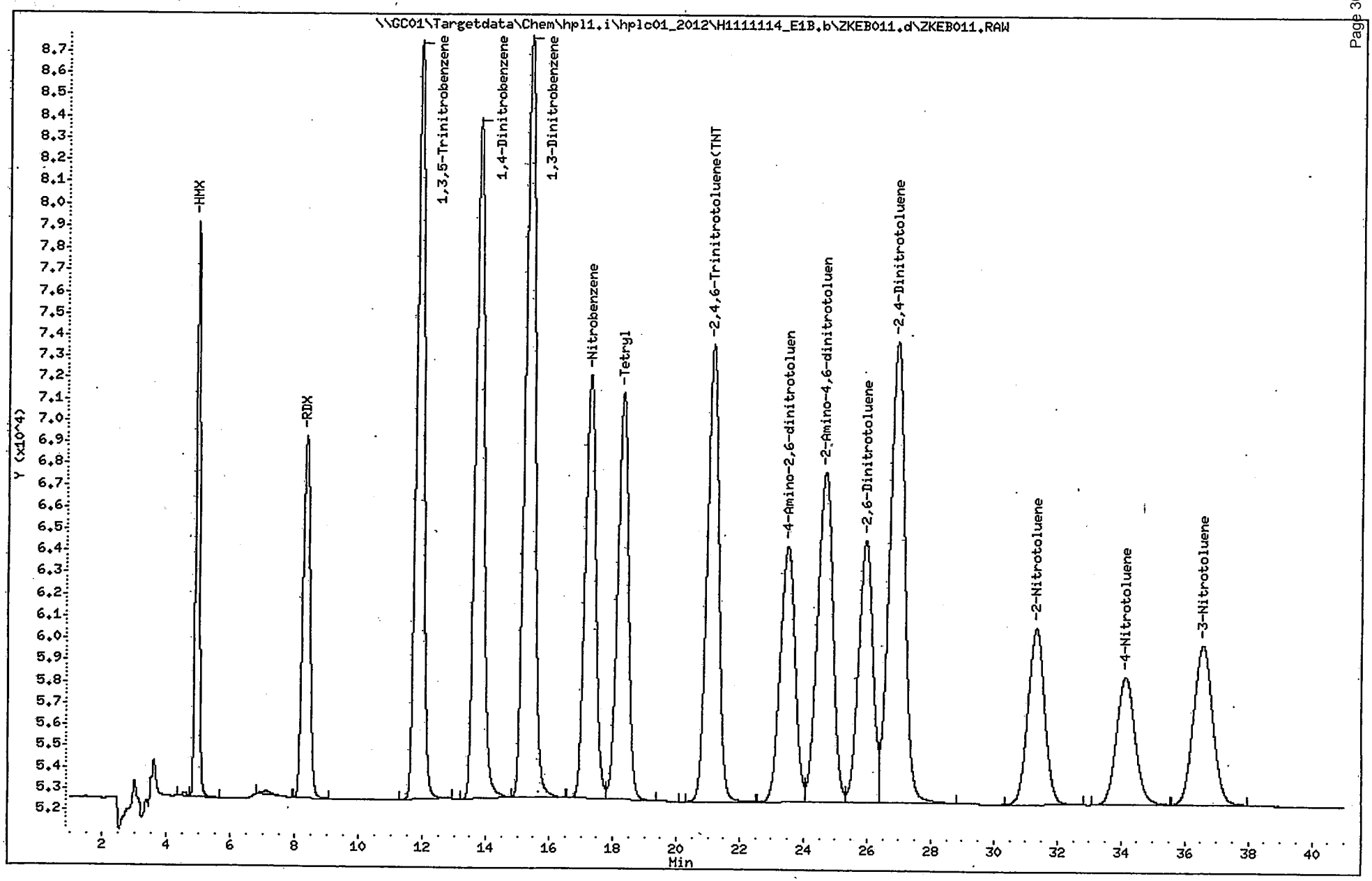
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1	HMX	4.930	4.930	0.000	219369	2000.00	1761.86
2	RDX	8.330	8.330	0.000	267775	2000.00	1770.60
3	1,3,5-Trinitrobenzene	11.856	11.857	-0.001	589354	2000.00	1807.17
$ 4	1,4-Dinitrobenzene	13.736	13.737	-0.001	610721	2000.00	1801.74
5	1,3-Dinitrobenzene	15.316	15.317	-0.001	767270	2000.00	1787.66
6	Nitrobenzene	17.250	17.250	0.000	462204	2000.00	1762.56
7	Tetryl	18.283	18.283	0.000	447399	2000.00	1739.55
8	2,4,6-Trinitrotoluene(TNT)	21.110	21.110	0.000	547000	2000.00	1793.61
9	4-Amino-2,6-dinitrotoluene	23.483	23.483	0.000	385477	2000.00	1791.18
10	2-Amino-4,6-dinitrotoluene	24.650	24.650	0.000	520509	2000.00	1809.50
11	2,6-Dinitrotoluene	25.940	25.940	0.000	383635	2000.00	1796.94
12	2,4-Dinitrotoluene	26.903	26.903	0.000	709325	2000.00	1810.99
13	2-Nitrotoluene	31.326	31.327	-0.001	304908	2000.00	1834.49
14	4-Nitrotoluene	34.133	34.133	0.000	242252	2000.00	1865.65
15	3-Nitrotoluene	36.566	36.567	-0.001	314025	2000.00	1785.27

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB011.d
Date : 14-NOV-2011 22:12
Client ID:
Sample Info: LEVEL7;AJL;1;7
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



6A

RETENTION TIMES OF INITIAL CALIBRATION

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/15/2011

Calibration Times: 23:38 03:55

GC Column: E1, 218nm ID: 4.1 (mm)

LAB FILE ID: RT1 = ZKEA013.d RT2 = ZKEA014.d RT3 = ZKEA015.d

RT4 = ZKEA016.d RT5 = ZKEA017.d RT6 = ZKEA018.d

COMPOUND	RT1	RT2	RT3	RT4	RT5	RT6	MEAN RT	RT WINDOW FROM	RT WINDOW TO
3,5-Dinitroaniline		17.273	17.280	17.290	17.286	17.263	14.805	13.855	15.755
Nitroglycerin	18.623	18.600	18.613	18.620	18.620	18.610	18.613	18.233	18.993
PETN	37.956	37.960	37.960	37.970	37.973	37.980	37.965	37.115	38.815
1,4-Dinitrobenzene	13.770	13.750	13.753	13.760	13.760	13.746	13.754	12.904	14.604

6A

RETENTION TIMES OF INITIAL CALIBRATION

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/15/2011

Calibration Times: 23:38 03:55

GC Column: E1, 218nm ID: 4.1 (mm)

LAB FILE ID: RT7 = ZKEA019.d

COMPOUND	RT7						MEAN RT	RT WINDOW FROM	RT WINDOW TO
3,5-Dinitroaniline	17.240						14.805	13.855	15.755
Nitroglycerin	18.603						18.613	18.233	18.993
PETN	37.953						37.965	37.115	38.815
1,4-Dinitrobenzene	13.740						13.754	12.904	14.604

6B

ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/15/2011

Calibration Time(s): 23:38 03:55

GC Column: E1, 218nm ID: 4.1 (mm)

LAB FILE ID: RRF1 = ZKEA013.d RRF2 = ZKEA014.d RRF3 = ZKEA015.d RRF4 = ZKEA016.d

RRF5 = ZKEA017.d RRF6 = ZKEA018.d RRF7 = ZKEA019.d

COMPOUND	RRF1	RRF2	RRF3	RRF4	RRF5	CT
3,5-Dinitroaniline	753	748	756	761	747	A
Nitroglycerin	59.10000	64.46000	68.10200	68.20240	67.59760	A
PETN	53.02000	82.28400	78.83200	77.27440	77.91920	A
1,4-Dinitrobenzene	123	154	137	134	134	A

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

6B

ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/15/2011

Calibration Time(s): 23:38 03:55

GC Column: E1, 218n ID: 4.1 (mm)

LAB FILE ID: RRF1 = ZKEA013.d RRF2 = ZKEA014.d RRF3 = ZKEA015.d RRF4 = ZKEA016.d

RRF5 = ZKEA017.d RRF6 = ZKEA018.d RRF7 = ZKEA019.d

COMPOUND	RRF6	RRF7	CT	b	m1	m2	% RSD or R^2
3,5-Dinitroaniline	745	650	A		737		5.24410
Nitroglycerin	68.42180	59.25520	A		65.01986		6.47771
PETN	78.06260	67.71130	A		73.58621		13.73671
1,4-Dinitrobenzene	130	118	A		133		8.79295

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

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EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: LEVEL1
Inj Date : 14-NOV-2011 23:38
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL1
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 23:38 Cal File: ZKEA013.RAW
Als bottle: 58 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

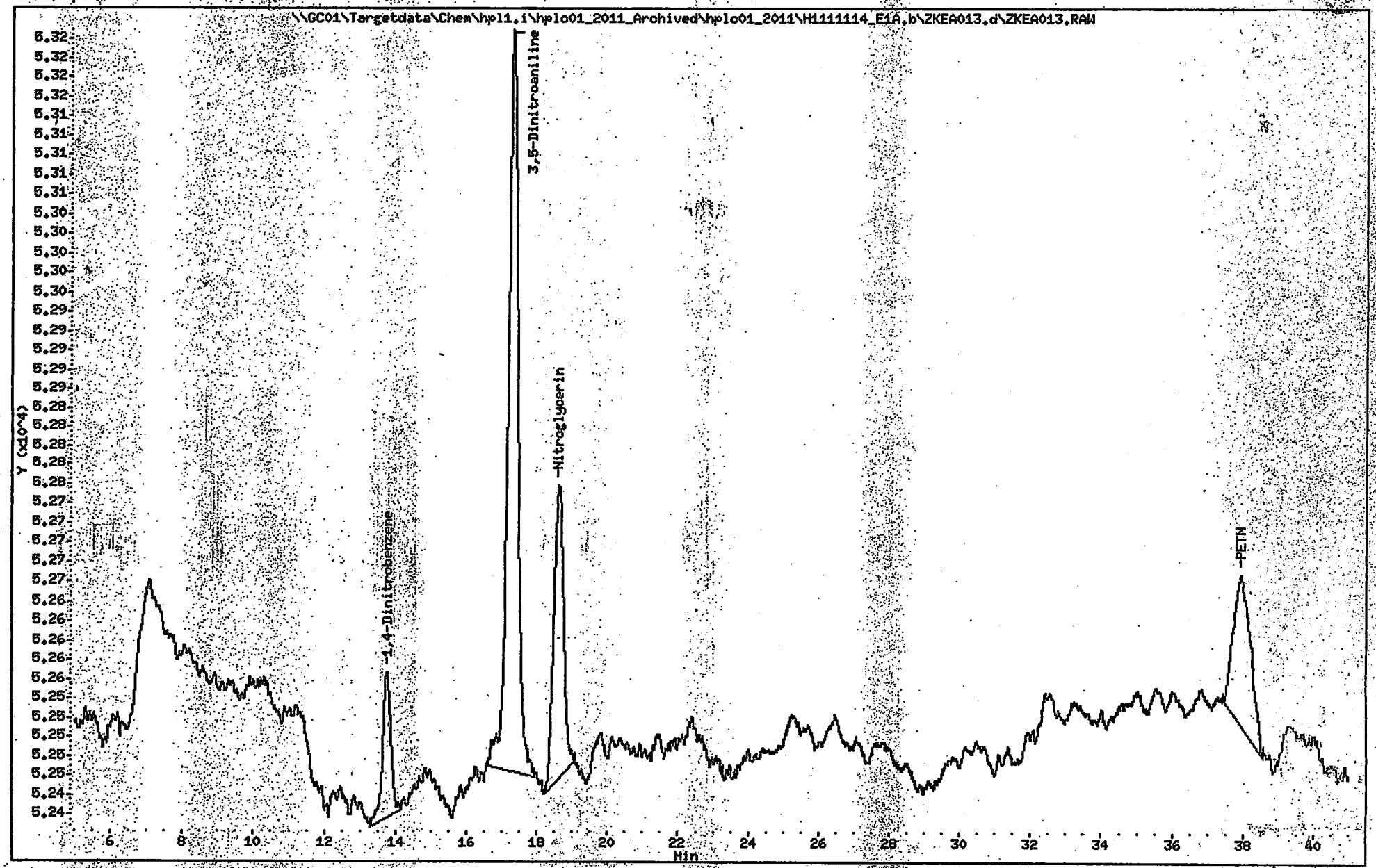
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.770	13.740	0.030	2451	20.0000	18.4529(a)
4	Nitroglycerin	18.623	18.603	0.020	5910	100.000	90.8953(a)
5	PETN	37.956	37.953	0.003	5302	100.000	71.1054(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA013.d
Date : 14-NOV-2011 23:38
Client ID:
Sample Info: LEVEL1
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
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Inj Date : 15-NOV-2011 00:21
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL2
Misc Info : 058
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Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 00:21 Cal File: ZKEA014.RAW
Als bottle: 58 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.750	13.740	0.010	7715	50.0000	58.0840
3	3,5-Dinitroaniline	17.273	17.239	0.034	37401	50.0000	50.7430(a)
4	Nitroglycerin	18.600	18.603	-0.003	16115	250.000	247.847(a)
5	PETN	37.960	37.953	0.007	20571	250.000	275.879(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA014.d

Page 2

Date : 15-NOV-2011 00:21

Client ID:

Instrument: hpl1.i

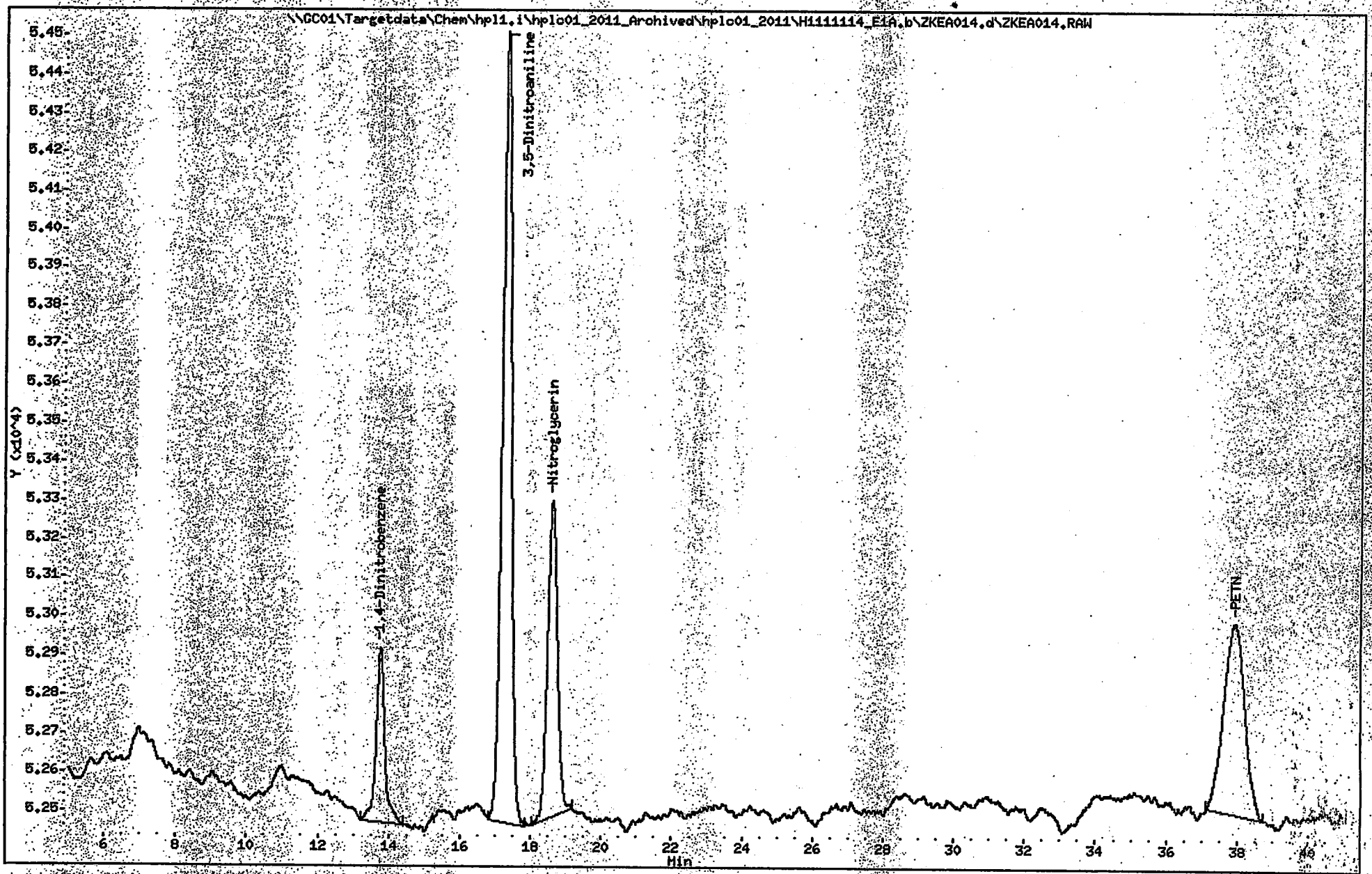
Sample Info: LEVEL2

Operator: AJL

Volume Injected (uL): 100.0

Column phase: E1

Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
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Inj Date : 15-NOV-2011 01:04
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL3
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 01:04 Cal File: ZKEA015.RAW
Als bottle: 58 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.753	13.740	0.013	13699	100.000	103.136
3	3,5-Dinitroaniline	17.280	17.239	0.041	75560	100.000	102.514
4	Nitroglycerin	18.613	18.603	0.010	34051	500.000	523.702
5	PETN	37.960	37.953	0.007	39416	500.000	528.610

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA015.d

Page: 2

Date : 15-NOV-2011 01:04

Client ID:

Instrument: hpl1.i

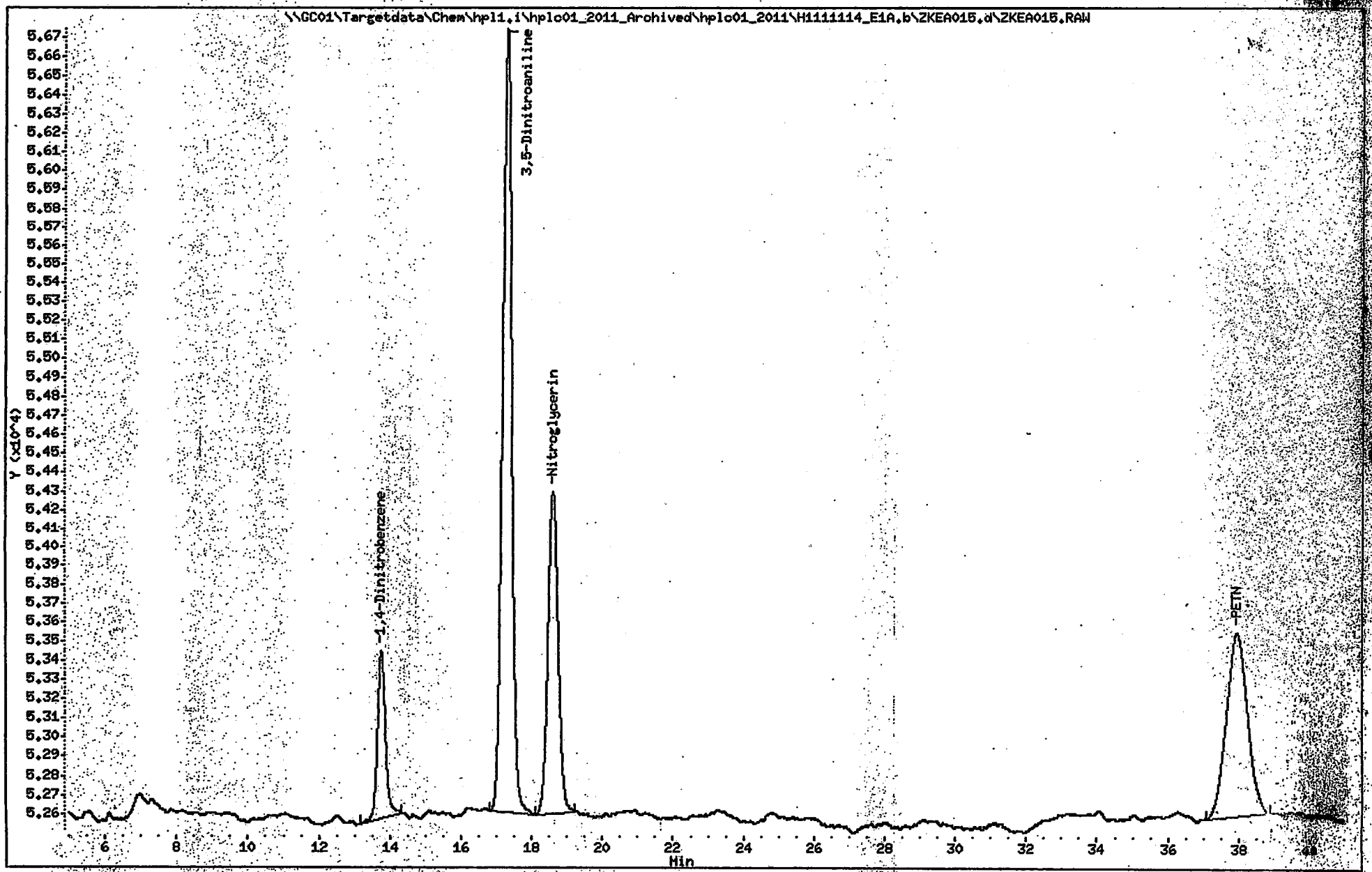
Sample Info: LEVEL3

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
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Inj Date : 15-NOV-2011 01:46
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL4
Misc Info : 058
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Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 01:46 Cal File: ZKEA016.RAW
Als bottle: 58 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.760	13.740	0.020	33422	250.000	251.625
3	3,5-Dinitroaniline	17.290	17.239	0.051	190204	250.000	258.055
4	Nitroglycerin	18.620	18.603	0.017	85253	1250.00	1311.18
5	PETN	37.970	37.953	0.017	96593	1250.00	1295.41

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA016.d

Page 1

Date : 15-NOV-2011 01:46

Client ID:

Instrument: hpl1.i

Sample Info: LEVEL4

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60

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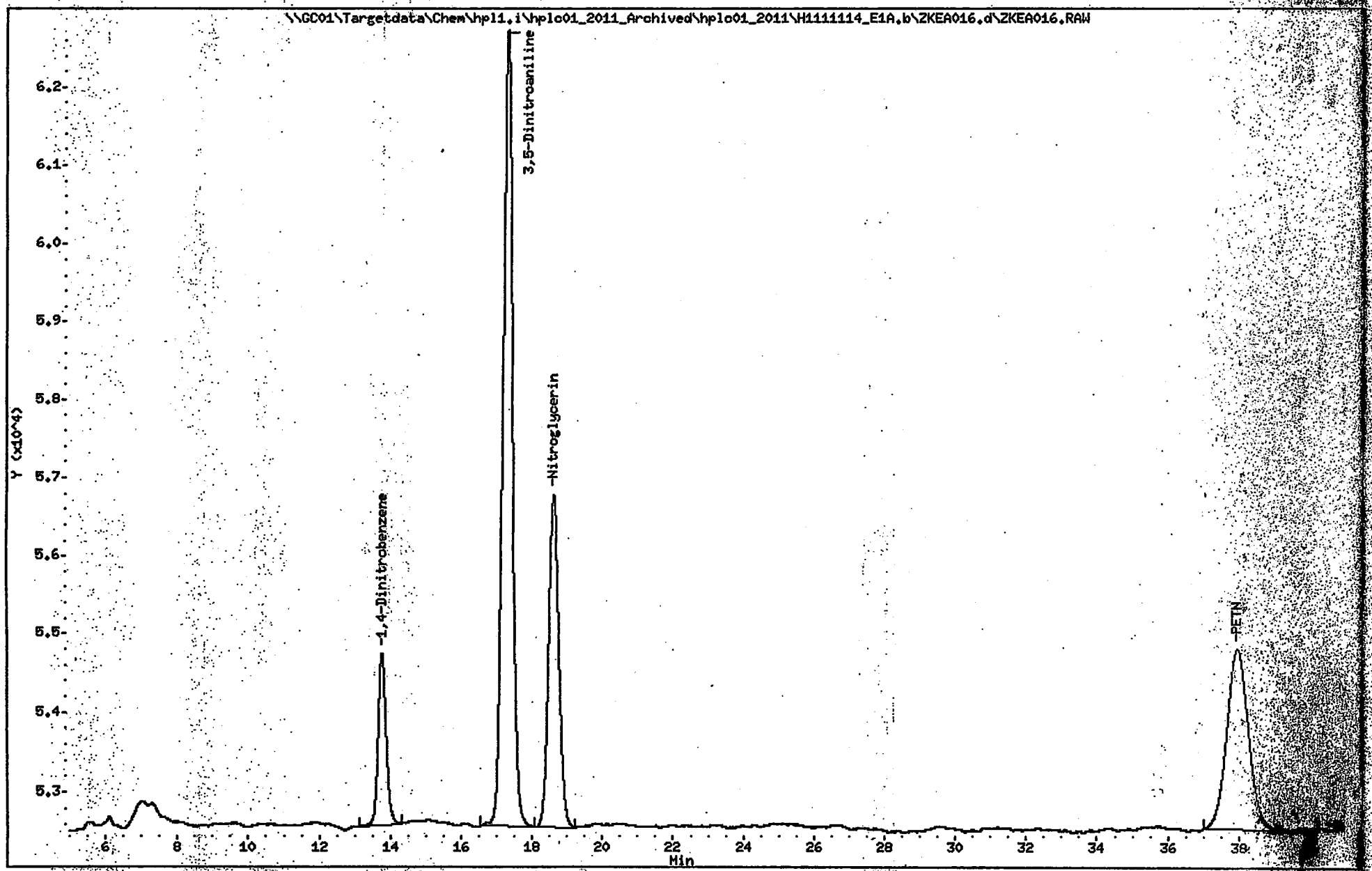

ALS - Middletown

EXPLOSIVES ANALYSIS

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Inj Date : 15-NOV-2011 02:29
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL5
Misc Info : 058
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Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 02:29 Cal File: ZKEA017.RAW
Als bottle: 58 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.760	13.740	0.020	67134	500.000	505.433
3	3,5-Dinitroaniline	17.286	17.239	0.047	373417	500.000	506.626
4	Nitroglycerin	18.620	18.603	0.017	168994	2500.00	2599.11
5	PETN	37.973	37.953	0.020	194798	2500.00	2612.45

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA017.d

Page 1

Date : 15-NOV-2011 02:29

Client ID:

Instrument: hpl1.i

Sample Info: LEVEL5

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60

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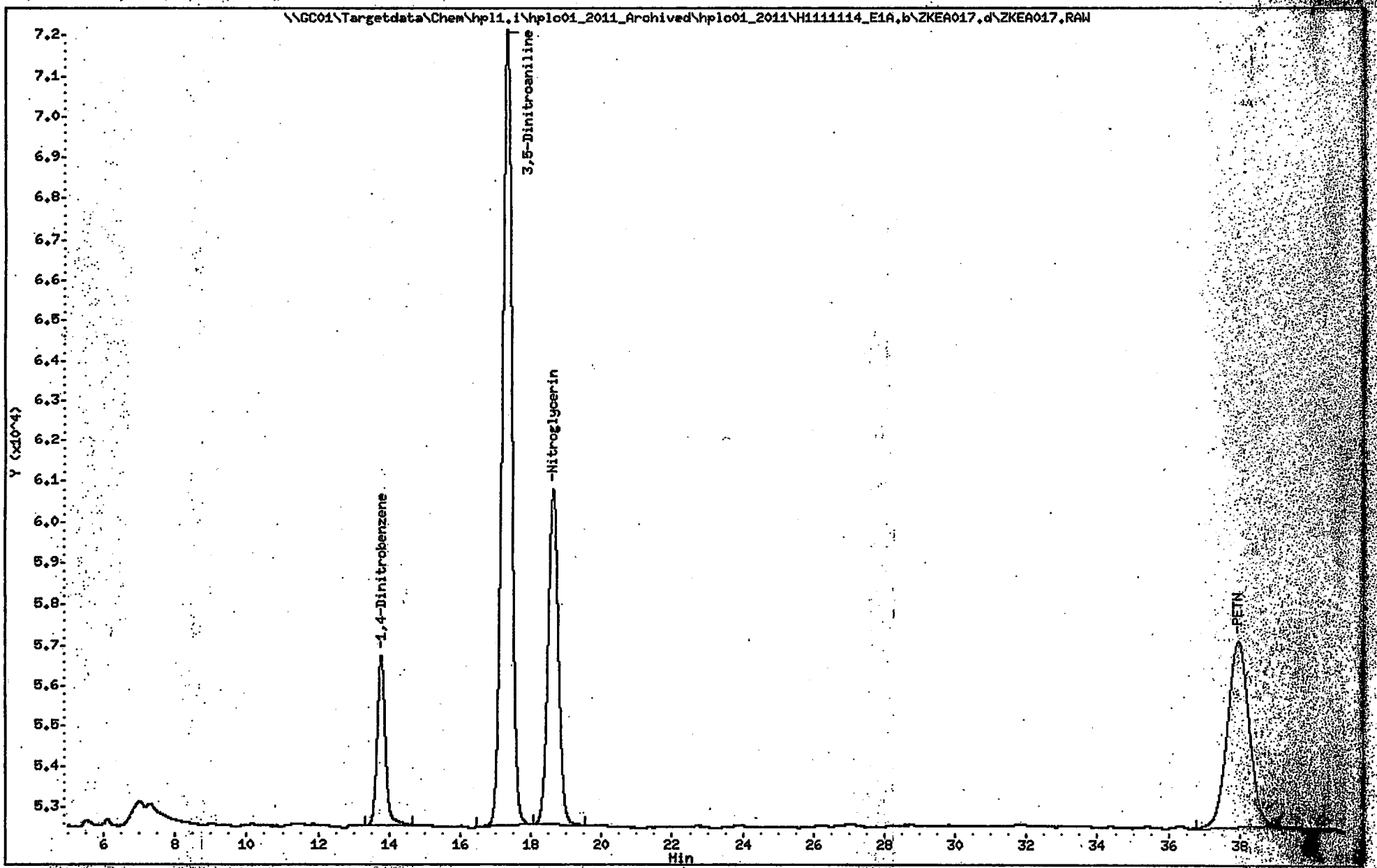


ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: LEVEL6
Inj Date : 15-NOV-2011 03:12
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL6
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:12 Cal File: ZKEA018.RAW
Als bottle: 58 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.746	13.740	0.006	130127	1000.00	979.689
3	3,5-Dinitroaniline	17.263	17.239	0.024	745369	1000.00	1011.26
4	Nitroglycerin	18.610	18.603	0.007	342109	5000.00	5261.61
5	PETN	37.980	37.953	0.027	390313	5000.00	5234.51

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA018.d

Page 2

Date : 15-NOV-2011 03:12

Client ID:

Instrument: hpl1.i

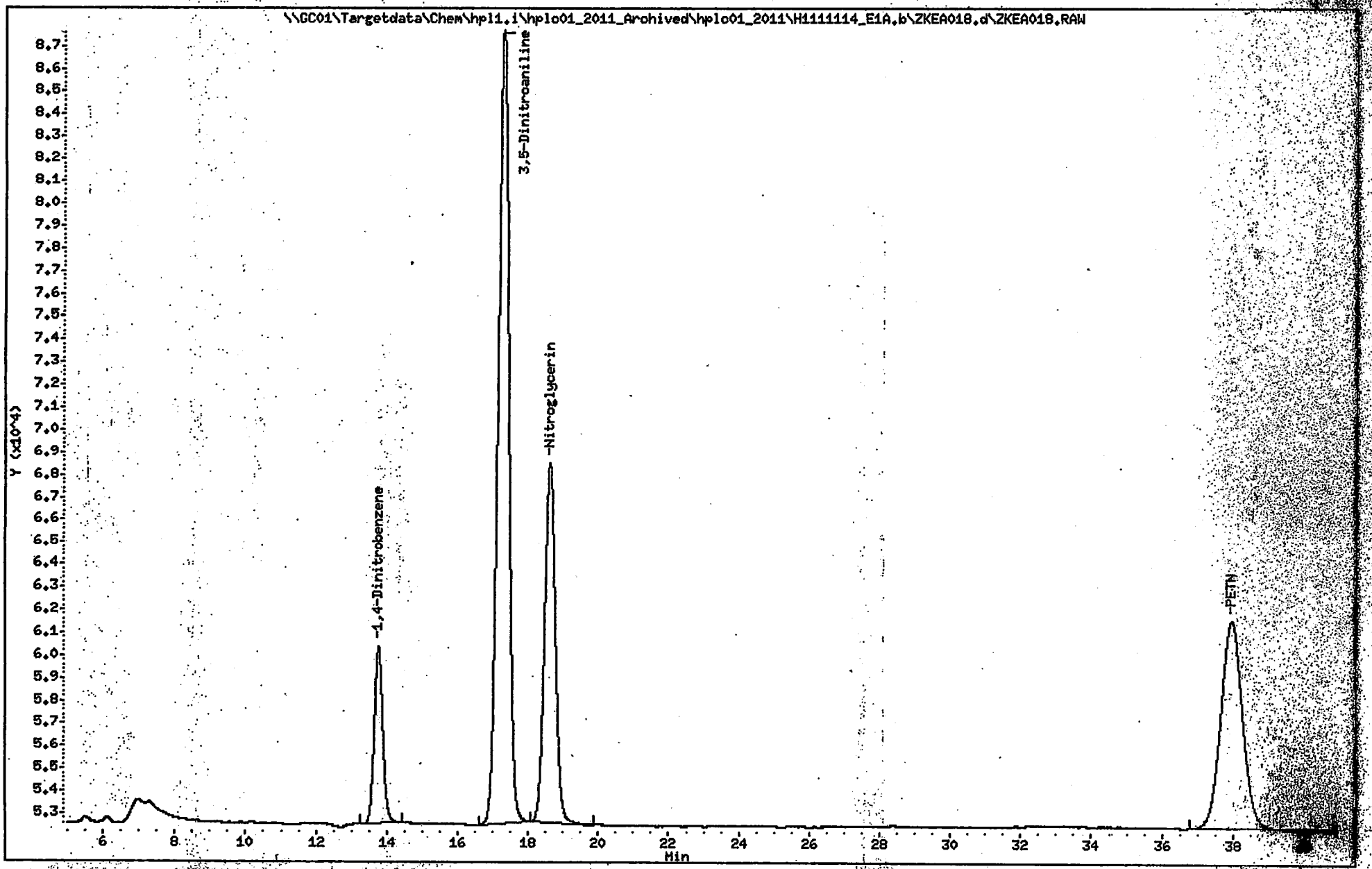
Sample Info: LEVEL6

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
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Inj Date : 15-NOV-2011 03:55
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL7
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.RAW
Als bottle: 58 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

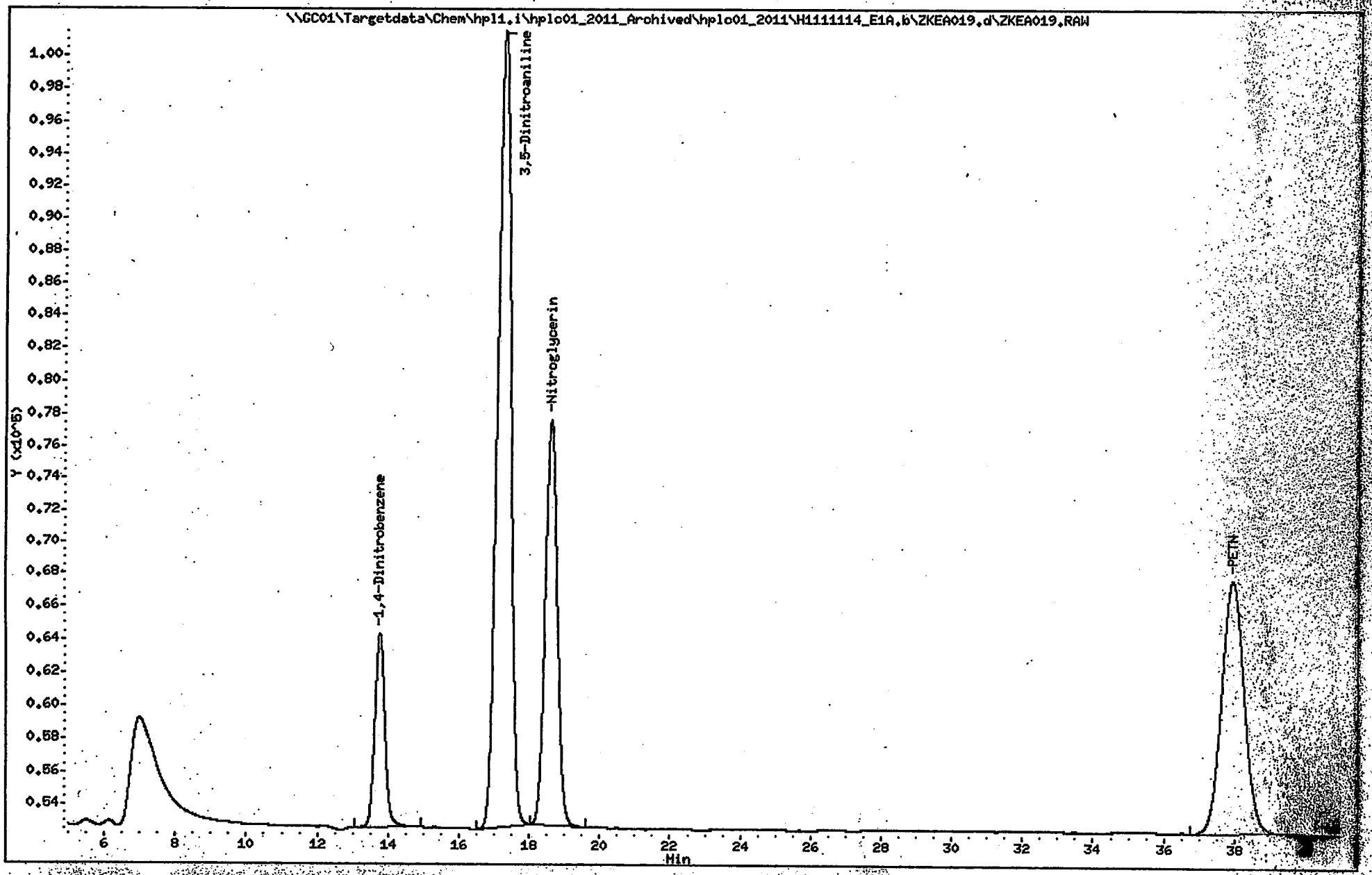
Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.740	13.740	0.000	235702	2000.00	1774.53
3	3,5-Dinitroaniline	17.240	17.239	0.001	1300553	2000.00	1764.50
4	Nitroglycerin	18.603	18.603	0.000	592552	10000.0	9113.40
5	PETN	37.953	37.953	0.000	677113	10000.0	9080.80

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA019.d
Date : 15-NOV-2011 03:55
Client ID:
Sample Info: LEVEL7
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



Continuing Calibrations

7D

CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

GC Column: E1, 254nm ID: 4.1 (mm) Calibration Date: 8/9/2012 Time: 09:26

Sample No.(CC): CCV1 Initi. Calib. Date(s): 11/14/2011 11/14/2011

Lab Sample No.(CC): CCV1 Initi. Calib. Time(s): 17:54 22:12

File ID: ZH8B029.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
2-Amino-4,6-dinitrotoluene	24.553	23.703	25.403	288	281	-2.3
4-Amino-2,6-dinitrotoluene	23.406	22.556	24.256	215	217	1.0
1,3-Dinitrobenzene	15.240	14.950	15.530	429	425	-1.0
2,4-Dinitrotoluene	26.740	26.190	27.290	392	389	-0.6
2,6-Dinitrotoluene	25.810	25.270	26.350	213	211	-1.2
HMX	4.980	4.710	5.250	125	136	9.3
Nitrobenzene	17.123	16.803	17.443	262	265	1.0
4-Nitrotoluene	33.830	33.150	34.510	130	121	-6.7
2-Nitrotoluene	31.060	30.480	31.640	166	164	-1.4
3-Nitrotoluene	36.200	35.490	36.910	176	172	-2.0
RDX	8.376	8.096	8.656	151	157	4.1
Tetryl	18.323	17.663	18.983	257	252	-2.1
1,3,5-Trinitrobenzene	11.833	11.633	12.033	326	357	9.6
2,4,6-Trinitrotoluene	21.066	20.606	21.526	305	301	-1.3
1,4-Dinitrobenzene	13.673	12.823	14.523	339	371	9.4

The Absolute Value of %D must be less than or equal to 15 ~~20%~~ SCT 8/21/12

FORM VII

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B029.d
Lab Smp Id: CCV1
Inj Date : 09-AUG-2012 09:26
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV1;AJL;2
Misc Info : 130
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_254
Meth Date : 10-Aug-2012 09:44 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	1 HMX	4.980	4.970	0.010	13610	100.000	109.308
	2 RDX	8.376	8.356	0.020	15741	100.000	104.084
	3 1,3,5-Trinitrobenzene	11.833	11.796	0.037	35744	100.000	109.604
$	4 1,4-Dinitrobenzene	13.673	13.646	0.027	37086	100.000	109.410
	5 1,3-Dinitrobenzene	15.240	15.196	0.044	42493	100.000	99.0042
	6 Nitrobenzene	17.123	17.120	0.003	26491	100.000	101.020
	7 Tetryl	18.323	18.706	-0.383	25176	100.000	97.8879
	8 2,4,6-Trinitrotoluene(TNT)	21.066	20.983	0.083	30108	100.000	98.7240
	9 4-Amino-2,6-dinitrotoluene	23.406	22.736	0.670	21741	100.000	101.023
	10 2-Amino-4,6-dinitrotoluene	24.553	24.473	0.080	28104	100.000	97.7008
	11 2,6-Dinitrotoluene	25.810	25.726	0.084	21101	100.000	98.8367
	12 2,4-Dinitrotoluene	26.740	26.650	0.090	38946	100.000	99.4336
	13 2-Nitrotoluene	31.060	30.996	0.064	16382	100.000	98.5630
	14 4-Nitrotoluene	33.830	33.760	0.070	12117	100.000	93.3164
	15 3-Nitrotoluene	36.200	36.110	0.090	17237	100.000	97.9944

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B029.d

Date : 09-AUG-2012 09:26

Client ID:

Instrument: hpl1.i

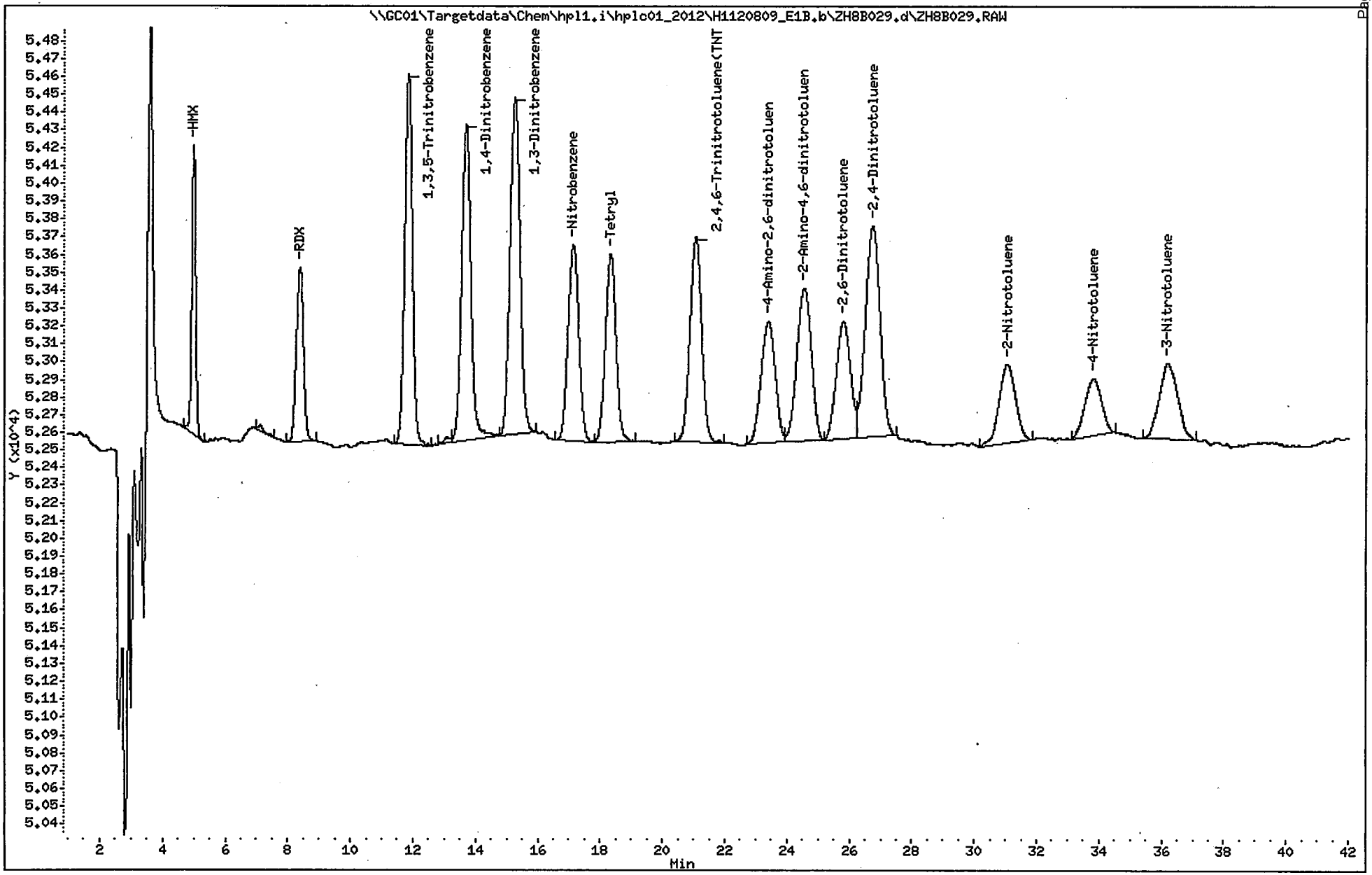
Sample Info: CCV1;AJL;2

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

GC Column: E1, 218nm ID: 4.1 (mm) Calibration Date: 8/9/2012 Time: 10:10

Sample No.(CC): CCV2 Initi. Calib. Date(s): 11/14/2011 11/15/2011

Lab Sample No.(CC): CCV2 Initi. Calib. Time(s): 23:38 03:55

File ID: ZH8A030.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
3,5-Dinitroaniline	17.153	16.203	18.103	737	715	-3.0
Nitroglycerin	18.663	18.283	19.043	65	69	5.6
PETN	38.173	37.323	39.023	75	78	5.0
1,4-Dinitrobenzene	13.663	12.813	14.513	133	120	-9.7

The Absolute Value of %D must be less than or equal to ~~20%~~ 15 SEV 8/21/12

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A030.d
Lab Smp Id: CCV2
Inj Date : 09-AUG-2012 10:10
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV2;AJL;2;;;;;;;;
Misc Info : 130
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_218
Meth Date : 10-Aug-2012 09:34 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

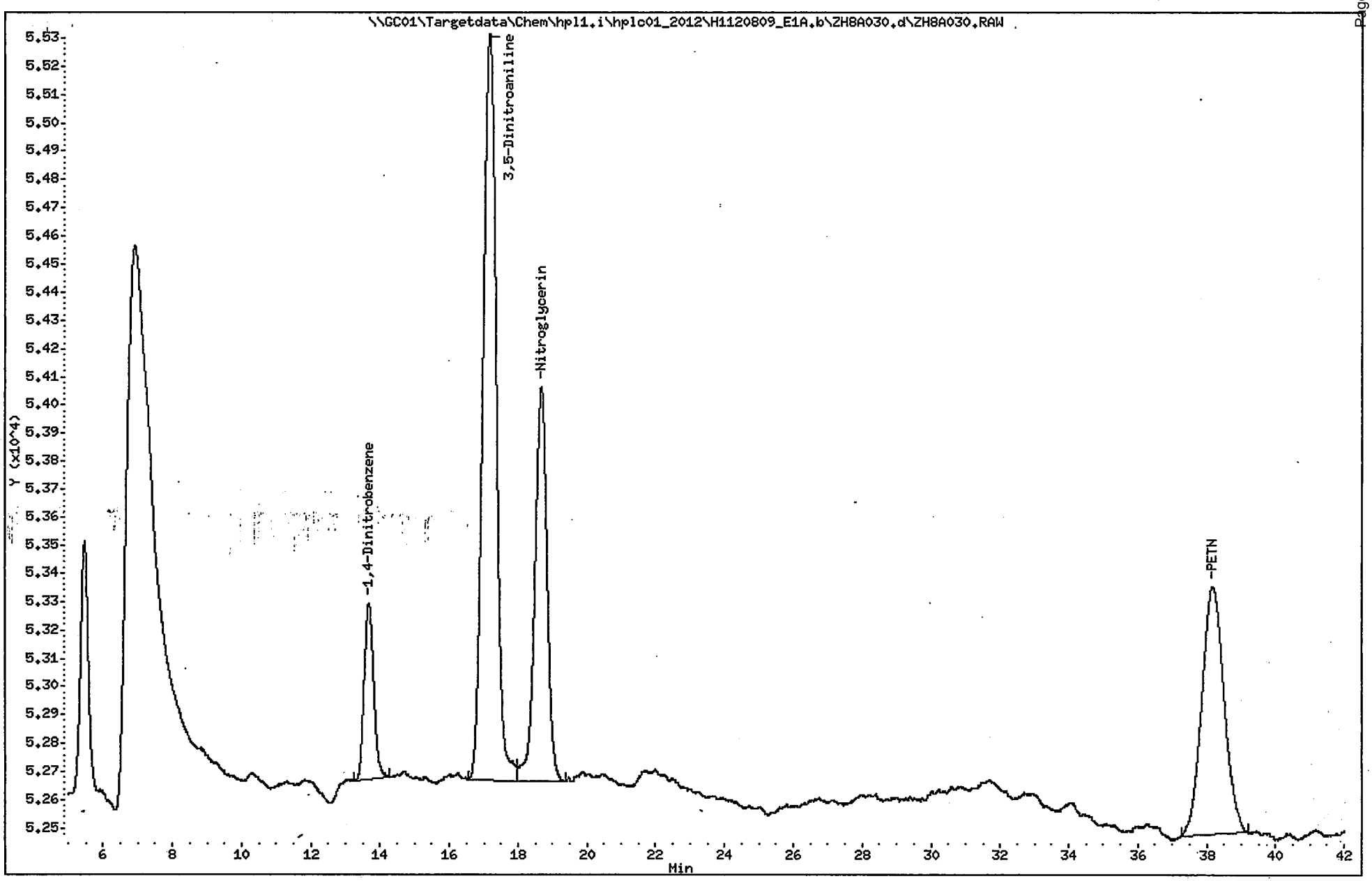
Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$	1 1,4-Dinitrobenzene	13.663	13.663	0.000	11994	100.000	90.2994
	3 3,5-Dinitroaniline	17.153	17.153	0.000	71529	100.000	97.0455
	4 Nitroglycerin	18.663	18.663	0.000	34328	500.000	527.962
	5 PETN	38.173	38.173	0.000	39155	500.000	525.110

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A030.d
Date : 09-AUG-2012 10:10
Client ID:
Sample Info: CCV2;AJL;2;;;;;;;;
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



7D

CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

GC Column: E1, 254nm ID: 4.1 (mm) Calibration Date: 8/9/2012 Time: 20:20

Sample No.(CC): CCV1 Initi. Calib. Date(s): 11/14/2011 11/14/2011

Lab Sample No.(CC): CCV1 Initi. Calib. Time(s): 17:54 22:12

File ID: ZH8B043.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
2-Amino-4,6-dinitrotoluene	24.490	23.640	25.340	288	320	11.4
4-Amino-2,6-dinitrotoluene	23.340	22.490	24.190	215	231	7.5
1,3-Dinitrobenzene	15.216	14.926	15.506	429	424	-1.1
2,4-Dinitrotoluene	26.676	26.126	27.226	392	419	7.0
2,6-Dinitrotoluene	25.756	25.216	26.296	213	235	10.2
HMX	4.973	4.703	5.243	125	132	5.7
Nitrobenzene	17.100	16.780	17.420	262	288	9.7
4-Nitrotoluene	33.723	33.043	34.403	130	145	11.6
2-Nitrotoluene	31.016	30.436	31.596	166	170	2.2
3-Nitrotoluene	36.133	35.423	36.843	176	174	-1.3
RDX	8.366	8.086	8.646	151	156	3.3
Tetryl	18.280	17.620	18.940	257	259	0.7
1,3,5-Trinitrobenzene	11.813	11.613	12.013	326	350	7.4
2,4,6-Trinitrotoluene	21.010	20.550	21.470	305	291	-4.4
1,4-Dinitrobenzene	13.653	12.803	14.503	339	351	3.5

The Absolute Value of %D must be less than or equal to ~~20%~~ 15 [illegible] 8/2/12

FORM VII

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B043.d
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Inj Date : 09-AUG-2012 20:20
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV1;AJL;2
Misc Info : 131
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_254
Meth Date : 10-Aug-2012 09:44 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

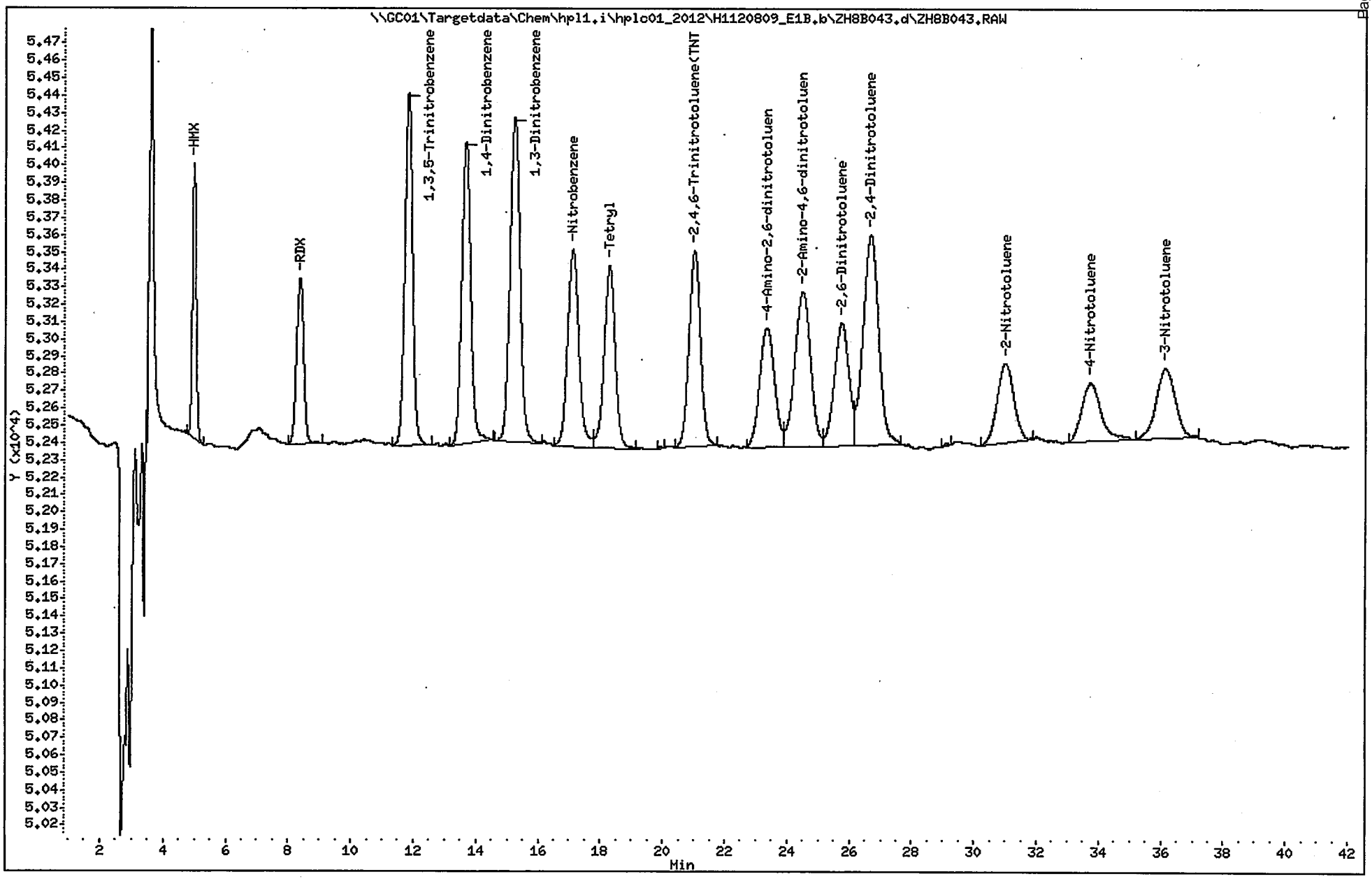
Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.973	4.970	0.003	13158	100.000	105.678
2	RDX	8.366	8.356	0.010	15623	100.000	103.303
3	1,3,5-Trinitrobenzene	11.813	11.796	0.017	35031	100.000	107.417
$ 4	1,4-Dinitrobenzene	13.653	13.646	0.007	35076	100.000	103.480
5	1,3-Dinitrobenzene	15.216	15.196	0.020	42427	100.000	98.8504
6	Nitrobenzene	17.100	17.120	-0.020	28770	100.000	109.711
7	Tetryl	18.280	18.706	-0.426	25898	100.000	100.695
8	2,4,6-Trinitrotoluene(TNT)	21.010	20.983	0.027	29141	100.000	95.5533
9	4-Amino-2,6-dinitrotoluene	23.340	22.736	0.604	23136	100.000	107.505
10	2-Amino-4,6-dinitrotoluene	24.490	24.473	0.017	32031	100.000	111.353
11	2,6-Dinitrotoluene	25.756	25.726	0.030	23524	100.000	110.186
12	2,4-Dinitrotoluene	26.676	26.650	0.026	41904	100.000	106.986
13	2-Nitrotoluene	31.016	30.996	0.020	16992	100.000	102.233
14	4-Nitrotoluene	33.723	33.760	-0.037	14485	100.000	111.553
15	3-Nitrotoluene	36.133	36.110	0.023	17362	100.000	98.7051

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B043.d
Date : 09-AUG-2012 20:20
Client ID:
Sample Info: CCV1;AJL;2
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



7D

CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

GC Column: E1, 218nm ID: 4.1 (mm) Calibration Date: 8/9/2012 Time: 21:04

Sample No.(CC): CCV2 Initi. Calib. Date(s): 11/14/2011 11/15/2011

Lab Sample No.(CC): CCV2 Initi. Calib. Time(s): 23:38 03:55

File ID: ZH8A044.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
3,5-Dinitroaniline	17.123	16.173	18.073	737	719	-2.5
Nitroglycerin	18.640	18.260	19.020	65	67	3.1
PETN	38.090	37.240	38.940	75	67	-10.7
1,4-Dinitrobenzene	13.656	12.806	14.506	133	143	7.5

The Absolute Value of %D must be less than or equal to 20% (15) SCT 8/23/12

FORM VII

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A044.d
Lab Smp Id: CCV2
Inj Date : 09-AUG-2012 21:04
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV2;AJL;2
Misc Info : 131
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_218
Meth Date : 10-Aug-2012 09:34 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

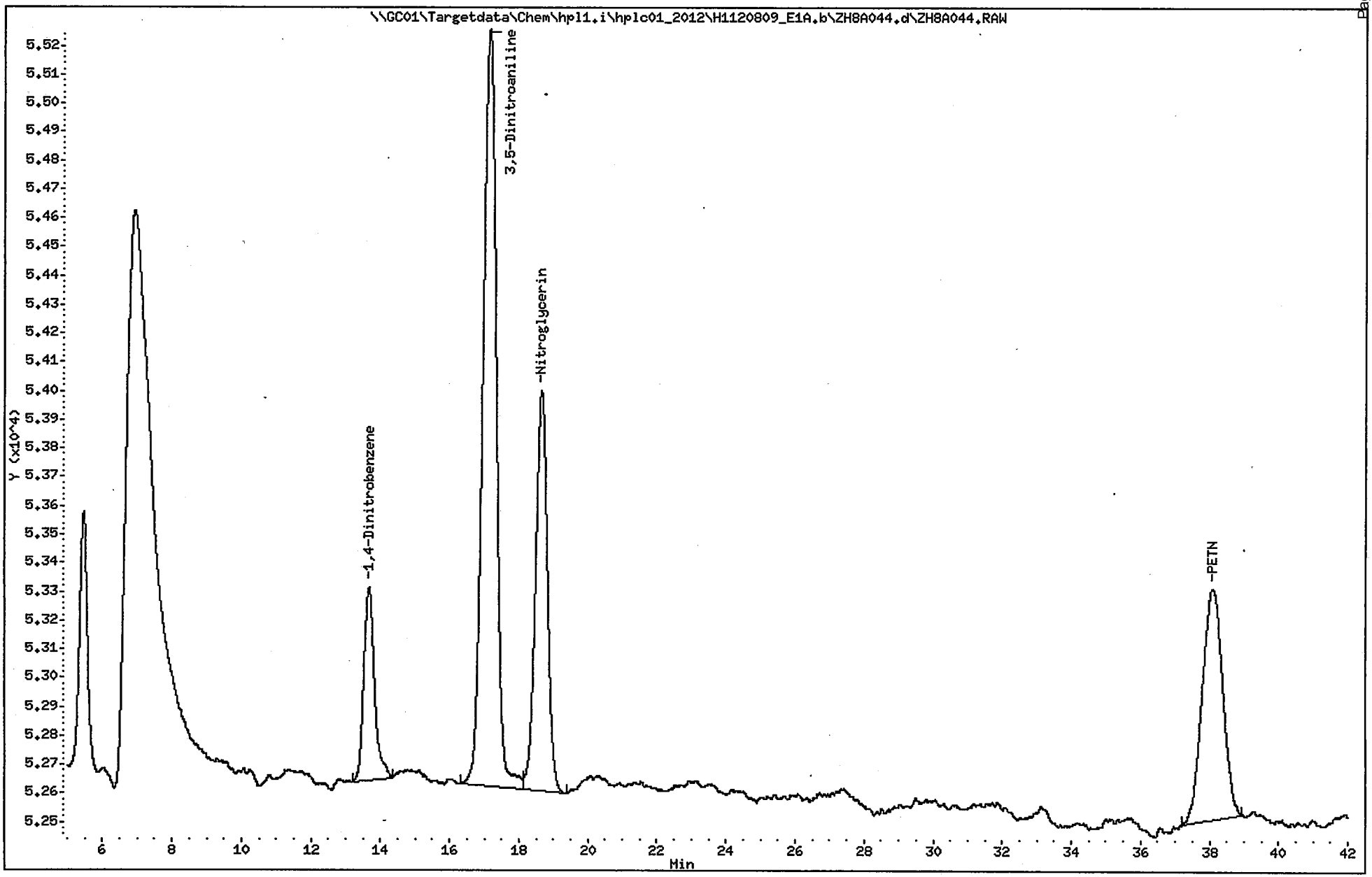
Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)
$	1 1,4-Dinitrobenzene	13.656	13.663	-0.007	14284	100.000	107.540
	3 3,5-Dinitroaniline	17.123	17.153	-0.030	71861	100.000	97.4960
	4 Nitroglycerin	18.640	18.663	-0.023	33503	500.000	515.273
	5 PETN	38.090	38.173	-0.083	33303	500.000	446.628

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A044.d
Date : 09-AUG-2012 21:04
Client ID:
Sample Info: CCV2;AJL;2
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

GC Column: E1, 254nm ID: 4.1 (mm) Calibration Date: 8/10/2012 Time: 04:24

Sample No.(CC): CCV1 Initi. Calib. Date(s): 11/14/2011 11/14/2011

Lab Sample No.(CC): CCV1 Initi. Calib. Time(s): 17:54 22:12

File ID: ZH8B054.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
2-Amino-4,6-dinitrotoluene	24.473	23.623	25.323	288	267	-7.1
4-Amino-2,6-dinitrotoluene	23.316	22.466	24.166	215	199	-7.4
1,3-Dinitrobenzene	15.196	14.906	15.486	429	419	-2.4
2,4-Dinitrotoluene	26.650	26.100	27.200	392	402	2.6
2,6-Dinitrotoluene	25.726	25.186	26.266	213	213	0.0
HMX	4.970	4.700	5.240	125	131	5.0
Nitrobenzene	17.086	16.766	17.406	262	271	3.5
4-Nitrotoluene	33.760	33.080	34.440	130	130	-0.2
2-Nitrotoluene	30.996	30.416	31.576	166	184	10.9
3-Nitrotoluene	36.110	35.400	36.820	176	180	2.3
RDX	8.356	8.076	8.636	151	155	2.3
Tetryl	18.253	17.593	18.913	257	223	-13.2
1,3,5-Trinitrobenzene	11.796	11.596	11.996	326	338	3.7
2,4,6-Trinitrotoluene	20.983	20.523	21.443	305	284	-6.8
1,4-Dinitrobenzene	13.633	12.783	14.483	339	343	1.1

The Absolute Value of %D must be less than or equal to 15 20% SCT 8/24/12

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B054.d
Lab Smp Id: CCV1
Inj Date : 10-AUG-2012 04:24
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV1;AJL;2
Misc Info : 131
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_254
Meth Date : 10-Aug-2012 09:44 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

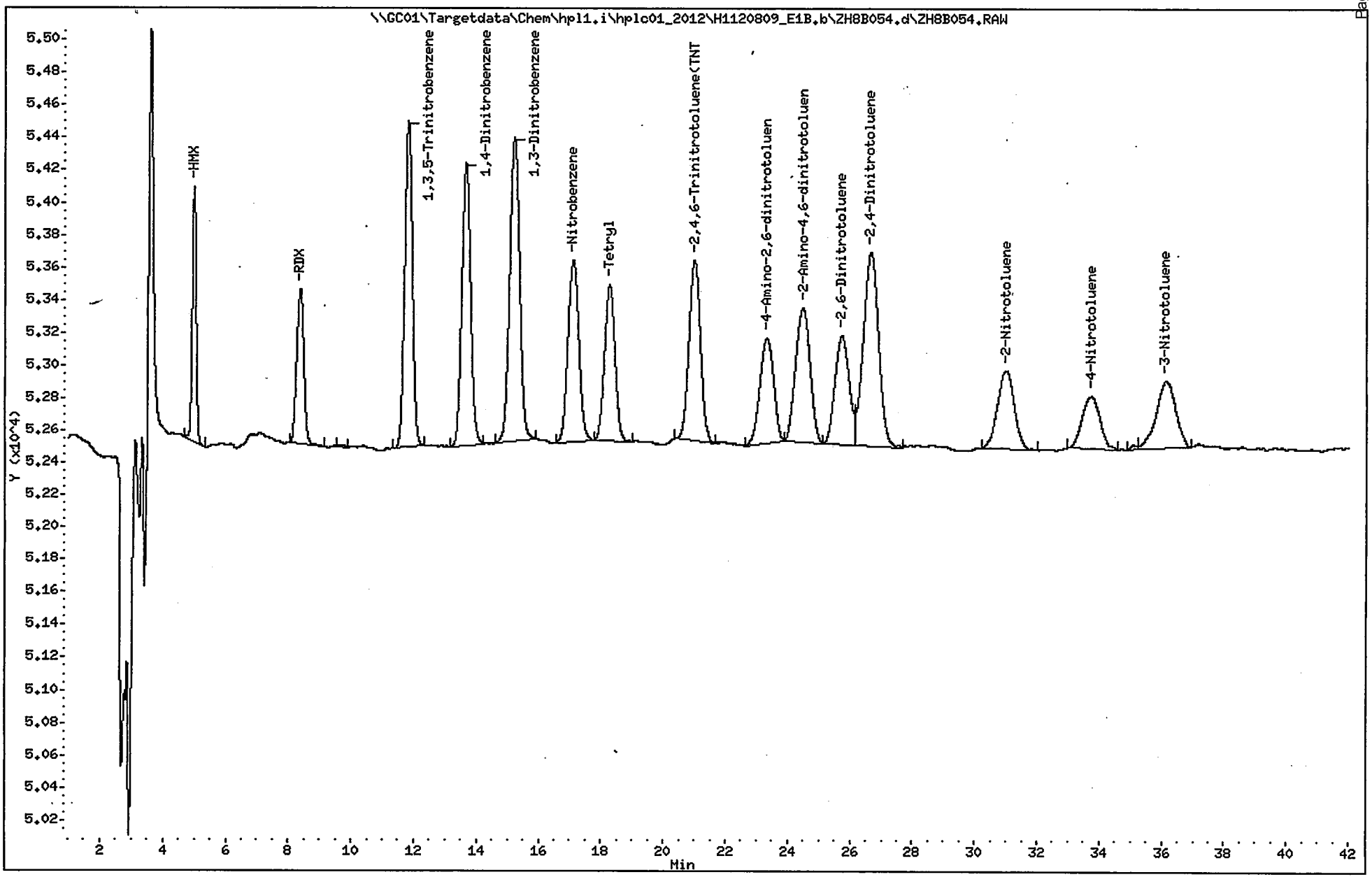
Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.970	4.970	0.000	13077	100.000	105.028
2	RDX	8.356	8.356	0.000	15464	100.000	102.252
3	1,3,5-Trinitrobenzene	11.796	11.796	0.000	33815	100.000	103.689
$ 4	1,4-Dinitrobenzene	13.633	13.646	-0.013	34258	100.000	101.067
5	1,3-Dinitrobenzene	15.196	15.196	0.000	41902	100.000	97.6272
6	Nitrobenzene	17.086	17.120	-0.034	27143	100.000	103.507
7	Tetryl	18.253	18.706	-0.453	22336	100.000	86.8456
8	2,4,6-Trinitrotoluene(TNT)	20.983	20.983	0.000	28411	100.000	93.1596
9	4-Amino-2,6-dinitrotoluene	23.316	22.736	0.580	19933	100.000	92.6217
10	2-Amino-4,6-dinitrotoluene	24.473	24.473	0.000	26736	100.000	92.9451
11	2,6-Dinitrotoluene	25.726	25.726	0.000	21341	100.000	99.9608
12	2,4-Dinitrotoluene	26.650	26.650	0.000	40203	100.000	102.643
13	2-Nitrotoluene	30.996	30.996	0.000	18432	100.000	110.897
14	4-Nitrotoluene	33.760	33.760	0.000	12960	100.000	99.8086
15	3-Nitrotoluene	36.110	36.110	0.000	18001	100.000	102.338

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B054.d
Date : 10-AUG-2012 04:24
Client ID:
Sample Info: CCV1;AJL;2
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

GC Column: E1, 218nm ID: 4.1 (mm) Calibration Date: 8/10/2012 Time: 05:08

Sample No.(CC): CCV2 Initi. Calib. Date(s): 11/14/2011 11/15/2011

Lab Sample No.(CC): CCV2 Initi. Calib. Time(s): 23:38 03:55

File ID: ZH8A055.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
3,5-Dinitroaniline	17.126	16.176	18.076	737	724	-1.8
Nitroglycerin	18.636	18.256	19.016	65	73	12.1
PETN	38.110	37.260	38.960	75	73	-2.3
1,4-Dinitrobenzene	13.650	12.800	14.500	133	132	-1.0

The Absolute Value of %D must be less than or equal to 20% 15 SCF 9/21/12

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A055.d
Lab Smp Id: CCV2
Inj Date : 10-AUG-2012 05:08
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV2;AJL;2
Misc Info : 131
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_218
Meth Date : 10-Aug-2012 09:34 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.650	13.663	-0.013	13152	100.000	99.0176
3	3,5-Dinitroaniline	17.126	17.153	-0.027	72412	100.000	98.2435
4	Nitroglycerin	18.636	18.663	-0.027	36435	500.000	560.367
5	PETN	38.110	38.173	-0.063	36407	500.000	488.256

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A055.d

Date : 10-AUG-2012 05:08

Client ID:

Instrument: hpl1.i

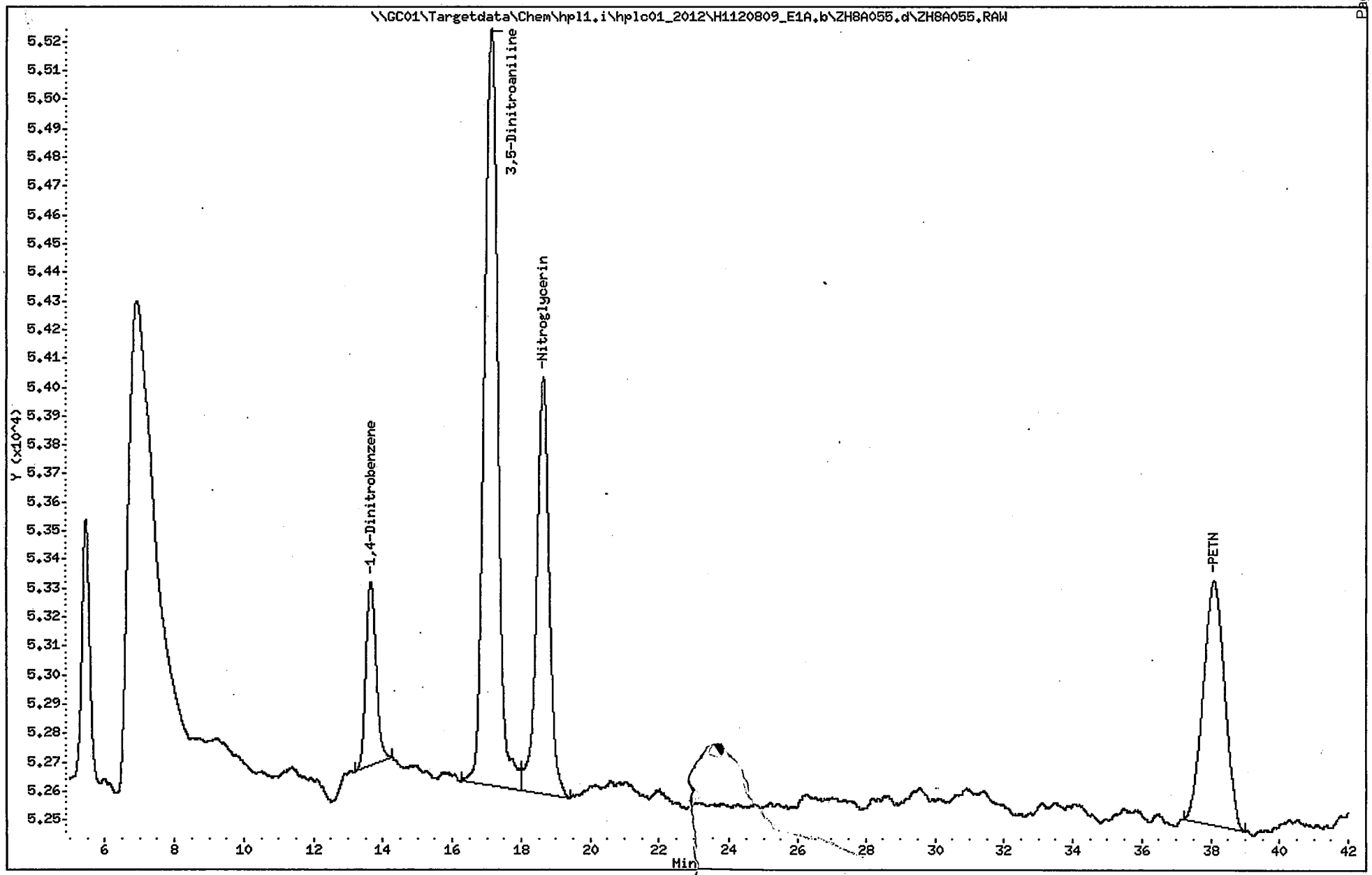
Sample Info: CCV2;AJL;2

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



QC Raw Data

Blank Raw Data

1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1020314 (MB)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): SOIL Lab Sample ID: 1020314

Sample wt/vol: 10.0 (g/mL) G Lab File ID (1): ZH8B031.d

% Moisture:

Extraction: (Type) SONC Date Received: 08/08/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.100	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.100	U
99-65-0	1,3-Dinitrobenzene	0.100	U
121-14-2	2,4-Dinitrotoluene	0.100	U
606-20-2	2,6-Dinitrotoluene	0.100	U
2691-41-0	HMX	0.100	U
98-95-3	Nitrobenzene	0.100	U
99-99-0	4-Nitrotoluene	0.100	U
88-72-2	2-Nitrotoluene	0.100	U
99-08-1	3-Nitrotoluene	0.100	U
121-82-4	RDX	0.100	U
479-45-8	Tetryl	0.100	U
99-35-4	1,3,5-Trinitrobenzene	0.100	U
118-96-7	2,4,6-Trinitrotoluene	0.100	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B031.d
Lab Smp Id: 1020314 Client Smp ID: MB for HBN 475072 [
Inj Date : 09-AUG-2012 11:16
Operator : AJL Inst ID: hpl1.i
Smp Info : 1020314;AJL;3;;BLANK
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_254
Meth Date : 10-Aug-2012 09:44 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.666	13.646	0.020	182467	538.310	2.15324
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

ALS - Middletown

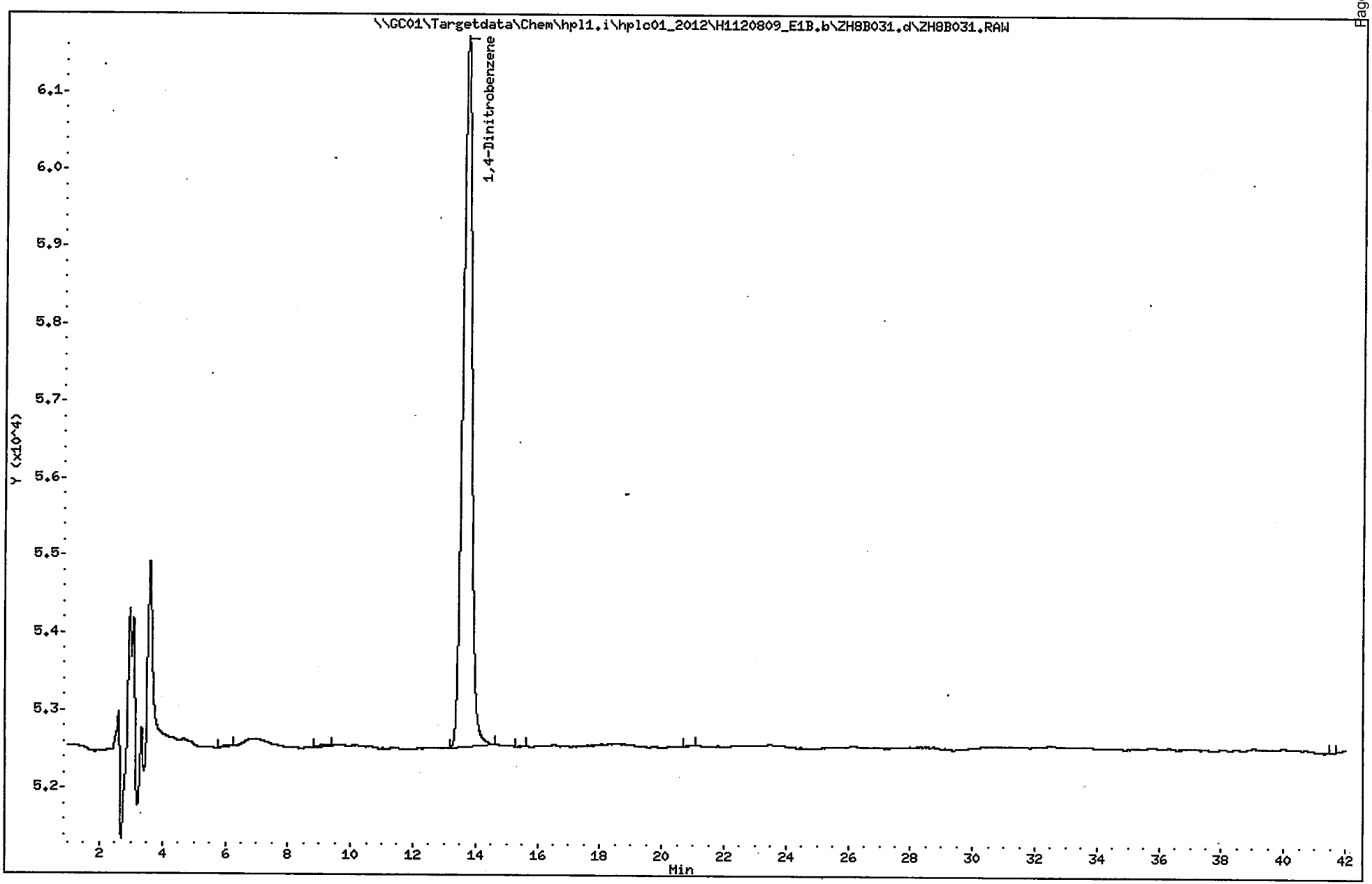
RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: 1020314
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Client SDG: H1120809_E1B.b
Fraction: SV
Client Smp ID: MB for HBN 475072 [
Operator: AJL
SampleType: BLANK
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3178 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	2.00000	2.15324	107.66	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B031.d
Date : 09-AUG-2012 11:16
Client ID: MB for HBN 475072 [
Sample Info: 1020314;AJL;3;;BLANK
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1020314 (MB)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): SOIL Lab Sample ID: 1020314

Sample wt/vol: 10.0 (g/mL) G Lab File ID (1): ZH8A031.d

% Moisture:

Extraction: (Type) SONC Date Received: 08/08/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.100	U
55-63-0	Nitroglycerin	1.0	U
78-11-5	PETN	1.0	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A031.d
Lab Smp Id: 1020314 Client Smp ID: MB for HBN 475072 [
Inj Date : 09-AUG-2012 11:16
Operator : AJL Inst ID: hpl1.i
Smp Info : 1020314;AJL;3;;BLANK
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_218
Meth Date : 10-Aug-2012 09:34 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED 8/14
2nd REVIEW 8/14

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1	1,4-Dinitrobenzene	13.670	13.663	0.007	67195	505.892	2.02357
3	3,5-Dinitroaniline	Compound Not Detected.					
4	Nitroglycerin	Compound Not Detected.					
5	PETN	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

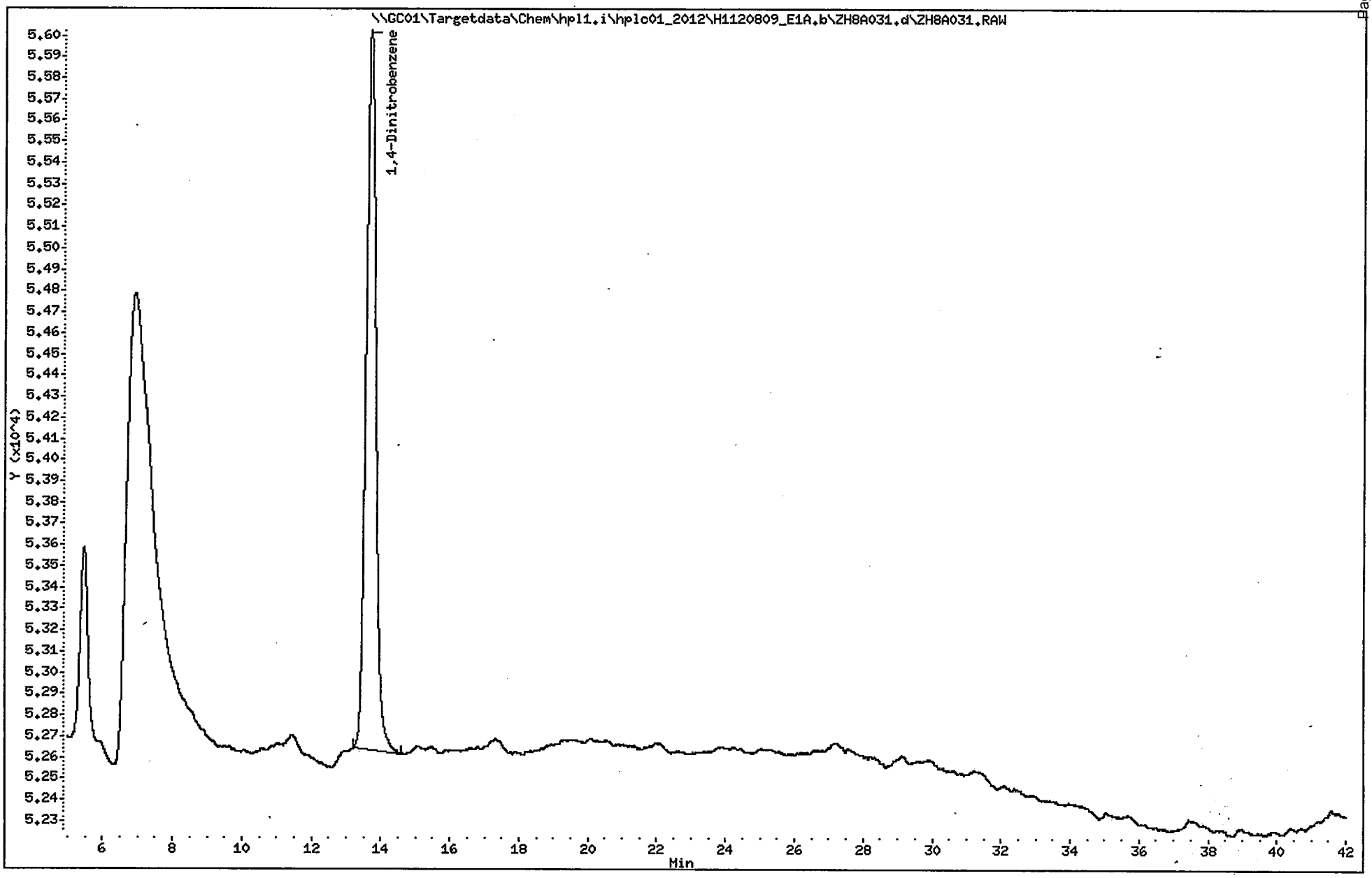
Client Name:
Sample Matrix: SOLID
Lab Smp Id: 1020314
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3178 D8330S

Client SDG: H1120809_E1A.b
Fraction: SV
Client Smp ID: MB for HBN 475072 [
Operator: AJL
SampleType: BLANK
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	2.00000	2.02357	101.18	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A031.d
Date : 09-AUG-2012 11:16
Client ID: MB for HBN 475072 [
Sample Info: 1020314;AJL;3;;BLANK
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



LCS Raw Data

1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

ICV111411(ICV)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): WATER Lab Sample ID: ICV111411

Sample wt/vol: 1000 (g/mL) ML Lab File ID (1): ZKEB012.d

% Moisture:

Extraction:(Type) Date Received:

Concentrated Extract Volume: 10000 (uL) Date Extracted:

Injection Volume: 100 (uL) Date Analyzed: 11/14/2011

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup:(Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.90	
1946-51-0	4-Amino-2,6-dinitrotoluene	0.87	
99-65-0	1,3-Dinitrobenzene	0.83	
121-14-2	2,4-Dinitrotoluene	0.85	
606-20-2	2,6-Dinitrotoluene	0.90	
2691-41-0	HMX	0.89	
98-95-3	Nitrobenzene	0.89	
99-99-0	4-Nitrotoluene	0.97	
88-72-2	2-Nitrotoluene	0.91	
99-08-1	3-Nitrotoluene	0.94	
121-82-4	RDX	0.86	
479-45-8	Tetryl	0.89	
99-35-4	1,3,5-Trinitrobenzene	0.90	
118-96-7	2,4,6-Trinitrotoluene	0.82	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB012
Lab Smp Id: ICV
Inj Date : 14-NOV-2011 22:55
Operator : AJL Inst ID: hpl1.i
Smp Info : ICV
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 58 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
	1 HMX	4.940	4.930	0.010	11031	88.5952	0.885952
	2 RDX	8.346	8.330	0.016	13072	86.4355	0.864355
	3 1,3,5-Trinitrobenzene	11.870	11.857	0.013	29196	89.5251	0.895251
$	4 1,4-Dinitrobenzene	13.753	13.737	0.016	28820	85.0241	0.850241
	5 1,3-Dinitrobenzene	15.333	15.317	0.016	35698	83.1725	0.831725
	6 Nitrobenzene	17.270	17.250	0.020	23216	88.5315	0.885315
	7 Tetryl	18.290	18.283	0.007	22992	89.3962	0.893962
	8 2,4,6-Trinitrotoluene(TNT)	21.120	21.110	0.010	24978	81.9028	0.819028
	9 4-Amino-2,6-dinitrotoluene	23.500	23.483	0.017	18794	87.3292	0.873292
	10 2-Amino-4,6-dinitrotoluene	24.656	24.650	0.006	25772	89.5939	0.895939
	11 2,6-Dinitrotoluene	25.943	25.940	0.003	19167	89.7778	0.897778
	12 2,4-Dinitrotoluene	26.910	26.903	0.007	33226	84.8298	0.848298
	13 2-Nitrotoluene	31.340	31.327	0.013	15153	91.1687	0.911687
	14 4-Nitrotoluene	34.143	34.133	0.010	12601	97.0438	0.970438
	15 3-Nitrotoluene	36.616	36.567	0.049	16513	93.8784	0.938784

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: ICV
Level: LOW
Data Type: LC DATA
SpikeList File: ICV.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1
Misc Info: 058

Client SDG: H1111114_E1B.b
Fraction: SV

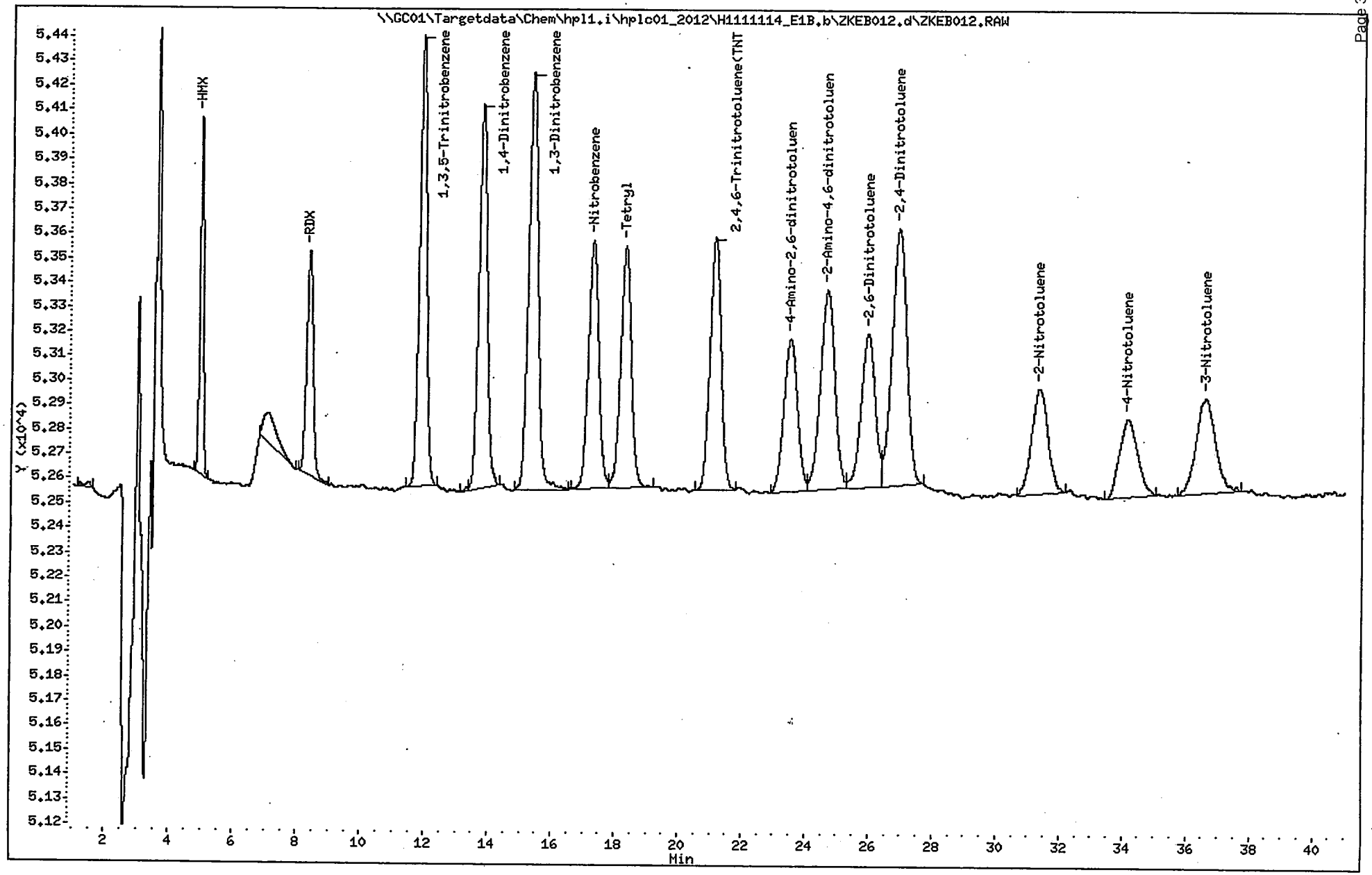
Operator: AJL
SampleType: LCS
Quant Type: ESTD

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1	HMX	1.00000	0.885952	88.60	80-120
2	RDX	1.00000	0.864355	86.44	80-120
3	1,3,5-Trinitrobenz	1.00000	0.895251	89.53	80-120
5	1,3-Dinitrobenzene	1.00000	0.831725	83.17	80-120
7	Tetryl	1.00000	0.893962	89.40	80-120
6	Nitrobenzene	1.00000	0.885315	88.53	80-120
8	2,4,6-Trinitrotolu	1.00000	0.819028	81.90	80-120
9	4-Amino-2,6-dinitr	1.00000	0.873292	87.33	80-120
10	2-Amino-4,6-dinitr	1.00000	0.895939	89.59	80-120
11	2,6-Dinitrotoluene	1.00000	0.897778	89.78	80-120
12	2,4-Dinitrotoluene	1.00000	0.848298	84.83	80-120
13	2-Nitrotoluene	1.00000	0.911687	91.17	80-120
14	4-Nitrotoluene	1.00000	0.970438	97.04	80-120
15	3-Nitrotoluene	1.00000	0.938784	93.88	80-120

	SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4	1,4-Dinitrobenzene	1.00000	0.850241	85.02	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB012.d
Date : 14-NOV-2011 22:55
Client ID:
Sample Info: ICV
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

ICV112011(ICV)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): WATER Lab Sample ID: ICV112011

Sample wt/vol: 1000 (g/mL) ML Lab File ID (1): ZKKA003.d

% Moisture:

Extraction: (Type) Date Received:

Concentrated Extract Volume: 40000 (uL) Date Extracted:

Injection Volume: 100 (uL) Date Analyzed: 11/20/2011

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
618-87-1	3,5-Dinitroaniline	1.0	J
55-63-0	Nitroglycerin	5.6	
78-11-5	PETN	4.9	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: CCV2
Inj Date : 20-NOV-2011 11:37
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV2;AJL;2
Misc Info : 056
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 20-Aug-2012 13:25 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 56 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
$ 1 1,4-Dinitrobenzene	13.380	13.346	0.034	13685	103.030	1.03030
3 3,5-Dinitroaniline	16.793	16.760	0.033	75392	102.287	1.02287(M)
4 Nitroglycerin	18.170	18.120	0.050	36109	555.353	5.55353(M)
5 PETN	37.290	37.110	0.180	36909	494.989	4.94989

QC Flag Legend

M - Compound response manually integrated.

[redacted]

ALS - Middletown

RECOVERY REPORT

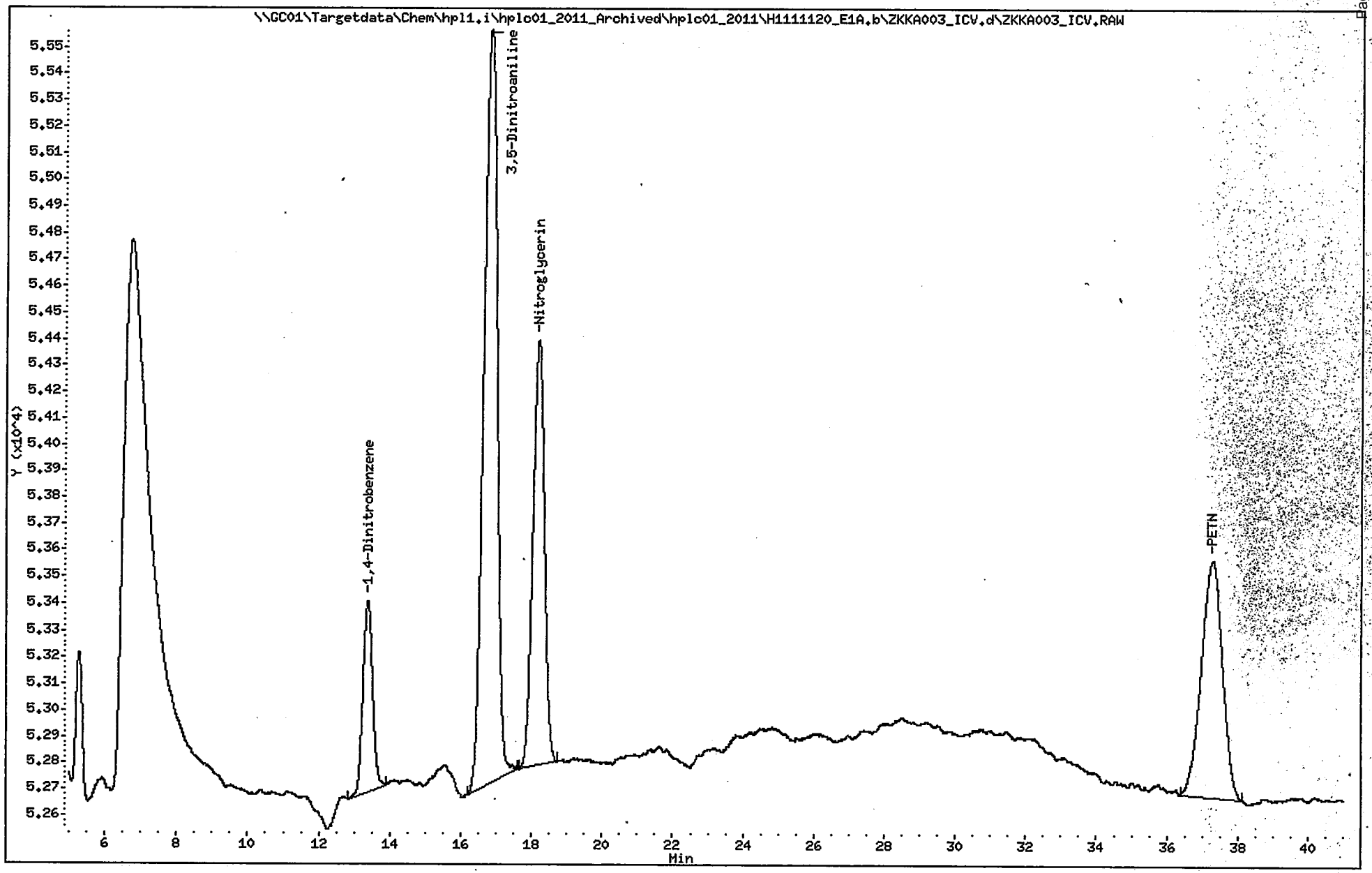
Client Name: Client SDG: H1111120_E1A.b
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: CCV2
Level: LOW Operator: AJL
Data Type: LC DATA SampleType: LCS
SpikeList File: ICV.spk Quant Type: ESTD
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H11
Misc Info: 056

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
4 Nitroglycerin	5.00000	5.55353	111.07	80-120
3 3,5-Dinitroaniline	1.00000	1.02287	102.29	80-120
5 PETN	5.00000	4.94989	99.00	80-120

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.00000	1.03030	103.03	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111120_E1A.b\ZKKA003_ICV.d
Date : 20-NOV-2011 11:37
Client ID:
Sample Info: CCV2;AJL;2
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1020315(LCS)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): SOIL Lab Sample ID: 1020315

Sample wt/vol: 10.0 (g/mL) G Lab File ID (1): ZH8B032.d

% Moisture:

Extraction:(Type) SONC Date Received: 08/08/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup:(Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.43	
1946-51-0	4-Amino-2,6-dinitrotoluene	0.42	
99-65-0	1,3-Dinitrobenzene	0.42	
121-14-2	2,4-Dinitrotoluene	0.42	
606-20-2	2,6-Dinitrotoluene	0.41	
2691-41-0	HMX	0.40	
98-95-3	Nitrobenzene	0.37	
99-99-0	4-Nitrotoluene	0.39	
88-72-2	2-Nitrotoluene	0.40	
99-08-1	3-Nitrotoluene	0.41	
121-82-4	RDX	0.43	
479-45-8	Tetryl	0.40	
99-35-4	1,3,5-Trinitrobenzene	0.43	
118-96-7	2,4,6-Trinitrotoluene	0.41	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B032.d
Lab Smp Id: 1020315 Client Smp ID: LCS1 for HBN 475072
Inj Date : 09-AUG-2012 12:00
Operator : AJL Inst ID: hpl1.i
Smp Info : 1020315;AJL;3;;LCS;1
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_254
Meth Date : 10-Aug-2012 09:44 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW
REPORTED
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
1	HMX	4.973	4.970	0.003	12500	100.393	0.401574
2	RDX	8.370	8.356	0.014	16193	107.072	0.428289
3	1,3,5-Trinitrobenzene	11.823	11.796	0.027	35404	108.561	0.434244
$ 4	1,4-Dinitrobenzene	13.660	13.646	0.014	180177	531.554	2.12622
5	1,3-Dinitrobenzene	15.233	15.196	0.037	45182	105.269	0.421077
6	Nitrobenzene	17.116	17.120	-0.004	24368	92.9245	0.371698
7	Tetryl	18.306	18.706	-0.400	25871	100.590	0.402361
8	2,4,6-Trinitrotoluene(TNT)	21.040	20.983	0.057	31605	103.633	0.414531
9	4-Amino-2,6-dinitrotoluene	23.380	22.736	0.644	22840	106.130	0.424518
10	2-Amino-4,6-dinitrotoluene	24.533	24.473	0.060	31017	107.828	0.431310
11	2,6-Dinitrotoluene	25.783	25.726	0.057	22009	103.090	0.412359
12	2,4-Dinitrotoluene	26.713	26.650	0.063	41336	105.536	0.422142
13	2-Nitrotoluene	31.023	30.996	0.027	16515	99.3632	0.397453
14	4-Nitrotoluene	33.816	33.760	0.056	12736	98.0835	0.392334
15	3-Nitrotoluene	36.156	36.110	0.046	18078	102.776	0.411102

ALS - Middletown

RECOVERY REPORT

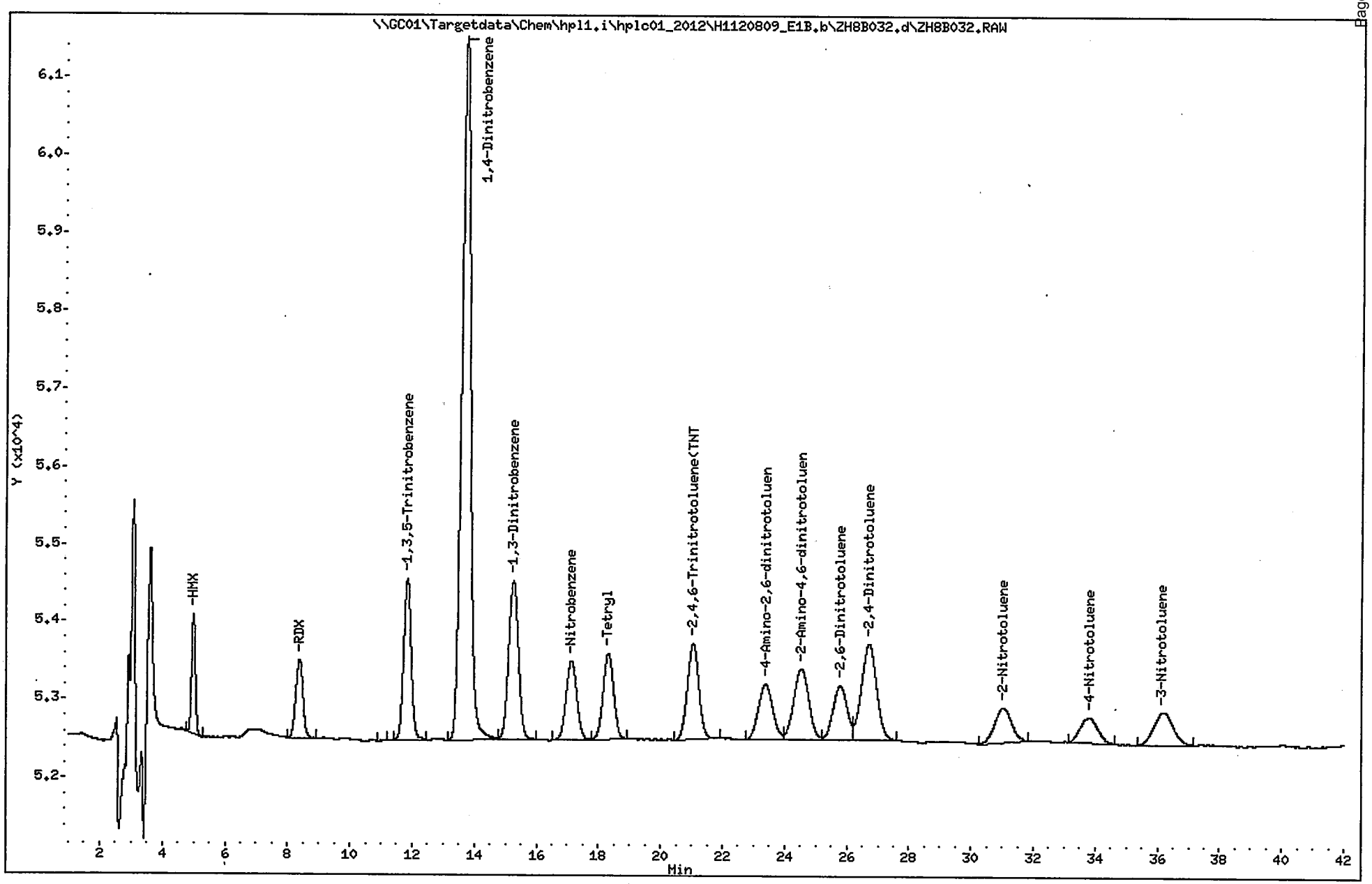
Client Name:
Sample Matrix: SOLID
Lab Smp Id: 1020315
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_S.spk
Sublist File: 8330all.sub
Client SDG: H1120809_E1B.b
Fraction: SV
Client Smp ID: LCS1 for HBN 475072
Operator: AJL
SampleType: LCS
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3178 D8330S

	SPIKE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
1	HMX	0.400000	0.401574	100.39	75-125
2	RDX	0.400000	0.428289	107.07	70-135
3	1,3,5-Trinitrobenz	0.400000	0.434244	108.56	75-125
5	1,3-Dinitrobenzene	0.400000	0.421077	105.27	80-125
7	Tetryl	0.400000	0.402361	100.59	10-150
6	Nitrobenzene	0.400000	0.371698	92.92	75-125
8	2,4,6-Trinitrotolu	0.400000	0.414531	103.63	55-140
9	4-Amino-2,6-dinitr	0.400000	0.424518	106.13	80-125
10	2-Amino-4,6-dinitr	0.400000	0.431310	107.83	80-125
11	2,6-Dinitrotoluene	0.400000	0.412359	103.09	80-120
12	2,4-Dinitrotoluene	0.400000	0.422142	105.54	80-125
13	2-Nitrotoluene	0.400000	0.397453	99.36	80-125
14	4-Nitrotoluene	0.400000	0.392334	98.08	75-125
15	3-Nitrotoluene	0.400000	0.411102	102.78	75-120

	SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4	1,4-Dinitrobenzene	2.00000	2.12622	106.31	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B032.d
Date : 09-AUG-2012 12:00
Client ID: LCS1 for HBN 475072
Sample Info: 1020315;AJL;3;;LCS;1
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1020316(LCS)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-002

Matrix (soil/water): SOIL Lab Sample ID: 1020316

Sample wt/vol: 10.0 (g/mL) G Lab File ID (1): ZH8A033.d

% Moisture:

Extraction: (Type) SONC Date Received: 08/08/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.39	
55-63-0	Nitroglycerin	2.1	
78-11-5	PETN	2.0	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A033.d
Lab Smp Id: 1020316 Client Smp ID: LCS2 for HBN 475072
Inj Date : 09-AUG-2012 12:44
Operator : AJL Inst ID: hpl1.i
Smp Info : 1020316;AJL;3;;LCS;1
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_218
Meth Date : 10-Aug-2012 09:34 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW
REPORTED
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1	1,4-Dinitrobenzene	13.666	13.663	0.003	61797	465.252	1.86101
3	3,5-Dinitroaniline	17.146	17.153	-0.007	71231	96.6412	0.386565
4	Nitroglycerin	18.666	18.663	0.003	34739	534.283	2.13713
5	PETN	38.166	38.173	-0.007	36379	487.881	1.95152

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: 1020316
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3178 D8330S

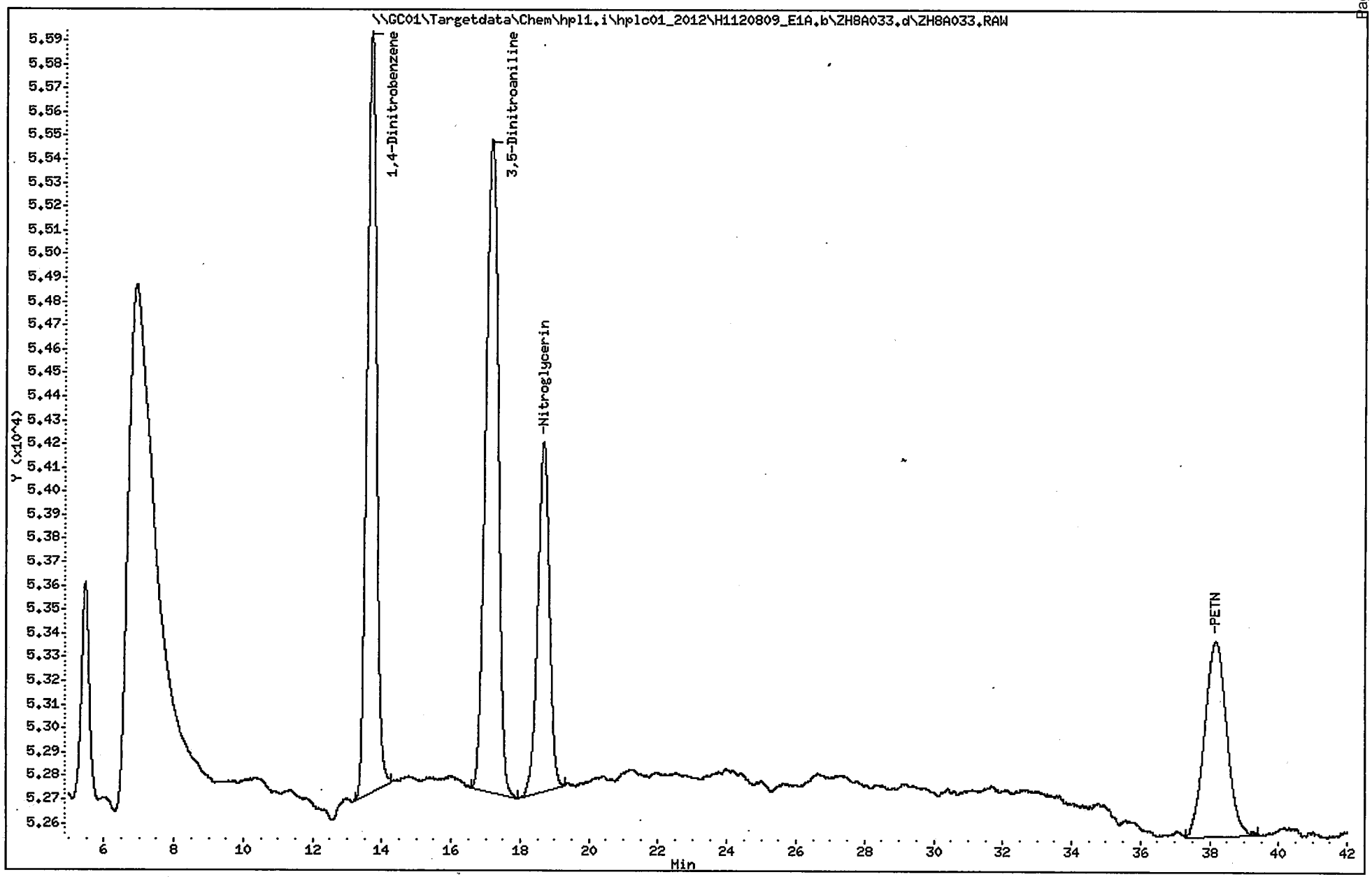
Client SDG: H1120809_E1A.b
Fraction: SV
Client Smp ID: LCS2 for HBN 475072
Operator: AJL
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
4 Nitroglycerin	2.00000	2.13713	106.86	70-130
3 3,5-Dinitroaniline	0.400000	0.386565	96.64	70-130
5 PETN	2.00000	1.95152	97.58	70-130

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	2.00000	1.86101	93.05	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A033.d
Date : 09-AUG-2012 12:44
Client ID: LCS2 for HBN 475072
Sample Info: 1020316;AJL;3;;LCS;1
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



Preparation Logbook

Sample Drying Log

Horizon Batch: WCPR 23565 Notes:

		Set up and First weighing Tech: SAS Date: 8/1/2012 Time: 9:45			Weight after > 24Hours Tech: SAS Date: 8/2/2012 Time: 10:00			2nd Weight (>+2Hours) Tech: SAS Date: 8/2/2012 Time: 12:05			3rd Weight (>+2Hours) Tech: SAS Date: 8/6/2012 Time: 6:00			4th Weight (>+2Hours) Tech: SAS Date: 8/7/2012 Time: 11:35						
	Sample #	Tray Wt.(g)	Tray + Samp Wt. (g)	Sample Wt. (g)	Tray + Samp Wt. (g)	Sample Wt. (g)	RPD	Tray + Samp Wt. (g)	Sample Wt. (g)	RPD	Tray + Samp Wt. (g)	Sample Wt. (g)	RPD	Tray + Samp Wt. (g)	Sample Wt. (g)	RPD	Seived	Subsampled for Metals	Date	Initials
1	9980109001	0	430	430	381.5	381.5	8.5%	376.5	376.5	0.9%	354	354	4.4%	356.5	356.5	0.5%	x	No	8/7/2012	SAS
2	9980109003	0	468.5	468.5	335.5	335.5	23.4%	331.5	331.5	0.8%	296	296	8.0%	295	295	0.2%	x	No	8/7/2012	SAS
3	9980109004	0	413.5	413.5	383.5	383.5	5.3%	381.5	381.5	0.4%	379.5	379.5	0.4%				x	No	8/6/2012	SAS
4	9980109005	0	382.5	382.5	348	348	6.7%	344	344	0.8%	300	300	9.7%	298	298	0.5%	x	No	8/7/2012	SAS
5	9980109006	0	461	461	424	424	5.9%	421.5	421.5	0.4%	410.5	410.5	1.9%				x	No	8/6/2012	SAS
6	9980109007	0	325	325	322.5	322.5	0.5%	322	322	0.1%	322	322	0.0%				x	No	8/6/2012	SAS
7	9980109008	0	401	401	370	370	5.7%	369.5	369.5	0.1%	369.5	369.5	0.0%				x	No	8/6/2012	SAS
8	9980109009	0	321	321	277.5	277.5	10.3%	275	275	0.6%	270.5	270.5	1.2%				x	No	8/6/2012	SAS
9	9980109010	0	419	419	380.5	380.5	6.8%	379	379	0.3%	379	379	0.0%				x	No	8/6/2012	SAS
10	9980109011-C	0	292	292	285.5	285.5	1.6%	284.5	284.5	0.2%	283	283	0.4%				x	No	8/6/2012	SAS
11	9980109011-B	0	279	279	268.5	268.5	2.7%	268.5	268.5	0.0%	268.5	268.5	0.0%				x	No	8/6/2012	SAS
12	9980109011-A	0	282.5	282.5	274	274	2.2%	274	274	0.0%	274	274	0.0%				x	No	8/6/2012	SAS
13	9980109012	0	290	290	281.5	281.5	2.1%	281.5	281.5	0.0%	281.5	281.5	0.0%				x	No	8/6/2012	SAS
14	9980109013	0	340.5	340.5	315	315	5.5%	312	312	0.7%	301	301	2.5%				x	No	8/6/2012	SAS
15	9980109014	0	321.5	321.5	285.5	285.5	8.4%	282.5	282.5	0.7%	268	268	3.7%				x	No	8/6/2012	SAS
16	9980109015	0	357	357	330	330	5.6%	326.5	326.5	0.8%	307	307	4.4%	308	308	0.2%	x	No	8/7/2012	SAS
17	9980109016	0	388	388	359	359	5.5%	356	356	0.6%	347	347	1.8%				x	No	8/6/2012	SAS
18	9980109017	0	379	379	354.5	354.5	4.7%	351.5	351.5	0.6%	328.5	328.5	4.8%	330	330	0.3%	x	No	8/7/2012	SAS
19	9980109018	0	389	389	359	359	5.7%	355.5	355.5	0.7%	333.5	333.5	4.5%	334.5	334.5	0.2%	x	No	8/7/2012	SAS
20	9980109019	0	308	308	290.5	290.5	4.1%	289.5	289.5	0.2%	289	289	0.1%				x	No	8/6/2012	SAS
21	9980394001	1730	2183	453	2140.5	410.5	7.0%	2136.5	406.5	0.7%	2085.5	355.5	9.5%		349	1.3%	x	No	8/7/2012	SAS
22	9980394002	0	437	437	406	406	5.2%	402	402	0.7%	368.5	368.5	6.1%	368	368	0.1%	x	No	8/7/2012	SAS
23	9980394003	0	373.5	373.5	344	344	5.8%	341	341	0.6%	331	331	2.1%				x	No	8/6/2012	SAS
24	9980394004	0	400.5	400.5	372	372	5.2%	369	369	0.6%	331	331	7.7%	329.5	329.5	0.3%	x	No	8/7/2012	SAS
25	9980394005	1422	1862	440	1817.5	395.5	7.5%	1813.5	391.5	0.7%	1729	307	17.1%	304	304	0.7%	x	No	8/7/2012	SAS

Comments

Sample Drying Log

Horizon Batch: WCPR 23565 Notes:

		Set up and First weighing Tech: SAS Date: 8/1/2012 Time: 9:45			Weight after > 24Hours Tech: SAS Date: 8/2/2012 Time: 10:00			2nd Weight (>+2Hours) Tech: SAS Date: 8/2/2012 Time: 12:05			3rd Weight (>+2Hours) Tech: SAS Date: 8/6/2012 Time: 6:00			4th Weight (>+2Hours) Tech: SAS Date: 8/7/2012 Time: 11:35						
	Sample #	Tray Wt.(g)	Tray + Samp Wt. (g)	Sample Wt. (g)	Tray + Samp Wt. (g)	Sample Wt. (g)	RPD	Tray + Samp Wt. (g)	Sample Wt. (g)	RPD	Tray + Samp Wt. (g)	Sample Wt. (g)	RPD	Tray + Samp Wt. (g)	Sample Wt. (g)	RPD	Seived	Subsampled for Metals	Date	Initials
26	9980394007	1430.5	1908	477.5	1861	430.5	7.3%	1830	399.5	5.3%	1818	387.5	2.2%				x	No	8/6/2012	SAS
27	9980395003	0	107.5	107.5	101.5	101.5	4.1%	104.5	104.5	2.1%							x	No	8/6/2012	SAS
28	9980395004	0	100	100	93	93	5.1%	92	92	0.8%							x	No	8/6/2012	SAS
29	9980395005	0	132	132	127.5	127.5	2.5%													
30																				
31																				
32																				
33																				
34																				
35																				
36																				
37																				
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47																				
48																				
49																				
50																				

Comments 9980395003,-4,-5 STARTED 12:05 8/2/12, SECOND WT. TAKEN 6:00 8/6/12, THIRD WT. TAKEN 11:35 8/7/12

HPLC EXTRACTION

Queue: HPLC
Rule: DB3303
Batch: 3177
HBN: 425072

Surrogate ID: 110712002 SA
Surrogate Amount: 10µl

Extraction:	Date	Time	Tech	Sonication:	Time On	Time Off	Hours	Tech
	8/8/12	10:40	SA		10:40	0440	18 hr	W

e #	Sample ID	Sample Amount	QC Type	Spike ID	Spike Amount	Extraction Time	Final Volume	Sample Specific Comments
.)	1020314	10.0g	MB	—	—	18hrs	20ml	
.)	1020315	10.0g	LCS1	120224001	20µl SA		20ml	
.)	1020316	10.0g	LCS2	1B15C2 1111300003 1111030003	20µl 20µl 20µl SA		20ml	
.)	9980109017	10.3	—	—	—		20ml	
.)	1020317	10.3	MS1	120224001	20µl SA		20ml	
.)	1020318	10.97g	MS2	1B15C2 1111300003 1111030003	20µl 20µl 20µl SA		20ml	
.)	1020319	10.43g	MSD1	120224001	20µl SA		20ml	
.)	1020320	10.29g	MSD2	1B15C2 1111300003 1111030003	20µl 20µl 20µl SA		20ml	
.)	9980394001	10.3g	—	—	—		20ml	
.)	9980394002	10.7g	—	—	—		20ml	
.)	9980394003	10.26g	—	—	—		20ml	
.)	9980394004	10.0g	—	—	—		20ml	
.)	9980394005	10.11g	—	—	—		20ml	
.)	9980394007	10.4g	—	—	—		20ml	
.)	9980395003	10.4g	—	—	—		20ml	
.)	1020321	10.1g	MS1	120224001	20µl SA		20ml	
.)	1020322	10.3g	MS2	1B15C2 1111300003 1111030003	20µl 20µl 20µl SA		20ml	
.)	1020323	10.33g	MSD1	120224001	20µl SA		20ml	
.)	1020324	10.04g	MSD2	1B15C2 1111300003 1111030003	20µl 20µl 20µl SA		20ml	
.)	9980395004	10.12g	—	—	—		20ml	
.)	9980395005	10.4g	—	—	—	✓	20ml	
.)								
.)								
.)								
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.)								
.)								
.)								
.)								

gents:
Acetonitrile, # 120507001

iments:
Temp. 26.2°C
Chr. 418713

ved By:
Approved: 8/10/12
/26/10

Page #: 52

Reviewed By: KMR
Date reviewed: 8/23/12

Analytical Logbook

Sequence: 8330_111114.B
Operator: ALMDT.nouser

Printed: 8/20/2012 8:51:04 AM

Title: 8330 Startup Injections
Datasource: D49KVMB1_local
Location: ALS\Vol_Lab_LC\MySequences\8330
Timebase: d49kvmb1_1
#Samples: 21

Created: 11/14/2011 11:45:34 AM by almdt.nouser
Last Update: 11/14/2011 5:42:07 PM by almdt.nouser

No.	Name	Type	Pos.	Inj. Vol.	Inj. Date/Time	Comment
1	CCV1	Unknown	RA1	100.000	11/14/2011 11:50:00 AM	5uL 1b1394 to1mL 1:1 1B1473
2	CCV TEST	Unknown	RA1	100.000	11/14/2011 2:21:26 PM	5uL 1b1394 to1mL 1:1 1B1473
3	CCV TEST	Unknown	RA1	100.000	11/14/2011 3:11:12 PM	5uL 1b1394 to1mL 1:1 1B1473
4	CCV MIX2 TEST	Unknown	RA2	100.000	11/14/2011 4:01:52 PM	.
5	LEVEL1	Unknown	RA1	1.000	11/14/2011 5:12:03 PM	.
6	LEVEL1	Unknown	RA1	1.000	11/14/2011 5:54:58 PM	1B1475
7	LEVEL2	Unknown	RA1	2.500	11/14/2011 6:37:52 PM	MIX1 - 254
8	LEVEL3	Unknown	RA1	5.000	11/14/2011 7:20:46 PM	.
9	LEVEL4	Unknown	RA1	12.500	11/14/2011 8:03:36 PM	.
10	LEVEL5	Unknown	RA1	25.000	11/14/2011 8:46:30 PM	.
11	LEVEL6	Unknown	RA1	50.000	11/14/2011 9:29:29 PM	.
12	LEVEL7	Unknown	RA1	100.000	11/14/2011 10:12:27 PM	.
13	ICV1	Unknown	RA2	100.000	11/14/2011 10:55:30 PM	5uL 1b1394 to1mL 1:1 1B1473
14	LEVEL1	Unknown	RA3	1.000	11/14/2011 11:38:19 PM	1B1476
15	LEVEL2	Unknown	RA3	2.500	11/15/2011 12:21:08 AM	MIX2 - 218
16	LEVEL3	Unknown	RA3	5.000	11/15/2011 1:04:07 AM	.
17	LEVEL4	Unknown	RA3	12.500	11/15/2011 1:47:00 AM	.
18	LEVEL5	Unknown	RA3	25.000	11/15/2011 2:29:54 AM	.
19	LEVEL6	Unknown	RA3	50.000	11/15/2011 3:12:47 AM	.
20	LEVEL7	Unknown	RA3	100.000	11/15/2011 3:55:45 AM	.
21	ICV2	Unknown	RA4	100.000	11/15/2011 4:38:47 AM	5uL 1b1394 to1mL 1:1 1B1413

Sequence: 8330_111116.B
Operator: ALMDT.nouser
Printed: 8/20/2012 1:26:35 PM

Title: 8330 Startup Injections
Datasource: D49KVMB1_local
Location: ALS\Vol_Lab_LC\MySequences\8330
Timebase: d49kvmb1_1
#Samples: 61
Created: 11/16/2011 9:52:07 AM by almdt.nouser
Last Update: 8/20/2012 1:26:21 PM by ALMDT.nouser

No.	Name	Type	Pos.	Inj. Vol.	Inj. Date/Time	Comment
1	CCV1	Unknown	RA1	100.000	11/16/2011 10:20:36 AM	5uL 1b1473 to1mL 1:1 ACN:WATER
2	CCV2	Unknown	RA1	100.000	11/16/2011 11:04:34 AM	Injected in wrong position
3	CCV2/ICV	Unknown	RA2	100.000	11/16/2011 12:02:50 PM	5uL 1b1413 to1mL 1:1 acn:water
4	914196MB	Unknown	RA3	100.000	11/16/2011 1:12:21 PM	.
5	914198LCS1	Unknown	RA4	100.000	11/16/2011 2:10:36 PM	.
6	914197LCS2	Unknown	RA5	100.000	11/16/2011 3:08:52 PM	.
7	9935227002	Unknown	RA6	5.000	11/16/2011 4:07:02 PM	20X
8	9935227001	Unknown	RA7	100.000	11/16/2011 5:05:18 PM	.
9	914199MS	Unknown	RA8	100.000	11/16/2011 6:03:33 PM	.
10	914200MSD	Unknown	RB1	100.000	11/16/2011 6:47:36 PM	.
11	TEST1	Unknown	RB2	100.000	11/16/2011 7:31:40 PM	.
12	TEST2	Unknown	RB3	100.000	11/16/2011 8:15:39 PM	.
13	CCV2	Unknown	RA2	100.000	11/16/2011 8:59:47 PM	5uL 1b1413 to1mL 1:1 acn:water
14	CCV1	Unknown	RA1	100.000	11/16/2011 9:58:03 PM	5uL 1b1473 to1mL 1:1 ACN:WATER
15	MB	Unknown	RB4	100.000	11/16/2011 10:42:07 PM	SAS110911
16	DOC1	Unknown	RB5	100.000	11/16/2011 11:26:15 PM	SAS110911
17	DOC2	Unknown	RB6	100.000	11/17/2011 12:10:38 AM	SAS110911
18	DOC3	Unknown	RB7	100.000	11/17/2011 12:55:05 AM	SAS110911
19	DOC4	Unknown	RB8	100.000	11/17/2011 1:39:18 AM	SAS110911
20	914773MB	Unknown	RC1	100.000	11/17/2011 2:23:36 AM	.
21	914774LCS1	Unknown	RC2	100.000	11/17/2011 3:21:56 AM	.
22	914775LCS2	Unknown	RC3	100.000	11/17/2011 4:20:10 AM	.
23	9936126007	Unknown	RC4	100.000	11/17/2011 5:18:20 AM	.
24	9936126001	Unknown	RC5	100.000	11/17/2011 6:16:52 AM	.
25	CCV2	Unknown	RC6	100.000	11/17/2011 7:15:20 AM	5uL 1b1413 to1mL 1:1 acn:water
26	CCV1	Unknown	RC7	100.000	11/17/2011 8:19:07 AM	5uL 1b1473 to1mL 1:1 ACN:WATER
27	9936126002	Unknown	RC8	100.000	11/17/2011 9:03:28 AM	.
28	9936126003	Unknown	RD1	100.000	11/17/2011 9:47:30 AM	.
29	9936126004	Unknown	RD2	100.000	11/17/2011 10:31:28 AM	.
30	9936126005	Unknown	RD3	100.000	11/17/2011 11:15:25 AM	.
31	9936126006	Unknown	RD4	100.000	11/17/2011 11:59:22 AM	.
32	9936396012	Unknown	RD5	100.000	11/17/2011 12:43:23 PM	.
33	9936396001	Unknown	RD6	100.000	11/17/2011 1:27:20 PM	.
34	9936396002	Unknown	RD7	100.000	11/17/2011 2:11:40 PM	.
35	9936396003	Unknown	RD8	100.000	11/17/2011 2:55:42 PM	.
36	9936396004	Unknown	RE1	100.000	11/17/2011 3:39:44 PM	.
37	CCV2	Unknown	RC6	100.000	11/17/2011 4:23:41 PM	.
38	CCV2	Unknown	RC6	100.000	11/17/2011 5:54:44 PM	5uL 1b1413 to1mL 1:1 acn:water
39	CCV1	Unknown	RC7	100.000	11/17/2011 6:52:58 PM	5uL 1b1473 to1mL 1:1 ACN:WATER
40	9936396005	Unknown	RE2	100.000	11/17/2011 7:37:01 PM	
41	9936396006	Unknown	RE3	100.000	11/17/2011 8:21:00 PM	
42	914776DUP	Unknown	RE4	100.000	11/17/2011 9:04:57 PM	

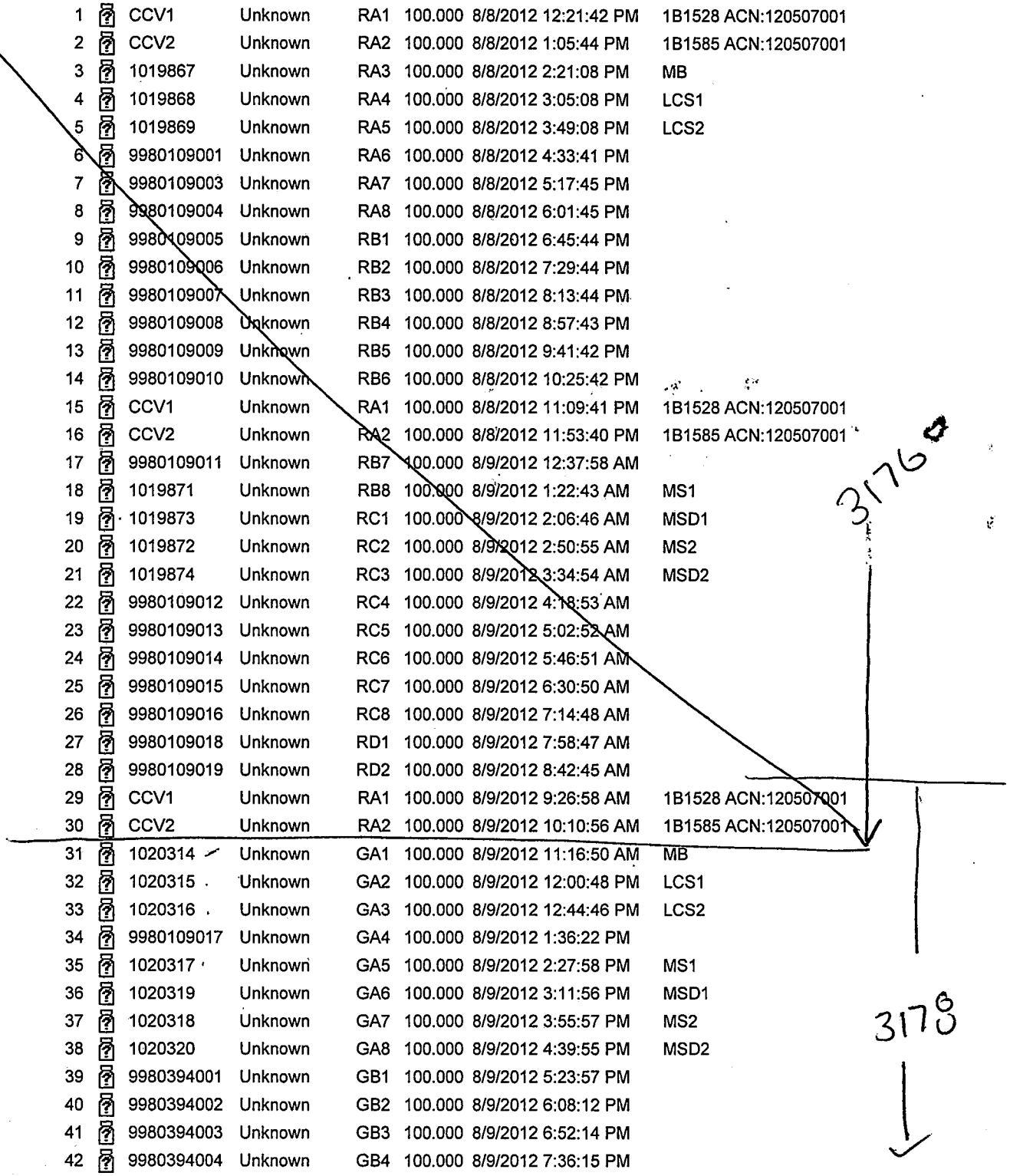
Chromeleon © Dionex Corporation, Version 6.80 SP2 Build 2284

E1 254+218 5011

Sequence: 8330_120808A.B
Operator: ALMDT.nouser
Printed: 8/10/2012 8:29:20 AM

Title: 8330 Startup Injections
Datasource: D49KVMB1_local
Location: ALS\Vol_Lab_LC\MySequences\8330
Timebase: d49kvmb1_1
#Samples: 55
Created: 8/8/2012 12:18:36 PM by ALMDT.nouser
Last Update: 8/9/2012 5:57:18 PM by ALMDT.nouser

No.	Name	Type	Pos.	Inj. Vol.	Inj. Date/Time	Comment
1	CCV1	Unknown	RA1	100.000	8/8/2012 12:21:42 PM	1B1528 ACN:120507001
2	CCV2	Unknown	RA2	100.000	8/8/2012 1:05:44 PM	1B1585 ACN:120507001
3	1019867	Unknown	RA3	100.000	8/8/2012 2:21:08 PM	MB
4	1019868	Unknown	RA4	100.000	8/8/2012 3:05:08 PM	LCS1
5	1019869	Unknown	RA5	100.000	8/8/2012 3:49:08 PM	LCS2
6	9980109001	Unknown	RA6	100.000	8/8/2012 4:33:41 PM	
7	9980109003	Unknown	RA7	100.000	8/8/2012 5:17:45 PM	
8	9980109004	Unknown	RA8	100.000	8/8/2012 6:01:45 PM	
9	9980109005	Unknown	RB1	100.000	8/8/2012 6:45:44 PM	
10	9980109006	Unknown	RB2	100.000	8/8/2012 7:29:44 PM	
11	9980109007	Unknown	RB3	100.000	8/8/2012 8:13:44 PM	
12	9980109008	Unknown	RB4	100.000	8/8/2012 8:57:43 PM	
13	9980109009	Unknown	RB5	100.000	8/8/2012 9:41:42 PM	
14	9980109010	Unknown	RB6	100.000	8/8/2012 10:25:42 PM	
15	CCV1	Unknown	RA1	100.000	8/8/2012 11:09:41 PM	1B1528 ACN:120507001
16	CCV2	Unknown	RA2	100.000	8/8/2012 11:53:40 PM	1B1585 ACN:120507001
17	9980109011	Unknown	RB7	100.000	8/9/2012 12:37:58 AM	
18	1019871	Unknown	RB8	100.000	8/9/2012 1:22:43 AM	MS1
19	1019873	Unknown	RC1	100.000	8/9/2012 2:06:46 AM	MSD1
20	1019872	Unknown	RC2	100.000	8/9/2012 2:50:55 AM	MS2
21	1019874	Unknown	RC3	100.000	8/9/2012 3:34:54 AM	MSD2
22	9980109012	Unknown	RC4	100.000	8/9/2012 4:18:53 AM	
23	9980109013	Unknown	RC5	100.000	8/9/2012 5:02:52 AM	
24	9980109014	Unknown	RC6	100.000	8/9/2012 5:46:51 AM	
25	9980109015	Unknown	RC7	100.000	8/9/2012 6:30:50 AM	
26	9980109016	Unknown	RC8	100.000	8/9/2012 7:14:48 AM	
27	9980109018	Unknown	RD1	100.000	8/9/2012 7:58:47 AM	
28	9980109019	Unknown	RD2	100.000	8/9/2012 8:42:45 AM	
29	CCV1	Unknown	RA1	100.000	8/9/2012 9:26:58 AM	1B1528 ACN:120507001
30	CCV2	Unknown	RA2	100.000	8/9/2012 10:10:56 AM	1B1585 ACN:120507001
31	1020314	Unknown	GA1	100.000	8/9/2012 11:16:50 AM	MB
32	1020315	Unknown	GA2	100.000	8/9/2012 12:00:48 PM	LCS1
33	1020316	Unknown	GA3	100.000	8/9/2012 12:44:46 PM	LCS2
34	9980109017	Unknown	GA4	100.000	8/9/2012 1:36:22 PM	
35	1020317	Unknown	GA5	100.000	8/9/2012 2:27:58 PM	MS1
36	1020319	Unknown	GA6	100.000	8/9/2012 3:11:56 PM	MSD1
37	1020318	Unknown	GA7	100.000	8/9/2012 3:55:57 PM	MS2
38	1020320	Unknown	GA8	100.000	8/9/2012 4:39:55 PM	MSD2
39	9980394001	Unknown	GB1	100.000	8/9/2012 5:23:57 PM	
40	9980394002	Unknown	GB2	100.000	8/9/2012 6:08:12 PM	
41	9980394003	Unknown	GB3	100.000	8/9/2012 6:52:14 PM	
42	9980394004	Unknown	GB4	100.000	8/9/2012 7:36:15 PM	



Title: 8330 Startup Injections
Datasource: D49KVMB1_local
Location: ALS\Vol_Lab_LC\MySequences\8330
Timebase: d49kvmb1_1
#Samples: 55
Created: 8/8/2012 12:18:36 PM by ALMDT.nouser
Last Update: 8/9/2012 5:57:18 PM by ALMDT.nouser

No.	Name	Type	Pos.	Inj. Vol.	Inj. Date/Time	Comment
43	CCV1	Unknown	RA1	100.000	8/9/2012 8:20:21 PM	1B1528 ACN:120507001
44	CCV2	Unknown	RA2	100.000	8/9/2012 9:04:22 PM	1B1585 ACN:120507001
45	9980394005	Unknown	GB5	100.000	8/9/2012 9:48:24 PM	
46	9980394007	Unknown	GB6	100.000	8/9/2012 10:32:30 PM	
47	9980395003	Unknown	GB7	100.000	8/9/2012 11:16:31 PM	
48	1020321	Unknown	GB8	100.000	8/10/2012 12:00:32 AM	
49	1020323	Unknown	GC1	100.000	8/10/2012 12:44:33 AM	
50	1020322	Unknown	GC2	100.000	8/10/2012 1:28:35 AM	
51	1020324	Unknown	GC3	100.000	8/10/2012 2:12:36 AM	
52	9980395004	Unknown	GC4	100.000	8/10/2012 2:56:36 AM	
53	9980395005	Unknown	GC5	100.000	8/10/2012 3:40:37 AM	
54	CCV1	Unknown	RA1	100.000	8/10/2012 4:24:37 AM	1B1528 ACN:120507001
55	CCV2	Unknown	RA2	100.000	8/10/2012 5:08:37 AM	1B1585 ACN:120507001

3178

Total Metals in Water by 6020A Summary Forms

6020 3015
- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: Analytical Laboratory Services Inc.

SDG No.: ERT-002 **Method Type:** 6020 3015 **SOW No.:**

Contract: ERT002|Ft. Stewart 3 **Lab Code:** CAS **Case No.:** **SAS No.:**

Lab Sample ID	Client Sample ID	QC Description
9980394006	FTSW-AA-SW-21	
9980394014	FTSW-AA-SO-22 ERB	
9980395006S	FTSW-HR-SO-02 (01.5) ER	Matrix Spike
9980395006SD	FTSW-HR-SO-02 (01.5) ER	Matrix Spike Duplicate

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: **Lisa Miller**

Date: Title: **Metals Manager**

6020 3015

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002 **Method Type:** 6020 3015

Sample ID: 9980394006 **Client ID:** FTSW-AA-SW-21

Matrix: WATER **Date Received:** 7/31/2012 **Level:** LOW

% Solids: **Sample Wt/Vol:** 45.00 **Final Vol:** 50.0

Prep Batch ID: 473767 **Prep Date:** 8/1/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	2.3	mg/L			M	0.089	0.059	0.030	1.00	8/7/2012	13:44:42
Copper	7440-50-8	0.0054	mg/L	J		M	0.0056	0.0037	0.0019	1.00	8/7/2012	13:44:42
Lead	7439-92-1	0.0025	mg/L			M	0.0022	0.0015	0.0007	1.00	8/7/2012	13:44:42
Zinc	7440-66-6	0.075	mg/L			M	0.0056	0.0037	0.0019	1.00	8/7/2012	13:44:42

Comments:

6020 3015

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002 **Method Type:** 6020 3015

Sample ID: 9980394014 **Client ID:** FTSW-AA-SO-22 ERB

Matrix: WATER **Date Received:** 7/31/2012 **Level:** LOW

% Solids: **Sample Wt/Vol:** 45.00 **Final Vol:** 50.0

Prep Batch ID: 473767 **Prep Date:** 8/1/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	0.059	mg/L	U		M	0.089	0.059	0.030	1.00	8/7/2012	13:52:28
Copper	7440-50-8	0.0037	mg/L	U		M	0.0056	0.0037	0.0019	1.00	8/7/2012	13:52:28
Lead	7439-92-1	0.0015	mg/L	U		M	0.0022	0.0015	0.0007	1.00	8/7/2012	13:52:28
Zinc	7440-66-6	0.0037	mg/L	U		M	0.0056	0.0037	0.0019	1.00	8/7/2012	13:52:28

Comments:

6020 3015

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
ICV										
	Aluminum	0.1055	0.1000	106		90 - 110	M	8/7/2012	08:39	A080712
	Copper	0.1062	0.1000	106		90 - 110	M	8/7/2012	08:39	A080712
	Lead	0.1046	0.1000	105		90 - 110	M	8/7/2012	08:39	A080712
	Zinc	0.1018	0.1000	102		90 - 110	M	8/7/2012	08:39	A080712
LLICV										
	Aluminum	0.0811	0.0800	101		70 - 130	M	8/7/2012	08:51	A080712
	Copper	0.0049	0.0050	98		70 - 130	M	8/7/2012	08:51	A080712
	Lead	0.0022	0.0020	110		70 - 130	M	8/7/2012	08:51	A080712
	Zinc	0.0053	0.0050	106		70 - 130	M	8/7/2012	08:51	A080712
LLCCV										
	Aluminum	0.0840	0.0800	105		70 - 130	M	8/7/2012	13:00	A080712
	Copper	0.0047	0.0050	94		70 - 130	M	8/7/2012	13:00	A080712
	Lead	0.0018	0.0020	90		70 - 130	M	8/7/2012	13:00	A080712
	Zinc	0.0053	0.0050	106		70 - 130	M	8/7/2012	13:00	A080712
CCV										
	Aluminum	0.1045	0.1000	104		90 - 110	M	8/7/2012	13:04	A080712
	Copper	0.1009	0.1000	101		90 - 110	M	8/7/2012	13:04	A080712
	Lead	0.0995	0.1000	100		90 - 110	M	8/7/2012	13:04	A080712
	Zinc	0.0983	0.1000	98		90 - 110	M	8/7/2012	13:04	A080712
LLCCV										
	Aluminum	0.0894	0.0800	112		70 - 130	M	8/7/2012	14:17	A080712
	Copper	0.0051	0.0050	102		70 - 130	M	8/7/2012	14:17	A080712
	Lead	0.0019	0.0020	95		70 - 130	M	8/7/2012	14:17	A080712
	Zinc	0.0057	0.0050	114		70 - 130	M	8/7/2012	14:17	A080712
CCV										
	Aluminum	0.1102	0.1000	110		90 - 110	M	8/7/2012	14:21	A080712
	Copper	0.1107	0.1000	111	*	90 - 110	M	8/7/2012	14:21	A080712
	Lead	0.1033	0.1000	103		90 - 110	M	8/7/2012	14:21	A080712
	Zinc	0.1050	0.1000	105		90 - 110	M	8/7/2012	14:21	A080712

6020 3015
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
LLCCV										
	Aluminum	0.0830	0.0800	104		70 - 130	M	8/7/2012	15:17	A080712
	Copper	0.0048	0.0050	96		70 - 130	M	8/7/2012	15:17	A080712
	Lead	0.0018	0.0020	90		70 - 130	M	8/7/2012	15:17	A080712
	Zinc	0.0052	0.0050	104		70 - 130	M	8/7/2012	15:17	A080712
CCV										
	Aluminum	0.1046	0.1000	105		90 - 110	M	8/7/2012	15:28	A080712
	Copper	0.1024	0.1000	102		90 - 110	M	8/7/2012	15:28	A080712
	Lead	0.1010	0.1000	101		90 - 110	M	8/7/2012	15:28	A080712
	Zinc	0.0979	0.1000	98		90 - 110	M	8/7/2012	15:28	A080712

6020 3015

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Conc Qual	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
ICB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/7/2012	08:47	A080712
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	08:47	A080712
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/7/2012	08:47	A080712
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	08:47	A080712
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/7/2012	12:52	A080712
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	12:52	A080712
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/7/2012	12:52	A080712
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	12:52	A080712
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/7/2012	14:13	A080712
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	14:13	A080712
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/7/2012	14:13	A080712
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	14:13	A080712
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/7/2012	15:13	A080712
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	15:13	A080712
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/7/2012	15:13	A080712
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	15:13	A080712

6020 3015
- 3b -
PREPARATION BLANK SUMMARY

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result (mg/L)	Conc Qual	Q	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
1017577			QC-WATER								
	Aluminum	0.0889	U		0.044	0.0300	0.0889	M	8/7/2012	13:08	A080712
	Copper	0.00556	U		0.0028	0.00190	0.00556	M	8/7/2012	13:08	A080712
	Lead	0.00222	U		0.0011	0.00074	0.00222	M	8/7/2012	13:08	A080712
	Zinc	0.00222	J		0.0028	0.00190	0.00556	M	8/7/2012	13:08	A080712

6020 3015
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INTERFERENCE CHECK SAMPLE

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

ICS Source: Inorganic Ventures **Instrument ID:** AGILENT 7700 ICPMS

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	Analysis Date	Analysis Time	Run Number
ICSA									
	Aluminum	91.1	100.0000	91		80 - 120%	8/7/2012	08:57	A080712
	Copper	0.0007				-0.00500 - -0.00500	8/7/2012	08:57	A080712
	Lead	0.0003				-0.00200 - -0.00200	8/7/2012	08:57	A080712
	Zinc	0.0025				-0.01000 - -0.01000	8/7/2012	08:57	A080712
ICSAB									
	Aluminum	88.9	100.0000	89		80 - 120%	8/7/2012	09:01	A080712
	Copper	0.0173	0.02000	86		80 - 120%	8/7/2012	09:01	A080712
	Lead	0.0004				-0.00200 - -0.00200	8/7/2012	09:01	A080712
	Zinc	0.0204	0.02000	102		80 - 120%	8/7/2012	09:01	A080712

6020 3015
- 5a -
MATRIX SPIKE SUMMARY

Client: Analytical Laboratory Services Inc. **Level:** LOW **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: WATER **Sample ID:** 9980395006 **Client ID:** FTSW-HR-SO-02 (01.5) ERBS **LIMS ID:** 1017579

Percent Solids for Sample: 0.00 **Spiked ID:** 9980395006S **Percent Solids for Spike Sample:** 0.00

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/L	80 - 120	2.23		0.09	U	2.222	100		M
Copper	mg/L	80 - 120	0.213		0.006	U	0.222	96		M
Lead	mg/L	80 - 120	0.221		0.002	U	0.222	100		M
Zinc	mg/L	80 - 120	0.202		0.002		0.222	90		M

6020 3015
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

Client: Analytical Laboratory Services Inc. **Level:** LOW **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: WATER **Sample ID:** 9980395006 **Client ID:** FTSW-HR-SO-02 (01.5) **LIMS ID:** 1017580

Percent Solids for Sample: 0.00 **Spiked ID:** 9980395006SD ERBSD **Percent Solids for Spike Sample:** 0.00

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/L	80 - 120	2.19		0.09	U	2.222	99		M
Copper	mg/L	80 - 120	0.205		0.006	U	0.222	92		M
Lead	mg/L	80 - 120	0.217		0.002	U	0.222	98		M
Zinc	mg/L	80 - 120	0.197		0.002		0.222	88		M

6020 3015
- 5b -
POST DIGEST SPIKE SUMMARY

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: WATER **Level:** LOW **Client ID:** FTSW-AA-SW-21PS

Sample ID: 9980394006 **Spiked ID:** 9980394006PS

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/L	80 - 120	2.29		2.10		0.20	95		M
Copper	mg/L	80 - 120	0.210		0.005	J	0.200	102		M
Lead	mg/L	80 - 120	0.214		0.002		0.200	106		M
Zinc	mg/L	80 - 120	0.272		0.068		0.200	102		M

6020 3015
- 6 -
DUPLICATE SAMPLE SUMMARY

Client: Analytical Laboratory Services Inc. **Level:** LOW **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: WATER **Sample ID:** 9980395006S **Client ID:** FTSW-HR-SO-02 (01.5) ERBSD **LIMS ID:** 1017580

Percent Solids for Sample: 0.00 **Duplicate ID:** 9980395006SD **Percent Solids for Duplicate:** 0.00

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/L	0 - 20	2.23		2.19		1.81		M
Copper	mg/L	0 - 20	0.213		0.205		4		M
Lead	mg/L	0 - 20	0.221		0.217		2		M
Zinc	mg/L	0 - 20	0.202		0.197		3		M

6020 3015

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Q	QC Criteria	M
1017578									
	Aluminum	mg/L	2.2220	2.1863		98		80 - 120	M
	Copper	mg/L	0.2220	0.2076		94		80 - 120	M
	Lead	mg/L	0.2220	0.2147		97		80 - 120	M
	Zinc	mg/L	0.2220	0.1998		90		80 - 120	M

6020 3015

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SERIAL DILUTION SAMPLE SUMMARY

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Matrix: WATER **Level:** LOW **Client ID:** FTSW-AA-SW-21L

Sample ID: 9980394006 **Serial Dilution ID:** 9980394006L

Analyte	Initial Result mg/L	C	Serial Result mg/L	C	% Difference	Qual	Acceptance Limits	M
Aluminum	2.1019		2.6581		26		10.00 %	M
Copper	0.0049		0.0019	U	100.0		10.00 %	M
Lead	0.0023		0.0007	U	100.0		10.00 %	M
Zinc	0.0676		0.0881		30		10.00 %	M

6020 3015

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LINEAR RANGES

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Instrument ID: AGILENT 7700 ICPMS **Date:** 1/19/2012

Analyte	Integration Time (sec)	LDR mg/L
Aluminum	1.00	90
Copper	1.00	50
Lead	1.00	5
Zinc	1.00	50

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SAMPLE PREPARATION SUMMARY

Client: Analytical Laboratory Services Inc.

SDG No.: ERT-002

Contract: ERT002|Ft. Stewart 3153-004

Lab Code: CAS

Method: MS

Case No.:

SAS No.:

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	473767						
1017577	MB for HBN 473767 [MDIG/3732	MB	QC-WAT	8/1/12	45.0	50.0	
1017578	LCS for HBN 473767 [MDIG/3732	LCS	QC-WAT	8/1/12	45.0	50.0	
9980394006	FTSW-AA-SW-21	SAM	WATER	8/1/12	45.0	50.0	
9980394014	FTSW-AA-SO-22 ERB	SAM	WATER	8/1/12	45.0	50.0	
9980395006S	FTSW-HR-SO-02 (01.5) ERBS	MS	WATER	8/1/12	45.0	50.0	
9980395006SD	FTSW-HR-SO-02 (01.5) ERBSD	MSD	WATER	8/1/12	45.0	50.0	

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ANALYSIS RUN LOG

Client: Analytical Laboratory Services Inc. Contract: ERT002|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-002

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A080712

Start Date: 8/7/2012 End Date: 8/7/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	0812																												
BLK	1.00	0816		X									X		X											X				
STANDARD 1	1.00	0820		X									X		X											X				
STANDARD 2	1.00	0824		X									X		X											X				
STANDARD 3	1.00	0827		X									X		X											X				
STANDARD 4	1.00	0831		X									X		X											X				
STANDARD 5	1.00	0835		X									X		X											X				
ICV	1.00	0839		X									X		X											X				
ZZZZZZ	1.00	0843																												
ICB2	1.00	0847		X									X		X											X				
LLICV	1.00	0851		X									X		X											X				
ICS-A1	1.00	0857		X									X		X											X				
ICS-AB1	1.00	0901		X									X		X											X				
ZZZZZZ	5.00	0908																												
ZZZZZZ	5.00	0912																												
ZZZZZZ	5.00	0916																												
ZZZZZZ	5.00	0920																												
ZZZZZZ	5.00	0924																												
ZZZZZZ	5.00	0927																												
ZZZZZZ	5.00	0931																												
ZZZZZZ	5.00	0935																												
ZZZZZZ	5.00	0939																												
ZZZZZZ	5.00	0943																												
ZZZZZZ	1.00	0946																												
ZZZZZZ	1.00	0950																												
ZZZZZZ	1.00	0954																												
ZZZZZZ	25.00	0959																												
ZZZZZZ	1.00	1003																												
ZZZZZZ	1.00	1009																												
ZZZZZZ	5.00	1014																												
ZZZZZZ	5.00	1019																												
ZZZZZZ	5.00	1023																												
ZZZZZZ	5.00	1027																												
ZZZZZZ	5.00	1031																												
ZZZZZZ	5.00	1035																												
ZZZZZZ	5.00	1039																												

6020 3015
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ANALYSIS RUN LOG

Client: Analytical Laboratory Services Inc. Contract: ERT002|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-002

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A080712

Start Date: 8/7/2012 End Date: 8/7/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1043																										
ZZZZZZ	1.00	1047																										
ZZZZZZ	1.00	1050																										
ZZZZZZ	5.00	1054																										
ZZZZZZ	5.00	1058																										
ZZZZZZ	5.00	1102																										
ZZZZZZ	5.00	1106																										
ZZZZZZ	5.00	1110																										
ZZZZZZ	5.00	1114																										
ZZZZZZ	5.00	1118																										
ZZZZZZ	5.00	1122																										
ZZZZZZ	5.00	1125																										
ZZZZZZ	5.00	1129																										
ZZZZZZ	1.00	1133																										
ZZZZZZ	1.00	1137																										
ZZZZZZ	1.00	1141																										
ZZZZZZ	5.00	1145																										
ZZZZZZ	5.00	1149																										
ZZZZZZ	5.00	1153																										
ZZZZZZ	5.00	1157																										
ZZZZZZ	5.00	1201																										
ZZZZZZ	5.00	1204																										
ZZZZZZ	5.00	1208																										
ZZZZZZ	5.00	1212																										
ZZZZZZ	5.00	1216																										
ZZZZZZ	25.00	1220																										
ZZZZZZ	1.00	1224																										
ZZZZZZ	1.00	1231																										
ZZZZZZ	1.00	1234																										
ZZZZZZ	1.00	1239																										
ZZZZZZ	1.00	1243																										
ZZZZZZ	1.00	1248																										
CCB5	1.00	1252		X									X		X											X	
LLCCV	1.00	1300		X									X		X											X	
CCV6	1.00	1304		X									X		X											X	
1017577	1.00	1308		X									X		X											X	

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ANALYSIS RUN LOG

Client: Analytical Laboratory Services Inc. Contract: ERT002|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-002

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A080712

Start Date: 8/7/2012 End Date: 8/7/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
1017578	1.00	1329		X									X		X										X	
ZZZZZZ	1.00	1333																								
ZZZZZZ	1.00	1337																								
ZZZZZZ	1.00	1340																								
9980394006	1.00	1344		X									X		X										X	
9980394006L	5.00	1348		X									X		X										X	
9980394014	1.00	1352		X									X		X										X	
9980394006PS	1.00	1359		X									X		X										X	
ZZZZZZ	1.00	1409																								
CCB6	1.00	1413		X									X		X										X	
LLCCV	1.00	1417		X									X		X										X	
CCV8	1.00	1421		X									X		X										X	
ZZZZZZ	1.00	1425																								
9980395006S	1.00	1447		X									X		X										X	
9980395006SD	1.00	1450		X									X		X										X	
ZZZZZZ	1.00	1454																								
ZZZZZZ	1.00	1458																								
ZZZZZZ	1.00	1502																								
ZZZZZZ	5.00	1506																								
ZZZZZZ	1.00	1510																								
CCB7	1.00	1513		X									X		X										X	
LLCCV	1.00	1517		X									X		X										X	
CCV10	1.00	1528		X									X		X										X	
ZZZZZZ	5.00	1549																								
ZZZZZZ	5.00	1553																								
ZZZZZZ	1.00	1558																								
ZZZZZZ	1.00	1602																								
ZZZZZZ	1.00	1606																								
ZZZZZZ	5.00	1642																								
ZZZZZZ	5.00	1646																								
ZZZZZZ	5.00	1650																								
ZZZZZZ	5.00	1654																								
ZZZZZZ	5.00	1658																								
ZZZZZZ	5.00	1702																								
ZZZZZZ	5.00	1706																								
ZZZZZZ	1.00	1710																								

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ANALYSIS RUN LOG

Client: Analytical Laboratory Services Inc. Contract: ERT002|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-002

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A080712

Start Date: 8/7/2012 End Date: 8/7/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1713																								
ZZZZZZ	1.00	1717																								
ZZZZZZ	1.00	1721																								
ZZZZZZ	1.00	1725																								
ZZZZZZ	5.00	1729																								
ZZZZZZ	5.00	1733																								
ZZZZZZ	1.00	1737																								
ZZZZZZ	1.00	1741																								
ZZZZZZ	1.00	1745																								
ZZZZZZ	1.00	1749																								
ZZZZZZ	1.00	1752																								
ZZZZZZ	1.00	1756																								
ZZZZZZ	1.00	1800																								
ZZZZZZ	1.00	1804																								
ZZZZZZ	1.00	1808																								
ZZZZZZ	1.00	1945																								

6020 3015

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT002|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-002

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/07/2012 End Date: 08/07/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
BLK	ZZZZZZ	0812												
BLK	BLK	0816	100		100		100		100		100		100	
STANDARD 1	STANDARD 1	0820	99		98		98		100		101		101	
STANDARD 2	STANDARD 2	0824	104		101		103		104		105		102	
STANDARD 3	STANDARD 3	0827	103		100		104		104		104		101	
STANDARD 4	STANDARD 4	0831	106		105		109		110		109		106	
STANDARD 5	STANDARD 5	0835	104		102		107		108		102		106	
ICV	ICV	0839	105		102		105		105		105		103	
ICB1	ZZZZZZ	0843												
ICB2	ICB	0847	107		102		108		107		111		103	
LLICV	LLICV	0851	103		98		105		107		94		100	
ICS-A1	ICSA	0857	93		99		97		105		109		106	
ICS-AB1	ICSAB	0901	94		102		99		106		109		109	
1015362	ZZZZZZ	0908												
1015363	ZZZZZZ	0912												
1017907	ZZZZZZ	0916												
1017908	ZZZZZZ	0920												
9980583001	ZZZZZZ	0924												
1017909	ZZZZZZ	0927												
1017910	ZZZZZZ	0931												
9980583001P	ZZZZZZ	0935												
9980583002	ZZZZZZ	0939												
9980583004	ZZZZZZ	0943												
CCV1	ZZZZZZ	0946												
CCB1	ZZZZZZ	0950												
LLCCV	ZZZZZZ	0954												
9980583004L	ZZZZZZ	0959												
LDR 2 PPM	ZZZZZZ	1003												
CHECK	ZZZZZZ	1009												
1017046	ZZZZZZ	1014												
1017047	ZZZZZZ	1019												
9980109001	ZZZZZZ	1023												
9980109003	ZZZZZZ	1027												
9980109004	ZZZZZZ	1031												
9980109005	ZZZZZZ	1035												
9980109006	ZZZZZZ	1039												
CCV2	ZZZZZZ	1043												
CCB2	ZZZZZZ	1047												
LLCCV	ZZZZZZ	1050												
9980109007	ZZZZZZ	1054												
9980109008	ZZZZZZ	1058												
9980109009	ZZZZZZ	1102												
9980109010	ZZZZZZ	1106												
9980109011	ZZZZZZ	1110												
1017048	ZZZZZZ	1114												

6020 3015

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT002|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-002

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/07/2012 End Date: 08/07/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
1017049	ZZZZZZ	1118												
9980109011	ZZZZZZ	1122												
9980109012	ZZZZZZ	1125												
9980109013	ZZZZZZ	1129												
CCV3	ZZZZZZ	1133												
CCB3	ZZZZZZ	1137												
LLCCV	ZZZZZZ	1141												
9980109014	ZZZZZZ	1145												
9980109015	ZZZZZZ	1149												
9980109016	ZZZZZZ	1153												
9980109017	ZZZZZZ	1157												
1017050	ZZZZZZ	1201												
1017051	ZZZZZZ	1204												
9980109017P	ZZZZZZ	1208												
9980109018	ZZZZZZ	1212												
9980109019	ZZZZZZ	1216												
9980109019L	ZZZZZZ	1220												
CCV4	ZZZZZZ	1224												
CCB4	ZZZZZZ	1231												
LLCCV	ZZZZZZ	1234												
LDR 50 PPM	ZZZZZZ	1239												
CHECK	ZZZZZZ	1243												
CCV5	ZZZZZZ	1248												
CCB5	CCB	1252	101		101		103		105		106		103	
LLCCV	LLCCV	1300	101		101		103		106		107		100	
CCV6	CCV	1304	102		101		104		107		106		102	
1017577	MB for HBN 47376	1308	101		102		101		102		103		101	
1017578	LCS for HBN 4737	1329	99		102		101		104		103		102	
1019627	ZZZZZZ	1333												
1019628	ZZZZZZ	1337												
9980109002	ZZZZZZ	1340												
9980394006	FTSW-AA-SW-21	1344	104		105		105		105		105		101	
9980394006L	FTSW-AA-SW-21L	1348	104		103		106		105		107		101	
9980394014	FTSW-AA-SO-22 ER	1352	104		103		105		104		104		100	
9980394006P	FTSW-AA-SW-21PS	1359	102		102		104		105		79		90	
CCV7	ZZZZZZ	1409												
CCB6	CCB	1413	103		102		104		104		105		101	
LLCCV	LLCCV	1417	100		99		102		98		107		102	
CCV8	CCV	1421	101		99		102		100		107		102	
9980395006	ZZZZZZ	1425												
9980395006S	FTSW-HR-SO-02 (0	1447	100		101		99		100		98		98	
9980395006S	FTSW-HR-SO-02 (0	1450	102		100		100		101		98		98	
9980875015	ZZZZZZ	1454												
1019629	ZZZZZZ	1458												
1019630	ZZZZZZ	1502												

FORM XV-IN

6020 3015

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT002|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-002

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/07/2012 End Date: 08/07/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980875015L	ZZZZZZ	1506												
CCV9	ZZZZZZ	1510												
CCB7	CCB	1513	105		98		104		100		102		96	
LLCCV	LLCCV	1517	105		99		103		103		102		98	
CCV10	CCV	1528	103		98		103		103		101		95	
9979663004	ZZZZZZ	1549												
9979678003	ZZZZZZ	1553												
CCV11	ZZZZZZ	1558												
CCB8	ZZZZZZ	1602												
LLCCV	ZZZZZZ	1606												
9980477001	ZZZZZZ	1642												
9980477002	ZZZZZZ	1646												
9980478001	ZZZZZZ	1650												
9980478002	ZZZZZZ	1654												
9980478003	ZZZZZZ	1658												
9980478004	ZZZZZZ	1702												
9980478004L	ZZZZZZ	1706												
CCV12	ZZZZZZ	1710												
CCB9	ZZZZZZ	1713												
LLCCV	ZZZZZZ	1717												
9975539001	ZZZZZZ	1721												
9975539002	ZZZZZZ	1725												
9975539001	ZZZZZZ	1729												
9975539002	ZZZZZZ	1733												
CHECK	ZZZZZZ	1737												
CHECK	ZZZZZZ	1741												
CHECK	ZZZZZZ	1745												
CHECK	ZZZZZZ	1749												
CHECK	ZZZZZZ	1752												
CHECK	ZZZZZZ	1756												
CCV13	ZZZZZZ	1800												
CCB10	ZZZZZZ	1804												
LLCCV	ZZZZZZ	1808												
LLCCV	ZZZZZZ	1945												

Total Metals in Water by 6020A Raw Data

Dataset: A080712 2nd Review Lam

First Review: MWO Approval: Lam 8.7.12

Internal Standards: **ICPMS9190**

200	60-125%	**6020Qc:**	70-130%	**6020A**	30-130%	**DOD:**	70-120%

Standards :
Tuning MS0361
Daily Standard: MS0361

Calibration Standards
MS0343
MS0344

PIPETTES:

03-028	10.0 mL
03-202	.200 mL
03-201	1.0 mL
03-031	1.0 mL

ICSA: MS0341
ICSAB:MS0340

GOLD: MS0346
DW LCS: MS0358
Second Source

MA1393	MA1388	MA1360
MA1342	MS0345	MA1381
MS0309	MA1359	

Internal Standards/ Target Analytes

Sc-Al,V,Cr,Mn,Co,Ni,Cu,Na, K, Ti, Mg, Ca, Fe, As, Zn, Se,
Y
In-Sr, Mo, Ag, Cd, Sn, Sb, Ba
Tb
Bi-Hg, Tl, Pb, U

Fe out in opening QC.

Case Narrative:

*D: *D at the beginning of the Dataset Denotes that the samples were run on the Elan DRCe ICP-MS*

200.8 Tune Check Sample Report

Batch Folder C:\Agilent\ICPMH\1\DATA\A080612 TUNE.b
Report Comment
Instrument Name G3281A JP11040846

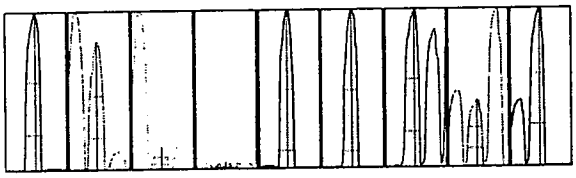
[no Gas]

Mass	Count (Actual)
9	48981
24	156895
25	21828
26	26320
59	336983
115	438792
206	102692
207	95589
208	202094

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	0.72	5.00	
24	0.79	5.00	
25	1.10	5.00	
26	0.48	5.00	
59	1.19	5.00	
115	0.82	5.00	
206	1.24	5.00	
207	2.29	5.00	
208	0.55	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	49517	48977	48772	49057	48581
24	158720	157559	156215	156388	155590
25	22019	21960	21791	21944	21423
26	26506	26367	26289	26190	26247
59	342220	339661	336783	333396	332855
115	443308	440284	438250	438724	433395
206	104659	102986	102654	101485	101678
207	98827	96854	94434	94117	93711
208	203164	202058	203261	200775	201211

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	7425	9.00	6.9 - 9.1		0.792	0.850	
24	25341	23.90	23.9 - 24.1		0.786	0.850	
25	3445	24.95	24.9 - 25.1		0.787	0.850	
26	4225	25.95	25.9 - 26.1		0.773	0.850	
59	54681	58.95	58.9 - 59.1		0.771	0.850	
115	74884	115.00	114.9 - 115.1		0.725	0.850	
206	16322	205.95	205.9 - 206.1		0.747	0.850	
207	14151	206.95	206.9 - 207.1		0.738	0.850	
208	33931	207.95	207.9 - 208.1		0.737	0.850	

X% = 10 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 235.1 **Y Axis =** Linear

Tune Parameters

Plasma Paramters

RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
RF Matching	1.80 V	Optional Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	DilutionGas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	9.7 V	Deflect	15.4 V
Extract 2	-190.0 V	Cell Entrance	-34 V	Plate Bias	-50 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

OctP Bias	-8.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	200 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	001CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:12:17-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	21852	0.14
Cr	52	1	No Gas	34572	0.01
Mn	55	1	No Gas	30791	0.02
Co	59	1	No Gas	244	14.04
Ni	60	1	No Gas	500	2.80
Cu	63	1	No Gas	11909	0.00
Sr	88	1	No Gas	248	10.26
Ag	107	1	No Gas	85	31.88
Al	27	1	No Gas	10403	0.02
Sn	118	1	No Gas	13077	0.23
Ti	47	1	No Gas	3264	0.80
Zn	66	1	No Gas	1003	0.40
As	75	3	HeHe	100	16.05
As	75	1	No Gas	26028	0.07
Sb	121	1	No Gas	5731	0.49
Hg	201	1	No Gas	36	131.85
Be	9	1	No Gas	14	269.97
Pb	208	1	No Gas	21200	0.00
Se	82	1	No Gas	179	60.64
Mo	98	1	No Gas	37245	0.09
Ba	137	1	No Gas	83	59.96
Tl	205	1	No Gas	107	62.66
U	238	1	No Gas	1371	2.25
Na	23	2	he	112860	0.00
Mg	24	2	he	470	6.14
K	39	2	he	253444	0.00
Se	82	3	HeHe	87	22.26
Fe	57	3	HeHe	474	6.73
Cd	114	1	No Gas	703	5.28
Ca	44	1	No Gas	65587	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	9318028	0.91
Sc	45	2	he	1766521	1.57
Ge	72	1	No Gas	1005789	0.47
In	115	1	No Gas	5661518	1.48
Tb	159	1	No Gas	6831155	0.65

Calibration Blank Report

Bi	209	1	No Gas	3774501	0.92
Sc	45	3	HeHe	172918	0.76

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	002CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:16:15-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	21094	0.14
Cr	52	1	No Gas	34138	0.01
Mn	55	1	No Gas	36389	0.00
Co	59	1	No Gas	159	48.25
Ni	60	1	No Gas	510	2.69
Cu	63	1	No Gas	11740	0.00
Sr	88	1	No Gas	193	19.95
Ag	107	1	No Gas	70	56.46
Al	27	1	No Gas	10326	0.02
Sn	118	1	No Gas	6861	0.34
Ti	47	1	No Gas	1316	1.88
Zn	66	1	No Gas	993	1.13
As	75	3	HeHe	39	99.57
As	75	1	No Gas	26735	0.04
Sb	121	1	No Gas	2856	0.80
Hg	201	1	No Gas	23	97.96
Be	9	1	No Gas	22	180.12
Pb	208	1	No Gas	17529	0.02
Se	82	1	No Gas	64	27.91
Mo	98	1	No Gas	11922	0.33
Ba	137	1	No Gas	93	35.07
Tl	205	1	No Gas	56	108.00
U	238	1	No Gas	285	11.78
Na	23	2	he	111386	0.00
Mg	24	2	he	374	4.65
K	39	2	he	243446	0.00
Se	82	3	HeHe	113	7.35
Fe	57	3	HeHe	374	0.46
Cd	114	1	No Gas	360	8.59
Ca	44	1	No Gas	64419	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	9248342	1.26
Sc	45	2	he	1744643	1.17
Ge	72	1	No Gas	1012122	1.06
In	115	1	No Gas	5760110	0.77
Tb	159	1	No Gas	6952439	1.03

Calibration Blank Report

Bi	209	1	No Gas	3846945	0.42
Sc	45	3	HeHe	171212	2.47

Calibration Standard Report

Sample Table

Sample Name	Standard 1
Data File Name	003CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:20:10-04:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	18063	0.07
Cr	52	1	No Gas	38963	0.01
Mn	55	1	No Gas	49023	0.00
Co	59	1	No Gas	5383	0.09
Ni	60	1	No Gas	1580	0.11
Cu	63	1	No Gas	15285	0.01
Sr	88	1	No Gas	6524	0.12
Ag	107	1	No Gas	3104	0.22
Al	27	1	No Gas	59462	0.00
Sn	118	1	No Gas	6709	0.35
Ti	47	1	No Gas	1652	0.72
Zn	66	1	No Gas	1780	0.74
As	75	3	HeHe	68	24.13
As	75	1	No Gas	26543	0.06
Sb	121	1	No Gas	4705	0.18
Hg	201	1	No Gas	38	49.94
Be	9	1	No Gas	661	1.29
Pb	208	1	No Gas	20348	0.03
Se	82	1	No Gas	132	106.96
Mo	98	1	No Gas	10414	0.29
Ba	137	1	No Gas	893	1.26
Tl	205	1	No Gas	3982	0.08
U	238	1	No Gas	4697	0.16
Na	23	2	he	117342	0.00
Mg	24	2	he	3408	0.35
K	39	2	he	261549	0.00
Se	82	3	HeHe	89	12.06
Fe	57	3	HeHe	293	11.04
Cd	114	1	No Gas	1547	1.11
Ca	44	1	No Gas	69431	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9230482	1.11	9248342	99.81	70	120	
Sc	45	2	he	1761372	0.68	1744643	100.96	70	120	
Ge	72	1	No Gas	991031	1.22	1012122	97.92	70	120	

Calibration Standard Report

In	115	1	No Gas	5660258	1.42	5760110	98.27	70	120	
Tb	159	1	No Gas	6804369	1.26	6952439	97.87	70	120	
Bl	209	1	No Gas	3791147	2.08	3846945	98.55	70	120	
Sc	45	3	HeHe	172414	2.77	171212	100.70	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 2
Data File Name	004CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:24:04-04:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	75240	0.01
Cr	52	1	No Gas	79879	0.00
Mn	55	1	No Gas	97795	0.00
Co	59	1	No Gas	50904	0.00
Ni	60	1	No Gas	12542	0.01
Cu	63	1	No Gas	41498	0.00
Sr	88	1	No Gas	67816	0.00
Ag	107	1	No Gas	31349	0.01
Al	27	1	No Gas	140284	0.00
Sn	118	1	No Gas	23599	0.02
Ti	47	1	No Gas	5303	0.05
Zn	66	1	No Gas	12980	0.00
As	75	3	HeHe	484	0.89
As	75	1	No Gas	32611	0.01
Sb	121	1	No Gas	26036	0.02
Hg	201	1	No Gas	93	35.35
Be	9	1	No Gas	6422	0.04
Pb	208	1	No Gas	81148	0.00
Se	82	1	No Gas	320	7.94
Mo	98	1	No Gas	26675	0.05
Ba	137	1	No Gas	9030	0.04
Tl	205	1	No Gas	42273	0.01
U	238	1	No Gas	51558	0.00
Na	23	2	he	158442	0.00
Mg	24	2	he	24922	0.02
K	39	2	he	304695	0.00
Se	82	3	HeHe	123	10.00
Fe	57	3	HeHe	1474	0.83
Cd	114	1	No Gas	13716	0.00
Ca	44	1	No Gas	87487	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9606577	0.99	9248342	103.87	70	120	
Sc	45	2	he	1830837	0.65	1744643	104.94	70	120	
Ge	72	1	No Gas	1021767	0.80	1012122	100.95	70	120	

Calibration Standard Report

In	115	1	No Gas	5934139	0.96	5760110	103.02	70	120	
Tb	159	1	No Gas	7112799	0.83	6952439	102.31	70	120	
Bi	209	1	No Gas	3993179	0.68	3846945	103.80	70	120	
Sc	45	3	HeHe	174349	0.65	171212	101.83	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 3
Data File Name	005CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:27:58-04:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	536384	0.00
Cr	52	1	No Gas	499471	0.00
Mn	55	1	No Gas	607526	0.00
Co	59	1	No Gas	513478	0.00
Ni	60	1	No Gas	115198	0.00
Cu	63	1	No Gas	291757	0.00
Sr	88	1	No Gas	673644	0.00
Ag	107	1	No Gas	302621	0.00
Al	27	1	No Gas	419330	0.00
Sn	118	1	No Gas	180565	0.00
Tl	47	1	No Gas	41510	0.00
Zn	66	1	No Gas	78050	0.00
As	75	3	HeHe	4653	0.12
As	75	1	No Gas	92057	0.00
Sb	121	1	No Gas	236636	0.00
Hg	201	1	No Gas	544	0.31
Be	9	1	No Gas	64582	0.00
Pb	208	1	No Gas	585512	0.00
Se	82	1	No Gas	3813	0.30
Mo	98	1	No Gas	185502	0.00
Ba	137	1	No Gas	83581	0.00
Tl	205	1	No Gas	422428	0.00
U	238	1	No Gas	512538	0.00
Na	23	2	he	496695	0.00
Mg	24	2	he	224038	0.00
K	39	2	he	599398	0.00
Se	82	3	HeHe	317	2.40
Fe	57	3	HeHe	11456	0.02
Cd	114	1	No Gas	138636	0.00
Ca	44	1	No Gas	202707	0.00

QC ISTD-Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9599585	0.21	9248342	103.80	70	120	
Sc	45	2	he	1819752	1.49	1744643	104.31	70	120	
Ge	72	1	No Gas	1016046	0.79	1012122	100.39	70	120	

Calibration Standard Report

In	115	1	No Gas	5960241	0.35	5760110	103.47	70	120	
Tb	159	1	No Gas	7215156	0.72	6952439	103.78	70	120	
Bi	209	1	No Gas	3949111	0.62	3846945	102.66	70	120	
Sc	45	3	HeHe	172939	1.30	171212	101.01	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 4
Data File Name	006CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:31:52-04:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	5638942	0.00
Cr	52	1	No Gas	4979669	0.00
Mn	55	1	No Gas	6192129	0.00
Co	59	1	No Gas	5447044	0.00
Ni	60	1	No Gas	1182013	0.00
Cu	63	1	No Gas	2985102	0.00
Sr	88	1	No Gas	6997417	0.00
Ag	107	1	No Gas	3174830	0.00
Al	27	1	No Gas	3653098	0.00
Sn	118	1	No Gas	1886235	0.00
Tl	47	1	No Gas	418509	0.00
Zn	66	1	No Gas	721550	0.00
As	75	3	HeHe	49452	0.00
As	75	1	No Gas	739186	0.00
Sb	121	1	No Gas	2555108	0.00
Hg	201	1	No Gas	5250	0.01
Be	9	1	No Gas	666474	0.00
Pb	208	1	No Gas	5859721	0.00
Se	82	1	No Gas	38718	0.00
Mo	98	1	No Gas	1996551	0.00
Ba	137	1	No Gas	841402	0.00
Tl	205	1	No Gas	4323264	0.00
U	238	1	No Gas	5263199	0.00
Na	23	2	he	4611890	0.00
Mg	24	2	he	2551831	0.00
K	39	2	he	3991640	0.00
Se	82	3	HeHe	2508	0.14
Fe	57	3	HeHe	117956	0.00
Cd	114	1	No Gas	1480140	0.00
Ca	44	1	No Gas	1479565	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	10207257	1.85	9248342	110.37	70	120	
Sc	45	2	he	1908011	1.86	1744643	109.36	70	120	
Ge	72	1	No Gas	1060324	1.35	1012122	104.76	70	120	

Calibration Standard Report

In	115	1	No Gas	6277627	0.94	5760110	108.98	70	120	
Tb	159	1	No Gas	7433190	0.78	6952439	106.91	70	120	
Bi	209	1	No Gas	4079951	1.27	3846945	106.06	70	120	
Sc	45	3	HeHe	181248	0.69	171212	105.86	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 5
Data File Name	007CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:35:41-04:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	10826451	0.00
Cr	52	1	No Gas	9637889	0.00
Mn	55	1	No Gas	11866703	0.00
Co	59	1	No Gas	10711214	0.00
Ni	60	1	No Gas	2413544	0.00
Cu	63	1	No Gas	5819480	0.00
Sr	88	1	No Gas	13751395	0.00
Ag	107	1	No Gas	6225088	0.00
Al	27	1	No Gas	6829165	0.00
Sn	118	1	No Gas	3750576	0.00
Tl	47	1	No Gas	823588	0.00
Zn	66	1	No Gas	1429052	0.00
As	75	3	HeHe	96786	0.00
As	75	1	No Gas	1481593	0.00
Sb	121	1	No Gas	4866586	0.00
Hg	201	1	No Gas	10743	0.02
Be	9	1	No Gas	1447602	0.00
Pb	208	1	No Gas	11462241	0.00
Se	82	1	No Gas	76676	0.00
Mo	98	1	No Gas	3907993	0.00
Ba	137	1	No Gas	1694987	0.00
Tl	205	1	No Gas	8390950	0.00
U	238	1	No Gas	10428690	0.00
Na	23	2	he	8720906	0.00
Mg	24	2	he	4821494	0.00
K	39	2	he	7360101	0.00
Se	82	3	HeHe	4959	0.02
Fe	57	3	HeHe	233280	0.00
Cd	114	1	No Gas	2908805	0.00
Ca	44	1	No Gas	2795845	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9993227	0.18	9248342	108.05	70	120	
Sc	45	2	he	1774489	1.33	1744643	101.71	70	120	
Ge	72	1	No Gas	1031020	0.52	1012122	101.87	70	120	

Calibration Standard Report

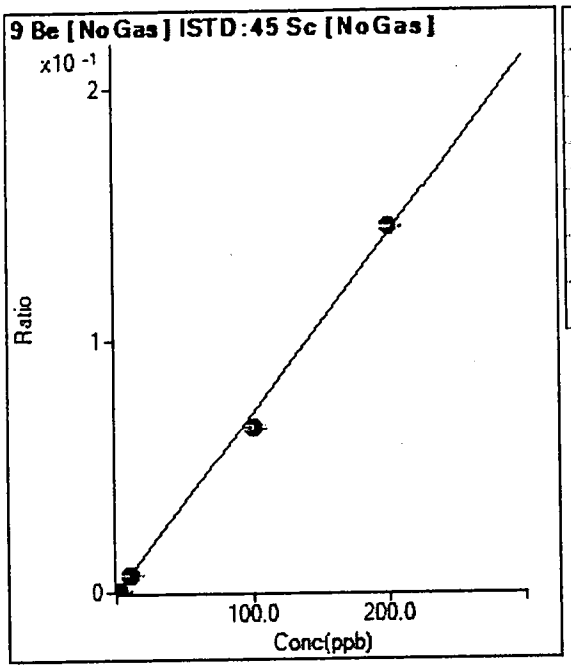
In	115	1	No Gas	6133321	1.61	5760110	106.48	70	120	
Tb	159	1	No Gas	7274529	1.23	6952439	104.63	70	120	
Bi	209	1	No Gas	4005913	0.87	3846945	104.13	70	120	
Sc	45	3	HeHe	182051	0.95	171212	106.33	70	120	

Calibration for 071_CCV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\A080712.b\
Analysis File: A080712.batch.bin
DA Date-Time: 8/7/2012 1:05:32 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	002CALB.d	blk	8/7/2012 8:16:15 AM
2	003CALS.d	Standard 1	8/7/2012 8:20:10 AM
3	004CALS.d	Standard 2	8/7/2012 8:24:04 AM
4	005CALS.d	Standard 3	8/7/2012 8:27:58 AM
5	006CALS.d	Standard 4	8/7/2012 8:31:52 AM
6	007CALS.d	Standard 5	8/7/2012 8:35:41 AM

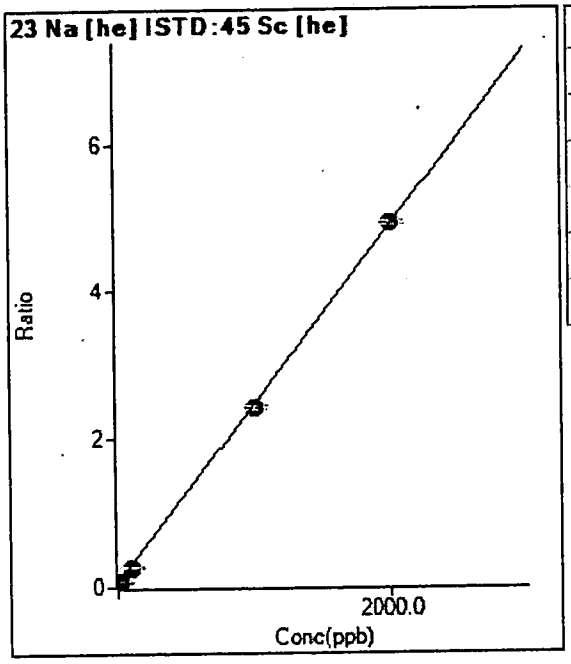
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.00	0.0000	P	40.0
2	☐	0.100	0.098	661.35	0.0001	P	8.4
3	☐	1.000	0.938	6422.49	0.0007	P	2.3
4	☐	10.000	9.473	64581.75	0.0067	P	1.2
5	☐	100.000	91.991	666474.04	0.0653	P	2.3
6	☐	200.000	204.031	1447602.42	0.1449	A	0.8

y = 7.0996E-004 * x + 2.3808E-006
R = 0.9989
DL = 0.004029
BEC = 0.003353

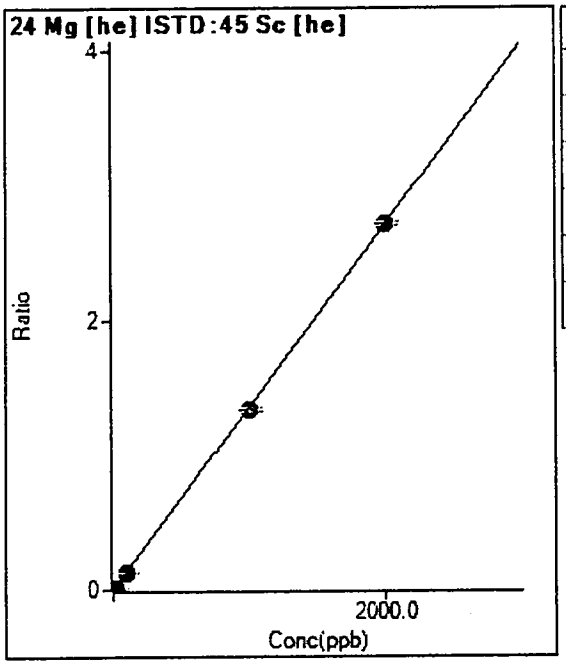
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	111385.71	0.0639	P	4.6
2	☐			117342.24	0.0666	P	1.3
3	☐	10.000	9.407	158441.63	0.0865	P	1.3
4	☐	100.000	86.740	496695.47	0.2730	P	1.2
5	☐	1000.000	976.358	4611889.86	2.4174	A	1.7
6	☐	2000.000	2012.487	8720906.27	4.9150	A	1.0

y = 0.0024 * x + 0.0639
R = 0.9999
DL = 3.687
BEC = 26.49

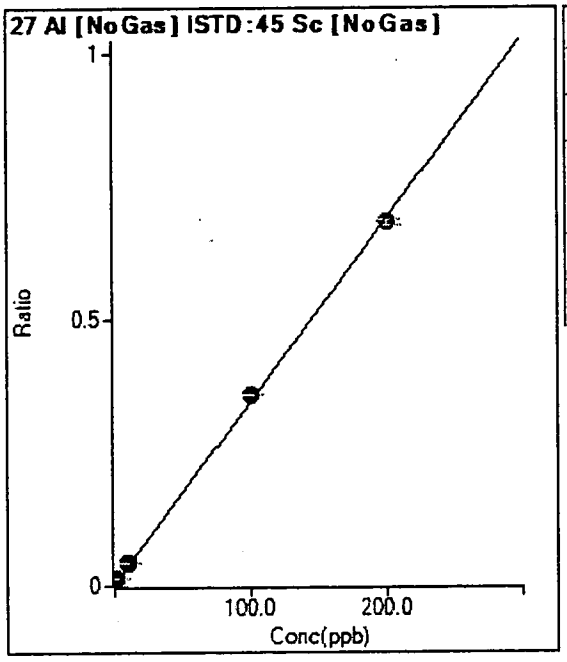
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	374.10	0.0002	P	16.5
2	☐			3407.90	0.0019	P	11.9
3	☐	10.000	9.897	24921.94	0.0136	P	6.1
4	☐	100.000	90.757	224037.56	0.1231	P	0.7
5	☐	1000.000	987.738	2551831.50	1.3377	A	2.2
6	☐	2000.000	2006.594	4821493.91	2.7174	A	1.2

y = 0.0014 * x + 2.1419E-004
R = 1.0000
DL = 0.07847
BEC = 0.1582

Weight: <None>
Min Conc: <None>

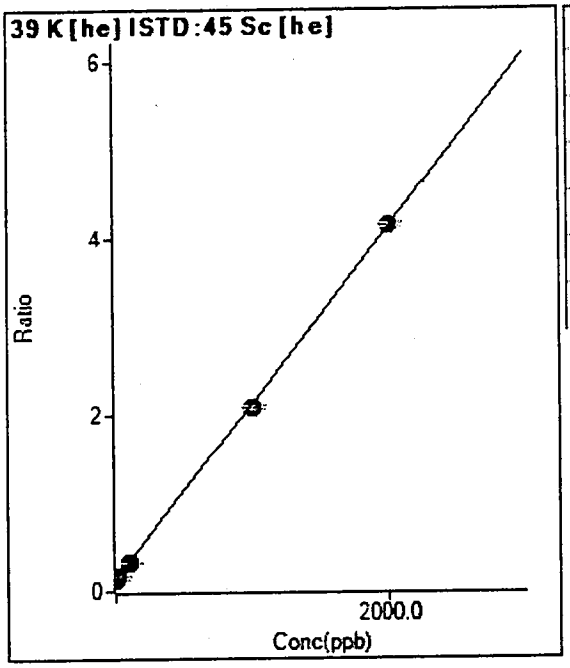


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10325.69	0.0011	P	3.2
2	☐			59461.87	0.0064	P	2.9
3	☐	1.000	3.916	140283.57	0.0146	P	1.6
4	☐	10.000	12.358	419330.09	0.0437	P	1.3
5	☐	100.000	103.580	3653098.12	0.3579	A	0.6
6	☐	200.000	198.078	6829164.54	0.6834	A	1.4

y = 0.0034 * x + 0.0011
R = 0.9998
DL = 0.03075
BEC = 0.3242

Weight: <None>
Min Conc: <None>

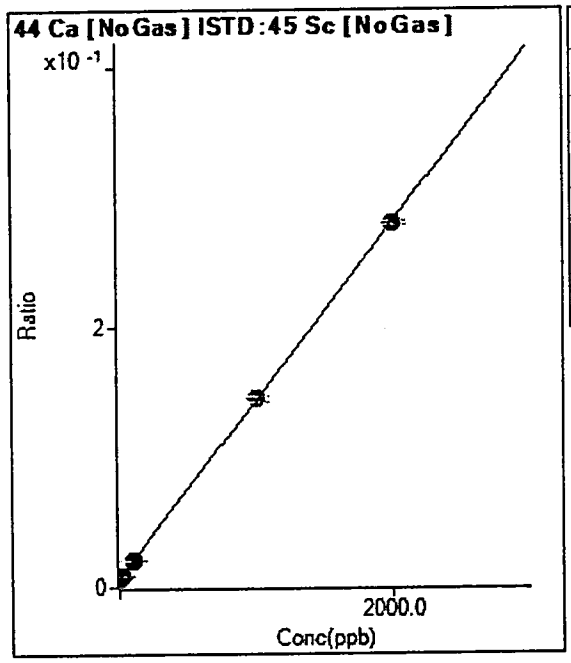
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	243445.55	0.1396	P	2.7
2	☐			261549.24	0.1485	P	0.7
3	☐	10.000	13.468	304695.36	0.1664	P	0.6
4	☐	100.000	95.209	599397.65	0.3294	P	2.1
5	☐	1000.000	979.526	3991640.12	2.0926	A	2.1
6	☐	2000.000	2010.459	7360101.33	4.1480	A	1.1

y = 0.0020 * x + 0.1396
R = 0.9999
DL = 5.695
BEC = 70

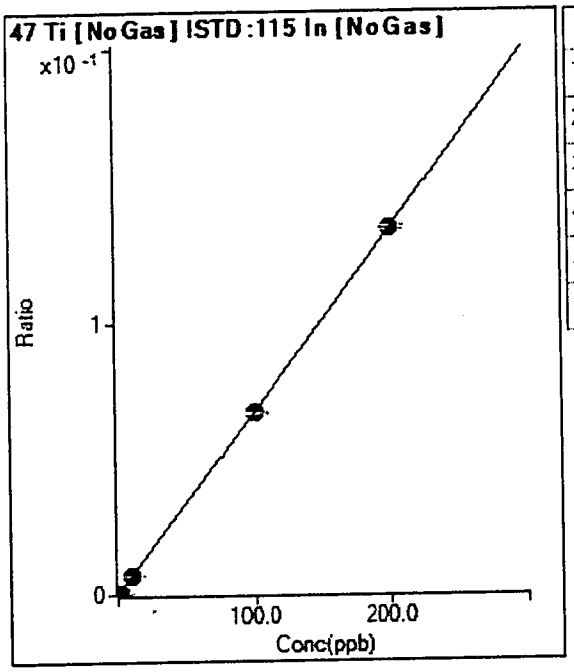
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	64419.26	0.0070	P	2.5
2	☐			69430.84	0.0075	P	8.6
3	☐	10.000	15.649	87487.23	0.0091	P	4.2
4	☐	100.000	103.491	202707.19	0.0211	P	1.7
5	☐	1000.000	1009.457	1479564.93	0.1450	A	3.2
6	☐	2000.000	1995.069	2795845.17	0.2798	A	1.1

y = 1.3674E-004 * x + 0.0070
R = 1.0000
DL = 3.8
BEC = 50.93

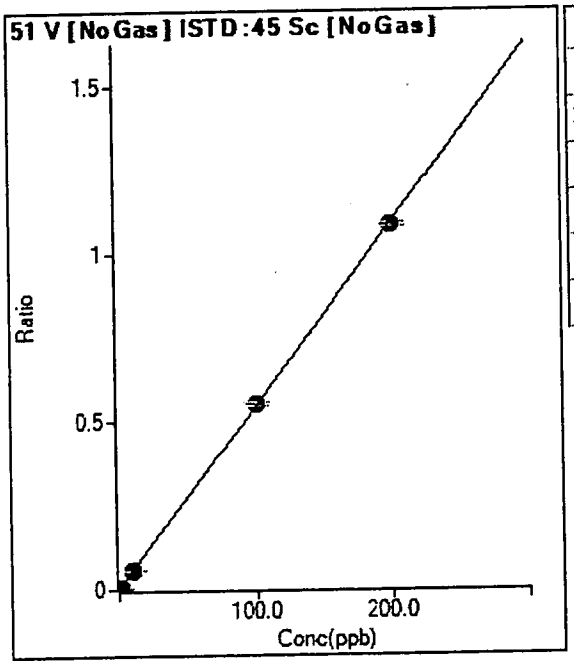
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1315.75	0.0002	P	24.7
2	☐	0.100	0.095	1651.73	0.0003	P	13.3
3	☐	1.000	0.995	5303.43	0.0009	P	3.6
4	☐	10.000	10.067	41510.48	0.0070	P	1.7
5	☐	100.000	99.291	418508.63	0.0667	P	1.1
6	☐	200.000	200.351	823588.40	0.1343	P	1.2

y = 6.6917E-004 * x + 2.2834E-004
R = 1.0000
DL = 0.2524
BEC = 0.3412

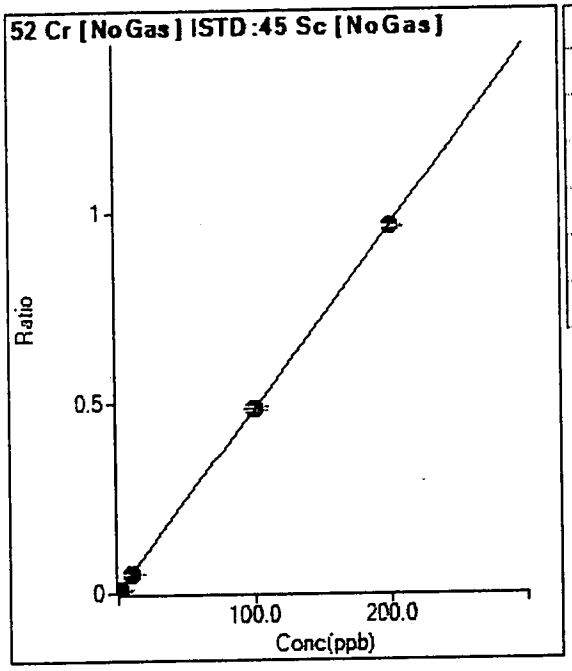
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21093.76	0.0023	P	29.5
2	☐	0.100	-0.061	18063.48	0.0020	P	11.4
3	☐	1.000	1.022	75239.91	0.0078	P	8.3
4	☐	10.000	9.879	536384.01	0.0559	P	2.7
5	☐	100.000	101.444	5638942.05	0.5526	A	2.4
6	☐	200.000	199.284	10826451.35	1.0834	A	1.1

y = 0.0054 * x + 0.0023
R = 1.0000
DL = 0.3732
BEC = 0.4215

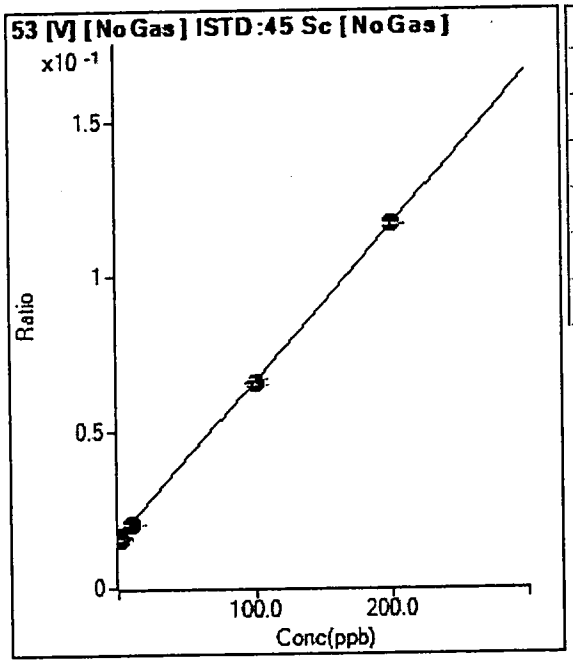
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34138.23	0.0037	P	5.7
2	☐	0.100	0.110	38962.87	0.0042	P	3.2
3	☐	1.000	0.961	79879.22	0.0083	P	2.2
4	☐	10.000	10.046	499471.34	0.0520	P	1.1
5	☐	100.000	100.638	4979668.67	0.4879	A	2.0
6	☐	200.000	199.679	9637888.74	0.9644	A	0.6

y = 0.0048 * x + 0.0037
R = 1.0000
DL = 0.1302
BEC = 0.7675

Weight: <None>
Min Conc: <None>

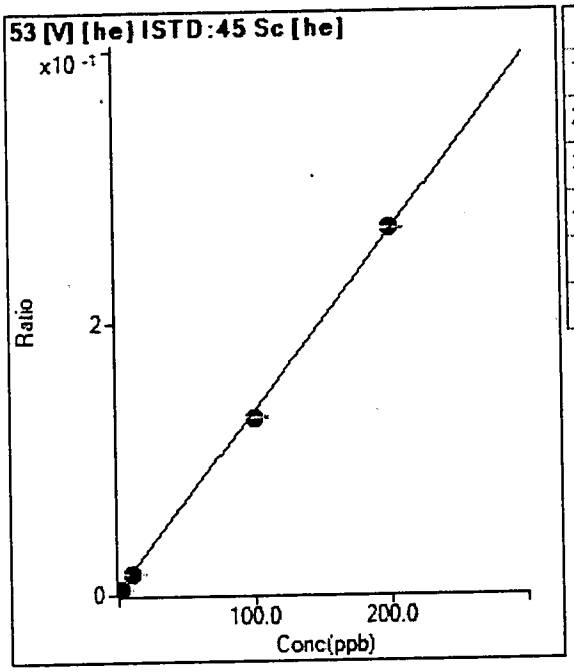


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	149554.69	0.0162	P	0.5
2	☐	0.100	1.015	153951.55	0.0167	P	1.7
3	☐	1.000	-1.133	149877.05	0.0156	P	2.0
4	☐	10.000	8.414	195723.03	0.0204	P	2.1
5	☐	100.000	98.717	669822.89	0.0656	P	2.8
6	☐	200.000	200.731	1166872.46	0.1168	P	0.5

y = 5.0114E-004 * x + 0.0162
R = 0.9999
DL = 0.4835
BEC = 32.27

Weight: <None>
Min Conc: <None>

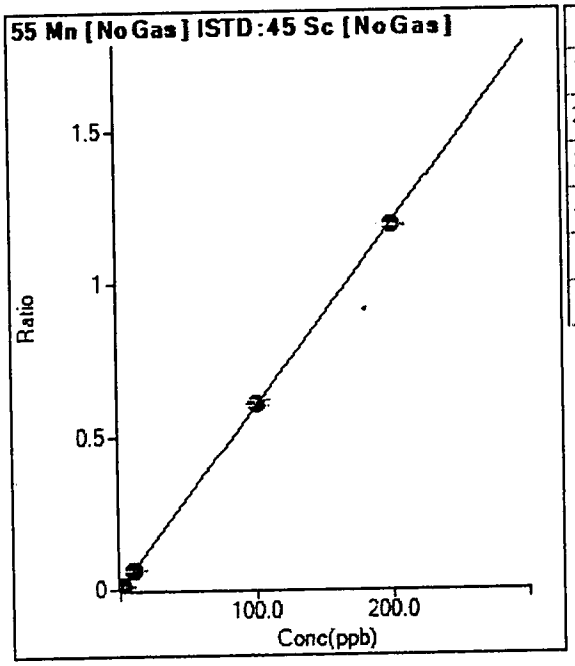
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6523.76	0.0037	P	2.7
2	☐	0.100	0.178	7001.69	0.0040	P	5.9
3	☐	1.000	0.660	8439.50	0.0046	P	3.8
4	☐	10.000	9.229	28935.89	0.0159	P	2.5
5	☐	100.000	96.246	249133.30	0.1306	P	1.3
6	☐	200.000	201.917	478832.97	0.2699	P	0.5

y = 0.0013 * x + 0.0037
R = 0.9998
DL = 0.2296
BEC = 2.838

Weight: <None>
Min Conc: <None>

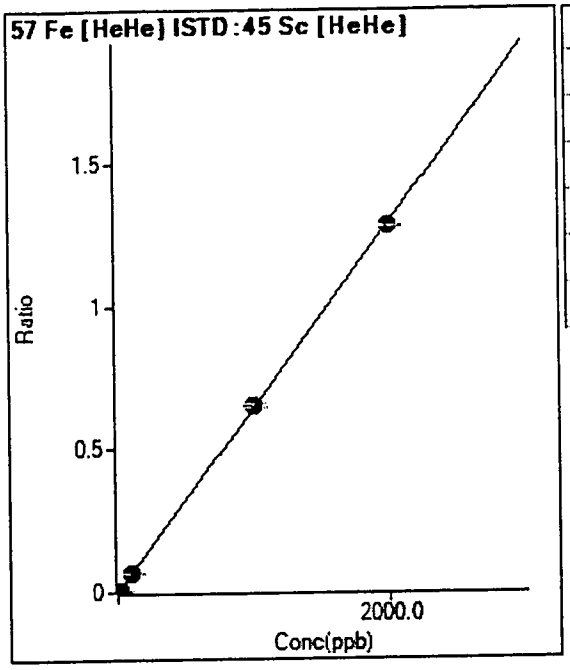


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36389.16	0.0039	P	2.5
2	☐	0.100	0.232	49022.90	0.0053	P	2.6
3	☐	1.000	1.052	97794.51	0.0102	P	3.7
4	☐	10.000	9.992	607526.39	0.0633	P	0.9
5	☐	100.000	101.501	6192129.38	0.6068	A	3.1
6	☐	200.000	199.249	11866703.23	1.1875	A	0.4

y = 0.0059 * x + 0.0039
R = 1.0000
DL = 0.04907
BEC = 0.6625

Weight: <None>
Min Conc: <None>

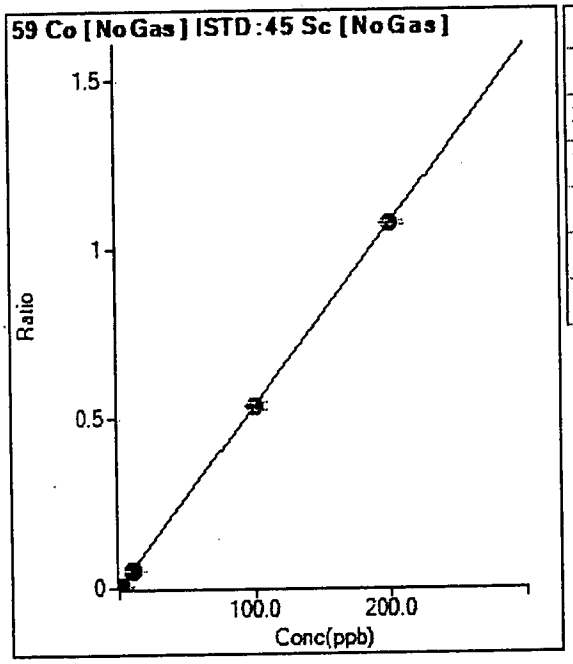
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	3.400	374.10	0.0022	P	2.1
2	☐			292.61	0.0017	P	29.7
3	☐	10.000	13.155	1474.21	0.0085	P	12.3
4	☐	100.000	103.056	11456.05	0.0662	P	1.6
5	☐	1000.000	1012.524	117955.50	0.6508	P	2.3
6	☐	2000.000	1993.570	233280.34	1.2814	P	0.4

y = 6.4275E-004 * x
R = 1.0000
DL = 0.2166
BEC = 0

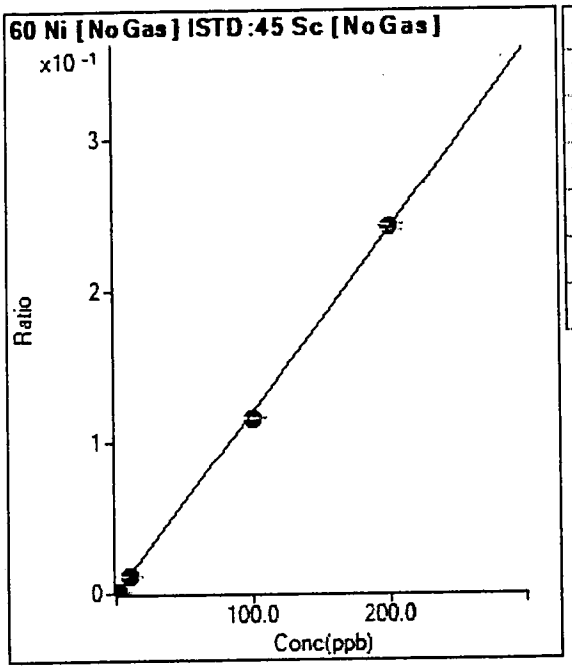
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	159.27	0.0000	P	75.6
2	☐	0.100	0.106	5382.58	0.0006	P	4.0
3	☐	1.000	0.986	50904.40	0.0053	P	2.9
4	☐	10.000	9.985	513478.35	0.0535	P	0.7
5	☐	100.000	99.702	5447043.65	0.5339	A	4.4
6	☐	200.000	200.150	10711213.93	1.0718	A	1.0

y = 0.0054 * x + 1.7113E-005
R = 1.0000
DL = 0.007244
BEC = 0.003196

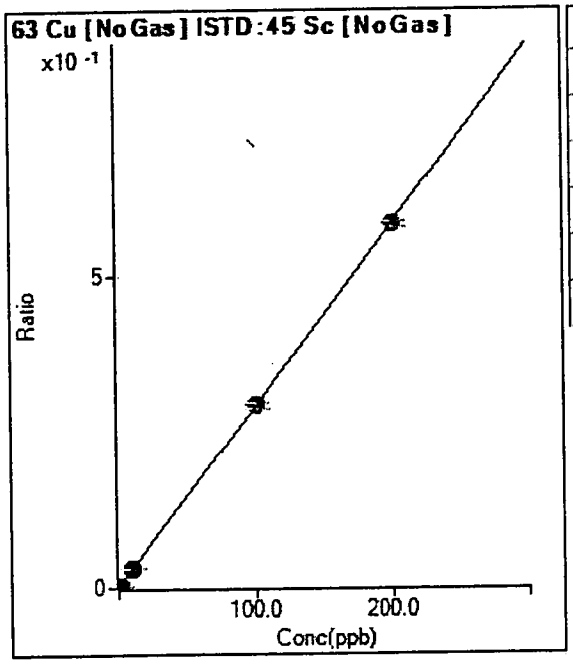
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	510.03	0.0001	P	13.6
2	☐	0.100	0.097	1580.14	0.0002	P	2.7
3	☐	1.000	1.044	12541.64	0.0013	P	1.1
4	☐	10.000	9.976	115198.15	0.0120	P	0.8
5	☐	100.000	96.689	1182012.74	0.1158	P	2.0
6	☐	200.000	201.656	2413544.03	0.2415	A	1.8

y = 0.0012 * x + 5.5141E-005
R = 0.9998
DL = 0.01879
BEC = 0.04605

Weight: <None>
Min Conc: <None>

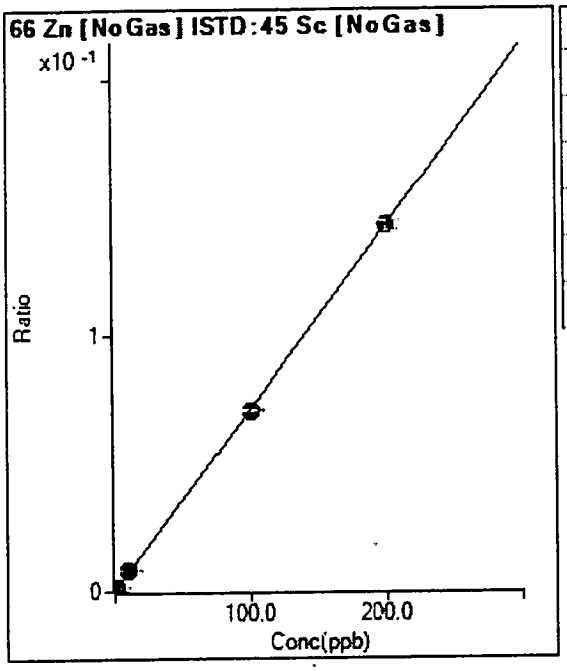


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11739.95	0.0013	P	1.5
2	☐	0.100	0.133	15285.32	0.0017	P	1.6
3	☐	1.000	1.049	41498.26	0.0043	P	0.4
4	☐	10.000	10.019	291757.45	0.0304	P	0.6
5	☐	100.000	100.204	2985102.00	0.2926	A	2.9
6	☐	200.000	199.897	5819480.00	0.5823	A	1.3

y = 0.0029 * x + 0.0013
R = 1.0000
DL = 0.01912
BEC = 0.4367

Weight: <None>
Min Conc: <None>

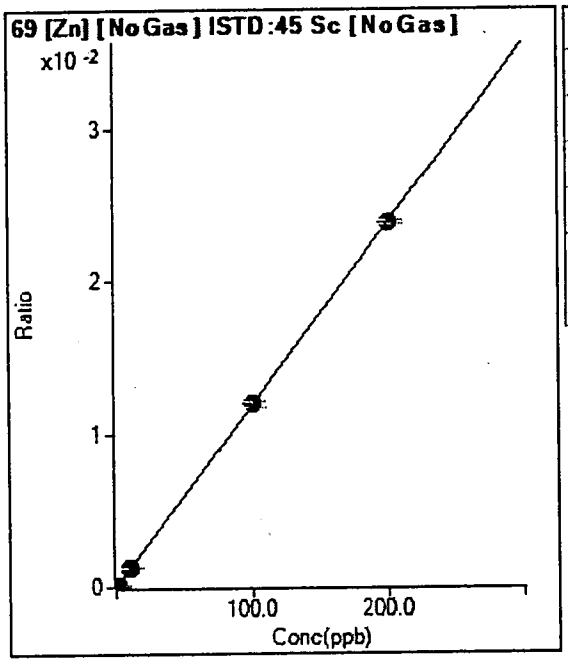
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	993.30	0.0001	P	11.9
2	☐	0.100	0.120	1779.98	0.0002	P	14.2
3	☐	1.000	1.745	12980.00	0.0014	P	1.6
4	☐	10.000	11.253	78050.21	0.0081	P	0.6
5	☐	100.000	99.016	721549.68	0.0707	P	1.3
6	☐	200.000	200.426	1429051.62	0.1430	M	2.8

y = 7.1295E-004 * x + 1.0747E-004
R = 1.0000
DL = 0.05375
BEC = 0.1507

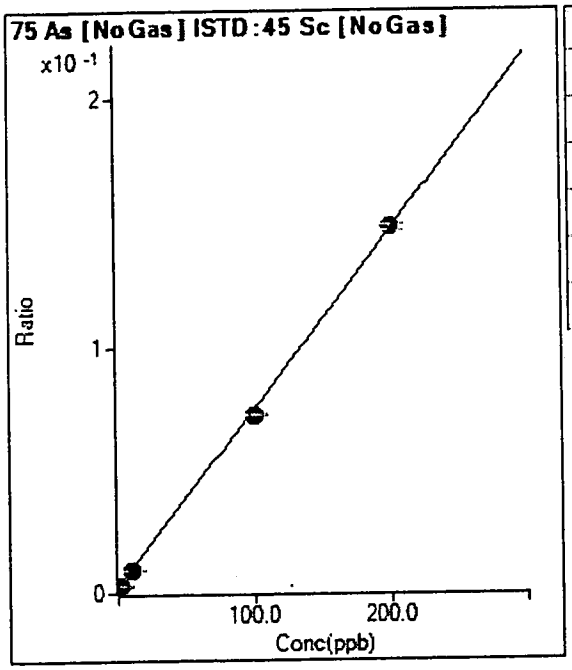
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	77.78	0.0000	P	38.2
2	☐	0.100	0.061	144.45	0.0000	P	32.5
3	☐	1.000	1.161	1407.54	0.0001	P	5.4
4	☐	10.000	10.400	11956.58	0.0012	P	3.1
5	☐	100.000	100.273	121816.85	0.0119	P	2.7
6	☐	200.000	199.843	237644.60	0.0238	P	1.2

y = 1.1895E-004 * x + 8.4155E-006
R = 1.0000
DL = 0.081
BEC = 0.07075

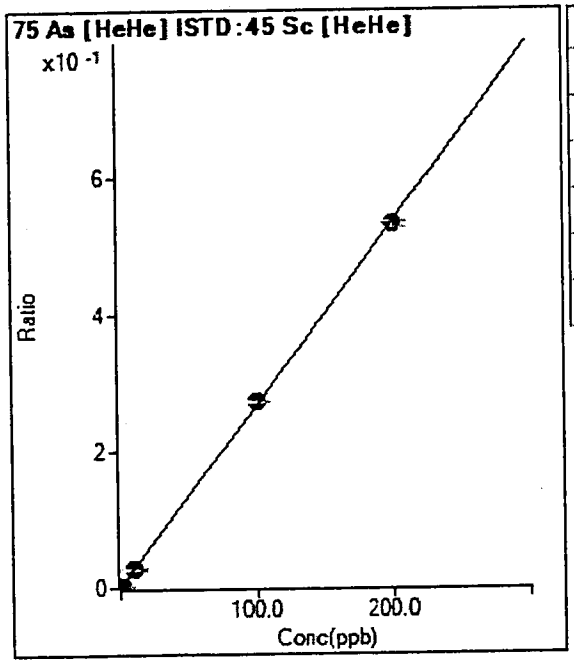
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26735.37	0.0029	P	11.7
2	☐	0.100	-0.023	26542.86	0.0029	P	16.6
3	☐	1.000	0.697	32610.52	0.0034	P	2.9
4	☐	10.000	9.295	92057.25	0.0096	P	0.3
5	☐	100.000	96.521	739186.23	0.0724	P	1.4
6	☐	200.000	201.776	1481592.55	0.1483	A	1.5

y = 7.2043E-004 * x + 0.0029
R = 0.9998
DL = 1.407
BEC = 4.016

Weight: <None>
Min Conc: <None>

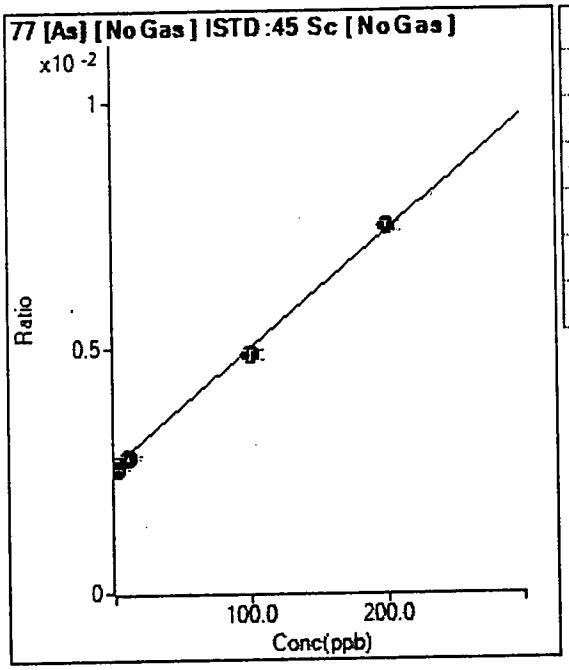


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	39.22	0.0002	P	38.4
2	☐	0.100	0.063	67.97	0.0004	P	18.9
3	☐	1.000	0.953	483.67	0.0028	P	3.8
4	☐	10.000	9.985	4652.94	0.0269	P	4.4
5	☐	100.000	102.077	49451.53	0.2728	P	0.8
6	☐	200.000	198.962	96786.09	0.5316	P	1.4

y = 0.0027 * x + 2.2845E-004
R = 0.9999
DL = 0.09864
BEC = 0.08554

Weight: <None>
Min Conc: <None>

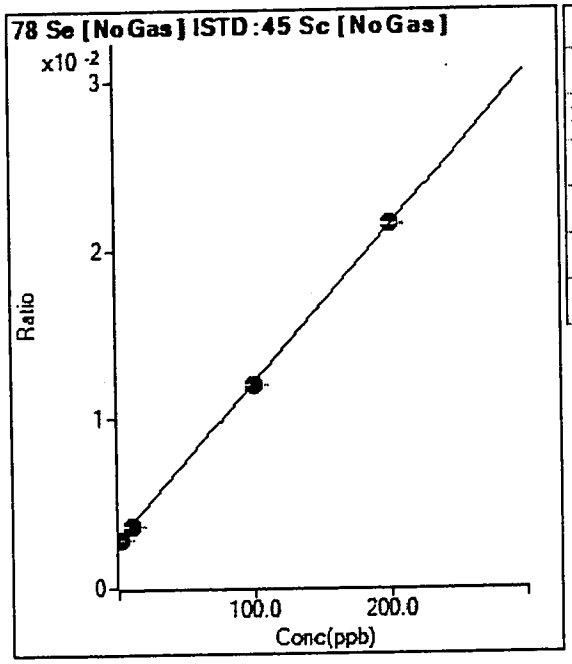
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24210.54	0.0026	P	2.3
2	☐	0.100	2.024	24603.69	0.0027	P	5.3
3	☐	1.000	-3.740	24291.98	0.0025	P	0.3
4	☐	10.000	6.064	26513.84	0.0028	P	2.0
5	☐	100.000	93.540	49411.89	0.0048	P	3.8
6	☐	200.000	203.449	74527.42	0.0075	P	2.4

y = 2.3790E-005 * x + 0.0026
R = 0.9990
DL = 7.636
BEC = 110

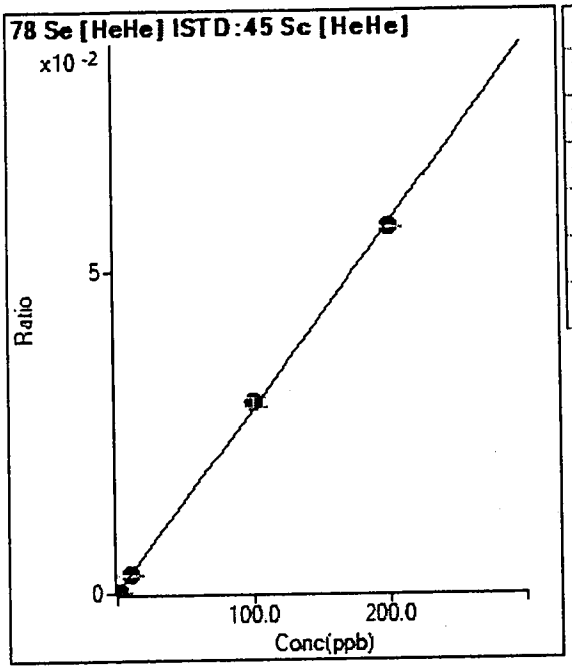
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26343.91	0.0028	P	2.2
2	☐	0.100	0.320	26569.76	0.0029	P	1.3
3	☐	1.000	-0.037	27335.03	0.0028	P	0.9
4	☐	10.000	8.456	34905.20	0.0036	P	1.5
5	☐	100.000	98.162	122331.43	0.0120	P	0.7
6	☐	200.000	201.001	215431.20	0.0216	P	0.6

y = 9.3077E-005 * x + 0.0028
R = 0.9999
DL = 2.022
BEC = 30.61

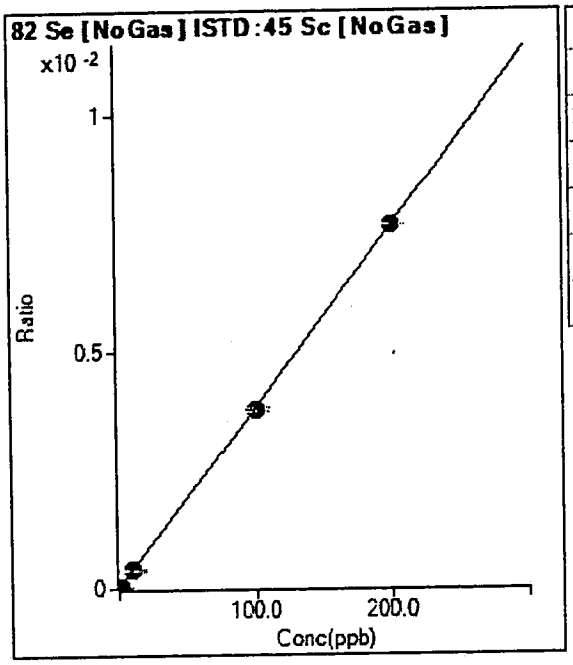
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5.23	0.0000	P	57.8
2	☐	0.100	0.278	18.96	0.0001	P	11.9
3	☐	1.000	1.019	56.21	0.0003	P	7.6
4	☐	10.000	10.023	501.97	0.0029	P	6.4
5	☐	100.000	103.649	5387.14	0.0297	P	5.3
6	☐	200.000	198.174	10339.07	0.0568	P	0.7

y = 2.8642E-004 * x + 3.0497E-005
R = 0.9998
DL = 0.1846
BEC = 0.1065

Weight: <None>
Min Conc: <None>

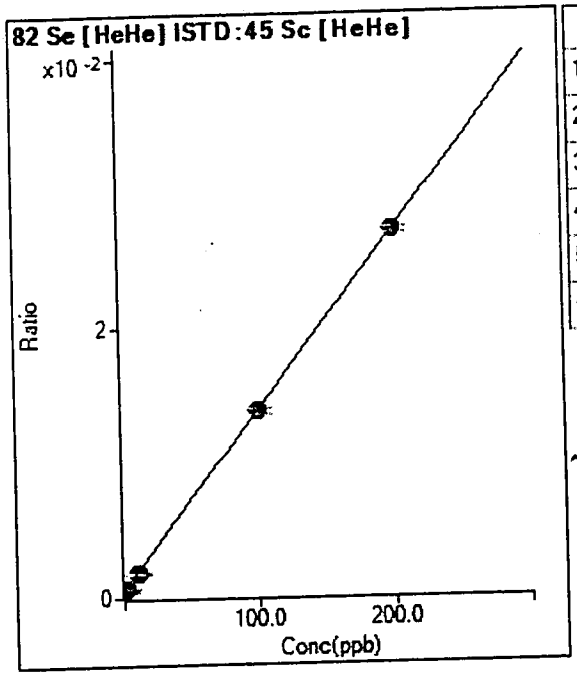


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	64.08	0.0000	P	18.3
2	☐	0.100	0.193	131.66	0.0000	P	140.0
3	☐	1.000	0.691	319.83	0.0000	P	26.2
4	☐	10.000	10.206	3813.38	0.0004	P	11.4
5	☐	100.000	99.040	38717.56	0.0038	P	2.2
6	☐	200.000	200.471	76676.06	0.0077	P	0.1

y = 3.8239E-005 * x + 6.9315E-006
R = 1.0000
DL = 0.09932
BEC = 0.1813

Weight: <None>
Min Conc: <None>

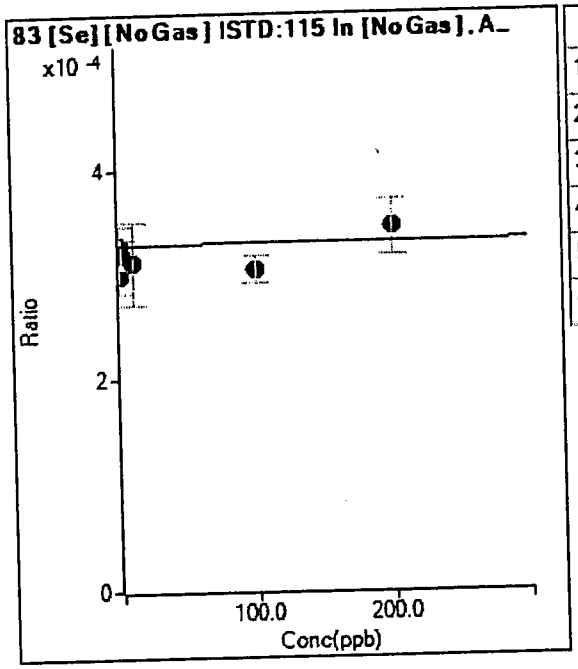
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	112.59	0.0007	P	9.8
2	☐	0.100	-1.098	88.52	0.0005	P	7.9
3	☐	1.000	0.351	122.96	0.0007	P	11.7
4	☐	10.000	8.836	316.67	0.0018	P	6.7
5	☐	100.000	99.349	2508.34	0.0138	P	3.0
6	☐	200.000	200.388	4959.24	0.0272	P	1.3

y = 1.3266E-004 * x + 6.5835E-004
R = 1.0000
DL = 1.454
BEC = 4.963

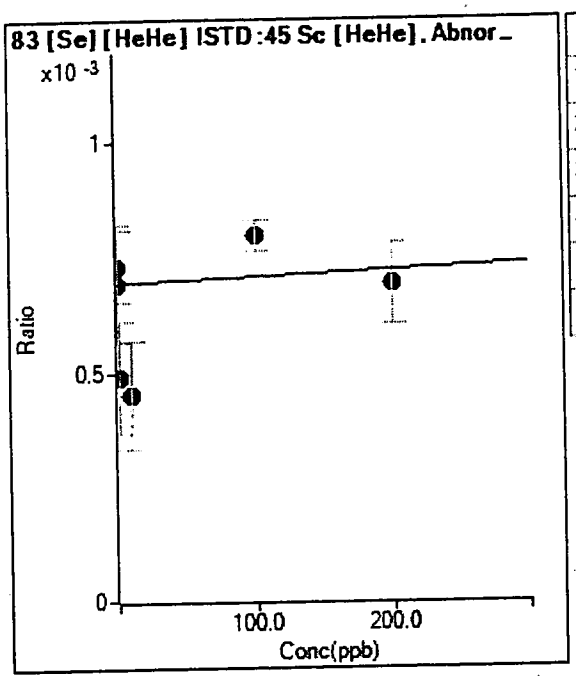
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1892.79	0.0003	P	10.9
2	☐	0.100	-3730.420	1689.05	0.0003	P	10.4
3	☐	1.000	-1145.853	1896.51	0.0003	P	8.5
4	☐	10.000	-2114.365	1855.75	0.0003	P	25.4
5	☐	100.000	-3045.833	1907.62	0.0003	P	8.5
6	☐	200.000	1886.734	2107.65	0.0003	P	15.4

y = 8.1625E-009 * x + 3.2878E-004
R = 0.5535
DL = 1.313E+04
BEC = 4.028E+04

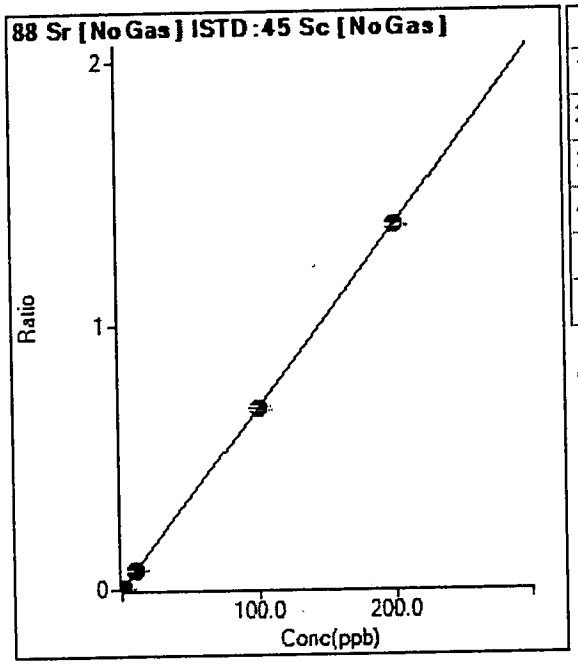
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	118.52	0.0007	P	37.1
2	☐	0.100	273.424	125.93	0.0007	P	20.8
3	☐	1.000	-1480.379	85.19	0.0005	P	49.9
4	☐	10.000	-1750.027	77.78	0.0005	P	52.8
5	☐	100.000	735.343	144.45	0.0008	P	8.4
6	☐	200.000	-22.400	125.93	0.0007	P	25.6

y = 1.3900E-007 * x + 6.9509E-004
R = 0.4026
DL = 5563
BEC = 5001

Weight: <None>
Min Conc: <None>

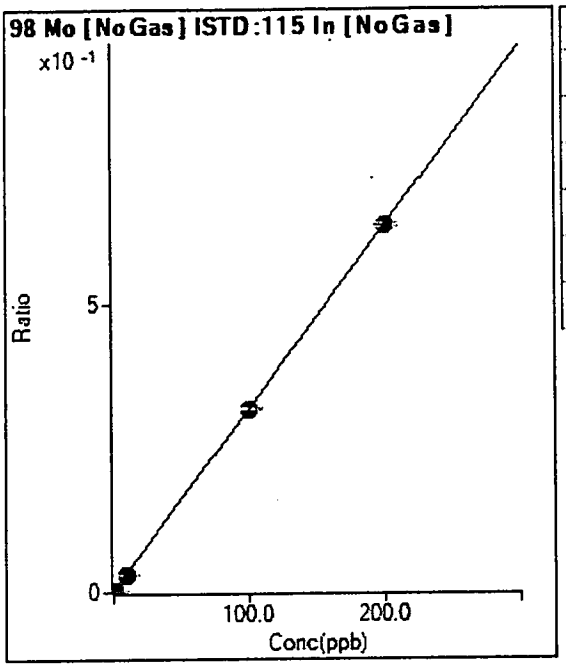


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	192.60	0.0000	P	39.3
2	☐	0.100	0.100	6523.87	0.0007	P	7.8
3	☐	1.000	1.024	67815.96	0.0071	P	1.5
4	☐	10.000	10.203	673643.91	0.0702	P	0.6
5	☐	100.000	99.721	6997417.08	0.6857	A	1.9
6	☐	200.000	200.129	13751394.82	1.3761	A	0.8

y = 0.0069 * x + 2.0867E-005
R = 1.0000
DL = 0.003578
BEC = 0.003035

Weight: <None>
Min Conc: <None>

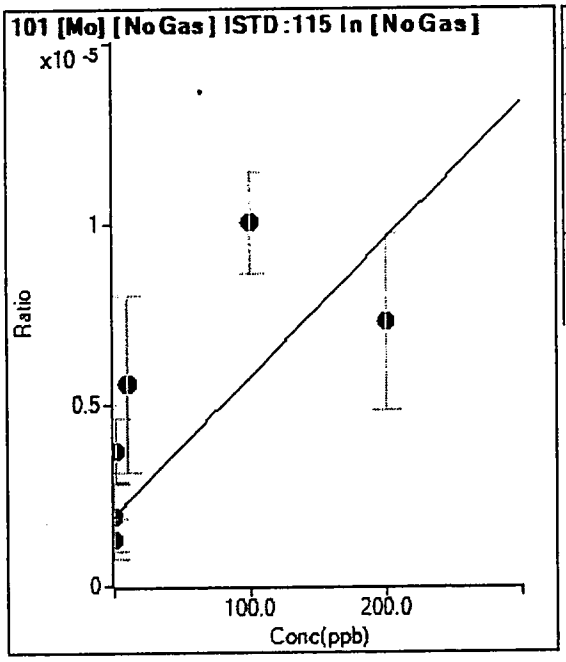
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11922.35	0.0021	P	38.8
2	☐	0.100	-0.070	10414.07	0.0018	P	30.9
3	☐	1.000	0.766	26675.06	0.0045	P	13.1
4	☐	10.000	9.159	185501.65	0.0311	P	1.7
5	☐	100.000	99.614	1996550.72	0.3181	A	1.0
6	☐	200.000	200.236	3907993.07	0.6372	A	1.1

y = 0.0032 * x + 0.0021
R = 1.0000
DL = 0.7586
BEC = 0.652

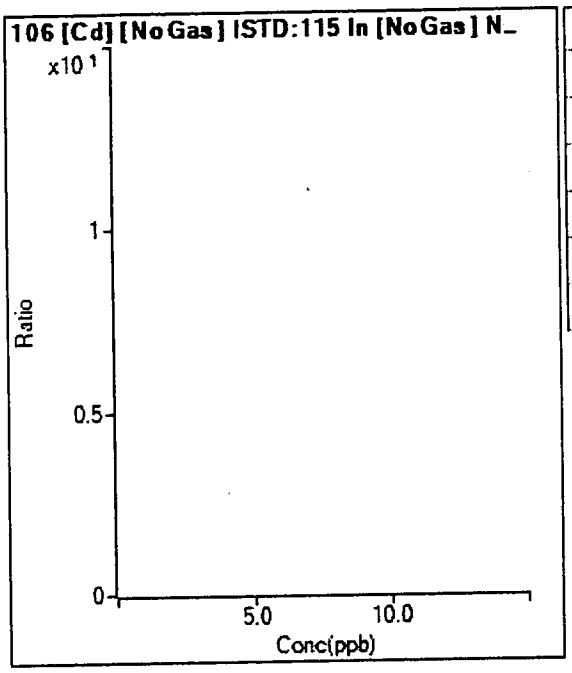
Weight: <None>
Min Conc: <None>



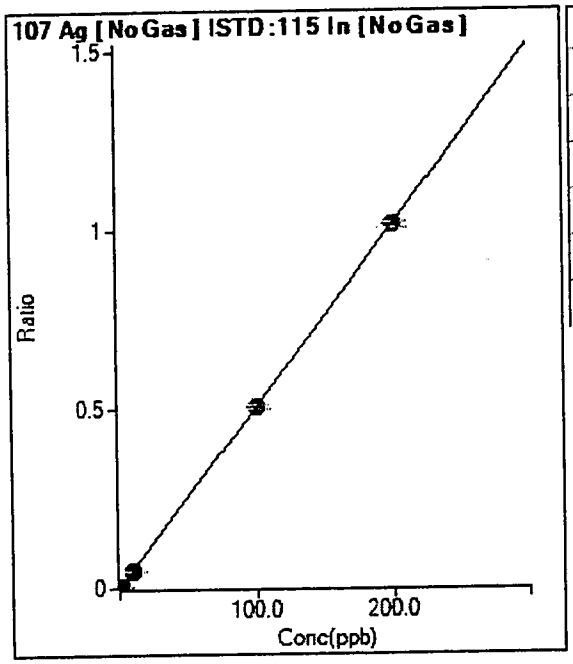
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11.11	0.0000	P	99.8
2	☐	0.100	-16.512	7.41	0.0000	P	86.6
3	☐	1.000	46.903	22.22	0.0000	P	49.2
4	☐	10.000	95.059	33.34	0.0000	P	88.2
5	☐	100.000	211.476	62.97	0.0000	P	27.8
6	☐	200.000	139.788	44.45	0.0000	P	66.8

y = 3.8363E-008 * x + 1.9349E-006
R = 0.7075
DL = 151
BEC = 50.44

Weight: <None>
Min Conc: <None>



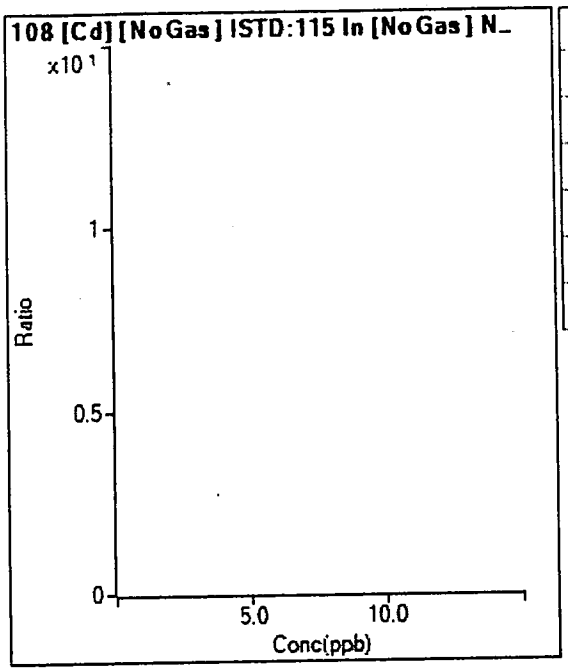
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.100					
3	☐	1.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					



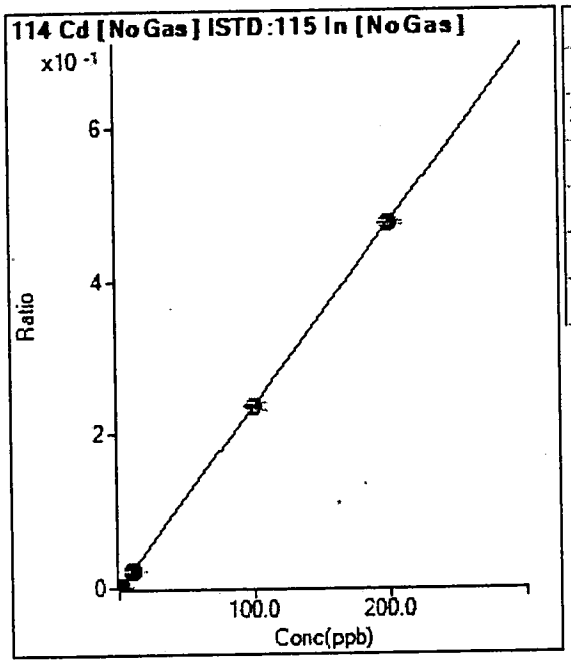
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.37	0.0000	P	39.0
2	☐	0.100	0.106	3104.18	0.0005	P	5.8
3	☐	1.000	1.039	31348.53	0.0053	P	1.7
4	☐	10.000	10.008	302621.10	0.0508	P	1.3
5	☐	100.000	99.715	3174830.08	0.5058	A	1.6
6	☐	200.000	200.142	6225088.41	1.0152	A	1.9

y = 0.0051 * x + 1.2193E-005
R = 1.0000
DL = 0.002811
BEC = 0.002404

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.100					
3	☐	1.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					

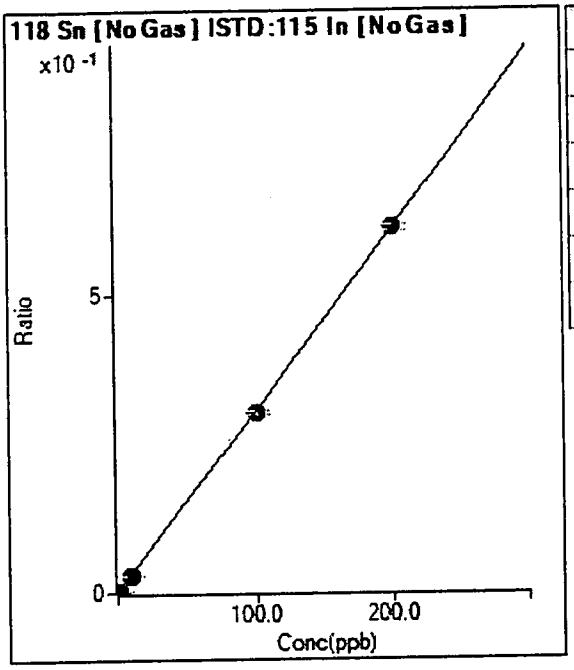


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	360.02	0.0001	P	30.5
2	☐	0.100	0.089	1546.80	0.0003	P	17.7
3	☐	1.000	0.950	13716.25	0.0023	P	1.2
4	☐	10.000	9.794	138635.90	0.0233	P	1.7
5	☐	100.000	99.547	1480139.82	0.2358	M	3.8
6	☐	200.000	200.237	2908805.06	0.4743	A	1.1

y = 0.0024 * x + 6.2458E-005
R = 1.0000
DL = 0.02414
BEC = 0.02637

Weight: <None>
Min Conc: <None>

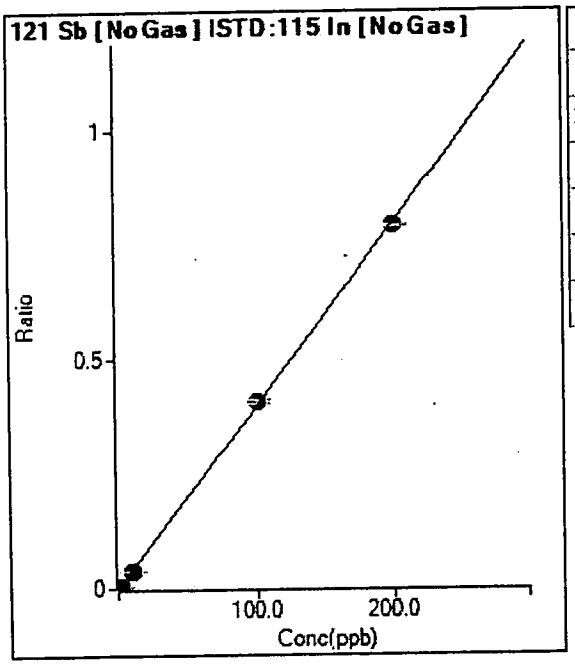
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6861.06	0.0012	P	22.9
2	☐	0.100	-0.001	6709.16	0.0012	P	24.9
3	☐	1.000	0.917	23599.10	0.0040	P	4.5
4	☐	10.000	9.573	180564.67	0.0303	P	1.4
5	☐	100.000	98.455	1886234.53	0.3005	A	1.8
6	☐	200.000	200.794	3750575.89	0.6116	A	1.7

y = 0.0030 * x + 0.0012
R = 1.0000
DL = 0.269
BEC = 0.3916

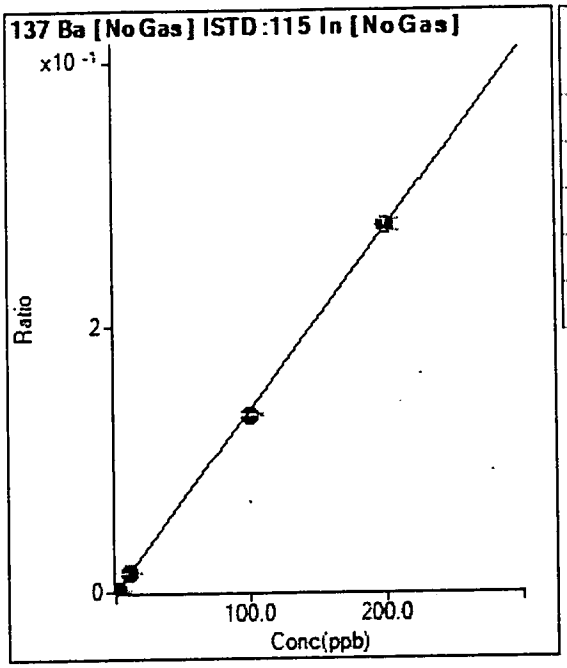
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2855.95	0.0005	P	22.8
2	☐	0.100	0.084	4704.59	0.0008	P	9.7
3	☐	1.000	0.977	26036.13	0.0044	P	6.2
4	☐	10.000	9.839	236636.34	0.0397	P	0.6
5	☐	100.000	102.030	2555108.35	0.4071	A	2.1
6	☐	200.000	198.993	4866585.80	0.7934	A	0.5

y = 0.0040 * x + 4.9561E-004
R = 0.9999
DL = 0.085
BEC = 0.1244

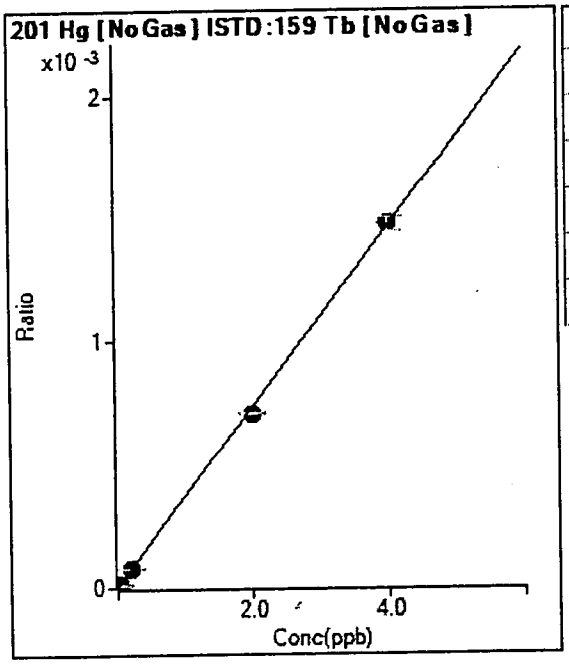
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.34	0.0000	P	33.0
2	☐	0.100	0.103	893.40	0.0002	P	12.5
3	☐	1.000	1.096	9029.55	0.0015	P	3.7
4	☐	10.000	10.196	83581.16	0.0140	P	0.9
5	☐	100.000	97.570	841402.25	0.1340	P	2.1
6	☐	200.000	201.205	1694987.47	0.2764	A	3.2

y = 0.0014 * x + 1.6210E-005
R = 0.9999
DL = 0.01168
BEC = 0.0118

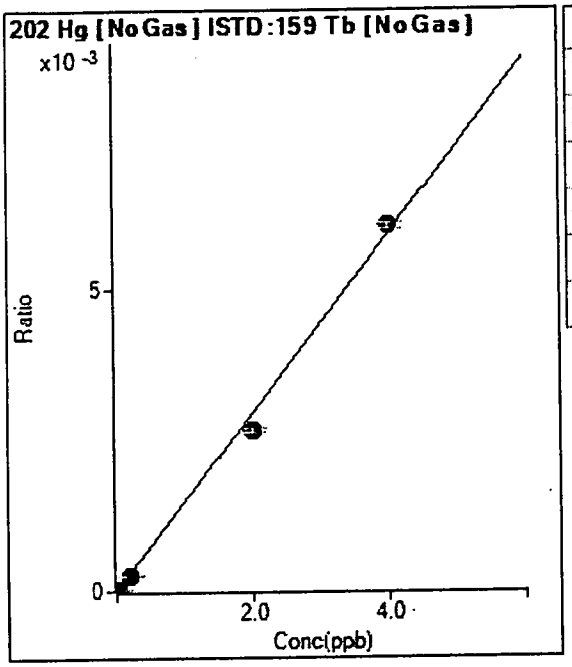
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.67	0.0000	P	21.2
2	☐			38.00	0.0000	P	18.8
3	☐	0.020	0.027	92.67	0.0000	P	32.3
4	☐	0.200	0.198	544.01	0.0001	P	1.0
5	☐	2.000	1.926	5249.57	0.0007	P	1.5
6	☐	4.000	4.037	10743.02	0.0015	P	3.6

y = 3.6509E-004 * x + 3.2556E-006
R = 0.9997
DL = 0.005662
BEC = 0.008917

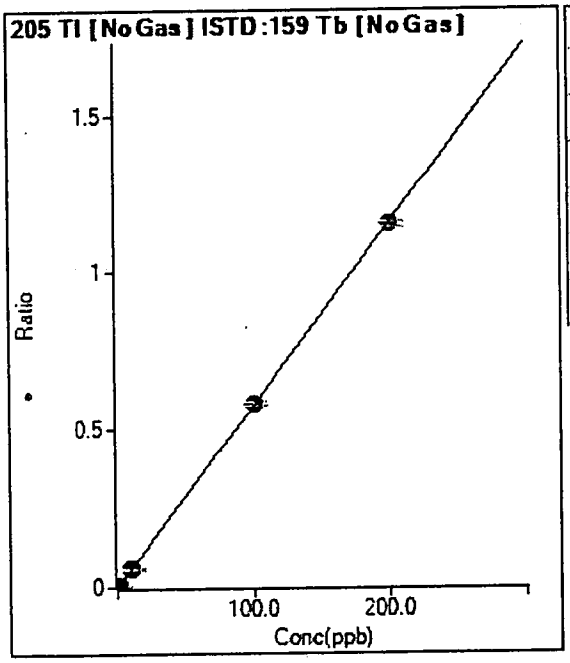
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	44.00	0.0000	P	36.7
2	☐			56.00	0.0000	P	23.2
3	☐	0.020	0.018	231.33	0.0000	P	1.9
4	☐	0.200	0.174	1894.80	0.0003	P	7.0
5	☐	2.000	1.796	19738.35	0.0027	P	2.1
6	☐	4.000	4.103	44068.81	0.0061	P	1.6

y = 0.0015 * x + 6.3210E-006
R = 0.9981
DL = 0.004714
BEC = 0.004286

Weight: <None>
Min Conc: <None>

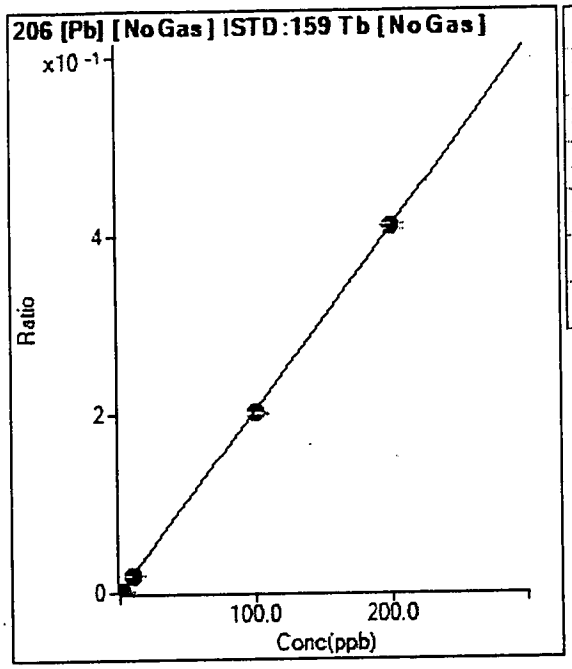


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55.56	0.0000	P	60.1
2	☐	0.100	0.100	3982.22	0.0006	P	4.0
3	☐	1.000	1.027	42273.29	0.0059	P	4.3
4	☐	10.000	10.133	422428.46	0.0586	P	1.8
5	☐	100.000	100.671	4323263.95	0.5817	A	1.6
6	☐	200.000	199.658	8390949.67	1.1536	A	1.5

y = 0.0058 * x + 7.9818E-006
R = 1.0000
DL = 0.002491
BEC = 0.001381

Weight: <None>
Min Conc: <None>

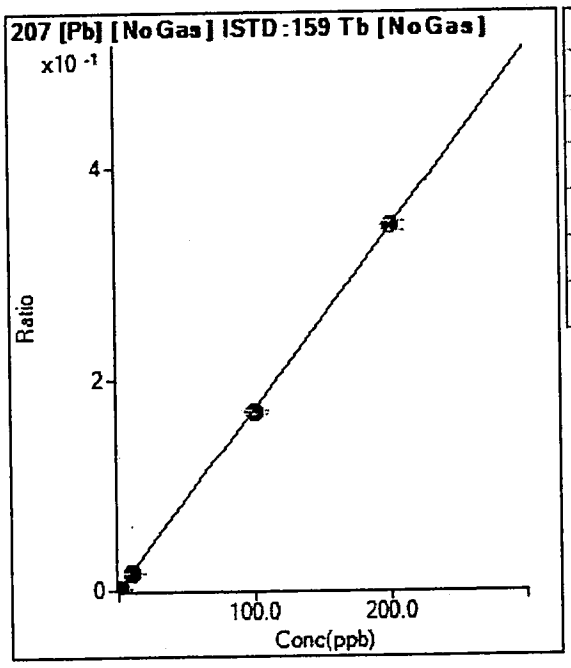
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	162.98	0.0000	P	63.8
2	☐	0.100	0.091	1426.06	0.0002	P	15.0
3	☐	1.000	0.994	14585.33	0.0021	P	3.5
4	☐	10.000	9.891	145726.66	0.0202	P	0.7
5	☐	100.000	98.456	1492734.84	0.2008	M	0.3
6	☐	200.000	200.778	2978569.21	0.4095	A	1.7

y = 0.0020 * x + 2.3543E-005
R = 1.0000
DL = 0.02208
BEC = 0.01154

Weight: <None>
Min Conc: <None>

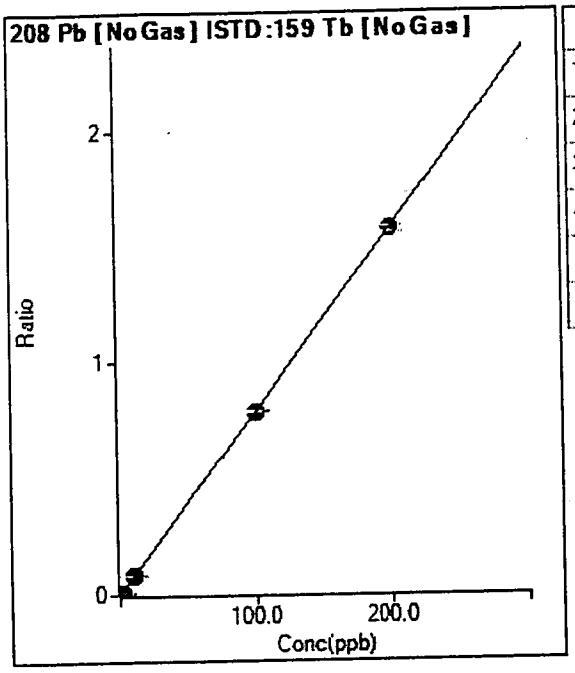


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	137.05	0.0000	P	41.7
2	☐	0.100	0.100	1296.42	0.0002	P	0.6
3	☐	1.000	1.036	12783.59	0.0018	P	0.5
4	☐	10.000	9.748	120751.66	0.0167	P	1.4
5	☐	100.000	98.151	1251344.91	0.1684	P	1.8
6	☐	200.000	200.937	2506560.95	0.3446	A	2.7

y = 0.0017 * x + 1.9709E-005
R = 0.9999
DL = 0.01439
BEC = 0.01149

Weight: <None>
Min Conc: <None>

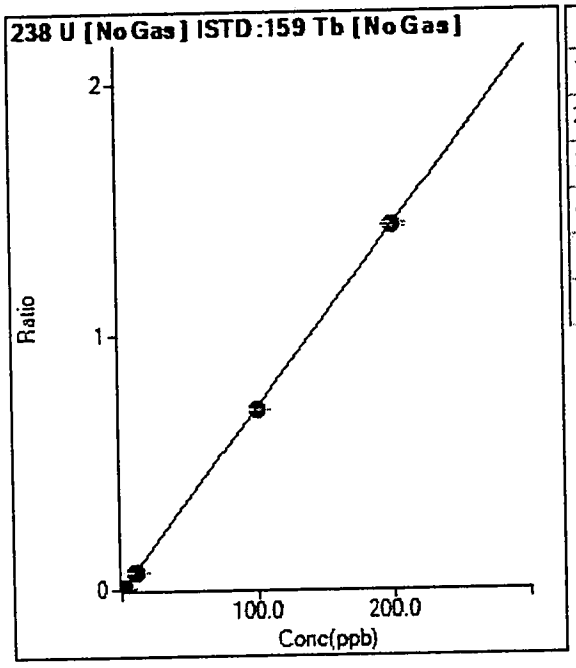
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17528.94	0.0025	P	4.6
2	☐	0.100	0.060	20348.15	0.0030	P	4.9
3	☐	1.000	1.130	81148.00	0.0114	P	2.5
4	☐	10.000	9.997	585511.81	0.0812	P	1.1
5	☐	100.000	99.911	5859720.94	0.7883	A	1.2
6	☐	200.000	200.044	11462240.81	1.5759	A	1.8

y = 0.0079 * x + 0.0025
R = 1.0000
DL = 0.04449
BEC = 0.3207

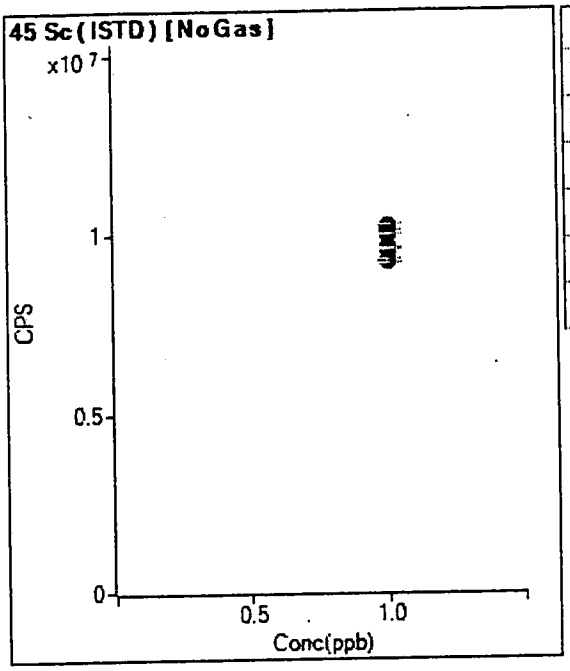
Weight: <None>
Min Conc: <None>



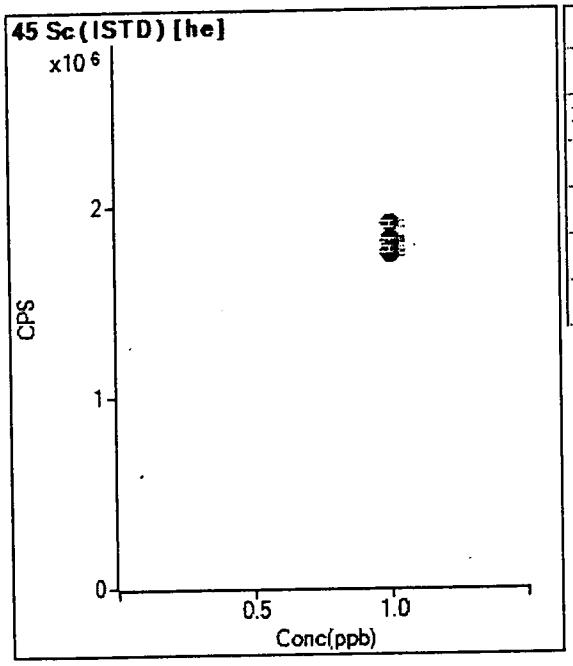
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	285.20	0.0000	P	32.7
2	☐	0.100	0.091	4697.27	0.0007	P	6.2
3	☐	1.000	1.008	51557.87	0.0072	P	0.4
4	☐	10.000	9.929	512538.03	0.0710	P	0.8
5	☐	100.000	99.018	5263199.44	0.7081	A	0.5
6	☐	200.000	200.495	10428690.33	1.4337	A	1.1

y = 0.0072 * x + 4.0951E-005
R = 1.0000
DL = 0.005613
BEC = 0.005727

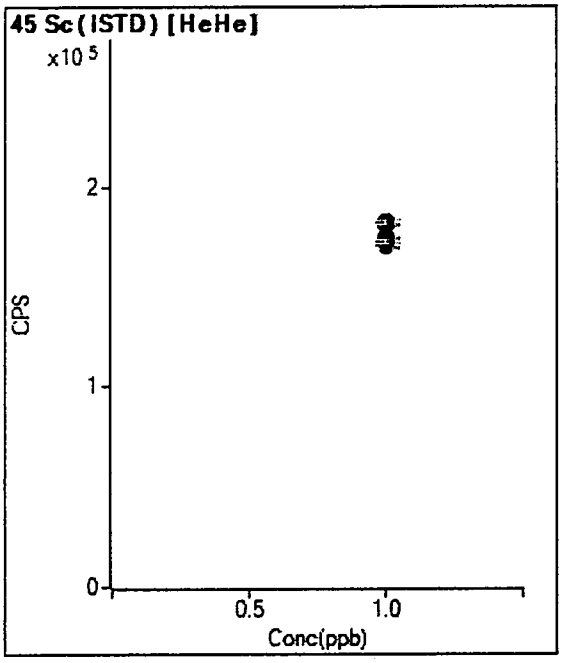
Weight: <None>
Min Conc: <None>



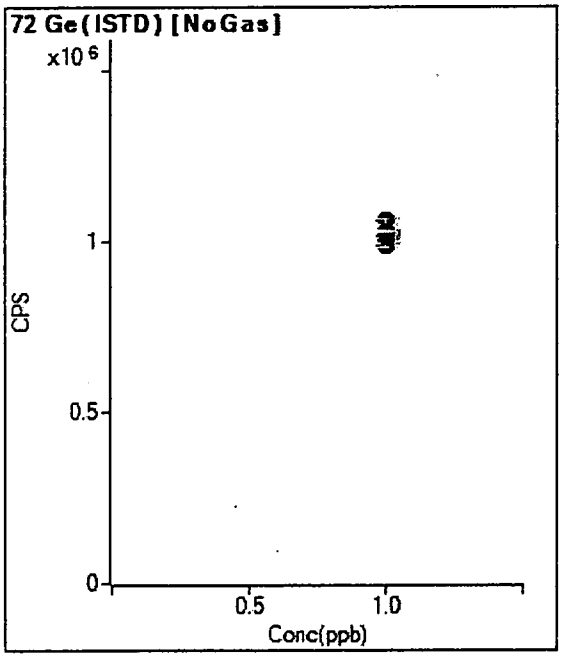
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9248342.15		A	1.3
2	☐	1.000		9230482.15		A	1.1
3	☐	1.000		9606577.15		A	1.0
4	☐	1.000		9599584.86		A	0.2
5	☐	1.000		10207256.51		A	1.9
6	☐	1.000		9993226.93		A	0.2



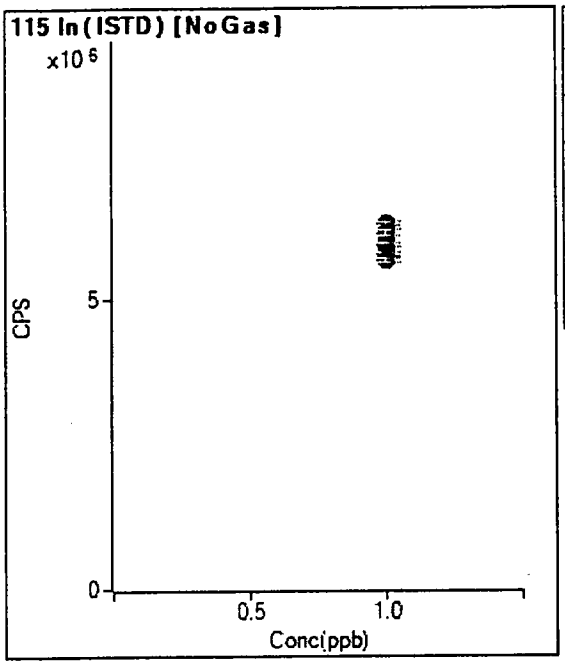
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1744642.74		A	1.2
2	☐	1.000		1761371.59		A	0.7
3	☐	1.000		1830836.90		A	0.7
4	☐	1.000		1819752.47		A	1.5
5	☐	1.000		1908010.65		A	1.9
6	☐	1.000		1774489.14		A	1.3



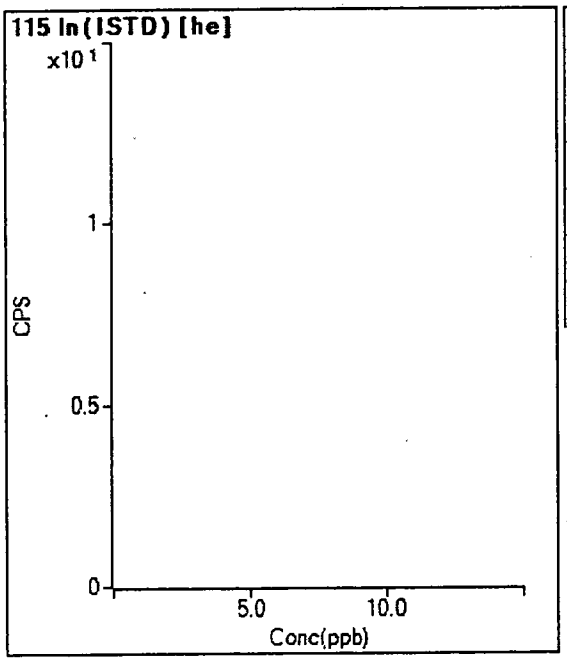
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		171212.05		P	2.5
2	☐	1.000		172413.77		P	2.8
3	☐	1.000		174348.69		P	0.7
4	☐	1.000		172938.55		P	1.3
5	☐	1.000		181247.61		P	0.7
6	☐	1.000		182051.31		P	0.9



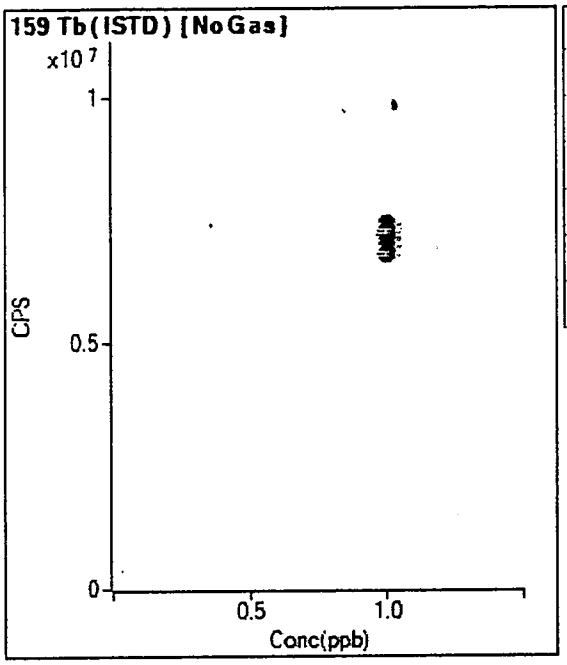
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1012122.41		P	1.1
2	☐	1.000		991031.21		P	1.2
3	☐	1.000		1021766.60		P	0.8
4	☐	1.000		1016045.53		P	0.8
5	☐	1.000		1060324.32		P	1.3
6	☐	1.000		1031019.78		P	0.5



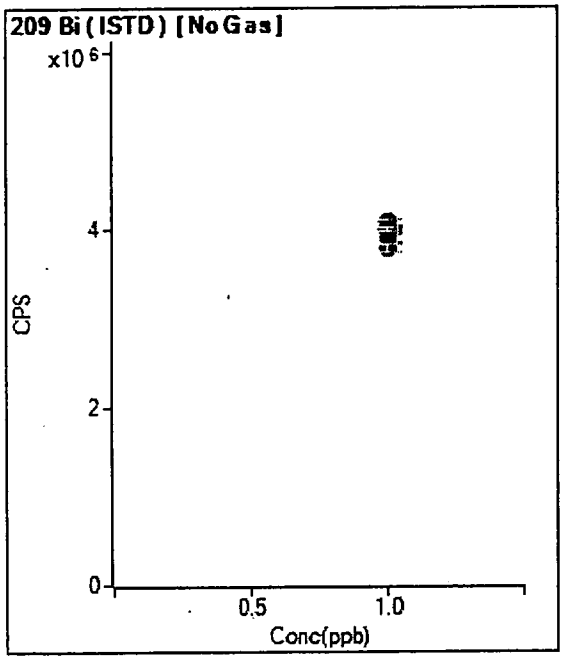
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5760109.93		A	0.8
2	☐	1.000		5660257.78		A	1.4
3	☐	1.000		5934138.78		A	1.0
4	☐	1.000		5960241.09		A	0.4
5	☐	1.000		6277626.82		A	0.9
6	☐	1.000		6133320.70		A	1.6



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000					
2	☐	1.000					
3	☐	1.000					
4	☐	1.000					
5	☐	1.000					
6	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6952439.08		A	1.0
2	☐	1.000		6804368.71		A	1.3
3	☐	1.000		7112798.56		A	0.8
4	☐	1.000		7215155.50		A	0.7
5	☐	1.000		7433189.75		A	0.8
6	☐	1.000		7274528.88		A	1.2



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3846945.10		A	0.4
2	☐	1.000		3791147.42		A	2.1
3	☐	1.000		3993178.89		A	0.7
4	☐	1.000		3949111.19		A	0.6
5	☐	1.000		4079951.34		A	1.3
6	☐	1.000		4005913.04		A	0.9

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	008_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:39:25-04:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	108.179	2.709	5710375	1.80	100	108.2	90	110	
Cr	52	1	No Gas	105.830	2.653	4971760	2.29	100	105.8	90	110	
Mn	55	1	No Gas	107.755	1.182	6242864	0.99	100	107.8	90	110	
Co	59	1	No Gas	104.761	2.670	5437450	0.71	100	104.8	90	110	
Ni	60	1	No Gas	102.457	1.892	1189685	0.67	100	102.5	90	110	
Cu	63	1	No Gas	106.175	3.458	3003279	1.38	100	106.2	90	110	
Sr	88	1	No Gas	107.029	2.725	7132974	1.46	100	107.0	90	110	
Ag	107	1	No Gas	105.943	2.149	3247896	0.58	100	105.9	90	110	
Al	27	1	No Gas	105.462	1.641	3532024	0.55	100	105.5	90	110	
Sn	118	1	No Gas	109.712	1.569	2023323	1.40	100	109.7	90	110	
Tl	47	1	No Gas	95.360	0.803	387126	1.08	100	95.4	90	110	
Zn	66	1	No Gas	101.792	1.795	704513	0.97	100	101.8	90	110	
As	75	3	HeHe	103.827	1.129	48839	0.75	100	103.8	90	110	
As	75	1	No Gas	102.010	1.477	740450	0.91	100	102.0	90	110	
Sb	121	1	No Gas	94.059	0.519	2268852	1.61	100	94.1	90	110	
Hg	201	1	No Gas	2.186	1.811	5791	2.32	2	109.3	90	110	
Be	9	1	No Gas	98.115	0.934	675312	1.20	100	98.1	90	110	
Pb	208	1	No Gas	104.590	0.978	5961329	0.61	100	104.6	90	110	
Se	82	1	No Gas	107.144	1.831	39781	0.89	100	107.1	90	110	
Mo	98	1	No Gas	107.705	2.634	2077591	2.05	100	107.7	90	110	
Ba	137	1	No Gas	101.442	0.784	842492	1.25	100	101.4	90	110	
Tl	205	1	No Gas	103.196	0.236	4307888	0.86	100	103.2	90	110	
U	238	1	No Gas	113.386	1.420	5858268	1.71	100	113.4	90	110	ICV Main CR1 Failed
Na	23	2	he	1005.870	1.299	4539165	0.92	1000	100.6	90	110	
Mg	24	2	he	1021.926	0.258	2524588	0.52	1000	102.2	90	110	
K	39	2	he	1006.474	2.495	3914766	1.98	1000	100.6	90	110	
Se	82	3	HeHe	108.537	1.617	2650	1.59	100	108.5	90	110	
Fe	57	3	HeHe	1108.579	1.499	125514	1.06	1000	110.9	90	110	ICV Main CR1 Failed
Cd	114	1	No Gas	104.693	1.043	1499274	0.85	100	104.7	90	110	
Ca	44	1	No Gas	1082.944	3.117	1502683	0.98	1000	108.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9695488	2.06	9248342	104.83	70	120	
Sc	45	2	he	1824095	0.70	1744643	104.55	70	120	
Ge	72	1	No Gas	1029221	0.98	1012122	101.69	70	120	
In	115	1	No Gas	6045633	1.87	5760110	104.96	70	120	
Tb	159	1	No Gas	7224955	0.73	6952439	103.92	70	120	
Bi	209	1	No Gas	4025671	1.37	3846945	104.65	70	120	
Sc	45	3	HeHe	175990	0.55	171212	102.79	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	009_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:43:14-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	-0.081	-2.8	17532	1.6	9	
Cr	52	1	No Gas	-0.074	-2.7	31678	1.2	4	
Mn	55	1	No Gas	0.246	6.2	51233	2.6	25	
Co	59	1	No Gas	0.006	14.8	485	10.8	1	
Ni	60	1	No Gas	0.009	32.3	630	5.7	25	
Cu	63	1	No Gas	0.075	13.7	14116	1.1	25	
Sr	88	1	No Gas	0.006	13.5	559	8.3	25	
Ag	107	1	No Gas	0.020	21.4	663	20.0	9	
Al	27	1	No Gas	0.011	112.2	10956	4.0	1000000	
Sn	118	1	No Gas	2.619	32.6	54438	27.4	25	
Ti	47	1	No Gas	0.478	47.9	3260	27.0	10000	
Zn	66	1	No Gas	0.000	-4630.7	1017	13.2	25	
As	75	3	HeHe	0.995	10.0	513	9.2	9	
As	75	1	No Gas	0.377	108.8	30020	8.8	9	
Sb	121	1	No Gas	1.986	15.4	50073	13.5	4	
Hg	201	1	No Gas	0.032	10.9	107	7.8	0.04	
Be	9	1	No Gas	0.011	14.3	100	10.6	1	
Pb	208	1	No Gas	0.134	13.7	25658	4.0	4	
Se	82	1	No Gas	1.568	46.7	636	42.2	25	
Mo	98	1	No Gas	1.355	41.9	37865	27.3	10000	
Ba	137	1	No Gas	0.009	45.3	170	20.4	25	
Tl	205	1	No Gas	0.029	13.2	1256	12.4	1	
U	238	1	No Gas	0.360	22.4	18824	22.9	25	
Na	23	2	he	-0.993	-107.2	113339	3.9	2500000	
Mg	24	2	he	0.030	115.7	470	19.2	2500000	
K	39	2	he	6.181	1.7	280084	0.9	5000000	
Se	82	3	HeHe	0.813	80.5	136	11.6	25	
Fe	57	3	HeHe	22.555	6.7	2578	6.4	2500000	
Cd	114	1	No Gas	0.087	13.4	1593	9.4	1	
Ca	44	1	No Gas	0.780	245.6	67097	3.1	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9490102	0.93	9248342	102.61	70	120	
Sc	45	2	he	1843980	1.02	1744643	105.69	70	120	
Ge	72	1	No Gas	1022478	0.29	1012122	101.02	70	120	

Initial Calibration Blank (ICB) Report

In	115	1	No Gas	5960261	1.04	5760110	103.47	70	120	
Tb	159	1	No Gas	7178623	1.54	6952439	103.25	70	120	
Bi	209	1	No Gas	3964814	2.06	3846945	103.06	70	120	
Sc	45	3	HeHe	177859	1.13	171212	103.88	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	010_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:47:09-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	-0.082	-187.1	18158	43.9	9	
Cr	52	1	No Gas	-0.114	-36.7	31143	4.8	4	
Mn	55	1	No Gas	0.124	53.5	46226	6.8	25	
Co	59	1	No Gas	0.002	117.7	300	51.5	1	
Ni	60	1	No Gas	0.003	372.1	577	19.0	25	
Cu	63	1	No Gas	0.013	139.3	12943	2.4	25	
Sr	88	1	No Gas	0.001	133.2	281	34.5	25	
Ag	107	1	No Gas	0.012	22.0	441	17.7	9	
Al	27	1	No Gas	0.004	58.7	11208	1.0	1000000	
Sn	118	1	No Gas	1.085	36.8	27914	26.5	25	
Ti	47	1	No Gas	0.089	101.3	1792	20.5	10000	
Zn	66	1	No Gas	0.035	73.0	1307	12.2	25	
As	75	3	HeHe	0.387	13.8	222	13.1	9	
As	75	1	No Gas	-0.105	-334.7	27881	7.5	9	
Sb	121	1	No Gas	0.664	21.1	19535	17.0	4	
Hg	201	1	No Gas	0.013	23.0	61	14.9	0.04	
Be	9	1	No Gas	0.003	22.5	43	11.8	1	
Pb	208	1	No Gas	0.230	6.2	32315	4.3	4	
Se	82	1	No Gas	0.285	323.9	176	196.5	25	
Mo	98	1	No Gas	0.267	119.5	18133	34.1	10000	
Ba	137	1	No Gas	0.003	149.1	130	33.5	25	
Tl	205	1	No Gas	0.011	29.2	519	26.4	1	
U	238	1	No Gas	0.088	38.8	4997	35.3	25	
Na	23	2	he	-3.213	-75.3	108189	2.3	2500000	
Mg	24	2	he	-0.043	-70.1	304	31.1	2500000	
K	39	2	he	-1.040	-597.4	265253	0.8	5000000	
Se	82	3	HeHe	0.712	132.6	132	15.7	25	
Fe	57	3	HeHe	7.980	14.3	900	15.0	2500000	
Cd	114	1	No Gas	0.045	35.7	1050	22.0	1	
Ca	44	1	No Gas	-0.531	-496.7	68240	3.9	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9906263	1.73	9248342	107.11	70	120	
Sc	45	2	he	1939137	8.60	1744643	111.15	70	120	
Ge	72	1	No Gas	1034853	2.32	1012122	102.25	70	120	

Initial Calibration Blank (ICB) Report

In	115	1	No Gas	6223600	1.77	5760110	108.05	70	120	
Tb	159	1	No Gas	7453756	1.79	6952439	107.21	70	120	
Bi	209	1	No Gas	4097513	1.57	3846945	106.51	70	120	
Sc	45	3	HeHe	175440	2.93	171212	102.47	70	120	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV
Data File Name	011LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:51:04-04:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	1.888	6.549	123562	3.30	2	94.4	70	130	
Cr	52	1	No Gas	1.902	4.742	126733	1.61	2	95.1	70	130	
Mn	55	1	No Gas	5.198	5.144	343367	2.56	5	104.0	70	130	
Co	59	1	No Gas	4.868	3.211	257370	1.26	5	97.4	70	130	
Ni	60	1	No Gas	5.046	2.217	60156	0.30	5	100.9	70	130	
Cu	63	1	No Gas	4.912	1.893	153432	0.56	5	98.2	70	130	
Sr	88	1	No Gas	4.577	1.484	310777	1.04	5	91.5	70	130	
Ag	107	1	No Gas	2.072	3.978	63461	2.45	2	103.6	70	130	
Al	27	1	No Gas	81.097	3.237	2766965	1.93	80	101.4	70	130	
Sn	118	1	No Gas	2.221	6.778	47910	5.58	2	111.0	70	130	
Tl	47	1	No Gas	4.671	1.044	20238	1.93	5	93.4	70	130	
Zn	66	1	No Gas	5.327	2.204	38534	0.31	5	106.5	70	130	
As	75	3	HeHe	3.338	7.180	1564	4.33	3	111.3	70	130	
As	75	1	No Gas	2.759	7.719	48166	3.16	3	92.0	70	130	
Sb	121	1	No Gas	2.370	3.581	59965	2.64	2	118.5	70	130	
Hg	201	1	No Gas	0.209	3.501	573	6.07	0.2	104.3	70	130	
Be	9	1	No Gas	0.984	5.708	6911	3.69	1	98.4	70	130	
Pb	208	1	No Gas	2.202	4.037	142892	1.20	2	110.1	70	130	
Se	82	1	No Gas	4.627	10.783	1812	8.24	5	92.5	70	130	
Mo	98	1	No Gas	1.837	10.684	47616	6.68	2	91.9	70	130	
Ba	137	1	No Gas	5.050	1.016	41954	2.05	5	101.0	70	130	
Tl	205	1	No Gas	1.027	5.946	42804	4.29	1	102.7	70	130	
U	238	1	No Gas	5.057	3.278	260762	1.18	5	101.1	70	130	
Na	23	2	he	105.890	20.966	512463	1.89	100	105.9	70	130	
Mg	24	2	he	105.193	16.306	229184	1.36	100	105.2	70	130	
K	39	2	he	121.763	25.859	614153	1.48	100	121.8	70	130	
Se	82	3	HeHe	4.972	3.369	226	5.44	5	99.4	70	130	
Fe	57	3	HeHe	57.454	7.586	6316	3.96	50	114.9	70	130	
Cd	114	1	No Gas	1.066	4.748	15611	5.75	1	106.6	70	130	
Ca	44	1	No Gas	96.240	3.208	198569	0.33	100	96.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9869984	2.25	9248342	106.72	70	120	
Sc	45	2	he	1631911	14.38	1744643	93.54	70	120	
Ge	72	1	No Gas	994170	2.25	1012122	98.23	70	120	
In	115	1	No Gas	6033756	1.88	5760110	104.75	70	120	
Tb	159	1	No Gas	7207597	3.16	6952439	103.67	70	120	
Bi	209	1	No Gas	3955991	0.95	3846945	102.83	70	120	
Sc	45	3	HeHe	171360	3.89	171212	100.09	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	012ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:57:04-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.069	100.9	25883	12.1	9	
Cr	52	1	No Gas	0.875	8.4	76952	2.5	4	
Mn	55	1	No Gas	1.383	2.6	118312	0.7	25	
Co	59	1	No Gas	1.318	3.3	68913	1.6	1	ICSA Main CR1 Failed
Ni	60	1	No Gas	1.779	4.8	21270	2.6	5	
Cu	63	1	No Gas	0.725	3.3	32914	3.8	5	
Ag	107	1	No Gas	0.313	6.8	8914	6.7	9	
Al	27	1	No Gas	91092.374	3.8	3054773805	1.8	110000	
Sn	118	1	No Gas	0.381	43.5	13102	21.5	25	
Tl	47	1	No Gas	1987.139	0.6	7420386	1.0	2200	
Zn	66	1	No Gas	2.478	3.1	18252	2.4	5	
As	75	3	HeHe	0.535	10.2	302	9.2	9	
As	75	1	No Gas	0.328	184.1	30434	12.4	9	
Sb	121	1	No Gas	1.027	22.9	25595	20.3	4	
Hg	201	1	No Gas	0.026	17.3	87	12.6	0.04	
Be	9	1	No Gas	0.007	19.3	74	15.0	1	
Pb	208	1	No Gas	0.345	3.3	36343	1.4	4	
Se	82	1	No Gas	0.301	148.1	180	92.7	25	
Mo	98	1	No Gas	2043.986	1.8	36184089	1.1	2200	
Ba	137	1	No Gas	0.145	9.5	1200	7.9	25	
Tl	205	1	No Gas	0.023	23.7	967	22.2	1	
U	238	1	No Gas	0.046	31.9	2571	28.8	25	
Na	23	2	he	87602.701	1.2	402491965	0.7	110000	
Mg	24	2	he	89786.071	1.9	231657739	1.2	110000	
K	39	2	he	87734.642	0.9	333588053	1.0	110000	
Se	82	3	HeHe	-0.198	-387.9	115	13.9	25	
Fe	57	3	HeHe	96996.857	1.0	11353561	1.6	110000	
Cd	114	1	No Gas	0.899	3.4	12232	3.3	1	
Ca	44	1	No Gas	87923.254	1.3	117159318	0.7	110000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9740728	2.02	9248342	105.32	70	120	
Sc	45	2	he	1905649	1.54	1744643	109.23	70	120	
Ge	72	1	No Gas	1000038	0.21	1012122	98.81	70	120	
In	115	1	No Gas	5579503	1.14	5760110	96.86	70	120	
Tb	159	1	No Gas	6938038	0.55	6952439	99.79	70	120	
Bi	209	1	No Gas	3590926	0.94	3846945	93.34	70	120	
Sc	45	3	HeHe	182138	2.50	171212	106.38	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	013ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T09:01:05-04:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	39.555	0.949	2122524	1.39	40	98.9	80	120		
Cr	52	1	No Gas	18.427	0.839	903873	1.04	20	92.1	80	120		
Mn	55	1	No Gas	19.453	2.088	1169466	2.29	20	97.3	80	120		
Co	59	1	No Gas	36.923	0.752	1935255	0.22	40	92.3	80	120		
Ni	60	1	No Gas	34.784	2.562	408157	2.45	40	87.0	80	120		
Cu	63	1	No Gas	17.329	2.085	505390	1.51	20	86.6	80	120		
Ag	107	1	No Gas	18.509	0.538	533985	0.74	20	92.5	80	120		
Al	27	1	No Gas	88937.217	3.298	2997864948	2.88	100000	88.9	90	110	ICSB Main CR1 Failed	OK
Tl	47	1	No Gas	1955.453	0.846	7443662	1.43	2000	97.8	90	110		
Zn	66	1	No Gas	20.410	1.049	143463	0.58	20	102.1	80	120		
As	75	3	HeHe	19.195	1.701	9605	1.97	20	96.0	80	120		
As	75	1	No Gas	19.233	2.359	163911	1.52	20	96.2	80	120		
Sb	121	1	No Gas	0.677	15.156	18166	12.43	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Hg	201	1	No Gas	0.014	10.238	59	5.21	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Be	9	1	No Gas	0.004	51.279	54	29.63	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Pb	208	1	No Gas	0.419	3.277	41674	2.51	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Se	82	1	No Gas	19.234	3.486	7267	3.98	20	96.2	80	120		
Mo	98	1	No Gas	2015.635	1.722	36377624	2.12	2000	100.8	90	110		
Ba	137	1	No Gas	0.185	5.927	1540	6.19	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Tl	205	1	No Gas	0.020	8.888	885	7.14	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
U	238	1	No Gas	0.022	23.670	1433	20.67	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Na	23	2	he	86138.637	1.876	394590809	1.24	100000	86.1	90	110	ICSB Main CR1 Failed	OK
Mg	24	2	he	88611.427	1.607	227968124	1.45	100000	88.6	90	110	ICSB Main CR1 Failed	OK
K	39	2	he	87486.841	1.339	331652461	0.63	100000	87.5	90	110	ICSB Main CR1 Failed	OK
Se	82	3	HeHe	18.828	6.911	589	4.63	20	94.1	80	120		
Fe	57	3	HeHe	93298.201	1.093	11185401	0.25	100000	93.3	90	110		
Cd	114	1	No Gas	9.576	2.163	129339	1.56	10	95.8	80	120		
Ca	44	1	No Gas	86786.790	1.704	116213412	1.63	100000	86.8	90	110	ICSB Main CR1 Failed	OK

80-120

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9786977	0.53	9248342	105.82	70	120	
Sc	45	2	he	1899930	0.70	1744643	108.90	70	120	
Ge	72	1	No Gas	1032635	1.10	1012122	102.03	70	120	
In	115	1	No Gas	5687437	0.80	5760110	98.74	70	120	
Tb	159	1	No Gas	7167544	1.87	6952439	103.09	70	120	
Bi	209	1	No Gas	3604212	0.69	3846945	93.69	70	120	
Sc	45	3	HeHe	186537	0.98	171212	108.95	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	069_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T12:52:37-04:00
Sample Type	CCB
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	-0.268	-37.0	8099	65.8	9	
Cr	52	1	No Gas	-0.097	-9.1	31325	0.1	4	
Mn	55	1	No Gas	0.391	2.4	60756	2.0	25	
Co	59	1	No Gas	0.006	48.8	496	31.4	1	
Ni	60	1	No Gas	0.004	231.7	580	17.9	25	
Cu	63	1	No Gas	-0.240	-2.4	5556	2.2	25	
Sr	88	1	No Gas	0.005	20.9	556	12.2	25	
Ag	107	1	No Gas	0.016	12.3	567	11.8	9	
Al	27	1	No Gas	0.290	3.6	20535	2.9	1000000	
Sn	118	1	No Gas	1.870	30.3	40746	24.7	25	
Tl	47	1	No Gas	0.358	43.4	2774	22.0	10000	
Zn	66	1	No Gas	-0.001	-1496.9	1037	7.8	25	
As	75	3	HeHe	0.655	11.0	347	9.2	9	
As	75	1	No Gas	0.253	40.2	29856	1.2	9	
Sb	121	1	No Gas	1.713	13.4	43425	12.3	4	
Hg	201	1	No Gas	0.018	33.2	71	21.0	0.04	
Be	9	1	No Gas	0.011	14.7	102	10.2	1	
Pb	208	1	No Gas	-0.172	-9.1	8432	8.7	4	
Se	82	1	No Gas	1.172	58.6	501	50.6	25	
Mo	98	1	No Gas	0.768	50.8	26701	27.2	10000	
Ba	137	1	No Gas	0.008	29.9	160	12.5	25	
Tl	205	1	No Gas	0.026	6.5	1148	7.4	1	
U	238	1	No Gas	0.311	21.6	16369	22.8	25	
Na	23	2	he	0.918	30.4	122432	1.8	2500000	
Mg	24	2	he	0.013	131.9	430	11.9	2500000	
K	39	2	he	-0.778	-145.2	255691	1.0	5000000	
Se	82	3	HeHe	0.016	3482.2	116	11.4	25	
Fe	57	3	HeHe	17.138	10.1	1934	10.5	2500000	
Cd	114	1	No Gas	0.073	30.3	1390	22.0	1	
Ca	44	1	No Gas	-9.123	-10.7	55522	3.2	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9710532	1.19	9248342	105.00	70	120	
Sc	45	2	he	1852940	1.95	1744643	106.21	70	120	
Ge	72	1	No Gas	1020074	1.24	1012122	100.79	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	5931519	1.02	5760110	102.98	70	120	
Tb	159	1	No Gas	7198771	1.74	6952439	103.54	70	120	
Bi	209	1	No Gas	3879305	2.29	3846945	100.84	70	120	
Sc	45	3	HeHe	175486	0.64	171212	102.50	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	070LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:00:08-04:00
Sample Type	LLCCV
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	1.754	4.471	115299	2.25	2	87.7	70	130	
Cr	52	1	No Gas	1.880	4.742	124463	0.87	2	94.0	70	130	
Mn	55	1	No Gas	5.282	2.716	345009	0.11	5	105.6	70	130	
Co	59	1	No Gas	4.931	2.917	258153	1.34	5	98.6	70	130	
Ni	60	1	No Gas	4.972	2.213	58712	1.42	5	99.4	70	130	
Cu	63	1	No Gas	4.664	2.194	144900	0.74	5	93.3	70	130	
Sr	88	1	No Gas	4.584	2.520	308189	0.54	5	91.7	70	130	
Ag	107	1	No Gas	2.050	1.881	61636	0.64	2	102.5	70	130	
Al	27	1	No Gas	84.005	1.384	2839190	2.62	80	105.0	70	130	
Sn	118	1	No Gas	2.145	13.963	45612	10.26	2	107.3	70	130	
Tl	47	1	No Gas	4.740	0.190	20133	1.46	5	94.8	70	130	
Zn	66	1	No Gas	5.307	3.168	38014	0.85	5	106.1	70	130	
As	75	3	HeHe	3.086	4.381	1453	2.98	3	102.9	70	130	
As	75	1	No Gas	3.321	12.504	51624	3.62	3	110.7	70	130	
Sb	121	1	No Gas	2.499	5.689	61863	3.88	2	124.9	70	130	
Hg	201	1	No Gas	0.185	7.895	504	8.10	0.2	92.5	70	130	
Be	9	1	No Gas	0.948	1.752	6599	2.74	1	94.8	70	130	
Pb	208	1	No Gas	1.846	2.049	121306	1.29	2	92.3	70	130	
Se	82	1	No Gas	3.992	21.021	1558	19.29	5	79.8	70	130	
Mo	98	1	No Gas	1.775	7.478	45561	3.98	2	88.8	70	130	
Ba	137	1	No Gas	5.025	1.503	40975	3.01	5	100.5	70	130	
Tl	205	1	No Gas	0.968	1.094	39863	2.40	1	96.8	70	130	
U	238	1	No Gas	5.112	1.361	260510	0.28	5	102.2	70	130	
Na	23	2	he	90.605	0.630	525217	0.72	100	90.6	70	130	
Mg	24	2	he	92.476	1.448	233410	1.81	100	92.5	70	130	
K	39	2	he	97.706	2.901	622130	1.19	100	97.7	70	130	
Se	82	3	HeHe	4.870	11.736	224	8.36	5	97.4	70	130	
Fe	57	3	HeHe	56.379	5.850	6220	6.52	50	112.8	70	130	
Cd	114	1	No Gas	0.992	2.343	14277	1.58	1	99.2	70	130	
Ca	44	1	No Gas	87.034	5.532	184308	1.11	100	87.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9774994	2.54	9248342	105.69	70	120	
Sc	45	2	he	1860682	0.52	1744643	106.65	70	120	
Ge	72	1	No Gas	1023845	1.17	1012122	101.16	70	120	
In	115	1	No Gas	5921225	1.58	5760110	102.80	70	120	
Tb	159	1	No Gas	7118830	1.32	6952439	102.39	70	120	
Bi	209	1	No Gas	3884486	0.47	3846945	100.98	70	120	
Sc	45	3	HeHe	171623	2.48	171212	100.24	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	071_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:04:04-04:00
Sample Type	CCV
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	104.313	1.131	5608981	0.43	100	104.3	90	110	
Cr	52	1	No Gas	102.136	1.366	4888446	2.06	100	102.1	90	110	
Mn	55	1	No Gas	102.979	2.280	6078469	2.96	100	103.0	90	110	
Co	59	1	No Gas	99.751	0.652	5274049	1.36	100	99.8	90	110	
Ni	60	1	No Gas	97.719	0.452	1155685	0.26	100	97.7	90	110	
Cu	63	1	No Gas	100.944	0.199	2909426	0.52	100	100.9	90	110	
Sr	88	1	No Gas	102.149	0.766	6934255	0.76	100	102.1	90	110	
Ag	107	1	No Gas	103.306	1.699	3129874	1.21	100	103.3	90	110	
Al	27	1	No Gas	104.516	0.749	3565265	1.39	100	104.5	90	110	
Sn	118	1	No Gas	103.323	0.938	1883441	1.16	100	103.3	90	110	
Tl	47	1	No Gas	93.027	0.952	373206	0.46	100	93.0	90	110	
Zn	66	1	No Gas	98.262	0.557	692676	0.15	100	98.3	90	110	
As	75	3	HeHe	97.916	1.301	45707	1.09	100	97.9	90	110	
As	75	1	No Gas	95.677	1.241	709064	1.24	100	95.7	90	110	
Sb	121	1	No Gas	93.821	1.555	2236111	1.20	100	93.8	90	110	
Hg	201	1	No Gas	2.002	1.904	5256	0.62	2	100.1	90	110	
Be	9	1	No Gas	90.950	0.809	637488	0.12	100	91.0	90	110	
Pb	208	1	No Gas	99.521	1.552	5620664	0.39	100	99.5	90	110	
Se	82	1	No Gas	99.092	1.481	37475	0.96	100	99.1	90	110	
Mo	98	1	No Gas	102.963	0.277	1963362	0.37	100	103.0	90	110	
Ba	137	1	No Gas	98.494	1.591	808278	1.25	100	98.5	90	110	
Tl	205	1	No Gas	98.661	1.136	4080533	1.23	100	98.7	90	110	
U	238	1	No Gas	113.568	1.307	5813068	0.19	100	113.6	90	110	CCV Main CR1 Failed
Na	23	2	he	986.366	1.543	4498375	1.47	1000	98.6	90	110	
Mg	24	2	he	997.598	2.433	2488982	1.40	1000	99.8	90	110	
K	39	2	he	985.482	1.772	3877099	1.13	1000	98.5	90	110	
Se	82	3	HeHe	96.509	2.035	2351	0.52	100	96.5	90	110	
Fe	57	3	HeHe	1033.798	3.458	116045	3.65	1000	103.4	90	110	
Cd	114	1	No Gas	96.467	1.302	1365187	1.39	100	96.5	90	110	
Ca	44	1	No Gas	1035.556	0.218	1466786	0.86	1000	103.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9872611	0.70	9248342	106.75	70	120	
Sc	45	2	he	1842695	2.01	1744643	105.62	70	120	
Ge	72	1	No Gas	1021483	1.09	1012122	100.92	70	120	
In	115	1	No Gas	5973461	0.49	5760110	103.70	70	120	
Tb	159	1	No Gas	7158631	1.29	6952439	102.97	70	120	
Bi	209	1	No Gas	3938738	1.43	3846945	102.39	70	120	
Sc	45	3	HeHe	174651	1.66	171212	102.01	70	120	

Sample Report

Sample Table

Sample Name	1017577
Data File Name	072SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:08:28-04:00
Sample Type	Sample
Dilution	1
Comment	37932 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3407

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	-0.114	-0.114	-32.21	15711	0.00	1000	
Cr	52	1	No Gas	0.411	0.411	11.32	53463	0.00	1000	
Mn	55	1	No Gas	0.438	0.438	9.47	61599	0.00	1000	
Co	59	1	No Gas	0.133	0.133	6.71	6887	0.00	1000	
Ni	60	1	No Gas	0.244	0.244	8.05	3270	0.01	1000	
Cu	63	1	No Gas	0.036	0.036	11.00	12954	0.00	1000	
Sr	88	1	No Gas	0.472	0.472	1.37	30785	0.00	1000	
Ag	107	1	No Gas	0.040	0.040	7.13	1241	0.00	1000	
Al	27	1	No Gas	5.130	5.130	2.50	177189	0.00	100000	
Sn	118	1	No Gas	3.485	3.485	29.50	68180	0.01	100	
Ti	47	1	No Gas	0.806	0.806	41.51	4439	0.02	2000	
Zn	66	1	No Gas	1.998	1.998	4.89	14439	0.01	1000	
As	75	3	HeHe	0.973	0.973	7.76	488	0.20	1000	
As	75	1	No Gas	0.768	0.768	66.95	32528	0.00	1000	
Sb	121	1	No Gas	3.838	3.838	18.88	91400	0.00	100	
Hg	201	1	No Gas	0.032	0.032	30.54	105	0.03	4	
Be	9	1	No Gas	0.036	0.036	9.60	266	0.01	1000	
Pb	208	1	No Gas	-0.099	-0.099	-3.32	12374	0.00	1000	
Se	82	1	No Gas	-0.159	-0.159	-532.03	12	-1.34	1000	
Mo	98	1	No Gas	2.083	2.083	37.50	50192	0.00	2000	
Ba	137	1	No Gas	0.571	0.571	5.98	4648	0.01	1000	
Tl	205	1	No Gas	0.038	0.038	11.19	1593	0.00	1000	
U	238	1	No Gas	0.387	0.387	21.31	19877	0.00	1000	
Na	23	2	he	9.645	9.645	8.89	155896	0.01	100000	
Mg	24	2	he	2.015	2.015	0.57	5268	0.04	100000	
K	39	2	he	0.533	0.533	57.88	251711	0.00	100000	
Se	82	3	HeHe	0.087	0.087	577.76	116	0.08	1000	
Fe	57	3	HeHe	34.343	34.343	5.48	3808	0.90	100000	
Cd	114	1	No Gas	0.146	0.146	12.18	2367	0.01	1000	
Ca	44	1	No Gas	8.619	8.619	34.24	76728	0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9428621	2.04	9248342	101.95	70	120	
Sc	45	2	he	1789903	1.78	1744643	102.59	70	120	

Ge	72	1	No Gas	1027614	0.97	1012122	101.53	70	120	
In	115	1	No Gas	5797312	1.33	5760110	100.65	70	120	
Tb	159	1	No Gas	7087372	1.83	6952439	101.94	70	120	
Bi	209	1	No Gas	3870538	0.32	3846945	100.61	70	120	
Sc	45	3	HeHe	172686	2.80	171212	100.86	70	120	

Sample Report

Sample Table

Sample Name	1017578
Data File Name	073SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:29:18-04:00
Sample Type	Sample
Dilution	1
Comment	37932 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass
Vial	3408

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	195.626	195.626	1.45	10255040	0.00	1000	
Cr	52	1	No Gas	197.781	197.781	1.28	9211369	0.00	1000	
Mn	55	1	No Gas	198.723	198.723	0.53	11419837	0.00	1000	
Co	59	1	No Gas	193.288	193.288	1.47	9980419	0.00	1000	
Ni	60	1	No Gas	195.137	195.137	0.80	2253498	0.01	1000	
Cu	63	1	No Gas	186.807	186.807	1.22	5248119	0.00	1000	
Sr	88	1	No Gas	178.341	178.341	1.31	11823812	0.00	1000	
Ag	107	1	No Gas	100.308	100.308	1.19	2947870	0.00	1000	
Al	27	1	No Gas	1967.628	1967.628	0.62	65362099	0.00	100000	
Sn	118	1	No Gas	192.439	192.439	2.11	3396229	0.01	100	>LDR
Ti	47	1	No Gas	185.301	185.301	1.70	719724	0.03	2000	
Zn	66	1	No Gas	179.864	179.864	0.71	1237495	0.01	1000	
As	75	3	HeHe	185.172	185.172	2.09	86085	0.22	1000	
As	75	1	No Gas	179.436	179.436	0.49	1274368	0.01	1000	
Sb	121	1	No Gas	196.319	196.319	1.71	4535236	0.00	100	>LDR
Hg	201	1	No Gas	1.871	1.871	4.79	4856	0.04	4	
Be	9	1	No Gas	190.758	190.758	1.79	1305919	0.01	1000	
Pb	208	1	No Gas	193.197	193.197	1.07	10776459	0.00	1000	
Se	82	1	No Gas	185.762	185.762	1.67	68560	0.27	1000	
Mo	98	1	No Gas	201.306	201.306	1.97	3711493	0.01	2000	
Ba	137	1	No Gas	1877.666	1877.666	1.23	14945024	0.01	1000	>LDR
Tl	205	1	No Gas	189.238	189.238	2.45	7739469	0.00	1000	
U	238	1	No Gas	0.039	0.039	22.80	2267	0.00	1000	
Na	23	2	he	1918.627	1918.627	0.94	8433710	0.02	100000	
Mg	24	2	he	1928.328	1928.328	0.90	4697058	0.04	100000	
K	39	2	he	1888.571	1888.571	1.46	7023621	0.03	100000	
Se	82	3	HeHe	179.396	179.396	3.08	4256	4.22	1000	
Fe	57	3	HeHe	2035.332	2035.332	1.98	227618	0.89	100000	
Cd	114	1	No Gas	190.082	190.082	0.77	2608906	0.01	1000	
Ca	44	1	No Gas	1973.856	1973.856	1.44	2669660	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9642395	0.42	9248342	104.26	70	120	
Sc	45	2	he	1798775	1.08	1744643	103.10	70	120	
Ge	72	1	No Gas	1032842	0.99	1012122	102.05	70	120	

In	115	1	No Gas	5794529	1.49	5760110	100.60	70	120	
Tb	159	1	No Gas	7081088	2.26	6952439	101.85	70	120	
Bi	209	1	No Gas	3817907	1.07	3846945	99.25	70	120	
Sc	45	3	HeHe	174023	1.38	171212	101.64	70	120	

Sample Report

Sample Table

Sample Name	9980394006
Data File Name	077SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:44:42-04:00
Sample Type	Sample
Dilution	1
Comment	37932 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3412

PS sample

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	5.769	5.769	6.22	326807	0.00	1000	
Cr	52	1	No Gas	2.262	2.262	1.00	141828	0.00	1000	
Mn	55	1	No Gas	697.263	697.263	0.44	40338035	0.00	1000	
Co	59	1	No Gas	0.660	0.660	1.17	34565	0.00	1000	
Ni	60	1	No Gas	1.166	1.166	2.39	14126	0.01	1000	
Cu	63	1	No Gas	4.857	4.857	1.25	149728	0.00	1000	
Sr	88	1	No Gas	33.587	33.587	3.09	2247110	0.00	1000	
Ag	107	1	No Gas	0.025	0.025	21.93	830	0.00	1000	
Al	27	1	No Gas	2101.852	2101.852	1.89	70450379	0.00	100000	
Sn	118	1	No Gas	0.352	0.352	53.04	13654	0.00	100	
Ti	47	1	No Gas	14.302	14.302	1.20	59260	0.02	2000	
Zn	66	1	No Gas	67.641	67.641	1.33	470259	0.01	1000	
As	75	3	HeHe	2.975	2.975	6.25	1413	0.21	1000	
As	75	1	No Gas	2.442	2.442	19.51	45279	0.01	1000	
Sb	121	1	No Gas	1.269	1.269	17.82	33580	0.00	100	
Hg	201	1	No Gas	0.046	0.046	9.85	147	0.03	4	
Be	9	1	No Gas	0.068	0.068	1.08	493	0.01	1000	
Pb	208	1	No Gas	2.279	2.279	1.84	150674	0.00	1000	
Se	82	1	No Gas	1.072	1.072	37.92	466	0.23	1000	
Mo	98	1	No Gas	0.903	0.903	46.52	29801	0.00	2000	
Ba	137	1	No Gas	56.032	56.032	0.99	465603	0.01	1000	
Tl	205	1	No Gas	0.030	0.030	12.98	1348	0.00	1000	
U	238	1	No Gas	0.215	0.215	1.67	11638	0.00	1000	
Na	23	2	he	3440.369	3440.369	0.90	15233224	0.02	100000	
Mg	24	2	he	1846.529	1846.529	2.11	4558188	0.04	100000	
K	39	2	he	745.167	745.167	0.59	2962561	0.03	100000	
Se	82	3	HeHe	0.815	0.815	38.39	133	0.61	1000	
Fe	57	3	HeHe	15531.417	15531.417	1.77	1726325	0.90	100000	
Cd	114	1	No Gas	0.074	0.074	13.29	1443	0.01	1000	
Ca	44	1	No Gas	7508.433	7508.433	0.85	10057887	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9730286	0.59	9248342	105.21	70	120	
Sc	45	2	he	1822820	0.47	1744643	104.48	70	120	
Ge	72	1	No Gas	1063789	1.01	1012122	105.10	70	120	

In	115	1	No Gas	6048165	0.88	5760110	105.00	70	120	
Tb	159	1	No Gas	7369257	0.35	6952439	106.00	70	120	
Bi	209	1	No Gas	3991833	0.71	3846945	103.77	70	120	
Sc	45	3	HeHe	172974	2.20	171212	101.03	70	120	

Sample Report

Sample Table

Sample Name	9980394006L
Data File Name	078SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:48:34-04:00
Sample Type	Sample
Dilution	1
Comment	37932 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3501

PS
Sample

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	1.977	1.977	7.37	126393	0.00	1000	
Cr	52	1	No Gas	0.442	0.442	4.97	56540	0.00	1000	
Mn	55	1	No Gas	174.506	174.506	0.98	10110093	0.00	1000	
Co	59	1	No Gas	0.166	0.166	3.87	8780	0.00	1000	
Ni	60	1	No Gas	0.313	0.313	10.03	4171	0.01	1000	
Cu	63	1	No Gas	1.110	1.110	0.85	43680	0.00	1000	
Sr	88	1	No Gas	7.994	7.994	1.16	534255	0.00	1000	
Ag	107	1	No Gas	0.012	0.012	24.39	452	0.00	1000	
Al	27	1	No Gas	531.623	531.623	1.68	17802747	0.00	100000	
Sn	118	1	No Gas	-0.075	-0.075	-77.69	5864	0.00	100	
Ti	47	1	No Gas	3.429	3.429	1.39	15362	0.02	2000	
Zn	66	1	No Gas	17.620	17.620	1.29	123108	0.01	1000	
As	75	3	HeHe	0.692	0.692	9.08	358	0.19	1000	
As	75	1	No Gas	0.818	0.818	77.50	33818	0.00	1000	
Sb	121	1	No Gas	0.214	0.214	33.60	8214	0.00	100	
Hg	201	1	No Gas	0.028	0.028	23.26	99	0.03	4	
Be	9	1	No Gas	0.022	0.022	2.12	177	0.01	1000	
Pb	208	1	No Gas	0.415	0.415	3.61	42965	0.00	1000	
Se	82	1	No Gas	0.143	0.143	209.39	120	0.12	1000	
Mo	98	1	No Gas	-0.148	-0.148	-102.28	9718	0.00	2000	
Ba	137	1	No Gas	13.827	13.827	0.48	115770	0.01	1000	
Tl	205	1	No Gas	0.009	0.009	9.68	441	0.00	1000	
U	238	1	No Gas	0.048	0.048	5.24	2874	0.00	1000	
Na	23	2	he	872.744	872.744	1.66	4044207	0.02	100000	
Mg	24	2	he	419.128	419.128	2.47	1059232	0.04	100000	
K	39	2	he	173.392	173.392	1.04	905468	0.02	100000	
Se	82	3	HeHe	-0.975	-0.975	-61.83	91	-1.07	1000	
Fe	57	3	HeHe	3626.681	3626.681	2.77	401445	0.90	100000	
Cd	114	1	No Gas	0.021	0.021	8.62	683	0.00	1000	
Ca	44	1	No Gas	1888.298	1888.298	2.18	2576466	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9717094	0.80	9248342	105.07	70	120	
Sc	45	2	he	1865917	1.03	1744643	106.95	70	120	
Ge	72	1	No Gas	1045267	0.41	1012122	103.27	70	120	

In	115	1	No Gas	6089880	0.85	5760110	105.73	70	120	
Tb	159	1	No Gas	7426685	0.98	6952439	106.82	70	120	
Bi	209	1	No Gas	4008197	1.41	3846945	104.19	70	120	
Sc	45	3	HeHe	172278	1.95	171212	100.62	70	120	

Sample Report

Sample Table

Sample Name	9980394014
Data File Name	079SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:52:28-04:00
Sample Type	Sample
Dilution	1
Comment	37932 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3502

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	7.243	7.243	2.92	399997	0.00	1000	
Cr	52	1	No Gas	0.857	0.857	12.27	75141	0.00	1000	
Mn	55	1	No Gas	0.735	0.735	11.84	79874	0.00	1000	
Co	59	1	No Gas	0.074	0.074	7.44	3993	0.00	1000	
Ni	60	1	No Gas	0.427	0.427	7.83	5444	0.01	1000	
Cu	63	1	No Gas	0.875	0.875	4.95	36676	0.00	1000	
Sr	88	1	No Gas	201.433	201.433	3.28	13323005	0.00	1000	
Ag	107	1	No Gas	0.020	0.020	24.02	682	0.00	1000	
Al	27	1	No Gas	7.420	7.420	5.81	256434	0.00	100000	
Sn	118	1	No Gas	0.024	0.024	444.55	7661	0.00	100	
Ti	47	1	No Gas	0.271	0.271	30.56	2481	0.01	2000	
Zn	66	1	No Gas	0.923	0.923	4.25	7368	0.01	1000	
As	75	3	HeHe	0.664	0.664	15.52	340	0.20	1000	
As	75	1	No Gas	0.696	0.696	19.67	32657	0.00	1000	
Sb	121	1	No Gas	0.463	0.463	23.36	14185	0.00	100	
Hg	201	1	No Gas	0.013	0.013	19.37	59	0.02	4	
Be	9	1	No Gas	0.009	0.009	10.14	87	0.01	1000	
Pb	208	1	No Gas	-0.126	-0.126	-2.49	11366	0.00	1000	
Se	82	1	No Gas	1.209	1.209	34.20	515	0.23	1000	
Mo	98	1	No Gas	11.962	11.962	4.19	242125	0.00	2000	
Ba	137	1	No Gas	5.304	5.304	5.31	44183	0.01	1000	
Tl	205	1	No Gas	0.025	0.025	11.40	1130	0.00	1000	
U	238	1	No Gas	0.625	0.625	3.20	33460	0.00	1000	
Na	23	2	he	5961.342	5961.342	2.82	26101538	0.02	100000	
Mg	24	2	he	3652.511	3652.511	3.59	8942880	0.04	100000	
K	39	2	he	361.458	361.458	2.39	1555938	0.02	100000	
Se	82	3	HeHe	0.660	0.660	112.75	127	0.52	1000	
Fe	57	3	HeHe	43.829	43.829	11.43	4790	0.92	100000	
Cd	114	1	No Gas	0.043	0.043	12.22	993	0.00	1000	
Ca	44	1	No Gas	51180.262	51180.262	3.68	67383474	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9626389	3.54	9248342	104.09	70	120	
Sc	45	2	he	1809509	3.43	1744643	103.72	70	120	
Ge	72	1	No Gas	1038854	1.32	1012122	102.64	70	120	

In	115	1	No Gas	6056405	3.56	5760110	105.14	70	120	
Tb	159	1	No Gas	7426190	1.68	6952439	106.81	70	120	
Bi	209	1	No Gas	3993273	2.47	3846945	103.80	70	120	
Sc	45	3	HeHe	170943	7.38	171212	99.84	70	120	

Sample Report

Sample Table

Sample Name	9980394006PS
Data File Name	080SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:59:58-04:00
Sample Type	Sample
Dilution	1
Comment	37932 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass
Vial	3503

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	213.875	213.875	2.61	11328977	0.00	1000	
Cr	52	1	No Gas	213.921	213.921	1.87	10064413	0.00	1000	
Mn	55	1	No Gas	895.988	895.988	2.12	51883292	0.00	1000	
Co	59	1	No Gas	207.915	207.915	1.57	10846847	0.00	1000	
Ni	60	1	No Gas	208.316	208.316	2.69	2430268	0.01	1000	
Cu	63	1	No Gas	209.796	209.796	2.10	5953174	0.00	1000	
Sr	88	1	No Gas	33.368	33.368	2.53	2235173	0.00	1000	
Ag	107	1	No Gas	207.319	207.319	1.12	6278355	0.00	1000	
Al	27	1	No Gas	2292.703	2292.703	0.35	76953752	0.00	100000	
Sn	118	1	No Gas	0.175	0.175	70.86	10278	0.00	100	
Ti	47	1	No Gas	14.193	14.193	3.64	58055	0.02	2000	
Zn	66	1	No Gas	271.663	271.663	1.40	1887903	0.01	1000	
As	75	3	HeHe	236.041	236.041	9.27	97138	0.24	1000	
As	75	1	No Gas	209.554	209.554	1.43	1498933	0.01	1000	
Sb	121	1	No Gas	207.141	207.141	1.75	4930475	0.00	100	>LDR
Hg	201	1	No Gas	0.048	0.048	5.25	153	0.03	4	
Be	9	1	No Gas	201.289	201.289	1.32	1392327	0.01	1000	
Pb	208	1	No Gas	214.214	214.214	3.34	12299993	0.00	1000	
Se	82	1	No Gas	207.241	207.241	0.69	77277	0.27	1000	
Mo	98	1	No Gas	222.260	222.260	1.23	4221687	0.01	2000	
Ba	137	1	No Gas	275.299	275.299	1.09	2257754	0.01	1000	
Tl	205	1	No Gas	209.987	209.987	3.21	8844253	0.00	1000	
U	238	1	No Gas	220.999	220.999	3.77	11518501	0.00	1000	
Na	23	2	he	7248.510	7248.510	8.02	24156973	0.03	100000	
Mg	24	2	he	5089.002	5089.002	6.91	9498042	0.05	100000	
K	39	2	he	3584.661	3584.661	6.53	10045132	0.04	100000	
Se	82	3	HeHe	230.220	230.220	10.83	4802	4.79	1000	
Fe	57	3	HeHe	19887.551	19887.551	10.12	1968039	1.01	100000	
Cd	114	1	No Gas	199.578	199.578	1.65	2822482	0.01	1000	
Ca	44	1	No Gas	9299.192	9299.192	0.37	12457129	0.07	100000	

95%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9743276	1.39	9248342	105.35	70	120	
Sc	45	2	he	1382772	7.15	1744643	79.26	70	120	
Ge	72	1	No Gas	1033345	1.01	1012122	102.10	70	120	

In	115	1	No Gas	5970174	0.79	5760110	103.65	70	120	
Tb	159	1	No Gas	7294650	3.28	6952439	104.92	70	120	
Bi	209	1	No Gas	3905364	0.62	3846945	101.52	70	120	
Sc	45	3	HeHe	154792	7.98	171212	90.41	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	082_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T14:13:31-04:00
Sample Type	CCB
Dilution	1
Comment	37932 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.302	25.7	37553	10.4	9	
Cr	52	1	No Gas	-0.096	-28.5	30913	2.7	4	
Mn	55	1	No Gas	0.331	17.5	56508	5.5	25	
Co	59	1	No Gas	0.006	42.1	489	26.2	1	
Ni	60	1	No Gas	0.425	3.7	5401	1.9	25	
Cu	63	1	No Gas	-0.176	-2.1	7263	3.2	25	
Sr	88	1	No Gas	0.007	22.8	659	17.7	25	
Ag	107	1	No Gas	0.022	12.5	756	13.1	9	
Al	27	1	No Gas	3.656	2.0	131288	2.9	1000000	
Sn	118	1	No Gas	1.785	32.3	39732	26.0	25	
Ti	47	1	No Gas	0.283	56.5	2509	25.4	10000	
Zn	66	1	No Gas	0.079	30.5	1573	12.7	25	
As	75	3	HeHe	0.780	7.0	401	7.4	9	
As	75	1	No Gas	0.212	49.6	29156	0.9	9	
Sb	121	1	No Gas	1.886	17.5	48112	16.1	4	
Hg	201	1	No Gas	0.018	25.1	71	15.6	0.04	
Be	9	1	No Gas	0.014	19.7	118	13.9	1	
Pb	208	1	No Gas	-0.105	-16.7	12108	6.3	4	
Se	82	1	No Gas	0.164	369.4	124	175.8	25	
Mo	98	1	No Gas	0.838	48.5	28371	26.6	10000	
Ba	137	1	No Gas	0.018	19.7	243	10.3	25	
Tl	205	1	No Gas	0.026	4.0	1111	5.2	1	
U	238	1	No Gas	0.377	20.2	19562	21.6	25	
Na	23	2	he	-0.568	-126.9	113990	2.7	2500000	
Mg	24	2	he	0.071	44.3	567	13.6	2500000	
K	39	2	he	-3.377	-28.6	242296	1.8	5000000	
Se	82	3	HeHe	0.818	45.3	133	5.4	25	
Fe	57	3	HeHe	23.653	2.7	2637	3.4	2500000	
Cd	114	1	No Gas	0.073	34.8	1407	24.6	1	
Ca	44	1	No Gas	-8.848	-4.2	55098	1.3	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9575561	2.24	9248342	103.54	70	120	
Sc	45	2	he	1823982	0.49	1744643	104.55	70	120	
Ge	72	1	No Gas	1030800	0.62	1012122	101.85	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	6007535	1.77	5760110	104.30	70	120	
Tb	159	1	No Gas	7132871	1.72	6952439	102.60	70	120	
Bi	209	1	No Gas	3949172	0.63	3846945	102.66	70	120	
Sc	45	3	HeHe	173458	1.12	171212	101.31	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	083LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T14:17:26-04:00
Sample Type	LLCCV
Dilution	1
Comment	37932 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	2.346	6.718	135419	7.68	2	117.3	70	130		
Cr	52	1	No Gas	2.079	8.832	123254	1.12	2	104.0	70	130		
Mn	55	1	No Gas	5.847	8.398	347793	1.25	5	116.9	70	130		
Co	59	1	No Gas	5.307	5.564	256006	1.60	5	106.1	70	130		
Ni	60	1	No Gas	5.402	6.169	58712	0.66	5	108.0	70	130		
Cu	63	1	No Gas	5.101	6.483	144875	0.78	5	102.0	70	130		
Sr	88	1	No Gas	4.918	6.684	304476	0.15	5	98.4	70	130		
Ag	107	1	No Gas	2.059	4.622	61052	1.81	2	102.9	70	130		
Al	27	1	No Gas	89.398	7.084	2780330	1.10	80	111.7	70	130		
Sn	118	1	No Gas	2.032	1.595	43072	3.32	2	101.6	70	130		
Tl	47	1	No Gas	4.754	1.609	19922	1.36	5	95.1	70	130		
Zn	66	1	No Gas	5.707	6.626	37581	0.24	5	114.1	70	130		
As	75	3	HeHe	3.162	1.257	1511	1.55	3	105.4	70	130		
As	75	1	No Gas	3.927	14.818	51484	2.61	3	130.9	70	130	LLCCV Main CR1 Failed	N/A
Sb	121	1	No Gas	2.746	1.666	66886	4.42	2	137.3	70	130	LLCCV Main CR1 Failed	N/A
Hg	201	1	No Gas	0.193	12.204	517	12.58	0.2	96.5	70	130		
Be	9	1	No Gas	1.022	6.179	6554	1.89	1	102.2	70	130		
Pb	208	1	No Gas	1.914	2.901	123082	1.43	2	95.7	70	130		
Se	82	1	No Gas	5.762	24.793	2030	17.51	5	115.2	70	130		
Mo	98	1	No Gas	1.916	3.968	47642	5.67	2	95.8	70	130		
Ba	137	1	No Gas	5.049	1.253	40628	1.90	5	101.0	70	130		
Tl	205	1	No Gas	1.026	2.214	41560	2.00	1	102.6	70	130		
U	238	1	No Gas	5.286	1.588	265009	0.35	5	105.7	70	130		
Na	23	2	he	85.688	1.171	502691	0.32	100	85.7	70	130		
Mg	24	2	he	90.216	0.873	227494	0.20	100	90.2	70	130		
K	39	2	he	89.652	1.780	591738	0.78	100	89.7	70	130		
Se	82	3	HeHe	4.438	31.187	217	13.80	5	88.8	70	130		
Fe	57	3	HeHe	60.438	2.885	6765	1.60	50	120.9	70	130		
Cd	114	1	No Gas	1.026	1.834	14574	2.88	1	102.6	70	130		
Ca	44	1	No Gas	98.871	8.187	184419	1.27	100	98.9	70	130		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9023869	6.48	9248342	97.57	70	120	
Sc	45	2	he	1859008	0.68	1744643	106.56	70	120	
Ge	72	1	No Gas	1000366	0.96	1012122	98.84	70	120	
In	115	1	No Gas	5845025	2.83	5760110	101.47	70	120	
Tb	159	1	No Gas	7004733	1.26	6952439	100.75	70	120	
Bi	209	1	No Gas	3842730	1.67	3846945	99.89	70	120	
Sc	45	3	HeHe	174190	1.86	171212	101.74	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	084_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T14:21:21-04:00
Sample Type	CCV
Dilution	1
Comment	37932 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	112.062	9.650	5596580	1.93	100	112.1	90	110	CCV Main CR1 Failed
Cr	52	1	No Gas	109.929	9.855	4884488	1.98	100	109.9	90	110	
Mn	55	1	No Gas	112.777	10.045	6178074	1.01	100	112.8	90	110	CCV Main CR1 Failed
Co	59	1	No Gas	109.270	9.990	5365252	1.05	100	109.3	90	110	
Ni	60	1	No Gas	103.974	9.922	1142019	0.86	100	104.0	90	110	
Cu	63	1	No Gas	110.688	8.695	2964043	0.97	100	110.7	90	110	CCV Main CR1 Failed
Sr	88	1	No Gas	110.699	9.770	6979742	0.58	100	110.7	90	110	CCV Main CR1 Failed
Ag	107	1	No Gas	105.584	8.422	3129492	0.89	100	105.6	90	110	
Al	27	1	No Gas	110.162	9.379	3490674	1.06	100	110.2	90	110	CCV Main CR1 Failed
Sn	118	1	No Gas	106.972	8.830	1907158	2.20	100	107.0	90	110	
Tl	47	1	No Gas	95.700	8.549	375536	1.01	100	95.7	90	110	
Zn	66	1	No Gas	105.026	8.695	688033	0.48	100	105.0	90	110	
As	75	3	HeHe	98.529	1.029	45854	1.61	100	98.5	90	110	
As	75	1	No Gas	105.030	9.957	720451	0.53	100	105.0	90	110	
Sb	121	1	No Gas	97.762	8.028	2279812	1.13	100	97.8	90	110	
Hg	201	1	No Gas	2.086	9.031	5422	1.23	2	104.3	90	110	
Be	9	1	No Gas	97.262	10.860	632810	1.62	100	97.3	90	110	
Pb	208	1	No Gas	103.260	8.625	5776936	0.53	100	103.3	90	110	
Se	82	1	No Gas	108.991	11.454	38244	2.32	100	109.0	90	110	
Mo	98	1	No Gas	106.946	9.418	1993709	2.19	100	106.9	90	110	
Ba	137	1	No Gas	101.912	7.813	818409	0.58	100	101.9	90	110	
Tl	205	1	No Gas	102.136	9.030	4183817	1.28	100	102.1	90	110	
U	238	1	No Gas	115.082	9.999	5831745	2.21	100	115.1	90	110	CCV Main CR1 Failed
Na	23	2	he	948.858	2.604	4401935	1.26	1000	94.9	90	110	
Mg	24	2	he	969.750	3.490	2458659	1.74	1000	97.0	90	110	
K	39	2	he	952.918	1.686	3819121	1.58	1000	95.3	90	110	
Se	82	3	HeHe	95.856	1.614	2329	2.24	100	95.9	90	110	
Fe	57	3	HeHe	1012.432	1.402	113294	1.64	1000	101.2	90	110	
Cd	114	1	No Gas	100.505	7.727	1391850	0.65	100	100.5	90	110	
Ca	44	1	No Gas	1136.240	9.538	1489429	2.40	1000	113.6	90	110	CCV Main CR1 Failed

All samples ND. LVCCV OK 10/10

OK

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9222142	8.73	9248342	99.72	70	120	
Sc	45	2	he	1872800	1.89	1744643	107.35	70	120	
Ge	72	1	No Gas	998859	5.41	1012122	98.69	70	120	
In	115	1	No Gas	5867485	7.27	5760110	101.86	70	120	
Tb	159	1	No Gas	7122545	7.69	6952439	102.45	70	120	
Bi	209	1	No Gas	3879956	5.83	3846945	100.86	70	120	
Sc	45	3	HeHe	174099	0.73	171212	101.69	70	120	

Digestion Logbook

Microwave 3015 Prep (Water) (Version 1- 6/1/2010)

Note: All TCLP matrix spikes are spiked prior to preservation as noted in the TCLP logbook.

Batch: 37326	Queue: MDIG	HBN: 473767	RULE: D3015/6020	ALSI SOP: 09-3015
File Name: 37326_120801-073155			METHOD: 3015	Microwave ID: MARS

Batch Type:	Comment Codes:	Reagents:		Pipettes:		Start	Finish
T: TCLP	1. Sample failed initial digestion due to a weight loss >5g	HNO3:	L12065 JT BAKER		Date:	08/01/2012	08/01/2012
S: SPLP	2. Sample reacts with reagent				Time:	09:40:00	10:06:00
M: 6020	3. Less sample used due to high metal content				Tech:	KMK	KMK
W: 6010	4. Less sample used to result in successful microwave digestion				Reviewed/Approved By:		N/A
A: ASTM	5. Sample does not digest by microwave, digest by method 3050				Date:		

Sample ID	Cont ID	Samp Type	Vessel Initial WT, grams	Vessel Final WT, grams	Difference grams	Spike Amt uL of Each	Spike Lot#	Sample Size, mL	Final Vol mL	Batch Type	Parent Sample ID	Comment Code
1017577		MB	209.72	209.60	0.12			45	50	M		
1017578		LCS	211.59	211.43	0.16	40/50/50/50	/MR2788/MA1346/	45	50	M		
9980109002	A	S	210.48	210.36	0.12			45	50	M		
9980394006	A	S	211.61	211.52	0.09			45	50	M		
9980394014	A	S	213.48	213.46	0.02			45	50	M		
9980395006	A	S	212.08	212.03	0.05			45	50	M		
1017579		MS	210.93	210.90	0.03	40/50/50/50	/MR2788/MA1346/	45	50	M	9980395006	
1017580		MSD	212.43	212.39	0.04	40/50/50/50	/MR2788/MA1346/	45	50	M	9980395006	

End

Analytical Logbook

Batch Log

#	Acquired Date and Time	Sample Type	Sample Name	File Name	Comment	Vial#	Dilution Result	Operator
1	8/7/2012 8:10	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A080712.b\001CALB.d		1101	1	Matthew Olley
2	8/7/2012 8:14	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A080712.b\002CALB.d		1101	1	Matthew Olley
3	8/7/2012 8:18	CalStd	Standard 1	C:\Agilent\ICPMH\1\DATA\A080712.b\003CALS.d		2101	1	Matthew Olley
4	8/7/2012 8:22	CalStd	Standard 2	C:\Agilent\ICPMH\1\DATA\A080712.b\004CALS.d		2102	1	Matthew Olley
5	8/7/2012 8:26	CalStd	Standard 3	C:\Agilent\ICPMH\1\DATA\A080712.b\005CALS.d		2103	1	Matthew Olley
6	8/7/2012 8:30	CalStd	Standard 4	C:\Agilent\ICPMH\1\DATA\A080712.b\006CALS.d		2104	1	Matthew Olley
7	8/7/2012 8:34	CalStd	Standard 5	C:\Agilent\ICPMH\1\DATA\A080712.b\007CALS.d		2105	1	Matthew Olley
8	8/7/2012 8:38	ICV	ICV	C:\Agilent\ICPMH\1\DATA\A080712.b\008_ICV.d		1307	1	Matthew Olley
9	8/7/2012 8:41	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A080712.b\009_ICB.d		1101	1	Matthew Olley
10	8/7/2012 8:45	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A080712.b\010_ICB.d		1101	1	Matthew Olley
11	8/7/2012 8:49	LLICV	LLICV	C:\Agilent\ICPMH\1\DATA\A080712.b\011LICV.d		1305	1	Matthew Olley
12	8/7/2012 8:49							Matthew Olley
13	8/7/2012 8:55	ICSA	ICSA	C:\Agilent\ICPMH\1\DATA\A080712.b\012ICSA.d		2111	1	Matthew Olley
14	8/7/2012 8:59	ICSB	ICSAB	C:\Agilent\ICPMH\1\DATA\A080712.b\013ICSB.d		2112	1	Matthew Olley
15	8/7/2012 8:59							Matthew Olley
16	8/7/2012 9:07	Sample	1015362	C:\Agilent\ICPMH\1\DATA\A080712.b\014SMPL.d	37925 MWODF5	3101	1	Matthew Olley
17	8/7/2012 9:11	Sample	1015363	C:\Agilent\ICPMH\1\DATA\A080712.b\015SMPL.d	37925 MWODF5	3102	1	Matthew Olley
18	8/7/2012 9:14	Sample	1017907	C:\Agilent\ICPMH\1\DATA\A080712.b\016SMPL.d	37925 MWODF5	3103	1	Matthew Olley
19	8/7/2012 9:18	Sample	1017908	C:\Agilent\ICPMH\1\DATA\A080712.b\017SMPL.d	37925 MWODF5	3104	1	Matthew Olley
20	8/7/2012 9:22	Sample	9980583001	C:\Agilent\ICPMH\1\DATA\A080712.b\018SMPL.d	37925 MWODF5	3105	1	Matthew Olley
21	8/7/2012 9:26	Sample	1017909	C:\Agilent\ICPMH\1\DATA\A080712.b\019SMPL.d	37925 MWODF5	3106	1	Matthew Olley

Batch Log

22	8/7/2012 9:30	Sample	1017910	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\020SMPL.d	3107	1	Matthew Olley
23	8/7/2012 9:34	Sample	9980583001PS	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\021SMPL.d	3108	1	Matthew Olley
24	8/7/2012 9:37	Sample	9980583002	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\022SMPL.d	3109	1	Matthew Olley
25	8/7/2012 9:41	Sample	9980583004	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\023SMPL.d	3110	1	Matthew Olley
26	8/7/2012 9:45						Matthew Olley
27	8/7/2012 9:45	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37925 MWO A\A080712.b\024_CCV.d	1307	1	Matthew Olley
28	8/7/2012 9:49	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37925 MWO A\A080712.b\025_CCB.d	1101	1	Matthew Olley
29	8/7/2012 9:53	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37925 MWO A\A080712.b\026LCCV.d	1305	1	Matthew Olley
30	8/7/2012 9:53						Matthew Olley
31	8/7/2012 9:58	Sample	9980583004L	C:\Agilent\ICPMH\1\DAT 37925 MWODF25 A\A080712.b\027SMPL.d	3111	1	Matthew Olley
32	8/7/2012 10:02						Matthew Olley
33	8/7/2012 10:02	Sample	LDR 2 PPM	C:\Agilent\ICPMH\1\DAT 37925 MWO A\A080712.b\028SMPL.d	3112	1	Matthew Olley
34	8/7/2012 10:02						Matthew Olley
35	8/7/2012 10:05						Matthew Olley
36	8/7/2012 10:08	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\029SMPL.d	3201	1	Matthew Olley
37	8/7/2012 10:08						Matthew Olley
38	8/7/2012 10:12						Matthew Olley
39	8/7/2012 10:13	Sample	1017046	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\030SMPL.d	3202	1	Matthew Olley
40	8/7/2012 10:13						Matthew Olley
41	8/7/2012 10:17						Matthew Olley
42	8/7/2012 10:18	Sample	1017047	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\031SMPL.d	3203	1	Matthew Olley
43	8/7/2012 10:22						Matthew Olley
44	8/7/2012 10:22	Sample	9980109001	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\032SMPL.d	3204	1	Matthew Olley
45	8/7/2012 10:26						Matthew Olley

Batch Log

46	8/7/2012 10:26	Sample	9980109003	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\033SMPL.d	3205	1	Matthew Olley
47	8/7/2012 10:30						Matthew Olley
48	8/7/2012 10:30	Sample	9980109004	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\034SMPL.d	3206	1	Matthew Olley
49	8/7/2012 10:33						Matthew Olley
50	8/7/2012 10:33	Sample	9980109005	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\035SMPL.d	3207	1	Matthew Olley
51	8/7/2012 10:37						Matthew Olley
52	8/7/2012 10:37	Sample	9980109006	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\036SMPL.d	3208	1	Matthew Olley
53	8/7/2012 10:41						Matthew Olley
54	8/7/2012 10:41	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\037_CCV.d	1307	1	Matthew Olley
55	8/7/2012 10:45	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\038_CCB.d	1101	1	Matthew Olley
56	8/7/2012 10:49	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\039LCCV.d	1305	1	Matthew Olley
57	8/7/2012 10:53	Sample	9980109007	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\040SMPL.d	3209	1	Matthew Olley
58	8/7/2012 10:57						Matthew Olley
59	8/7/2012 10:57	Sample	9980109008	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\041SMPL.d	3210	1	Matthew Olley
60	8/7/2012 11:01						Matthew Olley
61	8/7/2012 11:01	Sample	9980109009	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\042SMPL.d	3211	1	Matthew Olley
62	8/7/2012 11:05						Matthew Olley
63	8/7/2012 11:05	Sample	9980109010	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\043SMPL.d	3212	1	Matthew Olley
64	8/7/2012 11:09						Matthew Olley
65	8/7/2012 11:09	Sample	9980109011	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\044SMPL.d	3301	1	Matthew Olley
66	8/7/2012 11:12						Matthew Olley
67	8/7/2012 11:12	Sample	1017048	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\045SMPL.d	3302	1	Matthew Olley
68	8/7/2012 11:16						Matthew Olley
69	8/7/2012 11:16	Sample	1017049	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\046SMPL.d	3303	1	Matthew Olley

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70	8/7/2012 11:20						Matthew Olley
71	8/7/2012 11:20	Sample	9980109011	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\047SMPL.d	3304	1	Matthew Olley
72	8/7/2012 11:24						Matthew Olley
73	8/7/2012 11:24	Sample	9980109012	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\048SMPL.d	3305	1	Matthew Olley
74	8/7/2012 11:28						Matthew Olley
75	8/7/2012 11:28	Sample	9980109013	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\049SMPL.d	3306	1	Matthew Olley
76	8/7/2012 11:32						Matthew Olley
77	8/7/2012 11:32	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\050_CCV.d	1307	1	Matthew Olley
78	8/7/2012 11:36	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\051_CCB.d	1101	1	Matthew Olley
79	8/7/2012 11:39	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\052LCCV.d	1305	1	Matthew Olley
80	8/7/2012 11:43	Sample	9980109014	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\053SMPL.d	3307	1	Matthew Olley
81	8/7/2012 11:47						Matthew Olley
82	8/7/2012 11:47	Sample	9980109015	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\054SMPL.d	3308	1	Matthew Olley
83	8/7/2012 11:51						Matthew Olley
84	8/7/2012 11:51	Sample	9980109016	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\055SMPL.d	3309	1	Matthew Olley
85	8/7/2012 11:55						Matthew Olley
86	8/7/2012 11:55	Sample	9980109017	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\056SMPL.d	3310	1	Matthew Olley
87	8/7/2012 11:59						Matthew Olley
88	8/7/2012 11:59	Sample	1017050	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\057SMPL.d	3311	1	Matthew Olley
89	8/7/2012 12:03						Matthew Olley
90	8/7/2012 12:03	Sample	1017051	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\058SMPL.d	3312	1	Matthew Olley
91	8/7/2012 12:07						Matthew Olley
92	8/7/2012 12:07	Sample	9980109017PS	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\059SMPL.d	3401	1	Matthew Olley
93	8/7/2012 12:11						Matthew Olley

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94	8/7/2012 12:11	Sample	9980109018	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\060SMPL.d	3402	1	Matthew Olley
95	8/7/2012 12:15						Matthew Olley
96	8/7/2012 12:15	Sample	9980109019	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\061SMPL.d	3403	1	Matthew Olley
97	8/7/2012 12:19						Matthew Olley
98	8/7/2012 12:19	Sample	9980109019L	C:\Agilent\ICPMH\1\DAT 37926 MWODF25 A\A080712.b\062SMPL.d	3404	1	Matthew Olley
99	8/7/2012 12:22						Matthew Olley
100	8/7/2012 12:22	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\063_CCV.d	1307	1	Matthew Olley
101	8/7/2012 12:22						Matthew Olley
102	8/7/2012 12:29	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\064_CCB.d	1101	1	Matthew Olley
103	8/7/2012 12:33	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\065LCCV.d	1305	1	Matthew Olley
104	8/7/2012 12:33						Matthew Olley
105	8/7/2012 12:37	Sample	LDR 50 PPM	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\066SMPL.d	3405	1	Matthew Olley
106	8/7/2012 12:37						Matthew Olley
107	8/7/2012 12:41						Matthew Olley
108	8/7/2012 12:42	Sample	CHECK	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\067SMPL.d	3406	1	Matthew Olley
109	8/7/2012 12:42						Matthew Olley
110	8/7/2012 12:46						Matthew Olley
111	8/7/2012 12:47	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\068_CCV.d	1307	1	Matthew Olley
112	8/7/2012 12:51	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\069_CCB.d	1101	1	Matthew Olley
113	8/7/2012 12:51						Matthew Olley
114	8/7/2012 12:58	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\070LCCV.d	1305	1	Matthew Olley
115	8/7/2012 13:02	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\071_CCV.d	1307	1	Matthew Olley
116	8/7/2012 13:02						Matthew Olley
117	8/7/2012 13:07	Sample	1017577	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\072SMPL.d	3407	1	Matthew Olley
118	8/7/2012 13:07						Matthew Olley

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119	8/7/2012 13:10						Matthew Olley
120	8/7/2012 13:27	Sample	1017578	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\073SMPL.d	3408	1	Matthew Olley
121	8/7/2012 13:31						Matthew Olley
122	8/7/2012 13:31	Sample	1019627	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\074SMPL.d	3409	1	Matthew Olley
123	8/7/2012 13:35						Matthew Olley
124	8/7/2012 13:35	Sample	1019628	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\075SMPL.d	3410	1	Matthew Olley
125	8/7/2012 13:39						Matthew Olley
126	8/7/2012 13:39	Sample	9980109002	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\076SMPL.d	3411	1	Matthew Olley
127	8/7/2012 13:43						Matthew Olley
128	8/7/2012 13:43	Sample	9980394006	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\077SMPL.d	3412	1	Matthew Olley
129	8/7/2012 13:47						Matthew Olley
130	8/7/2012 13:47	Sample	9980394006L	C:\Agilent\ICPMH\1\DAT 37932 MWODF5 A\A080712.b\078SMPL.d	3501	1	Matthew Olley
131	8/7/2012 13:51						Matthew Olley
132	8/7/2012 13:51	Sample	9980394014	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\079SMPL.d	3502	1	Matthew Olley
133	8/7/2012 13:51						Matthew Olley
134	8/7/2012 13:54						Matthew Olley
135	8/7/2012 13:58	Sample	9980394006PS	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\080SMPL.d	3503	1	Matthew Olley
136	8/7/2012 13:58						Matthew Olley
137	8/7/2012 14:02						Matthew Olley
138	8/7/2012 14:08	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\081_CCV.d	1307	1	Matthew Olley
139	8/7/2012 14:12	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\082_CCB.d	1101	1	Matthew Olley
140	8/7/2012 14:16	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\083LCCV.d	1305	1	Matthew Olley
141	8/7/2012 14:19	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\084_CCV.d	1307	1	Matthew Olley
142	8/7/2012 14:23	Sample	9980395006	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\085SMPL.d	3504	1	Matthew Olley
143	8/7/2012 14:23						Matthew Olley

Batch Log

144	8/7/2012 14:27						Matthew Olley
145	8/7/2012 14:45	Sample	1017579	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\086SMPL.d	3505	1	Matthew Olley
146	8/7/2012 14:49						Matthew Olley
147	8/7/2012 14:49	Sample	1017580	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\087SMPL.d	3506	1	Matthew Olley
148	8/7/2012 14:53						Matthew Olley
149	8/7/2012 14:53	Sample	9980875015	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\088SMPL.d	3507	1	Matthew Olley
150	8/7/2012 14:57						Matthew Olley
151	8/7/2012 14:57	Sample	1019629	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\089SMPL.d	3508	1	Matthew Olley
152	8/7/2012 15:00						Matthew Olley
153	8/7/2012 15:00	Sample	1019630	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\090SMPL.d	3509	1	Matthew Olley
154	8/7/2012 15:04						Matthew Olley
155	8/7/2012 15:04	Sample	9980875015L	C:\Agilent\ICPMH\1\DAT 37932 MWODF5 A\A080712.b\091SMPL.d	3510	1	Matthew Olley
156	8/7/2012 15:08						Matthew Olley
157	8/7/2012 15:08	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\092_CCV.d	1307	1	Matthew Olley
158	8/7/2012 15:12	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\093_CCB.d	1101	1	Matthew Olley
159	8/7/2012 15:16	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\094LCCV.d	1305	1	Matthew Olley
160	8/7/2012 15:26	CalBlk	blk		1101		Matthew Olley
161	8/7/2012 15:26	CalBlk	blk		1101		Matthew Olley
162	8/7/2012 15:26	CalStd	Standard 1		2101		Matthew Olley
163	8/7/2012 15:26	CalStd	Standard 2		2102		Matthew Olley
164	8/7/2012 15:26	CalStd	Standard 3		2103		Matthew Olley
165	8/7/2012 15:26	CalStd	Standard 4		2104		Matthew Olley
166	8/7/2012 15:26	CalStd	Standard 5		2105		Matthew Olley
167	8/7/2012 15:26	ICV	ICV		1307		Matthew Olley
168	8/7/2012 15:26	ICB	ICB		1101		Matthew Olley
169	8/7/2012 15:26	ICB	ICB		1101		Matthew Olley
170	8/7/2012 15:26	LLICV	LLICV		1305		Matthew Olley

Batch Log

171	8/7/2012 15:26	ICSA	ICSA		2111		Matthew Olley
172	8/7/2012 15:26	ICSB	ICSAB		2112		Matthew Olley
173	8/7/2012 15:27	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\095_CCV.d	1307	1	Matthew Olley
174	8/7/2012 15:27						Matthew Olley
175	8/7/2012 15:47	Sample	9979663004	C:\Agilent\ICPMH\1\DAT 37936 MWODF5 A\A080712.b\096SMPL.d	3101	1	Matthew Olley
176	8/7/2012 15:51	Sample	9979678003	C:\Agilent\ICPMH\1\DAT 37936 MWODF5 A\A080712.b\097SMPL.d	3102	1	Matthew Olley
177	8/7/2012 15:51						Matthew Olley
178	8/7/2012 15:57	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\098_CCV.d	1307	1	Matthew Olley
179	8/7/2012 16:01	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\099_CCB.d	1101	1	Matthew Olley
180	8/7/2012 16:05	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\100LCCV.d	1305	1	Matthew Olley
181	8/7/2012 16:05						Matthew Olley
182	8/7/2012 16:41	Sample	9980477001	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\101SMPL.d	3101	1	Matthew Olley
183	8/7/2012 16:45	Sample	9980477002	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\102SMPL.d	3102	1	Matthew Olley
184	8/7/2012 16:49	Sample	9980478001	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\103SMPL.d	3103	1	Matthew Olley
185	8/7/2012 16:53	Sample	9980478002	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\104SMPL.d	3104	1	Matthew Olley
186	8/7/2012 16:56	Sample	9980478003	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\105SMPL.d	3105	1	Matthew Olley
187	8/7/2012 17:00	Sample	9980478004	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\106SMPL.d	3106	1	Matthew Olley
188	8/7/2012 17:04	Sample	9980478004L	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\107SMPL.d	3107	1	Matthew Olley
189	8/7/2012 17:08	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\108_CCV.d	1307	1	Matthew Olley
190	8/7/2012 17:12	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\109_CCB.d	1101	1	Matthew Olley
191	8/7/2012 17:16	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\110LCCV.d	1305	1	Matthew Olley
192	8/7/2012 17:20	Sample	9975539001	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A080712.b\111SMPL.d	3108	1	Matthew Olley

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193	8/7/2012 17:24	Sample	9975539002	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A080712.b\112SMPL.d	3109	1	Matthew Olley
194	8/7/2012 17:28	Sample	9975539001	C:\Agilent\ICPMH\1\DAT 99999 MWODF5 A\A080712.b\113SMPL.d	3110	1	Matthew Olley
195	8/7/2012 17:32	Sample	9975539002	C:\Agilent\ICPMH\1\DAT 99999 MWODF5 A\A080712.b\114SMPL.d	3111	1	Matthew Olley
196	8/7/2012 17:35	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\115SMPL.d	3112	1	Matthew Olley
197	8/7/2012 17:39	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\116SMPL.d	3201	1	Matthew Olley
198	8/7/2012 17:43	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\117SMPL.d	3202	1	Matthew Olley
199	8/7/2012 17:47	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\118SMPL.d	3203	1	Matthew Olley
200	8/7/2012 17:51	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\119SMPL.d	3204	1	Matthew Olley
201	8/7/2012 17:55	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\120SMPL.d	3205	1	Matthew Olley
202	8/7/2012 17:59						Matthew Olley
203	8/7/2012 17:59	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A080712.b\121_CCV.d	1307	1	Matthew Olley
204	8/7/2012 18:03	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A080712.b\122_CCB.d	1101	1	Matthew Olley
205	8/7/2012 18:07	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A080712.b\123LCCV.d	1305	1	Matthew Olley

Total Metals in Solid by 6020A Summary Forms

6020 3051
- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: Analytical Laboratory Services Inc.

SDG No.: ERT-002 Method Type: 6020 3051 SOW No.:

Contract: ERT002|Ft. Stewart 3 Lab Code: CAS Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
9980394001	FTSW-AA-SO-17	
9980394002	FTSW-AA-SO-18 (01.5)	
9980394003	FTSW-AA-SO-19	
9980394004	FTSW-AA-SO-20 (01.5)	
9980394005	FTSW-AA-SO-21	
9980394007	FTSW-AA-SO-22	
9980394008	FTSW-AA-SO-23	
9980394009	FTSW-AA-SO-24	
9980394010	FTSW-AA-SO-25	
9980394011	FTSW-AA-SO-25 DUP	
9980394012	FTSW-AA-SO-26	
9980394013	FTSW-AA-SO-27	
9980395003S	FTSW-HR-SO-01S	Matrix Spike
9980395003SD	FTSW-HR-SO-01SD	Matrix Spike Duplicate

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: **Lisa Miller**

Date: Title: **Metals Manager**

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002 **Method Type:** 6020 3051

Sample ID: 9980394001 **Client ID:** FTSW-AA-SO-17

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 74.9 **Sample Wt/Vol:** 0.51 **Final Vol:** 50.0

Prep Batch ID: 475030 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	4420	mg/Kg			M	52.3	34.7	17.0	5.00	8/13/2012	15:03:12
Copper	7440-50-8	3.1	mg/Kg	J		M	3.3	2.2	1.0	5.00	8/13/2012	15:03:12
Lead	7439-92-1	4.2	mg/Kg			M	1.3	0.85	0.43	5.00	8/13/2012	15:03:12
Zinc	7440-66-6	11.1	mg/Kg			M	3.3	2.2	1.0	5.00	8/13/2012	15:03:12

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002 **Method Type:** 6020 3051

Sample ID: 9980394002 **Client ID:** FTSW-AA-SO-18 (01.5)

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 76.6 **Sample Wt/Vol:** 0.54 **Final Vol:** 50.0

Prep Batch ID: 475030 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	5370	mg/Kg			M	48.3	32.0	15.7	5.00	8/13/2012	15:06:43
Copper	7440-50-8	1.99	mg/Kg	U		M	3.0	1.99	0.97	5.00	8/13/2012	15:06:43
Lead	7439-92-1	3.3	mg/Kg			M	1.2	0.79	0.40	5.00	8/13/2012	15:06:43
Zinc	7440-66-6	2.4	mg/Kg	J		M	3.0	1.99	0.97	5.00	8/13/2012	15:06:43

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002 **Method Type:** 6020 3051

Sample ID: 9980394003 **Client ID:** FTSW-AA-SO-19

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 74.6 **Sample Wt/Vol:** 0.55 **Final Vol:** 50.0

Prep Batch ID: 475030 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	7870	mg/Kg			M	48.7	32.3	15.8	5.00	8/13/2012	15:10:13
Copper	7440-50-8	1.0	mg/Kg	J		M	3.0	2.01	0.97	5.00	8/13/2012	15:10:13
Lead	7439-92-1	6.5	mg/Kg			M	1.2	0.79	0.40	5.00	8/13/2012	15:10:13
Zinc	7440-66-6	11.6	mg/Kg			M	3.0	2.01	0.97	5.00	8/13/2012	15:10:13

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002 **Method Type:** 6020 3051

Sample ID: 9980394004 **Client ID:** FTSW-AA-SO-20 (01.5)

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 78.1 **Sample Wt/Vol:** 0.53 **Final Vol:** 50.0

Prep Batch ID: 475030 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	11900	mg/Kg			M	48.3	32.0	15.7	5.00	8/13/2012	15:13:42
Copper	7440-50-8	1.1	mg/Kg	J		M	3.0	1.99	0.97	5.00	8/13/2012	15:13:42
Lead	7439-92-1	10.8	mg/Kg			M	1.2	0.79	0.40	5.00	8/13/2012	15:13:42
Zinc	7440-66-6	3.8	mg/Kg			M	3.0	1.99	0.97	5.00	8/13/2012	15:13:42

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002 **Method Type:** 6020 3051

Sample ID: 9980394005 **Client ID:** FTSW-AA-SO-21

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 75.9 **Sample Wt/Vol:** 0.52 **Final Vol:** 50.0

Prep Batch ID: 475030 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	6540	mg/Kg			M	50.7	33.6	16.5	5.00	8/13/2012	15:17:10
Copper	7440-50-8	1.9	mg/Kg	J		M	3.2	2.1	1.0	5.00	8/13/2012	15:17:10
Lead	7439-92-1	7.1	mg/Kg			M	1.3	0.82	0.42	5.00	8/13/2012	15:17:10
Zinc	7440-66-6	10.9	mg/Kg			M	3.2	2.1	1.0	5.00	8/13/2012	15:17:10

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002 **Method Type:** 6020 3051

Sample ID: 9980394007 **Client ID:** FTSW-AA-SO-22

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 81.1 **Sample Wt/Vol:** 0.57 **Final Vol:** 50.0

Prep Batch ID: 475030 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	886	mg/Kg			M	43.2	28.6	14.1	5.00	8/13/2012	15:20:41
Copper	7440-50-8	1.78	mg/Kg	U		M	2.7	1.78	0.86	5.00	8/13/2012	15:20:41
Lead	7439-92-1	1.5	mg/Kg			M	1.1	0.70	0.36	5.00	8/13/2012	15:20:41
Zinc	7440-66-6	2.3	mg/Kg	J		M	2.7	1.78	0.86	5.00	8/13/2012	15:20:41

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002 **Method Type:** 6020 3051

Sample ID: 9980394008 **Client ID:** FTSW-AA-SO-23

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 82.8 **Sample Wt/Vol:** 0.54 **Final Vol:** 50.0

Prep Batch ID: 475030 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	5140	mg/Kg			M	44.7	29.6	14.5	5.00	8/13/2012	15:24:10
Copper	7440-50-8	2.7	mg/Kg	J		M	2.8	1.84	0.89	5.00	8/13/2012	15:24:10
Lead	7439-92-1	4.6	mg/Kg			M	1.1	0.73	0.37	5.00	8/13/2012	15:24:10
Zinc	7440-66-6	12.9	mg/Kg			M	2.8	1.84	0.89	5.00	8/13/2012	15:24:10

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002 **Method Type:** 6020 3051

Sample ID: 9980394009 **Client ID:** FTSW-AA-SO-24

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 98.3 **Sample Wt/Vol:** 0.52 **Final Vol:** 50.0

Prep Batch ID: 475030 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	5060	mg/Kg			M	39.1	25.9	12.7	5.00	8/13/2012	15:27:41
Copper	7440-50-8	1.9	mg/Kg	J		M	2.4	1.61	0.78	5.00	8/13/2012	15:27:41
Lead	7439-92-1	2.6	mg/Kg			M	0.98	0.64	0.32	5.00	8/13/2012	15:27:41
Zinc	7440-66-6	12.8	mg/Kg			M	2.4	1.61	0.78	5.00	8/13/2012	15:27:41

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002 **Method Type:** 6020 3051

Sample ID: 9980394010 **Client ID:** FTSW-AA-SO-25

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 82.0 **Sample Wt/Vol:** 0.52 **Final Vol:** 50.0

Prep Batch ID: 475030 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	2080	mg/Kg			M	46.9	31.1	15.2	5.00	8/13/2012	15:31:08
Copper	7440-50-8	1.6	mg/Kg	J		M	2.9	1.93	0.94	5.00	8/13/2012	15:31:08
Lead	7439-92-1	3.9	mg/Kg			M	1.2	0.76	0.39	5.00	8/13/2012	15:31:08
Zinc	7440-66-6	1.8	mg/Kg	J		M	2.9	1.93	0.94	5.00	8/13/2012	15:31:08

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002 **Method Type:** 6020 3051

Sample ID: 9980394011 **Client ID:** FTSW-AA-SO-25 DUP

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 97.9 **Sample Wt/Vol:** 0.54 **Final Vol:** 50.0

Prep Batch ID: 475030 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	2530	mg/Kg			M	37.8	25.1	12.3	5.00	8/13/2012	15:34:36
Copper	7440-50-8	2.3	mg/Kg	J		M	2.4	1.56	0.76	5.00	8/13/2012	15:34:36
Lead	7439-92-1	4.6	mg/Kg			M	0.95	0.61	0.31	5.00	8/13/2012	15:34:36
Zinc	7440-66-6	6.5	mg/Kg			M	2.4	1.56	0.76	5.00	8/13/2012	15:34:36

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002 **Method Type:** 6020 3051

Sample ID: 9980394012 **Client ID:** FTSW-AA-SO-26

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 73.7 **Sample Wt/Vol:** 0.59 **Final Vol:** 50.0

Prep Batch ID: 475030 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	9590	mg/Kg			M	46.0	30.5	14.9	5.00	8/13/2012	16:24:53
Copper	7440-50-8	1.4	mg/Kg	J		M	2.9	1.90	0.92	5.00	8/13/2012	16:24:53
Lead	7439-92-1	17.0	mg/Kg			M	1.1	0.75	0.38	5.00	8/13/2012	16:24:53
Zinc	7440-66-6	11.0	mg/Kg			M	2.9	1.90	0.92	5.00	8/13/2012	16:24:53

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002 **Method Type:** 6020 3051

Sample ID: 9980394013 **Client ID:** FTSW-AA-SO-27

Matrix: SOIL **Date Received:** 7/31/2012 **Level:** LOW

% Solids: 74.0 **Sample Wt/Vol:** 0.57 **Final Vol:** 50.0

Prep Batch ID: 475030 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	5670	mg/Kg			M	47.4	31.4	15.4	5.00	8/13/2012	16:28:22
Copper	7440-50-8	1.6	mg/Kg	J		M	3.0	1.96	0.95	5.00	8/13/2012	16:28:22
Lead	7439-92-1	4.0	mg/Kg			M	1.2	0.77	0.39	5.00	8/13/2012	16:28:22
Zinc	7440-66-6	14.2	mg/Kg			M	3.0	1.96	0.95	5.00	8/13/2012	16:28:22

Comments:

6020 3051

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
ICV										
	Aluminum	0.0994	0.1000	99		90 - 110	M	8/13/2012	12:37	A081312C
	Copper	0.0996	0.1000	100		90 - 110	M	8/13/2012	12:37	A081312C
	Lead	0.0969	0.1000	97		90 - 110	M	8/13/2012	12:37	A081312C
	Zinc	0.0971	0.1000	97		90 - 110	M	8/13/2012	12:37	A081312C
LLICV										
	Aluminum	0.0819	0.0800	102		70 - 130	M	8/13/2012	12:47	A081312C
	Copper	0.0051	0.0050	102		70 - 130	M	8/13/2012	12:47	A081312C
	Lead	0.0021	0.0020	105		70 - 130	M	8/13/2012	12:47	A081312C
	Zinc	0.0051	0.0050	102		70 - 130	M	8/13/2012	12:47	A081312C
LLCCV										
	Aluminum	0.4059	0.4000	101		70 - 130	M	8/13/2012	13:54	A081312C
	Copper	0.0255	0.0250	102		70 - 130	M	8/13/2012	13:54	A081312C
	Lead	0.0100	0.0100	100		70 - 130	M	8/13/2012	13:54	A081312C
	Zinc	0.0254	0.0250	102		70 - 130	M	8/13/2012	13:54	A081312C
CCV										
	Aluminum	0.0994	0.1000	99		90 - 110	M	8/13/2012	13:58	A081312C
	Copper	0.0977	0.1000	98		90 - 110	M	8/13/2012	13:58	A081312C
	Lead	0.0958	0.1000	96		90 - 110	M	8/13/2012	13:58	A081312C
	Zinc	0.0958	0.1000	96		90 - 110	M	8/13/2012	13:58	A081312C
CCV										
	Aluminum	0.1018	0.1000	102		90 - 110	M	8/13/2012	14:52	A081312C
	Copper	0.1001	0.1000	100		90 - 110	M	8/13/2012	14:52	A081312C
	Lead	0.0967	0.1000	97		90 - 110	M	8/13/2012	14:52	A081312C
	Zinc	0.0972	0.1000	97		90 - 110	M	8/13/2012	14:52	A081312C
LLCCV										
	Aluminum	0.0802	0.0800	100		70 - 130	M	8/13/2012	14:59	A081312C
	Copper	0.0051	0.0050	102		70 - 130	M	8/13/2012	14:59	A081312C
	Lead	0.0020	0.0020	100		70 - 130	M	8/13/2012	14:59	A081312C
	Zinc	0.0051	0.0050	102		70 - 130	M	8/13/2012	14:59	A081312C

6020 3051

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
CCV										
	Aluminum	0.0990	0.1000	99		90 - 110	M	8/13/2012	15:38	A081312C
	Copper	0.0979	0.1000	98		90 - 110	M	8/13/2012	15:38	A081312C
	Lead	0.0977	0.1000	98		90 - 110	M	8/13/2012	15:38	A081312C
	Zinc	0.0953	0.1000	95		90 - 110	M	8/13/2012	15:38	A081312C
LLCCV										
	Aluminum	0.0797	0.0800	100		70 - 130	M	8/13/2012	15:45	A081312C
	Copper	0.0050	0.0050	100		70 - 130	M	8/13/2012	15:45	A081312C
	Lead	0.0021	0.0020	105		70 - 130	M	8/13/2012	15:45	A081312C
	Zinc	0.0050	0.0050	100		70 - 130	M	8/13/2012	15:45	A081312C
LLCCV										
	Aluminum	0.4024	0.4000	101		70 - 130	M	8/13/2012	16:18	A081312C
	Copper	0.0254	0.0250	102		70 - 130	M	8/13/2012	16:18	A081312C
	Lead	0.0100	0.0100	100		70 - 130	M	8/13/2012	16:18	A081312C
	Zinc	0.0252	0.0250	101		70 - 130	M	8/13/2012	16:18	A081312C
CCV										
	Aluminum	0.4984	0.5000	100		90 - 110	M	8/13/2012	16:21	A081312C
	Copper	0.4939	0.5000	99		90 - 110	M	8/13/2012	16:21	A081312C
	Lead	0.4847	0.5000	97		90 - 110	M	8/13/2012	16:21	A081312C
	Zinc	0.4834	0.5000	97		90 - 110	M	8/13/2012	16:21	A081312C
CCV										
	Aluminum	0.1021	0.1000	102		90 - 110	M	8/13/2012	16:59	A081312C
	Copper	0.0985	0.1000	98		90 - 110	M	8/13/2012	16:59	A081312C
	Lead	0.0968	0.1000	97		90 - 110	M	8/13/2012	16:59	A081312C
	Zinc	0.0964	0.1000	96		90 - 110	M	8/13/2012	16:59	A081312C

6020 3051

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
LLCCV										
	Aluminum	0.0821	0.0800	103		70 - 130	M	8/13/2012	17:08	A081312C
	Copper	0.0050	0.0050	100		70 - 130	M	8/13/2012	17:08	A081312C
	Lead	0.0020	0.0020	100		70 - 130	M	8/13/2012	17:08	A081312C
	Zinc	0.0052	0.0050	104		70 - 130	M	8/13/2012	17:08	A081312C
CCV										
	Aluminum	0.0986	0.1000	99		90 - 110	M	8/13/2012	17:46	A081312C
	Copper	0.0965	0.1000	96		90 - 110	M	8/13/2012	17:46	A081312C
	Lead	0.0973	0.1000	97		90 - 110	M	8/13/2012	17:46	A081312C
	Zinc	0.0939	0.1000	94		90 - 110	M	8/13/2012	17:46	A081312C
LLCCV										
	Aluminum	0.0824	0.0800	103		70 - 130	M	8/13/2012	17:53	A081312C
	Copper	0.0050	0.0050	100		70 - 130	M	8/13/2012	17:53	A081312C
	Lead	0.0020	0.0020	100		70 - 130	M	8/13/2012	17:53	A081312C
	Zinc	0.0052	0.0050	104		70 - 130	M	8/13/2012	17:53	A081312C
CCV										
	Aluminum	0.1013	0.1000	101		90 - 110	M	8/13/2012	18:32	A081312C
	Copper	0.0984	0.1000	98		90 - 110	M	8/13/2012	18:32	A081312C
	Lead	0.0948	0.1000	95		90 - 110	M	8/13/2012	18:32	A081312C
	Zinc	0.0956	0.1000	96		90 - 110	M	8/13/2012	18:32	A081312C
LLCCV										
	Aluminum	0.0826	0.0800	103		70 - 130	M	8/13/2012	18:39	A081312C
	Copper	0.0050	0.0050	100		70 - 130	M	8/13/2012	18:39	A081312C
	Lead	0.0020	0.0020	100		70 - 130	M	8/13/2012	18:39	A081312C
	Zinc	0.0051	0.0050	102		70 - 130	M	8/13/2012	18:39	A081312C

6020 3051
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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Conc Qual	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
ICB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/13/2012	12:44	A081312C
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	12:44	A081312C
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/13/2012	12:44	A081312C
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	12:44	A081312C
CCB										
	Aluminum	0.4000	U	0.33	0.1500	0.4000	M	8/13/2012	13:51	A081312C
	Copper	0.0250	U	0.021	0.0095	0.0250	M	8/13/2012	13:51	A081312C
	Lead	0.0100	U	0.0081	0.0037	0.0100	M	8/13/2012	13:51	A081312C
	Zinc	0.0250	U	0.021	0.0095	0.0250	M	8/13/2012	13:51	A081312C
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/13/2012	14:56	A081312C
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	14:56	A081312C
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/13/2012	14:56	A081312C
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	14:56	A081312C
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/13/2012	15:41	A081312C
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	15:41	A081312C
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/13/2012	15:41	A081312C
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	15:41	A081312C
CCB										
	Aluminum	0.4000	U	0.33	0.1500	0.4000	M	8/13/2012	16:14	A081312C
	Copper	0.0250	U	0.021	0.0095	0.0250	M	8/13/2012	16:14	A081312C
	Lead	0.0100	U	0.0081	0.0037	0.0100	M	8/13/2012	16:14	A081312C
	Zinc	0.0250	U	0.021	0.0095	0.0250	M	8/13/2012	16:14	A081312C

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Conc Qual	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/13/2012	17:05	A081312C
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	17:05	A081312C
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/13/2012	17:05	A081312C
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	17:05	A081312C
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/13/2012	17:50	A081312C
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	17:50	A081312C
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/13/2012	17:50	A081312C
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	17:50	A081312C
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/13/2012	18:35	A081312C
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	18:35	A081312C
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/13/2012	18:35	A081312C
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	18:35	A081312C

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- 3b -
PREPARATION BLANK SUMMARY

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result (mg/Kg)	Conc Qual	Q	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
1020183			**QC-SOLID**								
	Aluminum	40.0000	U		20	13.0000	40.0000	M	8/13/2012	14:08	A081312C
	Copper	2.50000	U		1.3	0.80000	2.50000	M	8/13/2012	14:08	A081312C
	Lead	1.00000	U		0.50	0.33000	1.00000	M	8/13/2012	14:08	A081312C
	Zinc	2.50000	U		1.3	0.80000	2.50000	M	8/13/2012	14:08	A081312C

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INTERFERENCE CHECK SAMPLE

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

ICS Source: Inorganic Ventures **Instrument ID:** AGILENT 7700 ICPMS

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	Analysis Date	Analysis Time	Run Number
ICSA									
	Aluminum	86.2	100.0000	86		80 - 120%	8/13/2012	12:51	A081312C
	Copper	0.0011				-0.00500 - -0.00500	8/13/2012	12:51	A081312C
	Lead	0.0005				-0.00200 - -0.00200	8/13/2012	12:51	A081312C
	Zinc	0.0035				-0.01000 - -0.01000	8/13/2012	12:51	A081312C
ICSAB									
	Aluminum	87.4	100.0000	87		80 - 120%	8/13/2012	13:00	A081312C
	Copper	0.0193	0.02000	96		80 - 120%	8/13/2012	13:00	A081312C
	Lead	0.0004				-0.00200 - -0.00200	8/13/2012	13:00	A081312C
	Zinc	0.0239	0.02000	120		80 - 120%	8/13/2012	13:00	A081312C

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MATRIX SPIKE SUMMARY

Client: Analytical Laboratory Services Inc. **Level:** LOW **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Matrix: SOIL **Sample ID:** 9980395003 **Client ID:** FTSW-HR-SO-01S **LIMS ID:** 1020185

Percent Solids for Sample: 0.00 **Spiked ID:** 9980395003S **Percent Solids for Spike Sample:** 90.54

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	80 - 120	2769.72		22.65	J	200.808	1368	*	M
Copper	mg/Kg	80 - 120	20.761		2.761	U	20.081	103		M
Lead	mg/Kg	80 - 120	26.328		1.104	U	20.081	131	*	M
Zinc	mg/Kg	80 - 120	202.297		2.761	U	200.808	101		M

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MATRIX SPIKE DUPLICATE SUMMARY

Client: Analytical Laboratory Services Inc. **Level:** LOW **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Matrix: SOIL **Sample ID:** 9980395003 **Client ID:** FTSW-HR-SO-01SD **LIMS ID:** 1020186

Percent Solids for Sample: 0.00 **Spiked ID:** 9980395003SD **Percent Solids for Spike Sample:** 90.54

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	80 - 120	2637.34		22.65	J	190.422	1373	*	M
Copper	mg/Kg	80 - 120	20.893		2.761	U	19.042	110		M
Lead	mg/Kg	80 - 120	26.075		1.104	U	19.042	137	*	M
Zinc	mg/Kg	80 - 120	199.832		2.761	U	190.422	105		M

6020 3051
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POST DIGEST SPIKE SUMMARY

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: WATER **Level:** LOW **Client ID:** 9980395003PS

Sample ID: 9980395003 **Spiked ID:** 9980395003PS

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Lead	mg/L	80 - 120	0.237		0.061		0.200	88		M

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DUPLICATE SAMPLE SUMMARY

Client: Analytical Laboratory Services Inc. **Level:** LOW **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: SOIL **Sample ID:** 9980395003S **Client ID:** FTSW-HR-SO-01SD **LIMS ID:** 1020186

Percent Solids for Sample: 90.54 **Duplicate ID:** 9980395003SD **Percent Solids for Duplicate:** 90.54

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	0 - 20	2769.72		2637.34		4.90		M
Copper	mg/Kg	0 - 20	20.761		20.893		1		M
Lead	mg/Kg	0 - 20	26.328		26.075		1		M
Zinc	mg/Kg	0 - 20	202.297		199.832		1		M

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Aqueous LCS Source: **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Q	QC Criteria	M
1020184									
	Aluminum	mg/Kg	200.0	202.4		101.2		80 - 120	M
	Copper	mg/Kg	20.0	19.5		97.5		80 - 120	M
	Lead	mg/Kg	20.0	19.6		98.0		80 - 120	M
	Zinc	mg/Kg	200.0	195.1		97.6		80 - 120	M

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SERIAL DILUTION SAMPLE SUMMARY

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Matrix: WATER **Level:** LOW **Client ID:** FTSW-AA-SO-27L

Sample ID: 9980394013 **Serial Dilution ID:** 9980394013L

Analyte	Initial Result mg/L	C	Serial Result mg/L	C	% Difference	Qual	Acceptance Limits	M
Aluminum	47.8597		45.7324		4		10.00 %	M
Copper	0.0136		0.0144		6		10.00 %	M
Lead	0.0341		0.0325		5		10.00 %	M
Zinc	0.1201		0.1163		3		10.00 %	M

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LINEAR RANGES

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Instrument ID: AGILENT 7700 ICPMS **Date:** 1/19/2012

Analyte	Integration Time (sec)	LDR mg/L
Aluminum	1.00	90
Copper	1.00	50
Lead	1.00	5
Zinc	1.00	50

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SAMPLE PREPARATION SUMMARY

Client: Analytical Laboratory Services Inc. **SDG No.:** ERT-002

Contract: ERT002|Ft. Stewart **Lab Code:** CAS **Method:** MS
3153-004

Case No.: _____ **SAS No.:** _____

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	475030						
1020183	MB for HBN 475030 [MDIG/3741	MB	QC-SOLI	8/8/12	0.50	50.0	100.00
1020184	LCS for HBN 475030 [MDIG/3741	LCS	QC-SOLI	8/8/12	0.50	50.0	100.00
9980394001	FTSW-AA-SO-17	SAM	SOIL	8/8/12	0.51	50.0	74.93
9980394002	FTSW-AA-SO-18 (01.5)	SAM	SOIL	8/8/12	0.54	50.0	76.65
9980394003	FTSW-AA-SO-19	SAM	SOIL	8/8/12	0.55	50.0	74.64
9980394004	FTSW-AA-SO-20 (01.5)	SAM	SOIL	8/8/12	0.53	50.0	78.09
9980394005	FTSW-AA-SO-21	SAM	SOIL	8/8/12	0.52	50.0	75.86
9980394007	FTSW-AA-SO-22	SAM	SOIL	8/8/12	0.57	50.0	81.15
9980394008	FTSW-AA-SO-23	SAM	SOIL	8/8/12	0.54	50.0	82.82
9980394009	FTSW-AA-SO-24	SAM	SOIL	8/8/12	0.52	50.0	98.34
9980394010	FTSW-AA-SO-25	SAM	SOIL	8/8/12	0.52	50.0	82.04
9980394011	FTSW-AA-SO-25 DUP	SAM	SOIL	8/8/12	0.54	50.0	97.93
9980394012	FTSW-AA-SO-26	SAM	SOIL	8/8/12	0.59	50.0	73.74
9980394013	FTSW-AA-SO-27	SAM	SOIL	8/8/12	0.57	50.0	74.00
9980395003S	FTSW-HR-SO-01S	MS	SOIL	8/8/12	0.55	50.0	90.54
9980395003SD	FTSW-HR-SO-01SD	MSD	SOIL	8/8/12	0.58	50.0	90.54

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ANALYSIS RUN LOG

Client: Analytical Laboratory Services Inc. Contract: ERT002|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-002

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1212																												
BLK	1.00	1216		X									X		X											X				
STANDARD 1	1.00	1219		X									X		X											X				
STANDARD 2	1.00	1223		X									X		X											X				
STANDARD 3	1.00	1226		X									X		X											X				
STANDARD 4	1.00	1230		X									X		X											X				
STANDARD 5	1.00	1233		X									X		X											X				
ICV	1.00	1237		X									X		X											X				
ZZZZZZ	1.00	1240																												
ICB2	1.00	1244		X									X		X											X				
LLICV	1.00	1247		X									X		X											X				
ICS-A1	1.00	1251		X									X		X											X				
ICS-AB1	1.00	1300		X									X		X											X				
ZZZZZZ	5.00	1304																												
ZZZZZZ	5.00	1307																												
ZZZZZZ	5.00	1311																												
ZZZZZZ	5.00	1314																												
ZZZZZZ	5.00	1318																												
ZZZZZZ	5.00	1321																												
ZZZZZZ	5.00	1324																												
ZZZZZZ	5.00	1328																												
ZZZZZZ	5.00	1331																												
ZZZZZZ	5.00	1335																												
ZZZZZZ	5.00	1338																												
CCB1	5.00	1351		X									X		X											X				
LLCCV	5.00	1354		X									X		X											X				
CCV2	1.00	1358		X									X		X											X				
ZZZZZZ	5.00	1401																												
ZZZZZZ	5.00	1405																												
1020183	5.00	1408		X									X		X											X				
1020184	5.00	1412		X									X		X											X				
ZZZZZZ	5.00	1432																												
ZZZZZZ	5.00	1435																												
ZZZZZZ	5.00	1438																												
ZZZZZZ	5.00	1442																												
ZZZZZZ	5.00	1445																												

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ANALYSIS RUN LOG

Client: Analytical Laboratory Services Inc. Contract: ERT002|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-002

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	1449																												
CCV3	1.00	1452		X									X		X											X				
CCB2	1.00	1456		X									X		X											X				
LLCCV	1.00	1459		X									X		X											X				
9980394001	5.00	1503		X									X		X											X				
9980394002	5.00	1506		X									X		X											X				
9980394003	5.00	1510		X									X		X											X				
9980394004	5.00	1513		X									X		X											X				
9980394005	5.00	1517		X									X		X											X				
9980394007	5.00	1520		X									X		X											X				
9980394008	5.00	1524		X									X		X											X				
9980394009	5.00	1527		X									X		X											X				
9980394010	5.00	1531		X									X		X											X				
9980394011	5.00	1534		X									X		X											X				
CCV4	1.00	1538		X									X		X											X				
CCB3	1.00	1541		X									X		X											X				
LLCCV	1.00	1545		X									X		X											X				
ZZZZZZ	5.00	1550																												
ZZZZZZ	5.00	1554																												
ZZZZZZ	5.00	1557																												
ZZZZZZ	5.00	1600																												
ZZZZZZ	5.00	1604																												
ZZZZZZ	5.00	1607																												
ZZZZZZ	5.00	1611																												
CCB4	5.00	1614		X									X		X											X				
LLCCV	5.00	1618		X									X		X											X				
CCV6	5.00	1621		X									X		X											X				
9980394012	5.00	1624		X									X		X											X				
9980394013	5.00	1628		X									X		X											X				
9980394013L	25.00	1631		X									X		X											X				
ZZZZZZ	5.00	1635																												
ZZZZZZ	5.00	1638																												
ZZZZZZ	5.00	1642																												
9980395003S	5.00	1645		X									X		X											X				
9980395003SD	5.00	1649		X									X		X											X				
9980395003PS	5.00	1652											X		X															

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ANALYSIS RUN LOG

Client: Analytical Laboratory Services Inc. Contract: ERT002|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-002

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	1656																												
CCV7	1.00	1659		X									X		X											X				
CCB5	1.00	1705		X									X		X											X				
LLCCV	1.00	1708		X									X		X											X				
ZZZZZZ	5.00	1712																												
ZZZZZZ	5.00	1715																												
ZZZZZZ	5.00	1719																												
ZZZZZZ	5.00	1722																												
ZZZZZZ	25.00	1726																												
ZZZZZZ	5.00	1729																												
ZZZZZZ	5.00	1733																												
ZZZZZZ	5.00	1736																												
ZZZZZZ	5.00	1740																												
ZZZZZZ	5.00	1743																												
CCV8	1.00	1746		X									X		X											X				
CCB6	1.00	1750		X									X		X											X				
LLCCV	1.00	1753		X									X		X											X				
ZZZZZZ	25.00	1757																												
ZZZZZZ	5.00	1800																												
ZZZZZZ	5.00	1804																												
ZZZZZZ	5.00	1807																												
ZZZZZZ	5.00	1811																												
ZZZZZZ	5.00	1814																												
ZZZZZZ	5.00	1818																												
ZZZZZZ	5.00	1821																												
ZZZZZZ	5.00	1825																												
ZZZZZZ	5.00	1828																												
CCV9	1.00	1832		X									X		X											X				
CCB7	1.00	1835		X									X		X											X				
LLCCV	1.00	1839		X									X		X											X				
ZZZZZZ	5.00	1842																												
ZZZZZZ	5.00	1846																												
ZZZZZZ	5.00	1849																												
ZZZZZZ	5.00	1853																												
ZZZZZZ	5.00	1856																												
ZZZZZZ	5.00	1900																												

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ANALYSIS RUN LOG

Client: Analytical Laboratory Services Inc. Contract: ERT002|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-002

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	1903																								
ZZZZZZ	5.00	1906																								
ZZZZZZ	5.00	1910																								
ZZZZZZ	25.00	1913																								
ZZZZZZ	1.00	1917																								
ZZZZZZ	1.00	1920																								
ZZZZZZ	1.00	1924																								
ZZZZZZ	5.00	1927																								
ZZZZZZ	5.00	1931																								
ZZZZZZ	5.00	1934																								
ZZZZZZ	5.00	1938																								
ZZZZZZ	5.00	1941																								
ZZZZZZ	5.00	1945																								
ZZZZZZ	5.00	1948																								
ZZZZZZ	25.00	1952																								
ZZZZZZ	5.00	1955																								
ZZZZZZ	5.00	1959																								
ZZZZZZ	1.00	2002																								
ZZZZZZ	1.00	2006																								
ZZZZZZ	1.00	2009																								
ZZZZZZ	5.00	2013																								
ZZZZZZ	5.00	2016																								
ZZZZZZ	5.00	2020																								
ZZZZZZ	5.00	2023																								
ZZZZZZ	5.00	2026																								
ZZZZZZ	5.00	2030																								
ZZZZZZ	5.00	2033																								
ZZZZZZ	5.00	2037																								
ZZZZZZ	5.00	2040																								
ZZZZZZ	5.00	2044																								
ZZZZZZ	1.00	2047																								
ZZZZZZ	1.00	2051																								
ZZZZZZ	1.00	2054																								
ZZZZZZ	5.00	2058																								
ZZZZZZ	5.00	2101																								
ZZZZZZ	5.00	2105																								

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ANALYSIS RUN LOG

Client: Analytical Laboratory Services Inc. Contract: ERT002|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-002

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	2108																								
ZZZZZZ	25.00	2112																								
ZZZZZZ	5.00	2115																								
ZZZZZZ	25.00	2119																								
ZZZZZZ	5.00	2122																								
ZZZZZZ	5.00	2126																								
ZZZZZZ	5.00	2129																								
ZZZZZZ	1.00	2133																								
ZZZZZZ	1.00	2136																								
ZZZZZZ	1.00	2140																								
ZZZZZZ	5.00	2143																								
ZZZZZZ	5.00	2147																								
ZZZZZZ	5.00	2150																								
ZZZZZZ	5.00	2153																								
ZZZZZZ	5.00	2157																								
ZZZZZZ	5.00	2200																								
ZZZZZZ	5.00	2204																								
ZZZZZZ	5.00	2207																								
ZZZZZZ	5.00	2211																								
ZZZZZZ	5.00	2214																								
ZZZZZZ	5.00	2218																								
ZZZZZZ	5.00	2221																								
ZZZZZZ	5.00	2225																								
ZZZZZZ	5.00	2228																								
ZZZZZZ	25.00	2232																								
ZZZZZZ	5.00	2235																								
ZZZZZZ	5.00	2239																								
ZZZZZZ	5.00	2242																								
ZZZZZZ	1.00	2246																								
ZZZZZZ	1.00	2256																								
ZZZZZZ	5.00	2259																								
ZZZZZZ	5.00	2311																								
ZZZZZZ	5.00	2315																								
ZZZZZZ	5.00	2318																								
ZZZZZZ	25.00	2327																								
ZZZZZZ	5.00	2330																								

6020 3051
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ANALYSIS RUN LOG

Client: Analytical Laboratory Services Inc. Contract: ERT002|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-002

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	2339																								
ZZZZZZ	5.00	2343																								
ZZZZZZ	5.00	2346																								

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT002|Ft. Stewart 3153-004

Lab Code: CAS Case No.: _____ NRAS No.: _____ SDG NO.: ERT-002

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
BLK	ZZZZZZ	1212												
BLK	BLK	1216	100		100		100		100		100		100	
STANDARD 1	STANDARD 1	1219	112		99		97		102		91		95	
STANDARD 2	STANDARD 2	1223	113		100		98		103		102		102	
STANDARD 3	STANDARD 3	1226	116		100		101		101		102		105	
STANDARD 4	STANDARD 4	1230	114		100		99		105		103		104	
STANDARD 5	STANDARD 5	1233	117		101		101		104		103		105	
ICV	ICV	1237	115		99		99		104		102		103	
ICB1	ZZZZZZ	1240												
ICB2	ICB	1244	102		99		98		98		99		98	
LLICV	LLICV	1247	111		100		97		103		104		100	
ICS-A1	ICSA	1251	106		96		92		101		99		96	
ICS-AB1	ICSAB	1300	107		102		95		107		106		102	
1020719	ZZZZZZ	1304												
1020720	ZZZZZZ	1307												
9981408002	ZZZZZZ	1311												
9981430001	ZZZZZZ	1314												
1020721	ZZZZZZ	1318												
1020722	ZZZZZZ	1321												
9981430001P	ZZZZZZ	1324												
9981517002	ZZZZZZ	1328												
9981517003	ZZZZZZ	1331												
9981517003L	ZZZZZZ	1335												
CCV1	ZZZZZZ	1338												
CCB1	CCB	1351	112		107		104		111		112		112	
LLCCV	LLCCV	1354	109		105		100		109		113		109	
CCV2	CCV	1358	108		104		99		110		112		109	
1021781	ZZZZZZ	1401												
1021782	ZZZZZZ	1405												
1020183	MB for HBN 47503	1408	104		102		95		106		108		104	
1020184	LCS for HBN 4750	1412	107		101		97		108		110		107	
1020187	ZZZZZZ	1432												
1020188	ZZZZZZ	1435												
1020191	ZZZZZZ	1438												
1020192	ZZZZZZ	1442												
1020195	ZZZZZZ	1445												
1020196	ZZZZZZ	1449												
CCV3	CCV	1452	115		110		106		114		116		116	
CCB2	CCB	1456	117		112		108		115		116		116	
LLCCV	LLCCV	1459	111		107		105		114		113		114	
9980394001	FTSW-AA-SO-17	1503	112		107		104		116		117		115	
9980394002	FTSW-AA-SO-18 (0	1506	112		106		105		113		115		121	
9980394003	FTSW-AA-SO-19	1510	110		105		102		114		114		113	
9980394004	FTSW-AA-SO-20 (0	1513	109		104		101		115		115		115	
9980394005	FTSW-AA-SO-21	1517	109		105		102		112		115		111	

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT002|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-002

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For: Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980394007	FTSW-AA-SO-22	1520	110		107		102		112		114		112	
9980394008	FTSW-AA-SO-23	1524	109		105		101		113		114		111	
9980394009	FTSW-AA-SO-24	1527	108		104		100		115		114		111	
9980394010	FTSW-AA-SO-25	1531	109		103		101		111		113		110	
9980394011	FTSW-AA-SO-25 DU	1534	109		102		98		109		109		107	
CCV4	CCV	1538	109		105		102		112		113		108	
CCB3	CCB	1541	110		107		103		110		111		109	
LLCCV	LLCCV	1545	106		105		98		111		113		109	
1020719	ZZZZZZ	1550												
1020720	ZZZZZZ	1554												
9981430001	ZZZZZZ	1557												
1020721	ZZZZZZ	1600												
1020722	ZZZZZZ	1604												
9981430001P	ZZZZZZ	1607												
CCV5	ZZZZZZ	1611												
CCB4	CCB	1614	112		109		105		113		115		114	
LLCCV	LLCCV	1618	111		106		102		112		114		111	
CCV6	CCV	1621	110		107		102		112		114		110	
9980394012	FTSW-AA-SO-26	1624	110		105		103		114		115		111	
9980394013	FTSW-AA-SO-27	1628	108		103		102		113		113		111	
9980394013L	FTSW-AA-SO-27L	1631	109		106		103		115		116		114	
9980395001	ZZZZZZ	1635												
9980395002	ZZZZZZ	1638												
9980395003	ZZZZZZ	1642												
9980395003S	FTSW-HR-SO-01S	1645	108		104		101		112		113		110	
9980395003S	FTSW-HR-SO-01SD	1649	107		102		99		111		113		108	
9980395003P	ZZZZZZ	1652												
9980395004	ZZZZZZ	1656												
CCV7	CCV	1659	106		103		97		108		112		105	
CCB5	CCB	1705	109		103		100		110		111		107	
LLCCV	LLCCV	1708	107		103		99		109		112		108	
9980395005	ZZZZZZ	1712												
9980395007	ZZZZZZ	1715												
9980395008	ZZZZZZ	1719												
9980395009	ZZZZZZ	1722												
9980395009L	ZZZZZZ	1726												
9980395010	ZZZZZZ	1729												
9980395011	ZZZZZZ	1733												
9980395012	ZZZZZZ	1736												
9980395013	ZZZZZZ	1740												
9980395014	ZZZZZZ	1743												
CCV8	CCV	1746	107		103		100		110		111		105	
CCB6	CCB	1750	108		103		100		109		109		105	
LLCCV	LLCCV	1753	107		103		98		109		112		107	
9980395014L	ZZZZZZ	1757												

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT002|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-002

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980614001	ZZZZZZ	1800												
9980614002	ZZZZZZ	1804												
9980614003	ZZZZZZ	1807												
9980614004	ZZZZZZ	1811												
9980614005	ZZZZZZ	1814												
9980614006	ZZZZZZ	1818												
9980614007	ZZZZZZ	1821												
9980614008	ZZZZZZ	1825												
9980614009	ZZZZZZ	1828												
CCV9	CCV	1832	108		102		96		109		110		105	
CCB7	CCB	1835	98		92		88		99		107		102	
LLCCV	LLCCV	1839	106		100		96		108		109		104	
9980614010	ZZZZZZ	1842												
9980614011	ZZZZZZ	1846												
9980614012	ZZZZZZ	1849												
9980614013	ZZZZZZ	1853												
1020189	ZZZZZZ	1856												
1020190	ZZZZZZ	1900												
9980614013P	ZZZZZZ	1903												
9980614014	ZZZZZZ	1906												
9980614015	ZZZZZZ	1910												
9980614015L	ZZZZZZ	1913												
CCV10	ZZZZZZ	1917												
CCB8	ZZZZZZ	1920												
LLCCV	ZZZZZZ	1924												
9980614016	ZZZZZZ	1927												
9980614017	ZZZZZZ	1931												
9980614018	ZZZZZZ	1934												
9980614019	ZZZZZZ	1938												
9980614020	ZZZZZZ	1941												
9980614021	ZZZZZZ	1945												
9980614022	ZZZZZZ	1948												
9980614022L	ZZZZZZ	1952												
9980875001	ZZZZZZ	1955												
1020193	ZZZZZZ	1959												
CCV11	ZZZZZZ	2002												
CCB9	ZZZZZZ	2006												
LLCCV	ZZZZZZ	2009												
1020194	ZZZZZZ	2013												
9980875001P	ZZZZZZ	2016												
9980875002	ZZZZZZ	2020												
9980875003	ZZZZZZ	2023												
9980875004	ZZZZZZ	2026												
9980875005	ZZZZZZ	2030												
9980875006	ZZZZZZ	2033												

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT002|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-002

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980875007	ZZZZZZ	2037												
9980875008	ZZZZZZ	2040												
9980875009	ZZZZZZ	2044												
CCV12	ZZZZZZ	2047												
CCB10	ZZZZZZ	2051												
LLCCV	ZZZZZZ	2054												
9980875010	ZZZZZZ	2058												
9980875011	ZZZZZZ	2101												
9980875012	ZZZZZZ	2105												
9980875013	ZZZZZZ	2108												
9980875013L	ZZZZZZ	2112												
9980875014	ZZZZZZ	2115												
9980875014L	ZZZZZZ	2119												
9981198001	ZZZZZZ	2122												
9981198002	ZZZZZZ	2126												
9981198003	ZZZZZZ	2129												
CCV13	ZZZZZZ	2133												
CCB11	ZZZZZZ	2136												
LLCCV	ZZZZZZ	2140												
1020197	ZZZZZZ	2143												
1020198	ZZZZZZ	2147												
9981198003P	ZZZZZZ	2150												
9981198004	ZZZZZZ	2153												
9981198005	ZZZZZZ	2157												
9981198006	ZZZZZZ	2200												
9981198007	ZZZZZZ	2204												
9981198008	ZZZZZZ	2207												
9981198009	ZZZZZZ	2211												
9981198010	ZZZZZZ	2214												
CCV14	ZZZZZZ	2218												
CCB12	ZZZZZZ	2221												
LLCCV	ZZZZZZ	2225												
9981198011	ZZZZZZ	2228												
9981198011L	ZZZZZZ	2232												
CCV15	ZZZZZZ	2235												
CCB13	ZZZZZZ	2239												
LLCCV	ZZZZZZ	2242												
50 PPM LDR	ZZZZZZ	2246												
30 PPM LDR	ZZZZZZ	2256												
1020719	ZZZZZZ	2259												
CCV16	ZZZZZZ	2311												
CCB14	ZZZZZZ	2315												
LLCCV	ZZZZZZ	2318												
9980875009	ZZZZZZ	2327												
1021781	ZZZZZZ	2330												

FORM XV-IN

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT002|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-002

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
CCV17	ZZZZZZ	2339												
CCB15	ZZZZZZ	2343												
LLCCV	ZZZZZZ	2346												

Total Metals in Solid by 6020A Raw Data

Dataset: A081312C 2nd Review MWO/ MM

First Review: MM/MWO Approval: MWO/ MM

Internal Standards: **ICPMS9190**

200	60-125%	**6020Qc:**	70-130%	**6020A**	30-130%	**DOD:**	70-120%

Standards :
Tuning MS0361
Daily Standard: MS0361

Calibration Standards
MS0343
MS0344

PIPETTES:

03-028	10.0 mL
03-202	.200 mL
03-201	1.0 mL
03-031	1.0 mL

ICSA: MS0341
ICSAB:MS0340

Al LDR 30 ppm

GOLD: MS0346
DW LCS: MS0358
Second Source

MA1393	MA1388	MA1360
MA1342	MS0345	MA1381
MS0309	MA1359	

Internal Standards/ Target Analytes

Sc-Al,V,Cr,Mn,Co,Ni,Cu,Na, K, Ti, Mg, Ca, Fe, As, Zn, Se,
Y
In-Sr, Mo, Ag, Cd, Sn, Sb, Ba
Tb
Bi-Hg, Tl, Pb, U

Reanalyzed & passed

RR. MB 1020719 } Fe } Carry
LCS 1020720 } Mo } over from ICSAB

Case Narrative:

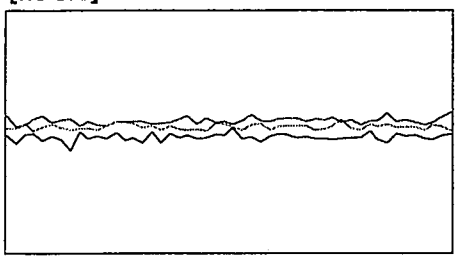
9981430001 - Mo
1020721
1020722 1

***D**: *D at the beginning of the Dataset Denotes that the samples were run on the Elan DRCe ICP-MS*

Tune Report

Batch Folder C:\Agilent\ICPMH\1\DATA\A081312.b
Report Comment
Instrument Name G3281A JP11040846

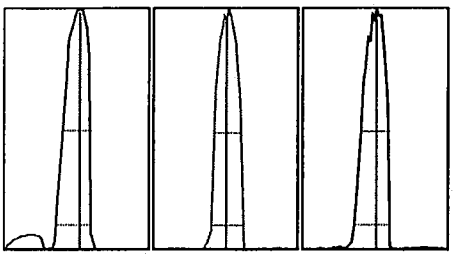
[No Gas]



Mass	Range	Count	RSD%	Background
7	20000	10949	2.467	16.800
89	10000	5213	2.148	10.900
205	5000	2399	3.205	29.500

Ratio (oxide) 156/140 0.448 % **Ratio (2+)** 70/140 12.811 %

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.311



Mass	Peak Height	Axis	W-50%	W-X%
7	10990.74	7.10	0.60	0.728
89	5222.83	89.05	0.59	0.689
205	2456.22	205.05	0.61	0.740

X = 10 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 22.74 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	9.2 V	Deflect	16.0 V
Extract 2	-200.0 V	Cell Entrance	-32 V	Plate Bias	-50 V
Omega Bias	-85 V	Cell Exit	-48 V		

Cell Parameters

OctP Bias	-8.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	200 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

[he]

Mass	Range	Count	RSD%	Background
59	2000	1752	4.007	
89	5000	2182	3.418	
51	500	382	7.089	

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.306

Tune Parameters

Tune Report

Plasma Paramters

RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
Mass	**Range**	**Count**	**RSD%**	**Background**	
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	9.2 V	Deflect	0.0 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-85 V	Cell Exit	-60 V		

Cell Parameters

OctP Bias	-18.0 V	He Flow	3.5 mL/min	Energy Discrimination	3.0 V
OctP RF	200 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

[HeHe]

Mass	Range	Count	RSD%	Background
59	1000	573	5.217	
89	1000	478	5.792	
51	50	28	27.475	

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.306

Tune Parameters

Plasma Paramters

RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	9.2 V	Deflect	-73.2 V
Extract 2	-200.0 V	Cell Entrance	-140 V	Plate Bias	-150 V
Omega Bias	-85 V	Cell Exit	-150 V		

Cell Parameters

OctP Bias	-100.0 V	He Flow	10.0 mL/min	Energy Discrimination	7.0 V
OctP RF	180 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	001CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:12:50-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	2551	3.61
Cr	52	1	No Gas	9974	0.04
Mn	55	1	No Gas	19045	0.02
Co	59	1	No Gas	330	7.40
Ni	60	1	No Gas	18053	0.01
Cu	63	1	No Gas	601	0.73
Sr	88	1	No Gas	59	210.68
Ag	107	1	No Gas	56	164.96
Al	27	1	No Gas	7669	0.03
Sn	118	1	No Gas	215	1.39
Ti	47	1	No Gas	297	7.26
Zn	66	1	No Gas	660	3.98
As	75	3	HeHe	10	373.51
As	75	1	No Gas	24182	0.01
Sb	121	1	No Gas	167	18.33
Hg	201	1	No Gas	39	65.07
Be	9	1	No Gas	22	71.57
Pb	208	1	No Gas	463	4.16
Se	82	1	No Gas	41	386.23
Mo	98	1	No Gas	923	2.04
Ba	137	1	No Gas	53	162.38
Tl	205	1	No Gas	63	85.61
U	238	1	No Gas	107	53.04
Na	23	2	he	85677	0.00
Mg	24	2	he	200	13.89
K	39	2	he	193930	0.00
Se	82	3	HeHe	48	14.65
Fe	57	3	HeHe	126	26.53
Cd	114	1	No Gas	37	214.72
Ca	44	1	No Gas	123727	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	5836894	3.06
Sc	45	2	he	1293410	1.06
Ge	72	1	No Gas	677402	2.06
In	115	1	No Gas	3685121	2.00
Tb	159	1	No Gas	4485657	1.37

Calibration Blank Report

Bi	209	1	No Gas	2034548	4.06
Sc	45	3	HeHe	136772	1.11

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	002CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:16:22-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	1149	13.25
Cr	52	1	No Gas	10752	0.07
Mn	55	1	No Gas	31947	0.08
Co	59	1	No Gas	248	5.80
Ni	60	1	No Gas	18861	0.01
Cu	63	1	No Gas	595	1.97
Sr	88	1	No Gas	93	45.51
Ag	107	1	No Gas	37	337.22
Al	27	1	No Gas	8628	0.05
Sn	118	1	No Gas	193	6.24
Ti	47	1	No Gas	295	6.58
Zn	66	1	No Gas	783	1.76
As	75	3	HeHe	7	579.68
As	75	1	No Gas	23234	0.03
Sb	121	1	No Gas	126	31.60
Hg	201	1	No Gas	33	81.17
Be	9	1	No Gas	23	265.75
Pb	208	1	No Gas	293	14.59
Mo	98	1	No Gas	864	3.14
Ba	137	1	No Gas	50	105.83
Tl	205	1	No Gas	26	668.06
U	238	1	No Gas	37	247.43
Na	23	2	he	83881	0.00
Mg	24	2	he	152	54.16
K	39	2	he	200065	0.00
Se	82	3	HeHe	62	45.93
Fe	57	3	HeHe	174	12.88
Cd	114	1	No Gas	50	207.84
Ca	44	1	No Gas	123511	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	5896472	4.01
Sc	45	2	he	1271268	0.31
Ge	72	1	No Gas	682805	1.30
In	115	1	No Gas	3697856	1.76
Tb	159	1	No Gas	4404848	1.64
Bi	209	1	No Gas	1997135	4.62

Calibration Blank Report

Sc	45	3	HeHe	132951	0.59

Calibration Standard Report

Sample Table

Sample Name	Standard 1
Data File Name	003CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:19:52-04:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	5673	0.60
Cr	52	1	No Gas	15856	0.04
Mn	55	1	No Gas	38340	0.02
Co	59	1	No Gas	3771	0.10
Ni	60	1	No Gas	21774	0.02
Cu	63	1	No Gas	3188	0.06
Sr	88	1	No Gas	4608	0.25
Ag	107	1	No Gas	1700	0.31
Al	27	1	No Gas	94327	0.00
Sn	118	1	No Gas	1674	1.15
Ti	47	1	No Gas	1051	0.70
Zn	66	1	No Gas	2127	0.49
As	75	3	HeHe	32	48.14
As	75	1	No Gas	25894	0.02
Sb	121	1	No Gas	1559	0.78
Hg	201	1	No Gas	34	105.24
Be	9	1	No Gas	352	4.93
Pb	208	1	No Gas	3630	0.14
Se	82	1	No Gas	49	760.54
Mo	98	1	No Gas	2340	0.68
Ba	137	1	No Gas	527	4.30
Tl	205	1	No Gas	2463	0.17
U	238	1	No Gas	2708	0.13
Na	23	2	he	102533	0.00
Mg	24	2	he	2849	0.21
K	39	2	he	210864	0.00
Se	82	3	HeHe	57	31.86
Fe	57	3	HeHe	233	19.68
Cd	114	1	No Gas	833	2.16
Ca	44	1	No Gas	137356	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6025814	1.84	5896472	102.19	70	120	
Sc	45	2	he	1152938	27.74	1271268	90.69	70	120	
Ge	72	1	No Gas	676306	1.76	682805	99.05	70	120	

Calibration Standard Report

In	115	1	No Gas	3601392	3.13	3697856	97.39	70	120	
Tb	159	1	No Gas	4357156	1.15	4404848	98.92	70	120	
Bi	209	1	No Gas	2230028	3.15	1997135	111.66	70	120	
Sc	45	3	HeHe	126675	2.93	132951	95.28	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 2
Data File Name	004CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:23:22-04:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	36707	0.01
Cr	52	1	No Gas	43016	0.00
Mn	55	1	No Gas	64359	0.00
Co	59	1	No Gas	33047	0.01
Ni	60	1	No Gas	28157	0.01
Cu	63	1	No Gas	19610	0.01
Sr	88	1	No Gas	42535	0.00
Ag	107	1	No Gas	18389	0.02
Al	27	1	No Gas	65426	0.00
Sn	118	1	No Gas	8458	0.07
Ti	47	1	No Gas	2941	0.03
Zn	66	1	No Gas	7561	0.10
As	75	3	HeHe	346	3.44
As	75	1	No Gas	28695	0.01
Sb	121	1	No Gas	13917	0.03
Hg	201	1	No Gas	69	35.57
Be	9	1	No Gas	3490	0.12
Pb	208	1	No Gas	31540	0.01
Se	82	1	No Gas	200	55.45
Mo	98	1	No Gas	10991	0.02
Ba	137	1	No Gas	4901	0.05
Tl	205	1	No Gas	23645	0.02
U	238	1	No Gas	26795	0.01
Na	23	2	he	131719	0.00
Mg	24	2	he	19022	0.02
K	39	2	he	237673	0.00
Se	82	3	HeHe	74	11.51
Fe	57	3	HeHe	930	1.42
Cd	114	1	No Gas	8162	0.07
Ca	44	1	No Gas	141966	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6077153	2.03	5896472	103.06	70	120	
Sc	45	2	he	1293877	1.51	1271268	101.78	70	120	
Ge	72	1	No Gas	684931	2.11	682805	100.31	70	120	

Calibration Standard Report

In	115	1	No Gas	3628326	3.66	3697856	98.12	70	120	
Tb	159	1	No Gas	4313712	2.41	4404848	97.93	70	120	
Bi	209	1	No Gas	2247572	3.62	1997135	112.54	70	120	
Sc	45	3	HeHe	134887	1.50	132951	101.46	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 3
Data File Name	005CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:26:52-04:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	347687	0.00
Cr	52	1	No Gas	324578	0.00
Mn	55	1	No Gas	404655	0.00
Co	59	1	No Gas	336563	0.00
Ni	60	1	No Gas	94971	0.00
Cu	63	1	No Gas	179719	0.00
Sr	88	1	No Gas	419711	0.00
Ag	107	1	No Gas	186331	0.00
Al	27	1	No Gas	225467	0.00
Sn	118	1	No Gas	85168	0.01
Ti	47	1	No Gas	26475	0.01
Zn	66	1	No Gas	46308	0.01
As	75	3	HeHe	3572	0.14
As	75	1	No Gas	69418	0.00
Sb	121	1	No Gas	144398	0.00
Hg	201	1	No Gas	321	3.02
Be	9	1	No Gas	34814	0.00
Pb	208	1	No Gas	311633	0.00
Se	82	1	No Gas	2388	0.35
Mo	98	1	No Gas	105298	0.00
Ba	137	1	No Gas	49424	0.00
Tl	205	1	No Gas	238405	0.00
U	238	1	No Gas	284661	0.00
Na	23	2	he	378460	0.00
Mg	24	2	he	160598	0.00
K	39	2	he	470770	0.00
Se	82	3	HeHe	196	2.49
Fe	57	3	HeHe	8647	0.06
Cd	114	1	No Gas	83808	0.00
Ca	44	1	No Gas	219400	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5975593	2.40	5896472	101.34	70	120	
Sc	45	2	he	1295638	1.95	1271268	101.92	70	120	
Ge	72	1	No Gas	682250	0.93	682805	99.92	70	120	

Calibration Standard Report

In	115	1	No Gas	3734350	0.92	3697856	100.99	70	120	
Tb	159	1	No Gas	4329799	0.59	4404848	98.30	70	120	
Bi	209	1	No Gas	2313155	0.17	1997135	115.82	70	120	
Sc	45	3	HeHe	139923	1.19	132951	105.24	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 4
Data File Name	006CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:30:23-04:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	3327729	0.00
Cr	52	1	No Gas	3025690	0.00
Mn	55	1	No Gas	3711637	0.00
Co	59	1	No Gas	3336506	0.00
Ni	60	1	No Gas	758712	0.00
Cu	63	1	No Gas	1768262	0.00
Sr	88	1	No Gas	4216323	0.00
Ag	107	1	No Gas	1897625	0.00
Al	27	1	No Gas	1994166	0.00
Sn	118	1	No Gas	999552	0.00
Ti	47	1	No Gas	269085	0.00
Zn	66	1	No Gas	455362	0.00
As	75	3	HeHe	35929	0.00
As	75	1	No Gas	493405	0.00
Sb	121	1	No Gas	1435359	0.00
Hg	201	1	No Gas	2804	0.04
Be	9	1	No Gas	344243	0.00
Pb	208	1	No Gas	3113349	0.00
Se	82	1	No Gas	23663	0.00
Mo	98	1	No Gas	1133897	0.00
Ba	137	1	No Gas	484561	0.00
Tl	205	1	No Gas	2284952	0.00
U	238	1	No Gas	2921542	0.00
Na	23	2	he	2821420	0.00
Mg	24	2	he	1615680	0.00
K	39	2	he	2725055	0.00
Se	82	3	HeHe	1791	0.20
Fe	57	3	HeHe	81592	0.00
Cd	114	1	No Gas	835193	0.00
Ca	44	1	No Gas	979919	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6200036	1.53	5896472	105.15	70	120	
Sc	45	2	he	1303185	0.51	1271268	102.51	70	120	
Ge	72	1	No Gas	682451	1.66	682805	99.95	70	120	

Calibration Standard Report

In	115	1	No Gas	3670872	2.59	3697856	99.27	70	120	
Tb	159	1	No Gas	4348184	1.52	4404848	98.71	70	120	
Bi	209	1	No Gas	2283484	4.44	1997135	114.34	70	120	
Sc	45	3	HeHe	138327	1.35	132951	104.04	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 5
Data File Name	007CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:33:47-04:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	6563421	0.00
Cr	52	1	No Gas	5906265	0.00
Mn	55	1	No Gas	7211085	0.00
Co	59	1	No Gas	6504377	0.00
Ni	60	1	No Gas	1495844	0.00
Cu	63	1	No Gas	3519800	0.00
Sr	88	1	No Gas	8227989	0.00
Ag	107	1	No Gas	3678532	0.00
Al	27	1	No Gas	3886184	0.00
Sn	118	1	No Gas	2200502	0.00
Ti	47	1	No Gas	542859	0.00
Zn	66	1	No Gas	890715	0.00
As	75	3	HeHe	72900	0.00
As	75	1	No Gas	972406	0.00
Sb	121	1	No Gas	2915076	0.00
Hg	201	1	No Gas	5833	0.05
Be	9	1	No Gas	681346	0.00
Pb	208	1	No Gas	6208559	0.00
Se	82	1	No Gas	48679	0.00
Mo	98	1	No Gas	2354816	0.00
Ba	137	1	No Gas	968617	0.00
Tl	205	1	No Gas	4555286	0.00
U	238	1	No Gas	5741236	0.00
Na	23	2	he	5414301	0.00
Mg	24	2	he	3082653	0.00
K	39	2	he	5133884	0.00
Se	82	3	HeHe	3501	0.06
Fe	57	3	HeHe	164269	0.00
Cd	114	1	No Gas	1701177	0.00
Ca	44	1	No Gas	1821322	0.00

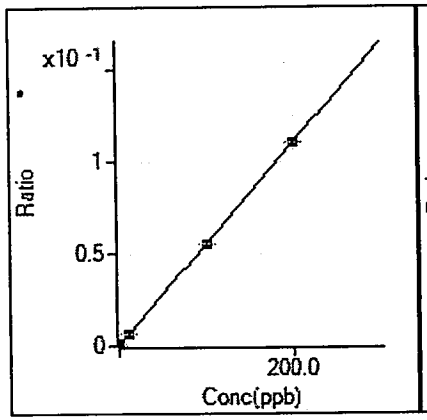
QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6151770	1.24	5896472	104.33	70	120	
Sc	45	2	he	1310111	1.57	1271268	103.06	70	120	
Ge	72	1	No Gas	687781	0.71	682805	100.73	70	120	

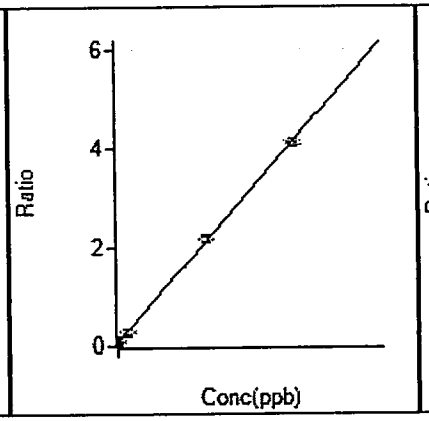
Calibration Standard Report

In	115	1	No Gas	3726710	1.53	3697856	100.78	70	120	
Tb	159	1	No Gas	4360250	1.19	4404848	98.99	70	120	
Bi	209	1	No Gas	2328198	0.87	1997135	116.58	70	120	
Sc	45	3	HeHe	139392	1.58	132951	104.84	70	120	

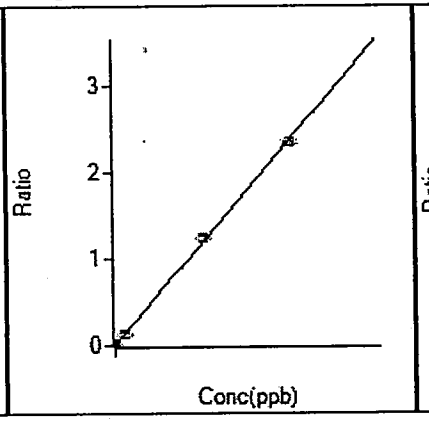
Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



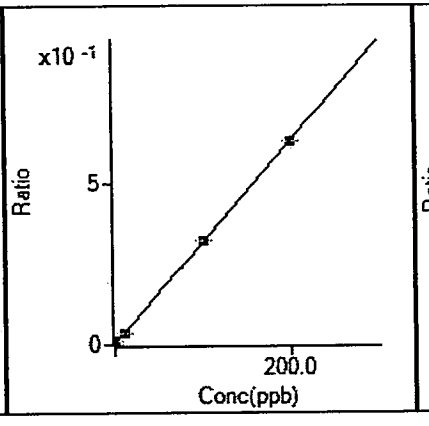
9 Be [No Gas] / ISTD: 45 Sc
y = 5.541E-4 x + 4.025E-6
R 1.0000
DL 0.01445
BEC 0.007265



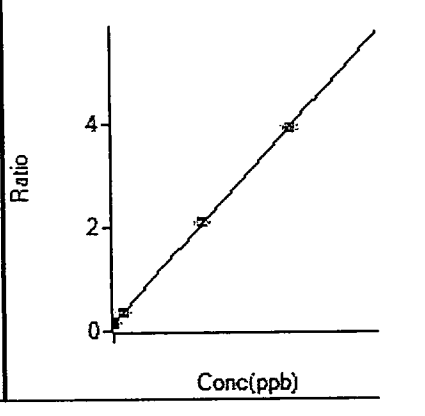
23 Na [he] / ISTD: 45 Sc
y = 2.047E-3 x + 6.598E-2
R 0.9999
DL 2.634
BEC 32.23



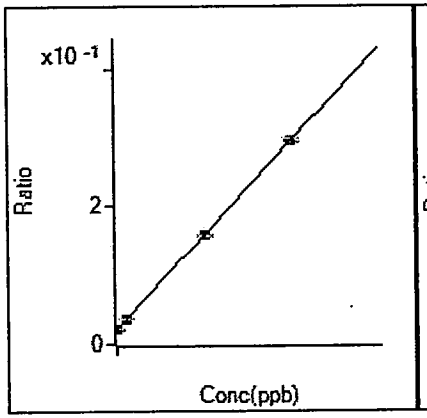
24 Mg [he] / ISTD: 45 Sc
y = 1.189E-3 x + 1.195E-4
R 0.9997
DL 0.2482
BEC 0.1004



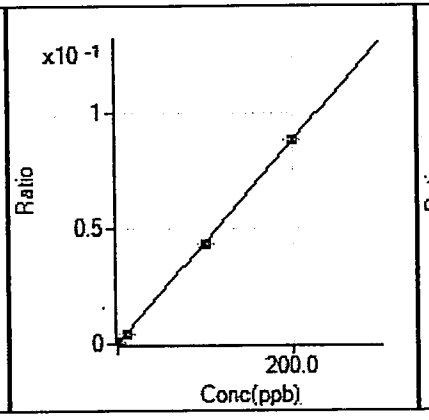
27 Al [No Gas] / ISTD: 45 Sc
y = 3.162E-3 x + 1.467E-3
R 1.0000
DL 0.1167
BEC 0.4638



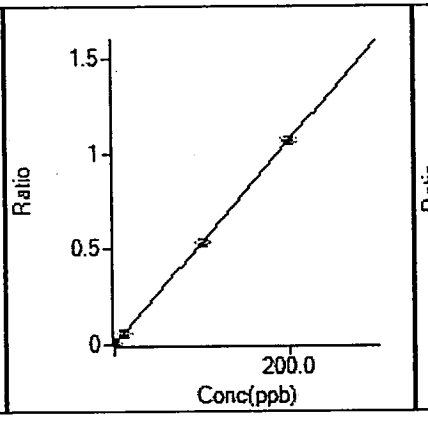
39 K [he] / ISTD: 45 Sc
y = 1.892E-3 x + 1.574E-1
R 0.9999
DL 2.785
BEC 83.19



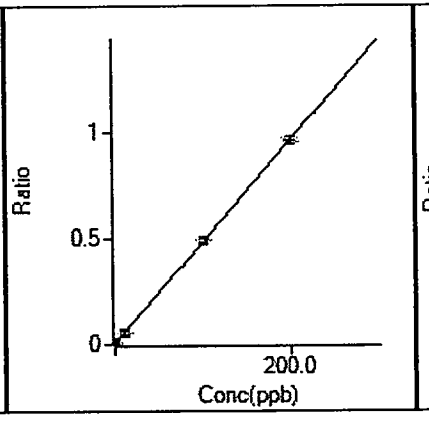
44 Ca [No Gas] / ISTD: 45 Sc
y = 1.375E-4 x + 2.096E-2
R 1.0000
DL 13.36
BEC 152.5



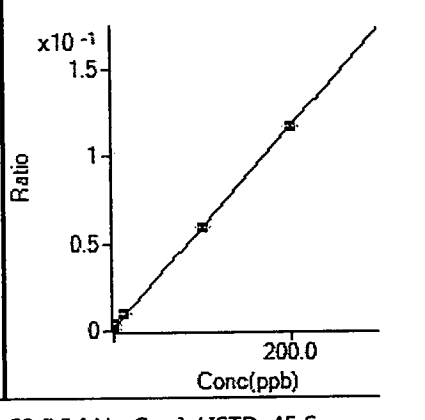
47 Ti [No Gas] / ISTD: 45 Sc
y = 4.395E-4 x + 5.013E-5
R 1.0000
DL 0.0652
BEC 0.1141



51 V [No Gas] / ISTD: 45 Sc
y = 5.340E-3 x + 2.003E-4
R 1.0000
DL 0.1719
BEC 0.03751

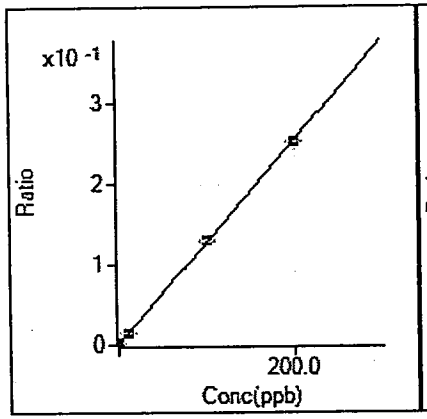


52 Cr [No Gas] / ISTD: 45 Sc
y = 4.807E-3 x + 1.824E-3
R 1.0000
DL 0.08261
BEC 0.3795

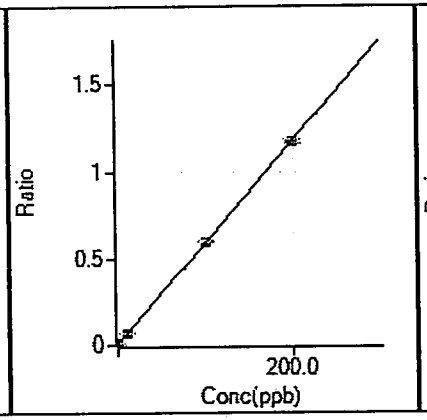


53 [V] [No Gas] / ISTD: 45 Sc
y = 5.795E-4 x + 1.368E-3
R 0.9998
DL 0.3926
BEC 2.361

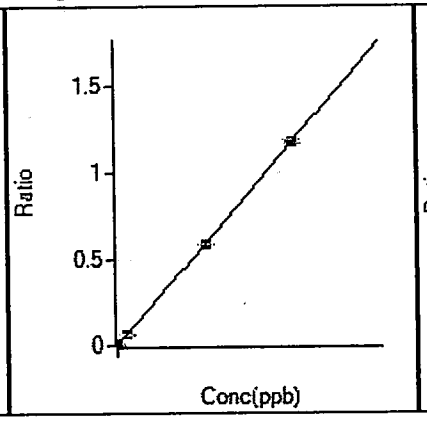
Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



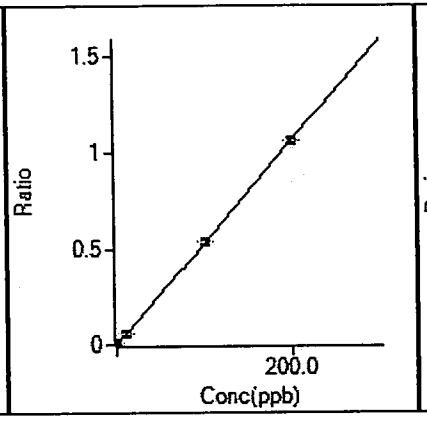
53 [V] [he] / ISTD: 45 Sc
y = 1.270E-3 x + 6.762E-4
R 0.9999
DL 0.5229
BEC 0.5325



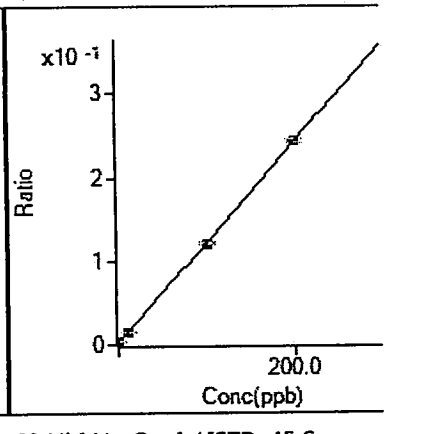
55 Mn [No Gas] / ISTD: 45 Sc
y = 5.855E-3 x + 5.402E-3
R 1.0000
DL 0.6308
BEC 0.9226



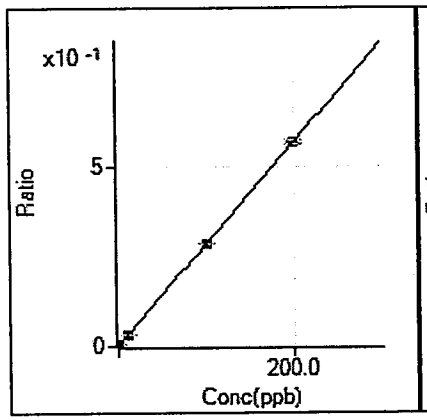
57 Fe [HeHe] / ISTD: 45 Sc
y = 5.887E-4 x + 1.311E-3
R 1.0000
DL 1.531
BEC 2.226



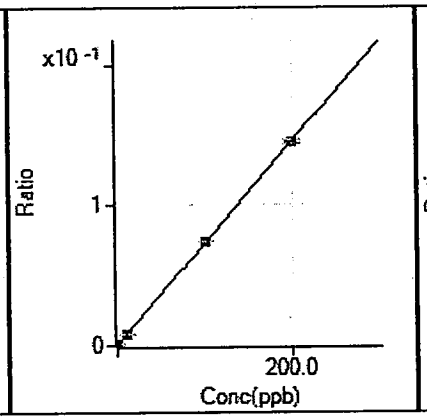
59 Co [No Gas] / ISTD: 45 Sc
y = 5.306E-3 x + 4.206E-5
R 1.0000
DL 0.003114
BEC 0.007927



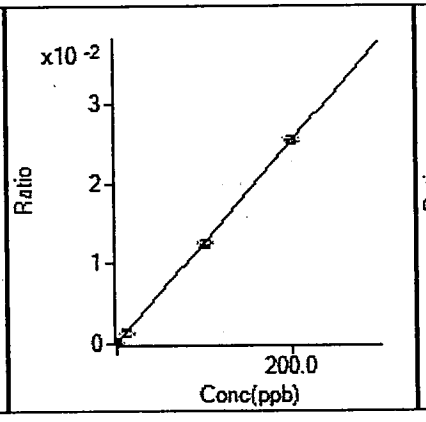
60 Ni [No Gas] / ISTD: 45 Sc
y = 1.198E-3 x + 3.204E-3
R 1.0000
DL 0.5389
BEC 2.674



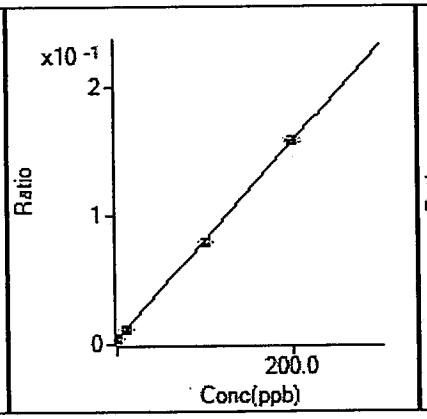
63Cu [No Gas] / ISTD: 45 Sc
y = 2.859E-3 x + 1.007E-4
R 1.0000
DL 0.009209
BEC 0.03522



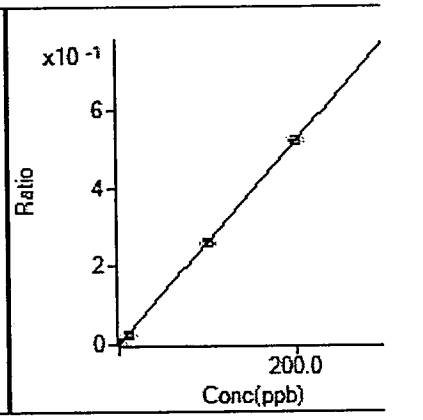
66 Zn [No Gas] / ISTD: 45 Sc
y = 7.254E-4 x + 1.333E-4
R 1.0000
DL 0.09382
BEC 0.1838



69 [Zn] [No Gas] / ISTD: 45 Sc
y = 1.267E-4 x + 3.180E-5
R 1.0000
DL 0.2514
BEC 0.251

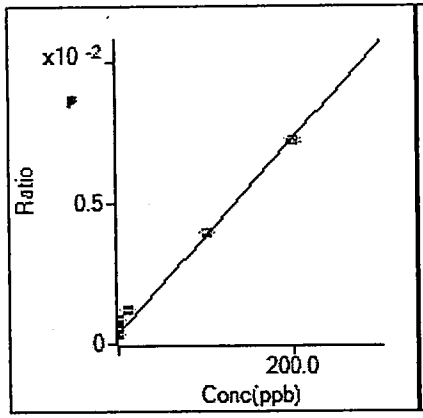


75 As [No Gas] / ISTD: 45 Sc
y = 7.678E-4 x + 3.949E-3
R 1.0000
DL 1.424
BEC 5.143

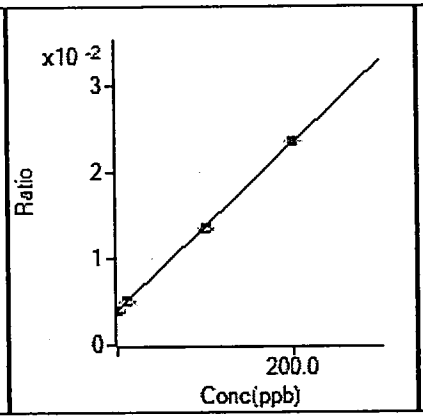


75 As [HeHe] / ISTD: 45 Sc
y = 2.611E-3 x + 5.400E-5
R 1.0000
DL 0.02561
BEC 0.02068

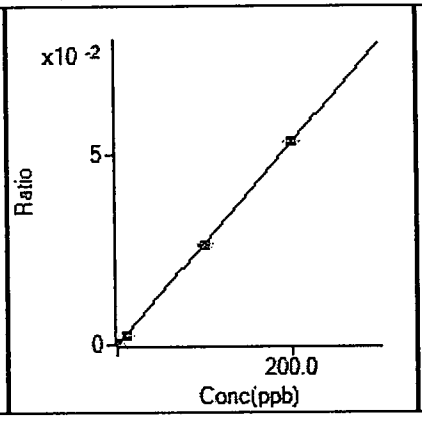
Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



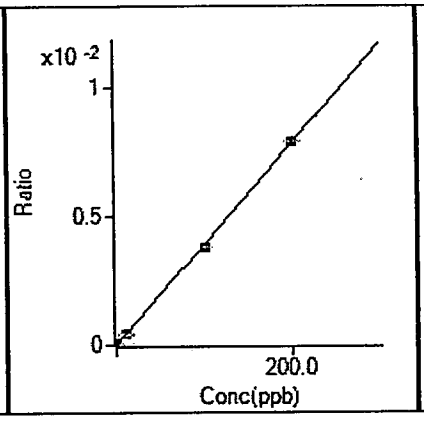
77 [As] [No Gas] / ISTD: 45 Sc
y = 3.487E-5 x + 3.519E-4
R 0.9974
DL 3.908
BEC 10.09



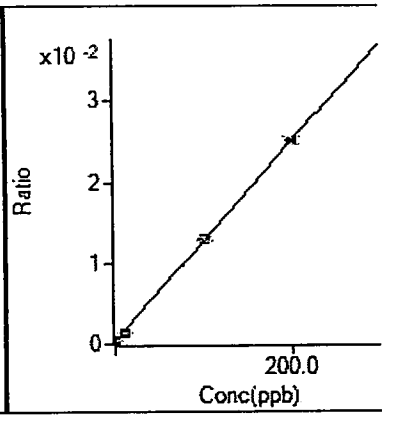
78 Se [No Gas] / ISTD: 45 Sc
y = 9.716E-5 x + 3.968E-3
R 0.9999
DL 5.747
BEC 40.84



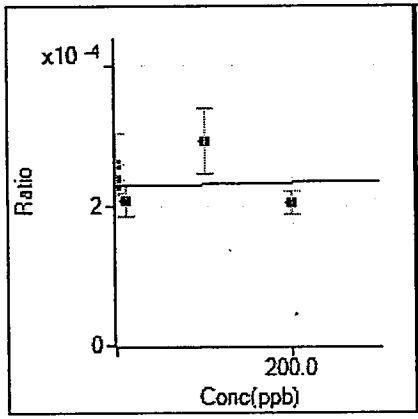
78 Se [HeHe] / ISTD: 45 Sc
y = 2.667E-4 x + 1.669E-5
R 1.0000
DL 0.1883
BEC 0.06256



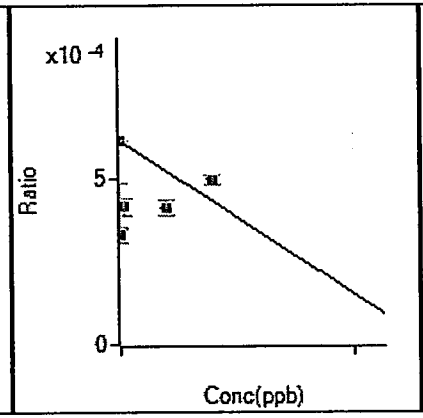
82 Se [No Gas] / ISTD: 45 Sc
y = 3.939E-5 x - 1.575E-5
R 0.9999
DL 0.3858
BEC -0.3998



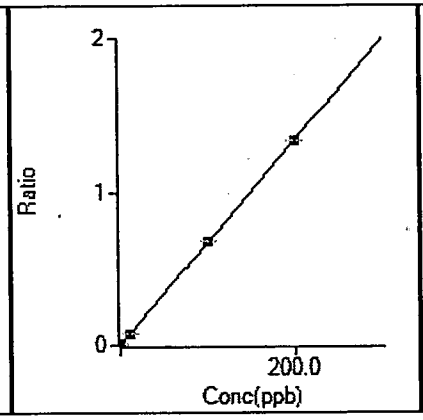
82 Se [HeHe] / ISTD: 45 Sc
y = 1.235E-4 x + 4.684E-4
R 0.9999
DL 3.293
BEC 3.792



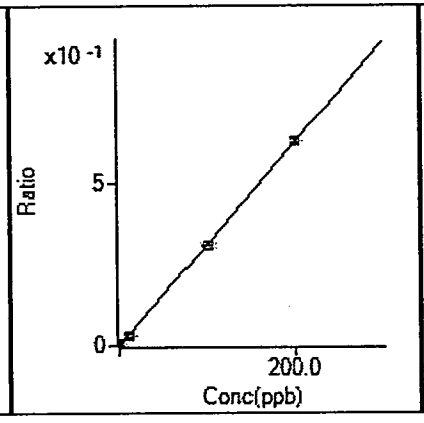
83 [Se] [No Gas] / ISTD: 115 In
y = 2.676E-8 x + 2.284E-4
R -0.1341
DL 2359
BEC 8534



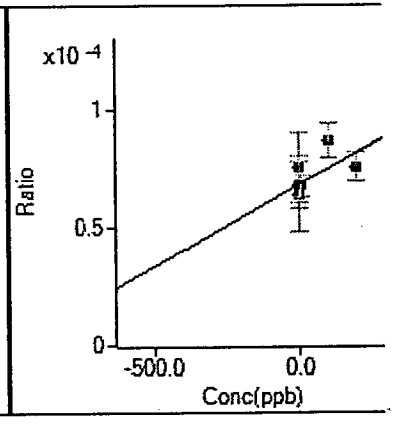
83 [Se] [HeHe] / ISTD: 45 Sc
y = - 9.258E-7 x + 6.156E-4
R 0.1431
DL -12.3
BEC -665



88 Sr [No Gas] / ISTD: 45 Sc
y = 6.711E-3 x + 1.555E-5
R 1.0000
DL 0.002704
BEC 0.002318

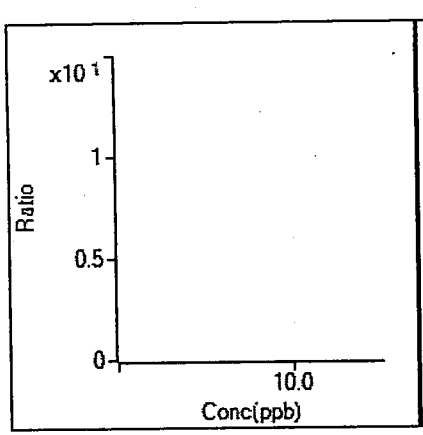


98 Mo [No Gas] / ISTD: 115 In
y = 3.143E-3 x + 2.337E-4
R 0.9999
DL 0.06173
BEC 0.07434

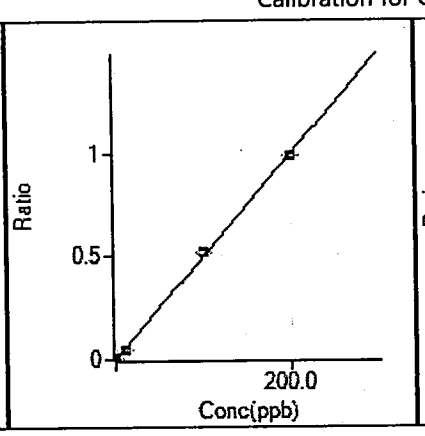


101 [Mo] [No Gas] / ISTD: 115 In
y = 6.819E-8 x + 6.787E-5
R 0.5579
DL 895.1
BEC 995.3

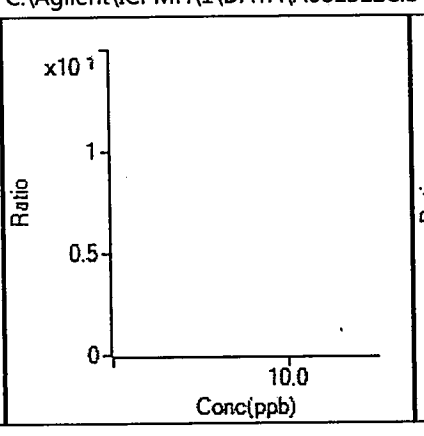
Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



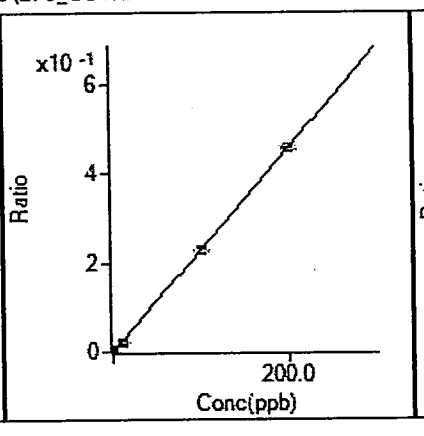
106 [Cd] [No Gas] / ISTD: 115 In
y =
R
DL
BEC



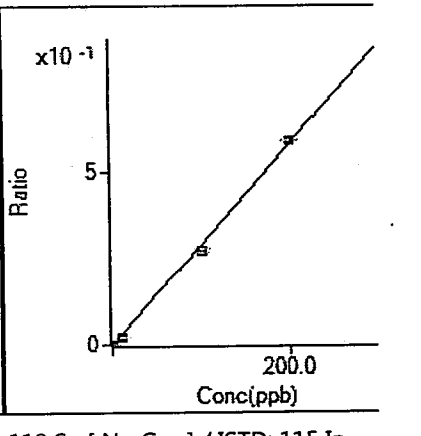
107 Ag [No Gas] / ISTD: 115 In
y = 4.983E-3 x + 1.008E-5
R 0.9997
DL 0.007648
BEC 0.002023



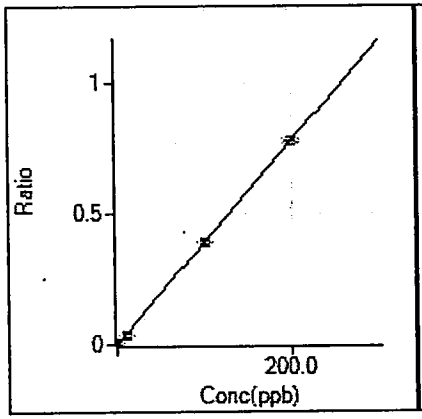
108 [Cd] [No Gas] / ISTD: 115 In
y =
R
DL
BEC



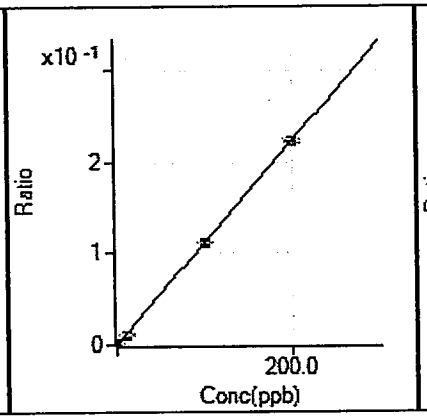
114 Cd [No Gas] / ISTD: 115 In
y = 2.281E-3 x + 1.336E-5
R 1.0000
DL 0.018
BEC 0.005859



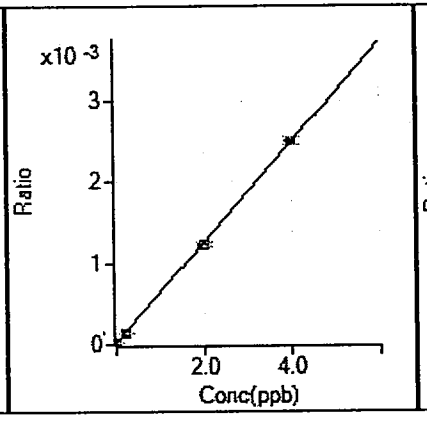
118 Sn [No Gas] / ISTD: 115 In
y = 2.905E-3 x + 5.207E-5
R 0.9993
DL 0.006195
BEC 0.01792



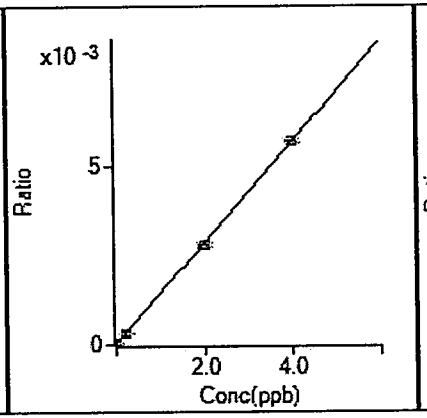
121 Sb [No Gas] / ISTD: 115 In
y = 3.911E-3 x + 3.410E-5
R 1.0000
DL 0.01061
BEC 0.008718



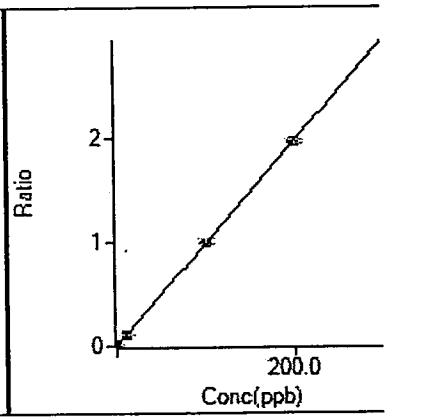
137 Ba [No Gas] / ISTD: 159 Tb
y = 1.112E-3 x + 1.129E-5
R 1.0000
DL 0.01568
BEC 0.01016



201 Hg [No Gas] / ISTD: 209 Bi
y = 6.191E-4 x + 1.681E-5
R 0.9999
DL 0.02511
BEC 0.02716

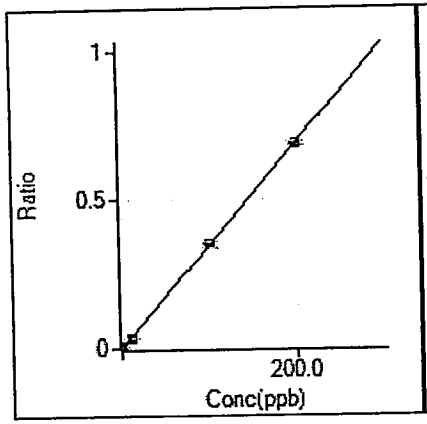


202 Hg [No Gas] / ISTD: 209 Bi
y = 1.413E-3 x + 1.890E-5
R 1.0000
DL 0.01015
BEC 0.01337



205 Tl [No Gas] / ISTD: 209 Bi
y = 9.832E-3 x + 1.279E-5
R 0.9999
DL 0.00676
BEC 0.001301

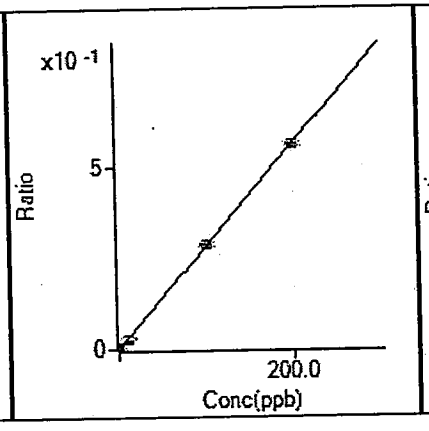
Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



206 [Pb] [No Gas] / ISTD: 209 Bi

y = 3.452E-3 x + 2.751E-5

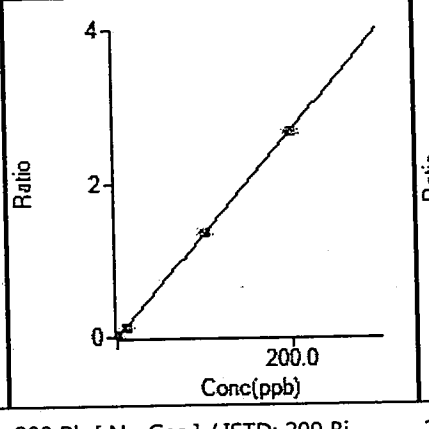
R	1.0000
DL	0.01696
BEC	0.00797



207 [Pb] [No Gas] / ISTD: 209 Bi

y = 2.838E-3 x + 2.212E-5

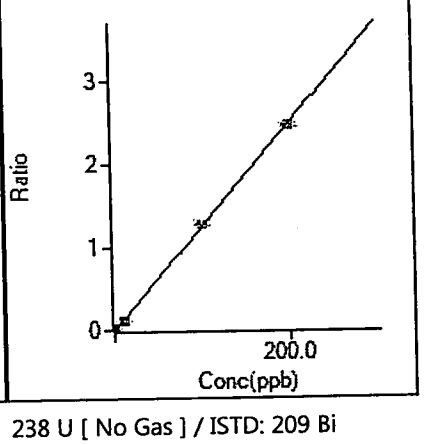
R	1.0000
DL	0.004877
BEC	0.007795



208 Pb [No Gas] / ISTD: 209 Bi

y = 1.340E-2 x + 1.450E-4

R	0.9999
DL	0.01306
BEC	0.01083



238 U [No Gas] / ISTD: 209 Bi

y = 1.243E-2 x + 1.804E-5

R	0.9998
DL	0.00397
BEC	0.001452

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	008_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:37:09-04:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	98.742	1.626	3245310	1.36	100	98.7	90	110	
Cr	52	1	No Gas	97.531	1.079	2895291	0.94	100	97.5	90	110	
Mn	55	1	No Gas	99.658	1.042	3623044	0.49	100	99.7	90	110	
Co	59	1	No Gas	97.852	0.975	3194700	1.50	100	97.9	90	110	
Ni	60	1	No Gas	96.889	1.045	734016	0.49	100	96.9	90	110	
Cu	63	1	No Gas	99.610	1.149	1752874	2.11	100	99.6	90	110	
Sr	88	1	No Gas	99.428	1.067	4104861	0.44	100	99.4	90	110	
Ag	107	1	No Gas	98.743	0.588	1805761	1.29	100	98.7	90	110	
Al	27	1	No Gas	99.447	2.057	1943613	1.74	100	99.4	90	110	
Sn	118	1	No Gas	103.632	0.816	1105279	1.98	100	103.6	90	110	
Tl	47	1	No Gas	89.870	1.572	243295	1.48	100	89.9	90	110	ICV Main CR1 Failed
Zn	66	1	No Gas	97.104	1.054	434159	0.47	100	97.1	90	110	
As	75	3	HeHe	98.358	1.316	35022	1.16	100	98.4	90	110	
As	75	1	No Gas	96.807	1.290	481574	0.51	100	96.8	90	110	
Sb	121	1	No Gas	99.039	0.731	1421867	2.12	100	99.0	90	110	
Hg	201	1	No Gas	1.960	2.785	2832	3.79	2	98.0	90	110	
Be	9	1	No Gas	96.075	0.565	327551	1.32	100	96.1	90	110	
Pb	208	1	No Gas	96.947	0.294	2990417	1.22	100	96.9	90	110	
Se	82	1	No Gas	97.671	1.676	23568	0.48	100	97.7	90	110	
Mo	98	1	No Gas	98.092	0.652	1132499	1.15	100	98.1	90	110	
Ba	137	1	No Gas	96.951	2.061	467348	1.65	100	97.0	90	110	
Tl	205	1	No Gas	96.006	2.060	2172954	2.24	100	96.0	90	110	
U	238	1	No Gas	107.911	0.514	3086981	0.64	100	107.9	90	110	
Na	23	2	he	1016.583	0.510	2782809	1.42	1000	101.7	90	110	
Mg	24	2	he	1031.757	0.765	1590388	0.37	1000	103.2	90	110	
K	39	2	he	993.630	0.651	2640040	0.42	1000	99.4	90	110	
Se	82	3	HeHe	96.572	1.756	1690	2.10	100	96.6	90	110	
Fe	57	3	HeHe	1054.143	1.763	84778	1.53	1000	105.4	90	110	
Cd	114	1	No Gas	96.656	0.453	809269	1.89	100	96.7	90	110	
Ca	44	1	No Gas	975.081	1.456	953715	0.30	1000	97.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6152674	1.51	5896472	104.35	70	120	
Sc	45	2	he	1296036	1.02	1271268	101.95	70	120	
Ge	72	1	No Gas	677632	0.92	682805	99.24	70	120	
In	115	1	No Gas	3670280	1.45	3697856	99.25	70	120	
Tb	159	1	No Gas	4336489	0.63	4404848	98.45	70	120	
Bi	209	1	No Gas	2302057	1.10	1997135	115.27	70	120	
Sc	45	3	HeHe	136339	1.09	132951	102.55	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	009_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:40:33-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.060	46.8	2984	28.2	9	
Cr	52	1	No Gas	-0.024	-100.7	9837	8.5	4	
Mn	55	1	No Gas	0.230	61.8	38897	13.7	25	
Co	59	1	No Gas	0.003	36.1	326	9.8	1	
Ni	60	1	No Gas	-0.970	-3.7	11748	1.2	25	
Cu	63	1	No Gas	0.016	17.0	843	3.8	25	
Sr	88	1	No Gas	0.002	47.7	163	21.9	25	
Ag	107	1	No Gas	0.003	30.2	100	19.2	9	
Al	27	1	No Gas	0.091	32.8	10100	4.3	1000000	
Sn	118	1	No Gas	0.273	9.0	3149	10.0	25	
Ti	47	1	No Gas	0.186	35.1	760	22.6	10000	
Zn	66	1	No Gas	-0.002	-1981.6	760	18.1	25	
As	75	3	HeHe	0.534	5.2	192	5.4	9	
As	75	1	No Gas	0.665	41.1	25663	4.1	9	
Sb	121	1	No Gas	0.317	27.9	4760	28.2	4	
Hg	201	1	No Gas	0.051	15.8	103	5.6	0.04	ICB Main CR1 Failed
Be	9	1	No Gas	0.009	48.8	51	28.0	1	
Pb	208	1	No Gas	0.041	38.8	1467	23.8	4	
Se	82	1	No Gas	1.216	31.7	185	46.4	25	
Mo	98	1	No Gas	0.870	17.2	11068	16.9	10000	
Ba	137	1	No Gas	0.012	45.1	107	23.6	25	
Tl	205	1	No Gas	0.058	16.2	1222	11.2	1	
U	238	1	No Gas	0.091	23.8	2452	28.0	25	
Na	23	2	he	0.911	105.6	86357	2.7	2500000	
Mg	24	2	he	0.022	179.4	185	33.0	2500000	
K	39	2	he	-1.460	-140.0	196775	1.6	5000000	
Se	82	3	HeHe	0.954	58.7	78	10.8	25	
Fe	57	3	HeHe	2.795	28.2	393	16.1	2500000	
Cd	114	1	No Gas	0.017	69.8	190	51.8	1	
Ca	44	1	No Gas	1.853	39.0	122116	1.5	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5755553	1.63	5896472	97.61	70	120	
Sc	45	2	he	1272979	1.57	1271268	100.13	70	120	
Ge	72	1	No Gas	678801	0.96	682805	99.41	70	120	
In	115	1	No Gas	3724033	1.61	3697856	100.71	70	120	

Initial Calibration Blank (ICB) Report

Tb	159	1	No Gas	4391649	2.36	4404848	99.70	70	120	
Bi	209	1	No Gas	2121785	6.49	1997135	106.24	70	120	
Sc	45	3	HeHe	132766	1.09	132951	99.86	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	010_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:44:04-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.060	23.2	2987	12.1	9	
Cr	52	1	No Gas	-0.020	-34.6	9970	2.9	4	
Mn	55	1	No Gas	-0.049	-139.3	29452	4.3	25	
Co	59	1	No Gas	0.001	231.9	282	32.1	1	
Ni	60	1	No Gas	-1.141	-6.8	10577	1.9	25	
Cu	63	1	No Gas	0.009	42.2	726	7.1	25	
Sr	88	1	No Gas	0.001	205.9	133	66.7	25	
Ag	107	1	No Gas	0.004	104.3	111	70.0	9	
Al	27	1	No Gas	0.097	68.0	10207	8.6	1000000	
Sn	118	1	No Gas	0.149	15.1	1756	13.3	25	
Ti	47	1	No Gas	0.097	27.4	537	16.1	10000	
Zn	66	1	No Gas	0.100	43.5	1183	13.1	25	
As	75	3	HeHe	0.233	13.5	86	12.7	9	
As	75	1	No Gas	0.497	37.8	24951	1.1	9	
Sb	121	1	No Gas	0.160	21.8	2389	20.5	4	
Hg	201	1	No Gas	0.021	58.8	60	23.1	0.04	
Be	9	1	No Gas	0.005	33.6	39	15.8	1	
Pb	208	1	No Gas	0.029	16.5	1096	10.2	4	
Se	82	1	No Gas	0.964	56.4	127	94.6	25	
Mo	98	1	No Gas	0.359	24.3	4943	19.9	10000	
Ba	137	1	No Gas	0.015	26.5	123	16.9	25	
Tl	205	1	No Gas	0.018	15.6	393	17.3	1	
U	238	1	No Gas	0.029	18.5	782	21.9	25	
Na	23	2	he	1.101	76.9	85432	2.0	2500000	
Mg	24	2	he	0.054	43.2	230	15.6	2500000	
K	39	2	he	-1.277	-156.7	193999	1.6	5000000	
Se	82	3	HeHe	-0.195	-280.4	58	13.9	25	
Fe	57	3	HeHe	1.010	11.2	248	5.2	2500000	
Cd	114	1	No Gas	0.001	229.3	60	44.1	1	
Ca	44	1	No Gas	-0.233	-2580.8	120570	0.6	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5765949	3.66	5896472	97.79	70	120	
Sc	45	2	he	1252133	0.83	1271268	98.49	70	120	
Ge	72	1	No Gas	672367	1.16	682805	98.47	70	120	

Initial Calibration Blank (ICB) Report

In	115	1	No Gas	3630295	0.40	3697856	98.17	70	120	
Tb	159	1	No Gas	4440065	1.55	4404848	100.80	70	120	
Bi	209	1	No Gas	2035819	5.74	1997135	101.94	70	120	
Sc	45	3	HeHe	130204	1.70	132951	97.93	70	120	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV
Data File Name	011LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:47:33-04:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.091	1.496	69306	1.16	2	104.6	70	130	
Cr	52	1	No Gas	2.203	0.635	75672	0.95	2	110.2	70	130	
Mn	55	1	No Gas	5.045	1.512	212993	1.07	5	100.9	70	130	
Co	59	1	No Gas	5.109	0.804	165513	1.18	5	102.2	70	130	
Ni	60	1	No Gas	3.934	3.998	48267	2.04	5	78.7	70	130	
Cu	63	1	No Gas	5.135	0.980	90105	1.31	5	102.7	70	130	
Sr	88	1	No Gas	4.703	0.815	192472	0.55	5	94.1	70	130	
Ag	107	1	No Gas	2.050	2.058	36540	1.72	2	102.5	70	130	
Al	27	1	No Gas	81.870	0.770	1587082	0.38	80	102.3	70	130	
Sn	118	1	No Gas	3.469	11.534	36237	12.68	2	173.4	70	130	LLICV Main CR1 Failed
Ti	47	1	No Gas	4.796	2.834	13156	3.17	5	95.9	70	130	
Zn	66	1	No Gas	5.054	1.676	23163	1.63	5	101.1	70	130	
As	75	3	HeHe	3.285	4.256	1152	4.98	3	109.5	70	130	
As	75	1	No Gas	3.625	8.318	41043	3.82	3	120.8	70	130	
Sb	121	1	No Gas	2.193	3.231	30770	3.86	2	109.6	70	130	
Hg	201	1	No Gas	0.220	6.167	341	7.00	0.2	110.0	70	130	
Be	9	1	No Gas	0.985	3.574	3352	3.17	1	98.5	70	130	
Pb	208	1	No Gas	2.061	3.918	61758	2.27	2	103.1	70	130	
Se	82	1	No Gas	5.592	26.926	1247	29.10	5	111.8	70	130	
Mo	98	1	No Gas	2.700	5.148	31185	6.35	2	135.0	70	130	LLICV Main CR1 Failed
Ba	137	1	No Gas	4.969	5.073	23564	5.89	5	99.4	70	130	
Tl	205	1	No Gas	1.024	3.850	22424	2.36	1	102.4	70	130	
U	238	1	No Gas	5.078	2.417	140424	0.90	5	101.6	70	130	
Na	23	2	he	106.819	2.456	376395	2.91	100	106.8	70	130	
Mg	24	2	he	102.005	0.843	160538	0.74	100	102.0	70	130	
K	39	2	he	111.098	2.411	485879	0.39	100	111.1	70	130	
Se	82	3	HeHe	6.391	3.045	168	1.15	5	127.8	70	130	
Fe	57	3	HeHe	60.742	8.525	4945	8.57	50	121.5	70	130	
Cd	114	1	No Gas	1.122	5.295	9203	6.69	1	112.2	70	130	
Ca	44	1	No Gas	105.838	0.870	216494	0.06	100	105.8	70	130	

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QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6096014	0.41	5896472	103.38	70	120	
Sc	45	2	he	1322090	1.04	1271268	104.00	70	120	
Ge	72	1	No Gas	679695	1.35	682805	99.54	70	120	
In	115	1	No Gas	3573913	1.49	3697856	96.65	70	120	
Tb	159	1	No Gas	4256462	0.84	4404848	96.63	70	120	
Bi	209	1	No Gas	2225339	1.63	1997135	111.43	70	120	
Sc	45	3	HeHe	133391	0.99	132951	100.33	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	012ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:51:03-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.408	14.9	14217	13.4	9	
Cr	52	1	No Gas	1.305	5.1	48404	3.5	4	
Mn	55	1	No Gas	1.387	6.3	80819	2.6	25	
Co	59	1	No Gas	1.341	6.0	42760	4.7	1	ICSA Main CR1 Failed
Ni	60	1	No Gas	-0.521	-8.8	15424	3.4	5	
Cu	63	1	No Gas	1.138	6.5	20033	4.9	5	
Ag	107	1	No Gas	0.229	8.9	3919	8.4	9	
Al	27	1	No Gas	86238.701	2.3	1629911165	0.9	110000	
Sn	118	1	No Gas	0.745	20.8	7539	20.2	25	
Tl	47	1	No Gas	1706.488	1.7	4483115	0.6	2200	
Zn	66	1	No Gas	3.487	6.4	15910	4.7	5	
As	75	3	HeHe	0.607	16.0	209	14.4	9	
As	75	1	No Gas	1.066	33.9	28487	4.7	9	
Sb	121	1	No Gas	0.449	5.0	6094	5.2	4	
Hg	201	1	No Gas	0.031	39.3	76	20.9	0.04	
Be	9	1	No Gas	0.008	40.2	51	21.5	1	
Pb	208	1	No Gas	0.503	14.0	14655	14.6	4	
Se	82	1	No Gas	0.519	17.6	28	77.8	25	
Mo	98	1	No Gas	1978.830	1.3	21173724	0.9	2200	
Ba	137	1	No Gas	0.155	3.0	763	4.0	25	
Tl	205	1	No Gas	0.027	10.5	589	10.5	1	
U	238	1	No Gas	0.080	20.7	2141	21.1	25	
Na	23	2	he	88481.402	1.0	228143533	0.7	110000	
Mg	24	2	he	88791.717	1.2	132950658	0.3	110000	
K	39	2	he	90634.329	0.7	216072962	0.1	110000	
Se	82	3	HeHe	0.170	252.5	63	11.8	25	
Fe	57	3	HeHe	95975.268	1.0	7219717	0.1	110000	
Cd	114	1	No Gas	0.807	3.6	6315	4.1	1	
Ca	44	1	No Gas	83755.733	1.9	68956089	0.5	110000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5978213	1.44	5896472	101.39	70	120	
Sc	45	2	he	1259096	0.87	1271268	99.04	70	120	
Ge	72	1	No Gas	652515	0.32	682805	95.56	70	120	
In	115	1	No Gas	3404061	0.52	3697856	92.05	70	120	
Tb	159	1	No Gas	4155147	1.57	4404848	94.33	70	120	
Bi	209	1	No Gas	2125630	0.86	1997135	106.43	70	120	
Sc	45	3	HeHe	127793	1.10	132951	96.12	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	013ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T13:00:47-04:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	39.560	1.314	1329992	0.73	40	98.9	80	120	
Cr	52	1	No Gas	19.750	2.876	608506	2.29	20	98.8	80	120	
Mn	55	1	No Gas	20.318	3.116	782143	2.19	20	101.6	80	120	
Co	59	1	No Gas	37.232	2.656	1242688	1.92	40	93.1	80	120	
Ni	60	1	No Gas	34.405	1.343	279478	1.08	40	86.0	80	120	
Cu	63	1	No Gas	19.315	2.159	347936	1.71	20	96.6	80	120	
Ag	107	1	No Gas	19.360	1.453	338694	1.83	20	96.8	80	120	
Al	27	1	No Gas	87401.980	1.778	1738225116	0.91	100000	87.4	90	110	ICSB Main CR1 Failed
Ti	47	1	No Gas	1734.566	1.843	4794854	1.45	2000	86.7	90	110	ICSB Main CR1 Failed
Zn	66	1	No Gas	23.932	2.902	110015	2.13	20	119.7	80	120	
As	75	3	HeHe	20.105	1.202	7128	1.50	20	100.5	80	120	
As	75	1	No Gas	20.392	2.981	123308	1.75	20	102.0	80	120	
Sb	121	1	No Gas	0.544	7.259	7595	7.45	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Hg	201	1	No Gas	0.019	59.638	61	24.91	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Be	9	1	No Gas	0.003	57.299	37	18.81	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Pb	208	1	No Gas	0.437	6.517	12858	6.46	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Se	82	1	No Gas	19.163	4.940	4647	4.00	20	95.8	80	120	
Mo	98	1	No Gas	2022.259	0.332	22316878	0.19	2000	101.1	90	110	
Ba	137	1	No Gas	0.221	7.541	1103	5.54	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Tl	205	1	No Gas	0.022	7.548	482	7.42	0	#DIV/0!	0	0	ICSB Main CR1 Failed
U	238	1	No Gas	0.066	15.781	1800	15.75	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Na	23	2	he	87984.945	1.603	242410011	2.05	100000	88.0	90	110	ICSB Main CR1 Failed
Mg	24	2	he	89548.792	1.071	143263065	0.20	100000	89.5	90	110	ICSB Main CR1 Failed
K	39	2	he	90005.881	0.921	229262169	0.27	100000	90.0	90	110	
Se	82	3	HeHe	19.533	10.748	391	8.56	20	97.7	80	120	
Fe	57	3	HeHe	95616.436	1.635	7634400	0.88	100000	95.6	90	110	
Cd	114	1	No Gas	10.043	3.166	80478	3.55	10	100.4	80	120	
Ca	44	1	No Gas	84131.326	1.047	72885131	0.52	100000	84.1	90	110	ICSB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6289971	1.06	5896472	106.67	70	120	
Sc	45	2	he	1345290	0.96	1271268	105.82	70	120	
Ge	72	1	No Gas	697499	1.87	682805	102.15	70	120	
In	115	1	No Gas	3510678	0.39	3697856	94.94	70	120	
Tb	159	1	No Gas	4306271	1.65	4404848	97.76	70	120	
Bi	209	1	No Gas	2142239	0.30	1997135	107.27	70	120	
Sc	45	3	HeHe	135647	1.32	132951	102.03	70	120	

Sample Report

Sample Table

Sample Name	1020183
Data File Name	030SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:08:31-04:00
Sample Type	Sample
Dilution	1
Comment	37996 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3201

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	0.565	0.565	9.14	20133	0.00	1000	
Cr	52	1	No Gas	0.271	0.271	9.78	19563	0.00	1000	
Mn	55	1	No Gas	0.366	0.366	4.11	47214	0.00	1000	
Co	59	1	No Gas	0.003	0.003	63.64	367	0.00	1000	
Ni	60	1	No Gas	-2.551	-2.551	-0.92	920	-0.28	1000	
Cu	63	1	No Gas	0.170	0.170	8.05	3678	0.00	1000	
Sr	88	1	No Gas	0.076	0.076	18.15	3289	0.00	1000	
Ag	107	1	No Gas	0.016	0.016	31.97	307	0.01	1000	
Al	27	1	No Gas	6.531	6.531	1.97	138427	0.00	100000	
Sn	118	1	No Gas	1.346	1.346	21.84	13951	0.01	100	
Ti	47	1	No Gas	0.926	0.926	31.14	2856	0.03	2000	
Zn	66	1	No Gas	0.852	0.852	4.52	4700	0.02	1000	
As	75	3	HeHe	0.307	0.307	23.89	119	0.26	1000	
As	75	1	No Gas	0.952	0.952	12.87	29295	0.00	1000	
Sb	121	1	No Gas	0.256	0.256	23.77	3641	0.01	100	
Hg	201	1	No Gas	0.030	0.030	56.01	73	0.04	4	
Be	9	1	No Gas	0.002	0.002	171.22	31	0.01	1000	
Pb	208	1	No Gas	0.050	0.050	8.97	1693	0.00	1000	
Se	82	1	No Gas	2.956	2.956	18.14	632	0.47	1000	
Mo	98	1	No Gas	0.640	0.640	26.31	7915	0.01	2000	
Ba	137	1	No Gas	0.281	0.281	6.13	1307	0.02	1000	
Tl	205	1	No Gas	0.020	0.020	48.65	426	0.00	1000	
U	238	1	No Gas	0.030	0.030	30.44	804	0.00	1000	
Na	23	2	he	14.781	14.781	5.65	131606	0.01	100000	
Mg	24	2	he	1.469	1.469	2.36	2552	0.06	100000	
K	39	2	he	6.368	6.368	11.69	231679	0.00	100000	
Se	82	3	HeHe	1.138	1.138	66.91	84	1.35	1000	
Fe	57	3	HeHe	22.770	22.770	10.74	2041	1.12	100000	
Cd	114	1	No Gas	0.074	0.074	9.14	640	0.01	1000	
Ca	44	1	No Gas	8.918	8.918	49.06	138859	0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6260037	1.76	5896472	106.17	70	120	
Sc	45	2	he	1367469	0.78	1271268	107.57	70	120	

Ge	72	1	No Gas	696916	0.94	682805	102.07	70	120	
In	115	1	No Gas	3509222	2.93	3697856	94.90	70	120	
Tb	159	1	No Gas	4031659	1.08	4404848	91.53	70	120	
Bi	209	1	No Gas	2072004	2.63	1997135	103.75	70	120	
Sc	45	3	HeHe	138777	0.89	132951	104.38	70	120	

Sample Report

Sample Table

Sample Name	1020184
Data File Name	031SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:12:01-04:00
Sample Type	Sample
Dilution	1
Comment	37996 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3202

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	40.593	40.593	1.62	1377892	0.00	1000	
Cr	52	1	No Gas	39.532	39.532	0.68	1218325	0.00	1000	
Mn	55	1	No Gas	41.623	41.623	1.33	1582151	0.00	1000	
Co	59	1	No Gas	40.446	40.446	1.97	1363339	0.00	1000	
Ni	60	1	No Gas	36.672	36.672	1.14	299465	0.01	1000	
Cu	63	1	No Gas	38.959	38.959	0.38	708056	0.01	1000	
Sr	88	1	No Gas	37.556	37.556	1.00	1600740	0.00	1000	
Ag	107	1	No Gas	15.815	15.815	0.58	282374	0.01	1000	
Al	27	1	No Gas	404.877	404.877	0.97	8139906	0.00	100000	
Sn	118	1	No Gas	38.626	38.626	1.64	402284	0.01	100	
Ti	47	1	No Gas	37.163	37.163	1.02	104053	0.04	2000	
Zn	66	1	No Gas	390.299	390.299	0.41	1798987	0.02	1000	
As	75	3	HeHe	37.132	37.132	1.78	13800	0.27	1000	
As	75	1	No Gas	38.363	38.363	0.86	212147	0.02	1000	
Sb	121	1	No Gas	39.437	39.437	0.23	552734	0.01	100	
Hg	201	1	No Gas	0.437	0.437	7.14	611	0.07	4	
Be	9	1	No Gas	36.792	36.792	1.36	129508	0.03	1000	
Pb	208	1	No Gas	39.298	39.298	0.90	1120560	0.00	1000	
Se	82	1	No Gas	40.175	40.175	1.00	9950	0.40	1000	
Mo	98	1	No Gas	40.237	40.237	0.14	454004	0.01	2000	
Ba	137	1	No Gas	419.609	419.609	1.30	1924073	0.02	1000	
Tl	205	1	No Gas	38.985	38.985	0.96	815675	0.00	1000	
U	238	1	No Gas	0.012	0.012	57.67	359	0.00	1000	
Na	23	2	he	442.544	442.544	2.71	1355175	0.03	100000	
Mg	24	2	he	411.083	411.083	1.39	681853	0.06	100000	
K	39	2	he	423.140	423.140	1.21	1335620	0.03	100000	
Se	82	3	HeHe	39.341	39.341	5.50	758	5.19	1000	
Fe	57	3	HeHe	429.603	429.603	1.92	36161	1.19	100000	
Cd	114	1	No Gas	38.743	38.743	1.21	316671	0.01	1000	
Ca	44	1	No Gas	409.047	409.047	0.66	490309	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6350993	1.00	5896472	107.71	70	120	
Sc	45	2	he	1394452	1.07	1271268	109.69	70	120	

Ge	72	1	No Gas	691477	0.14	682805	101.27	70	120	
In	115	1	No Gas	3582929	1.04	3697856	96.89	70	120	
Tb	159	1	No Gas	4125239	1.55	4404848	93.65	70	120	
Bi	209	1	No Gas	2127816	1.33	1997135	106.54	70	120	
Sc	45	3	HeHe	142255	0.85	132951	107.00	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	038_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:52:51-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	100.342	0.861	3607283	0.88	100	100.3	90	110	
Cr	52	1	No Gas	98.206	1.673	3188450	0.84	100	98.2	90	110	
Mn	55	1	No Gas	102.665	0.140	4081801	1.62	100	102.7	90	110	
Co	59	1	No Gas	97.691	2.070	3488283	1.72	100	97.7	90	110	
Ni	60	1	No Gas	95.621	1.296	792621	0.65	100	95.6	90	110	
Cu	63	1	No Gas	100.063	2.328	1925718	2.09	100	100.1	90	110	
Sr	88	1	No Gas	101.148	0.948	4567626	0.84	100	101.1	90	110	
Ag	107	1	No Gas	99.440	1.473	1949285	0.65	100	99.4	90	110	
Al	27	1	No Gas	101.775	2.134	2175255	0.90	100	101.8	90	110	
Sn	118	1	No Gas	98.236	1.799	1122983	0.86	100	98.2	90	110	
Tl	47	1	No Gas	89.161	1.635	264018	1.55	100	89.2	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	97.198	1.062	475366	1.47	100	97.2	90	110	
As	75	3	HeHe	93.041	2.372	37531	2.83	100	93.0	90	110	
As	75	1	No Gas	95.419	2.230	519516	0.45	100	95.4	90	110	
Sb	121	1	No Gas	99.710	1.543	1534440	1.72	100	99.7	90	110	
Hg	201	1	No Gas	1.988	3.343	2866	3.78	2	99.4	90	110	
Be	9	1	No Gas	92.661	1.055	345522	0.88	100	92.7	90	110	
Pb	208	1	No Gas	96.714	2.907	2976376	1.55	100	96.7	90	110	
Se	82	1	No Gas	94.700	1.740	24991	0.51	100	94.7	90	110	
Mo	98	1	No Gas	97.240	1.242	1203454	0.59	100	97.2	90	110	
Ba	137	1	No Gas	98.519	0.867	494076	0.19	100	98.5	90	110	
Tl	205	1	No Gas	96.547	0.675	2180762	1.40	100	96.5	90	110	
U	238	1	No Gas	103.411	0.916	2952826	2.73	100	103.4	90	110	
Na	23	2	he	1009.441	0.996	3153775	0.90	1000	100.9	90	110	
Mg	24	2	he	1023.870	2.192	1801121	2.53	1000	102.4	90	110	
K	39	2	he	995.257	1.211	3017136	0.36	1000	99.5	90	110	
Se	82	3	HeHe	91.168	1.627	1812	1.11	100	91.2	90	110	
Fe	57	3	HeHe	1014.418	1.032	92426	1.47	1000	101.4	90	110	
Cd	114	1	No Gas	95.639	1.179	858320	0.86	100	95.6	90	110	
Ca	44	1	No Gas	975.801	1.350	1043939	1.77	1000	97.6	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6729857	1.72	5896472	114.13	70	120	
Sc	45	2	he	1478963	0.94	1271268	116.34	70	120	
Ge	72	1	No Gas	751230	0.64	682805	110.02	70	120	
In	115	1	No Gas	3934751	1.69	3697856	106.41	70	120	
Tb	159	1	No Gas	4511436	0.78	4404848	102.42	70	120	
Bi	209	1	No Gas	2297520	1.88	1997135	115.04	70	120	
Sc	45	3	HeHe	154433	0.45	132951	116.16	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	039_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:56:14-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.174	1.0	7679	2.9	9	
Cr	52	1	No Gas	0.064	23.6	14473	2.3	4	
Mn	55	1	No Gas	0.315	12.0	49189	0.9	25	
Co	59	1	No Gas	0.002	104.2	359	19.9	1	
Ni	60	1	No Gas	-2.561	-0.5	923	12.6	25	
Cu	63	1	No Gas	0.219	3.3	4927	1.4	25	
Sr	88	1	No Gas	0.009	38.3	526	28.7	25	
Ag	107	1	No Gas	0.010	28.4	241	25.4	9	
Al	27	1	No Gas	0.878	2.8	28798	1.3	1000000	
Sn	118	1	No Gas	1.070	22.7	12598	21.3	25	
Ti	47	1	No Gas	0.380	22.4	1479	19.2	10000	
Zn	66	1	No Gas	0.642	5.8	4070	5.5	25	
As	75	3	HeHe	0.682	11.5	283	11.9	9	
As	75	1	No Gas	0.877	3.1	31391	2.1	9	
Sb	121	1	No Gas	0.326	29.4	5223	27.7	4	
Hg	201	1	No Gas	0.011	102.9	55	27.6	0.04	
Be	9	1	No Gas	0.006	95.0	49	39.9	1	
Pb	208	1	No Gas	0.049	10.9	1885	7.1	4	
Se	82	1	No Gas	0.928	133.5	146	229.6	25	
Mo	98	1	No Gas	1.111	27.7	14850	24.6	10000	
Ba	137	1	No Gas	0.050	11.8	303	10.1	25	
Tl	205	1	No Gas	0.039	30.6	933	27.7	1	
U	238	1	No Gas	0.195	20.3	5709	19.2	25	
Na	23	2	he	8.842	4.8	124345	2.4	2500000	
Mg	24	2	he	0.478	26.0	1015	20.3	2500000	
K	39	2	he	2.115	51.8	238599	0.8	5000000	
Se	82	3	HeHe	0.103	846.9	74	21.5	25	
Fe	57	3	HeHe	7.978	7.3	926	6.2	2500000	
Cd	114	1	No Gas	0.041	14.8	423	11.9	1	
Ca	44	1	No Gas	-6.992	-18.3	135814	1.3	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6791089	2.12	5896472	115.17	70	120	
Sc	45	2	he	1478720	1.50	1271268	116.32	70	120	
Ge	72	1	No Gas	763164	2.30	682805	111.77	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3992092	2.76	3697856	107.96	70	120	
Tb	159	1	No Gas	4554022	2.98	4404848	103.39	70	120	
Bi	209	1	No Gas	2337198	2.84	1997135	117.03	70	120	
Sc	45	3	HeHe	154133	0.82	132951	115.93	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	040LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:59:43-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	2.277	5.072	82954	5.53	2	113.8	70	130		
Cr	52	1	No Gas	2.144	2.412	81420	2.66	2	107.2	70	130		
Mn	55	1	No Gas	5.400	1.722	248458	0.66	5	108.0	70	130		
Co	59	1	No Gas	5.004	1.957	178473	2.08	5	100.1	70	130		
Ni	60	1	No Gas	2.301	2.532	40013	0.86	5	46.0	70	130	LLCCV Main CR1 Failed	N/A
Cu	63	1	No Gas	5.051	0.804	97588	0.97	5	101.0	70	130		
Sr	88	1	No Gas	4.695	1.416	211538	0.46	5	93.9	70	130		
Ag	107	1	No Gas	2.028	4.098	39306	3.14	2	101.4	70	130		
Al	27	1	No Gas	80.239	1.554	1712993	2.64	80	100.3	70	130		
Sn	118	1	No Gas	2.665	10.894	30311	11.43	2	133.2	70	130	LLCCV Main CR1 Failed	N/A
Ti	47	1	No Gas	4.875	2.731	14719	3.73	5	97.5	70	130		
Zn	66	1	No Gas	5.117	2.048	25809	2.04	5	102.3	70	130		
As	75	3	HeHe	3.196	1.675	1277	2.34	3	106.5	70	130		
As	75	1	No Gas	3.624	1.522	45181	1.76	3	120.8	70	130		
Sb	121	1	No Gas	2.142	3.901	32707	5.00	2	107.1	70	130		
Hg	201	1	No Gas	0.202	7.605	315	5.75	0.2	100.9	70	130		
Be	9	1	No Gas	0.931	2.046	3490	2.27	1	93.1	70	130		
Pb	208	1	No Gas	2.043	0.682	61231	1.61	2	102.2	70	130		
Se	82	1	No Gas	5.905	2.520	1455	2.37	5	118.1	70	130		
Mo	98	1	No Gas	2.507	5.975	31546	6.40	2	125.3	70	130		
Ba	137	1	No Gas	5.154	2.864	25207	1.80	5	103.1	70	130		
Tl	205	1	No Gas	0.975	4.456	21371	5.64	1	97.5	70	130		
U	238	1	No Gas	4.843	1.143	133946	1.08	5	96.9	70	130		
Na	23	2	he	111.962	2.312	424089	1.81	100	112.0	70	130		
Mg	24	2	he	102.011	0.878	174470	0.91	100	102.0	70	130		
K	39	2	he	112.325	0.830	531372	0.23	100	112.3	70	130		
Se	82	3	HeHe	3.306	2.874	133	2.21	5	66.1	70	130	LLCCV Main CR1 Failed	N/A
Fe	57	3	HeHe	54.935	6.887	5120	7.85	50	109.9	70	130		
Cd	114	1	No Gas	1.086	4.884	9680	3.82	1	108.6	70	130		
Ca	44	1	No Gas	91.211	3.520	224849	0.94	100	91.2	70	130		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6711721	1.15	5896472	113.83	70	120	
Sc	45	2	he	1436675	0.31	1271268	113.01	70	120	
Ge	72	1	No Gas	733028	1.78	682805	107.36	70	120	
In	115	1	No Gas	3887074	1.18	3697856	105.12	70	120	
Tb	159	1	No Gas	4393092	2.33	4404848	99.73	70	120	
Bi	209	1	No Gas	2225007	1.29	1997135	111.41	70	120	
Sc	45	3	HeHe	152061	1.55	132951	114.37	70	120	

Sample Report

Sample Table

Sample Name	9980394001
Data File Name	041SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T15:03:12-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3209

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	16.047	16.047	2.11	585233	0.00	1000	
Cr	52	1	No Gas	8.156	8.156	2.02	279518	0.00	1000	
Mn	55	1	No Gas	66.006	66.006	3.50	2669861	0.00	1000	
Co	59	1	No Gas	0.786	0.786	0.56	28687	0.00	1000	
Ni	60	1	No Gas	-0.376	-0.376	-21.78	18757	0.00	1000	
Cu	63	1	No Gas	4.796	4.796	2.18	94100	0.01	1000	
Sr	88	1	No Gas	8.551	8.551	1.43	391061	0.00	1000	
Ag	107	1	No Gas	0.016	0.016	34.17	337	0.00	1000	
Al	27	1	No Gas	6754.438	6754.438	1.68	145537350	0.00	100000	
Sn	118	1	No Gas	1.354	1.354	21.14	15267	0.01	100	
Ti	47	1	No Gas	153.445	153.445	1.69	459790	0.03	2000	
Zn	66	1	No Gas	16.994	16.994	1.67	84889	0.02	1000	
As	75	3	HeHe	1.390	1.390	9.30	563	0.25	1000	
As	75	1	No Gas	0.913	0.913	20.09	31675	0.00	1000	
Sb	121	1	No Gas	0.229	0.229	23.03	3567	0.01	100	
Hg	201	1	No Gas	0.041	0.041	25.87	95	0.04	4	
Be	9	1	No Gas	0.092	0.092	14.14	373	0.02	1000	
Pb	208	1	No Gas	6.359	6.359	2.09	190295	0.00	1000	
Se	82	1	No Gas	1.369	1.369	18.20	259	0.53	1000	
Mo	98	1	No Gas	1.005	1.005	25.25	12995	0.01	2000	
Ba	137	1	No Gas	19.781	19.781	1.66	97633	0.02	1000	
Tl	205	1	No Gas	0.081	0.081	3.74	1808	0.00	1000	
U	238	1	No Gas	1.164	1.164	3.13	32283	0.00	1000	
Na	23	2	he	28.750	28.750	5.21	185270	0.02	100000	
Mg	24	2	he	700.640	700.640	0.62	1236604	0.06	100000	
K	39	2	he	935.063	935.063	1.20	2858161	0.03	100000	
Se	82	3	HeHe	1.469	1.469	51.77	99	1.48	1000	
Fe	57	3	HeHe	4982.630	4982.630	1.58	448526	1.11	100000	
Cd	114	1	No Gas	0.088	0.088	9.95	823	0.01	1000	
Ca	44	1	No Gas	788.340	788.340	1.78	881410	0.09	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6813918	1.55	5896472	115.56	70	120	
Sc	45	2	he	1483892	1.23	1271268	116.73	70	120	
Ge	72	1	No Gas	733008	0.96	682805	107.35	70	120	

In	115	1	No Gas	3831959	1.16	3697856	103.63	70	120	
Tb	159	1	No Gas	4438182	0.76	4404848	100.76	70	120	
Bi	209	1	No Gas	2230020	0.08	1997135	111.66	70	120	
Sc	45	3	HeHe	152865	1.33	132951	114.98	70	120	

Sample Report

Sample Table

Sample Name	9980394002
Data File Name	042SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T15:06:43-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail
Vial	3210

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	14.156	14.156	3.06	505411	0.00	1000	
Cr	52	1	No Gas	10.426	10.426	2.58	346332	0.00	1000	
Mn	55	1	No Gas	25.824	25.824	1.78	1044176	0.00	1000	
Co	59	1	No Gas	0.577	0.577	1.92	20683	0.00	1000	
Ni	60	1	No Gas	0.466	0.466	17.52	25092	0.00	1000	
Cu	63	1	No Gas	0.584	0.584	1.13	11808	0.00	1000	
Sr	88	1	No Gas	3.485	3.485	1.56	156007	0.00	1000	
Ag	107	1	No Gas	0.009	0.009	20.84	207	0.00	1000	
Al	27	1	No Gas	8883.755	8883.755	1.46	187318722	0.00	100000	
Sn	118	1	No Gas	0.926	0.926	15.41	10648	0.01	100	
Ti	47	1	No Gas	227.898	227.898	0.29	668179	0.03	2000	
Zn	66	1	No Gas	3.991	3.991	2.97	20200	0.02	1000	
As	75	3	HeHe	1.423	1.423	14.41	604	0.24	1000	
As	75	1	No Gas	1.197	1.197	23.36	32463	0.00	1000	
Sb	121	1	No Gas	0.122	0.122	22.79	1989	0.01	100	
Hg	201	1	No Gas	0.073	0.073	6.92	139	0.05	4	
Be	9	1	No Gas	0.063	0.063	19.13	259	0.02	1000	
Pb	208	1	No Gas	5.532	5.532	1.70	165869	0.00	1000	
Se	82	1	No Gas	0.748	0.748	59.11	91	0.82	1000	
Mo	98	1	No Gas	0.563	0.563	27.41	7785	0.01	2000	
Ba	137	1	No Gas	14.640	14.640	1.95	71354	0.02	1000	
Tl	205	1	No Gas	0.042	0.042	18.43	948	0.00	1000	
U	238	1	No Gas	1.228	1.228	4.03	34140	0.00	1000	
Na	23	2	he	24.330	24.330	8.06	169505	0.01	100000	
Mg	24	2	he	230.667	230.667	1.75	401869	0.06	100000	
K	39	2	he	143.493	143.493	3.03	627910	0.02	100000	
Se	82	3	HeHe	1.299	1.299	126.92	100	1.29	1000	
Fe	57	3	HeHe	3733.549	3733.549	10.83	352528	1.06	100000	
Cd	114	1	No Gas	0.051	0.051	3.22	503	0.01	1000	
Ca	44	1	No Gas	204.805	204.805	1.89	327511	0.06	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6668101	1.56	5896472	113.09	70	120	
Sc	45	2	he	1464441	1.60	1271268	115.20	70	120	
Ge	72	1	No Gas	725435	1.35	682805	106.24	70	120	

In	115	1	No Gas	3880250	1.35	3697856	104.93	70	120	
Tb	159	1	No Gas	4381439	0.43	4404848	99.47	70	120	
Bi	209	1	No Gas	2233690	0.95	1997135	111.84	70	120	
Sc	45	3	HeHe	161033	6.31	132951	121.12	70	120	ISTD Failed

N/A

Sample Report

Sample Table

Sample Name	9980394003
Data File Name	043SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T15:10:13-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3211

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	20.154	20.154	0.79	725726	0.00	1000	
Cr	52	1	No Gas	13.423	13.423	0.74	446519	0.00	1000	
Mn	55	1	No Gas	50.617	50.617	1.98	2031125	0.00	1000	
Co	59	1	No Gas	0.812	0.812	3.33	29296	0.00	1000	
Ni	60	1	No Gas	-0.029	-0.029	-208.13	21331	0.00	1000	
Cu	63	1	No Gas	1.648	1.648	0.54	32388	0.01	1000	
Sr	88	1	No Gas	15.292	15.292	0.67	690751	0.00	1000	
Ag	107	1	No Gas	0.016	0.016	25.65	333	0.00	1000	
Al	27	1	No Gas	12915.650	12915.650	0.92	274895426	0.00	100000	
Sn	118	1	No Gas	0.890	0.890	11.86	9955	0.01	100	
Ti	47	1	No Gas	117.035	117.035	1.38	346518	0.03	2000	
Zn	66	1	No Gas	19.013	19.013	0.50	93724	0.02	1000	
As	75	3	HeHe	1.552	1.552	7.39	616	0.25	1000	
As	75	1	No Gas	1.332	1.332	20.15	33463	0.00	1000	
Sb	121	1	No Gas	0.134	0.134	15.18	2108	0.01	100	
Hg	201	1	No Gas	0.057	0.057	38.97	115	0.05	4	
Be	9	1	No Gas	0.143	0.143	3.19	562	0.03	1000	
Pb	208	1	No Gas	10.714	10.714	1.59	316187	0.00	1000	
Se	82	1	No Gas	1.572	1.572	7.59	311	0.51	1000	
Mo	98	1	No Gas	0.764	0.764	12.06	9950	0.01	2000	
Ba	137	1	No Gas	29.160	29.160	1.29	140016	0.02	1000	
Tl	205	1	No Gas	0.066	0.066	9.07	1452	0.00	1000	
U	238	1	No Gas	1.276	1.276	3.50	34926	0.00	1000	
Na	23	2	he	43.802	43.802	4.48	225472	0.02	100000	
Mg	24	2	he	505.138	505.138	1.71	870189	0.06	100000	
K	39	2	he	724.772	724.772	2.70	2213304	0.03	100000	
Se	82	3	HeHe	0.732	0.732	75.31	84	0.87	1000	
Fe	57	3	HeHe	6406.025	6406.025	1.02	565427	1.13	100000	
Cd	114	1	No Gas	0.092	0.092	11.19	843	0.01	1000	
Ca	44	1	No Gas	910.389	910.389	0.19	983533	0.09	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6730355	0.90	5896472	114.14	70	120	
Sc	45	2	he	1448312	1.31	1271268	113.93	70	120	
Ge	72	1	No Gas	717274	1.02	682805	105.05	70	120	

In	115	1	No Gas	3769967	1.50	3697856	101.95	70	120	
Tb	159	1	No Gas	4318234	0.95	4404848	98.03	70	120	
Bi	209	1	No Gas	2200980	2.35	1997135	110.21	70	120	
Sc	45	3	HeHe	149896	1.05	132951	112.75	70	120	

Sample Report

Sample Table

Sample Name	9980394004
Data File Name	044SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T15:13:42-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3212

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	38.765	38.765	2.64	1402203	0.00	1000	
Cr	52	1	No Gas	23.429	23.429	2.02	774375	0.00	1000	
Mn	55	1	No Gas	10.858	10.858	0.91	466771	0.00	1000	
Co	59	1	No Gas	0.816	0.816	2.31	29566	0.00	1000	
Ni	60	1	No Gas	0.094	0.094	33.30	22448	0.00	1000	
Cu	63	1	No Gas	1.863	1.863	2.49	36733	0.01	1000	
Sr	88	1	No Gas	42.002	42.002	0.95	1907427	0.00	1000	
Ag	107	1	No Gas	0.011	0.011	5.58	241	0.00	1000	
Al	27	1	No Gas	19662.913	19662.913	1.93	420756902	0.00	100000	
Sn	118	1	No Gas	1.283	1.283	8.19	14121	0.01	100	
Ti	47	1	No Gas	90.166	90.166	2.10	268482	0.03	2000	
Zn	66	1	No Gas	6.253	6.253	2.04	31596	0.02	1000	
As	75	3	HeHe	2.009	2.009	2.93	813	0.25	1000	
As	75	1	No Gas	1.581	1.581	12.83	34939	0.00	1000	
Sb	121	1	No Gas	0.129	0.129	7.63	2011	0.01	100	
Hg	201	1	No Gas	0.035	0.035	25.30	83	0.04	4	
Be	9	1	No Gas	0.237	0.237	3.55	915	0.03	1000	
Pb	208	1	No Gas	17.868	17.868	0.74	521145	0.00	1000	
Se	82	1	No Gas	1.479	1.479	18.15	288	0.51	1000	
Mo	98	1	No Gas	1.094	1.094	7.39	13713	0.01	2000	
Ba	137	1	No Gas	54.881	54.881	1.11	263516	0.02	1000	
Tl	205	1	No Gas	0.089	0.089	6.21	1934	0.00	1000	
U	238	1	No Gas	2.032	2.032	1.01	54974	0.00	1000	
Na	23	2	he	44.825	44.825	1.06	231051	0.02	100000	
Mg	24	2	he	461.429	461.429	0.77	803935	0.06	100000	
K	39	2	he	664.682	664.682	1.68	2072308	0.03	100000	
Se	82	3	HeHe	2.958	2.958	53.16	128	2.31	1000	
Fe	57	3	HeHe	12064.065	12064.065	1.11	1089524	1.11	100000	
Cd	114	1	No Gas	0.060	0.060	32.54	560	0.01	1000	
Ca	44	1	No Gas	236.218	236.218	0.73	361624	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6766907	0.31	5896472	114.76	70	120	
Sc	45	2	he	1464700	1.06	1271268	115.22	70	120	
Ge	72	1	No Gas	710390	1.63	682805	104.04	70	120	

In	115	1	No Gas	3732006	1.58	3697856	100.92	70	120	
Tb	159	1	No Gas	4319202	1.22	4404848	98.06	70	120	
Bi	209	1	No Gas	2175633	1.00	1997135	108.94	70	120	
Sc	45	3	HeHe	153398	0.99	132951	115.38	70	120	

Sample Report

Sample Table

Sample Name	9980394005
Data File Name	045SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T15:17:10-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3301

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	13.374	13.374	1.73	474082	0.00	1000	
Cr	52	1	No Gas	9.584	9.584	2.05	316998	0.00	1000	
Mn	55	1	No Gas	66.759	66.759	2.37	2622976	0.00	1000	
Co	59	1	No Gas	0.417	0.417	5.53	14911	0.00	1000	
Ni	60	1	No Gas	-0.992	-0.992	-4.80	13339	-0.01	1000	
Cu	63	1	No Gas	2.924	2.924	1.12	56005	0.01	1000	
Sr	88	1	No Gas	5.966	5.966	0.75	265077	0.00	1000	
Ag	107	1	No Gas	0.033	0.033	15.48	663	0.01	1000	
Al	27	1	No Gas	10314.975	10314.975	1.27	215906406	0.00	100000	
Sn	118	1	No Gas	0.652	0.652	16.52	7339	0.01	100	
Ti	47	1	No Gas	56.403	56.403	3.68	164437	0.03	2000	
Zn	66	1	No Gas	17.273	17.273	1.49	83820	0.02	1000	
As	75	3	HeHe	1.306	1.306	4.87	509	0.26	1000	
As	75	1	No Gas	1.068	1.068	31.29	31558	0.00	1000	
Sb	121	1	No Gas	0.113	0.113	15.41	1793	0.01	100	
Hg	201	1	No Gas	0.070	0.070	36.83	132	0.05	4	
Be	9	1	No Gas	0.195	0.195	6.35	742	0.03	1000	
Pb	208	1	No Gas	11.184	11.184	2.36	327598	0.00	1000	
Se	82	1	No Gas	1.613	1.613	40.89	317	0.51	1000	
Mo	98	1	No Gas	0.437	0.437	30.64	6064	0.01	2000	
Ba	137	1	No Gas	29.055	29.055	0.88	139075	0.02	1000	
Tl	205	1	No Gas	0.034	0.034	20.84	756	0.00	1000	
U	238	1	No Gas	1.757	1.757	0.70	47742	0.00	1000	
Na	23	2	he	27.602	27.602	3.81	178838	0.02	100000	
Mg	24	2	he	244.716	244.716	1.50	425110	0.06	100000	
K	39	2	he	121.903	121.903	1.66	566493	0.02	100000	
Se	82	3	HeHe	1.166	1.166	55.48	90	1.30	1000	
Fe	57	3	HeHe	5788.631	5788.631	0.37	501161	1.16	100000	
Cd	114	1	No Gas	0.054	0.054	9.48	517	0.01	1000	
Ca	44	1	No Gas	1022.093	1022.093	1.82	1068938	0.10	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6618780	0.90	5896472	112.25	70	120	
Sc	45	2	he	1460185	0.96	1271268	114.86	70	120	
Ge	72	1	No Gas	717106	0.82	682805	105.02	70	120	

Sample Report

In	115	1	No Gas	3764823	1.61	3697856	101.81	70	120	
Tb	159	1	No Gas	4304967	0.99	4404848	97.73	70	120	
Bi	209	1	No Gas	2184178	0.49	1997135	109.37	70	120	
Sc	45	3	HeHe	147018	0.88	132951	110.58	70	120	

Sample Report

Sample Table

Sample Name	9980394007
Data File Name	046SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T15:20:41-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3302

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	2.940	2.940	0.62	104722	0.00	1000	
Cr	52	1	No Gas	2.697	2.697	2.32	97382	0.00	1000	
Mn	55	1	No Gas	6.499	6.499	2.42	286191	0.00	1000	
Co	59	1	No Gas	0.102	0.102	9.53	3845	0.00	1000	
Ni	60	1	No Gas	-2.085	-2.085	-1.64	4647	-0.04	1000	
Cu	63	1	No Gas	0.323	0.323	4.49	6748	0.00	1000	
Sr	88	1	No Gas	1.040	1.040	4.54	46074	0.00	1000	
Ag	107	1	No Gas	0.007	0.007	25.50	167	0.00	1000	
Al	27	1	No Gas	1639.978	1639.978	2.14	34163957	0.00	100000	
Sn	118	1	No Gas	0.532	0.532	9.68	6035	0.01	100	
Ti	47	1	No Gas	88.015	88.015	3.49	255051	0.03	2000	
Zn	66	1	No Gas	4.237	4.237	0.81	21122	0.02	1000	
As	75	3	HeHe	0.430	0.430	7.60	175	0.25	1000	
As	75	1	No Gas	0.908	0.908	22.63	30601	0.00	1000	
Sb	121	1	No Gas	0.087	0.087	16.62	1419	0.01	100	
Hg	201	1	No Gas	0.030	0.030	27.49	77	0.04	4	
Be	9	1	No Gas	0.040	0.040	15.76	173	0.02	1000	
Pb	208	1	No Gas	2.770	2.770	0.97	81654	0.00	1000	
Se	82	1	No Gas	0.887	0.887	51.35	125	0.71	1000	
Mo	98	1	No Gas	0.340	0.340	34.08	4924	0.01	2000	
Ba	137	1	No Gas	4.296	4.296	3.53	20644	0.02	1000	
Tl	205	1	No Gas	0.015	0.015	12.43	341	0.00	1000	
U	238	1	No Gas	0.405	0.405	5.82	11071	0.00	1000	
Na	23	2	he	16.786	16.786	7.59	145492	0.01	100000	
Mg	24	2	he	48.689	48.689	1.23	84132	0.06	100000	
K	39	2	he	42.669	42.669	1.68	345215	0.01	100000	
Se	82	3	HeHe	1.230	1.230	107.23	92	1.34	1000	
Fe	57	3	HeHe	572.577	572.577	2.75	50169	1.14	100000	
Cd	114	1	No Gas	0.046	0.046	21.69	450	0.01	1000	
Ca	44	1	No Gas	32.665	32.665	8.22	167664	0.02	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6587084	1.29	5896472	111.71	70	120	
Sc	45	2	he	1449928	0.22	1271268	114.05	70	120	
Ge	72	1	No Gas	727729	1.21	682805	106.58	70	120	

In	115	1	No Gas	3774308	0.56	3697856	102.07	70	120	
Tb	159	1	No Gas	4312035	0.67	4404848	97.89	70	120	
Bi	209	1	No Gas	2191850	0.23	1997135	109.75	70	120	
Sc	45	3	HeHe	148283	0.90	132951	111.53	70	120	

Sample Report

Sample Table

Sample Name	9980394008
Data File Name	047SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T15:24:10-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3303

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	17.808	17.808	2.09	635789	0.00	1000	
Cr	52	1	No Gas	9.496	9.496	1.42	316679	0.00	1000	
Mn	55	1	No Gas	57.432	57.432	2.03	2279594	0.00	1000	
Co	59	1	No Gas	1.012	1.012	2.47	36094	0.00	1000	
Ni	60	1	No Gas	0.141	0.141	67.81	22505	0.00	1000	
Cu	63	1	No Gas	4.901	4.901	4.43	94133	0.01	1000	
Sr	88	1	No Gas	4.829	4.829	3.05	216289	0.00	1000	
Ag	107	1	No Gas	0.014	0.014	7.93	300	0.00	1000	
Al	27	1	No Gas	9201.700	9201.700	3.81	194104207	0.00	100000	
Sn	118	1	No Gas	1.953	1.953	5.72	21392	0.01	100	
Ti	47	1	No Gas	186.357	186.357	2.31	546720	0.03	2000	
Zn	66	1	No Gas	23.119	23.119	3.64	112755	0.02	1000	
As	75	3	HeHe	1.980	1.980	6.59	767	0.26	1000	
As	75	1	No Gas	2.387	2.387	12.40	38570	0.01	1000	
Sb	121	1	No Gas	0.157	0.157	9.63	2426	0.01	100	
Hg	201	1	No Gas	0.036	0.036	33.99	85	0.04	4	
Be	9	1	No Gas	0.074	0.074	18.58	300	0.02	1000	
Pb	208	1	No Gas	8.307	8.307	0.27	242390	0.00	1000	
Se	82	1	No Gas	0.841	0.841	51.12	115	0.73	1000	
Mo	98	1	No Gas	0.813	0.813	15.59	10422	0.01	2000	
Ba	137	1	No Gas	16.540	16.540	1.98	78614	0.02	1000	
Tl	205	1	No Gas	0.079	0.079	15.36	1708	0.00	1000	
U	238	1	No Gas	0.508	0.508	1.62	13777	0.00	1000	
Na	23	2	he	28.595	28.595	2.11	180929	0.02	100000	
Mg	24	2	he	809.634	809.634	0.71	1399227	0.06	100000	
K	39	2	he	1045.223	1045.223	1.65	3101713	0.03	100000	
Se	82	3	HeHe	-0.560	-0.560	-145.49	59	-0.96	1000	
Fe	57	3	HeHe	7228.524	7228.524	0.14	625411	1.16	100000	
Cd	114	1	No Gas	0.124	0.124	11.67	1110	0.01	1000	
Ca	44	1	No Gas	510.999	510.999	4.00	608527	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6672543	1.26	5896472	113.16	70	120	
Sc	45	2	he	1452986	0.20	1271268	114.29	70	120	
Ge	72	1	No Gas	714460	1.02	682805	104.64	70	120	

In	115	1	No Gas	3736219	0.67	3697856	101.04	70	120	
Tb	159	1	No Gas	4273988	1.51	4404848	97.03	70	120	
Bi	209	1	No Gas	2175022	0.61	1997135	108.91	70	120	
Sc	45	3	HeHe	146931	1.53	132951	110.52	70	120	

Sample Report

Sample Table

Sample Name	9980394009
Data File Name	048SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T15:27:41-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3304

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	19.739	19.739	1.61	716740	0.00	1000	
Cr	52	1	No Gas	12.436	12.436	2.06	418049	0.00	1000	
Mn	55	1	No Gas	118.826	118.826	1.74	4758377	0.00	1000	
Co	59	1	No Gas	1.860	1.860	2.82	67248	0.00	1000	
Ni	60	1	No Gas	0.240	0.240	47.72	23696	0.00	1000	
Cu	63	1	No Gas	3.946	3.946	2.84	77238	0.01	1000	
Sr	88	1	No Gas	27.030	27.030	1.83	1231151	0.00	1000	
Ag	107	1	No Gas	0.027	0.027	31.72	544	0.01	1000	
Al	27	1	No Gas	10356.663	10356.663	3.82	222256080	0.00	100000	
Sn	118	1	No Gas	0.622	0.622	12.64	6872	0.01	100	
Ti	47	1	No Gas	509.670	509.670	1.42	1520510	0.03	2000	
Zn	66	1	No Gas	26.208	26.208	3.44	129928	0.02	1000	
As	75	3	HeHe	2.387	2.387	3.01	926	0.26	1000	
As	75	1	No Gas	1.976	1.976	19.96	37108	0.01	1000	
Sb	121	1	No Gas	0.068	0.068	36.32	1104	0.01	100	
Hg	201	1	No Gas	0.026	0.026	20.96	71	0.04	4	
Be	9	1	No Gas	0.249	0.249	5.39	965	0.03	1000	
Pb	208	1	No Gas	5.256	5.256	0.39	152377	0.00	1000	
Se	82	1	No Gas	1.352	1.352	21.06	254	0.53	1000	
Mo	98	1	No Gas	0.667	0.667	16.01	8623	0.01	2000	
Ba	137	1	No Gas	29.857	29.857	2.93	141241	0.02	1000	
Tl	205	1	No Gas	0.132	0.132	4.57	2823	0.00	1000	
U	238	1	No Gas	3.361	3.361	1.26	90239	0.00	1000	
Na	23	2	he	39.292	39.292	4.75	211774	0.02	100000	
Mg	24	2	he	1580.998	1580.998	1.32	2720280	0.06	100000	
K	39	2	he	1811.546	1811.546	2.84	5184277	0.03	100000	
Se	82	3	HeHe	2.478	2.478	55.16	114	2.17	1000	
Fe	57	3	HeHe	7345.606	7345.606	1.54	637065	1.15	100000	
Cd	114	1	No Gas	0.084	0.084	18.95	757	0.01	1000	
Ca	44	1	No Gas	1441.435	1441.435	1.50	1487262	0.10	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6786923	0.59	5896472	115.10	70	120	
Sc	45	2	he	1447008	2.76	1271268	113.82	70	120	
Ge	72	1	No Gas	710377	1.16	682805	104.04	70	120	

In	115	1	No Gas	3695756	0.86	3697856	99.94	70	120	
Tb	159	1	No Gas	4254708	1.38	4404848	96.59	70	120	
Bi	209	1	No Gas	2159352	0.57	1997135	108.12	70	120	
Sc	45	3	HeHe	147297	1.23	132951	110.79	70	120	

Sample Report

Sample Table

Sample Name	9980394010
Data File Name	049SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T15:31:08-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3305

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	4.711	4.711	3.68	165455	0.00	1000	
Cr	52	1	No Gas	3.934	3.934	1.21	135219	0.00	1000	
Mn	55	1	No Gas	5.128	5.128	3.18	231013	0.00	1000	
Co	59	1	No Gas	0.177	0.177	1.68	6405	0.00	1000	
Ni	60	1	No Gas	-1.670	-1.670	-2.09	7845	-0.02	1000	
Cu	63	1	No Gas	2.700	2.700	1.04	51005	0.01	1000	
Sr	88	1	No Gas	1.708	1.708	2.51	74826	0.00	1000	
Ag	107	1	No Gas	0.008	0.008	53.16	178	0.00	1000	
Al	27	1	No Gas	3545.061	3545.061	0.90	73116593	0.00	100000	
Sn	118	1	No Gas	0.602	0.602	13.15	6717	0.01	100	
Ti	47	1	No Gas	76.659	76.659	0.87	220064	0.03	2000	
Zn	66	1	No Gas	3.013	3.013	1.77	15125	0.02	1000	
As	75	3	HeHe	0.541	0.541	9.70	214	0.25	1000	
As	75	1	No Gas	1.101	1.101	41.64	31241	0.00	1000	
Sb	121	1	No Gas	0.250	0.250	7.10	3771	0.01	100	
Hg	201	1	No Gas	0.036	0.036	22.53	85	0.04	4	
Be	9	1	No Gas	0.024	0.024	13.47	112	0.02	1000	
Pb	208	1	No Gas	6.605	6.605	1.97	193108	0.00	1000	
Se	82	1	No Gas	0.912	0.912	65.40	131	0.70	1000	
Mo	98	1	No Gas	0.361	0.361	25.96	5102	0.01	2000	
Ba	137	1	No Gas	5.551	5.551	2.41	26576	0.02	1000	
Tl	205	1	No Gas	0.022	0.022	21.16	496	0.00	1000	
U	238	1	No Gas	0.267	0.267	2.78	7280	0.00	1000	
Na	23	2	he	20.902	20.902	9.99	155768	0.01	100000	
Mg	24	2	he	82.663	82.663	3.56	140973	0.06	100000	
K	39	2	he	67.617	67.617	4.26	408715	0.02	100000	
Se	82	3	HeHe	-1.185	-1.185	-41.98	47	-2.52	1000	
Fe	57	3	HeHe	1104.174	1104.174	1.92	95201	1.16	100000	
Cd	114	1	No Gas	0.059	0.059	27.75	553	0.01	1000	
Ca	44	1	No Gas	47.976	47.976	5.18	179721	0.03	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6522227	1.84	5896472	110.61	70	120	
Sc	45	2	he	1433294	3.59	1271268	112.75	70	120	
Ge	72	1	No Gas	704949	0.88	682805	103.24	70	120	

In	115	1	No Gas	3724819	1.67	3697856	100.73	70	120	
Tb	159	1	No Gas	4299813	0.95	4404848	97.62	70	120	
Bi	209	1	No Gas	2178498	0.40	1997135	109.08	70	120	
Sc	45	3	HeHe	146182	1.06	132951	109.95	70	120	

Sample Report

Sample Table

Sample Name	9980394011
Data File Name	050SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T15:34:36-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3306

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	6.453	6.453	2.48	223191	0.00	1000	
Cr	52	1	No Gas	5.538	5.538	2.02	183142	0.00	1000	
Mn	55	1	No Gas	5.218	5.218	1.29	231511	0.00	1000	
Co	59	1	No Gas	0.263	0.263	3.67	9247	0.00	1000	
Ni	60	1	No Gas	-1.165	-1.165	-2.21	11644	-0.01	1000	
Cu	63	1	No Gas	4.864	4.864	1.48	90195	0.01	1000	
Sr	88	1	No Gas	2.416	2.416	0.76	104501	0.00	1000	
Ag	107	1	No Gas	0.009	0.009	33.62	193	0.00	1000	
Al	27	1	No Gas	5347.114	5347.114	1.01	108890314	0.00	100000	
Sn	118	1	No Gas	0.378	0.378	13.99	4193	0.01	100	
Ti	47	1	No Gas	82.758	82.758	0.73	234530	0.04	2000	
Zn	66	1	No Gas	13.662	13.662	1.68	64674	0.02	1000	
As	75	3	HeHe	0.840	0.840	5.18	318	0.26	1000	
As	75	1	No Gas	1.435	1.435	8.98	32532	0.00	1000	
Sb	121	1	No Gas	0.080	0.080	22.74	1270	0.01	100	
Hg	201	1	No Gas	0.034	0.034	80.17	83	0.04	4	
Be	9	1	No Gas	0.052	0.052	21.18	211	0.02	1000	
Pb	208	1	No Gas	9.802	9.802	1.50	286080	0.00	1000	
Se	82	1	No Gas	1.319	1.319	33.45	232	0.57	1000	
Mo	98	1	No Gas	0.349	0.349	26.48	4850	0.01	2000	
Ba	137	1	No Gas	6.403	6.403	2.75	29571	0.02	1000	
Tl	205	1	No Gas	0.030	0.030	2.81	674	0.00	1000	
U	238	1	No Gas	0.395	0.395	0.64	10726	0.00	1000	
Na	23	2	he	25.008	25.008	2.18	162788	0.02	100000	
Mg	24	2	he	122.022	122.022	0.80	201771	0.06	100000	
K	39	2	he	111.165	111.165	1.56	510791	0.02	100000	
Se	82	3	HeHe	1.565	1.565	69.65	94	1.67	1000	
Fe	57	3	HeHe	1836.429	1836.429	0.58	153279	1.20	100000	
Cd	114	1	No Gas	0.059	0.059	12.55	537	0.01	1000	
Ca	44	1	No Gas	60.530	60.530	2.00	188575	0.03	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6439241	1.49	5896472	109.20	70	120	
Sc	45	2	he	1389260	0.75	1271268	109.28	70	120	
Ge	72	1	No Gas	693351	1.29	682805	101.54	70	120	

In	115	1	No Gas	3639454	1.23	3697856	98.42	70	120	
Tb	159	1	No Gas	4147416	1.27	4404848	94.16	70	120	
Bi	209	1	No Gas	2176169	1.51	1997135	108.96	70	120	
Sc	45	3	HeHe	141612	0.68	132951	106.51	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	051_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T15:38:06-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	95.766	1.175	3371312	0.62	100	95.8	90	110	
Cr	52	1	No Gas	94.568	1.914	3007152	1.40	100	94.6	90	110	
Mn	55	1	No Gas	99.976	1.320	3892882	0.79	100	100.0	90	110	
Co	59	1	No Gas	95.982	1.302	3356256	1.02	100	96.0	90	110	
Ni	60	1	No Gas	92.508	1.399	751705	2.21	100	92.5	90	110	
Cu	63	1	No Gas	97.886	0.387	1844903	1.18	100	97.9	90	110	
Sr	88	1	No Gas	98.969	0.278	4376795	1.24	100	99.0	90	110	
Ag	107	1	No Gas	99.903	0.396	1869220	1.13	100	99.9	90	110	
Al	27	1	No Gas	98.964	0.736	2071912	1.28	100	99.0	90	110	
Sn	118	1	No Gas	98.355	1.134	1073114	0.37	100	98.4	90	110	
Tl	47	1	No Gas	88.181	0.939	255700	0.34	100	88.2	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	95.349	0.790	456653	0.68	100	95.3	90	110	
As	75	3	HeHe	93.995	1.512	35270	1.57	100	94.0	90	110	
As	75	1	No Gas	93.714	0.152	500216	1.37	100	93.7	90	110	
Sb	121	1	No Gas	97.901	2.179	1437850	2.11	100	97.9	90	110	
Hg	201	1	No Gas	2.010	2.841	2742	3.43	2	100.5	90	110	
Be	9	1	No Gas	90.368	0.709	330001	1.30	100	90.4	90	110	
Pb	208	1	No Gas	97.688	1.998	2845819	0.90	100	97.7	90	110	
Se	82	1	No Gas	93.088	0.780	24056	0.54	100	93.1	90	110	
Mo	98	1	No Gas	95.898	0.707	1132801	1.10	100	95.9	90	110	
Ba	137	1	No Gas	99.822	0.925	471729	0.92	100	99.8	90	110	
Tl	205	1	No Gas	97.007	1.350	2073768	0.53	100	97.0	90	110	
U	238	1	No Gas	104.776	1.673	2830922	0.53	100	104.8	90	110	
Na	23	2	he	994.689	1.453	3022597	0.64	1000	99.5	90	110	
Mg	24	2	he	1009.955	2.161	1727080	1.61	1000	101.0	90	110	
K	39	2	he	994.315	1.798	2930639	0.62	1000	99.4	90	110	
Se	82	3	HeHe	91.019	6.069	1683	6.28	100	91.0	90	110	
Fe	57	3	HeHe	1033.475	0.566	87592	0.46	1000	103.3	90	110	
Cd	114	1	No Gas	95.543	1.436	818348	1.25	100	95.5	90	110	
Ca	44	1	No Gas	939.661	0.888	989495	0.95	1000	94.0	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6589968	1.22	5896472	111.76	70	120	
Sc	45	2	he	1437902	1.18	1271268	113.11	70	120	
Ge	72	1	No Gas	714295	0.63	682805	104.61	70	120	
In	115	1	No Gas	3755192	1.44	3697856	101.55	70	120	
Tb	159	1	No Gas	4250998	0.22	4404848	96.51	70	120	
Bi	209	1	No Gas	2174489	1.23	1997135	108.88	70	120	
Sc	45	3	HeHe	143668	0.53	132951	108.06	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	052_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T15:41:31-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.052	88.3	3108	51.4	9	
Cr	52	1	No Gas	0.044	38.4	13191	4.0	4	
Mn	55	1	No Gas	0.329	11.3	47463	2.9	25	
Co	*59	1	No Gas	0.003	149.2	382	42.6	1	
Ni	60	1	No Gas	-2.551	-0.3	957	5.3	25	
Cu	63	1	No Gas	0.238	3.3	5063	2.8	25	
Sr	88	1	No Gas	0.012	19.0	615	15.2	25	
Ag	107	1	No Gas	0.006	18.4	159	14.5	9	
Al	27	1	No Gas	1.180	10.0	33668	7.1	1000000	
Sn	118	1	No Gas	0.986	22.0	11060	21.4	25	
Ti	47	1	No Gas	0.401	25.9	1469	20.5	10000	
Zn	66	1	No Gas	0.694	9.0	4124	6.7	25	
As	75	3	HeHe	0.477	14.2	189	13.8	9	
As	75	1	No Gas	1.012	2.8	30617	0.6	9	
Sb	121	1	No Gas	0.271	35.0	4153	33.7	4	
Hg	201	1	No Gas	0.018	83.1	61	33.0	0.04	
Be	9	1	No Gas	0.005	88.1	44	36.1	1	
Pb	208	1	No Gas	0.035	28.2	1348	21.2	4	
Se	82	1	No Gas	0.904	139.5	127	253.6	25	
Mo	98	1	No Gas	0.953	22.0	12242	20.1	10000	
Ba	137	1	No Gas	0.060	21.7	333	19.1	25	
Tl	205	1	No Gas	0.033	12.9	730	12.2	1	
U	238	1	No Gas	0.175	29.7	4816	29.1	25	
Na	23	2	he	10.791	5.8	124381	1.9	2500000	
Mg	24	2	he	0.561	33.2	1111	27.9	2500000	
K	39	2	he	2.357	26.8	228529	0.3	5000000	
Se	82	3	HeHe	1.716	53.1	99	16.6	25	
Fe	57	3	HeHe	8.460	31.9	915	25.6	2500000	
Cd	114	1	No Gas	0.033	35.5	337	29.9	1	
Ca	44	1	No Gas	-12.732	-17.7	124462	1.1	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6478737	0.84	5896472	109.87	70	120	
Sc	45	2	he	1412196	0.76	1271268	111.09	70	120	
Ge	72	1	No Gas	728734	0.35	682805	106.73	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3794873	0.59	3697856	102.62	70	120	
Tb	159	1	No Gas	4243609	2.04	4404848	96.34	70	120	
Bi	209	1	No Gas	2191657	0.73	1997135	109.74	70	120	
Sc	45	3	HeHe	145345	0.38	132951	109.32	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	053LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T15:45:01-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.177	5.264	77165	5.31	2	108.8	70	130	
Cr	52	1	No Gas	2.139	2.591	79006	2.74	2	107.0	70	130	
Mn	55	1	No Gas	5.336	2.952	239093	1.82	5	106.7	70	130	
Co	59	1	No Gas	4.915	1.204	170448	1.14	5	98.3	70	130	
Ni	60	1	No Gas	2.440	2.934	39986	1.11	5	48.8	70	130	LLCCV Main CR1 Failed
Cu	63	1	No Gas	5.010	0.870	94126	1.43	5	100.2	70	130	
Sr	88	1	No Gas	4.651	2.477	203784	2.61	5	93.0	70	130	
Ag	107	1	No Gas	2.092	1.408	37970	1.73	2	104.6	70	130	
Al	27	1	No Gas	79.656	3.125	1653078	2.52	80	99.6	70	130	
Sn	118	1	No Gas	2.587	7.057	27546	8.06	2	129.3	70	130	
Ti	47	1	No Gas	4.902	3.568	14388	3.92	5	98.0	70	130	
Zn	66	1	No Gas	5.006	5.265	24564	4.53	5	100.1	70	130	
As	75	3	HeHe	3.044	3.007	1161	2.86	3	101.5	70	130	
As	75	1	No Gas	3.659	10.391	44091	3.16	3	122.0	70	130	
Sb	121	1	No Gas	2.165	2.109	30930	3.23	2	108.2	70	130	
Hg	201	1	No Gas	0.176	27.654	266	23.77	0.2	87.9	70	130	
Be	9	1	No Gas	0.934	4.300	3404	5.25	1	93.4	70	130	
Pb	208	1	No Gas	2.054	1.410	58575	1.81	2	102.7	70	130	
Se	82	1	No Gas	5.211	11.618	1236	12.01	5	104.2	70	130	
Mo	98	1	No Gas	2.483	7.329	29259	8.31	2	124.1	70	130	
Ba	137	1	No Gas	5.228	3.615	24412	2.96	5	104.6	70	130	
Tl	205	1	No Gas	1.006	2.887	20967	2.90	1	100.6	70	130	
U	238	1	No Gas	4.857	1.493	127838	1.26	5	97.1	70	130	
Na	23	2	he	107.999	1.391	412281	0.54	100	108.0	70	130	
Mg	24	2	he	99.561	1.338	170216	0.48	100	99.6	70	130	
K	39	2	he	104.712	4.571	510449	1.74	100	104.7	70	130	
Se	82	3	HeHe	3.186	31.499	125	14.97	5	63.7	70	130	LLCCV Main CR1 Failed
Fe	57	3	HeHe	54.611	1.275	4856	0.82	50	109.2	70	130	
Cd	114	1	No Gas	1.059	5.653	8836	4.37	1	105.9	70	130	
Ca	44	1	No Gas	81.235	3.887	209669	0.91	100	81.2	70	130	

N/A

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6525797	1.16	5896472	110.67	70	120	
Sc	45	2	he	1436214	0.88	1271268	112.97	70	120	
Ge	72	1	No Gas	714833	1.35	682805	104.69	70	120	
In	115	1	No Gas	3638480	1.31	3697856	98.39	70	120	
Tb	159	1	No Gas	4193774	0.97	4404848	95.21	70	120	
Bi	209	1	No Gas	2117472	0.43	1997135	106.03	70	120	
Sc	45	3	HeHe	145156	0.93	132951	109.18	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	061_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T16:14:29-04:00
Sample Type	CCB
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.258	21.5	10449	17.0	9	
Cr	52	1	No Gas	0.085	15.7	14829	1.0	4	
Mn	55	1	No Gas	0.282	18.4	46806	1.9	25	
Co	59	1	No Gas	0.004	52.3	415	15.2	1	
Ni	60	1	No Gas	-2.534	-1.0	1113	15.7	25	
Cu	63	1	No Gas	0.270	3.2	5794	1.4	25	
Sr	88	1	No Gas	0.013	34.8	674	29.7	25	
Ag	107	1	No Gas	0.013	50.2	289	42.8	9	
Al	27	1	No Gas	1.124	7.8	33317	4.2	1000000	
Sn	118	1	No Gas	0.923	28.8	10645	30.5	25	
Ti	47	1	No Gas	0.792	31.8	2656	29.7	10000	
Zn	66	1	No Gas	0.756	7.9	4524	4.7	25	
As	75	3	HeHe	0.476	13.5	195	12.4	9	
As	75	1	No Gas	0.804	48.2	30281	4.1	9	
Sb	121	1	No Gas	0.878	15.7	13473	17.7	4	
Hg	201	1	No Gas	0.029	20.4	77	13.0	0.04	
Be	9	1	No Gas	0.006	18.3	50	6.9	1	
Pb	208	1	No Gas	0.039	35.2	1482	25.2	4	
Se	82	1	No Gas	1.085	52.3	178	82.5	25	
Mo	98	1	No Gas	1.075	26.6	14055	27.1	10000	
Ba	137	1	No Gas	0.074	12.5	427	11.1	25	
Tl	205	1	No Gas	0.037	22.8	837	21.5	1	
U	238	1	No Gas	0.118	24.2	3345	26.6	25	
Na	23	2	he	10.156	8.8	126707	1.9	2500000	
Mg	24	2	he	0.558	23.7	1145	20.5	2500000	
K	39	2	he	5.662	21.5	245434	1.1	5000000	
Se	82	3	HeHe	0.110	951.2	73	25.8	25	
Fe	57	3	HeHe	21.162	3.4	2078	3.7	2500000	
Cd	114	1	No Gas	0.038	8.8	390	6.8	1	
Ca	44	1	No Gas	3.929	76.5	142701	0.9	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6638402	2.50	5896472	112.58	70	120	
Sc	45	2	he	1460240	0.46	1271268	114.86	70	120	
Ge	72	1	No Gas	741448	2.88	682805	108.59	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3876860	2.36	3697856	104.84	70	120	
Tb	159	1	No Gas	4542410	0.70	4404848	103.12	70	120	
Bi	209	1	No Gas	2239048	2.56	1997135	112.11	70	120	
Sc	45	3	HeHe	150931	2.00	132951	113.52	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	062LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T16:18:00-04:00
Sample Type	LLCCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	2.390	2.438	85659	1.28	2	119.5	70	130		
Cr	52	1	No Gas	2.177	2.681	81201	2.03	2	108.8	70	130		
Mn	55	1	No Gas	5.427	0.651	245715	0.95	5	108.5	70	130		
Co	59	1	No Gas	4.895	1.739	171929	0.24	5	97.9	70	130		
Ni	60	1	No Gas	2.354	6.286	39813	2.07	5	47.1	70	130	LLCCV Main CR1 Failed	X N/A
Cu	63	1	No Gas	5.081	1.161	96675	0.44	5	101.6	70	130		
Sr	88	1	No Gas	4.658	0.727	206700	0.98	5	93.2	70	130		
Ag	107	1	No Gas	2.140	2.355	40208	1.37	2	107.0	70	130		
Al	27	1	No Gas	80.477	1.325	1691690	2.03	80	100.6	70	130		
Sn	118	1	No Gas	2.587	4.616	28533	6.90	2	129.3	70	130		
Ti	47	1	No Gas	5.196	3.477	15428	4.67	5	103.9	70	130		
Zn	66	1	No Gas	5.036	1.088	25029	2.21	5	100.7	70	130		
As	75	3	HeHe	3.229	2.446	1254	1.57	3	107.6	70	130		
As	75	1	No Gas	3.742	3.984	45089	1.90	3	124.7	70	130		
Sb	121	1	No Gas	2.703	2.541	39968	4.29	2	135.1	70	130	LLCCV Main CR1 Failed	X N/A
Hg	201	1	No Gas	0.192	1.387	300	1.33	0.2	96.1	70	130		
Be	9	1	No Gas	0.970	4.858	3579	3.55	1	97.0	70	130		
Pb	208	1	No Gas	1.998	2.281	59447	1.72	2	99.9	70	130		
Se	82	1	No Gas	5.456	2.427	1316	2.66	5	109.1	70	130		
Mo	98	1	No Gas	2.599	2.892	31668	4.55	2	129.9	70	130		
Ba	137	1	No Gas	5.304	3.723	25697	3.23	5	106.1	70	130		
Tl	205	1	No Gas	0.968	1.843	21052	1.95	1	96.8	70	130		
U	238	1	No Gas	4.917	0.145	135051	0.63	5	98.3	70	130		
Na	23	2	he	111.786	3.162	427436	0.93	100	111.8	70	130		
Mg	24	2	he	101.514	2.556	175226	2.31	100	101.5	70	130		
K	39	2	he	109.937	4.259	529699	1.57	100	109.9	70	130		
Se	82	3	HeHe	5.601	19.816	171	11.17	5	112.0	70	130		
Fe	57	3	HeHe	69.741	0.988	6264	2.13	50	139.5	70	130	LLCCV Main CR1 Failed	X
Cd	114	1	No Gas	1.043	2.022	9016	2.50	1	104.3	70	130		
Ca	44	1	No Gas	98.773	2.273	228305	1.49	100	98.8	70	130		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6609469	1.49	5896472	112.09	70	120	
Sc	45	2	he	1450134	1.53	1271268	114.07	70	120	
Ge	72	1	No Gas	726466	0.89	682805	106.39	70	120	
In	115	1	No Gas	3768227	2.33	3697856	101.90	70	120	
Tb	159	1	No Gas	4351112	1.00	4404848	98.78	70	120	
Bi	209	1	No Gas	2209519	0.64	1997135	110.63	70	120	
Sc	45	3	HeHe	147868	2.01	132951	111.22	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	063_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T16:21:30-04:00
Sample Type	CCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	98.080	1.671	3473192	0.59	100	98.1	90	110	
Cr	52	1	No Gas	96.228	1.104	3078078	0.50	100	96.2	90	110	
Mn	55	1	No Gas	100.875	1.416	3950975	0.73	100	100.9	90	110	
Co	59	1	No Gas	97.315	1.485	3423549	2.20	100	97.3	90	110	
Ni	60	1	No Gas	93.992	0.524	767947	1.33	100	94.0	90	110	
Cu	63	1	No Gas	98.788	1.146	1872850	0.20	100	98.8	90	110	
Sr	88	1	No Gas	99.909	1.365	4444611	1.63	100	99.9	90	110	
Ag	107	1	No Gas	102.043	1.085	1910900	1.35	100	102.0	90	110	
Al	27	1	No Gas	99.675	1.003	2099115	1.13	100	99.7	90	110	
Sn	118	1	No Gas	99.494	1.658	1086509	1.46	100	99.5	90	110	
Tl	47	1	No Gas	88.201	1.234	257287	1.07	100	88.2	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	96.686	1.457	465842	2.03	100	96.7	90	110	
As	75	3	HeHe	96.326	1.420	36769	1.75	100	96.3	90	110	
As	75	1	No Gas	95.326	0.953	511380	0.94	100	95.3	90	110	
Sb	121	1	No Gas	101.962	2.711	1498814	2.73	100	102.0	90	110	
Hg	201	1	No Gas	1.934	2.488	2660	2.22	2	96.7	90	110	
Be	9	1	No Gas	92.499	1.320	339769	0.72	100	92.5	90	110	
Pb	208	1	No Gas	96.943	1.052	2845479	1.31	100	96.9	90	110	
Se	82	1	No Gas	92.698	1.179	24100	1.81	100	92.7	90	110	
Mo	98	1	No Gas	97.515	0.262	1152878	0.64	100	97.5	90	110	
Ba	137	1	No Gas	100.432	2.243	478900	1.80	100	100.4	90	110	
Tl	205	1	No Gas	97.380	1.276	2097353	1.49	100	97.4	90	110	
U	238	1	No Gas	104.311	2.222	2839683	2.52	100	104.3	90	110	
Na	23	2	he	1036.498	3.184	3177345	0.91	1000	103.6	90	110	
Mg	24	2	he	1036.393	3.501	1789984	0.70	1000	103.6	90	110	
K	39	2	he	1019.966	4.231	3030089	0.76	1000	102.0	90	110	
Se	82	3	HeHe	96.000	1.545	1802	0.70	100	96.0	90	110	
Fe	57	3	HeHe	1029.732	3.202	88763	2.09	1000	103.0	90	110	
Cd	114	1	No Gas	96.789	1.554	829741	1.27	100	96.8	90	110	
Ca	44	1	No Gas	979.921	2.160	1032103	1.99	1000	98.0	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6629376	1.33	5896472	112.43	70	120	
Sc	45	2	he	1453152	3.18	1271268	114.31	70	120	
Ge	72	1	No Gas	727965	1.29	682805	106.61	70	120	
In	115	1	No Gas	3758237	0.49	3697856	101.63	70	120	
Tb	159	1	No Gas	4289899	1.27	4404848	97.39	70	120	
Bi	209	1	No Gas	2190555	0.33	1997135	109.68	70	120	
Sc	45	3	HeHe	146168	2.15	132951	109.94	70	120	

Sample Report

Sample Table

Sample Name	9980394012
Data File Name	064SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T16:24:53-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3307

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	16.543	16.543	1.34	597471	0.00	1000	
Cr	52	1	No Gas	15.493	15.493	0.30	514776	0.00	1000	
Mn	55	1	No Gas	71.716	71.716	1.25	2869865	0.00	1000	
Co	59	1	No Gas	1.078	1.078	3.80	38885	0.00	1000	
Ni	60	1	No Gas	2.929	2.929	1.96	45302	0.01	1000	
Cu	63	1	No Gas	2.460	2.460	1.57	48129	0.01	1000	
Sr	88	1	No Gas	9.872	9.872	1.09	447098	0.00	1000	
Ag	107	1	No Gas	0.021	0.021	20.09	441	0.00	1000	
Al	27	1	No Gas	16683.193	16683.193	0.74	355980534	0.00	100000	
Sn	118	1	No Gas	2.546	2.546	22.54	28274	0.01	100	
Ti	47	1	No Gas	265.144	265.144	1.05	786628	0.03	2000	
Zn	66	1	No Gas	19.175	19.175	1.94	94756	0.02	1000	
As	75	3	HeHe	2.248	2.248	14.93	873	0.26	1000	
As	75	1	No Gas	1.619	1.619	10.69	35038	0.00	1000	
Sb	121	1	No Gas	0.767	0.767	20.96	11512	0.01	100	
Hg	201	1	No Gas	0.074	0.074	14.78	138	0.05	4	
Be	9	1	No Gas	0.143	0.143	8.13	563	0.03	1000	
Pb	208	1	No Gas	29.602	29.602	0.50	873963	0.00	1000	
Se	82	1	No Gas	1.332	1.332	57.27	249	0.54	1000	
Mo	98	1	No Gas	2.176	2.176	16.38	26843	0.01	2000	
Ba	137	1	No Gas	34.952	34.952	0.61	168586	0.02	1000	
Tl	205	1	No Gas	0.127	0.127	4.46	2771	0.00	1000	
U	238	1	No Gas	1.228	1.228	7.43	33657	0.00	1000	
Na	23	2	he	46.101	46.101	4.10	233552	0.02	100000	
Mg	24	2	he	591.160	591.160	2.09	1024145	0.06	100000	
K	39	2	he	684.123	684.123	2.39	2114025	0.03	100000	
Se	82	3	HeHe	3.504	3.504	52.47	133	2.64	1000	
Fe	57	3	HeHe	4667.986	4667.986	1.54	404901	1.15	100000	
Cd	114	1	No Gas	0.164	0.164	8.80	1470	0.01	1000	
Ca	44	1	No Gas	774.106	774.106	1.35	859635	0.09	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6747369	0.81	5896472	114.43	70	120	
Sc	45	2	he	1456837	2.29	1271268	114.60	70	120	
Ge	72	1	No Gas	714925	0.56	682805	104.70	70	120	

In	115	1	No Gas	3790905	0.92	3697856	102.52	70	120	
Tb	159	1	No Gas	4338135	0.93	4404848	98.49	70	120	
Bi	209	1	No Gas	2202830	0.77	1997135	110.30	70	120	
Sc	45	3	HeHe	147292	1.39	132951	110.79	70	120	

Sample Report

Sample Table

Sample Name	9980394013
Data File Name	065SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T16:28:22-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3308

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	16.322	16.322	2.91	583994	0.00	1000	
Cr	52	1	No Gas	9.927	9.927	2.55	331090	0.00	1000	
Mn	55	1	No Gas	88.992	88.992	3.12	3519298	0.00	1000	
Co	59	1	No Gas	0.906	0.906	3.58	32435	0.00	1000	
Ni	60	1	No Gas	0.018	0.018	463.43	21571	0.00	1000	
Cu	63	1	No Gas	2.715	2.715	0.63	52563	0.01	1000	
Sr	88	1	No Gas	5.972	5.972	2.07	267964	0.00	1000	
Ag	107	1	No Gas	0.027	0.027	2.20	541	0.00	1000	
Al	27	1	No Gas	9571.946	9571.946	2.14	202321910	0.00	100000	
Sn	118	1	No Gas	1.196	1.196	12.00	13254	0.01	100	
Ti	47	1	No Gas	87.930	87.930	1.80	258633	0.03	2000	
Zn	66	1	No Gas	24.011	24.011	1.34	117302	0.02	1000	
As	75	3	HeHe	1.597	1.597	11.94	624	0.26	1000	
As	75	1	No Gas	1.809	1.809	5.13	35675	0.01	1000	
Sb	121	1	No Gas	0.496	0.496	12.21	7413	0.01	100	
Hg	201	1	No Gas	0.056	0.056	17.23	112	0.05	4	
Be	9	1	No Gas	0.113	0.113	3.26	444	0.03	1000	
Pb	208	1	No Gas	6.819	6.819	0.95	197778	0.00	1000	
Se	82	1	No Gas	0.877	0.877	85.93	127	0.69	1000	
Mo	98	1	No Gas	1.104	1.104	16.67	13920	0.01	2000	
Ba	137	1	No Gas	17.887	17.887	2.59	84851	0.02	1000	
Tl	205	1	No Gas	0.052	0.052	5.18	1130	0.00	1000	
U	238	1	No Gas	0.624	0.624	1.08	16799	0.00	1000	
Na	23	2	he	26.938	26.938	5.20	174219	0.02	100000	
Mg	24	2	he	553.362	553.362	0.78	946783	0.06	100000	
K	39	2	he	373.299	373.299	0.79	1242144	0.03	100000	
Se	82	3	HeHe	0.049	0.049	1220.08	70	0.07	1000	
Fe	57	3	HeHe	6854.515	6854.515	1.00	595730	1.15	100000	
Cd	114	1	No Gas	0.373	0.373	8.30	3244	0.01	1000	
Ca	44	1	No Gas	879.752	879.752	0.95	948591	0.09	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6684098	1.44	5896472	113.36	70	120	
Sc	45	2	he	1438434	0.80	1271268	113.15	70	120	
Ge	72	1	No Gas	700754	0.74	682805	102.63	70	120	

In	115	1	No Gas	3752892	1.73	3697856	101.49	70	120	
Tb	159	1	No Gas	4265108	0.92	4404848	96.83	70	120	
Bi	209	1	No Gas	2161418	1.62	1997135	108.23	70	120	
Sc	45	3	HeHe	147587	0.36	132951	111.01	70	120	

Sample Report

Sample Table

Sample Name	9980394013L
Data File Name	066SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T16:31:51-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF25
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3309

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	3.304	3.304	3.29	120571	0.00	1000	
Cr	52	1	No Gas	2.032	2.032	0.93	78313	0.00	1000	
Mn	55	1	No Gas	17.121	17.121	1.32	713915	0.00	1000	
Co	59	1	No Gas	0.182	0.182	4.63	6805	0.00	1000	
Ni	60	1	No Gas	-2.047	-2.047	-1.72	5074	-0.04	1000	
Cu	63	1	No Gas	0.577	0.577	1.51	11820	0.00	1000	
Sr	88	1	No Gas	1.172	1.172	0.89	53239	0.00	1000	
Ag	107	1	No Gas	0.013	0.013	32.48	293	0.00	1000	
Al	27	1	No Gas	1829.295	1829.295	1.16	39101389	0.00	100000	
Sn	118	1	No Gas	0.469	0.469	25.02	5390	0.01	100	
Ti	47	1	No Gas	17.103	17.103	1.05	51134	0.03	2000	
Zn	66	1	No Gas	4.653	4.653	2.71	23704	0.02	1000	
As	75	3	HeHe	0.357	0.357	23.70	149	0.24	1000	
As	75	1	No Gas	0.960	0.960	15.16	31671	0.00	1000	
Sb	121	1	No Gas	0.223	0.223	19.30	3456	0.01	100	
Hg	201	1	No Gas	0.019	0.019	89.68	62	0.03	4	
Be	9	1	No Gas	0.024	0.024	13.75	117	0.02	1000	
Pb	208	1	No Gas	1.300	1.300	3.04	38328	0.00	1000	
Se	82	1	No Gas	1.393	1.393	4.99	264	0.53	1000	
Mo	98	1	No Gas	0.374	0.374	36.18	5368	0.01	2000	
Ba	137	1	No Gas	3.537	3.537	4.70	16883	0.02	1000	
Tl	205	1	No Gas	0.010	0.010	61.73	241	0.00	1000	
U	238	1	No Gas	0.126	0.126	13.42	3464	0.00	1000	
Na	23	2	he	13.009	13.009	3.89	136490	0.01	100000	
Mg	24	2	he	106.284	106.284	1.91	186435	0.06	100000	
K	39	2	he	74.899	74.899	1.64	440704	0.02	100000	
Se	82	3	HeHe	1.168	1.168	169.04	93	1.26	1000	
Fe	57	3	HeHe	1299.079	1299.079	0.55	115952	1.12	100000	
Cd	114	1	No Gas	0.099	0.099	16.49	907	0.01	1000	
Ca	44	1	No Gas	162.792	162.792	1.09	292895	0.06	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6757509	0.98	5896472	114.60	70	120	
Sc	45	2	he	1473661	0.77	1271268	115.92	70	120	
Ge	72	1	No Gas	726229	0.73	682805	106.36	70	120	

In	115	1	No Gas	3804166	0.61	3697856	102.87	70	120	
Tb	159	1	No Gas	4281946	1.76	4404848	97.21	70	120	
Bi	209	1	No Gas	2181999	0.53	1997135	109.26	70	120	
Sc	45	3	HeHe	151367	0.71	132951	113.85	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	074_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T16:59:36-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	98.115	1.001	3338689	1.59	100	98.1	90	110	
Cr	52	1	No Gas	96.956	0.628	2979832	0.89	100	97.0	90	110	
Mn	55	1	No Gas	101.257	0.307	3810601	0.85	100	101.3	90	110	
Co	59	1	No Gas	97.196	1.301	3285259	1.92	100	97.2	90	110	
Ni	60	1	No Gas	93.398	0.743	733309	1.43	100	93.4	90	110	
Cu	63	1	No Gas	98.514	1.020	1794639	1.75	100	98.5	90	110	
Sr	88	1	No Gas	100.261	0.608	4285273	0.16	100	100.3	90	110	
Ag	107	1	No Gas	102.189	0.857	1834412	1.45	100	102.2	90	110	
Al	27	1	No Gas	102.118	1.672	2066199	2.34	100	102.1	90	110	
Sn	118	1	No Gas	99.295	1.506	1039419	1.29	100	99.3	90	110	
Tl	47	1	No Gas	89.296	0.525	250279	1.19	100	89.3	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	96.432	0.476	446388	1.07	100	96.4	90	110	
As	75	3	HeHe	94.372	1.539	34440	0.33	100	94.4	90	110	
As	75	1	No Gas	96.195	0.657	495602	1.31	100	96.2	90	110	
Sb	121	1	No Gas	99.253	2.530	1398719	3.17	100	99.3	90	110	
Hg	201	1	No Gas	1.973	5.980	2614	5.42	2	98.6	90	110	
Be	9	1	No Gas	93.397	0.589	329648	1.33	100	93.4	90	110	
Pb	208	1	No Gas	96.846	0.369	2740434	0.60	100	96.8	90	110	
Se	82	1	No Gas	94.472	0.671	23598	0.23	100	94.5	90	110	
Mo	98	1	No Gas	98.032	0.678	1110943	0.23	100	98.0	90	110	
Ba	137	1	No Gas	99.091	0.636	455263	0.83	100	99.1	90	110	
Tl	205	1	No Gas	97.453	0.948	2023561	1.56	100	97.5	90	110	
U	238	1	No Gas	105.434	2.448	2766909	2.29	100	105.4	90	110	
Na	23	2	he	1023.800	0.473	3067631	1.56	1000	102.4	90	110	
Mg	24	2	he	1014.744	1.475	1712502	1.63	1000	101.5	90	110	
K	39	2	he	1016.756	2.612	2951986	1.25	1000	101.7	90	110	
Se	82	3	HeHe	95.599	4.398	1715	3.01	100	95.6	90	110	
Fe	57	3	HeHe	1029.338	1.883	84848	0.78	1000	102.9	90	110	
Cd	114	1	No Gas	95.912	0.975	788219	1.55	100	95.9	90	110	
Ca	44	1	No Gas	977.277	0.379	989317	0.47	1000	97.7	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6369242	0.75	5896472	108.02	70	120	
Sc	45	2	he	1419045	2.01	1271268	111.62	70	120	
Ge	72	1	No Gas	699667	0.63	682805	102.47	70	120	
In	115	1	No Gas	3602583	0.64	3697856	97.42	70	120	
Tb	159	1	No Gas	4132845	0.23	4404848	93.82	70	120	
Bi	209	1	No Gas	2111865	0.82	1997135	105.74	70	120	
Sc	45	3	HeHe	139745	1.30	132951	105.11	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	075_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T17:05:00-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.162	32.5	6872	25.4	9	
Cr	52	1	No Gas	0.104	28.8	15040	4.4	4	
Mn	55	1	No Gas	0.036	149.8	36310	4.4	25	
Co	59	1	No Gas	0.007	67.6	504	32.1	1	
Ni	60	1	No Gas	-2.486	-0.7	1457	10.9	25	
Cu	63	1	No Gas	0.191	2.8	4189	0.7	25	
Sr	88	1	No Gas	0.011	16.1	563	14.8	25	
Ag	107	1	No Gas	0.014	14.5	300	11.1	9	
Al	27	1	No Gas	0.843	3.3	26739	3.1	1000000	
Sn	118	1	No Gas	0.649	17.1	7143	17.6	25	
Tl	47	1	No Gas	0.228	21.1	974	15.6	10000	
Zn	66	1	No Gas	0.498	8.2	3197	4.2	25	
As	75	3	HeHe	0.308	17.8	122	14.8	9	
As	75	1	No Gas	0.554	37.0	28301	2.0	9	
Sb	121	1	No Gas	0.348	26.2	5146	26.2	4	
Hg	201	1	No Gas	0.016	9.0	59	2.0	0.04	
Be	9	1	No Gas	0.004	20.4	41	7.4	1	
Pb	208	1	No Gas	0.041	13.1	1530	12.9	4	
Se	82	1	No Gas	0.764	61.9	93	131.1	25	
Mo	98	1	No Gas	0.593	35.9	7746	32.7	10000	
Ba	137	1	No Gas	0.049	17.8	280	16.4	25	
Tl	205	1	No Gas	0.019	12.4	444	15.2	1	
U	238	1	No Gas	0.065	31.2	1800	33.1	25	
Na	23	2	he	9.576	6.3	120260	1.4	2500000	
Mg	24	2	he	0.451	26.4	922	21.9	2500000	
K	39	2	he	2.689	29.8	228273	0.2	5000000	
Se	82	3	HeHe	-0.303	-107.5	61	10.9	25	
Fe	57	3	HeHe	6.173	16.2	704	10.3	2500000	
Cd	114	1	No Gas	0.021	6.9	223	6.8	1	
Ca	44	1	No Gas	-5.598	-36.1	130682	0.6	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6472625	1.72	5896472	109.77	70	120	
Sc	45	2	he	1405184	0.89	1271268	110.53	70	120	
Ge	72	1	No Gas	706351	2.17	682805	103.45	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3683033	1.62	3697856	99.60	70	120	
Tb	159	1	No Gas	4233695	1.95	4404848	96.11	70	120	
Bi	209	1	No Gas	2182843	4.02	1997135	109.30	70	120	
Sc	45	3	HeHe	142516	1.71	132951	107.19	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	076LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T17:08:29-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.293	3.716	80112	3.09	2	114.6	70	130	
Cr	52	1	No Gas	2.166	2.730	78786	2.38	2	108.3	70	130	
Mn	55	1	No Gas	5.164	2.246	229457	1.44	5	103.3	70	130	
Co	59	1	No Gas	4.989	2.053	170700	2.04	5	99.8	70	130	
Ni	60	1	No Gas	2.414	4.117	39261	2.23	5	48.3	70	130	LLCCV Main CR1 Failed N/A
Cu	63	1	No Gas	5.018	1.175	93018	0.73	5	100.4	70	130	
Sr	88	1	No Gas	4.536	0.683	196107	1.21	5	90.7	70	130	
Ag	107	1	No Gas	2.066	3.470	37773	3.19	2	103.3	70	130	
Al	27	1	No Gas	82.124	0.713	1681484	0.15	80	102.7	70	130	
Sn	118	1	No Gas	2.263	4.748	24289	4.92	2	113.1	70	130	
Tl	47	1	No Gas	4.792	1.220	13881	0.70	5	95.8	70	130	
Zn	66	1	No Gas	5.174	4.345	25023	4.06	5	103.5	70	130	
As	75	3	HeHe	3.010	4.224	1135	3.70	3	100.3	70	130	
As	75	1	No Gas	3.224	6.105	41369	2.80	3	107.5	70	130	
Sb	121	1	No Gas	2.346	2.155	33750	2.32	2	117.3	70	130	
Hg	201	1	No Gas	0.180	14.564	274	12.47	0.2	90.0	70	130	
Be	9	1	No Gas	0.958	2.092	3444	2.55	1	95.8	70	130	
Pb	208	1	No Gas	1.996	0.306	57436	1.00	2	99.8	70	130	
Se	82	1	No Gas	5.982	12.536	1415	12.98	5	119.6	70	130	
Mo	98	1	No Gas	2.402	4.444	28538	4.67	2	120.1	70	130	
Ba	137	1	No Gas	5.183	2.182	24095	2.59	5	103.7	70	130	
Tl	205	1	No Gas	0.996	3.012	20948	2.73	1	99.6	70	130	
U	238	1	No Gas	4.813	0.708	127798	1.26	5	96.3	70	130	
Na	23	2	he	111.359	0.931	417237	0.22	100	111.4	70	130	
Mg	24	2	he	103.080	0.762	174176	0.49	100	103.1	70	130	
K	39	2	he	109.677	0.652	517891	0.77	100	109.7	70	130	
Se	82	3	HeHe	2.832	38.209	117	16.83	5	56.6	70	130	LLCCV Main CR1 Failed N/A
Fe	57	3	HeHe	55.494	4.521	4871	3.08	50	111.0	70	130	
Cd	114	1	No Gas	1.010	4.421	8489	4.01	1	101.0	70	130	
Ca	44	1	No Gas	93.238	1.963	217510	0.33	100	93.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6438781	0.57	5896472	109.20	70	120	
Sc	45	2	he	1419433	0.61	1271268	111.65	70	120	
Ge	72	1	No Gas	705462	0.38	682805	103.32	70	120	
In	115	1	No Gas	3665171	0.38	3697856	99.12	70	120	
Tb	159	1	No Gas	4173671	0.89	4404848	94.75	70	120	
Bi	209	1	No Gas	2136093	1.23	1997135	106.96	70	120	
Sc	45	3	HeHe	143418	1.28	132951	107.87	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	170_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:35:44-04:00
Sample Type	CCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	97.951	1.155	3486349	0.51	100	98.0	90	110	
Cr	52	1	No Gas	95.873	1.509	3082667	2.24	100	95.9	90	110	
Mn	55	1	No Gas	100.453	1.055	3954785	1.23	100	100.5	90	110	
Co	59	1	No Gas	97.154	0.416	3435058	1.27	100	97.2	90	110	
Ni	60	1	No Gas	92.702	0.421	761514	0.89	100	92.7	90	110	
Cu	63	1	No Gas	96.244	0.279	1834031	1.06	100	96.2	90	110	
Sr	88	1	No Gas	99.913	0.871	4467544	1.71	100	99.9	90	110	
Ag	107	1	No Gas	101.835	1.635	1896100	0.61	100	101.8	90	110	
Al	27	1	No Gas	100.524	0.429	2127654	0.72	100	100.5	90	110	
Sn	118	1	No Gas	97.991	1.256	1064085	1.05	100	98.0	90	110	
Tl	47	1	No Gas	87.895	0.605	257712	1.37	100	87.9	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	94.285	0.770	456597	1.61	100	94.3	90	110	
As	75	3	HeHe	93.285	1.385	36012	1.89	100	93.3	90	110	
As	75	1	No Gas	93.800	0.758	506191	1.48	100	93.8	90	110	
Sb	121	1	No Gas	101.211	0.553	1479481	1.26	100	101.2	90	110	
Hg	201	1	No Gas	1.917	4.800	2569	3.06	2	95.8	90	110	
Be	9	1	No Gas	93.570	0.591	345477	1.34	100	93.6	90	110	
Pb	208	1	No Gas	96.007	0.333	2747629	1.76	100	96.0	90	110	
Se	82	1	No Gas	92.626	1.274	24203	2.01	100	92.6	90	110	
Mo	98	1	No Gas	96.782	1.747	1137659	0.37	100	96.8	90	110	
Ba	137	1	No Gas	99.897	0.471	471266	1.37	100	99.9	90	110	
Tl	205	1	No Gas	97.010	2.227	2036830	1.46	100	97.0	90	110	
U	238	1	No Gas	104.398	0.978	2770723	0.86	100	104.4	90	110	
Na	23	2	he	1030.576	2.352	3240430	1.15	1000	103.1	90	110	
Mg	24	2	he	1022.357	3.342	1811231	3.31	1000	102.2	90	110	
K	39	2	he	1025.564	2.452	3123985	1.52	1000	102.6	90	110	
Se	82	3	HeHe	90.465	2.321	1721	1.39	100	90.5	90	110	
Fe	57	3	HeHe	1026.911	0.457	89542	1.02	1000	102.7	90	110	
Cd	114	1	No Gas	94.669	1.367	807010	1.13	100	94.7	90	110	
Ca	44	1	No Gas	962.506	0.669	1021422	1.43	1000	96.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6662739	0.86	5896472	113.00	70	120	
Sc	45	2	he	1489897	2.73	1271268	117.20	70	120	
Ge	72	1	No Gas	717825	2.32	682805	105.13	70	120	
In	115	1	No Gas	3737385	1.51	3697856	101.07	70	120	
Tb	159	1	No Gas	4243515	0.91	4404848	96.34	70	120	
Bi	209	1	No Gas	2135894	1.77	1997135	106.95	70	120	
Sc	45	3	HeHe	147802	1.03	132951	111.17	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	171_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:39:09-04:00
Sample Type	CCB
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.105	33.9	4941	25.0	9	
Cr	52	1	No Gas	0.102	20.2	15070	2.9	4	
Mn	55	1	No Gas	0.290	22.1	46265	4.0	25	
Co	59	1	No Gas	0.015	39.9	793	24.7	1	
Ni	60	1	No Gas	-2.413	-0.7	2040	5.2	25	
Cu	63	1	No Gas	0.186	1.2	4117	2.2	25	
Sr	88	1	No Gas	0.018	21.8	885	17.8	25	
Ag	107	1	No Gas	0.020	41.4	411	35.8	9	
Al	27	1	No Gas	0.872	1.5	27522	1.8	1000000	
Sn	118	1	No Gas	1.320	21.0	14752	22.6	25	
Ti	47	1	No Gas	0.414	25.7	1513	21.0	10000	
Zn	66	1	No Gas	0.504	18.7	3247	12.3	25	
As	75	3	HeHe	0.476	0.4	186	2.8	9	
As	75	1	No Gas	0.787	13.2	29679	2.8	9	
Sb	121	1	No Gas	0.308	23.6	4708	25.4	4	
Hg	201	1	No Gas	0.021	32.5	66	13.9	0.04	
Be	9	1	No Gas	0.017	35.5	89	26.1	1	
Pb	208	1	No Gas	0.081	7.2	2734	5.7	4	
Se	82	1	No Gas	0.848	107.1	115	203.8	25	
Mo	98	1	No Gas	0.913	28.9	11788	28.9	10000	
Ba	137	1	No Gas	0.079	27.4	427	25.8	25	
Tl	205	1	No Gas	0.038	18.7	856	18.9	1	
U	238	1	No Gas	0.190	24.0	5312	24.5	25	
Na	23	2	he	9.537	3.1	122702	2.0	2500000	
Mg	24	2	he	0.423	23.0	893	17.8	2500000	
K	39	2	he	6.863	16.9	244434	1.5	5000000	
Se	82	3	HeHe	-0.765	-18.7	54	2.4	25	
Fe	57	3	HeHe	14.803	0.6	1441	2.9	2500000	
Cd	114	1	No Gas	0.051	43.0	490	41.3	1	
Ca	44	1	No Gas	-17.972	-8.4	120500	0.6	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6517073	1.38	5896472	110.52	70	120	
Sc	45	2	he	1434900	1.33	1271268	112.87	70	120	
Ge	72	1	No Gas	728329	0.40	682805	106.67	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3785985	2.64	3697856	102.38	70	120	
Tb	159	1	No Gas	4317763	1.61	4404848	98.02	70	120	
Bi	209	1	No Gas	2233380	0.92	1997135	111.83	70	120	
Sc	45	3	HeHe	143721	2.40	132951	108.10	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	172LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:42:40-04:00
Sample Type	LLCCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.058	3.338	73217	3.15	2	102.9	70	130	
Cr	52	1	No Gas	2.147	1.622	79467	1.00	2	107.4	70	130	
Mn	55	1	No Gas	5.315	0.676	238951	0.25	5	106.3	70	130	
Co	59	1	No Gas	4.863	2.923	169098	2.73	5	97.3	70	130	
Ni	60	1	No Gas	2.329	1.489	39225	1.07	5	46.6	70	130	LLCCV Main CR1 Failed
Cu	63	1	No Gas	4.977	1.294	93750	1.13	5	99.5	70	130	
Sr	88	1	No Gas	4.586	2.243	201466	1.90	5	91.7	70	130	
Ag	107	1	No Gas	2.003	1.318	36366	1.78	2	100.2	70	130	
Al	27	1	No Gas	82.404	0.580	1714486	0.21	80	103.0	70	130	
Sn	118	1	No Gas	2.549	7.457	27145	8.00	2	127.4	70	130	
Tl	47	1	No Gas	4.726	3.164	13917	2.78	5	94.5	70	130	
Zn	66	1	No Gas	5.509	2.952	27017	2.55	5	110.2	70	130	
As	75	3	HeHe	3.125	1.340	1160	0.52	3	104.2	70	130	
As	75	1	No Gas	3.409	4.623	42965	1.88	3	113.6	70	130	
Sb	121	1	No Gas	2.202	4.642	31475	5.06	2	110.1	70	130	
Hg	201	1	No Gas	0.215	2.494	313	2.88	0.2	107.6	70	130	
Be	9	1	No Gas	0.955	1.235	3488	0.86	1	95.5	70	130	
Pb	208	1	No Gas	2.056	1.823	57677	0.39	2	102.8	70	130	
Se	82	1	No Gas	5.592	18.835	1338	20.30	5	111.8	70	130	
Mo	98	1	No Gas	2.415	2.116	28481	2.66	2	120.8	70	130	
Ba	137	1	No Gas	5.207	2.765	23945	2.80	5	104.1	70	130	
Tl	205	1	No Gas	0.989	4.596	20269	2.76	1	98.9	70	130	
U	238	1	No Gas	4.744	4.496	122804	2.88	5	94.9	70	130	
Na	23	2	he	114.936	2.401	428593	1.21	100	114.9	70	130	
Mg	24	2	he	101.831	0.568	172465	0.22	100	101.8	70	130	
K	39	2	he	113.647	2.373	529733	0.61	100	113.6	70	130	
Se	82	3	HeHe	4.891	16.873	151	9.85	5	97.8	70	130	
Fe	57	3	HeHe	57.291	6.256	4945	5.35	50	114.6	70	130	
Cd	114	1	No Gas	1.079	4.902	9006	4.33	1	107.9	70	130	
Ca	44	1	No Gas	84.364	7.153	213045	2.46	100	84.4	70	130	

PIA

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6542879	0.38	5896472	110.96	70	120	
Sc	45	2	he	1422717	0.78	1271268	111.91	70	120	
Ge	72	1	No Gas	700131	1.31	682805	102.54	70	120	
In	115	1	No Gas	3639207	0.61	3697856	98.41	70	120	
Tb	159	1	No Gas	4129130	0.98	4404848	93.74	70	120	
Bi	209	1	No Gas	2083587	2.08	1997135	104.33	70	120	
Sc	45	3	HeHe	141190	0.86	132951	106.20	70	120	

Sample Report

Sample Table

Sample Name	30 PPM LDR
Data File Name	174SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081312C.b
Acq Date Time	2012-08-13T22:56:07-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4511

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	0.085	0.085	130.10	4416	0.00	1000	
Cr	52	1	No Gas	0.345	0.345	3.99	23583	0.00	1000	
Mn	55	1	No Gas	-0.011	-0.011	-180.30	36151	0.00	1000	
Co	59	1	No Gas	0.007	0.007	31.29	544	0.00	1000	
Ni	60	1	No Gas	-2.495	-2.495	-0.50	1453	-0.17	1000	
Cu	63	1	No Gas	0.095	0.095	5.43	2522	0.00	1000	
Sr	88	1	No Gas	0.015	0.015	7.25	785	0.00	1000	
Ag	107	1	No Gas	0.016	0.016	33.56	326	0.00	1000	
Al	27	1	No Gas	28283.977	28283.977	0.58	605851843	0.00	100000	
Sn	118	1	No Gas	0.341	0.341	33.79	3897	0.01	100	
Ti	47	1	No Gas	0.122	0.122	20.40	704	0.02	2000	
Zn	66	1	No Gas	0.616	0.616	5.73	3929	0.02	1000	
As	75	3	HeHe	0.062	0.062	61.23	32	0.19	1000	
As	75	1	No Gas	0.909	0.909	7.94	31477	0.00	1000	
Sb	121	1	No Gas	0.063	0.063	29.36	1048	0.01	100	
Hg	201	1	No Gas	0.006	0.006	160.42	44	0.01	4	
Be	9	1	No Gas	0.001	0.001	276.27	31	0.00	1000	
Pb	208	1	No Gas	0.043	0.043	29.41	1559	0.00	1000	
Se	82	1	No Gas	0.678	0.678	44.52	75	0.91	1000	
Mo	98	1	No Gas	0.148	0.148	46.68	2603	0.01	2000	
Ba	137	1	No Gas	0.232	0.232	11.22	1137	0.02	1000	
Tl	205	1	No Gas	0.002	0.002	78.44	70	0.00	1000	
U	238	1	No Gas	0.014	0.014	27.61	426	0.00	1000	
Na	23	2	he	9.297	9.297	7.91	123653	0.01	100000	
Mg	24	2	he	0.448	0.448	16.61	948	0.05	100000	
K	39	2	he	2.656	2.656	37.26	236210	0.00	100000	
Se	82	3	HeHe	-0.050	-0.050	-980.66	69	-0.07	1000	
Fe	57	3	HeHe	43.578	43.578	3.90	3997	1.09	100000	
Cd	114	1	No Gas	0.015	0.015	45.70	173	0.01	1000	
Ca	44	1	No Gas	-38.180	-38.180	-6.41	106426	-0.04	100000	

94%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6773953	1.32	5896472	114.88	70	120	
Sc	45	2	he	1454676	1.33	1271268	114.43	70	120	
Ge	72	1	No Gas	707192	1.08	682805	103.57	70	120	

In	115	1	No Gas	3736186	1.13	3697856	101.04	70	120	
Tb	159	1	No Gas	4221245	1.56	4404848	95.83	70	120	
Bi	209	1	No Gas	2152041	0.92	1997135	107.76	70	120	
Sc	45	3	HeHe	148272	1.34	132951	111.52	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	176_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081312C.b
Acq Date Time	2012-08-13T23:11:53-04:00
Sample Type	CCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	98.980	2.302	3555900	1.02	100	99.0	90	110	
Cr	52	1	No Gas	96.886	0.774	3144266	0.60	100	96.9	90	110	
Mn	55	1	No Gas	100.547	1.620	3995914	1.79	100	100.5	90	110	
Co	59	1	No Gas	95.565	1.648	3410828	2.04	100	95.6	90	110	
Ni	60	1	No Gas	91.888	2.193	762049	1.02	100	91.9	90	110	
Cu	63	1	No Gas	96.307	2.189	1852437	1.86	100	96.3	90	110	
Sr	88	1	No Gas	97.963	2.006	4421129	1.37	100	98.0	90	110	
Ag	107	1	No Gas	100.244	1.943	1864812	2.65	100	100.2	90	110	
Al	27	1	No Gas	99.326	0.814	2122333	1.24	100	99.3	90	110	
Sn	118	1	No Gas	96.711	1.178	1049045	0.69	100	96.7	90	110	
Tl	47	1	No Gas	88.195	1.484	261010	0.81	100	88.2	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	93.657	1.646	457783	0.49	100	93.7	90	110	
As	75	3	HeHe	92.592	1.736	35134	0.75	100	92.6	90	110	
As	75	1	No Gas	92.152	0.982	502427	0.60	100	92.2	90	110	
Sb	121	1	No Gas	99.121	1.267	1447259	0.87	100	99.1	90	110	
Hg	201	1	No Gas	1.869	4.928	2512	4.60	2	93.4	90	110	
Be	9	1	No Gas	92.851	1.855	346023	1.14	100	92.9	90	110	
Pb	208	1	No Gas	93.178	0.223	2671481	0.65	100	93.2	90	110	
Se	82	1	No Gas	90.630	2.985	23897	1.72	100	90.6	90	110	
Mo	98	1	No Gas	96.013	1.161	1127482	0.49	100	96.0	90	110	
Ba	137	1	No Gas	100.003	1.969	464237	2.00	100	100.0	90	110	
Tl	205	1	No Gas	96.100	0.999	2021863	1.82	100	96.1	90	110	
U	238	1	No Gas	102.287	1.084	2719961	1.58	100	102.3	90	110	
Na	23	2	he	1055.023	2.205	3265449	2.25	1000	105.5	90	110	
Mg	24	2	he	1031.410	1.861	1799536	0.46	1000	103.1	90	110	
K	39	2	he	1029.143	0.957	3087070	0.77	1000	102.9	90	110	
Se	82	3	HeHe	90.773	2.133	1697	2.46	100	90.8	90	110	
Fe	57	3	HeHe	1016.582	1.989	87152	2.86	1000	101.7	90	110	
Cd	114	1	No Gas	92.902	0.379	791116	0.41	100	92.9	90	110	
Ca	44	1	No Gas	938.083	1.138	1008411	0.43	1000	93.8	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6725963	1.33	5896472	114.07	70	120	
Sc	45	2	he	1467190	1.66	1271268	115.41	70	120	
Ge	72	1	No Gas	717091	0.51	682805	105.02	70	120	
In	115	1	No Gas	3733156	0.78	3697856	100.95	70	120	
Tb	159	1	No Gas	4176703	2.43	4404848	94.82	70	120	
Bi	209	1	No Gas	2139762	0.87	1997135	107.14	70	120	
Sc	45	3	HeHe	145315	2.03	132951	109.30	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	177_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081312C.b
Acq Date Time	2012-08-13T23:15:17-04:00
Sample Type	CCB
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.125	50.6	5645	36.9	9	
Cr	52	1	No Gas	0.172	16.4	17369	3.6	4	
Mn	55	1	No Gas	-0.010	-325.3	35042	1.4	25	
Co	59	1	No Gas	0.016	2.3	837	1.5	1	
Ni	60	1	No Gas	-2.451	-0.7	1754	7.3	25	
Cu	63	1	No Gas	0.199	3.8	4392	0.6	25	
Sr	88	1	No Gas	0.021	21.2	1030	19.1	25	
Ag	107	1	No Gas	0.025	6.2	500	3.8	9	
Al	27	1	No Gas	0.932	4.7	28935	3.1	1000000	
Sn	118	1	No Gas	1.401	23.8	15441	24.6	25	
Ti	47	1	No Gas	0.386	28.2	1447	24.3	10000	
Zn	66	1	No Gas	0.579	4.7	3630	3.6	25	
As	75	3	HeHe	0.442	28.3	176	23.0	9	
As	75	1	No Gas	0.912	26.7	30513	5.9	9	
Sb	121	1	No Gas	0.302	29.9	4549	29.6	4	
Hg	201	1	No Gas	0.019	95.2	61	40.8	0.04	
Be	9	1	No Gas	0.018	21.0	91	13.4	1	
Pb	208	1	No Gas	0.049	21.4	1708	18.7	4	
Se	82	1	No Gas	1.553	26.4	298	36.7	25	
Mo	98	1	No Gas	0.926	29.4	11773	27.8	10000	
Ba	137	1	No Gas	0.101	0.5	523	1.1	25	
Tl	205	1	No Gas	0.046	23.3	982	21.5	1	
U	238	1	No Gas	0.224	29.5	5946	28.5	25	
Na	23	2	he	9.768	5.4	124179	1.8	2500000	
Mg	24	2	he	0.548	12.9	1115	12.0	2500000	
K	39	2	he	5.797	7.9	243129	1.3	5000000	
Se	82	3	HeHe	-1.125	-20.0	49	10.8	25	
Fe	57	3	HeHe	12.057	11.3	1237	10.2	2500000	
Cd	114	1	No Gas	0.069	17.2	640	16.9	1	
Ca	44	1	No Gas	-31.978	-10.4	108621	1.3	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6559872	2.79	5896472	111.25	70	120	
Sc	45	2	he	1444279	1.07	1271268	113.61	70	120	
Ge	72	1	No Gas	708080	2.44	682805	103.70	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3736818	2.10	3697856	101.05	70	120	
Tb	159	1	No Gas	4232484	0.68	4404848	96.09	70	120	
Bi	209	1	No Gas	2122934	1.34	1997135	106.30	70	120	
Sc	45	3	HeHe	147150	4.06	132951	110.68	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	178LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081312C.b
Acq Date Time	2012-08-13T23:18:46-04:00
Sample Type	LLCCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.107	1.389	75854	1.83	2	105.4	70	130	
Cr	52	1	No Gas	2.232	4.820	83121	4.58	2	111.6	70	130	
Mn	55	1	No Gas	5.175	1.564	236460	2.44	5	103.5	70	130	
Co	59	1	No Gas	4.889	0.495	172046	0.82	5	97.8	70	130	
Ni	60	1	No Gas	2.476	0.619	40865	1.33	5	49.5	70	130	LLCCV Main CR1 Failed
Cu	63	1	No Gas	4.932	0.618	94041	1.24	5	98.6	70	130	
Sr	88	1	No Gas	4.526	0.339	201253	1.53	5	90.5	70	130	
Ag	107	1	No Gas	2.020	1.031	37064	0.25	2	101.0	70	130	
Al	27	1	No Gas	82.789	0.920	1743261	0.99	80	103.5	70	130	
Sn	118	1	No Gas	2.541	5.892	27360	7.15	2	127.0	70	130	
Tl	47	1	No Gas	4.675	3.379	13940	4.24	5	93.5	70	130	
Zn	66	1	No Gas	5.408	1.373	26863	2.62	5	108.2	70	130	
As	75	3	HeHe	3.140	3.029	1224	3.85	3	104.7	70	130	
As	75	1	No Gas	3.879	7.104	45864	1.82	3	129.3	70	130	
Sb	121	1	No Gas	2.110	2.905	30499	4.16	2	105.5	70	130	
Hg	201	1	No Gas	0.186	22.296	274	19.36	0.2	93.2	70	130	
Be	9	1	No Gas	0.970	0.766	3585	1.03	1	97.0	70	130	
Pb	208	1	No Gas	1.970	3.501	55004	3.02	2	98.5	70	130	
Se	82	1	No Gas	5.787	5.600	1405	5.39	5	115.7	70	130	
Mo	98	1	No Gas	2.300	1.599	27459	2.76	2	115.0	70	130	
Ba	137	1	No Gas	5.147	3.107	23731	3.63	5	102.9	70	130	
Tl	205	1	No Gas	0.977	3.156	19928	2.12	1	97.7	70	130	
U	238	1	No Gas	4.762	1.645	122725	1.90	5	95.2	70	130	
Na	23	2	he	116.631	2.401	445813	0.29	100	116.6	70	130	
Mg	24	2	he	102.185	1.556	177968	0.92	100	102.2	70	130	
K	39	2	he	117.418	1.999	555210	0.45	100	117.4	70	130	
Se	82	3	HeHe	4.154	9.202	146	3.97	5	83.1	70	130	
Fe	57	3	HeHe	55.573	11.818	5049	11.99	50	111.1	70	130	
Cd	114	1	No Gas	1.009	0.558	8516	1.37	1	100.9	70	130	
Ca	44	1	No Gas	70.394	5.118	202913	2.11	100	70.4	70	130	

x Ni

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6622192	1.31	5896472	112.31	70	120	
Sc	45	2	he	1463181	1.59	1271268	115.10	70	120	
Ge	72	1	No Gas	714673	1.65	682805	104.67	70	120	
In	115	1	No Gas	3679167	1.27	3697856	99.49	70	120	
Tb	159	1	No Gas	4139629	1.18	4404848	93.98	70	120	
Bi	209	1	No Gas	2073101	1.30	1997135	103.80	70	120	
Sc	45	3	HeHe	148320	1.01	132951	111.56	70	120	

Digestion Logbook

Microwave 3051 Prep (Soil) (Version 1 - 6/1/2010)

Batch: 37419	Queue: MDIG	HBN: 475030	RULE: D3051/6020	ALSI SOP: 09-3051
File Name: 37419_120808-114924			METHOD: SW3051	Microwave ID: MARS

COMMENTS:	Comment Codes:	Reagents:		Pipettes:		Start	Finish
	1. Sample failed initial digestion due to a weight loss >5g	HNO3:	L02030 JT BAKER		Date:	08/08/2012	08/08/2012
	2. Sample reacts with reagent	HCl:	K25031 MALLINCKRODT		Time:	12:24:00	12:54:00
	3. Less sample used due to high metal conten	Boiling Stones:	D1069103		Tech:	KMK	KMK
	4. Less sample used to result in successful microwave digestion				Reviewed/Approved By:		N/A
	5. Sample does not digest by microwave, digest by method 3050				Date:		

Sample ID	Cont ID	Samp Type	Vessel Initial WT, grams	Vessel Final WT, grams	Difference grams	Spike Amt uL of Each	Spike Lot#	Sample Size, grams	Final Vol mL	Parent Sample ID	Comment Code
1020183		MB	106.46	104.90	1.56			0.50	50		
1020184		LCS	108.68	107.37	1.31	40/50/500/500	/MS0360/MS0359/	0.50	50		
9980394001	A	S	106.77	104.89	1.88			0.51	50		
9980394002	A	S	107.05	104.57	2.48			0.54	50		
9980394003	A	S	106.64	104.76	1.88			0.55	50		
9980394004	A	S	107.09	105.26	1.83			0.53	50		
9980394005	A	S	106.65	104.53	2.12			0.52	50		
9980394007	A	S	106.79	105.54	1.25			0.57	50		
9980394008	A	S	107.16	105.64	1.52			0.54	50		
9980394009	A	S	106.98	103.97	3.01			0.52	50		
9980394010	A	S	106.60	104.86	1.74			0.52	50		
9980394011	A	S	106.01	101.59	4.42			0.54	50		
9980394012	A	S	107.17	104.39	2.78			0.59	50		
9980394013	A	S	106.64	104.97	1.67			0.57	50		
9980395001	A	S	108.25	105.88	2.37			0.56	50		
9980395002	A	S	106.47	104.89	1.58			0.54	50		
9980395003	A	S	107.71	104.88	2.83			0.54	50		
1020185		MS	107.59	104.89	2.70	40/50/500/500	/MS0360/MS0359/	0.55	50	9980395003	
1020186		MSD	107.19	104.94	2.25	40/50/500/500	/MS0360/MS0359/	0.58	50	9980395003	
9980395004	A	S	108.31	105.96	2.35			0.55	50		
9980395005	A	S	106.42	104.76	1.66			0.54	50		
9980395007	A	S	107.85	105.02	2.83			0.58	50		
9980395008	A	S	106.30	104.17	2.13			0.54	50		
9980395009	A	S	107.61	105.42	2.19			0.52	50		

End

Analytical Logbook

Batch Log

#	Acquired Date and Time	Sample Type	Sample Name	File Name	Comment	Vial#	Dilution Result	Operator
1	8/13/2012 12:11	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A081312C.b\001CALB.d		1101	1	Matthew Olley
2	8/13/2012 12:14	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A081312C.b\002CALB.d		1101	1	Matthew Olley
3	8/13/2012 12:18	CalStd	Standard 1	C:\Agilent\ICPMH\1\DATA\A081312C.b\003CALS.d		2101	1	Matthew Olley
4	8/13/2012 12:22	CalStd	Standard 2	C:\Agilent\ICPMH\1\DATA\A081312C.b\004CALS.d		2102	1	Matthew Olley
5	8/13/2012 12:25	CalStd	Standard 3	C:\Agilent\ICPMH\1\DATA\A081312C.b\005CALS.d		2103	1	Matthew Olley
6	8/13/2012 12:29	CalStd	Standard 4	C:\Agilent\ICPMH\1\DATA\A081312C.b\006CALS.d		2104	1	Matthew Olley
7	8/13/2012 12:32	CalStd	Standard 5	C:\Agilent\ICPMH\1\DATA\A081312C.b\007CALS.d		2105	1	Matthew Olley
8	8/13/2012 12:35	ICV	ICV	C:\Agilent\ICPMH\1\DATA\A081312C.b\008_ICV.d		1307	1	Matthew Olley
9	8/13/2012 12:39	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A081312C.b\009_ICB.d		1101	1	Matthew Olley
10	8/13/2012 12:42	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A081312C.b\010_ICB.d		1101	1	Matthew Olley
11	8/13/2012 12:46	LLICV	LLICV	C:\Agilent\ICPMH\1\DATA\A081312C.b\011LICV.d		1305	1	Matthew Olley
12	8/13/2012 12:49	ICSA	ICSA	C:\Agilent\ICPMH\1\DATA\A081312C.b\012ICSA.d		2111	1	Matthew Olley
13	8/13/2012 12:49							Matthew Olley
14	8/13/2012 12:59	ICSB	ICSAB	C:\Agilent\ICPMH\1\DATA\A081312C.b\013ICSB.d		2112	1	Matthew Olley
15	8/13/2012 13:02	Sample	1020719	C:\Agilent\ICPMH\1\DATA\A081312C.b\014SMPL.d	37991 LAMDF5	3101	1	Matthew Olley
16	8/13/2012 13:06	Sample	1020720	C:\Agilent\ICPMH\1\DATA\A081312C.b\015SMPL.d	37991 LAMDF5	3102	1	Matthew Olley
17	8/13/2012 13:09	Sample	9981408002	C:\Agilent\ICPMH\1\DATA\A081312C.b\016SMPL.d	37991 LAMDF5	3103	1	Matthew Olley
18	8/13/2012 13:13	Sample	9981430001	C:\Agilent\ICPMH\1\DATA\A081312C.b\017SMPL.d	37991 LAMDF5	3104	1	Matthew Olley
19	8/13/2012 13:16	Sample	1020721	C:\Agilent\ICPMH\1\DATA\A081312C.b\018SMPL.d	37991 LAMDF5	3105	1	Matthew Olley
20	8/13/2012 13:20	Sample	1020722	C:\Agilent\ICPMH\1\DATA\A081312C.b\019SMPL.d	37991 LAMDF5	3106	1	Matthew Olley

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21	8/13/2012 13:23	Sample	9981430001PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\020SMPL.d	3107	1	Matthew Olley
22	8/13/2012 13:26	Sample	9981517002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\021SMPL.d	3108	1	Matthew Olley
23	8/13/2012 13:30	Sample	9981517003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\022SMPL.d	3109	1	Matthew Olley
24	8/13/2012 13:33	Sample	9981517003L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\023SMPL.d	3110	1	Matthew Olley
25	8/13/2012 13:37						Matthew Olley
26	8/13/2012 13:37	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\024_CCV.d	1307	1	Matthew Olley
27	8/13/2012 13:37						Matthew Olley
28	8/13/2012 13:49	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\025_CCB.d	1101	1	Matthew Olley
29	8/13/2012 13:53	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\026LCCV.d	1305	1	Matthew Olley
30	8/13/2012 13:56	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\027_CCV.d	1307	1	Matthew Olley
31	8/13/2012 14:00	Sample	1021781	C:\Agilent\ICPMH\1\DAT 37995 LAMDF5 A\A081312C.b\028SMPL.d	3111	1	Matthew Olley
32	8/13/2012 14:03						Matthew Olley
33	8/13/2012 14:03	Sample	1021782	C:\Agilent\ICPMH\1\DAT 37995 LAMDF5 A\A081312C.b\029SMPL.d	3112	1	Matthew Olley
34	8/13/2012 14:07						Matthew Olley
35	8/13/2012 14:07	Sample	1020183	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\030SMPL.d	3201	1	Matthew Olley
36	8/13/2012 14:10						Matthew Olley
37	8/13/2012 14:10	Sample	1020184	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\031SMPL.d	3202	1	Matthew Olley
38	8/13/2012 14:10						Matthew Olley
39	8/13/2012 14:14						Matthew Olley
40	8/13/2012 14:30	Sample	1020187	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\032SMPL.d	3203	1	Matthew Olley
41	8/13/2012 14:34						Matthew Olley
42	8/13/2012 14:34	Sample	1020188	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\033SMPL.d	3204	1	Matthew Olley
43	8/13/2012 14:37						Matthew Olley
44	8/13/2012 14:37	Sample	1020191	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\034SMPL.d	3205	1	Matthew Olley

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45	8/13/2012 14:41						Matthew Olley
46	8/13/2012 14:41	Sample	1020192	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\035SMPL.d	3206	1	Matthew Olley
47	8/13/2012 14:44						Matthew Olley
48	8/13/2012 14:44	Sample	1020195	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\036SMPL.d	3207	1	Matthew Olley
49	8/13/2012 14:48						Matthew Olley
50	8/13/2012 14:48	Sample	1020196	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\037SMPL.d	3208	1	Matthew Olley
51	8/13/2012 14:51						Matthew Olley
52	8/13/2012 14:51	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\038_CCV.d	1307	1	Matthew Olley
53	8/13/2012 14:54	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\039_CCB.d	1101	1	Matthew Olley
54	8/13/2012 14:58	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\040LCCV.d	1305	1	Matthew Olley
55	8/13/2012 15:01	Sample	9980394001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\041SMPL.d	3209	1	Matthew Olley
56	8/13/2012 15:05						Matthew Olley
57	8/13/2012 15:05	Sample	9980394002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\042SMPL.d	3210	1	Matthew Olley
58	8/13/2012 15:08						Matthew Olley
59	8/13/2012 15:08	Sample	9980394003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\043SMPL.d	3211	1	Matthew Olley
60	8/13/2012 15:12						Matthew Olley
61	8/13/2012 15:12	Sample	9980394004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\044SMPL.d	3212	1	Matthew Olley
62	8/13/2012 15:15						Matthew Olley
63	8/13/2012 15:15	Sample	9980394005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\045SMPL.d	3301	1	Matthew Olley
64	8/13/2012 15:19						Matthew Olley
65	8/13/2012 15:19	Sample	9980394007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\046SMPL.d	3302	1	Matthew Olley
66	8/13/2012 15:22						Matthew Olley
67	8/13/2012 15:22	Sample	9980394008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\047SMPL.d	3303	1	Matthew Olley
68	8/13/2012 15:26						Matthew Olley

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69	8/13/2012 15:26	Sample	9980394009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\048SMPL.d	3304	1	Matthew Olley
70	8/13/2012 15:29						Matthew Olley
71	8/13/2012 15:29	Sample	9980394010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\049SMPL.d	3305	1	Matthew Olley
72	8/13/2012 15:33						Matthew Olley
73	8/13/2012 15:33	Sample	9980394011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\050SMPL.d	3306	1	Matthew Olley
74	8/13/2012 15:36						Matthew Olley
75	8/13/2012 15:36	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\051_CCV.d	1307	1	Matthew Olley
76	8/13/2012 15:40	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\052_CCB.d	1101	1	Matthew Olley
77	8/13/2012 15:43	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\053LCCV.d	1305	1	Matthew Olley
78	8/13/2012 15:43						Matthew Olley
79	8/13/2012 15:49	Sample	1020719	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\054SMPL.d	3101	1	Matthew Olley
80	8/13/2012 15:52						Matthew Olley
81	8/13/2012 15:52	Sample	1020720	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\055SMPL.d	3102	1	Matthew Olley
82	8/13/2012 15:56						Matthew Olley
83	8/13/2012 15:56	Sample	9981430001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\056SMPL.d	3104	1	Matthew Olley
84	8/13/2012 15:59						Matthew Olley
85	8/13/2012 15:59	Sample	1020721	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\057SMPL.d	3105	1	Matthew Olley
86	8/13/2012 16:02						Matthew Olley
87	8/13/2012 16:02	Sample	1020722	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\058SMPL.d	3106	1	Matthew Olley
88	8/13/2012 16:06						Matthew Olley
89	8/13/2012 16:06	Sample	9981430001PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\059SMPL.d	3107	1	Matthew Olley
90	8/13/2012 16:09						Matthew Olley
91	8/13/2012 16:09	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\060_CCV.d	1307	1	Matthew Olley
92	8/13/2012 16:13	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\061_CCB.d	1101	1	Matthew Olley

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93	8/13/2012 16:16	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\062LCCV.d	1305	1	Matthew Olley
94	8/13/2012 16:20	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\063_CCV.d	1307	1	Matthew Olley
95	8/13/2012 16:23	Sample	9980394012	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\064SMPL.d	3307	1	Matthew Olley
96	8/13/2012 16:26						Matthew Olley
97	8/13/2012 16:26	Sample	9980394013	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\065SMPL.d	3308	1	Matthew Olley
98	8/13/2012 16:30						Matthew Olley
99	8/13/2012 16:30	Sample	9980394013L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\066SMPL.d	3309	1	Matthew Olley
100	8/13/2012 16:33						Matthew Olley
101	8/13/2012 16:33	Sample	9980395001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\067SMPL.d	3310	1	Matthew Olley
102	8/13/2012 16:37						Matthew Olley
103	8/13/2012 16:37	Sample	9980395002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\068SMPL.d	3311	1	Matthew Olley
104	8/13/2012 16:40						Matthew Olley
105	8/13/2012 16:40	Sample	9980395003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\069SMPL.d	3312	1	Matthew Olley
106	8/13/2012 16:44						Matthew Olley
107	8/13/2012 16:44	Sample	1020185	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\070SMPL.d	3401	1	Matthew Olley
108	8/13/2012 16:47						Matthew Olley
109	8/13/2012 16:47	Sample	1020186	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\071SMPL.d	3402	1	Matthew Olley
110	8/13/2012 16:51						Matthew Olley
111	8/13/2012 16:51	Sample	9980395003PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\072SMPL.d	3403	1	Matthew Olley
112	8/13/2012 16:54						Matthew Olley
113	8/13/2012 16:54	Sample	9980395004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\073SMPL.d	3404	1	Matthew Olley
114	8/13/2012 16:58						Matthew Olley
115	8/13/2012 16:58	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\074_CCV.d	1307	1	Matthew Olley
116	8/13/2012 16:58						Matthew Olley

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117	8/13/2012 17:03	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A081312C.b\075_CCB.d	1101	1	Matthew Olley
118	8/13/2012 17:07	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DATA\A081312C.b\076LCCV.d	1305	1	Matthew Olley
119	8/13/2012 17:10	Sample	9980395005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\077SMPL.d	3405	1	Matthew Olley
120	8/13/2012 17:14						Matthew Olley
121	8/13/2012 17:14	Sample	9980395007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\078SMPL.d	3406	1	Matthew Olley
122	8/13/2012 17:17						Matthew Olley
123	8/13/2012 17:17	Sample	9980395008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\079SMPL.d	3407	1	Matthew Olley
124	8/13/2012 17:21						Matthew Olley
125	8/13/2012 17:21	Sample	9980395009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\080SMPL.d	3408	1	Matthew Olley
126	8/13/2012 17:24						Matthew Olley
127	8/13/2012 17:24	Sample	9980395009L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\081SMPL.d	3409	1	Matthew Olley
128	8/13/2012 17:28						Matthew Olley
129	8/13/2012 17:28	Sample	9980395010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\082SMPL.d	3410	1	Matthew Olley
130	8/13/2012 17:31						Matthew Olley
131	8/13/2012 17:31	Sample	9980395011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\083SMPL.d	3411	1	Matthew Olley
132	8/13/2012 17:35						Matthew Olley
133	8/13/2012 17:35	Sample	9980395012	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\084SMPL.d	3412	1	Matthew Olley
134	8/13/2012 17:38						Matthew Olley
135	8/13/2012 17:38	Sample	9980395013	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\085SMPL.d	3501	1	Matthew Olley
136	8/13/2012 17:42						Matthew Olley
137	8/13/2012 17:42	Sample	9980395014	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\086SMPL.d	3502	1	Matthew Olley
138	8/13/2012 17:45						Matthew Olley
139	8/13/2012 17:45	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A081312C.b\087_CCV.d	1307	1	Matthew Olley
140	8/13/2012 17:49	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A081312C.b\088_CCB.d	1101	1	Matthew Olley

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141	8/13/2012 17:52	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\089LCCV.d	1305	1	Matthew Olley
142	8/13/2012 17:56	Sample	9980395014L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\090SMPL.d	3503	1	Matthew Olley
143	8/13/2012 17:59						Matthew Olley
144	8/13/2012 17:59	Sample	9980614001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\091SMPL.d	3504	1	Matthew Olley
145	8/13/2012 18:02						Matthew Olley
146	8/13/2012 18:02	Sample	9980614002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\092SMPL.d	3505	1	Matthew Olley
147	8/13/2012 18:06						Matthew Olley
148	8/13/2012 18:06	Sample	9980614003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\093SMPL.d	3506	1	Matthew Olley
149	8/13/2012 18:09						Matthew Olley
150	8/13/2012 18:09	Sample	9980614004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\094SMPL.d	3507	1	Matthew Olley
151	8/13/2012 18:13						Matthew Olley
152	8/13/2012 18:13	Sample	9980614005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\095SMPL.d	3508	1	Matthew Olley
153	8/13/2012 18:16						Matthew Olley
154	8/13/2012 18:16	Sample	9980614006	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\096SMPL.d	3509	1	Matthew Olley
155	8/13/2012 18:20						Matthew Olley
156	8/13/2012 18:20	Sample	9980614007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\097SMPL.d	3510	1	Matthew Olley
157	8/13/2012 18:23						Matthew Olley
158	8/13/2012 18:23	Sample	9980614008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\098SMPL.d	3511	1	Matthew Olley
159	8/13/2012 18:27						Matthew Olley
160	8/13/2012 18:27	Sample	9980614009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\099SMPL.d	3512	1	Matthew Olley
161	8/13/2012 18:30						Matthew Olley
162	8/13/2012 18:30	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\100_CCV.d	1307	1	Matthew Olley
163	8/13/2012 18:34	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\101_CCB.d	1101	1	Matthew Olley
164	8/13/2012 18:37	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\102LCCV.d	1305	1	Matthew Olley

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165	8/13/2012 18:41	Sample	9980614010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\103SMPL.d	4101	1	Matthew Olley
166	8/13/2012 18:44						Matthew Olley
167	8/13/2012 18:44	Sample	9980614011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\104SMPL.d	4102	1	Matthew Olley
168	8/13/2012 18:48						Matthew Olley
169	8/13/2012 18:48	Sample	9980614012	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\105SMPL.d	4103	1	Matthew Olley
170	8/13/2012 18:51						Matthew Olley
171	8/13/2012 18:51	Sample	9980614013	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\106SMPL.d	4104	1	Matthew Olley
172	8/13/2012 18:55						Matthew Olley
173	8/13/2012 18:55	Sample	1020189	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\107SMPL.d	4105	1	Matthew Olley
174	8/13/2012 18:58						Matthew Olley
175	8/13/2012 18:58	Sample	1020190	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\108SMPL.d	4106	1	Matthew Olley
176	8/13/2012 19:02						Matthew Olley
177	8/13/2012 19:02	Sample	9980614013PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\109SMPL.d	4107	1	Matthew Olley
178	8/13/2012 19:05						Matthew Olley
179	8/13/2012 19:05	Sample	9980614014	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\110SMPL.d	4108	1	Matthew Olley
180	8/13/2012 19:09						Matthew Olley
181	8/13/2012 19:09	Sample	9980614015	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\111SMPL.d	4109	1	Matthew Olley
182	8/13/2012 19:12						Matthew Olley
183	8/13/2012 19:12	Sample	9980614015L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\112SMPL.d	4110	1	Matthew Olley
184	8/13/2012 19:16						Matthew Olley
185	8/13/2012 19:16	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\113_CCV.d	1307	1	Matthew Olley
186	8/13/2012 19:19	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\114_CCB.d	1101	1	Matthew Olley
187	8/13/2012 19:22	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\115LCCV.d	1305	1	Matthew Olley
188	8/13/2012 19:26	Sample	9980614016	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\116SMPL.d	4111	1	Matthew Olley

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189	8/13/2012 19:29						Matthew Olley
190	8/13/2012 19:29	Sample	9980614017	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\117SMPL.d	4112	1	Matthew Olley
191	8/13/2012 19:33						Matthew Olley
192	8/13/2012 19:33	Sample	9980614018	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\118SMPL.d	4201	1	Matthew Olley
193	8/13/2012 19:36						Matthew Olley
194	8/13/2012 19:36	Sample	9980614019	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\119SMPL.d	4202	1	Matthew Olley
195	8/13/2012 19:40						Matthew Olley
196	8/13/2012 19:40	Sample	9980614020	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\120SMPL.d	4203	1	Matthew Olley
197	8/13/2012 19:43						Matthew Olley
198	8/13/2012 19:43	Sample	9980614021	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\121SMPL.d	4204	1	Matthew Olley
199	8/13/2012 19:47						Matthew Olley
200	8/13/2012 19:47	Sample	9980614022	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\122SMPL.d	4205	1	Matthew Olley
201	8/13/2012 19:50						Matthew Olley
202	8/13/2012 19:50	Sample	9980614022L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\123SMPL.d	4206	1	Matthew Olley
203	8/13/2012 19:54						Matthew Olley
204	8/13/2012 19:54	Sample	9980875001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\124SMPL.d	4207	1	Matthew Olley
205	8/13/2012 19:57						Matthew Olley
206	8/13/2012 19:57	Sample	1020193	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\125SMPL.d	4208	1	Matthew Olley
207	8/13/2012 20:01						Matthew Olley
208	8/13/2012 20:01	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\126_CCV.d	1307	1	Matthew Olley
209	8/13/2012 20:04	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\127_CCB.d	1101	1	Matthew Olley
210	8/13/2012 20:08	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\128LCCV.d	1305	1	Matthew Olley
211	8/13/2012 20:11	Sample	1020194	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\129SMPL.d	4209	1	Matthew Olley
212	8/13/2012 20:15						Matthew Olley

Batch Log

213	8/13/2012 20:15	Sample	9980875001PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\130SMPL.d	4210	1	Matthew Olley
214	8/13/2012 20:18						Matthew Olley
215	8/13/2012 20:18	Sample	9980875002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\131SMPL.d	4211	1	Matthew Olley
216	8/13/2012 20:22						Matthew Olley
217	8/13/2012 20:22	Sample	9980875003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\132SMPL.d	4212	1	Matthew Olley
218	8/13/2012 20:25						Matthew Olley
219	8/13/2012 20:25	Sample	9980875004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\133SMPL.d	4301	1	Matthew Olley
220	8/13/2012 20:29						Matthew Olley
221	8/13/2012 20:29	Sample	9980875005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\134SMPL.d	4302	1	Matthew Olley
222	8/13/2012 20:32						Matthew Olley
223	8/13/2012 20:32	Sample	9980875006	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\135SMPL.d	4303	1	Matthew Olley
224	8/13/2012 20:36						Matthew Olley
225	8/13/2012 20:36	Sample	9980875007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\136SMPL.d	4304	1	Matthew Olley
226	8/13/2012 20:39						Matthew Olley
227	8/13/2012 20:39	Sample	9980875008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\137SMPL.d	4305	1	Matthew Olley
228	8/13/2012 20:43						Matthew Olley
229	8/13/2012 20:43	Sample	9980875009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\138SMPL.d	4306	1	Matthew Olley
230	8/13/2012 20:46						Matthew Olley
231	8/13/2012 20:46	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\139_CCV.d	1307	1	Matthew Olley
232	8/13/2012 20:49	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\140_CCB.d	1101	1	Matthew Olley
233	8/13/2012 20:53	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\141LCCV.d	1305	1	Matthew Olley
234	8/13/2012 20:56	Sample	9980875010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\142SMPL.d	4307	1	Matthew Olley
235	8/13/2012 21:00						Matthew Olley
236	8/13/2012 21:00	Sample	9980875011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\143SMPL.d	4308	1	Matthew Olley

Batch Log

237	8/13/2012 21:03						Matthew Olley
238	8/13/2012 21:03	Sample	9980875012	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\144SMPL.d	4309	1	Matthew Olley
239	8/13/2012 21:07						Matthew Olley
240	8/13/2012 21:07	Sample	9980875013	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\145SMPL.d	4310	1	Matthew Olley
241	8/13/2012 21:10						Matthew Olley
242	8/13/2012 21:10	Sample	9980875013L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\146SMPL.d	4311	1	Matthew Olley
243	8/13/2012 21:14						Matthew Olley
244	8/13/2012 21:14	Sample	9980875014	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\147SMPL.d	4312	1	Matthew Olley
245	8/13/2012 21:17						Matthew Olley
246	8/13/2012 21:17	Sample	9980875014L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\148SMPL.d	4401	1	Matthew Olley
247	8/13/2012 21:21						Matthew Olley
248	8/13/2012 21:21	Sample	9981198001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\149SMPL.d	4402	1	Matthew Olley
249	8/13/2012 21:24						Matthew Olley
250	8/13/2012 21:24	Sample	9981198002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\150SMPL.d	4403	1	Matthew Olley
251	8/13/2012 21:28						Matthew Olley
252	8/13/2012 21:28	Sample	9981198003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\151SMPL.d	4404	1	Matthew Olley
253	8/13/2012 21:31						Matthew Olley
254	8/13/2012 21:31	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\152_CCV.d	1306	1	Matthew Olley
255	8/13/2012 21:35	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\153_CCB.d	1101	1	Matthew Olley
256	8/13/2012 21:38	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\154LCCV.d	1304	1	Matthew Olley
257	8/13/2012 21:42	Sample	1020197	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\155SMPL.d	4405	1	Matthew Olley
258	8/13/2012 21:45						Matthew Olley
259	8/13/2012 21:45	Sample	1020198	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\156SMPL.d	4406	1	Matthew Olley
260	8/13/2012 21:49						Matthew Olley

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261	8/13/2012 21:49	Sample	9981198003PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\157SMPL.d	4407	1	Matthew Olley
262	8/13/2012 21:52						Matthew Olley
263	8/13/2012 21:52	Sample	9981198004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\158SMPL.d	4408	1	Matthew Olley
264	8/13/2012 21:55						Matthew Olley
265	8/13/2012 21:55	Sample	9981198005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\159SMPL.d	4409	1	Matthew Olley
266	8/13/2012 21:59						Matthew Olley
267	8/13/2012 21:59	Sample	9981198006	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\160SMPL.d	4410	1	Matthew Olley
268	8/13/2012 22:02						Matthew Olley
269	8/13/2012 22:02	Sample	9981198007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\161SMPL.d	4411	1	Matthew Olley
270	8/13/2012 22:06						Matthew Olley
271	8/13/2012 22:06	Sample	9981198008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\162SMPL.d	4412	1	Matthew Olley
272	8/13/2012 22:09						Matthew Olley
273	8/13/2012 22:09	Sample	9981198009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\163SMPL.d	4501	1	Matthew Olley
274	8/13/2012 22:13						Matthew Olley
275	8/13/2012 22:13	Sample	9981198010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\164SMPL.d	4502	1	Matthew Olley
276	8/13/2012 22:16						Matthew Olley
277	8/13/2012 22:16	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\165_CCV.d	1306	1	Matthew Olley
278	8/13/2012 22:20	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\166_CCB.d	1101	1	Matthew Olley
279	8/13/2012 22:23	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\167LCCV.d	1304	1	Matthew Olley
280	8/13/2012 22:27	Sample	9981198011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\168SMPL.d	4503	1	Matthew Olley
281	8/13/2012 22:30						Matthew Olley
282	8/13/2012 22:30	Sample	9981198011L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\169SMPL.d	4504	1	Matthew Olley
283	8/13/2012 22:34						Matthew Olley
284	8/13/2012 22:34	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\170_CCV.d	1306	1	Matthew Olley

Batch Log

285	8/13/2012 22:37	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\171_CCB.d	37991 LAMDF5	1101	1	Matthew Olley
286	8/13/2012 22:41	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\172LCCV.d	37991 LAMDF5	1304	1	Matthew Olley
287	8/13/2012 22:44	Sample	50 PPM LDR	C:\Agilent\ICPMH\1\DAT A\A081312C.b\173SMPL.d		4512	1	Matthew Olley
288	8/13/2012 22:48							Matthew Olley
289	8/13/2012 22:54	CalBlk	blk			1101		Matthew Olley
290	8/13/2012 22:54	CalBlk	blk			1101		Matthew Olley
291	8/13/2012 22:54	CalStd	Standard 1			2101		Matthew Olley
292	8/13/2012 22:54	CalStd	Standard 2			2102		Matthew Olley
293	8/13/2012 22:54	CalStd	Standard 3			2103		Matthew Olley
294	8/13/2012 22:54	CalStd	Standard 4			2104		Matthew Olley
295	8/13/2012 22:54	CalStd	Standard 5			2105		Matthew Olley
296	8/13/2012 22:54	ICV	ICV			1307		Matthew Olley
297	8/13/2012 22:54	ICB	ICB			1101		Matthew Olley
298	8/13/2012 22:54	ICB	ICB			1101		Matthew Olley
299	8/13/2012 22:54	LLICV	LLICV			1305		Matthew Olley
300	8/13/2012 22:54	ICSA	ICSA			2111		Matthew Olley
301	8/13/2012 22:54	ICSB	ICSAB			2112		Matthew Olley
302	8/13/2012 22:54	Sample	30 PPM LDR	C:\Agilent\ICPMH\1\DAT A\A081312C.b\174SMPL.d		4511	1	Matthew Olley
303	8/13/2012 22:58	Sample	1020719	C:\Agilent\ICPMH\1\DAT A\A081312C.b\175SMPL.d	37991 LAMDF5	3101	1	Matthew Olley
304	8/13/2012 22:58							Matthew Olley
305	8/13/2012 22:58	Sample	1020720		37991 LAMDF5	3102		Matthew Olley
306	8/13/2012 22:58	Sample	9981408002		37991 LAMDF5	3103		Matthew Olley
307	8/13/2012 22:58	Sample	9981430001		37991 LAMDF5	3104		Matthew Olley
308	8/13/2012 22:58	Sample	1020721		37991 LAMDF5	3105		Matthew Olley
309	8/13/2012 22:58	Sample	1020722		37991 LAMDF5	3106		Matthew Olley
310	8/13/2012 22:58	Sample	9981430001PS		37991 LAMDF5	3107		Matthew Olley
311	8/13/2012 22:58	Sample	9981517002		37991 LAMDF5	3108		Matthew Olley
312	8/13/2012 22:58	Sample	9981517003		37991 LAMDF5	3109		Matthew Olley
313	8/13/2012 22:58	Sample	9981517003L		37991 LAMDF5	3110		Matthew Olley

Batch Log

314	8/13/2012 23:10	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\176_CCV.d	1306	1	Matthew Olley
315	8/13/2012 23:13	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\177_CCB.d	1101	1	Matthew Olley
316	8/13/2012 23:17	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\178LCCV.d	1304	1	Matthew Olley
317	8/13/2012 23:17						Matthew Olley
318	8/13/2012 23:26	Sample	9980875009	C:\Agilent\ICPMH\1\DAT 37996 LAMDF25 A\A081312C.b\179SMPL.d	2501	1	Matthew Olley
319	8/13/2012 23:29	Sample	1021781	C:\Agilent\ICPMH\1\DAT 37995 LAMDF5 A\A081312C.b\180SMPL.d	2502	1	Matthew Olley
320	8/13/2012 23:29						Matthew Olley
321	8/13/2012 23:38	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\181_CCV.d	1306	1	Matthew Olley
322	8/13/2012 23:41	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\182_CCB.d	1101	1	Matthew Olley
323	8/13/2012 23:45	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\183LCCV.d	1304	1	Matthew Olley
324	8/13/2012 23:45						Matthew Olley
325	8/14/2012 0:01	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\184_CCB.d	1101	1	Matthew Olley

Total Solids Summary Forms

Sample Description
FTSW-AA-SO-25 DUP

Form 7
Duplicate Summary

Analysis Method: 2540G
SDG No.: ERT-002

Matrix (soil/water): soil
Units: %
Instrument ID: N/A
GC Column: N/A
Sample % Moisture: N/A

Lab Sample ID: 9980394011
Lab File ID: N/A
Lab Sample Dup. ID: 1017716
Dup. Lab File ID: N/A
Dup. % Moisture: N/A

Analyte	Sample Concentration	Duplicate Concentration	Relative Percent Difference (RPD)	(1)	Acceptable Limit
Total Solids	97.9	98.1	0.2		5%

(1) The following qualifiers are used:
* : Values outside of acceptable limits

Comments:

Total Solids Raw Data

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Total Solids

Batch: 113844 Queue: WETC Analyst: KED

File Name: 113844_120801-112943 Date/Time: 08/01/12 13:45

Misc:		1st Time In	13:45	2nd Time In	8:20	3rd Time In	11:15	4th Time In	
		1st Temp In °C	104	2nd Temp In °C	104	3rd Temp In °C	104	4th Temp In °C	
		1st Time Out	7:50	2nd Time Out	10:45	3rd Time Out	12:45	4th Time Out	
		1st Temp Out °C	104	2nd Temp Out °C	104	3rd Temp Out °C	104	4th Temp Out °C	

Sample ID	Cont ID	Samp Type	TVS	Weight of dish and sample (g) or Volume of sample (ml)	Dish Wt. (g)	1st Dish + Sample Wt (g)	2nd Dish + Sample Wt (g)	3rd Dish + Sample Wt (g)	4th Dish + Sample Wt (g)	TS (%) or (mg/l)	Result1 TARE (g)	Result2 IWT (g)	Result3 FWT (g)
1017714	BALCHK			0.1000	0.1000	0.1000	0.1000	0.1000		#DIV/0!	0.1000	0.1000	0.1000
1017715	A	DUP	0.1	24.2955	1.1724	21.7529	21.7528			89.0036	1.1724	24.2955	21.7528
9980387001	A	S		22.5774	1.2101	20.2452	20.2430			89.0749	1.2101	22.5774	20.2430
9980394001	A	S		32.8200	1.1583	24.8864	24.8838			74.9344	1.1583	32.8200	24.8838
9980394002	A	S		25.1990	1.1808	19.5919	19.5902			76.6477	1.1808	25.1990	19.5902
9980394003	A	S		28.9347	1.1527	21.8966	21.8889			74.6390	1.1527	28.9347	21.8889
9980394004	A	S		29.1517	1.1547	23.0187	23.0184			78.0930	1.1547	29.1517	23.0184
9980394005	A	S		35.2470	1.1604	27.0224	27.0179			75.8583	1.1604	35.2470	27.0179
9980394007	A	S		32.1281	1.1652	26.2925	26.2912			81.1487	1.1652	32.1281	26.2912
9980394008	A	S		39.2620	1.1646	32.7238	32.7180			82.8230	1.1646	39.2620	32.7180
9980394009	A	S		15.5445	1.1509	15.3085	15.3049			98.3354	1.1509	15.5445	15.3049
9980394010	A	S		22.8068	1.1567	18.9215	18.9188			82.0417	1.1567	22.8068	18.9188
1017716	A	DUP	0.1	12.4223	1.1499	12.2053	12.2037			98.0608	1.1499	12.4223	12.2037
9980394011	A	S		15.0705	1.1686	14.7845	14.7824			97.9276	1.1686	15.0705	14.7824
9980394012	A	S		31.5757	1.1590	23.5951	23.5896			73.7444	1.1590	31.5757	23.5896
9980394013	A	S		32.2829	1.1727	24.2010	24.1936			73.9979	1.1727	32.2829	24.1936
9980395001	A	S		13.7429	1.1579	13.0783	13.0759			94.7000	1.1579	13.7429	13.0759
9980395002	A	S		17.6413	1.1866	16.6704	16.6383			93.9045	1.1866	17.6413	16.6383
9980395003	A	S		11.5310	1.1607	10.5555	10.5503			90.5432	1.1607	11.5310	10.5503
9980395004	A	S		13.2968	1.1668	12.1800	12.1745			90.7477	1.1668	13.2968	12.1745
9980395005	A	S		15.4743	1.1506	14.9857	14.9801			96.5498	1.1506	15.4743	14.9801
9980395007	A	S		10.2497	1.1543	9.0177	9.0126			86.3986	1.1543	10.2497	9.0126
9980395008	A	S		15.0403	1.1931	14.5398	14.5372			96.3668	1.1931	15.0403	14.5372
1017717	A	DUP	0.2	9.9129	1.1842	9.1485	9.1428			91.1774	1.1842	9.9129	9.1428
9980395009	A	S		9.3607	1.1718	8.5989	8.5928			90.6227	1.1718	9.3607	8.5928
9980395010	A	S		17.4877	1.1651	16.7723	16.7638			95.5650	1.1651	17.4877	16.7638
9980395011	A	S		12.8722	1.1882	11.0301	11.0436			84.3495	1.1882	12.8722	11.0436
9980395012	A	S		20.2450	1.1627	18.3782	18.3892			90.2748	1.1627	20.2450	18.3892
9980395013	A	S		12.7318	1.1568	11.3222	11.3345			87.9283	1.1568	12.7318	11.3345
9980395014	A	S		15.2069	1.1650	14.3820	14.3874			94.1639	1.1650	15.2069	14.3874
9980460001	A	S		20.1054	1.1775	17.3400	17.3118			85.2408	1.1775	20.1054	17.3118

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9980462001	A	S		19.8313	1.1790	18.2032	18.2121			91.3190	1.1790	19.8313	18.2121
9980464001	A	S		16.9907	1.1800	16.5466	16.5579			97.2626	1.1800	16.9907	16.5579
9980465001	A	S		19.1817	1.1864	17.3909	17.6546	17.6313		91.3844	1.1864	19.1817	17.6313
1017718	A	DUP	1.0	15.6669	1.1782	14.5259	14.6904	14.6713		93.1284	1.1782	15.6669	14.6713
9980466001	A	S		16.6366	1.1838	15.3997	15.4291			92.1859	1.1838	16.6366	15.4291
9980467001	A	S		18.5130	1.1529	17.3360	17.3474			93.2858	1.1529	18.5130	17.3474
9980469001	A	S		28.7668	1.1657	23.7054	23.7100			81.6790	1.1657	28.7668	23.7100
9980469002	A	S		29.2295	1.1840	23.0258	23.0371			77.9202	1.1840	29.2295	23.0371
9980470001	A	S		26.8472	1.1603	24.6655	24.2483	24.2339		89.8263	1.1603	26.8472	24.2339
9980471001	A	S		27.1911	1.1600	23.6425	23.6541			86.4124	1.1600	27.1911	23.6541
9980472001	A	S		18.8236	1.1651	17.2048	17.2088			90.8554	1.1651	18.8236	17.2088
9980474001	A	S		37.0353	1.1616	25.5043	25.5113			67.8762	1.1616	37.0353	25.5113
9980475001	A	S		17.6038	1.1528	16.3337	16.3375			92.3026	1.1528	17.6038	16.3375
9980475002	A	S		22.2502	1.1538	20.6732	20.6774			92.5447	1.1538	22.2502	20.6774
1017719	A	DUP	2.2	19.2714	1.1578	17.7913	17.2037	17.1865		88.4899	1.1578	19.2714	17.1865
9980475003	A	S		19.8981	1.1803	18.1072	18.1112			90.4535	1.1803	19.8981	18.1112
9980477001	A	S		10.9432	1.1566	1.4412	1.4419			2.9152	1.1566	10.9432	1.4419
9980477002	A	S		9.9135	1.1579	1.2230	1.2234			0.7481	1.1579	9.9135	1.2234
9980477003	A	S		7.7966	1.1586	1.6163	1.6165			6.8982	1.1586	7.7966	1.6165
9980478001	A	S		27.6026	1.1604	2.7834	2.7808			6.1281	1.1604	27.6026	2.7808
9980478002	A	S		20.0480	1.1510	3.3031	3.3096			11.4230	1.1510	20.0480	3.3096
9980478003	A	S		4.9883	1.1512	2.3331	2.3509			31.2658	1.1512	4.9883	2.3509
9980478004	A	S		6.3692	1.1661	3.1000	3.1183			37.5199	1.1661	6.3692	3.1183
9980479001	A	S		17.5229	1.1510	14.9748	14.9989			84.5833	1.1510	17.5229	14.9989
9980479002	A	S		22.8264	1.1597	19.6454	19.6719			85.4408	1.1597	22.8264	19.6719
1017720	A	DUP	1.4	22.8675	1.1634	19.1258	19.1489			82.8668	1.1634	22.8675	19.1489
9980479003	A	S		20.2343	1.1827	16.7358	16.7578			81.7522	1.1827	20.2343	16.7578
9980480001	A	S		49.5766	1.1771	41.3258	41.3465			82.9955	1.1771	49.5766	41.3465
9980480002	A	S		33.1008	1.1646	27.7069	27.7237			83.1630	1.1646	33.1008	27.7237
9980481001	A	S		5.4073	1.1630	5.3155	5.3247			98.0539	1.1630	5.4073	5.3247
9980482001	A	S		18.5107	1.1635	14.7094	14.7386			78.2553	1.1635	18.5107	14.7386
9980482002	A	S		13.7530	1.1704	11.9516	11.9788			85.8996	1.1704	13.7530	11.9788
9980482003	A	S		18.0726	1.1638	15.9480	15.9712			87.5722	1.1638	18.0726	15.9712
9980483001	A	S		26.5436	1.1545	22.2356	22.3072	22.2608		83.1313	1.1545	26.5436	22.2608
9980484001	A	S		25.0897	1.1723	20.9585	20.1062	20.0687		79.0069	1.1723	25.0897	20.0687
9980484002	A	S		28.6364	1.1539	20.6621	20.6839			71.0634	1.1539	28.6364	20.6839
1017721	A	DUP	2.3	18.0355	1.1741	15.3533	15.3784			84.2415	1.1741	18.0355	15.3784
9980484003	A	S		19.5080	1.1618	16.9551	16.9824			86.2337	1.1618	19.5080	16.9824
9980484004	A	S		36.2270	1.1609	30.7049	30.7304			84.3250	1.1609	36.2270	30.7304
9980484005	A	S		34.7730	1.1664	29.1282	29.2191	29.2018		83.4223	1.1664	34.7730	29.2018
9980496001	A	S		10.7887	1.1738	1.4129	1.4193			2.5533	1.1738	10.7887	1.4193
9980496002	A	S		11.1080	1.1731	1.4228	1.4416			2.7026	1.1731	11.1080	1.4416
9980498001	A	S		17.8626	1.1731	17.4371	17.4590			97.5817	1.1731	17.8626	17.4590
9980525001	A	S		21.5702	1.1749	2.3285	2.3540			5.7812	1.1749	21.5702	2.3540
9980527001	A	S		22.2261	1.1621	6.4879	6.4885			25.2867	1.1621	22.2261	6.4885
9980527002	A	S		21.5648	1.1672	6.2728	6.2790			25.0608	1.1672	21.5648	6.2790
9980527003	A	S		23.8395	1.1817	6.7395	6.7462			24.5589	1.1817	23.8395	6.7462
1017722	A	DUP	1.8	22.5790	1.1575	20.0595	20.0541			88.2132	1.1575	22.5790	20.0541
9980564001	A	S		19.4125	1.1648	17.5207	17.5569			89.8310	1.1648	19.4125	17.5569
9980564002	A	S		23.6761	1.1597	20.5648	20.5931			86.3078	1.1597	23.6761	20.5931
9980564003	A	S		21.6005	1.1605	19.0172	19.0503			87.5235	1.1605	21.6005	19.0503

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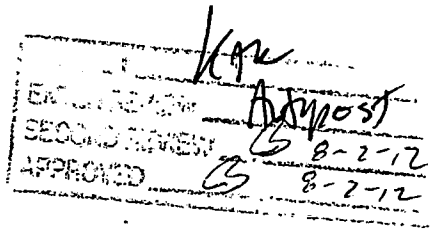
9980564004	A	S		28.9899	1.1603	24.7797	24.8124			84.9890	1.1603	28.9899	24.8124
9980564005	A	S		22.2660	1.1662	19.9191	19.9520			89.0331	1.1662	22.2660	19.9520
9980565001	A	S		40.1939	1.1537	36.8006	36.8263			91.3740	1.1537	40.1939	36.8263
9980565002	A	S		27.5810	1.1631	23.8804	23.9065			86.0909	1.1631	27.5810	23.9065
9980565003	A	S		36.0361	1.1470	30.7800	30.8041			85.0039	1.1470	36.0361	30.8041
9980565004	A	S		28.5674	1.1596	25.4029	25.4331			88.5642	1.1596	28.5674	25.4331
9980565005	A	S		44.2841	1.1582	38.2117	38.2391			85.9829	1.1582	44.2841	38.2391
1017723	A	DUP	0.3	30.0478	1.1587	26.5647	26.5969			88.0547	1.1587	30.0478	26.5969
9980565006	A	S		21.8841	1.1568	19.4387	19.4685			88.3458	1.1568	21.8841	19.4685
9980566001	A	S		25.4679	1.1565	24.3291	24.3121			95.2459	1.1565	25.4679	24.3121
9980566002	A	S		20.4426	1.1628	19.6057	19.5920			95.5881	1.1628	20.4426	19.5920
9980566003	A	S		20.4723	1.1552	19.6672	19.6552			95.7701	1.1552	20.4723	19.6552
9980567001	A	S		23.0881	1.1560	22.4573	22.4461			97.0728	1.1560	23.0881	22.4461
9980567002	A	S		21.5441	1.1504	20.8595	20.8472			96.5828	1.1504	21.5441	20.8472
9980567003	A	S		22.4413	1.1590	21.4643	21.4496			95.3403	1.1590	22.4413	21.4496
9980567004	A	S		23.0130	1.1659	22.1142	22.0977			95.8104	1.1659	23.0130	22.0977
9980568001	A	S		10.7865	1.1687	8.8231	8.8034			79.3809	1.1687	10.7865	8.8034
9980568002	A	S		16.0868	1.1653	14.4632	14.4435			88.9870	1.1653	16.0868	14.4435
1017724	A	DUP	0.1	13.4985	1.1610	12.8486	12.8330			94.6059	1.1610	13.4985	12.8330
9980568003	A	S		17.6691	1.1782	16.7870	16.7697			94.5461	1.1782	17.6691	16.7697
9980568004	A	S		15.7770	1.1565	14.8724	14.8561			93.7013	1.1565	15.7770	14.8561
9980569001	A	S		11.9885	1.1618	11.4015	11.3979			94.5450	1.1618	11.9885	11.3979
1017725	BALCHK			0.1000	0.1000	0.1000	0.1000	0.1001		#DIV/0!	0.1000	0.1000	0.1001

End



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PROJECT TITLE:
Fort Stewart

Earth Resources Technology, Inc.
6100 Frost Place
Laurel, MD 20707

Data Deliverable Group ERT-001
ALS#9980109

DoD QSM V.4.2
DATA PACKAGE

SAMPLES COLLECTED
July 26, 2012

Total Number of Pages 808

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    Digestion Logbook..... 611
Analytical Logbook..... 613
Total Metals in Solid by 6020A Summary Forms..... 623
Total Metals in Solid by 6020A Raw Data..... 666
    DIgestion Logbook..... 790
    Analytical Logbook..... 792
Total Solids Summary Forms..... 802
Total Solids Raw Data..... 805

Case Narrative

Earth Resources Technology, Inc.
Fort Stewart

ALS-Middletown
Case Narrative
ERT-001

Sample Management

This report contains the results of the analysis of one (1) water sample and eighteen (18) solid samples collected on July 26, 2012. Analytical results and quality control information are summarized in this data package.

Qualifier Symbol Definitions:

U = Qualifier indicates that the analyte was not detected above the LOD.
J = Qualifier indicates that the analyte value is between the DL and the LOQ.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds the calibration range.
P = Qualifier indicates that the RPD between the two analytical columns is greater than 40%.
NSC = Qualifier indicates that spike recoveries were not calculated based on the spiking concentration.

Result Symbol Definitions:

DL = The smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence.
LOD = The smallest analyte concentration that must be present in a sample in order to be detected at a high level of confidence.
LOQ = The lowest concentration that produces a quantitative result within specified limits of precision or bias.

Sample Receipt

Samples arrived at ALS via courier on July 27, 2012. Upon receipt, the samples were inspected and compared to the Chain of Custody. Sample temperature was documented on the enclosed Chain of Custody. Samples were received intact and properly preserved, unless noted on the enclosed Certificate of Analysis and/or Chain of Custody.

Explosives by Method 8330B

Sample Handling. One (1) water sample was extracted and analyzed by SW-846 Method 8330B for explosives. All sample extractions and analyses were performed within the holding times associated with the method.

Reporting. In Method 8330B, each sample extract may be analyzed on two dissimilar columns, an "Acclaim Explosives E1" column and an "Acclaim Explosives E2-Proprietary" column. In general, the final result reported on the Certificate of Analysis is the result from the primary column (E1), provided the target analyte is detected on both columns. For the sample in this deliverable group, there were no target analytes detected so confirmation on E2 was not warranted.

Initial Calibrations. The initial calibrations for all target analytes were in control on both columns.

Calibration Verification. Results for the second source and calibration verification standards were within control limits.

Surrogates. All surrogate recoveries were in within control limits.

Blanks. Target analytes were not detected in the method blank.

Laboratory Control Sample. Spike recoveries for all target analytes were within control limits.

Matrix Spikes. A matrix spike and matrix spike duplicate, identified as 1018216 and 1018217, were prepared from project sample FTSW-AA-SO-10[02]E (9980109002.) All results for precision and accuracy were within control limits.

Explosives by Method 8330B

Sample Handling. Eighteen (18) solid samples were air dried upon receipt. Once received, each sample was completely emptied and broken up onto a large tray lined with aluminum foil. The trays were then placed in a controlled environment to eliminate outside contamination. Samples were allowed to air dry to a constant weight at constant room temperature unexposed to light until all moisture was removed. Once dry, each sample was passed through a clean, dry 10-mesh (2 mm) sieve to remove any oversized fractions or debris.

Once the samples were dried, an aliquot for extraction was removed. The aliquot was laid out on the original tray it was dried on so that it was 1-2 cm thick. 10 grams of each sample, using 30 different increments (portions ~0.3grams) from randomly chosen locations were collected.

The dried samples were then extracted and analyzed by SW-846 Method 8330B for explosives. All sample extractions and analyses were performed within the holding times associated with the method.

Reporting. In Method 8330B, each sample extract may be analyzed on two dissimilar columns, an "Acclaim Explosives E1" column and an "Acclaim Explosives E2-Proprietary" column. In general, the final result reported on the Certificate of Analysis is the result from the primary column (E1), provided the target analyte is detected on both columns. For the samples in this deliverable group, there were no target analytes detected on Column E1, so confirmation on Column E2 was not warranted.

Initial Calibrations. The initial calibrations for all target analytes were in control on both columns.

Calibration Verification. Results for the second source and calibration verification standards were within control limits.

Surrogates. All surrogate recoveries were in within control limits.

Blanks. Target analytes were not detected in the method blank.

Laboratory Control Sample. Spike recoveries for all target analytes were within control limits.

Matrix Spikes. Matrix spikes and matrix spike duplicates, identified as 1019871, 1019872, 1019873 and 1019874, were prepared from project sample FTSW-AA-SO-03 (9980109011.) All results for precision and accuracy were within control limits.

Matrix spikes and matrix spike duplicates, identified as 1020317, 1020318, 1020319 and 1020319, were prepared from project sample FTSW-AA-SO-08[02] (9980109017.) All results for precision and accuracy were within control limits.

Totals Metals by SW-846 Method 6020A

Sample handling. One (1) water sample was analyzed for total metals on the Agilent 7700x using SW-846 Method 6020A. The sample was analyzed within the six-month holding time established for this method.

Calibration. All criteria associated with the calibration were within method control limits with the exception of the mid-level CCV analyzed at 14:21 on 8/7/12 for copper which was recovered above the method control limits. The associated LLCCV was within method control limits of 90-110%, and the sample did not contain copper. Data were reported.

Blanks. Metals were not detected in the reagent blanks. In the method blank, identified as 1017577, zinc was detected at 0.00222J mg/L.

Laboratory Control Samples. Recoveries were within method control limits.

Matrix Spike/Matrix Spike Duplicate. A matrix spike and matrix spike were performed on a sample not in this data deliverable. The MS and MSD recoveries and their RPDs were within method control limits.

Totals Metals by SW-846 Method 6020A

Sample handling. Eighteen (18) solid samples were digested and analyzed for total metals on the Agilent 7700x using SW-846 Method 6020A. The samples were analyzed within the six-month holding time established for this method.

Calibration. All criteria associated with the calibration were within method control limits.

Blanks. Metals were not detected in the reagent blanks or the method blank, identified as 1017046.

Laboratory Control Samples. Recoveries were within method control limits.

Matrix Spike/Matrix Spike Duplicate. Two sets of matrix spike and matrix spike duplicate were performed on two samples, 9980109011 (FTSW-AA-SO-03) and 9980109017 (FTSW-AA-SO-08 [02]) in this data deliverable. The MS and MSD recoveries and their RPDs were within method control limits for all target analytes except aluminum. The aluminum concentration in both samples was greater than four times the spiking amount; therefore, the spiked recoveries were not evaluated.

Total Solids by SM 2540G

Sample handling. Eighteen (13) solid samples were analyzed for total solids by Standard Method 2540G for dry weight reporting purposes. The samples were analyzed within the 14-day method recommended hold time for dry weight reporting.

Duplicate. A duplicate analysis, identified as 1016446, was performed on sample 9980109007 (FTSW-AA-SO-15 DUP). The relative percent difference between the results was within the QC limit of 5%.

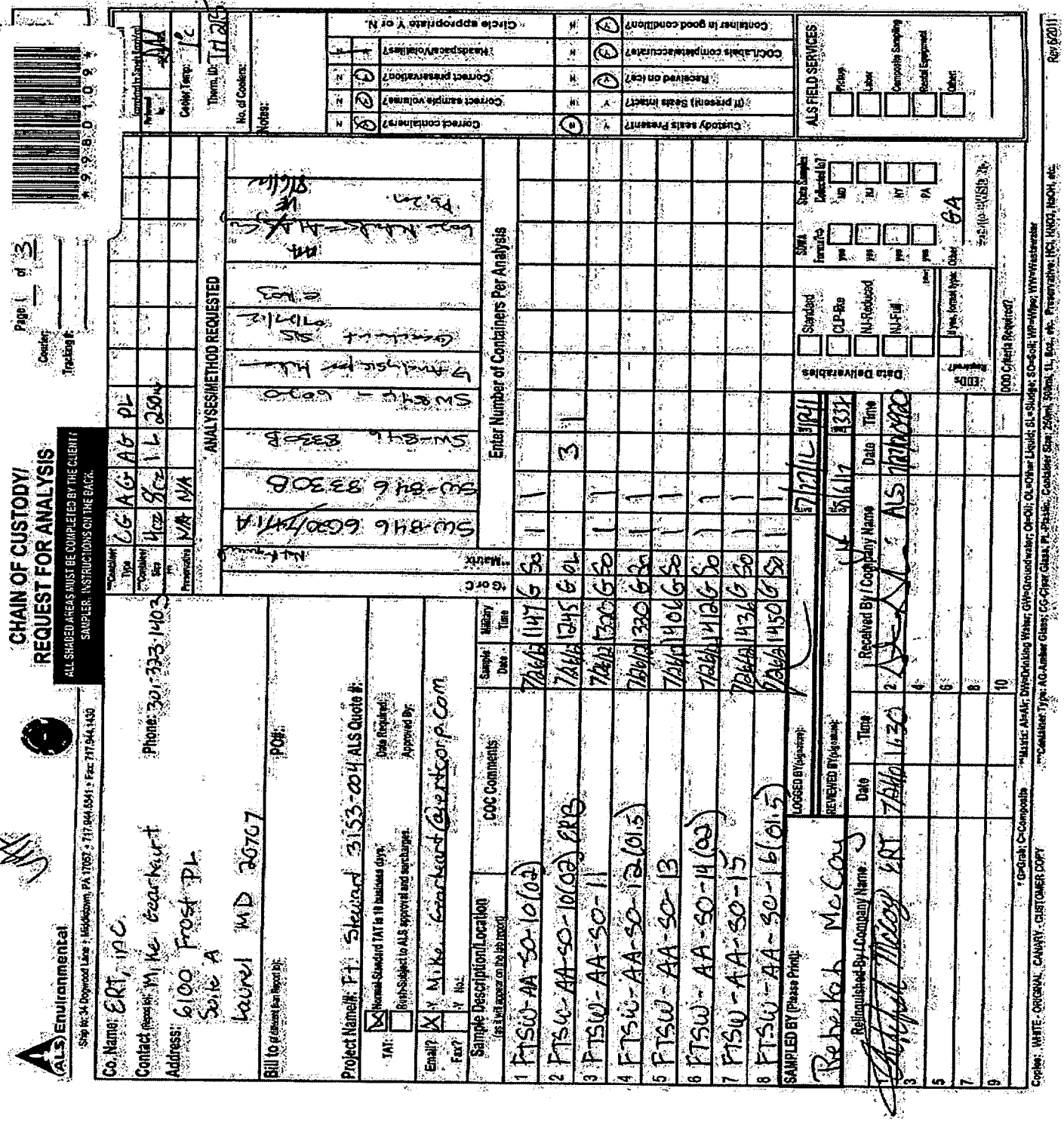
A duplicate analysis, identified as 1016447, was performed on sample 9980109077 (FTSW-AA-SO-08 [02] DUP). The relative percent difference between the results was within the QC limit of 5%.

Chain of Custody

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 2 of 3

Courier: Tracking #: 7956 6467 7666

9980109

Co. Name: ERT, Inc. Phone: 301-323-1463
Contact (Report to): Mike Gearhart
Address: 6100 Frost Pl. Suite A Laurel MD 20707
Project Name/#: Ft. Stewart 3153-004 ALS Quote #:
Bill to (if different than Report to): PO#:
TAT: Normal Standard TAT is 10 business days! Rush - Subject to ALS approval and surcharges. Date Required: Approved By:
Email: Mike.Gearhart@encorp.com
Fax? Y / N:

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	Matrix	Enter Number of Containers Per Analysis	ANALYSES/METHOD REQUESTED
9	FTSW-AA-SO-01		7/24/2012	0814	SO	1	SW-846 8330B
10	FTSW-AA-SO-03(0.5)		7/24/2012	0830	SO	1	SW-846 8330B
11	FTSW-AA-SO-02		7/24/2012	0858	SO	1	SW-846 8330B
12	FTSW-AA-SO-03 Dup		7/24/2012	0904	SO	1	SW-846 8330B
13	FTSW-AA-SO-03 MS		7/24/2012	0906	SO	1	SW-846 8330B
14	FTSW-AA-SO-03 MSD		7/24/2012	0908	SO	1	SW-846 8330B
15	FTSW-AA-SO-04(0.5)		7/24/2012	0917	SO	1	SW-846 8330B
16	FTSW-AA-SO-05		7/24/2012	0957	SO	1	SW-846 8330B

Receipt Information (completed by Lab Receipt): Cooler # Temp: 4°C Therm. ID: IR-215 No. of Coolers:

Notes:

Circle appropriate Y or N:
- Container in good condition? Y / N
- COC clearly completed/accurate? Y / N
- Received on ice? Y / N
- (if present) Seals Intact? Y / N
- Custody seals Present? Y / N
- Headspace/Volatiles? Y / N
- Correct preservative? Y / N
- Correct sample volume? Y / N
- Correct container? Y / N

ALS FIELD SERVICES: Pickup / Labor / Composite Sampling / Rental Equipment / Other

Data Deliverables: Standard / CLP-like / NJ-Reduced / NJ-Full / EDDs / DoD Criteria Required?

SDWA Format? Yes / No

State Samples Collected In: MD / NJ / NY / PA

LOGGED BY (Signature): 7/24/12 1941

SAMPLED BY (Please Print): Rebekah McCoy

	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Company Name	Date	Time
1	Rebekah McCoy	7/24/12	1630	2	ERT	7/24/12	1630
3				4			
5				6			
7				8			
9				10			

Codes: WHITE - ORIGINAL CANARY - CUSTOMER COPY *Grab; C=Composite **Matrix: A=Air; DW=Drinking Water; GW=Groundwater; O=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater ***Container Type: AG=Amber Glass; CG=Clear Glass; PL=Plastic; Container Size: 24oml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev. 6/2011

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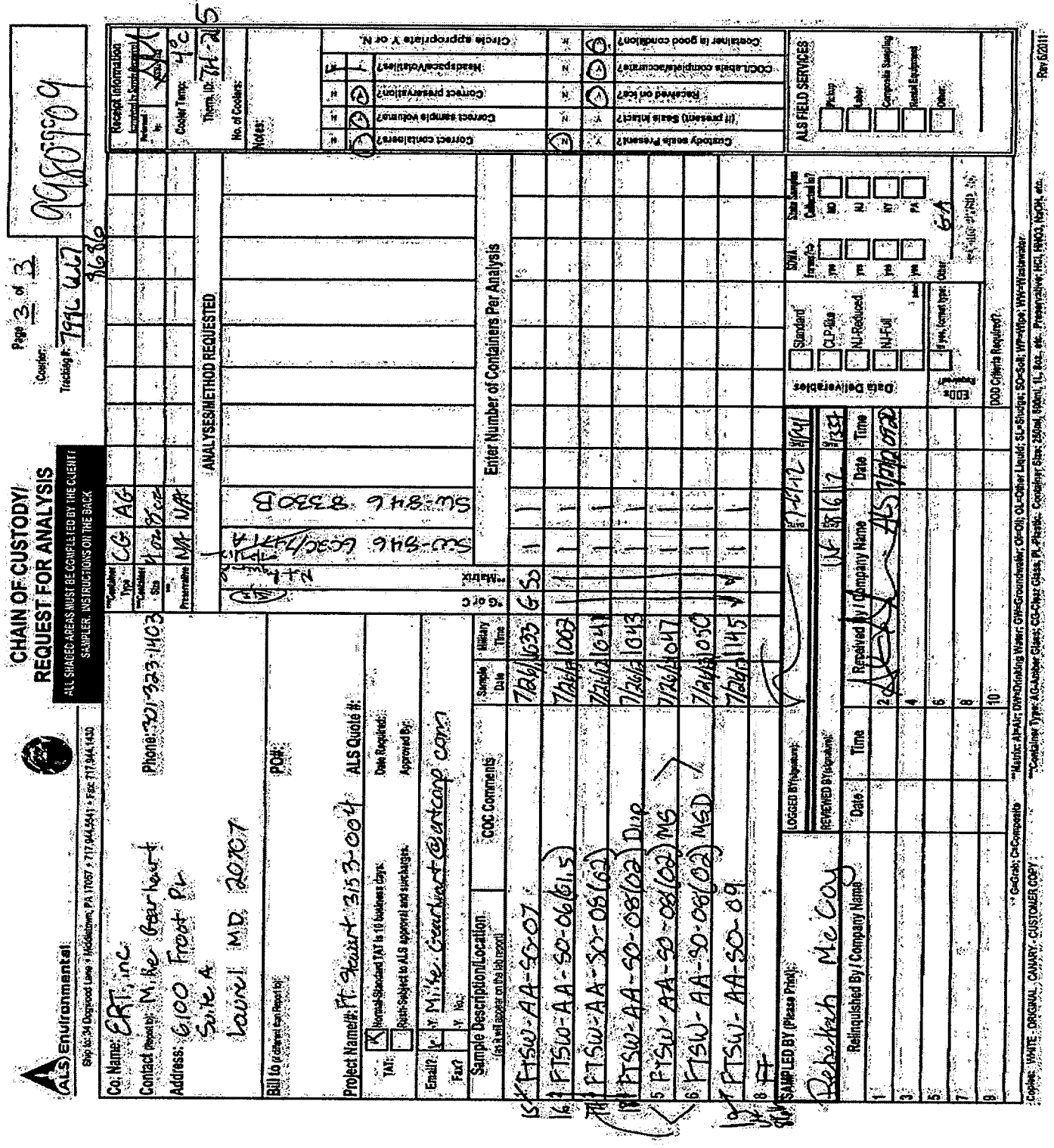
NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



ALS Environmental
34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

Internal Chain of Custody
Work Order: 9980109

9980109001-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109001-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 05:52	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109001-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 10:10	META-LAB	6020/3051 ANALYSIS	Olley, Mr. Matthew W.
07-31-12 05:55	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109001-A3	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:59	ORGPREP-LAB	sample extraction	Selgrath, Ms. Samantha A.
08-07-12 11:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980109001-A31	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:39	GC/MS-LAB	8330 ANALYSIS	Lopez, Mr. Alan J
08-07-12 12:01	ORGPREP-LAB	sample extraction	Lopez, Mr. Alan J

9980109001-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109001-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109002-A	P - PLASTIC		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:41	META-PREP	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109002-A1	P - PLASTIC		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 14:56	META-LAB		Miller, Lisa

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9980109002-A4	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 12:40	META-LAB	6020/3015 ANALYSIS	Olley, Mr. Matthew W.
08-01-12 06:03	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109002-B	A - AMBER GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 18:22	DEPLETED	DEPLETED	Kellner, Mr. Joseph E.
08-02-12 11:28	INORPREP-LAB	8330 Extraction (Explosives)	Kellner, Mr. Joseph E.
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109002-B1	OPOP - Output Container -		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 18:24	SVGC_LAB	8330 Analysis, Explosives	Kellner, Mr. Joseph E.
08-02-12 18:21	DEPLETED	DEPLETED	Kellner, Mr. Joseph E.
08-02-12 16:00	GC/MS-LAB	8330 ANALYSIS	Lopez, Mr. Alan J
08-02-12 11:30	INORPREP-LAB	8330 Extraction (Explosives)	Kellner, Mr. Joseph E.
08-02-12 11:27	INORPREP-LAB		Kellner, Mr. Joseph E.

9980109002-E	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109003-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109003-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 05:52	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109003-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 10:10	META-LAB	6020/3051 ANALYSIS	Olley, Mr. Matthew W.
07-31-12 05:55	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109003-A3	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:59	ORGPREP-LAB	sample extraction	Selgrath, Ms. Samantha A.
08-07-12 11:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

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9980109003-A31	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:39	GC/MS-LAB	8330 ANALYSIS	Lopez, Mr. Alan J
08-07-12 12:01	ORGPREP-LAB	sample extraction	Lopez, Mr. Alan J

9980109003-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109003-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109004-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109004-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 05:52	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109004-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 10:10	META-LAB	6020/3051 ANALYSIS	Olley, Mr. Matthew W.
07-31-12 05:55	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109004-A3	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:59	ORGPREP-LAB	sample extraction	Selgrath, Ms. Samantha A.
08-06-12 14:00	WETC-LAB	sample storage	Selgrath, Ms. Samantha A.
08-06-12 06:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980109004-A31	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:39	GC/MS-LAB	8330 ANALYSIS	Lopez, Mr. Alan J
08-07-12 12:01	ORGPREP-LAB	sample extraction	Lopez, Mr. Alan J

9980109004-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

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9980109004-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109005-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109005-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 05:52	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109005-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 10:10	META-LAB	6020/3051 ANALYSIS	Olley, Mr. Matthew W.
07-31-12 05:55	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109005-A3	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:59	ORGPREP-LAB	sample extraction	Selgrath, Ms. Samantha A.
08-07-12 11:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980109005-A31	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:39	GC/MS-LAB	8330 ANALYSIS	Lopez, Mr. Alan J
08-07-12 12:01	ORGPREP-LAB	sample extraction	Lopez, Mr. Alan J

9980109005-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109005-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109006-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

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9980109006-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 05:52	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109006-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 10:10	META-LAB	6020/3051 ANALYSIS	Olley, Mr. Matthew W.
07-31-12 05:55	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109006-A3	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:59	ORGPREP-LAB	sample extraction	Selgrath, Ms. Samantha A.
08-06-12 14:00	WETC-LAB	sample storage	Selgrath, Ms. Samantha A.
08-06-12 06:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980109006-A31	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:39	GC/MS-LAB	8330 ANALYSIS	Lopez, Mr. Alan J
08-07-12 12:01	ORGPREP-LAB	sample extraction	Lopez, Mr. Alan J

9980109006-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109006-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109007-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109007-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 05:52	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109007-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 10:10	META-LAB	6020/3051 ANALYSIS	Olley, Mr. Matthew W.
07-31-12 05:55	INORPREP-LAB		Kauffman, Mr. Kevin M

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9980109007-A3	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:59	ORGPREP-LAB	sample extraction	Selgrath, Ms. Samantha A.
08-06-12 14:00	WETC-LAB	sample storage	Selgrath, Ms. Samantha A.
08-06-12 06:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980109007-A31	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:39	GC/MS-LAB	8330 ANALYSIS	Lopez, Mr. Alan J
08-07-12 12:01	ORGPREP-LAB	sample extraction	Lopez, Mr. Alan J

9980109007-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109007-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109008-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109008-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 05:52	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109008-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 10:10	META-LAB	6020/3051 ANALYSIS	Olley, Mr. Matthew W.
07-31-12 05:55	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109008-A3	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:59	ORGPREP-LAB	sample extraction	Selgrath, Ms. Samantha A.
08-06-12 14:00	WETC-LAB	sample storage	Selgrath, Ms. Samantha A.
08-06-12 06:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980109008-A31	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**

Internal Chain of Custody

Work Order: 9980109

9980109008-A31 (cont)	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:39	GC/MS-LAB	8330 ANALYSIS	Lopez, Mr. Alan J
08-07-12 12:01	ORGPREP-LAB	sample extraction	Lopez, Mr. Alan J

9980109008-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109008-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109009-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109009-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 05:52	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109009-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 10:10	META-LAB	6020/3051 ANALYSIS	Olley, Mr. Matthew W.
07-31-12 05:55	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109009-A3	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:59	ORGPREP-LAB	sample extraction	Selgrath, Ms. Samantha A.
08-06-12 14:00	WETC-LAB	sample storage	Selgrath, Ms. Samantha A.
08-06-12 06:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980109009-A31	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:39	GC/MS-LAB	8330 ANALYSIS	Lopez, Mr. Alan J
08-07-12 12:01	ORGPREP-LAB	sample extraction	Lopez, Mr. Alan J

9980109009-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L

Internal Chain of Custody

Work Order: 9980109

9980109009-B (cont)	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 09:20	*Sample Received At Lab*		

9980109009-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109010-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109010-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 05:52	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109010-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 10:10	META-LAB	6020/3051 ANALYSIS	Olley, Mr. Matthew W.
07-31-12 05:55	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109010-A3	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:59	ORGPREP-LAB	sample extraction	Selgrath, Ms. Samantha A.
08-06-12 14:00	WETC-LAB	sample storage	Selgrath, Ms. Samantha A.
08-06-12 06:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980109010-A31	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:39	GC/MS-LAB	8330 ANALYSIS	Lopez, Mr. Alan J
08-07-12 12:01	ORGPREP-LAB	sample extraction	Lopez, Mr. Alan J

9980109010-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109010-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

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9980109011-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109011-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 05:52	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109011-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 10:10	META-LAB	6020/3051 ANALYSIS	Olley, Mr. Matthew W.
07-31-12 05:55	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109011-A3	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:59	ORGPREP-LAB	sample extraction	Selgrath, Ms. Samantha A.
08-06-12 14:00	WETC-LAB	sample storage	Selgrath, Ms. Samantha A.
08-06-12 06:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980109011-A31	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:39	GC/MS-LAB	8330 ANALYSIS	Lopez, Mr. Alan J
08-07-12 12:01	ORGPREP-LAB	sample extraction	Lopez, Mr. Alan J

9980109011-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109011-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109011-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109011-E	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**

Internal Chain of Custody

Work Order: 9980109

9980109011-E (cont)	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109011-F	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109011-G	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109012-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109012-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 05:52	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109012-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 10:10	META-LAB	6020/3051 ANALYSIS	Olley, Mr. Matthew W.
07-31-12 05:55	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109012-A3	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:59	ORGPREP-LAB	sample extraction	Selgrath, Ms. Samantha A.
08-06-12 14:00	WETC-LAB	sample storage	Selgrath, Ms. Samantha A.
08-06-12 06:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980109012-A31	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:39	GC/MS-LAB	8330 ANALYSIS	Lopez, Mr. Alan J
08-07-12 12:01	ORGPREP-LAB	sample extraction	Lopez, Mr. Alan J

9980109012-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L

Internal Chain of Custody

Work Order: 9980109

9980109012-B (cont)	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109012-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109013-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109013-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 05:52	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109013-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 10:10	META-LAB	6020/3051 ANALYSIS	Olley, Mr. Matthew W.
07-31-12 05:55	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109013-A3	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:59	ORGPREP-LAB	sample extraction	Selgrath, Ms. Samantha A.
08-06-12 14:00	WETC-LAB	sample storage	Selgrath, Ms. Samantha A.
08-06-12 06:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980109013-A31	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:39	GC/MS-LAB	8330 ANALYSIS	Lopez, Mr. Alan J
08-07-12 12:01	ORGPREP-LAB	sample extraction	Lopez, Mr. Alan J

9980109013-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109013-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

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Work Order: 9980109

9980109014-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109014-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 05:52	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109014-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 10:10	META-LAB	6020/3051 ANALYSIS	Olley, Mr. Matthew W.
07-31-12 05:55	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109014-A3	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:59	ORGPREP-LAB	sample extraction	Selgrath, Ms. Samantha A.
08-06-12 14:00	WETC-LAB	sample storage	Selgrath, Ms. Samantha A.
08-06-12 06:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980109014-A31	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:39	GC/MS-LAB	8330 ANALYSIS	Lopez, Mr. Alan J
08-07-12 12:01	ORGPREP-LAB	sample extraction	Lopez, Mr. Alan J

9980109014-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109014-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109015-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109015-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**

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Work Order: 9980109

9980109015-A1 (cont)	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 05:52	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109015-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 10:10	META-LAB	6020/3051 ANALYSIS	Olley, Mr. Matthew W.
07-31-12 05:55	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109015-A3	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:59	ORGPREP-LAB	sample extraction	Selgrath, Ms. Samantha A.
08-07-12 11:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980109015-A31	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:39	GC/MS-LAB	8330 ANALYSIS	Lopez, Mr. Alan J
08-07-12 12:01	ORGPREP-LAB	sample extraction	Lopez, Mr. Alan J

9980109015-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109015-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109016-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109016-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 05:52	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109016-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 10:10	META-LAB	6020/3051 ANALYSIS	Olley, Mr. Matthew W.
07-31-12 05:55	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109016-A3	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**

Internal Chain of Custody

Work Order: 9980109

9980109016-A3 (cont)	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:59	ORGPREP-LAB	sample extraction	Selgrath, Ms. Samantha A.
08-06-12 14:00	WETC-LAB	sample storage	Selgrath, Ms. Samantha A.
08-06-12 06:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980109016-A31	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:39	GC/MS-LAB	8330 ANALYSIS	Lopez, Mr. Alan J
08-07-12 12:01	ORGPREP-LAB	sample extraction	Lopez, Mr. Alan J

9980109016-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109016-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109017-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 05:52	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109017-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 10:10	META-LAB	6020/3051 ANALYSIS	Olley, Mr. Matthew W.
07-31-12 05:55	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109017-A3	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 08:37	GCMS_LAB	8330S	Selgrath, Ms. Samantha A.
08-07-12 11:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980109017-A31	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:00	GC/MS-LAB	ANALYSIS	Lopez, Mr. Alan J
08-08-12 08:39	GCMS_LAB	8330S	Selgrath, Ms. Samantha A.

9980109017-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

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9980109017-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109017-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109017-E	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109017-F	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109017-G	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109018-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109018-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 05:52	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109018-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 10:10	META-LAB	6020/3051 ANALYSIS	Olley, Mr. Matthew W.
07-31-12 05:55	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109018-A3	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:59	ORGPREP-LAB	sample extraction	Selgrath, Ms. Samantha A.
08-07-12 11:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.

Internal Chain of Custody

Work Order: 9980109

9980109018-A3 (cont)	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980109018-A31	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:39	GC/MS-LAB	8330 ANALYSIS	Lopez, Mr. Alan J
08-07-12 12:01	ORGPREP-LAB	sample extraction	Lopez, Mr. Alan J

9980109018-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109018-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109019-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-01-12 08:00	WETC-LAB	Sample drying	Lopez, Mr. Alan J
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109019-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-31-12 05:52	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109019-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 10:10	META-LAB	6020/3051 ANALYSIS	Olley, Mr. Matthew W.
07-31-12 05:55	INORPREP-LAB		Kauffman, Mr. Kevin M

9980109019-A3	BAG - Bag		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:59	ORGPREP-LAB	sample extraction	Selgrath, Ms. Samantha A.
08-06-12 14:00	WETC-LAB	sample storage	Selgrath, Ms. Samantha A.
08-06-12 06:00	WETC-LAB	sample particle size reduction, sieving	Selgrath, Ms. Samantha A.
08-01-12 08:02	WETC-LAB	Sample drying	Lopez, Mr. Alan J

9980109019-A31	E - EXTRACT		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 08:39	GC/MS-LAB	8330 ANALYSIS	Lopez, Mr. Alan J
08-07-12 12:01	ORGPREP-LAB	sample extraction	Lopez, Mr. Alan J

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Internal Chain of Custody

Work Order: 9980109

9980109019-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:49	NEW-WALKIN	Storage	Smith, Mr. Steven L
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

9980109019-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
07-27-12 18:32	RECEIVING	LOGIN	Smith, Mr. Steven L
07-27-12 09:20	*Sample Received At Lab*		

Certificate of Analysis

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

August 28, 2012

Mr. Mike Gearhart
Earth Resources Technology, Inc.
6100 Frost Place
Suite A
Laurel, MD 20707

Certificate of Analysis

Project Name:	**Ft. Stewart GA project**	Workorder:	**9980109**
Purchase Order:		Workorder ID:	**ERT001|Ft. Stewart 3153-004**

Dear Mr. Gearhart,

Enclosed are the analytical results for samples received by the laboratory on Friday, July 27, 2012.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Vicki Forney (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

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This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

SAMPLE SUMMARY

Workorder: 9980109 ERT001|Ft. Stewart 3153-004 Discard Date: 09/11/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9980109001	FTSW-AA-SO-10[02]	Solid	7/26/12 11:47	7/27/12 09:20	Customer
9980109002	FTSW-AA-SO-10[02] ERB	Water	7/26/12 12:45	7/27/12 09:20	Customer
9980109003	FTSW-AA-SO-11	Solid	7/26/12 13:20	7/27/12 09:20	Customer
9980109004	FTSW-AA-SO-12 [01.5]	Solid	7/26/12 13:30	7/27/12 09:20	Customer
9980109005	FTSW-AA-SO-13	Solid	7/26/12 14:06	7/27/12 09:20	Customer
9980109006	FTSW-AA-SO-14 [02]	Solid	7/26/12 14:12	7/27/12 09:20	Customer
9980109007	FTSW-AA-SO-15	Solid	7/26/12 14:36	7/27/12 09:20	Customer
9980109008	FTSW-AA-SO-16 [01.5]	Solid	7/26/12 14:50	7/27/12 09:20	Customer
9980109009	FTSW-AA-SO-01	Solid	7/26/12 08:14	7/27/12 09:20	Customer
9980109010	FTSW-AA-SO-02 [01.5]	Solid	7/26/12 08:20	7/27/12 09:20	Customer
9980109011	FTSW-AA-SO-03	Solid	7/26/12 09:02	7/27/12 09:20	Customer
9980109012	FTSW-AA-SO-03 DUP	Solid	7/26/12 09:04	7/27/12 09:20	Customer
9980109013	FTSW-AA-SO-04 [01.5]	Solid	7/26/12 09:17	7/27/12 09:20	Customer
9980109014	FTSW-AA-SO-05	Solid	7/26/12 09:57	7/27/12 09:20	Customer
9980109015	FTSW-AA-SO-07	Solid	7/26/12 10:33	7/27/12 09:20	Customer
9980109016	FTSW-AA-SO-06 [01.5]	Solid	7/26/12 10:02	7/27/12 09:20	Customer
9980109017	FTSW-AA-SO-08 [02]	Solid	7/26/12 10:41	7/27/12 09:20	Customer
9980109018	FTSW-AA-SO-08 [02] DUP	Solid	7/26/12 10:43	7/27/12 09:20	Customer
9980109019	FTSW-AA-SO-09	Solid	7/26/12 11:45	7/27/12 09:20	Customer

Workorder Comments:

This report was modified to report all surrogate results for Method 8330. SM 8/28/12

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

SAMPLE SUMMARY

Workorder: 9980109 ERT001|Ft. Stewart 3153-004 Discard Date: 09/11/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID: **9980109001** Date Collected: 7/26/2012 11:47 Matrix: Solid

Sample ID: **FTSW-AA-SO-10[02]** Date Received: 7/27/2012 09:20

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.099U	mg/kg		0.20	0.099	0.052	SW846 8330B	8/7/12	8/8/12 16:33	AJL	A31
4-Amino-2,6-dinitrotoluene	0.099U	mg/kg		0.20	0.099	0.053	SW846 8330B	8/7/12	8/8/12 16:33	AJL	A31
3,5-Dinitroaniline	0.099U	mg/kg		0.20	0.099	0.052	SW846 8330B	8/7/12	8/8/12 16:33	AJL	A31
1,3-Dinitrobenzene	0.099U	mg/kg		0.20	0.099	0.030	SW846 8330B	8/7/12	8/8/12 16:33	AJL	A31
2,4-Dinitrotoluene	0.099U	mg/kg		0.20	0.099	0.057	SW846 8330B	8/7/12	8/8/12 16:33	AJL	A31
2,6-Dinitrotoluene	0.099U	mg/kg		0.20	0.099	0.061	SW846 8330B	8/7/12	8/8/12 16:33	AJL	A31
HMX	0.099U	mg/kg		0.20	0.099	0.082	SW846 8330B	8/7/12	8/8/12 16:33	AJL	A31
Nitrobenzene	0.099U	mg/kg		0.20	0.099	0.077	SW846 8330B	8/7/12	8/8/12 16:33	AJL	A31
Nitroglycerin	0.99U	mg/kg		1.2	0.99	0.35	SW846 8330B	8/7/12	8/8/12 16:33	AJL	A31
4-Nitrotoluene	0.099U	mg/kg		0.20	0.099	0.064	SW846 8330B	8/7/12	8/8/12 16:33	AJL	A31
2-Nitrotoluene	0.099U	mg/kg		0.20	0.099	0.056	SW846 8330B	8/7/12	8/8/12 16:33	AJL	A31
3-Nitrotoluene	0.099U	mg/kg		0.20	0.099	0.060	SW846 8330B	8/7/12	8/8/12 16:33	AJL	A31
PETN	0.99U	mg/kg		1.2	0.99	0.51	SW846 8330B	8/7/12	8/8/12 16:33	AJL	A31
RDX	0.099U	mg/kg		0.20	0.099	0.025	SW846 8330B	8/7/12	8/8/12 16:33	AJL	A31
Tetryl	0.099U	mg/kg		0.20	0.099	0.074	SW846 8330B	8/7/12	8/8/12 16:33	AJL	A31
1,3,5-Trinitrobenzene	0.099U	mg/kg		0.20	0.099	0.069	SW846 8330B	8/7/12	8/8/12 16:33	AJL	A31
2,4,6-Trinitrotoluene	0.099U	mg/kg		0.20	0.099	0.035	SW846 8330B	8/7/12	8/8/12 16:33	AJL	A31
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	94.9	%		50-150			SW846 8330B	8/7/12	8/8/12 16:33	AJL	A31
1,4-Dinitrobenzene (S)	106	%		50-150			SW846 8330B	8/7/12	8/8/12 16:33	AJL	A31
WET CHEMISTRY											
Moisture	20.2	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
Total Solids	79.8	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
METALS											
Aluminum, Total	1130	mg/kg		46.4	30.8	15.1	SW846 6020A	7/31/12	8/7/12 10:23	MWO	A2
Copper, Total	1.9U	mg/kg		2.9	1.9	0.93	SW846 6020A	7/31/12	8/7/12 10:23	MWO	A2
Lead, Total	1.8	mg/kg		1.2	0.75	0.38	SW846 6020A	7/31/12	8/7/12 10:23	MWO	A2
Zinc, Total	1.4J	mg/kg		2.9	1.9	0.93	SW846 6020A	7/31/12	8/7/12 10:23	MWO	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID:	**9980109001**	Date Collected:	7/26/2012 11:47	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-10[02]**	Date Received:	7/27/2012 09:20		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID: **9980109002** Date Collected: 7/26/2012 12:45 Matrix: Water

Sample ID: **FTSW-AA-SO-10[02] ERB** Date Received: 7/27/2012 09:20

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.097U	ug/L		0.19	0.097	0.058	SW846 8330B	8/2/12	8/2/12 23:33	AJL	B1
4-Amino-2,6-dinitrotoluene	0.097U	ug/L		0.19	0.097	0.068	SW846 8330B	8/2/12	8/2/12 23:33	AJL	B1
3,5-Dinitroaniline	0.11U	ug/L		0.24	0.11	0.077	SW846 8330B	8/2/12	8/6/12 15:14	AJL	B1
1,3-Dinitrobenzene	0.097U	ug/L		0.19	0.097	0.029	SW846 8330B	8/2/12	8/2/12 23:33	AJL	B1
2,4-Dinitrotoluene	0.097U	ug/L		0.19	0.097	0.029	SW846 8330B	8/2/12	8/2/12 23:33	AJL	B1
2,6-Dinitrotoluene	0.097U	ug/L		0.19	0.097	0.058	SW846 8330B	8/2/12	8/2/12 23:33	AJL	B1
HMX	0.097U	ug/L		0.19	0.097	0.029	SW846 8330B	8/2/12	8/2/12 23:33	AJL	B1
Nitrobenzene	0.097U	ug/L		0.19	0.097	0.029	SW846 8330B	8/2/12	8/2/12 23:33	AJL	B1
Nitroglycerin	0.77U	ug/L		1.4	0.77	0.26	SW846 8330B	8/2/12	8/6/12 15:14	AJL	B1
4-Nitrotoluene	0.097U	ug/L		0.19	0.097	0.058	SW846 8330B	8/2/12	8/2/12 23:33	AJL	B1
2-Nitrotoluene	0.097U	ug/L		0.19	0.097	0.068	SW846 8330B	8/2/12	8/2/12 23:33	AJL	B1
3-Nitrotoluene	0.097U	ug/L		0.19	0.097	0.077	SW846 8330B	8/2/12	8/2/12 23:33	AJL	B1
PETN	0.77U	ug/L		1.4	0.77	0.24	SW846 8330B	8/2/12	8/6/12 15:14	AJL	B1
RDX	0.097U	ug/L		0.19	0.097	0.029	SW846 8330B	8/2/12	8/2/12 23:33	AJL	B1
Tetryl	0.19U	ug/L		0.29	0.19	0.14	SW846 8330B	8/2/12	8/2/12 23:33	AJL	B1
1,3,5-Trinitrobenzene	0.097U	ug/L		0.19	0.097	0.058	SW846 8330B	8/2/12	8/2/12 23:33	AJL	B1
2,4,6-Trinitrotoluene	0.097U	ug/L		0.19	0.097	0.087	SW846 8330B	8/2/12	8/2/12 23:33	AJL	B1
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	90.8	%		50-150			SW846 8330B	8/2/12	8/2/12 23:33	AJL	B1
1,4-Dinitrobenzene (S)	82.8	%		50-150			SW846 8330B	8/2/12	8/6/12 15:14	AJL	B1
METALS											
Aluminum, Total	0.059U	mg/L		0.089	0.059	0.030	SW846 6020A	8/1/12	8/7/12 13:40	MWO	A4
Copper, Total	0.0037U	mg/L		0.0056	0.0037	0.0019	SW846 6020A	8/1/12	8/7/12 13:40	MWO	A4
Lead, Total	0.0015U	mg/L		0.0022	0.0015	0.00074	SW846 6020A	8/1/12	8/7/12 13:40	MWO	A4
Zinc, Total	0.0037U	mg/L		0.0056	0.0037	0.0019	SW846 6020A	8/1/12	8/7/12 13:40	MWO	A4

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID:	**9980109002**	Date Collected:	7/26/2012 12:45	Matrix:	Water
Sample ID:	**FTSW-AA-SO-10[02] ERB**	Date Received:	7/27/2012 09:20		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

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Technical Manager

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID: **9980109003** Date Collected: 7/26/2012 13:20 Matrix: Solid

Sample ID: **FTSW-AA-SO-11** Date Received: 7/27/2012 09:20

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.10U	mg/kg		0.20	0.10	0.053	SW846 8330B	8/7/12	8/8/12 17:17	AJL	A31
4-Amino-2,6-dinitrotoluene	0.10U	mg/kg		0.20	0.10	0.054	SW846 8330B	8/7/12	8/8/12 17:17	AJL	A31
3,5-Dinitroaniline	0.10U	mg/kg		0.20	0.10	0.053	SW846 8330B	8/7/12	8/8/12 17:17	AJL	A31
1,3-Dinitrobenzene	0.10U	mg/kg		0.20	0.10	0.030	SW846 8330B	8/7/12	8/8/12 17:17	AJL	A31
2,4-Dinitrotoluene	0.10U	mg/kg		0.20	0.10	0.058	SW846 8330B	8/7/12	8/8/12 17:17	AJL	A31
2,6-Dinitrotoluene	0.10U	mg/kg		0.20	0.10	0.062	SW846 8330B	8/7/12	8/8/12 17:17	AJL	A31
HMX	0.10U	mg/kg		0.20	0.10	0.083	SW846 8330B	8/7/12	8/8/12 17:17	AJL	A31
Nitrobenzene	0.10U	mg/kg		0.20	0.10	0.078	SW846 8330B	8/7/12	8/8/12 17:17	AJL	A31
Nitroglycerin	1.0U	mg/kg		1.2	1.0	0.35	SW846 8330B	8/7/12	8/8/12 17:17	AJL	A31
4-Nitrotoluene	0.10U	mg/kg		0.20	0.10	0.065	SW846 8330B	8/7/12	8/8/12 17:17	AJL	A31
2-Nitrotoluene	0.10U	mg/kg		0.20	0.10	0.057	SW846 8330B	8/7/12	8/8/12 17:17	AJL	A31
3-Nitrotoluene	0.10U	mg/kg		0.20	0.10	0.061	SW846 8330B	8/7/12	8/8/12 17:17	AJL	A31
PETN	1.0U	mg/kg		1.2	1.0	0.52	SW846 8330B	8/7/12	8/8/12 17:17	AJL	A31
RDX	0.10U	mg/kg		0.20	0.10	0.025	SW846 8330B	8/7/12	8/8/12 17:17	AJL	A31
Tetryl	0.10U	mg/kg		0.20	0.10	0.075	SW846 8330B	8/7/12	8/8/12 17:17	AJL	A31
1,3,5-Trinitrobenzene	0.10U	mg/kg		0.20	0.10	0.070	SW846 8330B	8/7/12	8/8/12 17:17	AJL	A31
2,4,6-Trinitrotoluene	0.10U	mg/kg		0.20	0.10	0.035	SW846 8330B	8/7/12	8/8/12 17:17	AJL	A31
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	96.6	%		50-150			SW846 8330B	8/7/12	8/8/12 17:17	AJL	A31
1,4-Dinitrobenzene (S)	104	%		50-150			SW846 8330B	8/7/12	8/8/12 17:17	AJL	A31
WET CHEMISTRY											
Moisture	4.0	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
Total Solids	96.0	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
METALS											
Aluminum, Total	5520	mg/kg		39.3	26.0	12.8	SW846 6020A	7/31/12	8/7/12 10:27	MWO	A2
Copper, Total	2.4J	mg/kg		2.5	1.6	0.79	SW846 6020A	7/31/12	8/7/12 10:27	MWO	A2
Lead, Total	5.1	mg/kg		0.98	0.64	0.32	SW846 6020A	7/31/12	8/7/12 10:27	MWO	A2
Zinc, Total	11.2	mg/kg		2.5	1.6	0.79	SW846 6020A	7/31/12	8/7/12 10:27	MWO	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID:	**9980109003**	Date Collected:	7/26/2012 13:20	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-11**	Date Received:	7/27/2012 09:20		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

Anna G Milliken
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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID: **9980109004** Date Collected: 7/26/2012 13:30 Matrix: Solid

Sample ID: **FTSW-AA-SO-12 [01.5]** Date Received: 7/27/2012 09:20

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.096U	mg/kg		0.19	0.096	0.051	SW846 8330B	8/7/12	8/8/12 18:01	AJL	A31
4-Amino-2,6-dinitrotoluene	0.096U	mg/kg		0.19	0.096	0.052	SW846 8330B	8/7/12	8/8/12 18:01	AJL	A31
3,5-Dinitroaniline	0.096U	mg/kg		0.19	0.096	0.051	SW846 8330B	8/7/12	8/8/12 18:01	AJL	A31
1,3-Dinitrobenzene	0.096U	mg/kg		0.19	0.096	0.029	SW846 8330B	8/7/12	8/8/12 18:01	AJL	A31
2,4-Dinitrotoluene	0.096U	mg/kg		0.19	0.096	0.056	SW846 8330B	8/7/12	8/8/12 18:01	AJL	A31
2,6-Dinitrotoluene	0.096U	mg/kg		0.19	0.096	0.060	SW846 8330B	8/7/12	8/8/12 18:01	AJL	A31
HMX	0.096U	mg/kg		0.19	0.096	0.080	SW846 8330B	8/7/12	8/8/12 18:01	AJL	A31
Nitrobenzene	0.096U	mg/kg		0.19	0.096	0.075	SW846 8330B	8/7/12	8/8/12 18:01	AJL	A31
Nitroglycerin	0.96U	mg/kg		1.2	0.96	0.34	SW846 8330B	8/7/12	8/8/12 18:01	AJL	A31
4-Nitrotoluene	0.096U	mg/kg		0.19	0.096	0.063	SW846 8330B	8/7/12	8/8/12 18:01	AJL	A31
2-Nitrotoluene	0.096U	mg/kg		0.19	0.096	0.055	SW846 8330B	8/7/12	8/8/12 18:01	AJL	A31
3-Nitrotoluene	0.096U	mg/kg		0.19	0.096	0.059	SW846 8330B	8/7/12	8/8/12 18:01	AJL	A31
PETN	0.96U	mg/kg		1.2	0.96	0.50	SW846 8330B	8/7/12	8/8/12 18:01	AJL	A31
RDX	0.096U	mg/kg		0.19	0.096	0.024	SW846 8330B	8/7/12	8/8/12 18:01	AJL	A31
Tetryl	0.096U	mg/kg		0.19	0.096	0.072	SW846 8330B	8/7/12	8/8/12 18:01	AJL	A31
1,3,5-Trinitrobenzene	0.096U	mg/kg		0.19	0.096	0.067	SW846 8330B	8/7/12	8/8/12 18:01	AJL	A31
2,4,6-Trinitrotoluene	0.096U	mg/kg		0.19	0.096	0.034	SW846 8330B	8/7/12	8/8/12 18:01	AJL	A31
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	94.5	%		50-150			SW846 8330B	8/7/12	8/8/12 18:01	AJL	A31
1,4-Dinitrobenzene (S)	105	%		50-150			SW846 8330B	8/7/12	8/8/12 18:01	AJL	A31
WET CHEMISTRY											
Moisture	22.0	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
Total Solids	78.0	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
METALS											
Aluminum, Total	4440	mg/kg		47.5	31.4	15.4	SW846 6020A	7/31/12	8/7/12 10:31	MWO	A2
Copper, Total	2.0U	mg/kg		3.0	2.0	0.95	SW846 6020A	7/31/12	8/7/12 10:31	MWO	A2
Lead, Total	3.7	mg/kg		1.2	0.77	0.39	SW846 6020A	7/31/12	8/7/12 10:31	MWO	A2
Zinc, Total	2.0J	mg/kg		3.0	2.0	0.95	SW846 6020A	7/31/12	8/7/12 10:31	MWO	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID:	**9980109004**	Date Collected:	7/26/2012 13:30	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-12 [01.5]**	Date Received:	7/27/2012 09:20		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID: **9980109005** Date Collected: 7/26/2012 14:06 Matrix: Solid

Sample ID: **FTSW-AA-SO-13** Date Received: 7/27/2012 09:20

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.096U	mg/kg		0.19	0.096	0.051	SW846 8330B	8/7/12	8/8/12 18:45	AJL	A31
4-Amino-2,6-dinitrotoluene	0.096U	mg/kg		0.19	0.096	0.052	SW846 8330B	8/7/12	8/8/12 18:45	AJL	A31
3,5-Dinitroaniline	0.096U	mg/kg		0.19	0.096	0.051	SW846 8330B	8/7/12	8/8/12 18:45	AJL	A31
1,3-Dinitrobenzene	0.096U	mg/kg		0.19	0.096	0.029	SW846 8330B	8/7/12	8/8/12 18:45	AJL	A31
2,4-Dinitrotoluene	0.096U	mg/kg		0.19	0.096	0.056	SW846 8330B	8/7/12	8/8/12 18:45	AJL	A31
2,6-Dinitrotoluene	0.096U	mg/kg		0.19	0.096	0.060	SW846 8330B	8/7/12	8/8/12 18:45	AJL	A31
HMX	0.096U	mg/kg		0.19	0.096	0.080	SW846 8330B	8/7/12	8/8/12 18:45	AJL	A31
Nitrobenzene	0.096U	mg/kg		0.19	0.096	0.075	SW846 8330B	8/7/12	8/8/12 18:45	AJL	A31
Nitroglycerin	0.96U	mg/kg		1.2	0.96	0.34	SW846 8330B	8/7/12	8/8/12 18:45	AJL	A31
4-Nitrotoluene	0.096U	mg/kg		0.19	0.096	0.063	SW846 8330B	8/7/12	8/8/12 18:45	AJL	A31
2-Nitrotoluene	0.096U	mg/kg		0.19	0.096	0.055	SW846 8330B	8/7/12	8/8/12 18:45	AJL	A31
3-Nitrotoluene	0.096U	mg/kg		0.19	0.096	0.059	SW846 8330B	8/7/12	8/8/12 18:45	AJL	A31
PETN	0.96U	mg/kg		1.2	0.96	0.50	SW846 8330B	8/7/12	8/8/12 18:45	AJL	A31
RDX	0.096U	mg/kg		0.19	0.096	0.024	SW846 8330B	8/7/12	8/8/12 18:45	AJL	A31
Tetryl	0.096U	mg/kg		0.19	0.096	0.072	SW846 8330B	8/7/12	8/8/12 18:45	AJL	A31
1,3,5-Trinitrobenzene	0.096U	mg/kg		0.19	0.096	0.067	SW846 8330B	8/7/12	8/8/12 18:45	AJL	A31
2,4,6-Trinitrotoluene	0.096U	mg/kg		0.19	0.096	0.034	SW846 8330B	8/7/12	8/8/12 18:45	AJL	A31
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	89.4	%		50-150			SW846 8330B	8/7/12	8/8/12 18:45	AJL	A31
1,4-Dinitrobenzene (S)	98	%		50-150			SW846 8330B	8/7/12	8/8/12 18:45	AJL	A31
WET CHEMISTRY											
Moisture	31.9	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
Total Solids	68.1	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
METALS											
Aluminum, Total	4830	mg/kg		50.6	33.6	16.5	SW846 6020A	7/31/12	8/7/12 10:35	MWO	A2
Copper, Total	1.4J	mg/kg		3.2	2.1	1.0	SW846 6020A	7/31/12	8/7/12 10:35	MWO	A2
Lead, Total	5.8	mg/kg		1.3	0.82	0.42	SW846 6020A	7/31/12	8/7/12 10:35	MWO	A2
Zinc, Total	7.4	mg/kg		3.2	2.1	1.0	SW846 6020A	7/31/12	8/7/12 10:35	MWO	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID:	**9980109005**	Date Collected:	7/26/2012 14:06	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-13**	Date Received:	7/27/2012 09:20		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID: **9980109006** Date Collected: 7/26/2012 14:12 Matrix: Solid

Sample ID: **FTSW-AA-SO-14 [02]** Date Received: 7/27/2012 09:20

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.097U	mg/kg		0.19	0.097	0.051	SW846 8330B	8/7/12	8/8/12 19:29	AJL	A31
4-Amino-2,6-dinitrotoluene	0.097U	mg/kg		0.19	0.097	0.052	SW846 8330B	8/7/12	8/8/12 19:29	AJL	A31
3,5-Dinitroaniline	0.097U	mg/kg		0.19	0.097	0.051	SW846 8330B	8/7/12	8/8/12 19:29	AJL	A31
1,3-Dinitrobenzene	0.097U	mg/kg		0.19	0.097	0.029	SW846 8330B	8/7/12	8/8/12 19:29	AJL	A31
2,4-Dinitrotoluene	0.097U	mg/kg		0.19	0.097	0.056	SW846 8330B	8/7/12	8/8/12 19:29	AJL	A31
2,6-Dinitrotoluene	0.097U	mg/kg		0.19	0.097	0.060	SW846 8330B	8/7/12	8/8/12 19:29	AJL	A31
HMX	0.097U	mg/kg		0.19	0.097	0.081	SW846 8330B	8/7/12	8/8/12 19:29	AJL	A31
Nitrobenzene	0.097U	mg/kg		0.19	0.097	0.076	SW846 8330B	8/7/12	8/8/12 19:29	AJL	A31
Nitroglycerin	0.97U	mg/kg		1.2	0.97	0.34	SW846 8330B	8/7/12	8/8/12 19:29	AJL	A31
4-Nitrotoluene	0.097U	mg/kg		0.19	0.097	0.063	SW846 8330B	8/7/12	8/8/12 19:29	AJL	A31
2-Nitrotoluene	0.097U	mg/kg		0.19	0.097	0.055	SW846 8330B	8/7/12	8/8/12 19:29	AJL	A31
3-Nitrotoluene	0.097U	mg/kg		0.19	0.097	0.059	SW846 8330B	8/7/12	8/8/12 19:29	AJL	A31
PETN	0.97U	mg/kg		1.2	0.97	0.50	SW846 8330B	8/7/12	8/8/12 19:29	AJL	A31
RDX	0.097U	mg/kg		0.19	0.097	0.024	SW846 8330B	8/7/12	8/8/12 19:29	AJL	A31
Tetryl	0.097U	mg/kg		0.19	0.097	0.073	SW846 8330B	8/7/12	8/8/12 19:29	AJL	A31
1,3,5-Trinitrobenzene	0.097U	mg/kg		0.19	0.097	0.068	SW846 8330B	8/7/12	8/8/12 19:29	AJL	A31
2,4,6-Trinitrotoluene	0.097U	mg/kg		0.19	0.097	0.034	SW846 8330B	8/7/12	8/8/12 19:29	AJL	A31
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	97.3	%		50-150			SW846 8330B	8/7/12	8/8/12 19:29	AJL	A31
1,4-Dinitrobenzene (S)	104	%		50-150			SW846 8330B	8/7/12	8/8/12 19:29	AJL	A31
WET CHEMISTRY											
Moisture	17.9	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
Total Solids	82.1	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
METALS											
Aluminum, Total	7710	mg/kg		44.3	29.3	14.4	SW846 6020A	7/31/12	8/7/12 10:39	MWO	A2
Copper, Total	8.8	mg/kg		2.8	1.8	0.89	SW846 6020A	7/31/12	8/7/12 10:39	MWO	A2
Lead, Total	8.0	mg/kg		1.1	0.72	0.37	SW846 6020A	7/31/12	8/7/12 10:39	MWO	A2
Zinc, Total	10.6	mg/kg		2.8	1.8	0.89	SW846 6020A	7/31/12	8/7/12 10:39	MWO	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID:	**9980109006**	Date Collected:	7/26/2012 14:12	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-14 [02]**	Date Received:	7/27/2012 09:20		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID: **9980109007** Date Collected: 7/26/2012 14:36 Matrix: Solid

Sample ID: **FTSW-AA-SO-15** Date Received: 7/27/2012 09:20

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.098U	mg/kg		0.20	0.098	0.052	SW846 8330B	8/7/12	8/8/12 20:13	AJL	A31
4-Amino-2,6-dinitrotoluene	0.098U	mg/kg		0.20	0.098	0.053	SW846 8330B	8/7/12	8/8/12 20:13	AJL	A31
3,5-Dinitroaniline	0.098U	mg/kg		0.20	0.098	0.052	SW846 8330B	8/7/12	8/8/12 20:13	AJL	A31
1,3-Dinitrobenzene	0.098U	mg/kg		0.20	0.098	0.029	SW846 8330B	8/7/12	8/8/12 20:13	AJL	A31
2,4-Dinitrotoluene	0.098U	mg/kg		0.20	0.098	0.057	SW846 8330B	8/7/12	8/8/12 20:13	AJL	A31
2,6-Dinitrotoluene	0.098U	mg/kg		0.20	0.098	0.061	SW846 8330B	8/7/12	8/8/12 20:13	AJL	A31
HMX	0.098U	mg/kg		0.20	0.098	0.081	SW846 8330B	8/7/12	8/8/12 20:13	AJL	A31
Nitrobenzene	0.098U	mg/kg		0.20	0.098	0.076	SW846 8330B	8/7/12	8/8/12 20:13	AJL	A31
Nitroglycerin	0.98U	mg/kg		1.2	0.98	0.34	SW846 8330B	8/7/12	8/8/12 20:13	AJL	A31
4-Nitrotoluene	0.098U	mg/kg		0.20	0.098	0.064	SW846 8330B	8/7/12	8/8/12 20:13	AJL	A31
2-Nitrotoluene	0.098U	mg/kg		0.20	0.098	0.056	SW846 8330B	8/7/12	8/8/12 20:13	AJL	A31
3-Nitrotoluene	0.098U	mg/kg		0.20	0.098	0.060	SW846 8330B	8/7/12	8/8/12 20:13	AJL	A31
PETN	0.98U	mg/kg		1.2	0.98	0.51	SW846 8330B	8/7/12	8/8/12 20:13	AJL	A31
RDX	0.098U	mg/kg		0.20	0.098	0.025	SW846 8330B	8/7/12	8/8/12 20:13	AJL	A31
Tetryl	0.098U	mg/kg		0.20	0.098	0.074	SW846 8330B	8/7/12	8/8/12 20:13	AJL	A31
1,3,5-Trinitrobenzene	0.098U	mg/kg		0.20	0.098	0.069	SW846 8330B	8/7/12	8/8/12 20:13	AJL	A31
2,4,6-Trinitrotoluene	0.098U	mg/kg		0.20	0.098	0.034	SW846 8330B	8/7/12	8/8/12 20:13	AJL	A31
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	93.2	%		50-150			SW846 8330B	8/7/12	8/8/12 20:13	AJL	A31
1,4-Dinitrobenzene (S)	104	%		50-150			SW846 8330B	8/7/12	8/8/12 20:13	AJL	A31
WET CHEMISTRY											
Moisture	15.6	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
Total Solids	84.4	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
METALS											
Aluminum, Total	10900	mg/kg		43.9	29.1	14.3	SW846 6020A	7/31/12	8/7/12 10:54	MWO	A2
Copper, Total	1.4J	mg/kg		2.7	1.8	0.88	SW846 6020A	7/31/12	8/7/12 10:54	MWO	A2
Lead, Total	7.8	mg/kg		1.1	0.71	0.36	SW846 6020A	7/31/12	8/7/12 10:54	MWO	A2
Zinc, Total	8.4	mg/kg		2.7	1.8	0.88	SW846 6020A	7/31/12	8/7/12 10:54	MWO	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID:	**9980109007**	Date Collected:	7/26/2012 14:36	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-15**	Date Received:	7/27/2012 09:20		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID: **9980109008** Date Collected: 7/26/2012 14:50 Matrix: Solid

Sample ID: **FTSW-AA-SO-16 [01.5]** Date Received: 7/27/2012 09:20

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.094U	mg/kg		0.19	0.094	0.050	SW846 8330B	8/7/12	8/8/12 20:57	AJL	A31
4-Amino-2,6-dinitrotoluene	0.094U	mg/kg		0.19	0.094	0.051	SW846 8330B	8/7/12	8/8/12 20:57	AJL	A31
3,5-Dinitroaniline	0.094U	mg/kg		0.19	0.094	0.050	SW846 8330B	8/7/12	8/8/12 20:57	AJL	A31
1,3-Dinitrobenzene	0.094U	mg/kg		0.19	0.094	0.028	SW846 8330B	8/7/12	8/8/12 20:57	AJL	A31
2,4-Dinitrotoluene	0.094U	mg/kg		0.19	0.094	0.055	SW846 8330B	8/7/12	8/8/12 20:57	AJL	A31
2,6-Dinitrotoluene	0.094U	mg/kg		0.19	0.094	0.058	SW846 8330B	8/7/12	8/8/12 20:57	AJL	A31
HMX	0.094U	mg/kg		0.19	0.094	0.078	SW846 8330B	8/7/12	8/8/12 20:57	AJL	A31
Nitrobenzene	0.094U	mg/kg		0.19	0.094	0.074	SW846 8330B	8/7/12	8/8/12 20:57	AJL	A31
Nitroglycerin	0.94U	mg/kg		1.1	0.94	0.33	SW846 8330B	8/7/12	8/8/12 20:57	AJL	A31
4-Nitrotoluene	0.094U	mg/kg		0.19	0.094	0.061	SW846 8330B	8/7/12	8/8/12 20:57	AJL	A31
2-Nitrotoluene	0.094U	mg/kg		0.19	0.094	0.054	SW846 8330B	8/7/12	8/8/12 20:57	AJL	A31
3-Nitrotoluene	0.094U	mg/kg		0.19	0.094	0.058	SW846 8330B	8/7/12	8/8/12 20:57	AJL	A31
PETN	0.94U	mg/kg		1.1	0.94	0.49	SW846 8330B	8/7/12	8/8/12 20:57	AJL	A31
RDX	0.094U	mg/kg		0.19	0.094	0.024	SW846 8330B	8/7/12	8/8/12 20:57	AJL	A31
Tetryl	0.094U	mg/kg		0.19	0.094	0.071	SW846 8330B	8/7/12	8/8/12 20:57	AJL	A31
1,3,5-Trinitrobenzene	0.094U	mg/kg		0.19	0.094	0.066	SW846 8330B	8/7/12	8/8/12 20:57	AJL	A31
2,4,6-Trinitrotoluene	0.094U	mg/kg		0.19	0.094	0.033	SW846 8330B	8/7/12	8/8/12 20:57	AJL	A31
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	94.7	%		50-150			SW846 8330B	8/7/12	8/8/12 20:57	AJL	A31
1,4-Dinitrobenzene (S)	101	%		50-150			SW846 8330B	8/7/12	8/8/12 20:57	AJL	A31
WET CHEMISTRY											
Moisture	24.2	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
Total Solids	75.8	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
METALS											
Aluminum, Total	6260	mg/kg		51.7	34.3	16.8	SW846 6020A	7/31/12	8/7/12 10:58	MWO	A2
Copper, Total	2.1U	mg/kg		3.2	2.1	1.0	SW846 6020A	7/31/12	8/7/12 10:58	MWO	A2
Lead, Total	4.8	mg/kg		1.3	0.84	0.43	SW846 6020A	7/31/12	8/7/12 10:58	MWO	A2
Zinc, Total	3.5	mg/kg		3.2	2.1	1.0	SW846 6020A	7/31/12	8/7/12 10:58	MWO	A2

Sample Comments:

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID:	**9980109008**	Date Collected:	7/26/2012 14:50	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-16 [01.5]**	Date Received:	7/27/2012 09:20		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

Anna G Milliken
Technical Manager

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID: **9980109009** Date Collected: 7/26/2012 08:14 Matrix: Solid

Sample ID: **FTSW-AA-SO-01** Date Received: 7/27/2012 09:20

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.093U	mg/kg		0.19	0.093	0.049	SW846 8330B	8/7/12	8/8/12 21:41	AJL	A31
4-Amino-2,6-dinitrotoluene	0.093U	mg/kg		0.19	0.093	0.050	SW846 8330B	8/7/12	8/8/12 21:41	AJL	A31
3,5-Dinitroaniline	0.093U	mg/kg		0.19	0.093	0.049	SW846 8330B	8/7/12	8/8/12 21:41	AJL	A31
1,3-Dinitrobenzene	0.093U	mg/kg		0.19	0.093	0.028	SW846 8330B	8/7/12	8/8/12 21:41	AJL	A31
2,4-Dinitrotoluene	0.093U	mg/kg		0.19	0.093	0.054	SW846 8330B	8/7/12	8/8/12 21:41	AJL	A31
2,6-Dinitrotoluene	0.093U	mg/kg		0.19	0.093	0.057	SW846 8330B	8/7/12	8/8/12 21:41	AJL	A31
HMX	0.093U	mg/kg		0.19	0.093	0.077	SW846 8330B	8/7/12	8/8/12 21:41	AJL	A31
Nitrobenzene	0.093U	mg/kg		0.19	0.093	0.072	SW846 8330B	8/7/12	8/8/12 21:41	AJL	A31
Nitroglycerin	0.93U	mg/kg		1.1	0.93	0.32	SW846 8330B	8/7/12	8/8/12 21:41	AJL	A31
4-Nitrotoluene	0.093U	mg/kg		0.19	0.093	0.060	SW846 8330B	8/7/12	8/8/12 21:41	AJL	A31
2-Nitrotoluene	0.093U	mg/kg		0.19	0.093	0.053	SW846 8330B	8/7/12	8/8/12 21:41	AJL	A31
3-Nitrotoluene	0.093U	mg/kg		0.19	0.093	0.056	SW846 8330B	8/7/12	8/8/12 21:41	AJL	A31
PETN	0.93U	mg/kg		1.1	0.93	0.48	SW846 8330B	8/7/12	8/8/12 21:41	AJL	A31
RDX	0.093U	mg/kg		0.19	0.093	0.023	SW846 8330B	8/7/12	8/8/12 21:41	AJL	A31
Tetryl	0.093U	mg/kg		0.19	0.093	0.069	SW846 8330B	8/7/12	8/8/12 21:41	AJL	A31
1,3,5-Trinitrobenzene	0.093U	mg/kg		0.19	0.093	0.065	SW846 8330B	8/7/12	8/8/12 21:41	AJL	A31
2,4,6-Trinitrotoluene	0.093U	mg/kg		0.19	0.093	0.032	SW846 8330B	8/7/12	8/8/12 21:41	AJL	A31
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	94.1	%		50-150			SW846 8330B	8/7/12	8/8/12 21:41	AJL	A31
1,4-Dinitrobenzene (S)	101	%		50-150			SW846 8330B	8/7/12	8/8/12 21:41	AJL	A31
WET CHEMISTRY											
Moisture	35.1	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
Total Solids	64.9	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
METALS											
Aluminum, Total	7060	mg/kg		56.0	37.1	18.2	SW846 6020A	7/31/12	8/7/12 11:02	MWO	A2
Copper, Total	1.3J	mg/kg		3.5	2.3	1.1	SW846 6020A	7/31/12	8/7/12 11:02	MWO	A2
Lead, Total	5.3	mg/kg		1.4	0.91	0.46	SW846 6020A	7/31/12	8/7/12 11:02	MWO	A2
Zinc, Total	9.7	mg/kg		3.5	2.3	1.1	SW846 6020A	7/31/12	8/7/12 11:02	MWO	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID:	**9980109009**	Date Collected:	7/26/2012 08:14	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-01**	Date Received:	7/27/2012 09:20		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID: **9980109010** Date Collected: 7/26/2012 08:20 Matrix: Solid

Sample ID: **FTSW-AA-SO-02 [01.5]** Date Received: 7/27/2012 09:20

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.093U	mg/kg		0.19	0.093	0.049	SW846 8330B	8/7/12	8/8/12 22:25	AJL	A31
4-Amino-2,6-dinitrotoluene	0.093U	mg/kg		0.19	0.093	0.050	SW846 8330B	8/7/12	8/8/12 22:25	AJL	A31
3,5-Dinitroaniline	0.093U	mg/kg		0.19	0.093	0.049	SW846 8330B	8/7/12	8/8/12 22:25	AJL	A31
1,3-Dinitrobenzene	0.093U	mg/kg		0.19	0.093	0.028	SW846 8330B	8/7/12	8/8/12 22:25	AJL	A31
2,4-Dinitrotoluene	0.093U	mg/kg		0.19	0.093	0.054	SW846 8330B	8/7/12	8/8/12 22:25	AJL	A31
2,6-Dinitrotoluene	0.093U	mg/kg		0.19	0.093	0.057	SW846 8330B	8/7/12	8/8/12 22:25	AJL	A31
HMX	0.093U	mg/kg		0.19	0.093	0.077	SW846 8330B	8/7/12	8/8/12 22:25	AJL	A31
Nitrobenzene	0.093U	mg/kg		0.19	0.093	0.072	SW846 8330B	8/7/12	8/8/12 22:25	AJL	A31
Nitroglycerin	0.93U	mg/kg		1.1	0.93	0.32	SW846 8330B	8/7/12	8/8/12 22:25	AJL	A31
4-Nitrotoluene	0.093U	mg/kg		0.19	0.093	0.060	SW846 8330B	8/7/12	8/8/12 22:25	AJL	A31
2-Nitrotoluene	0.093U	mg/kg		0.19	0.093	0.053	SW846 8330B	8/7/12	8/8/12 22:25	AJL	A31
3-Nitrotoluene	0.093U	mg/kg		0.19	0.093	0.056	SW846 8330B	8/7/12	8/8/12 22:25	AJL	A31
PETN	0.93U	mg/kg		1.1	0.93	0.48	SW846 8330B	8/7/12	8/8/12 22:25	AJL	A31
RDX	0.093U	mg/kg		0.19	0.093	0.023	SW846 8330B	8/7/12	8/8/12 22:25	AJL	A31
Tetryl	0.093U	mg/kg		0.19	0.093	0.069	SW846 8330B	8/7/12	8/8/12 22:25	AJL	A31
1,3,5-Trinitrobenzene	0.093U	mg/kg		0.19	0.093	0.065	SW846 8330B	8/7/12	8/8/12 22:25	AJL	A31
2,4,6-Trinitrotoluene	0.093U	mg/kg		0.19	0.093	0.032	SW846 8330B	8/7/12	8/8/12 22:25	AJL	A31
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	90.3	%		50-150			SW846 8330B	8/7/12	8/8/12 22:25	AJL	A31
1,4-Dinitrobenzene (S)	97.7	%		50-150			SW846 8330B	8/7/12	8/8/12 22:25	AJL	A31
WET CHEMISTRY											
Moisture	7.4	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
Total Solids	92.6	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
METALS											
Aluminum, Total	8160	mg/kg		36.6	24.3	11.9	SW846 6020A	7/31/12	8/7/12 11:06	MWO	A2
Copper, Total	1.5U	mg/kg		2.3	1.5	0.73	SW846 6020A	7/31/12	8/7/12 11:06	MWO	A2
Lead, Total	4.6	mg/kg		0.92	0.60	0.30	SW846 6020A	7/31/12	8/7/12 11:06	MWO	A2
Zinc, Total	2.7	mg/kg		2.3	1.5	0.73	SW846 6020A	7/31/12	8/7/12 11:06	MWO	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID:	**9980109010**	Date Collected:	7/26/2012 08:20	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-02 [01.5]**	Date Received:	7/27/2012 09:20		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID: **9980109011** Date Collected: 7/26/2012 09:02 Matrix: Solid

Sample ID: **FTSW-AA-SO-03** Date Received: 7/27/2012 09:20

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.094U	mg/kg		0.19	0.094	0.050	SW846 8330B	8/7/12	8/9/12 00:37	AJL	A31
4-Amino-2,6-dinitrotoluene	0.094U	mg/kg		0.19	0.094	0.051	SW846 8330B	8/7/12	8/9/12 00:37	AJL	A31
3,5-Dinitroaniline	0.094U	mg/kg		0.19	0.094	0.050	SW846 8330B	8/7/12	8/9/12 00:37	AJL	A31
1,3-Dinitrobenzene	0.094U	mg/kg		0.19	0.094	0.028	SW846 8330B	8/7/12	8/9/12 00:37	AJL	A31
2,4-Dinitrotoluene	0.094U	mg/kg		0.19	0.094	0.055	SW846 8330B	8/7/12	8/9/12 00:37	AJL	A31
2,6-Dinitrotoluene	0.094U	mg/kg		0.19	0.094	0.058	SW846 8330B	8/7/12	8/9/12 00:37	AJL	A31
HMX	0.094U	mg/kg		0.19	0.094	0.078	SW846 8330B	8/7/12	8/9/12 00:37	AJL	A31
Nitrobenzene	0.094U	mg/kg		0.19	0.094	0.074	SW846 8330B	8/7/12	8/9/12 00:37	AJL	A31
Nitroglycerin	0.94U	mg/kg		1.1	0.94	0.33	SW846 8330B	8/7/12	8/9/12 00:37	AJL	A31
4-Nitrotoluene	0.094U	mg/kg		0.19	0.094	0.061	SW846 8330B	8/7/12	8/9/12 00:37	AJL	A31
2-Nitrotoluene	0.094U	mg/kg		0.19	0.094	0.054	SW846 8330B	8/7/12	8/9/12 00:37	AJL	A31
3-Nitrotoluene	0.094U	mg/kg		0.19	0.094	0.058	SW846 8330B	8/7/12	8/9/12 00:37	AJL	A31
PETN	0.94U	mg/kg		1.1	0.94	0.49	SW846 8330B	8/7/12	8/9/12 00:37	AJL	A31
RDX	0.094U	mg/kg		0.19	0.094	0.024	SW846 8330B	8/7/12	8/9/12 00:37	AJL	A31
Tetryl	0.094U	mg/kg		0.19	0.094	0.071	SW846 8330B	8/7/12	8/9/12 00:37	AJL	A31
1,3,5-Trinitrobenzene	0.094U	mg/kg		0.19	0.094	0.066	SW846 8330B	8/7/12	8/9/12 00:37	AJL	A31
2,4,6-Trinitrotoluene	0.094U	mg/kg		0.19	0.094	0.033	SW846 8330B	8/7/12	8/9/12 00:37	AJL	A31
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	95.6	%		50-150			SW846 8330B	8/7/12	8/9/12 00:37	AJL	A31
1,4-Dinitrobenzene (S)	104	%		50-150			SW846 8330B	8/7/12	8/9/12 00:37	AJL	A31
WET CHEMISTRY											
Moisture	7.9	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
Total Solids	92.1	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
METALS											
Aluminum, Total	5750	mg/kg		41.7	27.7	13.6	SW846 6020A	7/31/12	8/7/12 11:10	MWO	A2
Copper, Total	2.0J	mg/kg		2.6	1.7	0.83	SW846 6020A	7/31/12	8/7/12 11:10	MWO	A2
Lead, Total	3.8	mg/kg		1.0	0.68	0.34	SW846 6020A	7/31/12	8/7/12 11:10	MWO	A2
Zinc, Total	6.5	mg/kg		2.6	1.7	0.83	SW846 6020A	7/31/12	8/7/12 11:10	MWO	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID:	**9980109011**	Date Collected:	7/26/2012 09:02	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-03**	Date Received:	7/27/2012 09:20		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID: **9980109012** Date Collected: 7/26/2012 09:04 Matrix: Solid

Sample ID: **FTSW-AA-SO-03 DUP** Date Received: 7/27/2012 09:20

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.093U	mg/kg		0.19	0.093	0.050	SW846 8330B	8/7/12	8/9/12 04:18	AJL	A31
4-Amino-2,6-dinitrotoluene	0.093U	mg/kg		0.19	0.093	0.050	SW846 8330B	8/7/12	8/9/12 04:18	AJL	A31
3,5-Dinitroaniline	0.093U	mg/kg		0.19	0.093	0.050	SW846 8330B	8/7/12	8/9/12 04:18	AJL	A31
1,3-Dinitrobenzene	0.093U	mg/kg		0.19	0.093	0.028	SW846 8330B	8/7/12	8/9/12 04:18	AJL	A31
2,4-Dinitrotoluene	0.093U	mg/kg		0.19	0.093	0.054	SW846 8330B	8/7/12	8/9/12 04:18	AJL	A31
2,6-Dinitrotoluene	0.093U	mg/kg		0.19	0.093	0.058	SW846 8330B	8/7/12	8/9/12 04:18	AJL	A31
HMX	0.093U	mg/kg		0.19	0.093	0.078	SW846 8330B	8/7/12	8/9/12 04:18	AJL	A31
Nitrobenzene	0.093U	mg/kg		0.19	0.093	0.073	SW846 8330B	8/7/12	8/9/12 04:18	AJL	A31
Nitroglycerin	0.93U	mg/kg		1.1	0.93	0.33	SW846 8330B	8/7/12	8/9/12 04:18	AJL	A31
4-Nitrotoluene	0.093U	mg/kg		0.19	0.093	0.061	SW846 8330B	8/7/12	8/9/12 04:18	AJL	A31
2-Nitrotoluene	0.093U	mg/kg		0.19	0.093	0.053	SW846 8330B	8/7/12	8/9/12 04:18	AJL	A31
3-Nitrotoluene	0.093U	mg/kg		0.19	0.093	0.057	SW846 8330B	8/7/12	8/9/12 04:18	AJL	A31
PETN	0.93U	mg/kg		1.1	0.93	0.49	SW846 8330B	8/7/12	8/9/12 04:18	AJL	A31
RDX	0.093U	mg/kg		0.19	0.093	0.023	SW846 8330B	8/7/12	8/9/12 04:18	AJL	A31
Tetryl	0.093U	mg/kg		0.19	0.093	0.070	SW846 8330B	8/7/12	8/9/12 04:18	AJL	A31
1,3,5-Trinitrobenzene	0.093U	mg/kg		0.19	0.093	0.065	SW846 8330B	8/7/12	8/9/12 04:18	AJL	A31
2,4,6-Trinitrotoluene	0.093U	mg/kg		0.19	0.093	0.033	SW846 8330B	8/7/12	8/9/12 04:18	AJL	A31
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	89.7	%		50-150			SW846 8330B	8/7/12	8/9/12 04:18	AJL	A31
1,4-Dinitrobenzene (S)	99.7	%		50-150			SW846 8330B	8/7/12	8/9/12 04:18	AJL	A31
WET CHEMISTRY											
Moisture	4.7	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
Total Solids	95.3	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
METALS											
Aluminum, Total	4370	mg/kg		35.6	23.6	11.6	SW846 6020A	7/31/12	8/7/12 11:25	MWO	A2
Copper, Total	3.2	mg/kg		2.2	1.5	0.71	SW846 6020A	7/31/12	8/7/12 11:25	MWO	A2
Lead, Total	3.5	mg/kg		0.89	0.58	0.29	SW846 6020A	7/31/12	8/7/12 11:25	MWO	A2
Zinc, Total	7.6	mg/kg		2.2	1.5	0.71	SW846 6020A	7/31/12	8/7/12 11:25	MWO	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID:	**9980109012**	Date Collected:	7/26/2012 09:04	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-03 DUP**	Date Received:	7/27/2012 09:20		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID: **9980109013** Date Collected: 7/26/2012 09:17 Matrix: Solid

Sample ID: **FTSW-AA-SO-04 [01.5]** Date Received: 7/27/2012 09:20

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.097U	mg/kg		0.19	0.097	0.051	SW846 8330B	8/7/12	8/9/12 05:02	AJL	A31
4-Amino-2,6-dinitrotoluene	0.097U	mg/kg		0.19	0.097	0.052	SW846 8330B	8/7/12	8/9/12 05:02	AJL	A31
3,5-Dinitroaniline	0.097U	mg/kg		0.19	0.097	0.051	SW846 8330B	8/7/12	8/9/12 05:02	AJL	A31
1,3-Dinitrobenzene	0.097U	mg/kg		0.19	0.097	0.029	SW846 8330B	8/7/12	8/9/12 05:02	AJL	A31
2,4-Dinitrotoluene	0.097U	mg/kg		0.19	0.097	0.056	SW846 8330B	8/7/12	8/9/12 05:02	AJL	A31
2,6-Dinitrotoluene	0.097U	mg/kg		0.19	0.097	0.060	SW846 8330B	8/7/12	8/9/12 05:02	AJL	A31
HMX	0.097U	mg/kg		0.19	0.097	0.081	SW846 8330B	8/7/12	8/9/12 05:02	AJL	A31
Nitrobenzene	0.097U	mg/kg		0.19	0.097	0.076	SW846 8330B	8/7/12	8/9/12 05:02	AJL	A31
Nitroglycerin	0.97U	mg/kg		1.2	0.97	0.34	SW846 8330B	8/7/12	8/9/12 05:02	AJL	A31
4-Nitrotoluene	0.097U	mg/kg		0.19	0.097	0.063	SW846 8330B	8/7/12	8/9/12 05:02	AJL	A31
2-Nitrotoluene	0.097U	mg/kg		0.19	0.097	0.055	SW846 8330B	8/7/12	8/9/12 05:02	AJL	A31
3-Nitrotoluene	0.097U	mg/kg		0.19	0.097	0.059	SW846 8330B	8/7/12	8/9/12 05:02	AJL	A31
PETN	0.97U	mg/kg		1.2	0.97	0.50	SW846 8330B	8/7/12	8/9/12 05:02	AJL	A31
RDX	0.097U	mg/kg		0.19	0.097	0.024	SW846 8330B	8/7/12	8/9/12 05:02	AJL	A31
Tetryl	0.097U	mg/kg		0.19	0.097	0.073	SW846 8330B	8/7/12	8/9/12 05:02	AJL	A31
1,3,5-Trinitrobenzene	0.097U	mg/kg		0.19	0.097	0.068	SW846 8330B	8/7/12	8/9/12 05:02	AJL	A31
2,4,6-Trinitrotoluene	0.097U	mg/kg		0.19	0.097	0.034	SW846 8330B	8/7/12	8/9/12 05:02	AJL	A31
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	90.6	%		50-150			SW846 8330B	8/7/12	8/9/12 05:02	AJL	A31
1,4-Dinitrobenzene (S)	99.6	%		50-150			SW846 8330B	8/7/12	8/9/12 05:02	AJL	A31
WET CHEMISTRY											
Moisture	15.1	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
Total Solids	84.9	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
METALS											
Aluminum, Total	20200	mg/kg		40.6	26.9	13.2	SW846 6020A	7/31/12	8/7/12 11:29	MWO	A2
Copper, Total	1.7U	mg/kg		2.5	1.7	0.81	SW846 6020A	7/31/12	8/7/12 11:29	MWO	A2
Lead, Total	7.2	mg/kg		1.0	0.66	0.33	SW846 6020A	7/31/12	8/7/12 11:29	MWO	A2
Zinc, Total	5.4	mg/kg		2.5	1.7	0.81	SW846 6020A	7/31/12	8/7/12 11:29	MWO	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID: **9980109013** Date Collected: 7/26/2012 09:17 Matrix: Solid

Sample ID: **FTSW-AA-SO-04 [01.5]** Date Received: 7/27/2012 09:20

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID: **9980109014** Date Collected: 7/26/2012 09:57 Matrix: Solid

Sample ID: **FTSW-AA-SO-05** Date Received: 7/27/2012 09:20

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.094U	mg/kg		0.19	0.094	0.050	SW846 8330B	8/7/12	8/9/12 05:46	AJL	A31
4-Amino-2,6-dinitrotoluene	0.094U	mg/kg		0.19	0.094	0.051	SW846 8330B	8/7/12	8/9/12 05:46	AJL	A31
3,5-Dinitroaniline	0.094U	mg/kg		0.19	0.094	0.050	SW846 8330B	8/7/12	8/9/12 05:46	AJL	A31
1,3-Dinitrobenzene	0.094U	mg/kg		0.19	0.094	0.028	SW846 8330B	8/7/12	8/9/12 05:46	AJL	A31
2,4-Dinitrotoluene	0.094U	mg/kg		0.19	0.094	0.055	SW846 8330B	8/7/12	8/9/12 05:46	AJL	A31
2,6-Dinitrotoluene	0.094U	mg/kg		0.19	0.094	0.058	SW846 8330B	8/7/12	8/9/12 05:46	AJL	A31
HMX	0.094U	mg/kg		0.19	0.094	0.078	SW846 8330B	8/7/12	8/9/12 05:46	AJL	A31
Nitrobenzene	0.094U	mg/kg		0.19	0.094	0.074	SW846 8330B	8/7/12	8/9/12 05:46	AJL	A31
Nitroglycerin	0.94U	mg/kg		1.1	0.94	0.33	SW846 8330B	8/7/12	8/9/12 05:46	AJL	A31
4-Nitrotoluene	0.094U	mg/kg		0.19	0.094	0.061	SW846 8330B	8/7/12	8/9/12 05:46	AJL	A31
2-Nitrotoluene	0.094U	mg/kg		0.19	0.094	0.054	SW846 8330B	8/7/12	8/9/12 05:46	AJL	A31
3-Nitrotoluene	0.094U	mg/kg		0.19	0.094	0.058	SW846 8330B	8/7/12	8/9/12 05:46	AJL	A31
PETN	0.94U	mg/kg		1.1	0.94	0.49	SW846 8330B	8/7/12	8/9/12 05:46	AJL	A31
RDX	0.094U	mg/kg		0.19	0.094	0.024	SW846 8330B	8/7/12	8/9/12 05:46	AJL	A31
Tetryl	0.094U	mg/kg		0.19	0.094	0.071	SW846 8330B	8/7/12	8/9/12 05:46	AJL	A31
1,3,5-Trinitrobenzene	0.094U	mg/kg		0.19	0.094	0.066	SW846 8330B	8/7/12	8/9/12 05:46	AJL	A31
2,4,6-Trinitrotoluene	0.094U	mg/kg		0.19	0.094	0.033	SW846 8330B	8/7/12	8/9/12 05:46	AJL	A31
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	89.1	%		50-150			SW846 8330B	8/7/12	8/9/12 05:46	AJL	A31
1,4-Dinitrobenzene (S)	97.3	%		50-150			SW846 8330B	8/7/12	8/9/12 05:46	AJL	A31
WET CHEMISTRY											
Moisture	16.5	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
Total Solids	83.5	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
METALS											
Aluminum, Total	4440	mg/kg		41.3	27.4	13.4	SW846 6020A	7/31/12	8/7/12 11:45	MWO	A2
Copper, Total	1.5J	mg/kg		2.6	1.7	0.83	SW846 6020A	7/31/12	8/7/12 11:45	MWO	A2
Lead, Total	4.4	mg/kg		1.0	0.67	0.34	SW846 6020A	7/31/12	8/7/12 11:45	MWO	A2
Zinc, Total	9.0	mg/kg		2.6	1.7	0.83	SW846 6020A	7/31/12	8/7/12 11:45	MWO	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID:	**9980109014**	Date Collected:	7/26/2012 09:57	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-05**	Date Received:	7/27/2012 09:20		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID: **9980109015** Date Collected: 7/26/2012 10:33 Matrix: Solid

Sample ID: **FTSW-AA-SO-07** Date Received: 7/27/2012 09:20

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.093U	mg/kg		0.19	0.093	0.049	SW846 8330B	8/7/12	8/9/12 06:30	AJL	A31
4-Amino-2,6-dinitrotoluene	0.093U	mg/kg		0.19	0.093	0.050	SW846 8330B	8/7/12	8/9/12 06:30	AJL	A31
3,5-Dinitroaniline	0.093U	mg/kg		0.19	0.093	0.049	SW846 8330B	8/7/12	8/9/12 06:30	AJL	A31
1,3-Dinitrobenzene	0.093U	mg/kg		0.19	0.093	0.028	SW846 8330B	8/7/12	8/9/12 06:30	AJL	A31
2,4-Dinitrotoluene	0.093U	mg/kg		0.19	0.093	0.054	SW846 8330B	8/7/12	8/9/12 06:30	AJL	A31
2,6-Dinitrotoluene	0.093U	mg/kg		0.19	0.093	0.057	SW846 8330B	8/7/12	8/9/12 06:30	AJL	A31
HMX	0.093U	mg/kg		0.19	0.093	0.077	SW846 8330B	8/7/12	8/9/12 06:30	AJL	A31
Nitrobenzene	0.093U	mg/kg		0.19	0.093	0.072	SW846 8330B	8/7/12	8/9/12 06:30	AJL	A31
Nitroglycerin	0.93U	mg/kg		1.1	0.93	0.32	SW846 8330B	8/7/12	8/9/12 06:30	AJL	A31
4-Nitrotoluene	0.093U	mg/kg		0.19	0.093	0.060	SW846 8330B	8/7/12	8/9/12 06:30	AJL	A31
2-Nitrotoluene	0.093U	mg/kg		0.19	0.093	0.053	SW846 8330B	8/7/12	8/9/12 06:30	AJL	A31
3-Nitrotoluene	0.093U	mg/kg		0.19	0.093	0.056	SW846 8330B	8/7/12	8/9/12 06:30	AJL	A31
PETN	0.93U	mg/kg		1.1	0.93	0.48	SW846 8330B	8/7/12	8/9/12 06:30	AJL	A31
RDX	0.093U	mg/kg		0.19	0.093	0.023	SW846 8330B	8/7/12	8/9/12 06:30	AJL	A31
Tetryl	0.093U	mg/kg		0.19	0.093	0.069	SW846 8330B	8/7/12	8/9/12 06:30	AJL	A31
1,3,5-Trinitrobenzene	0.093U	mg/kg		0.19	0.093	0.065	SW846 8330B	8/7/12	8/9/12 06:30	AJL	A31
2,4,6-Trinitrotoluene	0.093U	mg/kg		0.19	0.093	0.032	SW846 8330B	8/7/12	8/9/12 06:30	AJL	A31
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	89.3	%		50-150			SW846 8330B	8/7/12	8/9/12 06:30	AJL	A31
1,4-Dinitrobenzene (S)	99.2	%		50-150			SW846 8330B	8/7/12	8/9/12 06:30	AJL	A31
WET CHEMISTRY											
Moisture	6.1	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
Total Solids	93.9	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
METALS											
Aluminum, Total	4050	mg/kg		38.1	25.2	12.4	SW846 6020A	7/31/12	8/7/12 11:49	MWO	A2
Copper, Total	4.6	mg/kg		2.4	1.6	0.76	SW846 6020A	7/31/12	8/7/12 11:49	MWO	A2
Lead, Total	3.3	mg/kg		0.95	0.62	0.31	SW846 6020A	7/31/12	8/7/12 11:49	MWO	A2
Zinc, Total	10.4	mg/kg		2.4	1.6	0.76	SW846 6020A	7/31/12	8/7/12 11:49	MWO	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID:	**9980109015**	Date Collected:	7/26/2012 10:33	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-07**	Date Received:	7/27/2012 09:20		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID: **9980109016** Date Collected: 7/26/2012 10:02 Matrix: Solid

Sample ID: **FTSW-AA-SO-06 [01.5]** Date Received: 7/27/2012 09:20

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.095U	mg/kg		0.19	0.095	0.050	SW846 8330B	8/7/12	8/9/12 07:14	AJL	A31
4-Amino-2,6-dinitrotoluene	0.095U	mg/kg		0.19	0.095	0.051	SW846 8330B	8/7/12	8/9/12 07:14	AJL	A31
3,5-Dinitroaniline	0.095U	mg/kg		0.19	0.095	0.050	SW846 8330B	8/7/12	8/9/12 07:14	AJL	A31
1,3-Dinitrobenzene	0.095U	mg/kg		0.19	0.095	0.029	SW846 8330B	8/7/12	8/9/12 07:14	AJL	A31
2,4-Dinitrotoluene	0.095U	mg/kg		0.19	0.095	0.055	SW846 8330B	8/7/12	8/9/12 07:14	AJL	A31
2,6-Dinitrotoluene	0.095U	mg/kg		0.19	0.095	0.059	SW846 8330B	8/7/12	8/9/12 07:14	AJL	A31
HMX	0.095U	mg/kg		0.19	0.095	0.079	SW846 8330B	8/7/12	8/9/12 07:14	AJL	A31
Nitrobenzene	0.095U	mg/kg		0.19	0.095	0.074	SW846 8330B	8/7/12	8/9/12 07:14	AJL	A31
Nitroglycerin	0.95U	mg/kg		1.1	0.95	0.33	SW846 8330B	8/7/12	8/9/12 07:14	AJL	A31
4-Nitrotoluene	0.095U	mg/kg		0.19	0.095	0.062	SW846 8330B	8/7/12	8/9/12 07:14	AJL	A31
2-Nitrotoluene	0.095U	mg/kg		0.19	0.095	0.054	SW846 8330B	8/7/12	8/9/12 07:14	AJL	A31
3-Nitrotoluene	0.095U	mg/kg		0.19	0.095	0.058	SW846 8330B	8/7/12	8/9/12 07:14	AJL	A31
PETN	0.95U	mg/kg		1.1	0.95	0.50	SW846 8330B	8/7/12	8/9/12 07:14	AJL	A31
RDX	0.095U	mg/kg		0.19	0.095	0.024	SW846 8330B	8/7/12	8/9/12 07:14	AJL	A31
Tetryl	0.095U	mg/kg		0.19	0.095	0.071	SW846 8330B	8/7/12	8/9/12 07:14	AJL	A31
1,3,5-Trinitrobenzene	0.095U	mg/kg		0.19	0.095	0.067	SW846 8330B	8/7/12	8/9/12 07:14	AJL	A31
2,4,6-Trinitrotoluene	0.095U	mg/kg		0.19	0.095	0.033	SW846 8330B	8/7/12	8/9/12 07:14	AJL	A31
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	89.7	%		50-150			SW846 8330B	8/7/12	8/9/12 07:14	AJL	A31
1,4-Dinitrobenzene (S)	99.2	%		50-150			SW846 8330B	8/7/12	8/9/12 07:14	AJL	A31
WET CHEMISTRY											
Moisture	19.8	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
Total Solids	80.2	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
METALS											
Aluminum, Total	4560	mg/kg		43.0	28.5	14.0	SW846 6020A	7/31/12	8/7/12 11:53	MWO	A2
Copper, Total	1.8U	mg/kg		2.7	1.8	0.86	SW846 6020A	7/31/12	8/7/12 11:53	MWO	A2
Lead, Total	3.7	mg/kg		1.1	0.70	0.35	SW846 6020A	7/31/12	8/7/12 11:53	MWO	A2
Zinc, Total	1.7J	mg/kg		2.7	1.8	0.86	SW846 6020A	7/31/12	8/7/12 11:53	MWO	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID:	**9980109016**	Date Collected:	7/26/2012 10:02	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-06 [01.5]**	Date Received:	7/27/2012 09:20		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID: **9980109017** Date Collected: 7/26/2012 10:41 Matrix: Solid

Sample ID: **FTSW-AA-SO-08 [02]** Date Received: 7/27/2012 09:20

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.097U	mg/kg		0.19	0.097	0.051	SW846 8330B	8/8/12	8/9/12 13:36	AJL	A31
4-Amino-2,6-dinitrotoluene	0.097U	mg/kg		0.19	0.097	0.052	SW846 8330B	8/8/12	8/9/12 13:36	AJL	A31
3,5-Dinitroaniline	0.097U	mg/kg		0.19	0.097	0.051	SW846 8330B	8/8/12	8/9/12 13:36	AJL	A31
1,3-Dinitrobenzene	0.097U	mg/kg		0.19	0.097	0.029	SW846 8330B	8/8/12	8/9/12 13:36	AJL	A31
2,4-Dinitrotoluene	0.097U	mg/kg		0.19	0.097	0.056	SW846 8330B	8/8/12	8/9/12 13:36	AJL	A31
2,6-Dinitrotoluene	0.097U	mg/kg		0.19	0.097	0.060	SW846 8330B	8/8/12	8/9/12 13:36	AJL	A31
HMX	0.097U	mg/kg		0.19	0.097	0.081	SW846 8330B	8/8/12	8/9/12 13:36	AJL	A31
Nitrobenzene	0.097U	mg/kg		0.19	0.097	0.076	SW846 8330B	8/8/12	8/9/12 13:36	AJL	A31
Nitroglycerin	0.97U	mg/kg		1.2	0.97	0.34	SW846 8330B	8/8/12	8/9/12 13:36	AJL	A31
4-Nitrotoluene	0.097U	mg/kg		0.19	0.097	0.063	SW846 8330B	8/8/12	8/9/12 13:36	AJL	A31
2-Nitrotoluene	0.097U	mg/kg		0.19	0.097	0.055	SW846 8330B	8/8/12	8/9/12 13:36	AJL	A31
3-Nitrotoluene	0.097U	mg/kg		0.19	0.097	0.059	SW846 8330B	8/8/12	8/9/12 13:36	AJL	A31
PETN	0.97U	mg/kg		1.2	0.97	0.50	SW846 8330B	8/8/12	8/9/12 13:36	AJL	A31
RDX	0.097U	mg/kg		0.19	0.097	0.024	SW846 8330B	8/8/12	8/9/12 13:36	AJL	A31
Tetryl	0.097U	mg/kg		0.19	0.097	0.073	SW846 8330B	8/8/12	8/9/12 13:36	AJL	A31
1,3,5-Trinitrobenzene	0.097U	mg/kg		0.19	0.097	0.068	SW846 8330B	8/8/12	8/9/12 13:36	AJL	A31
2,4,6-Trinitrotoluene	0.097U	mg/kg		0.19	0.097	0.034	SW846 8330B	8/8/12	8/9/12 13:36	AJL	A31
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	95.3	%		50-150			SW846 8330B	8/8/12	8/9/12 13:36	AJL	A31
1,4-Dinitrobenzene (S)	105	%		50-150			SW846 8330B	8/8/12	8/9/12 13:36	AJL	A31
WET CHEMISTRY											
Moisture	22.0	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
Total Solids	78.0	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
METALS											
Aluminum, Total	20600	mg/kg		47.5	31.5	15.4	SW846 6020A	7/31/12	8/7/12 11:57	MWO	A2
Copper, Total	2.0U	mg/kg		3.0	2.0	0.95	SW846 6020A	7/31/12	8/7/12 11:57	MWO	A2
Lead, Total	7.3	mg/kg		1.2	0.77	0.39	SW846 6020A	7/31/12	8/7/12 11:57	MWO	A2
Zinc, Total	4.5	mg/kg		3.0	2.0	0.95	SW846 6020A	7/31/12	8/7/12 11:57	MWO	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID:	**9980109017**	Date Collected:	7/26/2012 10:41	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-08 [02]**	Date Received:	7/27/2012 09:20		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

Anna G Milliken
Technical Manager

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID: **9980109018** Date Collected: 7/26/2012 10:43 Matrix: Solid

Sample ID: **FTSW-AA-SO-08 [02] DUP** Date Received: 7/27/2012 09:20

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.094U	mg/kg		0.19	0.094	0.050	SW846 8330B	8/7/12	8/9/12 07:58	AJL	A31
4-Amino-2,6-dinitrotoluene	0.094U	mg/kg		0.19	0.094	0.051	SW846 8330B	8/7/12	8/9/12 07:58	AJL	A31
3,5-Dinitroaniline	0.094U	mg/kg		0.19	0.094	0.050	SW846 8330B	8/7/12	8/9/12 07:58	AJL	A31
1,3-Dinitrobenzene	0.094U	mg/kg		0.19	0.094	0.028	SW846 8330B	8/7/12	8/9/12 07:58	AJL	A31
2,4-Dinitrotoluene	0.094U	mg/kg		0.19	0.094	0.055	SW846 8330B	8/7/12	8/9/12 07:58	AJL	A31
2,6-Dinitrotoluene	0.094U	mg/kg		0.19	0.094	0.058	SW846 8330B	8/7/12	8/9/12 07:58	AJL	A31
HMX	0.094U	mg/kg		0.19	0.094	0.078	SW846 8330B	8/7/12	8/9/12 07:58	AJL	A31
Nitrobenzene	0.094U	mg/kg		0.19	0.094	0.074	SW846 8330B	8/7/12	8/9/12 07:58	AJL	A31
Nitroglycerin	0.94U	mg/kg		1.1	0.94	0.33	SW846 8330B	8/7/12	8/9/12 07:58	AJL	A31
4-Nitrotoluene	0.094U	mg/kg		0.19	0.094	0.061	SW846 8330B	8/7/12	8/9/12 07:58	AJL	A31
2-Nitrotoluene	0.094U	mg/kg		0.19	0.094	0.054	SW846 8330B	8/7/12	8/9/12 07:58	AJL	A31
3-Nitrotoluene	0.094U	mg/kg		0.19	0.094	0.058	SW846 8330B	8/7/12	8/9/12 07:58	AJL	A31
PETN	0.94U	mg/kg		1.1	0.94	0.49	SW846 8330B	8/7/12	8/9/12 07:58	AJL	A31
RDX	0.094U	mg/kg		0.19	0.094	0.024	SW846 8330B	8/7/12	8/9/12 07:58	AJL	A31
Tetryl	0.094U	mg/kg		0.19	0.094	0.071	SW846 8330B	8/7/12	8/9/12 07:58	AJL	A31
1,3,5-Trinitrobenzene	0.094U	mg/kg		0.19	0.094	0.066	SW846 8330B	8/7/12	8/9/12 07:58	AJL	A31
2,4,6-Trinitrotoluene	0.094U	mg/kg		0.19	0.094	0.033	SW846 8330B	8/7/12	8/9/12 07:58	AJL	A31
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	95.3	%		50-150			SW846 8330B	8/7/12	8/9/12 07:58	AJL	A31
1,4-Dinitrobenzene (S)	106	%		50-150			SW846 8330B	8/7/12	8/9/12 07:58	AJL	A31
WET CHEMISTRY											
Moisture	20.5	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
Total Solids	79.5	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
METALS											
Aluminum, Total	30200	mg/kg		49.3	32.7	16.0	SW846 6020A	7/31/12	8/7/12 12:12	MWO	A2
Copper, Total	2.0U	mg/kg		3.1	2.0	0.99	SW846 6020A	7/31/12	8/7/12 12:12	MWO	A2
Lead, Total	6.9	mg/kg		1.2	0.80	0.41	SW846 6020A	7/31/12	8/7/12 12:12	MWO	A2
Zinc, Total	5.3	mg/kg		3.1	2.0	0.99	SW846 6020A	7/31/12	8/7/12 12:12	MWO	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID:	**9980109018**	Date Collected:	7/26/2012 10:43	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-08 [02] DUP**	Date Received:	7/27/2012 09:20		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID: **9980109019** Date Collected: 7/26/2012 11:45 Matrix: Solid

Sample ID: **FTSW-AA-SO-09** Date Received: 7/27/2012 09:20

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
EXPLOSIVES											
2-Amino-4,6-Dinitrotoluene	0.099U	mg/kg		0.20	0.099	0.052	SW846 8330B	8/7/12	8/9/12 08:42	AJL	A31
4-Amino-2,6-dinitrotoluene	0.099U	mg/kg		0.20	0.099	0.053	SW846 8330B	8/7/12	8/9/12 08:42	AJL	A31
3,5-Dinitroaniline	0.099U	mg/kg		0.20	0.099	0.052	SW846 8330B	8/7/12	8/9/12 08:42	AJL	A31
1,3-Dinitrobenzene	0.099U	mg/kg		0.20	0.099	0.030	SW846 8330B	8/7/12	8/9/12 08:42	AJL	A31
2,4-Dinitrotoluene	0.099U	mg/kg		0.20	0.099	0.057	SW846 8330B	8/7/12	8/9/12 08:42	AJL	A31
2,6-Dinitrotoluene	0.099U	mg/kg		0.20	0.099	0.061	SW846 8330B	8/7/12	8/9/12 08:42	AJL	A31
HMX	0.099U	mg/kg		0.20	0.099	0.082	SW846 8330B	8/7/12	8/9/12 08:42	AJL	A31
Nitrobenzene	0.099U	mg/kg		0.20	0.099	0.077	SW846 8330B	8/7/12	8/9/12 08:42	AJL	A31
Nitroglycerin	0.99U	mg/kg		1.2	0.99	0.35	SW846 8330B	8/7/12	8/9/12 08:42	AJL	A31
4-Nitrotoluene	0.099U	mg/kg		0.20	0.099	0.064	SW846 8330B	8/7/12	8/9/12 08:42	AJL	A31
2-Nitrotoluene	0.099U	mg/kg		0.20	0.099	0.056	SW846 8330B	8/7/12	8/9/12 08:42	AJL	A31
3-Nitrotoluene	0.099U	mg/kg		0.20	0.099	0.060	SW846 8330B	8/7/12	8/9/12 08:42	AJL	A31
PETN	0.99U	mg/kg		1.2	0.99	0.51	SW846 8330B	8/7/12	8/9/12 08:42	AJL	A31
RDX	0.099U	mg/kg		0.20	0.099	0.025	SW846 8330B	8/7/12	8/9/12 08:42	AJL	A31
Tetryl	0.099U	mg/kg		0.20	0.099	0.074	SW846 8330B	8/7/12	8/9/12 08:42	AJL	A31
1,3,5-Trinitrobenzene	0.099U	mg/kg		0.20	0.099	0.069	SW846 8330B	8/7/12	8/9/12 08:42	AJL	A31
2,4,6-Trinitrotoluene	0.099U	mg/kg		0.20	0.099	0.035	SW846 8330B	8/7/12	8/9/12 08:42	AJL	A31
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,4-Dinitrobenzene (S)	89.1	%		50-150			SW846 8330B	8/7/12	8/9/12 08:42	AJL	A31
1,4-Dinitrobenzene (S)	96.3	%		50-150			SW846 8330B	8/7/12	8/9/12 08:42	AJL	A31
WET CHEMISTRY											
Moisture	27.2	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
Total Solids	72.8	%		0.1	0.1	0.01	SM20-2540 G		7/28/12 09:35	KED	A
METALS											
Aluminum, Total	2090	mg/kg		49.0	32.5	15.9	SW846 6020A	7/31/12	8/7/12 12:16	MWO	A2
Copper, Total	2.0U	mg/kg		3.1	2.0	0.98	SW846 6020A	7/31/12	8/7/12 12:16	MWO	A2
Lead, Total	2.9	mg/kg		1.2	0.80	0.40	SW846 6020A	7/31/12	8/7/12 12:16	MWO	A2
Zinc, Total	3.1	mg/kg		3.1	2.0	0.98	SW846 6020A	7/31/12	8/7/12 12:16	MWO	A2

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980109 ERT001|Ft. Stewart 3153-004

Lab ID:	**9980109019**	Date Collected:	7/26/2012 11:45	Matrix:	Solid
Sample ID:	**FTSW-AA-SO-09**	Date Received:	7/27/2012 09:20		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

Anna G Milliken
Technical Manager

Explosives in Water by 8330B Summary Forms

2E

SURROGATE RECOVERY

b Name: ALS - Middletown Contract:

b Code: PA010 CASE No.: SAS No.: SDG No.: ERT-001

Column (1): E1, 254nm GC Column (2):

	CLIENT SAMPLE NO.	SURR1 % REC	#	SURR2 % REC	#	TOT OUT
1	1018213(MB)	108				0
2	1018214(LCS)	109				0
3	FTSW-AA-SO-10[02] E	90.8				0
4	9980109002MS	91.9				0
5	9980109002MSD	92.5				0

	QC LIMITS
1,4-Dinitrobenzene	(50-150)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate Diluted Out

2E
SURROGATE RECOVERY

Name: ALS - Middletown Contract:

Code: PA010 CASE No.: SAS No.: SDG No.: ERT-001

Column (1): E1, 218nm GC Column (2):

CLIENT SAMPLE NO.	SURR1 % REC #	SURR2 % REC #	TOT OUT
1018213(MB)	104		0
1020409(LCS)	112		0
FTSW-AA-SO-10[02] E	82.8		0

	QC LIMITS
1,4-Dinitrobenzene	(50-150)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate Diluted Out

3E

WATER LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

LCS - Sample No.: ICV111411 Column ID: E1, 254nm

COMPOUND	SPIKE ADDED ug/L	ICV CONCENTRATION ug/L	ICV % REC#	QC LIMITS REC
2-Amino-4,6-dinitrotoluene	1.0	0.90	89.6	(80-120)
4-Amino-2,6-dinitrotoluene	1.0	0.87	87.3	(80-120)
1,3-Dinitrobenzene	1.0	0.83	83.2	(80-120)
2,4-Dinitrotoluene	1.0	0.85	84.8	(80-120)
2,6-Dinitrotoluene	1.0	0.90	89.8	(80-120)
HMX	1.0	0.89	88.6	(80-120)
Nitrobenzene	1.0	0.89	88.5	(80-120)
4-Nitrotoluene	1.0	0.97	97.0	(80-120)
2-Nitrotoluene	1.0	0.91	91.2	(80-120)
3-Nitrotoluene	1.0	0.94	93.9	(80-120)
RDX	1.0	0.86	86.4	(80-120)
Tetryl	1.0	0.89	89.4	(80-120)
1,3,5-Trinitrobenzene	1.0	0.90	89.5	(80-120)
2,4,6-Trinitrotoluene	1.0	0.82	81.9	(80-120)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 14 outside limits

3E

WATER LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

LCS - Sample No.: ICV112011 Column ID: E1, 218nm

COMPOUND	SPIKE ADDED ug/L	ICV CONCENTRATION ug/L	ICV % REC#	QC LIMITS REC
3,5-Dinitroaniline	1.0	1.0	102	(80-120)
Nitroglycerin	5.0	5.6	111	(80-120)
PETN	5.0	4.9	99.0	(80-120)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 3 outside limits

3E

WATER LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

LCS - Sample No.: 1018214 Column ID: E1, 254nm

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC#	QC LIMITS REC
2-Amino-4,6-dinitrotoluene	1.0	1.0	102	(50-155)
4-Amino-2,6-dinitrotoluene	1.0	1.0	103	(55-155)
1,3-Dinitrobenzene	1.0	1.1	112	(45-160)
2,4-Dinitrotoluene	1.0	1.0	104	(60-135)
2,6-Dinitrotoluene	1.0	1.0	101	(60-135)
HMX	1.0	1.0	101	(80-115)
Nitrobenzene	1.0	1.1	105	(50-140)
4-Nitrotoluene	1.0	1.1	106	(50-130)
2-Nitrotoluene	1.0	0.98	98.2	(45-135)
3-Nitrotoluene	1.0	1.0	104	(50-130)
RDX	1.0	1.1	107	(50-160)
Tetryl	1.0	0.99	98.6	(20-175)
1,3,5-Trinitrobenzene	1.0	1.0	105	(65-140)
2,4,6-Trinitrotoluene	1.0	1.1	108	(50-145)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 14 outside limits

3E

WATER LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.:ERT-001

LCS - Sample No.: 1020409 Column ID: E1, 218nm

COMPOUND	SPIKE ADDED ug/L	LCS CONCENTRATION ug/L	LCS % REC#	QC LIMITS REC
3,5-Dinitroaniline	1.0	1.0	101	(70-130)
Nitroglycerin	5.0	5.3	106	(70-130)
PETN	5.0	4.9	97.8	(70-130)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 3 outside limits

WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

MS/MSD - Client Sample No.: 9980109002MS

Column ID: E1, 254nm

Sample wt/vol: 1040 (g/mL) ML Concentrated Extract Volume: 10000

Instrument ID: hpl1.i Batch Number: 3166 Operator: AJL

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC#	QC LIMITS REC
2-Amino-4,6-dinitrotol	0.96	0	0.86	89.0	(50-155)
4-Amino-2,6-dinitrotol	0.96	0	0.88	91.6	(55-155)
1,3-Dinitrobenzene	0.96	0	0.88	91.4	(45-160)
2,4-Dinitrotoluene	0.96	0	0.82	85.6	(60-135)
2,6-Dinitrotoluene	0.96	0	0.80	83.5	(60-135)
HMX	0.96	0	0.81	84.4	(80-115)
Nitrobenzene	0.96	0	0.83	86.8	(50-140)
4-Nitrotoluene	0.96	0	0.80	83.7	(50-130)
2-Nitrotoluene	0.96	0	0.87	90.5	(45-135)
3-Nitrotoluene	0.96	0	0.79	81.9	(50-130)
RDX	0.96	0	0.80	83.5	(50-160)
Tetryl	0.96	0	0.76	78.6	(20-175)
1,3,5-Trinitrobenzene	0.96	0	0.84	87.0	(65-140)
2,4,6-Trinitrotoluene	0.96	0	0.84	87.1	(50-145)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 14 outside limits

3E

WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

MS/MSD - Client Sample No.: 9980109002MSD

Column ID: E1, 254nm

Sample wt/vol: 1050 (g/mL) ML Concentrated Extract Volume: 10000

Instrument ID: hpl1.i Batch Number: 3166 Operator: AJL

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	#	MSD % RPD	#	QC LIMITS RPD	QC LIMITS REC
2-Amino-4,6-dinitrotol	0.95	0.85	88.9		1		20	(50-155)
4-Amino-2,6-dinitrotol	0.95	0.88	92.1		0		20	(55-155)
1,3-Dinitrobenzene	0.95	0.90	94.1		2		20	(45-160)
2,4-Dinitrotoluene	0.95	0.83	87.3		1		20	(60-135)
2,6-Dinitrotoluene	0.95	0.83	87.5		4		20	(60-135)
HMX	0.95	0.80	83.9		2		20	(80-115)
Nitrobenzene	0.95	0.88	92.7		6		20	(50-140)
4-Nitrotoluene	0.95	0.97	102		19		20	(50-130)
2-Nitrotoluene	0.95	0.77	81.0		12		20	(45-135)
3-Nitrotoluene	0.95	0.84	88.4		7		20	(50-130)
RDX	0.95	0.88	92.6		9		20	(50-160)
Tetryl	0.95	0.81	85.4		7		20	(20-175)
1,3,5-Trinitrobenzene	0.95	0.84	88.4		1		20	(65-140)
2,4,6-Trinitrotoluene	0.95	0.87	91.4		4		20	(50-145)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 14 outside limits

Spike Recovery: 0 out of 14 outside limits

4C

METHOD BLANK SUMMARY

SAMPLE NO.

1018213

ıb Name: ALS - Middletown Contract:

ıb Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

ıb Sample ID: 1018213 Lab File ID (1): ZH2B003A.d Lab File ID (2):

ıtrix: (soil/water) WATER Extraction: (Type) SPE

ılfur Cleanup: (Y/N) N Date Extracted: 8/2/2012

ıte Analyzed (1): 8/2/2012 Date Analyzed (2):

ıme Analyzed (1): 19:08 Time Analyzed (2):

ıstrument ID (1): hpl1.i Instrument ID (2):

: Column (1): E1, 254nm GC Column (2):

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
1018214(LCS)	1018214	ZH2B004A.d	8/2/2012	
FTSW-AA-SO-10[02] E	9980109002	ZH2B009.d	8/2/2012	
9980109002MS	1018216	ZH2B010.d	8/3/2012	
9980109002MSD	1018217	ZH2B011.d	8/3/2012	

COMMENTS:

4C

METHOD BLANK SUMMARY

SAMPLE NO.

1018213

ab Name: ALS - Middletown Contract:

ab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

ab Sample ID: 1018213 Lab File ID (1): ZH6A002A.d Lab File ID (2):

atrix: (soil/water) WATER Extraction: (Type) SPE

ulfur Cleanup: (Y/N) N Date Extracted: 8/2/2012

ate Analyzed (1): 8/6/2012 Date Analyzed (2):

me Analyzed (1): 13:02 Time Analyzed (2):

strument ID (1): hpl1.i Instrument ID (2):

Column (1): E1, 218nm GC Column (2):

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
1020409(LCS)	1020409	ZH6A003.d	8/6/2012	
FTSW-AA-SO-10[02] E	9980109002	ZH6A005.d	8/6/2012	

COMMENTS:

8D

ANALYTICAL SEQUENCE

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

Column: E1, 254nm Init. Calib. Date(s): 11/14/2011 11/14/2011

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION

SUR 1: 13.76

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
LEVEL1	LEVEL1	11/14/2011	17:54	13.76
LEVEL2	LEVEL2	11/14/2011	18:37	13.77
LEVEL3	LEVEL3	11/14/2011	19:20	13.77
LEVEL4	LEVEL4	11/14/2011	20:03	13.77
LEVEL5	LEVEL5	11/14/2011	20:46	13.76
LEVEL6	LEVEL6	11/14/2011	21:29	13.75
LEVEL7	LEVEL7	11/14/2011	22:12	13.74
ICV	ICV111411	11/14/2011	22:55	13.75

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

Column: E1, 218nm Init. Calib. Date(s): 11/14/2011 11/15/2011

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION

SUR 1: 13.75

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
LEVEL1	LEVEL1	11/14/2011	23:38	13.77
LEVEL2	LEVEL2	11/15/2011	00:21	13.75
LEVEL3	LEVEL3	11/15/2011	01:04	13.75
LEVEL4	LEVEL4	11/15/2011	01:46	13.76
LEVEL5	LEVEL5	11/15/2011	02:29	13.76
LEVEL6	LEVEL6	11/15/2011	03:12	13.75
LEVEL7	LEVEL7	11/15/2011	03:55	13.74
ZZZZZZ	ICV111511	11/15/2011	04:38	13.76

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

ıb Name: ALS - Middletown Contract:

ıb Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

: Column: E1, 254nm Cont. Calib. Date(s): 8/2/2012 17:40

ıstrument ID: hp11.i

IE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
ID STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.80

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
ZZZZZZ	1018210	8/2/2012	19:08	13.83
1018213(MB)	1018213	8/2/2012	19:08	13.83
ZZZZZZ	1018211	8/2/2012	19:52	13.82
1018214(LCS)	1018214	8/2/2012	19:52	13.82
ZZZZZZ	9979284032	8/2/2012	21:21	13.81
ZZZZZZ	9979284032	8/2/2012	22:05	13.76
ZZZZZZ	9980086001	8/2/2012	22:49	13.81
FTSW-AA-SO-10[02] E	9980109002	8/2/2012	23:33	13.80
9980109002MS	1018216	8/3/2012	00:17	13.79
9980109002MSD	1018217	8/3/2012	01:01	13.78
ZZZZZZ	9980394014	8/3/2012	01:45	13.79

QC LIMITS

1,4-Dinitrobenzene (+/-.0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

ıb Name: ALS - Middletown Contract:

ıb Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

: Column: E1, 254nm Cont. Calib. Date(s): 8/3/2012 03:57

ıstrument ID: hpl1.i

IE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
ID STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.73

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
ZZZZZZ	9978606004	8/3/2012	05:25	13.78
ZZZZZZ	9978607007	8/3/2012	06:09	13.76
ZZZZZZ	9978607009	8/3/2012	06:53	13.76
ZZZZZZ	9980394006	8/3/2012	08:48	13.79

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

ıb Name: ALS - Middletown Contract:

ıb Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

: Column: E1, 218nm Cont. Calib. Date(s): 8/6/2012 12:03

ıstrument ID: hpl1.i

IE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
ID STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.82

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
1018213(MB)	1018213	8/6/2012	13:02	13.85
1020409(LCS)	1020409	8/6/2012	13:46	13.83
ZZZZZZ	9980086001	8/6/2012	14:30	13.82
FTSW-AA-SO-10[02] E	9980109002	8/6/2012	15:14	13.82
ZZZZZZ	9980394014	8/6/2012	15:58	13.83
ZZZZZZ	9980394006	8/6/2012	16:42	13.78
ZZZZZZ	9978606007	8/6/2012	17:26	13.80
ZZZZZZ	9978607004	8/6/2012	18:10	13.81

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Explosives in Water by 8330B Raw Data

Sample Raw Data

1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-10[02] E

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): WATER Lab Sample ID: 9980109002

Sample wt/vol: 1035 (g/mL) ML Lab File ID (1): ZH2B009.d

% Moisture: Lab File ID (2):

Extraction: (Type) SPE Date Received: 07/27/2012

Concentrated Extract Volume: 10000 (uL) Date Extracted: 08/02/2012

Injection Volume: 100 (uL) Date Analyzed: 08/02/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.097	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.097	U
99-65-0	1,3-Dinitrobenzene	0.097	U
121-14-2	2,4-Dinitrotoluene	0.097	U
606-20-2	2,6-Dinitrotoluene	0.097	U
2691-41-0	HMX	0.097	U
98-95-3	Nitrobenzene	0.097	U
99-99-0	4-Nitrotoluene	0.097	U
88-72-2	2-Nitrotoluene	0.097	U
99-08-1	3-Nitrotoluene	0.097	U
121-82-4	RDX	0.097	U
479-45-8	Tetryl	0.19	U
99-35-4	1,3,5-Trinitrobenzene	0.097	U
118-96-7	2,4,6-Trinitrotoluene	0.097	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B009.d
Lab Smp Id: 9980109002 Client Smp ID: FTSW-AA-SO-10[02] E
Inj Date : 02-AUG-2012 23:33
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109002;AJL;;;;;1035
Misc Info : ZZ HPLC 3174 D8330W
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_254
Meth Date : 08-Aug-2012 09:59 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1035.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

DATA REVIEW AR 8/13/12
REPORTED MR 8/13/12
APPROVED CY/kh
2nd REVIEW CY/kh

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1 HMX	Compound Not Detected.					
2 RDX	Compound Not Detected.					
3 1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4 1,4-Dinitrobenzene	13.800	13.726	0.074	153873	453.953	4.38602
5 1,3-Dinitrobenzene	Compound Not Detected.					
6 Nitrobenzene	Compound Not Detected.					
7 Tetryl	Compound Not Detected.					
8 2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9 4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10 2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11 2,6-Dinitrotoluene	Compound Not Detected.					
12 2,4-Dinitrotoluene	Compound Not Detected.					
13 2-Nitrotoluene	Compound Not Detected.					
14 4-Nitrotoluene	Compound Not Detected.					
15 3-Nitrotoluene	Compound Not Detected.					

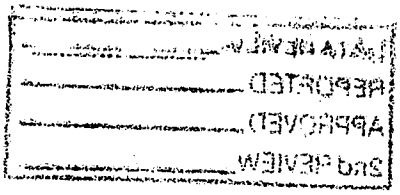
ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: LIQUID
Lab Smp Id: 9980109002
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3174 D8330W

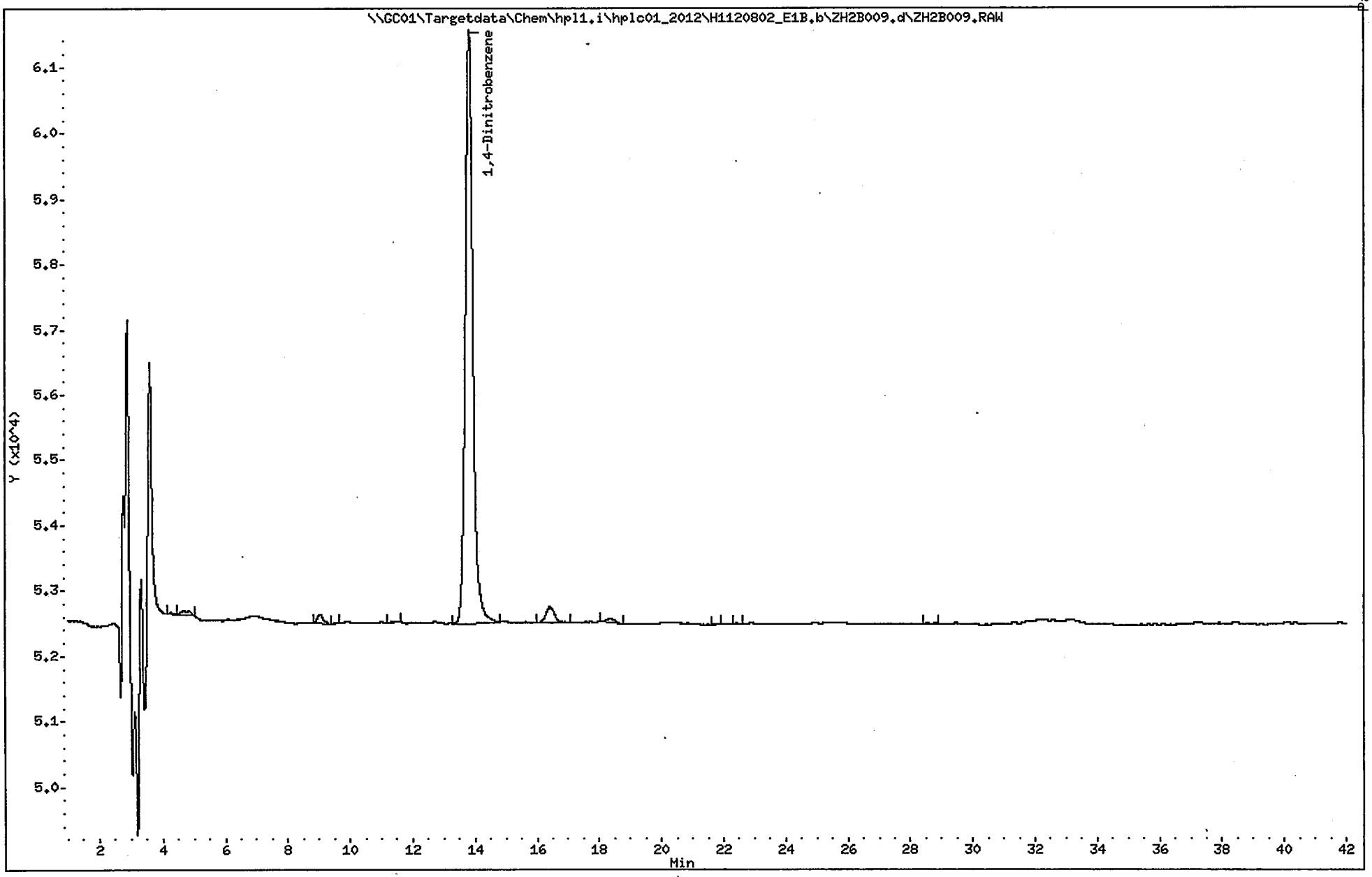
Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-10[02] E
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	4.83092	4.38602	90.79	50-150



Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B009.d
Date : 02-AUG-2012 23:33
Client ID: FTSW-AA-SO-10[02] E
Sample Info: 9980109002;AJL;;;;;1035
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-10[02] E

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): WATER Lab Sample ID: 9980109002

Sample wt/vol: 1035 (g/mL) ML Lab File ID (1): ZH6A005.d

% Moisture: Lab File ID (2):

Extraction: (Type) SPE Date Received: 07/27/2012

Concentrated Extract Volume: 10000 (uL) Date Extracted: 08/02/2012

Injection Volume: 100 (uL) Date Analyzed: 08/06/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
618-87-1	3,5-Dinitroaniline	0.11	U
55-63-0	Nitroglycerin	0.77	U
78-11-5	PETN	0.77	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A005.d
Lab Smp Id: 9980109002 Client Smp ID: FTSW-AA-SO-10[02] E
Inj Date : 06-AUG-2012 15:14
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109002;AJL;;;;;1035
Misc Info : ZZ HPLC 3174 D8330W
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\8330E1_218
Meth Date : 07-Aug-2012 08:51 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1035.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/13/12
REPORTED 8/13/12
APPROVED
2ND REVIEW

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
$ 1 1,4-Dinitrobenzene	13.823	13.750	0.073	54979	413.921	3.99924
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

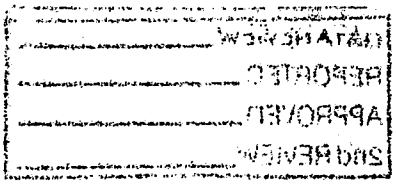
ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: LIQUID
Lab Smp Id: 9980109002
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3174 D8330W

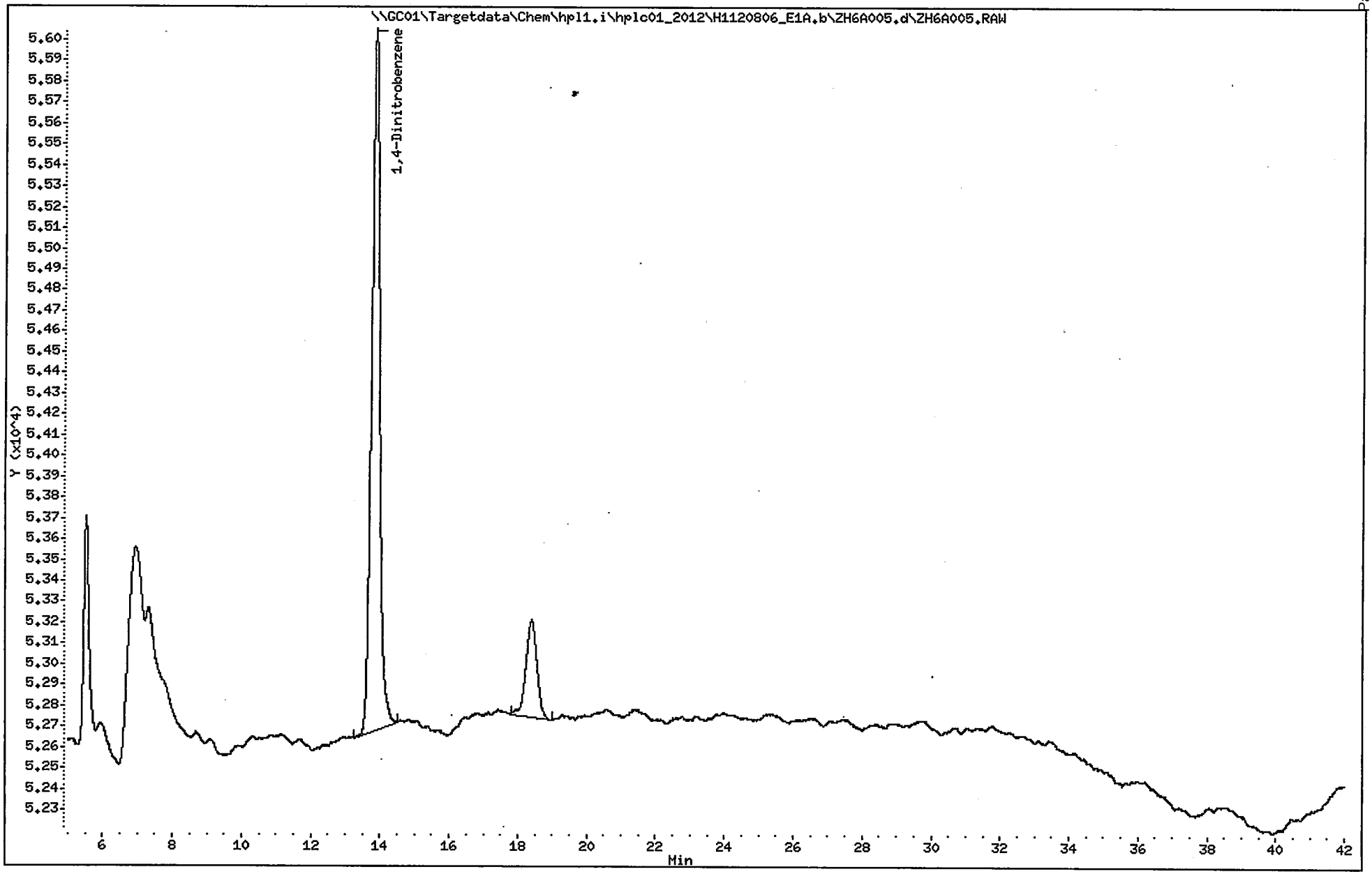
Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-10[02] E
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	4.83092	3.99924	82.78	50-150



Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A005.d
Date : 06-AUG-2012 15:14
Client ID: FTSW-AA-SO-10[02] E
Sample Info: 9980109002;AJL;;;;;1035
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



Standards Raw Data

Initial Calibrations

6A

RETENTION TIMES OF INITIAL CALIBRATION

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/14/2011

Calibration Times: 17:54 22:12

GC Column: E1, 254nm ID: 4.1 (mm)

LAB FILE ID: RT1 = ZKEB005.d RT2 = ZKEB006.d RT3 = ZKEB007.d

RT4 = ZKEB008.d RT5 = ZKEB009.d RT6 = ZKEB010.d

COMPOUND	RT1	RT2	RT3	RT4	RT5	RT6	MEAN RT	RT WINDOW FROM	RT WINDOW TO
2-Amino-4,6-dinitro	24.790	24.773	24.786	24.770	24.746	24.696	24.744	23.894	25.594
4-Amino-2,6-dinitro	23.606	23.606	23.610	23.600	23.576	23.526	23.572	22.722	24.422
1,3-Dinitrobenzene	15.366	15.363	15.370	15.366	15.356	15.336	15.353	15.063	15.643
2,4-Dinitrotoluene	27.020	27.003	27.006	26.993	26.980	26.933	26.977	26.427	27.527
2,6-Dinitrotoluene	26.070	26.026	26.040	26.030	26.013	25.970	26.013	25.473	26.553
HMX	4.853	4.860	4.866	4.876	4.886	4.906	4.882	4.612	5.152
Nitrobenzene	17.330	17.316	17.320	17.316	17.303	17.276	17.302	16.982	17.622
4-Nitrotoluene	34.210	34.246	34.286	34.270	34.236	34.173	34.222	33.542	34.902
2-Nitrotoluene	31.503	31.446	31.446	31.436	31.420	31.366	31.420	30.840	32.000
3-Nitrotoluene	36.753	36.716	36.720	36.690	36.663	36.613	36.674	35.964	37.384
RDX	8.326	8.336	8.340	8.340	8.340	8.336	8.335	8.055	8.615
Tetryl	18.333	18.326	18.323	18.330	18.316	18.300	18.316	17.656	18.976
1,3,5-Trinitrobenze	11.860	11.866	11.870	11.870	11.870	11.863	11.865	11.665	12.065
2,4,6-Trinitrotolue	21.156	21.166	21.166	21.163	21.150	21.130	21.149	20.689	21.609
1,4-Dinitrobenzene	13.763	13.766	13.773	13.766	13.763	13.750	13.760	12.910	14.610

6A

RETENTION TIMES OF INITIAL CALIBRATION

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/14/2011

Calibration Times: 17:54 22:12

GC Column: E1, 254nm ID: 4.1 (mm)

LAB FILE ID: RT7 = ZKEB011.d

COMPOUND	RT7						MEAN RT	RT WINDOW FROM	RT WINDOW TO
2-Amino-4,6-dinitro	24.650						24.744	23.894	25.594
4-Amino-2,6-dinitro	23.483						23.572	22.722	24.422
1,3-Dinitrobenzene	15.316						15.353	15.063	15.643
2,4-Dinitrotoluene	26.903						26.977	26.427	27.527
2,6-Dinitrotoluene	25.940						26.013	25.473	26.553
HMX	4.930						4.882	4.612	5.152
Nitrobenzene	17.250						17.302	16.982	17.622
4-Nitrotoluene	34.133						34.222	33.542	34.902
2-Nitrotoluene	31.326						31.420	30.840	32.000
3-Nitrotoluene	36.566						36.674	35.964	37.384
RDX	8.330						8.335	8.055	8.615
Tetryl	18.283						18.316	17.656	18.976
1,3,5-Trinitrobenze	11.856						11.865	11.665	12.065
2,4,6-Trinitrotolue	21.110						21.149	20.689	21.609
1,4-Dinitrobenzene	13.736						13.760	12.910	14.610

6B

ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/14/2011

Calibration Time(s): 17:54 22:12

GC Column: E1, 254nm ID: 4.1 (mm)

LAB FILE ID: RRF1 = ZKEB005.d RRF2 = ZKEB006.d RRF3 = ZKEB007.d RRF4 = ZKEB008.d

RRF5 = ZKEB009.d RRF6 = ZKEB010.d RRF7 = ZKEB011.d

COMPOUND	RRF1	RRF2	RRF3	RRF4	RRF5	CT
2-Amino-4,6-dinitrotoluene	230	302	299	313	306	A
4-Amino-2,6-dinitrotoluene	167	241	219	234	227	A
1,3-Dinitrobenzene	372	437	440	464	458	A
2,4-Dinitrotoluene	335	398	411	422	409	A
2,6-Dinitrotoluene	176	227	220	233	223	A
HMX	116	126	130	133	129	A
Nitrobenzene	240	276	267	275	274	A
4-Nitrotoluene	102	121	131	148	144	A
2-Nitrotoluene	128	171	173	182	179	A
3-Nitrotoluene	155	170	191	187	186	A
RDX	131	154	163	160	160	A
Tetryl	248	280	255	268	264	A
1,3,5-Trinitrobenzene	265	336	349	349	347	A
2,4,6-Trinitrotoluene(TNT)	261	316	318	325	323	A
1,4-Dinitrobenzene	288	344	357	362	359	A

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

6B

ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/14/2011

Calibration Time(s): 17:54 22:12

GC Column: E1, 254n ID: 4.1 (mm)

LAB FILE ID: RRF1 = ZKEB005.d RRF2 = ZKEB006.d RRF3 = ZKEB007.d RRF4 = ZKEB008.d

RRF5 = ZKEB009.d RRF6 = ZKEB010.d RRF7 = ZKEB011.d

COMPOUND	RRF6	RRF7	CT	b	m1	m2	% RSD or R^2
2-Amino-4,6-dinitrotoluene	303	260	A		288		10.58960
4-Amino-2,6-dinitrotoluene	225	193	A		215		12.10871
1,3-Dinitrobenzene	450	384	A		429		8.46463
2,4-Dinitrotoluene	413	355	A		392		8.52224
2,6-Dinitrotoluene	224	192	A		213		9.88029
HMX	127	110	A		125		6.74028
Nitrobenzene	272	231	A		262		7.10871
4-Nitrotoluene	143	121	A		130		12.84894
2-Nitrotoluene	177	152	A		166		11.60487
3-Nitrotoluene	186	157	A		176		8.60429
RDX	157	134	A		151		8.73951
Tetryl	262	224	A		257		6.93349
1,3,5-Trinitrobenzene	343	295	A		326		10.19659
2,4,6-Trinitrotoluene(TNT)	319	274	A		305		8.59445
1,4-Dinitrobenzene	357	305	A		339		8.85687

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

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EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB005
Lab Smp Id: LEVEL1
Inj Date : 14-NOV-2011 17:54
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL1;AJL;1;1
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 17:54 Cal File: ZKEB005.d
Als bottle: 58 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.853	4.930	-0.077	2324	20.0000	18.6652(a)
2	RDX	8.326	8.330	-0.004	2616	20.0000	17.2977(a)
3	1,3,5-Trinitrobenzene	11.860	11.857	0.003	5291	20.0000	16.2241(a)
$ 4	1,4-Dinitrobenzene	13.763	13.737	0.026	5751	20.0000	16.9665(a)
5	1,3-Dinitrobenzene	15.366	15.317	0.049	7446	20.0000	17.3484(a)
6	Nitrobenzene	17.330	17.250	0.080	4799	20.0000	18.3004(a)
7	Tetryl	18.333	18.283	0.050	4954	20.0000	19.2619(a)
8	2,4,6-Trinitrotoluene(TNT)	21.156	21.110	0.046	5220	20.0000	17.1164(a)
9	4-Amino-2,6-dinitrotoluene	23.606	23.483	0.123	3347	20.0000	15.5523(a)
10	2-Amino-4,6-dinitrotoluene	24.790	24.650	0.140	4608	20.0000	16.0193(a)
11	2,6-Dinitrotoluene	26.070	25.940	0.130	3522	20.0000	16.4970(a)
12	2,4-Dinitrotoluene	27.020	26.903	0.117	6693	20.0000	17.0880(a)
13	2-Nitrotoluene	31.503	31.327	0.176	2567	20.0000	15.4445(a)
14	4-Nitrotoluene	34.210	34.133	0.077	2031	20.0000	15.6413(aM)
15	3-Nitrotoluene	36.753	36.567	0.186	3100	20.0000	17.6239(aM)

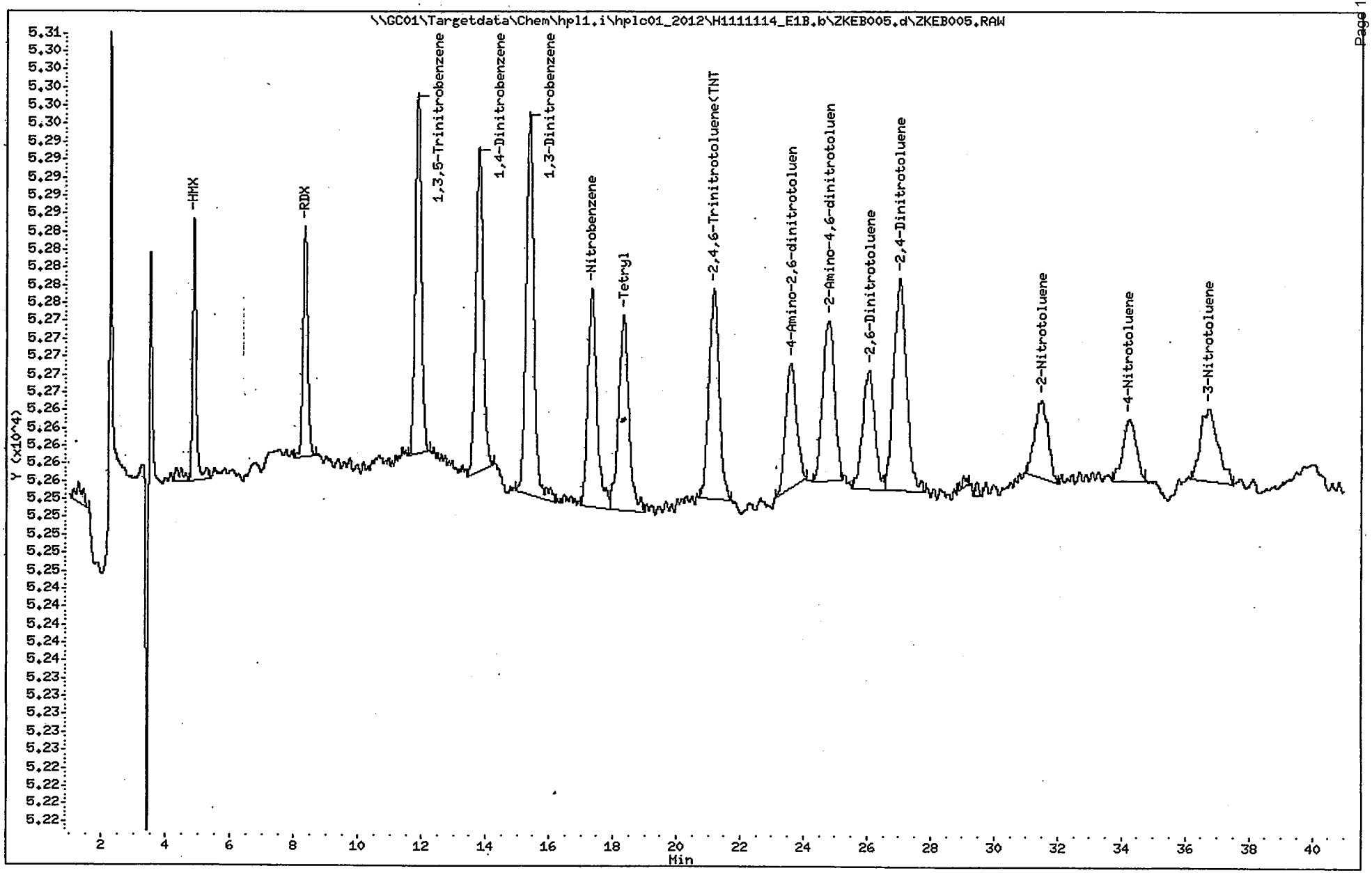
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB005.d
Date : 14-NOV-2011 17:54
Client ID:
Sample Info: LEVEL1;AJL;1;1
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i

Operator: AJL
Column diameter: 4.60



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EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB006
Lab Smp Id: LEVEL2
Inj Date : 14-NOV-2011 18:37
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL2;AJL;1;2
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 18:37 Cal File: ZKEB006.d
Als bottle: 58 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

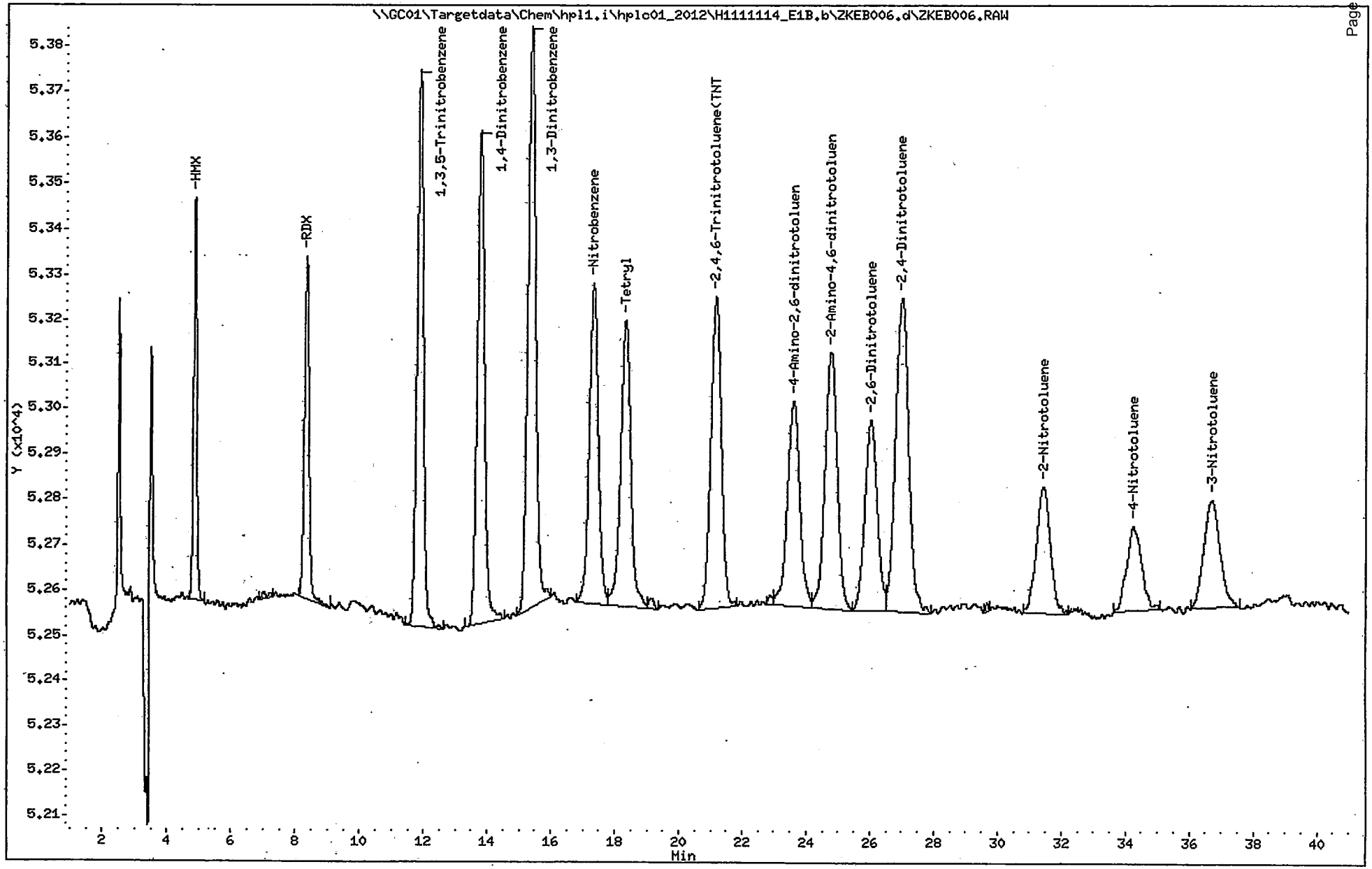
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.860	4.930	-0.070	6302	50.0000	50.6144
2	RDX	8.336	8.330	0.006	7698	50.0000	50.9012
3	1,3,5-Trinitrobenzene	11.866	11.857	0.009	16783	50.0000	51.4625
$ 4	1,4-Dinitrobenzene	13.766	13.737	0.029	17206	50.0000	50.7608
5	1,3-Dinitrobenzene	15.363	15.317	0.046	21850	50.0000	50.9082
6	Nitrobenzene	17.316	17.250	0.066	13791	50.0000	52.5903
7	Tetryl	18.326	18.283	0.043	13993	50.0000	54.4068
8	2,4,6-Trinitrotoluene(TNT)	21.166	21.110	0.056	15775	50.0000	51.7262
9	4-Amino-2,6-dinitrotoluene	23.606	23.483	0.123	12068	50.0000	56.0758
10	2-Amino-4,6-dinitrotoluene	24.773	24.650	0.123	15107	50.0000	52.5180
11	2,6-Dinitrotoluene	26.026	25.940	0.086	11368	50.0000	53.2475
12	2,4-Dinitrotoluene	27.003	26.903	0.100	19896	50.0000	50.7968
13	2-Nitrotoluene	31.446	31.327	0.119	8547	50.0000	51.4234
14	4-Nitrotoluene	34.246	34.133	0.113	6027	50.0000	46.4156
15	3-Nitrotoluene	36.716	36.567	0.149	8485	50.0000	48.2382

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB006.d
Date : 14-NOV-2011 18:37
Client ID:
Sample Info: LEVEL2;AJL;1;2
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB007
Lab Smp Id: LEVEL3
Inj Date : 14-NOV-2011 19:20
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL3;AJL;1;3
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 19:20 Cal File: ZKEB007.d
Als bottle: 58 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

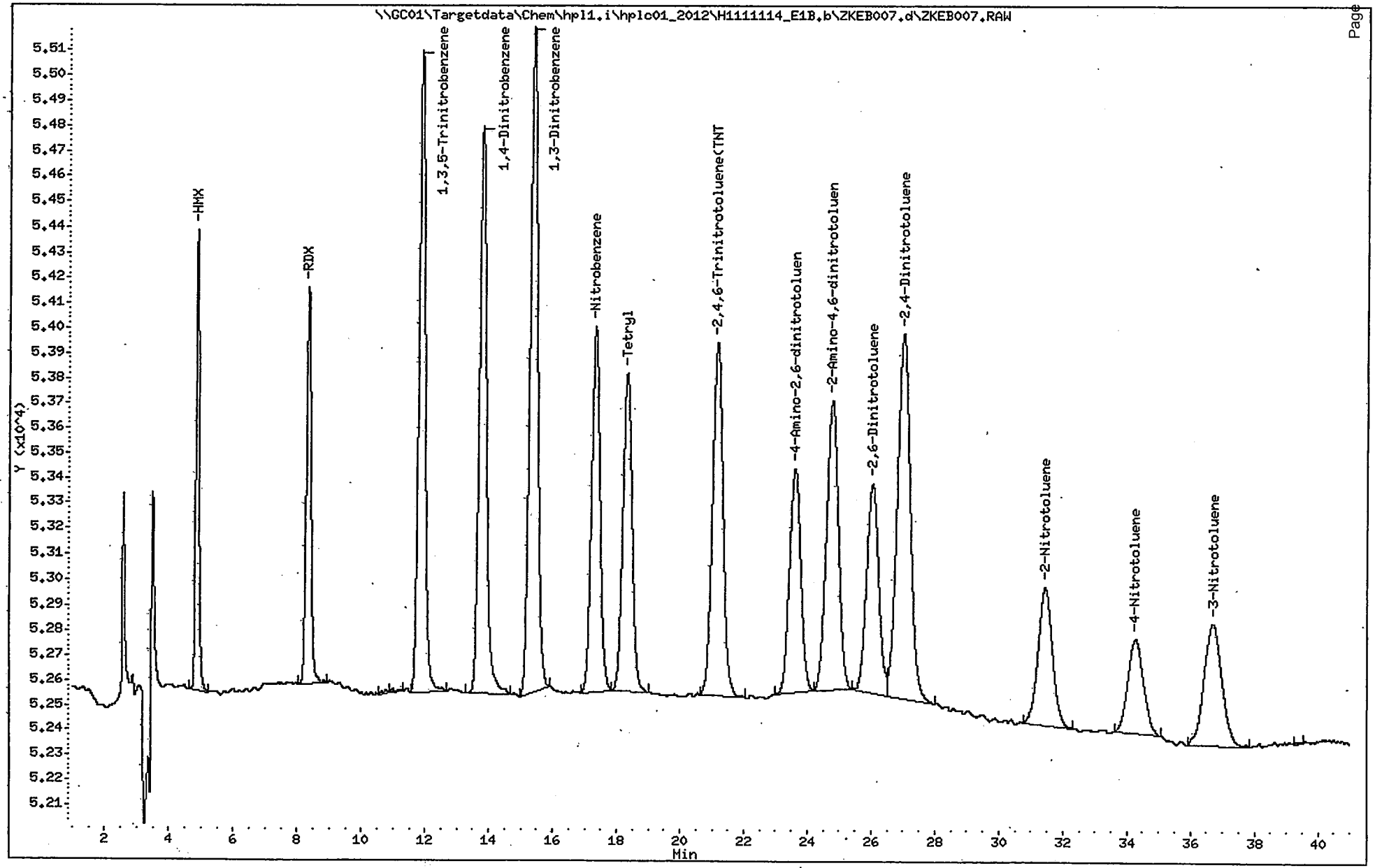
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.866	4.930	-0.064	13031	100.000	104.658
2	RDX	8.340	8.330	0.010	16266	100.000	107.555
3	1,3,5-Trinitrobenzene	11.870	11.857	0.013	34899	100.000	107.013
$ 4	1,4-Dinitrobenzene	13.773	13.737	0.036	35733	100.000	105.419
5	1,3-Dinitrobenzene	15.370	15.317	0.053	44034	100.000	102.595
6	Nitrobenzene	17.320	17.250	0.070	26726	100.000	101.916
7	Tetryl	18.323	18.283	0.040	25540	100.000	99.3032
8	2,4,6-Trinitrotoluene(TNT)	21.166	21.110	0.056	31767	100.000	104.164
9	4-Amino-2,6-dinitrotoluene	23.610	23.483	0.127	21943	100.000	101.962
10	2-Amino-4,6-dinitrotoluene	24.786	24.650	0.136	29905	100.000	103.962
11	2,6-Dinitrotoluene	26.040	25.940	0.100	21955	100.000	102.837
12	2,4-Dinitrotoluene	27.006	26.903	0.103	41109	100.000	104.956
13	2-Nitrotoluene	31.446	31.327	0.119	17335	100.000	104.297
14	4-Nitrotoluene	34.286	34.133	0.153	13069	100.000	100.648
15	3-Nitrotoluene	36.720	36.567	0.153	19059	100.000	108.353

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB007.d
Date : 14-NOV-2011 19:20
Client ID:
Sample Info: LEVEL3;AJL;1;3
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB008
Lab Smp Id: LEVEL4
Inj Date : 14-NOV-2011 20:03
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL4;AJL;1;4
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 20:03 Cal File: ZKEB008.RAW
Als bottle: 58 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

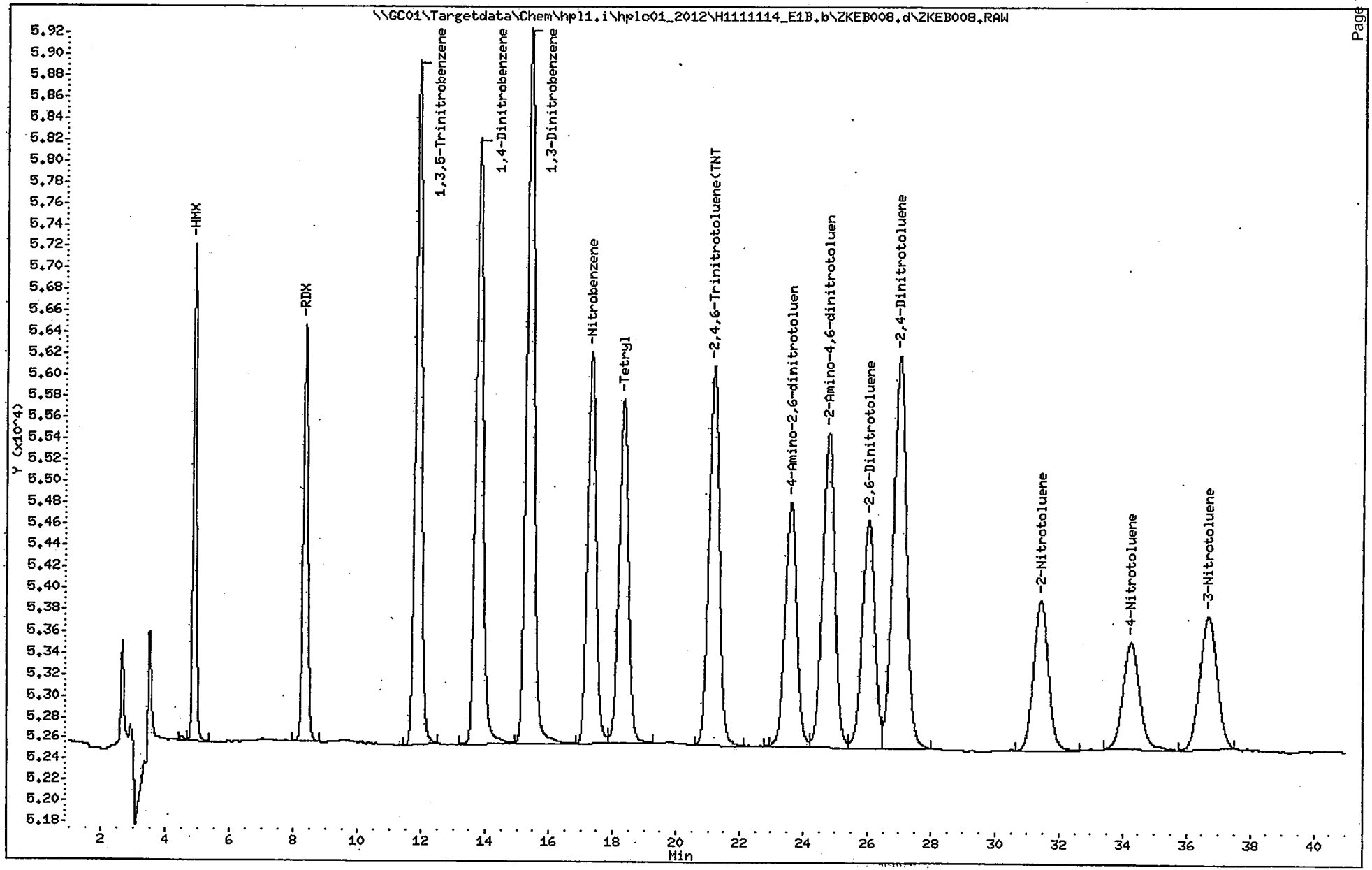
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.876	4.930	-0.054	33176	250.000	266.452
2	RDX	8.340	8.330	0.010	40108	250.000	265.205
3	1,3,5-Trinitrobenzene	11.870	11.857	0.013	87211	250.000	267.419
$ 4	1,4-Dinitrobenzene	13.766	13.737	0.029	90493	250.000	266.970
5	1,3-Dinitrobenzene	15.366	15.317	0.049	115905	250.000	270.046
6	Nitrobenzene	17.316	17.250	0.066	68813	250.000	262.410
7	Tetryl	18.330	18.283	0.047	66925	250.000	260.214
8	2,4,6-Trinitrotoluene(TNT)	21.163	21.110	0.053	81269	250.000	266.481
9	4-Amino-2,6-dinitrotoluene	23.600	23.483	0.117	58474	250.000	271.708
10	2-Amino-4,6-dinitrotoluene	24.770	24.650	0.120	78170	250.000	271.750
11	2,6-Dinitrotoluene	26.030	25.940	0.090	58233	250.000	272.762
12	2,4-Dinitrotoluene	26.993	26.903	0.090	105443	250.000	269.208
13	2-Nitrotoluene	31.436	31.327	0.109	45453	250.000	273.470
14	4-Nitrotoluene	34.270	34.133	0.137	37055	250.000	285.371
15	3-Nitrotoluene	36.690	36.567	0.123	46682	250.000	265.393

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB008.d
Date : 14-NOV-2011 20:03
Client ID:
Sample Info: LEVEL4;AJL;1;4
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB009
Lab Smp Id: LEVEL5
Inj Date : 14-NOV-2011 20:46
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL5;AJL;1;5
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 20:46 Cal File: ZKEB009.d
Als bottle: 58 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

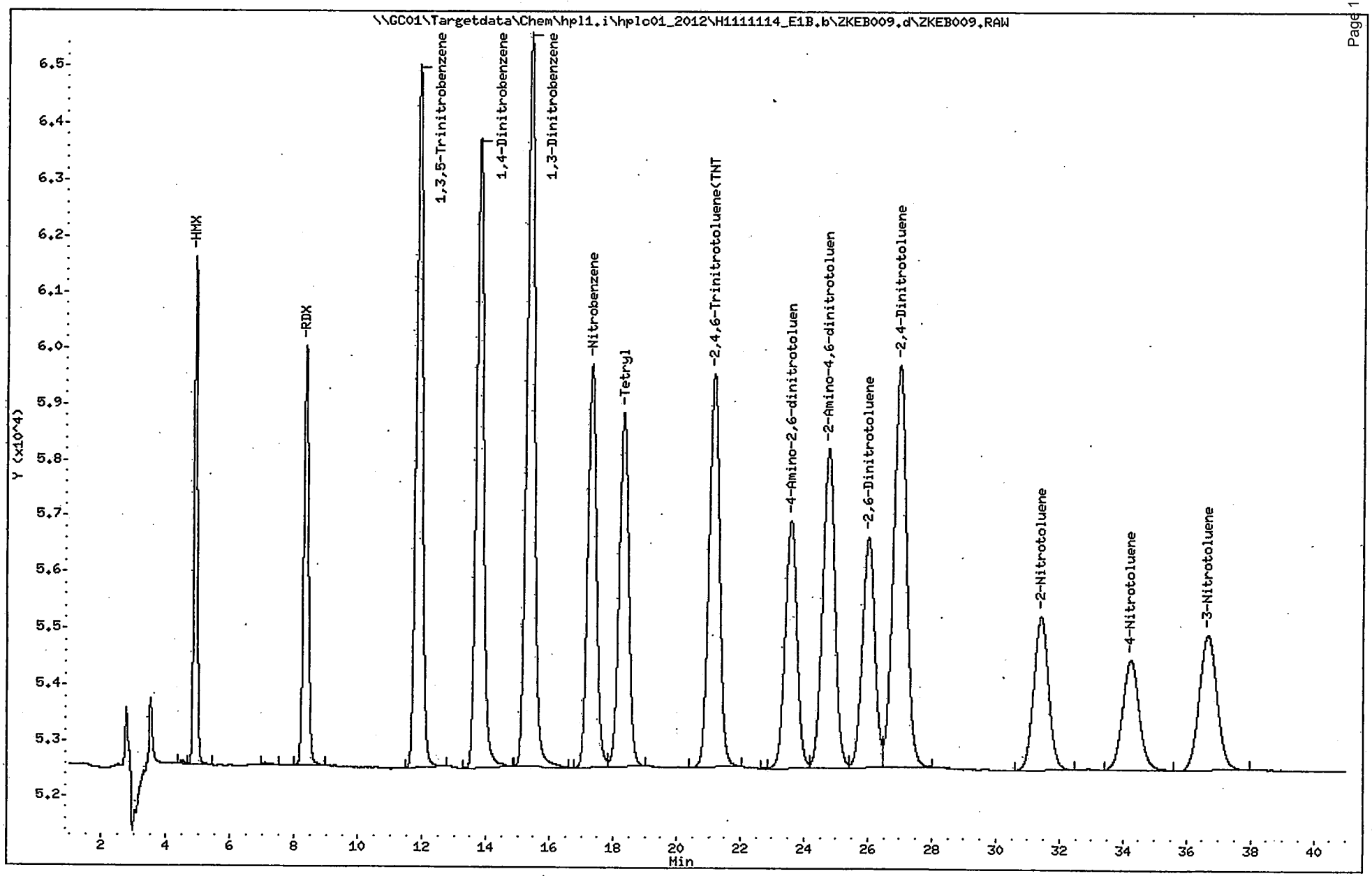
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.886	4.930	-0.044	64611	500.000	518.922
2	RDX	8.340	8.330	0.010	79835	500.000	527.890
3	1,3,5-Trinitrobenzene	11.870	11.857	0.013	173473	500.000	531.929
$ 4	1,4-Dinitrobenzene	13.763	13.737	0.026	179549	500.000	529.701
5	1,3-Dinitrobenzene	15.356	15.317	0.039	228785	500.000	533.045
6	Nitrobenzene	17.303	17.250	0.053	137130	500.000	522.929
7	Tetryl	18.316	18.283	0.033	131907	500.000	512.873
8	2,4,6-Trinitrotoluene(TNT)	21.150	21.110	0.040	161394	500.000	529.210
9	4-Amino-2,6-dinitrotoluene	23.576	23.483	0.093	113416	500.000	527.005
10	2-Amino-4,6-dinitrotoluene	24.746	24.650	0.096	152906	500.000	531.563
11	2,6-Dinitrotoluene	26.013	25.940	0.073	111418	500.000	521.880
12	2,4-Dinitrotoluene	26.980	26.903	0.077	204407	500.000	521.875
13	2-Nitrotoluene	31.420	31.327	0.093	89591	500.000	539.028
14	4-Nitrotoluene	34.236	34.133	0.103	72009	500.000	554.561
15	3-Nitrotoluene	36.663	36.567	0.096	92926	500.000	528.295

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB009.d
Date : 14-NOV-2011 20:46
Client ID:
Sample Info: LEVEL5;AJL;1;5
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB010
Lab Smp Id: LEVEL6
Inj Date : 14-NOV-2011 21:29
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL6;AJL;1;6
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 21:29 Cal File: ZKEB010.d
Als bottle: 58 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

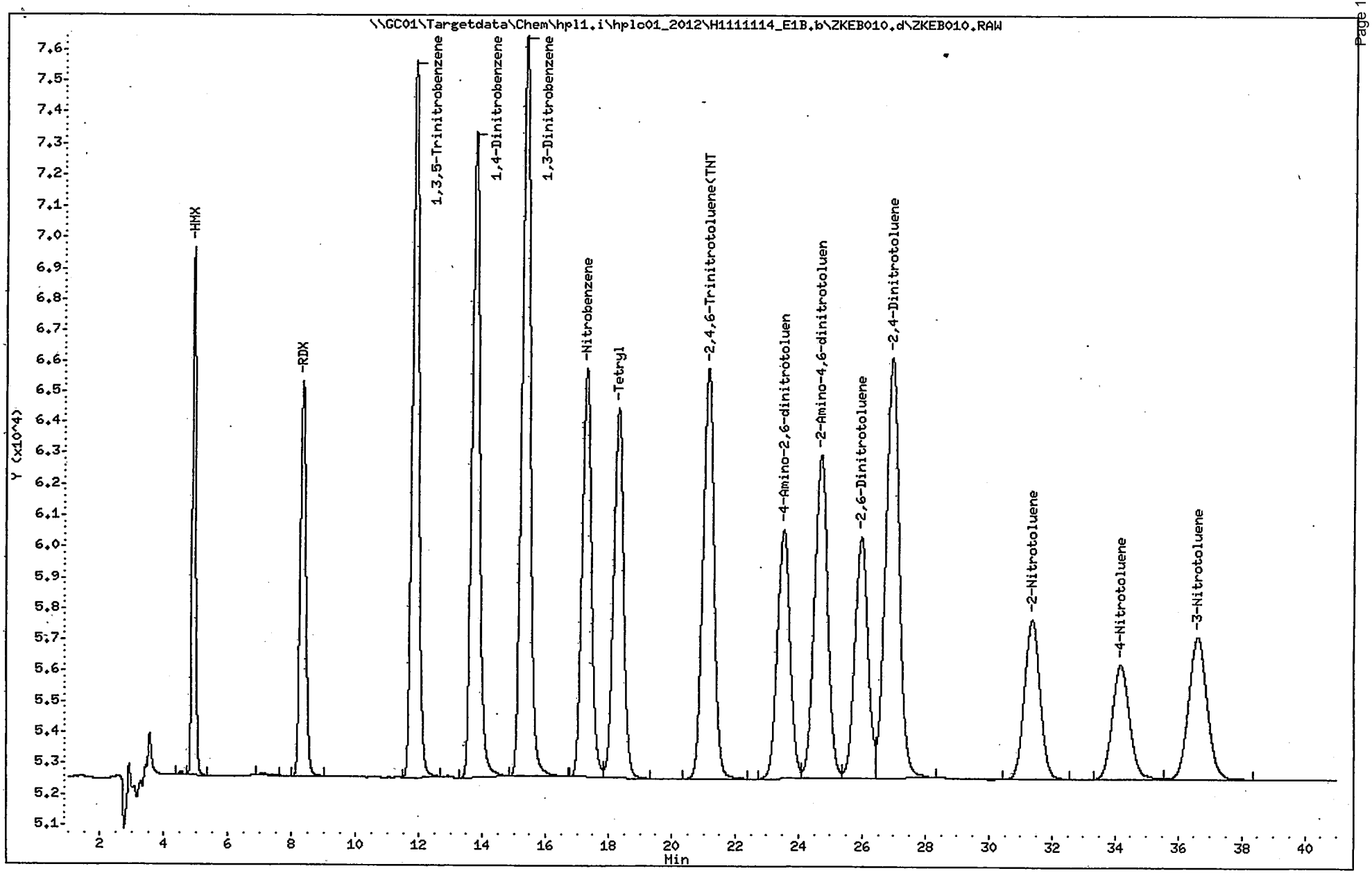
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	1 HMX	4.906	4.930	-0.024	127410	1000.00	1023.29
	2 RDX	8.336	8.330	0.006	157230	1000.00	1039.65
	3 1,3,5-Trinitrobenzene	11.863	11.857	0.006	343178	1000.00	1052.30
$	4 1,4-Dinitrobenzene	13.750	13.737	0.013	357308	1000.00	1054.12
	5 1,3-Dinitrobenzene	15.336	15.317	0.019	449964	1000.00	1048.37
	6 Nitrobenzene	17.276	17.250	0.026	271997	1000.00	1037.23
	7 Tetryl	18.300	18.283	0.017	262172	1000.00	1019.36
	8 2,4,6-Trinitrotoluene(TNT)	21.130	21.110	0.020	319265	1000.00	1046.87
	9 4-Amino-2,6-dinitrotoluene	23.526	23.483	0.043	224854	1000.00	1044.82
	10 2-Amino-4,6-dinitrotoluene	24.696	24.650	0.046	303239	1000.00	1054.18
	11 2,6-Dinitrotoluene	25.970	25.940	0.030	223860	1000.00	1048.56
	12 2,4-Dinitrotoluene	26.933	26.903	0.030	412840	1000.00	1054.03
	13 2-Nitrotoluene	31.366	31.327	0.039	177371	1000.00	1067.16
	14 4-Nitrotoluene	34.173	34.133	0.040	142796	1000.00	1099.71
	15 3-Nitrotoluene	36.613	36.567	0.046	186402	1000.00	1059.72

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB010.d
Date : 14-NOV-2011 21:29
Client ID:
Sample Info: LEVEL6;AJL;1;6
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB011
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Inj Date : 14-NOV-2011 22:12
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL7;AJL;1;7
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 58 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

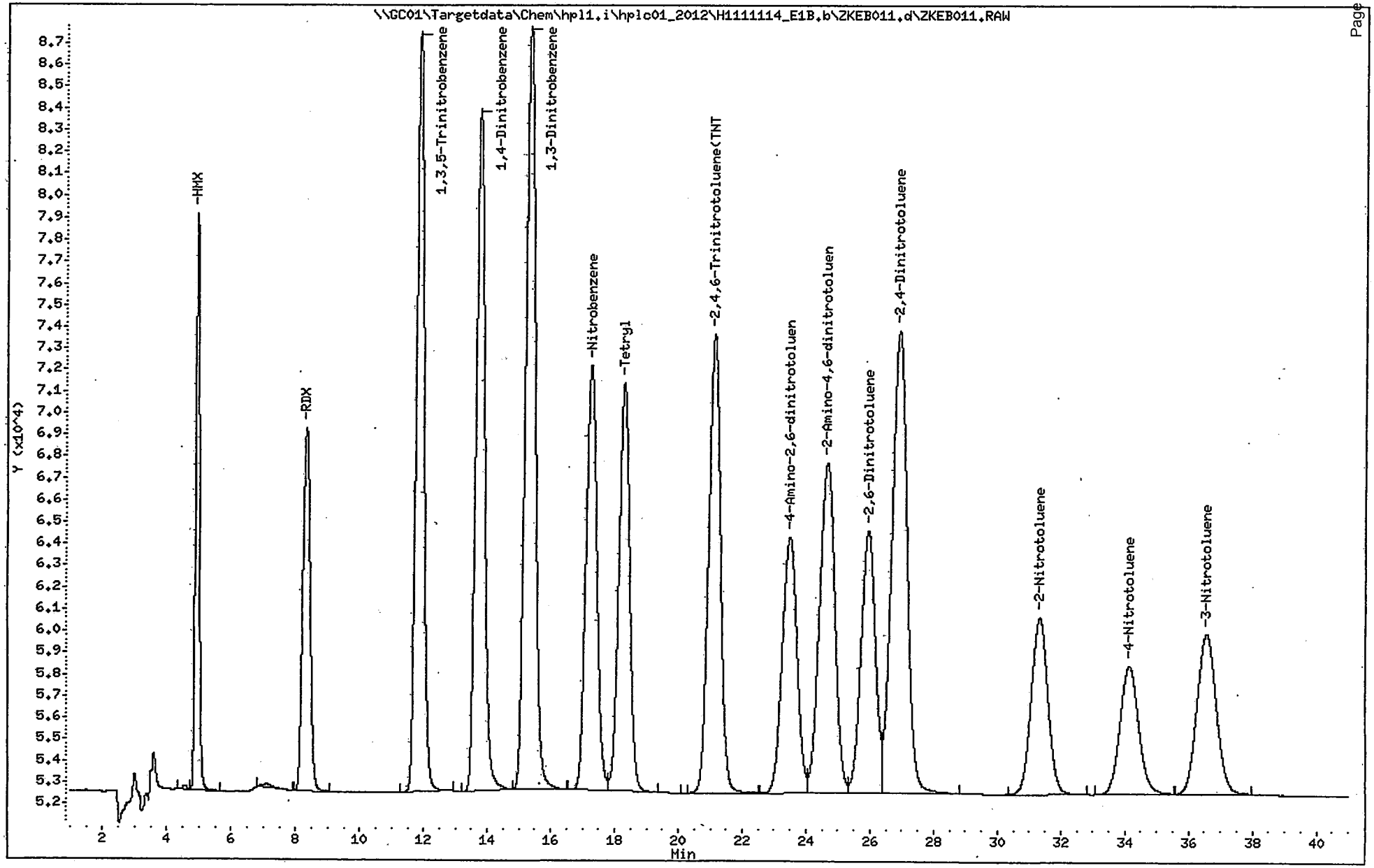
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
	1 HMX	4.930	4.930	0.000	219369	2000.00	1761.86
	2 RDX	8.330	8.330	0.000	267775	2000.00	1770.60
	3 1,3,5-Trinitrobenzene	11.856	11.857	-0.001	589354	2000.00	1807.17
$	4 1,4-Dinitrobenzene	13.736	13.737	-0.001	610721	2000.00	1801.74
	5 1,3-Dinitrobenzene	15.316	15.317	-0.001	767270	2000.00	1787.66
	6 Nitrobenzene	17.250	17.250	0.000	462204	2000.00	1762.56
	7 Tetryl	18.283	18.283	0.000	447399	2000.00	1739.55
	8 2,4,6-Trinitrotoluene(TNT)	21.110	21.110	0.000	547000	2000.00	1793.61
	9 4-Amino-2,6-dinitrotoluene	23.483	23.483	0.000	385477	2000.00	1791.18
	10 2-Amino-4,6-dinitrotoluene	24.650	24.650	0.000	520509	2000.00	1809.50
	11 2,6-Dinitrotoluene	25.940	25.940	0.000	383635	2000.00	1796.94
	12 2,4-Dinitrotoluene	26.903	26.903	0.000	709325	2000.00	1810.99
	13 2-Nitrotoluene	31.326	31.327	-0.001	304908	2000.00	1834.49
	14 4-Nitrotoluene	34.133	34.133	0.000	242252	2000.00	1865.65
	15 3-Nitrotoluene	36.566	36.567	-0.001	314025	2000.00	1785.27

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB011.d
Date : 14-NOV-2011 22:12
Client ID:
Sample Info: LEVEL7;AJL;1;7
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



6A

RETENTION TIMES OF INITIAL CALIBRATION

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/15/2011

Calibration Times: 23:38 03:55

GC Column: E1, 218nm ID: 4.1 (mm)

LAB FILE ID: RT1 = ZKEA013.d RT2 = ZKEA014.d RT3 = ZKEA015.d

RT4 = ZKEA016.d RT5 = ZKEA017.d RT6 = ZKEA018.d

COMPOUND	RT1	RT2	RT3	RT4	RT5	RT6	MEAN RT	RT WINDOW FROM	RT WINDOW TO
3,5-Dinitroaniline		17.273	17.280	17.290	17.286	17.263	14.805	13.855	15.755
Nitroglycerin	18.623	18.600	18.613	18.620	18.620	18.610	18.613	18.233	18.993
PETN	37.956	37.960	37.960	37.970	37.973	37.980	37.965	37.115	38.815
1,4-Dinitrobenzene	13.770	13.750	13.753	13.760	13.760	13.746	13.754	12.904	14.604

6A

RETENTION TIMES OF INITIAL CALIBRATION

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/15/2011

Calibration Times: 23:38 03:55

GC Column: E1, 218nm ID: 4.1 (mm)

LAB FILE ID: RT7 = ZKEA019.d

COMPOUND	RT7						MEAN RT	RT WINDOW FROM	RT WINDOW TO
3,5-Dinitroaniline	17.240						14.805	13.855	15.755
Nitroglycerin	18.603						18.613	18.233	18.993
PETN	37.953						37.965	37.115	38.815
1,4-Dinitrobenzene	13.740						13.754	12.904	14.604

6B

ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/15/2011

Calibration Time(s): 23:38 03:55

GC Column: E1, 218nm ID: 4.1 (mm)

LAB FILE ID: RRF1 = ZKEA013.d RRF2 = ZKEA014.d RRF3 = ZKEA015.d RRF4 = ZKEA016.d

RRF5 = ZKEA017.d RRF6 = ZKEA018.d RRF7 = ZKEA019.d

COMPOUND	RRF1	RRF2	RRF3	RRF4	RRF5	CT
3,5-Dinitroaniline	753	748	756	761	747	A
Nitroglycerin	59.10000	64.46000	68.10200	68.20240	67.59760	A
PETN	53.02000	82.28400	78.83200	77.27440	77.91920	A
1,4-Dinitrobenzene	123	154	137	134	134	A

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

6B

ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/15/2011

Calibration Time(s): 23:38 03:55

GC Column: E1, 218n ID: 4.1 (mm)

LAB FILE ID: RRF1 = ZKEA013.d RRF2 = ZKEA014.d RRF3 = ZKEA015.d RRF4 = ZKEA016.d

RRF5 = ZKEA017.d RRF6 = ZKEA018.d RRF7 = ZKEA019.d

COMPOUND	RRF6	RRF7	CT	b	m1	m2	% RSD or R^2
3,5-Dinitroaniline	745	650	A		737		5.24410
Nitroglycerin	68.42180	59.25520	A		65.01986		6.47771
PETN	78.06260	67.71130	A		73.58621		13.73671
1,4-Dinitrobenzene	130	118	A		133		8.79295

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

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EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: LEVEL1
Inj Date : 14-NOV-2011 23:38
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL1
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 23:38 Cal File: ZKEA013.RAW
Als bottle: 58 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.770	13.740	0.030	2451	20.0000	18.4529(a)
4	Nitroglycerin	18.623	18.603	0.020	5910	100.000	90.8953(a)
5	PETN	37.956	37.953	0.003	5302	100.000	71.1054(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA013.d

Page 2

Date : 14-NOV-2011 23:38

Client ID:

Instrument: hpl1.i

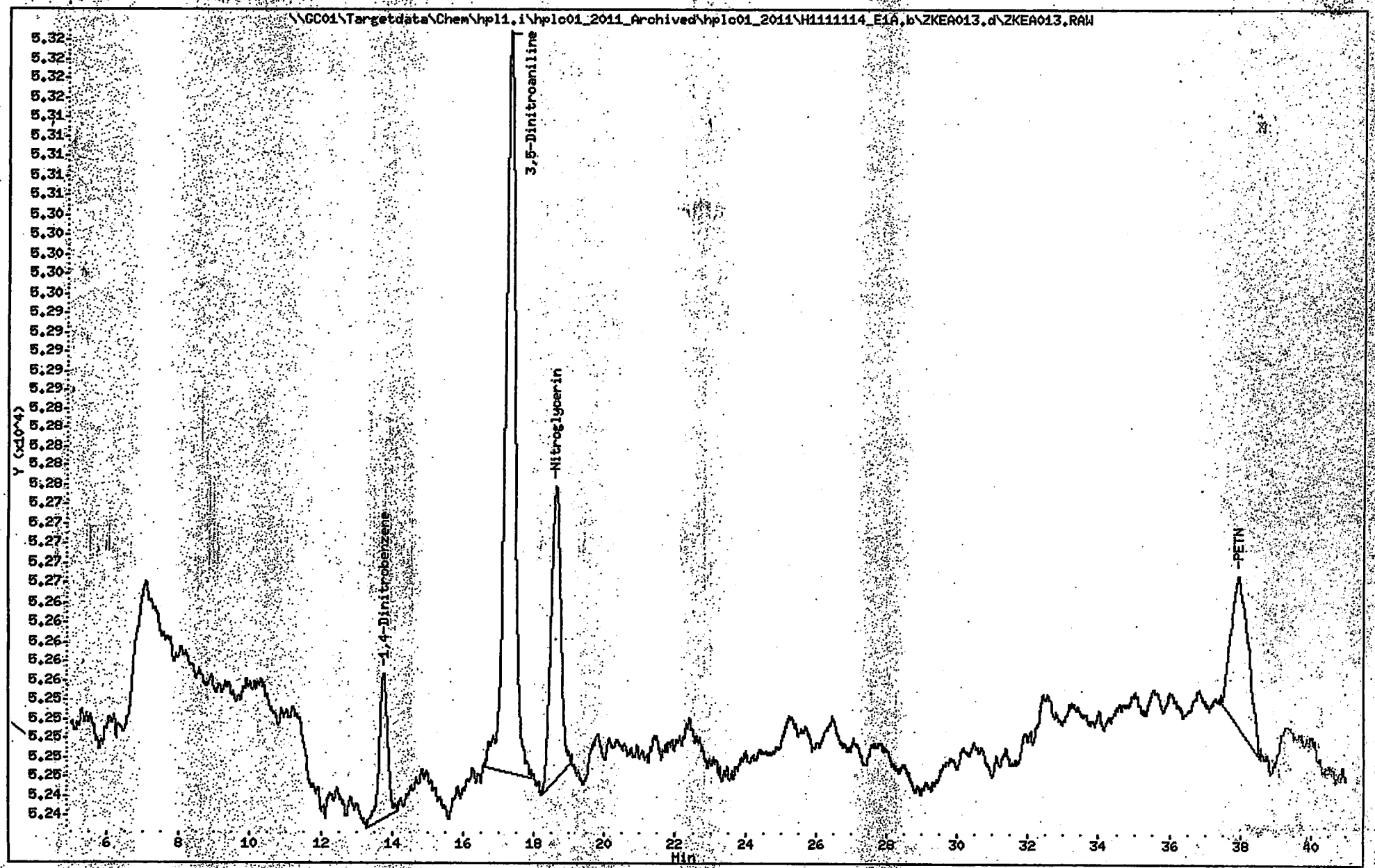
Sample Info: LEVEL1

Operator: AJL

Volume Injected (uL): 100.0

Column phase: E1

Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
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Inj Date : 15-NOV-2011 00:21
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL2
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 00:21 Cal File: ZKEA014.RAW
Als bottle: 58 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.750	13.740	0.010	7715	50.0000	58.0840
3	3,5-Dinitroaniline	17.273	17.239	0.034	37401	50.0000	50.7430(a)
4	Nitroglycerin	18.600	18.603	-0.003	16115	250.000	247.847(a)
5	PETN	37.960	37.953	0.007	20571	250.000	275.879(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA014.d

Page 2

Date : 15-NOV-2011 00:21

Client ID:

Instrument: hpl1.i

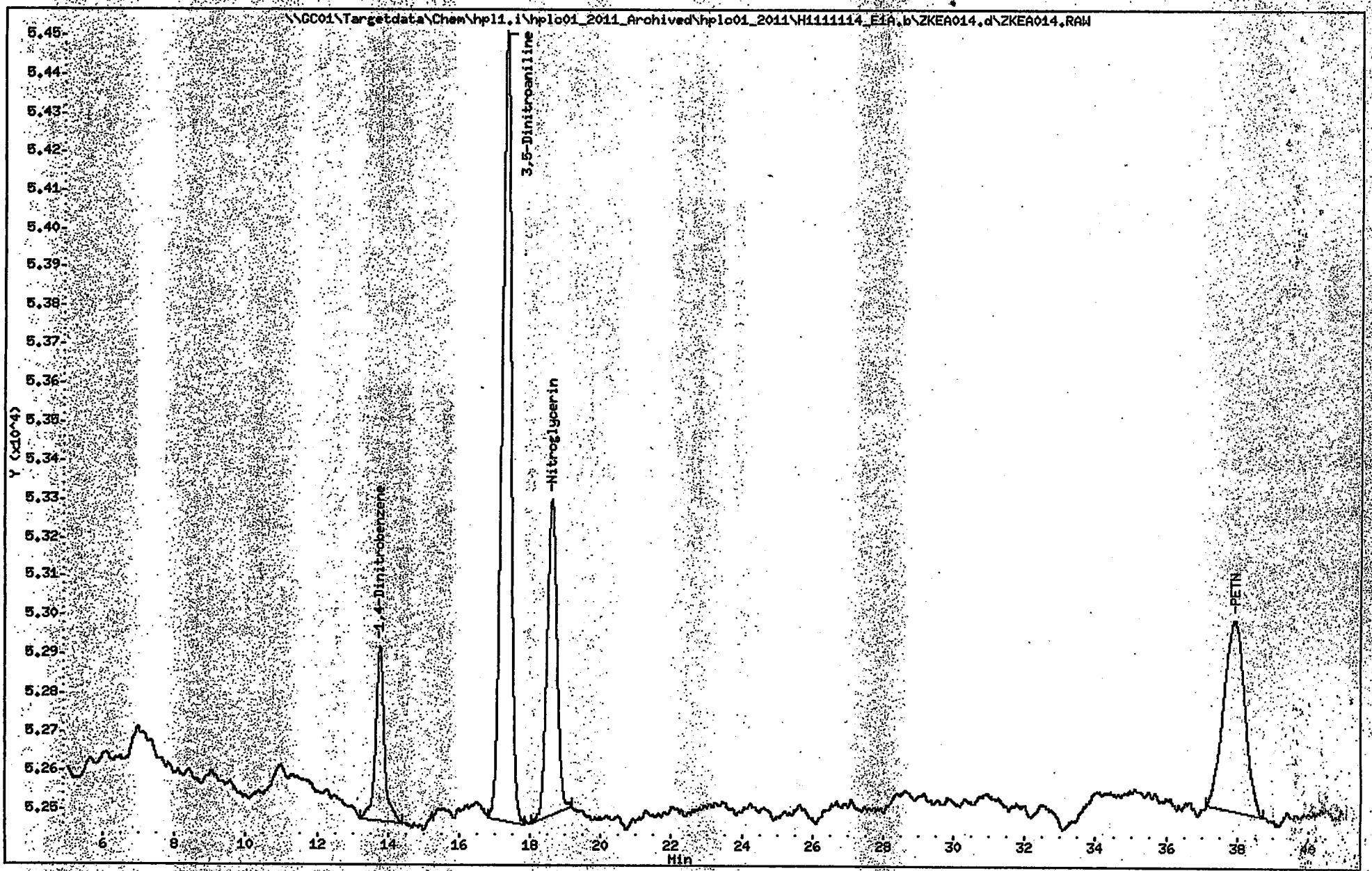
Sample Info: LEVEL2

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: LEVEL3
Inj Date : 15-NOV-2011 01:04
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL3
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 01:04 Cal File: ZKEA015.RAW
Als bottle: 58 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$	1 1,4-Dinitrobenzene	13.753	13.740	0.013	13699	100.000	103.136
	3 3,5-Dinitroaniline	17.280	17.239	0.041	75560	100.000	102.514
	4 Nitroglycerin	18.613	18.603	0.010	34051	500.000	523.702
	5 PETN	37.960	37.953	0.007	39416	500.000	528.610

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA015.d

Page: 2

Date : 15-NOV-2011 01:04

Client ID:

Instrument: hpl1.i

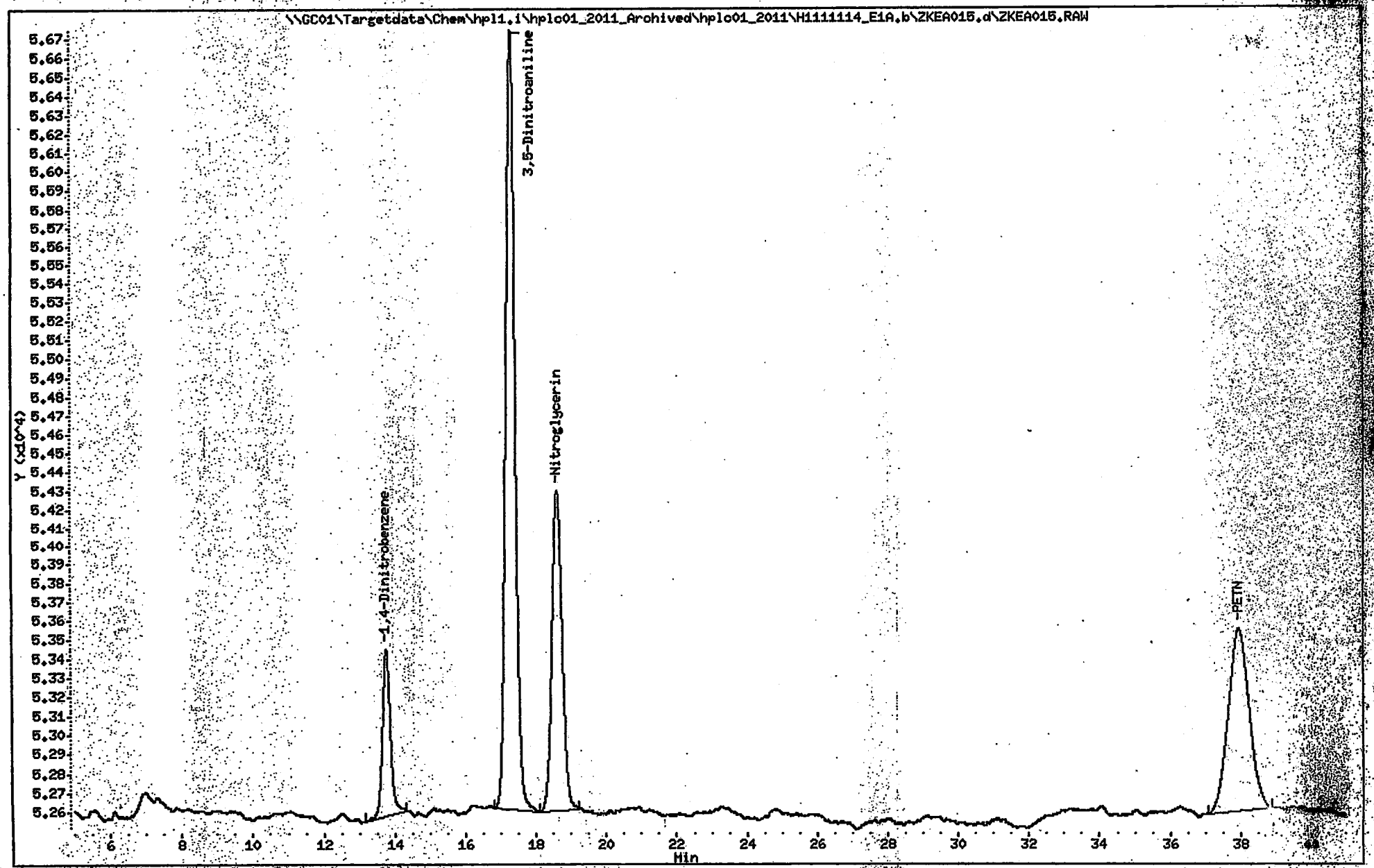
Sample Info: LEVEL3

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: LEVEL4
Inj Date : 15-NOV-2011 01:46
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL4
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 01:46 Cal File: ZKEA016.RAW
Als bottle: 58 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$	1 1,4-Dinitrobenzene	13.760	13.740	0.020	33422	250.000	251.625
	3 3,5-Dinitroaniline	17.290	17.239	0.051	190204	250.000	258.055
	4 Nitroglycerin	18.620	18.603	0.017	85253	1250.00	1311.18
	5 PETN	37.970	37.953	0.017	96593	1250.00	1295.41

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA016.d

Page 1

Date : 15-NOV-2011 01:46

Client ID:

Instrument: hpl1.i

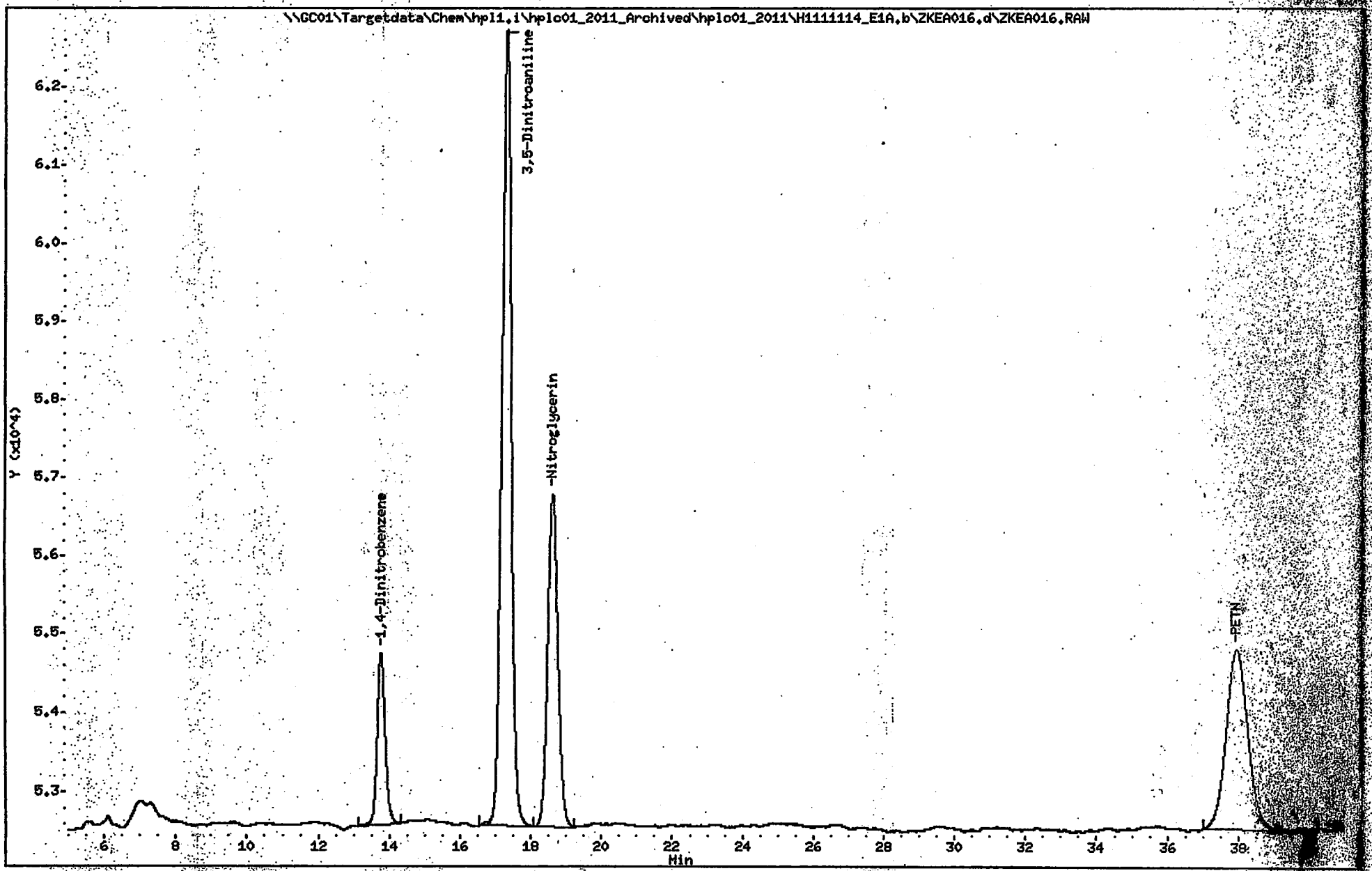
Sample Info: LEVEL4

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
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Inj Date : 15-NOV-2011 02:29
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL5
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 02:29 Cal File: ZKEA017.RAW
Als bottle: 58 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.760	13.740	0.020	67134	500.000	505.433
3	3,5-Dinitroaniline	17.286	17.239	0.047	373417	500.000	506.626
4	Nitroglycerin	18.620	18.603	0.017	168994	2500.00	2599.11
5	PETN	37.973	37.953	0.020	194798	2500.00	2612.45

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA017.d

Date : 15-NOV-2011 02:29

Client ID:

Instrument: hpl1.i

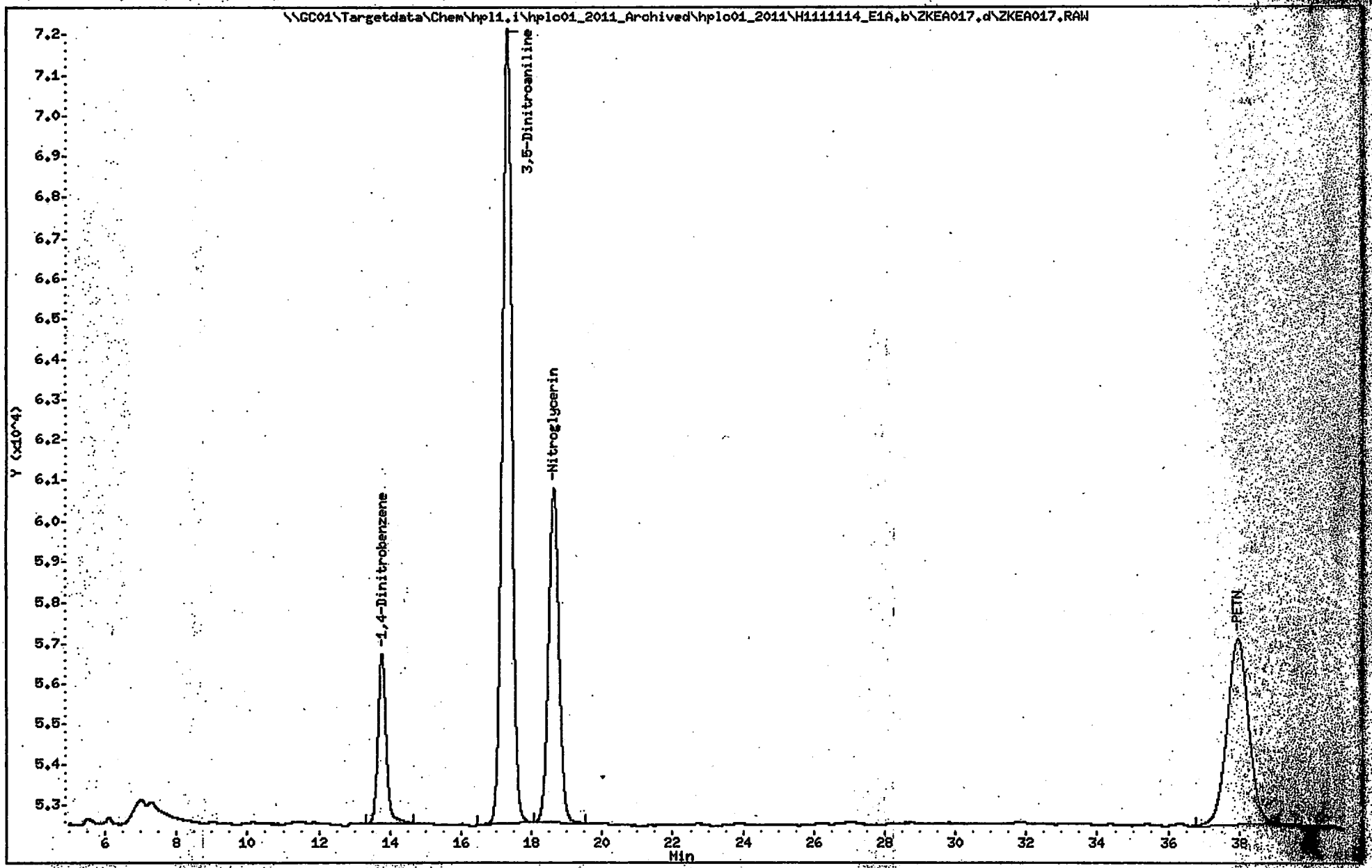
Sample Info: LEVEL5

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: LEVEL6
Inj Date : 15-NOV-2011 03:12
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL6
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:12 Cal File: ZKEA018.RAW
Als bottle: 58 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.746	13.740	0.006	130127	1000.00	979.689
3	3,5-Dinitroaniline	17.263	17.239	0.024	745369	1000.00	1011.26
4	Nitroglycerin	18.610	18.603	0.007	342109	5000.00	5261.61
5	PETN	37.980	37.953	0.027	390313	5000.00	5234.51

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA018.d

Page 1

Date : 15-NOV-2011 03:12

Client ID:

Instrument: hpl1.i

Sample Info: LEVEL6

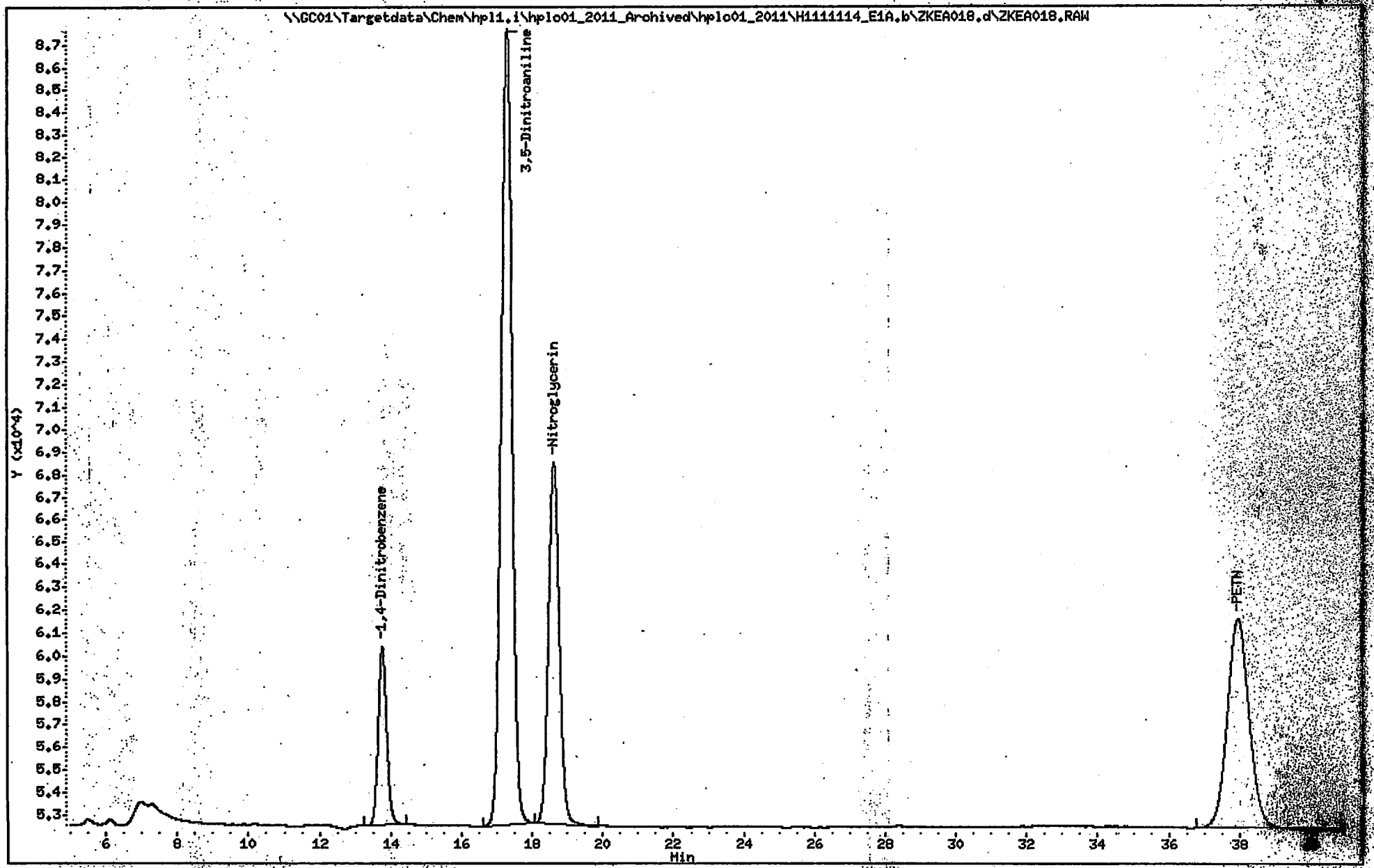
Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60

Page 132 of 807



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: LEVEL7
Inj Date : 15-NOV-2011 03:55
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL7
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.RAW
Als bottle: 58 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

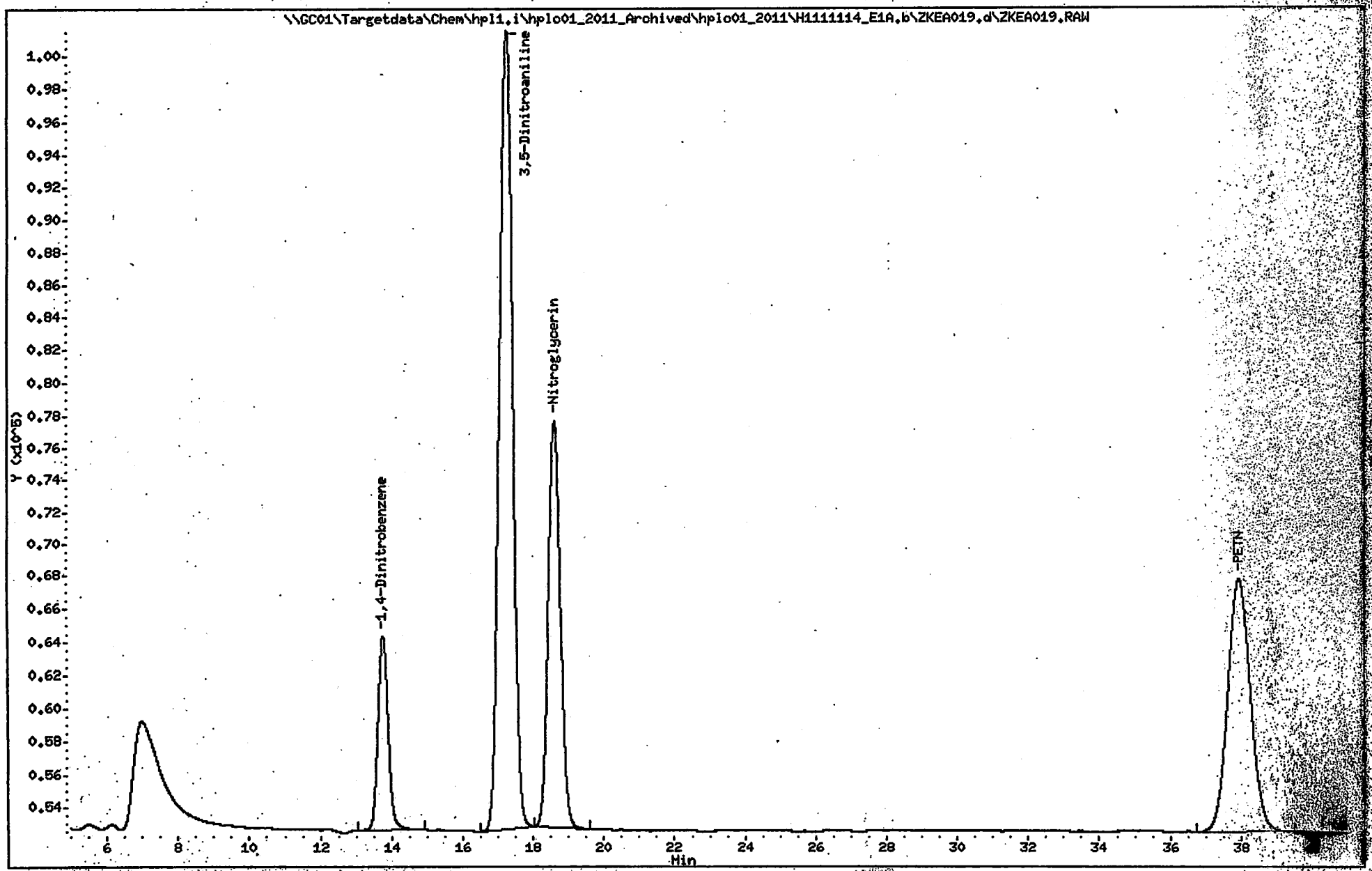
Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.740	13.740	0.000	235702	2000.00	1774.53
3	3,5-Dinitroaniline	17.240	17.239	0.001	1300553	2000.00	1764.50
4	Nitroglycerin	18.603	18.603	0.000	592552	10000.0	9113.40
5	PETN	37.953	37.953	0.000	677113	10000.0	9080.80

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA019.d
Date : 15-NOV-2011 03:55
Client ID:
Sample Info: LEVEL7
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



Continuing Calibrations

CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

GC Column: E1, 254nm ID: 4.1 (mm) Calibration Date: 8/2/2012 Time: 17:40

Sample No.(CC): CCV1 Initi. Calib. Date(s): 11/14/2011 11/14/2011

Lab Sample No.(CC): CCV1 Initi. Calib. Time(s): 17:54 22:12

File ID: ZH2B001.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
2-Amino-4,6-dinitrotoluene	24.870	24.020	25.720	288	289	0.4
4-Amino-2,6-dinitrotoluene	23.693	22.843	24.543	215	211	-2.0
1,3-Dinitrobenzene	15.383	15.093	15.673	429	397	-7.5
2,4-Dinitrotoluene	27.030	26.480	27.580	392	379	-3.3
2,6-Dinitrotoluene	26.080	25.540	26.620	213	219	2.8
HMX	4.996	4.726	5.266	125	130	4.2
Nitrobenzene	17.286	16.966	17.606	262	261	-0.6
4-Nitrotoluene	34.173	33.493	34.853	130	132	1.4
2-Nitrotoluene	31.413	30.833	31.993	166	179	7.7
3-Nitrotoluene	36.663	35.953	37.373	176	166	-5.5
RDX	8.446	8.166	8.726	151	150	-0.5
Tetryl	18.540	17.880	19.200	257	248	-3.4
1,3,5-Trinitrobenzene	11.940	11.740	12.140	326	340	4.2
2,4,6-Trinitrotoluene	21.286	20.826	21.746	305	282	-7.6
1,4-Dinitrobenzene	13.796	12.946	14.646	339	346	2.2

The Absolute Value of %D must be less than or equal to 20%

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B001.d
Lab Smp Id: CCV1
Inj Date : 02-AUG-2012 17:40
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV1;AJL;2
Misc Info : 045
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_254
Meth Date : 08-Aug-2012 09:59 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 45 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

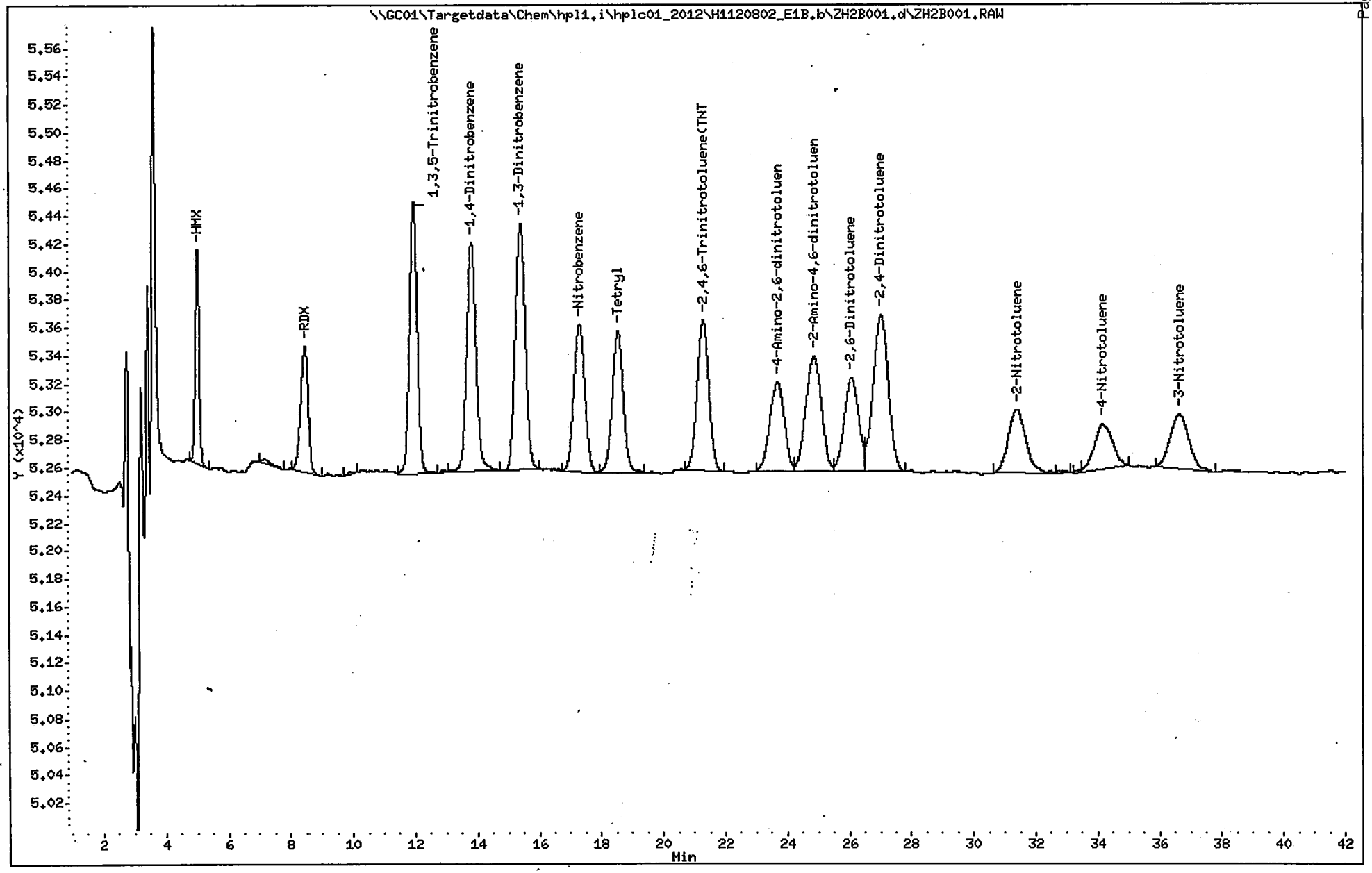
Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
	1 HMX	4.996	4.980	0.016	12971	100.000	104.176
	2 RDX	8.446	8.413	0.033	15044	100.000	99.4748
	3 1,3,5-Trinitrobenzene	11.940	11.876	0.064	33991	100.000	104.228
$	4 1,4-Dinitrobenzene	13.796	13.726	0.070	34630	100.000	102.165
	5 1,3-Dinitrobenzene	15.383	15.303	0.080	39719	100.000	92.5410
	6 Nitrobenzene	17.286	17.203	0.083	26078	100.000	99.4454
	7 Tetryl	18.540	18.403	0.137	24834	100.000	96.5581
	8 2,4,6-Trinitrotoluene(TNT)	21.286	21.156	0.130	28189	100.000	92.4317
	9 4-Amino-2,6-dinitrotoluene	23.693	23.520	0.173	21099	100.000	98.0397
	10 2-Amino-4,6-dinitrotoluene	24.870	24.683	0.187	28892	100.000	100.440
	11 2,6-Dinitrotoluene	26.080	25.920	0.160	21941	100.000	102.771
	12 2,4-Dinitrotoluene	27.030	26.860	0.170	37882	100.000	96.7171
	13 2-Nitrotoluene	31.413	31.183	0.230	17904	100.000	107.720
	14 4-Nitrotoluene	34.173	34.036	0.137	13171	100.000	101.434
	15 3-Nitrotoluene	36.663	36.456	0.207	16620	100.000	94.4867

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B001.d
Date : 02-AUG-2012 17:40
Client ID:
Sample Info: CCV1;AJL;2
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

GC Column: E1, 254nm ID: 4.1 (mm) Calibration Date: 8/3/2012 Time: 03:57

Sample No.(CC): CCV1 Initi. Calib. Date(s): 11/14/2011 11/14/2011

Lab Sample No.(CC): CCV1 Initi. Calib. Time(s): 17:54 22:12

File ID: ZH2B015.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
2-Amino-4,6-dinitrotoluene	24.703	23.853	25.553	288	283	-1.5
4-Amino-2,6-dinitrotoluene	23.536	22.686	24.386	215	227	5.7
1,3-Dinitrobenzene	15.313	15.023	15.603	429	413	-3.8
2,4-Dinitrotoluene	26.866	26.316	27.416	392	388	-0.9
2,6-Dinitrotoluene	25.943	25.403	26.483	213	224	5.0
HMX /	4.986	4.716	5.256	125	131	4.8
Nitrobenzene	17.206	16.886	17.526	262	276	5.4
4-Nitrotoluene	33.990	33.310	34.670	130	132	1.7
2-Nitrotoluene	31.226	30.646	31.806	166	168	1.2
3-Nitrotoluene	36.463	35.753	37.173	176	172	-2.2
RDX	8.416	8.136	8.696	151	155	2.5
Tetryl	18.416	17.756	19.076	257	237	-8.0
1,3,5-Trinitrobenzene	11.883	11.683	12.083	326	338	3.7
2,4,6-Trinitrotoluene	21.160	20.700	21.620	305	285	-6.5
1,4-Dinitrobenzene	13.726	12.876	14.576	339	338	-0.2

The Absolute Value of %D must be less than or equal to 20%

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B015.d
Lab Smp Id: CCV1
Inj Date : 03-AUG-2012 03:57
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV1;AJL;2;;;;
Misc Info : 125
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_254
Meth Date : 08-Aug-2012 09:59 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1	HMX	4.986	4.980	0.006	13051	100.000	104.819
2	RDX	8.416	8.413	0.003	15507	100.000	102.536
3	1,3,5-Trinitrobenzene	11.883	11.876	0.007	33824	100.000	103.716
$ 4	1,4-Dinitrobenzene	13.726	13.726	0.000	33840	100.000	99.8340
5	1,3-Dinitrobenzene	15.313	15.303	0.010	41298	100.000	96.2199
6	Nitrobenzene	17.206	17.203	0.003	27631	100.000	105.368
7	Tetryl	18.416	18.403	0.013	23674	100.000	92.0479
8	2,4,6-Trinitrotoluene(TNT)	21.160	21.156	0.004	28523	100.000	93.5268
9	4-Amino-2,6-dinitrotoluene	23.536	23.520	0.016	22737	100.000	105.651
10	2-Amino-4,6-dinitrotoluene	24.703	24.683	0.020	28325	100.000	98.4691
11	2,6-Dinitrotoluene	25.943	25.920	0.023	22409	100.000	104.963
12	2,4-Dinitrotoluene	26.866	26.860	0.006	38802	100.000	99.0660
13	2-Nitrotoluene	31.226	31.183	0.043	16813	100.000	101.156
14	4-Nitrotoluene	33.990	34.036	-0.046	13203	100.000	101.680(M)
15	3-Nitrotoluene	36.463	36.456	0.007	17201	100.000	97.7897

QC Flag Legend

M - Compound response manually integrated.

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B015.d

Date : 03-AUG-2012 03:57

Client ID:

Instrument: hpl1.i

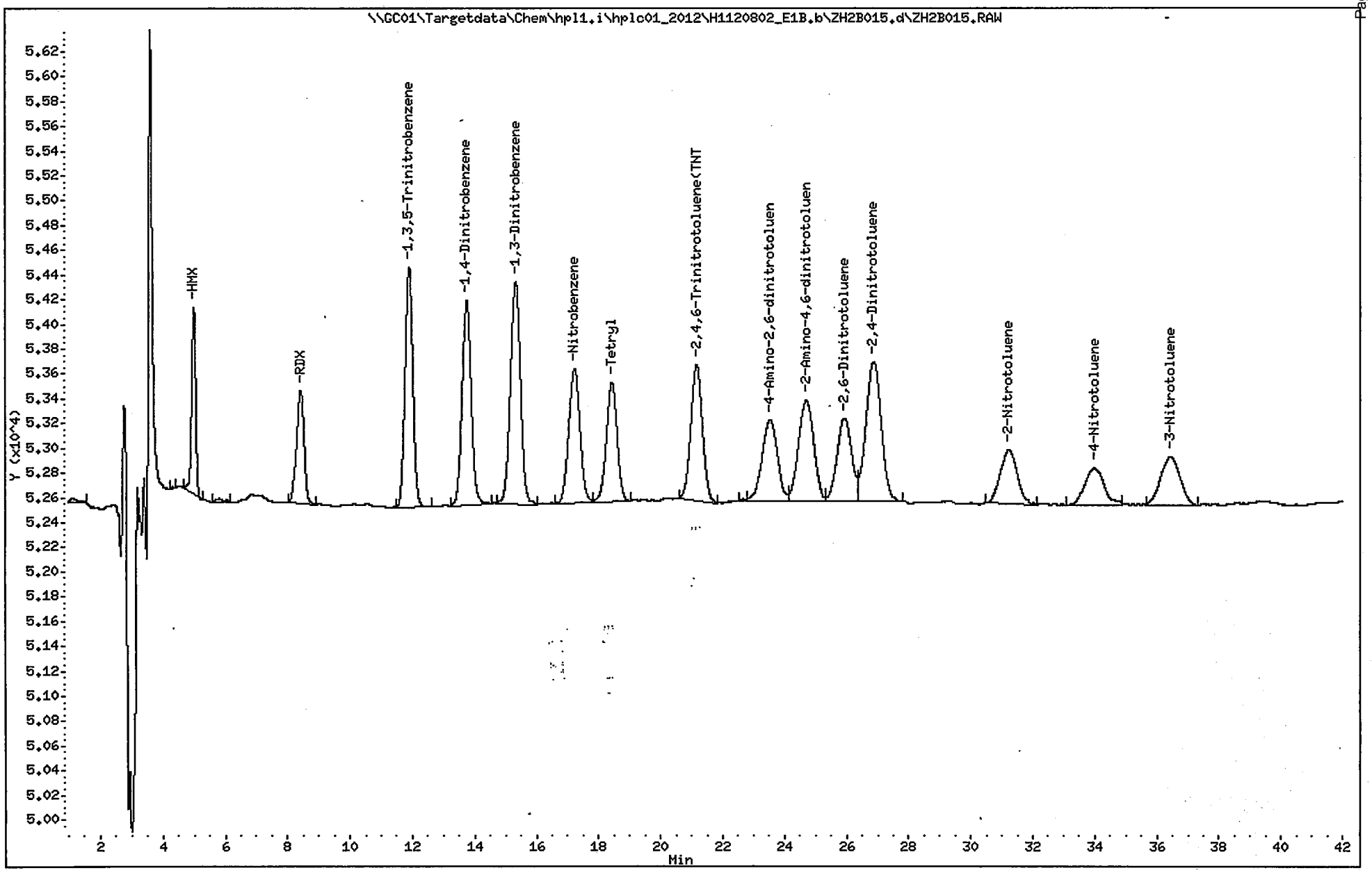
Sample Info: CCV1;AJL;2;;;;

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

GC Column: E1, 218nm ID: 4.1 (mm) Calibration Date: 8/6/2012 Time: 12:03

Sample No.(CC): CCV2 Initi. Calib. Date(s): 11/14/2011 11/15/2011

Lab Sample No.(CC): CCV2 Initi. Calib. Time(s): 23:38 03:55

File ID: ZH6A001.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
3,5-Dinitroaniline	17.380	16.430	18.330	737	709	-3.9
Nitroglycerin	18.933	18.553	19.313	65	67	2.7
PETN	38.823	37.973	39.673	75	65	-12.4
1,4-Dinitrobenzene	13.816	12.966	14.666	133	128	-3.4

The Absolute Value of %D must be less than or equal to 20%

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A001.d
Lab Smp Id: CCV2
Inj Date : 06-AUG-2012 12:03
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV2;AJL;2
Misc Info : 111
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\8330E1_218
Meth Date : 07-Aug-2012 08:51 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

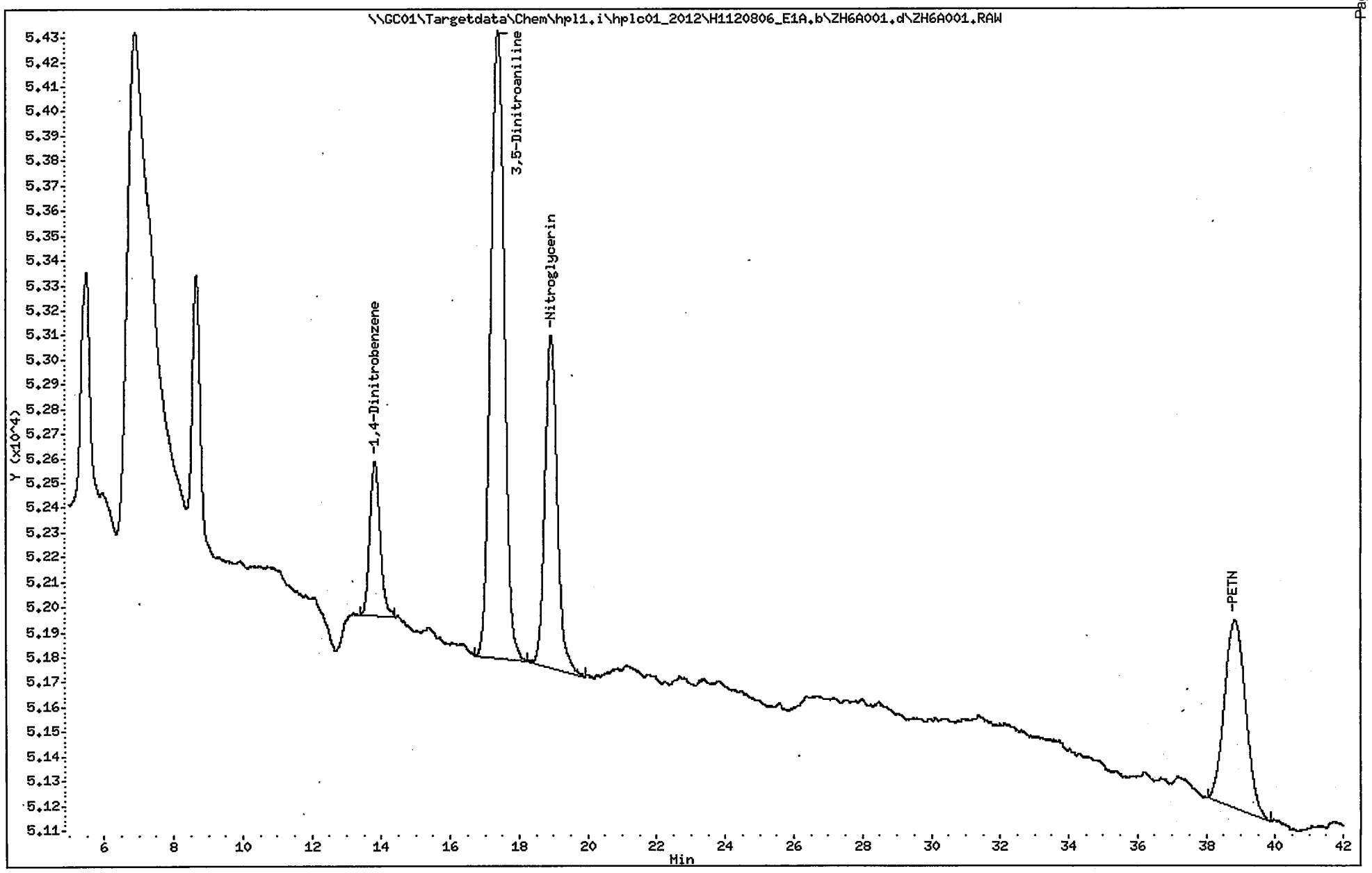
Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
$	1 1,4-Dinitrobenzene	13.816	13.750	0.066	12836	100.000	96.6385
	3 3,5-Dinitroaniline	17.380	17.260	0.120	70865	100.000	96.1446
	4 Nitroglycerin	18.933	18.803	0.130	33377	500.000	513.335
	5 PETN	38.823	38.503	0.320	32676	500.000	438.220

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A001.d
Date : 06-AUG-2012 12:03
Client ID:
Sample Info: CCV2;AJL;2
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-002

GC Column: E1, 218nm ID: 4.1 (mm) Calibration Date: 8/6/2012 Time: 18:54

Sample No.(CC): CCV2 Initi. Calib. Date(s): 11/14/2011 11/15/2011

Lab Sample No.(CC): CCV2 Initi. Calib. Time(s): 23:38 03:55

File ID: ZH6A010.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
3,5-Dinitroaniline	17.260	16.310	18.210	737	675	-8.4
Nitroglycerin	18.803	18.423	19.183	65	62	-4.1
PETN	38.503	37.653	39.353	75	66	-11.1
1,4-Dinitrobenzene	13.750	12.900	14.600	133	131	-1.5

The Absolute Value of %D must be less than or equal to 20%

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A010.d
Lab Smp Id: CCV2
Inj Date : 06-AUG-2012 18:54
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV2;AJL;2
Misc Info : 129
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\8330E1_218
Meth Date : 07-Aug-2012 08:51 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$	1 1,4-Dinitrobenzene	13.750	13.750	0.000	13083	100.000	98.4981
	3 3,5-Dinitroaniline	17.260	17.260	0.000	67537	100.000	91.6295
	4 Nitroglycerin	18.803	18.803	0.000	31179	500.000	479.530
	5 PETN	38.503	38.503	0.000	33146	500.000	444.523

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A010.d

Date : 06-AUG-2012 18:54

Client ID:

Sample Info: CCV2;AJL;2

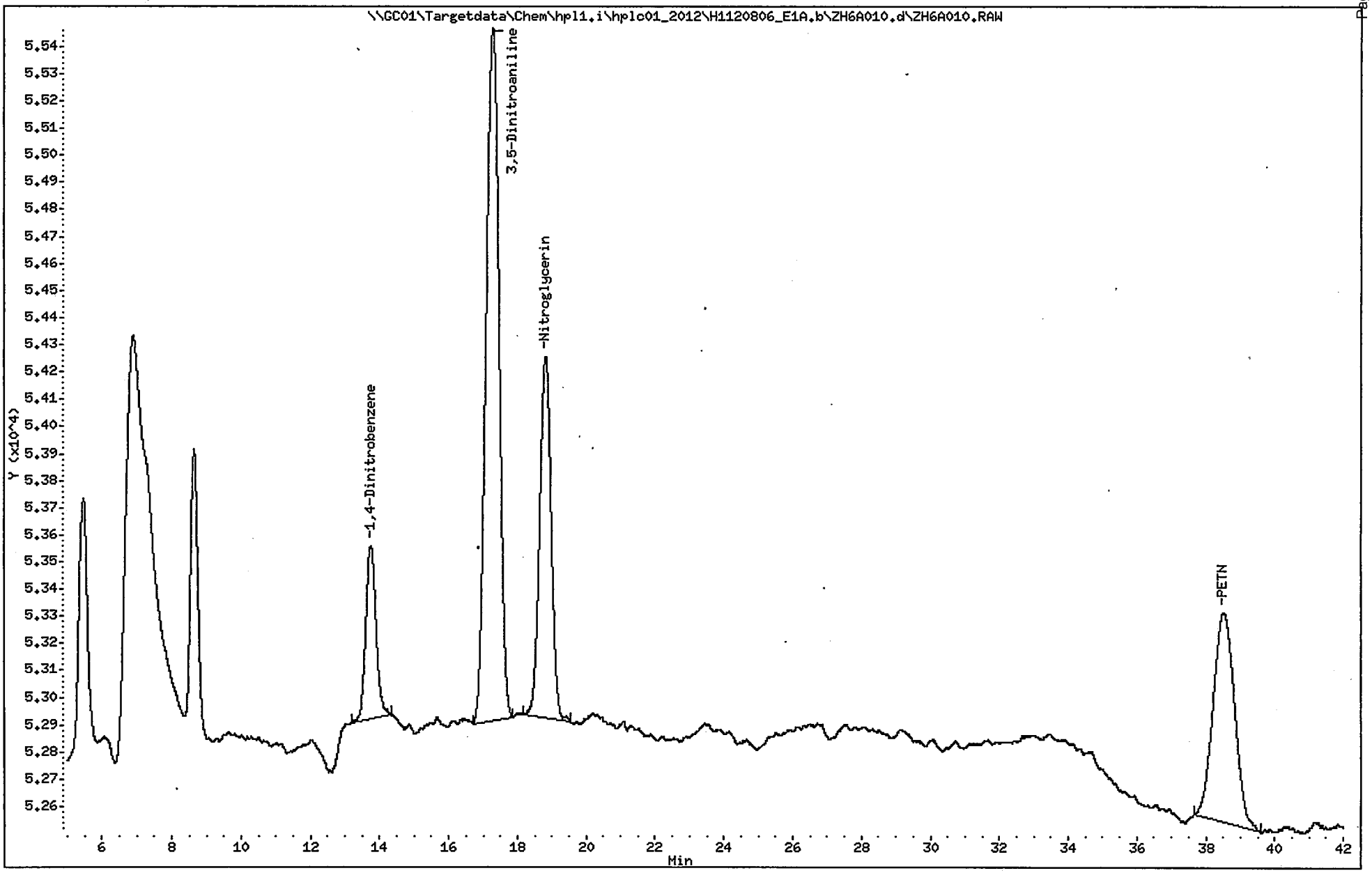
Volume Injected (uL): 100.0

Column phase: E1

Instrument: hpl1.i

Operator: AJL

Column diameter: 4.60



QC Raw Data

Blank Raw Data

1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1018213(MB)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): WATER Lab Sample ID: 1018213

Sample wt/vol: 1000 (g/mL) ML Lab File ID (1): ZH2B003A.d

% Moisture:

Extraction:(Type) SPE Date Received: 08/02/2012

Concentrated Extract Volume: 10000 (uL) Date Extracted: 08/02/2012

Injection Volume: 100 (uL) Date Analyzed: 08/02/2012

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup:(Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.100	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.100	U
99-65-0	1,3-Dinitrobenzene	0.100	U
121-14-2	2,4-Dinitrotoluene	0.100	U
606-20-2	2,6-Dinitrotoluene	0.100	U
2691-41-0	HMX	0.100	U
98-95-3	Nitrobenzene	0.100	U
99-99-0	4-Nitrotoluene	0.100	U
88-72-2	2-Nitrotoluene	0.100	U
99-08-1	3-Nitrotoluene	0.100	U
121-82-4	RDX	0.100	U
479-45-8	Tetryl	0.20	U
99-35-4	1,3,5-Trinitrobenzene	0.100	U
118-96-7	2,4,6-Trinitrotoluene	0.100	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B003A.d
Lab Smp Id: 1018213 Client Smp ID: MB for HBN 474044 [
Inj Date : 02-AUG-2012 19:08
Operator : AJL Inst ID: hpl1.i
Smp Info : 1018213;AJL;3;;BLANK
Misc Info : ZZ HPLC 3174 D8330W
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_254
Meth Date : 08-Aug-2012 09:59 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (m
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/13/12
REPORTED 8/13/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.830	13.726	0.104	183364	540.956	5.40956
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

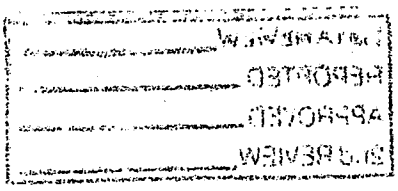
ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1018213
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3174 D8330W

Client SDG: H1120802_E1B.b
Fraction: SV
Client Smp ID: MB for HBN 474044 [
Operator: AJL
SampleType: BLANK
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	5.00000	5.40956	108.19	50-150



Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B003A.d

Date : 02-AUG-2012 19:08

Client ID: MB for HBN 474044 [

Sample Info: 1018213;AJL;3;;BLANK

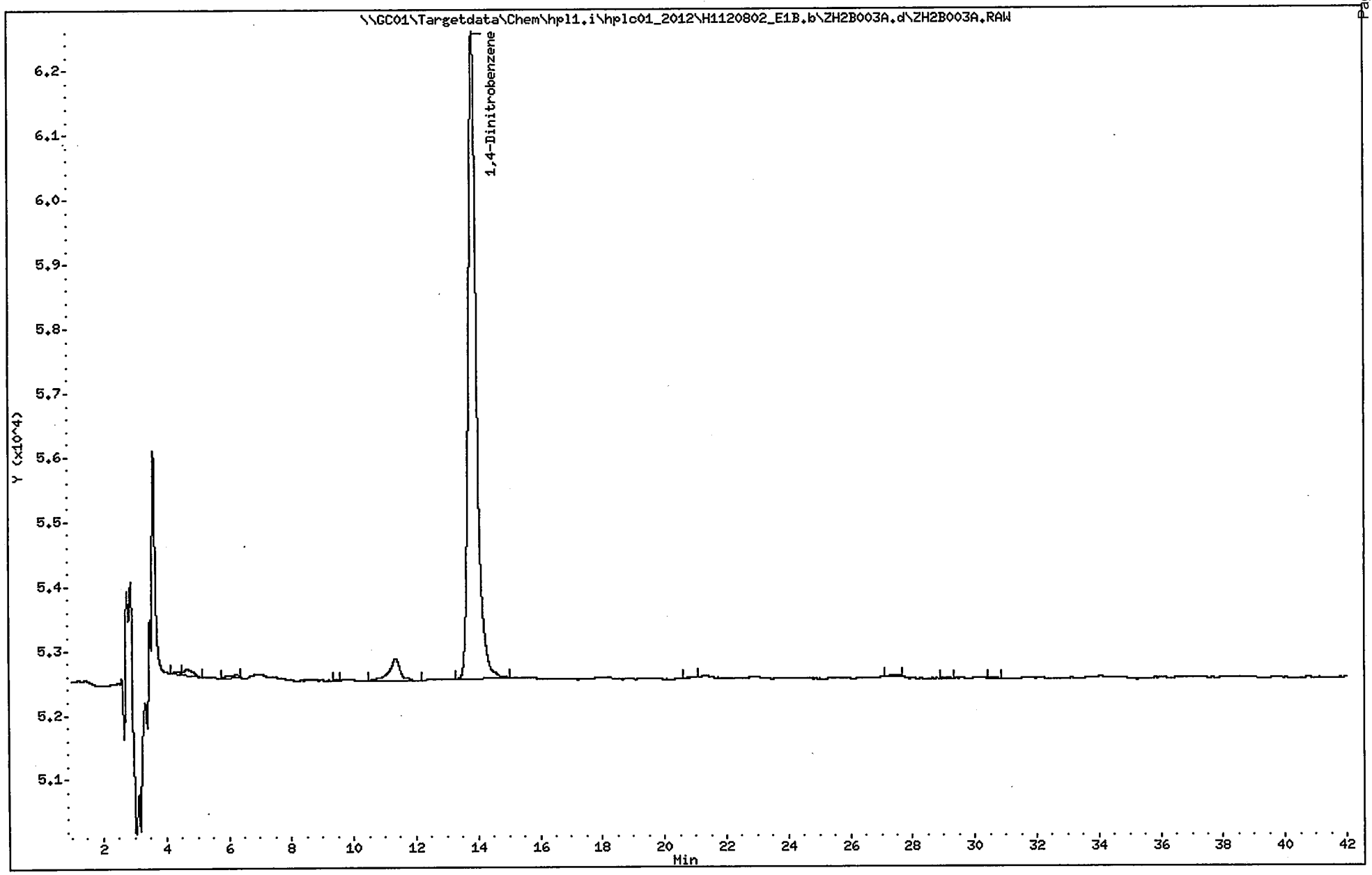
Volume Injected (uL): 100.0

Column phase: E1

Instrument: hpl1.i

Operator: AJL

Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1018213(MB)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): WATER Lab Sample ID: 1018213

Sample wt/vol: 1000 (g/mL) ML Lab File ID (1): ZH6A002A.d

% Moisture:

Extraction:(Type) SPE Date Received: 08/02/2012

Concentrated Extract Volume: 10000 (uL) Date Extracted: 08/02/2012

Injection Volume: 100 (uL) Date Analyzed: 08/06/2012

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup:(Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/L	Q
618-87-1	3,5-Dinitroaniline	0.11	U
55-63-0	Nitroglycerin	0.80	U
78-11-5	PETN	0.80	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A002A.d
Lab Smp Id: 1018213 Client Smp ID: MB for HBN 474044 [
Inj Date : 06-AUG-2012 13:02
Operator : AJL Inst ID: hpl1.i
Smp Info : 1018213;AJL;3;;BLANK
Misc Info : ZZ HPLC 3174 D8330W
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\8330E1_218
Meth Date : 07-Aug-2012 08:51 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/13/12
REPORTED 8/13/12
APPROVED CY/WY
2nd REVIEW CY/WY

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
$ 1 1,4-Dinitrobenzene	13.853	13.750	0.103	69350	522.116	5.22116
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

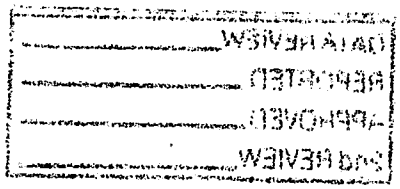
ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1018213
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3174 D8330W

Client SDG: H1120806_E1A.b
Fraction: SV
Client Smp ID: MB for HBN 474044 [
Operator: AJL
SampleType: BLANK
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	5.00000	5.22116	104.42	50-150



Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A002A.d

Date : 06-AUG-2012 13:02

Client ID: MB for HBN 474044 [

Instrument: hpl1.i

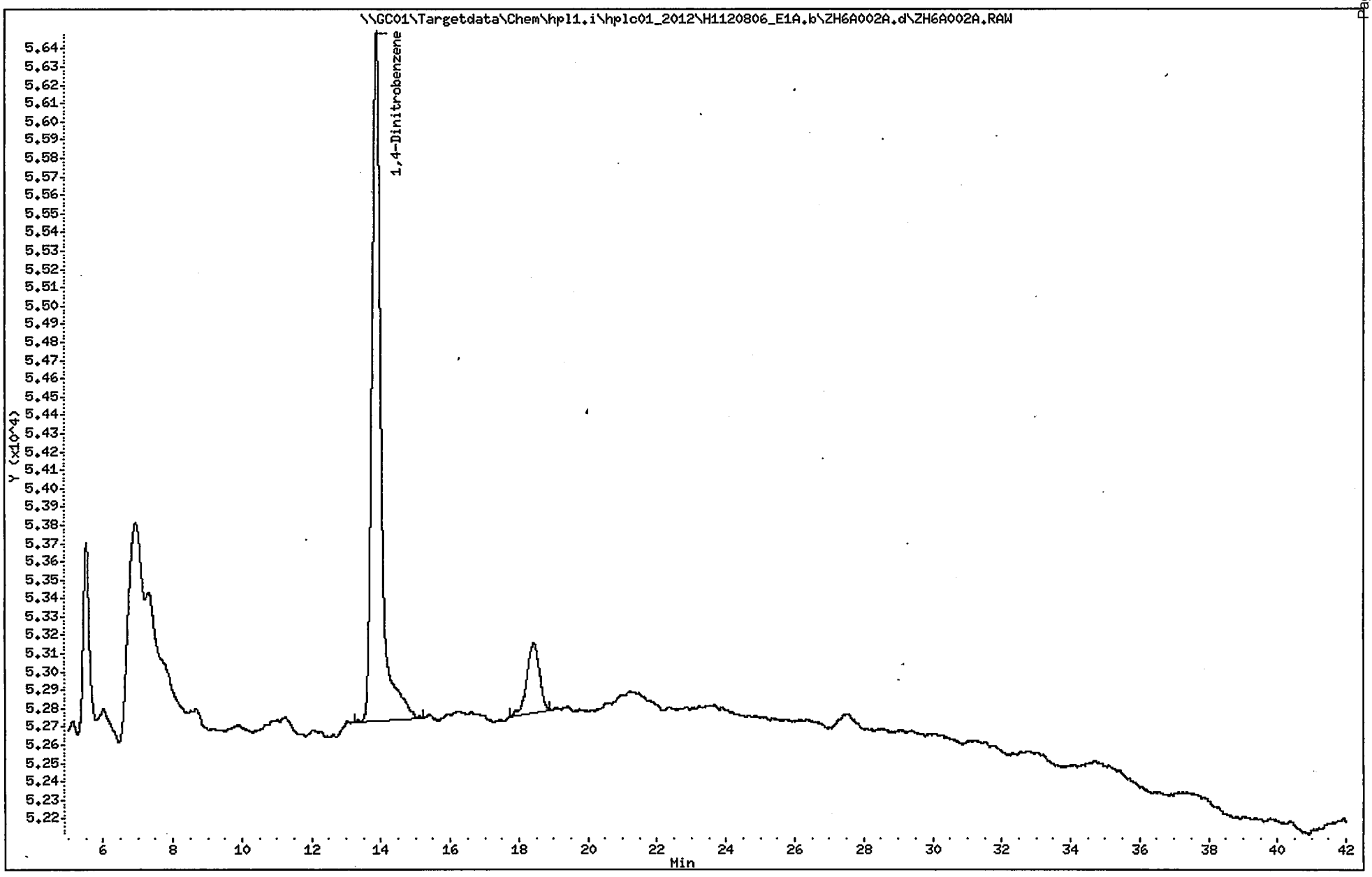
Sample Info: 1018213;AJL;3;;BLANK

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



Matrix Spike Raw Data

1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

9980109002MS

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): WATER Lab Sample ID: 1018216

Sample wt/vol: 1040 (g/mL) ML Lab File ID (1): ZH2B010.d

% Moisture: Lab File ID (2):

Extraction: (Type) SPE Date Received: 07/27/2012

Concentrated Extract Volume: 10000 (uL) Date Extracted: 08/02/2012

Injection Volume: 100 (uL) Date Analyzed: 08/03/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/L	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.86	
1946-51-0	4-Amino-2,6-dinitrotoluene	0.88	
99-65-0	1,3-Dinitrobenzene	0.88	
121-14-2	2,4-Dinitrotoluene	0.82	
606-20-2	2,6-Dinitrotoluene	0.80	
2691-41-0	HMX	0.81	
98-95-3	Nitrobenzene	0.83	
99-99-0	4-Nitrotoluene	0.80	
88-72-2	2-Nitrotoluene	0.87	
99-08-1	3-Nitrotoluene	0.79	
121-82-4	RDX	0.80	
479-45-8	Tetryl	0.76	
99-35-4	1,3,5-Trinitrobenzene	0.84	
118-96-7	2,4,6-Trinitrotoluene	0.84	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B010.d
Lab Smp Id: 1018216 Client Smp ID: 9980109002MS
Inj Date : 03-AUG-2012 00:17
Operator : AJL Inst ID: hpl1.i
Smp Info : 1018216;AJL;3;;MS;1;1040
Misc Info : ZZ HPLC 3174 D8330W
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_254
Meth Date : 08-Aug-2012 09:59 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1040.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/13/12
REPORTED 8/13/12
APPROVED CW/MH
2nd REVIEW CW/MH

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1	HMX	5.006	4.980	0.026	10505	84.3707	0.811257
2	RDX	8.456	8.413	0.043	12630	83.5128	0.803008
3	1,3,5-Trinitrobenzene	11.933	11.876	0.057	28379	87.0199	0.836730
$ 4	1,4-Dinitrobenzene	13.786	13.726	0.060	155708	459.366	4.41698
5	1,3-Dinitrobenzene	15.380	15.303	0.077	39208	91.3505	0.878370
6	Nitrobenzene	17.283	17.203	0.080	22751	86.7582	0.834214
7	Tetryl	18.490	18.403	0.087	20219	78.6144	0.755907
8	2,4,6-Trinitrotoluene(TNT)	21.236	21.156	0.080	26571	87.1262	0.837752
9	4-Amino-2,6-dinitrotoluene	23.656	23.520	0.136	19714	91.6041	0.880809
10	2-Amino-4,6-dinitrotoluene	24.826	24.683	0.143	25608	89.0237	0.855997
11	2,6-Dinitrotoluene	26.043	25.920	0.123	17835	83.5388	0.803258
12	2,4-Dinitrotoluene	26.986	26.860	0.126	33530	85.6060	0.823134
13	2-Nitrotoluene	31.346	31.183	0.163	15040	90.4888	0.870085
14	4-Nitrotoluene	34.136	34.036	0.100	10869	83.7052	0.804858
15	3-Nitrotoluene	36.550	36.456	0.094	14405	81.8942	0.787444

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1018216
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3174 D8330W

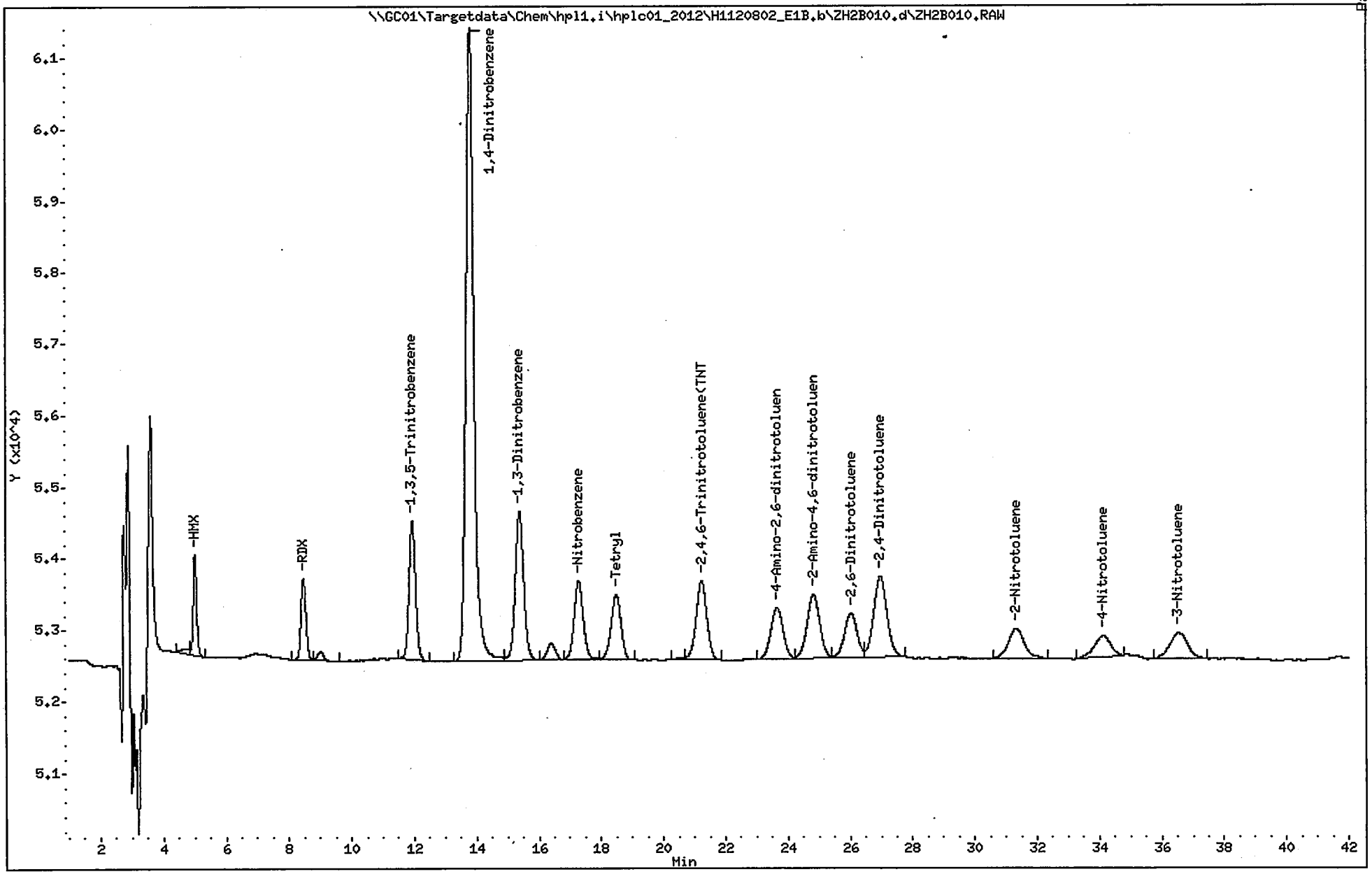
Client SDG: H1120802_E1B.b
Fraction: SV
Client Smp ID: 9980109002MS
Operator: AJL
SampleType: MS
Quant Type: ESTD

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1	HMX	0.961538	0.811257	84.37	80-115
2	RDX	0.961538	0.803008	83.51	50-160
3	1,3,5-Trinitrobenz	0.961538	0.836730	87.02	65-140
5	1,3-Dinitrobenzene	0.961538	0.878370	91.35	45-160
7	Tetryl	0.961538	0.755907	78.61	20-175
6	Nitrobenzene	0.961538	0.834214	86.76	50-140
8	2,4,6-Trinitrotolu	0.961538	0.837752	87.13	50-145
9	4-Amino-2,6-dinitr	0.961538	0.880809	91.60	55-155
10	2-Amino-4,6-dinitr	0.961538	0.855997	89.02	50-155
11	2,6-Dinitrotoluene	0.961538	0.803258	83.54	60-135
12	2,4-Dinitrotoluene	0.961538	0.823134	85.61	60-135
13	2-Nitrotoluene	0.961538	0.870085	90.49	45-135
14	4-Nitrotoluene	0.961538	0.804858	83.71	50-130
15	3-Nitrotoluene	0.961538	0.787444	81.89	50-130

	SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4	1,4-Dinitrobenzene	4.80769	4.41698	91.87	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B010.d
Date : 03-AUG-2012 00:17
Client ID: 9980109002MS
Sample Info: 1018216;AJL;3;;MS;1;1040
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

9980109002MSD

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): WATER Lab Sample ID: 1018217

Sample wt/vol: 1050 (g/mL) ML Lab File ID (1): ZH2B011.d

% Moisture: Lab File ID (2):

Extraction: (Type) SPE Date Received: 07/27/2012

Concentrated Extract Volume: 10000 (uL) Date Extracted: 08/02/2012

Injection Volume: 100 (uL) Date Analyzed: 08/03/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.85	
1946-51-0	4-Amino-2,6-dinitrotoluene	0.88	
99-65-0	1,3-Dinitrobenzene	0.90	
121-14-2	2,4-Dinitrotoluene	0.83	
606-20-2	2,6-Dinitrotoluene	0.83	
2691-41-0	HMX	0.80	
98-95-3	Nitrobenzene	0.88	
99-99-0	4-Nitrotoluene	0.97	
88-72-2	2-Nitrotoluene	0.77	
99-08-1	3-Nitrotoluene	0.84	
121-82-4	RDX	0.88	
479-45-8	Tetryl	0.81	
99-35-4	1,3,5-Trinitrobenzene	0.84	
118-96-7	2,4,6-Trinitrotoluene	0.87	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B011.d
Lab Smp Id: 1018217 Client Smp ID: 9980109002MSD
Inj Date : 03-AUG-2012 01:01
Operator : AJL Inst ID: hpl1.i
Smp Info : 1018217;AJL;3;;MSD;1;1050
Misc Info : ZZ HPLC 3174 D8330W
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_254
Meth Date : 08-Aug-2012 09:59 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1050.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

DATA REVIEW 8-31-12
REPORTED 8/31/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
	1 HMX	5.006	4.980	0.026	10441	83.8567	0.798635
	2 RDX	8.453	8.413	0.040	14002	92.5849	0.881761
	3 1,3,5-Trinitrobenzene	11.933	11.876	0.057	28820	88.3722	0.841640
$	4 1,4-Dinitrobenzene	13.783	13.726	0.057	156777	462.520	4.40495
	5 1,3-Dinitrobenzene	15.380	15.303	0.077	40400	94.1277	0.896454
	6 Nitrobenzene	17.286	17.203	0.083	24306	92.6881	0.882743
	7 Tetryl	18.500	18.403	0.097	21975	85.4419	0.813733
	8 2,4,6-Trinitrotoluene(TNT)	21.243	21.156	0.087	27868	91.3791	0.870277
	9 4-Amino-2,6-dinitrotoluene	23.650	23.520	0.130	19810	92.0502	0.876669
	10 2-Amino-4,6-dinitrotoluene	24.830	24.683	0.147	25586	88.9472	0.847117
	11 2,6-Dinitrotoluene	26.040	25.920	0.120	18685	87.5202	0.833525
	12 2,4-Dinitrotoluene	26.980	26.860	0.120	34182	87.2706	0.831148
	13 2-Nitrotoluene	31.333	31.183	0.150	13464	81.0067	0.771493
	14 4-Nitrotoluene	34.136	34.036	0.100	13289	102.342	0.974688
	15 3-Nitrotoluene	36.586	36.456	0.130	15550	88.4036	0.841939

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1018217
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Client SDG: H1120802_E1B.b
Fraction: SV
Client Smp ID: 9980109002MSD
Operator: AJL
SampleType: MSD
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3174 D8330W

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 HMX	0.952381	0.798635	83.86	80-115
2 RDX	0.952381	0.881761	92.58	50-160
3 1,3,5-Trinitrobenz	0.952381	0.841640	88.37	65-140
5 1,3-Dinitrobenzene	0.952381	0.896454	94.13	45-160
7 Tetryl	0.952381	0.813733	85.44	20-175
6 Nitrobenzene	0.952381	0.882743	92.69	50-140
8 2,4,6-Trinitrotolu	0.952381	0.870277	91.38	50-145
9 4-Amino-2,6-dinitr	0.952381	0.876669	92.05	55-155
10 2-Amino-4,6-dinitr	0.952381	0.847117	88.95	50-155
11 2,6-Dinitrotoluene	0.952381	0.833525	87.52	60-135
12 2,4-Dinitrotoluene	0.952381	0.831148	87.27	60-135
13 2-Nitrotoluene	0.952381	0.771493	81.01	45-135
14 4-Nitrotoluene	0.952381	0.974688	102.34	50-130
15 3-Nitrotoluene	0.952381	0.841939	88.40	50-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	4.76190	4.40495	92.50	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B011.d

Date : 03-AUG-2012 01:01

Client ID: 9980109002MSD

Instrument: hpl1.i

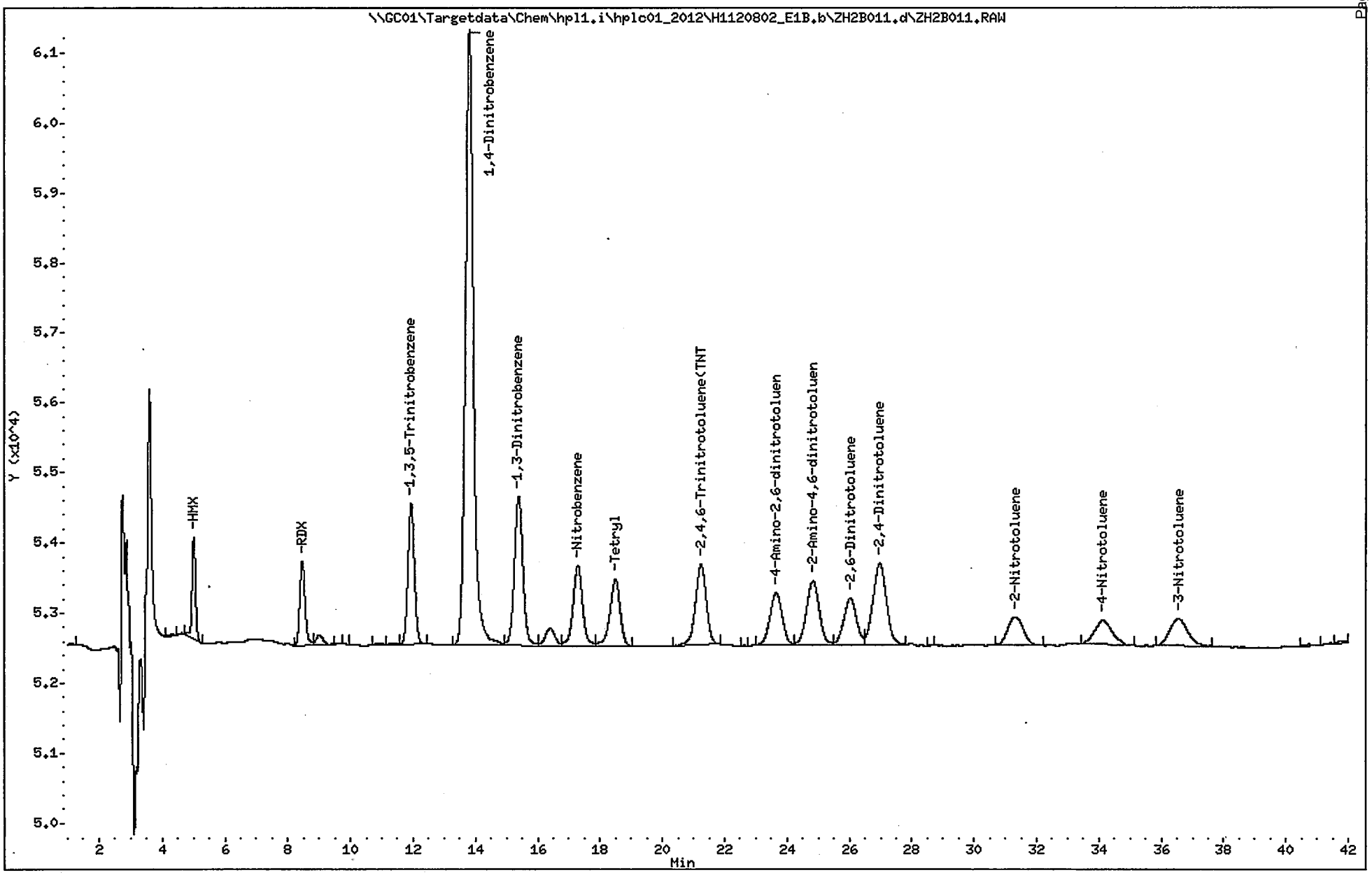
Sample Info: 1018217;AJL;3;;MSD;1;1050

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



LCS Raw Data

1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

ICV111411(ICV)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): WATER Lab Sample ID: ICV111411

Sample wt/vol: 1000 (g/mL) ML Lab File ID (1): ZKEB012.d

% Moisture:

Extraction: (Type) Date Received:

Concentrated Extract Volume: 10000 (uL) Date Extracted:

Injection Volume: 100 (uL) Date Analyzed: 11/14/2011

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.90	
1946-51-0	4-Amino-2,6-dinitrotoluene	0.87	
99-65-0	1,3-Dinitrobenzene	0.83	
121-14-2	2,4-Dinitrotoluene	0.85	
606-20-2	2,6-Dinitrotoluene	0.90	
2691-41-0	HMX	0.89	
98-95-3	Nitrobenzene	0.89	
99-99-0	4-Nitrotoluene	0.97	
88-72-2	2-Nitrotoluene	0.91	
99-08-1	3-Nitrotoluene	0.94	
121-82-4	RDX	0.86	
479-45-8	Tetryl	0.89	
99-35-4	1,3,5-Trinitrobenzene	0.90	
118-96-7	2,4,6-Trinitrotoluene	0.82	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB012
Lab Smp Id: ICV
Inj Date : 14-NOV-2011 22:55
Operator : AJL Inst ID: hpl1.i
Smp Info : ICV
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 58 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
	1 HMX	4.940	4.930	0.010	11031	88.5952	0.885952
	2 RDX	8.346	8.330	0.016	13072	86.4355	0.864355
	3 1,3,5-Trinitrobenzene	11.870	11.857	0.013	29196	89.5251	0.895251
$	4 1,4-Dinitrobenzene	13.753	13.737	0.016	28820	85.0241	0.850241
	5 1,3-Dinitrobenzene	15.333	15.317	0.016	35698	83.1725	0.831725
	6 Nitrobenzene	17.270	17.250	0.020	23216	88.5315	0.885315
	7 Tetryl	18.290	18.283	0.007	22992	89.3962	0.893962
	8 2,4,6-Trinitrotoluene(TNT)	21.120	21.110	0.010	24978	81.9028	0.819028
	9 4-Amino-2,6-dinitrotoluene	23.500	23.483	0.017	18794	87.3292	0.873292
	10 2-Amino-4,6-dinitrotoluene	24.656	24.650	0.006	25772	89.5939	0.895939
	11 2,6-Dinitrotoluene	25.943	25.940	0.003	19167	89.7778	0.897778
	12 2,4-Dinitrotoluene	26.910	26.903	0.007	33226	84.8298	0.848298
	13 2-Nitrotoluene	31.340	31.327	0.013	15153	91.1687	0.911687
	14 4-Nitrotoluene	34.143	34.133	0.010	12601	97.0438	0.970438
	15 3-Nitrotoluene	36.616	36.567	0.049	16513	93.8784	0.938784

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: ICV
Level: LOW
Data Type: LC DATA
SpikeList File: ICV.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1
Misc Info: 058

Client SDG: H1111114_E1B.b
Fraction: SV

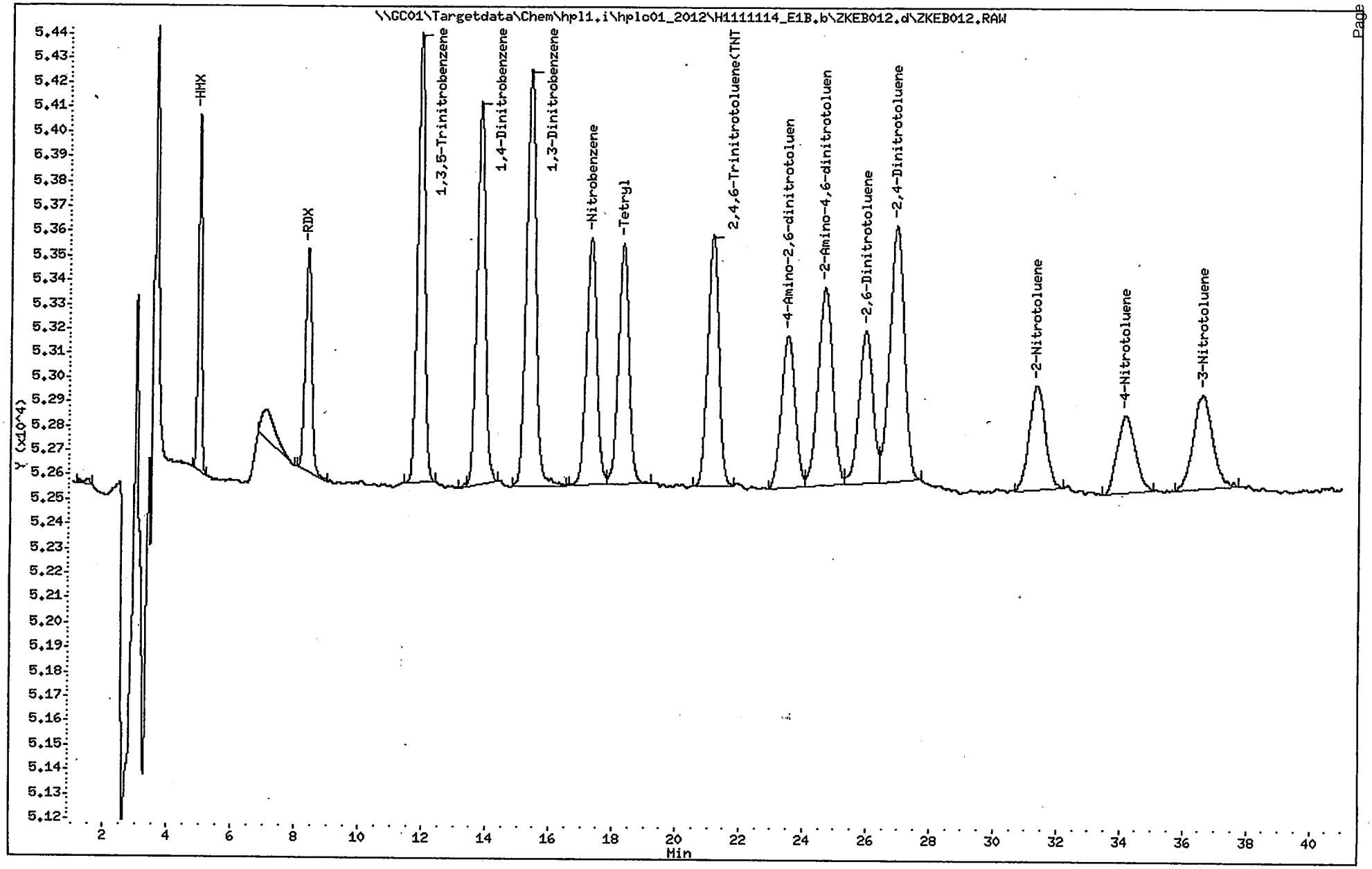
Operator: AJL
SampleType: LCS
Quant Type: ESTD

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1	HMX	1.00000	0.885952	88.60	80-120
2	RDX	1.00000	0.864355	86.44	80-120
3	1,3,5-Trinitrobenz	1.00000	0.895251	89.53	80-120
5	1,3-Dinitrobenzene	1.00000	0.831725	83.17	80-120
7	Tetryl	1.00000	0.893962	89.40	80-120
6	Nitrobenzene	1.00000	0.885315	88.53	80-120
8	2,4,6-Trinitrotolu	1.00000	0.819028	81.90	80-120
9	4-Amino-2,6-dinitr	1.00000	0.873292	87.33	80-120
10	2-Amino-4,6-dinitr	1.00000	0.895939	89.59	80-120
11	2,6-Dinitrotoluene	1.00000	0.897778	89.78	80-120
12	2,4-Dinitrotoluene	1.00000	0.848298	84.83	80-120
13	2-Nitrotoluene	1.00000	0.911687	91.17	80-120
14	4-Nitrotoluene	1.00000	0.970438	97.04	80-120
15	3-Nitrotoluene	1.00000	0.938784	93.88	80-120

	SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4	1,4-Dinitrobenzene	1.00000	0.850241	85.02	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB012.d
Date : 14-NOV-2011 22:55
Client ID:
Sample Info: ICV
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

ICV112011(ICV)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): WATER Lab Sample ID: ICV112011

Sample wt/vol: 1000 (g/mL) ML Lab File ID (1): ZKKA003.d

% Moisture:

Extraction: (Type) Date Received:

Concentrated Extract Volume: 40000 (uL) Date Extracted:

Injection Volume: 100 (uL) Date Analyzed: 11/20/2011

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
618-87-1	3,5-Dinitroaniline	1.0	J
55-63-0	Nitroglycerin	5.6	
78-11-5	PETN	0.95	J

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: CCV2/ICV Rerun.
Inj Date : 20-NOV-2011 11:37
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV2;AJL;2
Misc Info : 056
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 20-Aug-2012 13:25 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 56 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
$ 1	1,4-Dinitrobenzene	13.380	13.346	0.034	13685	103.030	1.03030
3	3,5-Dinitroaniline	16.793	16.760	0.033	75392	102.287	1.02287 (M)
4	Nitroglycerin	18.170	18.120	0.050	36109	555.353	5.55353 (M)
5	PETN	37.290	37.110	0.180	36909	494.989	4.94989

QC Flag Legend

M - Compound response manually integrated.

Data File: [redacted]ccv.d
Report Date: 20-Aug-2012 13:25

[redacted]

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: CCV2
Level: LOW
Data Type: LC DATA
SpikeList File: ICV.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H11
Misc Info: 056

Client SDG: H1111120_E1A.b
Fraction: SV

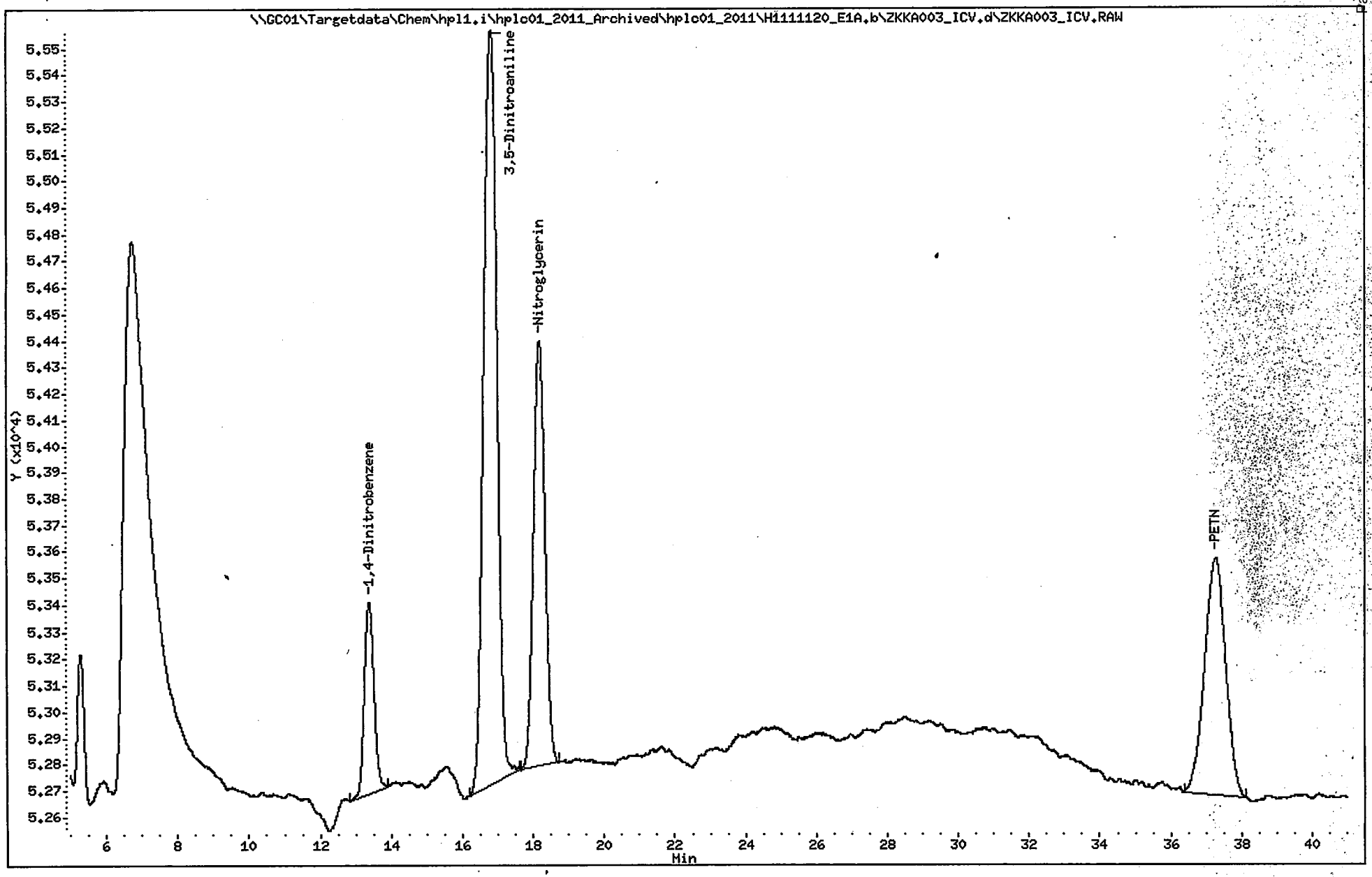
Operator: AJL
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
4 Nitroglycerin	5.00000	5.55353	111.07	80-120
3 3,5-Dinitroaniline	1.00000	1.02287	102.29	80-120
5 PETN	5.00000	4.94989	99.00	80-120

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.00000	1.03030	103.03	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111120_E1A.b\ZKKA003_ICV.d
Date : 20-NOV-2011 11:37
Client ID:
Sample Info: CCV2;AJL;2
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1018214 (LCS)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): WATER Lab Sample ID: 1018214

Sample wt/vol: 1000 (g/mL) ML Lab File ID (1): ZH2B004A.d

% Moisture:

Extraction: (Type) SPE Date Received: 08/02/2012

Concentrated Extract Volume: 10000 (uL) Date Extracted: 08/02/2012

Injection Volume: 100 (uL) Date Analyzed: 08/02/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	1.0	
1946-51-0	4-Amino-2,6-dinitrotoluene	1.0	
99-65-0	1,3-Dinitrobenzene	1.1	
121-14-2	2,4-Dinitrotoluene	1.0	
606-20-2	2,6-Dinitrotoluene	1.0	
2691-41-0	HMX	1.0	
98-95-3	Nitrobenzene	1.1	
99-99-0	4-Nitrotoluene	1.1	
88-72-2	2-Nitrotoluene	0.98	
99-08-1	3-Nitrotoluene	1.0	
121-82-4	RDX	1.1	
479-45-8	Tetryl	0.99	
99-35-4	1,3,5-Trinitrobenzene	1.0	
118-96-7	2,4,6-Trinitrotoluene	1.1	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B004A.d
Lab Smp Id: 1018214 Client Smp ID: LCS for HBN 474044
Inj Date : 02-AUG-2012 19:52
Operator : AJL Inst ID: hpl1.i
Smp Info : 1018214;AJL;3;;LCS;1
Misc Info : ZZ HPLC 3174 D8330W
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_254
Meth Date : 08-Aug-2012 09:59 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/13/12
REPORTED 8/13/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
	1 HMX	5.010	4.980	0.030	12537	100.691	1.00691
	2 RDX	8.466	8.413	0.053	16176	106.960	1.06960
	3 1,3,5-Trinitrobenzene	11.960	11.876	0.084	34164	104.759	1.04759
$	4 1,4-Dinitrobenzene	13.816	13.726	0.090	185181	546.317	5.46317
	5 1,3-Dinitrobenzene	15.413	15.303	0.110	48276	112.478	1.12478
	6 Nitrobenzene	17.316	17.203	0.113	27594	105.226	1.05226
	7 Tetryl	18.556	18.403	0.153	25348	98.5566	0.985566
	8 2,4,6-Trinitrotoluene(TNT)	21.296	21.156	0.140	33012	108.246	1.08246
	9 4-Amino-2,6-dinitrotoluene	23.720	23.520	0.200	22184	103.081	1.03081
	10 2-Amino-4,6-dinitrotoluene	24.896	24.683	0.213	29431	102.314	1.02314
	11 2,6-Dinitrotoluene	26.093	25.920	0.173	21594	101.146	1.01146
	12 2,4-Dinitrotoluene	27.053	26.860	0.193	40749	104.037	1.04037
	13 2-Nitrotoluene	31.433	31.183	0.250	16316	98.1659	0.981659
	14 4-Nitrotoluene	34.223	34.036	0.187	13795	106.239	1.06239
	15 3-Nitrotoluene	36.660	36.456	0.204	18252	103.765	1.03765

ALS - Middletown

RECOVERY REPORT

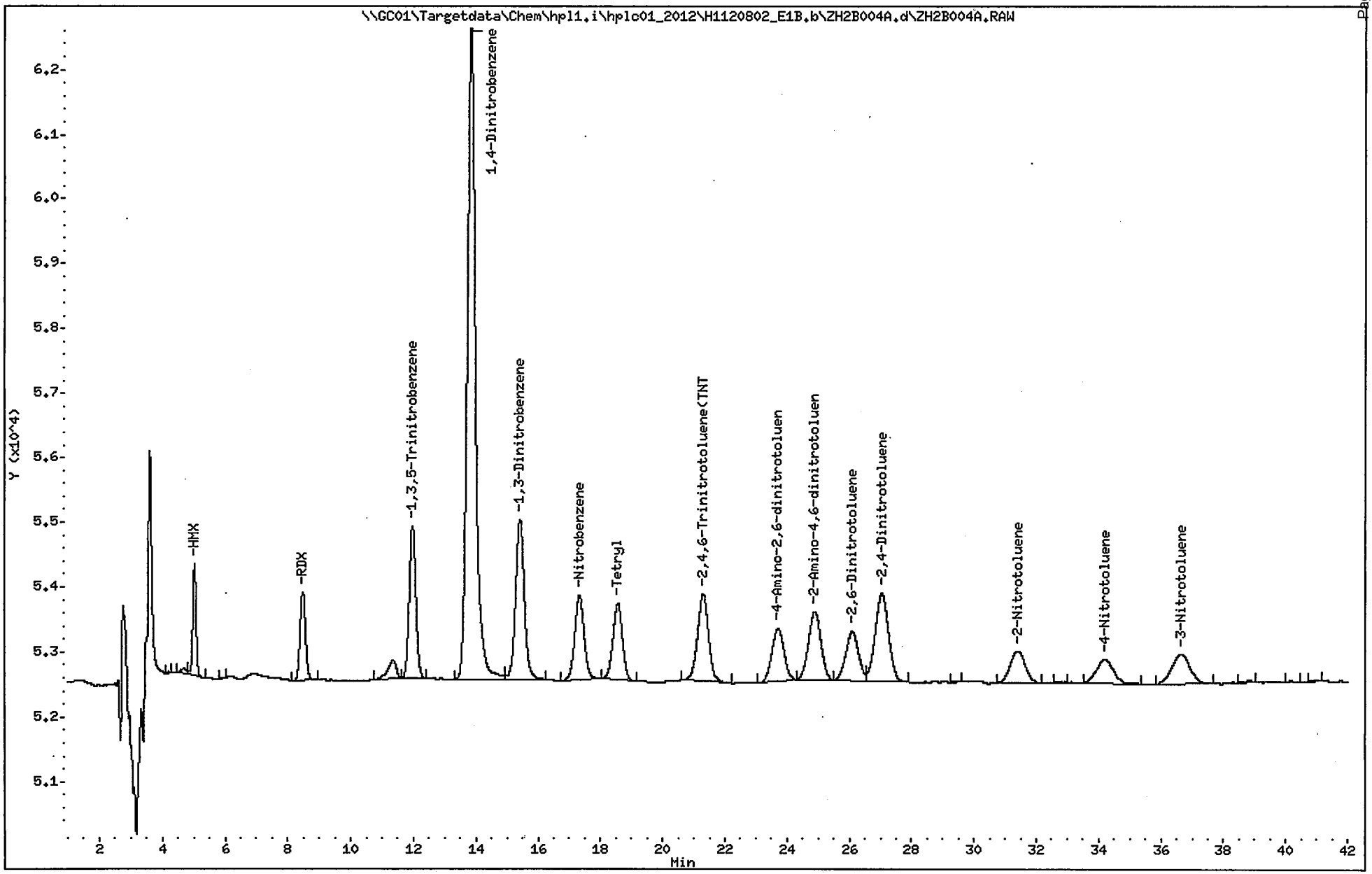
Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1018214
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Client SDG: H1120802_E1B.b
Fraction: SV
Client Smp ID: LCS for HBN 474044
Operator: AJL
SampleType: LCS
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3174 D8330W

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 HMX	1.00000	1.00691	100.69	80-115
2 RDX	1.00000	1.06960	106.96	50-160
3 1,3,5-Trinitrobenz	1.00000	1.04759	104.76	65-140
5 1,3-Dinitrobenzene	1.00000	1.12478	112.48	45-160
7 Tetryl	1.00000	0.985566	98.56	20-175
6 Nitrobenzene	1.00000	1.05226	105.23	50-140
8 2,4,6-Trinitrotolu	1.00000	1.08246	108.25	50-145
9 4-Amino-2,6-dinitr	1.00000	1.03081	103.08	55-155
10 2-Amino-4,6-dinitr	1.00000	1.02314	102.31	50-155
11 2,6-Dinitrotoluene	1.00000	1.01146	101.15	60-135
12 2,4-Dinitrotoluene	1.00000	1.04037	104.04	60-135
13 2-Nitrotoluene	1.00000	0.981659	98.17	45-135
14 4-Nitrotoluene	1.00000	1.06239	106.24	50-130
15 3-Nitrotoluene	1.00000	1.03765	103.76	50-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	5.00000	5.46317	109.26	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120802_E1B.b\ZH2B004A.d
Date : 02-AUG-2012 19:52
Client ID: LCS for HBN 474044
Sample Info: 1018214;AJL;3;;LCS;1
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1020409(LCS)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): WATER Lab Sample ID: 1020409

Sample wt/vol: 1000 (g/mL) ML Lab File ID (1): ZH6A003.d

% Moisture:

Extraction: (Type) SPE Date Received: 08/08/2012

Concentrated Extract Volume: 10000 (uL) Date Extracted: 08/02/2012

Injection Volume: 100 (uL) Date Analyzed: 08/06/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
618-87-1	3,5-Dinitroaniline	1.0	
55-63-0	Nitroglycerin	5.3	
78-11-5	PETN	4.9	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A003.d
Lab Smp Id: 1020409 Client Smp ID: LCS for HBN 474043
Inj Date : 06-AUG-2012 13:46
Operator : AJL Inst ID: hpl1.i
Smp Info : 1020409;AJL;3;;LCS;1
Misc Info : ZZ HPLC 3174 D8330W
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\8330E1_218
Meth Date : 07-Aug-2012 08:51 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/13/12
REPORTED 8/13/12
APPROVED
2nd REVIEW

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
$ 1 1,4-Dinitrobenzene	13.826	13.750	0.076	74413	560.234	5.60234
3 3,5-Dinitroaniline	17.396	17.260	0.136	74199	100.668	1.00668
4 Nitroglycerin	18.926	18.803	0.123	34536	531.161	5.31161
5 PETN	38.756	38.503	0.253	36464	489.021	4.89021

ALS - Middletown

RECOVERY REPORT

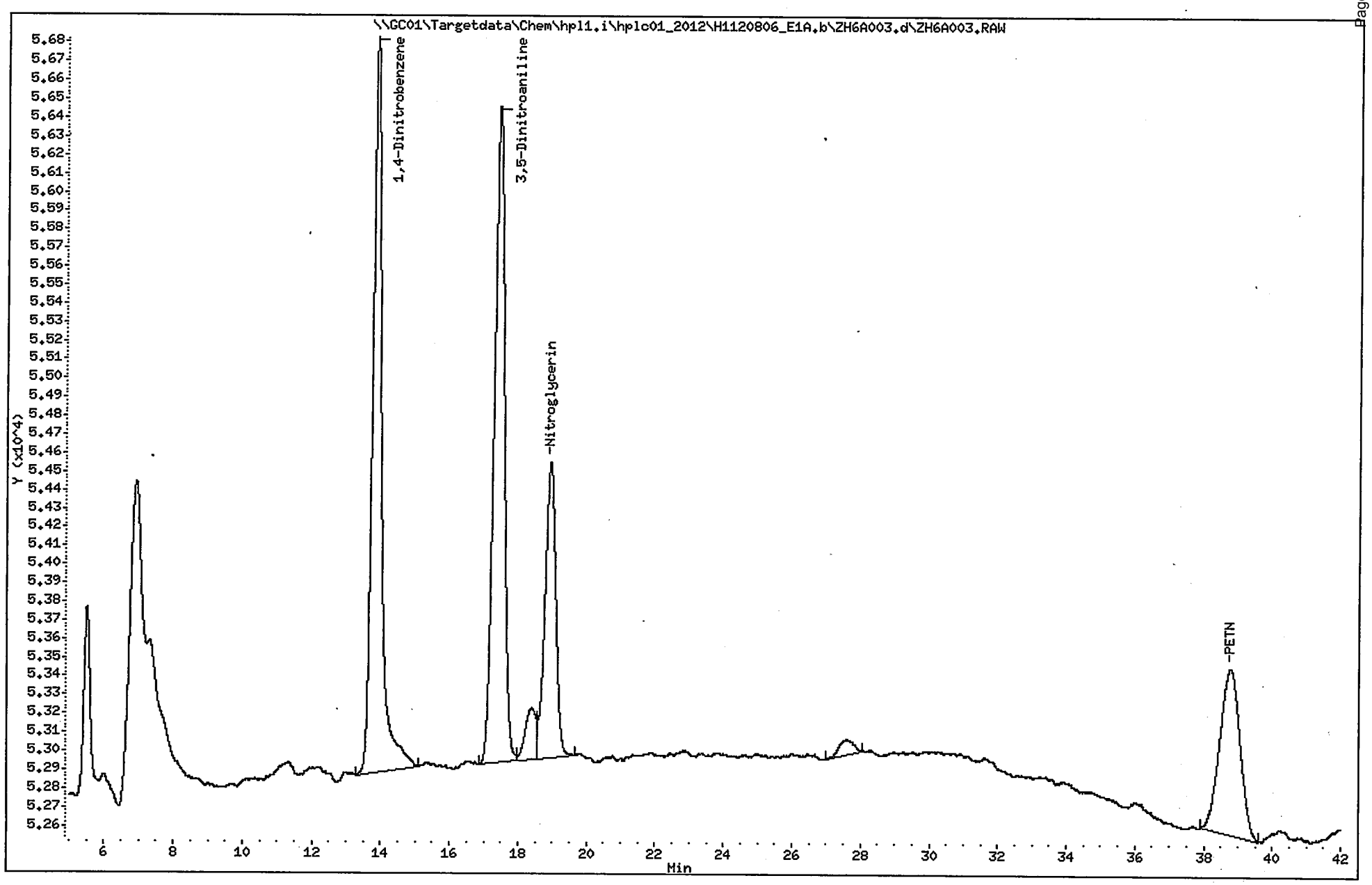
Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1020409
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Client SDG: H1120806_E1A.b
Fraction: SV
Client Smp ID: LCS for HBN 474043
Operator: AJL
SampleType: LCS
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3174 D8330W

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
4 Nitroglycerin	5.00000	5.31161	106.23	70-130
3 3,5-Dinitroaniline	1.00000	1.00668	100.67	70-130
5 PETN	5.00000	4.89021	97.80	70-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	5.00000	5.60234	112.05	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120806_E1A.b\ZH6A003.d
Date : 06-AUG-2012 13:46
Client ID: LCS for HBN 474043
Sample Info: 1020409;AJL;3;;LCS;1
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



Preparation Logbook

HPLC EXTRACTION

Queue: HPLC
Rule: 8330W EXTR, 08332W EXTR
Batch: 3165 / 3166
HBN: 474043 / 474044

Surrogate ID: 110712002
Surrogate Amount: 2.5mL JBL

Extraction:	Date	Time	Tech	Sonication:	Time On	Time Off	Hours	Tech
	8/2/12	12:35	JBL		—	—	—	—

Line #	Sample ID	Sample Amount	QC Type	Spike ID	Spike Amount	Extraction Time	Final Volume	Sample Specific Comments
1.)	1018210 / 1018213	1000mL	MB	—	—	15½ min	10mL	8330W / 08332W
2.)	1018211 / 1018214	1000mL	LCS 1	120224001	5mL JBL	17½ min	10mL	
3.)	1018212	1000mL	LCS 2	131522 / 113006E3 / 112502L2	5mL / 5mL / 5mL	16½ min.	10mL	
4.)	9979284032	1000mL	PT	—	—	16 min	10mL	8330W EXTR
5.)	9980086001-P	940mL	—	—	—	15 min.	10mL	↓
6.)	9980109002-B	1035mL	—	—	—	17½ min.	10mL	
7.)	1018216	1040mL	MS	120224001	5mL JBL	18½ min	10mL	9980109002-C
8.)	1018217	1050mL	MSD	120224001	5mL JBL	20 min.	10mL	9980109002-D
9.)	~~9985396~~							JBL 8/2/12
10.)	9980394006-B	1040mL	—	—	—	~10 HRS.	10mL	
11.)	9980394014-C	1040mL	—	—	—	16½ min.	10mL	
12.)	—	—	—	—	—	—	—	—
13.)	MIX 1 LOD1	1000mL	LOD1	181576	2.5mL JBL	~20 min.	10mL	
14.)	MIX 1 LOQ1	1000mL	LOQ1	181576	5mL JBL	~20 min.	10mL	
15.)	MIX 1 LOQ1/2	1000mL	LOQ1	181576	7.5mL JBL	~20 min.	10mL	
16.)	MIX 2 LOD1	1000mL	LOD1	181577	8mL JBL	16 min.	10mL	
17.)	MIX 2 LOQ1	1000mL	LOQ1	181577	15mL JBL	16½ min.	10mL	
18.)								
19.)								
20.)								
21.)								
22.)								
23.)								
24.)								
25.)								
26.)								
27.)								
28.)								
29.)								
30.)								

8330W EXTR Lot# P210-677

8330W EXTR

Reagents:
SOB-RPS OLES (760167, EMPORE), MeOH (120626028), ACN (120507001), FA400 (50111, CAMPBOR)

Comments:
RAW SAMPLES FROM BATCH 3166 TRANSFERRED ON CHAIN 417542 JBL 8/2/12 EXTRACTS TRANSFERRED ON CHAIN 417543 JBL 8/2/12 -JBL 8/2/12
ACTUAL EFFECTIVE FINAL VOLUME IS 10mL, AS 5mL EXTRACT IS DILUTED 1:1 PRIOR TO ANALYSIS -JBL 8/2/12

Approved By: JBL
Date Approved: 8/2/12
Rev 3/26/10

Page #: 48

Reviewed By: KMB
Date reviewed: 8/7/12

Analytical Logbook

Title: 8330 Startup Injections
Datasource: D49KVMB1_local
Location: ALS\Vol_Lab_LC\MySequences\8330
Timebase: d49kvmb1_1
#Samples: 21
Created: 11/14/2011 11:45:34 AM by almdt.nouser
Last Update: 11/14/2011 5:42:07 PM by almdt.nouser

No.	Name	Type	Pos.	Inj. Vol.	Inj. Date/Time	Comment
1	CCV1	Unknown	RA1	100.000	11/14/2011 11:50:00 AM	5uL 1b1394 to1mL 1:1 1B1473
2	CCV TEST	Unknown	RA1	100.000	11/14/2011 2:21:26 PM	5uL 1b1394 to1mL 1:1 1B1473
3	CCV TEST	Unknown	RA1	100.000	11/14/2011 3:11:12 PM	5uL 1b1394 to1mL 1:1 1B1473
4	CCV MIX2 TEST	Unknown	RA2	100.000	11/14/2011 4:01:52 PM	.
5	LEVEL1	Unknown	RA1	1.000	11/14/2011 5:12:03 PM	.
6	LEVEL1	Unknown	RA1	1.000	11/14/2011 5:54:58 PM	1B1475
7	LEVEL2	Unknown	RA1	2.500	11/14/2011 6:37:52 PM	MIX1 - 254
8	LEVEL3	Unknown	RA1	5.000	11/14/2011 7:20:46 PM	.
9	LEVEL4	Unknown	RA1	12.500	11/14/2011 8:03:36 PM	.
10	LEVEL5	Unknown	RA1	25.000	11/14/2011 8:46:30 PM	.
11	LEVEL6	Unknown	RA1	50.000	11/14/2011 9:29:29 PM	.
12	LEVEL7	Unknown	RA1	100.000	11/14/2011 10:12:27 PM	.
13	ICV1	Unknown	RA2	100.000	11/14/2011 10:55:30 PM	5uL 1b1394 to1mL 1:1 1B1473
14	LEVEL1	Unknown	RA3	1.000	11/14/2011 11:38:19 PM	1B1476
15	LEVEL2	Unknown	RA3	2.500	11/15/2011 12:21:08 AM	MIX2 - 218
16	LEVEL3	Unknown	RA3	5.000	11/15/2011 1:04:07 AM	.
17	LEVEL4	Unknown	RA3	12.500	11/15/2011 1:47:00 AM	.
18	LEVEL5	Unknown	RA3	25.000	11/15/2011 2:29:54 AM	.
19	LEVEL6	Unknown	RA3	50.000	11/15/2011 3:12:47 AM	.
20	LEVEL7	Unknown	RA3	100.000	11/15/2011 3:55:45 AM	.
21	ICV2	Unknown	RA4	100.000	11/15/2011 4:38:47 AM	5uL 1b1394 to1mL 1:1 1B1413

Sequence: 8330_111116.B
Operator: ALMDT.nouser
Printed: 8/20/2012 1:26:35 PM

Title: 8330 Startup Injections
Datasource: D49KVMB1_local
Location: ALS\Vol_Lab_LC\MySequences\8330
Timebase: d49kvmb1_1
#Samples: 61
Created: 11/16/2011 9:52:07 AM by almdt.nouser
Last Update: 8/20/2012 1:26:21 PM by ALMDT.nouser

No.	Name	Type	Pos.	Inj. Vol.	Inj. Date/Time	Comment
1	CCV1	Unknown	RA1	100.000	11/16/2011 10:20:36 AM	5uL 1b1473 to1mL 1:1 ACN:WATER
2	CCV2	Unknown	RA1	100.000	11/16/2011 11:04:34 AM	Inseed for wrong pos:-1
3	CCV2/ICV	Unknown	RA2	100.000	11/16/2011 12:02:50 PM	5uL 1b1413 to1mL 1:1 acn:water
4	914196MB	Unknown	RA3	100.000	11/16/2011 1:12:21 PM	.
5	914198LCS1	Unknown	RA4	100.000	11/16/2011 2:10:36 PM	.
6	914197LCS2	Unknown	RA5	100.000	11/16/2011 3:08:52 PM	.
7	9935227002	Unknown	RA6	5.000	11/16/2011 4:07:02 PM	20X
8	9935227001	Unknown	RA7	100.000	11/16/2011 5:05:18 PM	.
9	914199MS	Unknown	RA8	100.000	11/16/2011 6:03:33 PM	.
10	914200MSD	Unknown	RB1	100.000	11/16/2011 6:47:36 PM	.
11	TEST1	Unknown	RB2	100.000	11/16/2011 7:31:40 PM	.
12	TEST2	Unknown	RB3	100.000	11/16/2011 8:15:39 PM	.
13	CCV2	Unknown	RA2	100.000	11/16/2011 8:59:47 PM	5uL 1b1413 to1mL 1:1 acn:water
14	CCV1	Unknown	RA1	100.000	11/16/2011 9:58:03 PM	5uL 1b1473 to1mL 1:1 ACN:WATER
15	MB	Unknown	RB4	100.000	11/16/2011 10:42:07 PM	SAS110911
16	DOC1	Unknown	RB5	100.000	11/16/2011 11:26:15 PM	SAS110911
17	DOC2	Unknown	RB6	100.000	11/17/2011 12:10:38 AM	SAS110911
18	DOC3	Unknown	RB7	100.000	11/17/2011 12:55:05 AM	SAS110911
19	DOC4	Unknown	RB8	100.000	11/17/2011 1:39:18 AM	SAS110911
20	914773MB	Unknown	RC1	100.000	11/17/2011 2:23:36 AM	.
21	914774LCS1	Unknown	RC2	100.000	11/17/2011 3:21:56 AM	.
22	914775LCS2	Unknown	RC3	100.000	11/17/2011 4:20:10 AM	.
23	9936126007	Unknown	RC4	100.000	11/17/2011 5:18:20 AM	.
24	9936126001	Unknown	RC5	100.000	11/17/2011 6:16:52 AM	.
25	CCV2	Unknown	RC6	100.000	11/17/2011 7:15:20 AM	5uL 1b1413 to1mL 1:1 acn:water
26	CCV1	Unknown	RC7	100.000	11/17/2011 8:19:07 AM	5uL 1b1473 to1mL 1:1 ACN:WATER
27	9936126002	Unknown	RC8	100.000	11/17/2011 9:03:28 AM	.
28	9936126003	Unknown	RD1	100.000	11/17/2011 9:47:30 AM	.
29	9936126004	Unknown	RD2	100.000	11/17/2011 10:31:28 AM	.
30	9936126005	Unknown	RD3	100.000	11/17/2011 11:15:25 AM	.
31	9936126006	Unknown	RD4	100.000	11/17/2011 11:59:22 AM	.
32	9936396012	Unknown	RD5	100.000	11/17/2011 12:43:23 PM	.
33	9936396001	Unknown	RD6	100.000	11/17/2011 1:27:20 PM	.
34	9936396002	Unknown	RD7	100.000	11/17/2011 2:11:40 PM	.
35	9936396003	Unknown	RD8	100.000	11/17/2011 2:55:42 PM	.
36	9936396004	Unknown	RE1	100.000	11/17/2011 3:39:44 PM	.
37	CCV2	Unknown	RC6	100.000	11/17/2011 4:23:41 PM	.
38	CCV2	Unknown	RC6	100.000	11/17/2011 5:54:44 PM	5uL 1b1413 to1mL 1:1 acn:water
39	CCV1	Unknown	RC7	100.000	11/17/2011 6:52:58 PM	5uL 1b1473 to1mL 1:1 ACN:WATER
40	9936396005	Unknown	RE2	100.000	11/17/2011 7:37:01 PM	
41	9936396006	Unknown	RE3	100.000	11/17/2011 8:21:00 PM	
42	914776DUP	Unknown	RE4	100.000	11/17/2011 9:04:57 PM	

Water EI - 254 only

Sequence: 8330_120802A.B
Operator: ALMDT.nouser
Printed: 8/3/2012 1:43:11 PM

Title: 8330 Startup Injections
Datasource: D49KVMB1_local
Location: ALS\Vol_Lab_LC\MySequences\8330
Timebase: d49kvmb1_1
#Samples: 22
Created: 8/2/2012 5:39:14 PM by ALMDT.nouser
Last Update: 8/3/2012 9:37:55 AM by ALMDT.nouser

No.	Name	Type	Pos.	Inj. Vol.	Inj. Date/Time	Comment
1	CCV1	Unknown	RA1	100.000	8/2/2012 5:41:01 PM	1B1528 ACN:120507001
2	~~CCV2~~	Unknown	RA2	100.000	8/2/2012 6:25:04 PM	1B1583 ACN:120507001
3	1018210/1018213	Unknown	RA3	100.000	8/2/2012 7:09:02 PM	
4	1018211/1018214	Unknown	RA4	100.000	8/2/2012 7:53:05 PM	
5	1018212	Unknown	RA5	100.000	8/2/2012 8:37:07 PM	
6	9979284032	Unknown	RA6	100.000	8/2/2012 9:21:32 PM	- conc no dilution
7	9979284032	Unknown	RA6	20.000	8/2/2012 10:05:29 PM	
8	9980086001	Unknown	RA7	100.000	8/2/2012 10:49:27 PM	
9	9980109002	Unknown	RA8	100.000	8/2/2012 11:33:23 PM	
10	1018216	Unknown	RB1	100.000	8/3/2012 12:17:25 AM	
11	1018217	Unknown	RB2	100.000	8/3/2012 1:01:26 AM	
12	9980374014	Unknown	RB3	100.000	8/3/2012 1:45:26 AM	- conc (Tetryl / TNT) 1040
13	M2 - LODV	Unknown	RB4	100.000	8/3/2012 2:29:27 AM	
14	M2 - LOQV	Unknown	RB5	100.000	8/3/2012 3:13:28 AM	
15	CCV1	Unknown	RA1	100.000	8/3/2012 3:57:28 AM	
16	~~CCV2~~	Unknown	RA2	100.000	8/3/2012 4:41:28 AM	
17	M1 - LODV	Unknown	RB6	100.000	8/3/2012 5:25:27 AM	9978606004
18	M1- LOQVL	Unknown	RB7	100.000	8/3/2012 6:09:27 AM	9978607007
19	M1- LOQVH	Unknown	RB8	100.000	8/3/2012 6:53:31 AM	9978607009
20	9980394006	Unknown	RC1	100.000	8/3/2012 8:48:42 AM	
21	CCV1	Unknown	RA1	100.000	8/3/2012 9:39:05 AM	
22	CCV2	Unknown	RA2	100.000	8/3/2012 10:23:12 AM	

3174 D
3175

CaCl Solution

Water E1 - 218 only

Sequence: 8330_120806.B
Operator: ALMDT.nouser
Printed: 8/7/2012 5:17:24 PM

Title: 8330 Startup Injections
Datasource: D49KVMB1_local
Location: ALS\Vol_Lab_LC\MySequences\8330
Timebase: d49kvmb1_1
#Samples: 10
Created: 8/6/2012 12:02:31 PM by ALMDT.nouser
Last Update: 8/6/2012 12:58:26 PM by ALMDT.nouser

No.	Name	Type	Pos.	Inj. Vol.	Inj. Date/Time	Comment
1	CCV2	Unknown	RA1	100.000	8/6/2012 12:03:56 PM	1B1583 ACN:120507001
2	1018210/1018213	Unknown	RA2	100.000	8/6/2012 1:02:10 PM	
3	1018212/1020409	Unknown	RA3	100.000	8/6/2012 1:46:10 PM	
4	9980086001	Unknown	RA4	100.000	8/6/2012 2:30:10 PM	
5	9980109002	Unknown	RA5	100.000	8/6/2012 3:14:38 PM	
6	9980314014	Unknown	RA6	100.000	8/6/2012 3:58:39 PM	
7	9980394006	Unknown	RA7	100.000	8/6/2012 4:42:39 PM	
8	M2 - LODV	Unknown	RA8	100.000	8/6/2012 5:26:38 PM	9978606067
9	M2 - LOQV	Unknown	RB1	100.000	8/6/2012 6:10:38 PM	9978607004
10	CCV2	Unknown	RA1	100.000	8/6/2012 6:54:37 PM	

Qa. C1 Solution

Explosives in Solid by 8330B Summary Forms

2F

SURROGATE RECOVERY

ab Name: ALS - Middletown Contract:

ab Code: PA010 CASE No.: SAS No.: SDG No.: ERT-001

Column (1): E1, 254nm GC Column (2):

	CLIENT SAMPLE NO.	SURR1 % REC #	SURR2 % REC #	TOT OUT
1	1019867(MB)	107		0
2	1019868(LCS)	107		0
3	FTSW-AA-SO-10[02]	106		0
4	FTSW-AA-SO-11	104		0
5	FTSW-AA-SO-12 [01.5	105		0
6	FTSW-AA-SO-13	98.0		0
7	FTSW-AA-SO-14 [02]	104		0
8	FTSW-AA-SO-15	104		0
9	FTSW-AA-SO-16 [01.5	101		0
0	FTSW-AA-SO-01	101		0
1	FTSW-AA-SO-02 [01.5	97.7		0
2	FTSW-AA-SO-03	104		0
3	FTSW-AA-SO-03(99801	108		0
4	FTSW-AA-SO-03(99801	102		0
5	FTSW-AA-SO-03 DUP	99.7		0
6	FTSW-AA-SO-04 [01.5	99.6		0
7	FTSW-AA-SO-05	97.3		0
8	FTSW-AA-SO-07	99.2		0
9	FTSW-AA-SO-06 [01.5	99.2		0
0	FTSW-AA-SO-08 [02]	106		0
1	FTSW-AA-SO-09	96.3		0

	QC LIMITS
1,4-Dinitrobenzene	(50-150)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate Diluted Out

2F

SURROGATE RECOVERY

b Name: ALS - Middletown Contract:

b Code: PA010 CASE No.: SAS No.: SDG No.: ERT-001

Column (1): E1, 218nm GC Column (2):

	CLIENT SAMPLE NO.	SURR1 % REC	#	SURR2 % REC	#	TOT OUT
1	1019867(MB)	95.4				0
2	1019869(LCS)	98.0				0
3	FTSW-AA-SO-10[02]	94.9				0
4	FTSW-AA-SO-11	96.6				0
5	FTSW-AA-SO-12 [01.5	94.5				0
6	FTSW-AA-SO-13	89.4				0
7	FTSW-AA-SO-14 [02]	97.3				0
8	FTSW-AA-SO-15	93.2				0
9	FTSW-AA-SO-16 [01.5	94.7				0
0	FTSW-AA-SO-01	94.1				0
1	FTSW-AA-SO-02 [01.5	90.3				0
2	FTSW-AA-SO-03	95.6				0
3	FTSW-AA-SO-03(99801	95.1				0
4	FTSW-AA-SO-03(99801	95.8				0
5	FTSW-AA-SO-03 DUP	89.7				0
6	FTSW-AA-SO-04 [01.5	90.6				0
7	FTSW-AA-SO-05	89.1				0
8	FTSW-AA-SO-07	89.3				0
9	FTSW-AA-SO-06 [01.5	89.7				0
0	FTSW-AA-SO-08 [02]	95.3				0
1	FTSW-AA-SO-09	89.1				0

	QC LIMITS
1,4-Dinitrobenzene	(50-150)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate Diluted Out

2F

SURROGATE RECOVERY

b Name: ALS - Middletown Contract:

ıb Code: PA010 CASE No.: SAS No.: SDG No.: ERT-001

: Column (1): E1, 254nm GC Column (2):

	CLIENT SAMPLE NO.	SURR1 % REC	#	SURR2 % REC	#	TOT OUT
1	1020314(MB)	108				0
2	1020315(LCS)	93				0
3	FTSW-AA-SO-08 [02]	105				0
4	FTSW-AA-SO-0...(998	112				0
5	FTSW-AA-SO-...(9980	107				0

	QC LIMITS
1,4-Dinitrobenzene	(50-150)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate Diluted Out

2F

SURROGATE RECOVERY

b Name: ALS - Middletown Contract:

ıb Code: PA010 CASE No.: SAS No.: SDG No.: ERT-001

Column (1): E1, 218nm GC Column (2):

	CLIENT SAMPLE NO.	SURR1 % REC #	SURR2 % REC #	TOT OUT
1	1020314(MB)	101		0
2	1020316(LCS)	93.1		0
3	FTSW-AA-SO-08 [02]	95.3		0
4	FTSW-AA-SO-0...(998	91.8		0
5	FTSW-AA-SO-...(9980	94.6		0

	QC LIMITS
1,4-Dinitrobenzene	(50-150)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate Diluted Out

3E

WATER LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

LCS - Sample No.: ICV111411 Column ID: E1, 254nm

COMPOUND	SPIKE ADDED ug/L	ICV CONCENTRATION ug/L	ICV % REC#	QC LIMITS REC
2-Amino-4,6-dinitrotoluene	1.0	0.90	89.6	(80-120)
4-Amino-2,6-dinitrotoluene	1.0	0.87	87.3	(80-120)
1,3-Dinitrobenzene	1.0	0.83	83.2	(80-120)
2,4-Dinitrotoluene	1.0	0.85	84.8	(80-120)
2,6-Dinitrotoluene	1.0	0.90	89.8	(80-120)
HMX	1.0	0.89	88.6	(80-120)
Nitrobenzene	1.0	0.89	88.5	(80-120)
4-Nitrotoluene	1.0	0.97	97.0	(80-120)
2-Nitrotoluene	1.0	0.91	91.2	(80-120)
3-Nitrotoluene	1.0	0.94	93.9	(80-120)
RDX	1.0	0.86	86.4	(80-120)
Tetryl	1.0	0.89	89.4	(80-120)
1,3,5-Trinitrobenzene	1.0	0.90	89.5	(80-120)
2,4,6-Trinitrotoluene	1.0	0.82	81.9	(80-120)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 14 outside limits

3E

WATER LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

LCS - Sample No.: ICV112011 Column ID: E1, 218nm

COMPOUND	SPIKE ADDED ug/L	ICV CONCENTRATION ug/L	ICV % REC#	QC LIMITS REC
3,5-Dinitroaniline	1.0	1.0	102	(80-120)
Nitroglycerin	5.0	5.6	111	(80-120)
PETN	5.0	4.9	99.0	(80-120)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 3 outside limits

3F

SOIL LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

LCS - Sample No.: 1019868 Column ID: E1, 254nm

COMPOUND	SPIKE ADDED ug/Kg		LCS CONCENTRATION ug/Kg	LCS % REC#	QC LIMITS REC
2-Amino-4,6-dinitrotol	0.40		0.42	104	(80-125)
4-Amino-2,6-dinitrotol	0.40		0.42	106	(80-125)
1,3-Dinitrobenzene	0.40		0.42	105	(80-125)
2,4-Dinitrotoluene	0.40		0.40	101	(80-125)
2,6-Dinitrotoluene	0.40		0.39	97.6	(80-120)
HMX	0.40		0.41	102	(75-125)
Nitrobenzene	0.40		0.39	97.2	(75-125)
4-Nitrotoluene	0.40		0.41	102	(75-125)
2-Nitrotoluene	0.40		0.41	103	(80-125)
3-Nitrotoluene	0.40		0.37	93.2	(75-120)
RDX	0.40		0.43	108	(70-135)
Tetryl	0.40		0.39	96.3	(10-150)
1,3,5-Trinitrobenzene	0.40		0.43	107	(75-125)
2,4,6-Trinitrotoluene	0.40		0.42	106	(55-140)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 14 outside limits

3F

SOIL LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

LCS - Sample No.: 1019869 Column ID: E1, 218nm

COMPOUND	SPIKE ADDED ug/Kg		LCS CONCENTRATION ug/Kg	LCS % REC#	QC LIMITS REC
3,5-Dinitroaniline	0.40		0.42	105	(70-130)
Nitroglycerin	2.0		2.1	105	(70-130)
PETN	2.0		1.9	94.9	(70-130)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 3 outside limits

3F

SOIL LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

LCS - Sample No.: 1020315 Column ID: E1, 254nm

COMPOUND	SPIKE ADDED ug/Kg		LCS CONCENTRATION ug/Kg	LCS % REC#	QC LIMITS REC
2-Amino-4,6-dinitrotol	0.40		0.43	108	(80-125)
4-Amino-2,6-dinitrotol	0.40		0.42	106	(80-125)
1,3-Dinitrobenzene	0.40		0.42	105	(80-125)
2,4-Dinitrotoluene	0.40		0.42	106	(80-125)
2,6-Dinitrotoluene	0.40		0.41	103	(80-120)
HMX	0.40		0.40	100	(75-125)
Nitrobenzene	0.40		0.37	92.9	(75-125)
4-Nitrotoluene	0.40		0.39	98.1	(75-125)
2-Nitrotoluene	0.40		0.40	99.4	(80-125)
3-Nitrotoluene	0.40		0.41	103	(75-120)
RDX	0.40		0.43	107	(70-135)
Tetryl	0.40		0.40	101	(10-150)
1,3,5-Trinitrobenzene	0.40		0.43	109	(75-125)
2,4,6-Trinitrotoluene	0.40		0.41	104	(55-140)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 14 outside limits

3F

SOIL LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

LCS - Sample No.: 1020316 Column ID: E1, 218nm

COMPOUND	SPIKE ADDED ug/Kg		LCS CONCENTRATION ug/Kg	LCS % REC#	QC LIMITS REC
3,5-Dinitroaniline	0.40		0.39	96.6	(70-130)
Nitroglycerin	2.0		2.1	107	(70-130)
PETN	2.0		2.0	97.6	(70-130)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 3 outside limits

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

MS/MSD - Client Sample No.: FTSW-AA-SO-03(99801

Column ID: E1, 254nm

Sample wt/vol: 10 (g/mL) G Concentrated Extract Volume: 40000

Instrument ID: hpl1.i Batch Number: 3170 Operator: AJL

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC#	QC LIMITS REC
2-Amino-4,6-dinitrotol	0.39	0	0.41	106	(80-125)
4-Amino-2,6-dinitrotol	0.39	0	0.45	117	(80-125)
1,3-Dinitrobenzene	0.39	0	0.44	114	(80-125)
2,4-Dinitrotoluene	0.39	0	0.42	109	(80-125)
2,6-Dinitrotoluene	0.39	0	0.41	106	(80-120)
HMX	0.39	0	0.42	108	(75-125)
Nitrobenzene	0.39	0	0.41	106	(75-125)
4-Nitrotoluene	0.39	0	0.44	112	(75-125)
2-Nitrotoluene	0.39	0	0.41	106	(80-125)
3-Nitrotoluene	0.39	0	0.41	105	(75-120)
RDX	0.39	0	0.41	107	(70-135)
Tetryl	0.39	0	0.34	88.4	(10-150)
1,3,5-Trinitrobenzene	0.39	0	0.41	107	(75-125)
2,4,6-Trinitrotoluene	0.39	0	0.43	110	(55-140)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 14 outside limits

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

MS/MSD - Client Sample No.: FTSW-AA-SO-03(99801

Column ID: E1, 254nm

Sample wt/vol: 10 (g/mL) G Concentrated Extract Volume: 40000

Instrument ID: hpl1.i Batch Number: 3170 Operator: AJL

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	MSD % RPD #	QC LIMITS RPD	QC LIMITS REC
2-Amino-4,6-dinitrotol	0.40	0.39	99.2	5	20	(80-125)
4-Amino-2,6-dinitrotol	0.40	0.41	103	10	20	(80-125)
1,3-Dinitrobenzene	0.40	0.42	105	6	20	(80-125)
2,4-Dinitrotoluene	0.40	0.41	104	3	20	(80-125)
2,6-Dinitrotoluene	0.40	0.40	102	2	20	(80-120)
HMX	0.40	0.42	106	0	20	(75-125)
Nitrobenzene	0.40	0.40	101	3	20	(75-125)
4-Nitrotoluene	0.40	0.38	96.2	13	20	(75-125)
2-Nitrotoluene	0.40	0.43	110	5	20	(80-125)
3-Nitrotoluene	0.40	0.42	105	2	20	(75-120)
RDX	0.40	0.40	101	4	20	(70-135)
Tetryl	0.40	0.32	81.4	6	20	(10-150)
1,3,5-Trinitrobenzene	0.40	0.41	103	2	20	(75-125)
2,4,6-Trinitrotoluene	0.40	0.40	102	5	20	(55-140)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 14 outside limits

Spike Recovery: 0 out of 14 outside limits

3E

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

MS/MSD - Client Sample No.: FTSW-AA-SO-03(99801

Column ID: E1, 218nm

Sample wt/vol: 10 (g/mL) G Concentrated Extract Volume: 40000

Instrument ID: hpl1.i Batch Number: 3170 Operator: AJL

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC#	QC LIMITS REC
3,5-Dinitroaniline	0.39	0	0.35	90.4	(70-130)
Nitroglycerin	1.9	0	2.0	101	(70-130)
PETN	1.9	0	1.8	92.1	(70-130)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 3 outside limits

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

MS/MSD - Client Sample No.: FTSW-AA-SO-03(99801

Column ID: E1, 218nm

Sample wt/vol: 11 (g/mL) G Concentrated Extract Volume: 40000

Instrument ID: hpl1.i Batch Number: 3170 Operator: AJL

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	MSD % RPD #	QC LIMITS RPD	QC LIMITS REC
3,5-Dinitroaniline	0.37	0.32	86.9	10	20	(70-130)
Nitroglycerin	1.8	1.9	103	4	20	(70-130)
PETN	1.8	1.8	99.8	2	20	(70-130)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 3 outside limits

Spike Recovery: 0 out of 3 outside limits

3E

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

MS/MSD - Client Sample No.: FTSW-AA-SO-0...(998

Column ID: E1, 254nm

Sample wt/vol: 10 (g/mL) G Concentrated Extract Volume: 40000

Instrument ID: hpl1.i Batch Number: 3173 Operator: AJL

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC#	QC LIMITS REC
2-Amino-4,6-dinitrotol	0.39	0	0.41	104	(80-125)
4-Amino-2,6-dinitrotol	0.39	0	0.43	110	(80-125)
1,3-Dinitrobenzene	0.39	0	0.42	107	(80-125)
2,4-Dinitrotoluene	0.39	0	0.42	107	(80-125)
2,6-Dinitrotoluene	0.39	0	0.42	109	(80-120)
HMX	0.39	0	0.40	103	(75-125)
Nitrobenzene	0.39	0	0.42	108	(75-125)
4-Nitrotoluene	0.39	0	0.41	106	(75-125)
2-Nitrotoluene	0.39	0	0.44	112	(80-125)
3-Nitrotoluene	0.39	0	0.38	97.9	(75-120)
RDX	0.39	0	0.38	98.0	(70-135)
Tetryl	0.39	0	0.36	92.0	(10-150)
1,3,5-Trinitrobenzene	0.39	0	0.40	103	(75-125)
2,4,6-Trinitrotoluene	0.39	0	0.40	104	(55-140)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 14 outside limits

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

MS/MSD - Client Sample No.: FTSW-AA-SO-...(9980

Column ID: E1, 254nm

Sample wt/vol: 10 (g/mL) G Concentrated Extract Volume: 40000

Instrument ID: hpl1.i Batch Number: 3173 Operator: AJL

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	MSD % RPD #	QC LIMITS RPD	QC LIMITS REC
2-Amino-4,6-dinitrotol	0.38	0.41	107	2	20	(80-125)
4-Amino-2,6-dinitrotol	0.38	0.41	108	3	20	(80-125)
1,3-Dinitrobenzene	0.38	0.41	107	1	20	(80-125)
2,4-Dinitrotoluene	0.38	0.40	104	4	20	(80-125)
2,6-Dinitrotoluene	0.38	0.40	105	5	20	(80-120)
HMX	0.38	0.38	99.0	5	20	(75-125)
Nitrobenzene	0.38	0.40	103	6	20	(75-125)
4-Nitrotoluene	0.38	0.42	109	1	20	(75-125)
2-Nitrotoluene	0.38	0.41	106	7	20	(80-125)
3-Nitrotoluene	0.38	0.40	105	6	20	(75-120)
RDX	0.38	0.37	95.6	4	20	(70-135)
Tetryl	0.38	0.35	90.5	3	20	(10-150)
1,3,5-Trinitrobenzene	0.38	0.40	104	1	20	(75-125)
2,4,6-Trinitrotoluene	0.38	0.39	103	2	20	(55-140)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 14 outside limits

Spike Recovery: 0 out of 14 outside limits

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

MS/MSD - Client Sample No.: FTSW-AA-SO-...(9980

Column ID: E1, 218nm

Sample wt/vol: 10 (g/mL) G Concentrated Extract Volume: 40000

Instrument ID: hpl1.i Batch Number: 3173 Operator: AJL

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	#	MSD % RPD	#	QC LIMITS RPD	QC LIMITS REC
3,5-Dinitroaniline	0.39	0.38	98.0		1		20	(70-130)
Nitroglycerin	1.9	2.1	107		2		20	(70-130)
PETN	1.9	1.8	95.1		1		20	(70-130)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 3 outside limits

Spike Recovery: 0 out of 3 outside limits

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

MS/MSD - Client Sample No.: FTSW-AA-SO-0...(998

Column ID: E1, 218nm

Sample wt/vol: 10 (g/mL) G Concentrated Extract Volume: 40000

Instrument ID: hpl1.i Batch Number: 3173 Operator: AJL

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC#	QC LIMITS REC
3,5-Dinitroaniline	0.38	0	0.38	98.9	(70-130)
Nitroglycerin	1.9	0	2.0	107	(70-130)
PETN	1.9	0	1.9	97.4	(70-130)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 3 outside limits

4C

METHOD BLANK SUMMARY

SAMPLE NO.

1019867

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

b Sample ID: 1019867 Lab File ID (1): ZH8B003.d Lab File ID (2):

trix: (soil/water) SOIL Extraction: (Type) SONC

lfur Cleanup: (Y/N) N Date Extracted: 8/7/2012

te Analyzed (1): 8/8/2012 Date Analyzed (2):

me Analyzed (1): 14:21 Time Analyzed (2):

strument ID (1): hpl1.i Instrument ID (2):

Column (1): E1, 254nm GC Column (2):

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
1019868(LCS)	1019868	ZH8B004.d	8/8/2012	
FTSW-AA-SO-10[02]	9980109001	ZH8B006.d	8/8/2012	
FTSW-AA-SO-11	9980109003	ZH8B007.d	8/8/2012	
FTSW-AA-SO-12 [01.5	9980109004	ZH8B008.d	8/8/2012	
FTSW-AA-SO-13	9980109005	ZH8B009.d	8/8/2012	
FTSW-AA-SO-14 [02]	9980109006	ZH8B010.d	8/8/2012	
FTSW-AA-SO-15	9980109007	ZH8B011.d	8/8/2012	
FTSW-AA-SO-16 [01.5	9980109008	ZH8B012.d	8/8/2012	
FTSW-AA-SO-01	9980109009	ZH8B013.d	8/8/2012	
FTSW-AA-SO-02 [01.5	9980109010	ZH8B014.d	8/8/2012	
FTSW-AA-SO-03	9980109011	ZH8B017.d	8/9/2012	
FTSW-AA-SO-03(99801	1019871	ZH8B018.d	8/9/2012	
FTSW-AA-SO-03(99801	1019873	ZH8B019.d	8/9/2012	
FTSW-AA-SO-03 DUP	9980109012	ZH8B022.d	8/9/2012	
FTSW-AA-SO-04 [01.5	9980109013	ZH8B023.d	8/9/2012	
FTSW-AA-SO-05	9980109014	ZH8B024.d	8/9/2012	
FTSW-AA-SO-07	9980109015	ZH8B025.d	8/9/2012	
FTSW-AA-SO-06 [01.5	9980109016	ZH8B026.d	8/9/2012	
FTSW-AA-SO-08 [02]	9980109018	ZH8B027.d	8/9/2012	
FTSW-AA-SO-09	9980109019	ZH8B028.d	8/9/2012	

COMMENTS:

4C

METHOD BLANK SUMMARY

SAMPLE NO.

1019867

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

b Sample ID: 1019867 Lab File ID (1): ZH8A003.d Lab File ID (2):

trix: (soil/water) SOIL Extraction: (Type) SONC

lfur Cleanup: (Y/N). N Date Extracted: 8/7/2012

te Analyzed (1): 8/8/2012 Date Analyzed (2):

me Analyzed (1): 14:21 Time Analyzed (2):

strument ID (1): hpl1.i Instrument ID (2):

Column (1): E1, 218nm GC Column (2):

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
1019869(LCS)	1019869	ZH8A005.d	8/8/2012	
FTSW-AA-SO-10[02]	9980109001	ZH8A006.d	8/8/2012	
FTSW-AA-SO-11	9980109003	ZH8A007.d	8/8/2012	
FTSW-AA-SO-12 [01.5	9980109004	ZH8A008.d	8/8/2012	
FTSW-AA-SO-13	9980109005	ZH8A009.d	8/8/2012	
FTSW-AA-SO-14 [02]	9980109006	ZH8A010.d	8/8/2012	
FTSW-AA-SO-15	9980109007	ZH8A011.d	8/8/2012	
FTSW-AA-SO-16 [01.5	9980109008	ZH8A012.d	8/8/2012	
FTSW-AA-SO-01	9980109009	ZH8A013.d	8/8/2012	
FTSW-AA-SO-02 [01.5	9980109010	ZH8A014.d	8/8/2012	
FTSW-AA-SO-03	9980109011	ZH8A017.d	8/9/2012	
FTSW-AA-SO-03(99801	1019872	ZH8A020.d	8/9/2012	
FTSW-AA-SO-03(99801	1019874	ZH8A021.d	8/9/2012	
FTSW-AA-SO-03 DUP	9980109012	ZH8A022.d	8/9/2012	
FTSW-AA-SO-04 [01.5	9980109013	ZH8A023.d	8/9/2012	
FTSW-AA-SO-05	9980109014	ZH8A024.d	8/9/2012	
FTSW-AA-SO-07	9980109015	ZH8A025.d	8/9/2012	
FTSW-AA-SO-06 [01.5	9980109016	ZH8A026.d	8/9/2012	
FTSW-AA-SO-08 [02]	9980109018	ZH8A027.d	8/9/2012	
FTSW-AA-SO-09	9980109019	ZH8A028.d	8/9/2012	

COMMENTS:

4C

METHOD BLANK SUMMARY

SAMPLE NO.

1020314

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

b Sample ID: 1020314 Lab File ID (1): ZH8B031.d Lab File ID (2):

trix: (soil/water) SOIL Extraction: (Type) SONC

lfur Cleanup: (Y/N) N Date Extracted: 8/8/2012

te Analyzed (1): 8/9/2012 Date Analyzed (2):

me Analyzed (1): 11:16 Time Analyzed (2):

strument ID (1): hpl1.i Instrument ID (2):

Column (1): E1, 254nm GC Column (2):

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
1020315(LCS)	1020315	ZH8B032.d	8/9/2012	
FTSW-AA-SO-08 [02]	9980109017	ZH8B034.d	8/9/2012	
FTSW-AA-SO-0...(998	1020317	ZH8B035.d	8/9/2012	
FTSW-AA-SO-...(9980	1020319	ZH8B036.d	8/9/2012	

COMMENTS:

4C

METHOD BLANK SUMMARY

SAMPLE NO.

1020314

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

b Sample ID: 1020314 Lab File ID (1): ZH8A031.d Lab File ID (2):

.trix: (soil/water) SOIL Extraction: (Type) SONC

lfur Cleanup: (Y/N) N Date Extracted: 8/8/2012

.te Analyzed (1): 8/9/2012 Date Analyzed (2):

me Analyzed (1): 11:16 Time Analyzed (2):

strument ID (1): hpl1.i Instrument ID (2):

! Column (1): E1, 218nm GC Column (2):

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
1020316(LCS)	1020316	ZH8A033.d	8/9/2012	
FTSW-AA-SO-08 [02]	9980109017	ZH8A034.d	8/9/2012	
FTSW-AA-SO-0...(998	1020318	ZH8A037.d	8/9/2012	
FTSW-AA-SO-...(9980	1020320	ZH8A038.d	8/9/2012	

COMMENTS:

8D

ANALYTICAL SEQUENCE

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

Column: E1, 254nm Init. Calib. Date(s): 11/14/2011 11/14/2011

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION

SUR 1: 13.76

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
LEVEL1	LEVEL1	11/14/2011	17:54	13.76
LEVEL2	LEVEL2	11/14/2011'	18:37	13.77
LEVEL3	LEVEL3	11/14/2011	19:20	13.77
LEVEL4	LEVEL4	11/14/2011	20:03	13.77
LEVEL5	LEVEL5	11/14/2011	20:46	13.76
LEVEL6	LEVEL6	11/14/2011	21:29	13.75
LEVEL7	LEVEL7	11/14/2011	22:12	13.74
ICV	ICV111411	11/14/2011	22:55	13.75

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE

) Name: ALS - Middletown Contract:

) Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

Column: E1, 218nm Init. Calib. Date(s): 11/14/2011 11/15/2011

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
) STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION

SUR 1: 13.75

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
LEVEL1	LEVEL1	11/14/2011	23:38	13.77
LEVEL2	LEVEL2	11/15/2011	00:21	13.75
LEVEL3	LEVEL3	11/15/2011	01:04	13.75
LEVEL4	LEVEL4	11/15/2011	01:46	13.76
LEVEL5	LEVEL5	11/15/2011	02:29	13.76
LEVEL6	LEVEL6	11/15/2011	03:12	13.75
LEVEL7	LEVEL7	11/15/2011	03:55	13.74
ZZZZZZ	ICV111511	11/15/2011	04:38	13.76

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

Column: E1, 254nm Cont. Calib. Date(s): 8/8/2012 12:21

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.74

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
1019867(MB)	1019867	8/8/2012	14:21	13.74
1019868(LCS)	1019868	8/8/2012	15:05	13.73
FTSW-AA-SO-10[02]	9980109001	8/8/2012	16:33	13.74
FTSW-AA-SO-11	9980109003	8/8/2012	17:17	13.72
FTSW-AA-SO-12 [01.5	9980109004	8/8/2012	18:01	13.70
FTSW-AA-SO-13	9980109005	8/8/2012	18:45	13.71
FTSW-AA-SO-14 [02]	9980109006	8/8/2012	19:29	13.71
FTSW-AA-SO-15	9980109007	8/8/2012	20:13	13.70
FTSW-AA-SO-16 [01.5	9980109008	8/8/2012	20:57	13.70
FTSW-AA-SO-01	9980109009	8/8/2012	21:41	13.70
FTSW-AA-SO-02 [01.5	9980109010	8/8/2012	22:25	13.68

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

: Column: E1, 218nm Cont. Calib. Date(s): 8/8/2012 13:05

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.75

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
1019867(MB)	1019867	8/8/2012	14:21	13.74
1019869(LCS)	1019869	8/8/2012	15:49	13.76
FTSW-AA-SO-10[02]	9980109001	8/8/2012	16:33	13.74
FTSW-AA-SO-11	9980109003	8/8/2012	17:17	13.73
FTSW-AA-SO-12 [01.5	9980109004	8/8/2012	18:01	13.70
FTSW-AA-SO-13	9980109005	8/8/2012	18:45	13.72
FTSW-AA-SO-14 [02]	9980109006	8/8/2012	19:29	13.71
FTSW-AA-SO-15	9980109007	8/8/2012	20:13	13.71
FTSW-AA-SO-16 [01.5	9980109008	8/8/2012	20:57	13.70
FTSW-AA-SO-01	9980109009	8/8/2012	21:41	13.71
FTSW-AA-SO-02 [01.5	9980109010	8/8/2012	22:25	13.68

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

Column: E1, 254nm Cont. Calib. Date(s): 8/8/2012 23:09

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.68

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
FTSW-AA-SO-03	9980109011	8/9/2012	00:37	13.68
FTSW-AA-SO-03(99801	1019871	8/9/2012	01:22	13.68
FTSW-AA-SO-03(99801	1019873	8/9/2012	02:06	13.69
FTSW-AA-SO-03 DUP	9980109012	8/9/2012	04:18	13.67
FTSW-AA-SO-04 [01.5	9980109013	8/9/2012	05:02	13.68
FTSW-AA-SO-05	9980109014	8/9/2012	05:46	13.68
FTSW-AA-SO-07	9980109015	8/9/2012	06:30	13.68
FTSW-AA-SO-06 [01.5	9980109016	8/9/2012	07:14	13.67
FTSW-AA-SO-08 [02]	9980109018	8/9/2012	07:58	13.68
FTSW-AA-SO-09	9980109019	8/9/2012	08:42	13.67

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

Column: E1, 218nm Cont. Calib. Date(s): 8/8/2012 23:53

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.70

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
FTSW-AA-SO-03	9980109011	8/9/2012	00:37	13.68
FTSW-AA-SO-03(99801	1019872	8/9/2012	02:50	13.67
FTSW-AA-SO-03(99801	1019874	8/9/2012	03:34	13.69
FTSW-AA-SO-03 DUP	9980109012	8/9/2012	04:18	13.67
FTSW-AA-SO-04 [01.5	9980109013	8/9/2012	05:02	13.68
FTSW-AA-SO-05	9980109014	8/9/2012	05:46	13.69
FTSW-AA-SO-07	9980109015	8/9/2012	06:30	13.69
FTSW-AA-SO-06 [01.5	9980109016	8/9/2012	07:14	13.68
FTSW-AA-SO-08 [02]	9980109018	8/9/2012	07:58	13.68
FTSW-AA-SO-09	9980109019	8/9/2012	08:42	13.68

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

Column: E1, 254nm Cont. Calib. Date(s): 8/9/2012 09:26

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.67

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
CCV1 (SAM)	CCV1	8/9/2012	09:26	13.67
1020314 (MB)	1020314	8/9/2012	11:16	13.67
1020315 (LCS)	1020315	8/9/2012	12:00	13.66
FTSW-AA-SO-08 [02]	9980109017	8/9/2012	13:36	13.65
FTSW-AA-SO-0...(998	1020317	8/9/2012	14:27	13.65
FTSW-AA-SO-...(9980	1020319	8/9/2012	15:11	13.65
ZZZZZZ	9980394001	8/9/2012	17:23	13.65
ZZZZZZ	9980394002	8/9/2012	18:08	13.64
ZZZZZZ	9980394003	8/9/2012	18:52	13.65
ZZZZZZ	9980394004	8/9/2012	19:36	13.66

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

ıb Name: ALS - Middletown Contract:

ıb Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

: Column: E1, 218nm Cont. Calib. Date(s): 8/9/2012 10:10

ıstrument ID: hpl1.i

IE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
ID STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.66

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
CCV2 (SAM)	CCV2	8/9/2012	10:10	13.66
1020314 (MB)	1020314	8/9/2012	11:16	13.67
1020316 (LCS)	1020316	8/9/2012	12:44	13.67
FTSW-AA-SO-08 [02]	9980109017	8/9/2012	13:36	13.66
FTSW-AA-SO-0...(998	1020318	8/9/2012	15:55	13.65
FTSW-AA-SO-...(9980	1020320	8/9/2012	16:39	13.67
ZZZZZZ	9980394001	8/9/2012	17:23	13.66
ZZZZZZ	9980394002	8/9/2012	18:08	13.65
ZZZZZZ	9980394003	8/9/2012	18:52	13.66
ZZZZZZ	9980394004	8/9/2012	19:36	13.66

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

o Name: ALS - Middletown Contract:

o Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

Column: E1, 254nm Cont. Calib. Date(s): 8/9/2012 20:20

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.65

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
ZZZZZZ	9980394005	8/9/2012	21:48	13.65
ZZZZZZ	9980394007	8/9/2012	22:32	13.65
ZZZZZZ	9980395003	8/9/2012	23:16	13.64
ZZZZZZ	1020321	8/10/2012	00:00	13.64
ZZZZZZ	1020323	8/10/2012	00:44	13.62
ZZZZZZ	9980395004	8/10/2012	02:56	13.63
ZZZZZZ	9980395005	8/10/2012	03:40	13.64

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D

ANALYTICAL SEQUENCE (CCAL)

b Name: ALS - Middletown Contract:

b Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

: Column: E1, 218nm Cont. Calib. Date(s): 8/9/2012 21:04

strument ID: hpl1.i

E ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
D STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM CONTINUING CALIBRATION

SUR 1: 13.66

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #
ZZZZZZ	9980394005	8/9/2012	21:48	13.65
ZZZZZZ	9980394007	8/9/2012	22:32	13.65
ZZZZZZ	9980395003	8/9/2012	23:16	13.64
ZZZZZZ	1020322	8/10/2012	01:28	13.64
ZZZZZZ	1020324	8/10/2012	02:12	13.64
ZZZZZZ	9980395004	8/10/2012	02:56	13.63
ZZZZZZ	9980395005	8/10/2012	03:40	13.64

QC LIMITS

1,4-Dinitrobenzene (+/- 0.85 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Explosives in Solid by 8330B Raw Data

Sample Raw Data

1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-10[02]

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109001

Sample wt/vol: 10.1 (g/mL) G Lab File ID (1): ZH8B006.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.099	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.099	U
99-65-0	1,3-Dinitrobenzene	0.099	U
121-14-2	2,4-Dinitrotoluene	0.099	U
606-20-2	2,6-Dinitrotoluene	0.099	U
2691-41-0	HMX	0.099	U
98-95-3	Nitrobenzene	0.099	U
99-99-0	4-Nitrotoluene	0.099	U
88-72-2	2-Nitrotoluene	0.099	U
99-08-1	3-Nitrotoluene	0.099	U
121-82-4	RDX	0.099	U
479-45-8	Tetryl	0.099	U
99-35-4	1,3,5-Trinitrobenzene	0.099	U
118-96-7	2,4,6-Trinitrotoluene	0.099	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B006.d
Lab Smp Id: 9980109001 Client Smp ID: FTSW-AA-SO-10[02]
Inj Date : 08-AUG-2012 16:33
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109001;AJL;;;;;;10.1
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.100	Weight of sample extracted
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW
REPORTED
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (mg/kg)
	1 HMX	Compound Not Detected.					
	2 RDX	Compound Not Detected.					
	3 1,3,5-Trinitrobenzene	Compound Not Detected.					
$	4 1,4-Dinitrobenzene	13.740	13.673	0.067	179480	529.498	2.09702
	5 1,3-Dinitrobenzene	Compound Not Detected.					
	6 Nitrobenzene	Compound Not Detected.					
	7 Tetryl	Compound Not Detected.					
	8 2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
	9 4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
	10 2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
	11 2,6-Dinitrotoluene	Compound Not Detected.					
	12 2,4-Dinitrotoluene	Compound Not Detected.					
	13 2-Nitrotoluene	Compound Not Detected.					
	14 4-Nitrotoluene	Compound Not Detected.					
	15 3-Nitrotoluene	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Client SDG: ERT001|Ft. Stewart
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: 9980109001
Client Smp ID: FTSW-AA-SO-10[02]
Level: LOW
Operator: AJL
Data Type: LC DATA
SampleType: SAMPLE
SpikeList File: DoD_W.spk
Quant Type: ESTD
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3176 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.98020	2.09702	105.90	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B006.d

Date : 08-AUG-2012 16:33

Client ID: FTSW-AA-SO-10[02]

Instrument: hpl1.i

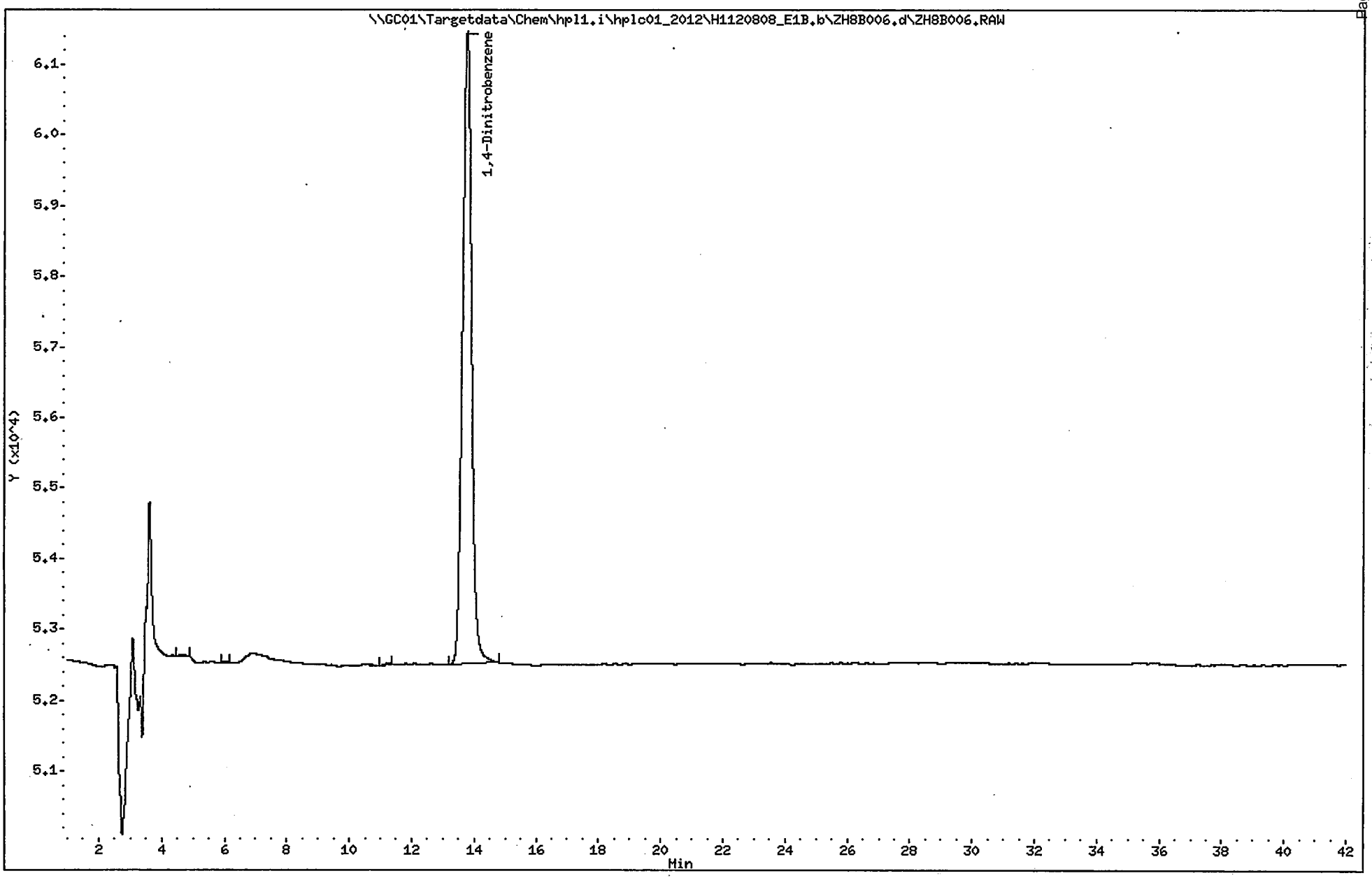
Sample Info: 9980109001;AJL;;;;;;10.1

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-10[02]

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109001

Sample wt/vol: 10.1 (g/mL) G Lab File ID (1): ZH8A006.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.099	U
55-63-0	Nitroglycerin	0.99	U
78-11-5	PETN	0.99	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A006.d
Lab Smp Id: 9980109001 Client Smp ID: FTSW-AA-SO-10[02]
Inj Date : 08-AUG-2012 16:33
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109001;AJL;;;;;;10.1
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.100	Weight of sample extracted
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED 8/8/12
2nd REVIEW 8/8/12

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.743	13.663	0.080	63022	474.474	1.87911
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

ALS - Middletown

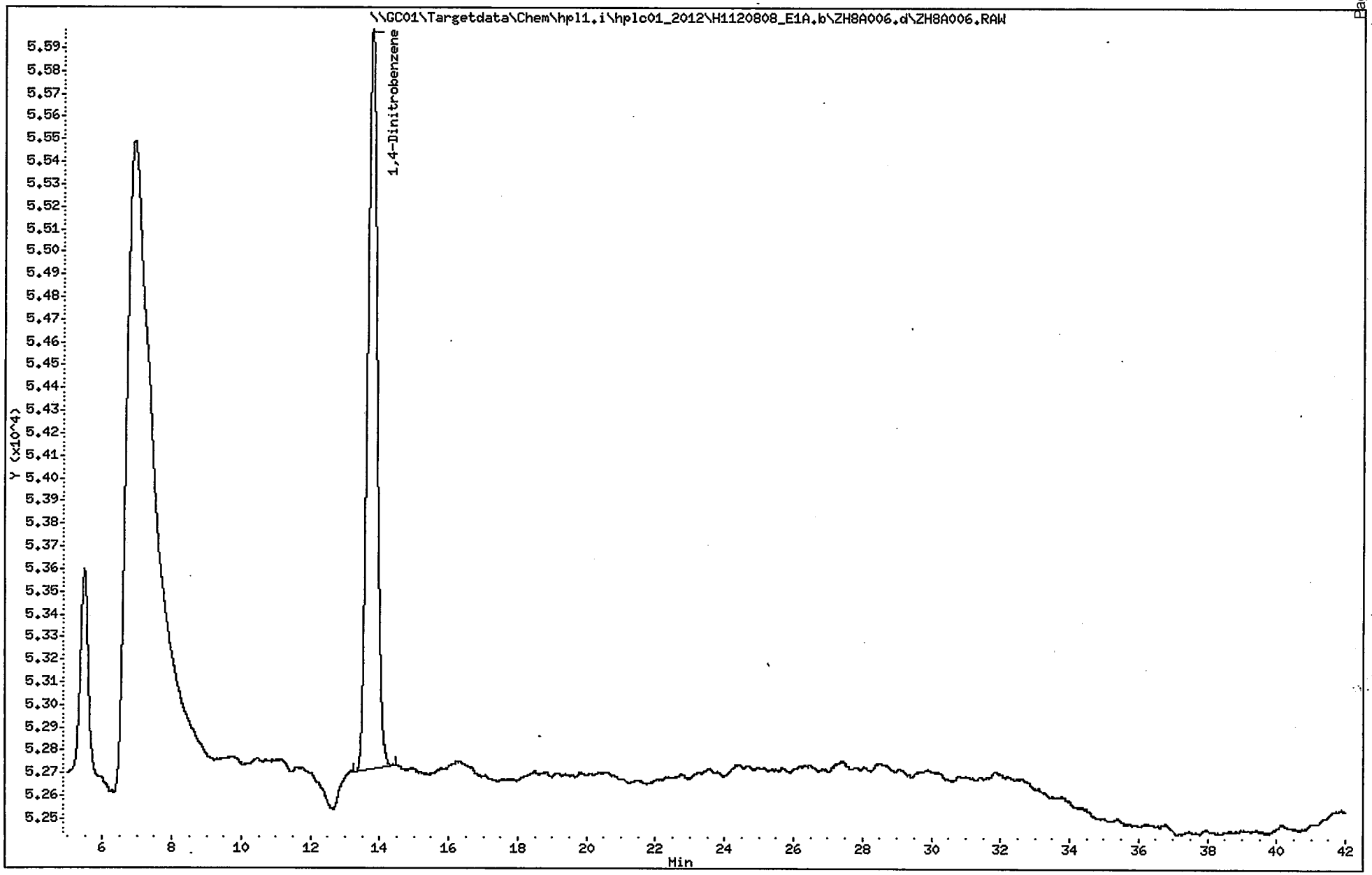
RECOVERY REPORT

Client Name: ERT Earth Resources
Client SDG: ERT001|Ft. Stewart
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: 9980109001
Client Smp ID: FTSW-AA-SO-10[02]
Level: LOW
Operator: AJL
Data Type: LC DATA
SampleType: SAMPLE
SpikeList File: 8330LCS.spk
Quant Type: ESTD
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3176 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.98020	1.87911	94.89	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A006.d
Date : 08-AUG-2012 16:33
Client ID: FTSW-AA-SO-10[02]
Sample Info: 9980109001;AJL;;;;;;10.1
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-11

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109003

Sample wt/vol: 10.0 (g/mL) G Lab File ID (1): ZH8B007.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.100	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.100	U
99-65-0	1,3-Dinitrobenzene	0.100	U
121-14-2	2,4-Dinitrotoluene	0.100	U
606-20-2	2,6-Dinitrotoluene	0.100	U
2691-41-0	HMX	0.100	U
98-95-3	Nitrobenzene	0.100	U
99-99-0	4-Nitrotoluene	0.100	U
88-72-2	2-Nitrotoluene	0.100	U
99-08-1	3-Nitrotoluene	0.100	U
121-82-4	RDX	0.100	U
479-45-8	Tetryl	0.100	U
99-35-4	1,3,5-Trinitrobenzene	0.100	U
118-96-7	2,4,6-Trinitrotoluene	0.100	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B007.d
Lab Smp Id: 9980109003 Client Smp ID: FTSW-AA-SO-11
Inj Date : 08-AUG-2012 17:17
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109003;AJL;;;;;;10.0
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED
APPROVED 8/14/12
2nd REVIEW 8/15/12

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.723	13.673	0.050	175594	518.033	2.07213
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Client SDG: ERT001|Ft. Stewart
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: 9980109003
Client Smp ID: FTSW-AA-SO-11
Level: LOW
Operator: AJL
Data Type: LC DATA
SampleType: SAMPLE
SpikeList File: DoD_W.spk
Quant Type: ESTD
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3176 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	2.00000	2.07213	103.61	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B007.d

Date : 08-AUG-2012 17:17

Client ID: FTSW-AA-SO-11

Instrument: hpl1.i

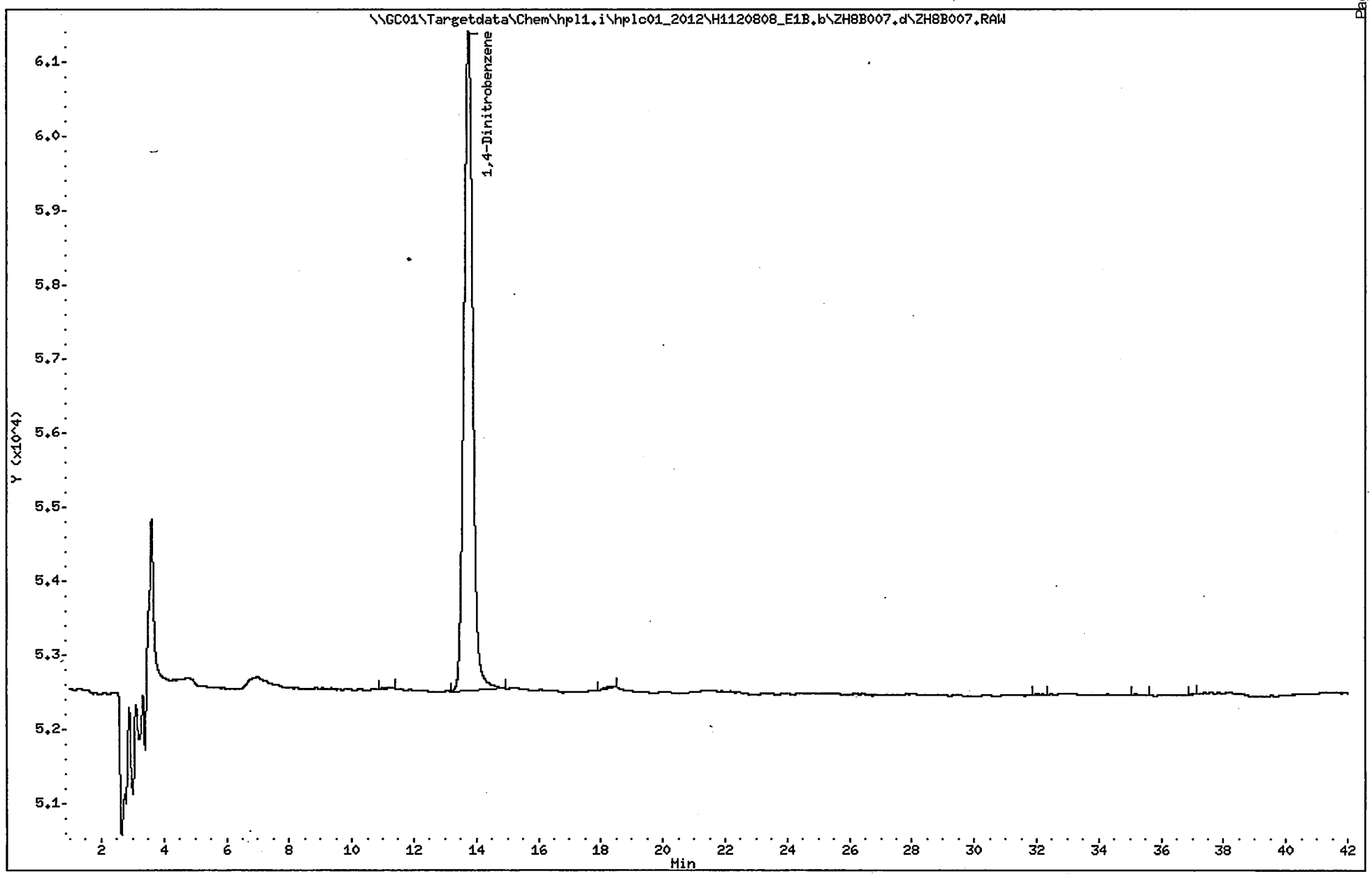
Sample Info: 9980109003;AJL;;;;;;10.0

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-11

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109003

Sample wt/vol: 10.0 (g/mL) G Lab File ID (1): ZH8A007.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.100	U
55-63-0	Nitroglycerin	1.0	U
78-11-5	PETN	1.0	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A007.d
Lab Smp Id: 9980109003 Client Smp ID: FTSW-AA-SO-11
Inj Date : 08-AUG-2012 17:17
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109003;AJL;;;;;;10.0
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.726	13.663	0.063	64133	482.839	1.93136
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Client SDG: ERT001|Ft. Stewart
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: 9980109003
Client Smp ID: FTSW-AA-SO-11
Level: LOW
Operator: AJL
Data Type: LC DATA
SampleType: SAMPLE
SpikeList File: 8330LCS.spk
Quant Type: ESTD
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3176 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	2.00000	1.93136	96.57	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A007.d

Date : 08-AUG-2012 17:17

Client ID: FTSW-AA-SO-11

Instrument: hpl1.i

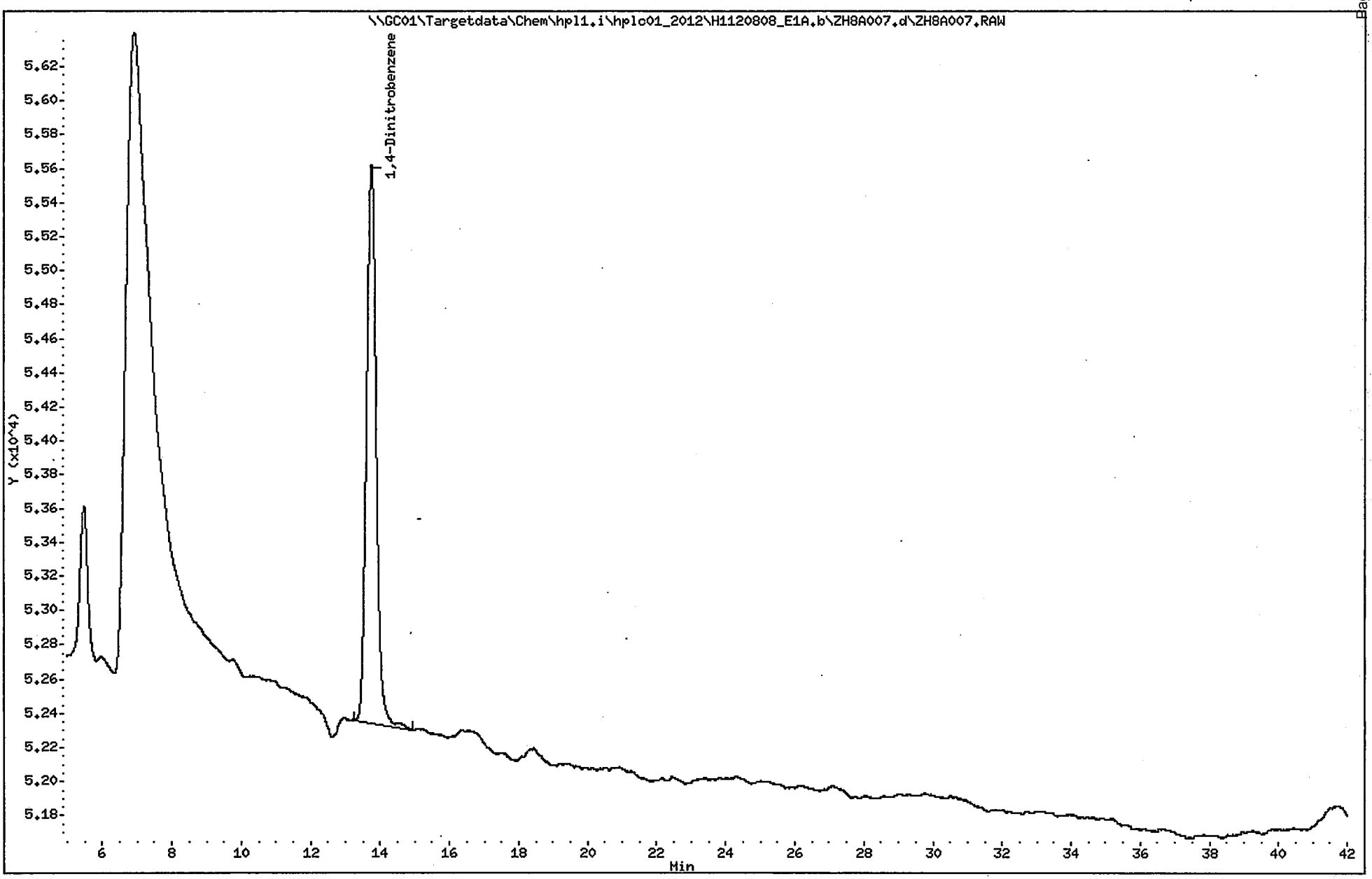
Sample Info: 9980109003;AJL;;;;;;10.0

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-12 [01.5

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109004

Sample wt/vol: 10.4 (g/mL) G Lab File ID (1): ZH8B008.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.096	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.096	U
99-65-0	1,3-Dinitrobenzene	0.096	U
121-14-2	2,4-Dinitrotoluene	0.096	U
606-20-2	2,6-Dinitrotoluene	0.096	U
2691-41-0	HMX	0.096	U
98-95-3	Nitrobenzene	0.096	U
99-99-0	4-Nitrotoluene	0.096	U
88-72-2	2-Nitrotoluene	0.096	U
99-08-1	3-Nitrotoluene	0.096	U
121-82-4	RDX	0.096	U
479-45-8	Tetryl	0.096	U
99-35-4	1,3,5-Trinitrobenzene	0.096	U
118-96-7	2,4,6-Trinitrotoluene	0.096	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B008.d
Lab Smp Id: 9980109004 Client Smp ID: FTSW-AA-SO-12 [01.5
Inj Date : 08-AUG-2012 18:01
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109004;AJL;;;;;;10.4
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.400	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED CY/LL
2nd REVIEW CY/LL

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.696	13.673	0.023	178145	525.559	2.02138
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109004
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3176 D8330S

Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-12 [01.5
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.92308	2.02138	105.11	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B008.d

Date : 08-AUG-2012 18:01

Client ID: FTSW-AA-SO-12 [01.5

Sample Info: 9980109004;AJL;;;;;;10.4

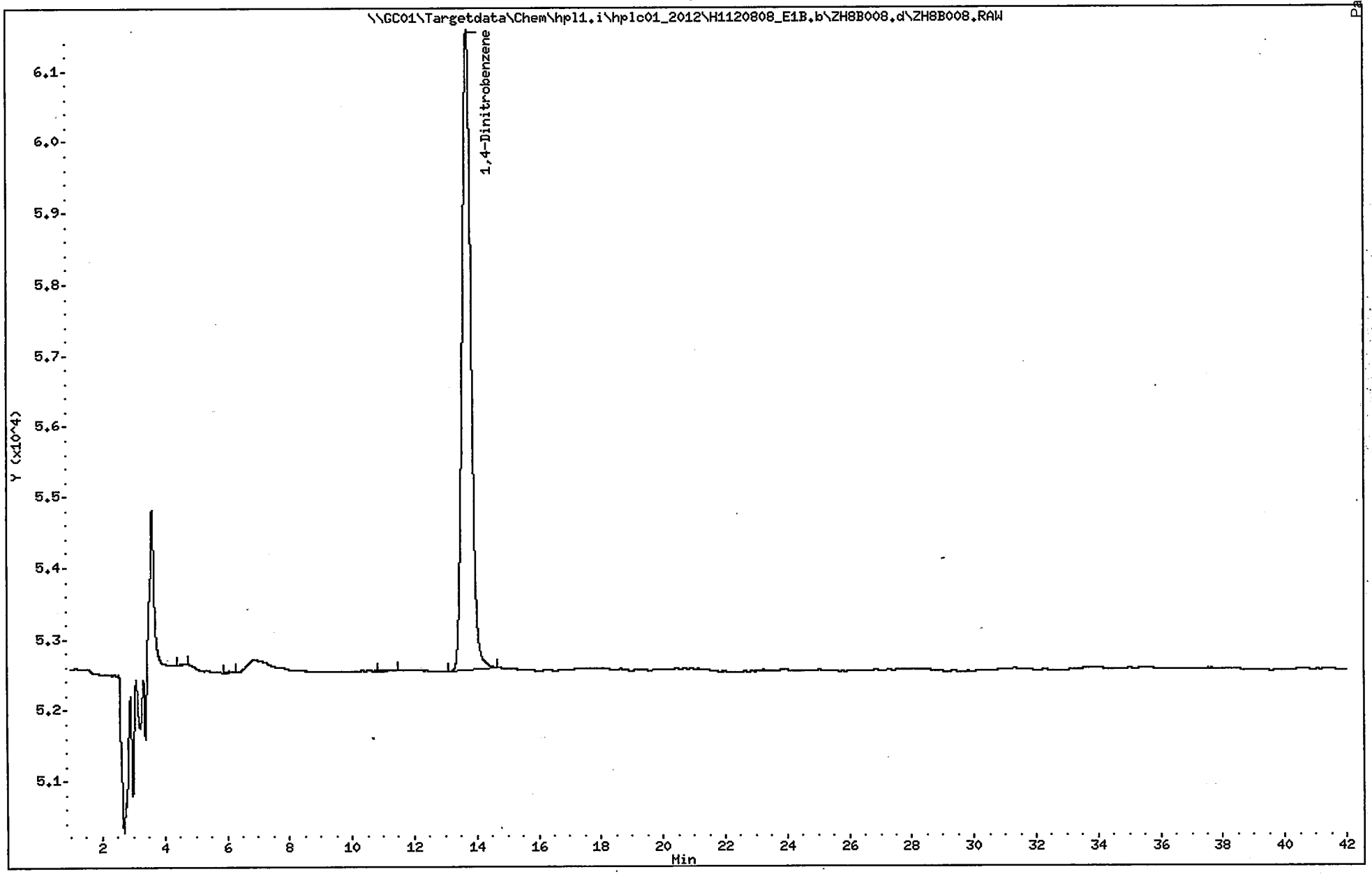
Volume Injected (uL): 100.0

Column phase: E1

Instrument: hpl1.i

Operator: AJL

Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-12 [01.5

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109004

Sample wt/vol: 10.4 (g/mL) G Lab File ID (1): ZH8A008.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.096	U
55-63-0	Nitroglycerin	0.96	U
78-11-5	PETN	0.96	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A008.d
Lab Smp Id: 9980109004 Client Smp ID: FTSW-AA-SO-12 [01.5
Inj Date : 08-AUG-2012 18:01
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109004;AJL;;;;;;10.4
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.400	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW
REPORTED
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (mg/kg)
$	1 1,4-Dinitrobenzene	13.700	13.663	0.037	62792	472.743	1.81824
	3 3,5-Dinitroaniline	Compound Not Detected.					
	4 Nitroglycerin	Compound Not Detected.					
	5 PETN	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

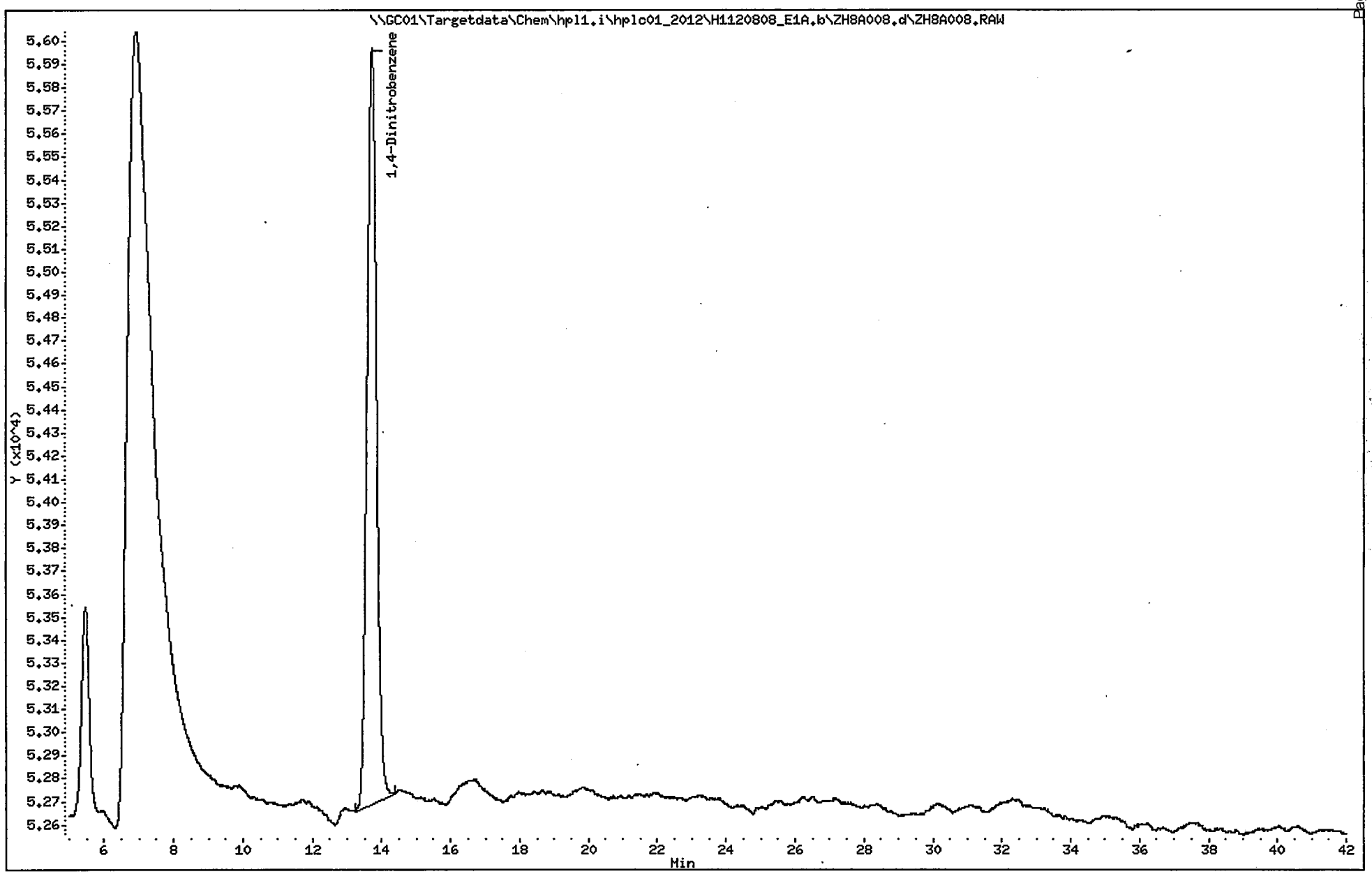
Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109004
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3176 D8330S

Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-12 [01.5
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.92308	1.81824	94.55	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A008.d
Date : 08-AUG-2012 18:01
Client ID: FTSW-AA-SO-12 [01.5
Sample Info: 9980109004;AJL;;;;;;10.4
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-13

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109005

Sample wt/vol: 10.4 (g/mL) G Lab File ID (1): ZH8B009.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.096	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.096	U
99-65-0	1,3-Dinitrobenzene	0.096	U
121-14-2	2,4-Dinitrotoluene	0.096	U
606-20-2	2,6-Dinitrotoluene	0.096	U
2691-41-0	HMX	0.096	U
98-95-3	Nitrobenzene	0.096	U
99-99-0	4-Nitrotoluene	0.096	U
88-72-2	2-Nitrotoluene	0.096	U
99-08-1	3-Nitrotoluene	0.096	U
121-82-4	RDX	0.096	U
479-45-8	Tetryl	0.096	U
99-35-4	1,3,5-Trinitrobenzene	0.096	U
118-96-7	2,4,6-Trinitrotoluene	0.096	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B009.d
Lab Smp Id: 9980109005 Client Smp ID: FTSW-AA-SO-13
Inj Date : 08-AUG-2012 18:45
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109005;AJL;;;;;;10.4
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.400	Weight of sample extracted (g
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/8/12
REPORTED 8/8/12
APPROVED 8/9/12
2nd REVIEW 8/9/12

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
	1 HMX	Compound Not Detected.					
	2 RDX	Compound Not Detected.					
	3 1,3,5-Trinitrobenzene	Compound Not Detected.					
$	4 1,4-Dinitrobenzene	13.713	13.673	0.040	166075	489.951	1.88443
	5 1,3-Dinitrobenzene	Compound Not Detected.					
	6 Nitrobenzene	Compound Not Detected.					
	7 Tetryl	Compound Not Detected.					
	8 2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
	9 4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
	10 2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
	11 2,6-Dinitrotoluene	Compound Not Detected.					
	12 2,4-Dinitrotoluene	Compound Not Detected.					
	13 2-Nitrotoluene	Compound Not Detected.					
	14 4-Nitrotoluene	Compound Not Detected.					
	15 3-Nitrotoluene	Compound Not Detected.					

ALS - Middletown

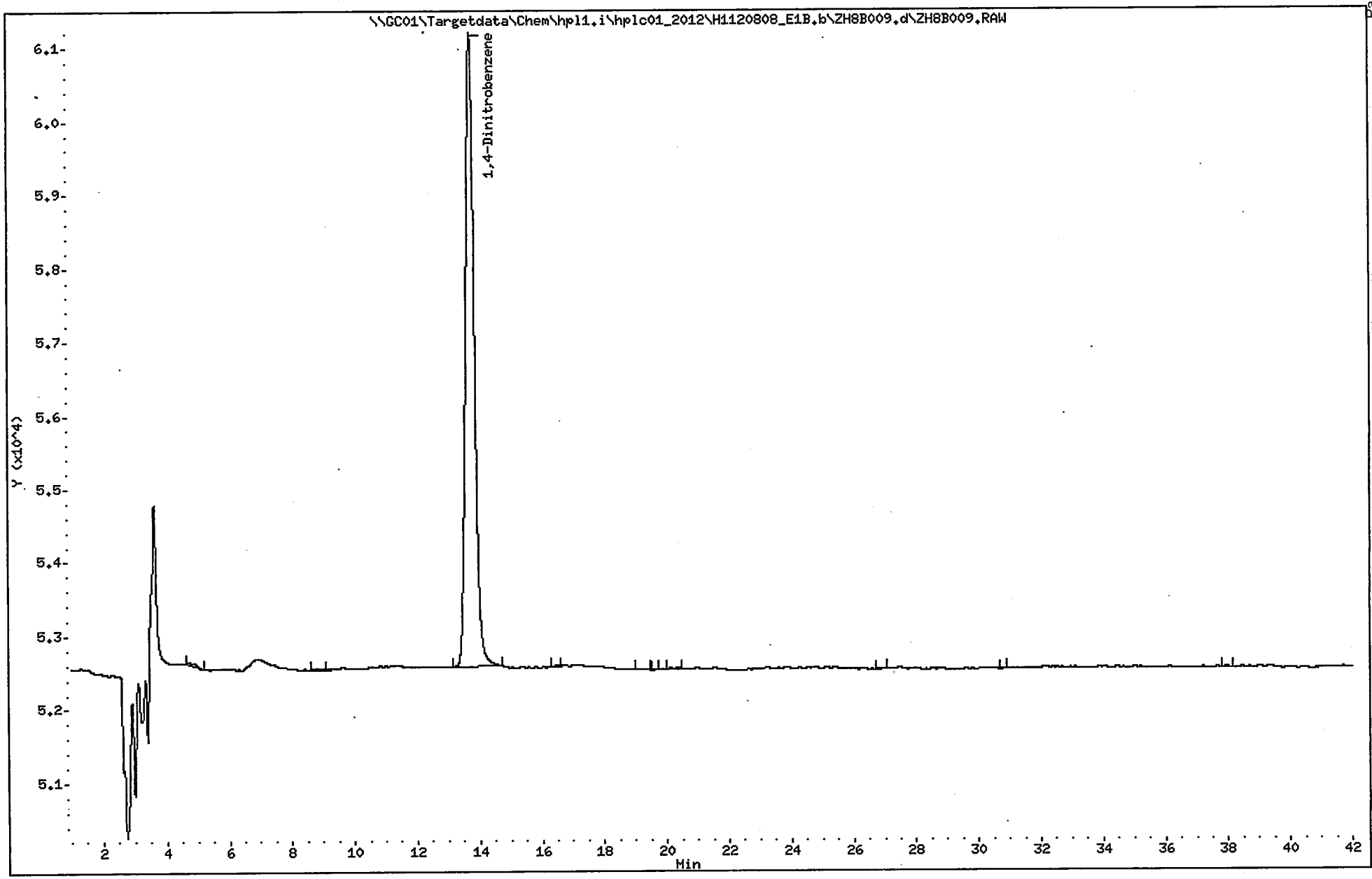
RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109005
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-13
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3176 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.92308	1.88443	97.99	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B009.d
Date : 08-AUG-2012 18:45
Client ID: FTSW-AA-SO-13
Sample Info: 9980109005;AJL;;;;;;10.4
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-13

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109005

Sample wt/vol: 10.4 (g/mL) G Lab File ID (1): ZH8A009.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.096	U
55-63-0	Nitroglycerin	0.96	U
78-11-5	PETN	0.96	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A009.d
Lab Smp Id: 9980109005 Client Smp ID: FTSW-AA-SO-13
Inj Date : 08-AUG-2012 18:45
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109005;AJL;;;;;;10.4
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.400	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED
APPROVED
2nd REVIEW

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.716	13.663	0.053	59391	447.138	1.71976
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

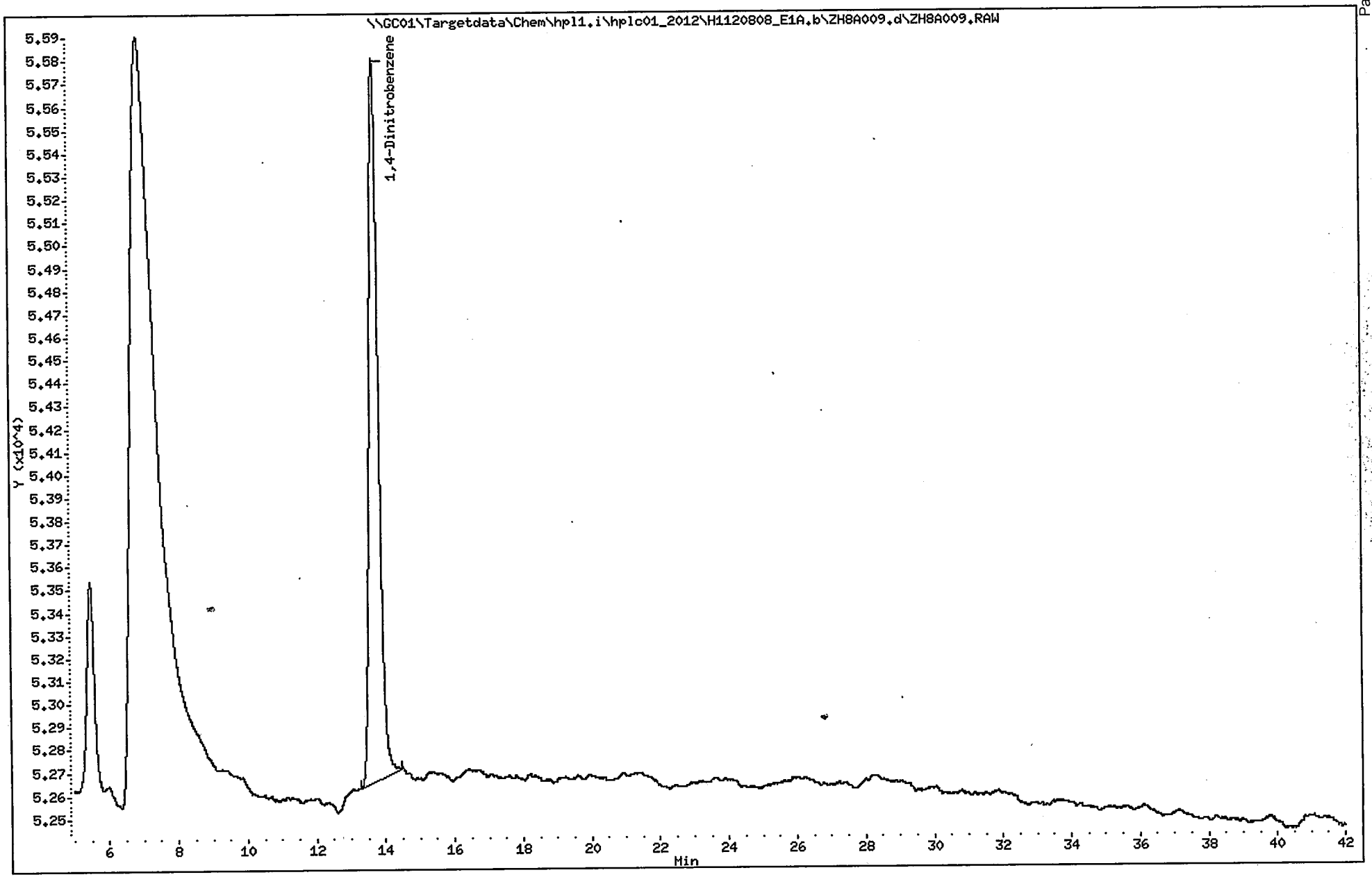
Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109005
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3176 D8330S

Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-13
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.92308	1.71976	89.43	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A009.d
Date : 08-AUG-2012 18:45
Client ID: FTSW-AA-SO-13
Sample Info: 9980109005;AJL;;;;;;10.4
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-14 [02]

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109006

Sample wt/vol: 10.3 (g/mL) G Lab File ID (1): ZH8B010.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.097	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.097	U
99-65-0	1,3-Dinitrobenzene	0.097	U
121-14-2	2,4-Dinitrotoluene	0.097	U
606-20-2	2,6-Dinitrotoluene	0.097	U
2691-41-0	HMX	0.097	U
98-95-3	Nitrobenzene	0.097	U
99-99-0	4-Nitrotoluene	0.097	U
88-72-2	2-Nitrotoluene	0.097	U
99-08-1	3-Nitrotoluene	0.097	U
121-82-4	RDX	0.097	U
479-45-8	Tetryl	0.097	U
99-35-4	1,3,5-Trinitrobenzene	0.097	U
118-96-7	2,4,6-Trinitrotoluene	0.097	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B010.d
Lab Smp Id: 9980109006 Client Smp ID: FTSW-AA-SO-14 [02]
Inj Date : 08-AUG-2012 19:29
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109006;AJL;;;;;;10.3
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.300	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/10/12
REPORTED 8/10/12
APPROVED CH/LH
2nd REVIEW CH/LH

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
	1 HMX	Compound Not Detected.					
	2 RDX	Compound Not Detected.					
	3 1,3,5-Trinitrobenzene	Compound Not Detected.					
$	4 1,4-Dinitrobenzene	13.706	13.673	0.033	175832	518.736	2.01451
	5 1,3-Dinitrobenzene	Compound Not Detected.					
	6 Nitrobenzene	Compound Not Detected.					
	7 Tetryl	Compound Not Detected.					
	8 2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
	9 4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
	10 2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
	11 2,6-Dinitrotoluene	Compound Not Detected.					
	12 2,4-Dinitrotoluene	Compound Not Detected.					
	13 2-Nitrotoluene	Compound Not Detected.					
	14 4-Nitrotoluene	Compound Not Detected.					
	15 3-Nitrotoluene	Compound Not Detected.					

Data File: ZH8B010.d
Report Date: 09-Aug-2012 11:56

ALS - Middletown

RECOVERY REPORT

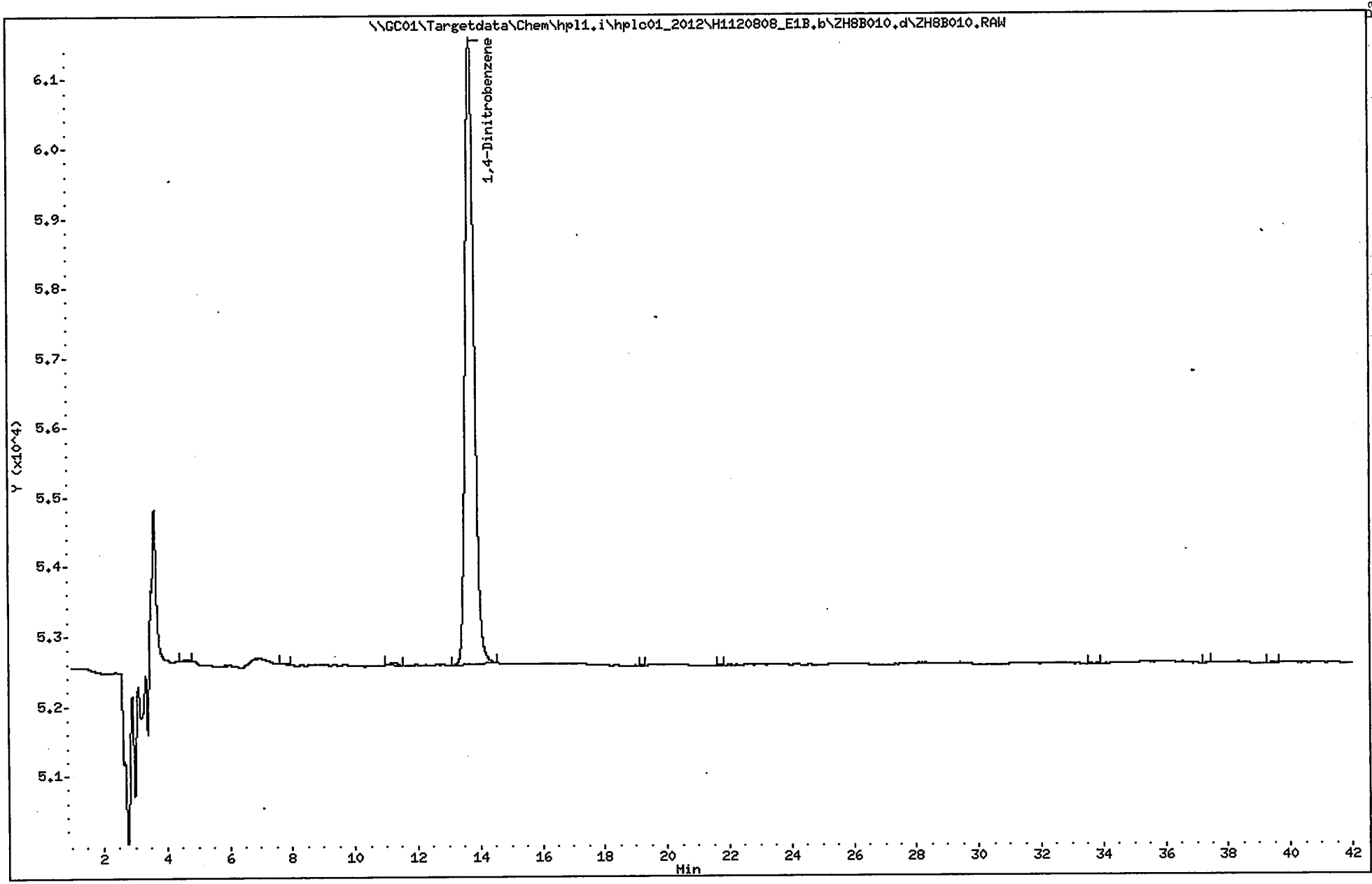
Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109006
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-14 [02]
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3176 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.94175	2.01451	103.75	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B010.d
Date : 08-AUG-2012 19:29
Client ID: FTSW-AA-SO-14 [02]
Sample Info: 9980109006;AJL;;;;;;10.3
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i

Operator: AJL
Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-14 [02]

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109006

Sample wt/vol: 10.3 (g/mL) G Lab File ID (1): ZH8A010.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.097	U
55-63-0	Nitroglycerin	0.97	U
78-11-5	PETN	0.97	U

FORM I PEST

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A010.d
Lab Smp Id: 9980109006 Client Smp ID: FTSW-AA-SO-14 [02]
Inj Date : 08-AUG-2012 19:29
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109006;AJL;;;;;;10.3
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.300	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/13/12
REPORTED 8/13/12
APPROVED
2ND REVIEW

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.706	13.663	0.043	64637	486.633	1.88984
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109006
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3176 D8330S

Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-14 [02]
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.94175	1.88984	97.33	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A010.d

Date : 08-AUG-2012 19:29

Client ID: FTSW-AA-SO-14 [02]

Sample Info: 9980109006;AJL;;;;;;10.3

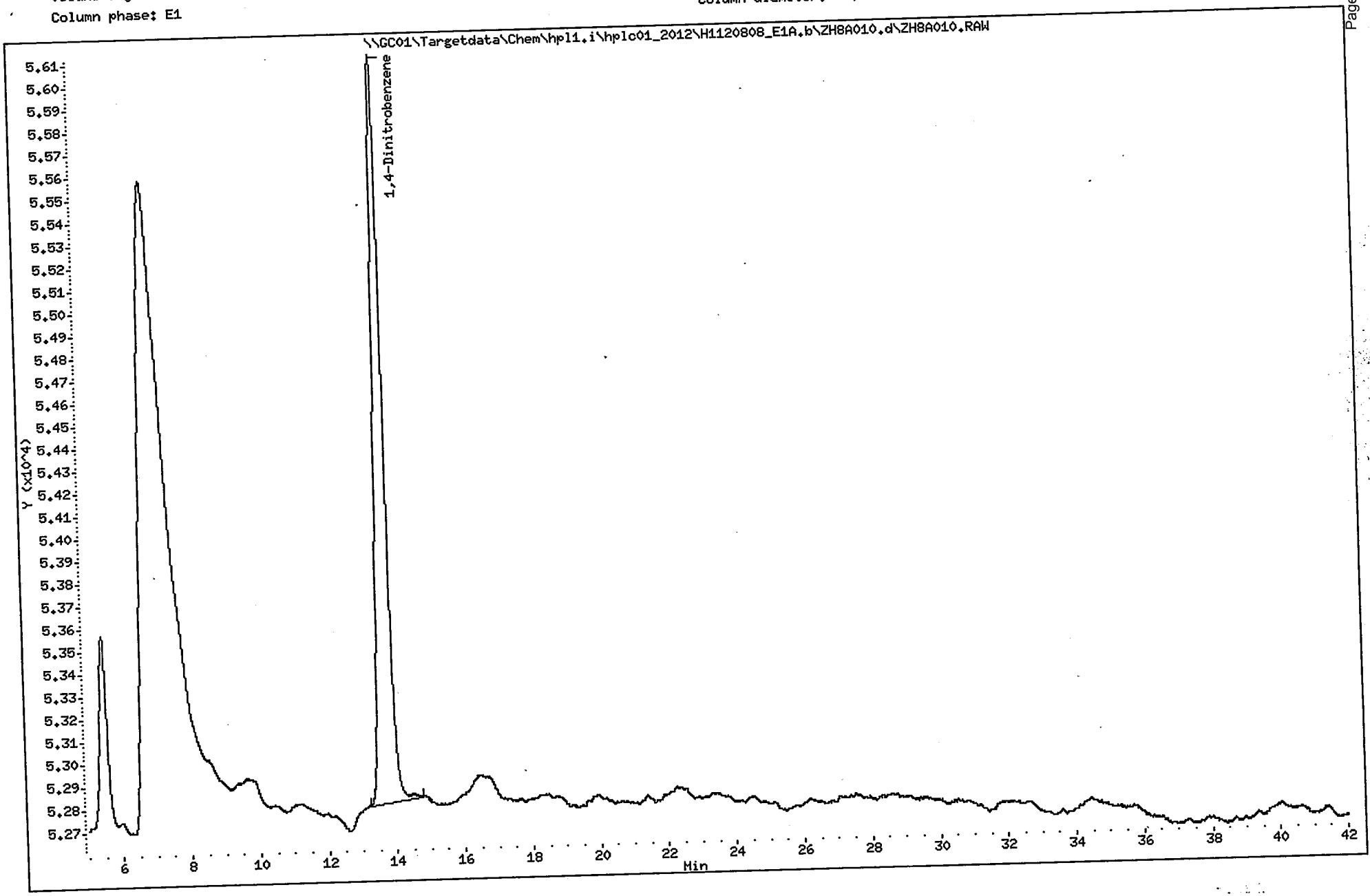
Volume Injected (uL): 100.0

Column phase: E1

Instrument: hpl1.i

Operator: AJL

Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-15

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109007

Sample wt/vol: 10.2 (g/mL) G Lab File ID (1): ZH8B011.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.098	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.098	U
99-65-0	1,3-Dinitrobenzene	0.098	U
121-14-2	2,4-Dinitrotoluene	0.098	U
606-20-2	2,6-Dinitrotoluene	0.098	U
2691-41-0	HMX	0.098	U
98-95-3	Nitrobenzene	0.098	U
99-99-0	4-Nitrotoluene	0.098	U
88-72-2	2-Nitrotoluene	0.098	U
99-08-1	3-Nitrotoluene	0.098	U
121-82-4	RDX	0.098	U
479-45-8	Tetryl	0.098	U
99-35-4	1,3,5-Trinitrobenzene	0.098	U
118-96-7	2,4,6-Trinitrotoluene	0.098	U

Data File: ZH8B011.d
Report Date: 09-Aug-2012 11:56

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B011.d
Lab Smp Id: 9980109007 Client Smp ID: FTSW-AA-SO-15
Inj Date : 08-AUG-2012 20:13
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109007;AJL;;;;;;10.2
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.200	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW
REPORTED
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.700	13.673	0.027	175760	518.523	2.03342
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

Data File: ZH8B011.d
Report Date: 09-Aug-2012 11:56

ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109007
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3176 D8330S

Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-15
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.96078	2.03342	103.70	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B011.d

Date : 08-AUG-2012 20:13

Client ID: FTSW-AA-SO-15

Sample Info: 9980109007;AJL;;;;;;10.2

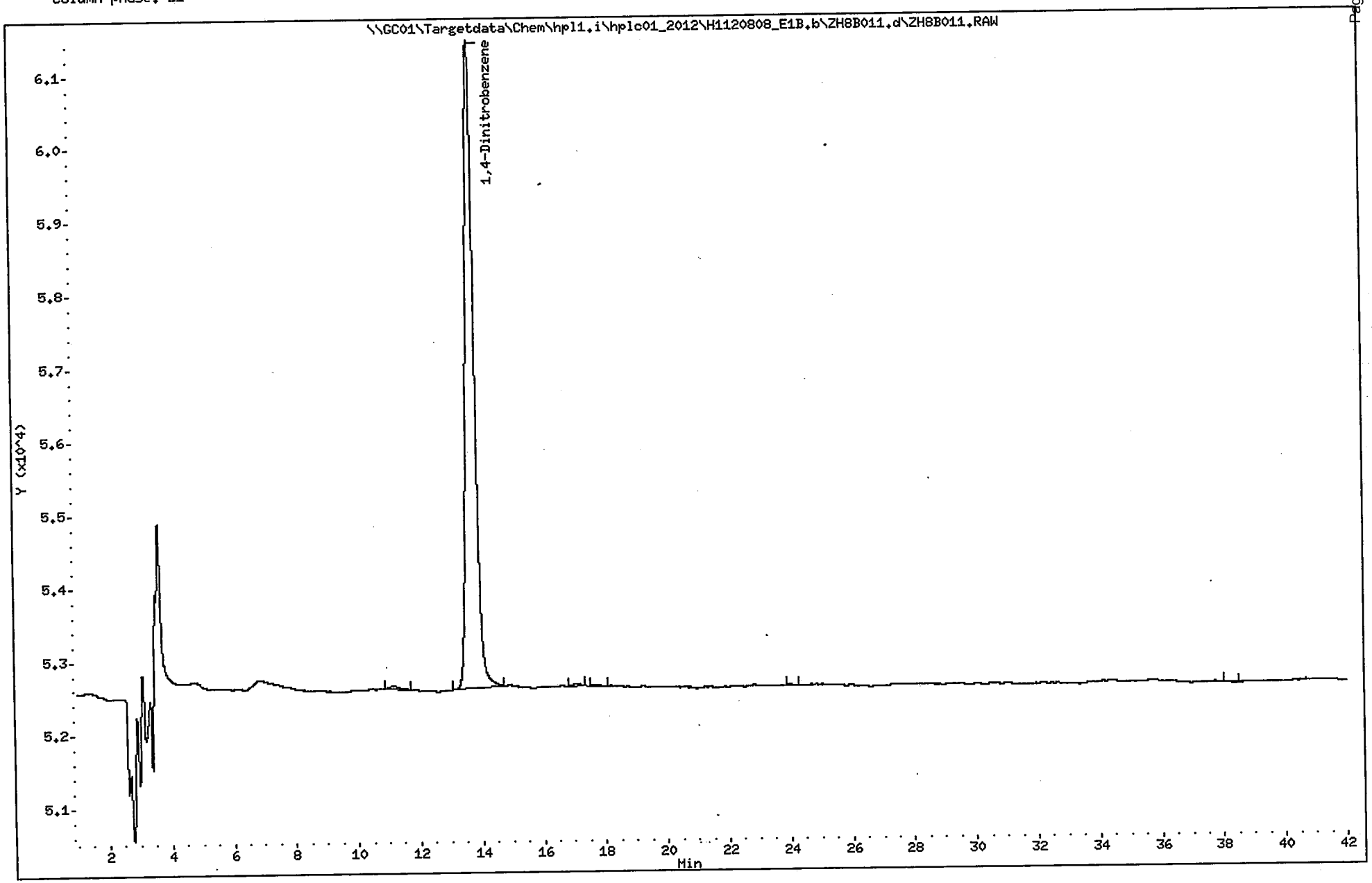
Volume Injected (uL): 100.0

Column phase: E1

Instrument: hpl1.i

Operator: AJL

Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-15

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109007

Sample wt/vol: 10.2 (g/mL) G Lab File ID (1): ZH8A011.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
618-87-1	3,5-Dinitroaniline	0.098	U
55-63-0	Nitroglycerin	0.98	U
78-11-5	PETN	0.98	U

FORM I

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A011.d
Lab Smp Id: 9980109007 Client Smp ID: FTSW-AA-SO-15
Inj Date : 08-AUG-2012 20:13
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109007;AJL;;;;;;10.2
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.200	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/8/12
REPORTED
APPROVED
2nd REVIEW

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.706	13.663	0.043	61913	466.125	1.82794
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

Data File: ZH8A011.d
Report Date: 09-Aug-2012 11:52

ALS - Middletown

RECOVERY REPORT

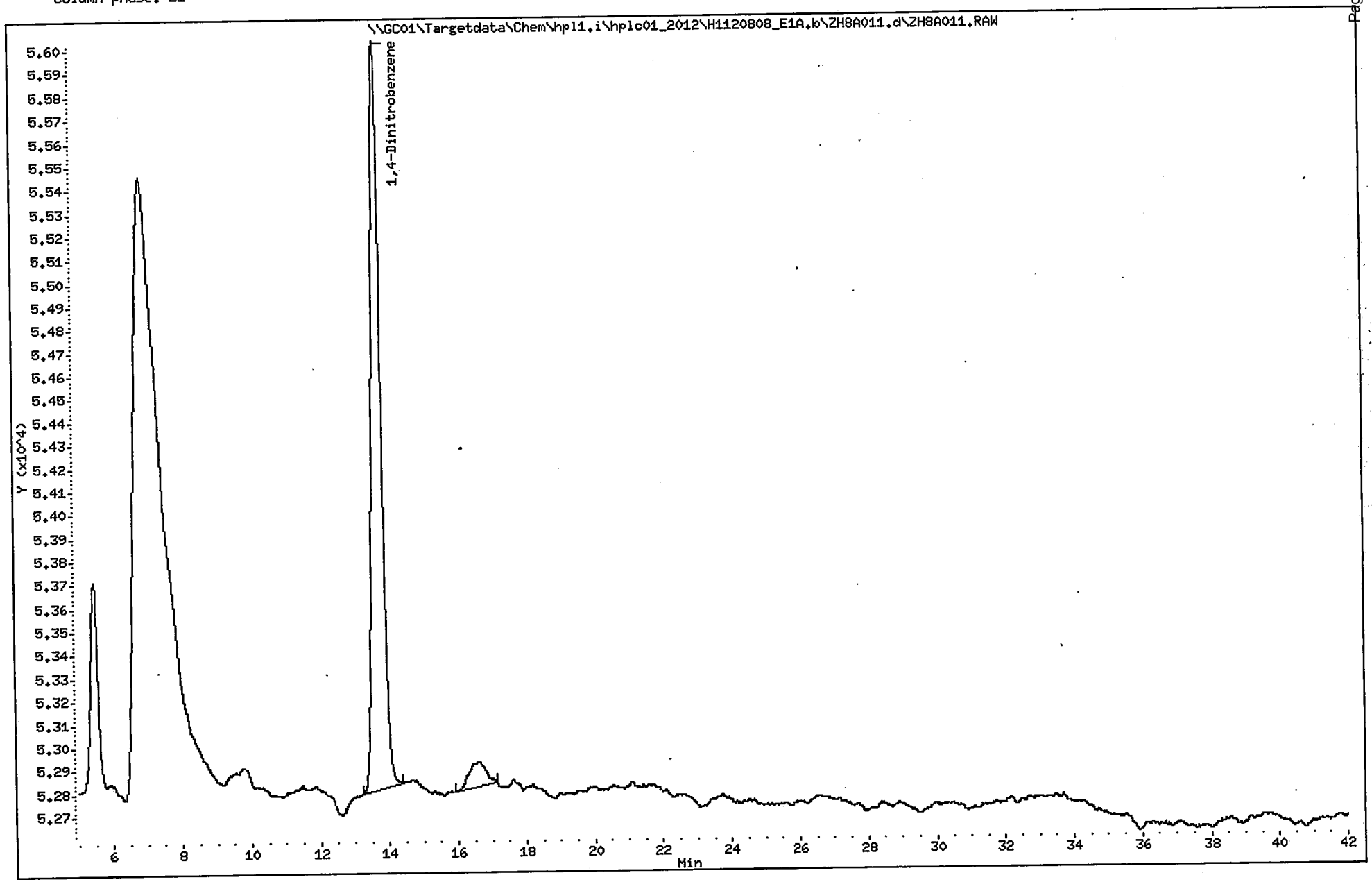
Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109007
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3176 D8330S

Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-15
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.96078	1.82794	93.23	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A011.d
Date : 08-AUG-2012 20:13
Client ID: FTSW-AA-SO-15
Sample Info: 9980109007;AJL;;;;;;10.2
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-16 [01.5

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109008

Sample wt/vol: 10.6 (g/mL) G Lab File ID (1): ZH8B012.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.094	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.094	U
99-65-0	1,3-Dinitrobenzene	0.094	U
121-14-2	2,4-Dinitrotoluene	0.094	U
606-20-2	2,6-Dinitrotoluene	0.094	U
2691-41-0	HMX	0.094	U
98-95-3	Nitrobenzene	0.094	U
99-99-0	4-Nitrotoluene	0.094	U
88-72-2	2-Nitrotoluene	0.094	U
99-08-1	3-Nitrotoluene	0.094	U
121-82-4	RDX	0.094	U
479-45-8	Tetryl	0.094	U
99-35-4	1,3,5-Trinitrobenzene	0.094	U
118-96-7	2,4,6-Trinitrotoluene	0.094	U

Data File: ZH8B012.d
Report Date: 09-Aug-2012 11:56

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B012.d
Lab Smp Id: 9980109008 Client Smp ID: FTSW-AA-SO-16 [01.5
Inj Date : 08-AUG-2012 20:57
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109008;AJL;;;;;;10.6
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.600	Weight of sample extracted
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (mg/kg)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.696	13.673	0.023	171749	506.690	1.91204
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

Data File: ZH8B012.d
Report Date: 09-Aug-2012 11:56

ALS - Middletown

RECOVERY REPORT

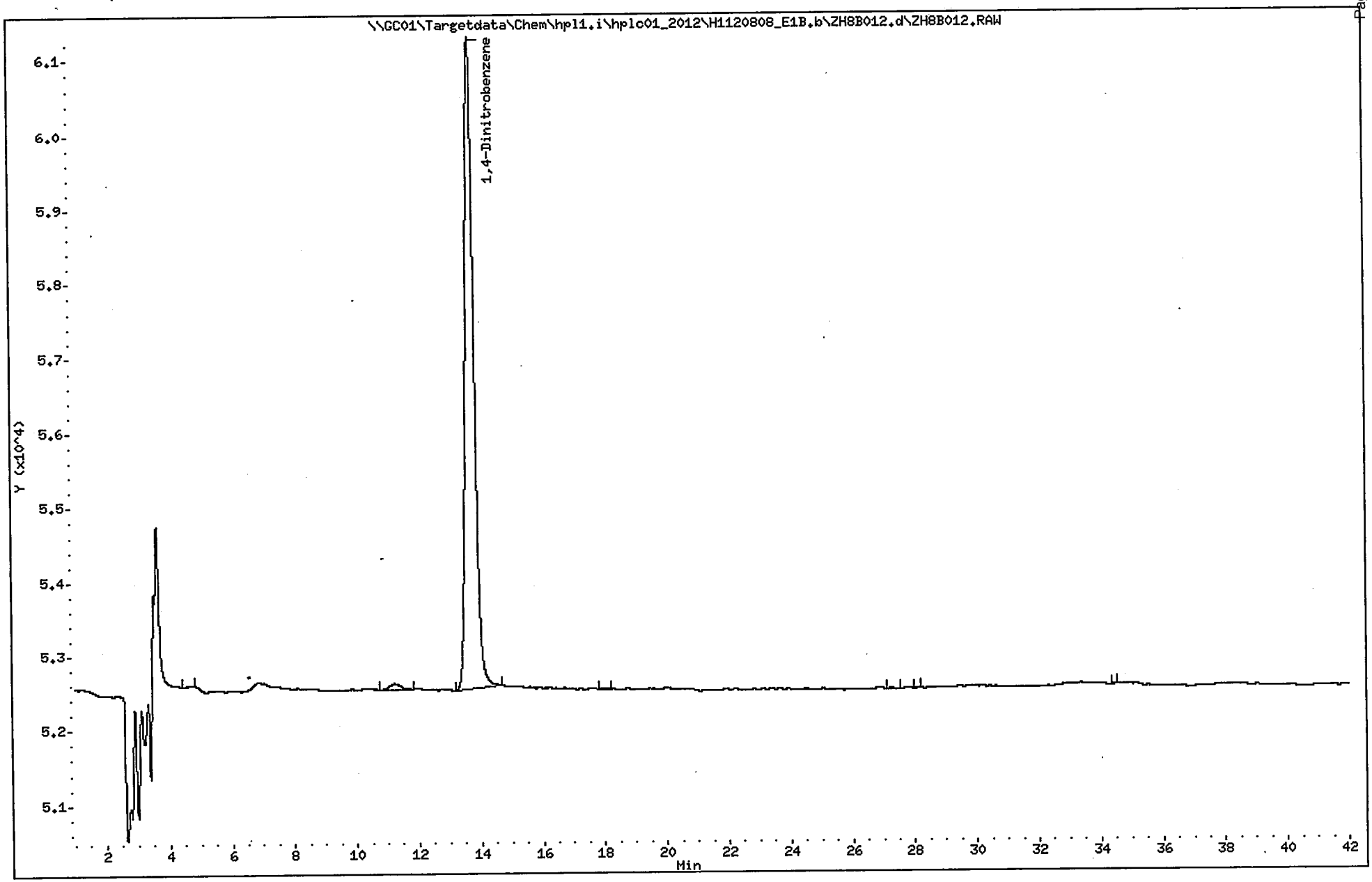
Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109008
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3176 D8330S

Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-16 [01.5
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.88679	1.91204	101.34	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B012.d
Date : 08-AUG-2012 20:57
Client ID: FTSW-AA-SO-16 [01.5
Sample Info: 9980109008;AJL;;;;;;10.6
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-16 [01.5

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109008

Sample wt/vol: 10.6 (g/mL) G Lab File ID (1): ZH8A012.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.094	U
55-63-0	Nitroglycerin	0.94	U
78-11-5	PETN	0.94	U

FORM I

Data File: ZH8A012.d
Report Date: 09-Aug-2012 11:52

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A012.d
Lab Smp Id: 9980109008 Client Smp ID: FTSW-AA-SO-16 [01.5
Inj Date : 08-AUG-2012 20:57
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109008;AJL;;;;;;10.6
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.600	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.700	13.663	0.037	62867	473.307	1.78607
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

Data File: ZH8A012.d
Report Date: 09-Aug-2012 11:52

ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109008
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3176 D8330S

Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-16 [01.5
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.88679	1.78607	94.66	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A012.d

Date : 08-AUG-2012 20:57

Client ID: FTSW-AA-SO-16 [01.5

Sample Info: 9980109008;AJL;;;;;;10.6

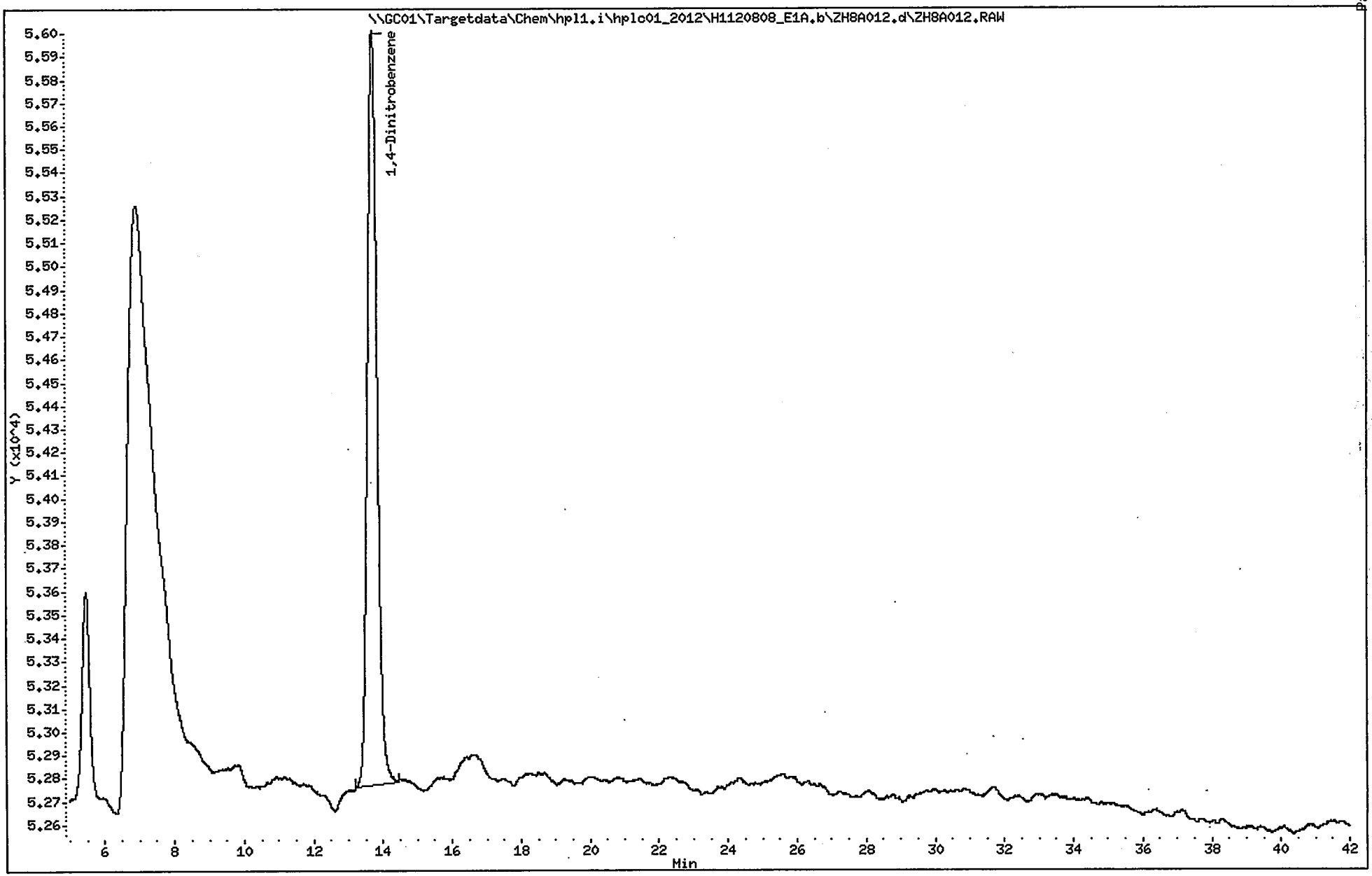
Volume Injected (uL): 100.0

Column phase: E1

Instrument: hpl1.i

Operator: AJL

Column diameter: 4.60



ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-01

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109009

Sample wt/vol: 10.8 (g/mL) G Lab File ID (1): ZH8B013.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.093	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.093	U
99-65-0	1,3-Dinitrobenzene	0.093	U
121-14-2	2,4-Dinitrotoluene	0.093	U
606-20-2	2,6-Dinitrotoluene	0.093	U
2691-41-0	HMX	0.093	U
98-95-3	Nitrobenzene	0.093	U
99-99-0	4-Nitrotoluene	0.093	U
88-72-2	2-Nitrotoluene	0.093	U
99-08-1	3-Nitrotoluene	0.093	U
121-82-4	RDX	0.093	U
479-45-8	Tetryl	0.093	U
99-35-4	1,3,5-Trinitrobenzene	0.093	U
118-96-7	2,4,6-Trinitrotoluene	0.093	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B013.d
Lab Smp Id: 9980109009 Client Smp ID: FTSW-AA-SO-01
Inj Date : 08-AUG-2012 21:41
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109009;AJL;;;;;;10.8
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.800	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (mg/kg)
	1 HMX	Compound Not Detected.					
	2 RDX	Compound Not Detected.					
	3 1,3,5-Trinitrobenzene	Compound Not Detected.					
$	4 1,4-Dinitrobenzene	13.703	13.673	0.030	171072	504.693	1.86923
	5 1,3-Dinitrobenzene	Compound Not Detected.					
	6 Nitrobenzene	Compound Not Detected.					
	7 Tetryl	Compound Not Detected.					
	8 2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
	9 4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
	10 2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
	11 2,6-Dinitrotoluene	Compound Not Detected.					
	12 2,4-Dinitrotoluene	Compound Not Detected.					
	13 2-Nitrotoluene	Compound Not Detected.					
	14 4-Nitrotoluene	Compound Not Detected.					
	15 3-Nitrotoluene	Compound Not Detected.					

Data File: ZH8B013.d
Report Date: 09-Aug-2012 11:56

ALS - Middletown

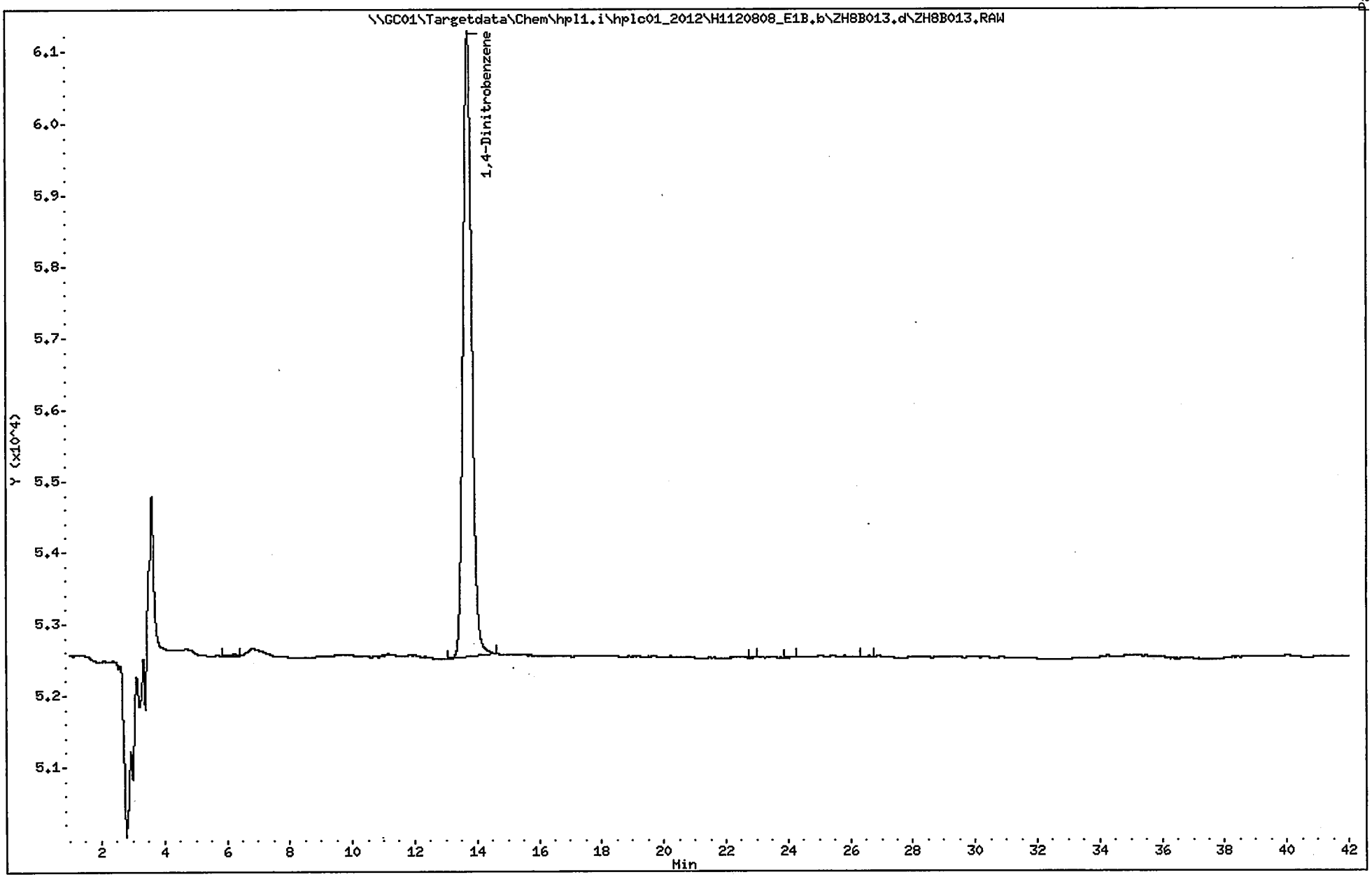
RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109009
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-01
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3176 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.85185	1.86923	100.94	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B013.d
Date : 08-AUG-2012 21:41
Client ID: FTSW-AA-SO-01
Sample Info: 9980109009;AJL;;;;;;10.8
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-01

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109009

Sample wt/vol: 10.8 (g/mL) G Lab File ID (1): ZH8A013.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.093	U
55-63-0	Nitroglycerin	0.93	U
78-11-5	PETN	0.93	U

FORM I

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A013.d
Lab Smp Id: 9980109009 Client Smp ID: FTSW-AA-SO-01
Inj Date : 08-AUG-2012 21:41
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109009;AJL;;;;;;10.8
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.800	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW
REPORTED
APPROVED
2nd REVIEW

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.706	13.663	0.043	62483	470.416	1.74228
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

Data File: ZH8A013.d
Report Date: 09-Aug-2012 11:52

ALS - Middletown

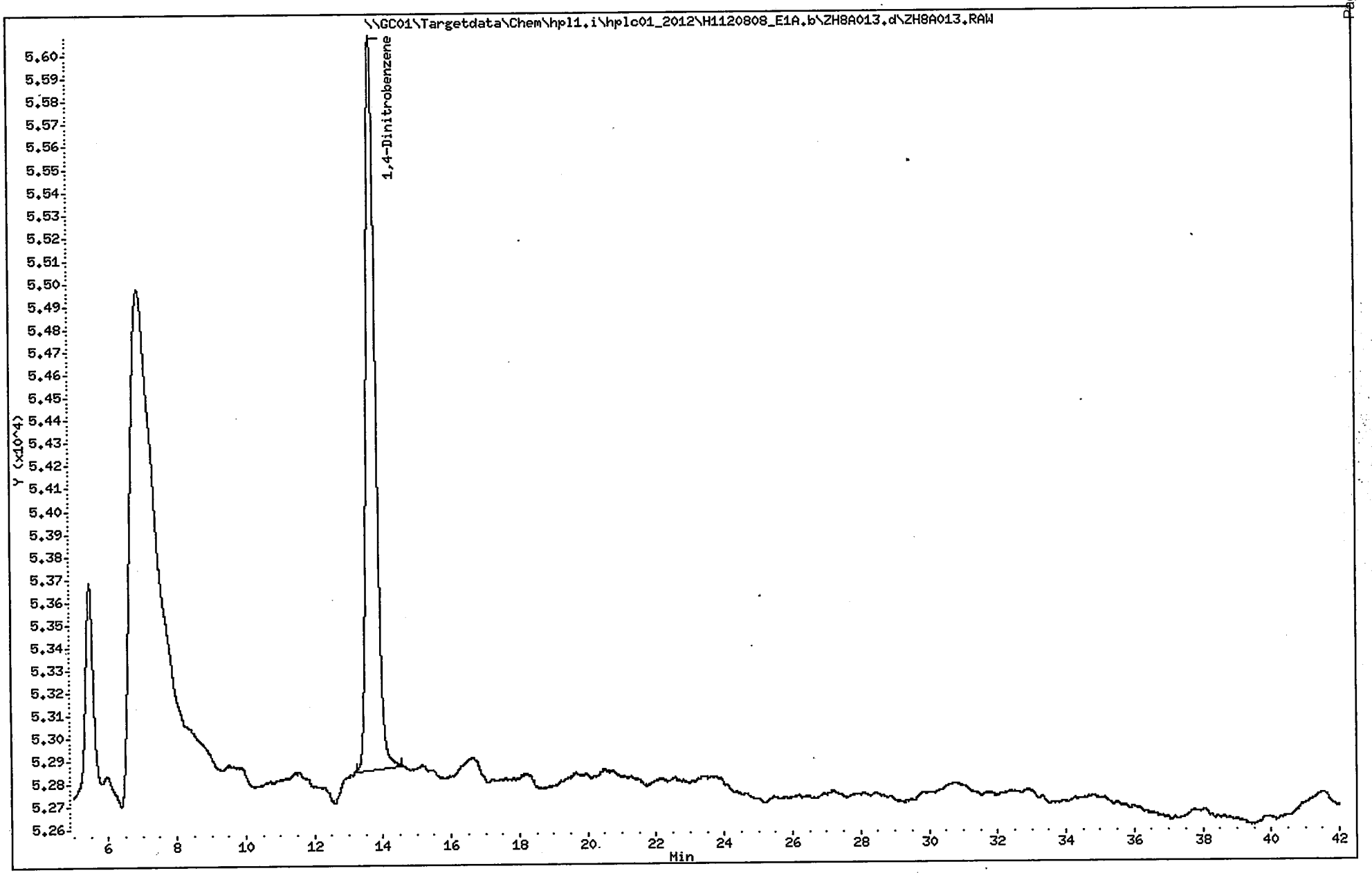
RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109009
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-01
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3176 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.85185	1.74228	94.08	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A013.d
Date : 08-AUG-2012 21:41
Client ID: FTSW-AA-SO-01
Sample Info: 9980109009;AJL;;;;;;10.8
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-02 [01.5

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109010

Sample wt/vol: 10.8 (g/mL) G Lab File ID (1): ZH8B014.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.093	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.093	U
99-65-0	1,3-Dinitrobenzene	0.093	U
121-14-2	2,4-Dinitrotoluene	0.093	U
606-20-2	2,6-Dinitrotoluene	0.093	U
2691-41-0	HMX	0.093	U
98-95-3	Nitrobenzene	0.093	U
99-99-0	4-Nitrotoluene	0.093	U
88-72-2	2-Nitrotoluene	0.093	U
99-08-1	3-Nitrotoluene	0.093	U
121-82-4	RDX	0.093	U
479-45-8	Tetryl	0.093	U
99-35-4	1,3,5-Trinitrobenzene	0.093	U
118-96-7	2,4,6-Trinitrotoluene	0.093	U

FORM I

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B014.d
Lab Smp Id: 9980109010 Client Smp ID: FTSW-AA-SO-02 [01.5
Inj Date : 08-AUG-2012 22:25
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109010;AJL;;;;;;10.8
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 254nm
Method. : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.800	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.680	13.673	0.007	165572	488.467	1.80914
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

Data File: ZH8B014.d
Report Date: 09-Aug-2012 11:56

ALS - Middletown

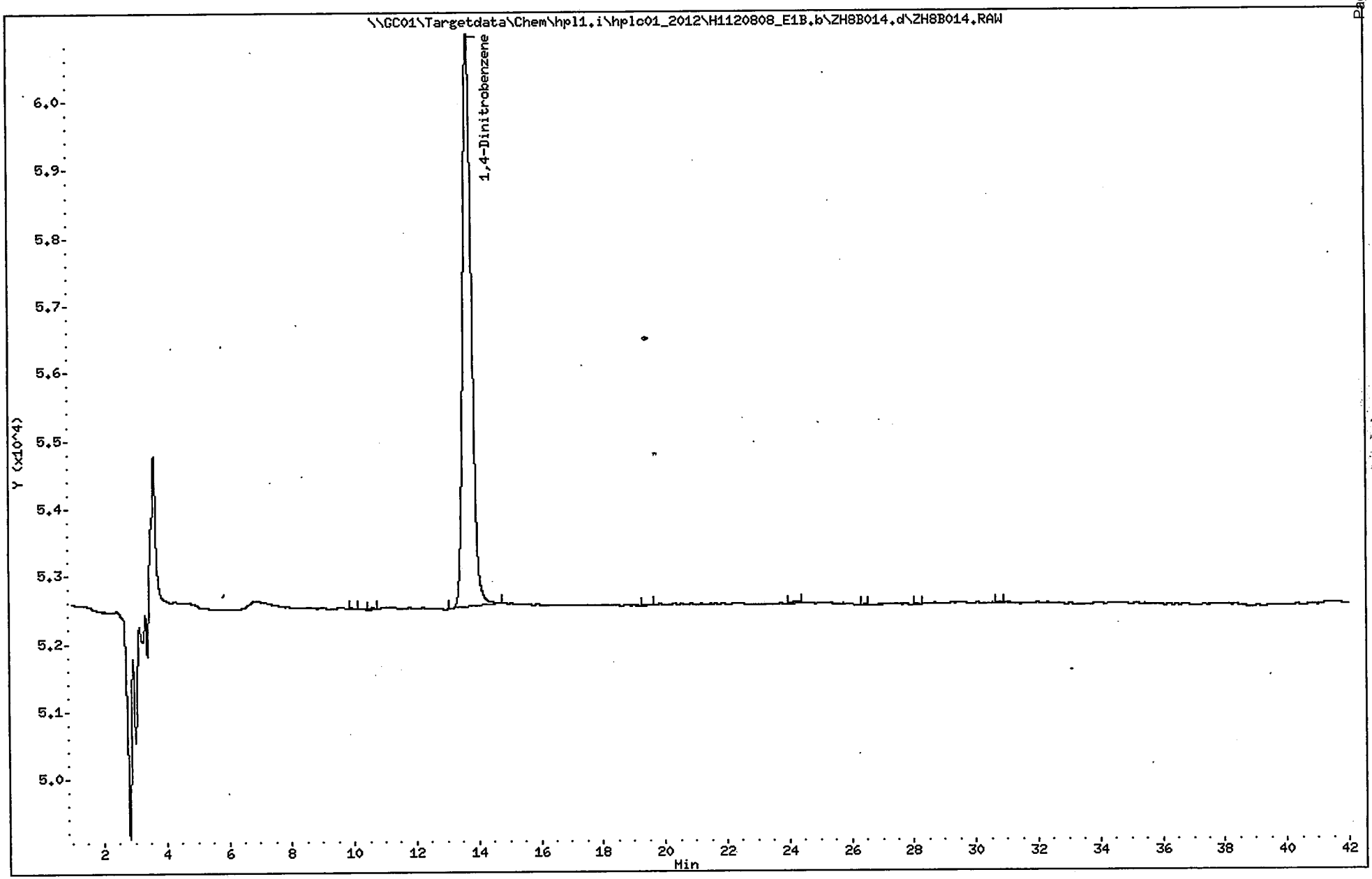
RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109010
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-02 [01.5
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3176 D8330S

SURROGATE.COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.85185	1.80914	97.69	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B014.d
Date : 08-AUG-2012 22:25
Client ID: FTSW-AA-SO-02 [01.5
Sample Info: 9980109010;AJL;;;;;;10.8
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-02 [01.5

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109010

Sample wt/vol: 10.8 (g/mL) G Lab File ID (1): ZH8A014.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.093	U
55-63-0	Nitroglycerin	0.93	U
78-11-5	PETN	0.93	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A014.d
Lab Smp Id: 9980109010 Client Smp ID: FTSW-AA-SO-02 [01.5
Inj Date : 08-AUG-2012 22:25
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109010;AJL;;;;;;10.8
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.800	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/8/12
REPORTED
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1	1,4-Dinitrobenzene	13.683	13.663	0.020	59990	451.647	1.67277
3	3,5-Dinitroaniline	Compound Not Detected.					
4	Nitroglycerin	Compound Not Detected.					
5	PETN	Compound Not Detected.					

Data File: ZH8A014.d
Report Date: 09-Aug-2012 11:52

ALS - Middletown

RECOVERY REPORT

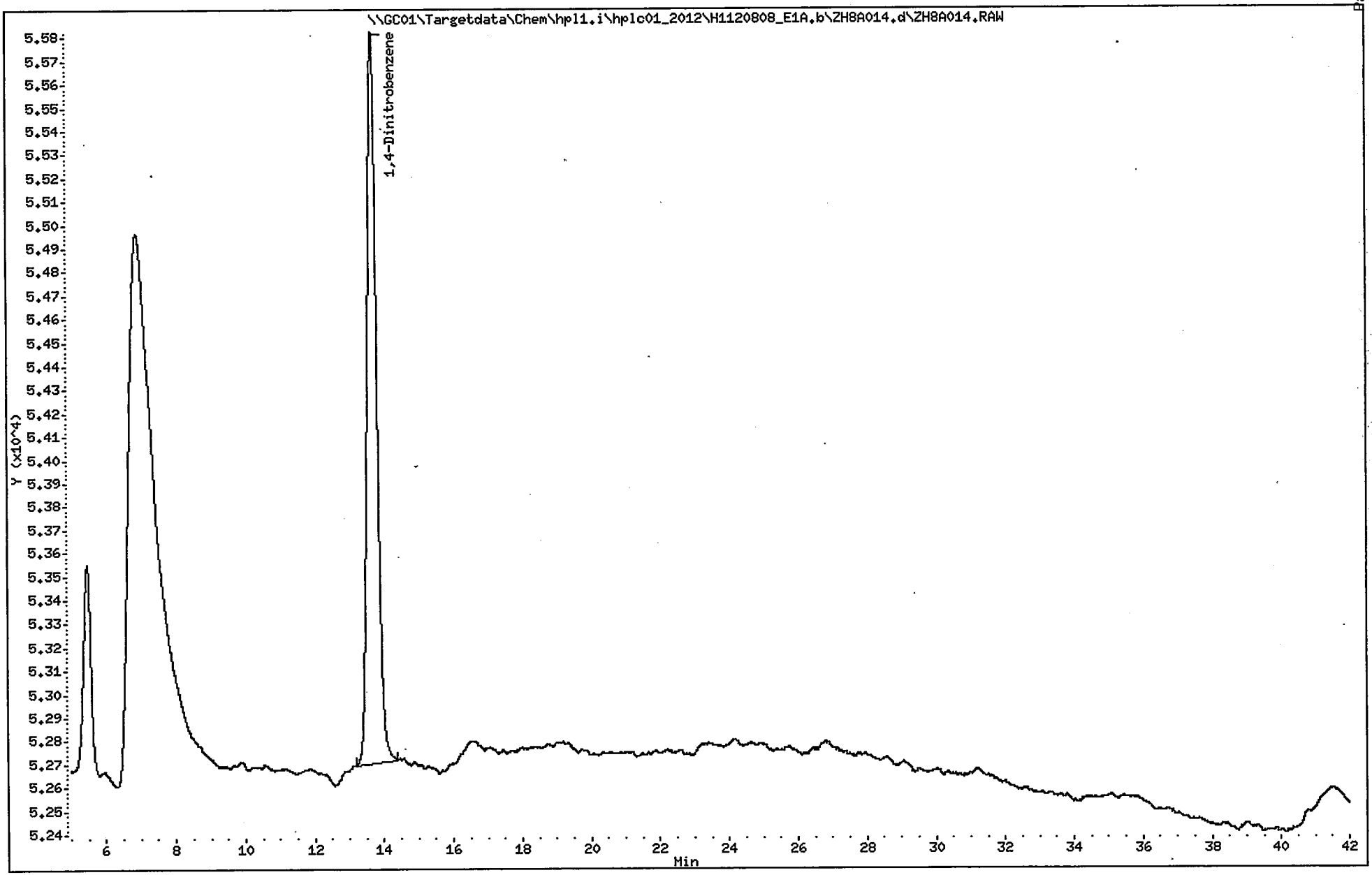
Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109010
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3176 D8330S

Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-02 [01.5
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.85185	1.67277	90.33	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A014.d
Date : 08-AUG-2012 22:25
Client ID: FTSW-AA-SO-02 [01.5
Sample Info: 9980109010;AJL;;;;;;10.8
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-03

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109011

Sample wt/vol: 10.6 (g/mL) G Lab File ID (1): ZH8B017.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.094	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.094	U
99-65-0	1,3-Dinitrobenzene	0.094	U
121-14-2	2,4-Dinitrotoluene	0.094	U
606-20-2	2,6-Dinitrotoluene	0.094	U
2691-41-0	HMX	0.094	U
98-95-3	Nitrobenzene	0.094	U
99-99-0	4-Nitrotoluene	0.094	U
88-72-2	2-Nitrotoluene	0.094	U
99-08-1	3-Nitrotoluene	0.094	U
121-82-4	RDX	0.094	U
479-45-8	Tetryl	0.094	U
99-35-4	1,3,5-Trinitrobenzene	0.094	U
118-96-7	2,4,6-Trinitrotoluene	0.094	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B017.d
Lab Smp Id: 9980109011 Client Smp ID: FTSW-AA-SO-03
Inj Date : 09-AUG-2012 00:37
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109011;AJL;;;;;;10.6
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.600	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (mg/kg)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.680	13.673	0.007	176293	520.096	1.96263
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

Data File: ZH8B017.d
Report Date: 09-Aug-2012 11:56

ALS - Middletown

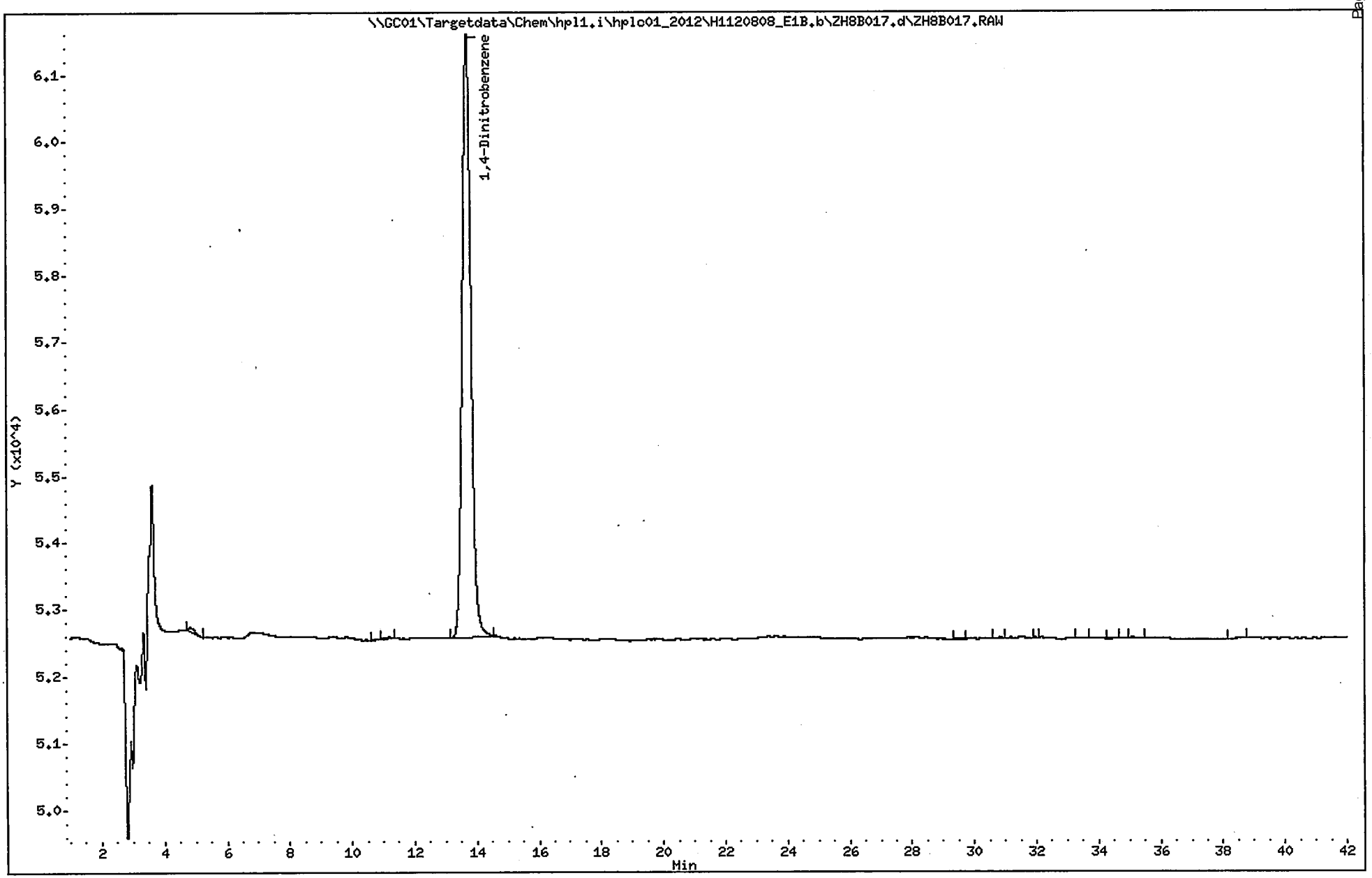
RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109011
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-03
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3176 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.88679	1.96263	104.02	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B017.d
Date : 09-AUG-2012 00:37
Client ID: FTSW-AA-SO-03
Sample Info: 9980109011;AJL;;;;;;10.6
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-03

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109011

Sample wt/vol: 10.6 (g/mL) G Lab File ID (1): ZH8A017.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.094	U
55-63-0	Nitroglycerin	0.94	U
78-11-5	PETN	0.94	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A017.d
Lab Smp Id: 9980109011 Client Smp ID: FTSW-AA-SO-03
Inj Date : 09-AUG-2012 00:37
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109011;AJL;;;;;;10.6
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.600	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW
REPORTED
APPROVED
2nd REVIEW

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.683	13.663	0.020	63511	478.156	1.80436
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

Data File: ZH8A017.d
Report Date: 09-Aug-2012 11:52

ALS - Middletown

RECOVERY REPORT

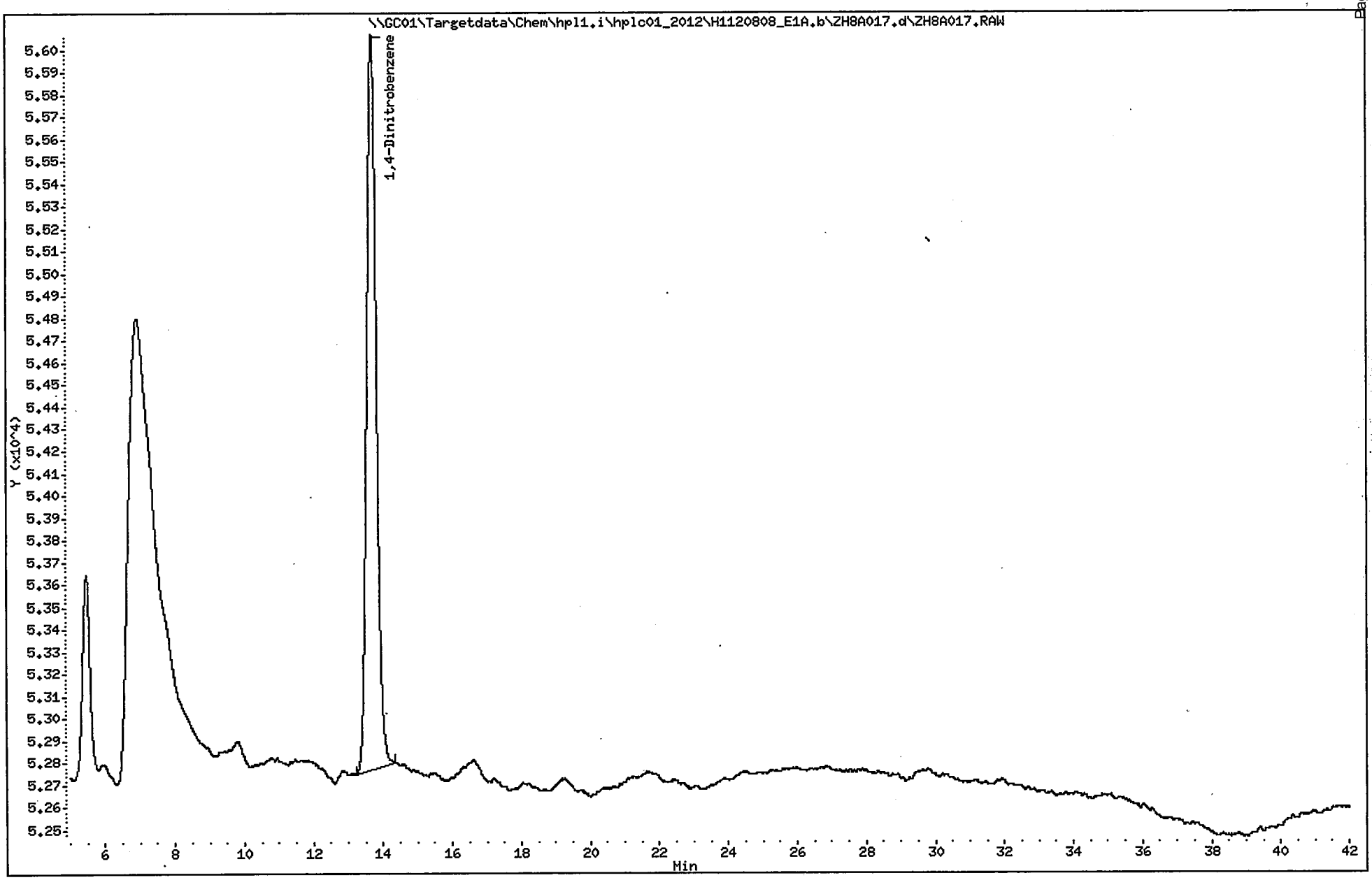
Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109011
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3176 D8330S

Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-03
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.88679	1.80436	95.63	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A017.d
Date : 09-AUG-2012 00:37
Client ID: FTSW-AA-SO-03
Sample Info: 9980109011;AJL;;;;;;10.6
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-03 DUP

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109012

Sample wt/vol: 10.7 (g/mL) G Lab File ID (1): ZH8B022.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.093	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.093	U
99-65-0	1,3-Dinitrobenzene	0.093	U
121-14-2	2,4-Dinitrotoluene	0.093	U
606-20-2	2,6-Dinitrotoluene	0.093	U
2691-41-0	HMX	0.093	U
98-95-3	Nitrobenzene	0.093	U
99-99-0	4-Nitrotoluene	0.093	U
88-72-2	2-Nitrotoluene	0.093	U
99-08-1	3-Nitrotoluene	0.093	U
121-82-4	RDX	0.093	U
479-45-8	Tetryl	0.093	U
99-35-4	1,3,5-Trinitrobenzene	0.093	U
118-96-7	2,4,6-Trinitrotoluene	0.093	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B022.d
Lab Smp Id: 9980109012 Client Smp ID: FTSW-AA-SO-03 DUP
Inj Date : 09-AUG-2012 04:18
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109012;AJL;;;;;;10.7
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.700	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/8/12
REPORTED 8/8/12
APPROVED CJH
2nd REVIEW CJH

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.673	13.673	0.000	168917	498.335	1.86294
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

Data File: ZH8B022.d
Report Date: 09-Aug-2012 11:56

ALS - Middletown

RECOVERY REPORT

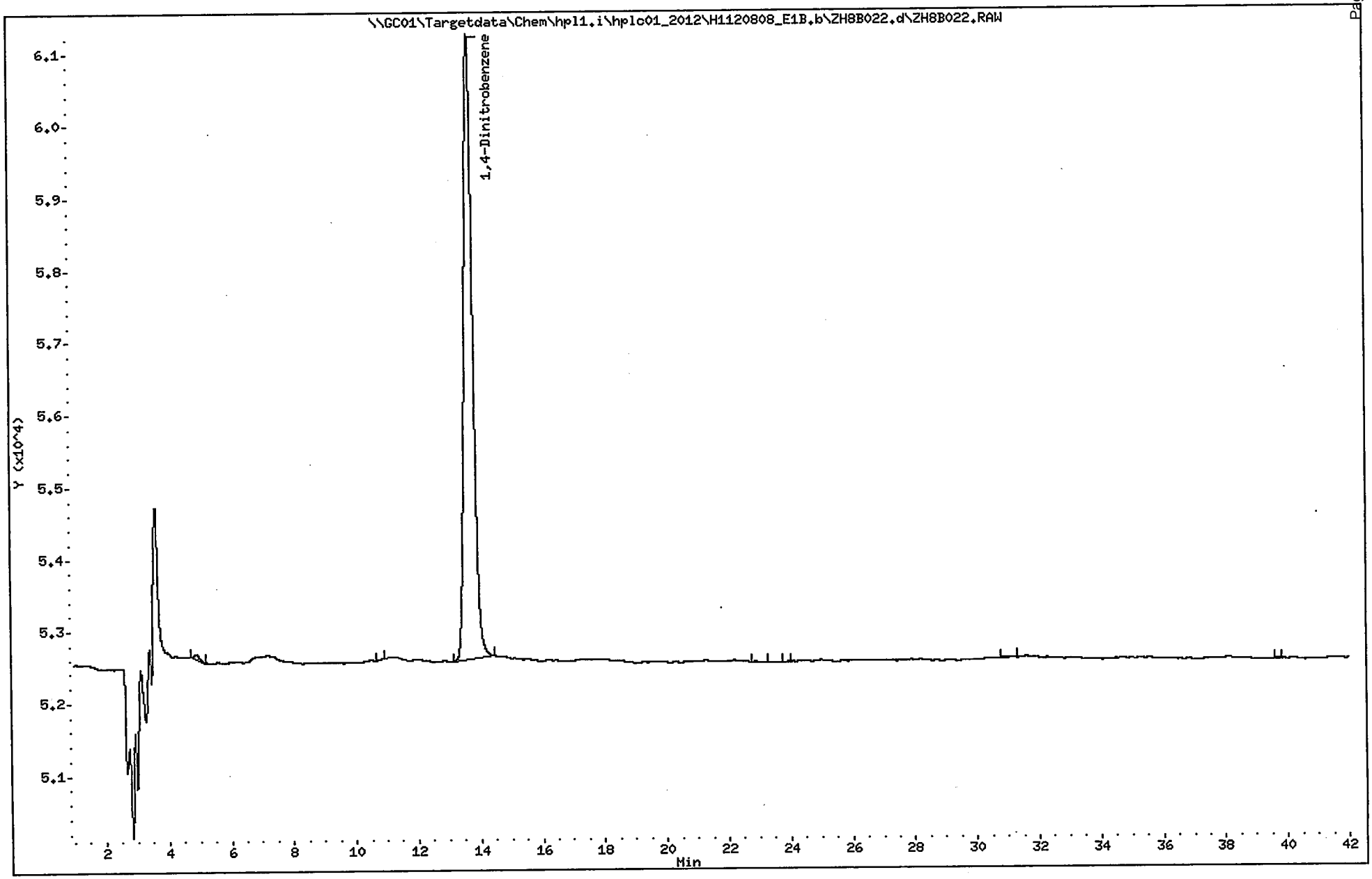
Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109012
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-03 DUP
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3176 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.86916	1.86294	99.67	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B022.d
Date : 09-AUG-2012 04:18
Client ID: FTSW-AA-SO-03 DUP
Sample Info: 9980109012;AJL;;;;;;10.7
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i

Operator: AJL
Column diameter: 4.60



ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-03 DUP

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109012

Sample wt/vol: 10.7 (g/mL) G Lab File ID (1): ZH8A022.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.093	U
55-63-0	Nitroglycerin	0.93	U
78-11-5	PETN	0.93	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A022.d
Lab Smp Id: 9980109012 Client Smp ID: FTSW-AA-SO-03 DUP
Inj Date : 09-AUG-2012 04:18
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109012;AJL;;;;;;10.7
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.700	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW 8/13/12

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.673	13.663	0.010	59593	448.658	1.67723
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

Data File: ZH8A022.d
Report Date: 09-Aug-2012 11:52

ALS - Middletown

RECOVERY REPORT

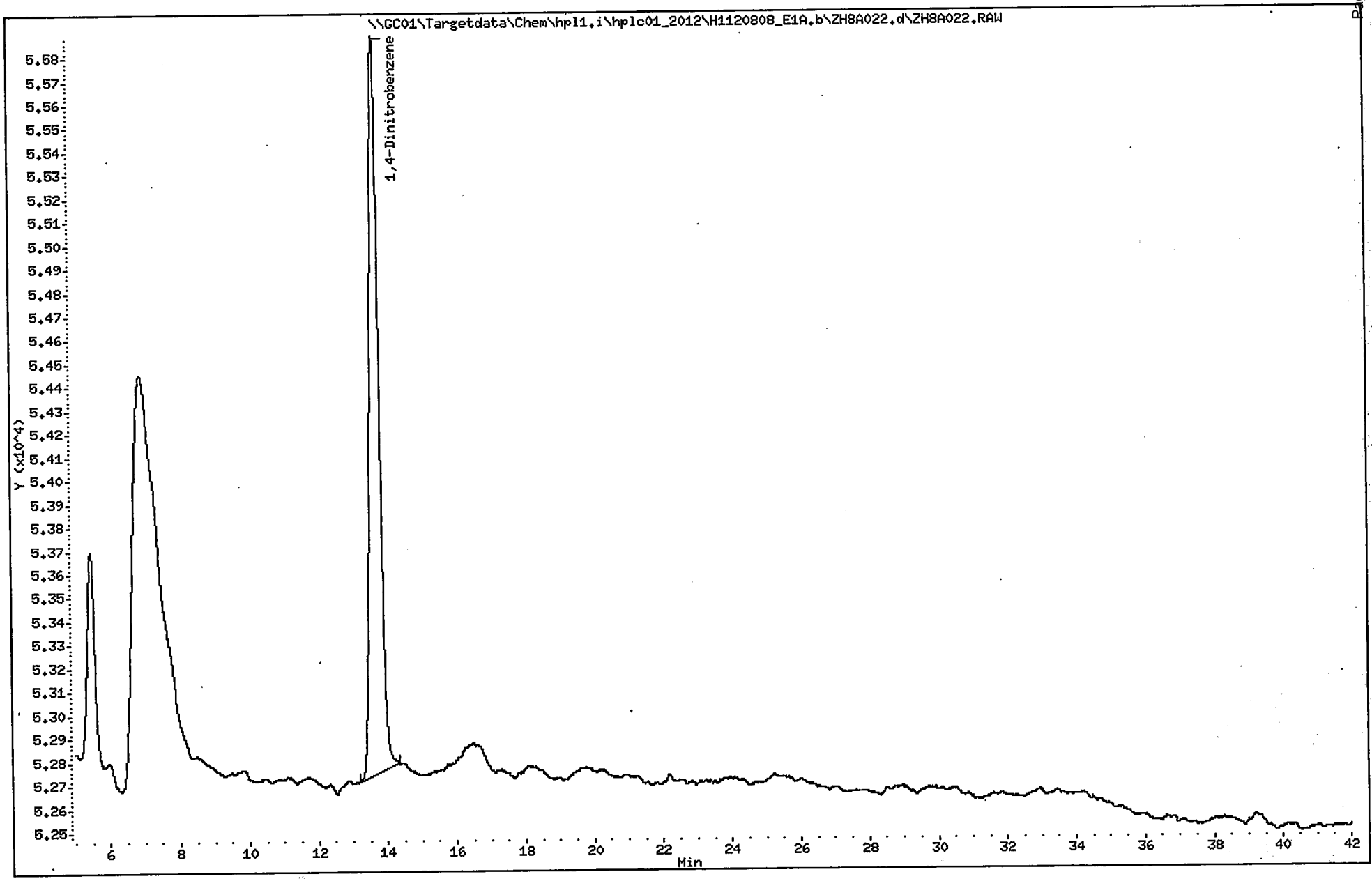
Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109012
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3176 D8330S

Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-03 DUP
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.86916	1.67723	89.73	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A022.d
Date : 09-AUG-2012 04:18
Client ID: FTSW-AA-SO-03 DUP
Sample Info: 9980109012;AJL;;;;;;10.7
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-04 [01.5

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109013

Sample wt/vol: 10.3 (g/mL) G Lab File ID (1): ZH8B023.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.097	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.097	U
99-65-0	1,3-Dinitrobenzene	0.097	U
121-14-2	2,4-Dinitrotoluene	0.097	U
606-20-2	2,6-Dinitrotoluene	0.097	U
2691-41-0	HMX	0.097	U
98-95-3	Nitrobenzene	0.097	U
99-99-0	4-Nitrotoluene	0.097	U
88-72-2	2-Nitrotoluene	0.097	U
99-08-1	3-Nitrotoluene	0.097	U
121-82-4	RDX	0.097	U
479-45-8	Tetryl	0.097	U
99-35-4	1,3,5-Trinitrobenzene	0.097	U
118-96-7	2,4,6-Trinitrotoluene	0.097	U

FORM I

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B023.d
Lab Smp Id: 9980109013 Client Smp ID: FTSW-AA-SO-04 [01.5
Inj Date : 09-AUG-2012 05:02
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109013;AJL;;;;;;10.3
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.300	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.680	13.673	0.007	168837	498.099	1.93437
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

Data File: ZH8B023.d
Report Date: 09-Aug-2012 11:56

ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109013
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3176 D8330S

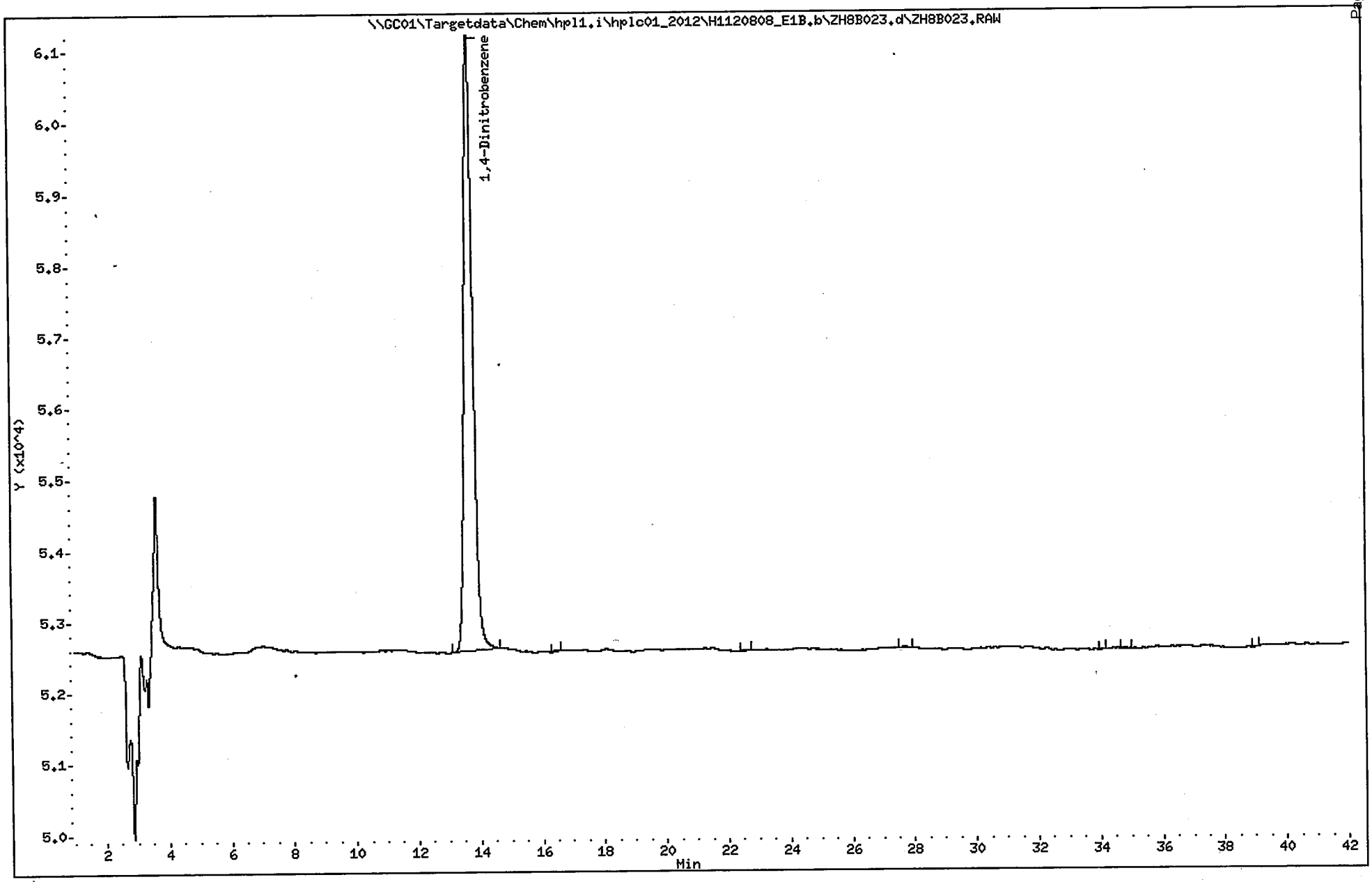
Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-04 [01.5
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.94175	1.93437	99.62	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B023.d
Date : 09-AUG-2012 05:02
Client ID: FTSW-AA-SO-04 [01.5
Sample Info: 9980109013;AJL;;;;;;10.3
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i

Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-04 [01.5

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109013

Sample wt/vol: 10.3 (g/mL) G Lab File ID (1): ZH8A023.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.097	U
55-63-0	Nitroglycerin	0.97	U
78-11-5	PETN	0.97	U

FORM I

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A023.d
Lab Smp Id: 9980109013 Client Smp ID: FTSW-AA-SO-04 [01.5
Inj Date : 09-AUG-2012 05:02
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109013;AJL;;;;;;10.3
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract
Vi	100.000	Volume injected (uL)
Ws	10.300	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW
REPORTED
APPROVED
2nd REVIEW

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.680	13.663	0.017	60199	453.221	1.76008
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

Data File: ZH8A023.d
Report Date: 09-Aug-2012 11:52

ALS - Middletown

RECOVERY REPORT

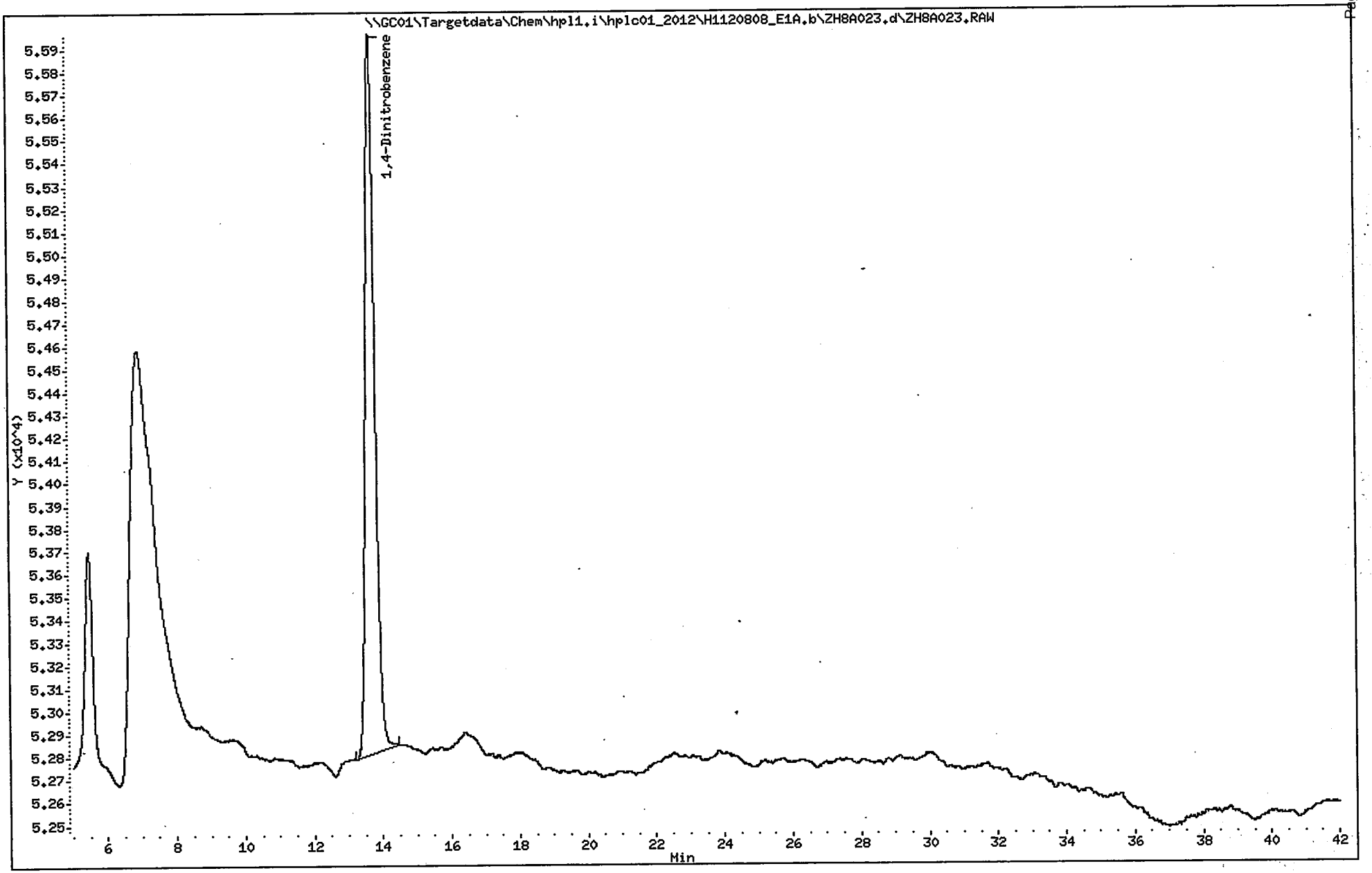
Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109013
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3176 D8330S

Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-04 [01.5
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.94175	1.76008	90.64	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A023.d
Date : 09-AUG-2012 05:02
Client ID: FTSW-AA-SO-04 [01.5
Sample Info: 9980109013;AJL;;;;;;10.3
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-05

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109014

Sample wt/vol: 10.6 (g/mL) G Lab File ID (1): ZH8B024.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.094	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.094	U
99-65-0	1,3-Dinitrobenzene	0.094	U
121-14-2	2,4-Dinitrotoluene	0.094	U
606-20-2	2,6-Dinitrotoluene	0.094	U
2691-41-0	HMX	0.094	U
98-95-3	Nitrobenzene	0.094	U
99-99-0	4-Nitrotoluene	0.094	U
88-72-2	2-Nitrotoluene	0.094	U
99-08-1	3-Nitrotoluene	0.094	U
121-82-4	RDX	0.094	U
479-45-8	Tetryl	0.094	U
99-35-4	1,3,5-Trinitrobenzene	0.094	U
118-96-7	2,4,6-Trinitrotoluene	0.094	U

FORM I

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B024.d
Lab Smp Id: 9980109014 Client Smp ID: FTSW-AA-SO-05
Inj Date : 09-AUG-2012 05:46
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109014;AJL;;;;;;10.6
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.600	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (mg/kg)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.680	13.673	0.007	164830	486.278	1.83501
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

Data File: ZH8B024.d
Report Date: 09-Aug-2012 11:57

ALS - Middletown

RECOVERY REPORT

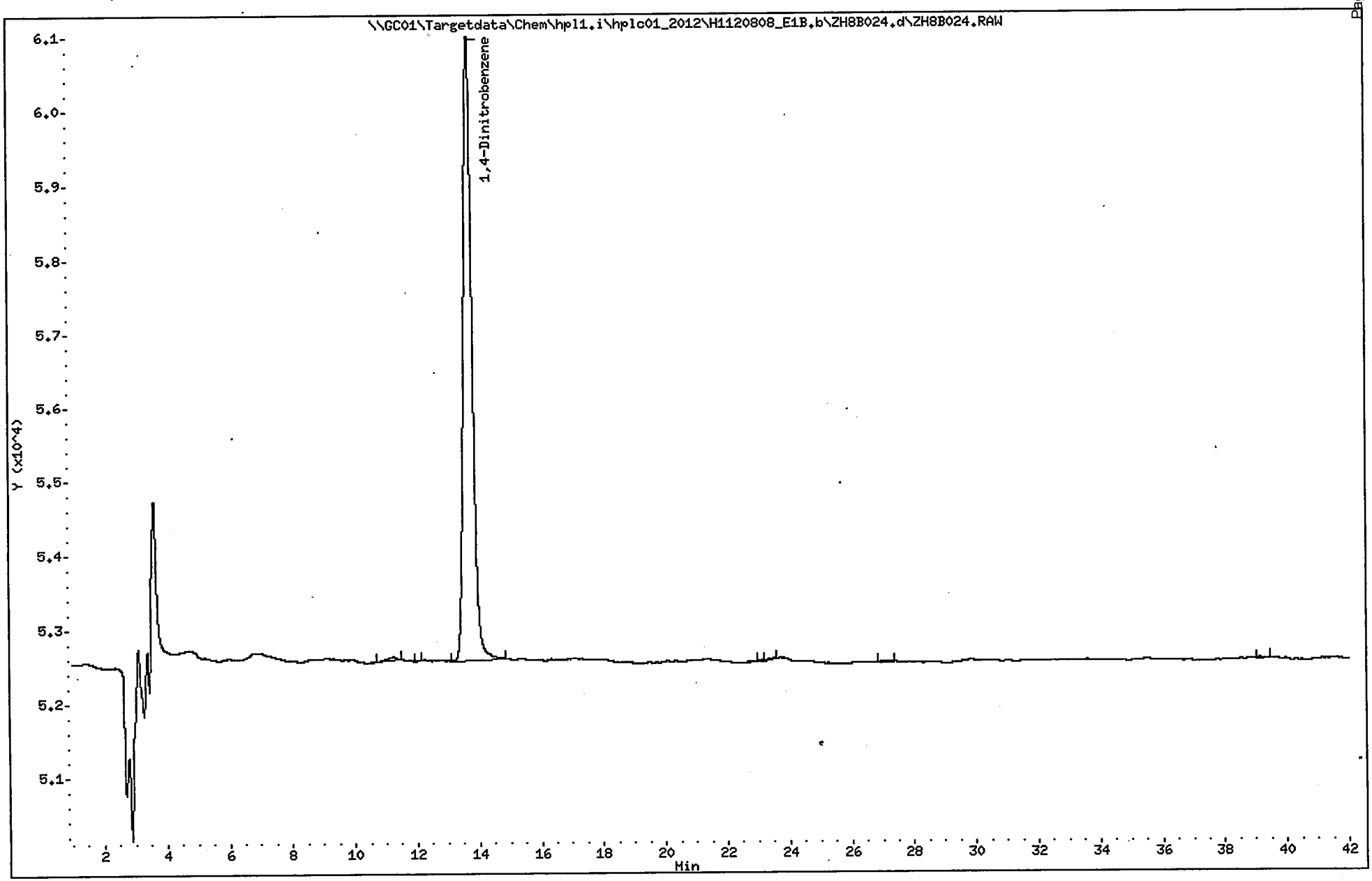
Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109014
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3176 D8330S

Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-05
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.88679	1.83501	97.26	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B024.d
Date : 09-AUG-2012 05:46
Client ID: FTSW-AA-SO-05
Sample Info: 9980109014;AJL;;;;;;10.6
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-05

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109014

Sample wt/vol: 10.6 (g/mL) G Lab File ID (1): ZH8A024.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.094	U
55-63-0	Nitroglycerin	0.94	U
78-11-5	PETN	0.94	U

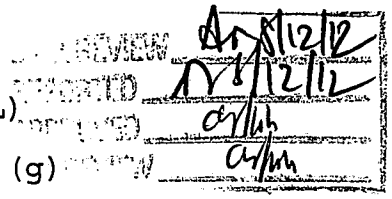
ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A024.d
Lab Smp Id: 9980109014 Client Smp ID: FTSW-AA-SO-05
Inj Date : 09-AUG-2012 05:46
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109014;AJL;;;;;;10.6
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.600	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable



Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.686	13.663	0.023	59192	445.639	1.68166
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

Data File: ZH8A024.d
Report Date: 09-Aug-2012 11:52

ALS - Middletown

RECOVERY REPORT

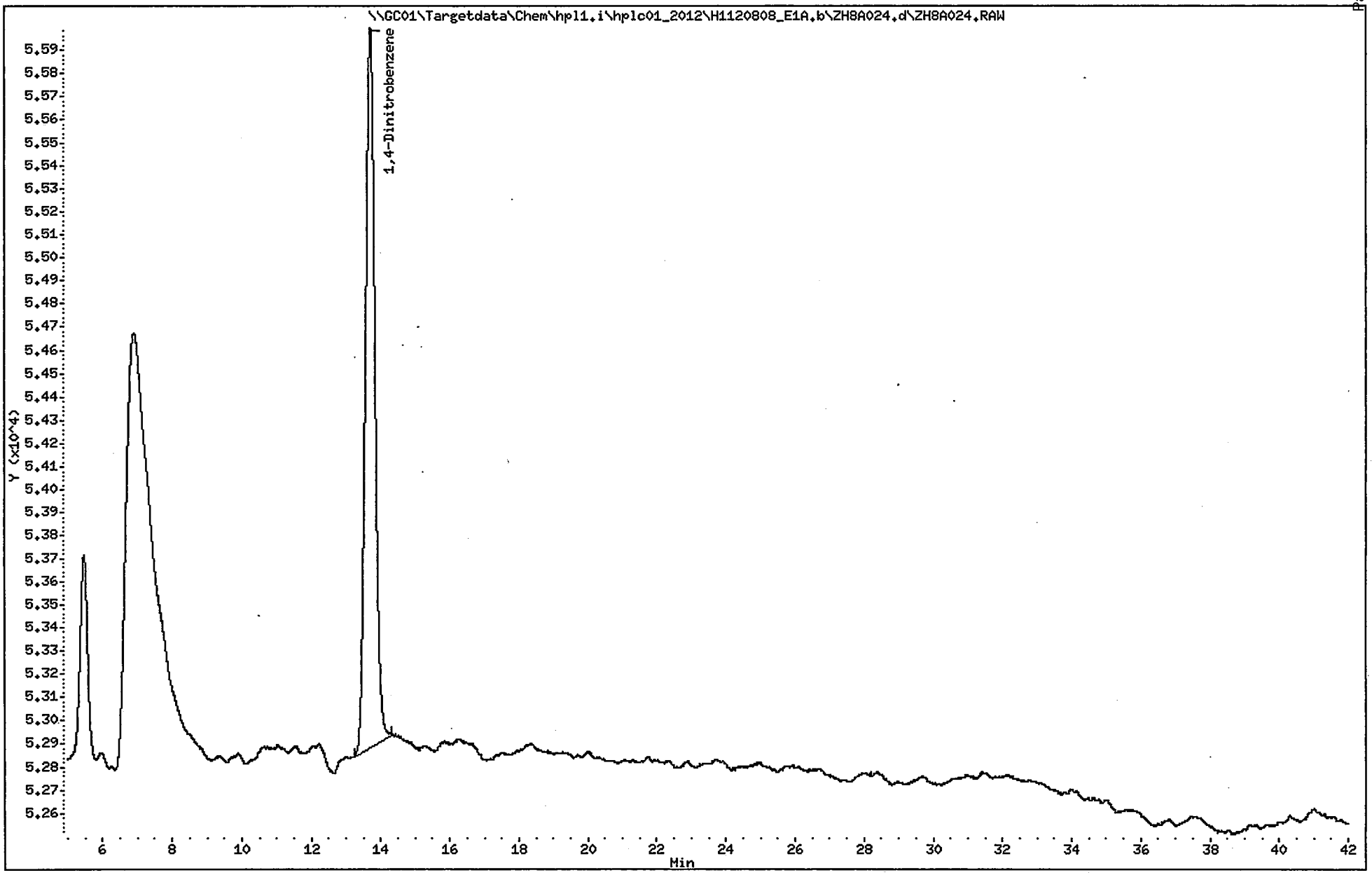
Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109014
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3176 D8330S

Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-05
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.88679	1.68166	89.13	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A024.d
Date : 09-AUG-2012 05:46
Client ID: FTSW-AA-SO-05
Sample Info: 9980109014;AJL;;;;;;10.6
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-07

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109015

Sample wt/vol: 10.8 (g/mL) G Lab File ID (1): ZH8B025.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.093	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.093	U
99-65-0	1,3-Dinitrobenzene	0.093	U
121-14-2	2,4-Dinitrotoluene	0.093	U
606-20-2	2,6-Dinitrotoluene	0.093	U
2691-41-0	HMX	0.093	U
98-95-3	Nitrobenzene	0.093	U
99-99-0	4-Nitrotoluene	0.093	U
88-72-2	2-Nitrotoluene	0.093	U
99-08-1	3-Nitrotoluene	0.093	U
121-82-4	RDX	0.093	U
479-45-8	Tetryl	0.093	U
99-35-4	1,3,5-Trinitrobenzene	0.093	U
118-96-7	2,4,6-Trinitrotoluene	0.093	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B025.d
Lab Smp Id: 9980109015 Client Smp ID: FTSW-AA-SO-07
Inj Date : 09-AUG-2012 06:30
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109015;AJL;;;;;;10.8
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.800	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/8/12
REPORTED 8/8/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (mg/kg)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.683	13.673	0.010	168055	495.792	1.83627
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

Data File: ZH8B025.d
Report Date: 09-Aug-2012 11:57

ALS - Middletown

RECOVERY REPORT

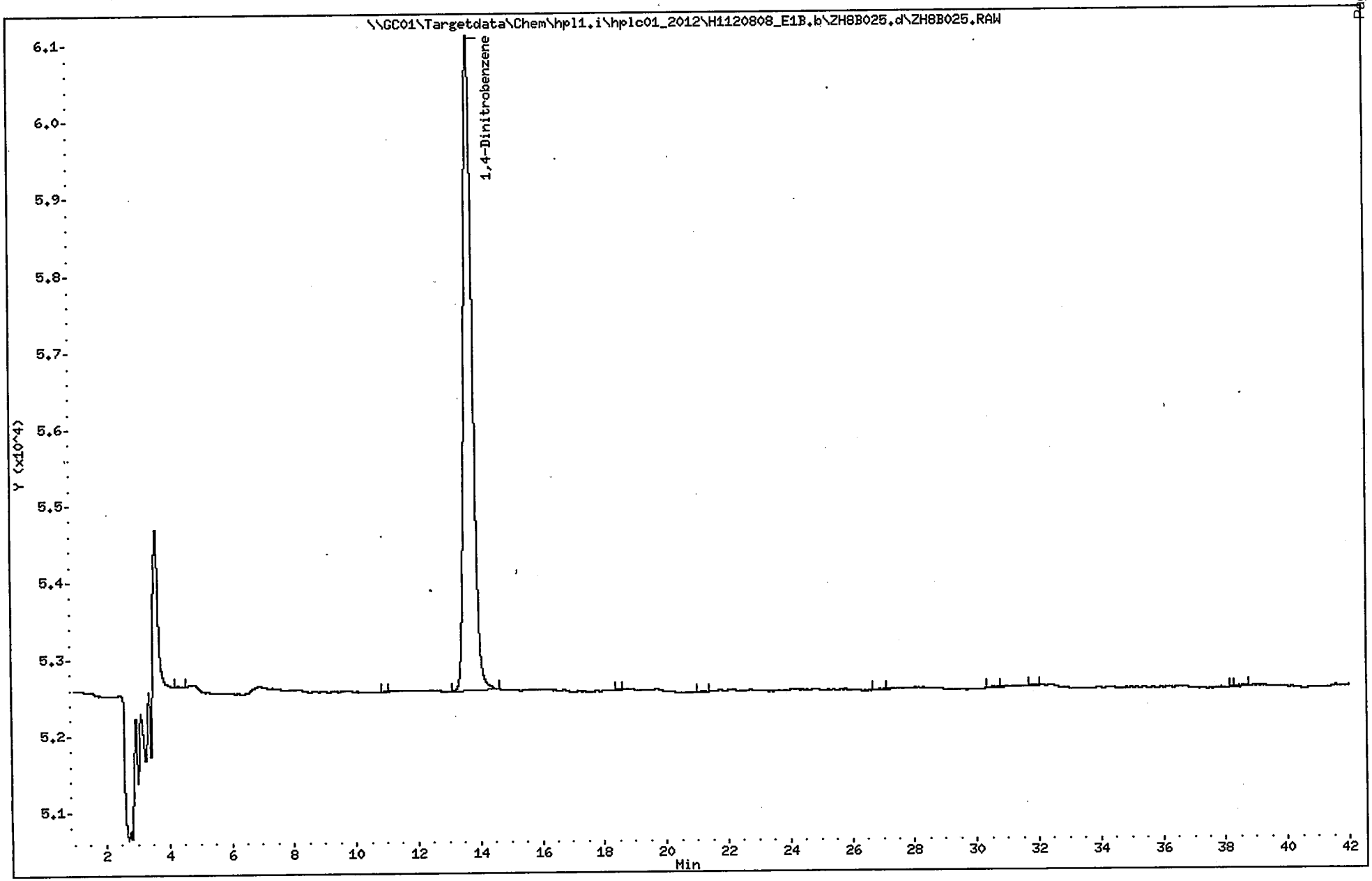
Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109015
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-07
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3176 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.85185	1.83627	99.16	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B025.d
Date : 09-AUG-2012 06:30
Client ID: FTSW-AA-SO-07
Sample Info: 9980109015;AJL;;;;;;10.8
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i

Operator: AJL
Column diameter: 4.60



ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-07

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109015

Sample wt/vol: 10.8 (g/mL) G Lab File ID (1): ZH8A025.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.093	U
55-63-0	Nitroglycerin	0.93	U
78-11-5	PETN	0.93	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A025.d
Lab Smp Id: 9980109015 Client Smp ID: FTSW-AA-SO-07
Inj Date : 09-AUG-2012 06:30
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109015;AJL;;;;;;10.8
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.800	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1	1,4-Dinitrobenzene	13.686	13.663	0.023	59312	446.543	1.65386
3	3,5-Dinitroaniline	Compound Not Detected.					
4	Nitroglycerin	Compound Not Detected.					
5	PETN	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109015
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3176 D8330S

Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-07
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.85185	1.65386	89.31	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A025.d

Date : 09-AUG-2012 06:30

Client ID: FTSW-AA-SO-07

Instrument: hpl1.i

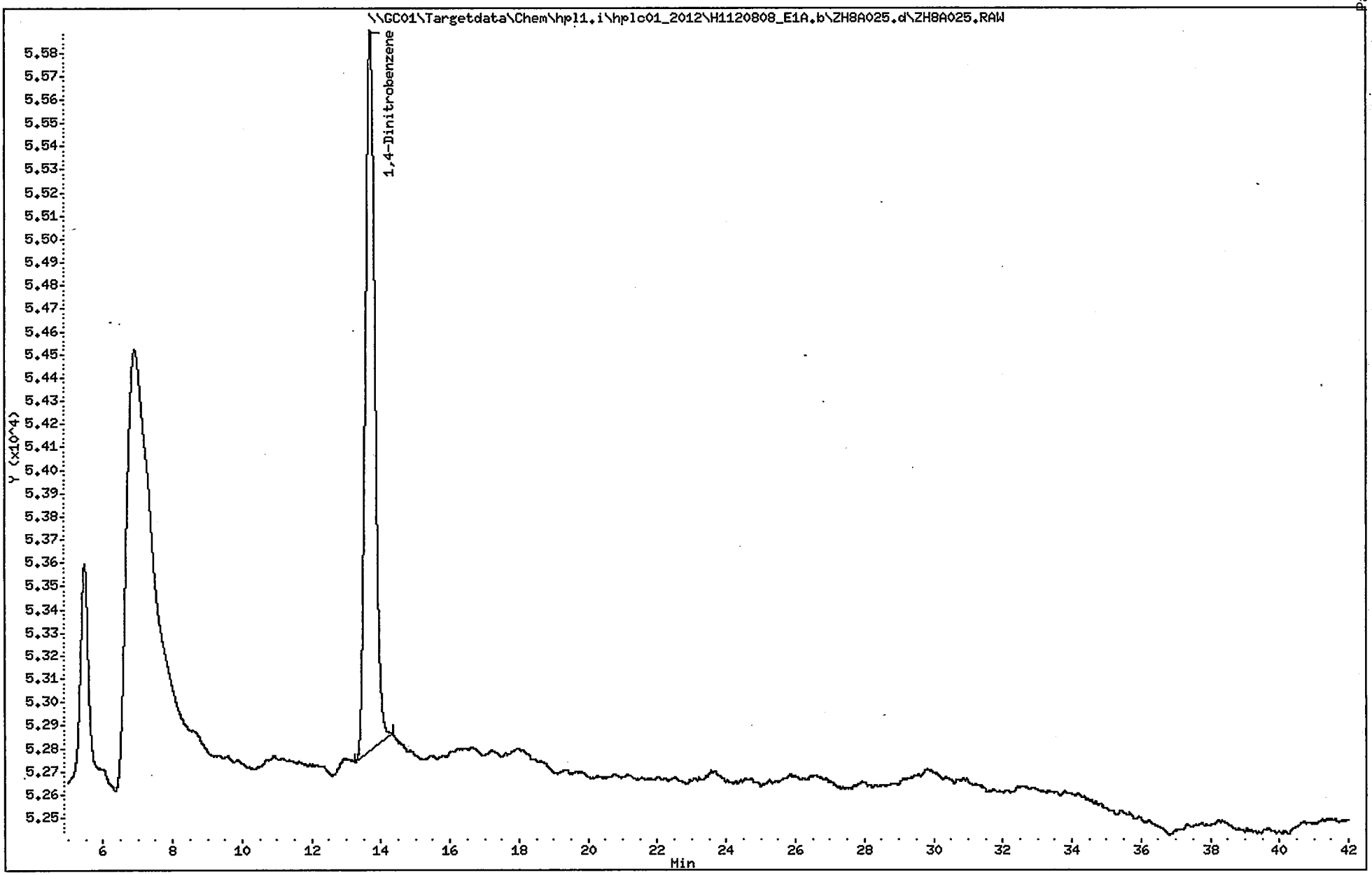
Sample Info: 9980109015;AJL;;;;;;10.8

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-06 [01.5

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109016

Sample wt/vol: 10.5 (g/mL) G Lab File ID (1): ZH8B026.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.095	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.095	U
99-65-0	1,3-Dinitrobenzene	0.095	U
121-14-2	2,4-Dinitrotoluene	0.095	U
606-20-2	2,6-Dinitrotoluene	0.095	U
2691-41-0	HMX	0.095	U
98-95-3	Nitrobenzene	0.095	U
99-99-0	4-Nitrotoluene	0.095	U
88-72-2	2-Nitrotoluene	0.095	U
99-08-1	3-Nitrotoluene	0.095	U
121-82-4	RDX	0.095	U
479-45-8	Tetryl	0.095	U
99-35-4	1,3,5-Trinitrobenzene	0.095	U
118-96-7	2,4,6-Trinitrotoluene	0.095	U

FORM I

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B026.d
Lab Smp Id: 9980109016 Client Smp ID: FTSW-AA-SO-06 [01.5
Inj Date : 09-AUG-2012 07:14
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109016;AJL;;;;;;10.5
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.500	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
QA REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.673	13.673	0.000	168138	496.037	1.88966
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

ALS - Middletown

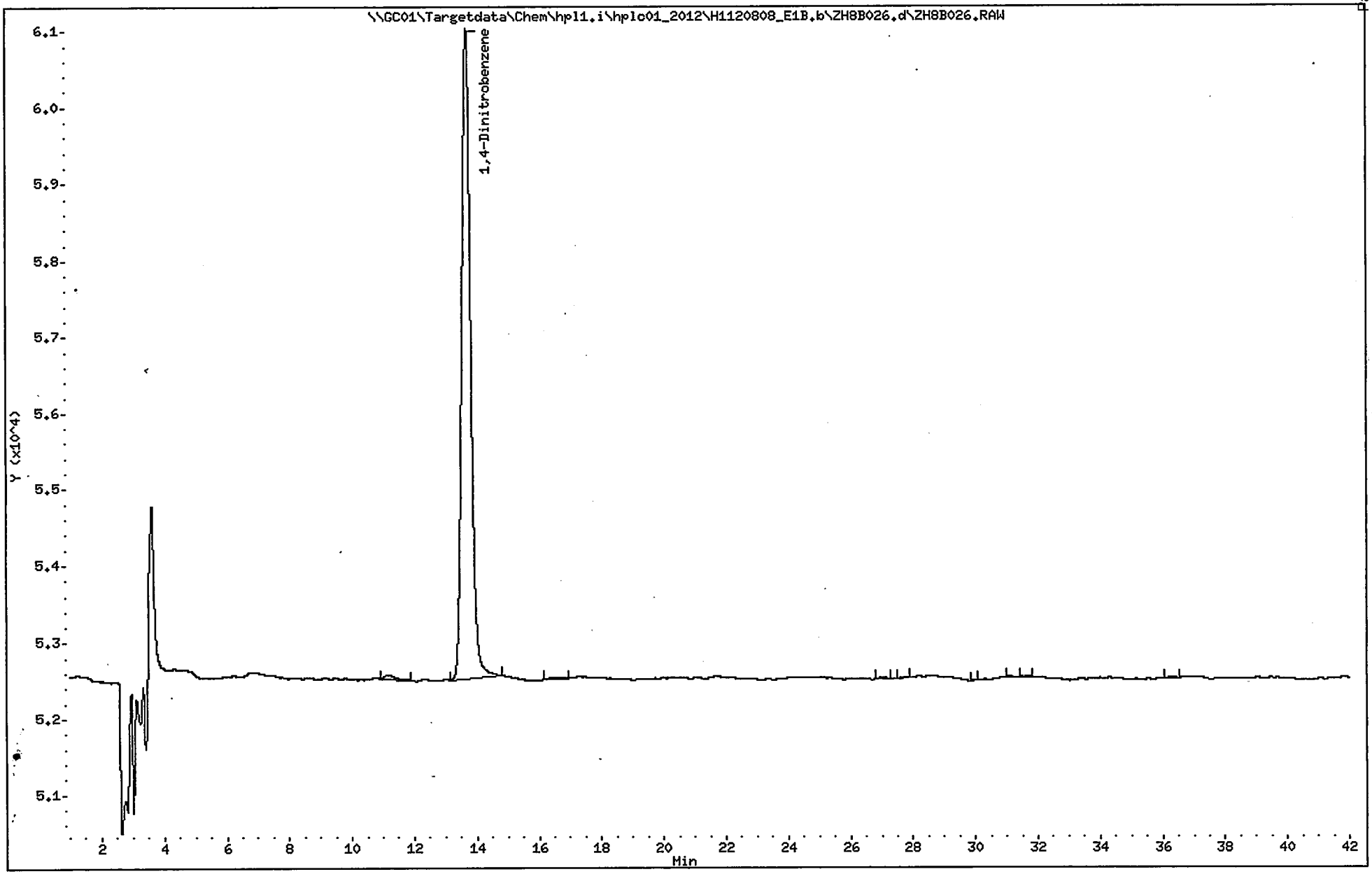
RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109016
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-06 [01.5
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3176 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.90476	1.88966	99.21	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B026.d
Date : 09-AUG-2012 07:14
Client ID: FTSW-AA-SO-06 [01.5
Sample Info: 9980109016;AJL;;;;;;10.5
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-06 [01.5

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109016

Sample wt/vol: 10.5 (g/mL) G Lab File ID (1): ZH8A026.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.095	U
55-63-0	Nitroglycerin	0.95	U
78-11-5	PETN	0.95	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A026.d
Lab Smp Id: 9980109016 Client Smp ID: FTSW-AA-SO-06 [01.5
Inj Date : 09-AUG-2012 07:14
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109016;AJL;;;;;;10.5
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.500	Weight of sample extracted
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.676	13.663	0.013	59570	448.485	1.70852
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109016
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3176 D8330S

Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-06 [01.5
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.90476	1.70852	89.70	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A026.d

Date : 09-AUG-2012 07:14

Client ID: FTSW-AA-SO-06 [01.5

Instrument: hpl1.i

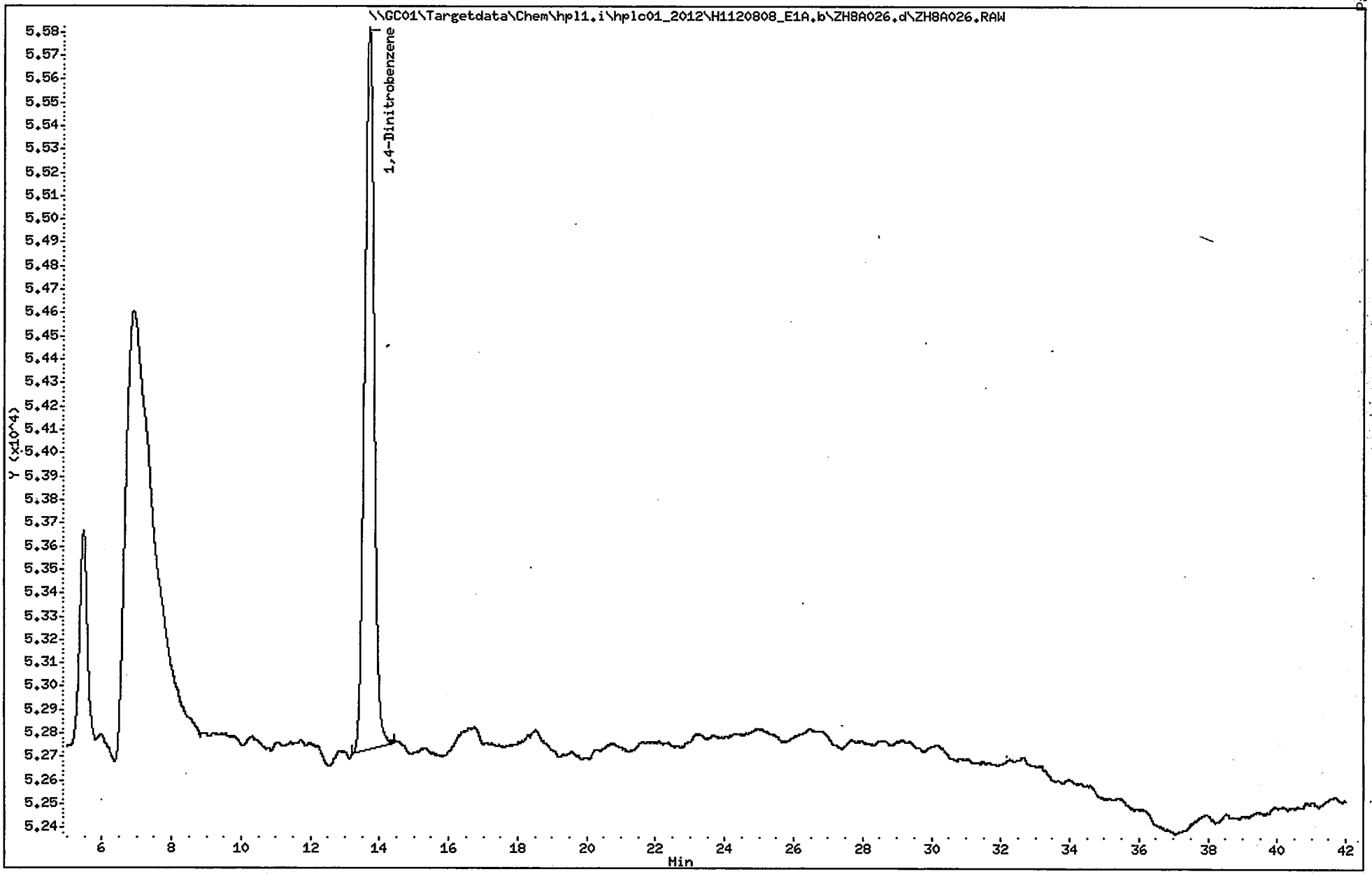
Sample Info: 9980109016;AJL;;;;;;10.5

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-08 [02]

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109017

Sample wt/vol: 10.3 (g/mL) G Lab File ID (1): ZH8B034.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.097	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.097	U
99-65-0	1,3-Dinitrobenzene	0.097	U
121-14-2	2,4-Dinitrotoluene	0.097	U
606-20-2	2,6-Dinitrotoluene	0.097	U
2691-41-0	HMX	0.097	U
98-95-3	Nitrobenzene	0.097	U
99-99-0	4-Nitrotoluene	0.097	U
88-72-2	2-Nitrotoluene	0.097	U
99-08-1	3-Nitrotoluene	0.097	U
121-82-4	RDX	0.097	U
479-45-8	Tetryl	0.097	U
99-35-4	1,3,5-Trinitrobenzene	0.097	U
118-96-7	2,4,6-Trinitrotoluene	0.097	U

FORM I

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B034.d
Lab Smp Id: 9980109017 Client Smp ID: FTSW-AA-SO-08 [02]
Inj Date : 09-AUG-2012 13:36
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109017;AJL;;;;;;10.3;;;
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_254
Meth Date : 10-Aug-2012 09:44 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.300	Weight of sample extracted
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.653	13.646	0.007	177448	523.503	2.03302
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

ALS - Middletown

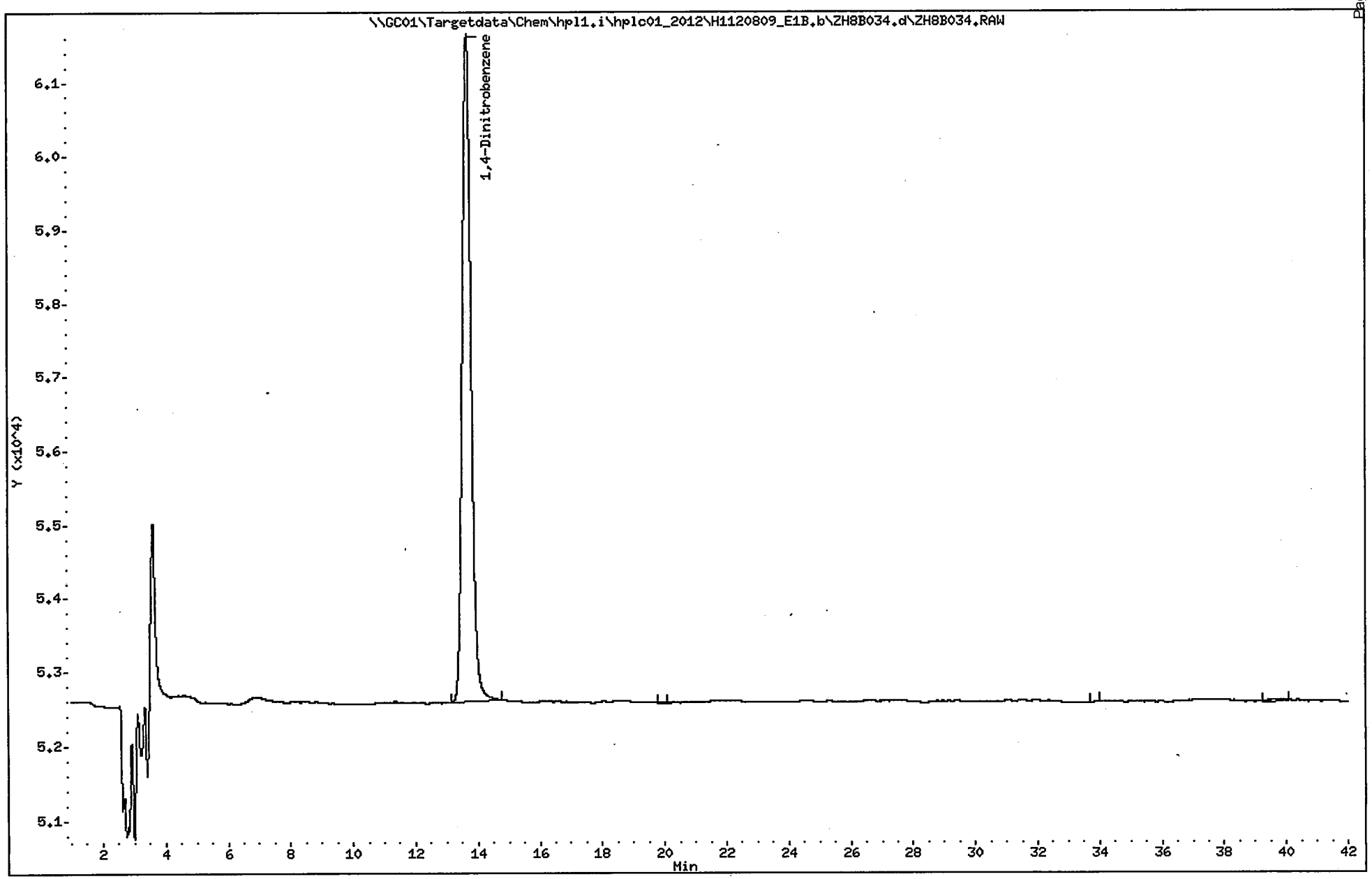
RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109017
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-08 [02]
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3178 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.94175	2.03302	104.70	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B034.d
Date : 09-AUG-2012 13:36
Client ID: FTSW-AA-SO-08 [02]
Sample Info: 9980109017;AJL;;;;;;10.3;;;
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-08 [02]

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109017

Sample wt/vol: 10.3 (g/mL) G Lab File ID (1): ZH8A034.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.097	U
55-63-0	Nitroglycerin	0.97	U
78-11-5	PETN	0.97	U

FORM I

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A034.d
Lab Smp Id: 9980109017 Client Smp ID: FTSW-AA-SO-08 [02]
Inj Date : 09-AUG-2012 13:36
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109017;AJL;;;;;;10.3;;;
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_218
Meth Date : 10-Aug-2012 09:34 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.300	Weight of sample extracted
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/10/12
REPORTED
APPROVED
2nd REVIEW

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.656	13.663	-0.007	63304	476.598	1.85086
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109017
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3178 D8330S

Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-08 [02]
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.94175	1.85086	95.32	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A034.d

Date : 09-AUG-2012 13:36

Client ID: FTSW-AA-SO-08 [02]

Instrument: hpl1.i

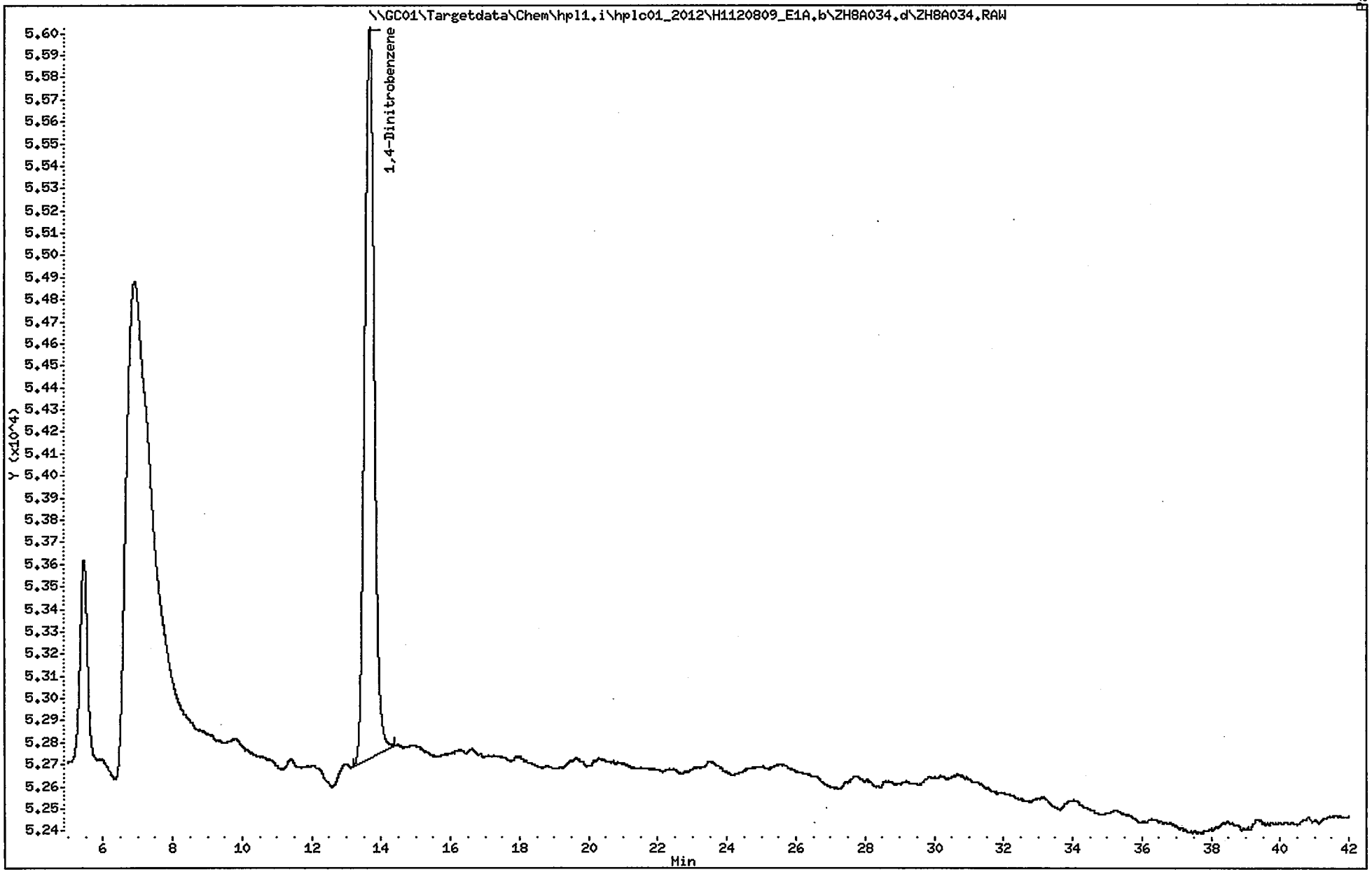
Sample Info: 9980109017;AJL;;;;;;10.3;;;

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-08 [02]

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109018

Sample wt/vol: 10.6 (g/mL) G Lab File ID (1): ZH8B027.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.094	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.094	U
99-65-0	1,3-Dinitrobenzene	0.094	U
121-14-2	2,4-Dinitrotoluene	0.094	U
606-20-2	2,6-Dinitrotoluene	0.094	U
2691-41-0	HMX	0.094	U
98-95-3	Nitrobenzene	0.094	U
99-99-0	4-Nitrotoluene	0.094	U
88-72-2	2-Nitrotoluene	0.094	U
99-08-1	3-Nitrotoluene	0.094	U
121-82-4	RDX	0.094	U
479-45-8	Tetryl	0.094	U
99-35-4	1,3,5-Trinitrobenzene	0.094	U
118-96-7	2,4,6-Trinitrotoluene	0.094	U

FORM I

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B027.d
Lab Smp Id: 9980109018 Client Smp ID: FTSW-AA-SO-08 [02]
Inj Date : 09-AUG-2012 07:58
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109018;AJL;;;;;;10.6
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.600	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.676	13.673	0.003	178874	527.710	1.99136
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

ALS - Middletown

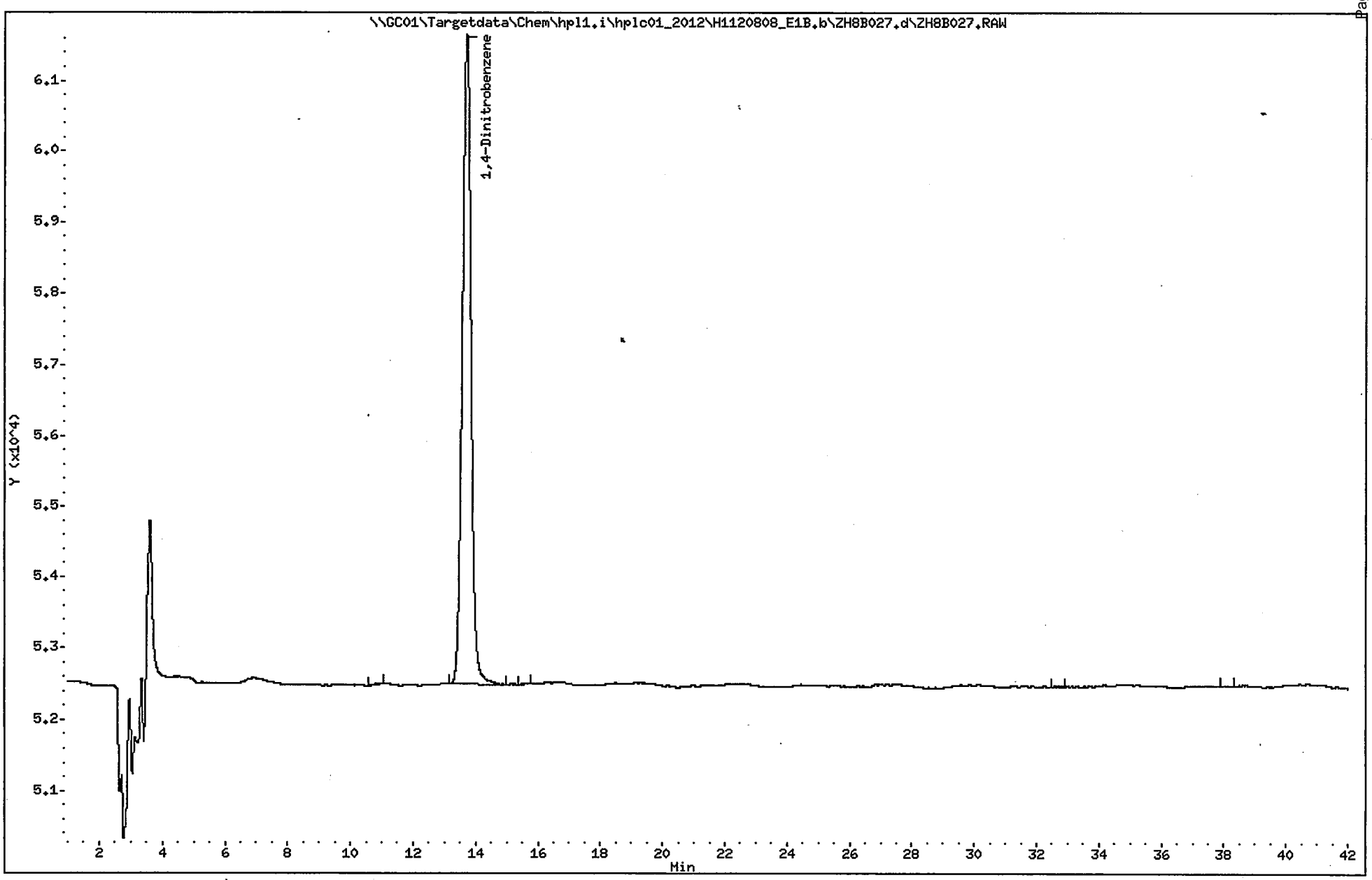
RECOVERY REPORT

Client Name: ERT Earth Resources
Client SDG: ERT001|Ft. Stewart
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: 9980109018
Client Smp ID: FTSW-AA-SO-08 [02]
Level: LOW
Operator: AJL
Data Type: LC DATA
SampleType: SAMPLE
SpikeList File: DoD_W.spk
Quant Type: ESTD
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3176 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.88679	1.99136	105.54	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B027.d
Date : 09-AUG-2012 07:58
Client ID: FTSW-AA-SO-08 [02]
Sample Info: 9980109018;AJL;;;;;;10.6
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-08 [02]

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109018

Sample wt/vol: 10.6 (g/mL) G Lab File ID (1): ZH8A027.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.094	U
55-63-0	Nitroglycerin	0.94	U
78-11-5	PETN	0.94	U

FORM I

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A027.d
Lab Smp Id: 9980109018 Client Smp ID: FTSW-AA-SO-08 [02]
Inj Date : 09-AUG-2012 07:58
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109018;AJL;;;;;;10.6
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.600	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
QA REVIEW

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.680	13.663	0.017	63263	476.289	1.79732
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

Data File: ZH8A027.d
Report Date: 09-Aug-2012 11:52

ALS - Middletown

RECOVERY REPORT

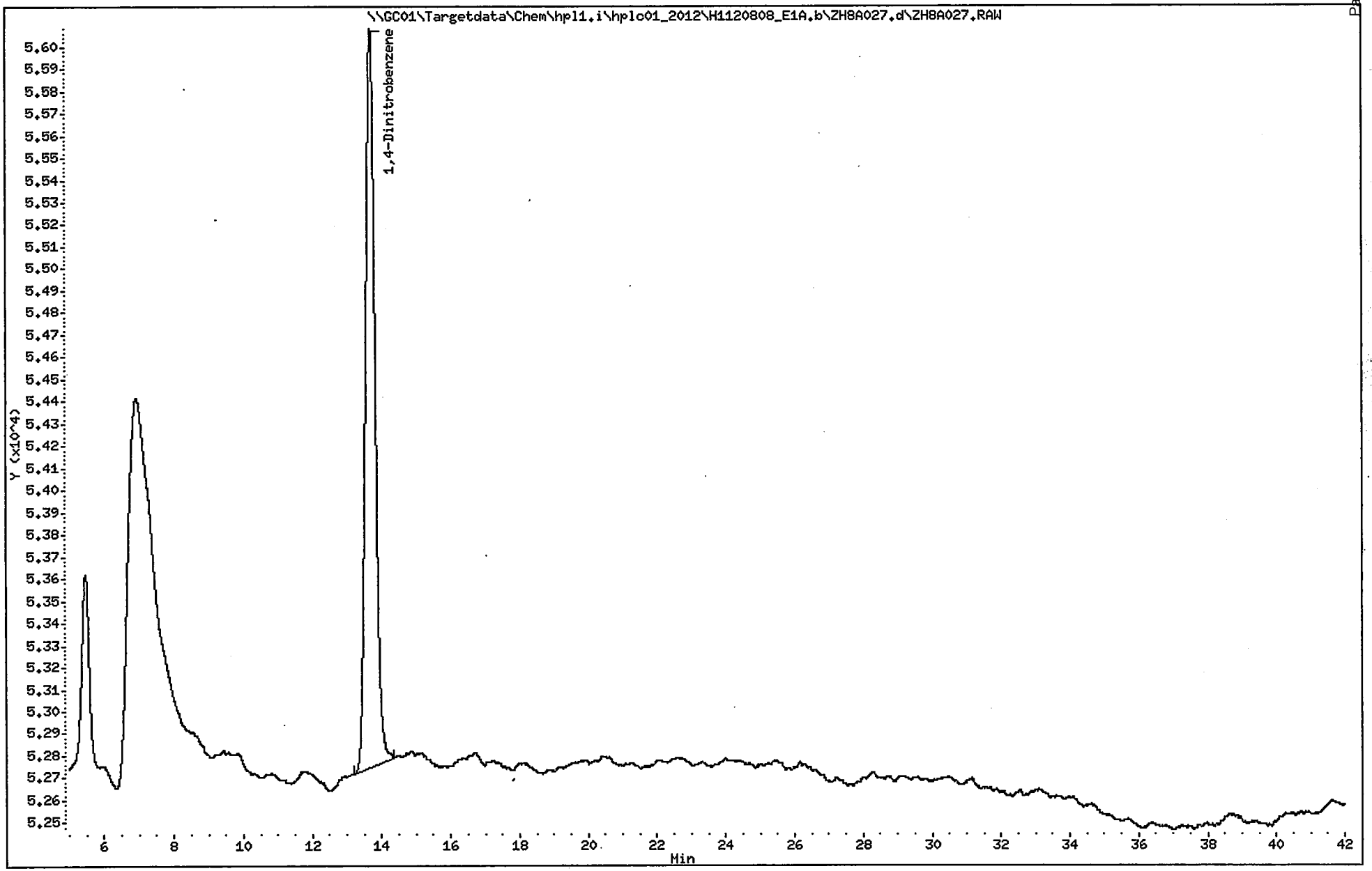
Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109018
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3176 D8330S

Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-08 [02]
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.88679	1.79732	95.26	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A027.d
Date : 09-AUG-2012 07:58
Client ID: FTSW-AA-SO-08 [02]
Sample Info: 9980109018;AJL;;;;;;10.6
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-09

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109019

Sample wt/vol: 10.1 (g/mL) G Lab File ID (1): ZH8B028.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.099	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.099	U
99-65-0	1,3-Dinitrobenzene	0.099	U
121-14-2	2,4-Dinitrotoluene	0.099	U
606-20-2	2,6-Dinitrotoluene	0.099	U
2691-41-0	HMX	0.099	U
98-95-3	Nitrobenzene	0.099	U
99-99-0	4-Nitrotoluene	0.099	U
88-72-2	2-Nitrotoluene	0.099	U
99-08-1	3-Nitrotoluene	0.099	U
121-82-4	RDX	0.099	U
479-45-8	Tetryl	0.099	U
99-35-4	1,3,5-Trinitrobenzene	0.099	U
118-96-7	2,4,6-Trinitrotoluene	0.099	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B028.d
Lab Smp Id: 9980109019 Client Smp ID: FTSW-AA-SO-09
Inj Date : 09-AUG-2012 08:42
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109019;AJL;;;;;;10.1
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.100	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.673	13.673	0.000	163161	481.354	1.90635
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

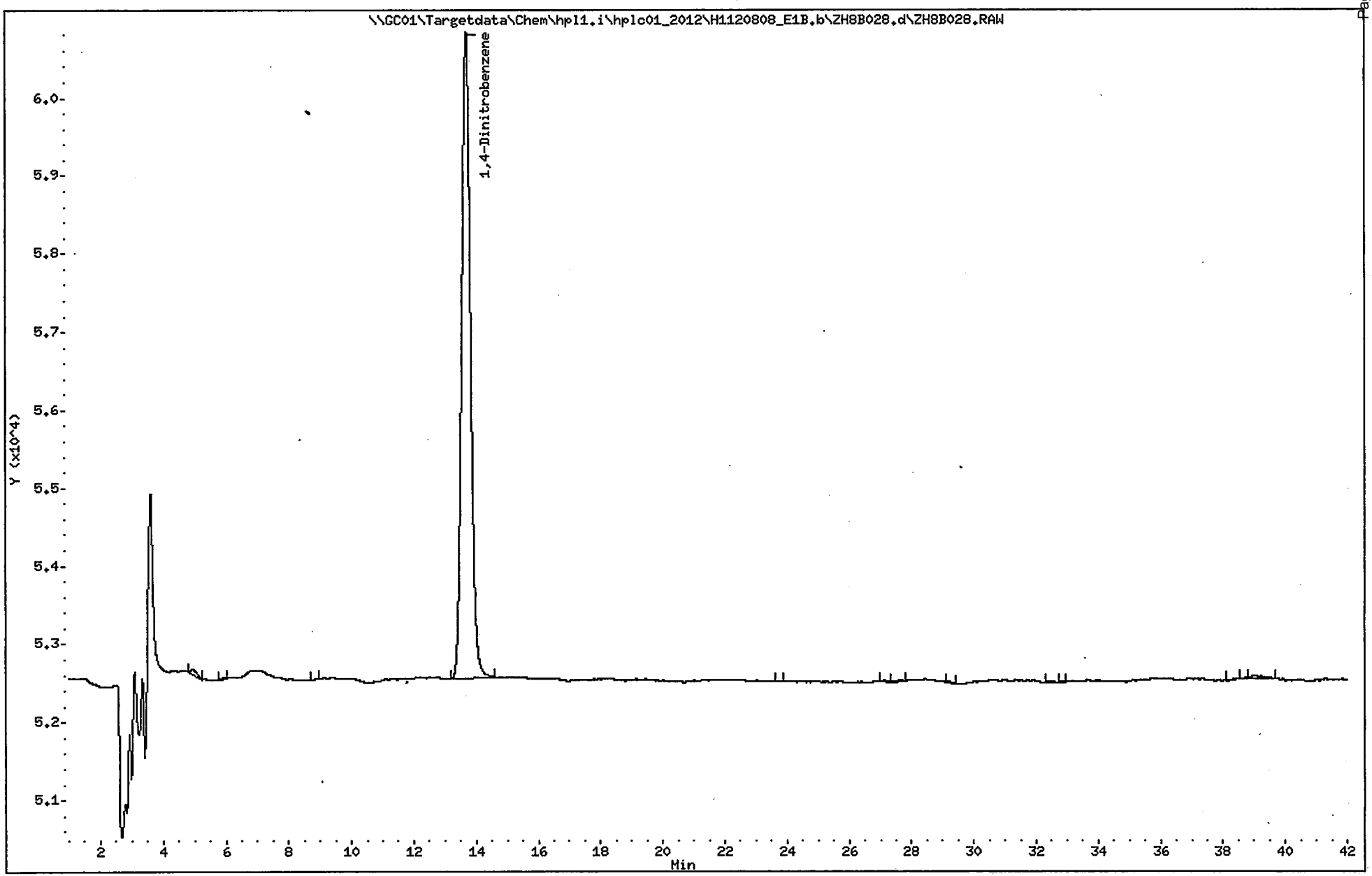
Client Name: ERT Earth Resources
Sample Matrix: SOLID
Lab Smp Id: 9980109019
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3176 D8330S

Client SDG: ERT001|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-AA-SO-09
Operator: AJL
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.98020	1.90635	96.27	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B028.d
Date : 09-AUG-2012 08:42
Client ID: FTSW-AA-SO-09
Sample Info: 9980109019;AJL;;;;;;10.1
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-09

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 9980109019

Sample wt/vol: 10.1 (g/mL) G Lab File ID (1): ZH8A028.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.099	U
55-63-0	Nitroglycerin	0.99	U
78-11-5	PETN	0.99	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A028.d
Lab Smp Id: 9980109019 Client Smp ID: FTSW-AA-SO-09
Inj Date : 09-AUG-2012 08:42
Operator : AJL Inst ID: hpl1.i
Smp Info : 9980109019;AJL;;;;;;10.1
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.100	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/13/12
APPROVED
REVIEW

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.680	13.663	0.017	59182	445.564	1.76461
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Client SDG: ERT001|Ft. Stewart
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: 9980109019
Client Smp ID: FTSW-AA-SO-09
Level: LOW
Operator: AJL
Data Type: LC DATA
SampleType: SAMPLE
SpikeList File: 8330LCS.spk
Quant Type: ESTD
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3176 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.98020	1.76461	89.11	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A028.d

Date : 09-AUG-2012 08:42

Client ID: FTSW-AA-SO-09

Instrument: hpl1.i

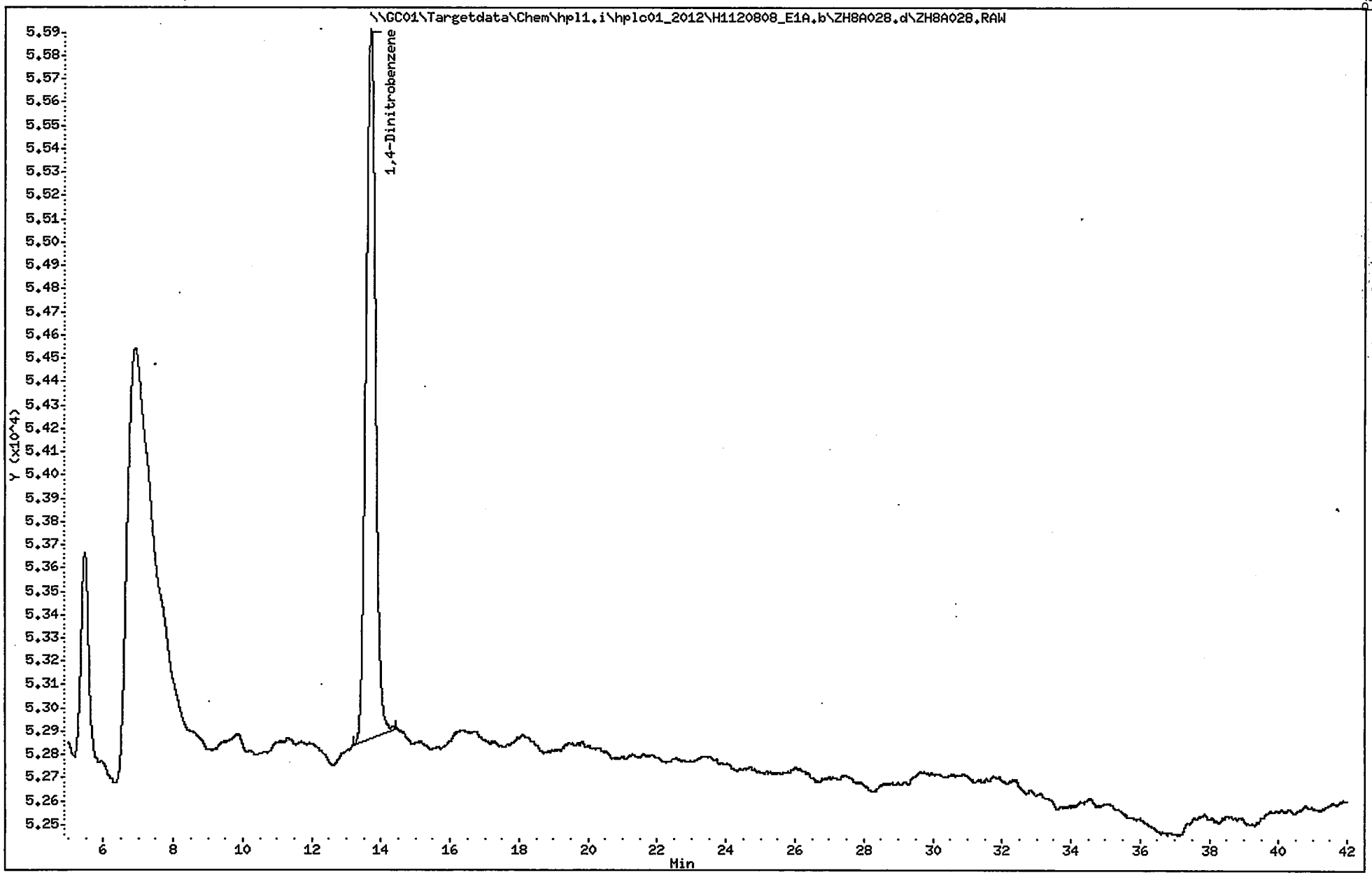
Sample Info: 9980109019;AJL;;;;;;10.1

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



Standards Raw Data

Initial Calibrations

6A

RETENTION TIMES OF INITIAL CALIBRATION

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/14/2011

Calibration Times: 17:54 22:12

GC Column: E1, 254nm ID: 4.1 (mm)

LAB FILE ID: RT1 = ZKEB005.d RT2 = ZKEB006.d RT3 = ZKEB007.d

RT4 = ZKEB008.d RT5 = ZKEB009.d RT6 = ZKEB010.d

COMPOUND	RT1	RT2	RT3	RT4	RT5	RT6	MEAN RT	RT WINDOW FROM	RT WINDOW TO
2-Amino-4,6-dinitro	24.790	24.773	24.786	24.770	24.746	24.696	24.744	23.894	25.594
4-Amino-2,6-dinitro	23.606	23.606	23.610	23.600	23.576	23.526	23.572	22.722	24.422
1,3-Dinitrobenzene	15.366	15.363	15.370	15.366	15.356	15.336	15.353	15.063	15.643
2,4-Dinitrotoluene	27.020	27.003	27.006	26.993	26.980	26.933	26.977	26.427	27.527
2,6-Dinitrotoluene	26.070	26.026	26.040	26.030	26.013	25.970	26.013	25.473	26.553
HMX	4.853	4.860	4.866	4.876	4.886	4.906	4.882	4.612	5.152
Nitrobenzene	17.330	17.316	17.320	17.316	17.303	17.276	17.302	16.982	17.622
4-Nitrotoluene	34.210	34.246	34.286	34.270	34.236	34.173	34.222	33.542	34.902
2-Nitrotoluene	31.503	31.446	31.446	31.436	31.420	31.366	31.420	30.840	32.000
3-Nitrotoluene	36.753	36.716	36.720	36.690	36.663	36.613	36.674	35.964	37.384
RDX	8.326	8.336	8.340	8.340	8.340	8.336	8.335	8.055	8.615
Tetryl	18.333	18.326	18.323	18.330	18.316	18.300	18.316	17.656	18.976
1,3,5-Trinitrobenze	11.860	11.866	11.870	11.870	11.870	11.863	11.865	11.665	12.065
2,4,6-Trinitrotolue	21.156	21.166	21.166	21.163	21.150	21.130	21.149	20.689	21.609
1,4-Dinitrobenzene	13.763	13.766	13.773	13.766	13.763	13.750	13.760	12.910	14.610

6A

RETENTION TIMES OF INITIAL CALIBRATION

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/14/2011

Calibration Times: 17:54 22:12

GC Column: E1, 254nm ID: 4.1 (mm)

LAB FILE ID: RT7 = ZKEB011.d

COMPOUND	RT7						MEAN RT	RT WINDOW FROM	RT WINDOW TO
2-Amino-4,6-dinitro	24.650						24.744	23.894	25.594
4-Amino-2,6-dinitro	23.483						23.572	22.722	24.422
1,3-Dinitrobenzene	15.316						15.353	15.063	15.643
2,4-Dinitrotoluene	26.903						26.977	26.427	27.527
2,6-Dinitrotoluene	25.940						26.013	25.473	26.553
HMX	4.930						4.882	4.612	5.152
Nitrobenzene	17.250						17.302	16.982	17.622
4-Nitrotoluene	34.133						34.222	33.542	34.902
2-Nitrotoluene	31.326						31.420	30.840	32.000
3-Nitrotoluene	36.566						36.674	35.964	37.384
RDX	8.330						8.335	8.055	8.615
Tetryl	18.283						18.316	17.656	18.976
1,3,5-Trinitrobenze	11.856						11.865	11.665	12.065
2,4,6-Trinitrotolue	21.110						21.149	20.689	21.609
1,4-Dinitrobenzene	13.736						13.760	12.910	14.610

6B

ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/14/2011

Calibration Time(s): 17:54 22:12

GC Column: E1, 254nm ID: 4.1 (mm)

LAB FILE ID: RRF1 = ZKEB005.d RRF2 = ZKEB006.d RRF3 = ZKEB007.d RRF4 = ZKEB008.d

RRF5 = ZKEB009.d RRF6 = ZKEB010.d RRF7 = ZKEB011.d

COMPOUND	RRF1	RRF2	RRF3	RRF4	RRF5	CT
2-Amino-4,6-dinitrotoluene	230	302	299	313	306	A
4-Amino-2,6-dinitrotoluene	167	241	219	234	227	A
1,3-Dinitrobenzene	372	437	440	464	458	A
2,4-Dinitrotoluene	335	398	411	422	409	A
2,6-Dinitrotoluene	176	227	220	233	223	A
HMX	116	126	130	133	129	A
Nitrobenzene	240	276	267	275	274	A
4-Nitrotoluene	102	121	131	148	144	A
2-Nitrotoluene	128	171	173	182	179	A
3-Nitrotoluene	155	170	191	187	186	A
RDX	131	154	163	160	160	A
Tetryl	248	280	255	268	264	A
1,3,5-Trinitrobenzene	265	336	349	349	347	A
2,4,6-Trinitrotoluene(TNT)	261	316	318	325	323	A
1,4-Dinitrobenzene	288	344	357	362	359	A

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

6B

ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/14/2011

Calibration Time(s): 17:54 22:12

GC Column: E1, 254n ID: 4.1 (mm)

LAB FILE ID: RRF1 = ZKEB005.d RRF2 = ZKEB006.d RRF3 = ZKEB007.d RRF4 = ZKEB008.d

RRF5 = ZKEB009.d RRF6 = ZKEB010.d RRF7 = ZKEB011.d

COMPOUND	RRF6	RRF7	CT	b	m1	m2	% RSD or R^2
2-Amino-4,6-dinitrotoluene	303	260	A		288		10.58960
4-Amino-2,6-dinitrotoluene	225	193	A		215		12.10871
1,3-Dinitrobenzene	450	384	A		429		8.46463
2,4-Dinitrotoluene	413	355	A		392		8.52224
2,6-Dinitrotoluene	224	192	A		213		9.88029
HMX	127	110	A		125		6.74028
Nitrobenzene	272	231	A		262		7.10871
4-Nitrotoluene	143	121	A		130		12.84894
2-Nitrotoluene	177	152	A		166		11.60487
3-Nitrotoluene	186	157	A		176		8.60429
RDX	157	134	A		151		8.73951
Tetryl	262	224	A		257		6.93349
1,3,5-Trinitrobenzene	343	295	A		326		10.19659
2,4,6-Trinitrotoluene(TNT)	319	274	A		305		8.59445
1,4-Dinitrobenzene	357	305	A		339		8.85687

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB005
Lab Smp Id: LEVEL1
Inj Date : 14-NOV-2011 17:54
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL1;AJL;1;1
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 17:54 Cal File: ZKEB005.d
Als bottle: 58 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

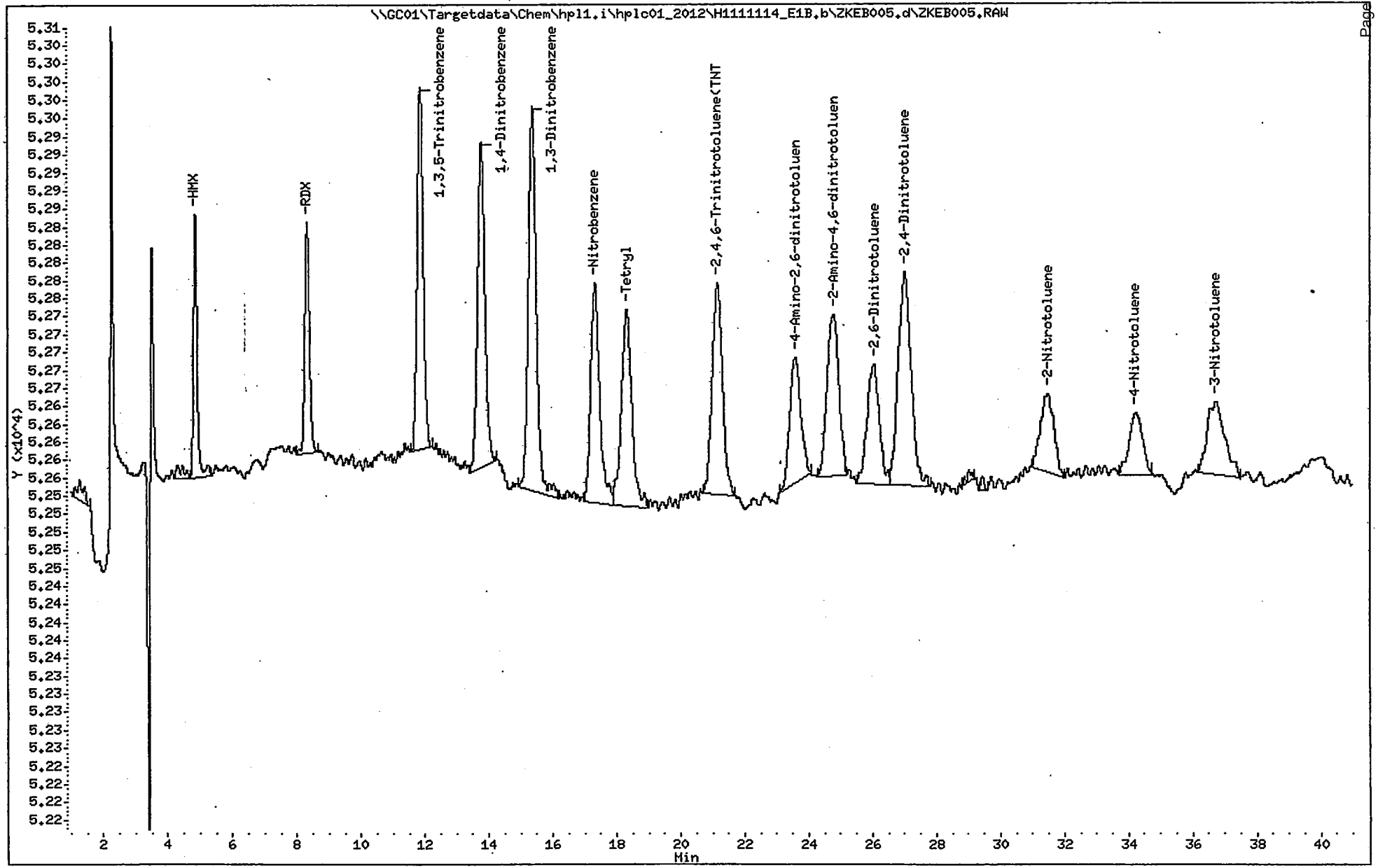
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1	HMX	4.853	4.930	-0.077	2324	20.0000	18.6652(a)
2	RDX	8.326	8.330	-0.004	2616	20.0000	17.2977(a)
3	1,3,5-Trinitrobenzene	11.860	11.857	0.003	5291	20.0000	16.2241(a)
$ 4	1,4-Dinitrobenzene	13.763	13.737	0.026	5751	20.0000	16.9665(a)
5	1,3-Dinitrobenzene	15.366	15.317	0.049	7446	20.0000	17.3484(a)
6	Nitrobenzene	17.330	17.250	0.080	4799	20.0000	18.3004(a)
7	Tetryl	18.333	18.283	0.050	4954	20.0000	19.2619(a)
8	2,4,6-Trinitrotoluene(TNT)	21.156	21.110	0.046	5220	20.0000	17.1164(a)
9	4-Amino-2,6-dinitrotoluene	23.606	23.483	0.123	3347	20.0000	15.5523(a)
10	2-Amino-4,6-dinitrotoluene	24.790	24.650	0.140	4608	20.0000	16.0193(a)
11	2,6-Dinitrotoluene	26.070	25.940	0.130	3522	20.0000	16.4970(a)
12	2,4-Dinitrotoluene	27.020	26.903	0.117	6693	20.0000	17.0880(a)
13	2-Nitrotoluene	31.503	31.327	0.176	2567	20.0000	15.4445(a)
14	4-Nitrotoluene	34.210	34.133	0.077	2031	20.0000	15.6413(aM)
15	3-Nitrotoluene	36.753	36.567	0.186	3100	20.0000	17.6239(aM)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB005.d
Date : 14-NOV-2011 17:54
Client ID:
Sample Info: LEVEL1;AJL;1;1
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB006
Lab Smp Id: LEVEL2
Inj Date : 14-NOV-2011 18:37
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL2;AJL;1;2
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 18:37 Cal File: ZKEB006.d
Als bottle: 58 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

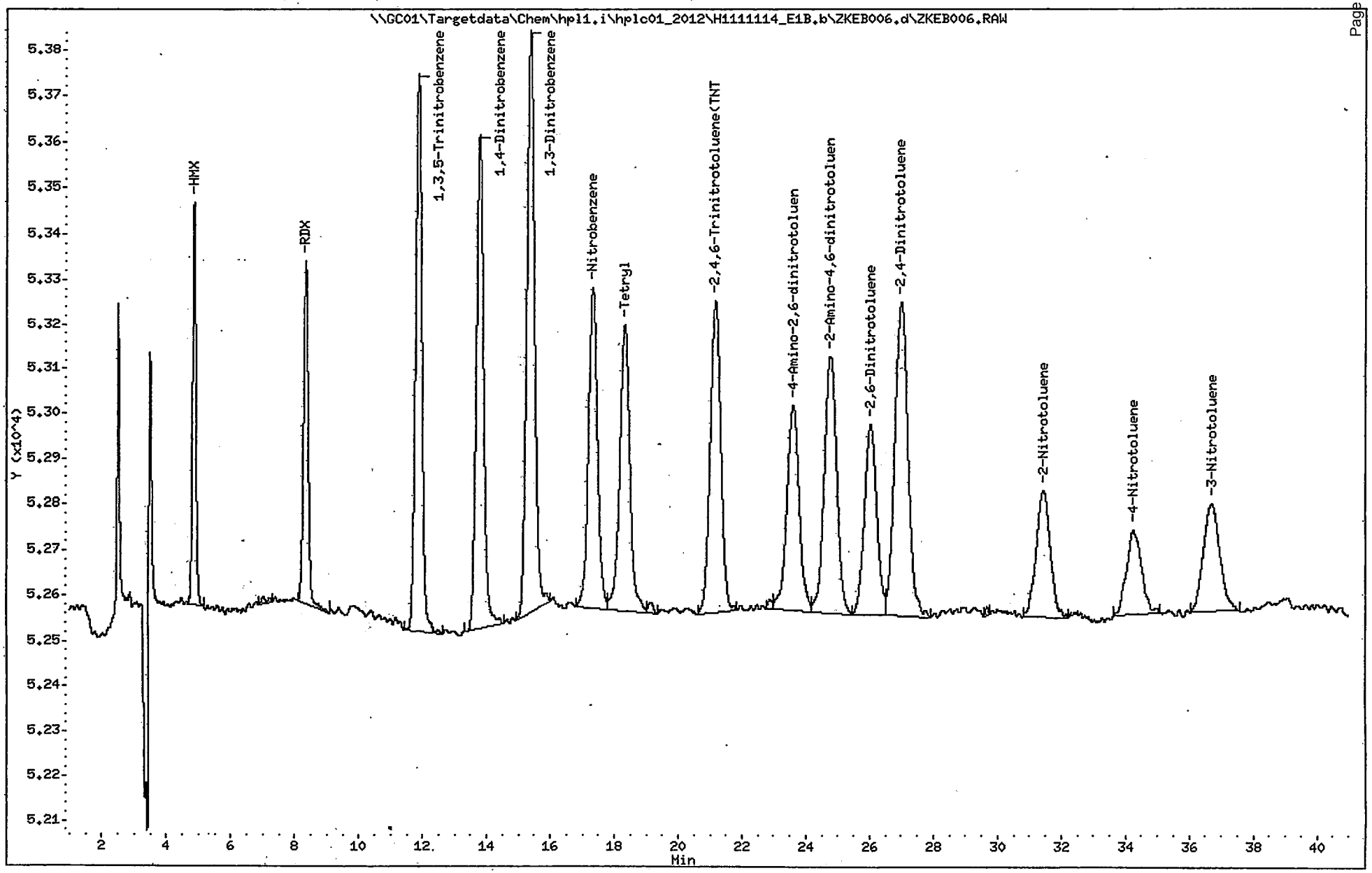
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.860	4.930	-0.070	6302	50.0000	50.6144
2	RDX	8.336	8.330	0.006	7698	50.0000	50.9012
3	1,3,5-Trinitrobenzene	11.866	11.857	0.009	16783	50.0000	51.4625
$ 4	1,4-Dinitrobenzene	13.766	13.737	0.029	17206	50.0000	50.7608
5	1,3-Dinitrobenzene	15.363	15.317	0.046	21850	50.0000	50.9082
6	Nitrobenzene	17.316	17.250	0.066	13791	50.0000	52.5903
7	Tetryl	18.326	18.283	0.043	13993	50.0000	54.4068
8	2,4,6-Trinitrotoluene(TNT)	21.166	21.110	0.056	15775	50.0000	51.7262
9	4-Amino-2,6-dinitrotoluene	23.606	23.483	0.123	12068	50.0000	56.0758
10	2-Amino-4,6-dinitrotoluene	24.773	24.650	0.123	15107	50.0000	52.5180
11	2,6-Dinitrotoluene	26.026	25.940	0.086	11368	50.0000	53.2475
12	2,4-Dinitrotoluene	27.003	26.903	0.100	19896	50.0000	50.7968
13	2-Nitrotoluene	31.446	31.327	0.119	8547	50.0000	51.4234
14	4-Nitrotoluene	34.246	34.133	0.113	6027	50.0000	46.4156
15	3-Nitrotoluene	36.716	36.567	0.149	8485	50.0000	48.2382

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB006.d
Date : 14-NOV-2011 18:37
Client ID:
Sample Info: LEVEL2;AJL;1;2
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB007
Lab Smp Id: LEVEL3
Inj Date : 14-NOV-2011 19:20
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL3;AJL;1;3
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 19:20 Cal File: ZKEB007.d
Als bottle: 58 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

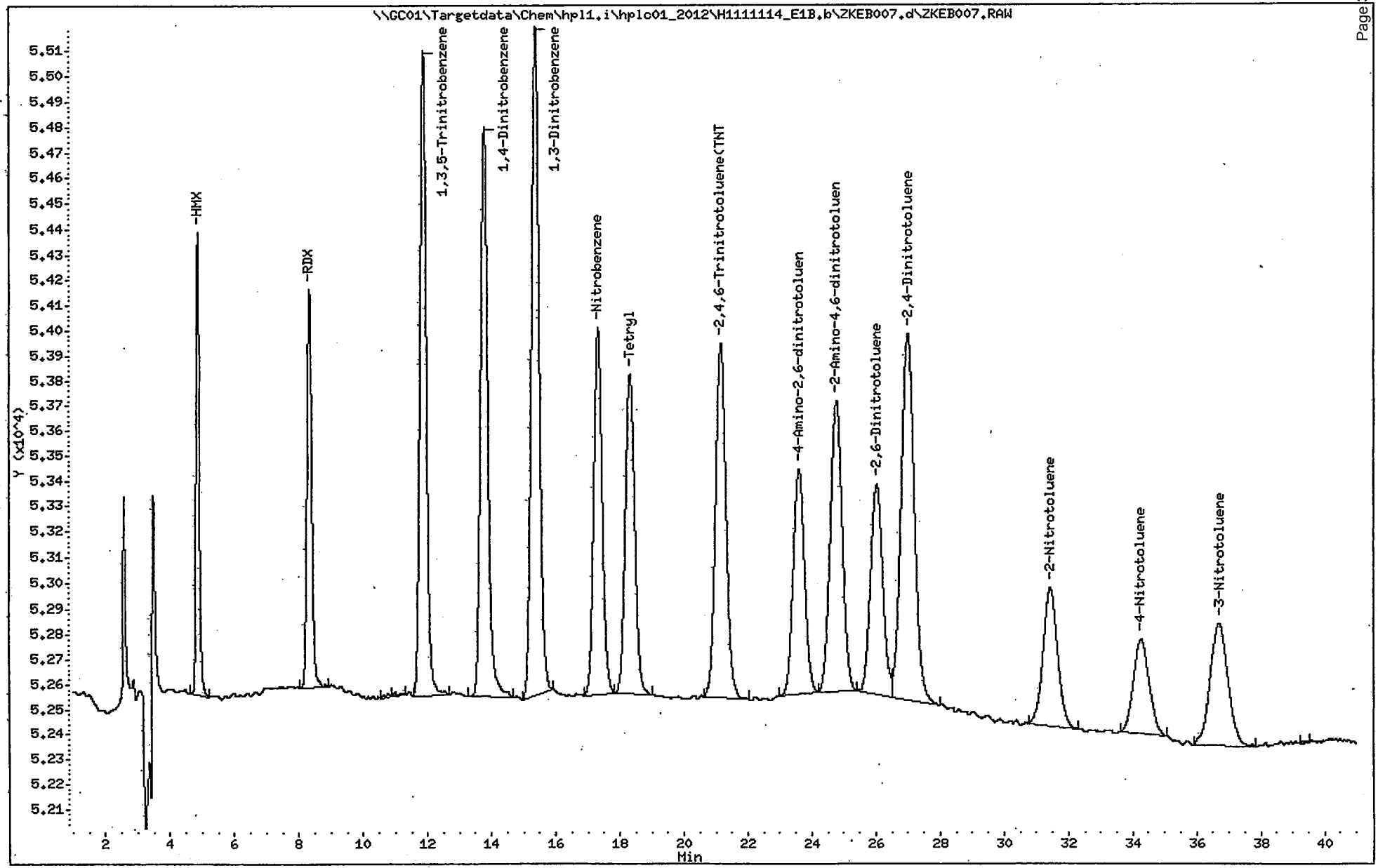
Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.866	4.930	-0.064	13031	100.000	104.658
2	RDX	8.340	8.330	0.010	16266	100.000	107.555
3	1,3,5-Trinitrobenzene	11.870	11.857	0.013	34899	100.000	107.013
$ 4	1,4-Dinitrobenzene	13.773	13.737	0.036	35733	100.000	105.419
5	1,3-Dinitrobenzene	15.370	15.317	0.053	44034	100.000	102.595
6	Nitrobenzene	17.320	17.250	0.070	26726	100.000	101.916
7	Tetryl	18.323	18.283	0.040	25540	100.000	99.3032
8	2,4,6-Trinitrotoluene(TNT)	21.166	21.110	0.056	31767	100.000	104.164
9	4-Amino-2,6-dinitrotoluene	23.610	23.483	0.127	21943	100.000	101.962
10	2-Amino-4,6-dinitrotoluene	24.786	24.650	0.136	29905	100.000	103.962
11	2,6-Dinitrotoluene	26.040	25.940	0.100	21955	100.000	102.837
12	2,4-Dinitrotoluene	27.006	26.903	0.103	41109	100.000	104.956
13	2-Nitrotoluene	31.446	31.327	0.119	17335	100.000	104.297
14	4-Nitrotoluene	34.286	34.133	0.153	13069	100.000	100.648
15	3-Nitrotoluene	36.720	36.567	0.153	19059	100.000	108.353

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB007.d
Date : 14-NOV-2011 19:20
Client ID:
Sample Info: LEVEL3;AJL;1;3
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i

Operator: AJL
Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB008
Lab Smp Id: LEVEL4
Inj Date : 14-NOV-2011 20:03
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL4;AJL;1;4
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 20:03 Cal File: ZKEB008.RAW
Als bottle: 58 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.876	4.930	-0.054	33176	250.000	266.452
2	RDX	8.340	8.330	0.010	40108	250.000	265.205
3	1,3,5-Trinitrobenzene	11.870	11.857	0.013	87211	250.000	267.419
$ 4	1,4-Dinitrobenzene	13.766	13.737	0.029	90493	250.000	266.970
5	1,3-Dinitrobenzene	15.366	15.317	0.049	115905	250.000	270.046
6	Nitrobenzene	17.316	17.250	0.066	68813	250.000	262.410
7	Tetryl	18.330	18.283	0.047	66925	250.000	260.214
8	2,4,6-Trinitrotoluene(TNT)	21.163	21.110	0.053	81269	250.000	266.481
9	4-Amino-2,6-dinitrotoluene	23.600	23.483	0.117	58474	250.000	271.708
10	2-Amino-4,6-dinitrotoluene	24.770	24.650	0.120	78170	250.000	271.750
11	2,6-Dinitrotoluene	26.030	25.940	0.090	58233	250.000	272.762
12	2,4-Dinitrotoluene	26.993	26.903	0.090	105443	250.000	269.208
13	2-Nitrotoluene	31.436	31.327	0.109	45453	250.000	273.470
14	4-Nitrotoluene	34.270	34.133	0.137	37055	250.000	285.371
15	3-Nitrotoluene	36.690	36.567	0.123	46682	250.000	265.393

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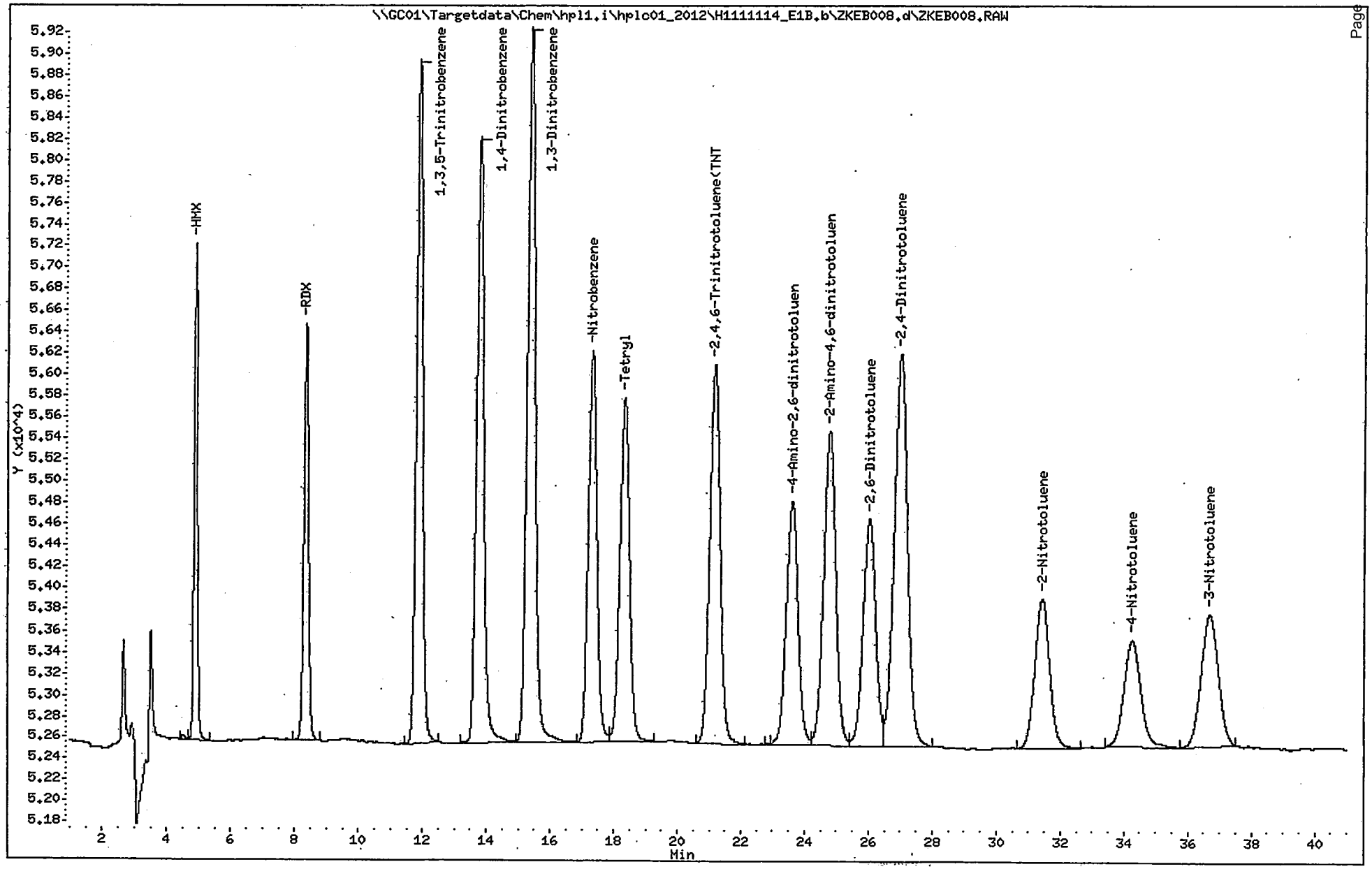
Date : 14-NOV-2011 20:03
Client ID:
Sample Info: LEVEL4;AJL;1;4
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB009
Lab Smp Id: LEVEL5
Inj Date : 14-NOV-2011 20:46
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL5;AJL;1;5
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 20:46 Cal File: ZKEB009.d
Als bottle: 58 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

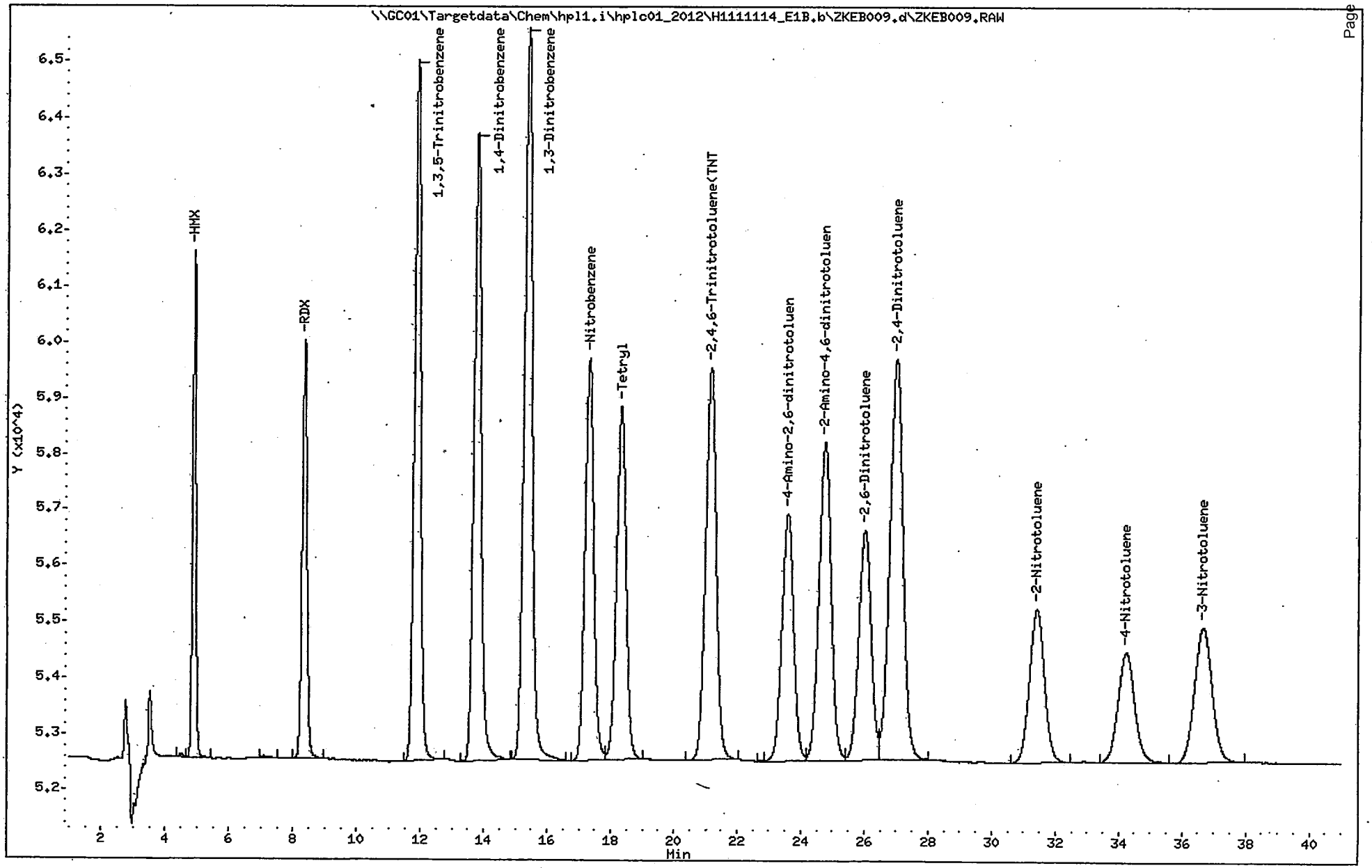
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1	HMX	4.886	4.930	-0.044	64611	500.000	518.922
2	RDX	8.340	8.330	0.010	79835	500.000	527.890
3	1,3,5-Trinitrobenzene	11.870	11.857	0.013	173473	500.000	531.929
$ 4	1,4-Dinitrobenzene	13.763	13.737	0.026	179549	500.000	529.701
5	1,3-Dinitrobenzene	15.356	15.317	0.039	228785	500.000	533.045
6	Nitrobenzene	17.303	17.250	0.053	137130	500.000	522.929
7	Tetryl	18.316	18.283	0.033	131907	500.000	512.873
8	2,4,6-Trinitrotoluene(TNT)	21.150	21.110	0.040	161394	500.000	529.210
9	4-Amino-2,6-dinitrotoluene	23.576	23.483	0.093	113416	500.000	527.005
10	2-Amino-4,6-dinitrotoluene	24.746	24.650	0.096	152906	500.000	531.563
11	2,6-Dinitrotoluene	26.013	25.940	0.073	111418	500.000	521.880
12	2,4-Dinitrotoluene	26.980	26.903	0.077	204407	500.000	521.875
13	2-Nitrotoluene	31.420	31.327	0.093	89591	500.000	539.028
14	4-Nitrotoluene	34.236	34.133	0.103	72009	500.000	554.561
15	3-Nitrotoluene	36.663	36.567	0.096	92926	500.000	528.295

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB009.d
Date : 14-NOV-2011 20:46
Client ID:
Sample Info: LEVEL5;AJL;1;5
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB010
Lab Smp Id: LEVEL6
Inj Date : 14-NOV-2011 21:29
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL6;AJL;1;6
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 21:29 Cal File: ZKEB010.d
Als bottle: 58 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

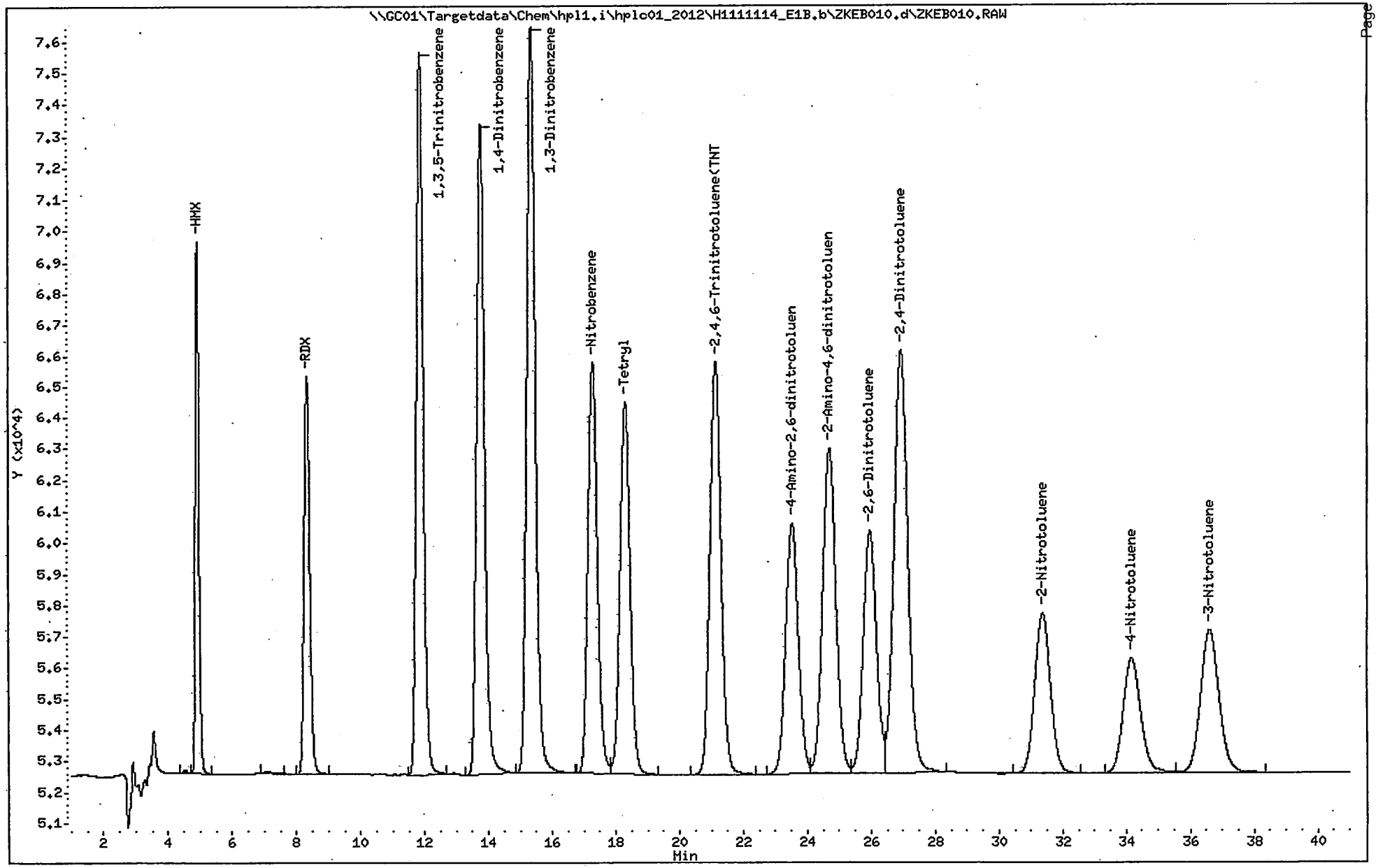
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.906	4.930	-0.024	127410	1000.00	1023.29
2	RDX	8.336	8.330	0.006	157230	1000.00	1039.65
3	1,3,5-Trinitrobenzene	11.863	11.857	0.006	343178	1000.00	1052.30
$ 4	1,4-Dinitrobenzene	13.750	13.737	0.013	357308	1000.00	1054.12
5	1,3-Dinitrobenzene	15.336	15.317	0.019	449964	1000.00	1048.37
6	Nitrobenzene	17.276	17.250	0.026	271997	1000.00	1037.23
7	Tetryl	18.300	18.283	0.017	262172	1000.00	1019.36
8	2,4,6-Trinitrotoluene(TNT)	21.130	21.110	0.020	319265	1000.00	1046.87
9	4-Amino-2,6-dinitrotoluene	23.526	23.483	0.043	224854	1000.00	1044.82
10	2-Amino-4,6-dinitrotoluene	24.696	24.650	0.046	303239	1000.00	1054.18
11	2,6-Dinitrotoluene	25.970	25.940	0.030	223860	1000.00	1048.56
12	2,4-Dinitrotoluene	26.933	26.903	0.030	412840	1000.00	1054.03
13	2-Nitrotoluene	31.366	31.327	0.039	177371	1000.00	1067.16
14	4-Nitrotoluene	34.173	34.133	0.040	142796	1000.00	1099.71
15	3-Nitrotoluene	36.613	36.567	0.046	186402	1000.00	1059.72

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB010.d
Date : 14-NOV-2011 21:29
Client ID:
Sample Info: LEVEL6;AJL;1;6
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB011
Lab Smp Id: LEVEL7
Inj Date : 14-NOV-2011 22:12
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL7;AJL;1;7
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 58 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

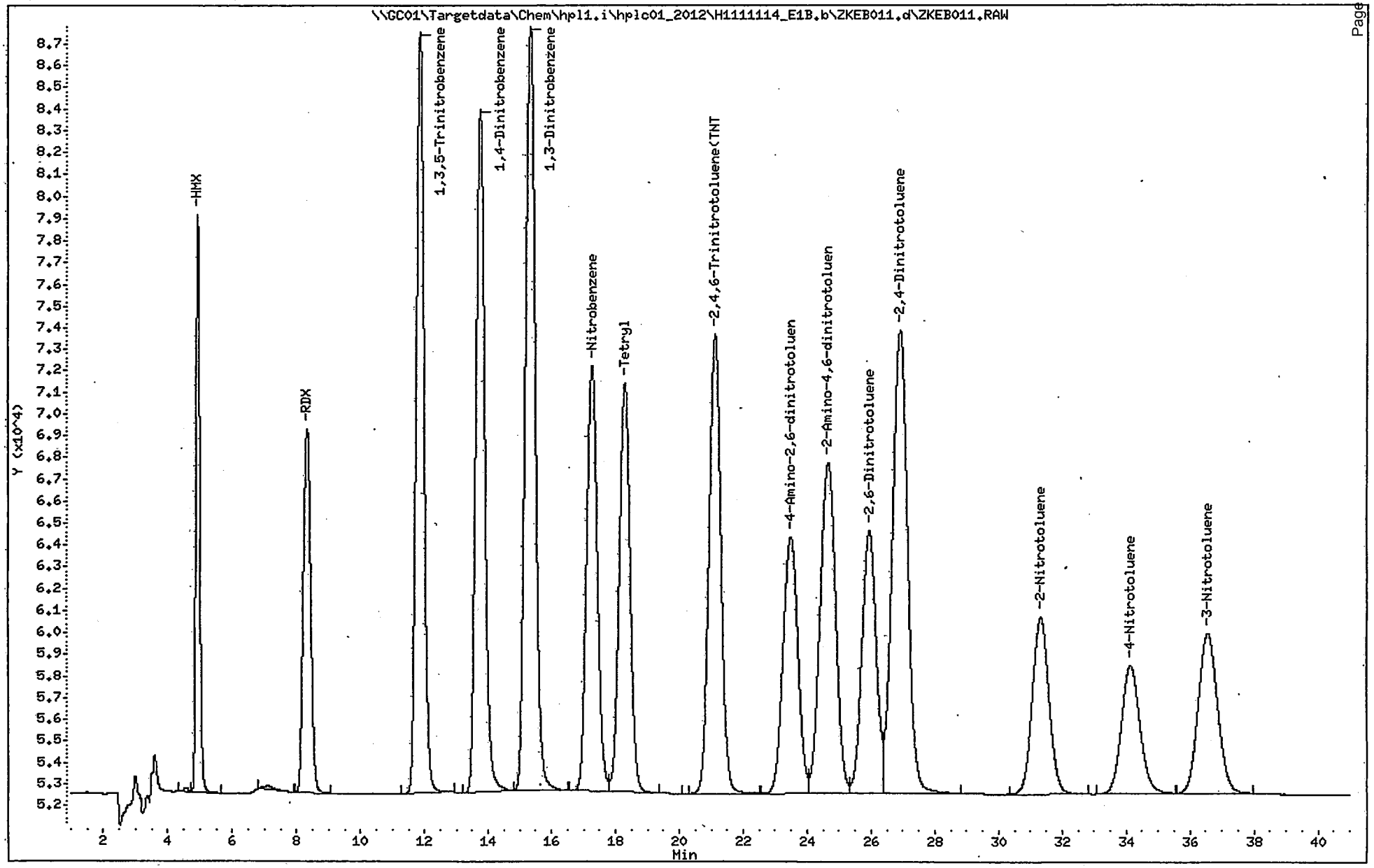
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1	HMX	4.930	4.930	0.000	219369	2000.00	1761.86
2	RDX	8.330	8.330	0.000	267775	2000.00	1770.60
3	1,3,5-Trinitrobenzene	11.856	11.857	-0.001	589354	2000.00	1807.17
$ 4	1,4-Dinitrobenzene	13.736	13.737	-0.001	610721	2000.00	1801.74
5	1,3-Dinitrobenzene	15.316	15.317	-0.001	767270	2000.00	1787.66
6	Nitrobenzene	17.250	17.250	0.000	462204	2000.00	1762.56
7	Tetryl	18.283	18.283	0.000	447399	2000.00	1739.55
8	2,4,6-Trinitrotoluene(TNT)	21.110	21.110	0.000	547000	2000.00	1793.61
9	4-Amino-2,6-dinitrotoluene	23.483	23.483	0.000	385477	2000.00	1791.18
10	2-Amino-4,6-dinitrotoluene	24.650	24.650	0.000	520509	2000.00	1809.50
11	2,6-Dinitrotoluene	25.940	25.940	0.000	383635	2000.00	1796.94
12	2,4-Dinitrotoluene	26.903	26.903	0.000	709325	2000.00	1810.99
13	2-Nitrotoluene	31.326	31.327	-0.001	304908	2000.00	1834.49
14	4-Nitrotoluene	34.133	34.133	0.000	242252	2000.00	1865.65
15	3-Nitrotoluene	36.566	36.567	-0.001	314025	2000.00	1785.27

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB011.d
Date : 14-NOV-2011 22:12
Client ID:
Sample Info: LEVEL7;AJL;1;7
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



6A

RETENTION TIMES OF INITIAL CALIBRATION

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/15/2011

Calibration Times: 23:38 03:55

GC Column: E1, 218nm ID: 4.1 (mm)

LAB FILE ID: RT1 = ZKEA013.d RT2 = ZKEA014.d RT3 = ZKEA015.d

RT4 = ZKEA016.d RT5 = ZKEA017.d RT6 = ZKEA018.d

COMPOUND	RT1	RT2	RT3	RT4	RT5	RT6	MEAN RT	RT WINDOW FROM	RT WINDOW TO
3,5-Dinitroaniline		17.273	17.280	17.290	17.286	17.263	14.805	13.855	15.755
Nitroglycerin	18.623	18.600	18.613	18.620	18.620	18.610	18.613	18.233	18.993
PETN	37.956	37.960	37.960	37.970	37.973	37.980	37.965	37.115	38.815
1,4-Dinitrobenzene	13.770	13.750	13.753	13.760	13.760	13.746	13.754	12.904	14.604

6A

RETENTION TIMES OF INITIAL CALIBRATION

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/15/2011

Calibration Times: 23:38 03:55

GC Column: E1, 218nm ID: 4.1 (mm)

LAB FILE ID: RT7 = ZKEA019.d

COMPOUND	RT7						MEAN RT	RT WINDOW FROM	RT WINDOW TO
3,5-Dinitroaniline	17.240						14.805	13.855	15.755
Nitroglycerin	18.603						18.613	18.233	18.993
PETN	37.953						37.965	37.115	38.815
1,4-Dinitrobenzene	13.740						13.754	12.904	14.604

6B

ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/15/2011

Calibration Time(s): 23:38 03:55

GC Column: E1, 218nm ID: 4.1 (mm)

LAB FILE ID: RRF1 = ZKEA013.d RRF2 = ZKEA014.d RRF3 = ZKEA015.d RRF4 = ZKEA016.d

RRF5 = ZKEA017.d RRF6 = ZKEA018.d RRF7 = ZKEA019.d

COMPOUND	RRF1	RRF2	RRF3	RRF4	RRF5	CT
3,5-Dinitroaniline	753	748	756	761	747	A
Nitroglycerin	59.10000	64.46000	68.10200	68.20240	67.59760	A
PETN	53.02000	82.28400	78.83200	77.27440	77.91920	A
1,4-Dinitrobenzene	123	154	137	134	134	A

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

6B

ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Instrument ID: hpl1.i Calibration Date(s): 11/14/2011 11/15/2011

Calibration Time(s): 23:38 03:55

GC Column: E1, 218n ID: 4.1 (mm)

LAB FILE ID: RRF1 = ZKEA013.d RRF2 = ZKEA014.d RRF3 = ZKEA015.d RRF4 = ZKEA016.d

RRF5 = ZKEA017.d RRF6 = ZKEA018.d RRF7 = ZKEA019.d

COMPOUND	RRF6	RRF7	CT	b	m1	m2	% RSD or R^2
3,5-Dinitroaniline	745	650	A		737		5.24410
Nitroglycerin	68.42180	59.25520	A		65.01986		6.47771
PETN	78.06260	67.71130	A		73.58621		13.73671
1,4-Dinitrobenzene	130	118	A		133		8.79295

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

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EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
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Inj Date : 14-NOV-2011 23:38
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL1
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 23:38 Cal File: ZKEA013.RAW
Als bottle: 58 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

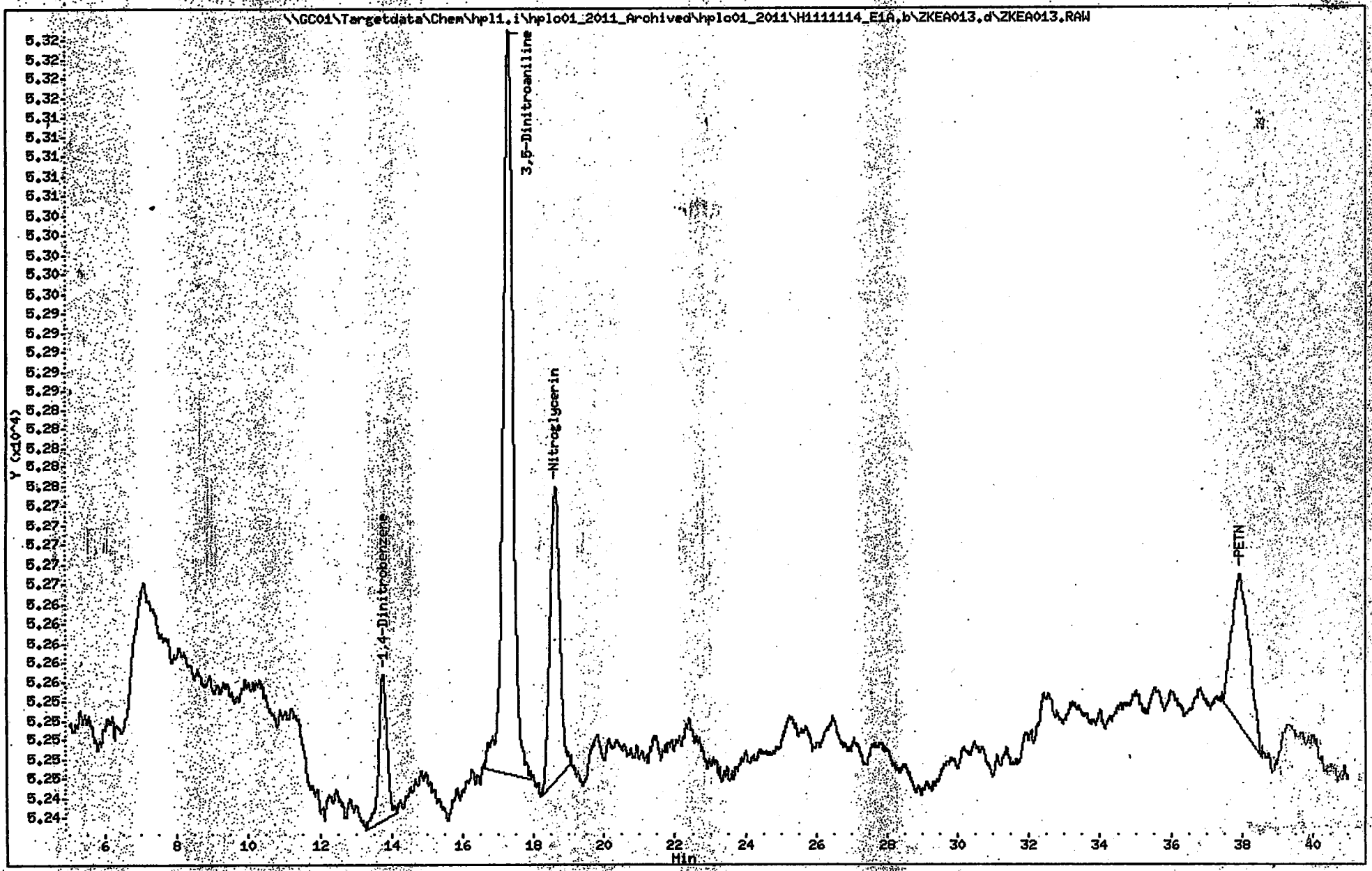
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.770	13.740	0.030	2451	20.0000	18.4529(a)
4	Nitroglycerin	18.623	18.603	0.020	5910	100.000	90.8953(a)
5	PETN	37.956	37.953	0.003	5302	100.000	71.1054(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA013.d
Date : 14-NOV-2011 23:38
Client ID:
Sample Info: LEVEL1
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: LEVEL2
Inj Date : 15-NOV-2011 00:21
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL2
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 00:21 Cal File: ZKEA014.RAW
Als bottle: 58 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.750	13.740	0.010	7715	50.0000	58.0840
3	3,5-Dinitroaniline	17.273	17.239	0.034	37401	50.0000	50.7430(a)
4	Nitroglycerin	18.600	18.603	-0.003	16115	250.000	247.847(a)
5	PETN	37.960	37.953	0.007	20571	250.000	275.879(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA014.d

Date : 15-NOV-2011 00:21

Client ID:

Instrument: hpl1.i

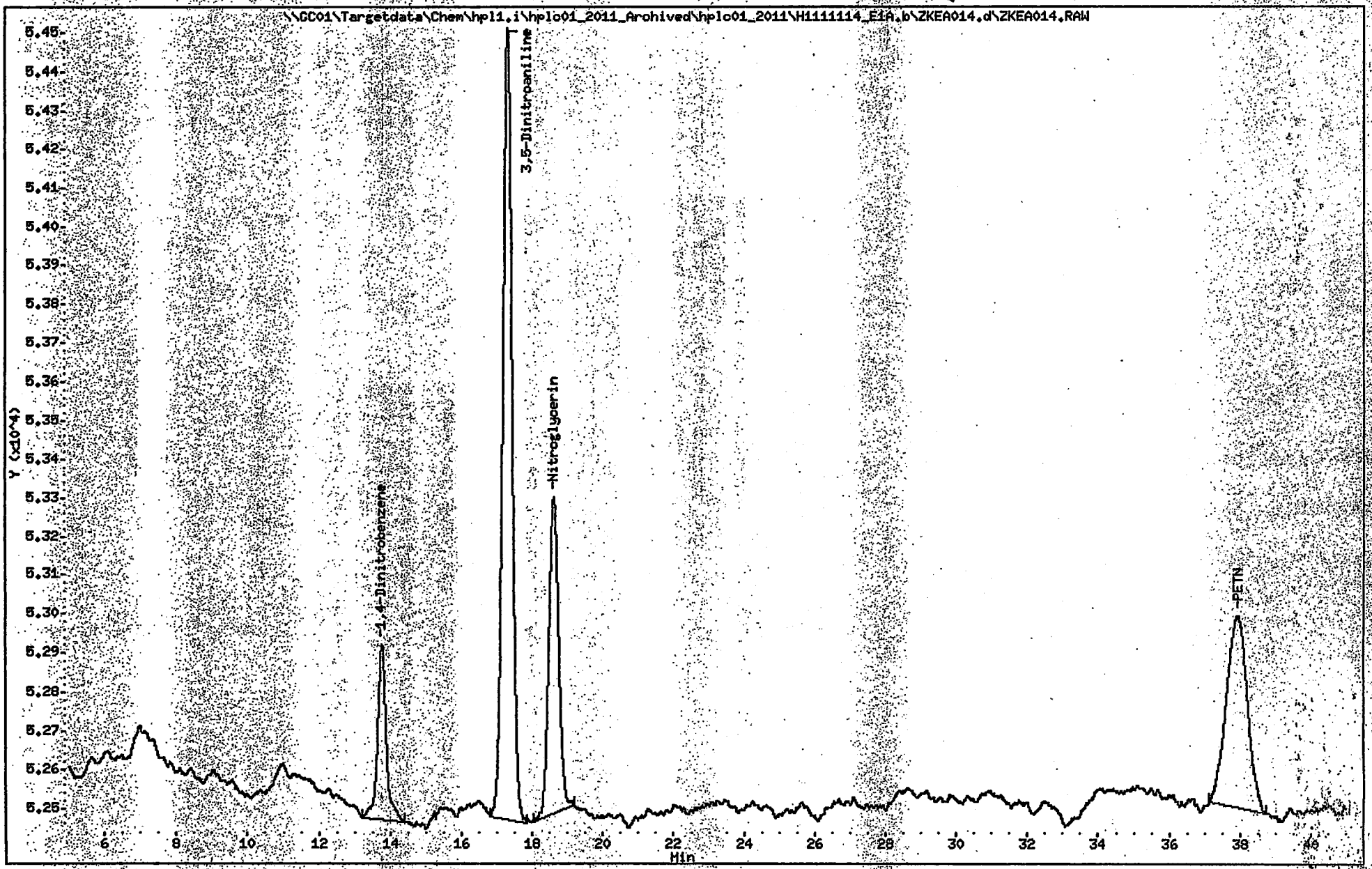
Sample Info: LEVEL2

Operator: AJL

Volume Injected (uL): 100.0

Column phase: E1

Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: LEVEL3
Inj Date : 15-NOV-2011 01:04
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL3
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 01:04 Cal File: ZKEA015.RAW
Als bottle: 58 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$	1 1,4-Dinitrobenzene	13.753	13.740	0.013	13699	100.000	103.136
	3 3,5-Dinitroaniline	17.280	17.239	0.041	75560	100.000	102.514
	4 Nitroglycerin	18.613	18.603	0.010	34051	500.000	523.702
	5 PETN	37.960	37.953	0.007	39416	500.000	528.610

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA015.d

Page: 2

Date : 15-NOV-2011 01:04

Client ID:

Instrument: hpl1.i

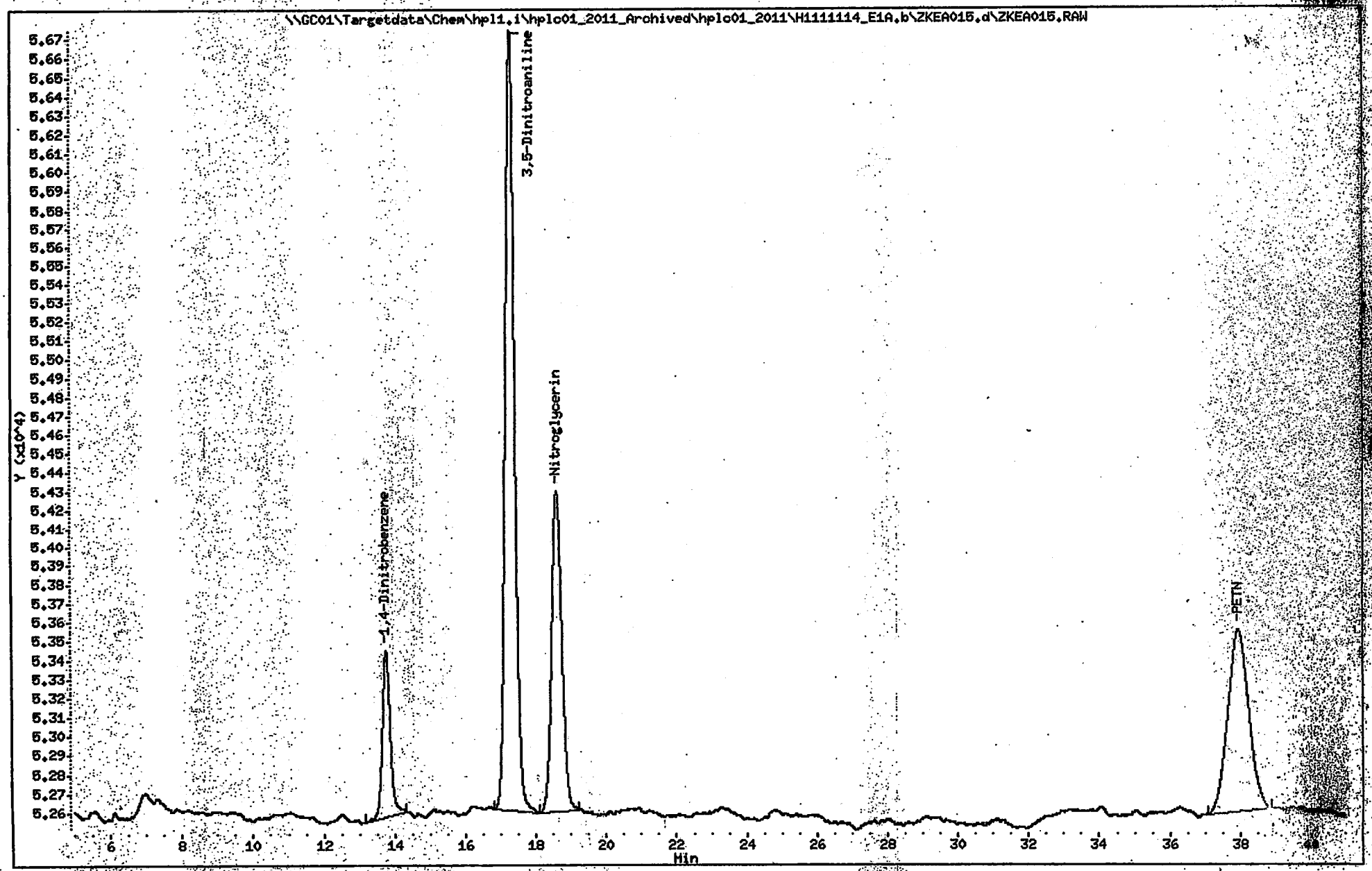
Sample Info: LEVEL3

Operator: AJL

Volume Injected (uL): 100.0

Column phase: E1

Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
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Inj Date : 15-NOV-2011 01:46
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL4
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 01:46 Cal File: ZKEA016.RAW
Als bottle: 58 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.760	13.740	0.020	33422	250.000	251.625
3	3,5-Dinitroaniline	17.290	17.239	0.051	190204	250.000	258.055
4	Nitroglycerin	18.620	18.603	0.017	85253	1250.00	1311.18
5	PETN	37.970	37.953	0.017	96593	1250.00	1295.41

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA016.d

Date : 15-NOV-2011 01:46

Client ID:

Sample Info: LEVEL4

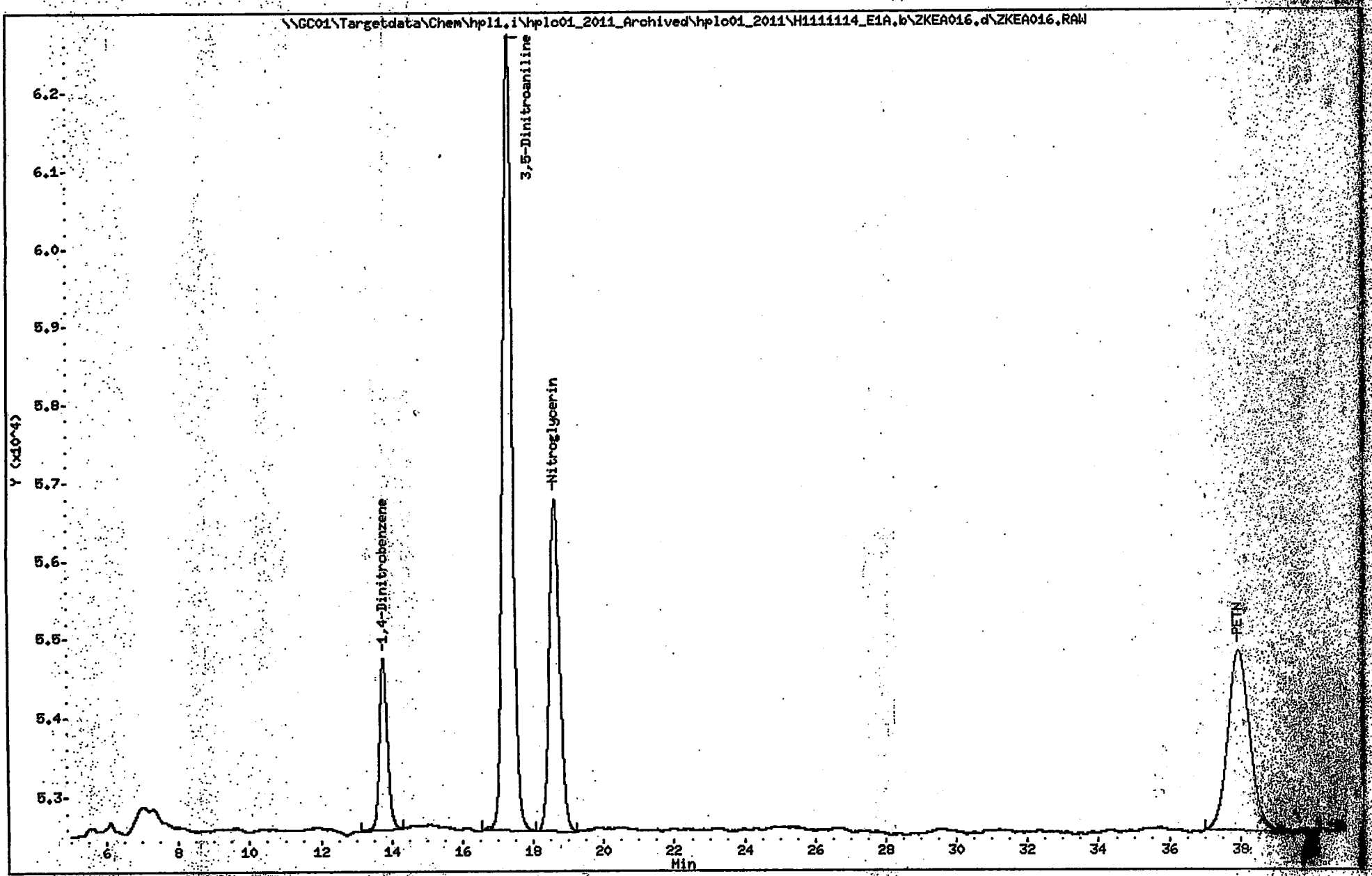
Volume Injected (uL): 100.0

Column phase: E1

Instrument: hpl1.i

Operator: AJL

Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: LEVEL5
Inj Date : 15-NOV-2011 02:29
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL5
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 02:29 Cal File: ZKEA017.RAW
Als bottle: 58 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.760	13.740	0.020	67134	500.000	505.433
3	3,5-Dinitroaniline	17.286	17.239	0.047	373417	500.000	506.626
4	Nitroglycerin	18.620	18.603	0.017	168994	2500.00	2599.11
5	PETN	37.973	37.953	0.020	194798	2500.00	2612.45

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA017.d

Page 2

Date : 15-NOV-2011 02:29

Client ID:

Instrument: hpl1.i

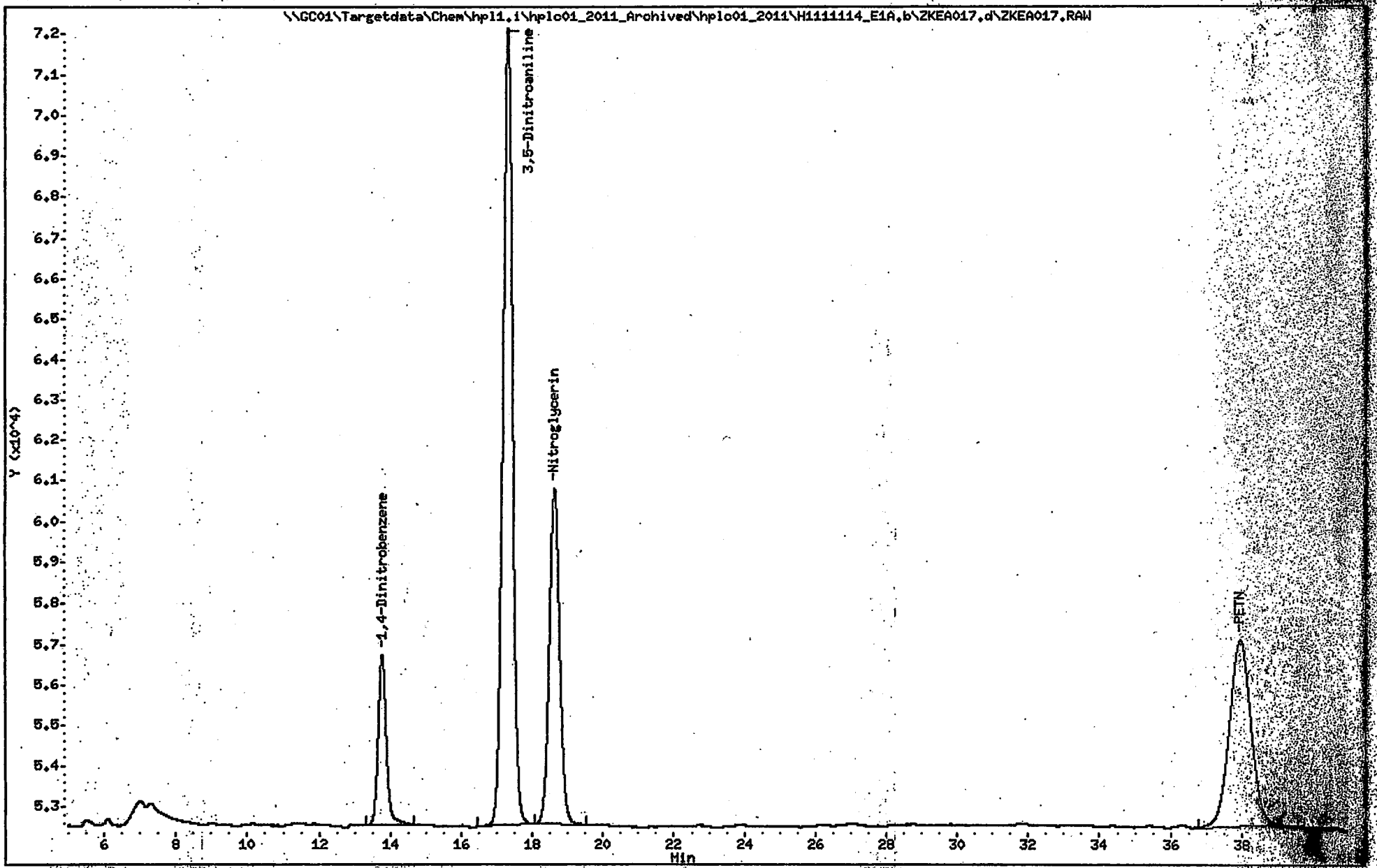
Sample Info: LEVEL5

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: LEVEL6
Inj Date : 15-NOV-2011 03:12
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL6
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:12 Cal File: ZKEA018.RAW
Als bottle: 58 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.746	13.740	0.006	130127	1000.00	979.689
3	3,5-Dinitroaniline	17.263	17.239	0.024	745369	1000.00	1011.26
4	Nitroglycerin	18.610	18.603	0.007	342109	5000.00	5261.61
5	PETN	37.980	37.953	0.027	390313	5000.00	5234.51

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA018.d

Date : 15-NOV-2011 03:12

Client ID:

Sample Info: LEVEL6

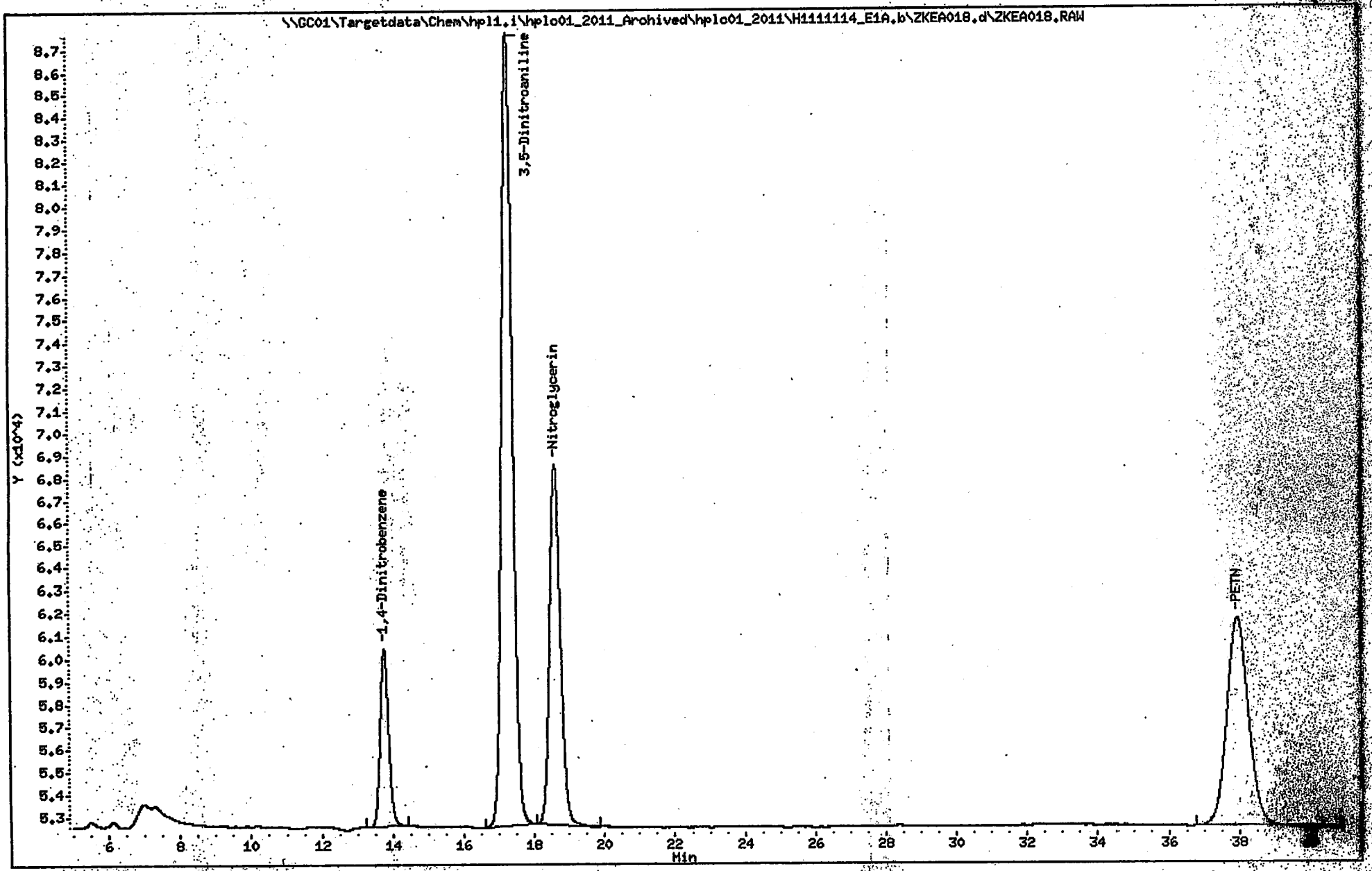
Volume Injected (uL): 100.0

Column phase: E1

Instrument: hpl1.i

Operator: AJL

Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: LEVEL7
Inj Date : 15-NOV-2011 03:55
Operator : AJL Inst ID: hpl1.i
Smp Info : LEVEL7
Misc Info : 058
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.RAW
Als bottle: 58 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

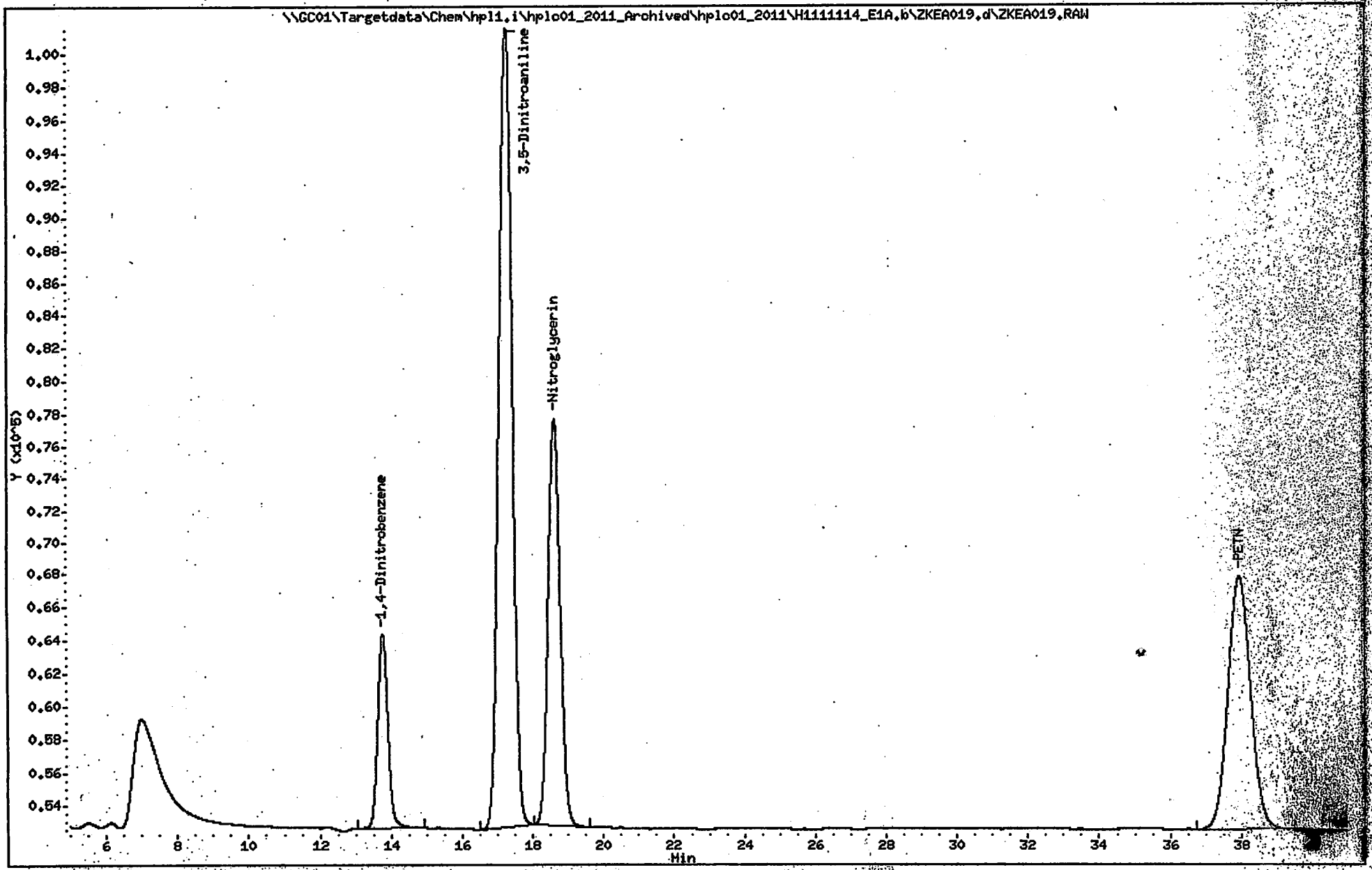
Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$	1 1,4-Dinitrobenzene	13.740	13.740	0.000	235702	2000.00	1774.53
	3 3,5-Dinitroaniline	17.240	17.239	0.001	1300553	2000.00	1764.50
	4 Nitroglycerin	18.603	18.603	0.000	592552	10000.0	9113.40
	5 PETN	37.953	37.953	0.000	677113	10000.0	9080.80

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111114_E1A.b\ZKEA019.d
Date : 15-NOV-2011 03:55
Client ID:
Sample Info: LEVEL7
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



Continuing Calibrations

CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

GC Column: E1, 254nm ID: 4.1 (mm) Calibration Date: 8/8/2012 Time: 12:21

Sample No.(CC): CCV1 Initi. Calib. Date(s): 11/14/2011 11/14/2011

Lab Sample No.(CC): CCV1 Initi. Calib. Time(s): 17:54 22:12

File ID: ZH8B001.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
2-Amino-4,6-dinitrotoluene	24.700	23.850	25.550	288	287	-0.2
4-Amino-2,6-dinitrotoluene	23.536	22.686	24.386	215	222	3.2
1,3-Dinitrobenzene	15.320	15.030	15.610	429	420	-2.2
2,4-Dinitrotoluene	26.900	26.350	27.450	392	389	-0.8
2,6-Dinitrotoluene	25.960	25.420	26.500	213	211	-1.0
HMX	4.983	4.713	5.253	125	130	4.8
Nitrobenzene	17.203	16.883	17.523	262	263	0.2
4-Nitrotoluene	33.993	33.313	34.673	130	136	5.0
2-Nitrotoluene	31.233	30.653	31.813	166	184	10.4
3-Nitrotoluene	36.413	35.703	37.123	176	195	10.8
RDX	8.403	8.123	8.683	151	151	0.0
Tetryl	18.450	17.790	19.110	257	249	-3.3
1,3,5-Trinitrobenzene	11.893	11.693	12.093	326	347	6.4
2,4,6-Trinitrotoluene	21.196	20.736	21.656	305	287	-5.7
1,4-Dinitrobenzene	13.736	12.886	14.586	339	343	1.2

The Absolute Value of %D must be less than or equal to 20% (15) GEF 3/21/12

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B001.d
Lab Smp Id: CCV1
Inj Date : 08-AUG-2012 12:21
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV1;AJL;2
Misc Info : 045
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 45 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

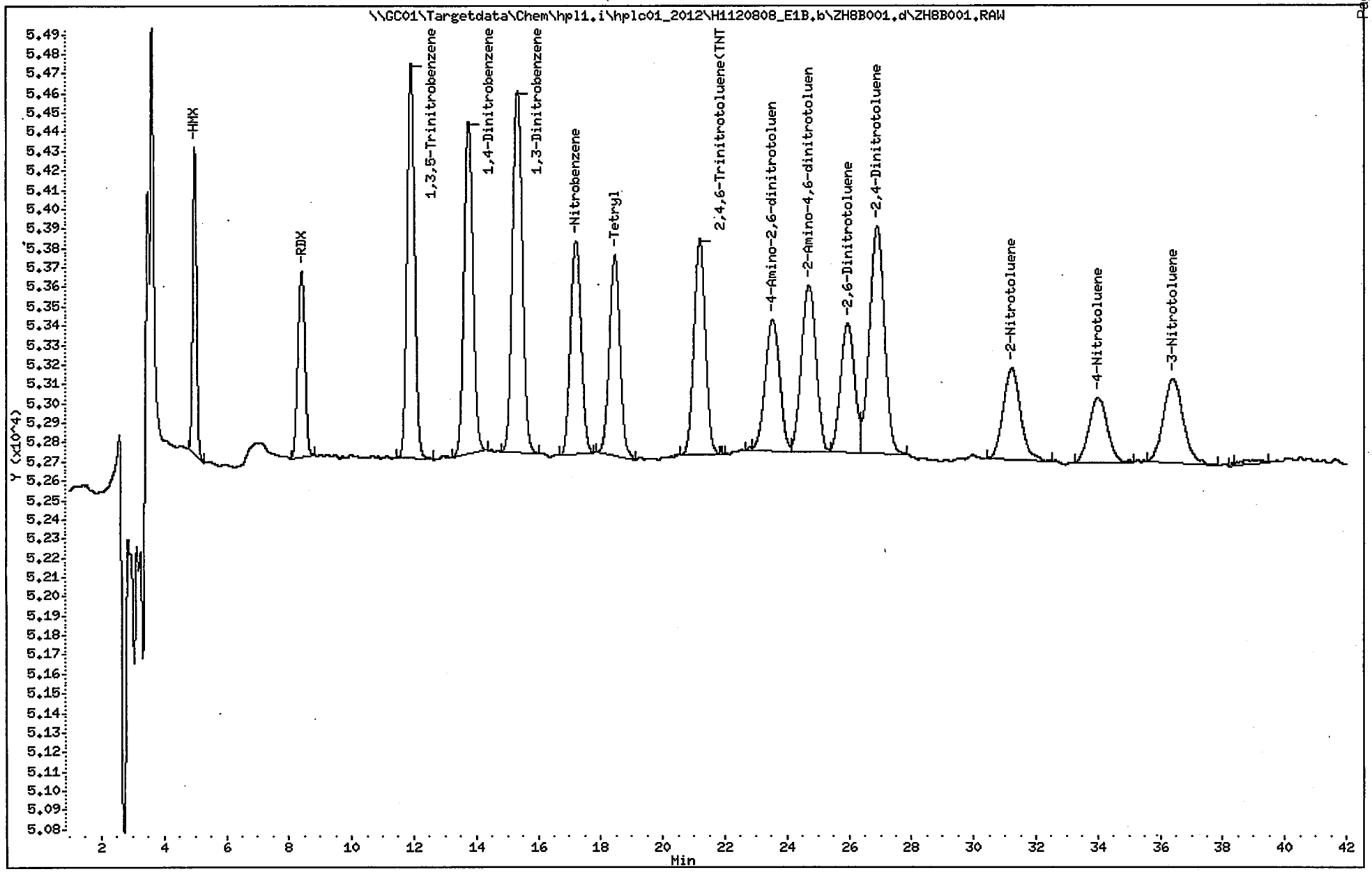
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.983	4.980	0.003	13049	100.000	104.803
2	RDX	8.403	8.376	0.027	15122	100.000	99.9906
3	1,3,5-Trinitrobenzene	11.893	11.833	0.060	34683	100.000	106.350
$ 4	1,4-Dinitrobenzene	13.736	13.673	0.063	34316	100.000	101.238
5	1,3-Dinitrobenzene	15.320	15.240	0.080	41967	100.000	97.7786
6	Nitrobenzene	17.203	17.123	0.080	26281	100.000	100.219
7	Tetryl	18.450	18.323	0.127	24879	100.000	96.7331
8	2,4,6-Trinitrotoluene(TNT)	21.196	21.066	0.130	28744	100.000	94.2515
9	4-Amino-2,6-dinitrotoluene	23.536	23.406	0.130	22204	100.000	103.174
10	2-Amino-4,6-dinitrotoluene	24.700	24.553	0.147	28701	100.000	99.7762
11	2,6-Dinitrotoluene	25.960	25.810	0.150	21134	100.000	98.9912
12	2,4-Dinitrotoluene	26.900	26.740	0.160	38874	100.000	99.2498
13	2-Nitrotoluene	31.233	31.060	0.173	18357	100.000	110.446
14	4-Nitrotoluene	33.993	33.830	0.163	13631	100.000	104.976
15	3-Nitrotoluene	36.413	36.200	0.213	19495	100.000	110.831

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B001.d
Date : 08-AUG-2012 12:21
Client ID:
Sample Info: CCV1;AJL;2
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



7D

CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

GC Column: E1, 218nm ID: 4.1 (mm) Calibration Date: 8/8/2012 Time: 13:05

Sample No.(CC): CCV2 Initi. Calib. Date(s): 11/14/2011 11/15/2011

Lab Sample No.(CC): CCV2 Initi. Calib. Time(s): 23:38 03:55

File ID: ZH8A002.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
3,5-Dinitroaniline	17.253	16.303	18.203	737	681	-7.6
Nitroglycerin	18.790	18.410	19.170	65	62	-4.0
PETN	38.503	37.653	39.353	75	76	2.2
1,4-Dinitrobenzene	13.746	12.896	14.596	133	129	-2.8

The Absolute Value of %D must be less than or equal to 20% 15 8/21/12

FORM VII

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A002.d
Lab Smp Id: CCV2
Inj Date : 08-AUG-2012 13:05
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV2;AJL;2
Misc Info : 111
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

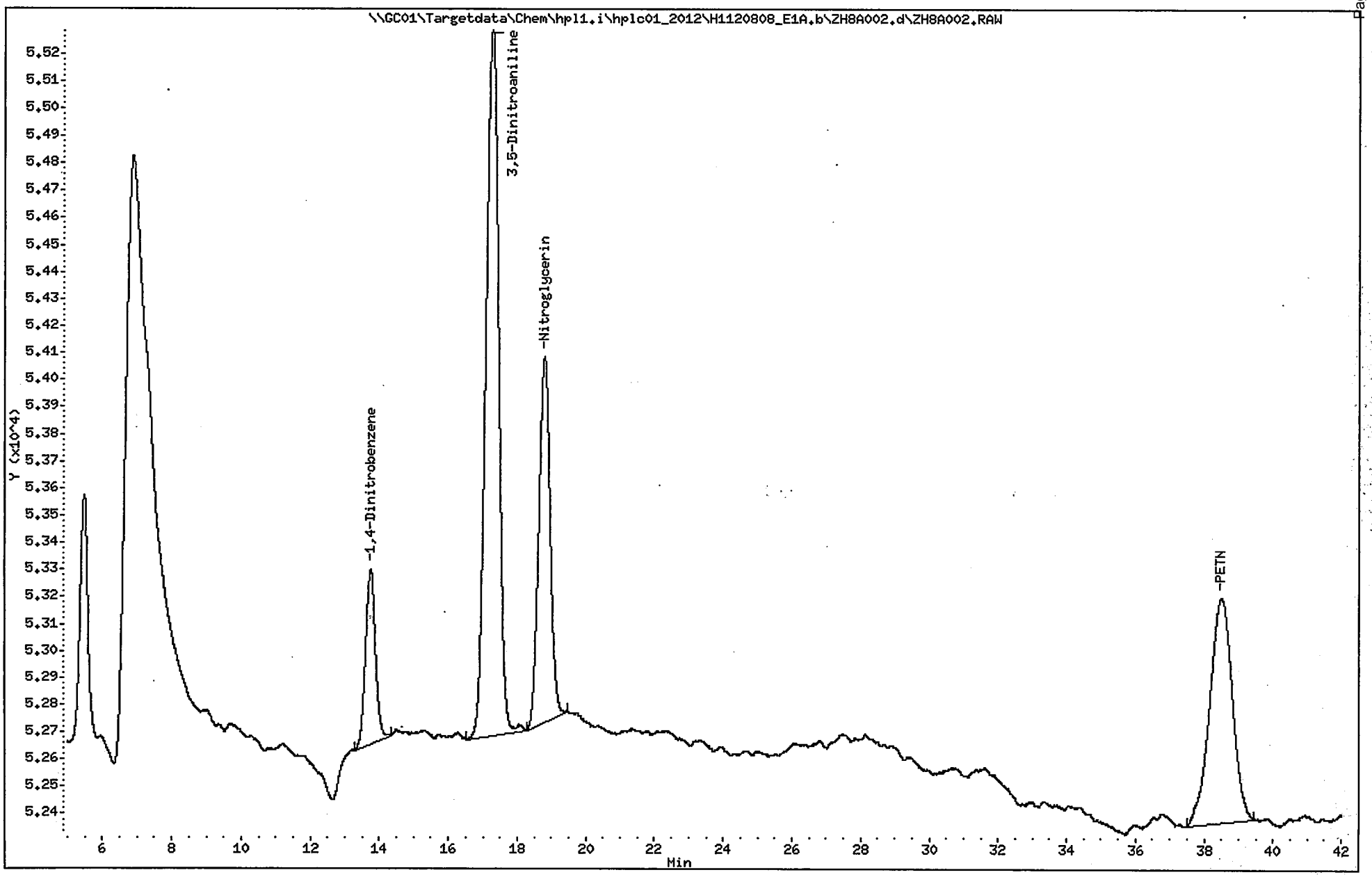
Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
$	1 1,4-Dinitrobenzene	13.746	13.663	0.083	12917	100.000	97.2484
	3 3,5-Dinitroaniline	17.253	17.153	0.100	68129	100.000	92.4326
	4 Nitroglycerin	18.790	18.663	0.127	31207	500.000	479.961
	5 PETN	38.503	38.173	0.330	38100	500.000	510.961

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A002.d
Date : 08-AUG-2012 13:05
Client ID:
Sample Info: CCV2;AJL;2
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

GC Column: E1, 254nm ID: 4.1 (mm) Calibration Date: 8/8/2012 Time: 23:09

Sample No.(CC): CCV1 Initi. Calib. Date(s): 11/14/2011 11/14/2011

Lab Sample No.(CC): CCV1 Initi. Calib. Time(s): 17:54 22:12

File ID: ZH8B015.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
2-Amino-4,6-dinitrotoluene	24.556	23.706	25.406	288	287	-0.3
4-Amino-2,6-dinitrotoluene	23.403	22.553	24.253	215	212	-1.3
1,3-Dinitrobenzene	15.253	14.963	15.543	429	424	-1.2
2,4-Dinitrotoluene	26.743	26.193	27.293	392	393	0.3
2,6-Dinitrotoluene	25.813	25.273	26.353	213	220	2.8
HMX	4.980	4.710	5.250	125	130	4.6
Nitrobenzene	17.133	16.813	17.453	262	279	6.4
4-Nitrotoluene	33.853	33.173	34.533	130	132	1.9
2-Nitrotoluene	31.070	30.490	31.650	166	178	7.2
3-Nitrotoluene	36.250	35.540	36.960	176	175	-0.6
RDX	8.383	8.103	8.663	151	158	4.5
Tetryl	18.336	17.676	18.996	257	223	-13.3
1,3,5-Trinitrobenzene	11.843	11.643	12.043	326	348	6.7
2,4,6-Trinitrotoluene	21.070	20.610	21.530	305	303	-0.7
1,4-Dinitrobenzene	13.680	12.830	14.530	339	351	3.7

The Absolute Value of %D must be less than or equal to ~~20~~ 15% SEF 8/21/12

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B015.d
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Inj Date : 08-AUG-2012 23:09
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV1;AJL;2
Misc Info : 125
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

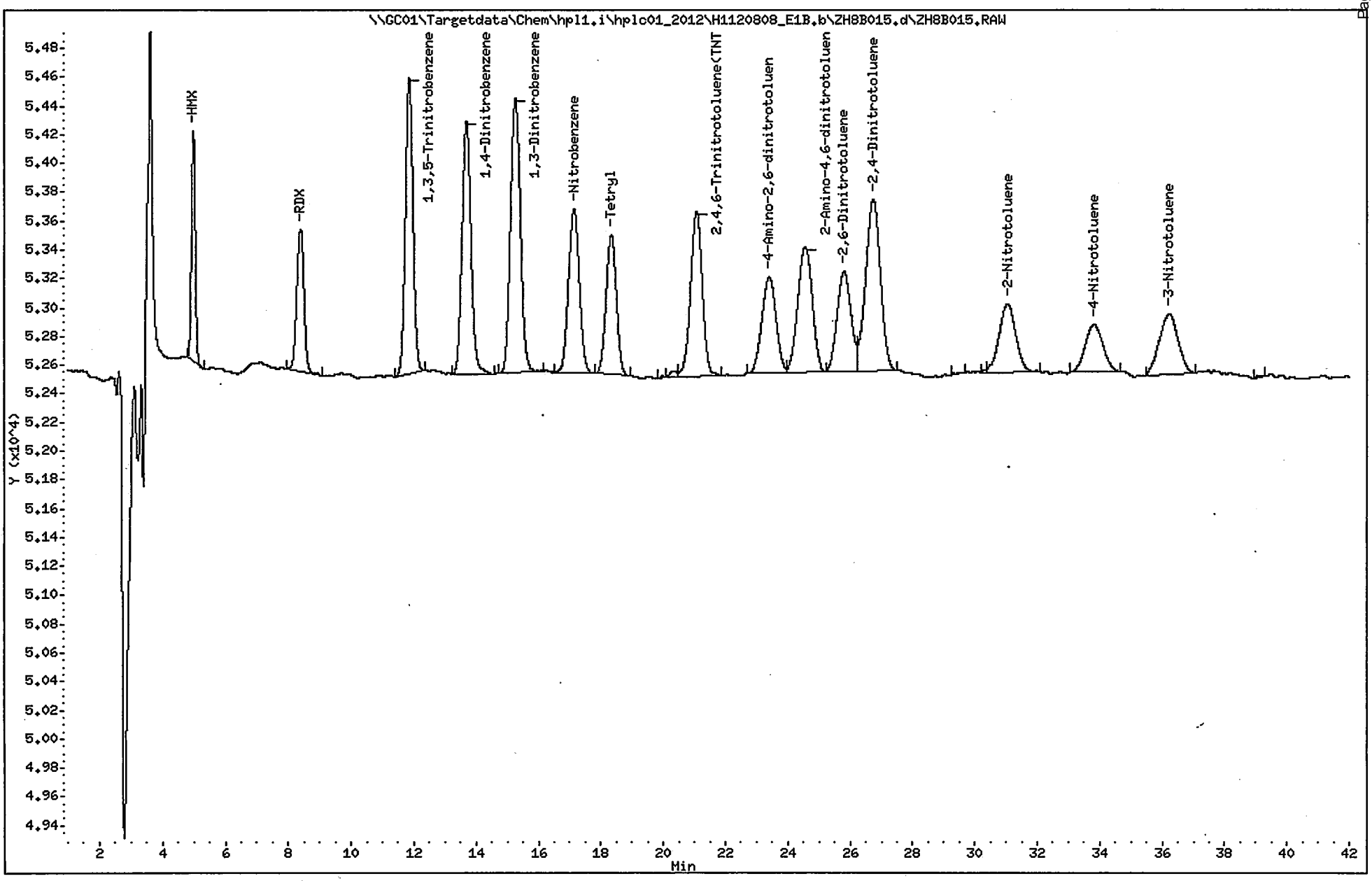
Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.980	4.980	0.000	13018	100.000	104.554
2	RDX	8.383	8.376	0.007	15801	100.000	104.480
3	1,3,5-Trinitrobenzene	11.843	11.833	0.010	34794	100.000	106.691
$ 4	1,4-Dinitrobenzene	13.680	13.673	0.007	35141	100.000	103.672
5	1,3-Dinitrobenzene	15.253	15.240	0.013	42387	100.000	98.7572
6	Nitrobenzene	17.133	17.123	0.010	27902	100.000	106.401
7	Tetryl	18.336	18.323	0.013	22298	100.000	86.6978
8	2,4,6-Trinitrotoluene(TNT)	21.070	21.066	0.004	30290	100.000	99.3208
9	4-Amino-2,6-dinitrotoluene	23.403	23.406	-0.003	21244	100.000	98.7135
10	2-Amino-4,6-dinitrotoluene	24.556	24.553	0.003	28690	100.000	99.7380
11	2,6-Dinitrotoluene	25.813	25.810	0.003	21951	100.000	102.818
12	2,4-Dinitrotoluene	26.743	26.740	0.003	39302	100.000	100.343
13	2-Nitrotoluene	31.070	31.060	0.010	17821	100.000	107.221
14	4-Nitrotoluene	33.853	33.830	0.023	13232	100.000	101.903
15	3-Nitrotoluene	36.250	36.200	0.050	17492	100.000	99.4441

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B015.d
Date : 08-AUG-2012 23:09
Client ID:
Sample Info: CCV1;AJL;2
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

GC Column: E1, 218nm ID: 4.1 (mm) Calibration Date: 8/8/2012 Time: 23:53

Sample No.(CC): CCV2 Initi. Calib. Date(s): 11/14/2011 11/15/2011

Lab Sample No.(CC): CCV2 Initi. Calib. Time(s): 23:38 03:55

File ID: ZH8A016.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
3,5-Dinitroaniline	17.190	16.240	18.140	737	719	-2.5
Nitroglycerin	18.720	18.340	19.100	65	67	2.3
PETN	38.253	37.403	39.103	75	73	-2.3
1,4-Dinitrobenzene	13.703	12.853	14.553	133	126	-4.8

The Absolute Value of %D must be less than or equal to ~~20%~~ 15 8/21/12

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A016.d
Lab Smp Id: CCV2
Inj Date : 08-AUG-2012 23:53
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV2;AJL;2
Misc Info : 129
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
$ 1	1,4-Dinitrobenzene	13.703	13.663	0.040	12643	100.000	95.1855
3	3,5-Dinitroaniline	17.190	17.153	0.037	71877	100.000	97.5177
4	Nitroglycerin	18.720	18.663	0.057	33264	500.000	511.598
5	PETN	38.253	38.173	0.080	36435	500.000	488.632

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A016.d

Date : 08-AUG-2012 23:53

Client ID:

Instrument: hpl1.i

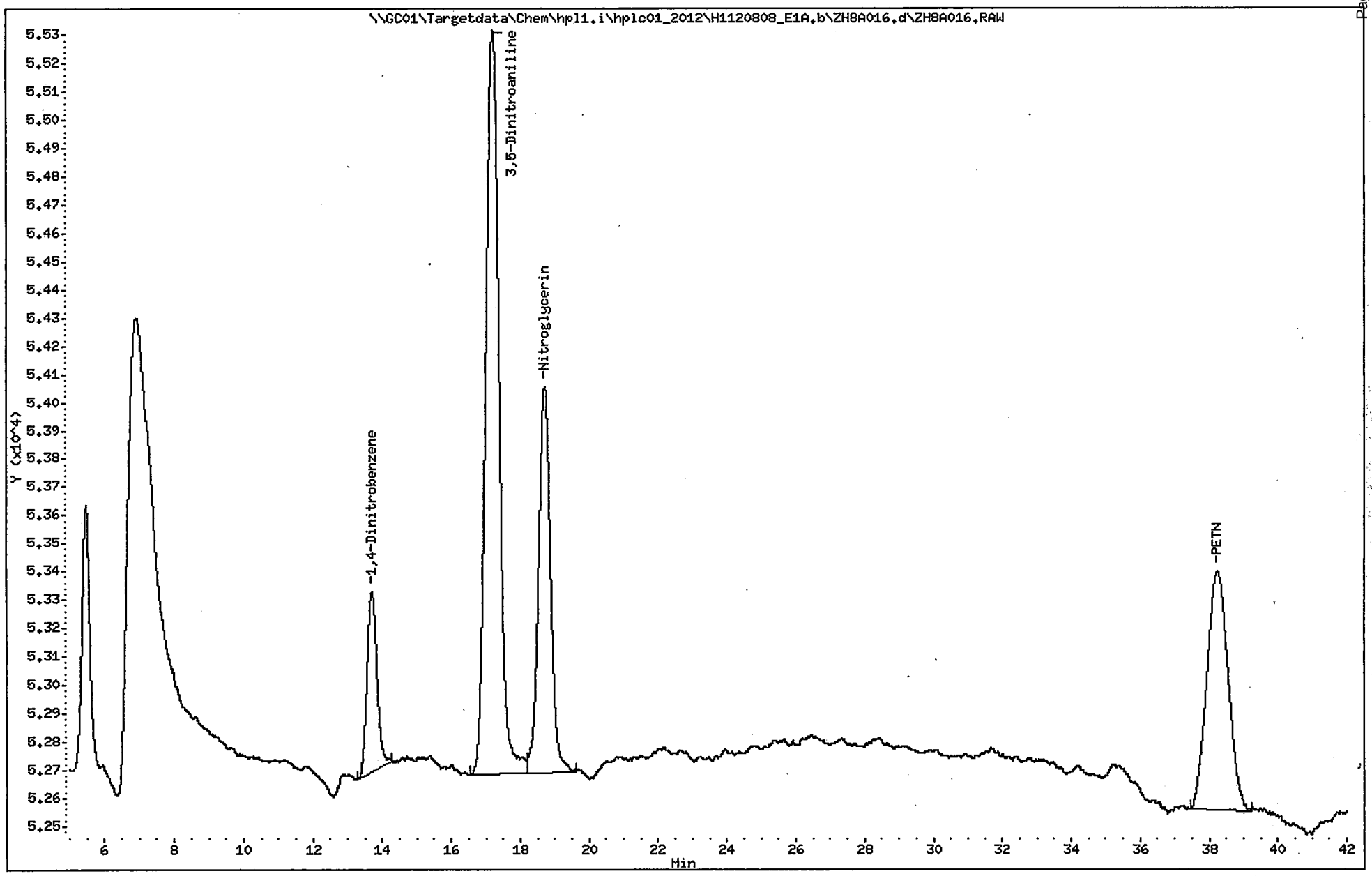
Sample Info: CCV2;AJL;2

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

GC Column: E1, 254nm ID: 4.1 (mm) Calibration Date: 8/9/2012 Time: 09:26

Sample No.(CC): CCV1 Initi. Calib. Date(s): 11/14/2011 11/14/2011

Lab Sample No.(CC): CCV1 Initi. Calib. Time(s): 17:54 22:12

File ID: ZH8B029.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
2-Amino-4,6-dinitrotoluene	24.553	23.703	25.403	288	281	-2.3
4-Amino-2,6-dinitrotoluene	23.406	22.556	24.256	215	217	1.0
1,3-Dinitrobenzene	15.240	14.950	15.530	429	425	-1.0
2,4-Dinitrotoluene	26.740	26.190	27.290	392	389	-0.6
2,6-Dinitrotoluene	25.810	25.270	26.350	213	211	-1.2
HMX	4.980	4.710	5.250	125	136	9.3
Nitrobenzene	17.123	16.803	17.443	262	265	1.0
4-Nitrotoluene	33.830	33.150	34.510	130	121	-6.7
2-Nitrotoluene	31.060	30.480	31.640	166	164	-1.4
3-Nitrotoluene	36.200	35.490	36.910	176	172	-2.0
RDX	8.376	8.096	8.656	151	157	4.1
Tetryl	18.323	17.663	18.983	257	252	-2.1
1,3,5-Trinitrobenzene	11.833	11.633	12.033	326	357	9.6
2,4,6-Trinitrotoluene	21.066	20.606	21.526	305	301	-1.3
1,4-Dinitrobenzene	13.673	12.823	14.523	339	371	9.4

The Absolute Value of %D must be less than or equal to ~~20%~~ 15 8/21/12

ALS -,Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B029.d
Lab Smp Id: CCV1
Inj Date : 09-AUG-2012 09:26
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV1;AJL;2
Misc Info : 130
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.980	4.980	0.000	13610	100.000	109.308
2	RDX	8.376	8.376	0.000	15741	100.000	104.084
3	1,3,5-Trinitrobenzene	11.833	11.833	0.000	35744	100.000	109.604
$ 4	1,4-Dinitrobenzene	13.673	13.673	0.000	37086	100.000	109.410
5	1,3-Dinitrobenzene	15.240	15.240	0.000	42493	100.000	99.0042
6	Nitrobenzene	17.123	17.123	0.000	26491	100.000	101.020
7	Tetryl	18.323	18.323	0.000	25176	100.000	97.8879
8	2,4,6-Trinitrotoluene(TNT)	21.066	21.066	0.000	30108	100.000	98.7240
9	4-Amino-2,6-dinitrotoluene	23.406	23.406	0.000	21741	100.000	101.023
10	2-Amino-4,6-dinitrotoluene	24.553	24.553	0.000	28104	100.000	97.7008
11	2,6-Dinitrotoluene	25.810	25.810	0.000	21101	100.000	98.8367
12	2,4-Dinitrotoluene	26.740	26.740	0.000	38946	100.000	99.4336
13	2-Nitrotoluene	31.060	31.060	0.000	16382	100.000	98.5630
14	4-Nitrotoluene	33.830	33.830	0.000	12117	100.000	93.3164
15	3-Nitrotoluene	36.200	36.200	0.000	17237	100.000	97.9944

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B029.d

Date : 09-AUG-2012 09:26

Client ID:

Sample Info: CCV1;AJL;2

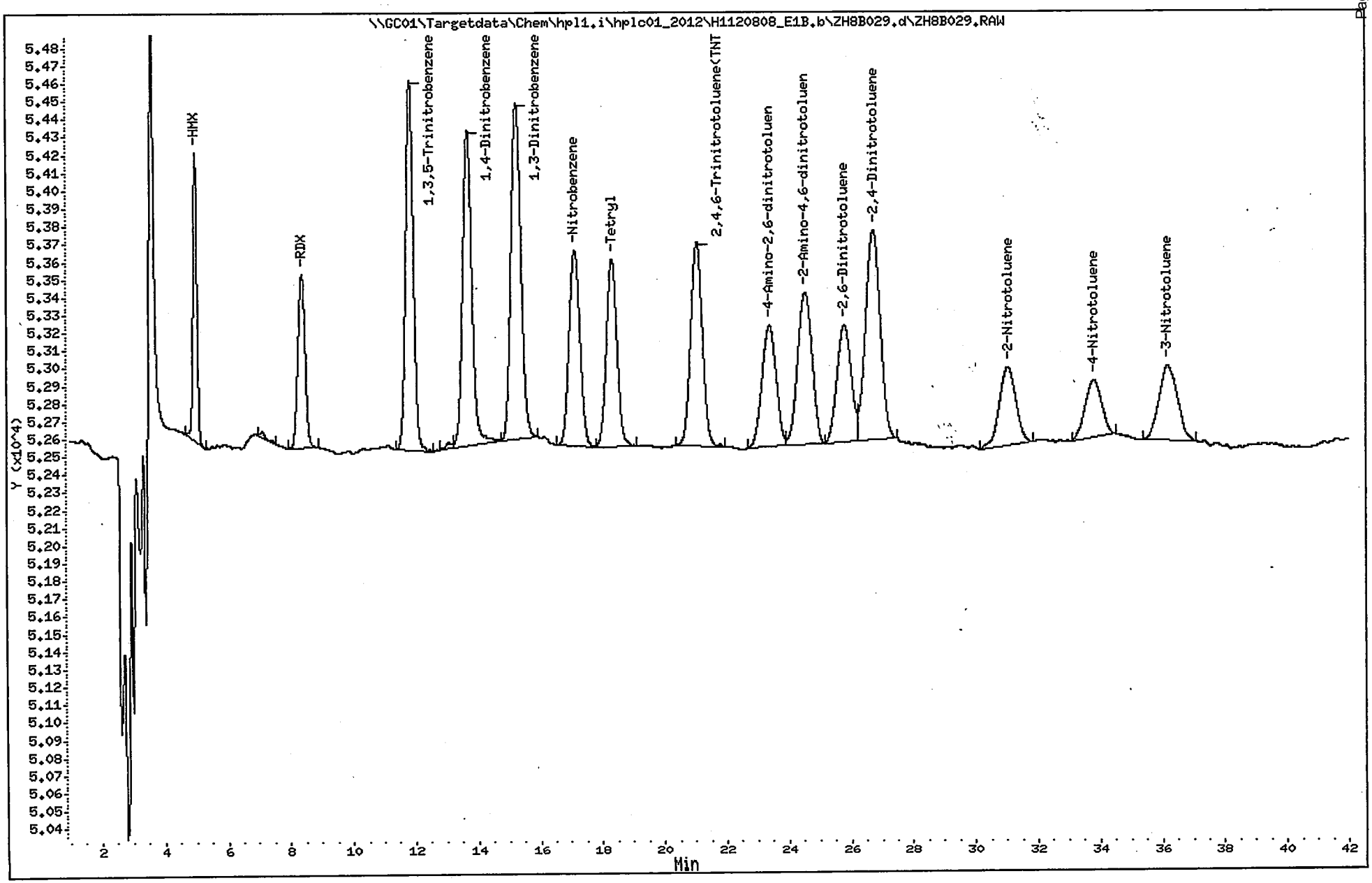
Volume Injected (uL): 100.0

Column phase: E1

Instrument: hpl1.i

Operator: AJL

Column diameter: 4.60



CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

GC Column: E1, 218nm ID: 4.1 (mm) Calibration Date: 8/9/2012 Time: 10:10

Sample No.(CC): CCV2 Initi. Calib. Date(s): 11/14/2011 11/15/2011

Lab Sample No.(CC): CCV2 Initi. Calib. Time(s): 23:38 03:55

File ID: ZH8A030.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
3,5-Dinitroaniline	17.153	16.203	18.103	737	715	-3.0
Nitroglycerin	18.663	18.283	19.043	65	69	5.6
PETN	38.173	37.323	39.023	75	78	5.0
1,4-Dinitrobenzene	13.663	12.813	14.513	133	120	-9.7

The Absolute Value of %D must be less than or equal to ~~20~~ 15% 8/21/12

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A030.d
Lab Smp Id: CCV2
Inj Date : 09-AUG-2012 10:10
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV2;AJL;2;;;;;;;;
Misc Info : 130
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
$	1 1,4-Dinitrobenzene	13.663	13.663	0.000	11994	100.000	90.2994
	3 3,5-Dinitroaniline	17.153	17.153	0.000	71529	100.000	97.0455
	4 Nitroglycerin	18.663	18.663	0.000	34328	500.000	527.962
	5 PETN	38.173	38.173	0.000	39155	500.000	525.110

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A030.d

Date : 09-AUG-2012 10:10

Client ID:

Sample Info: CCV2;AJL;2;;;;;;;;

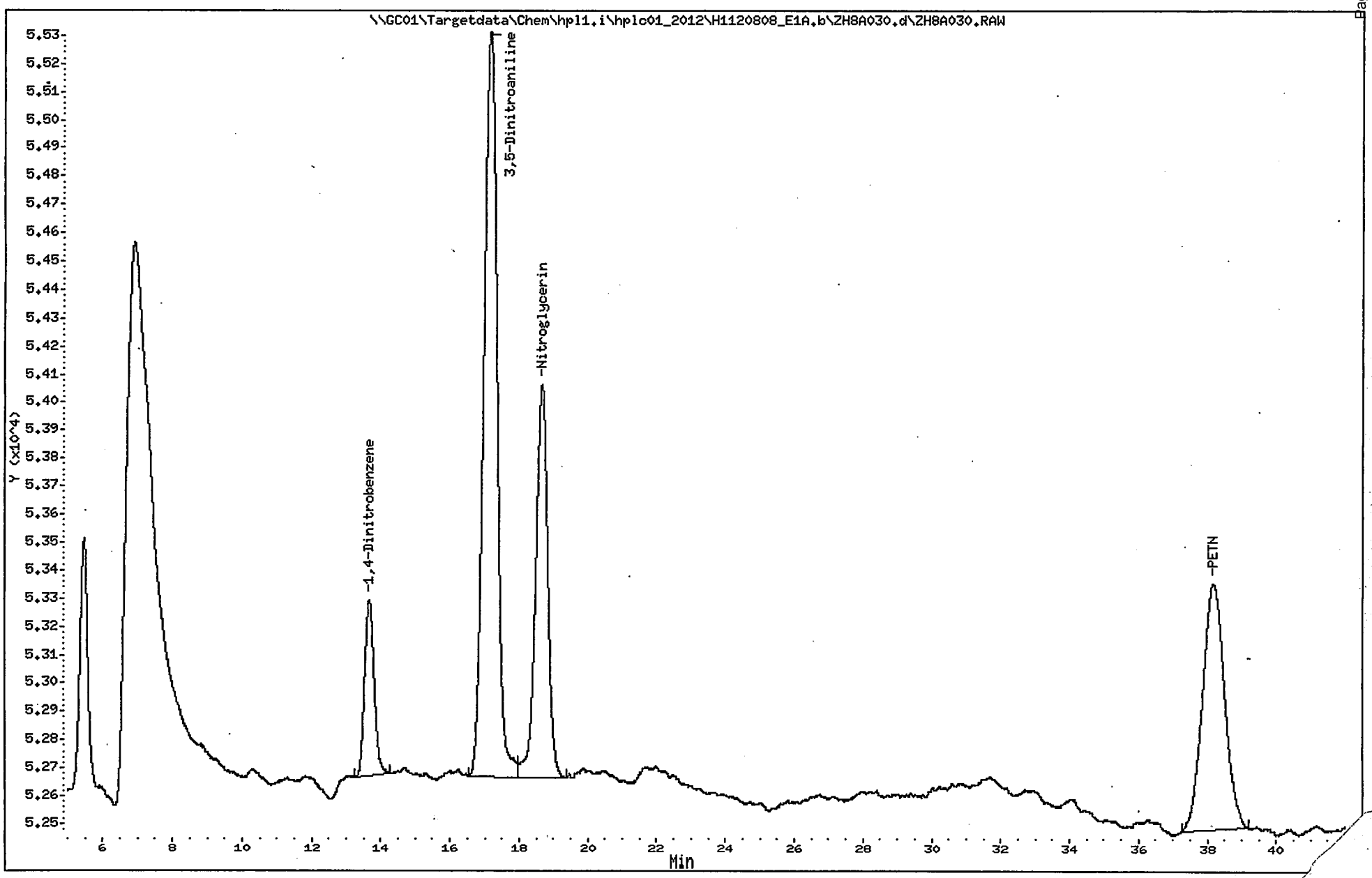
Volume Injected (uL): 100.0

Column phase: E1

Instrument: hpl1.i

Operator: AJL

Column diameter: 4.60



7D

CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

GC Column: E1, 254nm ID: 4.1 (mm) Calibration Date: 8/9/2012 Time: 20:20

Sample No.(CC): CCV1 Initi. Calib. Date(s): 11/14/2011 11/14/2011

Lab Sample No.(CC): CCV1 Initi. Calib. Time(s): 17:54 22:12

File ID: ZH8B043.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
2-Amino-4,6-dinitrotoluene	24.490	23.640	25.340	288	320	11.4
4-Amino-2,6-dinitrotoluene	23.340	22.490	24.190	215	231	7.5
1,3-Dinitrobenzene	15.216	14.926	15.506	429	424	-1.1
2,4-Dinitrotoluene	26.676	26.126	27.226	392	419	7.0
2,6-Dinitrotoluene	25.756	25.216	26.296	213	235	10.2
HMX	4.973	4.703	5.243	125	132	5.7
Nitrobenzene	17.100	16.780	17.420	262	288	9.7
4-Nitrotoluene	33.723	33.043	34.403	130	145	11.6
2-Nitrotoluene	31.016	30.436	31.596	166	170	2.2
3-Nitrotoluene	36.133	35.423	36.843	176	174	-1.3
RDX	8.366	8.086	8.646	151	156	3.3
Tetryl	18.280	17.620	18.940	257	259	0.7
1,3,5-Trinitrobenzene	11.813	11.613	12.013	326	350	7.4
2,4,6-Trinitrotoluene	21.010	20.550	21.470	305	291	-4.4
1,4-Dinitrobenzene	13.653	12.803	14.503	339	351	3.5

The Absolute Value of %D must be less than or equal to ~~20~~ 15 % 8/21/12

FORM VII

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B043.d
Lab Smp Id: CCV1
Inj Date : 09-AUG-2012 20:20
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV1;AJL;2
Misc Info : 131
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_254
Meth Date : 10-Aug-2012 09:44 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

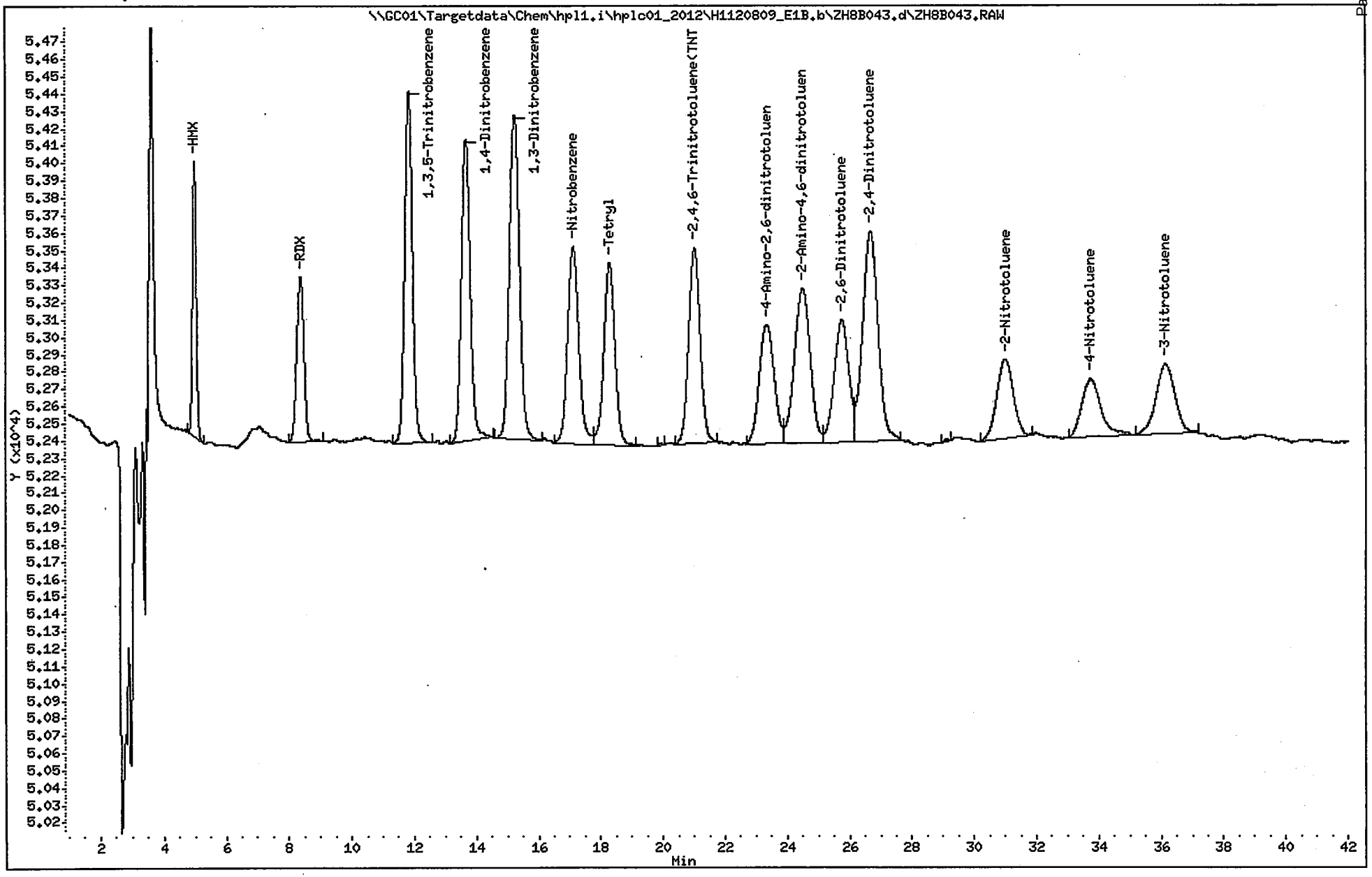
Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1	HMX	4.973	4.970	0.003	13158	100.000	105.678
2	RDX	8.366	8.356	0.010	15623	100.000	103.303
3	1,3,5-Trinitrobenzene	11.813	11.796	0.017	35031	100.000	107.417
$ 4	1,4-Dinitrobenzene	13.653	13.646	0.007	35076	100.000	103.480
5	1,3-Dinitrobenzene	15.216	15.196	0.020	42427	100.000	98.8504
6	Nitrobenzene	17.100	17.120	-0.020	28770	100.000	109.711
7	Tetryl	18.280	18.706	-0.426	25898	100.000	100.695
8	2,4,6-Trinitrotoluene(TNT)	21.010	20.983	0.027	29141	100.000	95.5533
9	4-Amino-2,6-dinitrotoluene	23.340	22.736	0.604	23136	100.000	107.505
10	2-Amino-4,6-dinitrotoluene	24.490	24.473	0.017	32031	100.000	111.353
11	2,6-Dinitrotoluene	25.756	25.726	0.030	23524	100.000	110.186
12	2,4-Dinitrotoluene	26.676	26.650	0.026	41904	100.000	106.986
13	2-Nitrotoluene	31.016	30.996	0.020	16992	100.000	102.233
14	4-Nitrotoluene	33.723	33.760	-0.037	14485	100.000	111.553
15	3-Nitrotoluene	36.133	36.110	0.023	17362	100.000	98.7051

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B043.d
Date : 09-AUG-2012 20:20
Client ID:
Sample Info: CCV1;AJL;2
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-001

GC Column: E1, 218nm ID: 4.1 (mm) Calibration Date: 8/9/2012 Time: 21:04

Sample No.(CC): CCV2 Initi. Calib. Date(s): 11/14/2011 11/15/2011

Lab Sample No.(CC): CCV2 Initi. Calib. Time(s): 23:38 03:55

File ID: ZH8A044.d

Compound	RT	RT Window From	RT Window To	Avg. CF	CF	%D
3,5-Dinitroaniline	17.123	16.173	18.073	737	719	-2.5
Nitroglycerin	18.640	18.260	19.020	65	67	3.1
PETN	38.090	37.240	38.940	75	67	-10.7
1,4-Dinitrobenzene	13.656	12.806	14.506	133	143	7.5

The Absolute Value of %D must be less than or equal to 20% 15 SDF 8/21/12

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A044.d
Lab Smp Id: CCV2
Inj Date : 09-AUG-2012 21:04
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV2;AJL;2
Misc Info : 131
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_218
Meth Date : 10-Aug-2012 09:34 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
$	1 1,4-Dinitrobenzene	13.656	13.663	-0.007	14284	100.000	107.540
	3 3,5-Dinitroaniline	17.123	17.153	-0.030	71861	100.000	97.4960
	4 Nitroglycerin	18.640	18.663	-0.023	33503	500.000	515.273
	5 PETN	38.090	38.173	-0.083	33303	500.000	446.628

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A044.d

Date : 09-AUG-2012 21:04

Client ID:

Instrument: hpl1.i

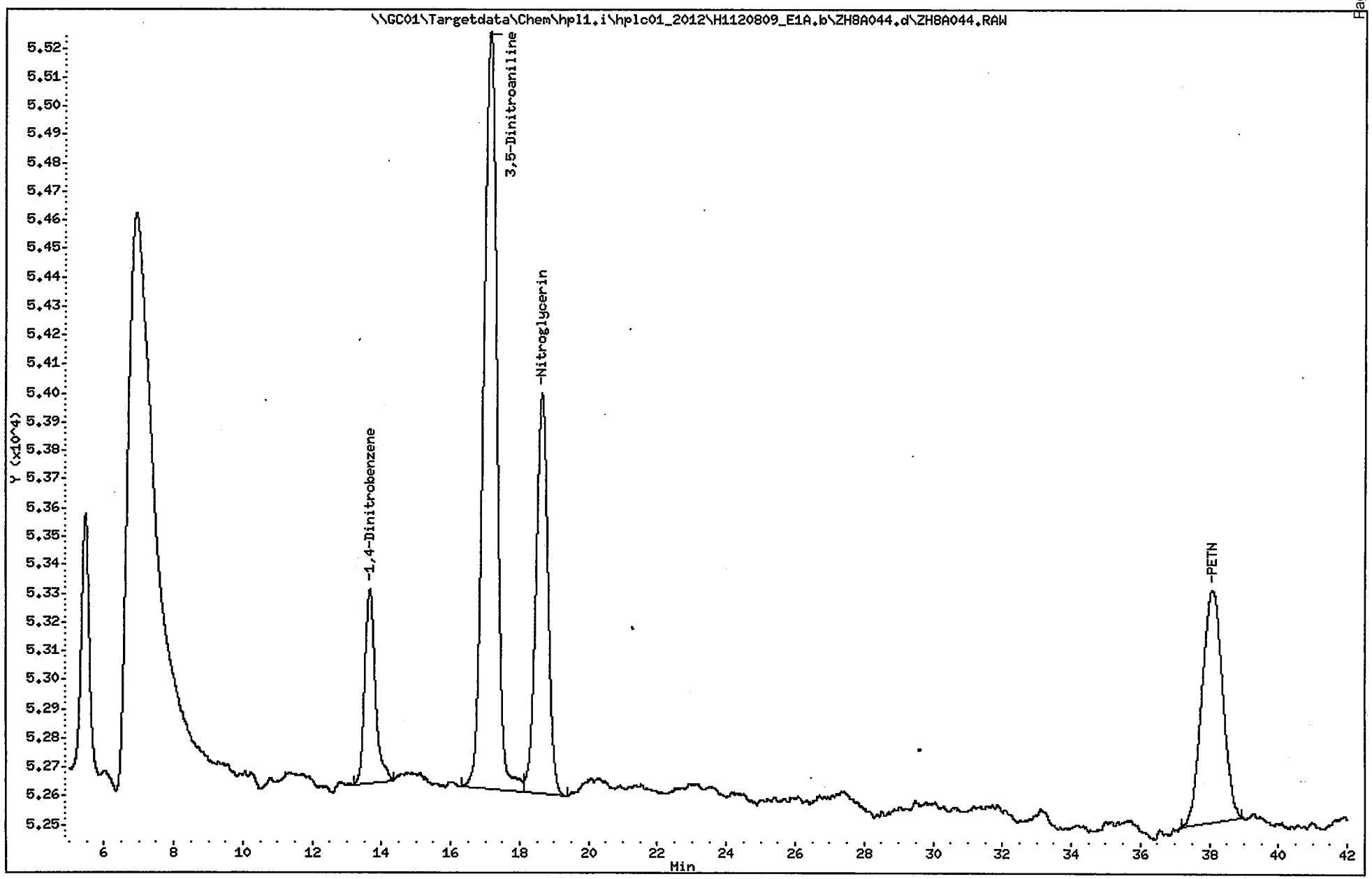
Sample Info: CCV2;AJL;2

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



QC Raw Data

Blank Raw Data

1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1019867 (MB)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 1019867

Sample wt/vol: 10.0 (g/mL) G Lab File ID (1): ZH8B003.d

% Moisture:

Extraction: (Type) SONC Date Received: 08/07/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.100	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.100	U
99-65-0	1,3-Dinitrobenzene	0.100	U
121-14-2	2,4-Dinitrotoluene	0.100	U
606-20-2	2,6-Dinitrotoluene	0.100	U
2691-41-0	HMX	0.100	U
98-95-3	Nitrobenzene	0.100	U
99-99-0	4-Nitrotoluene	0.100	U
88-72-2	2-Nitrotoluene	0.100	U
99-08-1	3-Nitrotoluene	0.100	U
121-82-4	RDX	0.100	U
479-45-8	Tetryl	0.100	U
99-35-4	1,3,5-Trinitrobenzene	0.100	U
118-96-7	2,4,6-Trinitrotoluene	0.100	U

FORM I

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B003.d
Lab Smp Id: 1019867 Client Smp ID: MB for HBN 474917 [
Inj Date : 08-AUG-2012 14:21
Operator : AJL Inst ID: hpl1.i
Smp Info : 1019867;AJL;3;;BLANK;;;10
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.736	13.673	0.063	180498	532.501	2.13000
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

DATA REVIEW Am 8/12/12
REPORTED 8/12/12
APPROVED CM 8/14
2nd REVIEW CM 8/14

ALS - Middletown

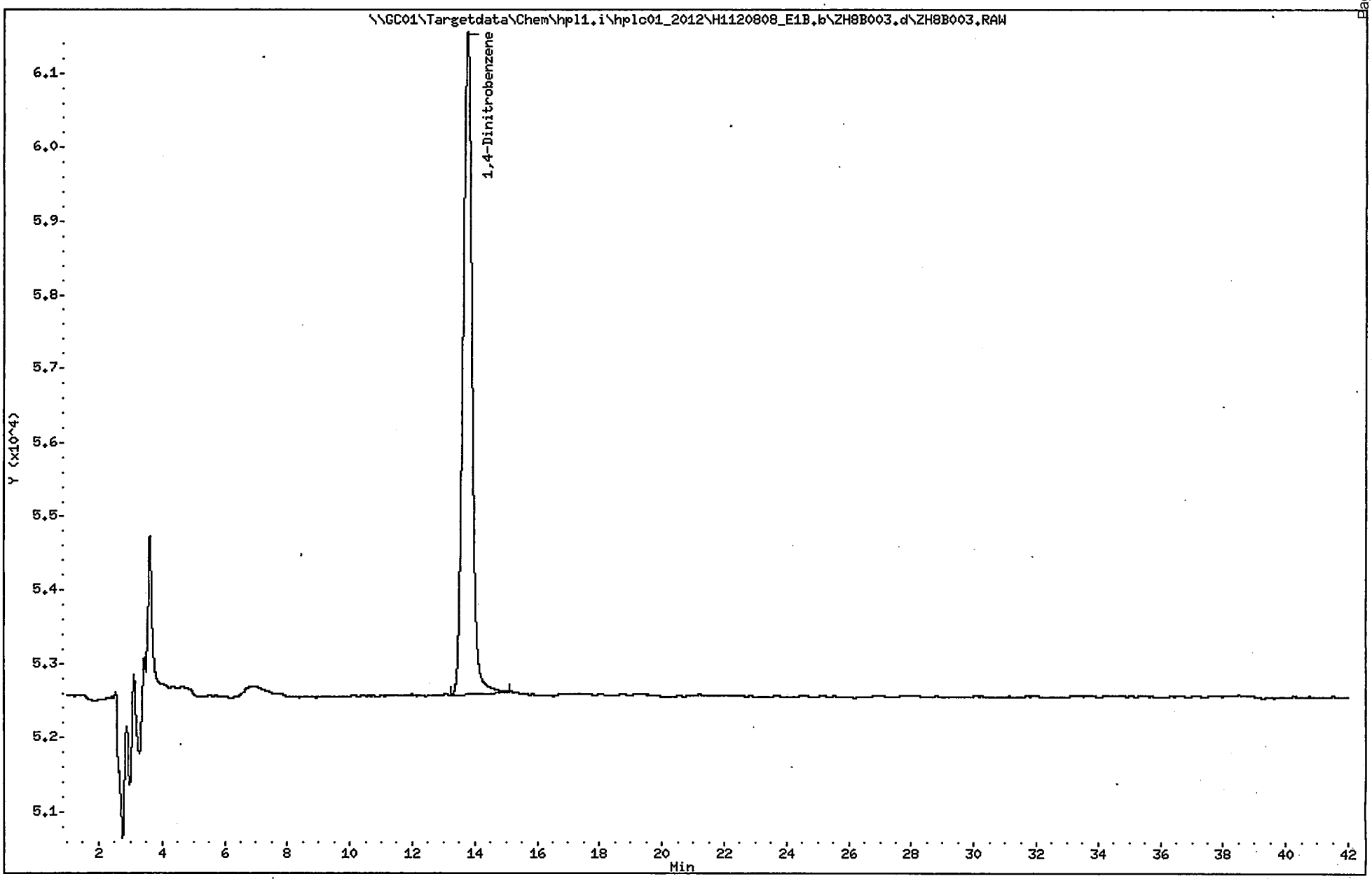
RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: 1019867
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_W.spk
Sublist File: 8330all.sub
Client SDG: H1120808_E1B.b
Fraction: SV
Client Smp ID: MB for HBN 474917 [
Operator: AJL
SampleType: BLANK
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3176 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	2.00000	2.13000	106.50	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B003.d
Date : 08-AUG-2012 14:21
Client ID: MB for HBN 474917 [
Sample Info: 1019867;AJL;3;;BLANK;;;10
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1019867 (MB)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 1019867

Sample wt/vol: 10.0 (g/mL) G Lab File ID (1): ZH8A003.d

% Moisture:

Extraction: (Type) SONC Date Received: 08/07/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.100	U
55-63-0	Nitroglycerin	1.0	U
78-11-5	PETN	1.0	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A003.d
Lab Smp Id: 1019867 Client Smp ID: MB for HBN 474917 [
Inj Date : 08-AUG-2012 14:21
Operator : AJL Inst ID: hpl1.i
Smp Info : 1019867;AJL;3;;BLANK;;;10
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1	1,4-Dinitrobenzene	13.740	13.663	0.077	63355	476.982	1.90793
3	3,5-Dinitroaniline	Compound Not Detected.					
4	Nitroglycerin	Compound Not Detected.					
5	PETN	Compound Not Detected.					

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED 8/14
2nd REVIEW 8/14

ALS - Middletown

RECOVERY REPORT

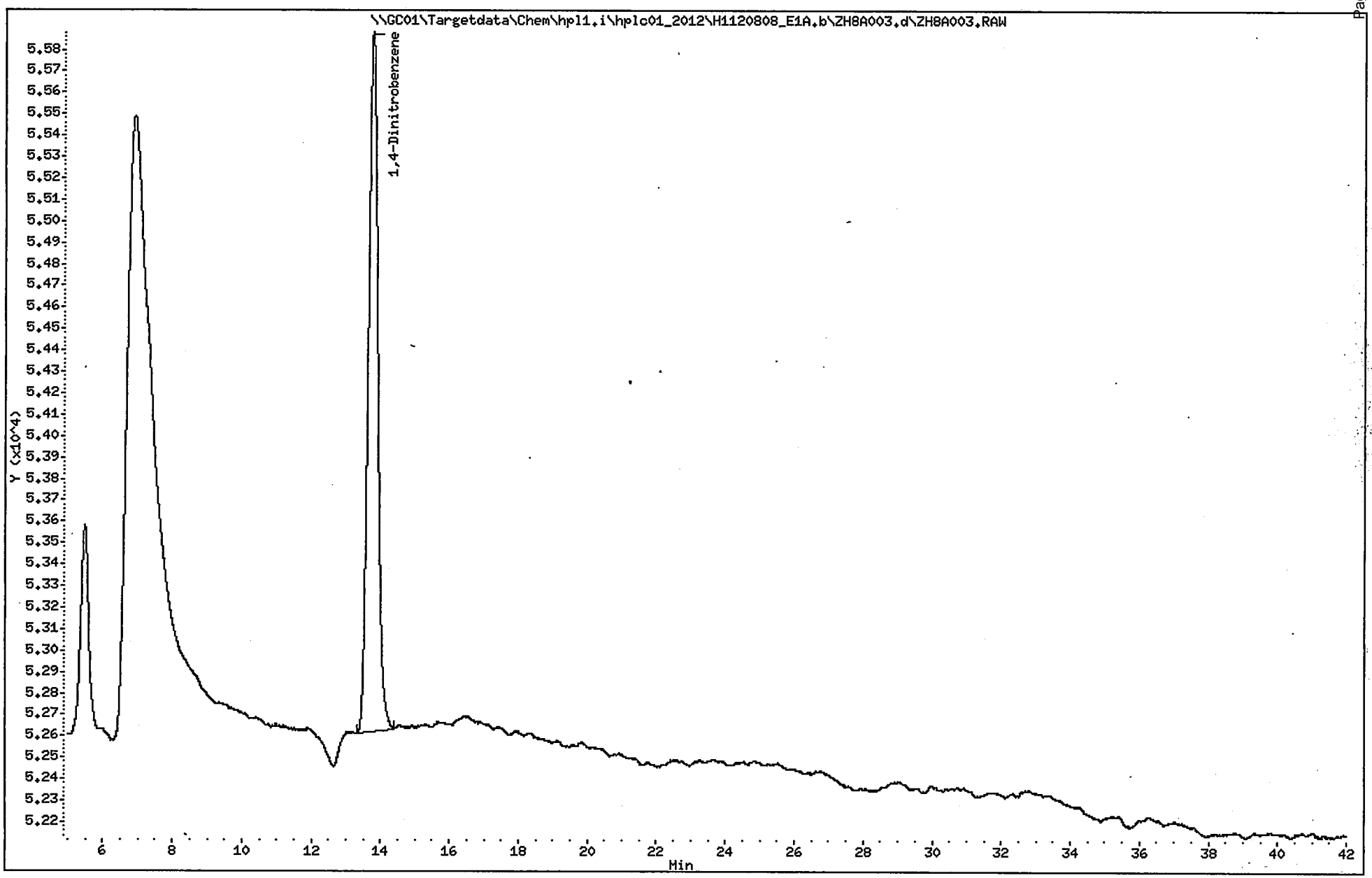
Client Name:
Sample Matrix: SOLID
Lab Smp Id: 1019867
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3176 D8330S

Client SDG: H1120808_E1A.b
Fraction: SV
Client Smp ID: MB for HBN 474917 [
Operator: AJL
SampleType: BLANK
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	2.00000	1.90793	95.40	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A003.d
Date : 08-AUG-2012 14:21
Client ID: MB for HBN 474917 [
Sample Info: 1019867;AJL;3;;BLANK;;;10
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1020314 (MB)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 1020314

Sample wt/vol: 10.0 (g/mL) G Lab File ID (1): ZH8B031.d

% Moisture:

Extraction: (Type) SONC Date Received: 08/08/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.100	U
1946-51-0	4-Amino-2,6-dinitrotoluene	0.100	U
99-65-0	1,3-Dinitrobenzene	0.100	U
121-14-2	2,4-Dinitrotoluene	0.100	U
606-20-2	2,6-Dinitrotoluene	0.100	U
2691-41-0	HMX	0.100	U
98-95-3	Nitrobenzene	0.100	U
99-99-0	4-Nitrotoluene	0.100	U
88-72-2	2-Nitrotoluene	0.100	U
99-08-1	3-Nitrotoluene	0.100	U
121-82-4	RDX	0.100	U
479-45-8	Tetryl	0.100	U
99-35-4	1,3,5-Trinitrobenzene	0.100	U
118-96-7	2,4,6-Trinitrotoluene	0.100	U

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B031.d
Lab Smp Id: 1020314 Client Smp ID: MB for HBN 475072 [
Inj Date : 09-AUG-2012 11:16
Operator : AJL Inst ID: hpl1.i
Smp Info : 1020314;AJL;3;;BLANK
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_254
Meth Date : 10-Aug-2012 09:44 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (mg/kg)
1	HMX	Compound Not Detected.					
2	RDX	Compound Not Detected.					
3	1,3,5-Trinitrobenzene	Compound Not Detected.					
$ 4	1,4-Dinitrobenzene	13.666	13.646	0.020	182467	538.310	2.15324
5	1,3-Dinitrobenzene	Compound Not Detected.					
6	Nitrobenzene	Compound Not Detected.					
7	Tetryl	Compound Not Detected.					
8	2,4,6-Trinitrotoluene(TNT)	Compound Not Detected.					
9	4-Amino-2,6-dinitrotoluene	Compound Not Detected.					
10	2-Amino-4,6-dinitrotoluene	Compound Not Detected.					
11	2,6-Dinitrotoluene	Compound Not Detected.					
12	2,4-Dinitrotoluene	Compound Not Detected.					
13	2-Nitrotoluene	Compound Not Detected.					
14	4-Nitrotoluene	Compound Not Detected.					
15	3-Nitrotoluene	Compound Not Detected.					

ALS - Middletown

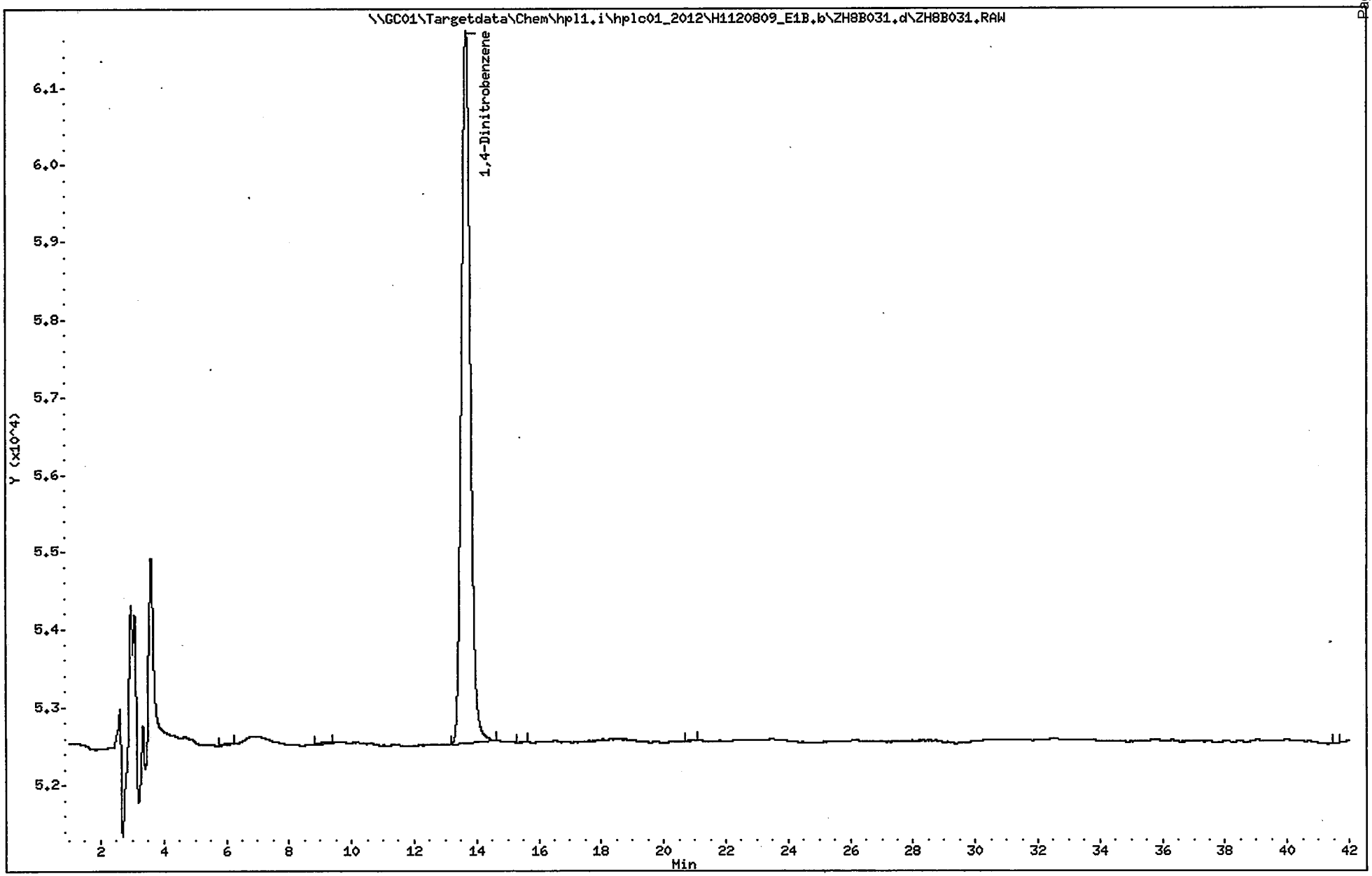
RECOVERY REPORT

Client Name:
Client SDG: H1120809_E1B.b
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: 1020314
Client Smp ID: MB for HBN 475072 [
Level: LOW
Operator: AJL
Data Type: LC DATA
SampleType: BLANK
SpikeList File: DoD_W.spk
Quant Type: ESTD
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3178 D8330S

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	2.00000	2.15324	107.66	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B031.d
Date : 09-AUG-2012 11:16
Client ID: MB for HBN 475072 [
Sample Info: 1020314;AJL;3;;BLANK
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1020314 (MB)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 1020314

Sample wt/vol: 10.0 (g/mL) G Lab File ID (1): ZH8A031.d

% Moisture:

Extraction: (Type) SONC Date Received: 08/08/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.100	U
55-63-0	Nitroglycerin	1.0	U
78-11-5	PETN	1.0	U

FORM I

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A031.d
Lab Smp Id: 1020314 Client Smp ID: MB for HBN 475072 [
Inj Date : 09-AUG-2012 11:16
Operator : AJL Inst ID: hpl1.i
Smp Info : 1020314;AJL;3;;BLANK
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_218
Meth Date : 10-Aug-2012 09:34 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED 8/14
2nd REVIEW 8/14

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.670	13.663	0.007	67195	505.892	2.02357
3 3,5-Dinitroaniline	Compound Not Detected.					
4 Nitroglycerin	Compound Not Detected.					
5 PETN	Compound Not Detected.					

ALS - Middletown

RECOVERY REPORT

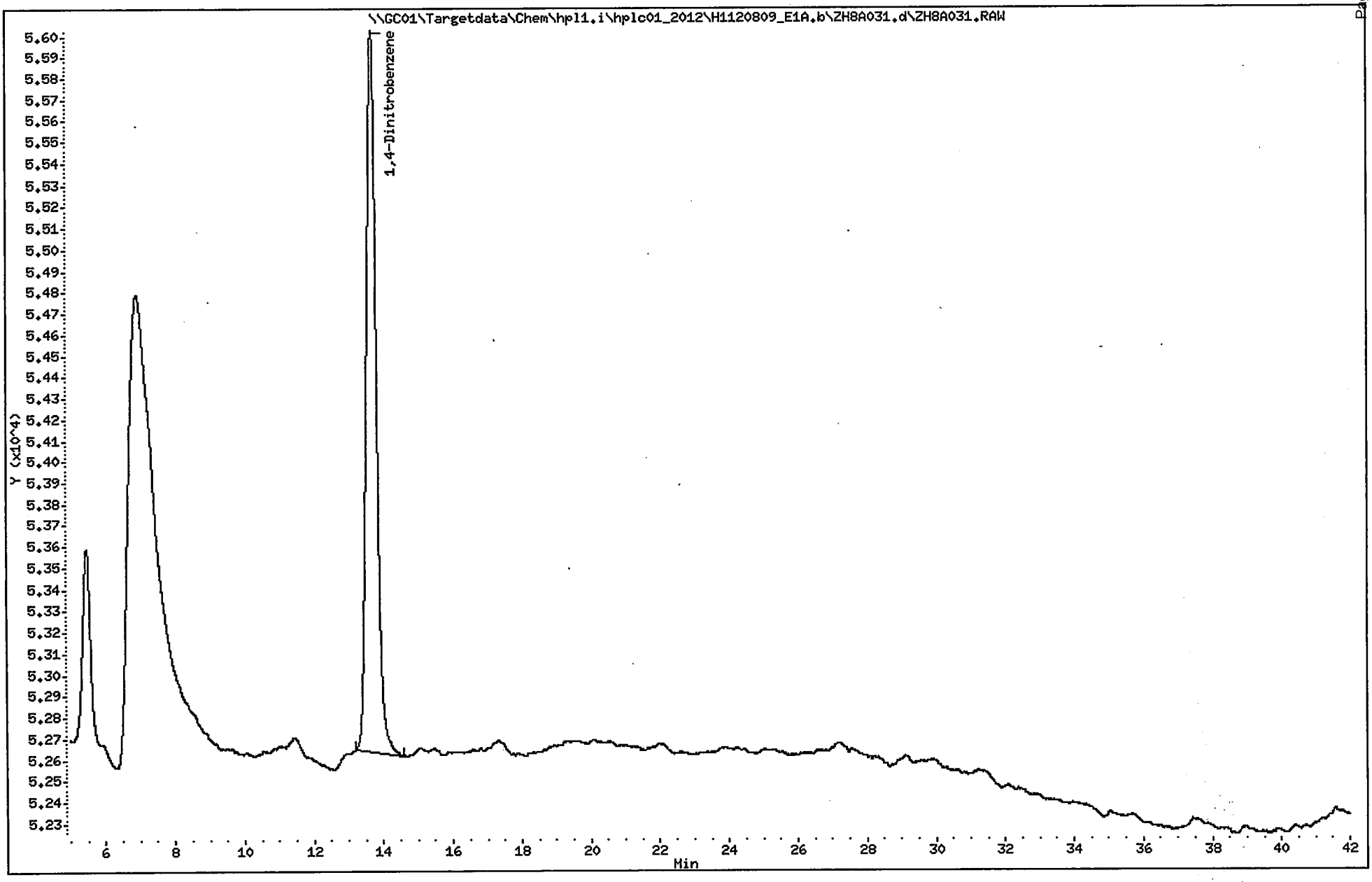
Client Name:
Sample Matrix: SOLID
Lab Smp Id: 1020314
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3178 D8330S

Client SDG: H1120809_E1A.b
Fraction: SV
Client Smp ID: MB for HBN 475072 [
Operator: AJL
SampleType: BLANK
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	2.00000	2.02357	101.18	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A031.d
Date : 09-AUG-2012 11:16
Client ID: MB for HBN 475072 [
Sample Info: 1020314;AJL;3;;BLANK
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



Matrix Spike Raw Data

1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-03(99801

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 1019871

Sample wt/vol: 10.3 (g/mL) G Lab File ID (1): ZH8B018.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.41	
1946-51-0	4-Amino-2,6-dinitrotoluene	0.45	
99-65-0	1,3-Dinitrobenzene	0.44	
121-14-2	2,4-Dinitrotoluene	0.42	
606-20-2	2,6-Dinitrotoluene	0.41	
2691-41-0	HMX	0.42	
98-95-3	Nitrobenzene	0.41	
99-99-0	4-Nitrotoluene	0.44	
88-72-2	2-Nitrotoluene	0.41	
99-08-1	3-Nitrotoluene	0.41	
121-82-4	RDX	0.41	
479-45-8	Tetryl	0.34	
99-35-4	1,3,5-Trinitrobenzene	0.41	
118-96-7	2,4,6-Trinitrotoluene	0.43	

FORM I

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B018.d
Lab Smp Id: 1019871 Client Smp ID: FTSW-AA-SO-03(99801
Inj Date : 09-AUG-2012 01:22
Operator : AJL Inst ID: hpl1.i
Smp Info : 1019871;AJL;3;;MS;1;;10.3
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.300	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
1	HMX	4.976	4.980	-0.004	13458	108.088	0.419758
2	RDX	8.376	8.376	0.000	16135	106.689	0.414326
3	1,3,5-Trinitrobenzene	11.840	11.833	0.007	34779	106.645	0.414154
$ 4	1,4-Dinitrobenzene	13.676	13.673	0.003	183862	542.426	2.10651
5	1,3-Dinitrobenzene	15.250	15.240	0.010	48902	113.936	0.442472
6	Nitrobenzene	17.136	17.123	0.013	27714	105.684	0.410424
7	Tetryl	18.336	18.323	0.013	22727	88.3658	0.343168
8	2,4,6-Trinitrotoluene(TNT)	21.073	21.066	0.007	33410	109.551	0.425442
9	4-Amino-2,6-dinitrotoluene	23.416	23.406	0.010	25176	116.984	0.454307
10	2-Amino-4,6-dinitrotoluene	24.553	24.553	0.000	30599	106.374	0.413105
11	2,6-Dinitrotoluene	25.823	25.810	0.013	22675	106.209	0.412463
12	2,4-Dinitrotoluene	26.746	26.740	0.006	42578	108.707	0.422161
13	2-Nitrotoluene	31.056	31.060	-0.004	17666	106.288	0.412770
14	4-Nitrotoluene	33.820	33.830	-0.010	14569	112.200	0.435728
15	3-Nitrotoluene	36.223	36.200	0.023	18428	104.765	0.406856

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: 1019871
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_S.spk
Sublist File: 8330all.sub
Client SDG: H1120808_E1B.b
Fraction: SV
Client Smp ID: FTSW-AA-SO-03(99801
Operator: AJL
SampleType: MS
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3176 D8330S

SPIKE	COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
1	HMX	0.388350	0.419758	108.09	75-125
2	RDX	0.388350	0.414326	106.69	70-135
3	1,3,5-Trinitrobenz	0.388350	0.414154	106.64	75-125
5	1,3-Dinitrobenzene	0.388350	0.442472	113.94	80-125
7	Tetryl	0.388350	0.343168	88.37	10-150
6	Nitrobenzene	0.388350	0.410424	105.68	75-125
8	2,4,6-Trinitrotolu	0.388350	0.425442	109.55	55-140
9	4-Amino-2,6-dinitr	0.388350	0.454307	116.98	80-125
10	2-Amino-4,6-dinitr	0.388350	0.413105	106.37	80-125
11	2,6-Dinitrotoluene	0.388350	0.412463	106.21	80-120
12	2,4-Dinitrotoluene	0.388350	0.422161	108.71	80-125
13	2-Nitrotoluene	0.388350	0.412770	106.29	80-125
14	4-Nitrotoluene	0.388350	0.435728	112.20	75-125
15	3-Nitrotoluene	0.388350	0.406856	104.77	75-120

SURROGATE	COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4	1,4-Dinitrobenzene	1.94175	2.10651	108.49	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B018.d

Date : 09-AUG-2012 01:22

Client ID: FTSW-AA-SO-03(99801

Instrument: hpl1.i

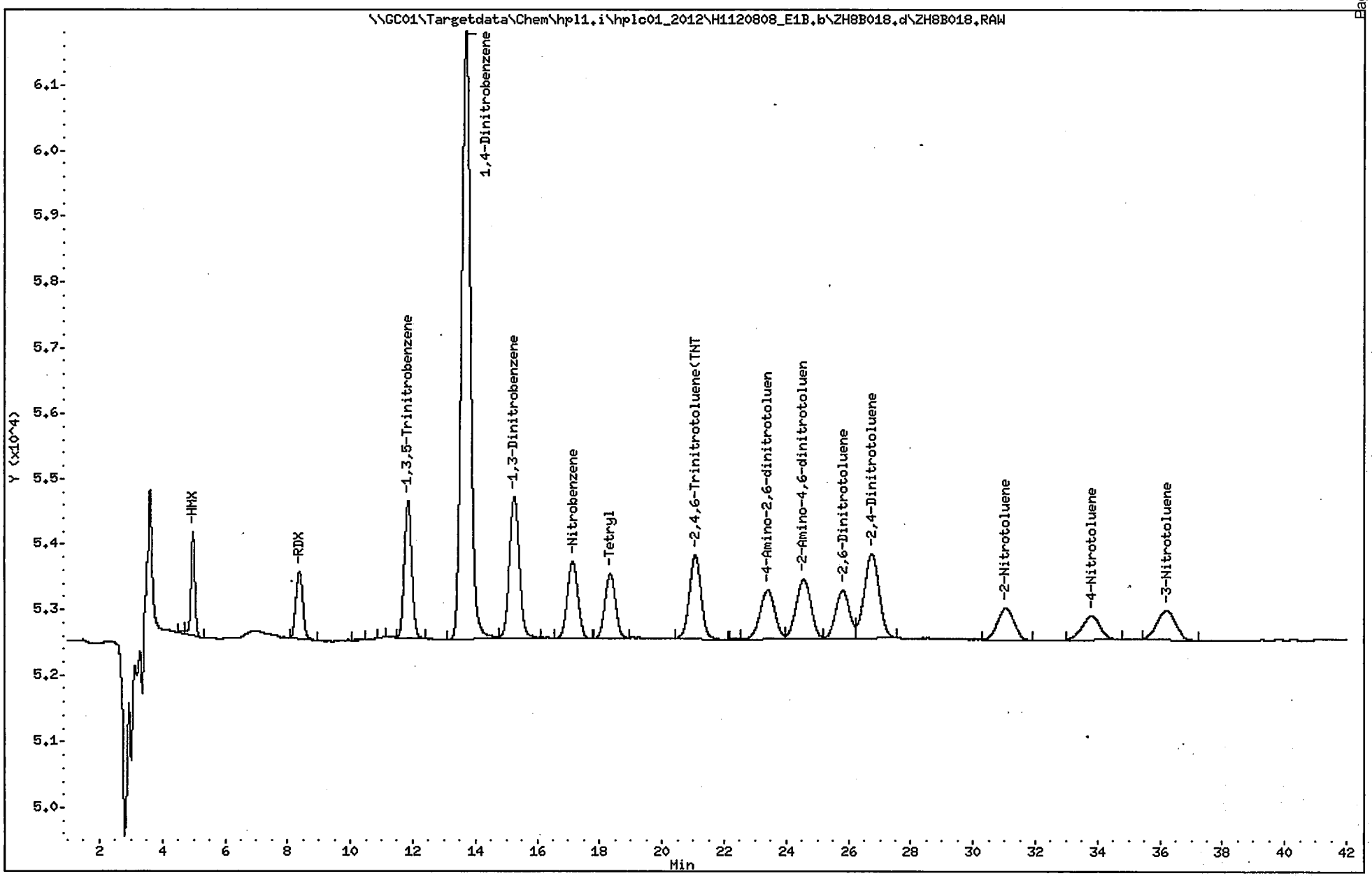
Sample Info: 1019871;AJL;3;;MS;1;;10.3

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-03(99801

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 1019872

Sample wt/vol: 10.3 (g/mL) G Lab File ID (1): ZH8A020.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.35	
55-63-0	Nitroglycerin	2.0	
78-11-5	PETN	1.8	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A020.d
Lab Smp Id: 1019872 Client Smp ID: FTSW-AA-SO-03(99801
Inj Date : 09-AUG-2012 02:50
Operator : AJL Inst ID: hpl1.i
Smp Info : 1019872;AJL;3;;MS;1;;10.3
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.300	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW AD 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.673	13.663	0.010	63125	475.250	1.84563
3 3,5-Dinitroaniline	17.166	17.153	0.013	66644	90.4179	0.351137
4 Nitroglycerin	18.676	18.663	0.013	32774	504.061	1.95752
5 PETN	38.196	38.173	0.023	34324	460.321	1.78765

ALS - Middletown

RECOVERY REPORT

Client Name:
Client SDG: H1120808_E1A.b
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: 1019872
Client Smp ID: FTSW-AA-SO-03(99801
Level: LOW
Operator: AJL
Data Type: LC DATA
SampleType: MS
SpikeList File: 8330LCS.spk
Quant Type: ESTD
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3176 D8330S

SPIKE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
4 Nitroglycerin	1.94175	1.95752	100.81	70-130
3 3,5-Dinitroaniline	0.388350	0.351137	90.42	70-130
5 PETN	1.94175	1.78765	92.06	70-130

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.94175	1.84563	95.05	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A020.d

Date : 09-AUG-2012 02:50

Client ID: FTSW-AA-SO-03(99801

Sample Info: 1019872;AJL;3;;MS;1;;10.3

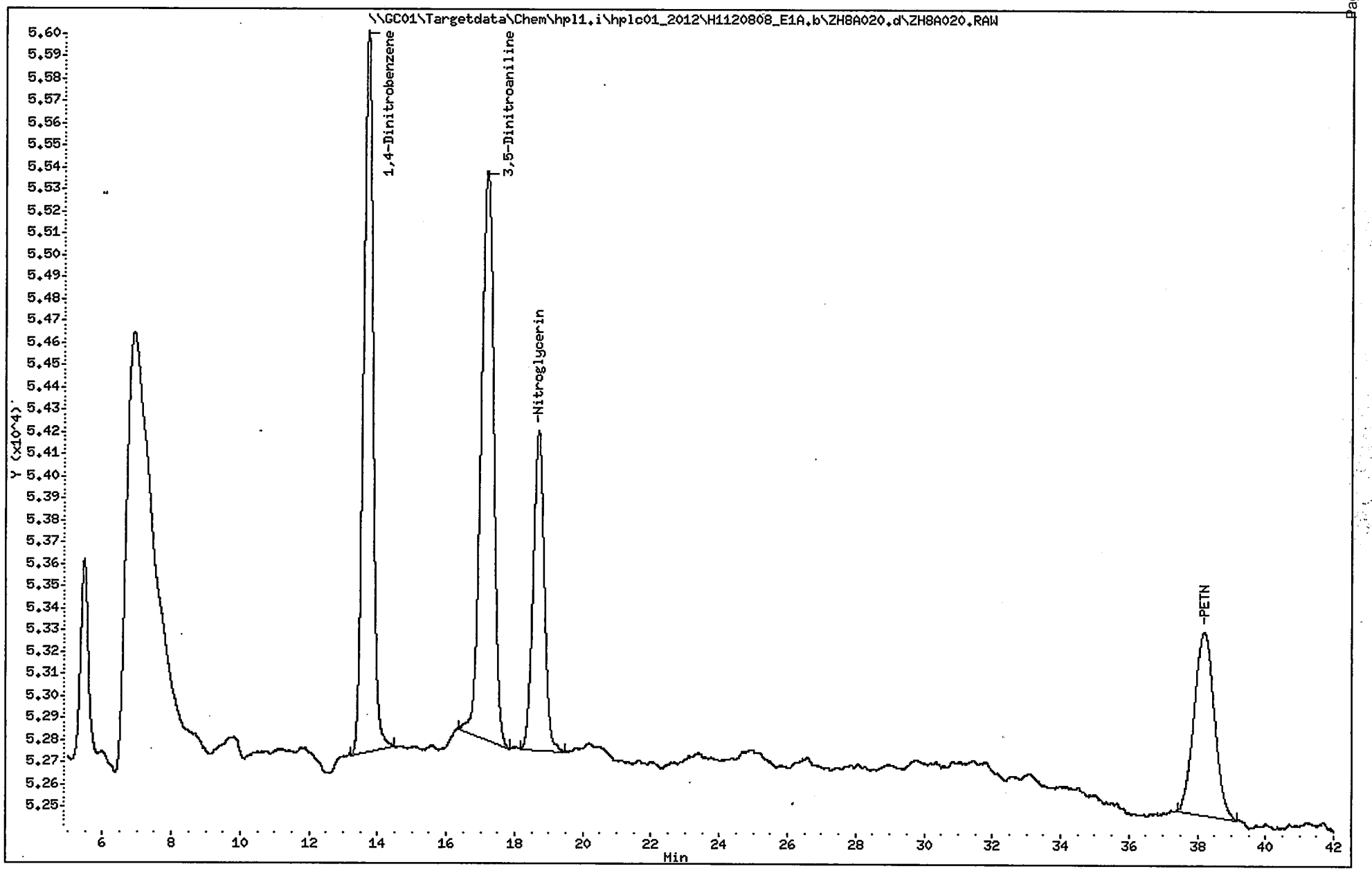
Volume Injected (uL): 100.0

Column phase: E1

Instrument: hpl1.i

Operator: AJL

Column diameter: 4.60



ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-03(99801

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 1019873

Sample wt/vol: 10.1 (g/mL) G Lab File ID (1): ZH8B019.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.39	
1946-51-0	4-Amino-2,6-dinitrotoluene	0.41	
99-65-0	1,3-Dinitrobenzene	0.42	
121-14-2	2,4-Dinitrotoluene	0.41	
606-20-2	2,6-Dinitrotoluene	0.40	
2691-41-0	HMX	0.42	
98-95-3	Nitrobenzene	0.40	
99-99-0	4-Nitrotoluene	0.38	
88-72-2	2-Nitrotoluene	0.43	
99-08-1	3-Nitrotoluene	0.42	
121-82-4	RDX	0.40	
479-45-8	Tetryl	0.32	
99-35-4	1,3,5-Trinitrobenzene	0.41	
118-96-7	2,4,6-Trinitrotoluene	0.40	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B019.d
Lab Smp Id: 1019873 Client Smp ID: FTSW-AA-SO-03(99801
Inj Date : 09-AUG-2012 02:06
Operator : AJL Inst ID: hpl1.i
Smp Info : 1019873;AJL;3;;MSD;1;;10.1
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.100	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED 8/14
2nd REVIEW 8/14

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
1	HMX	4.980	4.980	0.000	13213	106.120	0.420277
2	RDX	8.386	8.376	0.010	15269	100.963	0.399852
3	1,3,5-Trinitrobenzene	11.850	11.833	0.017	33511	102.756	0.406956
$ 4	1,4-Dinitrobenzene	13.690	13.673	0.017	172876	510.015	2.01986
5	1,3-Dinitrobenzene	15.263	15.240	0.023	45025	104.903	0.415459
6	Nitrobenzene	17.146	17.123	0.023	26503	101.066	0.400262
7	Tetryl	18.356	18.323	0.033	20946	81.4410	0.322539
8	2,4,6-Trinitrotoluene(TNT)	21.093	21.066	0.027	31063	101.855	0.403388
9	4-Amino-2,6-dinitrotoluene	23.436	23.406	0.030	22256	103.416	0.409568
10	2-Amino-4,6-dinitrotoluene	24.600	24.553	0.047	28537	99.2061	0.392895
11	2,6-Dinitrotoluene	25.846	25.810	0.036	21723	101.750	0.402971
12	2,4-Dinitrotoluene	26.776	26.740	0.036	40548	103.524	0.409995
13	2-Nitrotoluene	31.106	31.060	0.046	18219	109.615	0.434120
14	4-Nitrotoluene	33.876	33.830	0.046	12495	96.2275	0.381099
15	3-Nitrotoluene	36.253	36.200	0.053	18519	105.283	0.416961

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: 1019873
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_S.spk
Sublist File: 8330all.sub
Client SDG: H1120808_E1B.b
Fraction: SV
Client Smp ID: FTSW-AA-SO-03(99801
Operator: AJL
SampleType: MSD
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3176 D8330S

SPIKE	COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
1	HMX	0.396040	0.420277	106.12	75-125
2	RDX	0.396040	0.399852	100.96	70-135
3	1,3,5-Trinitrobenz	0.396040	0.406956	102.76	75-125
5	1,3-Dinitrobenzene	0.396040	0.415459	104.90	80-125
7	Tetryl	0.396040	0.322539	81.44	10-150
6	Nitrobenzene	0.396040	0.400262	101.07	75-125
8	2,4,6-Trinitrotolu	0.396040	0.403388	101.86	55-140
9	4-Amino-2,6-dinitr	0.396040	0.409568	103.42	80-125
10	2-Amino-4,6-dinitr	0.396040	0.392895	99.21	80-125
11	2,6-Dinitrotoluene	0.396040	0.402971	101.75	80-120
12	2,4-Dinitrotoluene	0.396040	0.409995	103.52	80-125
13	2-Nitrotoluene	0.396040	0.434120	109.62	80-125
14	4-Nitrotoluene	0.396040	0.381099	96.23	75-125
15	3-Nitrotoluene	0.396040	0.416961	105.28	75-120

SURROGATE	COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4	1,4-Dinitrobenzene	1.98020	2.01986	102.00	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B019.d

Date : 09-AUG-2012 02:06

Client ID: FTSW-AA-SO-03(99801

Sample Info: 1019873;AJL;3;;MSD;1;;10.1

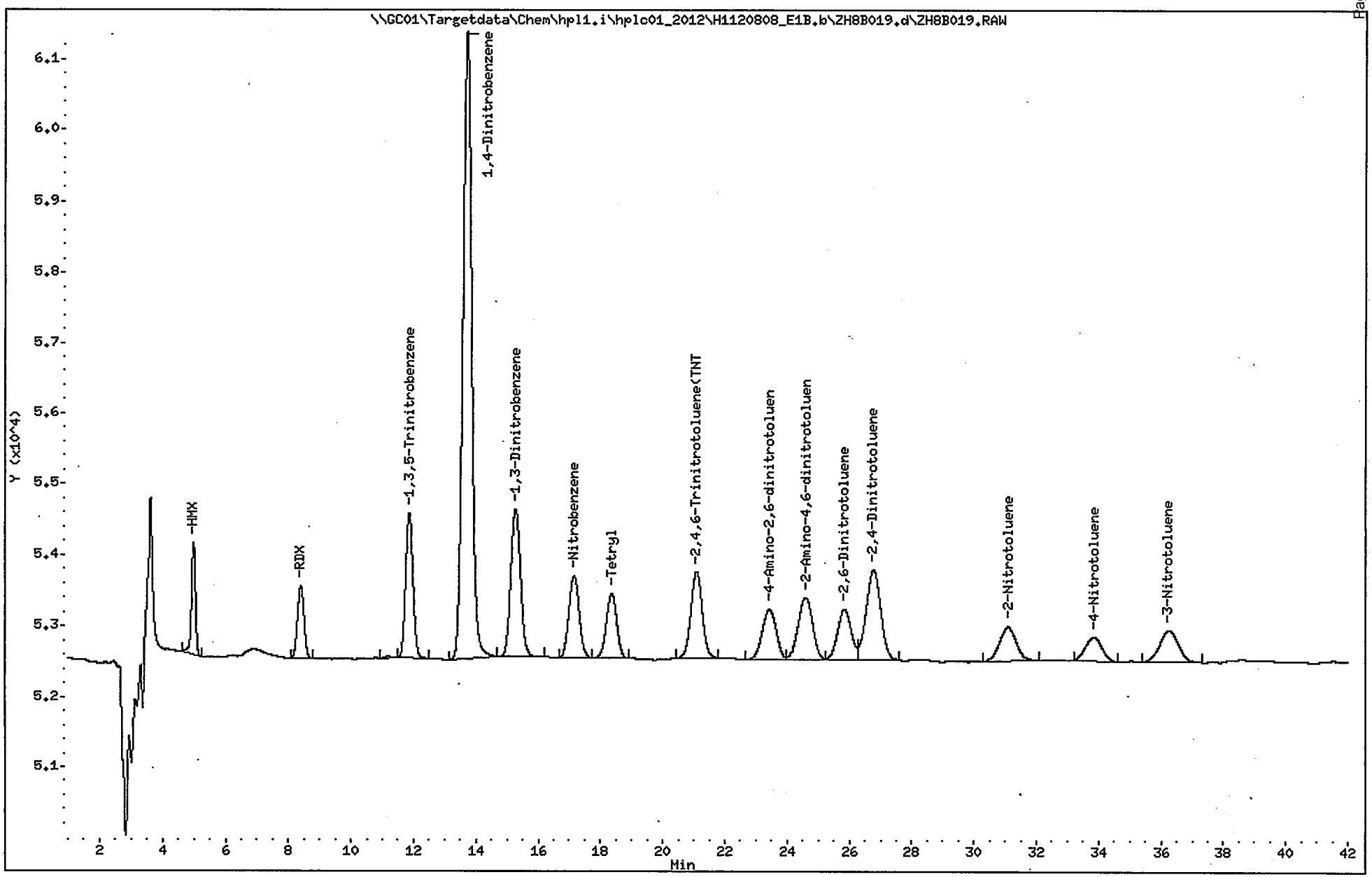
Volume Injected (uL): 100.0

Column phase: E1

Instrument: hpl1.i

Operator: AJL

Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-03(99801

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 1019874

Sample wt/vol: 10.9 (g/mL) G Lab File ID (1): ZH8A021.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.32	
55-63-0	Nitroglycerin	1.9	
78-11-5	PETN	1.8	

FORM I

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A021.d
Lab Smp Id: 1019874 Client Smp ID: FTSW-AA-SO-03(99801
Inj Date : 09-AUG-2012 03:34
Operator : AJL Inst ID: hpl1.i
Smp Info : 1019874;AJL;3;;MSD;1;;10.9
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.900	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW
REPORTED
APPROVED 8/14/12
2nd REVIEW 8/14/12

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1	1,4-Dinitrobenzene	13.686	13.663	0.023	63635	479.090	1.75813
3	3,5-Dinitroaniline	17.180	17.153	0.027	64083	86.9433	0.319058
4	Nitroglycerin	18.700	18.663	0.037	33371	513.243	1.88346
5	PETN	38.233	38.173	0.060	37196	498.837	1.83060

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: 1019874
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3176 D8330S

Client SDG: H1120808_E1A.b
Fraction: SV
Client Smp ID: FTSW-AA-SO-03(99801
Operator: AJL
SampleType: MSD
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
4 Nitroglycerin	1.83486	1.88346	102.65	70-130
3 3,5-Dinitroaniline	0.366972	0.319058	86.94	70-130
5 PETN	1.83486	1.83060	99.77	70-130

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.83486	1.75813	95.82	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A021.d

Date : 09-AUG-2012 03:34

Client ID: FTSW-AA-SO-03(99801

Sample Info: 1019874;AJL;3;;MSD;1;;10.9

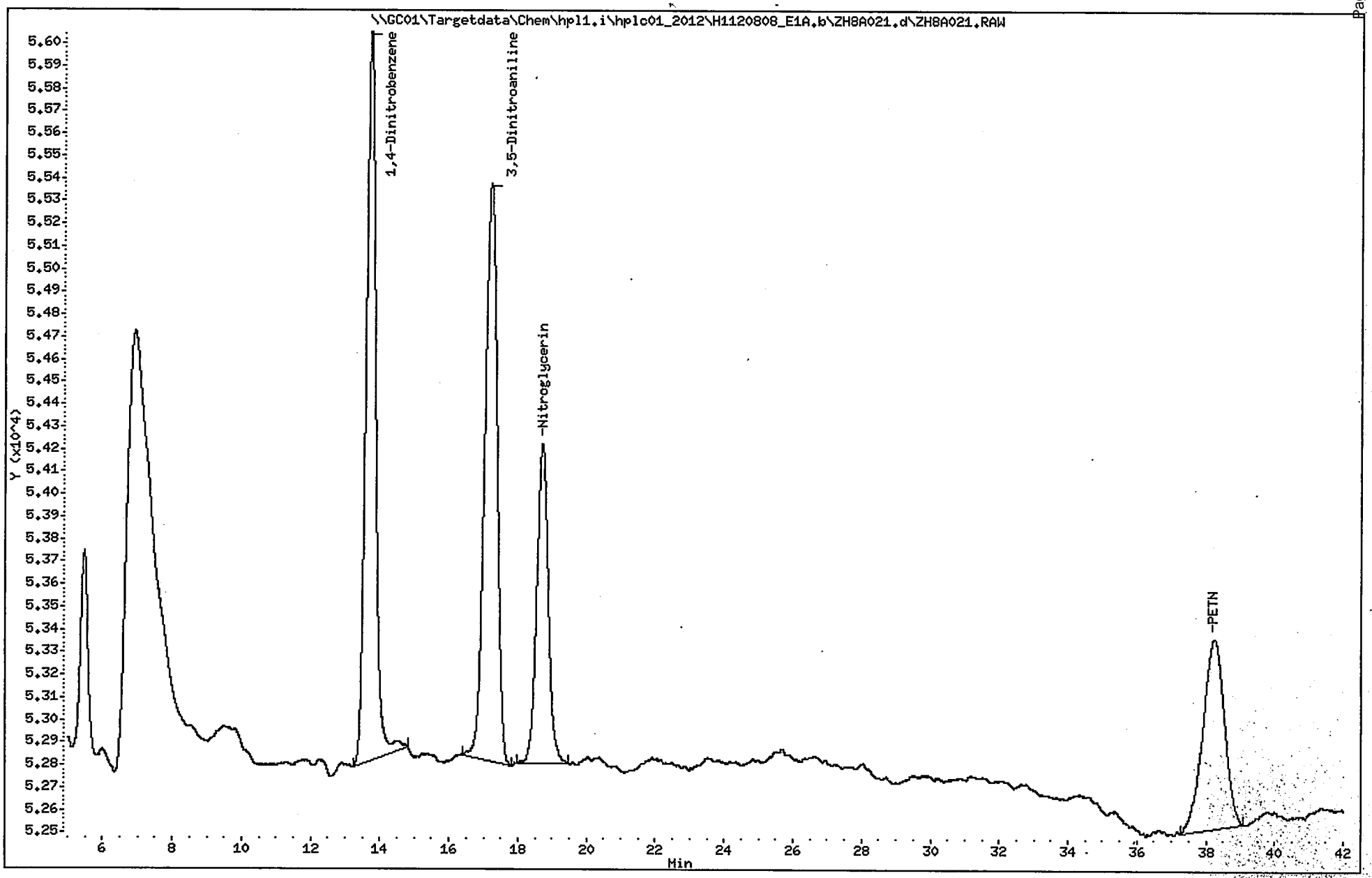
Volume Injected (uL): 100.0

Column phase: E1

Instrument: hpl1.i

Operator: AJL

Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-0...(998

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 1020317

Sample wt/vol: 10.3 (g/mL) G Lab File ID (1): ZH8B035.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.41	
1946-51-0	4-Amino-2,6-dinitrotoluene	0.43	
99-65-0	1,3-Dinitrobenzene	0.42	
121-14-2	2,4-Dinitrotoluene	0.42	
606-20-2	2,6-Dinitrotoluene	0.42	
2691-41-0	HMX	0.40	
98-95-3	Nitrobenzene	0.42	
99-99-0	4-Nitrotoluene	0.41	
88-72-2	2-Nitrotoluene	0.44	
99-08-1	3-Nitrotoluene	0.38	
121-82-4	RDX	0.38	
479-45-8	Tetryl	0.36	
99-35-4	1,3,5-Trinitrobenzene	0.40	
118-96-7	2,4,6-Trinitrotoluene	0.40	

FORM I

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\Gc01\TargetData\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B035.d
Lab Smp Id: 1020317 Client Smp ID: FTSW-AA-SO-0...(998
Inj Date : 09-AUG-2012 14:27
Operator : AJL Inst ID: hpl1.i
Smp Info : 1020317;AJL;3;;MS;1;;10.3
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_254
Meth Date : 12-Aug-2012 21:42 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.300	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/28/12
REPORTED 8/28/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (mg/kg)
1	HMX	4.970	4.970	0.000	12804	102.835	0.399359
2	RDX	8.370	8.356	0.014	14826	98.0334	0.380712
3	1,3,5-Trinitrobenzene	11.820	11.796	0.024	33708	103.360	0.401400
$ 4	1,4-Dinitrobenzene	13.653	13.633	0.020	183829	542.328	2.10613 (M)
5	1,3-Dinitrobenzene	15.223	15.196	0.027	46073	107.345	0.416875 (M)
6	Nitrobenzene	17.103	17.086	0.017	28368	108.178	0.420109 (M)
7	Tetryl	18.290	18.253	0.037	23661	91.9973	0.357271 (M)
8	2,4,6-Trinitrotoluene (TNT)	21.030	20.983	0.047	31610	103.649	0.402521
9	4-Amino-2,6-dinitrotoluene	23.370	23.316	0.054	23744	110.330	0.428467
10	2-Amino-4,6-dinitrotoluene	24.510	24.473	0.037	30006	104.313	0.405099
11	2,6-Dinitrotoluene	25.766	25.726	0.040	23197	108.654	0.421958
12	2,4-Dinitrotoluene	26.693	26.650	0.043	41947	107.096	0.415905
13	2-Nitrotoluene	31.023	30.996	0.027	18676	112.365	0.436369
14	4-Nitrotoluene	33.770	33.760	0.010	13823	106.455	0.413417
15	3-Nitrotoluene	36.170	36.110	0.060	17221	97.9034	0.380208
65	NewCpnd_16	Compound Not Detected.					
66	NewCpnd_17	Compound Not Detected.					
67	NewCpnd_18	Compound Not Detected.					

AP 8/28/12

QC Flag Legend

M - Compound response manually integrated.

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: 1020317
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_S.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3178 D8330S

Client SDG: H1120809_E1B.b
Fraction: SV
Client Smp ID: FTSW-AA-SO-0...(998
Operator: AJL
SampleType: MS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
1 HMX	0.388350	0.399359	102.84	75-125
2 RDX	0.388350	0.380712	98.03	70-135
3 1,3,5-Trinitrobenz	0.388350	0.401400	103.36	75-125
5 1,3-Dinitrobenzene	0.388350	0.416875	107.35	80-125
7 Tetryl	0.388350	0.357271	92.00	10-150
6 Nitrobenzene	0.388350	0.420109	108.18	75-125
8 2,4,6-Trinitrotolu	0.388350	0.402521	103.65	55-140
9 4-Amino-2,6-dinitr	0.388350	0.428467	110.33	80-125
10 2-Amino-4,6-dinitr	0.388350	0.405099	104.31	80-125
11 2,6-Dinitrotoluene	0.388350	0.421958	108.65	80-120
12 2,4-Dinitrotoluene	0.388350	0.415905	107.10	80-125
13 2-Nitrotoluene	0.388350	0.436369	112.36	80-125
14 4-Nitrotoluene	0.388350	0.413417	106.45	75-125
15 3-Nitrotoluene	0.388350	0.380208	97.90	75-120

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	1.94175	2.10613	108.47	50-150

Data File: \\Gc01\TargetData\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B035.d

Date : 09-AUG-2012 14:27

Client ID: FTSW-AA-SO-0...(998

Sample Info: 1020317;AJL;3;;MS;1;;10.3

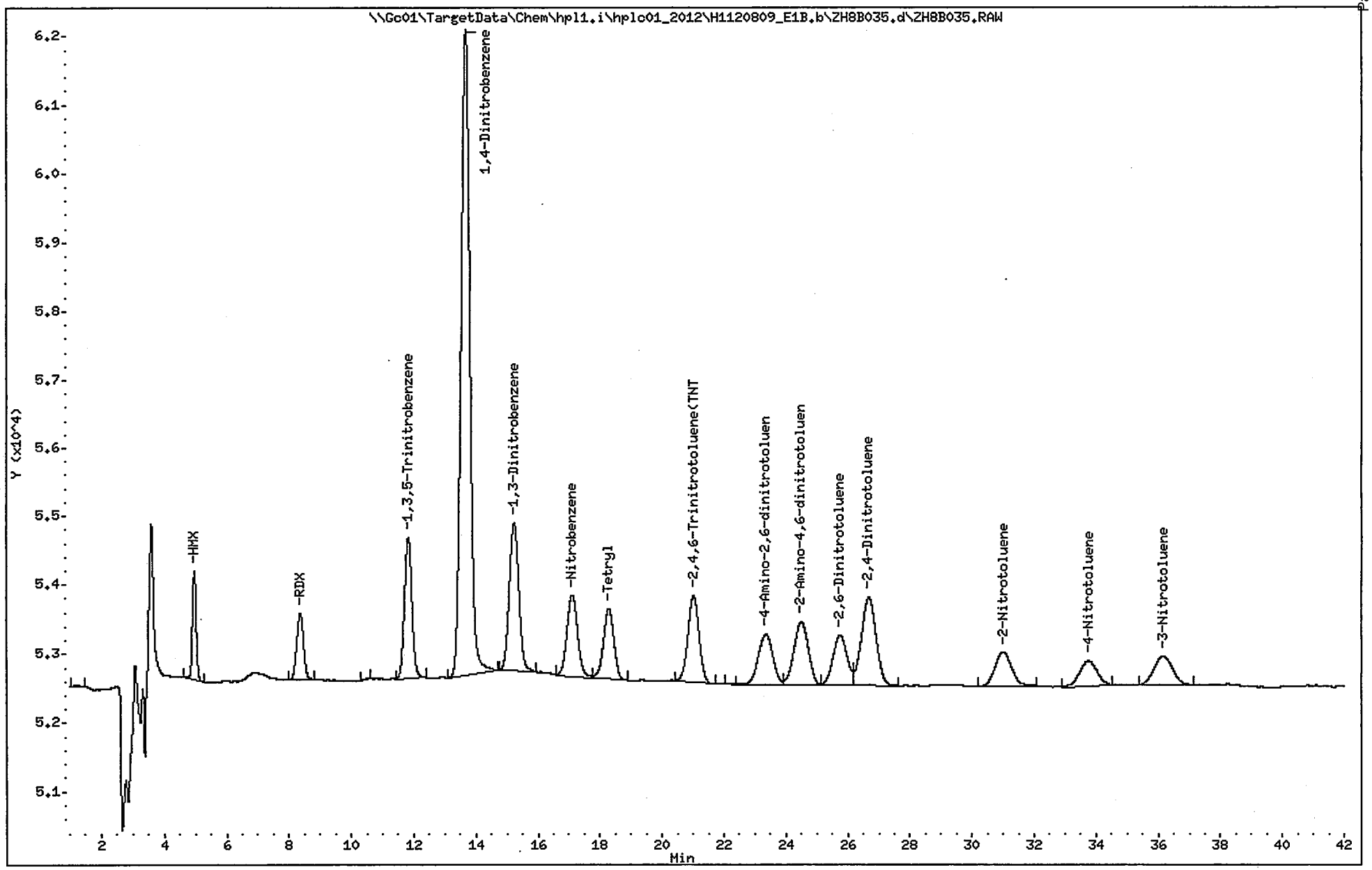
Volume Injected (uL): 100.0

Column phase: E1

Instrument: hpl1.i

Operator: AJL

Column diameter: 4.60



ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B035.d
Lab Smp Id: 1020317 Client Smp ID: FTSW-AA-SO-0...(998
Inj Date : 09-AUG-2012 14:27
Operator : AJL Inst ID: hpl1.i
Smp Info : 1020317;AJL;3;;MS;1;;10.3
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_254
Meth.Date : 10-Aug-2012 09:44 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.300	Weight of sample extracted
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED
APPROVED
2nd REVIEW

Data prior to manual integrations

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
	1 HMX	4.970	4.970	0.000	12804	102.835	0.399359
	2 RDX	8.370	8.356	0.014	14826	98.0334	0.380712
	3 1,3,5-Trinitrobenzene	11.820	11.796	0.024	33708	103.360	0.401400
$	4 1,4-Dinitrobenzene	13.653	13.646	0.007	190160	561.006	2.17866
	5 1,3-Dinitrobenzene	15.226	15.196	0.030	58187	135.570	0.526484 (R)
	6 Nitrobenzene	17.113	17.120	-0.007	31640	120.655	0.468565
	7 Tetryl	18.290	18.706	-0.416	24630	95.7650	0.371903
	8 2,4,6-Trinitrotoluene(TNT)	21.030	20.983	0.047	31610	103.649	0.402521
	9 4-Amino-2,6-dinitrotoluene	23.370	22.736	0.634	23744	110.330	0.428467
	10 2-Amino-4,6-dinitrotoluene	24.510	24.473	0.037	30006	104.313	0.405099
	11 2,6-Dinitrotoluene	25.766	25.726	0.040	23197	108.654	0.421958
	12 2,4-Dinitrotoluene	26.693	26.650	0.043	41947	107.096	0.415905
	13 2-Nitrotoluene	31.023	30.996	0.027	18676	112.365	0.436369
	14 4-Nitrotoluene	33.770	33.760	0.010	13823	106.455	0.413417
	15 3-Nitrotoluene	36.170	36.110	0.060	17221	97.9034	0.380208

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ALS - Middletown

RECOVERY REPORT

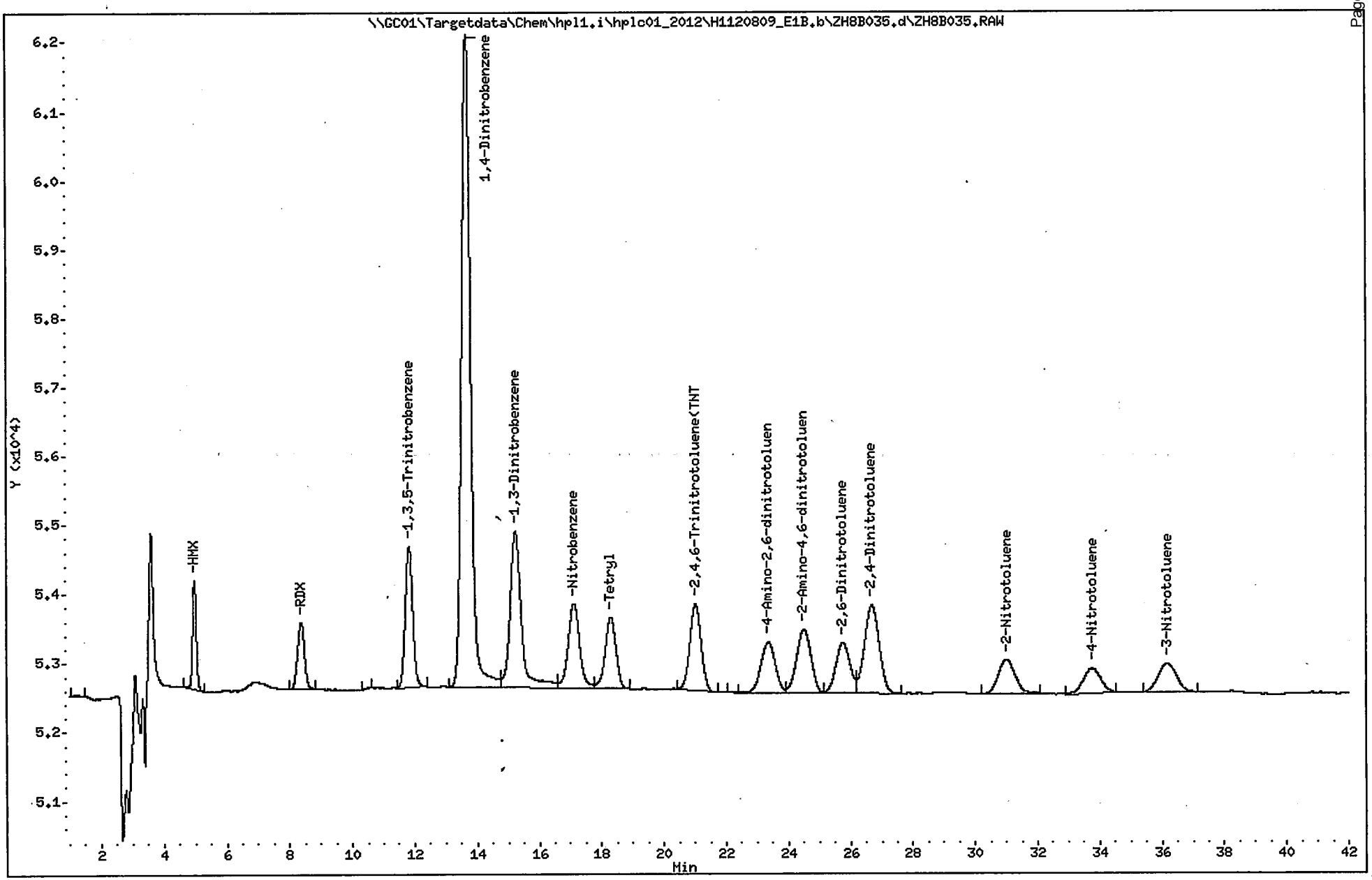
Client Name:
Sample Matrix: SOLID
Lab Smp Id: 1020317
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_S.spk
Sublist File: 8330all.sub
Client SDG: H1120809_E1B.b
Fraction: SV
Client Smp ID: FTSW-AA-SO-0...(998
Operator: AJL
SampleType: MS
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3178 D8330S

SPIKE	COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
1	HMX	0.388350	0.399359	102.84	75-125
2	RDX	0.388350	0.380712	98.03	70-135
3	1,3,5-Trinitrobenz	0.388350	0.401400	103.36	75-125
5	1,3-Dinitrobenzene	0.388350	0.526484	135.57*	80-125
7	Tetryl	0.388350	0.371903	95.76	10-150
6	Nitrobenzene	0.388350	0.468565	120.66	75-125
8	2,4,6-Trinitrotolu	0.388350	0.402521	103.65	55-140
9	4-Amino-2,6-dinitr	0.388350	0.428467	110.33	80-125
10	2-Amino-4,6-dinitr	0.388350	0.405099	104.31	80-125
11	2,6-Dinitrotoluene	0.388350	0.421958	108.65	80-120
12	2,4-Dinitrotoluene	0.388350	0.415905	107.10	80-125
13	2-Nitrotoluene	0.388350	0.436369	112.36	80-125
14	4-Nitrotoluene	0.388350	0.413417	106.45	75-125
15	3-Nitrotoluene	0.388350	0.380208	97.90	75-120

SURROGATE	COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4	1,4-Dinitrobenzene	1.94175	2.17866	112.20	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B035.d
Date : 09-AUG-2012 14:27
Client ID: FTSW-AA-SO-0...(998
Sample Info: 1020317;AJL;3;;MS;1;;10.3
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-0...(998

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 1020318

Sample wt/vol: 10.5 (g/mL) G Lab File ID (1): ZH8A037.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.38	
55-63-0	Nitroglycerin	2.0	
78-11-5	PETN	1.9	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A037.d
Lab Smp Id: 1020318 Client Smp ID: FTSW-AA-SO-0...(998
Inj Date : 09-AUG-2012 15:55
Operator : AJL Inst ID: hpl1.i
Smp Info : 1020318;AJL;3;;MS;1;;10.47
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_218
Meth Date : 10-Aug-2012 09:34 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.470	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1	1,4-Dinitrobenzene	13.653	13.663	-0.010	60992	459.191	1.75431
3	3,5-Dinitroaniline	17.133	17.153	-0.020	72884	98.8839	0.377780
4	Nitroglycerin	18.646	18.663	-0.017	34674	533.283	2.03738
5	PETN	38.113	38.173	-0.060	36309	486.942	1.86033

ALS - Middletown

RECOVERY REPORT

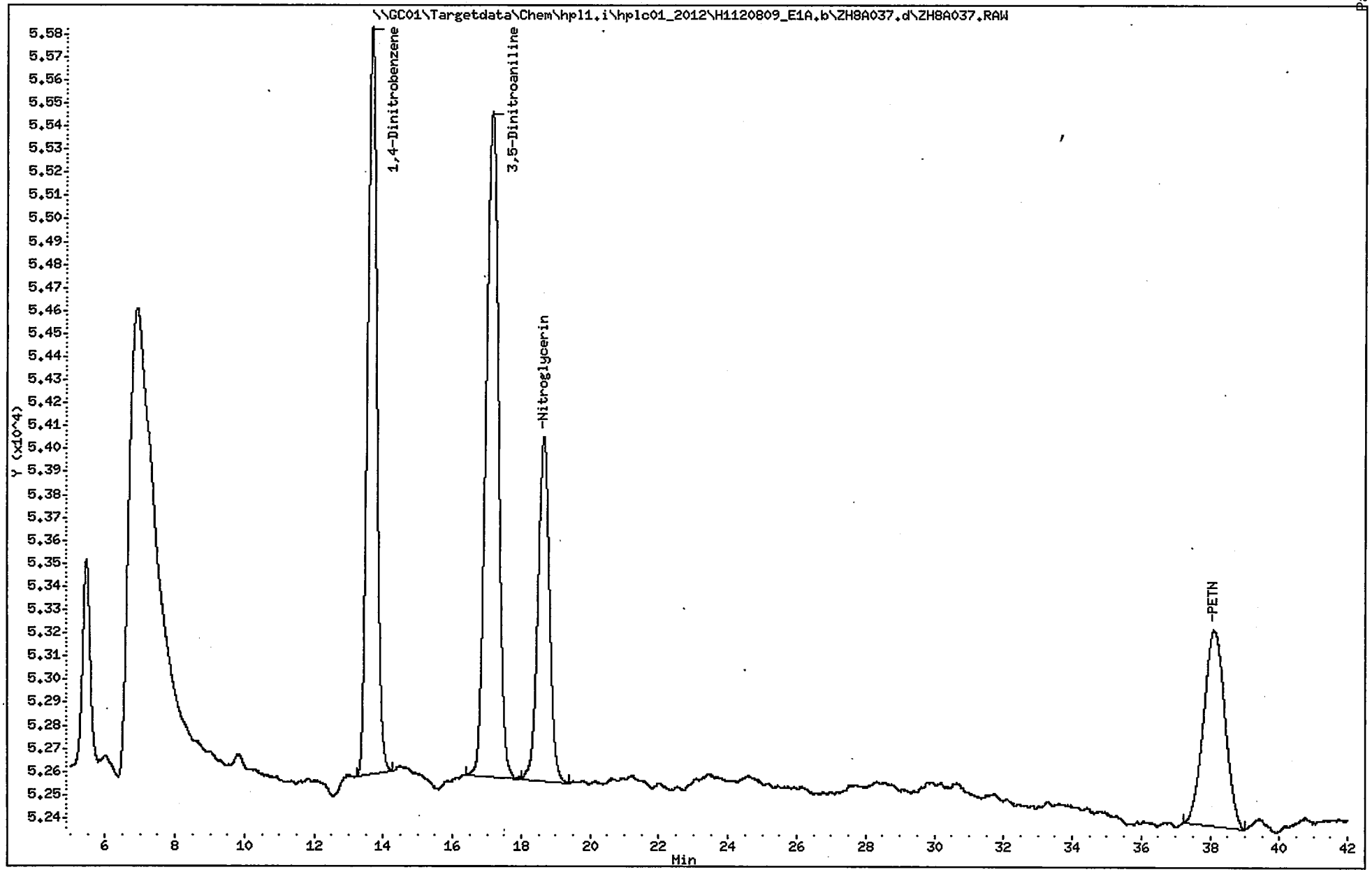
Client Name:
Sample Matrix: SOLID
Lab Smp Id: 1020318
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Client SDG: H1120809_E1A.b
Fraction: SV
Client Smp ID: FTSW-AA-SO-0...(998
Operator: AJL
SampleType: MS
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3178 D8330S

SPIKE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
4 Nitroglycerin	1.91022	2.03738	106.66	70-130
3 3,5-Dinitroaniline	0.382044	0.377780	98.88	70-130
5 PETN	1.91022	1.86033	97.39	70-130

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.91022	1.75431	91.84	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A037.d
Date : 09-AUG-2012 15:55
Client ID: FTSW-AA-SO-0...(998
Sample Info: 1020318;AJL;3;;MS;1;;10.47
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-...(9980

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 1020319

Sample wt/vol: 10.4 (g/mL) G Lab File ID (1): ZH8B036.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.41	
1946-51-0	4-Amino-2,6-dinitrotoluene	0.41	
99-65-0	1,3-Dinitrobenzene	0.41	
121-14-2	2,4-Dinitrotoluene	0.40	
606-20-2	2,6-Dinitrotoluene	0.40	
2691-41-0	HMX	0.38	
98-95-3	Nitrobenzene	0.40	
99-99-0	4-Nitrotoluene	0.42	
88-72-2	2-Nitrotoluene	0.41	
99-08-1	3-Nitrotoluene	0.40	
121-82-4	RDX	0.37	
479-45-8	Tetryl	0.35	
99-35-4	1,3,5-Trinitrobenzene	0.40	
118-96-7	2,4,6-Trinitrotoluene	0.39	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B036.d
Lab Smp Id: 1020319 Client Smp ID: FTSW-AA-SO-...(9980
Inj Date : 09-AUG-2012 15:11
Operator : AJL Inst ID: hpl1.i
Smp Info : 1020319;AJL;3;;MSD;1;;10.43
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_254
Meth Date : 10-Aug-2012 09:44 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.430	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
1	HMX	4.973	4.970	0.003	12324	98.9799	0.379597
2	RDX	8.370	8.356	0.014	14454	95.5736	0.366534
3	1,3,5-Trinitrobenzene	11.820	11.796	0.024	33872	103.863	0.398326
$ 4	1,4-Dinitrobenzene	13.653	13.646	0.007	180865	533.584	2.04634
5	1,3-Dinitrobenzene	15.226	15.196	0.030	46056	107.306	0.411527
6	Nitrobenzene	17.113	17.120	-0.007	27061	103.194	0.395758
7	Tetryl	18.290	18.706	-0.416	23264	90.4537	0.346898
8	2,4,6-Trinitrotoluene(TNT)	21.030	20.983	0.047	31316	102.685	0.393807
9	4-Amino-2,6-dinitrotoluene	23.373	22.736	0.637	23220	107.895	0.413788
10	2-Amino-4,6-dinitrotoluene	24.523	24.473	0.050	30855	107.264	0.411369
11	2,6-Dinitrotoluene	25.770	25.726	0.044	22346	104.668	0.401412
12	2,4-Dinitrotoluene	26.706	26.650	0.056	40677	103.853	0.398286
13	2-Nitrotoluene	31.026	30.996	0.030	17696	106.469	0.408317
14	4-Nitrotoluene	33.800	33.760	0.040	14108	108.650	0.416681
15	3-Nitrotoluene	36.190	36.110	0.080	18542	105.413	0.404270

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: 1020319
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_S.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3178 D8330S

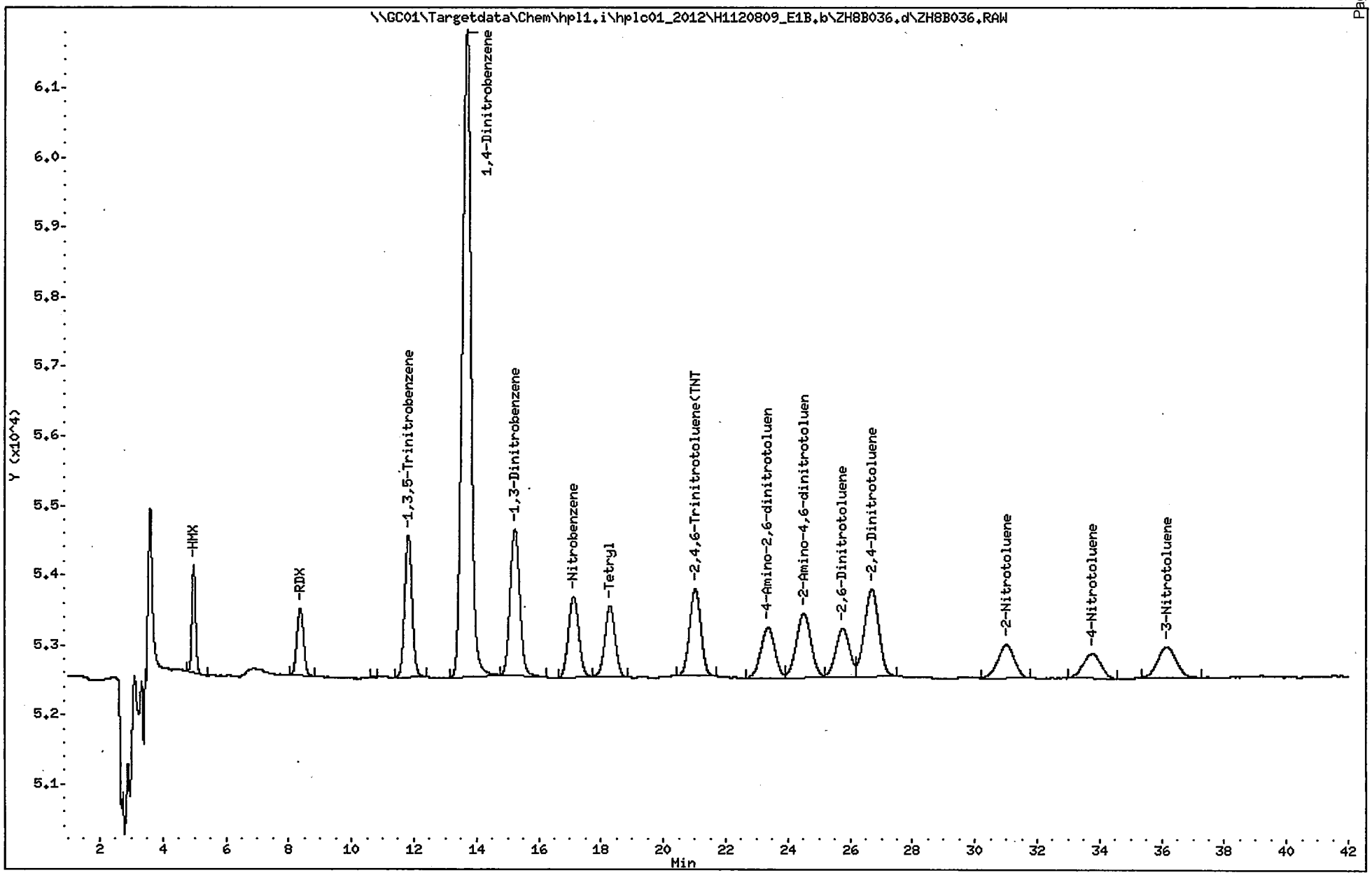
Client SDG: H1120809_E1B.b
Fraction: SV
Client Smp ID: FTSW-AA-SO-...(9980
Operator: AJL
SampleType: MSD
Quant Type: ESTD

	SPIKE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
1	HMX	0.383509	0.379597	98.98	75-125
2	RDX	0.383509	0.366534	95.57	70-135
3	1,3,5-Trinitrobenz	0.383509	0.398326	103.86	75-125
5	1,3-Dinitrobenzene	0.383509	0.411527	107.31	80-125
7	Tetryl	0.383509	0.346898	90.45	10-150
6	Nitrobenzene	0.383509	0.395758	103.19	75-125
8	2,4,6-Trinitrotolu	0.383509	0.393807	102.69	55-140
9	4-Amino-2,6-dinitr	0.383509	0.413788	107.90	80-125
10	2-Amino-4,6-dinitr	0.383509	0.411369	107.26	80-125
11	2,6-Dinitrotoluene	0.383509	0.401412	104.67	80-120
12	2,4-Dinitrotoluene	0.383509	0.398286	103.85	80-125
13	2-Nitrotoluene	0.383509	0.408317	106.47	80-125
14	4-Nitrotoluene	0.383509	0.416681	108.65	75-125
15	3-Nitrotoluene	0.383509	0.404270	105.41	75-120

	SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4	1,4-Dinitrobenzene	1.91755	2.04634	106.72	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B036.d
Date : 09-AUG-2012 15:11
Client ID: FTSW-AA-SO-...(9980
Sample Info: 1020319;AJL;3;;MSD;1;;10.43
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



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ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-AA-SO-...(9980

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 1020320

Sample wt/vol: 10.3 (g/mL) G Lab File ID (1): ZH8A038.d

% Moisture: Lab File ID (2):

Extraction: (Type) SONC Date Received: 07/27/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.38	
55-63-0	Nitroglycerin	2.1	
78-11-5	PETN	1.8	

FORM I

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A038.d
Lab Smp Id: 1020320 Client Smp ID: FTSW-AA-SO-...(9980
Inj Date : 09-AUG-2012 16:39
Operator : AJL Inst ID: hpl1.i
Smp Info : 1020320;AJL;3;;MSD;1;;10.28
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_218
Meth Date : 10-Aug-2012 09:34 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.280	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$	1 1,4-Dinitrobenzene	13.673	13.663	0.010	62807	472.856	1.83991
	3 3,5-Dinitroaniline	17.156	17.153	0.003	72210	97.9695	0.381204
	4 Nitroglycerin	18.676	18.663	0.013	34829	535.667	2.08431
	5 PETN	38.190	38.173	0.017	35446	475.368	1.84968

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: 1020320
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Client SDG: H1120809_E1A.b
Fraction: SV
Client Smp ID: FTSW-AA-SO-...(9980
Operator: AJL
SampleType: MSD
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3178 D8330S

SPIKE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
4 Nitroglycerin	1.94553	2.08431	107.13	70-130
3 3,5-Dinitroaniline	0.389105	0.381204	97.97	70-130
5 PETN	1.94553	1.84968	95.07	70-130

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.94553	1.83991	94.57	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A038.d

Date : 09-AUG-2012 16:39

Client ID: FTSW-AA-SO-...(9980

Sample Info: 1020320;AJL;3;;MSD;1;;10.28

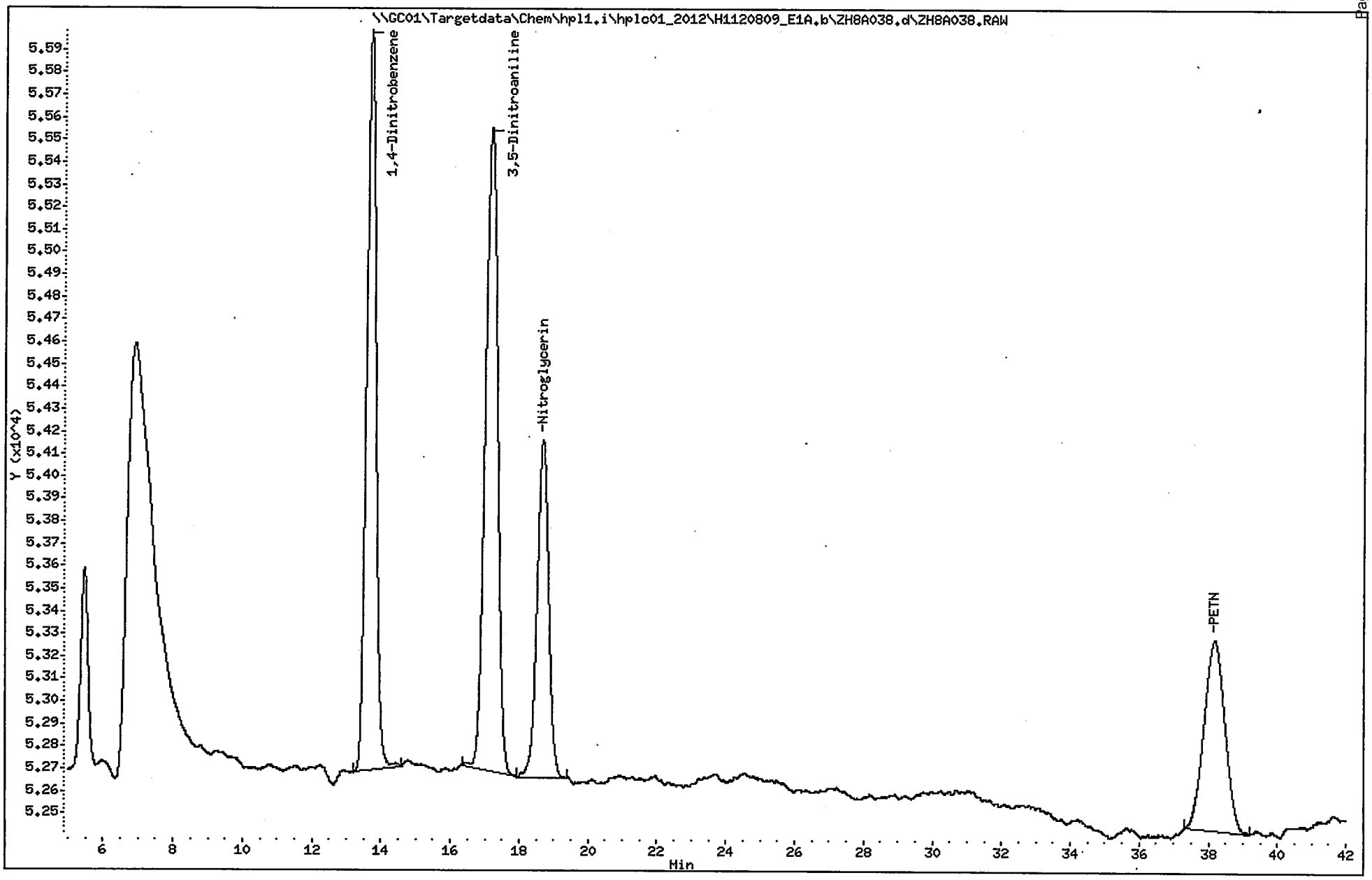
Volume Injected (uL): 100.0

Column phase: E1

Instrument: hpl1.i

Operator: AJL

Column diameter: 4.60



LCS Raw Data

1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

ICV111411(ICV)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): WATER Lab Sample ID: ICV111411

Sample wt/vol: 1000 (g/mL) ML Lab File ID (1): ZKEB012.d

% Moisture:

Extraction: (Type) Date Received:

Concentrated Extract Volume: 10000 (uL) Date Extracted:

Injection Volume: 100 (uL) Date Analyzed: 11/14/2011

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.90	
1946-51-0	4-Amino-2,6-dinitrotoluene	0.87	
99-65-0	1,3-Dinitrobenzene	0.83	
121-14-2	2,4-Dinitrotoluene	0.85	
606-20-2	2,6-Dinitrotoluene	0.90	
2691-41-0	HMX	0.89	
98-95-3	Nitrobenzene	0.89	
99-99-0	4-Nitrotoluene	0.97	
88-72-2	2-Nitrotoluene	0.91	
99-08-1	3-Nitrotoluene	0.94	
121-82-4	RDX	0.86	
479-45-8	Tetryl	0.89	
99-35-4	1,3,5-Trinitrobenzene	0.90	
118-96-7	2,4,6-Trinitrotoluene	0.82	

FORM I PEST

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EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB012
Lab Smp Id: ICV
Inj Date : 14-NOV-2011 22:55
Operator : AJL Inst ID: hpl1.i
Smp Info : ICV
Misc Info : 058
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1_
Meth Date : 15-Nov-2011 06:17 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 58 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
	1 HMX	4.940	4.930	0.010	11031	88.5952	0.885952
	2 RDX	8.346	8.330	0.016	13072	86.4355	0.864355
	3 1,3,5-Trinitrobenzene	11.870	11.857	0.013	29196	89.5251	0.895251
$	4 1,4-Dinitrobenzene	13.753	13.737	0.016	28820	85.0241	0.850241
	5 1,3-Dinitrobenzene	15.333	15.317	0.016	35698	83.1725	0.831725
	6 Nitrobenzene	17.270	17.250	0.020	23216	88.5315	0.885315
	7 Tetryl	18.290	18.283	0.007	22992	89.3962	0.893962
	8 2,4,6-Trinitrotoluene(TNT)	21.120	21.110	0.010	24978	81.9028	0.819028
	9 4-Amino-2,6-dinitrotoluene	23.500	23.483	0.017	18794	87.3292	0.873292
	10 2-Amino-4,6-dinitrotoluene	24.656	24.650	0.006	25772	89.5939	0.895939
	11 2,6-Dinitrotoluene	25.943	25.940	0.003	19167	89.7778	0.897778
	12 2,4-Dinitrotoluene	26.910	26.903	0.007	33226	84.8298	0.848298
	13 2-Nitrotoluene	31.340	31.327	0.013	15153	91.1687	0.911687
	14 4-Nitrotoluene	34.143	34.133	0.010	12601	97.0438	0.970438
	15 3-Nitrotoluene	36.616	36.567	0.049	16513	93.8784	0.938784

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: ICV
Level: LOW
Data Type: LC DATA
SpikeList File: ICV.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\8330E1
Misc Info: 058

Client SDG: H1111114_E1B.b
Fraction: SV

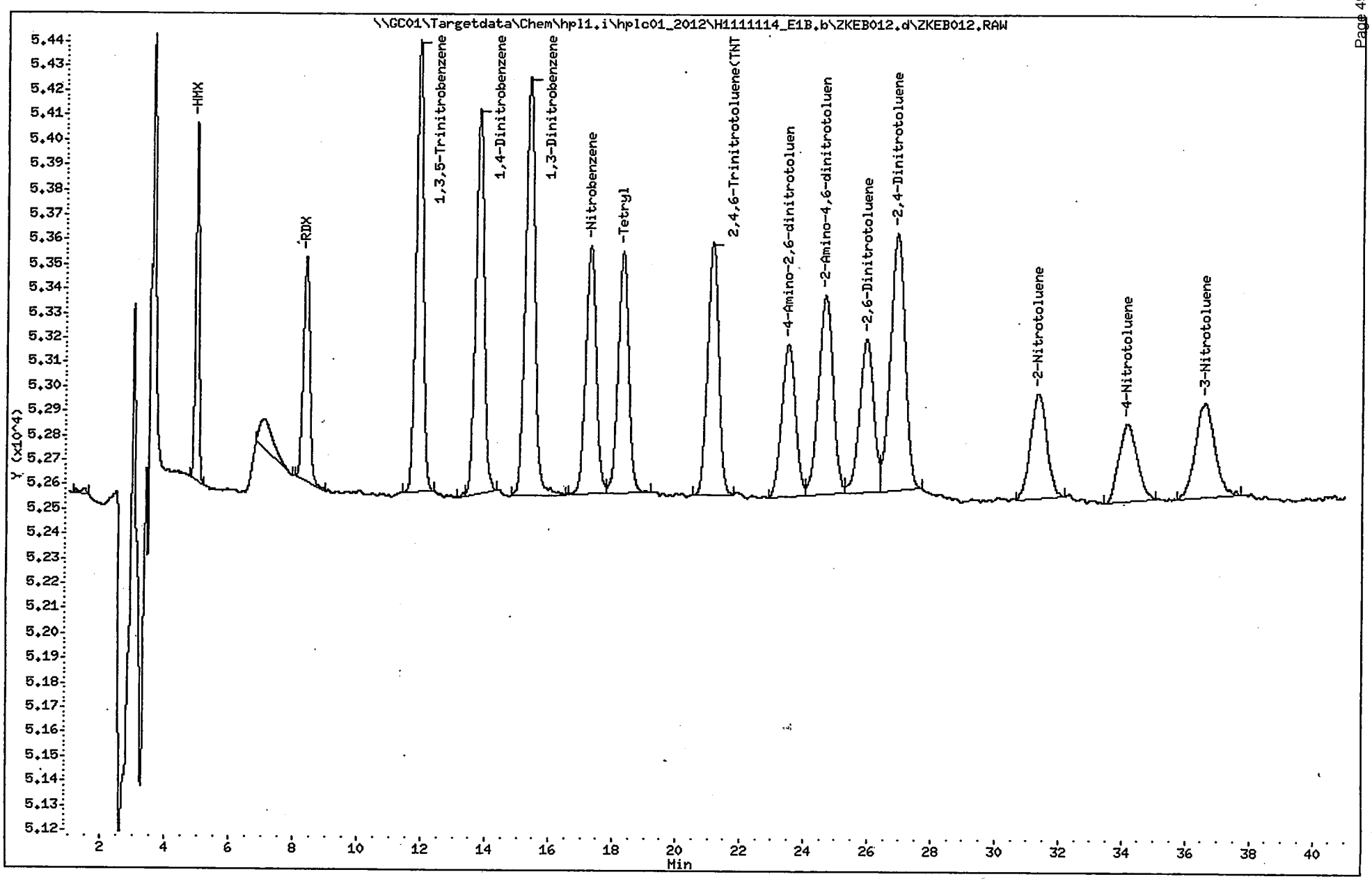
Operator: AJL
SampleType: LCS
Quant Type: ESTD

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1	HMX	1.00000	0.885952	88.60	80-120
2	RDX	1.00000	0.864355	86.44	80-120
3	1,3,5-Trinitrobenz	1.00000	0.895251	89.53	80-120
5	1,3-Dinitrobenzene	1.00000	0.831725	83.17	80-120
7	Tetryl	1.00000	0.893962	89.40	80-120
6	Nitrobenzene	1.00000	0.885315	88.53	80-120
8	2,4,6-Trinitrotolu	1.00000	0.819028	81.90	80-120
9	4-Amino-2,6-dinitr	1.00000	0.873292	87.33	80-120
10	2-Amino-4,6-dinitr	1.00000	0.895939	89.59	80-120
11	2,6-Dinitrotoluene	1.00000	0.897778	89.78	80-120
12	2,4-Dinitrotoluene	1.00000	0.848298	84.83	80-120
13	2-Nitrotoluene	1.00000	0.911687	91.17	80-120
14	4-Nitrotoluene	1.00000	0.970438	97.04	80-120
15	3-Nitrotoluene	1.00000	0.938784	93.88	80-120

	SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4	1,4-Dinitrobenzene	1.00000	0.850241	85.02	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1111114_E1B.b\ZKEB012.d
Date : 14-NOV-2011 22:55
Client ID:
Sample Info: ICV
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

ICV112011(ICV)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): WATER Lab Sample ID: ICV112011

Sample wt/vol: 1000 (g/mL) ML Lab File ID (1): ZKKA003.d

% Moisture:

Extraction: (Type) Date Received:

Concentrated Extract Volume: 40000 (uL) Date Extracted:

Injection Volume: 100 (uL) Date Analyzed: 11/20/2011

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
618-87-1	3,5-Dinitroaniline	1.0	J
55-63-0	Nitroglycerin	5.6	
78-11-5	PETN	0.95	J

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EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Lab Smp Id: CCV2
Inj Date : 20-NOV-2011 11:37
Operator : AJL Inst ID: hpl1.i
Smp Info : CCV2;AJL;2
Misc Info : 056
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H111
Meth Date : 20-Aug-2012 13:25 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 56 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF * (Vt*Vi/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00100	UNIT CORRECTION
Vt	10000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
$ 1	1,4-Dinitrobenzene	13.380	13.346	0.034	13685	103.030	1.03030
3	3,5-Dinitroaniline	16.793	16.760	0.033	75392	102.287	1.02287 (M)
4	Nitroglycerin	18.170	18.120	0.050	36109	555.353	5.55353 (M)
5	PETN	37.290	37.110	0.180	36909	494.989	4.94989

QC Flag Legend

M - Compound response manually integrated.

[redacted]

ALS - Middletown

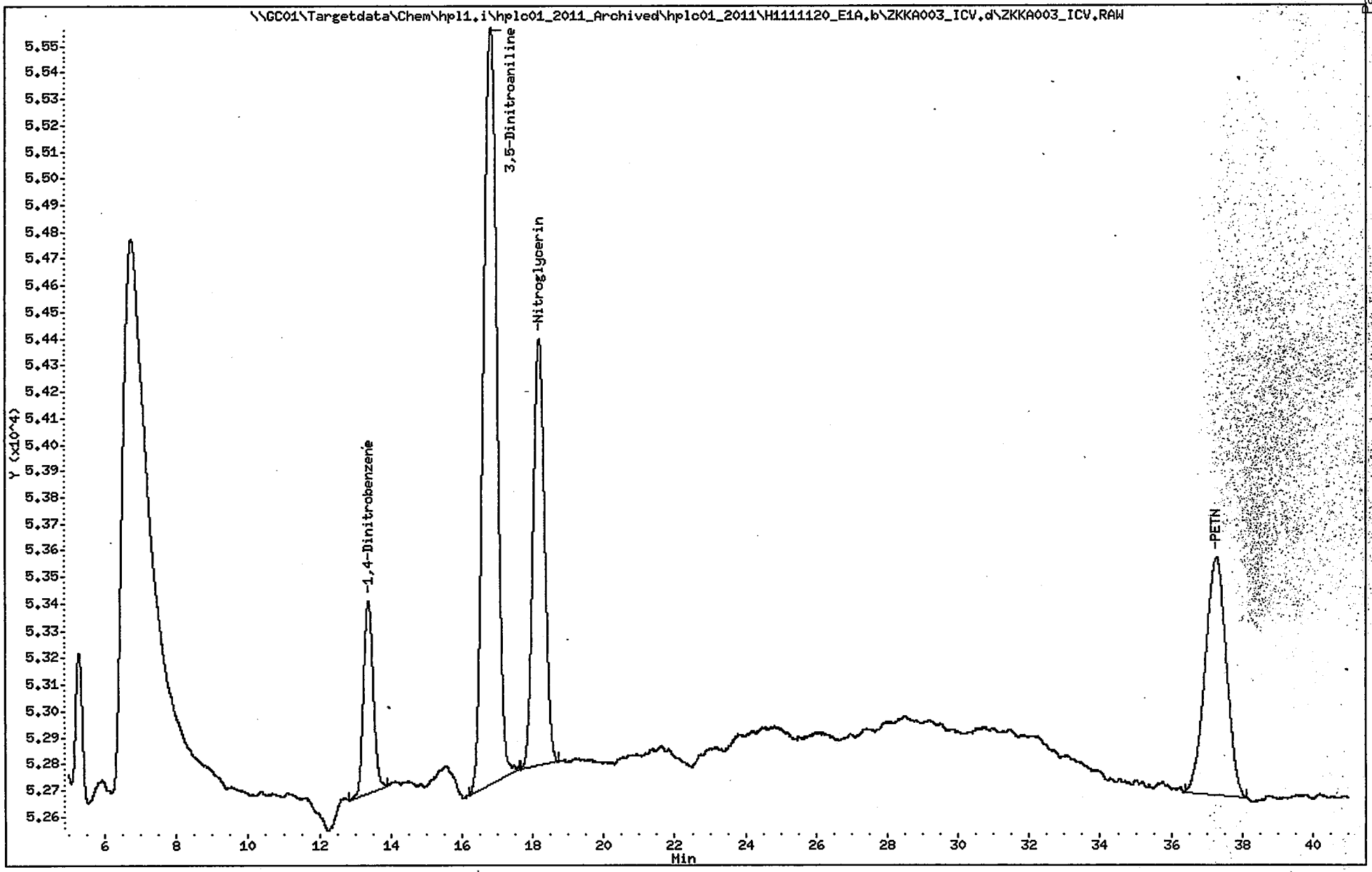
RECOVERY REPORT

Client Name:
Client SDG: H1111120_E1A.b
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: CCV2
Level: LOW
Operator: AJL
Data Type: LC DATA
SampleType: LCS
SpikeList File: ICV.spk
Quant Type: ESTD
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H11
Misc Info: 056

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
4 Nitroglycerin	5.00000	5.55353	111.07	80-120
3 3,5-Dinitroaniline	1.00000	1.02287	102.29	80-120
5 PETN	5.00000	4.94989	99.00	80-120

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	1.00000	1.03030	103.03	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2011_Archived\hplc01_2011\H1111120_E1A.b\ZKKA003_ICV.d
Date : 20-NOV-2011 11:37
Client ID:
Instrument: hpl1.i
Sample Info: CCV2;AJL;2
Volume Injected (uL): 100.0
Operator: AJL
Column phase: E1
Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1019868(LCS)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 1019868

Sample wt/vol: 10.0 (g/mL) G Lab File ID (1): ZH8B004.d

% Moisture:

Extraction:(Type) SONC Date Received: 08/07/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup:(Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.42	
1946-51-0	4-Amino-2,6-dinitrotoluene	0.42	
99-65-0	1,3-Dinitrobenzene	0.42	
121-14-2	2,4-Dinitrotoluene	0.40	
606-20-2	2,6-Dinitrotoluene	0.39	
2691-41-0	HMX	0.41	
98-95-3	Nitrobenzene	0.39	
99-99-0	4-Nitrotoluene	0.41	
88-72-2	2-Nitrotoluene	0.41	
99-08-1	3-Nitrotoluene	0.37	
121-82-4	RDX	0.43	
479-45-8	Tetryl	0.39	
99-35-4	1,3,5-Trinitrobenzene	0.43	
118-96-7	2,4,6-Trinitrotoluene	0.42	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B004.d
Lab Smp Id: 1019868 Client Smp ID: LCS1 for HBN 474917
Inj Date : 08-AUG-2012 15:05
Operator : AJL Inst ID: hpl1.i
Smp Info : 1019868;AJL;3;;LCS;1;;10
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_254
Meth Date : 09-Aug-2012 11:13 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted g
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED
2nd REVIEW 08/14

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
1	HMX	4.990	4.980	0.010	12660	101.679	0.406714
2	RDX	8.406	8.376	0.030	16319	107.905	0.431622
3	1,3,5-Trinitrobenzene	11.890	11.833	0.057	35041	107.448	0.429792
$ 4	1,4-Dinitrobenzene	13.733	13.673	0.060	181529	535.543	2.14217
5	1,3-Dinitrobenzene	15.316	15.240	0.076	45275	105.486	0.421944
6	Nitrobenzene	17.206	17.123	0.083	25500	97.2412	0.388965
7	Tetryl	18.440	18.323	0.117	24776	96.3326	0.385330
8	2,4,6-Trinitrotoluene(TNT)	21.186	21.066	0.120	32276	105.833	0.423332
9	4-Amino-2,6-dinitrotoluene	23.546	23.406	0.140	22810	105.990	0.423961
10	2-Amino-4,6-dinitrotoluene	24.713	24.553	0.160	29863	103.816	0.415263
11	2,6-Dinitrotoluene	25.966	25.810	0.156	20840	97.6141	0.390457
12	2,4-Dinitrotoluene	26.893	26.740	0.153	39505	100.861	0.403443
13	2-Nitrotoluene	31.210	31.060	0.150	17080	102.763	0.411050
14	4-Nitrotoluene	34.020	33.830	0.190	13239	101.957	0.407829
15	3-Nitrotoluene	36.416	36.200	0.216	16394	93.2019	0.372807

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: 1019868
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_S.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3176 D8330S

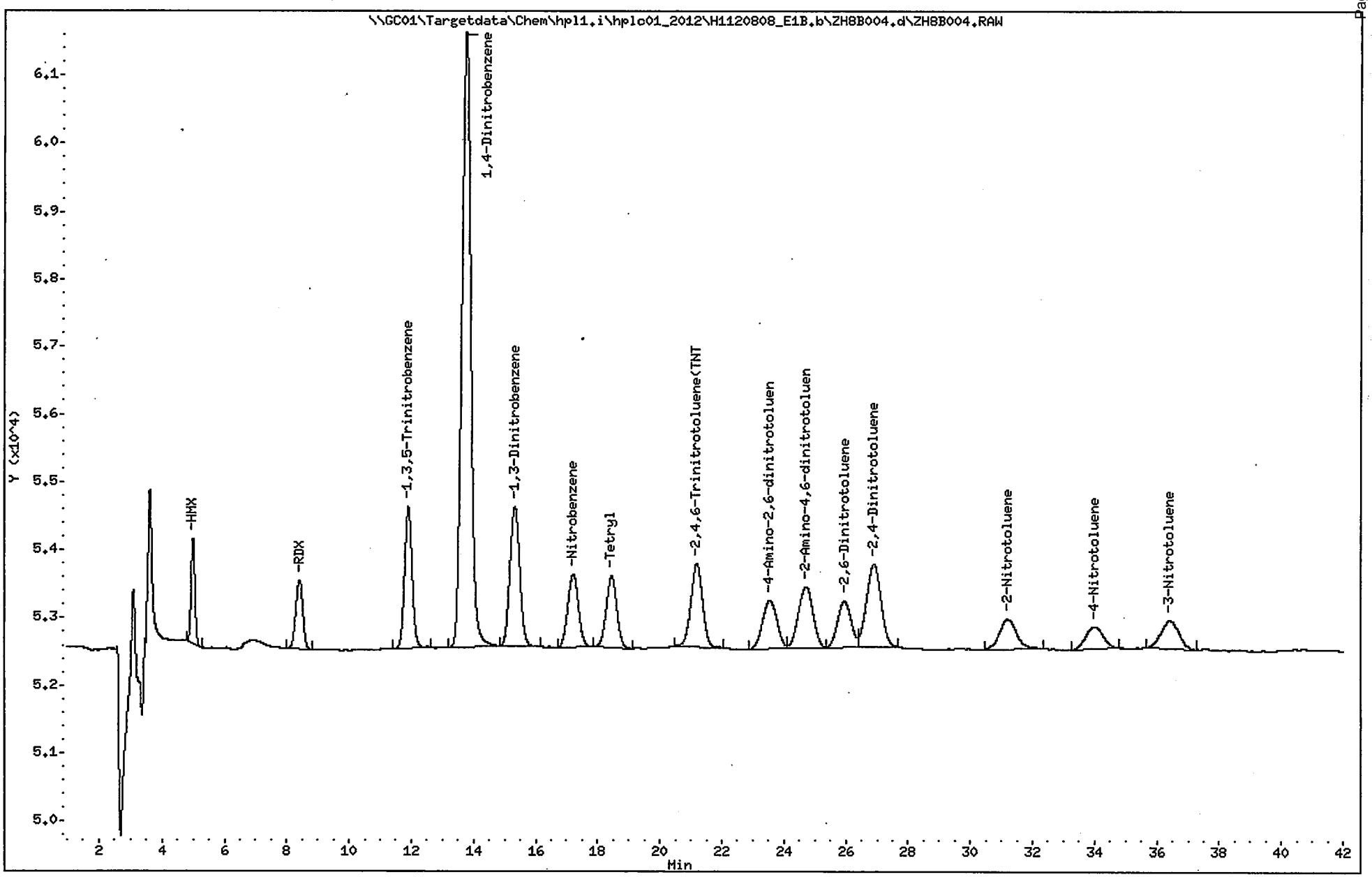
Client SDG: H1120808_E1B.b
Fraction: SV
Client Smp ID: LCS1 for HBN 474917
Operator: AJL
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
1 HMX	0.400000	0.406714	101.68	75-125
2 RDX	0.400000	0.431622	107.91	70-135
3 1,3,5-Trinitrobenz	0.400000	0.429792	107.45	75-125
5 1,3-Dinitrobenzene	0.400000	0.421944	105.49	80-125
7 Tetryl	0.400000	0.385330	96.33	10-150
6 Nitrobenzene	0.400000	0.388965	97.24	75-125
8 2,4,6-Trinitrotolu	0.400000	0.423332	105.83	55-140
9 4-Amino-2,6-dinitr	0.400000	0.423961	105.99	80-125
10 2-Amino-4,6-dinitr	0.400000	0.415263	103.82	80-125
11 2,6-Dinitrotoluene	0.400000	0.390457	97.61	80-120
12 2,4-Dinitrotoluene	0.400000	0.403443	100.86	80-125
13 2-Nitrotoluene	0.400000	0.411050	102.76	80-125
14 4-Nitrotoluene	0.400000	0.407829	101.96	75-125
15 3-Nitrotoluene	0.400000	0.372807	93.20	75-120

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4 1,4-Dinitrobenzene	2.00000	2.14217	107.11	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1B.b\ZH8B004.d
Date : 08-AUG-2012 15:05
Client ID: LCS1 for HBN 474917
Sample Info: 1019868;AJL;3;;LCS;1;;10
Volume Injected (uL): 100.0
Column phase: E1

Instrument: hpl1.i
Operator: AJL
Column diameter: 4.60



ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1019869(LCS)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 1019869

Sample wt/vol: 10.0 (g/mL) G Lab File ID (1): ZH8A005.d

% Moisture:

Extraction: (Type) SONC Date Received: 08/07/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/07/2012

Injection Volume: 100 (uL) Date Analyzed: 08/08/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.42	
55-63-0	Nitroglycerin	2.1	
78-11-5	PETN	1.9	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A005.d
Lab Smp Id: 1019869 Client Smp ID: LCS2 for HBN 474917
Inj Date : 08-AUG-2012 15:49
Operator : AJL Inst ID: hpl1.i
Smp Info : 1019869;AJL;3;;LCS;1;;10;;;
Misc Info : ZZ HPLC 3176 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_218
Meth Date : 09-Aug-2012 11:14 Lopez Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/12/12
APPROVED 8/14
2nd REVIEW 8/14

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.756	13.663	0.093	65101	490.127	1.96051
3 3,5-Dinitroaniline	17.273	17.153	0.120	77402	105.014	0.420054
4 Nitroglycerin	18.806	18.663	0.143	34042	523.563	2.09425
5 PETN	38.536	38.173	0.363	35374	474.403	1.89761

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: 1019869
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Client SDG: H1120808_E1A.b
Fraction: SV
Client Smp ID: LCS2 for HBN 474917
Operator: AJL
SampleType: LCS
Quant Type: ESTD
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3176 D8330S

SPIKE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
4 Nitroglycerin	2.00000	2.09425	104.71	70-130
3 3,5-Dinitroaniline	0.400000	0.420054	105.01	70-130
5 PETN	2.00000	1.89761	94.88	70-130

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	2.00000	1.96051	98.03	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120808_E1A.b\ZH8A005.d

Date : 08-AUG-2012 15:49

Client ID: LCS2 for HBN 474917

Instrument: hpl1.i

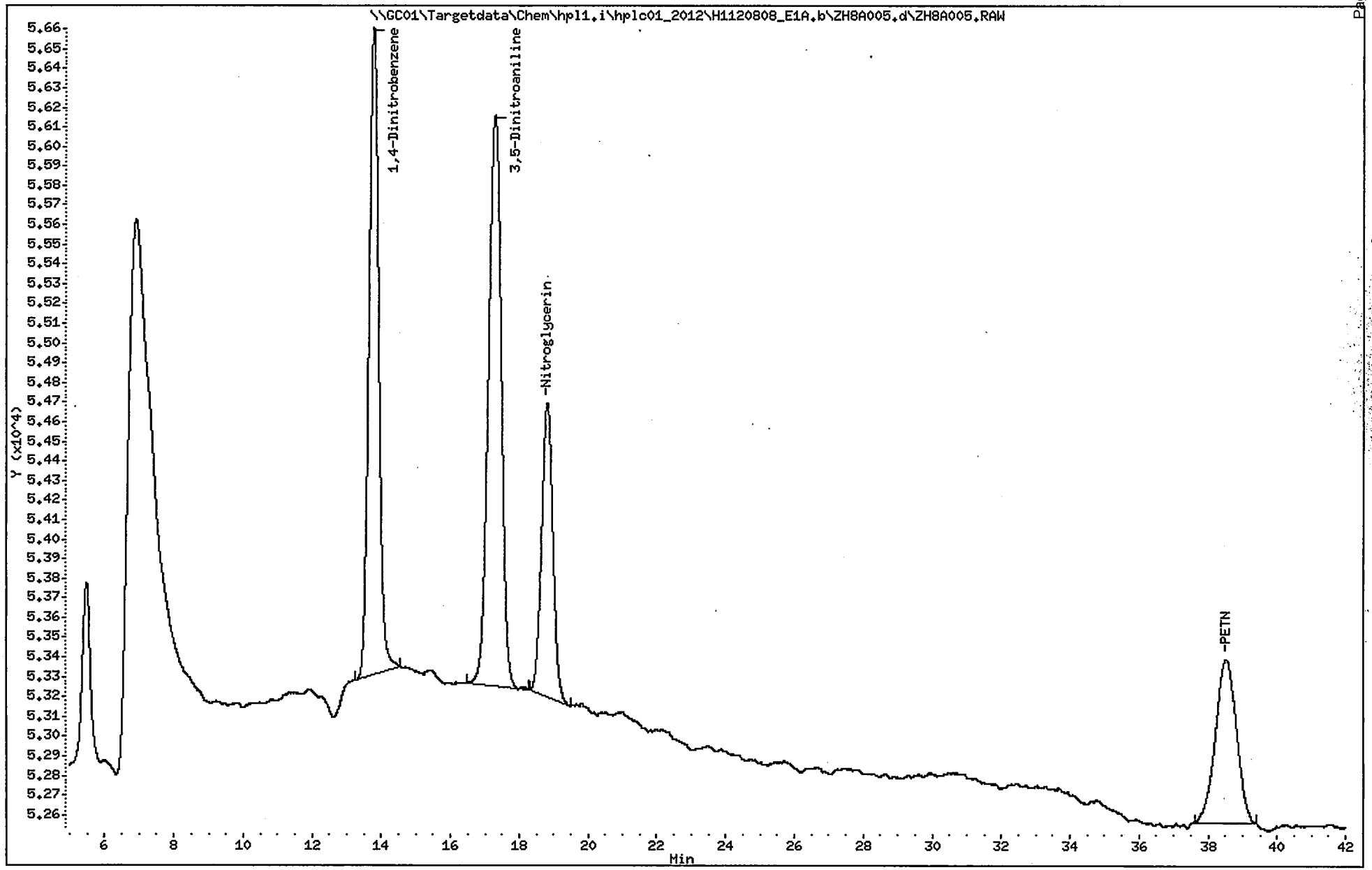
Sample Info: 1019869;AJL;3;;LCS;1;;10;;;

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1020315(LCS)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 1020315

Sample wt/vol: 10.0 (g/mL) G Lab File ID (1): ZH8B032.d

% Moisture:

Extraction: (Type) SONC Date Received: 08/08/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
35572-78-2	2-Amino-4,6-dinitrotoluene	0.43	
1946-51-0	4-Amino-2,6-dinitrotoluene	0.42	
99-65-0	1,3-Dinitrobenzene	0.42	
121-14-2	2,4-Dinitrotoluene	0.42	
606-20-2	2,6-Dinitrotoluene	0.41	
2691-41-0	HMX	0.40	
98-95-3	Nitrobenzene	0.37	
99-99-0	4-Nitrotoluene	0.39	
88-72-2	2-Nitrotoluene	0.40	
99-08-1	3-Nitrotoluene	0.41	
121-82-4	RDX	0.43	
479-45-8	Tetryl	0.40	
99-35-4	1,3,5-Trinitrobenzene	0.43	
118-96-7	2,4,6-Trinitrotoluene	0.41	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B032.d
Lab Smp Id: 1020315 Client Smp ID: LCS1 for HBN 475072
Inj Date : 09-AUG-2012 12:00
Operator : AJL Inst ID: hpl1.i
Smp Info : 1020315;AJL;3;;LCS;1
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 254nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_254
Meth Date : 10-Aug-2012 09:44 Lopez Quant Type: ESTD
Cal Date : 14-NOV-2011 22:12 Cal File: ZKEB011.d
Als bottle: 100 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8330all.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW 8/12/12
REPORTED 8/13/12
APPROVED 8/13/12
2nd REVIEW 8/13/12

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
1	HMX	4.973	4.970	0.003	12500	100.393	0.401574
2	RDX	8.370	8.356	0.014	16193	107.072	0.428289
3	1,3,5-Trinitrobenzene	11.823	11.796	0.027	35404	108.561	0.434244
$ 4	1,4-Dinitrobenzene	13.660	13.646	0.014	180177	531.554	2.12622
5	1,3-Dinitrobenzene	15.233	15.196	0.037	45182	105.269	0.421077
6	Nitrobenzene	17.116	17.120	-0.004	24368	92.9245	0.371698
7	Tetryl	18.306	18.706	-0.400	25871	100.590	0.402361
8	2,4,6-Trinitrotoluene(TNT)	21.040	20.983	0.057	31605	103.633	0.414531
9	4-Amino-2,6-dinitrotoluene	23.380	22.736	0.644	22840	106.130	0.424518
10	2-Amino-4,6-dinitrotoluene	24.533	24.473	0.060	31017	107.828	0.431310
11	2,6-Dinitrotoluene	25.783	25.726	0.057	22009	103.090	0.412359
12	2,4-Dinitrotoluene	26.713	26.650	0.063	41336	105.536	0.422142
13	2-Nitrotoluene	31.023	30.996	0.027	16515	99.3632	0.397453
14	4-Nitrotoluene	33.816	33.760	0.056	12736	98.0835	0.392334
15	3-Nitrotoluene	36.156	36.110	0.046	18078	102.776	0.411102

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: 1020315
Level: LOW
Data Type: LC DATA
SpikeList File: DoD_S.spk
Sublist File: 8330all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\8330E1_25
Misc Info: ZZ HPLC 3178 D8330S

Client SDG: H1120809_E1B.b
Fraction: SV
Client Smp ID: LCS1 for HBN 475072
Operator: AJL
SampleType: LCS
Quant Type: ESTD

SPIKE	COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
1	HMX	0.400000	0.401574	100.39	75-125
2	RDX	0.400000	0.428289	107.07	70-135
3	1,3,5-Trinitrobenz	0.400000	0.434244	108.56	75-125
5	1,3-Dinitrobenzene	0.400000	0.421077	105.27	80-125
7	Tetryl	0.400000	0.402361	100.59	10-150
6	Nitrobenzene	0.400000	0.371698	92.92	75-125
8	2,4,6-Trinitrotolu	0.400000	0.414531	103.63	55-140
9	4-Amino-2,6-dinitr	0.400000	0.424518	106.13	80-125
10	2-Amino-4,6-dinitr	0.400000	0.431310	107.83	80-125
11	2,6-Dinitrotoluene	0.400000	0.412359	103.09	80-120
12	2,4-Dinitrotoluene	0.400000	0.422142	105.54	80-125
13	2-Nitrotoluene	0.400000	0.397453	99.36	80-125
14	4-Nitrotoluene	0.400000	0.392334	98.08	75-125
15	3-Nitrotoluene	0.400000	0.411102	102.78	75-120

SURROGATE	COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 4	1,4-Dinitrobenzene	2.00000	2.12622	106.31	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1B.b\ZH8B032.d

Date : 09-AUG-2012 12:00

Client ID: LCS1 for HBN 475072

Instrument: hpl1.i

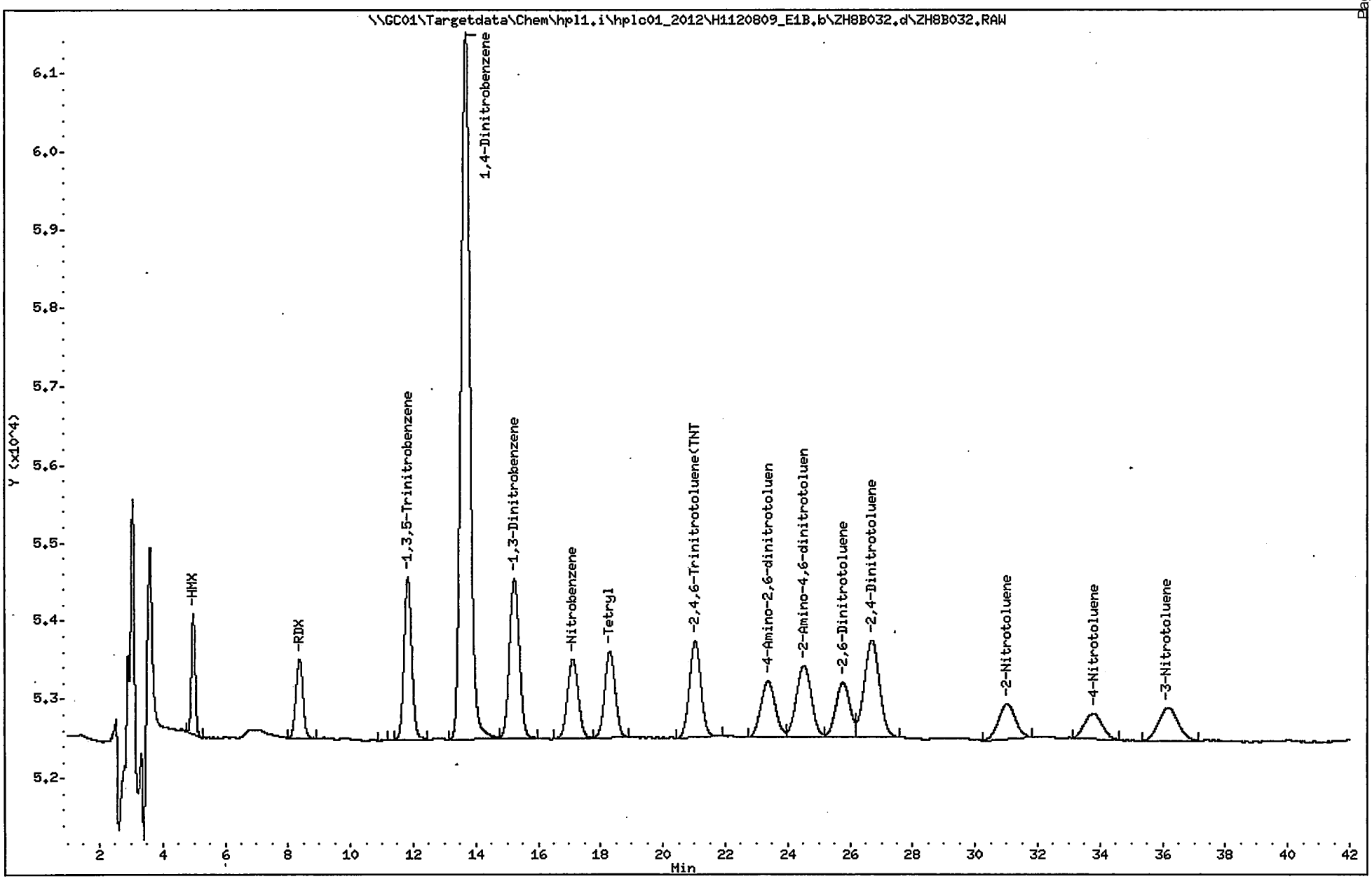
Sample Info: 1020315;AJL;3;;LCS;1

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



1E

ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1020316(LCS)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-001

Matrix (soil/water): SOIL Lab Sample ID: 1020316

Sample wt/vol: 10.0 (g/mL) G Lab File ID (1): ZH8A033.d

% Moisture:

Extraction: (Type) SONC Date Received: 08/08/2012

Concentrated Extract Volume: 40000 (uL) Date Extracted: 08/08/2012

Injection Volume: 100 (uL) Date Analyzed: 08/09/2012

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
618-87-1	3,5-Dinitroaniline	0.39	
55-63-0	Nitroglycerin	2.1	
78-11-5	PETN	2.0	

ALS - Middletown

EXPLOSIVES ANALYSIS

Data file : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A033.d
Lab Smp Id: 1020316 Client Smp ID: LCS2 for HBN 475072
Inj Date : 09-AUG-2012 12:44
Operator : AJL Inst ID: hpl1.i
Smp Info : 1020316;AJL;3;;LCS;1
Misc Info : ZZ HPLC 3178 D8330S
Comment : Column: E1, 218nm
Method : \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_218
Meth Date : 10-Aug-2012 09:34 hpl1.i Quant Type: ESTD
Cal Date : 15-NOV-2011 03:55 Cal File: ZKEA019.d
Als bottle: 100 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 218all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * UF*(Vt/(Vi * Ws * (100 - M)/100)) * CpndVaria

Name	Value	Description
DF	1.000	Dilution Factor
UF	0.00010	CORRECTION FACTOR
Vt	40000.000	Volume of final extract (uL)
Vi	100.000	Volume injected (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

DATA REVIEW
REPORTED
APPROVED
2nd REVIEW

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/kg)
$ 1 1,4-Dinitrobenzene	13.666	13.663	0.003	61797	465.252	1.86101
3 3,5-Dinitroaniline	17.146	17.153	-0.007	71231	96.6412	0.386565
4 Nitroglycerin	18.666	18.663	0.003	34739	534.283	2.13713
5 PETN	38.166	38.173	-0.007	36379	487.881	1.95152

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: 1020316
Level: LOW
Data Type: LC DATA
SpikeList File: 8330LCS.spk
Sublist File: 218all.sub
Method File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\8330E1_21
Misc Info: ZZ HPLC 3178 D8330S

Client SDG: H1120809_E1A.b
Fraction: SV
Client Smp ID: LCS2 for HBN 475072
Operator: AJL
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
4 Nitroglycerin	2.00000	2.13713	106.86	70-130
3 3,5-Dinitroaniline	0.400000	0.386565	96.64	70-130
5 PETN	2.00000	1.95152	97.58	70-130

SURROGATE COMPOUND	CONC ADDED mg/kg	CONC RECOVERED mg/kg	% RECOVERED	LIMITS
$ 1 1,4-Dinitrobenzene	2.00000	1.86101	93.05	50-150

Data File: \\GC01\Targetdata\Chem\hpl1.i\hplc01_2012\H1120809_E1A.b\ZH8A033.d

Date : 09-AUG-2012 12:44

Client ID: LCS2 for HBN 475072

Instrument: hpl1.i

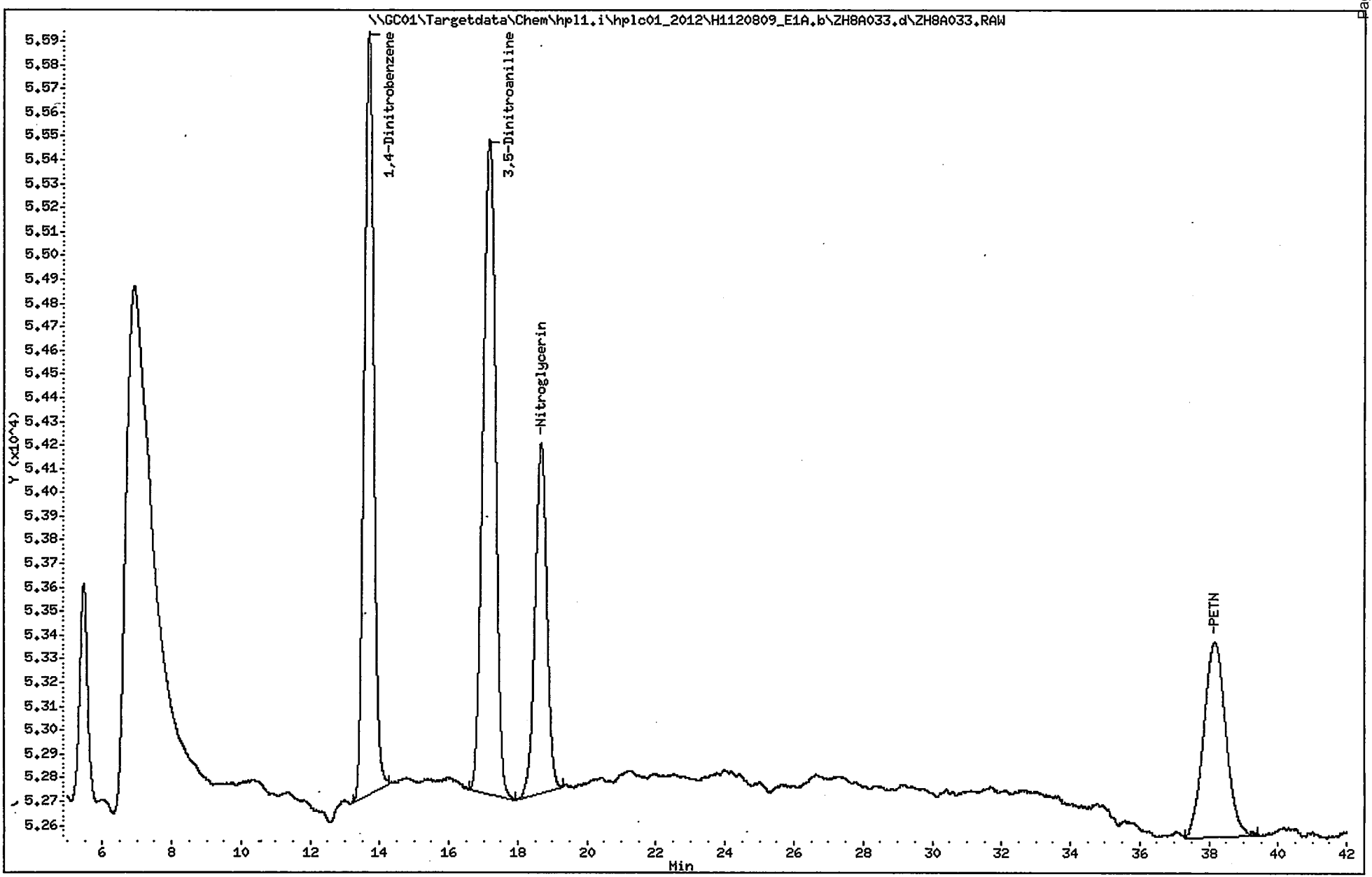
Sample Info: 1020316;AJL;3;;LCS;1

Volume Injected (uL): 100.0

Operator: AJL

Column phase: E1

Column diameter: 4.60



Preparation Logbook

Sample Drying Log

Horizon Batch: WCPR 23565 Notes:

		Set up and First weighing Tech: SAS Date: 8/1/2012 Time: 9:45			Weight after > 24Hours Tech: SAS Date: 8/2/2012 Time: 10:00			2nd Weight (>+2Hours) Tech: SAS Date: 8/2/2012 Time: 12:05			3rd Weight (>+2Hours) Tech: SAS Date: 8/6/2012 Time: 6:00			4th Weight (>+2Hours) Tech: SAS Date: 8/7/2012 Time: 11:35						
	Sample #	Tray Wt.(g)	Tray + Samp Wt. (g)	Sample Wt. (g)	Tray + Samp Wt. (g)	Sample Wt. (g)	RPD	Tray + Samp Wt. (g)	Sample Wt. (g)	RPD	Tray + Samp Wt. (g)	Sample Wt. (g)	RPD	Tray + Samp Wt. (g)	Sample Wt. (g)	RPD	Seived	Subsampled for Metals	Date	Initials
1	9980109001	0	430	430	381.5	381.5	8.5%	376.5	376.5	0.9%	354	354	4.4%	356.5	356.5	0.5%	x	No	8/7/2012	SAS
2	9980109003	0	468.5	468.5	335.5	335.5	23.4%	331.5	331.5	0.8%	296	296	8.0%	295	295	0.2%	x	No	8/7/2012	SAS
3	9980109004	0	413.5	413.5	383.5	383.5	5.3%	381.5	381.5	0.4%	379.5	379.5	0.4%				x	No	8/6/2012	SAS
4	9980109005	0	382.5	382.5	348	348	6.7%	344	344	0.8%	300	300	9.7%	298	298	0.5%	x	No	8/7/2012	SAS
5	9980109006	0	461	461	424	424	5.9%	421.5	421.5	0.4%	410.5	410.5	1.9%				x	No	8/6/2012	SAS
6	9980109007	0	325	325	322.5	322.5	0.5%	322	322	0.1%	322	322	0.0%				x	No	8/6/2012	SAS
7	9980109008	0	401	401	370	370	5.7%	369.5	369.5	0.1%	369.5	369.5	0.0%				x	No	8/6/2012	SAS
8	9980109009	0	321	321	277.5	277.5	10.3%	275	275	0.6%	270.5	270.5	1.2%				x	No	8/6/2012	SAS
9	9980109010	0	419	419	380.5	380.5	6.8%	379	379	0.3%	379	379	0.0%				x	No	8/6/2012	SAS
10	9980109011-C	0	292	292	285.5	285.5	1.6%	284.5	284.5	0.2%	283	283	0.4%				x	No	8/6/2012	SAS
11	9980109011-B	0	279	279	268.5	268.5	2.7%	268.5	268.5	0.0%	268.5	268.5	0.0%				x	No	8/6/2012	SAS
12	9980109011-A	0	282.5	282.5	274	274	2.2%	274	274	0.0%	274	274	0.0%				x	No	8/6/2012	SAS
13	9980109012	0	290	290	281.5	281.5	2.1%	281.5	281.5	0.0%	281.5	281.5	0.0%				x	No	8/6/2012	SAS
14	9980109013	0	340.5	340.5	315	315	5.5%	312	312	0.7%	301	301	2.5%				x	No	8/6/2012	SAS
15	9980109014	0	321.5	321.5	285.5	285.5	8.4%	282.5	282.5	0.7%	268	268	3.7%				x	No	8/6/2012	SAS
16	9980109015	0	357	357	330	330	5.6%	326.5	326.5	0.8%	307	307	4.4%	308	308	0.2%	x	No	8/7/2012	SAS
17	9980109016	0	388	388	359	359	5.5%	356	356	0.6%	347	347	1.8%				x	No	8/6/2012	SAS
18	9980109017	0	379	379	354.5	354.5	4.7%	351.5	351.5	0.6%	328.5	328.5	4.8%	330	330	0.3%	x	No	8/7/2012	SAS
19	9980109018	0	389	389	359	359	5.7%	355.5	355.5	0.7%	333.5	333.5	4.5%	334.5	334.5	0.2%	x	No	8/7/2012	SAS
20	9980109019	0	308	308	290.5	290.5	4.1%	289.5	289.5	0.2%	289	289	0.1%				x	No	8/6/2012	SAS
21	9980394001	1730	2183	453	2140.5	410.5	7.0%	2136.5	406.5	0.7%	2085.5	355.5	9.5%		349	1.3%	x	No	8/7/2012	SAS
22	9980394002	0	437	437	406	406	5.2%	402	402	0.7%	368.5	368.5	6.1%	368	368	0.1%	x	No	8/7/2012	SAS
23	9980394003	0	373.5	373.5	344	344	5.8%	341	341	0.6%	331	331	2.1%				x	No	8/6/2012	SAS
24	9980394004	0	400.5	400.5	372	372	5.2%	369	369	0.6%	331	331	7.7%	329.5	329.5	0.3%	x	No	8/7/2012	SAS
25	9980394005	1422	1862	440	1817.5	395.5	7.5%	1813.5	391.5	0.7%	1729	307	17.1%	304	304	0.7%	x	No	8/7/2012	SAS

Comments

Sample Drying Log

Horizon Batch: WCPR 23565 Notes:

		Set up and First weighing Tech: SAS Date: 8/1/2012 Time: 9:45			Weight after > 24Hours Tech: SAS Date: 8/2/2012 Time: 10:00			2nd Weight (>+2Hours) Tech: SAS Date: 8/2/2012 Time: 12:05			3rd Weight (>+2Hours) Tech: SAS Date: 8/6/2012 Time: 6:00			4th Weight (>+2Hours) Tech: SAS Date: 8/7/2012 Time: 11:35						
	Sample #	Tray Wt.(g)	Tray + Samp Wt. (g)	Sample Wt. (g)	Tray + Samp Wt. (g)	Sample Wt. (g)	RPD	Tray + Samp Wt. (g)	Sample Wt. (g)	RPD	Tray + Samp Wt. (g)	Sample Wt. (g)	RPD	Tray + Samp Wt. (g)	Sample Wt. (g)	RPD	Seived	Subsampled for Metals	Date	Initials
26	9980394007	1430.5	1908	477.5	1861	430.5	7.3%	1830	399.5	5.3%	1818	387.5	2.2%				x	No	8/6/2012	SAS
27	9980395003	0	107.5	107.5	101.5	101.5	4.1%	104.5	104.5	2.1%							x	No	8/6/2012	SAS
28	9980395004	0	100	100	93	93	5.1%	92	92	0.8%							x	No	8/6/2012	SAS
29	9980395005	0	132	132	127.5	127.5	2.5%													
30																				
31																				
32																				
33																				
34																				
35																				
36																				
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47																				
48																				
49																				
50																				

Comments 9980395003,-4,-5 STARTED 12:05 8/2/12, SECOND WT. TAKEN 6:00 8/6/12, THIRD WT. TAKEN 11:35 8/7/12

HPLC EXTRACTION

Queue: HPLC
Rule: DB3305EXTR
Batch: 3170
HBN: 474917

Surrogate ID: 110712002
Surrogate Amount: 10µl SA

Extraction:	Date	Time	Tech	Sonication:	Time On	Time Off	Hours	Tech
	8/7/12	2:05	SAS	PS#1	2:05	8:00 8/8/12 ~~8:55~~	18:00	SAS

ne #	Sample ID	Sample Amount	QC Type	Spike ID	Spike Amount	Extraction Time	Final Volume	Sample Specific Comments
1.)	1619867	10.0g	MB	—	—		20ml	
2.)	1619868	10.0g	LCS1	120224001	20µl SA		20ml	
3.)	1619869	10.0g	LCS2	110730002 18-1 110730003	20µl 20µl 20µl SA		20ml	
4.)	9980109001	10.0g	—	—	—		20ml	
5.)	9980109003	10.0g	—	—	—		20ml	
6.)	9980109004	10.4g	—	—	—		20ml	
7.)	9980109005	10.4g	—	—	—		20ml	
8.)	9980109006	10.3g	—	—	—		20ml	
9.)	9980109007	10.2g	—	—	—		20ml	
10.)	9980109008	10.6g	—	—	—		20ml	
11.)	9980109009	10.8g	—	—	—		20ml	
12.)	9980109010	10.8g	—	—	—		20ml	
13.)	9980109011	10.6g	—	—	—		20ml	
14.)	1019871	10.3	MS1	120224001	20µl SA		20ml	9980109011 -A
15.)	1019872	10.3	MS2	110730002 18-1 110730003	20µl 20µl 20µl SA		20ml	-B
16.)	1019873	10.1g	MSD1	120224001	20µl SA		20ml	-C
17.)	1019874	10.9g	MSD2	110730002 18-1 110730003	20µl 20µl 20µl SA		20ml	-C
18.)	9980109012	10.7g	—	—	—		20ml	
19.)	9980109013	10.3g	—	—	—		20ml	
20.)	9980109014	10.6g	—	—	—		20ml	
21.)	9980109015	10.8g	—	—	—		20ml	
22.)	9980109016	10.5g	—	—	—		20ml	
23.)	9980109018	10.6g	—	—	—		20ml	
24.)	9980109019	10.1g	—	—	—		20ml	
25.)								
26.)								
27.)								
28.)								
29.)								
30.)								

Reagents:
Acetonitrile 120507001
Temp. 24.1°C Final temp. 25.6°C

Comments:

Moved By: [illegible]
Approved: 8/8/12
3/26/10

Reviewed By: SAS
Date reviewed: 8/28/12

Page #: 51

Analytical Logbook

Title: 8330 Startup Injections
Datasource: D49KVMB1_local
Location: ALS\Vol_Lab_LC\MySequences\8330
Timebase: d49kvmb1_1
#Samples: 21
Created: 11/14/2011 11:45:34 AM by almdt.nouser
Last Update: 11/14/2011 5:42:07 PM by almdt.nouser

No.	Name	Type	Pos.	Inj. Vol.	Inj. Date/Time	Comment
1	CCV1	Unknown	RA1	100.000	11/14/2011 11:50:00 AM	5uL 1b1394 to1mL 1:1 1B1473
2	CCV TEST	Unknown	RA1	100.000	11/14/2011 2:21:26 PM	5uL 1b1394 to1mL 1:1 1B1473
3	CCV TEST	Unknown	RA1	100.000	11/14/2011 3:11:12 PM	5uL 1b1394 to1mL 1:1 1B1473
4	CCV MIX2 TEST	Unknown	RA2	100.000	11/14/2011 4:01:52 PM	.
5	LEVEL1	Unknown	RA1	1.000	11/14/2011 5:12:03 PM	.
6	LEVEL1	Unknown	RA1	1.000	11/14/2011 5:54:58 PM	1B1475
7	LEVEL2	Unknown	RA1	2.500	11/14/2011 6:37:52 PM	MIX1 - 254
8	LEVEL3	Unknown	RA1	5.000	11/14/2011 7:20:46 PM	.
9	LEVEL4	Unknown	RA1	12.500	11/14/2011 8:03:36 PM	.
10	LEVEL5	Unknown	RA1	25.000	11/14/2011 8:46:30 PM	.
11	LEVEL6	Unknown	RA1	50.000	11/14/2011 9:29:29 PM	.
12	LEVEL7	Unknown	RA1	100.000	11/14/2011 10:12:27 PM	.
13	ICV1	Unknown	RA2	100.000	11/14/2011 10:55:30 PM	5uL 1b1394 to1mL 1:1 1B1473
14	LEVEL1	Unknown	RA3	1.000	11/14/2011 11:38:19 PM	1B1476
15	LEVEL2	Unknown	RA3	2.500	11/15/2011 12:21:08 AM	MIX2 - 218
16	LEVEL3	Unknown	RA3	5.000	11/15/2011 1:04:07 AM	.
17	LEVEL4	Unknown	RA3	12.500	11/15/2011 1:47:00 AM	.
18	LEVEL5	Unknown	RA3	25.000	11/15/2011 2:29:54 AM	.
19	LEVEL6	Unknown	RA3	50.000	11/15/2011 3:12:47 AM	.
20	LEVEL7	Unknown	RA3	100.000	11/15/2011 3:55:45 AM	.
21	ICV2	Unknown	RA4	100.000	11/15/2011 4:38:47 AM	5uL 1b1394 to1mL 1:1 1B1413

Sequence: 8330_111116.B
Operator: ALMDT.nouser
Printed: 8/20/2012 1:26:35 PM

Title: 8330 Startup Injections
Datasource: D49KVMB1_local
Location: ALS\Vol_Lab_LC\MySequences\8330
Timebase: d49kvmb1_1
#Samples: 61
Created: 11/16/2011 9:52:07 AM by almdt.nouser
Last Update: 8/20/2012 1:26:21 PM by ALMDT.nouser

No.	Name	Type	Pos.	Inj. Vol.	Inj. Date/Time	Comment
1	CCV1	Unknown	RA1	100.000	11/16/2011 10:20:36 AM	5uL 1b1473 to1mL 1:1 ACN:WATER
2	CCV2	Unknown	RA1	100.000	11/16/2011 11:04:34 AM	Injected in wrong position
3	CCV2/ICV	Unknown	RA2	100.000	11/16/2011 12:02:50 PM	5uL 1b1413 to1mL 1:1 acn:water
4	914196MB	Unknown	RA3	100.000	11/16/2011 1:12:21 PM	.
5	914198LCS1	Unknown	RA4	100.000	11/16/2011 2:10:36 PM	.
6	914197LCS2	Unknown	RA5	100.000	11/16/2011 3:08:52 PM	.
7	9935227002	Unknown	RA6	5.000	11/16/2011 4:07:02 PM	20X
8	9935227001	Unknown	RA7	100.000	11/16/2011 5:05:18 PM	.
9	914199MS	Unknown	RA8	100.000	11/16/2011 6:03:33 PM	.
10	914200MSD	Unknown	RB1	100.000	11/16/2011 6:47:36 PM	.
11	TEST1	Unknown	RB2	100.000	11/16/2011 7:31:40 PM	.
12	TEST2	Unknown	RB3	100.000	11/16/2011 8:15:39 PM	.
13	CCV2	Unknown	RA2	100.000	11/16/2011 8:59:47 PM	5uL 1b1413 to1mL 1:1 acn:water
14	CCV1	Unknown	RA1	100.000	11/16/2011 9:58:03 PM	5uL 1b1473 to1mL 1:1 ACN:WATER
15	MB	Unknown	RB4	100.000	11/16/2011 10:42:07 PM	SAS110911
16	DOC1	Unknown	RB5	100.000	11/16/2011 11:26:15 PM	SAS110911
17	DOC2	Unknown	RB6	100.000	11/17/2011 12:10:38 AM	SAS110911
18	DOC3	Unknown	RB7	100.000	11/17/2011 12:55:05 AM	SAS110911
19	DOC4	Unknown	RB8	100.000	11/17/2011 1:39:18 AM	SAS110911
20	914773MB	Unknown	RC1	100.000	11/17/2011 2:23:36 AM	.
21	914774LCS1	Unknown	RC2	100.000	11/17/2011 3:21:56 AM	.
22	914775LCS2	Unknown	RC3	100.000	11/17/2011 4:20:10 AM	.
23	9936126007	Unknown	RC4	100.000	11/17/2011 5:18:20 AM	.
24	9936126001	Unknown	RC5	100.000	11/17/2011 6:16:52 AM	.
25	CCV2	Unknown	RC6	100.000	11/17/2011 7:15:20 AM	5uL 1b1413 to1mL 1:1 acn:water
26	CCV1	Unknown	RC7	100.000	11/17/2011 8:19:07 AM	5uL 1b1473 to1mL 1:1 ACN:WATER
27	9936126002	Unknown	RC8	100.000	11/17/2011 9:03:28 AM	.
28	9936126003	Unknown	RD1	100.000	11/17/2011 9:47:30 AM	.
29	9936126004	Unknown	RD2	100.000	11/17/2011 10:31:28 AM	.
30	9936126005	Unknown	RD3	100.000	11/17/2011 11:15:25 AM	.
31	9936126006	Unknown	RD4	100.000	11/17/2011 11:59:22 AM	.
32	9936396012	Unknown	RD5	100.000	11/17/2011 12:43:23 PM	.
33	9936396001	Unknown	RD6	100.000	11/17/2011 1:27:20 PM	.
34	9936396002	Unknown	RD7	100.000	11/17/2011 2:11:40 PM	.
35	9936396003	Unknown	RD8	100.000	11/17/2011 2:55:42 PM	.
36	9936396004	Unknown	RE1	100.000	11/17/2011 3:39:44 PM	.
37	CCV2	Unknown	RC6	100.000	11/17/2011 4:23:41 PM	.
38	CCV2	Unknown	RC6	100.000	11/17/2011 5:54:44 PM	5uL 1b1413 to1mL 1:1 acn:water
39	CCV1	Unknown	RC7	100.000	11/17/2011 6:52:58 PM	5uL 1b1473 to1mL 1:1 ACN:WATER
40	9936396005	Unknown	RE2	100.000	11/17/2011 7:37:01 PM	
41	9936396006	Unknown	RE3	100.000	11/17/2011 8:21:00 PM	
42	914776DUP	Unknown	RE4	100.000	11/17/2011 9:04:57 PM	

EI-218+254 soil

Sequence: 8330_120808A.B
Operator: ALMDT.nouser

Title: 8330 Startup Injections
Datasource: D49KVMB1_local
Location: ALS\Vol_Lab_LC\MySequences\8330
Timebase: d49kvmb1_1
#Samples: 55

Created: 8/8/2012 12:18:36 PM by ALMDT.nouser
Last Update: 8/9/2012 5:57:18 PM by ALMDT.nouser

No.	Name	Type	Pos.	Inj. Vol.	Inj. Date/Time	Comment
1	CCV1	Unknown	RA1	100.000	8/8/2012 12:21:42 PM	1B1528 ACN:120507001
2	CCV2	Unknown	RA2	100.000	8/8/2012 1:05:44 PM	1B1585 ACN:120507001
3	1019867	Unknown	RA3	100.000	8/8/2012 2:21:08 PM	MB
4	1019868	Unknown	RA4	100.000	8/8/2012 3:05:08 PM	LCS1
5	1019869	Unknown	RA5	100.000	8/8/2012 3:49:08 PM	LCS2
6	9980109001	Unknown	RA6	100.000	8/8/2012 4:33:41 PM	
7	9980109003	Unknown	RA7	100.000	8/8/2012 5:17:45 PM	
8	9980109004	Unknown	RA8	100.000	8/8/2012 6:01:45 PM	
9	9980109005	Unknown	RB1	100.000	8/8/2012 6:45:44 PM	
10	9980109006	Unknown	RB2	100.000	8/8/2012 7:29:44 PM	
11	9980109007	Unknown	RB3	100.000	8/8/2012 8:13:44 PM	
12	9980109008	Unknown	RB4	100.000	8/8/2012 8:57:43 PM	
13	9980109009	Unknown	RB5	100.000	8/8/2012 9:41:42 PM	
14	9980109010	Unknown	RB6	100.000	8/8/2012 10:25:42 PM	
15	CCV1	Unknown	RA1	100.000	8/8/2012 11:09:41 PM	1B1528 ACN:120507001
16	CCV2	Unknown	RA2	100.000	8/8/2012 11:53:40 PM	1B1585 ACN:120507001
17	9980109011	Unknown	RB7	100.000	8/9/2012 12:37:58 AM	
18	1019871	Unknown	RB8	100.000	8/9/2012 1:22:43 AM	MS1
19	1019873	Unknown	RC1	100.000	8/9/2012 2:06:46 AM	MSD1
20	1019872	Unknown	RC2	100.000	8/9/2012 2:50:55 AM	MS2
21	1019874	Unknown	RC3	100.000	8/9/2012 3:34:54 AM	MSD2
22	9980109012	Unknown	RC4	100.000	8/9/2012 4:18:53 AM	
23	9980109013	Unknown	RC5	100.000	8/9/2012 5:02:52 AM	
24	9980109014	Unknown	RC6	100.000	8/9/2012 5:46:51 AM	
25	9980109015	Unknown	RC7	100.000	8/9/2012 6:30:50 AM	
26	9980109016	Unknown	RC8	100.000	8/9/2012 7:14:48 AM	
27	9980109018	Unknown	RD1	100.000	8/9/2012 7:58:47 AM	
28	9980109019	Unknown	RD2	100.000	8/9/2012 8:42:45 AM	
29	CCV1	Unknown	RA1	100.000	8/9/2012 9:26:58 AM	1B1528 ACN:120507001
30	CCV2	Unknown	RA2	100.000	8/9/2012 10:10:56 AM	1B1585 ACN:120507001
31	1020314	Unknown	GA1	100.000	8/9/2012 11:16:50 AM	MB
32	1020315	Unknown	GA2	100.000	8/9/2012 12:00:48 PM	LCS1
33	1020316	Unknown	GA3	100.000	8/9/2012 12:44:46 PM	LCS2
34	9980109017	Unknown	GA4	100.000	8/9/2012 1:36:22 PM	
35	1020317	Unknown	GA5	100.000	8/9/2012 2:27:58 PM	MS1
36	1020319	Unknown	GA6	100.000	8/9/2012 3:11:56 PM	MSD1
37	1020318	Unknown	GA7	100.000	8/9/2012 3:55:57 PM	MS2
38	1020320	Unknown	GA8	100.000	8/9/2012 4:39:55 PM	MSD2
39	9980394001	Unknown	GB1	100.000	8/9/2012 5:23:57 PM	
40	9980394002	Unknown	GB2	100.000	8/9/2012 6:08:12 PM	
41	9980394003	Unknown	GB3	100.000	8/9/2012 6:52:14 PM	
42	9980394004	Unknown	GB4	100.000	8/9/2012 7:36:15 PM	

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EI 218+254 soil

Title: 8330 Startup Injections
Datasource: D49KVMB1_local
Location: ALS\Vol_Lab_LC\MySequences\8330
Timebase: d49kvmb1_1
#Samples: 55
Created: 8/8/2012 12:18:36 PM by ALMDT.nouser
Last Update: 8/9/2012 5:57:18 PM by ALMDT.nouser

No.	Name	Type	Pos.	Inj. Vol.	Inj. Date/Time	Comment
1	CCV1	Unknown	RA1	100.000	8/8/2012 12:21:42 PM	1B1528 ACN:120507001
2	CCV2	Unknown	RA2	100.000	8/8/2012 1:05:44 PM	1B1585 ACN:120507001
3	1019867	Unknown	RA3	100.000	8/8/2012 2:21:08 PM	MB
4	1019868	Unknown	RA4	100.000	8/8/2012 3:05:08 PM	LCS1
5	1019869	Unknown	RA5	100.000	8/8/2012 3:49:08 PM	LCS2
6	9980109001	Unknown	RA6	100.000	8/8/2012 4:33:41 PM	
7	9980109003	Unknown	RA7	100.000	8/8/2012 5:17:45 PM	
8	9980109004	Unknown	RA8	100.000	8/8/2012 6:01:45 PM	
9	9980109005	Unknown	RB1	100.000	8/8/2012 6:45:44 PM	
10	9980109006	Unknown	RB2	100.000	8/8/2012 7:29:44 PM	
11	9980109007	Unknown	RB3	100.000	8/8/2012 8:13:44 PM	
12	9980109008	Unknown	RB4	100.000	8/8/2012 8:57:43 PM	
13	9980109009	Unknown	RB5	100.000	8/8/2012 9:41:42 PM	
14	9980109010	Unknown	RB6	100.000	8/8/2012 10:25:42 PM	
15	CCV1	Unknown	RA1	100.000	8/8/2012 11:09:41 PM	1B1528 ACN:120507001
16	CCV2	Unknown	RA2	100.000	8/8/2012 11:53:40 PM	1B1585 ACN:120507001
17	9980109011	Unknown	RB7	100.000	8/9/2012 12:37:58 AM	
18	1019871	Unknown	RB8	100.000	8/9/2012 1:22:43 AM	MS1
19	1019873	Unknown	RC1	100.000	8/9/2012 2:06:46 AM	MSD1
20	1019872	Unknown	RC2	100.000	8/9/2012 2:50:55 AM	MS2
21	1019874	Unknown	RC3	100.000	8/9/2012 3:34:54 AM	MSD2
22	9980109012	Unknown	RC4	100.000	8/9/2012 4:18:53 AM	
23	9980109013	Unknown	RC5	100.000	8/9/2012 5:02:52 AM	
24	9980109014	Unknown	RC6	100.000	8/9/2012 5:46:51 AM	
25	9980109015	Unknown	RC7	100.000	8/9/2012 6:30:50 AM	
26	9980109016	Unknown	RC8	100.000	8/9/2012 7:14:48 AM	
27	9980109018	Unknown	RD1	100.000	8/9/2012 7:58:47 AM	
28	9980109019	Unknown	RD2	100.000	8/9/2012 8:42:45 AM	
29	CCV1	Unknown	RA1	100.000	8/9/2012 9:26:58 AM	1B1528 ACN:120507001
30	CCV2	Unknown	RA2	100.000	8/9/2012 10:10:56 AM	1B1585 ACN:120507001
31	1020314	Unknown	GA1	100.000	8/9/2012 11:16:50 AM	MB
32	1020315	Unknown	GA2	100.000	8/9/2012 12:00:48 PM	LCS1
33	1020316	Unknown	GA3	100.000	8/9/2012 12:44:46 PM	LCS2
34	9980109017	Unknown	GA4	100.000	8/9/2012 1:36:22 PM	
35	1020317	Unknown	GA5	100.000	8/9/2012 2:27:58 PM	MS1
36	1020319	Unknown	GA6	100.000	8/9/2012 3:11:56 PM	MSD1
37	1020318	Unknown	GA7	100.000	8/9/2012 3:55:57 PM	MS2
38	1020320	Unknown	GA8	100.000	8/9/2012 4:39:55 PM	MSD2
39	9980394001	Unknown	GB1	100.000	8/9/2012 5:23:57 PM	
40	9980394002	Unknown	GB2	100.000	8/9/2012 6:08:12 PM	
41	9980394003	Unknown	GB3	100.000	8/9/2012 6:52:14 PM	
42	9980394004	Unknown	GB4	100.000	8/9/2012 7:36:15 PM	

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Title: 8330 Startup Injections
Datasource: D49KVMB1_local
Location: ALS\Vol_Lab_LC\MySequences\8330
Timebase: d49kvmb1_1
#Samples: 55
Created: 8/8/2012 12:18:36 PM by ALMDT.nouser
Last Update: 8/9/2012 5:57:18 PM by ALMDT.nouser

No.	Name	Type	Pos.	Inj. Vol.	Inj. Date/Time	Comment
43	CCV1	Unknown	RA1	100.000	8/9/2012 8:20:21 PM	1B1528 ACN:120507001
44	CCV2	Unknown	RA2	100.000	8/9/2012 9:04:22 PM	1B1585 ACN:120507001
45	9980394005	Unknown	GB5	100.000	8/9/2012 9:48:24 PM	
46	9980394007	Unknown	GB6	100.000	8/9/2012 10:32:30 PM	
47	9980395003	Unknown	GB7	100.000	8/9/2012 11:16:31 PM	
48	1020321	Unknown	GB8	100.000	8/10/2012 12:00:32 AM	
49	1020323	Unknown	GC1	100.000	8/10/2012 12:44:33 AM	
50	1020322	Unknown	GC2	100.000	8/10/2012 1:28:35 AM	
51	1020324	Unknown	GC3	100.000	8/10/2012 2:12:36 AM	
52	9980395004	Unknown	GC4	100.000	8/10/2012 2:56:36 AM	
53	9980395005	Unknown	GC5	100.000	8/10/2012 3:40:37 AM	
54	CCV1	Unknown	RA1	100.000	8/10/2012 4:24:37 AM	1B1528 ACN:120507001
55	CCV2	Unknown	RA2	100.000	8/10/2012 5:08:37 AM	1B1585 ACN:120507001

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Total Metals in Water by 6020A Summary Forms

6020 3015
- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, Inc

SDG No.: ERT-001 Method Type: 6020 3015 SOW No.:

Contract: ERT001|Ft. Stewart 3 Lab Code: CAS Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
9980109002	FTSW-AA-SO-10[02] ERB	
9980395006S	FTSW-HR-SO-02 (01.5) ER	Matrix Spike
9980395006SD	FTSW-HR-SO-02 (01.5) ER	Matrix Spike Duplicate

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: **Lisa Miller**

Date: Title: **Metals Manager**

6020 3015

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-001 **Method Type:** 6020 3015

Sample ID: 9980109002 **Client ID:** FTSW-AA-SO-10[02] ERB

Matrix: WATER **Date Received:** 7/27/2012 **Level:** LOW

% Solids: **Sample Wt/Vol:** 45.00 **Final Vol:** 50.0

Prep Batch ID: 473767 **Prep Date:** 8/1/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	0.059	mg/L	U		M	0.089	0.059	0.030	1.00	8/7/2012	13:40:47
Copper	7440-50-8	0.0037	mg/L	U		M	0.0056	0.0037	0.0019	1.00	8/7/2012	13:40:47
Lead	7439-92-1	0.0015	mg/L	U		M	0.0022	0.0015	0.0007	1.00	8/7/2012	13:40:47
Zinc	7440-66-6	0.0037	mg/L	U		M	0.0056	0.0037	0.0019	1.00	8/7/2012	13:40:47

Comments:

6020 3015
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
ICV										
	Aluminum	0.1055	0.1000	106		90 - 110	M	8/7/2012	08:39	A080712
	Copper	0.1062	0.1000	106		90 - 110	M	8/7/2012	08:39	A080712
	Lead	0.1046	0.1000	105		90 - 110	M	8/7/2012	08:39	A080712
	Zinc	0.1018	0.1000	102		90 - 110	M	8/7/2012	08:39	A080712
LLICV										
	Aluminum	0.0811	0.0800	101		70 - 130	M	8/7/2012	08:51	A080712
	Copper	0.0049	0.0050	98		70 - 130	M	8/7/2012	08:51	A080712
	Lead	0.0022	0.0020	110		70 - 130	M	8/7/2012	08:51	A080712
	Zinc	0.0053	0.0050	106		70 - 130	M	8/7/2012	08:51	A080712
LLCCV										
	Aluminum	0.0840	0.0800	105		70 - 130	M	8/7/2012	13:00	A080712
	Copper	0.0047	0.0050	94		70 - 130	M	8/7/2012	13:00	A080712
	Lead	0.0018	0.0020	90		70 - 130	M	8/7/2012	13:00	A080712
	Zinc	0.0053	0.0050	106		70 - 130	M	8/7/2012	13:00	A080712
CCV										
	Aluminum	0.1045	0.1000	104		90 - 110	M	8/7/2012	13:04	A080712
	Copper	0.1009	0.1000	101		90 - 110	M	8/7/2012	13:04	A080712
	Lead	0.0995	0.1000	100		90 - 110	M	8/7/2012	13:04	A080712
	Zinc	0.0983	0.1000	98		90 - 110	M	8/7/2012	13:04	A080712
LLCCV										
	Aluminum	0.0894	0.0800	112		70 - 130	M	8/7/2012	14:17	A080712
	Copper	0.0051	0.0050	102		70 - 130	M	8/7/2012	14:17	A080712
	Lead	0.0019	0.0020	95		70 - 130	M	8/7/2012	14:17	A080712
	Zinc	0.0057	0.0050	114		70 - 130	M	8/7/2012	14:17	A080712
CCV										
	Aluminum	0.1102	0.1000	110		90 - 110	M	8/7/2012	14:21	A080712
	Copper	0.1107	0.1000	111	*	90 - 110	M	8/7/2012	14:21	A080712
	Lead	0.1033	0.1000	103		90 - 110	M	8/7/2012	14:21	A080712
	Zinc	0.1050	0.1000	105		90 - 110	M	8/7/2012	14:21	A080712

6020 3015

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
LLCCV										
	Aluminum	0.0830	0.0800	104		70 - 130	M	8/7/2012	15:17	A080712
	Copper	0.0048	0.0050	96		70 - 130	M	8/7/2012	15:17	A080712
	Lead	0.0018	0.0020	90		70 - 130	M	8/7/2012	15:17	A080712
	Zinc	0.0052	0.0050	104		70 - 130	M	8/7/2012	15:17	A080712
CCV										
	Aluminum	0.1046	0.1000	105		90 - 110	M	8/7/2012	15:28	A080712
	Copper	0.1024	0.1000	102		90 - 110	M	8/7/2012	15:28	A080712
	Lead	0.1010	0.1000	101		90 - 110	M	8/7/2012	15:28	A080712
	Zinc	0.0979	0.1000	98		90 - 110	M	8/7/2012	15:28	A080712

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Conc Qual	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
ICB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/7/2012	08:43	A080712
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	08:43	A080712
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/7/2012	08:43	A080712
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	08:43	A080712
ICB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/7/2012	08:47	A080712
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	08:47	A080712
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/7/2012	08:47	A080712
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	08:47	A080712
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/7/2012	12:52	A080712
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	12:52	A080712
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/7/2012	12:52	A080712
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	12:52	A080712
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/7/2012	14:13	A080712
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	14:13	A080712
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/7/2012	14:13	A080712
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	14:13	A080712
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/7/2012	15:13	A080712
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	15:13	A080712
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/7/2012	15:13	A080712
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	15:13	A080712

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- 3b -
PREPARATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result (mg/L)	Conc Qual	Q	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
1017577			QC-WATER								
	Aluminum	0.0889	U		0.044	0.0300	0.0889	M	8/7/2012	13:08	A080712
	Copper	0.00556	U		0.0028	0.00190	0.00556	M	8/7/2012	13:08	A080712
	Lead	0.00222	U		0.0011	0.00074	0.00222	M	8/7/2012	13:08	A080712
	Zinc	0.00222	J		0.0028	0.00190	0.00556	M	8/7/2012	13:08	A080712

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INTERFERENCE CHECK SAMPLE

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

ICS Source: Inorganic Ventures **Instrument ID:** AGILENT 7700 ICPMS

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	Analysis Date	Analysis Time	Run Number
ICSA									
	Aluminum	91.1	100.0000	91		80 - 120%	8/7/2012	08:57	A080712
	Copper	0.0007				-0.00500 - -0.00500	8/7/2012	08:57	A080712
	Lead	0.0003				-0.00200 - -0.00200	8/7/2012	08:57	A080712
	Zinc	0.0025				-0.01000 - -0.01000	8/7/2012	08:57	A080712
ICSAB									
	Aluminum	88.9	100.0000	89		80 - 120%	8/7/2012	09:01	A080712
	Copper	0.0173	0.02000	86		80 - 120%	8/7/2012	09:01	A080712
	Lead	0.0004				-0.00200 - -0.00200	8/7/2012	09:01	A080712
	Zinc	0.0204	0.02000	102		80 - 120%	8/7/2012	09:01	A080712

6020 3015
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MATRIX SPIKE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: WATER **Sample ID:** 9980395006 **Client ID:** FTSW-HR-SO-02 (01.5) ERBS **LIMS ID:** 1017579

Percent Solids for Sample: 0.00 **Spiked ID:** 9980395006S **Percent Solids for Spike Sample:** 0.00

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/L	80 - 120	2.23		0.09	U	2.222	100		M
Copper	mg/L	80 - 120	0.213		0.006	U	0.222	96		M
Lead	mg/L	80 - 120	0.221		0.002	U	0.222	100		M
Zinc	mg/L	80 - 120	0.202		0.002		0.222	90		M

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MATRIX SPIKE DUPLICATE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: WATER **Sample ID:** 9980395006 **Client ID:** FTSW-HR-SO-02 (01.5) **LIMS ID:** 1017580

Percent Solids for Sample: 0.00 **Spiked ID:** 9980395006SD ERBSD **Percent Solids for Spike Sample:** 0.00

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/L	80 - 120	2.19		0.09	U	2.222	99		M
Copper	mg/L	80 - 120	0.205		0.006	U	0.222	92		M
Lead	mg/L	80 - 120	0.217		0.002	U	0.222	98		M
Zinc	mg/L	80 - 120	0.197		0.002		0.222	88		M

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DUPLICATE SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: WATER **Sample ID:** 9980395006S **Client ID:** FTSW-HR-SO-02 (01.5) ERBSD **LIMS ID:** 1017580

Percent Solids for Sample: 0.00 **Duplicate ID:** 9980395006SD **Percent Solids for Duplicate:** 0.00

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/L	0 - 20	2.23		2.19		1.81		M
Copper	mg/L	0 - 20	0.213		0.205		4		M
Lead	mg/L	0 - 20	0.221		0.217		2		M
Zinc	mg/L	0 - 20	0.202		0.197		3		M

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LABORATORY CONTROL SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Q	QC Criteria	M
1017578									
	Aluminum	mg/L	2.2220	2.1863		98		80 - 120	M
	Copper	mg/L	0.2220	0.2076		94		80 - 120	M
	Lead	mg/L	0.2220	0.2147		97		80 - 120	M
	Zinc	mg/L	0.2220	0.1998		90		80 - 120	M

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LINEAR RANGES

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Instrument ID: AGILENT 7700 ICPMS **Date:** 1/19/2012

Analyte	Integration Time (sec)	LDR mg/L
Aluminum	1.00	90
Copper	1.00	50
Lead	1.00	5
Zinc	1.00	50

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SAMPLE PREPARATION SUMMARY

Client: ERT Earth Resources Technology, Inc.

SDG No.: ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS

Method: MS

Case No.: _____ **SAS No.:** _____

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	473767						
1017577	MB for HBN 473767 [MDIG/3732	MB	QC-WAT	8/1/12	45.0	50.0	
1017578	LCS for HBN 473767 [MDIG/3732	LCS	QC-WAT	8/1/12	45.0	50.0	
9980109002	FTSW-AA-SO-10[02] ERB	SAM	WATER	8/1/12	45.0	50.0	
9980395006S	FTSW-HR-SO-02 (01.5) ERBS	MS	WATER	8/1/12	45.0	50.0	
9980395006SD	FTSW-HR-SO-02 (01.5) ERBSD	MSD	WATER	8/1/12	45.0	50.0	

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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT001|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-001

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A080712

Start Date: 8/7/2012 End Date: 8/7/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
BLK	1.00	0812		X									X		X										X	
BLK	1.00	0816		X									X		X										X	
STANDARD 1	1.00	0820		X									X		X										X	
STANDARD 2	1.00	0824		X									X		X										X	
STANDARD 3	1.00	0827		X									X		X										X	
STANDARD 4	1.00	0831		X									X		X										X	
STANDARD 5	1.00	0835		X									X		X										X	
ICV	1.00	0839		X									X		X										X	
ICB1	1.00	0843		X									X		X										X	
ICB2	1.00	0847		X									X		X										X	
LLICV	1.00	0851		X									X		X										X	
ICS-A1	1.00	0857		X									X		X										X	
ICS-AB1	1.00	0901		X									X		X										X	
ZZZZZZ	5.00	0908																								
ZZZZZZ	5.00	0912																								
ZZZZZZ	5.00	0916																								
ZZZZZZ	5.00	0920																								
ZZZZZZ	5.00	0924																								
ZZZZZZ	5.00	0927																								
ZZZZZZ	5.00	0931																								
ZZZZZZ	5.00	0935																								
ZZZZZZ	5.00	0939																								
ZZZZZZ	5.00	0943																								
ZZZZZZ	1.00	0946																								
ZZZZZZ	1.00	0950																								
ZZZZZZ	1.00	0954																								
ZZZZZZ	25.00	0959																								
ZZZZZZ	1.00	1003																								
ZZZZZZ	1.00	1009																								
ZZZZZZ	5.00	1014																								
ZZZZZZ	5.00	1019																								
ZZZZZZ	5.00	1023																								
ZZZZZZ	5.00	1027																								
ZZZZZZ	5.00	1031																								
ZZZZZZ	5.00	1035																								
ZZZZZZ	5.00	1039																								

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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT001|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-001

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A080712

Start Date: 8/7/2012 End Date: 8/7/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1043																										
ZZZZZZ	1.00	1047																										
ZZZZZZ	1.00	1050																										
ZZZZZZ	5.00	1054																										
ZZZZZZ	5.00	1058																										
ZZZZZZ	5.00	1102																										
ZZZZZZ	5.00	1106																										
ZZZZZZ	5.00	1110																										
ZZZZZZ	5.00	1114																										
ZZZZZZ	5.00	1118																										
ZZZZZZ	5.00	1122																										
ZZZZZZ	5.00	1125																										
ZZZZZZ	5.00	1129																										
ZZZZZZ	1.00	1133																										
ZZZZZZ	1.00	1137																										
ZZZZZZ	1.00	1141																										
ZZZZZZ	5.00	1145																										
ZZZZZZ	5.00	1149																										
ZZZZZZ	5.00	1153																										
ZZZZZZ	5.00	1157																										
ZZZZZZ	5.00	1201																										
ZZZZZZ	5.00	1204																										
ZZZZZZ	5.00	1208																										
ZZZZZZ	5.00	1212																										
ZZZZZZ	5.00	1216																										
ZZZZZZ	25.00	1220																										
ZZZZZZ	1.00	1224																										
ZZZZZZ	1.00	1231																										
ZZZZZZ	1.00	1234																										
ZZZZZZ	1.00	1239																										
ZZZZZZ	1.00	1243																										
ZZZZZZ	1.00	1248																										
CCB5	1.00	1252		X									X		X											X	
LLCCV	1.00	1300		X									X		X											X	
CCV6	1.00	1304		X									X		X											X	
1017577	1.00	1308		X									X		X											X	

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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT001|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-001

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A080712

Start Date: 8/7/2012 End Date: 8/7/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
1017578	1.00	1329		X									X		X										X	
ZZZZZZ	1.00	1333																								
ZZZZZZ	1.00	1337																								
9980109002	1.00	1340		X									X		X										X	
ZZZZZZ	1.00	1344																								
ZZZZZZ	5.00	1348																								
ZZZZZZ	1.00	1352																								
ZZZZZZ	1.00	1359																								
ZZZZZZ	1.00	1409																								
CCB6	1.00	1413		X									X		X										X	
LLCCV	1.00	1417		X									X		X										X	
CCV8	1.00	1421		X									X		X										X	
ZZZZZZ	1.00	1425																								
9980395006S	1.00	1447		X									X		X										X	
9980395006SD	1.00	1450		X									X		X										X	
ZZZZZZ	1.00	1454																								
ZZZZZZ	1.00	1458																								
ZZZZZZ	1.00	1502																								
ZZZZZZ	5.00	1506																								
ZZZZZZ	1.00	1510																								
CCB7	1.00	1513		X									X		X										X	
LLCCV	1.00	1517		X									X		X										X	
CCV10	1.00	1528		X									X		X										X	
ZZZZZZ	5.00	1549																								
ZZZZZZ	5.00	1553																								
ZZZZZZ	1.00	1558																								
ZZZZZZ	1.00	1602																								
ZZZZZZ	1.00	1606																								
ZZZZZZ	5.00	1642																								
ZZZZZZ	5.00	1646																								
ZZZZZZ	5.00	1650																								
ZZZZZZ	5.00	1654																								
ZZZZZZ	5.00	1658																								
ZZZZZZ	5.00	1702																								
ZZZZZZ	5.00	1706																								
ZZZZZZ	1.00	1710																								

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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT001|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-001

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A080712

Start Date: 8/7/2012 End Date: 8/7/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1713																								
ZZZZZZ	1.00	1717																								
ZZZZZZ	1.00	1721																								
ZZZZZZ	1.00	1725																								
ZZZZZZ	5.00	1729																								
ZZZZZZ	5.00	1733																								
ZZZZZZ	1.00	1737																								
ZZZZZZ	1.00	1741																								
ZZZZZZ	1.00	1745																								
ZZZZZZ	1.00	1749																								
ZZZZZZ	1.00	1752																								
ZZZZZZ	1.00	1756																								
ZZZZZZ	1.00	1800																								
ZZZZZZ	1.00	1804																								
ZZZZZZ	1.00	1808																								
ZZZZZZ	1.00	1945																								

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15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT001|Ft. Stewart 3153-004

Lab Code: CAS Case No.: _____ NRAS No.: _____ SDG NO.: ERT-001

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/07/2012 End Date: 08/07/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
BLK	BLK	0812	100		100		100		100		100		100	
BLK	BLK	0816	100		100		100		100		100		100	
STANDARD 1	STANDARD 1	0820	99		98		98		100		101		101	
STANDARD 2	STANDARD 2	0824	104		101		103		104		105		102	
STANDARD 3	STANDARD 3	0827	103		100		104		104		104		101	
STANDARD 4	STANDARD 4	0831	106		105		109		110		109		106	
STANDARD 5	STANDARD 5	0835	104		102		107		108		102		106	
ICV	ICV	0839	105		102		105		105		105		103	
ICB1	ICB	0843	103		101		104		103		106		104	
ICB2	ICB	0847	107		102		108		107		111		103	
LLICV	LLICV	0851	103		98		105		107		94		100	
ICS-A1	ICSA	0857	93		99		97		105		109		106	
ICS-AB1	ICSAB	0901	94		102		99		106		109		109	
1015362	ZZZZZZ	0908												
1015363	ZZZZZZ	0912												
1017907	ZZZZZZ	0916												
1017908	ZZZZZZ	0920												
9980583001	ZZZZZZ	0924												
1017909	ZZZZZZ	0927												
1017910	ZZZZZZ	0931												
9980583001P	ZZZZZZ	0935												
9980583002	ZZZZZZ	0939												
9980583004	ZZZZZZ	0943												
CCV1	ZZZZZZ	0946												
CCB1	ZZZZZZ	0950												
LLCCV	ZZZZZZ	0954												
9980583004L	ZZZZZZ	0959												
LDR 2 PPM	ZZZZZZ	1003												
CHECK	ZZZZZZ	1009												
1017046	ZZZZZZ	1014												
1017047	ZZZZZZ	1019												
9980109001	ZZZZZZ	1023												
9980109003	ZZZZZZ	1027												
9980109004	ZZZZZZ	1031												
9980109005	ZZZZZZ	1035												
9980109006	ZZZZZZ	1039												
CCV2	ZZZZZZ	1043												
CCB2	ZZZZZZ	1047												
LLCCV	ZZZZZZ	1050												
9980109007	ZZZZZZ	1054												
9980109008	ZZZZZZ	1058												
9980109009	ZZZZZZ	1102												
9980109010	ZZZZZZ	1106												
9980109011	ZZZZZZ	1110												
9980109011S	ZZZZZZ	1114												

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15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT001|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-001

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/07/2012 End Date: 08/07/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980109011S	ZZZZZZ	1118												
9980109011	ZZZZZZ	1122												
9980109012	ZZZZZZ	1125												
9980109013	ZZZZZZ	1129												
CCV3	ZZZZZZ	1133												
CCB3	ZZZZZZ	1137												
LLCCV	ZZZZZZ	1141												
9980109014	ZZZZZZ	1145												
9980109015	ZZZZZZ	1149												
9980109016	ZZZZZZ	1153												
9980109017	ZZZZZZ	1157												
9980109017S	ZZZZZZ	1201												
9980109017S	ZZZZZZ	1204												
9980109017P	ZZZZZZ	1208												
9980109018	ZZZZZZ	1212												
9980109019	ZZZZZZ	1216												
9980109019L	ZZZZZZ	1220												
CCV4	ZZZZZZ	1224												
CCB4	ZZZZZZ	1231												
LLCCV	ZZZZZZ	1234												
LDR 50 PPM	ZZZZZZ	1239												
CHECK	ZZZZZZ	1243												
CCV5	ZZZZZZ	1248												
CCB5	CCB	1252	101		101		103		105		106		103	
LLCCV	LLCCV	1300	101		101		103		106		107		100	
CCV6	CCV	1304	102		101		104		107		106		102	
1017577	MB for HBN 47376	1308	101		102		101		102		103		101	
1017578	LCS for HBN 4737	1329	99		102		101		104		103		102	
1019627	ZZZZZZ	1333												
1019628	ZZZZZZ	1337												
9980109002	FTSW-AA-SO-10[02	1340	101		102		102		101		100		97	
9980394006	ZZZZZZ	1344												
9980394006L	ZZZZZZ	1348												
9980394014	ZZZZZZ	1352												
9980394006P	ZZZZZZ	1359												
CCV7	ZZZZZZ	1409												
CCB6	CCB	1413	103		102		104		104		105		101	
LLCCV	LLCCV	1417	100		99		102		98		107		102	
CCV8	CCV	1421	101		99		102		100		107		102	
9980395006	ZZZZZZ	1425												
9980395006S	FTSW-HR-SO-02 (0	1447	100		101		99		100		98		98	
9980395006S	FTSW-HR-SO-02 (0	1450	102		100		100		101		98		98	
9980875015	ZZZZZZ	1454												
1019629	ZZZZZZ	1458												
1019630	ZZZZZZ	1502												

6020 3015

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT001|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-001

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/07/2012 End Date: 08/07/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980875015L	ZZZZZZ	1506												
CCV9	ZZZZZZ	1510												
CCB7	CCB	1513	105		98		104		100		102		96	
LLCCV	LLCCV	1517	105		99		103		103		102		98	
CCV10	CCV	1528	103		98		103		103		101		95	
9979663004	ZZZZZZ	1549												
9979678003	ZZZZZZ	1553												
CCV11	ZZZZZZ	1558												
CCB8	ZZZZZZ	1602												
LLCCV	ZZZZZZ	1606												
9980477001	ZZZZZZ	1642												
9980477002	ZZZZZZ	1646												
9980478001	ZZZZZZ	1650												
9980478002	ZZZZZZ	1654												
9980478003	ZZZZZZ	1658												
9980478004	ZZZZZZ	1702												
9980478004L	ZZZZZZ	1706												
CCV12	ZZZZZZ	1710												
CCB9	ZZZZZZ	1713												
LLCCV	ZZZZZZ	1717												
9975539001	ZZZZZZ	1721												
9975539002	ZZZZZZ	1725												
9975539001	ZZZZZZ	1729												
9975539002	ZZZZZZ	1733												
CHECK	ZZZZZZ	1737												
CHECK	ZZZZZZ	1741												
CHECK	ZZZZZZ	1745												
CHECK	ZZZZZZ	1749												
CHECK	ZZZZZZ	1752												
CHECK	ZZZZZZ	1756												
CCV13	ZZZZZZ	1800												
CCB10	ZZZZZZ	1804												
LLCCV	ZZZZZZ	1808												
LLCCV	ZZZZZZ	1945												

Total Metals in Water by 6020A Raw Data

Dataset: A080712 2nd Review Lam

First Review: MWO Approval: Lam 8.7.12

Internal Standards: **ICPMS9190**

200	60-125%	**6020Qc:**	70-130%	**6020A**	30-130%	**DOD:**	70-120%

Standards :
Tuning MS0361
Daily Standard: MS0361

Calibration Standards
MS0343
MS0344

PIPETTES:

03-028	10.0 mL
03-202	.200 mL
03-201	1.0 mL
03-031	1.0 mL

ICSA: MS0341
ICSAB:MS0340

GOLD: MS0346
DW LCS: MS0358
Second Source

MA1393	MA1388	MA1360
MA1342	MS0345	MA1381
MS0309	MA1359	

Internal Standards/ Target Analytes

Sc-Al,V,Cr,Mn,Co,Ni,Cu,Na, K, Ti, Mg, Ca, Fe, As, Zn, Se,
Y
In-Sr, Mo, Ag, Cd, Sn, Sb, Ba
Tb
Bi-Hg, Tl, Pb, U

Fe out in opening QC.

Case Narrative:

*D: *D at the beginning of the Dataset Denotes that the samples were run on the Elan DRCe ICP-MS*

200.8 Tune Check Sample Report

Batch Folder C:\Agilent\ICPMH\1\DATA\A080612 TUNE.b
Report Comment
Instrument Name G3281A JP11040846

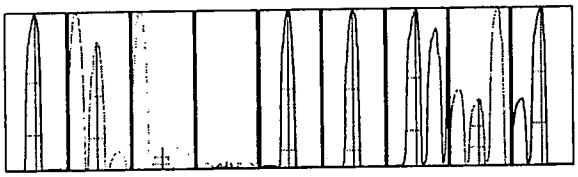
[no Gas]

Mass	Count (Actual)
9	48981
24	156895
25	21828
26	26320
59	336983
115	438792
206	102692
207	95589
208	202094

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	0.72	5.00	
24	0.79	5.00	
25	1.10	5.00	
26	0.46	5.00	
59	1.19	5.00	
115	0.82	5.00	
206	1.24	5.00	
207	2.29	5.00	
208	0.55	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	49517	48977	48772	49057	48581
24	158720	157559	156215	156388	155590
25	22019	21960	21791	21944	21423
26	26506	26367	26289	26190	26247
59	342220	339661	336783	333396	332855
115	443308	440284	438250	438724	433395
206	104659	102986	102654	101485	101678
207	98827	96854	94434	94117	93711
208	203164	202058	203261	200775	201211

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	7425	9.00	6.9 - 9.1		0.792	0.850	
24	25341	23.90	23.9 - 24.1		0.786	0.850	
25	3445	24.95	24.9 - 25.1		0.787	0.850	
26	4225	25.95	25.9 - 26.1		0.773	0.850	
59	54681	58.95	58.9 - 59.1		0.771	0.850	
115	74884	115.00	114.9 - 115.1		0.725	0.850	
206	16322	205.95	205.9 - 206.1		0.747	0.850	
207	14151	206.95	206.9 - 207.1		0.738	0.850	
208	33931	207.95	207.9 - 208.1		0.737	0.850	

X% = 10 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 235.1 **Y Axis =** Linear

Tune Parameters

## Plasma Paramters ##					
RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
RF Matching	1.80 V	Optional Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	DilutionGas
## Lenses Parameters ##					
Extract 1	0.0 V	Omega Lens	9.7 V	Deflect	15.4 V
Extract 2	-190.0 V	Cell Entrance	-34 V	Plate Bias	-50 V
Omega Bias	-100 V	Cell Exit	-50 V		
## Cell Parameters ##					
OctP Bias	-8.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	200 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	001CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:12:17-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	21852	0.14
Cr	52	1	No Gas	34572	0.01
Mn	55	1	No Gas	30791	0.02
Co	59	1	No Gas	244	14.04
Ni	60	1	No Gas	500	2.80
Cu	63	1	No Gas	11909	0.00
Sr	88	1	No Gas	248	10.26
Ag	107	1	No Gas	85	31.88
Al	27	1	No Gas	10403	0.02
Sn	118	1	No Gas	13077	0.23
Tl	47	1	No Gas	3264	0.80
Zn	66	1	No Gas	1003	0.40
As	75	3	HeHe	100	16.05
As	75	1	No Gas	26028	0.07
Sb	121	1	No Gas	5731	0.49
Hg	201	1	No Gas	36	131.85
Be	9	1	No Gas	14	269.97
Pb	208	1	No Gas	21200	0.00
Se	82	1	No Gas	179	60.64
Mo	98	1	No Gas	37245	0.09
Ba	137	1	No Gas	83	59.96
Tl	205	1	No Gas	107	62.66
U	238	1	No Gas	1371	2.25
Na	23	2	he	112860	0.00
Mg	24	2	he	470	6.14
K	39	2	he	253444	0.00
Se	82	3	HeHe	87	22.26
Fe	57	3	HeHe	474	6.73
Cd	114	1	No Gas	703	5.28
Ca	44	1	No Gas	65587	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	9318028	0.91
Sc	45	2	he	1766521	1.57
Ge	72	1	No Gas	1005789	0.47
In	115	1	No Gas	5661518	1.48
Tb	159	1	No Gas	6831155	0.65

Calibration Blank Report

Bi	209	1	No Gas	3774501	0.92
Sc	45	3	HeHe	172918	0.76

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	002CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:16:15-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	21094	0.14
Cr	52	1	No Gas	34138	0.01
Mn	55	1	No Gas	36389	0.00
Co	59	1	No Gas	159	48.25
Ni	60	1	No Gas	510	2.69
Cu	63	1	No Gas	11740	0.00
Sr	88	1	No Gas	193	19.95
Ag	107	1	No Gas	70	56.46
Al	27	1	No Gas	10326	0.02
Sn	118	1	No Gas	6861	0.34
Ti	47	1	No Gas	1316	1.88
Zn	66	1	No Gas	993	1.13
As	75	3	HeHe	39	99.57
As	75	1	No Gas	26735	0.04
Sb	121	1	No Gas	2856	0.80
Hg	201	1	No Gas	23	97.96
Be	9	1	No Gas	22	180.12
Pb	208	1	No Gas	17529	0.02
Se	82	1	No Gas	64	27.91
Mo	98	1	No Gas	11922	0.33
Ba	137	1	No Gas	93	35.07
Tl	205	1	No Gas	56	108.00
U	238	1	No Gas	285	11.78
Na	23	2	he	111386	0.00
Mg	24	2	he	374	4.65
K	39	2	he	243446	0.00
Se	82	3	HeHe	113	7.35
Fe	57	3	HeHe	374	0.46
Cd	114	1	No Gas	360	8.59
Ca	44	1	No Gas	64419	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	9248342	1.26
Sc	45	2	he	1744643	1.17
Ge	72	1	No Gas	1012122	1.06
In	115	1	No Gas	5760110	0.77
Tb	159	1	No Gas	6952439	1.03

Calibration Blank Report

Bi	209	1	No Gas	3846945	0.42
Sc	45	3	HeHe	171212	2.47

Calibration Standard Report

Sample Table

Sample Name	Standard 1
Data File Name	003CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:20:10-04:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	18063	0.07
Cr	52	1	No Gas	38963	0.01
Mn	55	1	No Gas	49023	0.00
Co	59	1	No Gas	5383	0.09
Ni	60	1	No Gas	1580	0.11
Cu	63	1	No Gas	15285	0.01
Sr	88	1	No Gas	6524	0.12
Ag	107	1	No Gas	3104	0.22
Al	27	1	No Gas	59462	0.00
Sn	118	1	No Gas	6709	0.35
Ti	47	1	No Gas	1652	0.72
Zn	66	1	No Gas	1780	0.74
As	75	3	HeHe	68	24.13
As	75	1	No Gas	26543	0.06
Sb	121	1	No Gas	4705	0.18
Hg	201	1	No Gas	38	49.94
Be	9	1	No Gas	661	1.29
Pb	208	1	No Gas	20348	0.03
Se	82	1	No Gas	132	106.96
Mo	98	1	No Gas	10414	0.29
Ba	137	1	No Gas	893	1.26
Tl	205	1	No Gas	3982	0.08
U	238	1	No Gas	4697	0.16
Na	23	2	he	117342	0.00
Mg	24	2	he	3408	0.35
K	39	2	he	261549	0.00
Se	82	3	HeHe	89	12.06
Fe	57	3	HeHe	293	11.04
Cd	114	1	No Gas	1547	1.11
Ca	44	1	No Gas	69431	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9230482	1.11	9248342	99.81	70	120	
Sc	45	2	he	1761372	0.68	1744643	100.96	70	120	
Ge	72	1	No Gas	991031	1.22	1012122	97.92	70	120	

Calibration Standard Report

In	115	1	No Gas	5660258	1.42	5760110	98.27	70	120	
Tb	159	1	No Gas	6804369	1.26	6952439	97.87	70	120	
Bi	209	1	No Gas	3791147	2.08	3846945	98.55	70	120	
Sc	45	3	HeHe	172414	2.77	171212	100.70	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 2
Data File Name	004CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:24:04-04:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	75240	0.01
Cr	52	1	No Gas	79879	0.00
Mn	55	1	No Gas	97795	0.00
Co	59	1	No Gas	50904	0.00
Ni	60	1	No Gas	12542	0.01
Cu	63	1	No Gas	41498	0.00
Sr	88	1	No Gas	67816	0.00
Ag	107	1	No Gas	31349	0.01
Al	27	1	No Gas	140284	0.00
Sn	118	1	No Gas	23599	0.02
Ti	47	1	No Gas	5303	0.05
Zn	66	1	No Gas	12980	0.00
As	75	3	HeHe	484	0.89
As	75	1	No Gas	32611	0.01
Sb	121	1	No Gas	26036	0.02
Hg	201	1	No Gas	93	35.35
Be	9	1	No Gas	6422	0.04
Pb	208	1	No Gas	81148	0.00
Se	82	1	No Gas	320	7.94
Mo	98	1	No Gas	26675	0.05
Ba	137	1	No Gas	9030	0.04
Tl	205	1	No Gas	42273	0.01
U	238	1	No Gas	51558	0.00
Na	23	2	he	158442	0.00
Mg	24	2	he	24922	0.02
K	39	2	he	304695	0.00
Se	82	3	HeHe	123	10.00
Fe	57	3	HeHe	1474	0.83
Cd	114	1	No Gas	13716	0.00
Ca	44	1	No Gas	87487	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9606577	0.99	9248342	103.87	70	120	
Sc	45	2	he	1830837	0.65	1744643	104.94	70	120	
Ge	72	1	No Gas	1021767	0.80	1012122	100.95	70	120	

Calibration Standard Report

In	115	1	No Gas	5934139	0.96	5760110	103.02	70	120	
Tb	159	1	No Gas	7112799	0.83	6952439	102.31	70	120	
Bi	209	1	No Gas	3993179	0.68	3846945	103.80	70	120	
Sc	45	3	HeHe	174349	0.65	171212	101.83	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 3
Data File Name	005CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:27:58-04:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	536384	0.00
Cr	52	1	No Gas	499471	0.00
Mn	55	1	No Gas	607526	0.00
Co	59	1	No Gas	513478	0.00
Ni	60	1	No Gas	115198	0.00
Cu	63	1	No Gas	291757	0.00
Sr	88	1	No Gas	673644	0.00
Ag	107	1	No Gas	302621	0.00
Al	27	1	No Gas	419330	0.00
Sn	118	1	No Gas	180565	0.00
Tl	47	1	No Gas	41510	0.00
Zn	66	1	No Gas	78050	0.00
As	75	3	HeHe	4653	0.12
As	75	1	No Gas	92057	0.00
Sb	121	1	No Gas	236636	0.00
Hg	201	1	No Gas	544	0.31
Be	9	1	No Gas	64582	0.00
Pb	208	1	No Gas	585512	0.00
Se	82	1	No Gas	3813	0.30
Mo	98	1	No Gas	185502	0.00
Ba	137	1	No Gas	83581	0.00
Tl	205	1	No Gas	422428	0.00
U	238	1	No Gas	512538	0.00
Na	23	2	he	496695	0.00
Mg	24	2	he	224038	0.00
K	39	2	he	599398	0.00
Se	82	3	HeHe	317	2.40
Fe	57	3	HeHe	11456	0.02
Cd	114	1	No Gas	138636	0.00
Ca	44	1	No Gas	202707	0.00

QC ISTD-Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9599585	0.21	9248342	103.80	70	120	
Sc	45	2	he	1819752	1.49	1744643	104.31	70	120	
Ge	72	1	No Gas	1016046	0.79	1012122	100.39	70	120	

Calibration Standard Report

In	115	1	No Gas	5960241	0.35	5760110	103.47	70	120	
Tb	159	1	No Gas	7215156	0.72	6952439	103.78	70	120	
Bi	209	1	No Gas	3949111	0.62	3846945	102.66	70	120	
Sc	45	3	HeHe	172939	1.30	171212	101.01	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 4
Data File Name	006CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:31:52-04:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	5638942	0.00
Cr	52	1	No Gas	4979669	0.00
Mn	55	1	No Gas	6192129	0.00
Co	59	1	No Gas	5447044	0.00
Ni	60	1	No Gas	1182013	0.00
Cu	63	1	No Gas	2985102	0.00
Sr	88	1	No Gas	6997417	0.00
Ag	107	1	No Gas	3174830	0.00
Al	27	1	No Gas	3653098	0.00
Sn	118	1	No Gas	1886235	0.00
Tl	47	1	No Gas	418509	0.00
Zn	66	1	No Gas	721550	0.00
As	75	3	HeHe	49452	0.00
As	75	1	No Gas	739186	0.00
Sb	121	1	No Gas	2555108	0.00
Hg	201	1	No Gas	5250	0.01
Be	9	1	No Gas	666474	0.00
Pb	208	1	No Gas	5859721	0.00
Se	82	1	No Gas	38718	0.00
Mo	98	1	No Gas	1996551	0.00
Ba	137	1	No Gas	841402	0.00
Tl	205	1	No Gas	4323264	0.00
U	238	1	No Gas	5263199	0.00
Na	23	2	he	4611890	0.00
Mg	24	2	he	2551831	0.00
K	39	2	he	3991640	0.00
Se	82	3	HeHe	2508	0.14
Fe	57	3	HeHe	117956	0.00
Cd	114	1	No Gas	1480140	0.00
Ca	44	1	No Gas	1479565	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	10207257	1.85	9248342	110.37	70	120	
Sc	45	2	he	1908011	1.86	1744643	109.36	70	120	
Ge	72	1	No Gas	1060324	1.35	1012122	104.76	70	120	

Calibration Standard Report

In	115	1	No Gas	6277627	0.94	5760110	108.98	70	120	
Tb	159	1	No Gas	7433190	0.78	6952439	106.91	70	120	
Bi	209	1	No Gas	4079951	1.27	3846945	106.06	70	120	
Sc	45	3	HeHe	181248	0.69	171212	105.86	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 5
Data File Name	007CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:35:41-04:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	10826451	0.00
Cr	52	1	No Gas	9637889	0.00
Mn	55	1	No Gas	11866703	0.00
Co	59	1	No Gas	10711214	0.00
Ni	60	1	No Gas	2413544	0.00
Cu	63	1	No Gas	5819480	0.00
Sr	88	1	No Gas	13751395	0.00
Ag	107	1	No Gas	6225088	0.00
Al	27	1	No Gas	6829165	0.00
Sn	118	1	No Gas	3750576	0.00
Ti	47	1	No Gas	823588	0.00
Zn	66	1	No Gas	1429052	0.00
As	75	3	HeHe	96786	0.00
As	75	1	No Gas	1481593	0.00
Sb	121	1	No Gas	4866586	0.00
Hg	201	1	No Gas	10743	0.02
Be	9	1	No Gas	1447602	0.00
Pb	208	1	No Gas	11462241	0.00
Se	82	1	No Gas	76676	0.00
Mo	98	1	No Gas	3907993	0.00
Ba	137	1	No Gas	1694987	0.00
Tl	205	1	No Gas	8390950	0.00
U	238	1	No Gas	10428690	0.00
Na	23	2	he	8720906	0.00
Mg	24	2	he	4821494	0.00
K	39	2	he	7360101	0.00
Se	82	3	HeHe	4959	0.02
Fe	57	3	HeHe	233280	0.00
Cd	114	1	No Gas	2908805	0.00
Ca	44	1	No Gas	2795845	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9993227	0.18	9248342	108.05	70	120	
Sc	45	2	he	1774489	1.33	1744643	101.71	70	120	
Ge	72	1	No Gas	1031020	0.52	1012122	101.87	70	120	

Calibration Standard Report

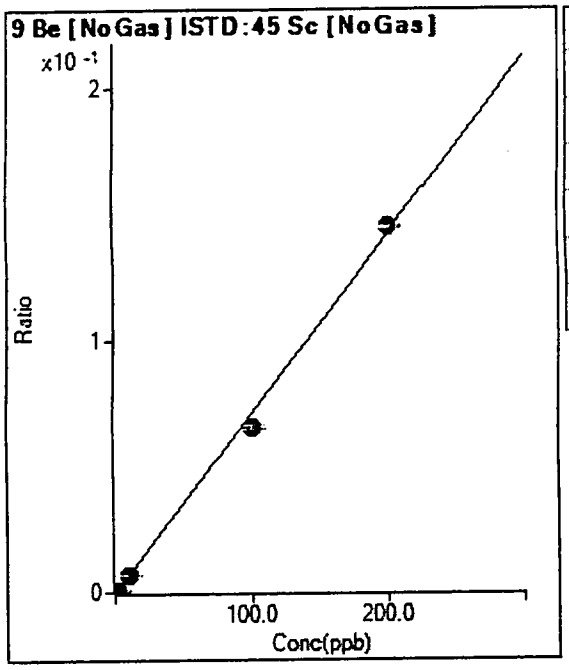
In	115	1	No Gas	6133321	1.61	5760110	106.48	70	120	
Tb	159	1	No Gas	7274529	1.23	6952439	104.63	70	120	
Bi	209	1	No Gas	4005913	0.87	3846945	104.13	70	120	
Sc	45	3	HeHe	182051	0.95	171212	106.33	70	120	

Calibration for 071_CCV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\A080712.b\
Analysis File: A080712.batch.bin
DA Date-Time: 8/7/2012 1:05:32 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	002CALB.d	blk	8/7/2012 8:16:15 AM
2	003CALS.d	Standard 1	8/7/2012 8:20:10 AM
3	004CALS.d	Standard 2	8/7/2012 8:24:04 AM
4	005CALS.d	Standard 3	8/7/2012 8:27:58 AM
5	006CALS.d	Standard 4	8/7/2012 8:31:52 AM
6	007CALS.d	Standard 5	8/7/2012 8:35:41 AM

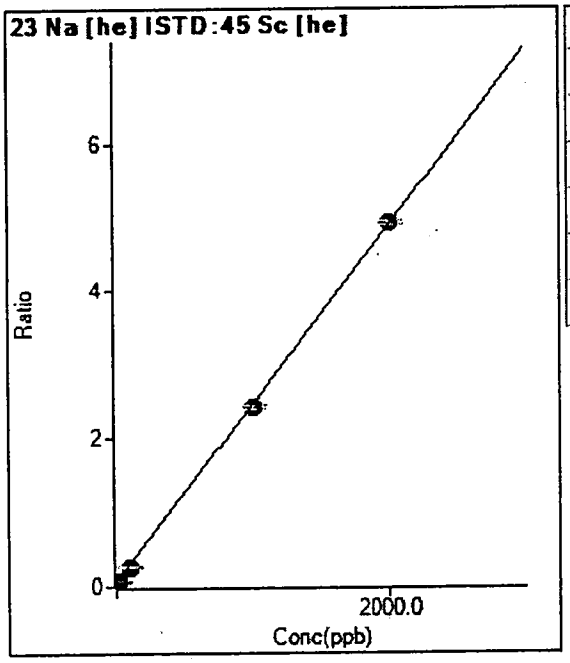
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.00	0.0000	P	40.0
2	☐	0.100	0.098	661.35	0.0001	P	8.4
3	☐	1.000	0.938	6422.49	0.0007	P	2.3
4	☐	10.000	9.473	64581.75	0.0067	P	1.2
5	☐	100.000	91.991	666474.04	0.0653	P	2.3
6	☐	200.000	204.031	1447602.42	0.1449	A	0.8

y = 7.0996E-004 * x + 2.3808E-006
R = 0.9989
DL = 0.004029
BEC = 0.003353

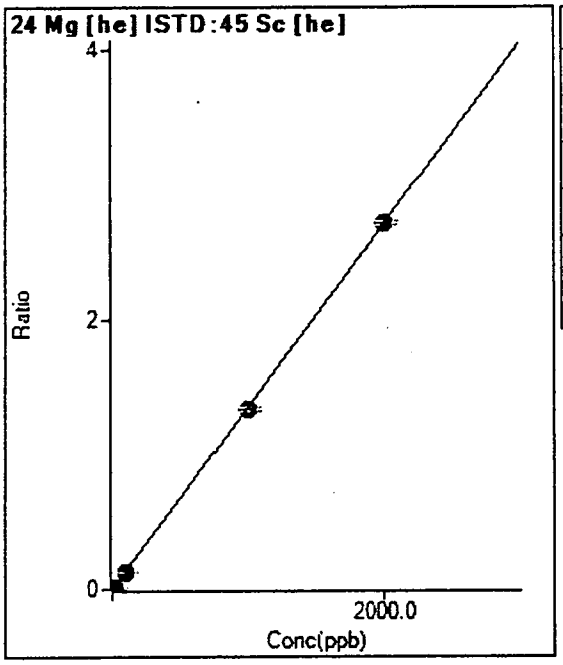
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	111385.71	0.0639	P	4.6
2	☐			117342.24	0.0666	P	1.3
3	☐	10.000	9.407	158441.63	0.0865	P	1.3
4	☐	100.000	86.740	496695.47	0.2730	P	1.2
5	☐	1000.000	976.358	4611889.86	2.4174	A	1.7
6	☐	2000.000	2012.487	8720906.27	4.9150	A	1.0

y = 0.0024 * x + 0.0639
R = 0.9999
DL = 3.687
BEC = 26.49

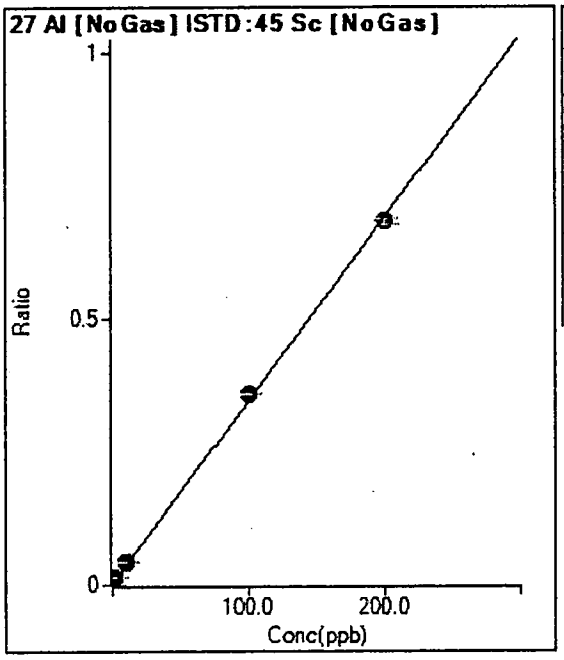
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	374.10	0.0002	P	16.5
2	☐			3407.90	0.0019	P	11.9
3	☐	10.000	9.897	24921.94	0.0136	P	6.1
4	☐	100.000	90.757	224037.56	0.1231	P	0.7
5	☐	1000.000	987.738	2551831.50	1.3377	A	2.2
6	☐	2000.000	2006.594	4821493.91	2.7174	A	1.2

y = 0.0014 * x + 2.1419E-004
R = 1.0000
DL = 0.07847
BEC = 0.1582

Weight: <None>
Min Conc: <None>

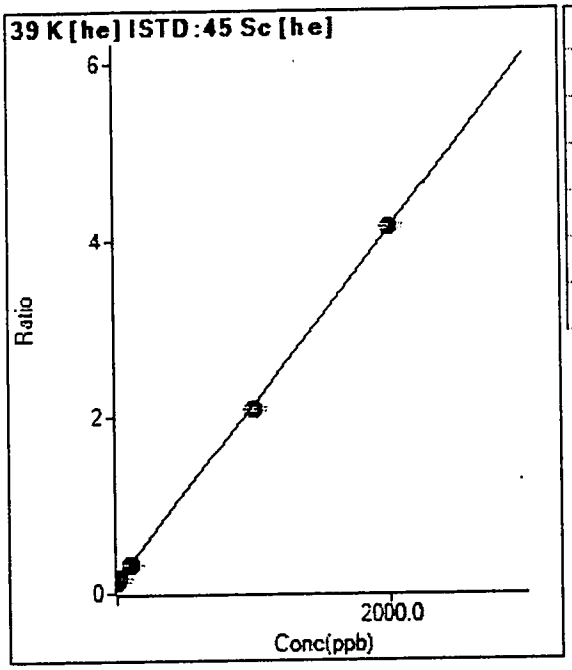


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10325.69	0.0011	P	3.2
2	☐			59461.87	0.0064	P	2.9
3	☐	1.000	3.916	140283.57	0.0146	P	1.6
4	☐	10.000	12.358	419330.09	0.0437	P	1.3
5	☐	100.000	103.580	3653098.12	0.3579	A	0.6
6	☐	200.000	198.078	6829164.54	0.6834	A	1.4

y = 0.0034 * x + 0.0011
R = 0.9998
DL = 0.03075
BEC = 0.3242

Weight: <None>
Min Conc: <None>

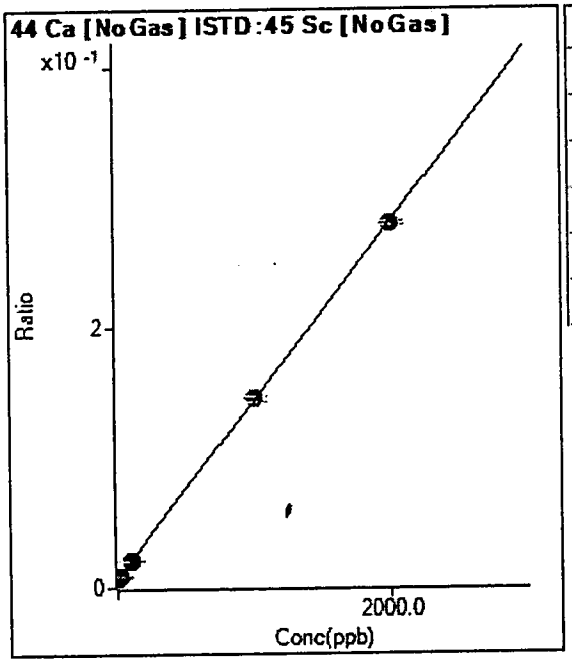
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	243445.55	0.1396	P	2.7
2				261549.24	0.1485	P	0.7
3		10.000	13.468	304695.36	0.1664	P	0.6
4		100.000	95.209	599397.65	0.3294	P	2.1
5		1000.000	979.526	3991640.12	2.0926	A	2.1
6		2000.000	2010.459	7360101.33	4.1480	A	1.1

y = 0.0020 * x + 0.1396
R = 0.9999
DL = 5.695
BEC = 70

Weight: <None>
Min Conc: <None>

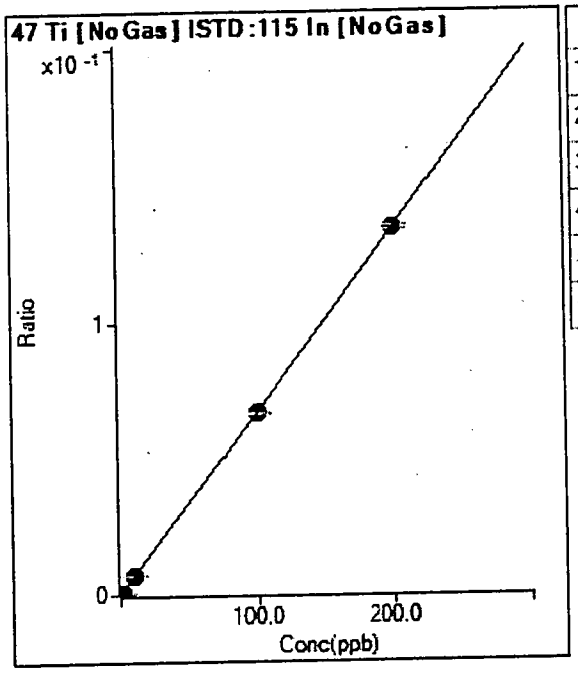


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	64419.26	0.0070	P	2.5
2				69430.84	0.0075	P	8.6
3		10.000	15.649	87487.23	0.0091	P	4.2
4		100.000	103.491	202707.19	0.0211	P	1.7
5		1000.000	1009.457	1479564.93	0.1450	A	3.2
6		2000.000	1995.069	2795845.17	0.2798	A	1.1

y = 1.3674E-004 * x + 0.0070
R = 1.0000
DL = 3.8
BEC = 50.93

Weight: <None>
Min Conc: <None>

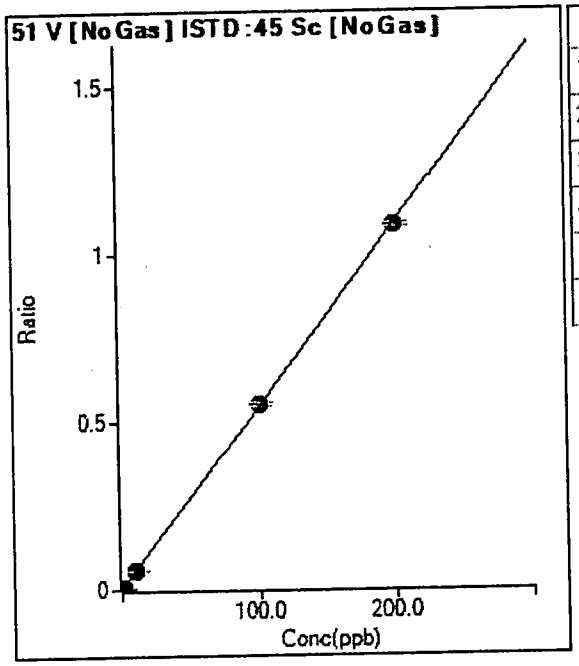
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1315.75	0.0002	P	24.7
2	☐	0.100	0.095	1651.73	0.0003	P	13.3
3	☐	1.000	0.995	5303.43	0.0009	P	3.6
4	☐	10.000	10.067	41510.48	0.0070	P	1.7
5	☐	100.000	99.291	418508.63	0.0667	P	1.1
6	☐	200.000	200.351	823588.40	0.1343	P	1.2

y = 6.6917E-004 * x + 2.2834E-004
R = 1.0000
DL = 0.2524
BEC = 0.3412

Weight: <None>
Min Conc: <None>

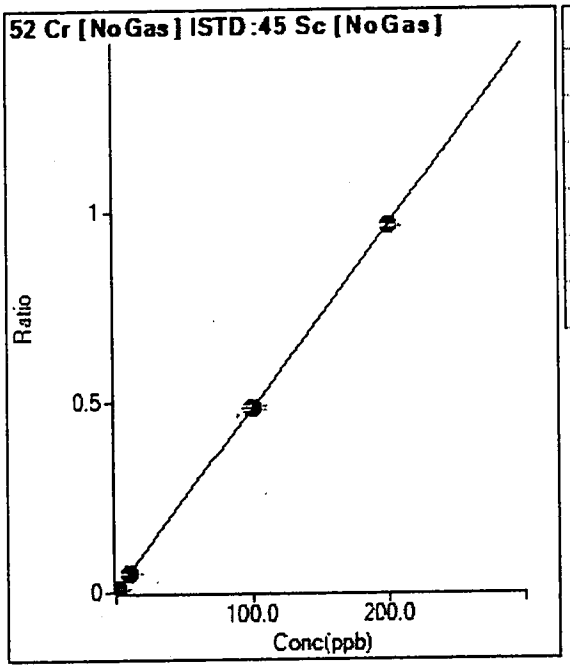


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21093.76	0.0023	P	29.5
2	☐	0.100	-0.061	18063.48	0.0020	P	11.4
3	☐	1.000	1.022	75239.91	0.0078	P	8.3
4	☐	10.000	9.879	536384.01	0.0559	P	2.7
5	☐	100.000	101.444	5638942.05	0.5526	A	2.4
6	☐	200.000	199.284	10826451.35	1.0834	A	1.1

y = 0.0054 * x + 0.0023
R = 1.0000
DL = 0.3732
BEC = 0.4215

Weight: <None>
Min Conc: <None>

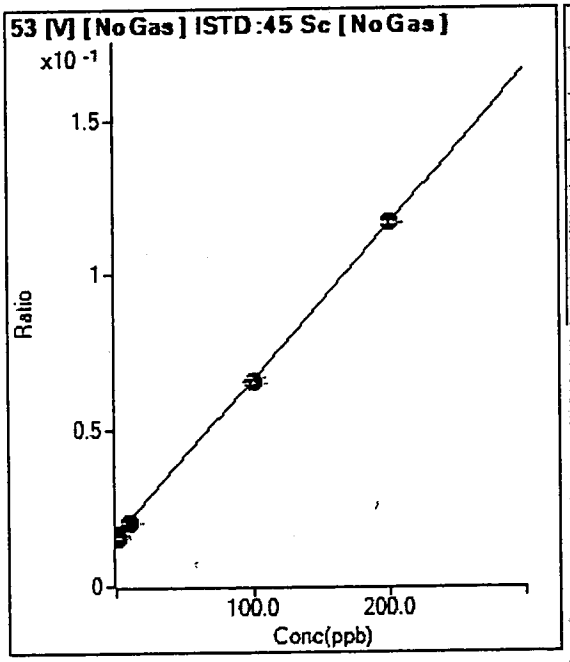
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34138.23	0.0037	P	5.7
2	☐	0.100	0.110	38962.87	0.0042	P	3.2
3	☐	1.000	0.961	79879.22	0.0083	P	2.2
4	☐	10.000	10.046	499471.34	0.0520	P	1.1
5	☐	100.000	100.638	4979668.67	0.4879	A	2.0
6	☐	200.000	199.679	9637888.74	0.9644	A	0.6

y = 0.0048 * x + 0.0037
R = 1.0000
DL = 0.1302
BEC = 0.7675

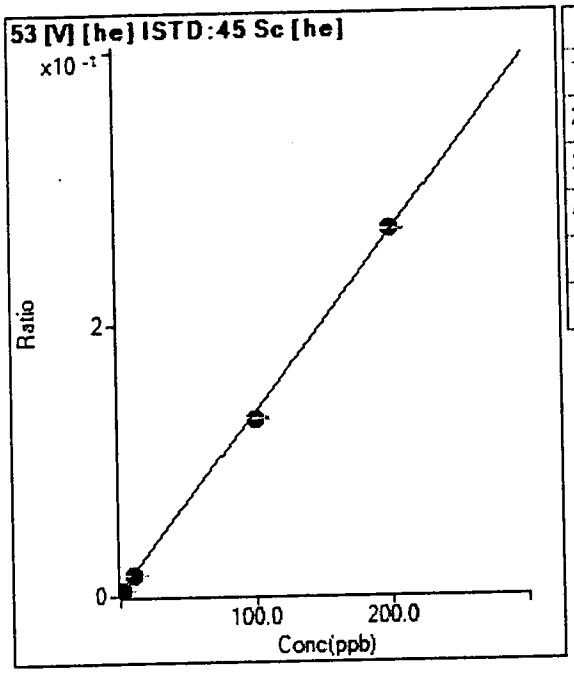
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	149554.69	0.0162	P	0.5
2	☐	0.100	1.015	153951.55	0.0167	P	1.7
3	☐	1.000	-1.133	149877.05	0.0156	P	2.0
4	☐	10.000	8.414	195723.03	0.0204	P	2.1
5	☐	100.000	98.717	669822.89	0.0656	P	2.8
6	☐	200.000	200.731	1166872.46	0.1168	P	0.5

y = 5.0114E-004 * x + 0.0162
R = 0.9999
DL = 0.4835
BEC = 32.27

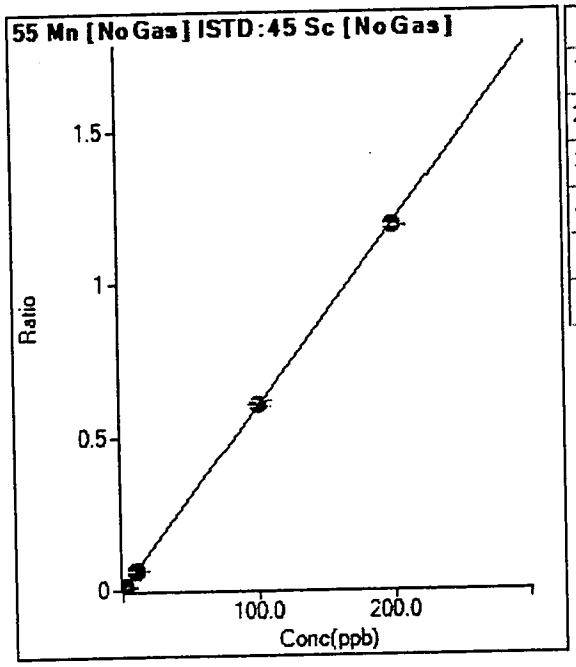
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6523.76	0.0037	P	2.7
2	☐	0.100	0.178	7001.69	0.0040	P	5.9
3	☐	1.000	0.660	8439.50	0.0046	P	3.8
4	☐	10.000	9.229	28935.89	0.0159	P	2.5
5	☐	100.000	96.246	249133.30	0.1306	P	1.3
6	☐	200.000	201.917	478832.97	0.2699	P	0.5

y = 0.0013 * x + 0.0037
R = 0.9998
DL = 0.2296
BEC = 2.838

Weight: <None>
Min Conc: <None>

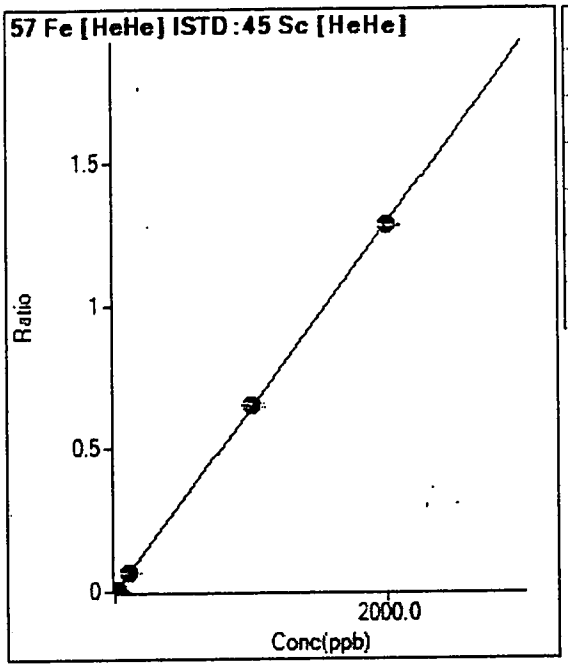


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36389.16	0.0039	P	2.5
2	☐	0.100	0.232	49022.90	0.0053	P	2.6
3	☐	1.000	1.052	97794.51	0.0102	P	3.7
4	☐	10.000	9.992	607526.39	0.0633	P	0.9
5	☐	100.000	101.501	6192129.38	0.6068	A	3.1
6	☐	200.000	199.249	11866703.23	1.1875	A	0.4

y = 0.0059 * x + 0.0039
R = 1.0000
DL = 0.04907
BEC = 0.6625

Weight: <None>
Min Conc: <None>

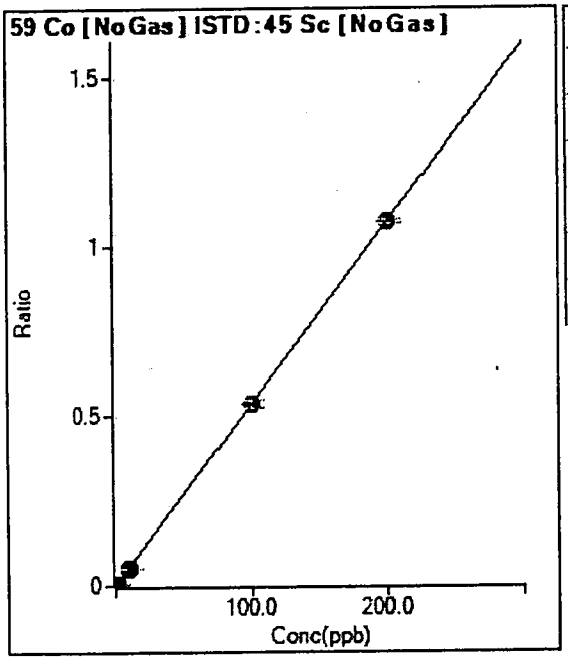
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	3.400	374.10	0.0022	P	2.1
2	☐			292.61	0.0017	P	29.7
3	☐	10.000	13.155	1474.21	0.0085	P	12.3
4	☐	100.000	103.056	11456.05	0.0662	P	1.6
5	☐	1000.000	1012.524	117955.50	0.6508	P	2.3
6	☐	2000.000	1993.570	233280.34	1.2814	P	0.4

y = 6.4275E-004 * x
R = 1.0000
DL = 0.2166
BEC = 0

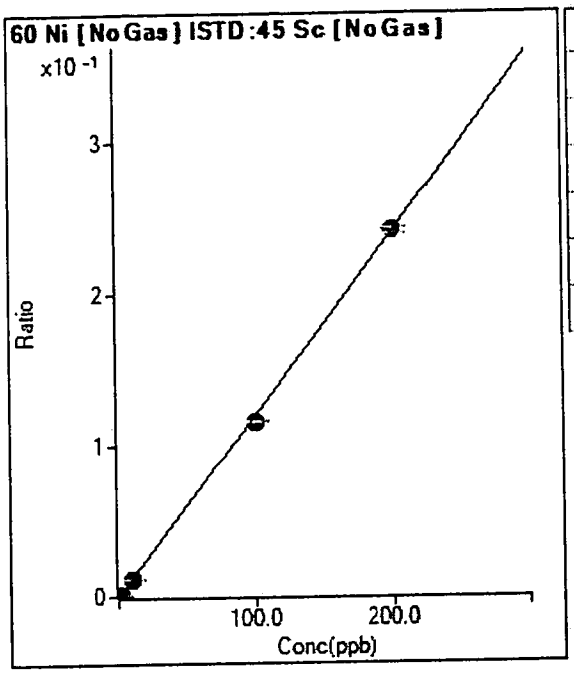
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	159.27	0.0000	P	75.6
2	☐	0.100	0.106	5382.58	0.0006	P	4.0
3	☐	1.000	0.986	50904.40	0.0053	P	2.9
4	☐	10.000	9.985	513478.35	0.0535	P	0.7
5	☐	100.000	99.702	5447043.65	0.5339	A	4.4
6	☐	200.000	200.150	10711213.93	1.0718	A	1.0

y = 0.0054 * x + 1.7113E-005
R = 1.0000
DL = 0.007244
BEC = 0.003196

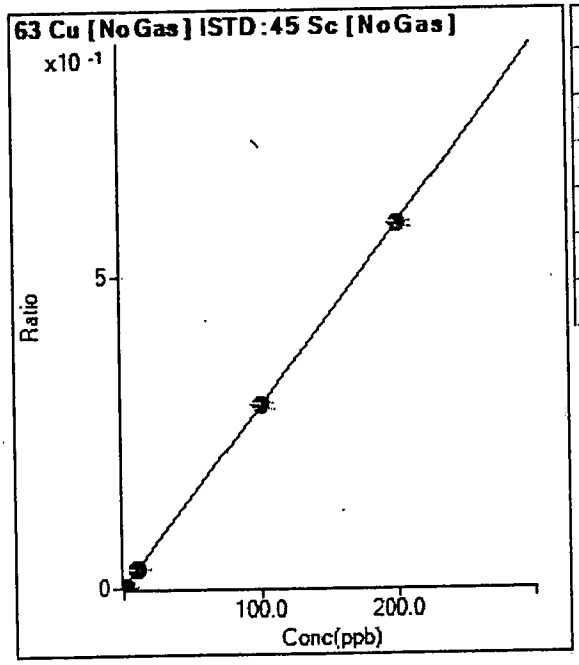
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	510.03	0.0001	P	13.6
2		0.100	0.097	1580.14	0.0002	P	2.7
3		1.000	1.044	12541.64	0.0013	P	1.1
4		10.000	9.976	115198.15	0.0120	P	0.8
5		100.000	96.689	1182012.74	0.1158	P	2.0
6		200.000	201.656	2413544.03	0.2415	A	1.8

y = 0.0012 * x + 5.5141E-005
R = 0.9998
DL = 0.01879
BEC = 0.04605

Weight: <None>
Min Conc: <None>

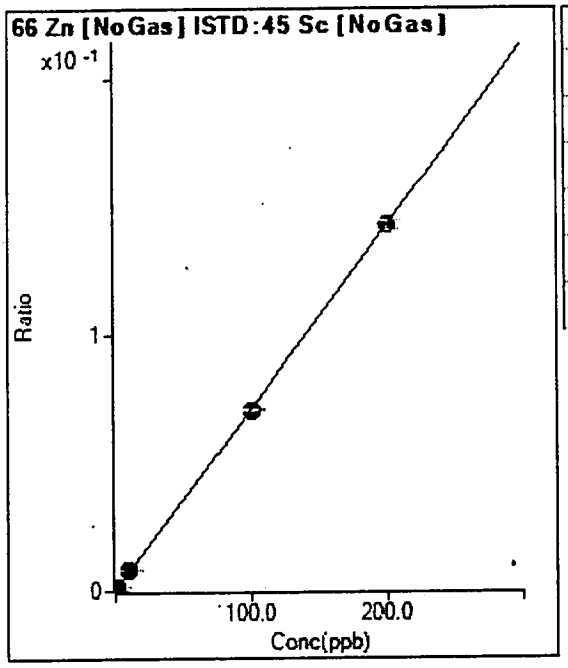


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	11739.95	0.0013	P	1.5
2		0.100	0.133	15285.32	0.0017	P	1.6
3		1.000	1.049	41498.26	0.0043	P	0.4
4		10.000	10.019	291757.45	0.0304	P	0.6
5		100.000	100.204	2985102.00	0.2926	A	2.9
6		200.000	199.897	5819480.00	0.5823	A	1.3

y = 0.0029 * x + 0.0013
R = 1.0000
DL = 0.01912
BEC = 0.4367

Weight: <None>
Min Conc: <None>

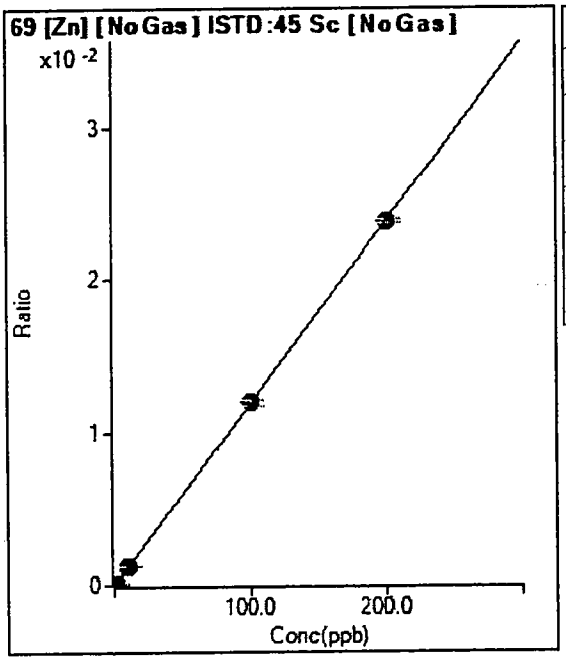
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	993.30	0.0001	P	11.9
2		0.100	0.120	1779.98	0.0002	P	14.2
3		1.000	1.745	12980.00	0.0014	P	1.6
4		10.000	11.253	78050.21	0.0081	P	0.6
5		100.000	99.016	721549.68	0.0707	P	1.3
6		200.000	200.426	1429051.62	0.1430	M	2.8

y = 7.1295E-004 * x + 1.0747E-004
R = 1.0000
DL = 0.05375
BEC = 0.1507

Weight: <None>
Min Conc: <None>

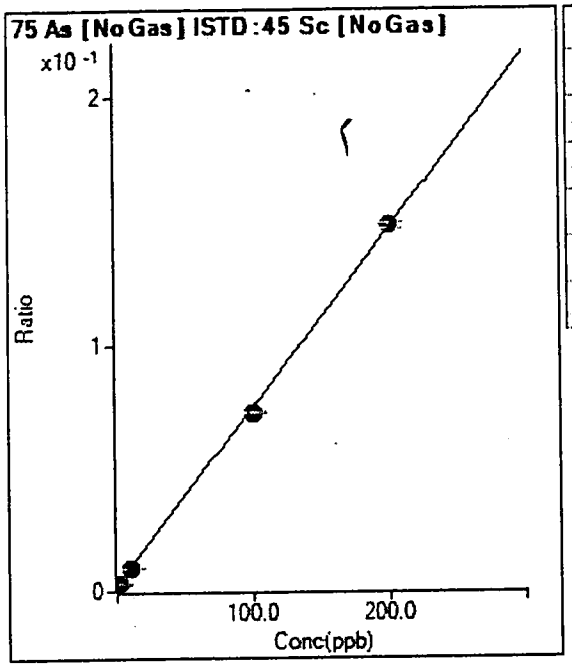


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	77.78	0.0000	P	38.2
2		0.100	0.061	144.45	0.0000	P	32.5
3		1.000	1.161	1407.54	0.0001	P	5.4
4		10.000	10.400	11956.58	0.0012	P	3.1
5		100.000	100.273	121816.85	0.0119	P	2.7
6		200.000	199.843	237644.60	0.0238	P	1.2

y = 1.1895E-004 * x + 8.4155E-006
R = 1.0000
DL = 0.081
BEC = 0.07075

Weight: <None>
Min Conc: <None>

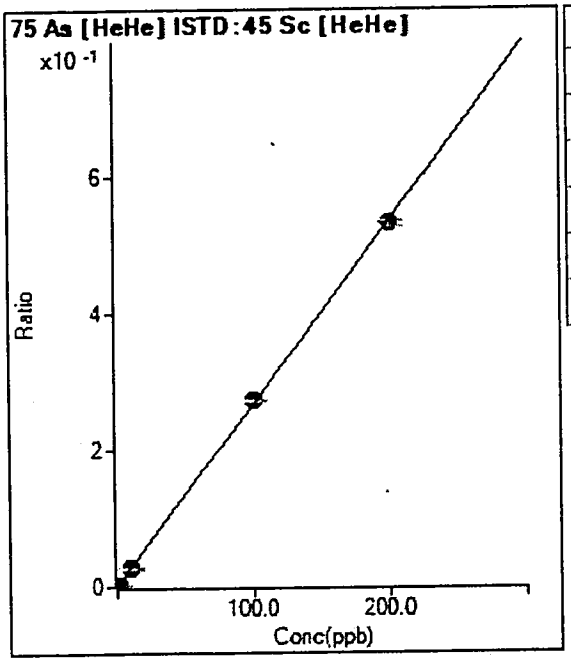
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26735.37	0.0029	P	11.7
2	☐	0.100	-0.023	26542.86	0.0029	P	16.6
3	☐	1.000	0.697	32610.52	0.0034	P	2.9
4	☐	10.000	9.295	92057.25	0.0096	P	0.3
5	☐	100.000	96.521	739186.23	0.0724	P	1.4
6	☐	200.000	201.776	1481592.55	0.1483	A	1.5

y = 7.2043E-004 * x + 0.0029
R = 0.9998
DL = 1.407
BEC = 4.016

Weight: <None>
Min Conc: <None>

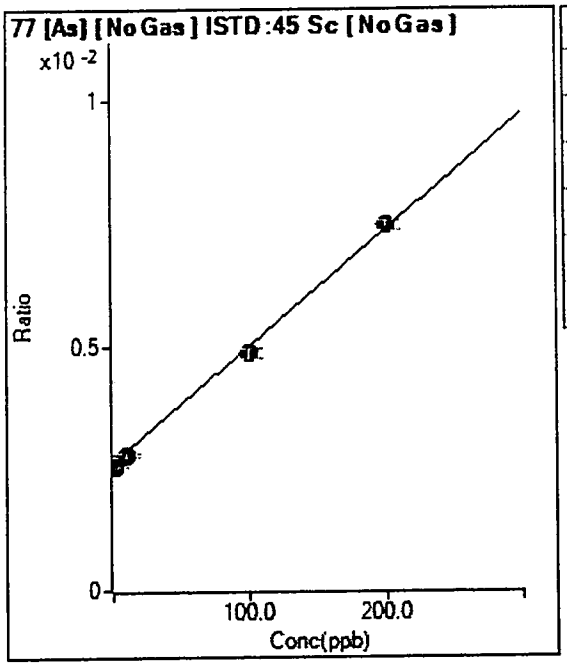


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	39.22	0.0002	P	38.4
2	☐	0.100	0.063	67.97	0.0004	P	18.9
3	☐	1.000	0.953	483.67	0.0028	P	3.8
4	☐	10.000	9.985	4652.94	0.0269	P	4.4
5	☐	100.000	102.077	49451.53	0.2728	P	0.8
6	☐	200.000	198.962	96786.09	0.5316	P	1.4

y = 0.0027 * x + 2.2845E-004
R = 0.9999
DL = 0.09864
BEC = 0.08554

Weight: <None>
Min Conc: <None>

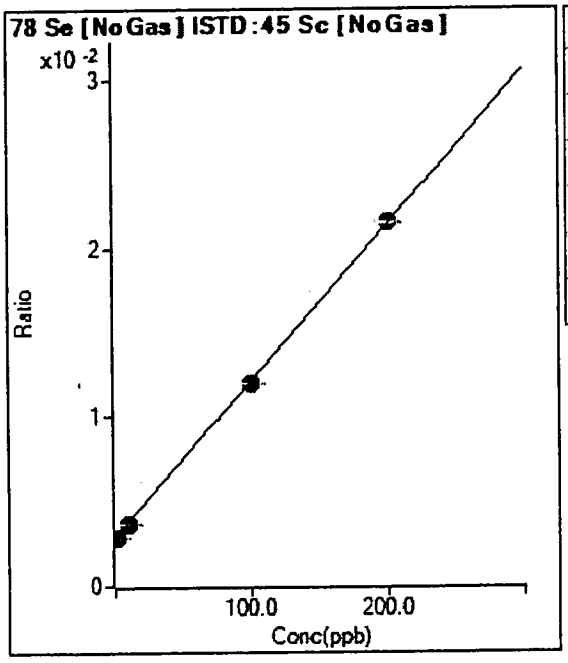
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24210.54	0.0026	P	2.3
2	☐	0.100	2.024	24603.69	0.0027	P	5.3
3	☐	1.000	-3.740	24291.98	0.0025	P	0.3
4	☐	10.000	6.064	26513.84	0.0028	P	2.0
5	☐	100.000	93.540	49411.89	0.0048	P	3.8
6	☐	200.000	203.449	74527.42	0.0075	P	2.4

y = 2.3790E-005 * x + 0.0026
R = 0.9990
DL = 7.636
BEC = 110

Weight: <None>
Min Conc: <None>

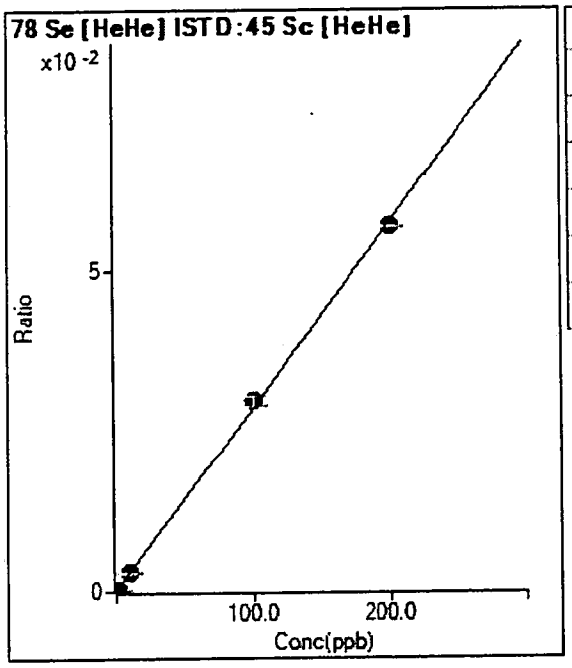


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26343.91	0.0028	P	2.2
2	☐	0.100	0.320	26569.76	0.0029	P	1.3
3	☐	1.000	-0.037	27335.03	0.0028	P	0.9
4	☐	10.000	8.456	34905.20	0.0036	P	1.5
5	☐	100.000	98.162	122331.43	0.0120	P	0.7
6	☐	200.000	201.001	215431.20	0.0216	P	0.6

y = 9.3077E-005 * x + 0.0028
R = 0.9999
DL = 2.022
BEC = 30.61

Weight: <None>
Min Conc: <None>

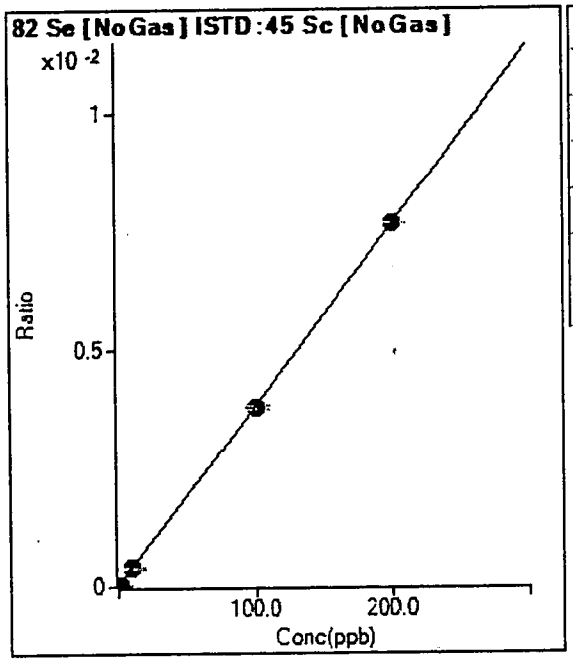
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5.23	0.0000	P	57.8
2	☐	0.100	0.278	18.96	0.0001	P	11.9
3	☐	1.000	1.019	56.21	0.0003	P	7.6
4	☐	10.000	10.023	501.97	0.0029	P	6.4
5	☐	100.000	103.649	5387.14	0.0297	P	5.3
6	☐	200.000	198.174	10339.07	0.0568	P	0.7

y = 2.8642E-004 * x + 3.0497E-005
R = 0.9998
DL = 0.1846
BEC = 0.1065

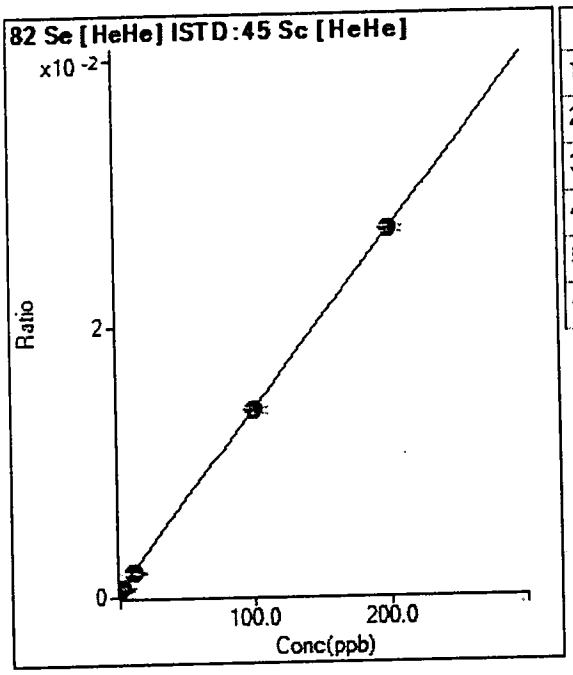
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	64.08	0.0000	P	18.3
2	☐	0.100	0.193	131.66	0.0000	P	140.0
3	☐	1.000	0.691	319.83	0.0000	P	26.2
4	☐	10.000	10.206	3813.38	0.0004	P	11.4
5	☐	100.000	99.040	38717.56	0.0038	P	2.2
6	☐	200.000	200.471	76676.06	0.0077	P	0.1

y = 3.8239E-005 * x + 6.9315E-006
R = 1.0000
DL = 0.09932
BEC = 0.1813

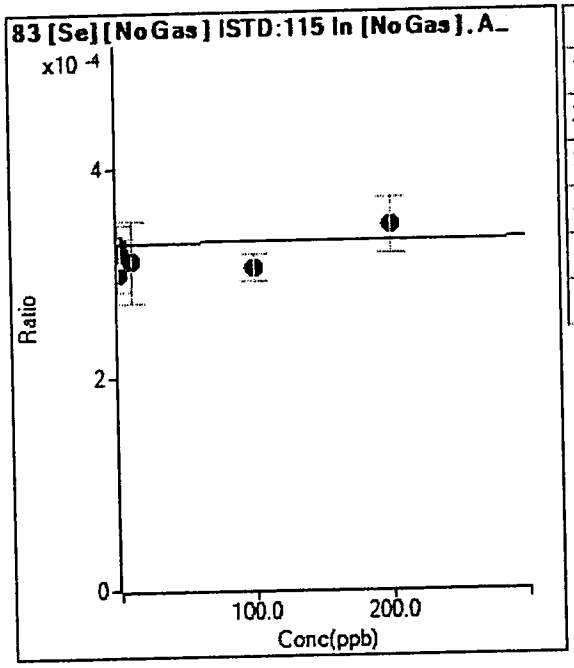
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	112.59	0.0007	P	9.8
2	☐	0.100	-1.098	88.52	0.0005	P	7.9
3	☐	1.000	0.351	122.96	0.0007	P	11.7
4	☐	10.000	8.836	316.67	0.0018	P	6.7
5	☐	100.000	99.349	2508.34	0.0138	P	3.0
6	☐	200.000	200.388	4959.24	0.0272	P	1.3

y = 1.3266E-004 * x + 6.5835E-004
R = 1.0000
DL = 1.454
BEC = 4.963

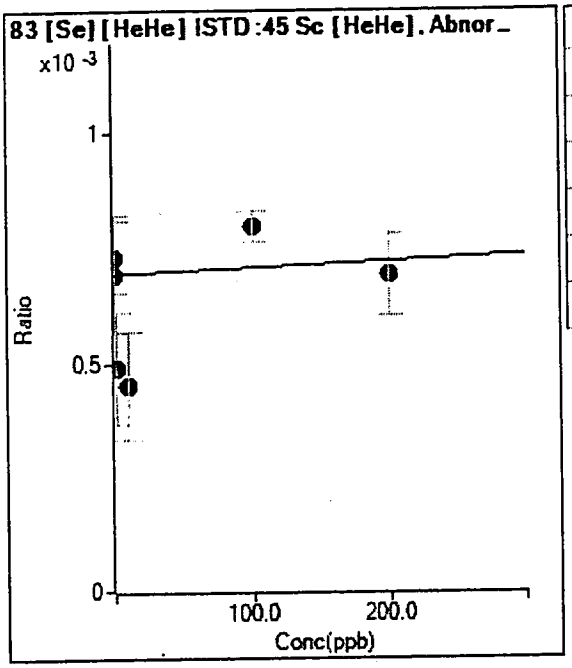
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1892.79	0.0003	P	10.9
2	☐	0.100	-3730.420	1689.05	0.0003	P	10.4
3	☐	1.000	-1145.853	1896.51	0.0003	P	8.5
4	☐	10.000	-2114.365	1855.75	0.0003	P	25.4
5	☐	100.000	-3045.833	1907.62	0.0003	P	8.5
6	☐	200.000	1886.734	2107.65	0.0003	P	15.4

y = 8.1625E-009 * x + 3.2878E-004
R = 0.5535
DL = 1.313E+04
BEC = 4.028E+04

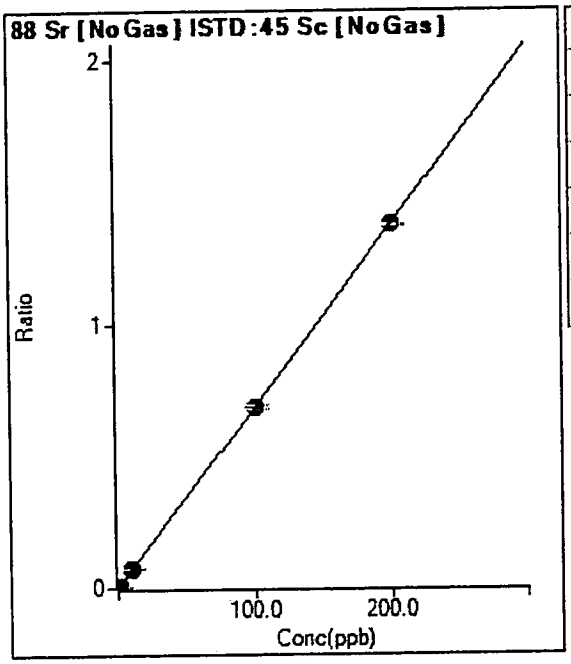
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	118.52	0.0007	P	37.1
2	☐	0.100	273.424	125.93	0.0007	P	20.8
3	☐	1.000	-1480.379	85.19	0.0005	P	49.9
4	☐	10.000	-1750.027	77.78	0.0005	P	52.8
5	☐	100.000	735.343	144.45	0.0008	P	8.4
6	☐	200.000	-22.400	125.93	0.0007	P	25.6

y = 1.3900E-007 * x + 6.9509E-004
R = 0.4026
DL = 5563
BEC = 5001

Weight: <None>
Min Conc: <None>

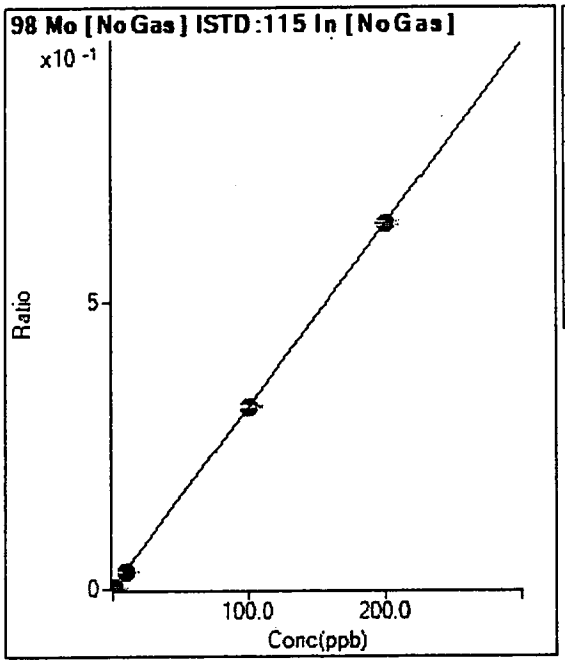


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	192.60	0.0000	P	39.3
2	☐	0.100	0.100	6523.87	0.0007	P	7.8
3	☐	1.000	1.024	67815.96	0.0071	P	1.5
4	☐	10.000	10.203	673643.91	0.0702	P	0.6
5	☐	100.000	99.721	6997417.08	0.6857	A	1.9
6	☐	200.000	200.129	13751394.82	1.3761	A	0.8

y = 0.0069 * x + 2.0867E-005
R = 1.0000
DL = 0.003578
BEC = 0.003035

Weight: <None>
Min Conc: <None>

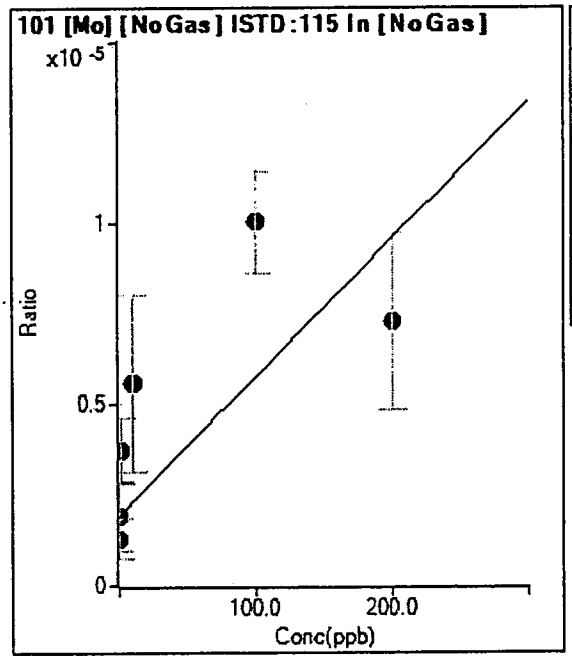
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11922.35	0.0021	P	38.8
2	☐	0.100	-0.070	10414.07	0.0018	P	30.9
3	☐	1.000	0.766	26675.06	0.0045	P	13.1
4	☐	10.000	9.159	185501.65	0.0311	P	1.7
5	☐	100.000	99.614	1996550.72	0.3181	A	1.0
6	☐	200.000	200.236	3907993.07	0.6372	A	1.1

y = 0.0032 * x + 0.0021
R = 1.0000
DL = 0.7586
BEC = 0.652

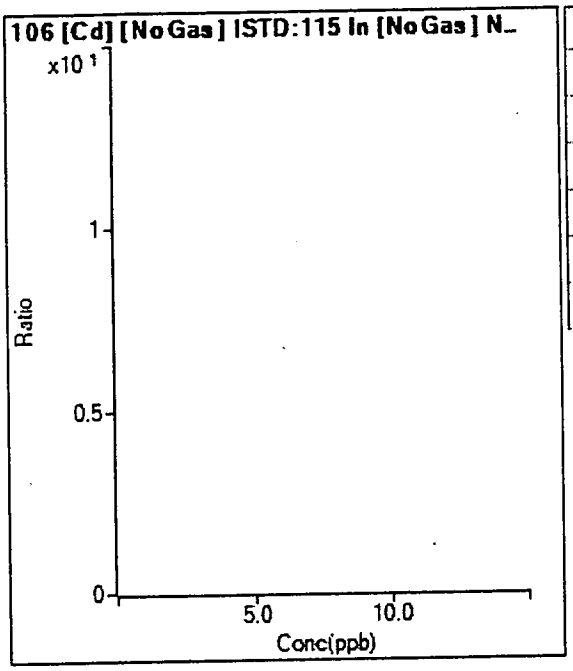
Weight: <None>
Min Conc: <None>



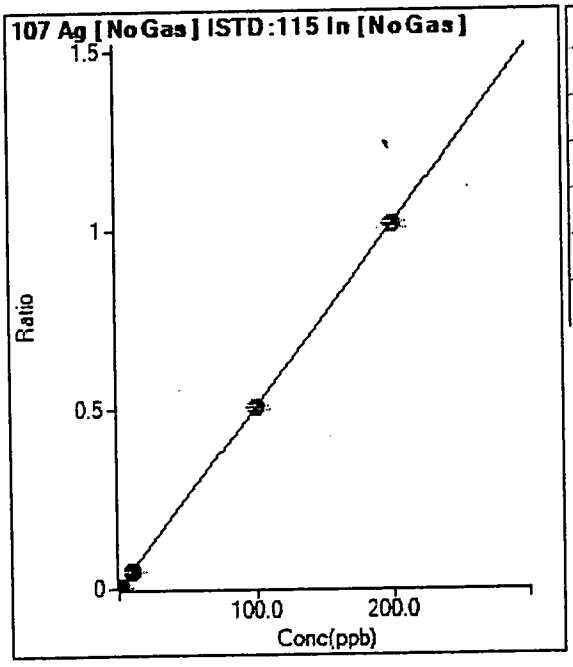
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11.11	0.0000	P	99.8
2	☐	0.100	-16.512	7.41	0.0000	P	86.6
3	☐	1.000	46.903	22.22	0.0000	P	49.2
4	☐	10.000	95.059	33.34	0.0000	P	88.2
5	☐	100.000	211.476	62.97	0.0000	P	27.8
6	☐	200.000	139.788	44.45	0.0000	P	66.8

y = 3.8363E-008 * x + 1.9349E-006
R = 0.7075
DL = 151
BEC = 50.44

Weight: <None>
Min Conc: <None>



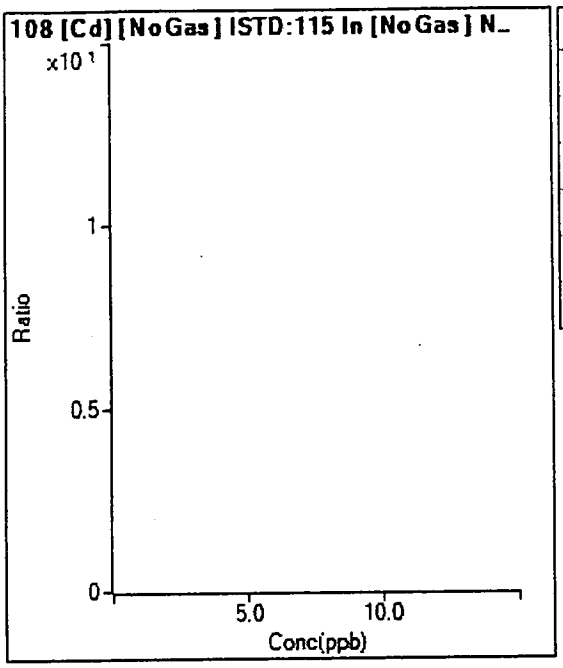
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.100					
3	☐	1.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					



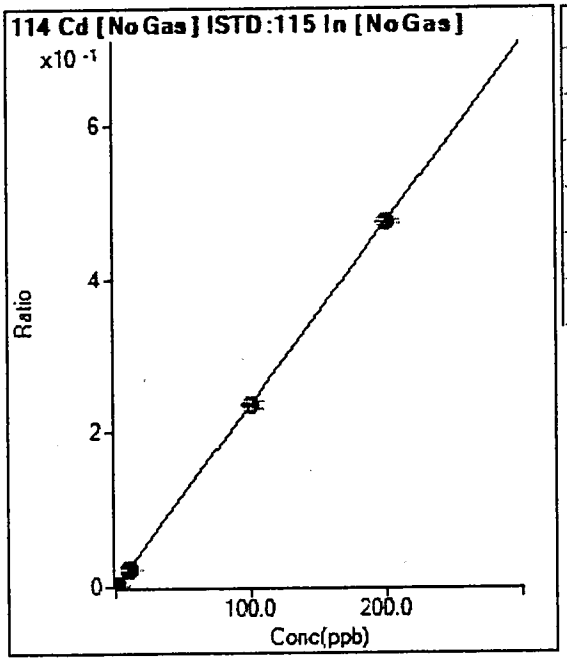
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.37	0.0000	P	39.0
2	☐	0.100	0.106	3104.18	0.0005	P	5.8
3	☐	1.000	1.039	31348.53	0.0053	P	1.7
4	☐	10.000	10.008	302621.10	0.0508	P	1.3
5	☐	100.000	99.715	3174830.08	0.5058	A	1.6
6	☐	200.000	200.142	6225088.41	1.0152	A	1.9

y = 0.0051 * x + 1.2193E-005
R = 1.0000
DL = 0.002811
BEC = 0.002404

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.100					
3	☐	1.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	360.02	0.0001	P	30.5
2	☐	0.100	0.089	1546.80	0.0003	P	17.7
3	☐	1.000	0.950	13716.25	0.0023	P	1.2
4	☐	10.000	9.794	138635.90	0.0233	P	1.7
5	☐	100.000	99.547	1480139.82	0.2358	M	3.8
6	☐	200.000	200.237	2908805.06	0.4743	A	1.1

y = 0.0024 * x + 6.2458E-005

R = 1.0000

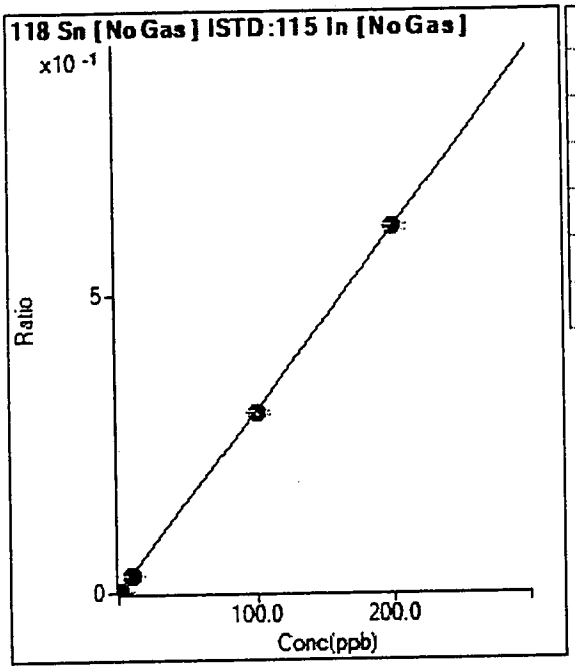
DL = 0.02414

BEC = 0.02637

Weight: <None>

Min Conc: <None>

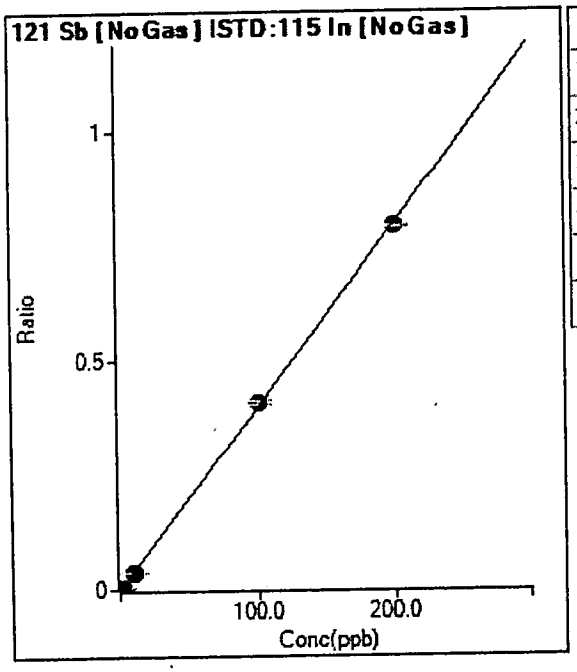
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6861.06	0.0012	P	22.9
2	☐	0.100	-0.001	. 6709.16	0.0012	P	24.9
3	☐	1.000	0.917	23599.10	0.0040	P	4.5
4	☐	10.000	9.573	180564.67	0.0303	P	1.4
5	☐	100.000	98.455	1886234.53	0.3005	A	1.8
6	☐	200.000	200.794	3750575.89	0.6116	A	1.7

y = 0.0030 * x + 0.0012
R = 1.0000
DL = 0.269
BEC = 0.3916

Weight: <None>
Min Conc: <None>

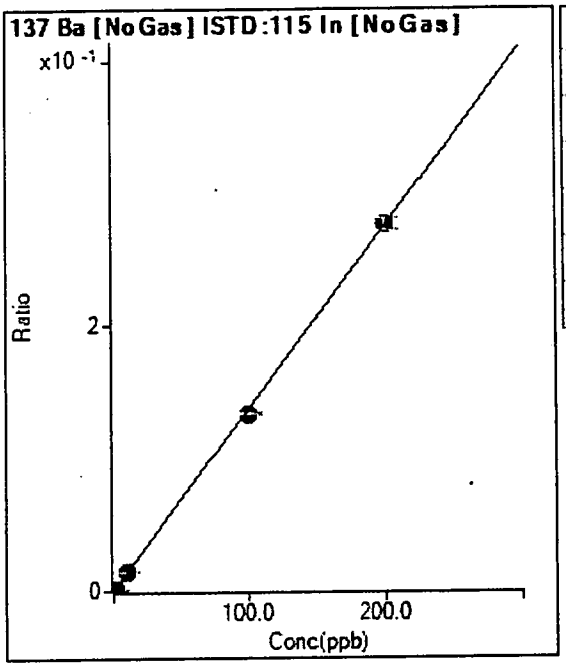


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2855.95	0.0005	P	22.8
2	☐	0.100	0.084	4704.59	0.0008	P	9.7
3	☐	1.000	0.977	26036.13	0.0044	P	6.2
4	☐	10.000	9.839	236636.34	0.0397	P	0.6
5	☐	100.000	102.030	2555108.35	0.4071	A	2.1
6	☐	200.000	198.993	4866585.80	0.7934	A	0.5

y = 0.0040 * x + 4.9561E-004
R = 0.9999
DL = 0.085
BEC = 0.1244

Weight: <None>
Min Conc: <None>

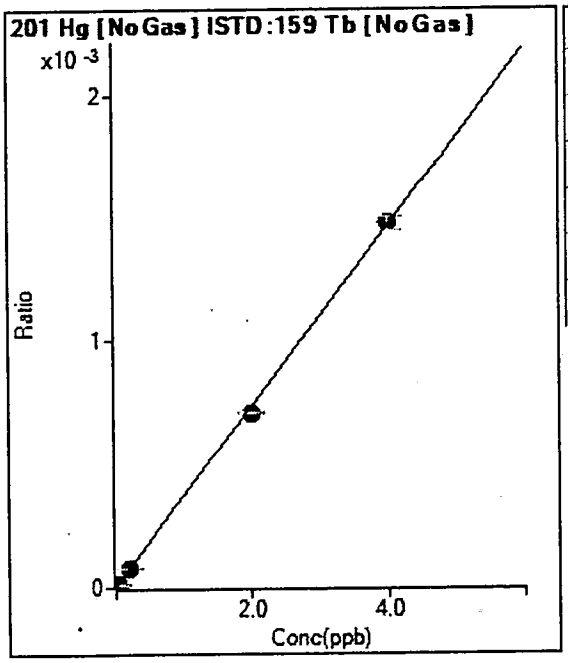
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.34	0.0000	P	33.0
2	☐	0.100	0.103	893.40	0.0002	P	12.5
3	☐	1.000	1.096	9029.55	0.0015	P	3.7
4	☐	10.000	10.196	83581.16	0.0140	P	0.9
5	☐	100.000	97.570	841402.25	0.1340	P	2.1
6	☐	200.000	201.205	1694987.47	0.2764	A	3.2

y = 0.0014 * x + 1.6210E-005
R = 0.9999
DL = 0.01168
BEC = 0.0118

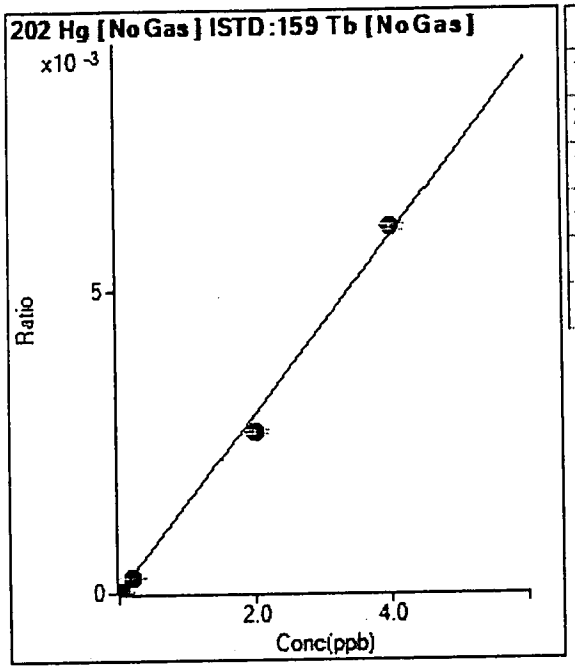
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.67	0.0000	P	21.2
2	☐			38.00	0.0000	P	18.8
3	☐	0.020	0.027	92.67	0.0000	P	32.3
4	☐	0.200	0.198	544.01	0.0001	P	1.0
5	☐	2.000	1.926	5249.57	0.0007	P	1.5
6	☐	4.000	4.037	10743.02	0.0015	P	3.6

y = 3.6509E-004 * x + 3.2556E-006
R = 0.9997
DL = 0.005662
BEC = 0.008917

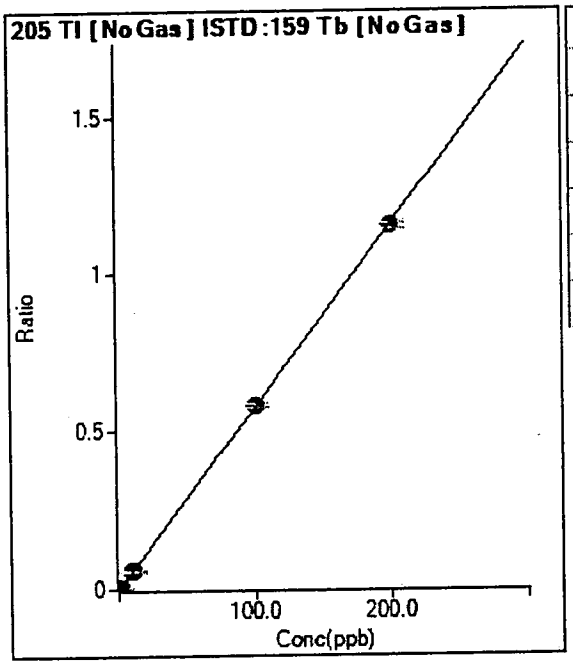
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	44.00	0.0000	P	36.7
2	☐			56.00	0.0000	P	23.2
3	☐	0.020	0.018	231.33	0.0000	P	1.9
4	☐	0.200	0.174	1894.80	0.0003	P	7.0
5	☐	2.000	1.796	19738.35	0.0027	P	2.1
6	☐	4.000	4.103	44068.81	0.0061	P	1.6

y = 0.0015 * x + 6.3210E-006
R = 0.9981
DL = 0.004714
BEC = 0.004286

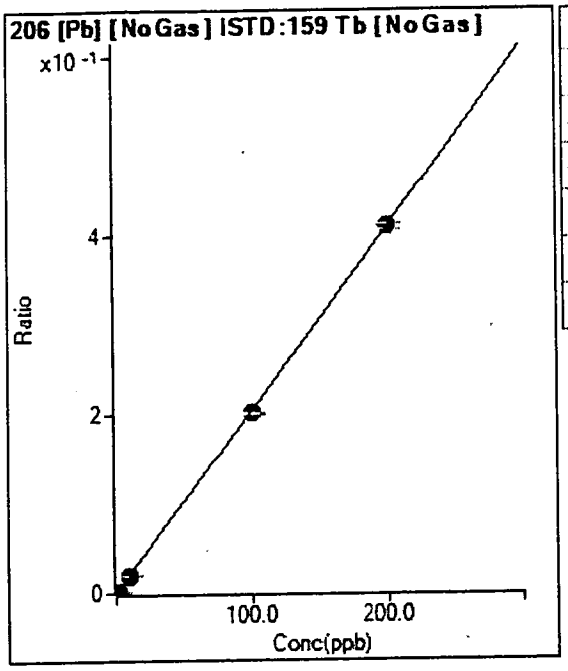
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55.56	0.0000	P	60.1
2	☐	0.100	0.100	3982.22	0.0006	P	4.0
3	☐	1.000	1.027	42273.29	0.0059	P	4.3
4	☐	10.000	10.133	422428.46	0.0586	P	1.8
5	☐	100.000	100.671	4323263.95	0.5817	A	1.6
6	☐	200.000	199.658	8390949.67	1.1536	A	1.5

y = 0.0058 * x + 7.9818E-006
R = 1.0000
DL = 0.002491
BEC = 0.001381

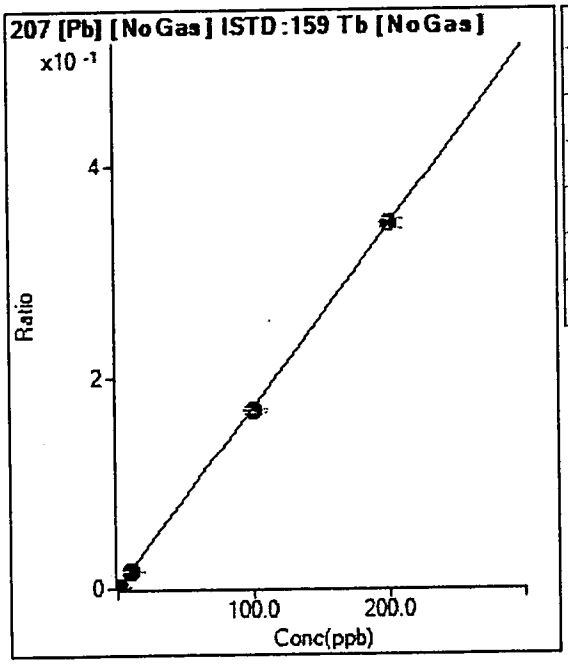
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	162.98	0.0000	P	63.8
2	☐	0.100	0.091	1426.06	0.0002	P	15.0
3	☐	1.000	0.994	14585.33	0.0021	P	3.5
4	☐	10.000	9.891	145726.66	0.0202	P	0.7
5	☐	100.000	98.456	1492734.84	0.2008	M	0.3
6	☐	200.000	200.778	2978569.21	0.4095	A	1.7

y = 0.0020 * x + 2.3543E-005
R = 1.0000
DL = 0.02208
BEC = 0.01154

Weight: <None>
Min Conc: <None>

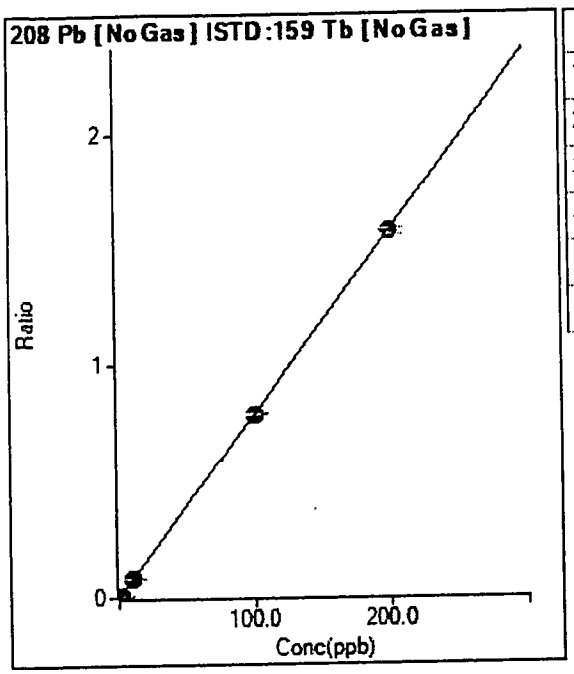


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	137.05	0.0000	P	41.7
2	☐	0.100	0.100	1296.42	0.0002	P	0.6
3	☐	1.000	1.036	12783.59	0.0018	P	0.5
4	☐	10.000	9.748	120751.66	0.0167	P	1.4
5	☐	100.000	98.151	1251344.91	0.1684	P	1.8
6	☐	200.000	200.937	2506560.95	0.3446	A	2.7

y = 0.0017 * x + 1.9709E-005
R = 0.9999
DL = 0.01439
BEC = 0.01149

Weight: <None>
Min Conc: <None>

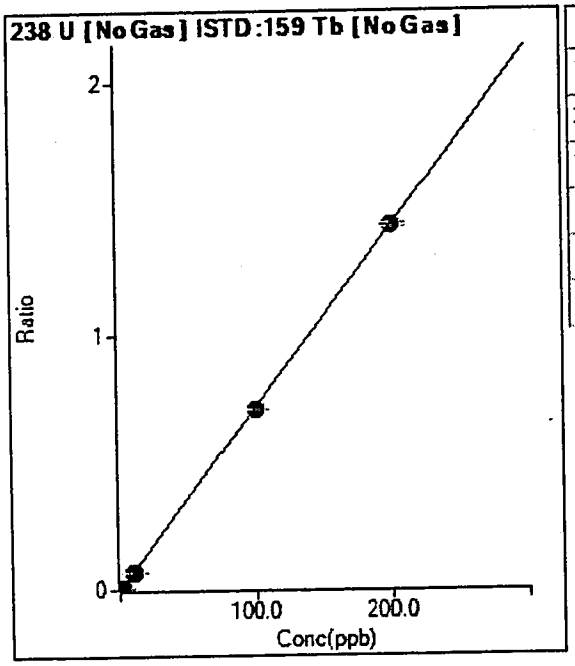
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17528.94	0.0025	P	4.6
2	☐	0.100	0.060	20348.15	0.0030	P	4.9
3	☐	1.000	1.130	81148.00	0.0114	P	2.5
4	☐	10.000	9.997	585511.81	0.0812	P	1.1
5	☐	100.000	99.911	5859720.94	0.7883	A	1.2
6	☐	200.000	200.044	11462240.81	1.5759	A	1.8

y = 0.0079 * x + 0.0025
R = 1.0000
DL = 0.04449
BEC = 0.3207

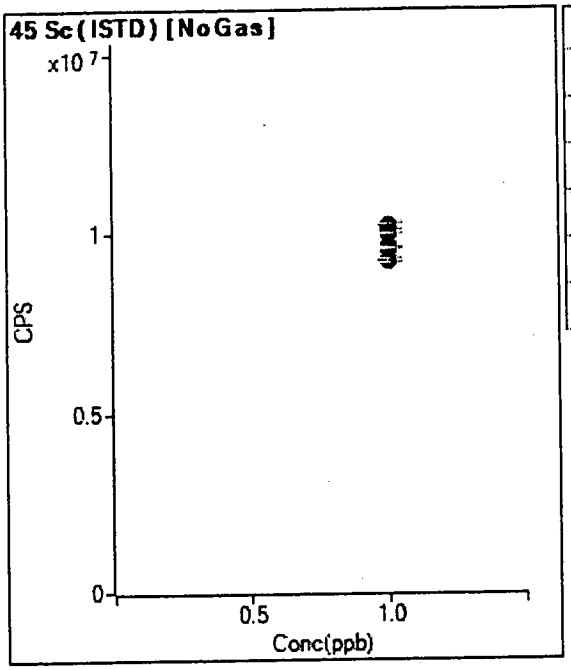
Weight: <None>
Min Conc: <None>



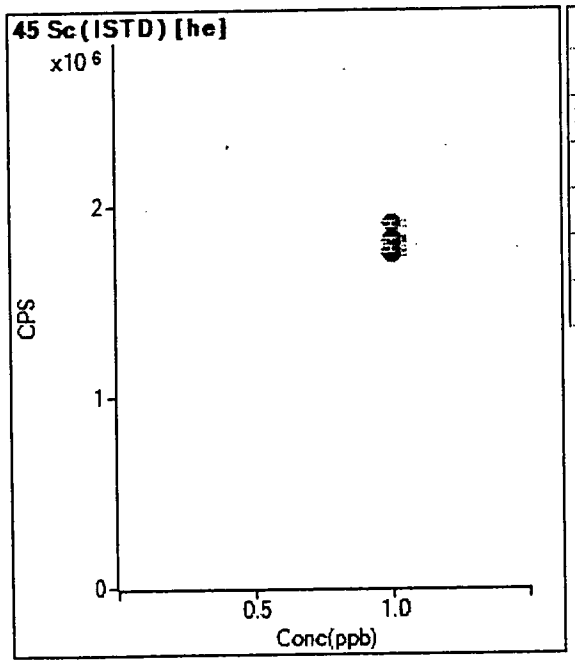
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	285.20	0.0000	P	32.7
2	☐	0.100	0.091	4697.27	0.0007	P	6.2
3	☐	1.000	1.008	51557.87	0.0072	P	0.4
4	☐	10.000	9.929	512538.03	0.0710	P	0.8
5	☐	100.000	99.018	5263199.44	0.7081	A	0.5
6	☐	200.000	200.495	10428690.33	1.4337	A	1.1

y = 0.0072 * x + 4.0951E-005
R = 1.0000
DL = 0.005613
BEC = 0.005727

Weight: <None>
Min Conc: <None>

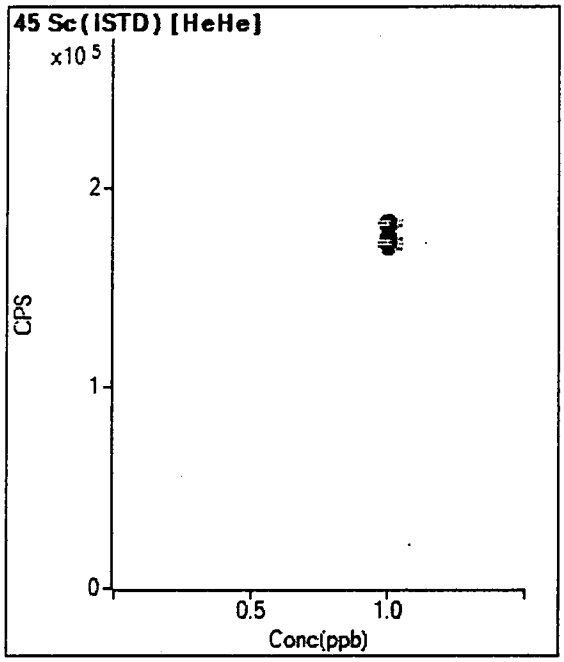


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9248342.15		A	1.3
2	☐	1.000		9230482.15		A	1.1
3	☐	1.000		9606577.15		A	1.0
4	☐	1.000		9599584.86		A	0.2
5	☐	1.000		10207256.51		A	1.9
6	☐	1.000		9993226.93		A	0.2

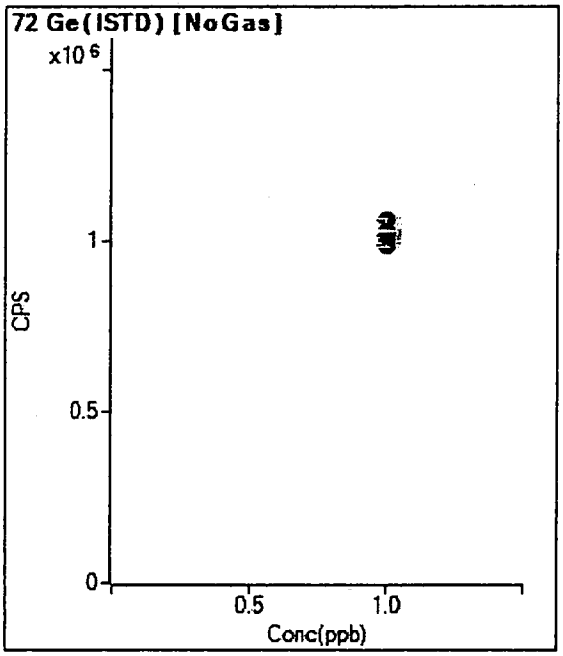


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1744642.74		A	1.2
2	☐	1.000		1761371.59		A	0.7
3	☐	1.000		1830836.90		A	0.7
4	☐	1.000		1819752.47		A	1.5
5	☐	1.000		1908010.65		A	1.9
6	☐	1.000		1774489.14		A	1.3

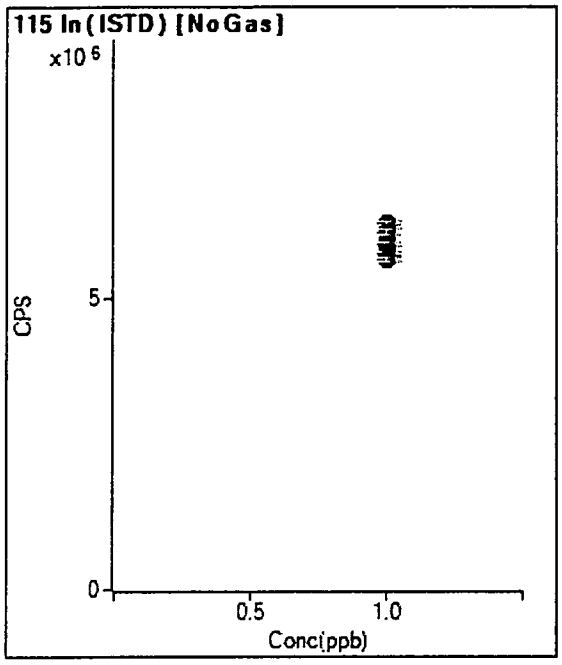
Calibration for 071_CCV.d



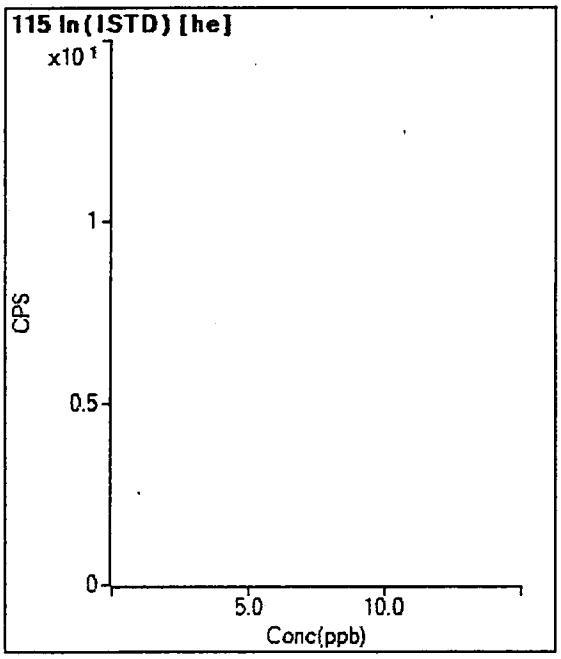
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		171212.05		P	2.5
2	☐	1.000		172413.77		P	2.8
3	☐	1.000		174348.69		P	0.7
4	☐	1.000		172938.55		P	1.3
5	☐	1.000		181247.61		P	0.7
6	☐	1.000		182051.31		P	0.9



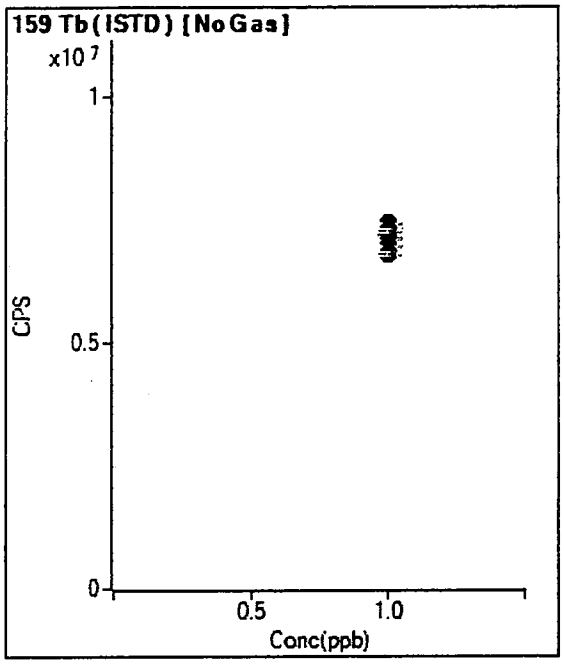
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1012122.41		P	1.1
2	☐	1.000		991031.21		P	1.2
3	☐	1.000		1021766.60		P	0.8
4	☐	1.000		1016045.53		P	0.8
5	☐	1.000		1060324.32		P	1.3
6	☐	1.000		1031019.78		P	0.5



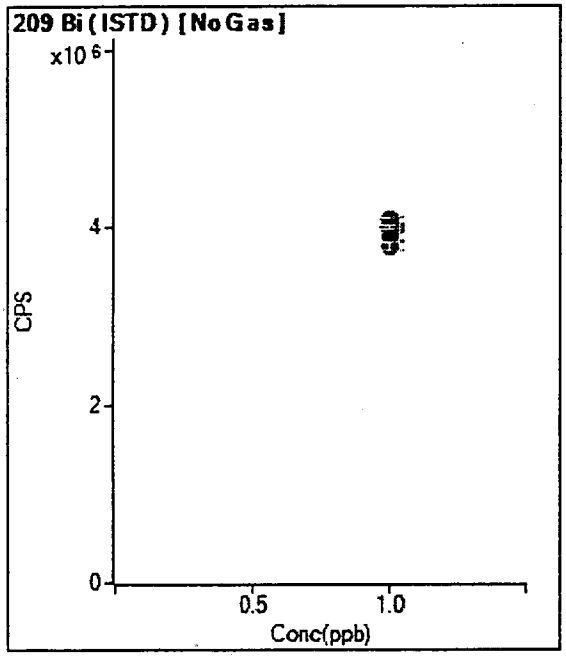
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5760109.93		A	0.8
2	☐	1.000		5660257.78		A	1.4
3	☐	1.000		5934138.78		A	1.0
4	☐	1.000		5960241.09		A	0.4
5	☐	1.000		6277626.82		A	0.9
6	☐	1.000		6133320.70		A	1.6



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000					
2	☐	1.000					
3	☐	1.000					
4	☐	1.000					
5	☐	1.000					
6	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6952439.08		A	1.0
2	☐	1.000		6804368.71		A	1.3
3	☐	1.000		7112798.56		A	0.8
4	☐	1.000		7215155.50		A	0.7
5	☐	1.000		7433189.75		A	0.8
6	☐	1.000		7274528.88		A	1.2



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3846945.10		A	0.4
2	☐	1.000		3791147.42		A	2.1
3	☐	1.000		3993178.89		A	0.7
4	☐	1.000		3949111.19		A	0.6
5	☐	1.000		4079951.34		A	1.3
6	☐	1.000		4005913.04		A	0.9

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	008_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:39:25-04:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	108.179	2.709	5710375	1.80	100	108.2	90	110	
Cr	52	1	No Gas	105.830	2.653	4971760	2.29	100	105.8	90	110	
Mn	55	1	No Gas	107.755	1.182	6242864	0.99	100	107.8	90	110	
Co	59	1	No Gas	104.761	2.670	5437450	0.71	100	104.8	90	110	
Ni	60	1	No Gas	102.457	1.892	1189685	0.67	100	102.5	90	110	
Cu	63	1	No Gas	106.175	3.458	3003279	1.38	100	106.2	90	110	
Sr	88	1	No Gas	107.029	2.725	7132974	1.46	100	107.0	90	110	
Ag	107	1	No Gas	105.943	2.149	3247896	0.58	100	105.9	90	110	
Al	27	1	No Gas	105.462	1.641	3532024	0.55	100	105.5	90	110	
Sn	118	1	No Gas	109.712	1.569	2023323	1.40	100	109.7	90	110	
Tl	47	1	No Gas	95.360	0.803	387126	1.08	100	95.4	90	110	
Zn	66	1	No Gas	101.792	1.795	704513	0.97	100	101.8	90	110	
As	75	3	HeHe	103.827	1.129	48839	0.75	100	103.8	90	110	
As	75	1	No Gas	102.010	1.477	740450	0.91	100	102.0	90	110	
Sb	121	1	No Gas	94.059	0.519	2268852	1.61	100	94.1	90	110	
Hg	201	1	No Gas	2.186	1.811	5791	2.32	2	109.3	90	110	
Be	9	1	No Gas	98.115	0.934	675312	1.20	100	98.1	90	110	
Pb	208	1	No Gas	104.590	0.978	5961329	0.61	100	104.6	90	110	
Se	82	1	No Gas	107.144	1.831	39781	0.89	100	107.1	90	110	
Mo	98	1	No Gas	107.705	2.634	2077591	2.05	100	107.7	90	110	
Ba	137	1	No Gas	101.442	0.784	842492	1.25	100	101.4	90	110	
Tl	205	1	No Gas	103.196	0.236	4307888	0.86	100	103.2	90	110	
U	238	1	No Gas	113.386	1.420	5858268	1.71	100	113.4	90	110	ICV Main CR1 Failed
Na	23	2	he	1005.870	1.299	4539165	0.92	1000	100.6	90	110	
Mg	24	2	he	1021.926	0.258	2524588	0.52	1000	102.2	90	110	
K	39	2	he	1006.474	2.495	3914766	1.98	1000	100.6	90	110	
Se	82	3	HeHe	108.537	1.617	2650	1.59	100	108.5	90	110	
Fe	57	3	HeHe	1108.579	1.499	125514	1.06	1000	110.9	90	110	ICV Main CR1 Failed
Cd	114	1	No Gas	104.693	1.043	1499274	0.85	100	104.7	90	110	
Ca	44	1	No Gas	1082.944	3.117	1502683	0.98	1000	108.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9695488	2.06	9248342	104.83	70	120	
Sc	45	2	he	1824095	0.70	1744643	104.55	70	120	
Ge	72	1	No Gas	1029221	0.98	1012122	101.69	70	120	
In	115	1	No Gas	6045633	1.87	5760110	104.96	70	120	
Tb	159	1	No Gas	7224955	0.73	6952439	103.92	70	120	
Bi	209	1	No Gas	4025671	1.37	3846945	104.65	70	120	
Sc	45	3	HeHe	175990	0.55	171212	102.79	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	009_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:43:14-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	-0.081	-2.8	17532	1.6	9	
Cr	52	1	No Gas	-0.074	-2.7	31678	1.2	4	
Mn	55	1	No Gas	0.246	6.2	51233	2.6	25	
Co	59	1	No Gas	0.006	14.8	485	10.8	1	
Ni	60	1	No Gas	0.009	32.3	630	5.7	25	
Cu	63	1	No Gas	0.075	13.7	14116	1.1	25	
Sr	88	1	No Gas	0.006	13.5	559	8.3	25	
Ag	107	1	No Gas	0.020	21.4	663	20.0	9	
Al	27	1	No Gas	0.011	-112.2	10956	4.0	1000000	
Sn	118	1	No Gas	2.619	32.6	54438	27.4	25	
Ti	47	1	No Gas	0.478	47.9	3260	27.0	10000	
Zn	66	1	No Gas	0.000	-4630.7	1017	13.2	25	
As	75	3	HeHe	0.995	10.0	513	9.2	9	
As	75	1	No Gas	0.377	108.8	30020	8.8	9	
Sb	121	1	No Gas	1.986	15.4	50073	13.5	4	
Hg	201	1	No Gas	0.032	10.9	107	7.8	0.04	
Be	9	1	No Gas	0.011	14.3	100	10.6	1	
Pb	208	1	No Gas	0.134	13.7	25658	4.0	4	
Se	82	1	No Gas	1.568	46.7	636	42.2	25	
Mo	98	1	No Gas	1.355	41.9	37865	27.3	10000	
Ba	137	1	No Gas	0.009	45.3	170	20.4	25	
Tl	205	1	No Gas	0.029	13.2	1256	12.4	1	
U	238	1	No Gas	0.360	22.4	18824	22.9	25	
Na	23	2	he	-0.993	-107.2	113339	3.9	2500000	
Mg	24	2	he	0.030	115.7	470	19.2	2500000	
K	39	2	he	6.181	1.7	280084	0.9	5000000	
Se	82	3	HeHe	0.813	80.5	136	11.6	25	
Fe	57	3	HeHe	22.555	6.7	2578	6.4	2500000	
Cd	114	1	No Gas	0.087	13.4	1593	9.4	1	
Ca	44	1	No Gas	0.780	245.6	67097	3.1	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9490102	0.93	9248342	102.61	70	120	
Sc	45	2	he	1843980	1.02	1744643	105.69	70	120	
Ge	72	1	No Gas	1022478	0.29	1012122	101.02	70	120	

Initial Calibration Blank (ICB) Report

In	115	1	No Gas	5960261	1.04	5760110	103.47	70	120	
Tb	159	1	No Gas	7178623	1.54	6952439	103.25	70	120	
Bi	209	1	No Gas	3964814	2.06	3846945	103.06	70	120	
Sc	45	3	HeHe	177859	1.13	171212	103.88	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	010_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:47:09-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	-0.082	-187.1	18158	43.9	9	
Cr	52	1	No Gas	-0.114	-36.7	31143	4.8	4	
Mn	55	1	No Gas	0.124	53.5	46226	6.8	25	
Co	59	1	No Gas	0.002	117.7	300	51.5	1	
Ni	60	1	No Gas	0.003	372.1	577	19.0	25	
Cu	63	1	No Gas	0.013	139.3	12943	2.4	25	
Sr	88	1	No Gas	0.001	133.2	281	34.5	25	
Ag	107	1	No Gas	0.012	22.0	441	17.7	9	
Al	27	1	No Gas	0.004	58.7	11208	1.0	1000000	
Sn	118	1	No Gas	1.085	36.8	27914	26.5	25	
Ti	47	1	No Gas	0.089	101.3	1792	20.5	10000	
Zn	66	1	No Gas	0.035	73.0	1307	12.2	25	
As	75	3	HeHe	0.387	13.8	222	13.1	9	
As	75	1	No Gas	-0.105	-334.7	27881	7.5	9	
Sb	121	1	No Gas	0.664	21.1	19535	17.0	4	
Hg	201	1	No Gas	0.013	23.0	61	14.9	0.04	
Be	9	1	No Gas	0.003	22.5	43	11.8	1	
Pb	208	1	No Gas	0.230	6.2	32315	4.3	4	
Se	82	1	No Gas	0.285	323.9	176	196.5	25	
Mo	98	1	No Gas	0.267	119.5	18133	34.1	10000	
Ba	137	1	No Gas	0.003	149.1	130	33.5	25	
Tl	205	1	No Gas	0.011	29.2	519	26.4	1	
U	238	1	No Gas	0.088	38.8	4997	35.3	25	
Na	23	2	he	-3.213	-75.3	108189	2.3	2500000	
Mg	24	2	he	-0.043	-70.1	304	31.1	2500000	
K	39	2	he	-1.040	-597.4	265253	0.8	5000000	
Se	82	3	HeHe	0.712	132.6	132	15.7	25	
Fe	57	3	HeHe	7.980	14.3	900	15.0	2500000	
Cd	114	1	No Gas	0.045	35.7	1050	22.0	1	
Ca	44	1	No Gas	-0.531	-496.7	68240	3.9	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9906263	1.73	9248342	107.11	70	120	
Sc	45	2	he	1939137	8.60	1744643	111.15	70	120	
Ge	72	1	No Gas	1034853	2.32	1012122	102.25	70	120	

Initial Calibration Blank (ICB) Report

In	115	1	No Gas	6223600	1.77	5760110	108.05	70	120	
Tb	159	1	No Gas	7453756	1.79	6952439	107.21	70	120	
Bi	209	1	No Gas	4097513	1.57	3846945	106.51	70	120	
Sc	45	3	HeHe	175440	2.93	171212	102.47	70	120	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV
Data File Name	011LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:51:04-04:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	1.888	6.549	123562	3.30	2	94.4	70	130	
Cr	52	1	No Gas	1.902	4.742	126733	1.61	2	95.1	70	130	
Mn	55	1	No Gas	5.198	5.144	343367	2.56	5	104.0	70	130	
Co	59	1	No Gas	4.868	3.211	257370	1.26	5	97.4	70	130	
Ni	60	1	No Gas	5.046	2.217	60156	0.30	5	100.9	70	130	
Cu	63	1	No Gas	4.912	1.893	153432	0.56	5	98.2	70	130	
Sr	88	1	No Gas	4.577	1.484	310777	1.04	5	91.5	70	130	
Ag	107	1	No Gas	2.072	3.978	63461	2.45	2	103.6	70	130	
Al	27	1	No Gas	81.097	3.237	2766965	1.93	80	101.4	70	130	
Sn	118	1	No Gas	2.221	6.778	47910	5.58	2	111.0	70	130	
Tl	47	1	No Gas	4.671	1.044	20238	1.93	5	93.4	70	130	
Zn	66	1	No Gas	5.327	2.204	38534	0.31	5	106.5	70	130	
As	75	3	HeHe	3.338	7.180	1564	4.33	3	111.3	70	130	
As	75	1	No Gas	2.759	7.719	48166	3.16	3	92.0	70	130	
Sb	121	1	No Gas	2.370	3.581	59965	2.64	2	118.5	70	130	
Hg	201	1	No Gas	0.209	3.501	573	6.07	0.2	104.3	70	130	
Be	9	1	No Gas	0.984	5.708	6911	3.69	1	98.4	70	130	
Pb	208	1	No Gas	2.202	4.037	142892	1.20	2	110.1	70	130	
Se	82	1	No Gas	4.627	10.783	1812	8.24	5	92.5	70	130	
Mo	98	1	No Gas	1.837	10.684	47616	6.68	2	91.9	70	130	
Ba	137	1	No Gas	5.050	1.016	41954	2.05	5	101.0	70	130	
Tl	205	1	No Gas	1.027	5.946	42804	4.29	1	102.7	70	130	
U	238	1	No Gas	5.057	3.278	260762	1.18	5	101.1	70	130	
Na	23	2	he	105.890	20.966	512463	1.89	100	105.9	70	130	
Mg	24	2	he	105.193	16.306	229184	1.36	100	105.2	70	130	
K	39	2	he	121.763	25.859	614153	1.48	100	121.8	70	130	
Se	82	3	HeHe	4.972	3.369	226	5.44	5	99.4	70	130	
Fe	57	3	HeHe	57.454	7.586	6316	3.96	50	114.9	70	130	
Cd	114	1	No Gas	1.066	4.748	15611	5.75	1	106.6	70	130	
Ca	44	1	No Gas	96.240	3.208	198569	0.33	100	96.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9869984	2.25	9248342	106.72	70	120	
Sc	45	2	he	1631911	14.38	1744643	93.54	70	120	
Ge	72	1	No Gas	994170	2.25	1012122	98.23	70	120	
In	115	1	No Gas	6033756	1.88	5760110	104.75	70	120	
Tb	159	1	No Gas	7207597	3.16	6952439	103.67	70	120	
Bi	209	1	No Gas	3955991	0.95	3846945	102.83	70	120	
Sc	45	3	HeHe	171360	3.89	171212	100.09	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	012ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:57:04-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.069	100.9	25883	12.1	9	
Cr	52	1	No Gas	0.875	8.4	76952	2.5	4	
Mn	55	1	No Gas	1.383	2.6	118312	0.7	25	
Co	59	1	No Gas	1.318	3.3	68913	1.6	1	ICSA Main CR1 Failed
Ni	60	1	No Gas	1.779	4.8	21270	2.6	5	
Cu	63	1	No Gas	0.725	3.3	32914	3.8	5	
Ag	107	1	No Gas	0.313	6.8	8914	6.7	9	
Al	27	1	No Gas	91092.374	3.8	3054773805	1.8	110000	
Sn	118	1	No Gas	0.381	43.5	13102	21.5	25	
Tl	47	1	No Gas	1987.139	0.6	7420386	1.0	2200	
Zn	66	1	No Gas	2.478	3.1	18252	2.4	5	
As	75	3	HeHe	0.535	10.2	302	9.2	9	
As	75	1	No Gas	0.328	184.1	30434	12.4	9	
Sb	121	1	No Gas	1.027	22.9	25595	20.3	4	
Hg	201	1	No Gas	0.026	17.3	87	12.6	0.04	
Be	9	1	No Gas	0.007	19.3	74	15.0	1	
Pb	208	1	No Gas	0.345	3.3	36343	1.4	4	
Se	82	1	No Gas	0.301	148.1	180	92.7	25	
Mo	98	1	No Gas	2043.986	1.8	36184089	1.1	2200	
Ba	137	1	No Gas	0.145	9.5	1200	7.9	25	
Tl	205	1	No Gas	0.023	23.7	967	22.2	1	
U	238	1	No Gas	0.046	31.9	2571	28.8	25	
Na	23	2	he	87602.701	1.2	402491965	0.7	110000	
Mg	24	2	he	89786.071	1.9	231657739	1.2	110000	
K	39	2	he	87734.642	0.9	333588053	1.0	110000	
Se	82	3	HeHe	-0.198	-387.9	115	13.9	25	
Fe	57	3	HeHe	96996.857	1.0	11353561	1.6	110000	
Cd	114	1	No Gas	0.899	3.4	12232	3.3	1	
Ca	44	1	No Gas	87923.254	1.3	117159318	0.7	110000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9740728	2.02	9248342	105.32	70	120	
Sc	45	2	he	1905649	1.54	1744643	109.23	70	120	
Ge	72	1	No Gas	1000038	0.21	1012122	98.81	70	120	
In	115	1	No Gas	5579503	1.14	5760110	96.86	70	120	
Tb	159	1	No Gas	6938038	0.55	6952439	99.79	70	120	
Bi	209	1	No Gas	3590926	0.94	3846945	93.34	70	120	
Sc	45	3	HeHe	182138	2.50	171212	106.38	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	013ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T09:01:05-04:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	39.555	0.949	2122524	1.39	40	98.9	80	120		
Cr	52	1	No Gas	18.427	0.839	903873	1.04	20	92.1	80	120		
Mn	55	1	No Gas	19.453	2.088	1169466	2.29	20	97.3	80	120		
Co	59	1	No Gas	36.923	0.752	1935255	0.22	40	92.3	80	120		
Ni	60	1	No Gas	34.784	2.562	408157	2.45	40	87.0	80	120		
Cu	63	1	No Gas	17.329	2.085	505390	1.51	20	86.6	80	120		
Ag	107	1	No Gas	18.509	0.538	533985	0.74	20	92.5	80	120		
Al	27	1	No Gas	88937.217	3.298	2997864948	2.88	100000	88.9	90	110	ICSB Main CR1 Failed	OK
Tl	47	1	No Gas	1955.453	0.846	7443662	1.43	2000	97.8	90	110		
Zn	66	1	No Gas	20.410	1.049	143463	0.58	20	102.1	80	120		
As	75	3	HeHe	19.195	1.701	9605	1.97	20	96.0	80	120		
As	75	1	No Gas	19.233	2.359	163911	1.52	20	96.2	80	120		
Sb	121	1	No Gas	0.677	15.156	18166	12.43	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Hg	201	1	No Gas	0.014	10.238	59	5.21	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Be	9	1	No Gas	0.004	51.279	54	29.63	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Pb	208	1	No Gas	0.419	3.277	41674	2.51	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Se	82	1	No Gas	19.234	3.486	7267	3.98	20	96.2	80	120		
Mo	98	1	No Gas	2015.635	1.722	36377624	2.12	2000	100.8	90	110		
Ba	137	1	No Gas	0.185	5.927	1540	6.19	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Tl	205	1	No Gas	0.020	8.888	885	7.14	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
U	238	1	No Gas	0.022	23.670	1433	20.67	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Na	23	2	he	86138.637	1.876	394590809	1.24	100000	86.1	90	110	ICSB Main CR1 Failed	OK
Mg	24	2	he	88611.427	1.607	227968124	1.45	100000	88.6	90	110	ICSB Main CR1 Failed	OK
K	39	2	he	87486.841	1.339	331652461	0.63	100000	87.5	90	110	ICSB Main CR1 Failed	OK
Se	82	3	HeHe	18.828	6.911	589	4.63	20	94.1	80	120		
Fe	57	3	HeHe	93298.201	1.093	11185401	0.25	100000	93.3	90	110		
Cd	114	1	No Gas	9.576	2.163	129339	1.56	10	95.8	80	120		
Ca	44	1	No Gas	86786.790	1.704	116213412	1.63	100000	86.8	90	110	ICSB Main CR1 Failed	OK

80-120

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9786977	0.53	9248342	105.82	70	120	
Sc	45	2	he	1899930	0.70	1744643	108.90	70	120	
Ge	72	1	No Gas	1032635	1.10	1012122	102.03	70	120	
In	115	1	No Gas	5687437	0.80	5760110	98.74	70	120	
Tb	159	1	No Gas	7167544	1.87	6952439	103.09	70	120	
Bi	209	1	No Gas	3604212	0.69	3846945	93.69	70	120	
Sc	45	3	HeHe	186537	0.98	171212	108.95	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	069_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T12:52:37-04:00
Sample Type	CCB
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	-0.268	-37.0	8099	65.8	9	
Cr	52	1	No Gas	-0.097	-9.1	31325	0.1	4	
Mn	55	1	No Gas	0.391	2.4	60756	2.0	25	
Co	59	1	No Gas	0.006	48.8	496	31.4	1	
Ni	60	1	No Gas	0.004	231.7	580	17.9	25	
Cu	63	1	No Gas	-0.240	-2.4	5556	2.2	25	
Sr	88	1	No Gas	0.005	20.9	556	12.2	25	
Ag	107	1	No Gas	0.016	12.3	567	11.8	9	
Al	27	1	No Gas	0.290	3.6	20535	2.9	1000000	
Sn	118	1	No Gas	1.870	30.3	40746	24.7	25	
Tl	47	1	No Gas	0.358	43.4	2774	22.0	10000	
Zn	66	1	No Gas	-0.001	-1496.9	1037	7.8	25	
As	75	3	HeHe	0.655	11.0	347	9.2	9	
As	75	1	No Gas	0.253	40.2	29856	1.2	9	
Sb	121	1	No Gas	1.713	13.4	43425	12.3	4	
Hg	201	1	No Gas	0.018	33.2	71	21.0	0.04	
Be	9	1	No Gas	0.011	14.7	102	10.2	1	
Pb	208	1	No Gas	-0.172	-9.1	8432	8.7	4	
Se	82	1	No Gas	1.172	58.6	501	50.6	25	
Mo	98	1	No Gas	0.768	50.8	26701	27.2	10000	
Ba	137	1	No Gas	0.008	29.9	160	12.5	25	
Tl	205	1	No Gas	0.026	6.5	1148	7.4	1	
U	238	1	No Gas	0.311	21.6	16369	22.8	25	
Na	23	2	he	0.918	30.4	122432	1.8	2500000	
Mg	24	2	he	0.013	131.9	430	11.9	2500000	
K	39	2	he	-0.778	-145.2	255691	1.0	5000000	
Se	82	3	HeHe	0.016	3482.2	116	11.4	25	
Fe	57	3	HeHe	17.138	10.1	1934	10.5	2500000	
Cd	114	1	No Gas	0.073	30.3	1390	22.0	1	
Ca	44	1	No Gas	-9.123	-10.7	55522	3.2	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9710532	1.19	9248342	105.00	70	120	
Sc	45	2	he	1852940	1.95	1744643	106.21	70	120	
Ge	72	1	No Gas	1020074	1.24	1012122	100.79	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	5931519	1.02	5760110	102.98	70	120	
Tb	159	1	No Gas	7198771	1.74	6952439	103.54	70	120	
Bi	209	1	No Gas	3879305	2.29	3846945	100.84	70	120	
Sc	45	3	HeHe	175486	0.64	171212	102.50	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	070LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:00:08-04:00
Sample Type	LLCCV
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	1.754	4.471	115299	2.25	2	87.7	70	130	
Cr	52	1	No Gas	1.880	4.742	124463	0.87	2	94.0	70	130	
Mn	55	1	No Gas	5.282	2.716	345009	0.11	5	105.6	70	130	
Co	59	1	No Gas	4.931	2.917	258153	1.34	5	98.6	70	130	
Ni	60	1	No Gas	4.972	2.213	58712	1.42	5	99.4	70	130	
Cu	63	1	No Gas	4.664	2.194	144900	0.74	5	93.3	70	130	
Sr	88	1	No Gas	4.584	2.520	308189	0.54	5	91.7	70	130	
Ag	107	1	No Gas	2.050	1.881	61636	0.64	2	102.5	70	130	
Al	27	1	No Gas	84.005	1.384	2839190	2.62	80	105.0	70	130	
Sn	118	1	No Gas	2.145	13.963	45612	10.26	2	107.3	70	130	
Tl	47	1	No Gas	4.740	0.190	20133	1.46	5	94.8	70	130	
Zn	66	1	No Gas	5.307	3.168	38014	0.85	5	106.1	70	130	
As	75	3	HeHe	3.086	4.381	1453	2.98	3	102.9	70	130	
As	75	1	No Gas	3.321	12.504	51624	3.62	3	110.7	70	130	
Sb	121	1	No Gas	2.499	5.689	61863	3.88	2	124.9	70	130	
Hg	201	1	No Gas	0.185	7.895	504	8.10	0.2	92.5	70	130	
Be	9	1	No Gas	0.948	1.752	6599	2.74	1	94.8	70	130	
Pb	208	1	No Gas	1.846	2.049	121306	1.29	2	92.3	70	130	
Se	82	1	No Gas	3.992	21.021	1558	19.29	5	79.8	70	130	
Mo	98	1	No Gas	1.775	7.478	45561	3.98	2	88.8	70	130	
Ba	137	1	No Gas	5.025	1.503	40975	3.01	5	100.5	70	130	
Tl	205	1	No Gas	0.968	1.094	39863	2.40	1	96.8	70	130	
U	238	1	No Gas	5.112	1.361	260510	0.28	5	102.2	70	130	
Na	23	2	he	90.605	0.630	525217	0.72	100	90.6	70	130	
Mg	24	2	he	92.476	1.448	233410	1.81	100	92.5	70	130	
K	39	2	he	97.706	2.901	622130	1.19	100	97.7	70	130	
Se	82	3	HeHe	4.870	11.736	224	8.36	5	97.4	70	130	
Fe	57	3	HeHe	56.379	5.850	6220	6.52	50	112.8	70	130	
Cd	114	1	No Gas	0.992	2.343	14277	1.58	1	99.2	70	130	
Ca	44	1	No Gas	87.034	5.532	184308	1.11	100	87.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9774994	2.54	9248342	105.69	70	120	
Sc	45	2	he	1860682	0.52	1744643	106.65	70	120	
Ge	72	1	No Gas	1023845	1.17	1012122	101.16	70	120	
In	115	1	No Gas	5921225	1.58	5760110	102.80	70	120	
Tb	159	1	No Gas	7118830	1.32	6952439	102.39	70	120	
Bi	209	1	No Gas	3884486	0.47	3846945	100.98	70	120	
Sc	45	3	HeHe	171623	2.48	171212	100.24	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	071_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:04:04-04:00
Sample Type	CCV
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	104.313	1.131	5608981	0.43	100	104.3	90	110	
Cr	52	1	No Gas	102.136	1.366	4888446	2.06	100	102.1	90	110	
Mn	55	1	No Gas	102.979	2.280	6078469	2.96	100	103.0	90	110	
Co	59	1	No Gas	99.751	0.652	5274049	1.36	100	99.8	90	110	
Ni	60	1	No Gas	97.719	0.452	1155685	0.26	100	97.7	90	110	
Cu	63	1	No Gas	100.944	0.199	2909426	0.52	100	100.9	90	110	
Sr	88	1	No Gas	102.149	0.766	6934255	0.76	100	102.1	90	110	
Ag	107	1	No Gas	103.306	1.699	3129874	1.21	100	103.3	90	110	
Al	27	1	No Gas	104.516	0.749	3565265	1.39	100	104.5	90	110	
Sn	118	1	No Gas	103.323	0.938	1883441	1.16	100	103.3	90	110	
Tl	47	1	No Gas	93.027	0.952	373206	0.46	100	93.0	90	110	
Zn	66	1	No Gas	98.262	0.557	692676	0.15	100	98.3	90	110	
As	75	3	HeHe	97.916	1.301	45707	1.09	100	97.9	90	110	
As	75	1	No Gas	95.677	1.241	709064	1.24	100	95.7	90	110	
Sb	121	1	No Gas	93.821	1.555	2236111	1.20	100	93.8	90	110	
Hg	201	1	No Gas	2.002	1.904	5256	0.62	2	100.1	90	110	
Be	9	1	No Gas	90.950	0.809	637488	0.12	100	91.0	90	110	
Pb	208	1	No Gas	99.521	1.552	5620664	0.39	100	99.5	90	110	
Se	82	1	No Gas	99.092	1.481	37475	0.96	100	99.1	90	110	
Mo	98	1	No Gas	102.963	0.277	1963362	0.37	100	103.0	90	110	
Ba	137	1	No Gas	98.494	1.591	808278	1.25	100	98.5	90	110	
Tl	205	1	No Gas	98.661	1.136	4080533	1.23	100	98.7	90	110	
U	238	1	No Gas	113.568	1.307	5813068	0.19	100	113.6	90	110	CCV Main CR1 Failed
Na	23	2	he	986.366	1.543	4498375	1.47	1000	98.6	90	110	
Mg	24	2	he	997.598	2.433	2488982	1.40	1000	99.8	90	110	
K	39	2	he	985.482	1.772	3877099	1.13	1000	98.5	90	110	
Se	82	3	HeHe	96.509	2.035	2351	0.52	100	96.5	90	110	
Fe	57	3	HeHe	1033.798	3.458	116045	3.65	1000	103.4	90	110	
Cd	114	1	No Gas	96.467	1.302	1365187	1.39	100	96.5	90	110	
Ca	44	1	No Gas	1035.556	0.218	1466786	0.86	1000	103.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9872611	0.70	9248342	106.75	70	120	
Sc	45	2	he	1842695	2.01	1744643	105.62	70	120	
Ge	72	1	No Gas	1021483	1.09	1012122	100.92	70	120	
In	115	1	No Gas	5973461	0.49	5760110	103.70	70	120	
Tb	159	1	No Gas	7158631	1.29	6952439	102.97	70	120	
Bi	209	1	No Gas	3938738	1.43	3846945	102.39	70	120	
Sc	45	3	HeHe	174651	1.66	171212	102.01	70	120	

Sample Report

Sample Table

Sample Name	1017577
Data File Name	072SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:08:28-04:00
Sample Type	Sample
Dilution	1
Comment	37932 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3407

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	-0.114	-0.114	-32.21	15711	0.00	1000	
Cr	52	1	No Gas	0.411	0.411	11.32	53463	0.00	1000	
Mn	55	1	No Gas	0.438	0.438	9.47	61599	0.00	1000	
Co	59	1	No Gas	0.133	0.133	6.71	6887	0.00	1000	
Ni	60	1	No Gas	0.244	0.244	8.05	3270	0.01	1000	
Cu	63	1	No Gas	0.036	0.036	11.00	12954	0.00	1000	
Sr	88	1	No Gas	0.472	0.472	1.37	30785	0.00	1000	
Ag	107	1	No Gas	0.040	0.040	7.13	1241	0.00	1000	
Al	27	1	No Gas	5.130	5.130	2.50	177189	0.00	100000	
Sn	118	1	No Gas	3.485	3.485	29.50	68180	0.01	100	
Ti	47	1	No Gas	0.806	0.806	41.51	4439	0.02	2000	
Zn	66	1	No Gas	1.998	1.998	4.89	14439	0.01	1000	
As	75	3	HeHe	0.973	0.973	7.76	488	0.20	1000	
As	75	1	No Gas	0.768	0.768	66.95	32528	0.00	1000	
Sb	121	1	No Gas	3.838	3.838	18.88	91400	0.00	100	
Hg	201	1	No Gas	0.032	0.032	30.54	105	0.03	4	
Be	9	1	No Gas	0.036	0.036	9.60	266	0.01	1000	
Pb	208	1	No Gas	-0.099	-0.099	-3.32	12374	0.00	1000	
Se	82	1	No Gas	-0.159	-0.159	-532.03	12	-1.34	1000	
Mo	98	1	No Gas	2.083	2.083	37.50	50192	0.00	2000	
Ba	137	1	No Gas	0.571	0.571	5.98	4648	0.01	1000	
Tl	205	1	No Gas	0.038	0.038	11.19	1593	0.00	1000	
U	238	1	No Gas	0.387	0.387	21.31	19877	0.00	1000	
Na	23	2	he	9.645	9.645	8.89	155896	0.01	100000	
Mg	24	2	he	2.015	2.015	0.57	5268	0.04	100000	
K	39	2	he	0.533	0.533	57.88	251711	0.00	100000	
Se	82	3	HeHe	0.087	0.087	577.76	116	0.08	1000	
Fe	57	3	HeHe	34.343	34.343	5.48	3808	0.90	100000	
Cd	114	1	No Gas	0.146	0.146	12.18	2367	0.01	1000	
Ca	44	1	No Gas	8.619	8.619	34.24	76728	0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9428621	2.04	9248342	101.95	70	120	
Sc	45	2	he	1789903	1.78	1744643	102.59	70	120	

Ge	72	1	No Gas	1027614	0.97	1012122	101.53	70	120	
In	115	1	No Gas	5797312	1.33	5760110	100.65	70	120	
Tb	159	1	No Gas	7087372	1.83	6952439	101.94	70	120	
Bi	209	1	No Gas	3870538	0.32	3846945	100.61	70	120	
Sc	45	3	HeHe	172686	2.80	171212	100.86	70	120	

Sample Report

Sample Table

Sample Name	1017578
Data File Name	073SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:29:18-04:00
Sample Type	Sample
Dilution	1
Comment	37932 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass
Vial	3408

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	195.626	195.626	1.45	10255040	0.00	1000	
Cr	52	1	No Gas	197.781	197.781	1.28	9211369	0.00	1000	
Mn	55	1	No Gas	198.723	198.723	0.53	11419837	0.00	1000	
Co	59	1	No Gas	193.288	193.288	1.47	9980419	0.00	1000	
Ni	60	1	No Gas	195.137	195.137	0.80	2253498	0.01	1000	
Cu	63	1	No Gas	186.807	186.807	1.22	5248119	0.00	1000	
Sr	88	1	No Gas	178.341	178.341	1.31	11823812	0.00	1000	
Ag	107	1	No Gas	100.308	100.308	1.19	2947870	0.00	1000	
Al	27	1	No Gas	1967.628	1967.628	0.62	65362099	0.00	100000	
Sn	118	1	No Gas	192.439	192.439	2.11	3396229	0.01	100	>LDR
Ti	47	1	No Gas	185.301	185.301	1.70	719724	0.03	2000	
Zn	66	1	No Gas	179.864	179.864	0.71	1237495	0.01	1000	
As	75	3	HeHe	185.172	185.172	2.09	86085	0.22	1000	
As	75	1	No Gas	179.436	179.436	0.49	1274368	0.01	1000	
Sb	121	1	No Gas	196.319	196.319	1.71	4535236	0.00	100	>LDR
Hg	201	1	No Gas	1.871	1.871	4.79	4856	0.04	4	
Be	9	1	No Gas	190.758	190.758	1.79	1305919	0.01	1000	
Pb	208	1	No Gas	193.197	193.197	1.07	10776459	0.00	1000	
Se	82	1	No Gas	185.762	185.762	1.67	68560	0.27	1000	
Mo	98	1	No Gas	201.306	201.306	1.97	3711493	0.01	2000	
Ba	137	1	No Gas	1877.666	1877.666	1.23	14945024	0.01	1000	>LDR
Tl	205	1	No Gas	189.238	189.238	2.45	7739469	0.00	1000	
U	238	1	No Gas	0.039	0.039	22.80	2267	0.00	1000	
Na	23	2	he	1918.627	1918.627	0.94	8433710	0.02	100000	
Mg	24	2	he	1928.328	1928.328	0.90	4697058	0.04	100000	
K	39	2	he	1888.571	1888.571	1.46	7023621	0.03	100000	
Se	82	3	HeHe	179.396	179.396	3.08	4256	4.22	1000	
Fe	57	3	HeHe	2035.332	2035.332	1.98	227618	0.89	100000	
Cd	114	1	No Gas	190.082	190.082	0.77	2608906	0.01	1000	
Ca	44	1	No Gas	1973.856	1973.856	1.44	2669660	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9642395	0.42	9248342	104.26	70	120	
Sc	45	2	he	1798775	1.08	1744643	103.10	70	120	
Ge	72	1	No Gas	1032842	0.99	1012122	102.05	70	120	

In	115	1	No Gas	5794529	1.49	5760110	100.60	70	120	
Tb	159	1	No Gas	7081088	2.26	6952439	101.85	70	120	
Bi	209	1	No Gas	3817907	1.07	3846945	99.25	70	120	
Sc	45	3	HeHe	174023	1.38	171212	101.64	70	120	

Sample Report

Sample Table

Sample Name	9980109002
Data File Name	076SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:40:47-04:00
Sample Type	Sample
Dilution	1
Comment	37932 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3411

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	7.356	7.356	3.43	393643	0.00	1000	
Cr	52	1	No Gas	1.230	1.230	1.26	89663	0.00	1000	
Mn	55	1	No Gas	0.887	0.887	2.71	85875	0.00	1000	
Co	59	1	No Gas	0.115	0.115	9.44	5883	0.00	1000	
Ni	60	1	No Gas	0.658	0.658	1.97	7862	0.01	1000	
Cu	63	1	No Gas	0.838	0.838	0.34	34572	0.00	1000	
Sr	88	1	No Gas	209.243	209.243	2.66	13423736	0.00	1000	
Ag	107	1	No Gas	0.027	0.027	8.28	859	0.00	1000	
Al	27	1	No Gas	10.866	10.866	0.96	359672	0.00	100000	
Sn	118	1	No Gas	0.686	0.686	33.22	19157	0.00	100	
Ti	47	1	No Gas	0.814	0.814	24.92	4518	0.02	2000	
Zn	66	1	No Gas	1.463	1.463	4.92	10734	0.01	1000	
As	75	3	HeHe	1.647	1.647	2.52	771	0.21	1000	
As	75	1	No Gas	1.392	1.392	11.75	36358	0.00	1000	
Sb	121	1	No Gas	3.996	3.996	13.32	96025	0.00	100	
Hg	201	1	No Gas	0.033	0.033	13.68	110	0.03	4	
Be	9	1	No Gas	0.020	0.020	4.21	155	0.01	1000	
Pb	208	1	No Gas	-0.076	-0.076	-6.53	13775	0.00	1000	
Se	82	1	No Gas	2.367	2.367	11.46	909	0.26	1000	
Mo	98	1	No Gas	13.993	13.993	3.86	271679	0.01	2000	
Ba	137	1	No Gas	5.092	5.092	2.25	41005	0.01	1000	
Tl	205	1	No Gas	0.056	0.056	8.21	2382	0.00	1000	
U	238	1	No Gas	0.681	0.681	3.76	35101	0.00	1000	
Na	23	2	he	6119.897	6119.897	2.88	25819367	0.02	100000	
Mg	24	2	he	3704.180	3704.180	0.72	8741826	0.04	100000	
K	39	2	he	375.805	375.805	3.28	1548985	0.02	100000	
Se	82	3	HeHe	1.729	1.729	65.63	148	1.17	1000	
Fe	57	3	HeHe	20.997	20.997	12.43	2248	0.93	100000	
Cd	114	1	No Gas	0.071	0.071	29.67	1347	0.01	1000	
Ca	44	1	No Gas	52120.941	52120.941	0.53	66567437	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9330928	0.49	9248342	100.89	70	120	
Sc	45	2	he	1742765	0.45	1744643	99.89	70	120	
Ge	72	1	No Gas	1030983	0.95	1012122	101.86	70	120	

In	115	1	No Gas	5848478	0.54	5760110	101.53	70	120	
Tb	159	1	No Gas	7152476	0.79	6952439	102.88	70	120	
Bi	209	1	No Gas	3869975	0.51	3846945	100.60	70	120	
Sc	45	3	HeHe	166525	0.57	171212	97.26	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	082_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T14:13:31-04:00
Sample Type	CCB
Dilution	1
Comment	37932 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.302	25.7	37553	10.4	9	
Cr	52	1	No Gas	-0.096	-28.5	30913	2.7	4	
Mn	55	1	No Gas	0.331	17.5	56508	5.5	25	
Co	59	1	No Gas	0.006	42.1	489	26.2	1	
Ni	60	1	No Gas	0.425	3.7	5401	1.9	25	
Cu	63	1	No Gas	0.176	-2.1	7263	3.2	25	
Sr	88	1	No Gas	0.007	22.8	659	17.7	25	
Ag	107	1	No Gas	0.022	12.5	756	13.1	9	
Al	27	1	No Gas	3.656	2.0	131288	2.9	1000000	
Sn	118	1	No Gas	1.785	32.3	39732	26.0	25	
Ti	47	1	No Gas	0.283	56.5	2509	25.4	10000	
Zn	66	1	No Gas	0.079	30.5	1573	12.7	25	
As	75	3	HeHe	0.780	7.0	401	7.4	9	
As	75	1	No Gas	0.212	49.6	29156	0.9	9	
Sb	121	1	No Gas	1.886	17.5	48112	16.1	4	
Hg	201	1	No Gas	0.018	25.1	71	15.6	0.04	
Be	9	1	No Gas	0.014	19.7	118	13.9	1	
Pb	208	1	No Gas	-0.105	-16.7	12108	6.3	4	
Se	82	1	No Gas	0.164	369.4	124	175.8	25	
Mo	98	1	No Gas	0.838	48.5	28371	26.6	10000	
Ba	137	1	No Gas	0.018	19.7	243	10.3	25	
Tl	205	1	No Gas	0.026	4.0	1111	5.2	1	
U	238	1	No Gas	0.377	20.2	19562	21.6	25	
Na	23	2	he	-0.568	-126.9	113990	2.7	2500000	
Mg	24	2	he	0.071	44.3	567	13.6	2500000	
K	39	2	he	-3.377	-28.6	242296	1.8	5000000	
Se	82	3	HeHe	0.818	45.3	133	5.4	25	
Fe	57	3	HeHe	23.653	2.7	2637	3.4	2500000	
Cd	114	1	No Gas	0.073	34.8	1407	24.6	1	
Ca	44	1	No Gas	-8.848	-4.2	55098	1.3	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9575561	2.24	9248342	103.54	70	120	
Sc	45	2	he	1823982	0.49	1744643	104.55	70	120	
Ge	72	1	No Gas	1030800	0.62	1012122	101.85	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	6007535	1.77	5760110	104.30	70	120	
Tb	159	1	No Gas	7132871	1.72	6952439	102.60	70	120	
Bi	209	1	No Gas	3949172	0.63	3846945	102.66	70	120	
Sc	45	3	HeHe	173458	1.12	171212	101.31	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	083LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T14:17:26-04:00
Sample Type	LLCCV
Dilution	1
Comment	37932 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	2.346	6.718	135419	7.68	2	117.3	70	130		
Cr	52	1	No Gas	2.079	8.832	123254	1.12	2	104.0	70	130		
Mn	55	1	No Gas	5.847	8.398	347793	1.25	5	116.9	70	130		
Co	59	1	No Gas	5.307	5.564	256006	1.60	5	106.1	70	130		
Ni	60	1	No Gas	5.402	6.169	58712	0.66	5	108.0	70	130		
Cu	63	1	No Gas	5.101	6.483	144875	0.78	5	102.0	70	130		
Sr	88	1	No Gas	4.918	6.684	304476	0.15	5	98.4	70	130		
Ag	107	1	No Gas	2.059	4.622	61052	1.81	2	102.9	70	130		
Al	27	1	No Gas	89.398	7.084	2780330	1.10	80	111.7	70	130		
Sn	118	1	No Gas	2.032	1.595	43072	3.32	2	101.6	70	130		
Tl	47	1	No Gas	4.754	1.609	19922	1.36	5	95.1	70	130		
Zn	66	1	No Gas	5.707	6.626	37581	0.24	5	114.1	70	130		
As	75	3	HeHe	3.162	1.257	1511	1.55	3	105.4	70	130		
As	75	1	No Gas	3.927	14.818	51484	2.61	3	130.9	70	130	LLCCV Main CR1 Failed	N/A
Sb	121	1	No Gas	2.746	1.666	66886	4.42	2	137.3	70	130	LLCCV Main CR1 Failed	N/A
Hg	201	1	No Gas	0.193	12.204	517	12.58	0.2	96.5	70	130		
Be	9	1	No Gas	1.022	6.179	6554	1.89	1	102.2	70	130		
Pb	208	1	No Gas	1.914	2.901	123082	1.43	2	95.7	70	130		
Se	82	1	No Gas	5.762	24.793	2030	17.51	5	115.2	70	130		
Mo	98	1	No Gas	1.916	3.968	47642	5.67	2	95.8	70	130		
Ba	137	1	No Gas	5.049	1.253	40628	1.90	5	101.0	70	130		
Tl	205	1	No Gas	1.026	2.214	41560	2.00	1	102.6	70	130		
U	238	1	No Gas	5.286	1.588	265009	0.35	5	105.7	70	130		
Na	23	2	he	85.688	1.171	502691	0.32	100	85.7	70	130		
Mg	24	2	he	90.216	0.873	227494	0.20	100	90.2	70	130		
K	39	2	he	89.652	1.780	591738	0.78	100	89.7	70	130		
Se	82	3	HeHe	4.438	31.187	217	13.80	5	88.8	70	130		
Fe	57	3	HeHe	60.438	2.885	6765	1.60	50	120.9	70	130		
Cd	114	1	No Gas	1.026	1.834	14574	2.88	1	102.6	70	130		
Ca	44	1	No Gas	98.871	8.187	184419	1.27	100	98.9	70	130		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9023869	6.48	9248342	97.57	70	120	
Sc	45	2	he	1859008	0.68	1744643	106.56	70	120	
Ge	72	1	No Gas	1000366	0.96	1012122	98.84	70	120	
In	115	1	No Gas	5845025	2.83	5760110	101.47	70	120	
Tb	159	1	No Gas	7004733	1.26	6952439	100.75	70	120	
Bi	209	1	No Gas	3842730	1.67	3846945	99.89	70	120	
Sc	45	3	HeHe	174190	1.86	171212	101.74	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	084_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T14:21:21-04:00
Sample Type	CCV
Dilution	1
Comment	37932 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	112.062	9.650	5596580	1.93	100	112.1	90	110	CCV Main CR1 Failed
Cr	52	1	No Gas	109.929	9.855	4884488	1.98	100	109.9	90	110	
Mn	55	1	No Gas	112.777	10.045	6178074	1.01	100	112.8	90	110	CCV Main CR1 Failed
Co	59	1	No Gas	109.270	9.990	5365252	1.05	100	109.3	90	110	
Ni	60	1	No Gas	103.974	9.922	1142019	0.86	100	104.0	90	110	
Cu	63	1	No Gas	110.688	8.695	2964043	0.97	100	110.7	90	110	CCV Main CR1 Failed
Sr	88	1	No Gas	110.699	9.770	6979742	0.58	100	110.7	90	110	CCV Main CR1 Failed
Ag	107	1	No Gas	105.584	8.422	3129492	0.89	100	105.6	90	110	
Al	27	1	No Gas	110.162	9.379	3490674	1.06	100	110.2	90	110	CCV Main CR1 Failed
Sn	118	1	No Gas	106.972	8.830	1907158	2.20	100	107.0	90	110	
Tl	47	1	No Gas	95.700	8.549	375536	1.01	100	95.7	90	110	
Zn	66	1	No Gas	105.026	8.695	688033	0.48	100	105.0	90	110	
As	75	3	HeHe	98.529	1.029	45854	1.61	100	98.5	90	110	
As	75	1	No Gas	105.030	9.957	720451	0.53	100	105.0	90	110	
Sb	121	1	No Gas	97.762	8.028	2279812	1.13	100	97.8	90	110	
Hg	201	1	No Gas	2.086	9.031	5422	1.23	2	104.3	90	110	
Be	9	1	No Gas	97.262	10.860	632810	1.62	100	97.3	90	110	
Pb	208	1	No Gas	103.260	8.625	5776936	0.53	100	103.3	90	110	
Se	82	1	No Gas	108.991	11.454	38244	2.32	100	109.0	90	110	
Mo	98	1	No Gas	106.946	9.418	1993709	2.19	100	106.9	90	110	
Ba	137	1	No Gas	101.912	7.813	818409	0.58	100	101.9	90	110	
Tl	205	1	No Gas	102.136	9.030	4183817	1.28	100	102.1	90	110	
U	238	1	No Gas	115.082	9.999	5831745	2.21	100	115.1	90	110	CCV Main CR1 Failed
Na	23	2	he	948.858	2.604	4401935	1.26	1000	94.9	90	110	
Mg	24	2	he	969.750	3.490	2458659	1.74	1000	97.0	90	110	
K	39	2	he	952.918	1.686	3819121	1.58	1000	95.3	90	110	
Se	82	3	HeHe	95.856	1.614	2329	2.24	100	95.9	90	110	
Fe	57	3	HeHe	1012.432	1.402	113294	1.64	1000	101.2	90	110	
Cd	114	1	No Gas	100.505	7.727	1391850	0.65	100	100.5	90	110	
Ca	44	1	No Gas	1136.240	9.538	1489429	2.40	1000	113.6	90	110	CCV Main CR1 Failed

All samples ND. in CCV 6K 10%

OK

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9222142	8.73	9248342	99.72	70	120	
Sc	45	2	he	1872800	1.89	1744643	107.35	70	120	
Ge	72	1	No Gas	998859	5.41	1012122	98.69	70	120	
In	115	1	No Gas	5867485	7.27	5760110	101.86	70	120	
Tb	159	1	No Gas	7122545	7.69	6952439	102.45	70	120	
Bi	209	1	No Gas	3879956	5.83	3846945	100.86	70	120	
Sc	45	3	HeHe	174099	0.73	171212	101.69	70	120	

Digestion Logbook

Microwave 3015 Prep (Water) (Version 1- 6/1/2010)

Note: All TCLP matrix spikes are spiked prior to preservation as noted in the TCLP logbook.

Batch: 37326	Queue: MDIG	HBN: 473767	RULE: D3015/6020	ALSI SOP: 09-3015
File Name: 37326_120801-073155			METHOD: 3015	Microwave ID: MARS

Batch Type:	Comment Codes:	Reagents:		Pipettes:		Start	Finish
T: TCLP	1. Sample failed initial digestion due to a weight loss >5g	HNO3:	L12065 JT BAKER		Date:	08/01/2012	08/01/2012
S: SPLP	2. Sample reacts with reagent				Time:	09:40:00	10:06:00
M: 6020	3. Less sample used due to high metal content				Tech:	KMK	KMK
W: 6010	4. Less sample used to result in successful microwave digestion				Reviewed/Approved By:		N/A
A: ASTM	5. Sample does not digest by microwave, digest by method 3050				Date:		

Sample ID	Cont ID	Samp Type	Vessel Initial WT, grams	Vessel Final WT, grams	Difference grams	Spike Amt uL of Each	Spike Lot#	Sample Size, mL	Final Vol mL	Batch Type	Parent Sample ID	Comment Code
1017577		MB	209.72	209.60	0.12			45	50	M		
1017578		LCS	211.59	211.43	0.16	40/50/50/50	/MR2788/MA1346/	45	50	M		
9980109002	A	S	210.48	210.36	0.12			45	50	M		
9980394006	A	S	211.61	211.52	0.09			45	50	M		
9980394014	A	S	213.48	213.46	0.02			45	50	M		
9980395006	A	S	212.08	212.03	0.05			45	50	M		
1017579		MS	210.93	210.90	0.03	40/50/50/50	/MR2788/MA1346/	45	50	M	9980395006	
1017580		MSD	212.43	212.39	0.04	40/50/50/50	/MR2788/MA1348/	45	50	M	9980395006	

End

Analytical Logbook

Batch Log

#	Acquired Date and Time	Sample Type	Sample Name	File Name	Comment	Vial#	Dilution Result	Operator
1	8/7/2012 8:10	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A080712.b\001CALB.d		1101	1	Matthew Olley
2	8/7/2012 8:14	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A080712.b\002CALB.d		1101	1	Matthew Olley
3	8/7/2012 8:18	CalStd	Standard 1	C:\Agilent\ICPMH\1\DATA\A080712.b\003CALS.d		2101	1	Matthew Olley
4	8/7/2012 8:22	CalStd	Standard 2	C:\Agilent\ICPMH\1\DATA\A080712.b\004CALS.d		2102	1	Matthew Olley
5	8/7/2012 8:26	CalStd	Standard 3	C:\Agilent\ICPMH\1\DATA\A080712.b\005CALS.d		2103	1	Matthew Olley
6	8/7/2012 8:30	CalStd	Standard 4	C:\Agilent\ICPMH\1\DATA\A080712.b\006CALS.d		2104	1	Matthew Olley
7	8/7/2012 8:34	CalStd	Standard 5	C:\Agilent\ICPMH\1\DATA\A080712.b\007CALS.d		2105	1	Matthew Olley
8	8/7/2012 8:38	ICV	ICV	C:\Agilent\ICPMH\1\DATA\A080712.b\008_ICV.d		1307	1	Matthew Olley
9	8/7/2012 8:41	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A080712.b\009_ICB.d		1101	1	Matthew Olley
10	8/7/2012 8:45	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A080712.b\010_ICB.d		1101	1	Matthew Olley
11	8/7/2012 8:49	LLICV	LLICV	C:\Agilent\ICPMH\1\DATA\A080712.b\011LICV.d		1305	1	Matthew Olley
12	8/7/2012 8:49							Matthew Olley
13	8/7/2012 8:55	ICSA	ICSA	C:\Agilent\ICPMH\1\DATA\A080712.b\012ICSA.d		2111	1	Matthew Olley
14	8/7/2012 8:59	ICSB	ICSAB	C:\Agilent\ICPMH\1\DATA\A080712.b\013ICSB.d		2112	1	Matthew Olley
15	8/7/2012 8:59							Matthew Olley
16	8/7/2012 9:07	Sample	1015362	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\014SMPL.d		3101	1	Matthew Olley
17	8/7/2012 9:11	Sample	1015363	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\015SMPL.d		3102	1	Matthew Olley
18	8/7/2012 9:14	Sample	1017907	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\016SMPL.d		3103	1	Matthew Olley
19	8/7/2012 9:18	Sample	1017908	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\017SMPL.d		3104	1	Matthew Olley
20	8/7/2012 9:22	Sample	9980583001	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\018SMPL.d		3105	1	Matthew Olley
21	8/7/2012 9:26	Sample	1017909	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\019SMPL.d		3106	1	Matthew Olley

Batch Log

22	8/7/2012 9:30	Sample	1017910	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\020SMPL.d	3107	1	Matthew Olley
23	8/7/2012 9:34	Sample	9980583001PS	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\021SMPL.d	3108	1	Matthew Olley
24	8/7/2012 9:37	Sample	9980583002	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\022SMPL.d	3109	1	Matthew Olley
25	8/7/2012 9:41	Sample	9980583004	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\023SMPL.d	3110	1	Matthew Olley
26	8/7/2012 9:45						Matthew Olley
27	8/7/2012 9:45	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37925 MWO A\A080712.b\024_CCV.d	1307	1	Matthew Olley
28	8/7/2012 9:49	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37925 MWO A\A080712.b\025_CCB.d	1101	1	Matthew Olley
29	8/7/2012 9:53	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37925 MWO A\A080712.b\026LCCV.d	1305	1	Matthew Olley
30	8/7/2012 9:53						Matthew Olley
31	8/7/2012 9:58	Sample	9980583004L	C:\Agilent\ICPMH\1\DAT 37925 MWODF25 A\A080712.b\027SMPL.d	3111	1	Matthew Olley
32	8/7/2012 10:02						Matthew Olley
33	8/7/2012 10:02	Sample	LDR 2 PPM	C:\Agilent\ICPMH\1\DAT 37925 MWO A\A080712.b\028SMPL.d	3112	1	Matthew Olley
34	8/7/2012 10:02						Matthew Olley
35	8/7/2012 10:05						Matthew Olley
36	8/7/2012 10:08	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\029SMPL.d	3201	1	Matthew Olley
37	8/7/2012 10:08						Matthew Olley
38	8/7/2012 10:12						Matthew Olley
39	8/7/2012 10:13	Sample	1017046	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\030SMPL.d	3202	1	Matthew Olley
40	8/7/2012 10:13						Matthew Olley
41	8/7/2012 10:17						Matthew Olley
42	8/7/2012 10:18	Sample	1017047	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\031SMPL.d	3203	1	Matthew Olley
43	8/7/2012 10:22						Matthew Olley
44	8/7/2012 10:22	Sample	9980109001	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\032SMPL.d	3204	1	Matthew Olley
45	8/7/2012 10:26						Matthew Olley

Batch Log

46	8/7/2012 10:26	Sample	9980109003	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\033SMPL.d	3205	1	Matthew Olley
47	8/7/2012 10:30						Matthew Olley
48	8/7/2012 10:30	Sample	9980109004	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\034SMPL.d	3206	1	Matthew Olley
49	8/7/2012 10:33						Matthew Olley
50	8/7/2012 10:33	Sample	9980109005	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\035SMPL.d	3207	1	Matthew Olley
51	8/7/2012 10:37						Matthew Olley
52	8/7/2012 10:37	Sample	9980109006	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\036SMPL.d	3208	1	Matthew Olley
53	8/7/2012 10:41						Matthew Olley
54	8/7/2012 10:41	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\037_CCV.d	1307	1	Matthew Olley
55	8/7/2012 10:45	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\038_CCB.d	1101	1	Matthew Olley
56	8/7/2012 10:49	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\039LCCV.d	1305	1	Matthew Olley
57	8/7/2012 10:53	Sample	9980109007	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\040SMPL.d	3209	1	Matthew Olley
58	8/7/2012 10:57						Matthew Olley
59	8/7/2012 10:57	Sample	9980109008	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\041SMPL.d	3210	1	Matthew Olley
60	8/7/2012 11:01						Matthew Olley
61	8/7/2012 11:01	Sample	9980109009	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\042SMPL.d	3211	1	Matthew Olley
62	8/7/2012 11:05						Matthew Olley
63	8/7/2012 11:05	Sample	9980109010	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\043SMPL.d	3212	1	Matthew Olley
64	8/7/2012 11:09						Matthew Olley
65	8/7/2012 11:09	Sample	9980109011	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\044SMPL.d	3301	1	Matthew Olley
66	8/7/2012 11:12						Matthew Olley
67	8/7/2012 11:12	Sample	1017048	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\045SMPL.d	3302	1	Matthew Olley
68	8/7/2012 11:16						Matthew Olley
69	8/7/2012 11:16	Sample	1017049	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\046SMPL.d	3303	1	Matthew Olley

Batch Log

70	8/7/2012 11:20						Matthew Olley
71	8/7/2012 11:20	Sample	9980109011	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\047SMPL.d	3304	1	Matthew Olley
72	8/7/2012 11:24						Matthew Olley
73	8/7/2012 11:24	Sample	9980109012	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\048SMPL.d	3305	1	Matthew Olley
74	8/7/2012 11:28						Matthew Olley
75	8/7/2012 11:28	Sample	9980109013	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\049SMPL.d	3306	1	Matthew Olley
76	8/7/2012 11:32						Matthew Olley
77	8/7/2012 11:32	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\050_CCV.d	1307	1	Matthew Olley
78	8/7/2012 11:36	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\051_CCB.d	1101	1	Matthew Olley
79	8/7/2012 11:39	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\052LCCV.d	1305	1	Matthew Olley
80	8/7/2012 11:43	Sample	9980109014	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\053SMPL.d	3307	1	Matthew Olley
81	8/7/2012 11:47						Matthew Olley
82	8/7/2012 11:47	Sample	9980109015	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\054SMPL.d	3308	1	Matthew Olley
83	8/7/2012 11:51						Matthew Olley
84	8/7/2012 11:51	Sample	9980109016	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\055SMPL.d	3309	1	Matthew Olley
85	8/7/2012 11:55						Matthew Olley
86	8/7/2012 11:55	Sample	9980109017	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\056SMPL.d	3310	1	Matthew Olley
87	8/7/2012 11:59						Matthew Olley
88	8/7/2012 11:59	Sample	1017050	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\057SMPL.d	3311	1	Matthew Olley
89	8/7/2012 12:03						Matthew Olley
90	8/7/2012 12:03	Sample	1017051	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\058SMPL.d	3312	1	Matthew Olley
91	8/7/2012 12:07						Matthew Olley
92	8/7/2012 12:07	Sample	9980109017PS	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\059SMPL.d	3401	1	Matthew Olley
93	8/7/2012 12:11						Matthew Olley

Batch Log

94	8/7/2012 12:11	Sample	9980109018	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\060SMPL.d	3402	1	Matthew Olley
95	8/7/2012 12:15						Matthew Olley
96	8/7/2012 12:15	Sample	9980109019	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\061SMPL.d	3403	1	Matthew Olley
97	8/7/2012 12:19						Matthew Olley
98	8/7/2012 12:19	Sample	9980109019L	C:\Agilent\ICPMH\1\DAT 37926 MWODF25 A\A080712.b\062SMPL.d	3404	1	Matthew Olley
99	8/7/2012 12:22						Matthew Olley
100	8/7/2012 12:22	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\063_CCV.d	1307	1	Matthew Olley
101	8/7/2012 12:22						Matthew Olley
102	8/7/2012 12:29	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\064_CCB.d	1101	1	Matthew Olley
103	8/7/2012 12:33	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\065LCCV.d	1305	1	Matthew Olley
104	8/7/2012 12:33						Matthew Olley
105	8/7/2012 12:37	Sample	LDR 50 PPM	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\066SMPL.d	3405	1	Matthew Olley
106	8/7/2012 12:37						Matthew Olley
107	8/7/2012 12:41						Matthew Olley
108	8/7/2012 12:42	Sample	CHECK	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\067SMPL.d	3406	1	Matthew Olley
109	8/7/2012 12:42						Matthew Olley
110	8/7/2012 12:46						Matthew Olley
111	8/7/2012 12:47	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\068_CCV.d	1307	1	Matthew Olley
112	8/7/2012 12:51	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\069_CCB.d	1101	1	Matthew Olley
113	8/7/2012 12:51						Matthew Olley
114	8/7/2012 12:58	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\070LCCV.d	1305	1	Matthew Olley
115	8/7/2012 13:02	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\071_CCV.d	1307	1	Matthew Olley
116	8/7/2012 13:02						Matthew Olley
117	8/7/2012 13:07	Sample	1017577	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\072SMPL.d	3407	1	Matthew Olley
118	8/7/2012 13:07						Matthew Olley

Batch Log

119	8/7/2012 13:10						Matthew Olley
120	8/7/2012 13:27	Sample	1017578	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\073SMPL.d	3408	1	Matthew Olley
121	8/7/2012 13:31						Matthew Olley
122	8/7/2012 13:31	Sample	1019627	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\074SMPL.d	3409	1	Matthew Olley
123	8/7/2012 13:35						Matthew Olley
124	8/7/2012 13:35	Sample	1019628	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\075SMPL.d	3410	1	Matthew Olley
125	8/7/2012 13:39						Matthew Olley
126	8/7/2012 13:39	Sample	9980109002	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\076SMPL.d	3411	1	Matthew Olley
127	8/7/2012 13:43						Matthew Olley
128	8/7/2012 13:43	Sample	9980394006	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\077SMPL.d	3412	1	Matthew Olley
129	8/7/2012 13:47						Matthew Olley
130	8/7/2012 13:47	Sample	9980394006L	C:\Agilent\ICPMH\1\DAT 37932 MWODF5 A\A080712.b\078SMPL.d	3501	1	Matthew Olley
131	8/7/2012 13:51						Matthew Olley
132	8/7/2012 13:51	Sample	9980394014	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\079SMPL.d	3502	1	Matthew Olley
133	8/7/2012 13:51						Matthew Olley
134	8/7/2012 13:54						Matthew Olley
135	8/7/2012 13:58	Sample	9980394006PS	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\080SMPL.d	3503	1	Matthew Olley
136	8/7/2012 13:58						Matthew Olley
137	8/7/2012 14:02						Matthew Olley
138	8/7/2012 14:08	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\081_CCV.d	1307	1	Matthew Olley
139	8/7/2012 14:12	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\082_CCB.d	1101	1	Matthew Olley
140	8/7/2012 14:16	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\083LCCV.d	1305	1	Matthew Olley
141	8/7/2012 14:19	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\084_CCV.d	1307	1	Matthew Olley
142	8/7/2012 14:23	Sample	9980395006	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\085SMPL.d	3504	1	Matthew Olley
143	8/7/2012 14:23						Matthew Olley

Batch Log

144	8/7/2012 14:27						Matthew Olley
145	8/7/2012 14:45	Sample	1017579	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\086SMPL.d	3505	1	Matthew Olley
146	8/7/2012 14:49						Matthew Olley
147	8/7/2012 14:49	Sample	1017580	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\087SMPL.d	3506	1	Matthew Olley
148	8/7/2012 14:53						Matthew Olley
149	8/7/2012 14:53	Sample	9980875015	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\088SMPL.d	3507	1	Matthew Olley
150	8/7/2012 14:57						Matthew Olley
151	8/7/2012 14:57	Sample	1019629	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\089SMPL.d	3508	1	Matthew Olley
152	8/7/2012 15:00						Matthew Olley
153	8/7/2012 15:00	Sample	1019630	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\090SMPL.d	3509	1	Matthew Olley
154	8/7/2012 15:04						Matthew Olley
155	8/7/2012 15:04	Sample	9980875015L	C:\Agilent\ICPMH\1\DAT 37932 MWODFSA\A080712.b\091SMPL.d	3510	1	Matthew Olley
156	8/7/2012 15:08						Matthew Olley
157	8/7/2012 15:08	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\092_CCV.d	1307	1	Matthew Olley
158	8/7/2012 15:12	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\093_CCB.d	1101	1	Matthew Olley
159	8/7/2012 15:16	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\094LCCV.d	1305	1	Matthew Olley
160	8/7/2012 15:26	CalBlk	blk		1101		Matthew Olley
161	8/7/2012 15:26	CalBlk	blk		1101		Matthew Olley
162	8/7/2012 15:26	CalStd	Standard 1		2101		Matthew Olley
163	8/7/2012 15:26	CalStd	Standard 2		2102		Matthew Olley
164	8/7/2012 15:26	CalStd	Standard 3		2103		Matthew Olley
165	8/7/2012 15:26	CalStd	Standard 4		2104		Matthew Olley
166	8/7/2012 15:26	CalStd	Standard 5		2105		Matthew Olley
167	8/7/2012 15:26	ICV	ICV		1307		Matthew Olley
168	8/7/2012 15:26	ICB	ICB		1101		Matthew Olley
169	8/7/2012 15:26	ICB	ICB		1101		Matthew Olley
170	8/7/2012 15:26	LLICV	LLICV		1305		Matthew Olley

Batch Log

171	8/7/2012 15:26	ICSA	ICSA		2111		Matthew Olley
172	8/7/2012 15:26	ICSB	ICSAB		2112		Matthew Olley
173	8/7/2012 15:27	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\095_CCV.d	1307	1	Matthew Olley
174	8/7/2012 15:27						Matthew Olley
175	8/7/2012 15:47	Sample	9979663004	C:\Agilent\ICPMH\1\DAT 37936 MWODF5 A\A080712.b\096SMPL.d	3101	1	Matthew Olley
176	8/7/2012 15:51	Sample	9979678003	C:\Agilent\ICPMH\1\DAT 37936 MWODF5 A\A080712.b\097SMPL.d	3102	1	Matthew Olley
177	8/7/2012 15:51						Matthew Olley
178	8/7/2012 15:57	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\098_CCV.d	1307	1	Matthew Olley
179	8/7/2012 16:01	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\099_CCB.d	1101	1	Matthew Olley
180	8/7/2012 16:05	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\100LCCV.d	1305	1	Matthew Olley
181	8/7/2012 16:05						Matthew Olley
182	8/7/2012 16:41	Sample	9980477001	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\101SMPL.d	3101	1	Matthew Olley
183	8/7/2012 16:45	Sample	9980477002	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\102SMPL.d	3102	1	Matthew Olley
184	8/7/2012 16:49	Sample	9980478001	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\103SMPL.d	3103	1	Matthew Olley
185	8/7/2012 16:53	Sample	9980478002	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\104SMPL.d	3104	1	Matthew Olley
186	8/7/2012 16:56	Sample	9980478003	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\105SMPL.d	3105	1	Matthew Olley
187	8/7/2012 17:00	Sample	9980478004	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\106SMPL.d	3106	1	Matthew Olley
188	8/7/2012 17:04	Sample	9980478004L	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\107SMPL.d	3107	1	Matthew Olley
189	8/7/2012 17:08	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\108_CCV.d	1307	1	Matthew Olley
190	8/7/2012 17:12	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\109_CCB.d	1101	1	Matthew Olley
191	8/7/2012 17:16	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\110LCCV.d	1305	1	Matthew Olley
192	8/7/2012 17:20	Sample	9975539001	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A080712.b\111SMPL.d	3108	1	Matthew Olley

Batch Log

193	8/7/2012 17:24	Sample	9975539002	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A080712.b\112SMPL.d	3109	1	Matthew Olley
194	8/7/2012 17:28	Sample	9975539001	C:\Agilent\ICPMH\1\DAT 99999 MWODF5 A\A080712.b\113SMPL.d	3110	1	Matthew Olley
195	8/7/2012 17:32	Sample	9975539002	C:\Agilent\ICPMH\1\DAT 99999 MWODF5 A\A080712.b\114SMPL.d	3111	1	Matthew Olley
196	8/7/2012 17:35	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\115SMPL.d	3112	1	Matthew Olley
197	8/7/2012 17:39	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\116SMPL.d	3201	1	Matthew Olley
198	8/7/2012 17:43	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\117SMPL.d	3202	1	Matthew Olley
199	8/7/2012 17:47	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\118SMPL.d	3203	1	Matthew Olley
200	8/7/2012 17:51	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\119SMPL.d	3204	1	Matthew Olley
201	8/7/2012 17:55	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\120SMPL.d	3205	1	Matthew Olley
202	8/7/2012 17:59						Matthew Olley
203	8/7/2012 17:59	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A080712.b\121_CCV.d	1307	1	Matthew Olley
204	8/7/2012 18:03	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A080712.b\122_CCB.d	1101	1	Matthew Olley
205	8/7/2012 18:07	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A080712.b\123LCCV.d	1305	1	Matthew Olley

Total Metals in Solid by 6020A Summary Forms

6020 3051
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INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, Inc

SDG No.: ERT-001 Method Type: 6020 3051 SOW No.:

Contract: ERT001|Ft. Stewart 3 Lab Code: CAS Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
9980109001	FTSW-AA-SO-10[02]	
9980109003	FTSW-AA-SO-11	
9980109004	FTSW-AA-SO-12 [01.5]	
9980109005	FTSW-AA-SO-13	
9980109006	FTSW-AA-SO-14 [02]	
9980109007	FTSW-AA-SO-15	
9980109008	FTSW-AA-SO-16 [01.5]	
9980109009	FTSW-AA-SO-01	
9980109010	FTSW-AA-SO-02 [01.5]	
9980109011	FTSW-AA-SO-03	
9980109011S	FTSW-AA-SO-03S	Matrix Spike
9980109011SD	FTSW-AA-SO-03SD	Matrix Spike Duplicate
9980109012	FTSW-AA-SO-03 DUP	
9980109013	FTSW-AA-SO-04 [01.5]	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: **Lisa Miller**

Date: Title: **Metals Manager**

6020 3051
- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, Inc

SDG No.: ERT-001 **Method Type:** 6020 3051 **SOW No.:**

Contract: ERT001|Ft. Stewart 3 **Lab Code:** CAS **Case No.:** **SAS No.:**

Lab Sample ID	Client Sample ID	QC Description
9980109014	FTSW-AA-SO-05	
9980109015	FTSW-AA-SO-07	
9980109016	FTSW-AA-SO-06 [01.5]	
9980109017	FTSW-AA-SO-08 [02]	
9980109017S	FTSW-AA-SO-08 [02]S	Matrix Spike
9980109017SD	FTSW-AA-SO-08 [02]SD	Matrix Spike Duplicate
9980109018	FTSW-AA-SO-08 [02] DUP	
9980109019	FTSW-AA-SO-09	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: **Lisa Miller**

Date: Title: **Metals Manager**

6020 3051

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INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-001 **Method Type:** 6020 3051

Sample ID: 9980109001 **Client ID:** FTSW-AA-SO-10[02]

Matrix: SOIL **Date Received:** 7/27/2012 **Level:** LOW

% Solids: 79.8 **Sample Wt/Vol:** 0.54 **Final Vol:** 50.0

Prep Batch ID: 473510 **Prep Date:** 7/31/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	1130	mg/Kg			M	46.4	30.8	15.1	5.00	8/7/2012	10:23:39
Copper	7440-50-8	1.92	mg/Kg	U		M	2.9	1.92	0.93	5.00	8/7/2012	10:23:39
Lead	7439-92-1	1.8	mg/Kg			M	1.2	0.75	0.38	5.00	8/7/2012	10:23:39
Zinc	7440-66-6	1.4	mg/Kg	J		M	2.9	1.92	0.93	5.00	8/7/2012	10:23:39

Comments:

6020 3051

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INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-001 **Method Type:** 6020 3051

Sample ID: 9980109003 **Client ID:** FTSW-AA-SO-11

Matrix: SOIL **Date Received:** 7/27/2012 **Level:** LOW

% Solids: 96.0 **Sample Wt/Vol:** 0.53 **Final Vol:** 50.0

Prep Batch ID: 473510 **Prep Date:** 7/31/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	5520	mg/Kg			M	39.3	26.0	12.8	5.00	8/7/2012	10:27:34
Copper	7440-50-8	2.4	mg/Kg	J		M	2.5	1.62	0.79	5.00	8/7/2012	10:27:34
Lead	7439-92-1	5.1	mg/Kg			M	0.98	0.64	0.32	5.00	8/7/2012	10:27:34
Zinc	7440-66-6	11.2	mg/Kg			M	2.5	1.62	0.79	5.00	8/7/2012	10:27:34

Comments:

6020 3051

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INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-001 **Method Type:** 6020 3051

Sample ID: 9980109004 **Client ID:** FTSW-AA-SO-12 [01.5]

Matrix: SOIL **Date Received:** 7/27/2012 **Level:** LOW

% Solids: 78.0 **Sample Wt/Vol:** 0.54 **Final Vol:** 50.0

Prep Batch ID: 473510 **Prep Date:** 7/31/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	4440	mg/Kg			M	47.5	31.4	15.4	5.00	8/7/2012	10:31:28
Copper	7440-50-8	1.96	mg/Kg	U		M	3.0	1.96	0.95	5.00	8/7/2012	10:31:28
Lead	7439-92-1	3.7	mg/Kg			M	1.2	0.77	0.39	5.00	8/7/2012	10:31:28
Zinc	7440-66-6	2.0	mg/Kg	J		M	3.0	1.96	0.95	5.00	8/7/2012	10:31:28

Comments:

6020 3051

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INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-001 **Method Type:** 6020 3051

Sample ID: 9980109005 **Client ID:** FTSW-AA-SO-13

Matrix: SOIL **Date Received:** 7/27/2012 **Level:** LOW

% Solids: 68.1 **Sample Wt/Vol:** 0.58 **Final Vol:** 50.0

Prep Batch ID: 473510 **Prep Date:** 7/31/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	4830	mg/Kg			M	50.6	33.6	16.5	5.00	8/7/2012	10:35:23
Copper	7440-50-8	1.4	mg/Kg	J		M	3.2	2.1	1.0	5.00	8/7/2012	10:35:23
Lead	7439-92-1	5.8	mg/Kg			M	1.3	0.82	0.42	5.00	8/7/2012	10:35:23
Zinc	7440-66-6	7.4	mg/Kg			M	3.2	2.1	1.0	5.00	8/7/2012	10:35:23

Comments:

6020 3051

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INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-001 **Method Type:** 6020 3051

Sample ID: 9980109006 **Client ID:** FTSW-AA-SO-14 [02]

Matrix: SOIL **Date Received:** 7/27/2012 **Level:** LOW

% Solids: 82.1 **Sample Wt/Vol:** 0.55 **Final Vol:** 50.0

Prep Batch ID: 473510 **Prep Date:** 7/31/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	7710	mg/Kg			M	44.3	29.3	14.4	5.00	8/7/2012	10:39:18
Copper	7440-50-8	8.8	mg/Kg			M	2.8	1.83	0.89	5.00	8/7/2012	10:39:18
Lead	7439-92-1	8.0	mg/Kg			M	1.1	0.72	0.37	5.00	8/7/2012	10:39:18
Zinc	7440-66-6	10.6	mg/Kg			M	2.8	1.83	0.89	5.00	8/7/2012	10:39:18

Comments:

6020 3051

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INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-001 **Method Type:** 6020 3051

Sample ID: 9980109007 **Client ID:** FTSW-AA-SO-15

Matrix: SOIL **Date Received:** 7/27/2012 **Level:** LOW

% Solids: 84.4 **Sample Wt/Vol:** 0.54 **Final Vol:** 50.0

Prep Batch ID: 473510 **Prep Date:** 7/31/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	10900	mg/Kg			M	43.9	29.1	14.3	5.00	8/7/2012	10:54:52
Copper	7440-50-8	1.4	mg/Kg	J		M	2.7	1.81	0.88	5.00	8/7/2012	10:54:52
Lead	7439-92-1	7.8	mg/Kg			M	1.1	0.71	0.36	5.00	8/7/2012	10:54:52
Zinc	7440-66-6	8.4	mg/Kg			M	2.7	1.81	0.88	5.00	8/7/2012	10:54:52

Comments:

6020 3051

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INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-001 **Method Type:** 6020 3051

Sample ID: 9980109008 **Client ID:** FTSW-AA-SO-16 [01.5]

Matrix: SOIL **Date Received:** 7/27/2012 **Level:** LOW

% Solids: 75.8 **Sample Wt/Vol:** 0.51 **Final Vol:** 50.0

Prep Batch ID: 473510 **Prep Date:** 7/31/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	6260	mg/Kg			M	51.7	34.3	16.8	5.00	8/7/2012	10:58:45
Copper	7440-50-8	2.1	mg/Kg	U		M	3.2	2.1	1.0	5.00	8/7/2012	10:58:45
Lead	7439-92-1	4.8	mg/Kg			M	1.3	0.84	0.43	5.00	8/7/2012	10:58:45
Zinc	7440-66-6	3.5	mg/Kg			M	3.2	2.1	1.0	5.00	8/7/2012	10:58:45

Comments:

6020 3051

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INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-001 **Method Type:** 6020 3051

Sample ID: 9980109009 **Client ID:** FTSW-AA-SO-01

Matrix: SOIL **Date Received:** 7/27/2012 **Level:** LOW

% Solids: 64.9 **Sample Wt/Vol:** 0.55 **Final Vol:** 50.0

Prep Batch ID: 473510 **Prep Date:** 7/31/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	7060	mg/Kg			M	56.0	37.1	18.2	5.00	8/7/2012	11:02:41
Copper	7440-50-8	1.3	mg/Kg	J		M	3.5	2.3	1.1	5.00	8/7/2012	11:02:41
Lead	7439-92-1	5.3	mg/Kg			M	1.4	0.91	0.46	5.00	8/7/2012	11:02:41
Zinc	7440-66-6	9.7	mg/Kg			M	3.5	2.3	1.1	5.00	8/7/2012	11:02:41

Comments:

6020 3051

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INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-001 **Method Type:** 6020 3051

Sample ID: 9980109010 **Client ID:** FTSW-AA-SO-02 [01.5]

Matrix: SOIL **Date Received:** 7/27/2012 **Level:** LOW

% Solids: 92.6 **Sample Wt/Vol:** 0.59 **Final Vol:** 50.0

Prep Batch ID: 473510 **Prep Date:** 7/31/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	8160	mg/Kg			M	36.6	24.3	11.9	5.00	8/7/2012	11:06:36
Copper	7440-50-8	1.51	mg/Kg	U		M	2.3	1.51	0.73	5.00	8/7/2012	11:06:36
Lead	7439-92-1	4.6	mg/Kg			M	0.92	0.60	0.30	5.00	8/7/2012	11:06:36
Zinc	7440-66-6	2.7	mg/Kg			M	2.3	1.51	0.73	5.00	8/7/2012	11:06:36

Comments:

6020 3051

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INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth-Resources Technology, I **SDG No.:** ERT-001 **Method Type:** 6020 3051

Sample ID: 9980109011 **Client ID:** FTSW-AA-SO-03

Matrix: SOIL **Date Received:** 7/27/2012 **Level:** LOW

% Solids: 92.1 **Sample Wt/Vol:** 0.52 **Final Vol:** 50.0

Prep Batch ID: 473510 **Prep Date:** 7/31/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	5750	mg/Kg			M	41.7	27.7	13.6	5.00	8/7/2012	11:10:29
Copper	7440-50-8	2.0	mg/Kg	J		M	2.6	1.72	0.83	5.00	8/7/2012	11:10:29
Lead	7439-92-1	3.8	mg/Kg			M	1.0	0.68	0.34	5.00	8/7/2012	11:10:29
Zinc	7440-66-6	6.5	mg/Kg			M	2.6	1.72	0.83	5.00	8/7/2012	11:10:29

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-001 **Method Type:** 6020 3051

Sample ID: 9980109012 **Client ID:** FTSW-AA-SO-03 DUP

Matrix: SOIL **Date Received:** 7/27/2012 **Level:** LOW

% Solids: 95.3 **Sample Wt/Vol:** 0.59 **Final Vol:** 50.0

Prep Batch ID: 473510 **Prep Date:** 7/31/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	4370	mg/Kg			M	35.6	23.6	11.6	5.00	8/7/2012	11:25:48
Copper	7440-50-8	3.2	mg/Kg			M	2.2	1.47	0.71	5.00	8/7/2012	11:25:48
Lead	7439-92-1	3.5	mg/Kg			M	0.89	0.58	0.29	5.00	8/7/2012	11:25:48
Zinc	7440-66-6	7.6	mg/Kg			M	2.2	1.47	0.71	5.00	8/7/2012	11:25:48

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-001 **Method Type:** 6020 3051

Sample ID: 9980109013 **Client ID:** FTSW-AA-SO-04 [01.5]

Matrix: SOIL **Date Received:** 7/27/2012 **Level:** LOW

% Solids: 84.9 **Sample Wt/Vol:** 0.58 **Final Vol:** 50.0

Prep Batch ID: 473510 **Prep Date:** 7/31/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	20200	mg/Kg			M	40.6	26.9	13.2	5.00	8/7/2012	11:29:42
Copper	7440-50-8	1.67	mg/Kg	U		M	2.5	1.67	0.81	5.00	8/7/2012	11:29:42
Lead	7439-92-1	7.2	mg/Kg			M	1.0	0.66	0.34	5.00	8/7/2012	11:29:42
Zinc	7440-66-6	5.4	mg/Kg			M	2.5	1.67	0.81	5.00	8/7/2012	11:29:42

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-001 **Method Type:** 6020 3051

Sample ID: 9980109014 **Client ID:** FTSW-AA-SO-05

Matrix: SOIL **Date Received:** 7/27/2012 **Level:** LOW

% Solids: 83.5 **Sample Wt/Vol:** 0.58 **Final Vol:** 50.0

Prep Batch ID: 473510 **Prep Date:** 7/31/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	4440	mg/Kg			M	41.3	27.4	13.4	5.00	8/7/2012	11:45:18
Copper	7440-50-8	1.5	mg/Kg	J		M	2.6	1.70	0.83	5.00	8/7/2012	11:45:18
Lead	7439-92-1	4.4	mg/Kg			M	1.0	0.67	0.34	5.00	8/7/2012	11:45:18
Zinc	7440-66-6	9.0	mg/Kg			M	2.6	1.70	0.83	5.00	8/7/2012	11:45:18

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-001 **Method Type:** 6020 3051

Sample ID: 9980109015 **Client ID:** FTSW-AA-SO-07

Matrix: SOIL **Date Received:** 7/27/2012 **Level:** LOW

% Solids: 93.9 **Sample Wt/Vol:** 0.56 **Final Vol:** 50.0

Prep Batch ID: 473510 **Prep Date:** 7/31/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	4050	mg/Kg			M	38.1	25.2	12.4	5.00	8/7/2012	11:49:12
Copper	7440-50-8	4.6	mg/Kg			M	2.4	1.57	0.76	5.00	8/7/2012	11:49:12
Lead	7439-92-1	3.3	mg/Kg			M	0.95	0.62	0.31	5.00	8/7/2012	11:49:12
Zinc	7440-66-6	10.4	mg/Kg			M	2.4	1.57	0.76	5.00	8/7/2012	11:49:12

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-001 **Method Type:** 6020 3051

Sample ID: 9980109016 **Client ID:** FTSW-AA-SO-06 [01.5]

Matrix: SOIL **Date Received:** 7/27/2012 **Level:** LOW

% Solids: 80.2 **Sample Wt/Vol:** 0.58 **Final Vol:** 50.0

Prep Batch ID: 473510 **Prep Date:** 7/31/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	4560	mg/Kg			M	43.0	28.5	14.0	5.00	8/7/2012	11:53:08
Copper	7440-50-8	1.77	mg/Kg	U		M	2.7	1.77	0.86	5.00	8/7/2012	11:53:08
Lead	7439-92-1	3.7	mg/Kg			M	1.1	0.70	0.35	5.00	8/7/2012	11:53:08
Zinc	7440-66-6	1.7	mg/Kg	J		M	2.7	1.77	0.86	5.00	8/7/2012	11:53:08

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-001 **Method Type:** 6020 3051

Sample ID: 9980109017 **Client ID:** FTSW-AA-SO-08 [02]

Matrix: SOIL **Date Received:** 7/27/2012 **Level:** LOW

% Solids: 78.0 **Sample Wt/Vol:** 0.54 **Final Vol:** 50.0

Prep Batch ID: 473510 **Prep Date:** 7/31/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	20600	mg/Kg			M	47.5	31.5	15.4	5.00	8/7/2012	11:57:02
Copper	7440-50-8	1.96	mg/Kg	U		M	3.0	1.96	0.95	5.00	8/7/2012	11:57:02
Lead	7439-92-1	7.3	mg/Kg			M	1.2	0.77	0.39	5.00	8/7/2012	11:57:02
Zinc	7440-66-6	4.5	mg/Kg			M	3.0	1.96	0.95	5.00	8/7/2012	11:57:02

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-001 **Method Type:** 6020 3051

Sample ID: 9980109018 **Client ID:** FTSW-AA-SO-08 [02] DUP

Matrix: SOIL **Date Received:** 7/27/2012 **Level:** LOW

% Solids: 79.5 **Sample Wt/Vol:** 0.51 **Final Vol:** 50.0

Prep Batch ID: 473510 **Prep Date:** 7/31/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	30200	mg/Kg			M	49.3	32.7	16.0	5.00	8/7/2012	12:12:36
Copper	7440-50-8	2.04	mg/Kg	U		M	3.1	2.04	0.99	5.00	8/7/2012	12:12:36
Lead	7439-92-1	6.9	mg/Kg			M	1.2	0.80	0.41	5.00	8/7/2012	12:12:36
Zinc	7440-66-6	5.3	mg/Kg			M	3.1	2.04	0.99	5.00	8/7/2012	12:12:36

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-001 **Method Type:** 6020 3051

Sample ID: 9980109019 **Client ID:** FTSW-AA-SO-09

Matrix: SOIL **Date Received:** 7/27/2012 **Level:** LOW

% Solids: 72.8 **Sample Wt/Vol:** 0.56 **Final Vol:** 50.0

Prep Batch ID: 473510 **Prep Date:** 7/31/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	2090	mg/Kg			M	49.0	32.5	15.9	5.00	8/7/2012	12:16:34
Copper	7440-50-8	2.02	mg/Kg	U		M	3.1	2.02	0.98	5.00	8/7/2012	12:16:34
Lead	7439-92-1	2.9	mg/Kg			M	1.2	0.80	0.40	5.00	8/7/2012	12:16:34
Zinc	7440-66-6	3.1	mg/Kg			M	3.1	2.02	0.98	5.00	8/7/2012	12:16:34

Comments:

6020 3051
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
ICV										
	Aluminum	0.1055	0.1000	106		90 - 110	M	8/7/2012	08:39	A080712
	Copper	0.1062	0.1000	106		90 - 110	M	8/7/2012	08:39	A080712
	Lead	0.1046	0.1000	105		90 - 110	M	8/7/2012	08:39	A080712
	Zinc	0.1018	0.1000	102		90 - 110	M	8/7/2012	08:39	A080712
LLICV										
	Aluminum	0.0811	0.0800	101		70 - 130	M	8/7/2012	08:51	A080712
	Copper	0.0049	0.0050	98		70 - 130	M	8/7/2012	08:51	A080712
	Lead	0.0022	0.0020	110		70 - 130	M	8/7/2012	08:51	A080712
	Zinc	0.0053	0.0050	106		70 - 130	M	8/7/2012	08:51	A080712
CCV										
	Aluminum	0.1072	0.1000	107		90 - 110	M	8/7/2012	09:46	A080712
	Copper	0.1050	0.1000	105		90 - 110	M	8/7/2012	09:46	A080712
	Lead	0.1003	0.1000	100		90 - 110	M	8/7/2012	09:46	A080712
	Zinc	0.1023	0.1000	102		90 - 110	M	8/7/2012	09:46	A080712
LLCCV										
	Aluminum	0.0842	0.0800	105		70 - 130	M	8/7/2012	09:54	A080712
	Copper	0.0048	0.0050	96		70 - 130	M	8/7/2012	09:54	A080712
	Lead	0.0019	0.0020	95		70 - 130	M	8/7/2012	09:54	A080712
	Zinc	0.0056	0.0050	112		70 - 130	M	8/7/2012	09:54	A080712
CCV										
	Aluminum	0.1071	0.1000	107		90 - 110	M	8/7/2012	10:43	A080712
	Copper	0.1054	0.1000	105		90 - 110	M	8/7/2012	10:43	A080712
	Lead	0.1026	0.1000	103		90 - 110	M	8/7/2012	10:43	A080712
	Zinc	0.1017	0.1000	102		90 - 110	M	8/7/2012	10:43	A080712
LLCCV										
	Aluminum	0.0814	0.0800	102		70 - 130	M	8/7/2012	10:50	A080712
	Copper	0.0049	0.0050	98		70 - 130	M	8/7/2012	10:50	A080712
	Lead	0.0021	0.0020	105		70 - 130	M	8/7/2012	10:50	A080712
	Zinc	0.0054	0.0050	108		70 - 130	M	8/7/2012	10:50	A080712

6020 3051

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
CCV										
	Aluminum	0.1066	0.1000	107		90 - 110	M	8/7/2012	11:33	A080712
	Copper	0.1041	0.1000	104		90 - 110	M	8/7/2012	11:33	A080712
	Lead	0.1030	0.1000	103		90 - 110	M	8/7/2012	11:33	A080712
	Zinc	0.1006	0.1000	101		90 - 110	M	8/7/2012	11:33	A080712
LLCCV										
	Aluminum	0.0820	0.0800	102		70 - 130	M	8/7/2012	11:41	A080712
	Copper	0.0047	0.0050	94		70 - 130	M	8/7/2012	11:41	A080712
	Lead	0.0019	0.0020	95		70 - 130	M	8/7/2012	11:41	A080712
	Zinc	0.0055	0.0050	110		70 - 130	M	8/7/2012	11:41	A080712
CCV										
	Aluminum	0.1071	0.1000	107		90 - 110	M	8/7/2012	12:24	A080712
	Copper	0.1047	0.1000	105		90 - 110	M	8/7/2012	12:24	A080712
	Lead	0.1019	0.1000	102		90 - 110	M	8/7/2012	12:24	A080712
	Zinc	0.0994	0.1000	99		90 - 110	M	8/7/2012	12:24	A080712
LLCCV										
	Aluminum	0.0861	0.0800	108		70 - 130	M	8/7/2012	12:34	A080712
	Copper	0.0048	0.0050	96		70 - 130	M	8/7/2012	12:34	A080712
	Lead	0.0019	0.0020	95		70 - 130	M	8/7/2012	12:34	A080712
	Zinc	0.0054	0.0050	108		70 - 130	M	8/7/2012	12:34	A080712

6020 3051
- 3a -
INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Conc Qual	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
ICB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/7/2012	08:47	A080712
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	08:47	A080712
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/7/2012	08:47	A080712
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	08:47	A080712
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/7/2012	09:50	A080712
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	09:50	A080712
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/7/2012	09:50	A080712
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	09:50	A080712
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/7/2012	10:47	A080712
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	10:47	A080712
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/7/2012	10:47	A080712
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	10:47	A080712
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/7/2012	11:37	A080712
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	11:37	A080712
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/7/2012	11:37	A080712
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	11:37	A080712
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/7/2012	12:31	A080712
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	12:31	A080712
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/7/2012	12:31	A080712
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/7/2012	12:31	A080712

6020 3051
- 3b -
PREPARATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result (mg/Kg)	Conc Qual	Q	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
1017046			QC-SOLID								
	Aluminum	40.0000	U		20	13.0000	40.0000	M	8/7/2012	10:14	A080712
	Copper	2.50000	U		1.3	0.80000	2.50000	M	8/7/2012	10:14	A080712
	Lead	1.00000	U		0.50	0.33000	1.00000	M	8/7/2012	10:14	A080712
	Zinc	2.50000	U		1.3	0.80000	2.50000	M	8/7/2012	10:14	A080712

6020 3051

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INTERFERENCE CHECK SAMPLE

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

ICS Source: Inorganic Ventures **Instrument ID:** AGILENT 7700 ICPMS

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	Analysis Date	Analysis Time	Run Number
ICSA									
	Aluminum	91.1	100.0000	91		80 - 120%	8/7/2012	08:57	A080712
	Copper	0.0007				-0.00500 - -0.00500	8/7/2012	08:57	A080712
	Lead	0.0003				-0.00200 - -0.00200	8/7/2012	08:57	A080712
	Zinc	0.0025				-0.01000 - -0.01000	8/7/2012	08:57	A080712
ICSAB									
	Aluminum	88.9	100.0000	89		80 - 120%	8/7/2012	09:01	A080712
	Copper	0.0173	0.02000	86		80 - 120%	8/7/2012	09:01	A080712
	Lead	0.0004				-0.00200 - -0.00200	8/7/2012	09:01	A080712
	Zinc	0.0204	0.02000	102		80 - 120%	8/7/2012	09:01	A080712

6020 3051
- 5a -
MATRIX SPIKE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: SOIL **Sample ID:** 9980109011 **Client ID:** FTSW-AA-SO-03S **LIMS ID:** 1017048

Percent Solids for Sample: 92.14 **Spiked ID:** 9980109011S **Percent Solids for Spike Sample:** 92.14

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	80 - 120	7362.51		5747.94		208.706	NSC		M
Copper	mg/Kg	80 - 120	20.995		2.006		20.871	91		M
Lead	mg/Kg	80 - 120	23.515		3.761		20.871	95		M
Zinc	mg/Kg	80 - 120	210.303		6.465		208.706	98		M

6020 3051
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Matrix: SOIL **Sample ID:** 9980109011 **Client ID:** FTSW-AA-SO-03SD **LIMS ID:** 1017049

Percent Solids for Sample: 92.14 **Spiked ID:** 9980109011SD **Percent Solids for Spike Sample:** 92.14

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	80 - 120	6779.94		5747.94		190.398	NSC		M
Copper	mg/Kg	80 - 120	19.961		2.006		19.040	94		M
Lead	mg/Kg	80 - 120	21.757		3.761		19.040	95		M
Zinc	mg/Kg	80 - 120	193.072		6.465		190.398	98		M

6020 3051
- 5a -
MATRIX SPIKE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Matrix: SOIL **Sample ID:** 9980109017 **Client ID:** FTSW-AA-SO-08 [02]S **LIMS ID:** 1017050

Percent Solids for Sample: 78.02 **Spiked ID:** 9980109017S **Percent Solids for Spike Sample:** 78.02

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	80 - 120	36987.22		20626.20		241.849	NSC		M
Copper	mg/Kg	80 - 120	21.522		3.023	U	24.185	89		M
Lead	mg/Kg	80 - 120	30.929		7.346		24.185	98		M
Zinc	mg/Kg	80 - 120	232.970		4.511		241.849	94		M

6020 3051
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: SOIL **Sample ID:** 9980109017 **Client ID:** FTSW-AA-SO-08 [02]SD **LIMS ID:** 1017051

Percent Solids for Sample: 78.02 **Spiked ID:** 9980109017SD **Percent Solids for Spike Sample:** 78.02

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	80 - 120	20269.47		20626.20		224.877	NSC		M
Copper	mg/Kg	80 - 120	20.605		2.811	U	22.488	92		M
Lead	mg/Kg	80 - 120	29.135		7.346		22.488	97		M
Zinc	mg/Kg	80 - 120	218.813		4.511		224.877	95		M

6020 3051

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DUPLICATE SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: SOIL **Sample ID:** 9980109011S **Client ID:** FTSW-AA-SO-03SD **LIMS ID:** 1017049

Percent Solids for Sample: 92.14 **Duplicate ID:** 9980109011SD **Percent Solids for Duplicate:** 92.14

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	0 - 20	7362.51		6779.94		8.24		M
Copper	mg/Kg	0 - 20	20.995		19.961		5		M
Lead	mg/Kg	0 - 20	23.515		21.757		8		M
Zinc	mg/Kg	0 - 20	210.303		193.072		9		M

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DUPLICATE SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: SOIL **Sample ID:** 9980109017S **Client ID:** FTSW-AA-SO-08 [02]SD **LIMS ID:** 1017051

Percent Solids for Sample: 78.02 **Duplicate ID:** 9980109017SD **Percent Solids for Duplicate:** 78.02

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	0 - 20	36987.22		20269.47		58.40	*	M
Copper	mg/Kg	0 - 20	21.522		20.605		4		M
Lead	mg/Kg	0 - 20	30.929		29.135		6		M
Zinc	mg/Kg	0 - 20	232.970		218.813		6		M

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LABORATORY CONTROL SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Aqueous LCS Source: **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Q	QC Criteria	M
1017047									
	Aluminum	mg/Kg	200.0	221.1		110.6		80 - 120	M
	Copper	mg/Kg	20.0	20.9		104.5		80 - 120	M
	Lead	mg/Kg	20.0	21.1		105.5		80 - 120	M
	Zinc	mg/Kg	200.0	219.9		110.0		80 - 120	M

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SERIAL DILUTION SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Matrix: WATER **Level:** LOW **Client ID:** FTSW-AA-SO-09L

Sample ID: 9980109019 **Serial Dilution ID:** 9980109019L

Analyte	Initial Result mg/L	C	Serial Result mg/L	C	% Difference	Qual	Acceptance Limits	M
Aluminum	17.0097		17.5171		3		10.00 %	M
Zinc	0.0256		0.0268		5		10.00 %	M

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LINEAR RANGES

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Instrument ID: AGILENT 7700 ICPMS **Date:** 1/19/2012

Analyte	Integration Time (sec)	LDR mg/L
Aluminum	1.00	90
Copper	1.00	50
Lead	1.00	5
Zinc	1.00	50

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SAMPLE PREPARATION SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-001

Contract: ERT001|Ft. Stewart 3153-004 **Lab Code:** CAS **Method:** MS

Case No.: _____ **SAS No.:** _____

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	473510						
1017046	MB for HBN 473510 [MDIG/3729	MB	QC-SOLI	7/31/12	0.50	50.0	100.00
1017047	LCS for HBN 473510 [MDIG/3729	LCS	QC-SOLI	7/31/12	0.50	50.0	100.00
9980109001	FTSW-AA-SO-10[02]	SAM	SOIL	7/31/12	0.54	50.0	79.77
9980109003	FTSW-AA-SO-11	SAM	SOIL	7/31/12	0.53	50.0	96.00
9980109004	FTSW-AA-SO-12 [01.5]	SAM	SOIL	7/31/12	0.54	50.0	78.02
9980109005	FTSW-AA-SO-13	SAM	SOIL	7/31/12	0.58	50.0	68.08
9980109006	FTSW-AA-SO-14 [02]	SAM	SOIL	7/31/12	0.55	50.0	82.11
9980109007	FTSW-AA-SO-15	SAM	SOIL	7/31/12	0.54	50.0	84.36
9980109008	FTSW-AA-SO-16 [01.5]	SAM	SOIL	7/31/12	0.51	50.0	75.83
9980109009	FTSW-AA-SO-01	SAM	SOIL	7/31/12	0.55	50.0	64.89
9980109010	FTSW-AA-SO-02 [01.5]	SAM	SOIL	7/31/12	0.59	50.0	92.56
9980109011	FTSW-AA-SO-03	SAM	SOIL	7/31/12	0.52	50.0	92.14
9980109011S	FTSW-AA-SO-03S	MS	SOIL	7/31/12	0.52	50.0	92.14
9980109011SD	FTSW-AA-SO-03SD	MSD	SOIL	7/31/12	0.57	50.0	92.14
9980109012	FTSW-AA-SO-03 DUP	SAM	SOIL	7/31/12	0.59	50.0	95.31
9980109013	FTSW-AA-SO-04 [01.5]	SAM	SOIL	7/31/12	0.58	50.0	84.92
9980109014	FTSW-AA-SO-05	SAM	SOIL	7/31/12	0.58	50.0	83.47
9980109015	FTSW-AA-SO-07	SAM	SOIL	7/31/12	0.56	50.0	93.85
9980109016	FTSW-AA-SO-06 [01.5]	SAM	SOIL	7/31/12	0.58	50.0	80.20
9980109017	FTSW-AA-SO-08 [02]	SAM	SOIL	7/31/12	0.54	50.0	78.02
9980109017S	FTSW-AA-SO-08 [02]S	MS	SOIL	7/31/12	0.53	50.0	78.02
9980109017SD	FTSW-AA-SO-08 [02]SD	MSD	SOIL	7/31/12	0.57	50.0	78.02
9980109018	FTSW-AA-SO-08 [02] DUP	SAM	SOIL	7/31/12	0.51	50.0	79.48
9980109019	FTSW-AA-SO-09	SAM	SOIL	7/31/12	0.56	50.0	72.84

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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT001|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-001

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A080712

Start Date: 8/7/2012 End Date: 8/7/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	0812																										
BLK	1.00	0816		X									X		X										X	
STANDARD 1	1.00	0820		X									X		X										X	
STANDARD 2	1.00	0824		X									X		X										X	
STANDARD 3	1.00	0827		X									X		X										X	
STANDARD 4	1.00	0831		X									X		X										X	
STANDARD 5	1.00	0835		X									X		X										X	
ICV	1.00	0839		X									X		X										X	
ZZZZZZ	1.00	0843																								
ICB2	1.00	0847		X									X		X										X	
LLICV	1.00	0851		X									X		X										X	
ICS-A1	1.00	0857		X									X		X										X	
ICS-AB1	1.00	0901		X									X		X										X	
ZZZZZZ	5.00	0908																								
ZZZZZZ	5.00	0912																								
ZZZZZZ	5.00	0916																								
ZZZZZZ	5.00	0920																								
ZZZZZZ	5.00	0924																								
ZZZZZZ	5.00	0927																								
ZZZZZZ	5.00	0931																								
ZZZZZZ	5.00	0935																								
ZZZZZZ	5.00	0939																								
ZZZZZZ	5.00	0943																								
CCV1	1.00	0946		X									X		X										X	
CCB1	1.00	0950		X									X		X										X	
LLCCV	1.00	0954		X									X		X										X	
ZZZZZZ	25.00	0959																								
ZZZZZZ	1.00	1003																								
ZZZZZZ	1.00	1009																								
1017046	5.00	1014		X									X		X										X	
1017047	5.00	1019		X									X		X										X	
9980109001	5.00	1023		X									X		X										X	
9980109003	5.00	1027		X									X		X										X	
9980109004	5.00	1031		X									X		X										X	
9980109005	5.00	1035		X									X		X										X	
9980109006	5.00	1039		X									X		X										X	

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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT001|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-001

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A080712

Start Date: 8/7/2012 End Date: 8/7/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV2	1.00	1043		X									X		X										X	
CCB2	1.00	1047		X									X		X										X	
LLCCV	1.00	1050		X									X		X										X	
9980109007	5.00	1054		X									X		X										X	
9980109008	5.00	1058		X									X		X										X	
9980109009	5.00	1102		X									X		X										X	
9980109010	5.00	1106		X									X		X										X	
9980109011	5.00	1110		X									X		X										X	
9980109011S	5.00	1114		X									X		X										X	
9980109011SD	5.00	1118		X									X		X										X	
ZZZZZZ	5.00	1122																								
9980109012	5.00	1125		X									X		X										X	
9980109013	5.00	1129		X									X		X										X	
CCV3	1.00	1133		X									X		X										X	
CCB3	1.00	1137		X									X		X										X	
LLCCV	1.00	1141		X									X		X										X	
9980109014	5.00	1145		X									X		X										X	
9980109015	5.00	1149		X									X		X										X	
9980109016	5.00	1153		X									X		X										X	
9980109017	5.00	1157		X									X		X										X	
9980109017S	5.00	1201		X									X		X										X	
9980109017SD	5.00	1204		X									X		X										X	
ZZZZZZ	5.00	1208																								
9980109018	5.00	1212		X									X		X										X	
9980109019	5.00	1216		X									X		X										X	
9980109019L	25.00	1220		X																					X	
CCV4	1.00	1224		X									X		X										X	
CCB4	1.00	1231		X									X		X										X	
LLCCV	1.00	1234		X									X		X										X	
ZZZZZZ	1.00	1239																								
ZZZZZZ	1.00	1243																								
ZZZZZZ	1.00	1248																								
ZZZZZZ	1.00	1252																								
ZZZZZZ	1.00	1300																								
ZZZZZZ	1.00	1304																								
ZZZZZZ	1.00	1308																								

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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT001|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-001

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A080712

Start Date: 8/7/2012 End Date: 8/7/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1329																								
ZZZZZZ	1.00	1333																								
ZZZZZZ	1.00	1337																								
ZZZZZZ	1.00	1340																								
ZZZZZZ	1.00	1344																								
ZZZZZZ	5.00	1348																								
ZZZZZZ	1.00	1352																								
ZZZZZZ	1.00	1359																								
ZZZZZZ	1.00	1409																								
ZZZZZZ	1.00	1413																								
ZZZZZZ	1.00	1417																								
ZZZZZZ	1.00	1421																								
ZZZZZZ	1.00	1425																								
ZZZZZZ	1.00	1447																								
ZZZZZZ	1.00	1450																								
ZZZZZZ	1.00	1454																								
ZZZZZZ	1.00	1458																								
ZZZZZZ	1.00	1502																								
ZZZZZZ	5.00	1506																								
ZZZZZZ	1.00	1510																								
ZZZZZZ	1.00	1513																								
ZZZZZZ	1.00	1517																								
ZZZZZZ	1.00	1528																								
ZZZZZZ	5.00	1549																								
ZZZZZZ	5.00	1553																								
ZZZZZZ	1.00	1558																								
ZZZZZZ	1.00	1602																								
ZZZZZZ	1.00	1606																								
ZZZZZZ	5.00	1642																								
ZZZZZZ	5.00	1646																								
ZZZZZZ	5.00	1650																								
ZZZZZZ	5.00	1654																								
ZZZZZZ	5.00	1658																								
ZZZZZZ	5.00	1702																								
ZZZZZZ	5.00	1706																								
ZZZZZZ	1.00	1710																								

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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT001|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-001

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A080712

Start Date: 8/7/2012 End Date: 8/7/2012

EPA Sample No.	D/F	Time	% R	Analytes																									
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1713																									
ZZZZZZ	1.00	1717																									
ZZZZZZ	1.00	1721																									
ZZZZZZ	1.00	1725																									
ZZZZZZ	5.00	1729																									
ZZZZZZ	5.00	1733																									
ZZZZZZ	1.00	1737																									
ZZZZZZ	1.00	1741																									
ZZZZZZ	1.00	1745																									
ZZZZZZ	1.00	1749																									
ZZZZZZ	1.00	1752																									
ZZZZZZ	1.00	1756																									
ZZZZZZ	1.00	1800																									
ZZZZZZ	1.00	1804																									
ZZZZZZ	1.00	1808																									
ZZZZZZ	1.00	1945																									

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT001|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-001

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/07/2012 End Date: 08/07/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
BLK	ZZZZZZ	0812												
BLK	BLK	0816	100		100		100		100		100		100	
STANDARD 1	STANDARD 1	0820	99		98		98		100		101		101	
STANDARD 2	STANDARD 2	0824	104		101		103		104		105		102	
STANDARD 3	STANDARD 3	0827	103		100		104		104		104		101	
STANDARD 4	STANDARD 4	0831	106		105		109		110		109		106	
STANDARD 5	STANDARD 5	0835	104		102		107		108		102		106	
ICV	ICV	0839	105		102		105		105		105		103	
ICB1	ZZZZZZ	0843												
ICB2	ICB	0847	107		102		108		107		111		103	
LLICV	LLICV	0851	103		98		105		107		94		100	
ICS-A1	ICSA	0857	93		99		97		105		109		106	
ICS-AB1	ICSAB	0901	94		102		99		106		109		109	
1015362	ZZZZZZ	0908												
1015363	ZZZZZZ	0912												
1017907	ZZZZZZ	0916												
1017908	ZZZZZZ	0920												
9980583001	ZZZZZZ	0924												
1017909	ZZZZZZ	0927												
1017910	ZZZZZZ	0931												
9980583001P	ZZZZZZ	0935												
9980583002	ZZZZZZ	0939												
9980583004	ZZZZZZ	0943												
CCV1	CCV	0946	106		108		111		111		103		111	
CCB1	CCB	0950	104		106		108		109		110		111	
LLCCV	LLCCV	0954	105		106		107		110		110		108	
9980583004L	ZZZZZZ	0959												
LDR 2 PPM	ZZZZZZ	1003												
CHECK	ZZZZZZ	1009												
1017046	MB for HBN 47351	1014	104		107		107		114		110		105	
1017047	LCS for HBN 4735	1019	96		95		98		100		108		106	
9980109001	FTSW-AA-SO-10[02	1023	107		104		109		109		110		106	
9980109003	FTSW-AA-SO-11	1027	106		102		105		106		104		102	
9980109004	FTSW-AA-SO-12 [0	1031	107		100		103		104		104		99	
9980109005	FTSW-AA-SO-13	1035	104		99		103		105		105		101	
9980109006	FTSW-AA-SO-14 [0	1039	91		85		89		92		104		100	
CCV2	CCV	1043	105		103		107		106		110		101	
CCB2	CCB	1047	107		105		108		109		108		106	
LLCCV	LLCCV	1050	109		104		108		109		107		108	
9980109007	FTSW-AA-SO-15	1054	109		107		110		115		109		108	
9980109008	FTSW-AA-SO-16 [0	1058	109		104		108		109		109		107	
9980109009	FTSW-AA-SO-01	1102	106		101		105		105		105		101	
9980109010	FTSW-AA-SO-02 [0	1106	105		102		106		107		106		104	
9980109011	FTSW-AA-SO-03	1110	106		101		106		105		106		104	
9980109011S	FTSW-AA-SO-03S	1114	106		101		105		107		106		104	

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT001|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-001

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/07/2012 End Date: 08/07/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980109011S	FTSW-AA-SO-03SD	1118	105		100		105		105		105		101	
9980109011	ZZZZZZ	1122												
9980109012	FTSW-AA-SO-03 DU	1125	108		102		107		106		105		103	
9980109013	FTSW-AA-SO-04 [0	1129	105		101		104		107		106		103	
CCV3	CCV	1133	106		103		107		107		106		104	
CCB3	CCB	1137	108		102		106		103		110		102	
LLCCV	LLCCV	1141	105		101		106		106		106		102	
9980109014	FTSW-AA-SO-05	1145	104		100		104		104		105		103	
9980109015	FTSW-AA-SO-07	1149	106		99		104		105		103		101	
9980109016	FTSW-AA-SO-06 [0	1153	106		100		106		104		99		94	
9980109017	FTSW-AA-SO-08 [0	1157	104		98		103		108		109		106	
9980109017S	FTSW-AA-SO-08 [0	1201	103		100		104		110		112		108	
9980109017S	FTSW-AA-SO-08 [0	1204	103		100		103		108		111		107	
9980109017P	FTSW-AA-SO-08 [0	1208	106		101		106		109		108		106	
9980109018	FTSW-AA-SO-08 [0	1212	101		100		102		109		111		108	
9980109019	FTSW-AA-SO-09	1216	103		102		106		105		106		105	
9980109019L	FTSW-AA-SO-09L	1220	101		100		102		103		89		102	
CCV4	CCV	1224	102		102		106		107		107		106	
CCB4	CCB	1231	101		102		103		106		103		106	
LLCCV	LLCCV	1234	101		102		104		105		107		102	
LDR 50 PPM	ZZZZZZ	1239												
CHECK	ZZZZZZ	1243												
CCV5	ZZZZZZ	1248												
CCB5	ZZZZZZ	1252												
LLCCV	ZZZZZZ	1300												
CCV6	ZZZZZZ	1304												
1017577	ZZZZZZ	1308												
1017578	ZZZZZZ	1329												
1019627	ZZZZZZ	1333												
1019628	ZZZZZZ	1337												
9980109002	ZZZZZZ	1340												
9980394006	ZZZZZZ	1344												
9980394006L	ZZZZZZ	1348												
9980394014	ZZZZZZ	1352												
9980394006P	ZZZZZZ	1359												
CCV7	ZZZZZZ	1409												
CCB6	ZZZZZZ	1413												
LLCCV	ZZZZZZ	1417												
CCV8	ZZZZZZ	1421												
9980395006	ZZZZZZ	1425												
9980395006S	ZZZZZZ	1447												
9980395006S	ZZZZZZ	1450												
9980875015	ZZZZZZ	1454												
1019629	ZZZZZZ	1458												
1019630	ZZZZZZ	1502												

6020 3051

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT001|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-001

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/07/2012 End Date: 08/07/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980875015L	ZZZZZZ	1506												
CCV9	ZZZZZZ	1510												
CCB7	ZZZZZZ	1513												
LLCCV	ZZZZZZ	1517												
CCV10	ZZZZZZ	1528												
9979663004	ZZZZZZ	1549												
9979678003	ZZZZZZ	1553												
CCV11	ZZZZZZ	1558												
CCB8	ZZZZZZ	1602												
LLCCV	ZZZZZZ	1606												
9980477001	ZZZZZZ	1642												
9980477002	ZZZZZZ	1646												
9980478001	ZZZZZZ	1650												
9980478002	ZZZZZZ	1654												
9980478003	ZZZZZZ	1658												
9980478004	ZZZZZZ	1702												
9980478004L	ZZZZZZ	1706												
CCV12	ZZZZZZ	1710												
CCB9	ZZZZZZ	1713												
LLCCV	ZZZZZZ	1717												
9975539001	ZZZZZZ	1721												
9975539002	ZZZZZZ	1725												
9975539001	ZZZZZZ	1729												
9975539002	ZZZZZZ	1733												
CHECK	ZZZZZZ	1737												
CHECK	ZZZZZZ	1741												
CHECK	ZZZZZZ	1745												
CHECK	ZZZZZZ	1749												
CHECK	ZZZZZZ	1752												
CHECK	ZZZZZZ	1756												
CCV13	ZZZZZZ	1800												
CCB10	ZZZZZZ	1804												
LLCCV	ZZZZZZ	1808												
LLCCV	ZZZZZZ	1945												

Total Metals in Solid by 6020A Raw Data

Dataset: A080712 2nd Review Lam

First Review: MWO Approval: Lam 8.7.12

Internal Standards: **ICPMS9190**

200	60-125%	**6020Qc:**	70-130%	**6020A**	30-130%	**DOD:**	70-120%

Standards :
Tuning MS0361
Daily Standard: MS0361

Calibration Standards
MS0343
MS0344

PIPETTES:

03-028	10.0 mL
03-202	.200 mL
03-201	1.0 mL
03-031	1.0 mL

ICSA: MS0341
ICSAB:MS0340

GOLD: MS0346
DW LCS: MS0358
Second Source

MA1393	MA1388	MA1360
MA1342	MS0345	MA1381
MS0309	MA1359	

Internal Standards/ Target Analytes

Sc-Al,V,Cr,Mn,Co,Ni,Cu,Na, K, Ti, Mg, Ca, Fe, As, Zn, Se,
Y
In-Sr, Mo, Ag, Cd, Sn, Sb, Ba
Tb
Bi-Hg, Tl, Pb, U

Fe out in opening QC.

Case Narrative:

*D: *D at the beginning of the Dataset Denotes that the samples were run on the Elan DRCe ICP-MS*

200.8 Tune Check Sample Report

Batch Folder C:\Agilent\ICPMH\1\DATA\A080612 TUNE.b
Report Comment
Instrument Name G3281A JP11040846

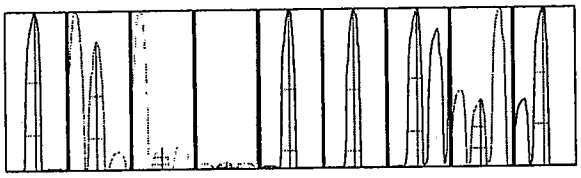
[no Gas]

Mass	Count (Actual)
9	48981
24	156895
25	21828
26	26320
59	336983
115	438792
206	102692
207	95589
208	202094

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	0.72	5.00	
24	0.79	5.00	
25	1.10	5.00	
26	0.46	5.00	
59	1.19	5.00	
115	0.82	5.00	
206	1.24	5.00	
207	2.29	5.00	
208	0.55	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	49517	48977	48772	49057	48581
24	158720	157559	156215	156388	155590
25	22019	21960	21791	21944	21423
26	26506	26367	26289	26190	26247
59	342220	339661	336783	333396	332855
115	443308	440284	438250	438724	433395
206	104659	102986	102654	101485	101678
207	98827	96854	94434	94117	93711
208	203164	202058	203261	200775	201211

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	7425	9.00	6.9 - 9.1		0.792	0.850	
24	25341	23.90	23.9 - 24.1		0.786	0.850	
25	3445	24.95	24.9 - 25.1		0.787	0.850	
26	4225	25.95	25.9 - 26.1		0.773	0.850	
59	54681	58.95	58.9 - 59.1		0.771	0.850	
115	74884	115.00	114.9 - 115.1		0.725	0.850	
206	16322	205.95	205.9 - 206.1		0.747	0.850	
207	14151	206.95	206.9 - 207.1		0.738	0.850	
208	33931	207.95	207.9 - 208.1		0.737	0.850	

X% = 10 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 235.1 **Y Axis =** Linear

Tune Parameters

Plasma Paramters

RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
RF Matching	1.80 V	Optional Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	DilutionGas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	9.7 V	Deflect	15.4 V
Extract 2	-190.0 V	Cell Entrance	-34 V	Plate Bias	-50 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

OctP Bias	-8.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	200 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	001CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:12:17-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	21852	0.14
Cr	52	1	No Gas	34572	0.01
Mn	55	1	No Gas	30791	0.02
Co	59	1	No Gas	244	14.04
Ni	60	1	No Gas	500	2.80
Cu	63	1	No Gas	11909	0.00
Sr	88	1	No Gas	248	10.26
Ag	107	1	No Gas	85	31.88
Al	27	1	No Gas	10403	0.02
Sn	118	1	No Gas	13077	0.23
Ti	47	1	No Gas	3264	0.80
Zn	66	1	No Gas	1003	0.40
As	75	3	HeHe	100	16.05
As	75	1	No Gas	26028	0.07
Sb	121	1	No Gas	5731	0.49
Hg	201	1	No Gas	36	131.85
Be	9	1	No Gas	14	269.97
Pb	208	1	No Gas	21200	0.00
Se	82	1	No Gas	179	60.64
Mo	98	1	No Gas	37245	0.09
Ba	137	1	No Gas	83	59.96
Tl	205	1	No Gas	107	62.66
U	238	1	No Gas	1371	2.25
Na	23	2	he	112860	0.00
Mg	24	2	he	470	6.14
K	39	2	he	253444	0.00
Se	82	3	HeHe	87	22.26
Fe	57	3	HeHe	474	6.73
Cd	114	1	No Gas	703	5.28
Ca	44	1	No Gas	65587	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	9318028	0.91
Sc	45	2	he	1766521	1.57
Ge	72	1	No Gas	1005789	0.47
In	115	1	No Gas	5661518	1.48
Tb	159	1	No Gas	6831155	0.65

Calibration Blank Report

Bi	209	1	No Gas	3774501	0.92
Sc	45	3	HeHe	172918	0.76

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	002CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:16:15-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	21094	0.14
Cr	52	1	No Gas	34138	0.01
Mn	55	1	No Gas	36389	0.00
Co	59	1	No Gas	159	48.25
Ni	60	1	No Gas	510	2.69
Cu	63	1	No Gas	11740	0.00
Sr	88	1	No Gas	193	19.95
Ag	107	1	No Gas	70	56.46
Al	27	1	No Gas	10326	0.02
Sn	118	1	No Gas	6861	0.34
Ti	47	1	No Gas	1316	1.88
Zn	66	1	No Gas	993	1.13
As	75	3	HeHe	39	99.57
As	75	1	No Gas	26735	0.04
Sb	121	1	No Gas	2856	0.80
Hg	201	1	No Gas	23	97.96
Be	9	1	No Gas	22	180.12
Pb	208	1	No Gas	17529	0.02
Se	82	1	No Gas	64	27.91
Mo	98	1	No Gas	11922	0.33
Ba	137	1	No Gas	93	35.07
Tl	205	1	No Gas	56	108.00
U	238	1	No Gas	285	11.78
Na	23	2	he	111386	0.00
Mg	24	2	he	374	4.65
K	39	2	he	243446	0.00
Se	82	3	HeHe	113	7.35
Fe	57	3	HeHe	374	0.46
Cd	114	1	No Gas	360	8.59
Ca	44	1	No Gas	64419	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	9248342	1.26
Sc	45	2	he	1744643	1.17
Ge	72	1	No Gas	1012122	1.06
In	115	1	No Gas	5760110	0.77
Tb	159	1	No Gas	6952439	1.03

Bi	209	1	No Gas	3846945	0.42
Sc	45	3	HeHe	171212	2.47

Calibration Standard Report

Sample Table

Sample Name	Standard 1
Data File Name	003CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:20:10-04:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	18063	0.07
Cr	52	1	No Gas	38963	0.01
Mn	55	1	No Gas	49023	0.00
Co	59	1	No Gas	5383	0.09
Ni	60	1	No Gas	1580	0.11
Cu	63	1	No Gas	15285	0.01
Sr	88	1	No Gas	6524	0.12
Ag	107	1	No Gas	3104	0.22
Al	27	1	No Gas	59462	0.00
Sn	118	1	No Gas	6709	0.35
Ti	47	1	No Gas	1652	0.72
Zn	66	1	No Gas	1780	0.74
As	75	3	HeHe	68	24.13
As	75	1	No Gas	26543	0.06
Sb	121	1	No Gas	4705	0.18
Hg	201	1	No Gas	38	49.94
Be	9	1	No Gas	661	1.29
Pb	208	1	No Gas	20348	0.03
Se	82	1	No Gas	132	106.96
Mo	98	1	No Gas	10414	0.29
Ba	137	1	No Gas	893	1.26
Tl	205	1	No Gas	3982	0.08
U	238	1	No Gas	4697	0.16
Na	23	2	he	117342	0.00
Mg	24	2	he	3408	0.35
K	39	2	he	261549	0.00
Se	82	3	HeHe	89	12.06
Fe	57	3	HeHe	293	11.04
Cd	114	1	No Gas	1547	1.11
Ca	44	1	No Gas	69431	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9230482	1.11	9248342	99.81	70	120	
Sc	45	2	he	1761372	0.68	1744643	100.96	70	120	
Ge	72	1	No Gas	991031	1.22	1012122	97.92	70	120	

Calibration Standard Report

In	115	1	No Gas	5660258	1.42	5760110	98.27	70	120	
Tb	159	1	No Gas	6804369	1.26	6952439	97.87	70	120	
Bi	209	1	No Gas	3791147	2.08	3846945	98.55	70	120	
Sc	45	3	HeHe	172414	2.77	171212	100.70	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 2
Data File Name	004CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:24:04-04:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	75240	0.01
Cr	52	1	No Gas	79879	0.00
Mn	55	1	No Gas	97795	0.00
Co	59	1	No Gas	50904	0.00
Ni	60	1	No Gas	12542	0.01
Cu	63	1	No Gas	41498	0.00
Sr	88	1	No Gas	67816	0.00
Ag	107	1	No Gas	31349	0.01
Al	27	1	No Gas	140284	0.00
Sn	118	1	No Gas	23599	0.02
Ti	47	1	No Gas	5303	0.05
Zn	66	1	No Gas	12980	0.00
As	75	3	HeHe	484	0.89
As	75	1	No Gas	32611	0.01
Sb	121	1	No Gas	26036	0.02
Hg	201	1	No Gas	93	35.35
Be	9	1	No Gas	6422	0.04
Pb	208	1	No Gas	81148	0.00
Se	82	1	No Gas	320	7.94
Mo	98	1	No Gas	26675	0.05
Ba	137	1	No Gas	9030	0.04
Tl	205	1	No Gas	42273	0.01
U	238	1	No Gas	51558	0.00
Na	23	2	he	158442	0.00
Mg	24	2	he	24922	0.02
K	39	2	he	304695	0.00
Se	82	3	HeHe	123	10.00
Fe	57	3	HeHe	1474	0.83
Cd	114	1	No Gas	13716	0.00
Ca	44	1	No Gas	87487	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9606577	0.99	9248342	103.87	70	120	
Sc	45	2	he	1830837	0.65	1744643	104.94	70	120	
Ge	72	1	No Gas	1021767	0.80	1012122	100.95	70	120	

Calibration Standard Report

In	115	1	No Gas	5934139	0.96	5760110	103.02	70	120	
Tb	159	1	No Gas	7112799	0.83	6952439	102.31	70	120	
Bi	209	1	No Gas	3993179	0.68	3846945	103.80	70	120	
Sc	45	3	HeHe	174349	0.65	171212	101.83	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 3
Data File Name	005CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:27:58-04:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	536384	0.00
Cr	52	1	No Gas	499471	0.00
Mn	55	1	No Gas	607526	0.00
Co	59	1	No Gas	513478	0.00
Ni	60	1	No Gas	115198	0.00
Cu	63	1	No Gas	291757	0.00
Sr	88	1	No Gas	673644	0.00
Ag	107	1	No Gas	302621	0.00
Al	27	1	No Gas	419330	0.00
Sn	118	1	No Gas	180565	0.00
Ti	47	1	No Gas	41510	0.00
Zn	66	1	No Gas	78050	0.00
As	75	3	HeHe	4653	0.12
As	75	1	No Gas	92057	0.00
Sb	121	1	No Gas	236636	0.00
Hg	201	1	No Gas	544	0.31
Be	9	1	No Gas	64582	0.00
Pb	208	1	No Gas	585512	0.00
Se	82	1	No Gas	3813	0.30
Mo	98	1	No Gas	185502	0.00
Ba	137	1	No Gas	83581	0.00
Tl	205	1	No Gas	422428	0.00
U	238	1	No Gas	512538	0.00
Na	23	2	he	496695	0.00
Mg	24	2	he	224038	0.00
K	39	2	he	599398	0.00
Se	82	3	HeHe	317	2.40
Fe	57	3	HeHe	11456	0.02
Cd	114	1	No Gas	138636	0.00
Ca	44	1	No Gas	202707	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9599585	0.21	9248342	103.80	70	120	
Sc	45	2	he	1819752	1.49	1744643	104.31	70	120	
Ge	72	1	No Gas	1016046	0.79	1012122	100.39	70	120	

Calibration Standard Report

In	115	1	No Gas	5960241	0.35	5760110	103.47	70	120	
Tb	159	1	No Gas	7215156	0.72	6952439	103.78	70	120	
Bi	209	1	No Gas	3949111	0.62	3846945	102.66	70	120	
Sc	45	3	HeHe	172939	1.30	171212	101.01	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 4
Data File Name	006CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:31:52-04:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	5638942	0.00
Cr	52	1	No Gas	4979669	0.00
Mn	55	1	No Gas	6192129	0.00
Co	59	1	No Gas	5447044	0.00
Ni	60	1	No Gas	1182013	0.00
Cu	63	1	No Gas	2985102	0.00
Sr	88	1	No Gas	6997417	0.00
Ag	107	1	No Gas	3174830	0.00
Al	27	1	No Gas	3653098	0.00
Sn	118	1	No Gas	1886235	0.00
Tl	47	1	No Gas	418509	0.00
Zn	66	1	No Gas	721550	0.00
As	75	3	HeHe	49452	0.00
As	75	1	No Gas	739186	0.00
Sb	121	1	No Gas	2555108	0.00
Hg	201	1	No Gas	5250	0.01
Be	9	1	No Gas	666474	0.00
Pb	208	1	No Gas	5859721	0.00
Se	82	1	No Gas	38718	0.00
Mo	98	1	No Gas	1996551	0.00
Ba	137	1	No Gas	841402	0.00
Tl	205	1	No Gas	4323264	0.00
U	238	1	No Gas	5263199	0.00
Na	23	2	he	4611890	0.00
Mg	24	2	he	2551831	0.00
K	39	2	he	3991640	0.00
Se	82	3	HeHe	2508	0.14
Fe	57	3	HeHe	117956	0.00
Cd	114	1	No Gas	1480140	0.00
Ca	44	1	No Gas	1479565	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	10207257	1.85	9248342	110.37	70	120	
Sc	45	2	he	1908011	1.86	1744643	109.36	70	120	
Ge	72	1	No Gas	1060324	1.35	1012122	104.76	70	120	

Calibration Standard Report

In	115	1	No Gas	6277627	0.94	5760110	108.98	70	120	
Tb	159	1	No Gas	7433190	0.78	6952439	106.91	70	120	
Bi	209	1	No Gas	4079951	1.27	3846945	106.06	70	120	
Sc	45	3	HeHe	181248	0.69	171212	105.86	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 5
Data File Name	007CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:35:41-04:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	10826451	0.00
Cr	52	1	No Gas	9637889	0.00
Mn	55	1	No Gas	11866703	0.00
Co	59	1	No Gas	10711214	0.00
Ni	60	1	No Gas	2413544	0.00
Cu	63	1	No Gas	5819480	0.00
Sr	88	1	No Gas	13751395	0.00
Ag	107	1	No Gas	6225088	0.00
Al	27	1	No Gas	6829165	0.00
Sn	118	1	No Gas	3750576	0.00
Ti	47	1	No Gas	823588	0.00
Zn	66	1	No Gas	1429052	0.00
As	75	3	HeHe	96786	0.00
As	75	1	No Gas	1481593	0.00
Sb	121	1	No Gas	4866586	0.00
Hg	201	1	No Gas	10743	0.02
Be	9	1	No Gas	1447602	0.00
Pb	208	1	No Gas	11462241	0.00
Se	82	1	No Gas	76676	0.00
Mo	98	1	No Gas	3907993	0.00
Ba	137	1	No Gas	1694987	0.00
Tl	205	1	No Gas	8390950	0.00
U	238	1	No Gas	10428690	0.00
Na	23	2	he	8720906	0.00
Mg	24	2	he	4821494	0.00
K	39	2	he	7360101	0.00
Se	82	3	HeHe	4959	0.02
Fe	57	3	HeHe	233280	0.00
Cd	114	1	No Gas	2908805	0.00
Ca	44	1	No Gas	2795845	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9993227	0.18	9248342	108.05	70	120	
Sc	45	2	he	1774489	1.33	1744643	101.71	70	120	
Ge	72	1	No Gas	1031020	0.52	1012122	101.87	70	120	

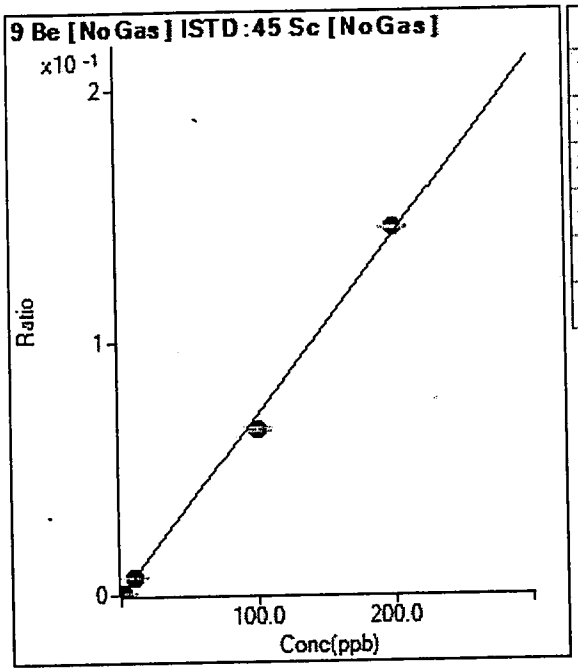
Calibration Standard Report

In	115	1	No Gas	6133321	1.61	5760110	106.48	70	120	
Tb	159	1	No Gas	7274529	1.23	6952439	104.63	70	120	
Bi	209	1	No Gas	4005913	0.87	3846945	104.13	70	120	
Sc	45	3	HeHe	182051	0.95	171212	106.33	70	120	

Calibration for 071_CCV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\A080712.b\
Analysis File: A080712.batch.bin
DA Date-Time: 8/7/2012 1:05:32 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

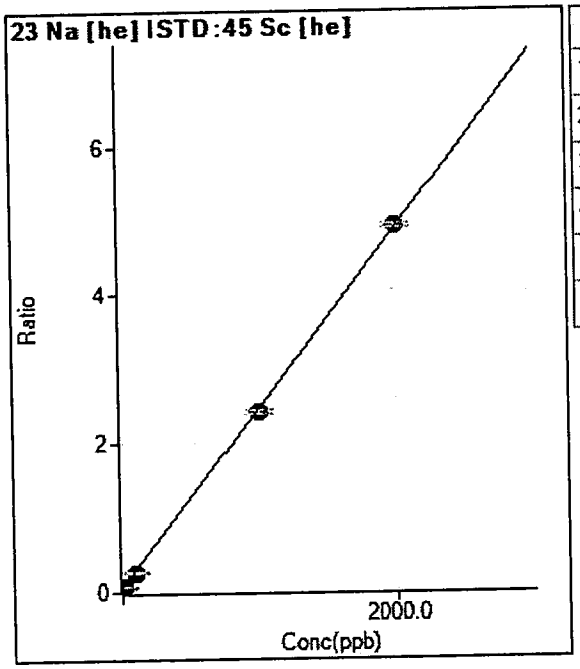
Level	Standard Data File	Sample Name	Acq. Date-Time
1	002CALB.d	blk	8/7/2012 8:16:15 AM
2	003CALS.d	Standard 1	8/7/2012 8:20:10 AM
3	004CALS.d	Standard 2	8/7/2012 8:24:04 AM
4	005CALS.d	Standard 3	8/7/2012 8:27:58 AM
5	006CALS.d	Standard 4	8/7/2012 8:31:52 AM
6	007CALS.d	Standard 5	8/7/2012 8:35:41 AM



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.00	0.0000	P	40.0
2	☐	0.100	0.098	661.35	0.0001	P	8.4
3	☐	1.000	0.938	6422.49	0.0007	P	2.3
4	☐	10.000	9.473	64581.75	0.0067	P	1.2
5	☐	100.000	91.991	666474.04	0.0653	P	2.3
6	☐	200.000	204.031	1447602.42	0.1449	A	0.8

y = 7.0996E-004 * x + 2.3808E-006
R = 0.9989
DL = 0.004029
BEC = 0.003353

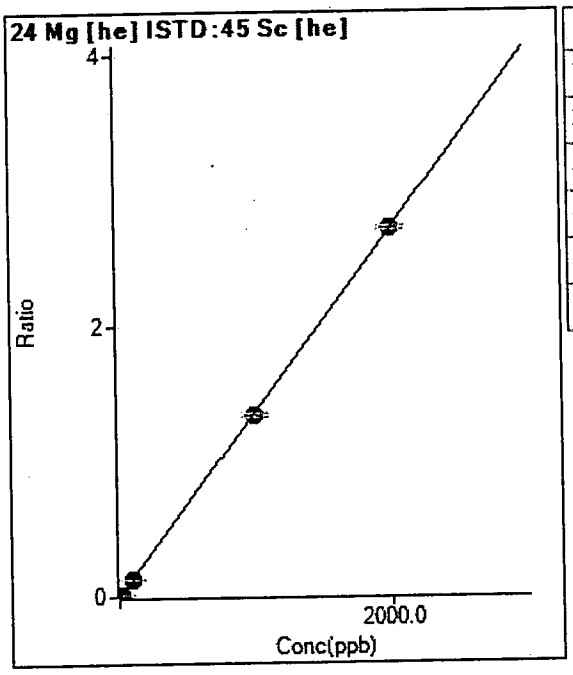
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	111385.71	0.0639	P	4.6
2	☐			117342.24	0.0666	P	1.3
3	☐	10.000	9.407	158441.63	0.0865	P	1.3
4	☐	100.000	86.740	496695.47	0.2730	P	1.2
5	☐	1000.000	976.358	4611889.86	2.4174	A	1.7
6	☐	2000.000	2012.487	8720906.27	4.9150	A	1.0

y = 0.0024 * x + 0.0639
R = 0.9999
DL = 3.687
BEC = 26.49

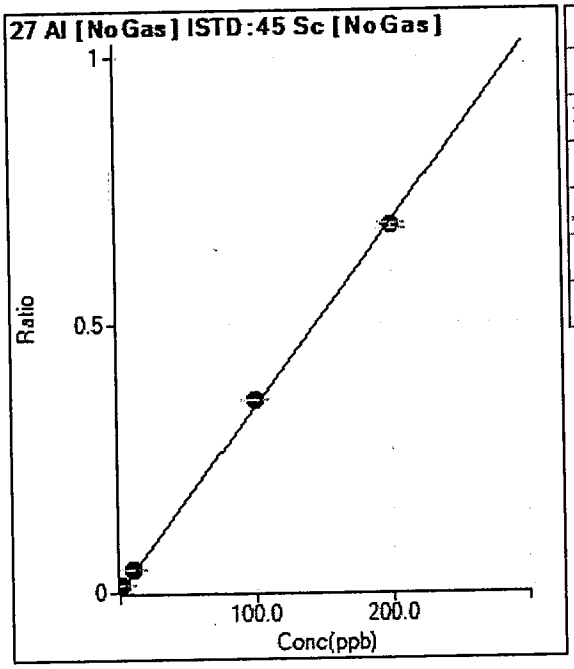
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	374.10	0.0002	P	16.5
2	☐			3407.90	0.0019	P	11.9
3	☐	10.000	9.897	24921.94	0.0136	P	6.1
4	☐	100.000	90.757	224037.56	0.1231	P	0.7
5	☐	1000.000	987.738	2551831.50	1.3377	A	2.2
6	☐	2000.000	2006.594	4821493.91	2.7174	A	1.2

y = 0.0014 * x + 2.1419E-004
R = 1.0000
DL = 0.07847
BEC = 0.1582

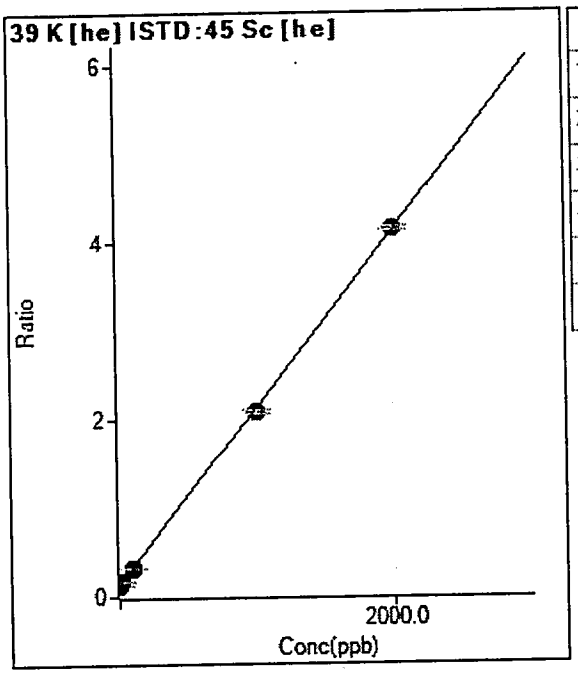
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10325.69	0.0011	P	3.2
2	☐			59461.87	0.0064	P	2.9
3	☐	1.000	3.916	140283.57	0.0146	P	1.6
4	☐	10.000	12.358	419330.09	0.0437	P	1.3
5	☐	100.000	103.580	3653098.12	0.3579	A	0.6
6	☐	200.000	198.078	6829164.54	0.6834	A	1.4

y = 0.0034 * x + 0.0011
R = 0.9998
DL = 0.03075
BEC = 0.3242

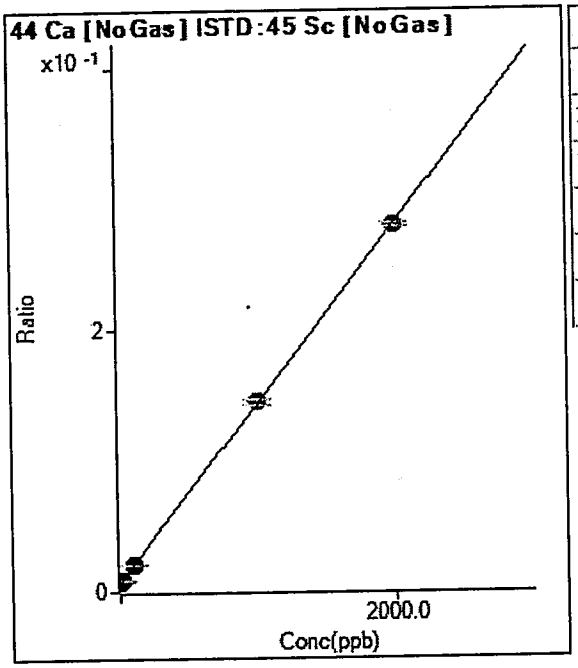
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	243445.55	0.1396	P	2.7
2				261549.24	0.1485	P	0.7
3		10.000	13.468	304695.36	0.1664	P	0.6
4		100.000	95.209	599397.65	0.3294	P	2.1
5		1000.000	979.526	3991640.12	2.0926	A	2.1
6		2000.000	2010.459	7360101.33	4.1480	A	1.1

y = 0.0020 * x + 0.1396
R = 0.9999
DL = 5.695
BEC = 70

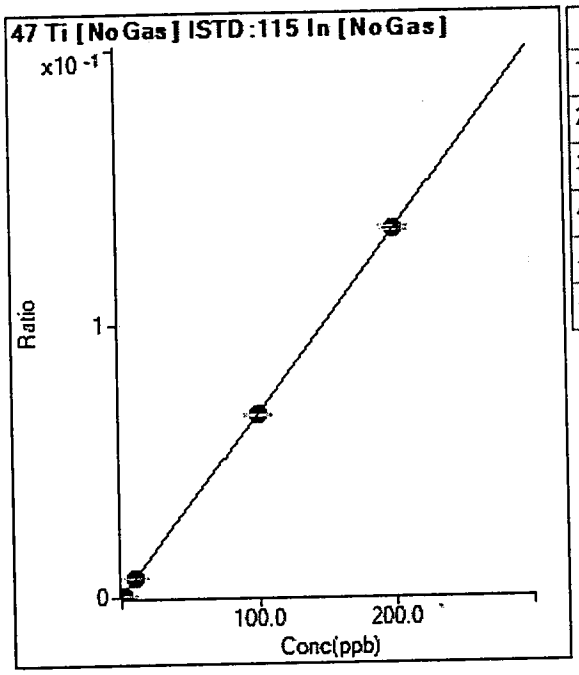
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	64419.26	0.0070	P	2.5
2				69430.84	0.0075	P	8.6
3		10.000	15.649	87487.23	0.0091	P	4.2
4		100.000	103.491	202707.19	0.0211	P	1.7
5		1000.000	1009.457	1479564.93	0.1450	A	3.2
6		2000.000	1995.069	2795845.17	0.2798	A	1.1

y = 1.3674E-004 * x + 0.0070
R = 1.0000
DL = 3.8
BEC = 50.93

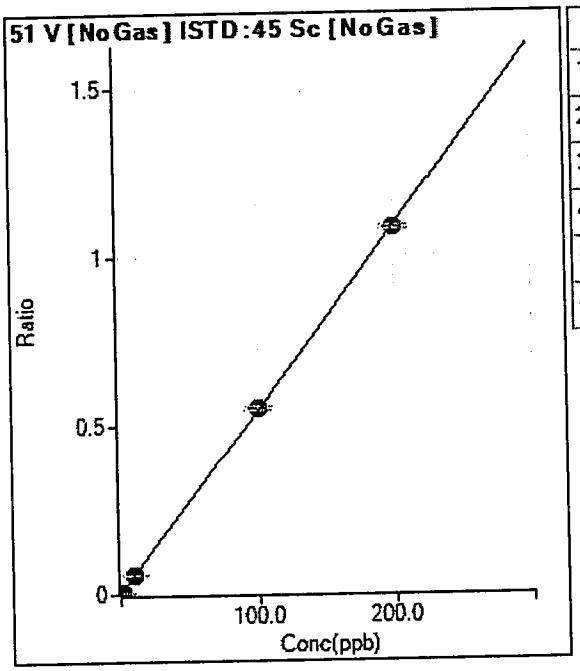
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1315.75	0.0002	P	24.7
2	☐	0.100	0.095	1651.73	0.0003	P	13.3
3	☐	1.000	0.995	5303.43	0.0009	P	3.6
4	☐	10.000	10.067	41510.48	0.0070	P	1.7
5	☐	100.000	99.291	418508.63	0.0667	P	1.1
6	☐	200.000	200.351	823588.40	0.1343	P	1.2

y = 6.6917E-004 * x + 2.2834E-004
R = 1.0000
DL = 0.2524
BEC = 0.3412

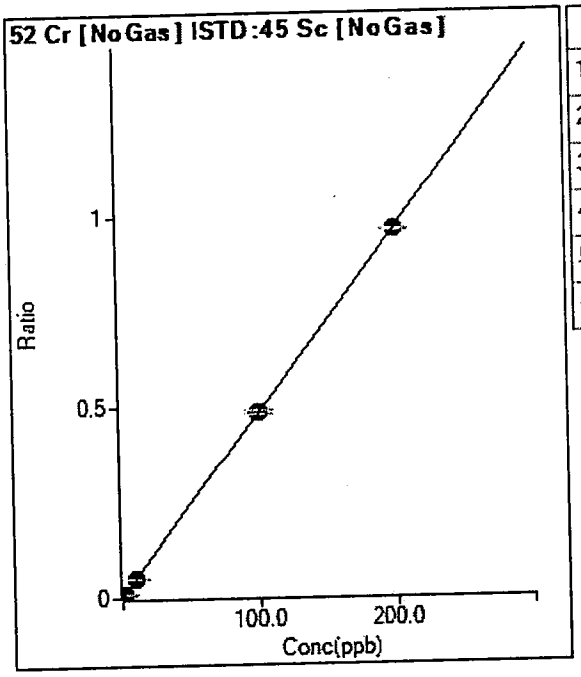
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21093.76	0.0023	P	29.5
2	☐	0.100	-0.061	18063.48	0.0020	P	11.4
3	☐	1.000	1.022	75239.91	0.0078	P	8.3
4	☐	10.000	9.879	536384.01	0.0559	P	2.7
5	☐	100.000	101.444	5638942.05	0.5526	A	2.4
6	☐	200.000	199.284	10826451.35	1.0834	A	1.1

y = 0.0054 * x + 0.0023
R = 1.0000
DL = 0.3732
BEC = 0.4215

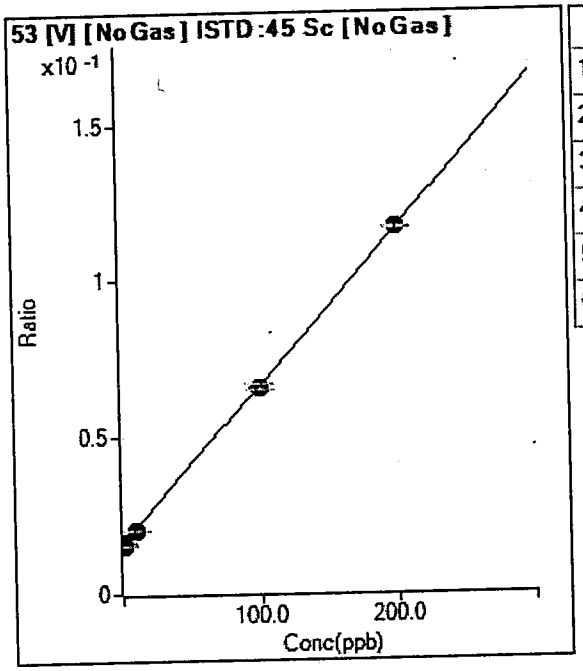
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	34138.23	0.0037	P	5.7
2		0.100	0.110	38962.87	0.0042	P	3.2
3		1.000	0.961	79879.22	0.0083	P	2.2
4		10.000	10.046	499471.34	0.0520	P	1.1
5		100.000	100.638	4979668.67	0.4879	A	2.0
6		200.000	199.679	9637888.74	0.9644	A	0.6

y = 0.0048 * x + 0.0037
R = 1.0000
DL = 0.1302
BEC = 0.7675

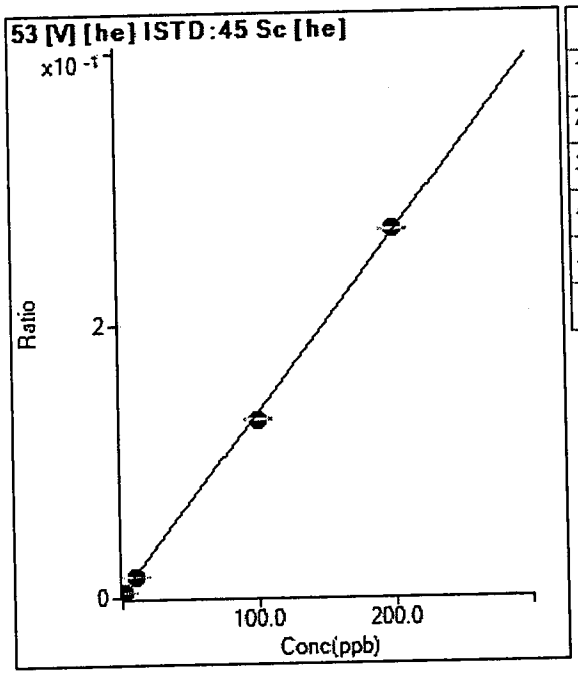
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	149554.69	0.0162	P	0.5
2		0.100	1.015	153951.55	0.0167	P	1.7
3		1.000	-1.133	149877.05	0.0156	P	2.0
4		10.000	8.414	195723.03	0.0204	P	2.1
5		100.000	98.717	669822.89	0.0656	P	2.8
6		200.000	200.731	1166872.46	0.1168	P	0.5

y = 5.0114E-004 * x + 0.0162
R = 0.9999
DL = 0.4835
BEC = 32.27

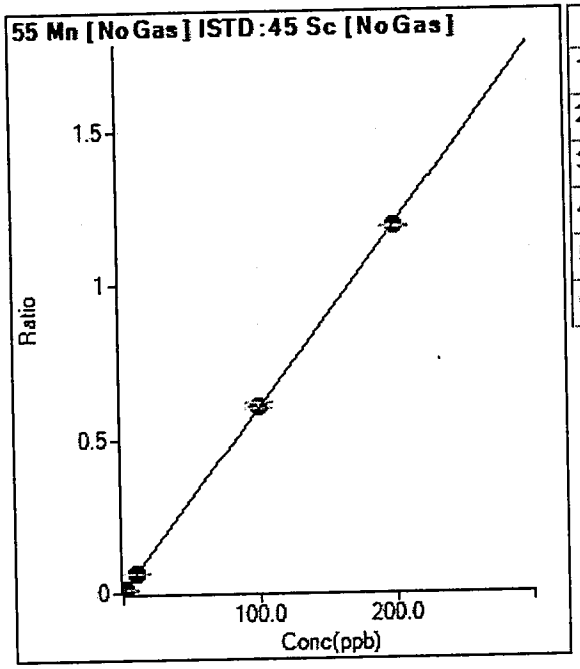
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6523.76	0.0037	P	2.7
2	☐	0.100	0.178	7001.69	0.0040	P	5.9
3	☐	1.000	0.660	8439.50	0.0046	P	3.8
4	☐	10.000	9.229	28935.89	0.0159	P	2.5
5	☐	100.000	96.246	249133.30	0.1306	P	1.3
6	☐	200.000	201.917	478832.97	0.2699	P	0.5

y = 0.0013 * x + 0.0037
R = 0.9998
DL = 0.2296
BEC = 2.838

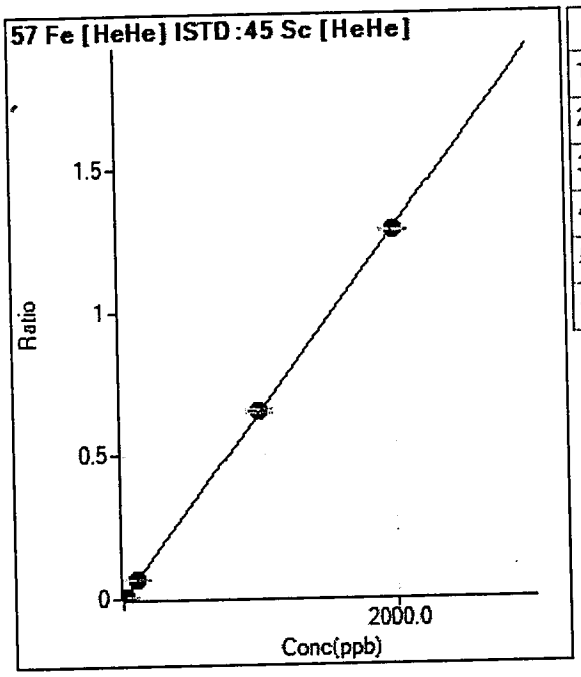
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36389.16	0.0039	P	2.5
2	☐	0.100	0.232	49022.90	0.0053	P	2.6
3	☐	1.000	1.052	97794.51	0.0102	P	3.7
4	☐	10.000	9.992	607526.39	0.0633	P	0.9
5	☐	100.000	101.501	6192129.38	0.6068	A	3.1
6	☐	200.000	199.249	11866703.23	1.1875	A	0.4

y = 0.0059 * x + 0.0039
R = 1.0000
DL = 0.04907
BEC = 0.6625

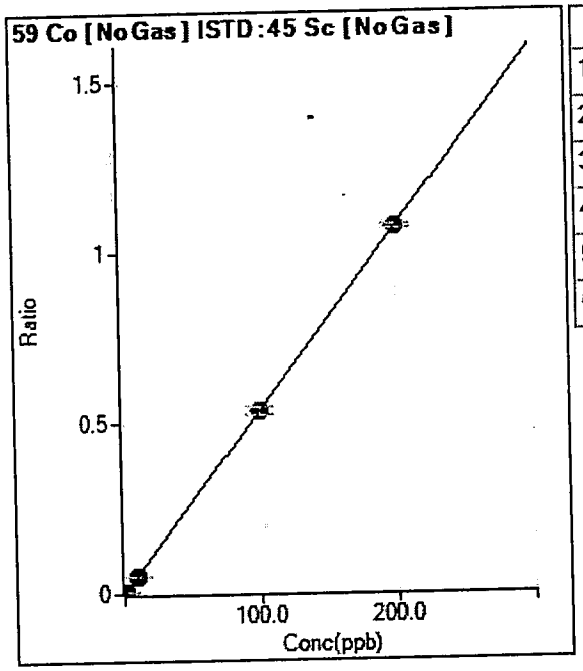
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	3.400	374.10	0.0022	P	2.1
2	☐			292.61	0.0017	P	29.7
3	☐	10.000	13.155	1474.21	0.0085	P	12.3
4	☐	100.000	103.056	11456.05	0.0662	P	1.6
5	☐	1000.000	1012.524	117955.50	0.6508	P	2.3
6	☐	2000.000	1993.570	233280.34	1.2814	P	0.4

y = 6.4275E-004 * x
R = 1.0000
DL = 0.2166
BEC = 0

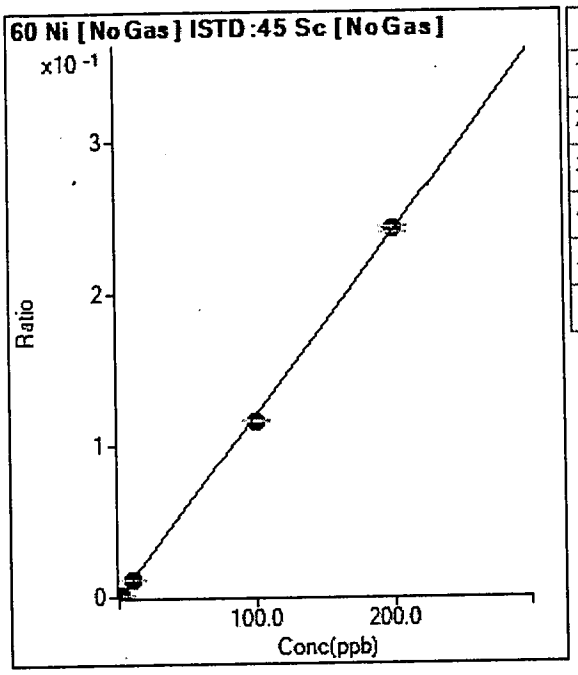
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	159.27	0.0000	P	75.6
2	☐	0.100	0.106	5382.58	0.0006	P	4.0
3	☐	1.000	0.986	50904.40	0.0053	P	2.9
4	☐	10.000	9.985	513478.35	0.0535	P	0.7
5	☐	100.000	99.702	5447043.65	0.5339	A	4.4
6	☐	200.000	200.150	10711213.93	1.0718	A	1.0

y = 0.0054 * x + 1.7113E-005
R = 1.0000
DL = 0.007244
BEC = 0.003196

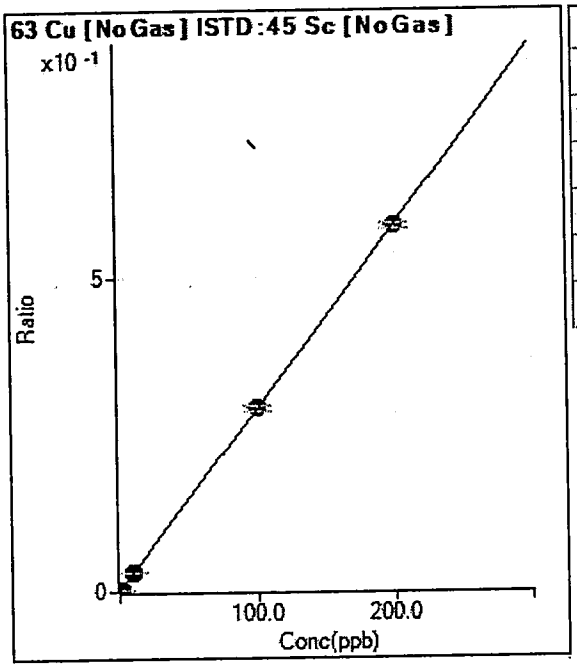
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	510.03	0.0001	P	13.6
2	☐	0.100	0.097	1580.14	0.0002	P	2.7
3	☐	1.000	1.044	12541.64	0.0013	P	1.1
4	☐	10.000	9.976	115198.15	0.0120	P	0.8
5	☐	100.000	96.689	1182012.74	0.1158	P	2.0
6	☐	200.000	201.656	2413544.03	0.2415	A	1.8

y = 0.0012 * x + 5.5141E-005
R = 0.9998
DL = 0.01879
BEC = 0.04605

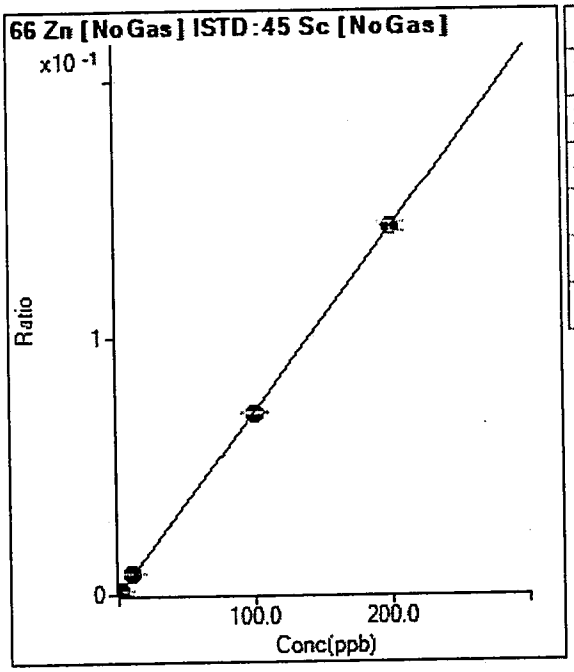
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11739.95	0.0013	P	1.5
2	☐	0.100	0.133	15285.32	0.0017	P	1.6
3	☐	1.000	1.049	41498.26	0.0043	P	0.4
4	☐	10.000	10.019	291757.45	0.0304	P	0.6
5	☐	100.000	100.204	2985102.00	0.2926	A	2.9
6	☐	200.000	199.897	5819480.00	0.5823	A	1.3

y = 0.0029 * x + 0.0013
R = 1.0000
DL = 0.01912
BEC = 0.4367

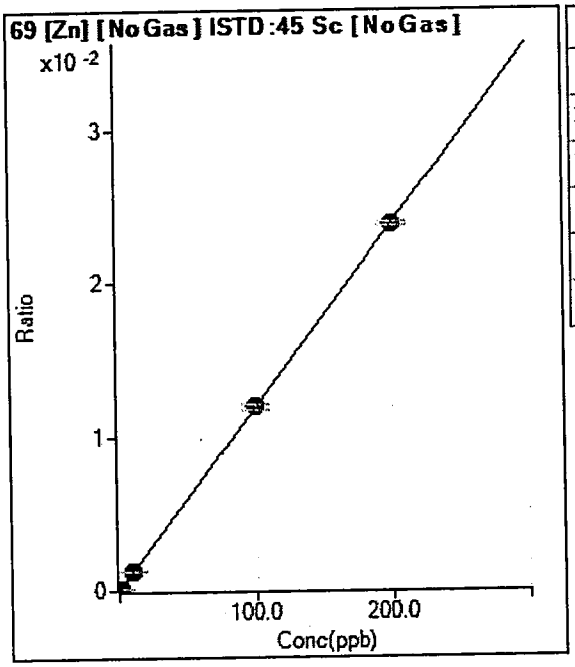
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	993.30	0.0001	P	11.9
2	☐	0.100	0.120	1779.98	0.0002	P	14.2
3	☐	1.000	1.745	12980.00	0.0014	P	1.6
4	☐	10.000	11.253	78050.21	0.0081	P	0.6
5	☐	100.000	99.016	721549.68	0.0707	P	1.3
6	☐	200.000	200.426	1429051.62	0.1430	M	2.8

y = 7.1295E-004 * x + 1.0747E-004
R = 1.0000
DL = 0.05375
BEC = 0.1507

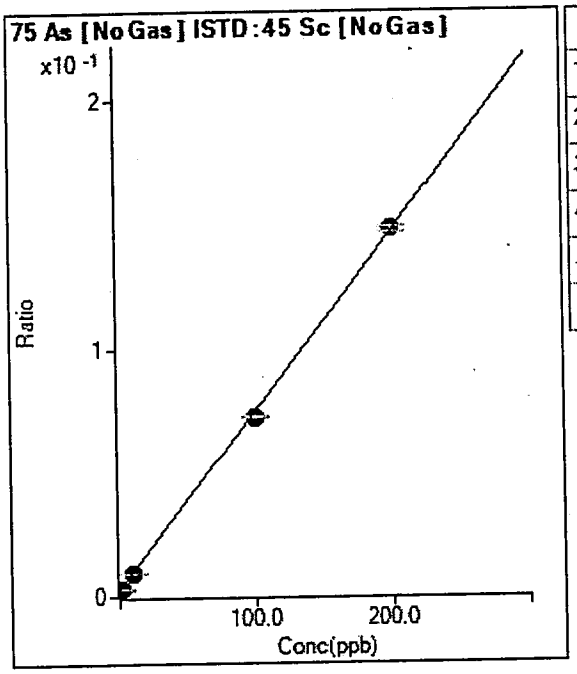
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	77.78	0.0000	P	38.2
2	☐	0.100	0.061	144.45	0.0000	P	32.5
3	☐	1.000	1.161	1407.54	0.0001	P	5.4
4	☐	10.000	10.400	11956.58	0.0012	P	3.1
5	☐	100.000	100.273	121816.85	0.0119	P	2.7
6	☐	200.000	199.843	237644.60	0.0238	P	1.2

y = 1.1895E-004 * x + 8.4155E-006
R = 1.0000
DL = 0.081
BEC = 0.07075

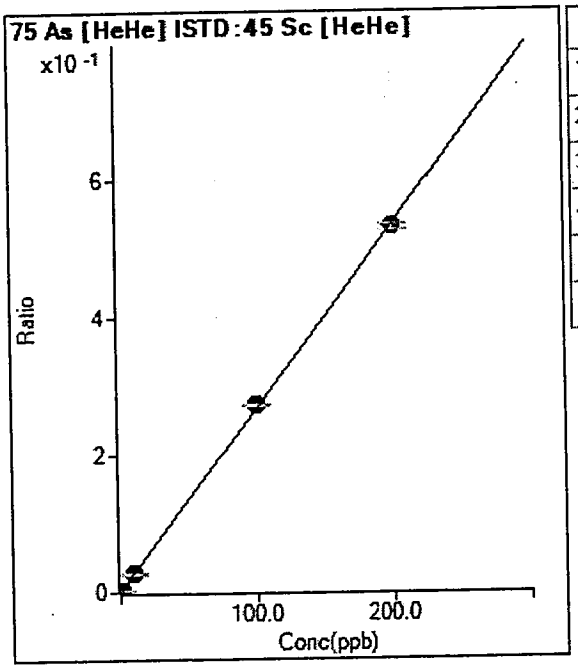
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26735.37	0.0029	P	11.7
2	☐	0.100	-0.023	26542.86	0.0029	P	16.6
3	☐	1.000	0.697	32610.52	0.0034	P	2.9
4	☐	10.000	9.295	92057.25	0.0096	P	0.3
5	☐	100.000	96.521	739186.23	0.0724	P	1.4
6	☐	200.000	201.776	1481592.55	0.1483	A	1.5

y = 7.2043E-004 * x + 0.0029
R = 0.9998
DL = 1.407
BEC = 4.016

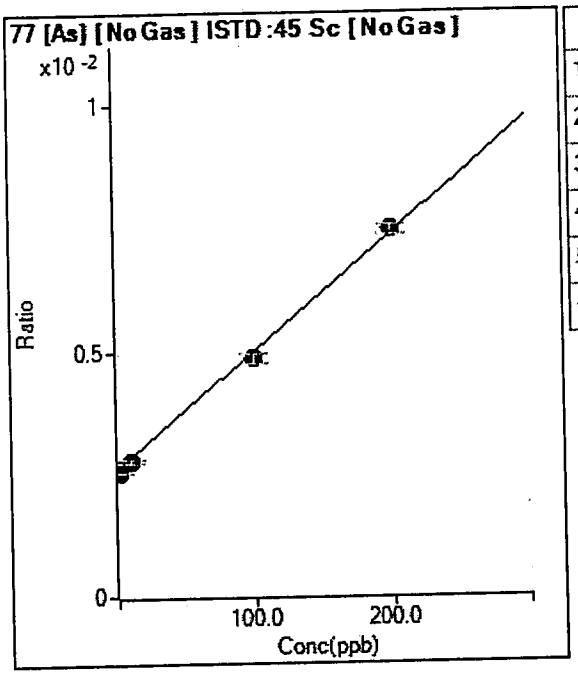
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	39.22	0.0002	P	38.4
2	☐	0.100	0.063	67.97	0.0004	P	18.9
3	☐	1.000	0.953	483.67	0.0028	P	3.8
4	☐	10.000	9.985	4652.94	0.0269	P	4.4
5	☐	100.000	102.077	49451.53	0.2728	P	0.8
6	☐	200.000	198.962	96786.09	0.5316	P	1.4

y = 0.0027 * x + 2.2845E-004
R = 0.9999
DL = 0.09864
BEC = 0.08554

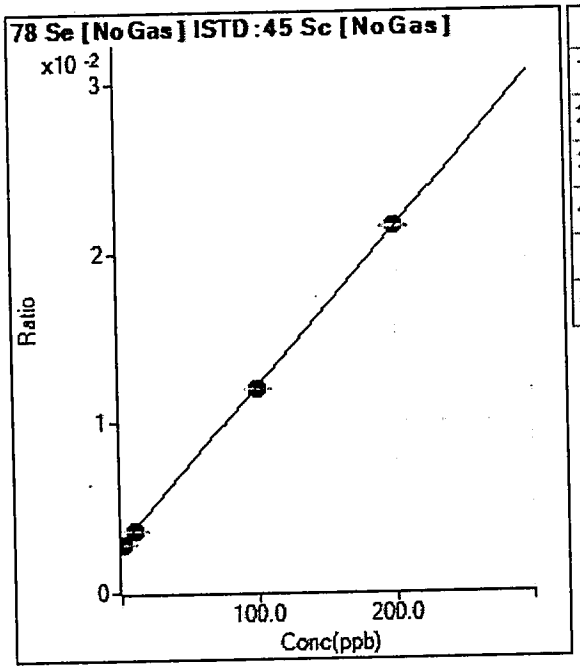
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24210.54	0.0026	P	2.3
2	☐	0.100	2.024	24603.69	0.0027	P	5.3
3	☐	1.000	-3.740	24291.98	0.0025	P	0.3
4	☐	10.000	6.064	26513.84	0.0028	P	2.0
5	☐	100.000	93.540	49411.89	0.0048	P	3.8
6	☐	200.000	203.449	74527.42	0.0075	P	2.4

y = 2.3790E-005 * x + 0.0026
R = 0.9990
DL = 7.636
BEC = 110

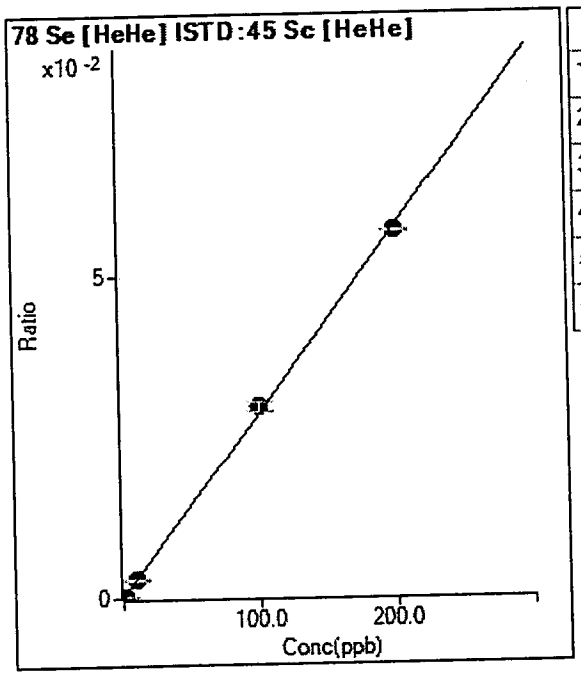
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26343.91	0.0028	P	2.2
2	☐	0.100	0.320	26569.76	0.0029	P	1.3
3	☐	1.000	-0.037	27335.03	0.0028	P	0.9
4	☐	10.000	8.456	34905.20	0.0036	P	1.5
5	☐	100.000	98.162	122331.43	0.0120	P	0.7
6	☐	200.000	201.001	215431.20	0.0216	P	0.6

y = 9.3077E-005 * x + 0.0028
R = 0.9999
DL = 2.022
BEC = 30.61

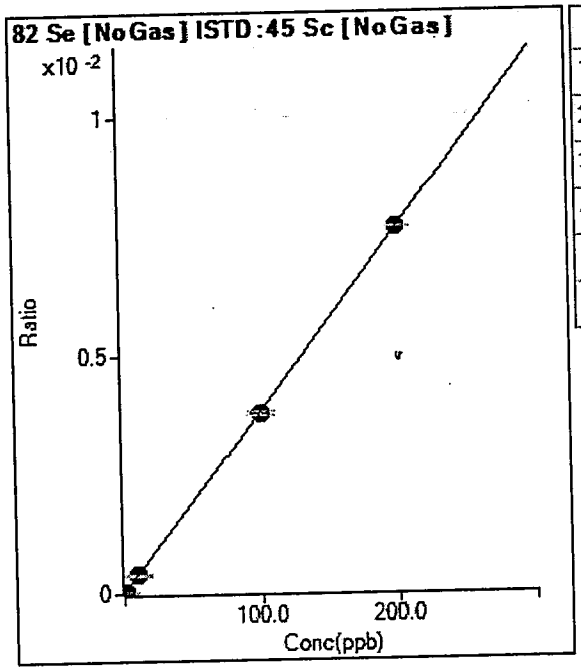
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5.23	0.0000	P	57.8
2	☐	0.100	0.278	18.96	0.0001	P	11.9
3	☐	1.000	1.019	56.21	0.0003	P	7.6
4	☐	10.000	10.023	501.97	0.0029	P	6.4
5	☐	100.000	103.649	5387.14	0.0297	P	5.3
6	☐	200.000	198.174	10339.07	0.0568	P	0.7

y = 2.8642E-004 * x + 3.0497E-005
R = 0.9998
DL = 0.1846
BEC = 0.1065

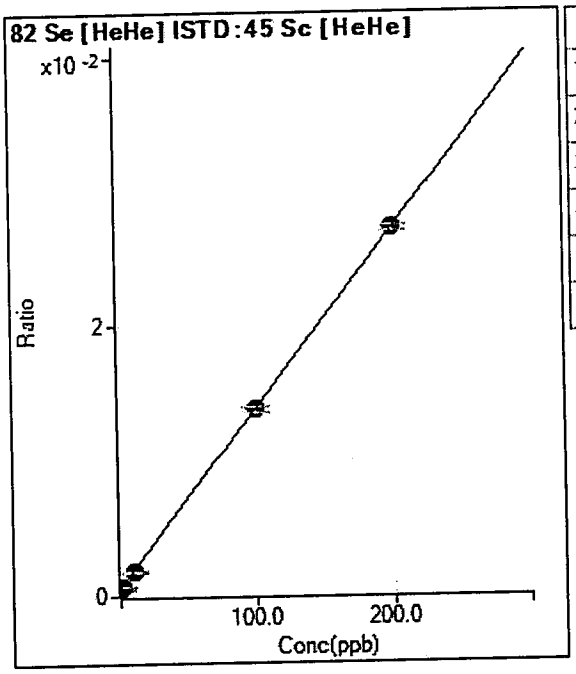
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	64.08	0.0000	P	18.3
2	☐	0.100	0.193	131.66	0.0000	P	140.0
3	☐	1.000	0.691	319.83	0.0000	P	26.2
4	☐	10.000	10.206	3813.38	0.0004	P	11.4
5	☐	100.000	99.040	38717.56	0.0038	P	2.2
6	☐	200.000	200.471	76676.06	0.0077	P	0.1

y = 3.8239E-005 * x + 6.9315E-006
R = 1.0000
DL = 0.09932
BEC = 0.1813

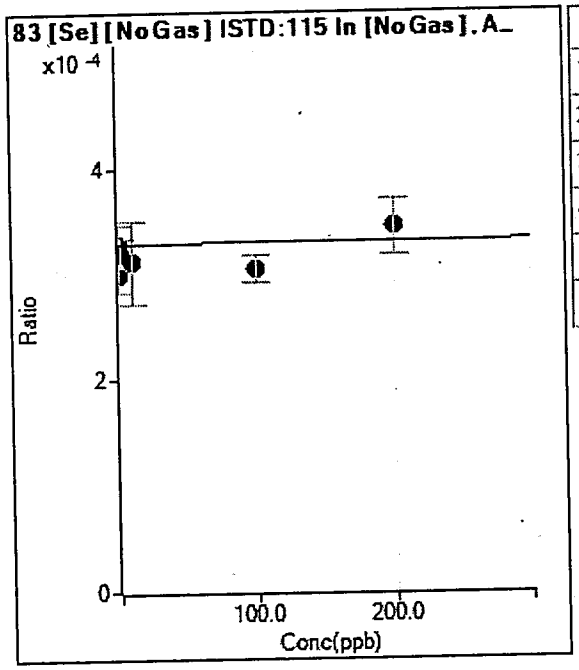
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	112.59	0.0007	P	9.8
2	☐	0.100	-1.098	88.52	0.0005	P	7.9
3	☐	1.000	0.351	122.96	0.0007	P	11.7
4	☐	10.000	8.836	316.67	0.0018	P	6.7
5	☐	100.000	99.349	2508.34	0.0138	P	3.0
6	☐	200.000	200.388	4959.24	0.0272	P	1.3

y = 1.3266E-004 * x + 6.5835E-004
R = 1.0000
DL = 1.454
BEC = 4.963

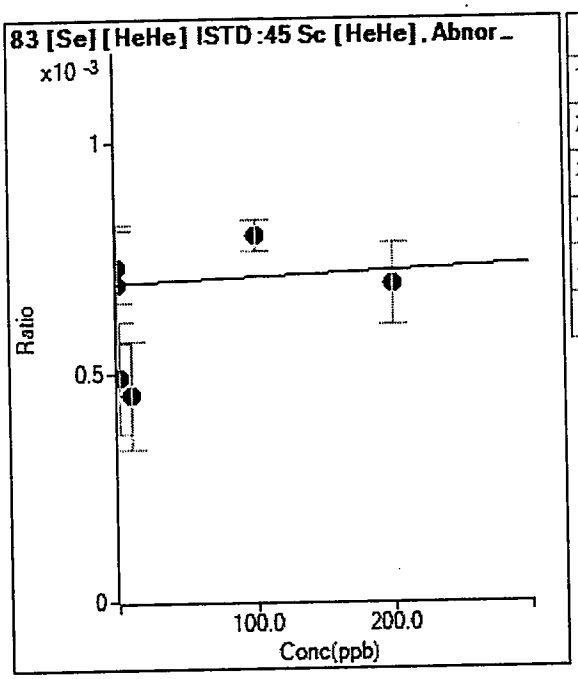
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1892.79	0.0003	P	10.9
2	☐	0.100	-3730.420	1689.05	0.0003	P	10.4
3	☐	1.000	-1145.853	1896.51	0.0003	P	8.5
4	☐	10.000	-2114.365	1855.75	0.0003	P	25.4
5	☐	100.000	-3045.833	1907.62	0.0003	P	8.5
6	☐	200.000	1886.734	2107.65	0.0003	P	15.4

y = 8.1625E-009 * x + 3.2878E-004
R = 0.5535
DL = 1.313E+04
BEC = 4.028E+04

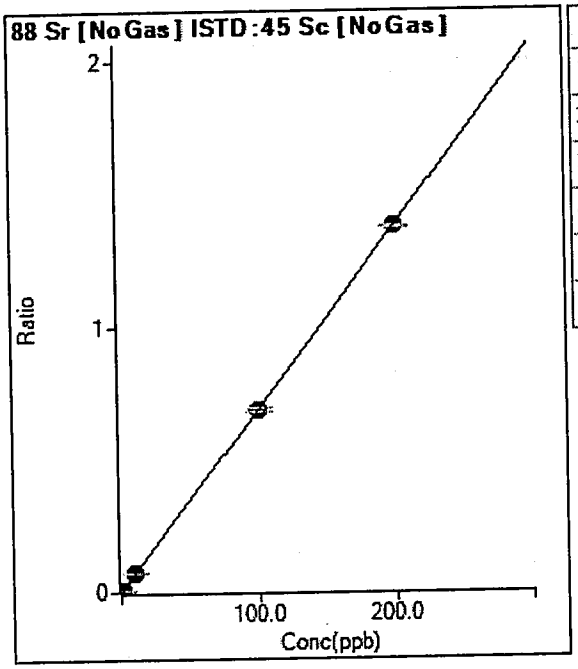
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	118.52	0.0007	P	37.1
2	☐	0.100	273.424	125.93	0.0007	P	20.8
3	☐	1.000	-1480.379	85.19	0.0005	P	49.9
4	☐	10.000	-1750.027	77.78	0.0005	P	52.8
5	☐	100.000	735.343	144.45	0.0008	P	8.4
6	☐	200.000	-22.400	125.93	0.0007	P	25.6

y = 1.3900E-007 * x + 6.9509E-004
R = 0.4026
DL = 5563
BEC = 5001

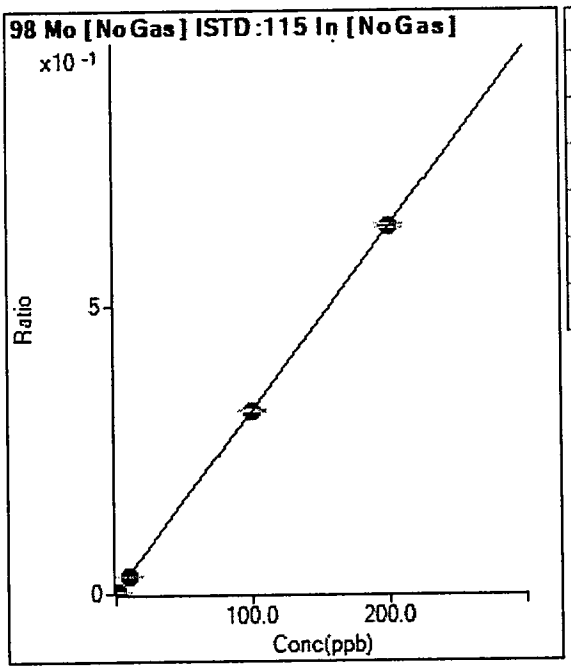
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	192.60	0.0000	P	39.3
2	☐	0.100	0.100	6523.87	0.0007	P	7.8
3	☐	1.000	1.024	67815.96	0.0071	P	1.5
4	☐	10.000	10.203	673643.91	0.0702	P	0.6
5	☐	100.000	99.721	6997417.08	0.6857	A	1.9
6	☐	200.000	200.129	13751394.82	1.3761	A	0.8

y = 0.0069 * x + 2.0867E-005
R = 1.0000
DL = 0.003578
BEC = 0.003035

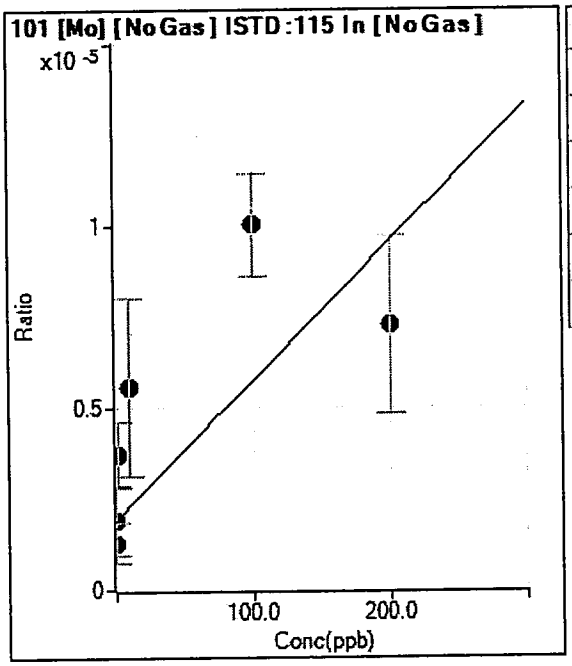
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11922.35	0.0021	P	38.8
2	☐	0.100	-0.070	10414.07	0.0018	P	30.9
3	☐	1.000	0.766	26675.06	0.0045	P	13.1
4	☐	10.000	9.159	185501.65	0.0311	P	1.7
5	☐	100.000	99.614	1996550.72	0.3181	A	1.0
6	☐	200.000	200.236	3907993.07	0.6372	A	1.1

y = 0.0032 * x + 0.0021
R = 1.0000
DL = 0.7586
BEC = 0.652

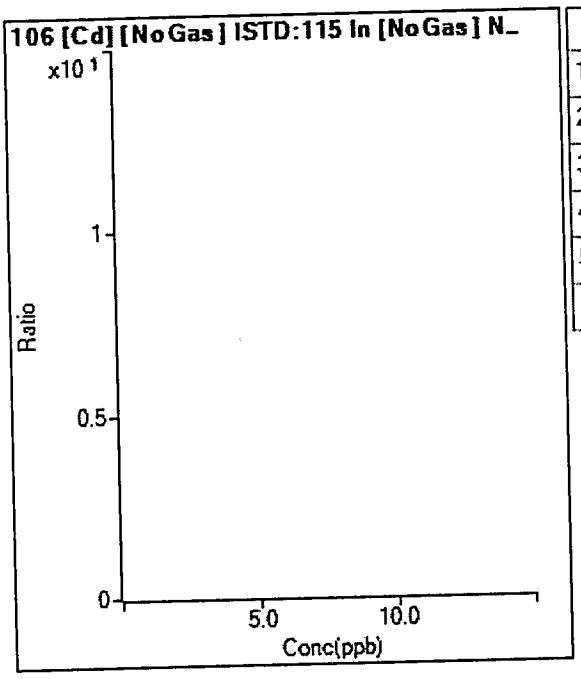
Weight: <None>
Min Conc: <None>



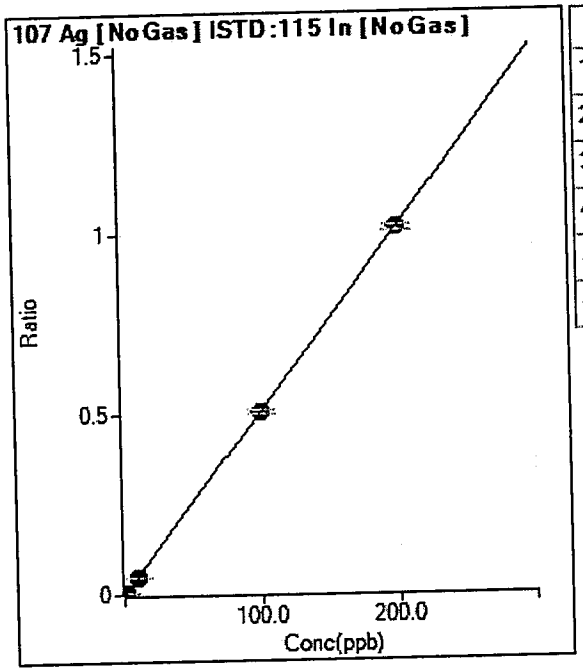
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11.11	0.0000	P	99.8
2	☐	0.100	-16.512	7.41	0.0000	P	86.6
3	☐	1.000	46.903	22.22	0.0000	P	49.2
4	☐	10.000	95.059	33.34	0.0000	P	88.2
5	☐	100.000	211.476	62.97	0.0000	P	27.8
6	☐	200.000	139.788	44.45	0.0000	P	66.8

y = 3.8363E-008 * x + 1.9349E-006
R = 0.7075
DL = 151
BEC = 50.44

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.100					
3	☐	1.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.37	0.0000	P	39.0
2	☐	0.100	0.106	3104.18	0.0005	P	5.8
3	☐	1.000	1.039	31348.53	0.0053	P	1.7
4	☐	10.000	10.008	302621.10	0.0508	P	1.3
5	☐	100.000	99.715	3174830.08	0.5058	A	1.6
6	☐	200.000	200.142	6225088.41	1.0152	A	1.9

y = 0.0051 * x + 1.2193E-005

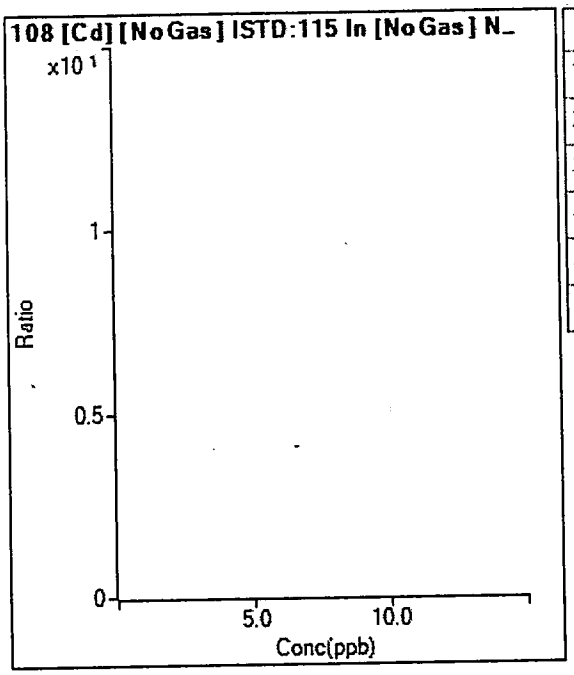
R = 1.0000

DL = 0.002811

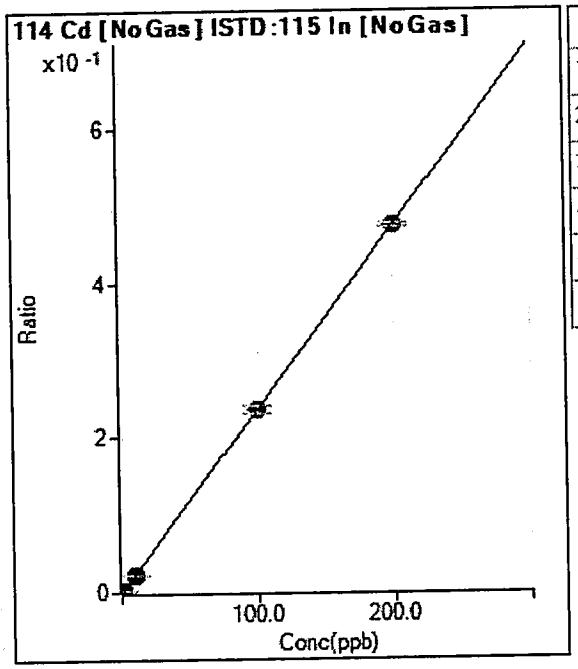
BEC = 0.002404

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.100					
3	☐	1.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	360.02	0.0001	P	30.5
2	☐	0.100	0.089	1546.80	0.0003	P	17.7
3	☐	1.000	0.950	13716.25	0.0023	P	1.2
4	☐	10.000	9.794	138635.90	0.0233	P	1.7
5	☐	100.000	99.547	1480139.82	0.2358	M	3.8
6	☐	200.000	200.237	2908805.06	0.4743	A	1.1

y = 0.0024 * x + 6.2458E-005

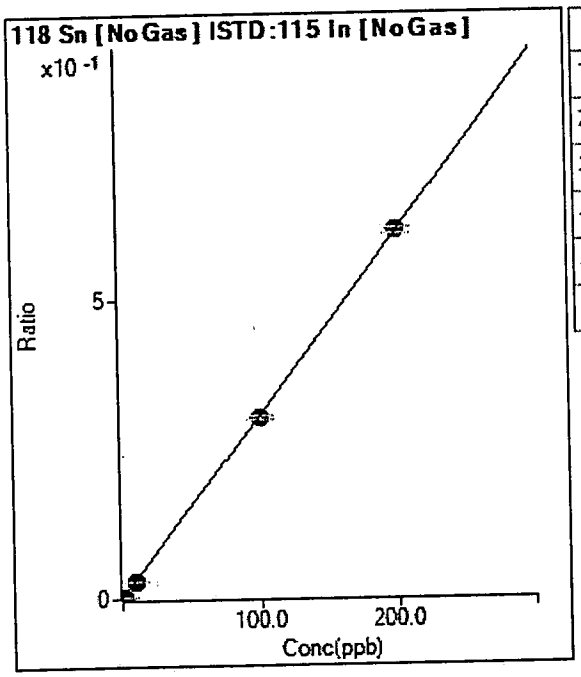
R = 1.0000

DL = 0.02414

BEC = 0.02637

Weight: <None>

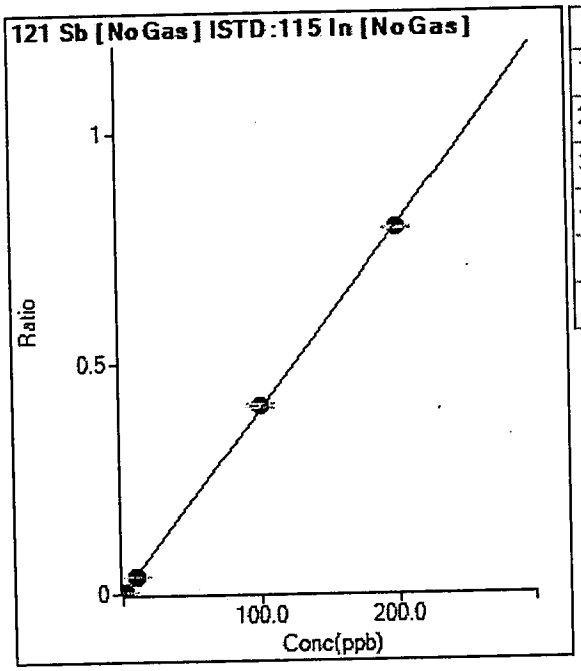
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6861.06	0.0012	P	22.9
2	☐	0.100	-0.001	6709.16	0.0012	P	24.9
3	☐	1.000	0.917	23599.10	0.0040	P	4.5
4	☐	10.000	9.573	180564.67	0.0303	P	1.4
5	☐	100.000	98.455	1886234.53	0.3005	A	1.8
6	☐	200.000	200.794	3750575.89	0.6116	A	1.7

y = 0.0030 * x + 0.0012
R = 1.0000
DL = 0.269
BEC = 0.3916

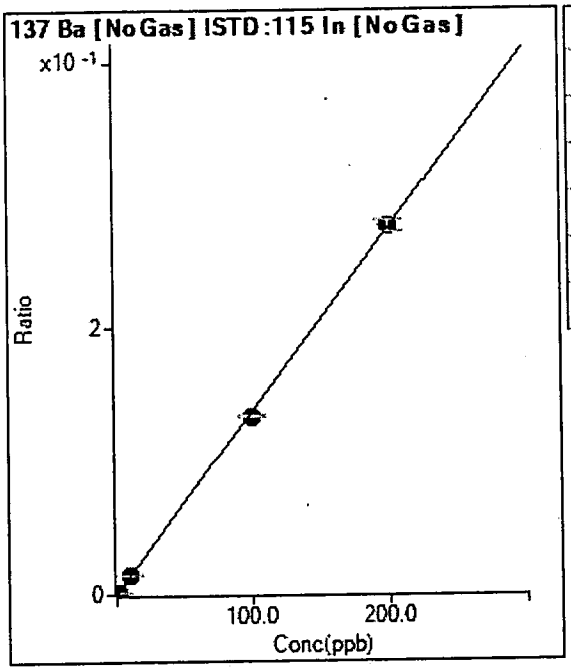
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2855.95	0.0005	P	22.8
2	☐	0.100	0.084	4704.59	0.0008	P	9.7
3	☐	1.000	0.977	26036.13	0.0044	P	6.2
4	☐	10.000	9.839	236636.34	0.0397	P	0.6
5	☐	100.000	102.030	2555108.35	0.4071	A	2.1
6	☐	200.000	198.993	4866585.80	0.7934	A	0.5

y = 0.0040 * x + 4.9561E-004
R = 0.9999
DL = 0.085
BEC = 0.1244

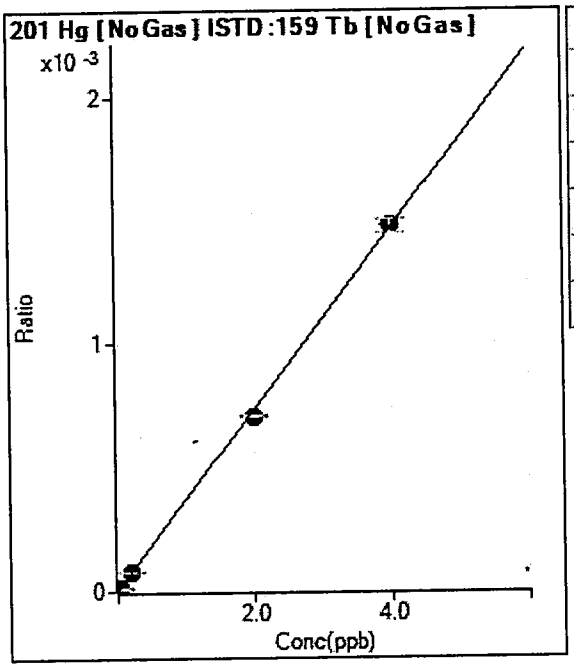
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.34	0.0000	P	33.0
2	☐	0.100	0.103	893.40	0.0002	P	12.5
3	☐	1.000	1.096	9029.55	0.0015	P	3.7
4	☐	10.000	10.196	83581.16	0.0140	P	0.9
5	☐	100.000	97.570	841402.25	0.1340	P	2.1
6	☐	200.000	201.205	1694987.47	0.2764	A	3.2

y = 0.0014 * x + 1.6210E-005
R = 0.9999
DL = 0.01168
BEC = 0.0118

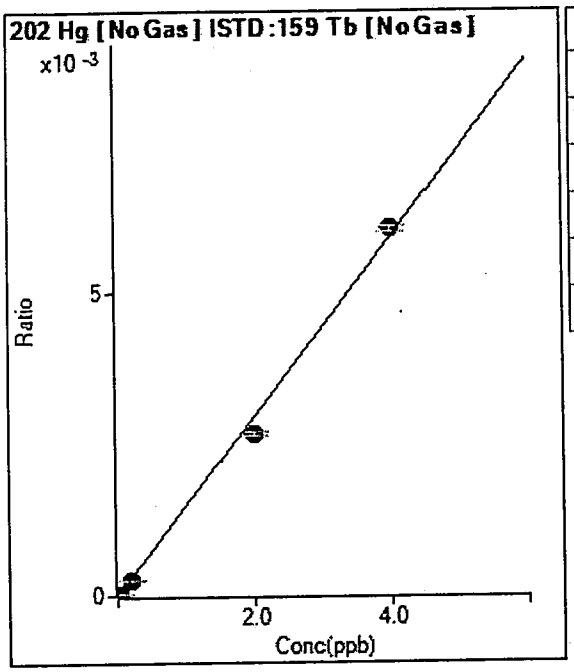
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.67	0.0000	P	21.2
2	☐			38.00	0.0000	P	18.8
3	☐	0.020	0.027	92.67	0.0000	P	32.3
4	☐	0.200	0.198	544.01	0.0001	P	1.0
5	☐	2.000	1.926	5249.57	0.0007	P	1.5
6	☐	4.000	4.037	10743.02	0.0015	P	3.6

y = 3.6509E-004 * x + 3.2556E-006
R = 0.9997
DL = 0.005662
BEC = 0.008917

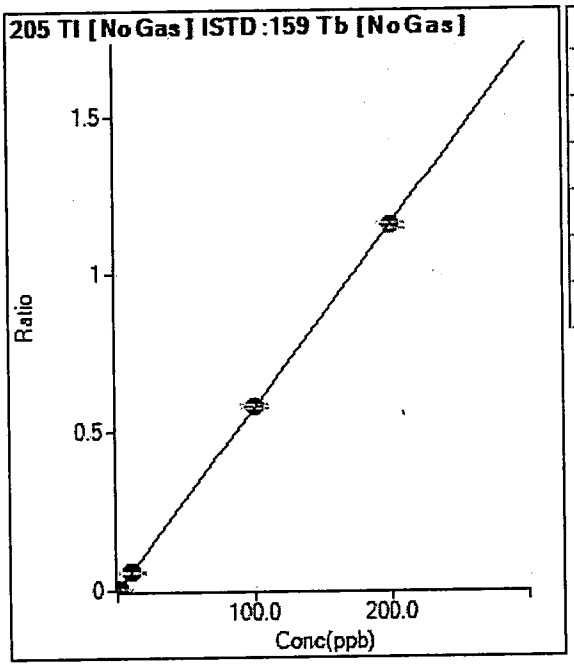
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	44.00	0.0000	P	36.7
2	☐			56.00	0.0000	P	23.2
3	☐	0.020	0.018	231.33	0.0000	P	1.9
4	☐	0.200	0.174	1894.80	0.0003	P	7.0
5	☐	2.000	1.796	19738.35	0.0027	P	2.1
6	☐	4.000	4.103	44068.81	0.0061	P	1.6

y = 0.0015 * x + 6.3210E-006
R = 0.9981
DL = 0.004714
BEC = 0.004286

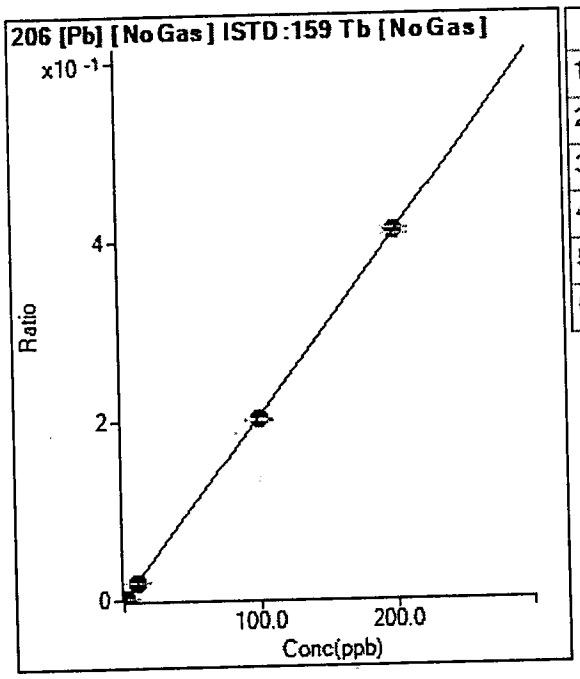
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55.56	0.0000	P	60.1
2	☐	0.100	0.100	3982.22	0.0006	P	4.0
3	☐	1.000	1.027	42273.29	0.0059	P	4.3
4	☐	10.000	10.133	422428.46	0.0586	P	1.8
5	☐	100.000	100.671	4323263.95	0.5817	A	1.6
6	☐	200.000	199.658	8390949.67	1.1536	A	1.5

y = 0.0058 * x + 7.9818E-006
R = 1.0000
DL = 0.002491
BEC = 0.001381

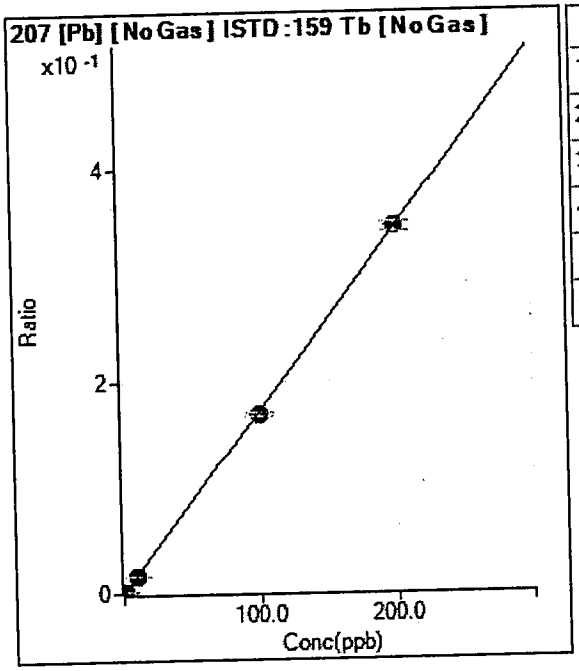
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	162.98	0.0000	P	63.8
2	☐	0.100	0.091	1426.06	0.0002	P	15.0
3	☐	1.000	0.994	14585.33	0.0021	P	3.5
4	☐	10.000	9.891	145726.66	0.0202	P	0.7
5	☐	100.000	98.456	1492734.84	0.2008	M	0.3
6	☐	200.000	200.778	2978569.21	0.4095	A	1.7

y = 0.0020 * x + 2.3543E-005
R = 1.0000
DL = 0.02208
BEC = 0.01154

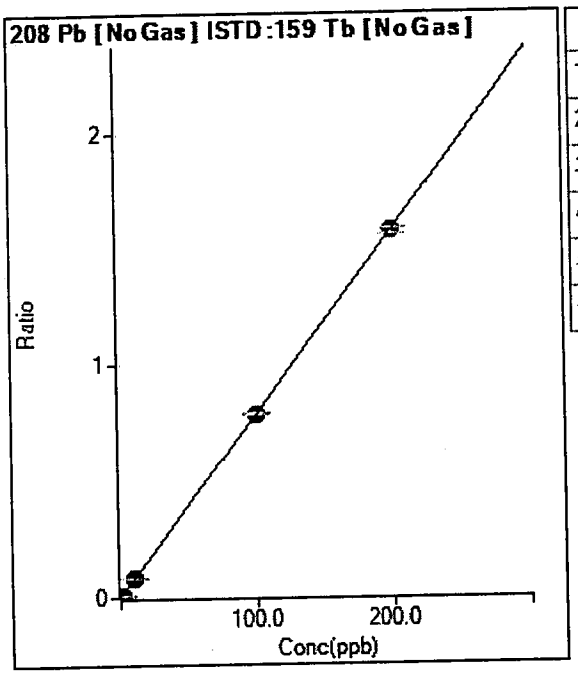
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	137.05	0.0000	P	41.7
2	☐	0.100	0.100	1296.42	0.0002	P	0.6
3	☐	1.000	1.036	12783.59	0.0018	P	0.5
4	☐	10.000	9.748	120751.66	0.0167	P	1.4
5	☐	100.000	98.151	1251344.91	0.1684	P	1.8
6	☐	200.000	200.937	2506560.95	0.3446	A	2.7

y = 0.0017 * x + 1.9709E-005
R = 0.9999
DL = 0.01439
BEC = 0.01149

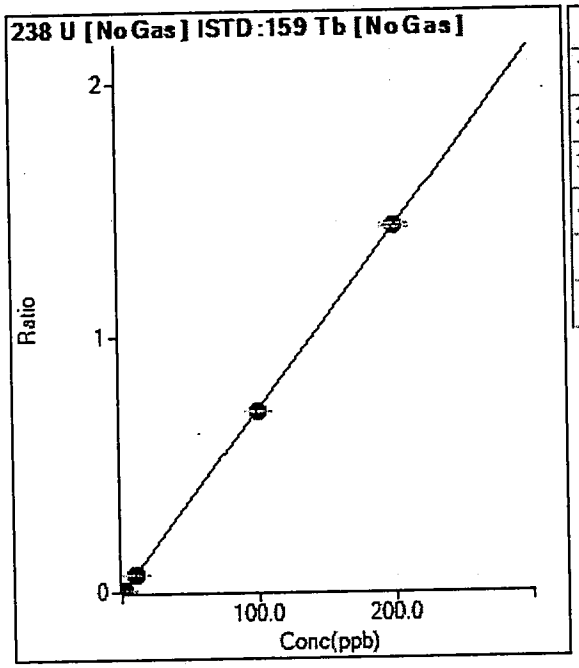
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17528.94	0.0025	P	4.6
2	☐	0.100	0.060	20348.15	0.0030	P	4.9
3	☐	1.000	1.130	81148.00	0.0114	P	2.5
4	☐	10.000	9.997	585511.81	0.0812	P	1.1
5	☐	100.000	99.911	5859720.94	0.7883	A	1.2
6	☐	200.000	200.044	11462240.81	1.5759	A	1.8

y = 0.0079 * x + 0.0025
R = 1.0000
DL = 0.04449
BEC = 0.3207

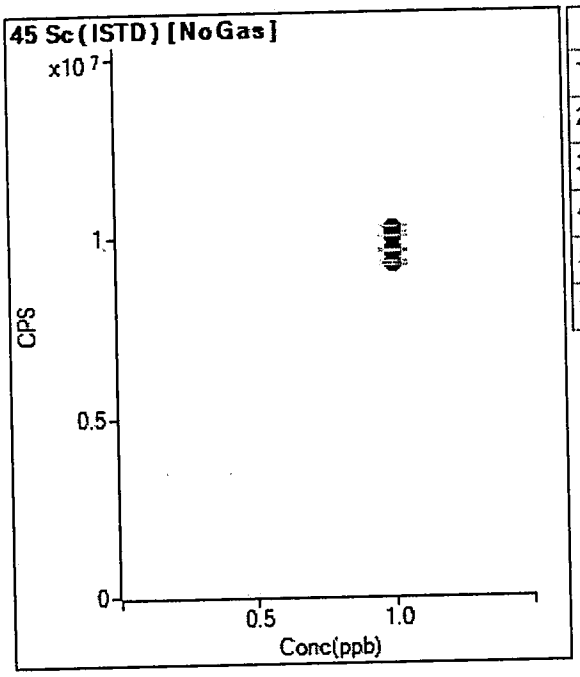
Weight: <None>
Min Conc: <None>



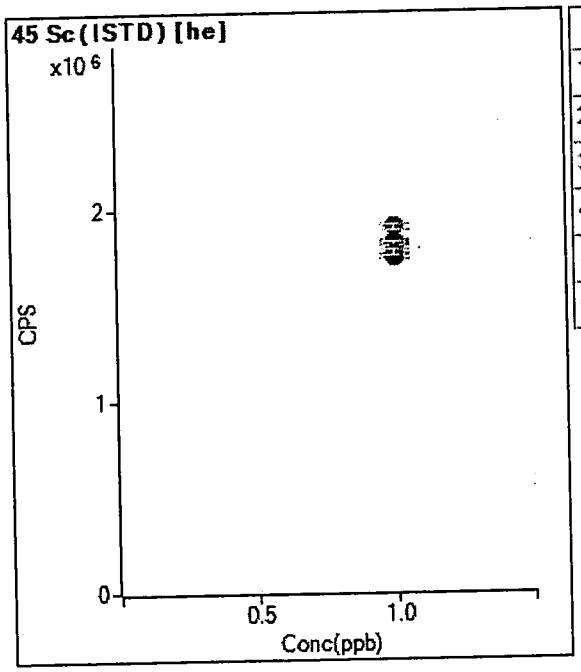
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	285.20	0.0000	P	32.7
2	☐	0.100	0.091	4697.27	0.0007	P	6.2
3	☐	1.000	1.008	51557.87	0.0072	P	0.4
4	☐	10.000	9.929	512538.03	0.0710	P	0.8
5	☐	100.000	99.018	5263199.44	0.7081	A	0.5
6	☐	200.000	200.495	10428690.33	1.4337	A	1.1

y = 0.0072 * x + 4.0951E-005
R = 1.0000
DL = 0.005613
BEC = 0.005727

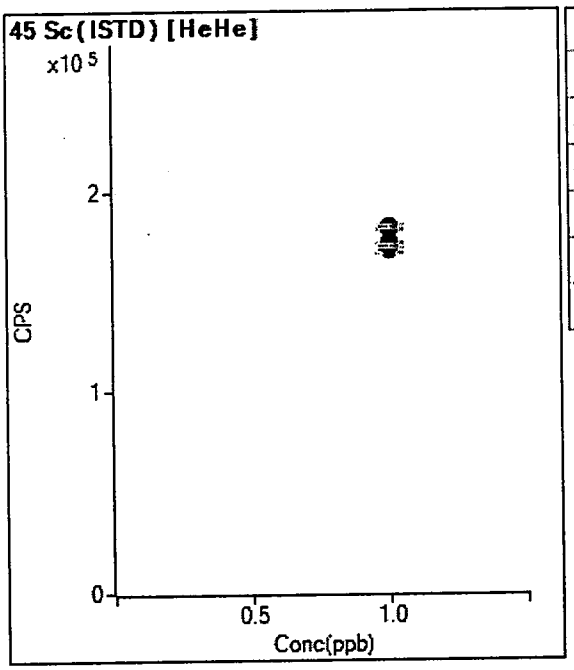
Weight: <None>
Min Conc: <None>



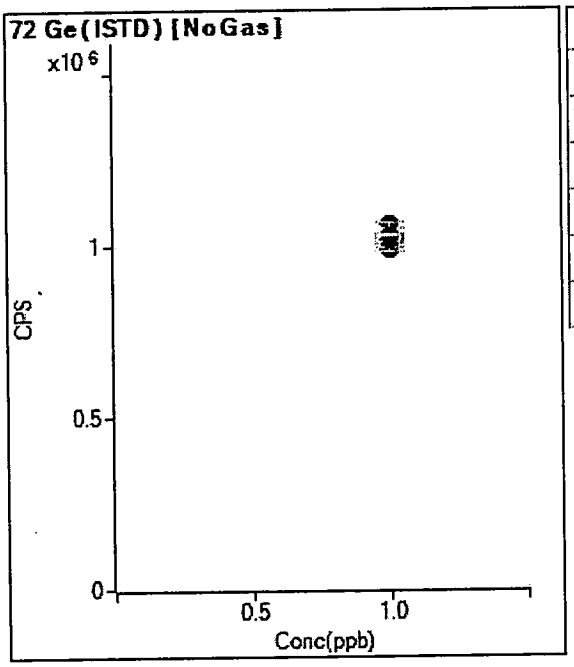
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9248342.15		A	1.3
2	☐	1.000		9230482.15		A	1.1
3	☐	1.000		9606577.15		A	1.0
4	☐	1.000		9599584.86		A	0.2
5	☐	1.000		10207256.51		A	1.9
6	☐	1.000		9993226.93		A	0.2



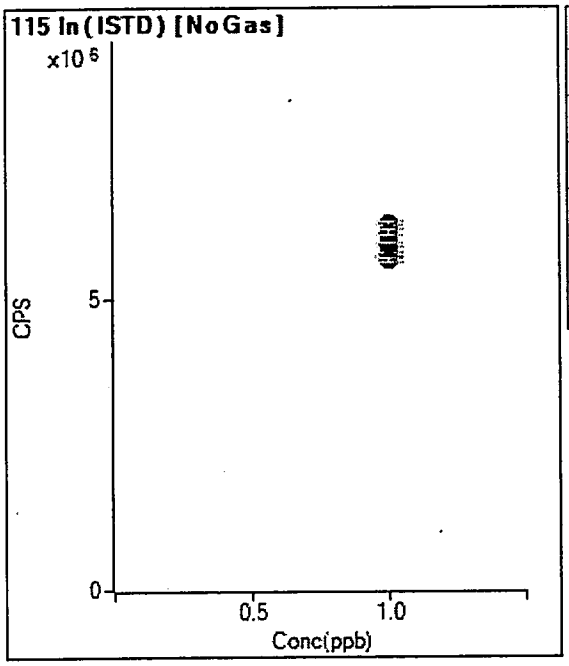
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1744642.74		A	1.2
2	☐	1.000		1761371.59		A	0.7
3	☐	1.000		1830836.90		A	0.7
4	☐	1.000		1819752.47		A	1.5
5	☐	1.000		1908010.65		A	1.9
6	☐	1.000		1774489.14		A	1.3



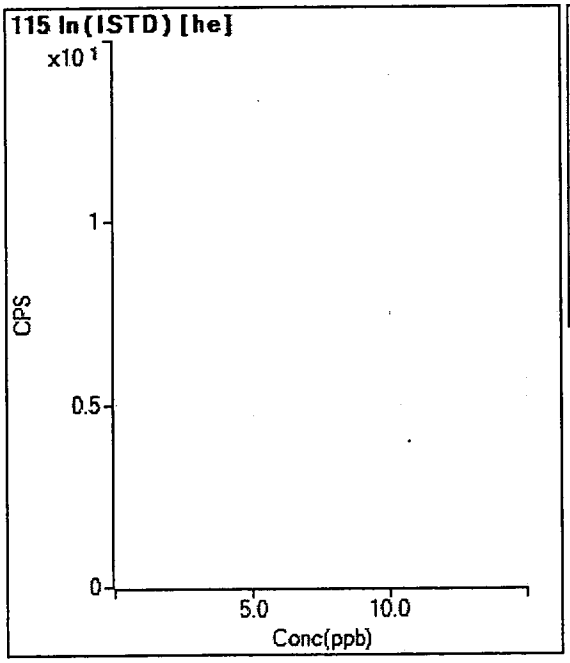
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		171212.05		P	2.5
2	☐	1.000		172413.77		P	2.8
3	☐	1.000		174348.69		P	0.7
4	☐	1.000		172938.55		P	1.3
5	☐	1.000		181247.61		P	0.7
6	☐	1.000		182051.31		P	0.9



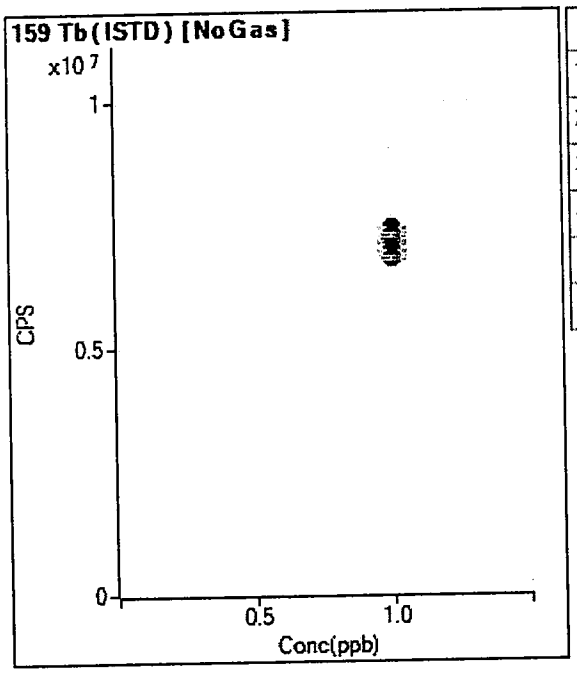
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1012122.41		P	1.1
2	☐	1.000		991031.21		P	1.2
3	☐	1.000		1021766.60		P	0.8
4	☐	1.000		1016045.53		P	0.8
5	☐	1.000		1060324.32		P	1.3
6	☐	1.000		1031019.78		P	0.5



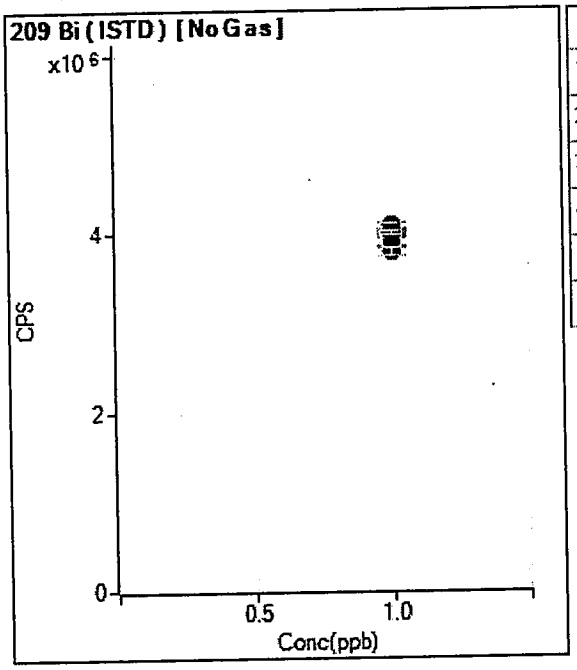
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5760109.93		A	0.8
2	☐	1.000		5660257.78		A	1.4
3	☐	1.000		5934138.78		A	1.0
4	☐	1.000		5960241.09		A	0.4
5	☐	1.000		6277626.82		A	0.9
6	☐	1.000		6133320.70		A	1.6



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000					
2	☐	1.000					
3	☐	1.000					
4	☐	1.000					
5	☐	1.000					
6	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6952439.08		A	1.0
2	☐	1.000		6804368.71		A	1.3
3	☐	1.000		7112798.56		A	0.8
4	☐	1.000		7215155.50		A	0.7
5	☐	1.000		7433189.75		A	0.8
6	☐	1.000		7274528.88		A	1.2



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3846945.10		A	0.4
2	☐	1.000		3791147.42		A	2.1
3	☐	1.000		3993178.89		A	0.7
4	☐	1.000		3949111.19		A	0.6
5	☐	1.000		4079951.34		A	1.3
6	☐	1.000		4005913.04		A	0.9

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	008_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:39:25-04:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	108.179	2.709	5710375	1.80	100	108.2	90	110	
Cr	52	1	No Gas	105.830	2.653	4971760	2.29	100	105.8	90	110	
Mn	55	1	No Gas	107.755	1.182	6242864	0.99	100	107.8	90	110	
Co	59	1	No Gas	104.761	2.670	5437450	0.71	100	104.8	90	110	
Ni	60	1	No Gas	102.457	1.892	1189685	0.67	100	102.5	90	110	
Cu	63	1	No Gas	106.175	3.458	3003279	1.38	100	106.2	90	110	
Sr	88	1	No Gas	107.029	2.725	7132974	1.46	100	107.0	90	110	
Ag	107	1	No Gas	105.943	2.149	3247896	0.58	100	105.9	90	110	
Al	27	1	No Gas	105.462	1.641	3532024	0.55	100	105.5	90	110	
Sn	118	1	No Gas	109.712	1.569	2023323	1.40	100	109.7	90	110	
Tl	47	1	No Gas	95.360	0.803	387126	1.08	100	95.4	90	110	
Zn	66	1	No Gas	101.792	1.795	704513	0.97	100	101.8	90	110	
As	75	3	HeHe	103.827	1.129	48839	0.75	100	103.8	90	110	
As	75	1	No Gas	102.010	1.477	740450	0.91	100	102.0	90	110	
Sb	121	1	No Gas	94.059	0.519	2268852	1.61	100	94.1	90	110	
Hg	201	1	No Gas	2.186	1.811	5791	2.32	2	109.3	90	110	
Be	9	1	No Gas	98.115	0.934	675312	1.20	100	98.1	90	110	
Pb	208	1	No Gas	104.590	0.978	5961329	0.61	100	104.6	90	110	
Se	82	1	No Gas	107.144	1.831	39781	0.89	100	107.1	90	110	
Mo	98	1	No Gas	107.705	2.634	2077591	2.05	100	107.7	90	110	
Ba	137	1	No Gas	101.442	0.784	842492	1.25	100	101.4	90	110	
Tl	205	1	No Gas	103.196	0.236	4307888	0.86	100	103.2	90	110	
U	238	1	No Gas	113.386	1.420	5858268	1.71	100	113.4	90	110	ICV Main CR1 Failed
Na	23	2	he	1005.870	1.299	4539165	0.92	1000	100.6	90	110	
Mg	24	2	he	1021.926	0.258	2524588	0.52	1000	102.2	90	110	
K	39	2	he	1006.474	2.495	3914766	1.98	1000	100.6	90	110	
Se	82	3	HeHe	108.537	1.617	2650	1.59	100	108.5	90	110	
Fe	57	3	HeHe	1108.579	1.499	125514	1.06	1000	110.9	90	110	ICV Main CR1 Failed
Cd	114	1	No Gas	104.693	1.043	1499274	0.85	100	104.7	90	110	
Ca	44	1	No Gas	1082.944	3.117	1502683	0.98	1000	108.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9695488	2.06	9248342	104.83	70	120	
Sc	45	2	he	1824095	0.70	1744643	104.55	70	120	
Ge	72	1	No Gas	1029221	0.98	1012122	101.69	70	120	
In	115	1	No Gas	6045633	1.87	5760110	104.96	70	120	
Tb	159	1	No Gas	7224955	0.73	6952439	103.92	70	120	
Bl	209	1	No Gas	4025671	1.37	3846945	104.65	70	120	
Sc	45	3	HeHe	175990	0.55	171212	102.79	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	009_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:43:14-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	-0.081	-2.8	17532	1.6	9	
Cr	52	1	No Gas	-0.074	-2.7	31678	1.2	4	
Mn	55	1	No Gas	0.246	6.2	51233	2.6	25	
Co	59	1	No Gas	0.006	14.8	485	10.8	1	
Ni	60	1	No Gas	0.009	32.3	630	5.7	25	
Cu	63	1	No Gas	0.075	13.7	14116	1.1	25	
Sr	88	1	No Gas	0.006	13.5	559	8.3	25	
Ag	107	1	No Gas	0.020	21.4	663	20.0	9	
Al	27	1	No Gas	0.011	112.2	10956	4.0	1000000	
Sn	118	1	No Gas	2.619	32.6	54438	27.4	25	
Ti	47	1	No Gas	0.478	47.9	3260	27.0	10000	
Zn	66	1	No Gas	0.000	-4630.7	1017	13.2	25	
As	75	3	HeHe	0.995	10.0	513	9.2	9	
As	75	1	No Gas	0.377	108.8	30020	8.8	9	
Sb	121	1	No Gas	1.986	15.4	50073	13.5	4	
Hg	201	1	No Gas	0.032	10.9	107	7.8	0.04	
Be	9	1	No Gas	0.011	14.3	100	10.6	1	
Pb	208	1	No Gas	0.134	13.7	25658	4.0	4	
Se	82	1	No Gas	1.568	46.7	636	42.2	25	
Mo	98	1	No Gas	1.355	41.9	37865	27.3	10000	
Ba	137	1	No Gas	0.009	45.3	170	20.4	25	
Tl	205	1	No Gas	0.029	13.2	1256	12.4	1	
U	238	1	No Gas	0.360	22.4	18824	22.9	25	
Na	23	2	he	-0.993	-107.2	113339	3.9	2500000	
Mg	24	2	he	0.030	115.7	470	19.2	2500000	
K	39	2	he	6.181	1.7	280084	0.9	5000000	
Se	82	3	HeHe	0.813	80.5	136	11.6	25	
Fe	57	3	HeHe	22.555	6.7	2578	6.4	2500000	
Cd	114	1	No Gas	0.087	13.4	1593	9.4	1	
Ca	44	1	No Gas	0.780	245.6	67097	3.1	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9490102	0.93	9248342	102.61	70	120	
Sc	45	2	he	1843980	1.02	1744643	105.69	70	120	
Ge	72	1	No Gas	1022478	0.29	1012122	101.02	70	120	

Initial Calibration Blank (ICB) Report

In	115	1	No Gas	5960261	1.04	5760110	103.47	70	120	
Tb	159	1	No Gas	7178623	1.54	6952439	103.25	70	120	
Bi	209	1	No Gas	3964814	2.06	3846945	103.06	70	120	
Sc	45	3	HeHe	177859	1.13	171212	103.88	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	010_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:47:09-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	-0.082	-187.1	18158	43.9	9	
Cr	52	1	No Gas	-0.114	-36.7	31143	4.8	4	
Mn	55	1	No Gas	0.124	53.5	46226	6.8	25	
Co	59	1	No Gas	0.002	117.7	300	51.5	1	
Ni	60	1	No Gas	0.003	372.1	577	19.0	25	
Cu	63	1	No Gas	0.013	139.3	12943	2.4	25	
Sr	88	1	No Gas	0.001	133.2	281	34.5	25	
Ag	107	1	No Gas	0.012	22.0	441	17.7	9	
Al	27	1	No Gas	0.004	58.7	11208	1.0	1000000	
Sn	118	1	No Gas	1.085	36.8	27914	26.5	25	
Ti	47	1	No Gas	0.089	101.3	1792	20.5	10000	
Zn	66	1	No Gas	0.035	73.0	1307	12.2	25	
As	75	3	HeHe	0.387	13.8	222	13.1	9	
As	75	1	No Gas	-0.105	-334.7	27881	7.5	9	
Sb	121	1	No Gas	0.664	21.1	19535	17.0	4	
Hg	201	1	No Gas	0.013	23.0	61	14.9	0.04	
Be	9	1	No Gas	0.003	22.5	43	11.8	1	
Pb	208	1	No Gas	0.230	6.2	32315	4.3	4	
Se	82	1	No Gas	0.285	323.9	176	196.5	25	
Mo	98	1	No Gas	0.267	119.5	18133	34.1	10000	
Ba	137	1	No Gas	0.003	149.1	130	33.5	25	
Tl	205	1	No Gas	0.011	29.2	519	26.4	1	
U	238	1	No Gas	0.088	38.8	4997	35.3	25	
Na	23	2	he	-3.213	-75.3	108189	2.3	2500000	
Mg	24	2	he	-0.043	-70.1	304	31.1	2500000	
K	39	2	he	-1.040	-597.4	265253	0.8	5000000	
Se	82	3	HeHe	0.712	132.6	132	15.7	25	
Fe	57	3	HeHe	7.980	14.3	900	15.0	2500000	
Cd	114	1	No Gas	0.045	35.7	1050	22.0	1	
Ca	44	1	No Gas	-0.531	-496.7	68240	3.9	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9906263	1.73	9248342	107.11	70	120	
Sc	45	2	he	1939137	8.60	1744643	111.15	70	120	
Ge	72	1	No Gas	1034853	2.32	1012122	102.25	70	120	

Initial Calibration Blank (ICB) Report

In	115	1	No Gas	6223600	1.77	5760110	108.05	70	120	
Tb	159	1	No Gas	7453756	1.79	6952439	107.21	70	120	
Bi	209	1	No Gas	4097513	1.57	3846945	106.51	70	120	
Sc	45	3	HeHe	175440	2.93	171212	102.47	70	120	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV
Data File Name	011LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:51:04-04:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	1.888	6.549	123562	3.30	2	94.4	70	130	
Cr	52	1	No Gas	1.902	4.742	126733	1.61	2	95.1	70	130	
Mn	55	1	No Gas	5.198	5.144	343367	2.56	5	104.0	70	130	
Co	59	1	No Gas	4.868	3.211	257370	1.26	5	97.4	70	130	
Ni	60	1	No Gas	5.046	2.217	60156	0.30	5	100.9	70	130	
Cu	63	1	No Gas	4.912	1.893	153432	0.56	5	98.2	70	130	
Sr	88	1	No Gas	4.577	1.484	310777	1.04	5	91.5	70	130	
Ag	107	1	No Gas	2.072	3.978	63461	2.45	2	103.6	70	130	
Al	27	1	No Gas	81.097	3.237	2766965	1.93	80	101.4	70	130	
Sn	118	1	No Gas	2.221	6.778	47910	5.58	2	111.0	70	130	
Tl	47	1	No Gas	4.671	1.044	20238	1.93	5	93.4	70	130	
Zn	66	1	No Gas	5.327	2.204	38534	0.31	5	106.5	70	130	
As	75	3	HeHe	3.338	7.180	1564	4.33	3	111.3	70	130	
As	75	1	No Gas	2.759	7.719	48166	3.16	3	92.0	70	130	
Sb	121	1	No Gas	2.370	3.581	59965	2.64	2	118.5	70	130	
Hg	201	1	No Gas	0.209	3.501	573	6.07	0.2	104.3	70	130	
Be	9	1	No Gas	0.984	5.708	6911	3.69	1	98.4	70	130	
Pb	208	1	No Gas	2.202	4.037	142892	1.20	2	110.1	70	130	
Se	82	1	No Gas	4.627	10.783	1812	8.24	5	92.5	70	130	
Mo	98	1	No Gas	1.837	10.684	47616	6.68	2	91.9	70	130	
Ba	137	1	No Gas	5.050	1.016	41954	2.05	5	101.0	70	130	
Tl	205	1	No Gas	1.027	5.946	42804	4.29	1	102.7	70	130	
U	238	1	No Gas	5.057	3.278	260762	1.18	5	101.1	70	130	
Na	23	2	he	105.890	20.966	512463	1.89	100	105.9	70	130	
Mg	24	2	he	105.193	16.306	229184	1.36	100	105.2	70	130	
K	39	2	he	121.763	25.859	614153	1.48	100	121.8	70	130	
Se	82	3	HeHe	4.972	3.369	226	5.44	5	99.4	70	130	
Fe	57	3	HeHe	57.454	7.586	6316	3.96	50	114.9	70	130	
Cd	114	1	No Gas	1.066	4.748	15611	5.75	1	106.6	70	130	
Ca	44	1	No Gas	96.240	3.208	198569	0.33	100	96.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9869984	2.25	9248342	106.72	70	120	
Sc	45	2	he	1631911	14.38	1744643	93.54	70	120	
Ge	72	1	No Gas	994170	2.25	1012122	98.23	70	120	
In	115	1	No Gas	6033756	1.88	5760110	104.75	70	120	
Tb	159	1	No Gas	7207597	3.16	6952439	103.67	70	120	
Bi	209	1	No Gas	3955991	0.95	3846945	102.83	70	120	
Sc	45	3	HeHe	171360	3.89	171212	100.09	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	012ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:57:04-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.069	100.9	25883	12.1	9	
Cr	52	1	No Gas	0.875	8.4	76952	2.5	4	
Mn	55	1	No Gas	1.383	2.6	118312	0.7	25	
Co	59	1	No Gas	1.318	3.3	68913	1.6	1	ICSA Main CR1 Failed
Ni	60	1	No Gas	1.779	4.8	21270	2.6	5	
Cu	63	1	No Gas	0.725	3.3	32914	3.8	5	
Ag	107	1	No Gas	0.313	6.8	8914	6.7	9	
Al	27	1	No Gas	91092.374	3.8	3054773805	1.8	110000	
Sn	118	1	No Gas	0.381	43.5	13102	21.5	25	
Tl	47	1	No Gas	1987.139	0.6	7420386	1.0	2200	
Zn	66	1	No Gas	2.478	3.1	18252	2.4	5	
As	75	3	HeHe	0.535	10.2	302	9.2	9	
As	75	1	No Gas	0.328	184.1	30434	12.4	9	
Sb	121	1	No Gas	1.027	22.9	25595	20.3	4	
Hg	201	1	No Gas	0.026	17.3	87	12.6	0.04	
Be	9	1	No Gas	0.007	19.3	74	15.0	1	
Pb	208	1	No Gas	0.345	3.3	36343	1.4	4	
Se	82	1	No Gas	0.301	148.1	180	92.7	25	
Mo	98	1	No Gas	2043.986	1.8	36184089	1.1	2200	
Ba	137	1	No Gas	0.145	9.5	1200	7.9	25	
Tl	205	1	No Gas	0.023	23.7	967	22.2	1	
U	238	1	No Gas	0.046	31.9	2571	28.8	25	
Na	23	2	he	87602.701	1.2	402491965	0.7	110000	
Mg	24	2	he	89786.071	1.9	231657739	1.2	110000	
K	39	2	he	87734.642	0.9	333588053	1.0	110000	
Se	82	3	HeHe	-0.198	-387.9	115	13.9	25	
Fe	57	3	HeHe	96996.857	1.0	11353561	1.6	110000	
Cd	114	1	No Gas	0.899	3.4	12232	3.3	1	
Ca	44	1	No Gas	87923.254	1.3	117159318	0.7	110000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9740728	2.02	9248342	105.32	70	120	
Sc	45	2	he	1905649	1.54	1744643	109.23	70	120	
Ge	72	1	No Gas	1000038	0.21	1012122	98.81	70	120	
In	115	1	No Gas	5579503	1.14	5760110	96.86	70	120	
Tb	159	1	No Gas	6938038	0.55	6952439	99.79	70	120	
Bl	209	1	No Gas	3590926	0.94	3846945	93.34	70	120	
Sc	45	3	HeHe	182138	2.50	171212	106.38	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	013ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T09:01:05-04:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	39.555	0.949	2122524	1.39	40	98.9	80	120		
Cr	52	1	No Gas	18.427	0.839	903873	1.04	20	92.1	80	120		
Mn	55	1	No Gas	19.453	2.088	1169466	2.29	20	97.3	80	120		
Co	59	1	No Gas	36.923	0.752	1935255	0.22	40	92.3	80	120		
Ni	60	1	No Gas	34.784	2.562	408157	2.45	40	87.0	80	120		
Cu	63	1	No Gas	17.329	2.085	505390	1.51	20	86.6	80	120		
Ag	107	1	No Gas	18.509	0.538	533985	0.74	20	92.5	80	120		
Al	27	1	No Gas	88937.217	3.298	2997864948	2.88	100000	88.9	90	110	ICSB Main CR1 Failed	OK
Ti	47	1	No Gas	1955.453	0.846	7443662	1.43	2000	97.8	90	110		
Zn	66	1	No Gas	20.410	1.049	143463	0.58	20	102.1	80	120		
As	75	3	HeHe	19.195	1.701	9605	1.97	20	96.0	80	120		
As	75	1	No Gas	19.233	2.359	163911	1.52	20	96.2	80	120		
Sb	121	1	No Gas	0.677	15.156	18166	12.43	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Hg	201	1	No Gas	0.014	10.238	59	5.21	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Be	9	1	No Gas	0.004	51.279	54	29.63	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Pb	208	1	No Gas	0.419	3.277	41674	2.51	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Se	82	1	No Gas	19.234	3.486	7267	3.98	20	96.2	80	120		
Mo	98	1	No Gas	2015.635	1.722	36377624	2.12	2000	100.8	90	110		
Ba	137	1	No Gas	0.185	5.927	1540	6.19	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Tl	205	1	No Gas	0.020	8.888	885	7.14	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
U	238	1	No Gas	0.022	23.670	1433	20.67	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Na	23	2	he	86138.637	1.876	394590809	1.24	100000	86.1	90	110	ICSB Main CR1 Failed	OK 80-120
Mg	24	2	he	88611.427	1.607	227968124	1.45	100000	88.6	90	110	ICSB Main CR1 Failed	OK
K	39	2	he	87486.841	1.339	331652461	0.63	100000	87.5	90	110	ICSB Main CR1 Failed	OK
Se	82	3	HeHe	18.828	6.911	589	4.63	20	94.1	80	120		
Fe	57	3	HeHe	93298.201	1.093	11185401	0.25	100000	93.3	90	110		
Cd	114	1	No Gas	9.576	2.163	129339	1.56	10	95.8	80	120		
Ca	44	1	No Gas	86786.790	1.704	116213412	1.63	100000	86.8	90	110	ICSB Main CR1 Failed	OK

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9786977	0.53	9248342	105.82	70	120	
Sc	45	2	he	1899930	0.70	1744643	108.90	70	120	
Ge	72	1	No Gas	1032635	1.10	1012122	102.03	70	120	
In	115	1	No Gas	5687437	0.80	5760110	98.74	70	120	
Tb	159	1	No Gas	7167544	1.87	6952439	103.09	70	120	
Bi	209	1	No Gas	3604212	0.69	3846945	93.69	70	120	
Sc	45	3	HeHe	186537	0.98	171212	108.95	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	024_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T09:46:59-04:00
Sample Type	CCV
Dilution	1
Comment	37925 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag	
V	51	1	No Gas	108.467	7.063	6065183	1.33	100	108.5	90	110		
Cr	52	1	No Gas	106.821	6.898	5315684	1.36	100	106.8	90	110		
Mn	55	1	No Gas	109.151	6.291	6699892	1.55	100	109.2	90	110		
Co	59	1	No Gas	106.123	7.171	5835345	1.96	100	106.1	90	110		
Ni	60	1	No Gas	102.101	6.171	1256231	0.20	100	102.1	90	110		
Cu	63	1	No Gas	104.999	5.582	3149039	1.97	100	105.0	90	110		
Sr	88	1	No Gas	106.359	6.295	7512420	2.42	100	106.4	90	110		
Ag	107	1	No Gas	105.966	9.874	3422614	0.82	100	106.0	90	110		
Al	27	1	No Gas	107.211	5.555	3805948	2.39	100	107.2	90	110		
Sn	118	1	No Gas	108.905	10.713	2114817	0.97	100	108.9	90	110		
Tl	47	1	No Gas	96.804	11.504	413496	1.42	100	96.8	90	110		
Zn	66	1	No Gas	102.272	6.799	749829	0.81	100	102.3	90	110		
As	75	3	HeHe	103.801	5.755	52401	0.28	100	103.8	90	110		
As	75	1	No Gas	101.520	6.824	780805	0.77	100	101.5	90	110		
Sb	121	1	No Gas	96.599	10.325	2453734	0.87	100	96.6	90	110		
Hg	201	1	No Gas	2.018	7.483	5554	1.11	2	100.9	90	110		
Be	9	1	No Gas	88.354	7.130	644064	1.13	100	88.4	90	110	CCV Main CR1 Failed	N/A
Pb	208	1	No Gas	100.272	8.220	5936726	0.18	100	100.3	90	110		
Se	82	1	No Gas	105.944	5.786	41687	0.21	100	105.9	90	110		
Mo	98	1	No Gas	106.311	11.047	2158968	0.75	100	106.3	90	110		
Ba	137	1	No Gas	100.530	10.403	879196	0.34	100	100.5	90	110		
Tl	205	1	No Gas	99.784	7.491	4327957	0.98	100	99.8	90	110		
U	238	1	No Gas	106.631	9.335	5718252	1.07	100	106.6	90	110		
Na	23	2	he	1093.472	1.766	4865257	2.53	1000	109.3	90	110		
Mg	24	2	he	1126.774	1.039	2749931	1.70	1000	112.7	90	110	CCV Main CR1 Failed	N/A
K	39	2	he	1111.019	2.346	4242794	1.78	1000	111.1	90	110	CCV Main CR1 Failed	N/A
Se	82	3	HeHe	103.906	7.250	2727	1.69	100	103.9	90	110		
Fe	57	3	HeHe	1179.195	5.493	143166	1.02	1000	117.9	90	110	CCV Main CR1 Failed	N/A
Cd	114	1	No Gas	102.844	8.776	1552688	1.69	100	102.8	90	110		
Ca	44	1	No Gas	1079.890	7.062	1587958	1.51	1000	108.0	90	110		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	10295433	5.78	9248342	111.32	70	120	
Sc	45	2	he	1802123	1.82	1744643	103.29	70	120	
Ge	72	1	No Gas	1095113	6.48	1012122	108.20	70	120	
In	115	1	No Gas	6411497	10.34	5760110	111.31	70	120	
Tb	159	1	No Gas	7538551	8.45	6952439	108.43	70	120	
Bi	209	1	No Gas	4069595	6.07	3846945	105.79	70	120	
Sc	45	3	HeHe	189294	5.91	171212	110.56	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	025_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T09:50:47-04:00
Sample Type	CCB
Dilution	1
Comment	37925 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	-0.255	-17.2	9097	26.3	9	
Cr	52	1	No Gas	-0.103	-21.8	32190	3.3	4	
Mn	55	1	No Gas	0.377	11.8	62145	4.2	25	
Co	59	1	No Gas	0.005	11.2	419	6.7	1	
Ni	60	1	No Gas	-0.007	-12.8	467	2.5	25	
Cu	63	1	No Gas	-0.164	-4.6	7988	2.7	25	
Sr	88	1	No Gas	0.004	25.7	493	14.7	25	
Ag	107	1	No Gas	0.016	15.1	574	12.4	9	
Al	27	1	No Gas	0.370	12.7	24073	6.7	1000000	
Sn	118	1	No Gas	1.157	37.3	29180	26.2	25	
Ti	47	1	No Gas	0.731	38.2	4447	24.3	10000	
Zn	66	1	No Gas	0.078	14.4	1643	4.9	25	
As	75	3	HeHe	0.619	12.1	358	10.2	9	
As	75	1	No Gas	0.518	65.8	32865	7.6	9	
Sb	121	1	No Gas	2.454	22.0	63751	19.2	4	
Hg	201	1	No Gas	0.013	46.7	57	25.7	0.04	
Be	9	1	No Gas	0.005	15.4	61	9.4	1	
Pb	208	1	No Gas	0.047	32.3	21087	2.6	4	
Se	82	1	No Gas	0.651	41.9	320	32.8	25	
Mo	98	1	No Gas	0.752	51.3	27609	25.8	10000	
Ba	137	1	No Gas	0.035	30.3	400	21.4	25	
Tl	205	1	No Gas	0.023	11.1	1041	11.4	1	
U	238	1	No Gas	0.157	16.5	8514	17.3	25	
Na	23	2	he	1.113	27.8	127705	1.8	2500000	
Mg	24	2	he	0.177	30.6	870	16.7	2500000	
K	39	2	he	-1.697	-45.1	261316	0.4	5000000	
Se	82	3	HeHe	-0.024	-2808.9	124	13.2	25	
Fe	57	3	HeHe	43.157	4.2	5271	4.3	2500000	
Cd	114	1	No Gas	0.034	13.9	893	6.5	1	
Ca	44	1	No Gas	-7.276	-57.8	60065	9.6	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	10062107	0.06	9248342	108.80	70	120	
Sc	45	2	he	1919052	1.46	1744643	110.00	70	120	
Ge	72	1	No Gas	1074546	1.23	1012122	106.17	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	6221361	2.01	5760110	108.01	70	120	
Tb	159	1	No Gas	7302659	1.59	6952439	105.04	70	120	
Bi	209	1	No Gas	4013560	2.41	3846945	104.33	70	120	
Sc	45	3	HeHe	190027	0.51	171212	110.99	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	026LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T09:54:43-04:00
Sample Type	LLCCV
Dilution	1
Comment	37925 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	1.767	9.776	120925	7.88	2	88.3	70	130	
Cr	52	1	No Gas	1.917	2.618	131568	1.21	2	95.8	70	130	
Mn	55	1	No Gas	5.393	3.082	366369	2.07	5	107.9	70	130	
Co	59	1	No Gas	4.961	1.908	270815	1.37	5	99.2	70	130	
Ni	60	1	No Gas	5.056	2.525	62231	2.19	5	101.1	70	130	
Cu	63	1	No Gas	4.814	1.213	155474	0.15	5	96.3	70	130	
Sr	88	1	No Gas	4.641	1.699	325280	1.38	5	92.8	70	130	
Ag	107	1	No Gas	2.084	1.534	65375	0.26	2	104.2	70	130	
Al	27	1	No Gas	84.180	1.682	2964987	1.05	80	105.2	70	130	
Sn	118	1	No Gas	2.009	4.011	45092	4.87	2	100.4	70	130	
Tl	47	1	No Gas	5.311	4.211	23375	5.54	5	106.2	70	130	
Zn	66	1	No Gas	5.560	0.275	41475	1.07	5	111.2	70	130	
As	75	3	HeHe	3.054	5.111	1553	3.94	3	101.8	70	130	
As	75	1	No Gas	2.855	10.470	50425	4.27	3	95.2	70	130	
Sb	121	1	No Gas	3.202	5.819	81927	7.19	2	160.1	70	130	LLCCV Main CR1 Failed
Hg	201	1	No Gas	0.189	5.448	531	6.46	0.2	94.5	70	130	
Be	9	1	No Gas	0.897	2.542	6510	1.59	1	89.7	70	130	
Pb	208	1	No Gas	1.942	2.568	130789	1.12	2	97.1	70	130	
Se	82	1	No Gas	5.359	9.488	2160	10.03	5	107.2	70	130	
Mo	98	1	No Gas	1.968	7.372	51379	7.25	2	98.4	70	130	
Ba	137	1	No Gas	5.026	4.043	42733	2.71	5	100.5	70	130	
Tl	205	1	No Gas	1.032	0.555	43878	1.16	1	103.2	70	130	
U	238	1	No Gas	5.087	2.189	267587	0.63	5	101.7	70	130	
Na	23	2	he	90.453	1.000	540506	1.69	100	90.5	70	130	
Mg	24	2	he	92.163	2.594	239628	0.79	100	92.2	70	130	
K	39	2	he	96.468	5.029	636164	0.87	100	96.5	70	130	
Se	82	3	HeHe	4.519	10.760	233	3.97	5	90.4	70	130	
Fe	57	3	HeHe	67.968	5.065	8091	4.05	50	135.9	70	130	LLCCV Main CR1 Failed
Cd	114	1	No Gas	1.036	0.342	15544	1.92	1	103.6	70	130	
Ca	44	1	No Gas	91.541	1.082	198471	1.17	100	91.5	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	10187314	0.96	9248342	110.15	70	120	
Sc	45	2	he	1917537	2.33	1744643	109.91	70	120	
Ge	72	1	No Gas	1070169	1.20	1012122	105.74	70	120	
In	115	1	No Gas	6177897	1.69	5760110	107.25	70	120	
Tb	159	1	No Gas	7349814	1.57	6952439	105.72	70	120	
Bi	209	1	No Gas	4024650	1.34	3846945	104.62	70	120	
Sc	45	3	HeHe	185277	1.29	171212	108.22	70	120	

Sample Report

Sample Table

Sample Name	1017046
Data File Name	030SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T10:14:35-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3202

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	-0.328	-0.328	-17.70	5384	-0.01	1000	
Cr	52	1	No Gas	0.119	0.119	34.80	44743	0.00	1000	
Mn	55	1	No Gas	0.283	0.283	19.80	58905	0.00	1000	
Co	59	1	No Gas	0.004	0.004	8.53	419	0.00	1000	
Ni	60	1	No Gas	0.138	0.138	10.44	2314	0.01	1000	
Cu	63	1	No Gas	-0.152	-0.152	-5.61	8674	0.00	1000	
Sr	88	1	No Gas	0.027	0.027	8.53	2185	0.00	1000	
Ag	107	1	No Gas	0.007	0.007	37.05	282	0.00	1000	
Al	27	1	No Gas	2.728	2.728	3.50	110304	0.00	100000	
Sn	118	1	No Gas	0.062	0.062	157.77	8562	0.00	100	
Ti	47	1	No Gas	0.207	0.207	52.57	2276	0.01	2000	
Zn	66	1	No Gas	0.493	0.493	7.13	4824	0.01	1000	
As	75	3	HeHe	0.016	0.016	118.92	49	0.03	1000	
As	75	1	No Gas	-0.399	-0.399	-29.72	27350	0.00	1000	
Sb	121	1	No Gas	0.421	0.421	32.84	13510	0.00	100	
Hg	201	1	No Gas	0.012	0.012	35.32	57	0.02	4	
Be	9	1	No Gas	0.002	0.002	103.92	43	0.01	1000	
Pb	208	1	No Gas	0.189	0.189	29.69	29989	0.00	1000	
Se	82	1	No Gas	-0.082	-0.082	-184.60	40	-0.21	1000	
Mo	98	1	No Gas	-0.135	-0.135	-87.44	10181	0.00	2000	
Ba	137	1	No Gas	0.100	0.100	19.11	950	0.01	1000	
Tl	205	1	No Gas	0.003	0.003	18.42	178	0.00	1000	
U	238	1	No Gas	0.005	0.005	87.56	552	0.00	1000	
Na	23	2	he	2.957	2.957	2.38	135562	0.00	100000	
Mg	24	2	he	0.964	0.964	17.90	2900	0.03	100000	
K	39	2	he	-4.830	-4.830	-5.40	248122	0.00	100000	
Se	82	3	HeHe	-0.087	-0.087	-648.95	117	-0.07	1000	
Fe	57	3	HeHe	20.598	20.598	10.36	2385	0.86	100000	
Cd	114	1	No Gas	0.021	0.021	22.76	693	0.00	1000	
Ca	44	1	No Gas	-4.465	-4.465	-58.47	66666	-0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	10501898	3.88	9248342	113.55	70	120	
Sc	45	2	he	1909541	0.91	1744643	109.45	70	120	

Sample Report

Ge	72	1	No Gas	1087301	1.16	1012122	107.43	70	120	
In	115	1	No Gas	6187078	2.96	5760110	107.41	70	120	
Tb	159	1	No Gas	7486145	1.65	6952439	107.68	70	120	
Bi	209	1	No Gas	4005295	2.64	3846945	104.12	70	120	
Sc	45	3	HeHe	180532	3.01	171212	105.44	70	120	

Sample Report

Sample Table

Sample Name	1017047
Data File Name	031SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T10:19:48-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3203

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	46.727	46.727	1.29	2356892	0.00	1000	
Cr	52	1	No Gas	45.053	45.053	0.63	2031675	0.00	1000	
Mn	55	1	No Gas	45.195	45.195	1.19	2510045	0.00	1000	
Co	59	1	No Gas	44.160	44.160	1.67	2179419	0.00	1000	
Ni	60	1	No Gas	41.701	41.701	2.70	460567	0.01	1000	
Cu	63	1	No Gas	41.791	41.791	2.08	1131023	0.00	1000	
Sr	88	1	No Gas	40.374	40.374	1.69	2558149	0.00	1000	
Ag	107	1	No Gas	17.748	17.748	8.48	504996	0.00	1000	
Al	27	1	No Gas	442.176	442.176	2.24	14043794	0.00	100000	
Sn	118	1	No Gas	40.034	40.034	7.55	689735	0.01	100	
Ti	47	1	No Gas	40.668	40.668	8.83	153905	0.03	2000	
Zn	66	1	No Gas	439.880	439.880	2.70	2890454	0.02	1000	
As	75	3	HeHe	38.353	38.353	3.74	18575	0.21	1000	
As	75	1	No Gas	40.750	40.750	1.54	297190	0.01	1000	
Sb	121	1	No Gas	42.451	42.451	8.77	951485	0.00	100	
Hg	201	1	No Gas	0.428	0.428	9.60	1075	0.04	4	
Be	9	1	No Gas	37.319	37.319	2.21	244164	0.02	1000	
Pb	208	1	No Gas	42.259	42.259	8.00	2257380	0.00	1000	
Se	82	1	No Gas	41.268	41.268	5.64	14599	0.28	1000	
Mo	98	1	No Gas	41.848	41.848	9.45	755863	0.01	2000	
Ba	137	1	No Gas	448.671	448.671	9.61	3455062	0.01	1000	
Tl	205	1	No Gas	43.429	43.429	7.39	1691999	0.00	1000	
U	238	1	No Gas	21.746	21.746	8.36	1048157	0.00	1000	
Na	23	2	he	414.318	414.318	1.10	2002998	0.02	100000	
Mg	24	2	he	363.462	363.462	0.73	928191	0.04	100000	
K	39	2	he	403.859	403.859	1.18	1781137	0.02	100000	
Se	82	3	HeHe	36.131	36.131	8.21	986	3.66	1000	
Fe	57	3	HeHe	435.126	435.126	0.80	50629	0.86	100000	
Cd	114	1	No Gas	40.850	40.850	7.82	543249	0.01	1000	
Ca	44	1	No Gas	421.846	421.846	2.64	595672	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9215965	1.56	9248342	99.65	70	120	
Sc	45	2	he	1885228	1.67	1744643	108.06	70	120	

Ge	72	1	No Gas	962984	10.19	1012122	95.15	70	120	
In	115	1	No Gas	5635790	8.37	5760110	97.84	70	120	
Tb	159	1	No Gas	6772658	8.94	6952439	97.41	70	120	
Bi	209	1	No Gas	3702924	8.59	3846945	96.26	70	120	
Sc	45	3	HeHe	181045	2.34	171212	105.74	70	120	

Sample Report

Sample Table

Sample Name	9980109001
Data File Name	032SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T10:23:39-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3204

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	3.082	3.082	2.58	190688	0.00	1000	
Cr	52	1	No Gas	3.265	3.265	2.20	194631	0.00	1000	
Mn	55	1	No Gas	8.072	8.072	2.05	520396	0.00	1000	
Co	59	1	No Gas	0.216	0.216	3.18	11786	0.00	1000	
Ni	60	1	No Gas	1.144	1.144	2.67	14300	0.01	1000	
Cu	63	1	No Gas	0.104	0.104	6.16	15759	0.00	1000	
Sr	88	1	No Gas	0.629	0.629	2.60	43593	0.00	1000	
Ag	107	1	No Gas	0.008	0.008	6.68	319	0.00	1000	
Al	27	1	No Gas	1943.898	1943.898	1.68	67173958	0.00	100000	
Sn	118	1	No Gas	0.301	0.301	30.72	13258	0.00	100	
Ti	47	1	No Gas	79.239	79.239	0.50	335111	0.02	2000	
Zn	66	1	No Gas	2.402	2.402	3.71	18253	0.01	1000	
As	75	3	HeHe	0.841	0.841	9.57	449	0.19	1000	
As	75	1	No Gas	0.209	0.209	121.42	30554	0.00	1000	
Sb	121	1	No Gas	0.456	0.456	23.39	14566	0.00	100	
Hg	201	1	No Gas	0.020	0.020	29.72	78	0.03	4	
Be	9	1	No Gas	0.021	0.021	3.95	175	0.01	1000	
Pb	208	1	No Gas	3.171	3.171	1.41	206065	0.00	1000	
Se	82	1	No Gas	-0.003	-0.003	-9090.46	69	0.00	1000	
Mo	98	1	No Gas	0.165	0.165	123.96	16309	0.00	2000	
Ba	137	1	No Gas	4.640	4.640	1.59	40210	0.01	1000	
Tl	205	1	No Gas	0.039	0.039	11.88	1763	0.00	1000	
U	238	1	No Gas	0.598	0.598	2.90	32413	0.00	1000	
Na	23	2	he	16.794	16.794	3.93	200081	0.01	100000	
Mg	24	2	he	67.824	67.824	1.42	176511	0.04	100000	
K	39	2	he	28.858	28.858	11.24	377789	0.01	100000	
Se	82	3	HeHe	0.796	0.796	20.44	139	0.57	1000	
Fe	57	3	HeHe	1177.731	1177.731	0.16	137580	0.86	100000	
Cd	114	1	No Gas	0.027	0.027	29.36	800	0.00	1000	
Ca	44	1	No Gas	58.376	58.376	5.35	149919	0.04	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	10032380	1.46	9248342	108.48	70	120	
Sc	45	2	he	1917847	2.86	1744643	109.93	70	120	
Ge	72	1	No Gas	1052804	1.04	1012122	104.02	70	120	

In	115	1	No Gas	6292741	0.41	5760110	109.25	70	120	
Tb	159	1	No Gas	7503368	0.98	6952439	107.92	70	120	
Bi	209	1	No Gas	4096658	0.70	3846945	106.49	70	120	
Sc	45	3	HeHe	181747	2.22	171212	106.15	70	120	

Sample Report

Sample Table

Sample Name	9980109003
Data File Name	033SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T10:27:34-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3205

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	11.509	11.509	1.39	636518	0.00	1000	
Cr	52	1	No Gas	9.908	9.908	0.98	505165	0.00	1000	
Mn	55	1	No Gas	131.831	131.831	1.56	7740140	0.00	1000	
Co	59	1	No Gas	0.600	0.600	2.88	31793	0.00	1000	
Ni	60	1	No Gas	2.900	2.900	2.42	34695	0.01	1000	
Cu	63	1	No Gas	4.863	4.863	0.23	151521	0.00	1000	
Sr	88	1	No Gas	8.382	8.382	1.23	567051	0.00	1000	
Ag	107	1	No Gas	0.013	0.013	11.81	482	0.00	1000	
Al	27	1	No Gas	11226.651	11226.651	1.02	380340266	0.00	100000	
Sn	118	1	No Gas	0.371	0.371	24.82	14055	0.00	100	
Tl	47	1	No Gas	64.634	64.634	1.29	263446	0.02	2000	
Zn	66	1	No Gas	22.843	22.843	0.77	161246	0.01	1000	
As	75	3	HeHe	1.356	1.356	2.52	671	0.20	1000	
As	75	1	No Gas	0.695	0.695	2.62	33376	0.00	1000	
Sb	121	1	No Gas	0.409	0.409	21.51	12898	0.00	100	
Hg	201	1	No Gas	0.056	0.056	4.38	175	0.03	4	
Be	9	1	No Gas	0.099	0.099	3.37	711	0.01	1000	
Pb	208	1	No Gas	10.378	10.378	0.95	620095	0.00	1000	
Se	82	1	No Gas	0.248	0.248	420.26	160	0.15	1000	
Mo	98	1	No Gas	0.278	0.278	43.30	17883	0.00	2000	
Ba	137	1	No Gas	21.671	21.671	1.15	180477	0.01	1000	
Tl	205	1	No Gas	0.059	0.059	9.41	2560	0.00	1000	
U	238	1	No Gas	0.762	0.762	3.87	40459	0.00	1000	
Na	23	2	he	21.848	21.848	3.34	211722	0.01	100000	
Mg	24	2	he	385.153	385.153	2.28	947948	0.04	100000	
K	39	2	he	370.772	370.772	1.49	1596842	0.02	100000	
Se	82	3	HeHe	1.029	1.029	67.29	139	0.74	1000	
Fe	57	3	HeHe	3758.737	3758.737	0.37	421320	0.89	100000	
Cd	114	1	No Gas	0.089	0.089	18.45	1650	0.01	1000	
Ca	44	1	No Gas	596.105	596.105	2.02	870151	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9835714	0.90	9248342	106.35	70	120	
Sc	45	2	he	1817018	0.75	1744643	104.15	70	120	
Ge	72	1	No Gas	1028007	2.13	1012122	101.57	70	120	

In	115	1	No Gas	6059358	0.55	5760110	105.20	70	120	
Tb	159	1	No Gas	7369537	1.21	6952439	106.00	70	120	
Bi	209	1	No Gas	4087460	0.63	3846945	106.25	70	120	
Sc	45	3	HeHe	174400	2.02	171212	101.86	70	120	

Sample Report

Sample Table

Sample Name	9980109004
Data File Name	034SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T10:31:28-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3206

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	8.517	8.517	3.14	468125	0.00	1000	
Cr	52	1	No Gas	7.254	7.254	3.34	372619	0.00	1000	
Mn	55	1	No Gas	24.424	24.424	1.93	1438925	0.00	1000	
Co	59	1	No Gas	0.504	0.504	2.95	26228	0.00	1000	
Ni	60	1	No Gas	2.946	2.946	3.17	34601	0.01	1000	
Cu	63	1	No Gas	0.543	0.543	0.79	27518	0.00	1000	
Sr	88	1	No Gas	2.715	2.715	1.14	180496	0.00	1000	
Ag	107	1	No Gas	0.007	0.007	16.51	296	0.00	1000	
Al	27	1	No Gas	7483.509	7483.509	1.59	248925205	0.00	100000	
Sn	118	1	No Gas	0.716	0.716	14.70	19953	0.00	100	
Tl	47	1	No Gas	189.789	189.789	0.56	754153	0.03	2000	
Zn	66	1	No Gas	3.292	3.292	1.69	23712	0.01	1000	
As	75	3	HeHe	1.002	1.002	8.08	493	0.20	1000	
As	75	1	No Gas	0.421	0.421	52.89	30885	0.00	1000	
Sb	121	1	No Gas	0.224	0.224	30.51	8232	0.00	100	
Hg	201	1	No Gas	0.051	0.051	22.75	159	0.03	4	
Be	9	1	No Gas	0.081	0.081	6.48	581	0.01	1000	
Pb	208	1	No Gas	6.259	6.259	0.39	373729	0.00	1000	
Se	82	1	No Gas	0.176	0.176	416.80	135	0.13	1000	
Mo	98	1	No Gas	-0.112	-0.112	-126.98	10151	0.00	2000	
Ba	137	1	No Gas	12.679	12.679	1.34	103331	0.01	1000	
Tl	205	1	No Gas	0.031	0.031	8.58	1352	0.00	1000	
U	238	1	No Gas	1.081	1.081	3.23	56108	0.00	1000	
Na	23	2	he	11.926	11.926	4.02	168070	0.01	100000	
Mg	24	2	he	188.908	188.908	0.55	464575	0.04	100000	
K	39	2	he	82.848	82.848	0.74	553030	0.01	100000	
Se	82	3	HeHe	1.063	1.063	52.29	136	0.78	1000	
Fe	57	3	HeHe	2478.847	2478.847	1.62	270885	0.92	100000	
Cd	114	1	No Gas	0.038	0.038	18.98	900	0.00	1000	
Ca	44	1	No Gas	364.136	364.136	0.47	548164	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9658380	1.93	9248342	104.43	70	120	
Sc	45	2	he	1814670	1.07	1744643	104.01	70	120	
Ge	72	1	No Gas	1006734	1.00	1012122	99.47	70	120	

In	115	1	No Gas	5927656	0.71	5760110	102.91	70	120	
Tb	159	1	No Gas	7222294	0.72	6952439	103.88	70	120	
Bi	209	1	No Gas	4099146	0.66	3846945	106.56	70	120	
Sc	45	3	HeHe	170053	1.97	171212	99.32	70	120	

Sample Report

Sample Table

Sample Name	9980109005
Data File Name	035SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T10:35:23-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3207

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	13.823	13.823	0.84	748542	0.00	1000	
Cr	52	1	No Gas	8.327	8.327	1.00	423839	0.00	1000	
Mn	55	1	No Gas	50.436	50.436	2.59	2939649	0.00	1000	
Co	59	1	No Gas	0.369	0.369	5.92	19296	0.00	1000	
Ni	60	1	No Gas	1.918	1.918	1.97	22779	0.01	1000	
Cu	63	1	No Gas	2.156	2.156	1.28	73004	0.00	1000	
Sr	88	1	No Gas	7.063	7.063	1.45	470646	0.00	1000	
Ag	107	1	No Gas	0.011	0.011	24.68	400	0.00	1000	
Al	27	1	No Gas	7627.645	7627.645	1.79	254484360	0.00	100000	
Sn	118	1	No Gas	0.262	0.262	31.62	11827	0.00	100	
Ti	47	1	No Gas	34.048	34.048	0.11	137028	0.02	2000	
Zn	66	1	No Gas	11.650	11.650	2.83	81483	0.01	1000	
As	75	3	HeHe	1.696	1.696	6.04	821	0.21	1000	
As	75	1	No Gas	1.343	1.343	18.76	37412	0.00	1000	
Sb	121	1	No Gas	0.222	0.222	32.64	8225	0.00	100	
Hg	201	1	No Gas	0.042	0.042	15.10	133	0.03	4	
Be	9	1	No Gas	0.067	0.067	6.77	486	0.01	1000	
Pb	208	1	No Gas	9.127	9.127	0.77	535822	0.00	1000	
Se	82	1	No Gas	0.550	0.550	25.92	271	0.20	1000	
Mo	98	1	No Gas	0.306	0.306	43.50	18104	0.00	2000	
Ba	137	1	No Gas	17.326	17.326	1.03	141824	0.01	1000	
Tl	205	1	No Gas	0.053	0.053	3.87	2282	0.00	1000	
U	238	1	No Gas	0.579	0.579	4.89	30172	0.00	1000	
Na	23	2	he	41.150	41.150	1.10	299602	0.01	100000	
Mg	24	2	he	170.355	170.355	1.25	424206	0.04	100000	
K	39	2	he	154.070	154.070	1.54	820736	0.02	100000	
Se	82	3	HeHe	0.494	0.494	176.28	125	0.40	1000	
Fe	57	3	HeHe	4980.388	4980.388	2.23	552784	0.90	100000	
Cd	114	1	No Gas	0.056	0.056	20.06	1160	0.00	1000	
Ca	44	1	No Gas	243.589	243.589	1.64	390121	0.06	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9687175	1.34	9248342	104.74	70	120	
Sc	45	2	he	1837285	1.40	1744643	105.31	70	120	
Ge	72	1	No Gas	1004426	1.01	1012122	99.24	70	120	

In	115	1	No Gas	5954607	0.19	5760110	103.38	70	120	
Tb	159	1	No Gas	7211586	1.06	6952439	103.73	70	120	
Bi	209	1	No Gas	4000506	1.04	3846945	103.99	70	120	
Sc	45	3	HeHe	172746	2.47	171212	100.90	70	120	

Sample Report

Sample Table

Sample Name	9980109006
Data File Name	036SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T10:39:18-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3208

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	12.096	12.096	6.10	574449	0.00	1000	
Cr	52	1	No Gas	12.029	12.029	5.89	520903	0.00	1000	
Mn	55	1	No Gas	17.100	17.100	5.35	892745	0.00	1000	
Co	59	1	No Gas	0.606	0.606	3.39	27608	0.00	1000	
Ni	60	1	No Gas	3.501	3.501	4.94	35937	0.01	1000	
Cu	63	1	No Gas	15.863	15.863	6.33	400787	0.00	1000	
Sr	88	1	No Gas	9.542	9.542	5.13	555371	0.00	1000	
Ag	107	1	No Gas	0.016	0.016	25.76	474	0.00	1000	
Al	27	1	No Gas	13930.931	13930.931	6.30	405874014	0.00	100000	
Sn	118	1	No Gas	0.748	0.748	10.89	17681	0.00	100	
Ti	47	1	No Gas	108.794	108.794	7.10	372692	0.03	2000	
Zn	66	1	No Gas	19.068	19.068	5.85	115918	0.02	1000	
As	75	3	HeHe	1.223	1.223	4.47	596	0.21	1000	
As	75	1	No Gas	1.560	1.560	19.27	33990	0.00	1000	
Sb	121	1	No Gas	0.434	0.434	2.78	11397	0.00	100	
Hg	201	1	No Gas	0.053	0.053	16.83	141	0.04	4	
Be	9	1	No Gas	0.110	0.110	7.98	680	0.02	1000	
Pb	208	1	No Gas	14.492	14.492	7.49	727432	0.00	1000	
Se	82	1	No Gas	0.757	0.757	58.25	309	0.25	1000	
Mo	98	1	No Gas	0.143	0.143	35.36	12949	0.00	2000	
Ba	137	1	No Gas	26.023	26.023	8.24	182409	0.01	1000	
Tl	205	1	No Gas	0.066	0.066	17.60	2434	0.00	1000	
U	238	1	No Gas	0.747	0.747	8.57	33590	0.00	1000	
Na	23	2	he	23.012	23.012	0.42	216532	0.01	100000	
Mg	24	2	he	213.164	213.164	0.72	524094	0.04	100000	
K	39	2	he	203.277	203.277	2.73	988381	0.02	100000	
Se	82	3	HeHe	1.124	1.124	161.53	137	0.82	1000	
Fe	57	3	HeHe	4338.652	4338.652	1.55	475623	0.91	100000	
Cd	114	1	No Gas	0.097	0.097	23.84	1487	0.01	1000	
Ca	44	1	No Gas	295.589	295.589	5.54	401008	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	8476349	5.08	9248342	91.65	70	120	
Sc	45	2	he	1814502	2.54	1744643	104.00	70	120	
Ge	72	1	No Gas	864518	11.73	1012122	85.42	70	120	

In	115	1	No Gas	5122837	8.09	5760110	88.94	70	120	
Tb	159	1	No Gas	6268728	8.04	6952439	90.17	70	120	
Bi	209	1	No Gas	3492252	8.51	3846945	90.78	70	120	
Sc	45	3	HeHe	170566	1.19	171212	99.62	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	037_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T10:43:14-04:00
Sample Type	CCV
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	107.436	2.439	5722289	1.65	100	107.4	90	110	
Cr	52	1	No Gas	105.426	0.803	4997500	0.27	100	105.4	90	110	
Mn	55	1	No Gas	108.700	0.910	6354266	1.77	100	108.7	90	110	
Co	59	1	No Gas	104.801	1.914	5488919	0.94	100	104.8	90	110	
Ni	60	1	No Gas	101.510	1.789	1189279	0.89	100	101.5	90	110	
Cu	63	1	No Gas	105.440	1.363	3010180	0.93	100	105.4	90	110	
Sr	88	1	No Gas	106.138	1.330	7137858	0.46	100	106.1	90	110	
Ag	107	1	No Gas	104.130	1.886	3261251	0.27	100	104.1	90	110	
Al	27	1	No Gas	107.146	1.878	3620369	0.97	100	107.1	90	110	
Sn	118	1	No Gas	103.918	1.945	1958034	0.70	100	103.9	90	110	
Tl	47	1	No Gas	93.698	2.029	388573	1.25	100	93.7	90	110	
Zn	66	1	No Gas	101.679	1.784	710045	1.17	100	101.7	90	110	
As	75	3	HeHe	102.119	1.607	47144	0.17	100	102.1	90	110	
As	75	1	No Gas	101.147	1.176	741004	0.55	100	101.1	90	110	
Sb	121	1	No Gas	93.366	2.325	2300239	0.97	100	93.4	90	110	
Hg	201	1	No Gas	2.067	0.847	5603	0.94	2	103.4	90	110	
Be	9	1	No Gas	93.804	0.987	651388	0.18	100	93.8	90	110	
Pb	208	1	No Gas	102.574	0.831	5982497	1.72	100	102.6	90	110	
Se	82	1	No Gas	105.004	1.447	39339	0.79	100	105.0	90	110	
Mo	98	1	No Gas	104.272	3.360	2054807	1.79	100	104.3	90	110	
Ba	137	1	No Gas	99.761	2.572	846219	0.91	100	99.8	90	110	
Tl	205	1	No Gas	100.899	1.247	4309114	0.40	100	100.9	90	110	
U	238	1	No Gas	116.408	0.640	6153381	0.88	100	116.4	90	110	CCV Main CR1 Failed
Na	23	2	he	949.822	3.485	4500297	1.55	1000	95.0	90	110	
Mg	24	2	he	984.210	4.103	2548486	1.66	1000	98.4	90	110	
K	39	2	he	956.088	4.279	3911504	1.66	1000	95.6	90	110	
Se	82	3	HeHe	100.498	4.691	2416	3.11	100	100.5	90	110	
Fe	57	3	HeHe	1095.843	1.098	121660	0.68	1000	109.6	90	110	
Cd	114	1	No Gas	98.401	2.299	1439368	0.53	100	98.4	90	110	
Ca	44	1	No Gas	1058.409	1.218	1483723	1.17	1000	105.8	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9781247	0.97	9248342	105.76	70	120	
Sc	45	2	he	1913166	2.43	1744643	109.66	70	120	
Ge	72	1	No Gas	1039908	0.45	1012122	102.75	70	120	
In	115	1	No Gas	6176061	1.85	5760110	107.22	70	120	
Tb	159	1	No Gas	7392324	1.33	6952439	106.33	70	120	
Bi	209	1	No Gas	4048607	0.68	3846945	105.24	70	120	
Sc	45	3	HeHe	172744	1.56	171212	100.90	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	038_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T10:47:02-04:00
Sample Type	CCB
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	-0.248	-24.9	9471	35.7	9	
Cr	52	1	No Gas	-0.128	-7.9	31028	1.6	4	
Mn	55	1	No Gas	0.413	9.5	64444	3.6	25	
Co	59	1	No Gas	0.005	54.5	456	33.9	1	
Ni	60	1	No Gas	0.003	457.5	597	31.0	25	
Cu	63	1	No Gas	0.044	23.4	14094	2.1	25	
Sr	88	1	No Gas	0.001	102.8	304	31.5	25	
Ag	107	1	No Gas	0.013	21.8	496	17.0	9	
Al	27	1	No Gas	0.350	9.1	23435	4.7	1000000	
Sn	118	1	No Gas	1.573	27.3	37247	23.9	25	
Ti	47	1	No Gas	0.408	39.7	3128	23.7	10000	
Zn	66	1	No Gas	0.006	22.5	1130	0.9	25	
As	75	3	HeHe	0.645	15.0	355	14.4	9	
As	75	1	No Gas	0.596	34.6	33511	4.4	9	
Sb	121	1	No Gas	1.829	12.3	48486	13.6	4	
Hg	201	1	No Gas	0.016	24.6	68	16.4	0.04	
Be	9	1	No Gas	0.007	29.7	71	19.7	1	
Pb	208	1	No Gas	-0.085	-40.6	13877	15.3	4	
Se	82	1	No Gas	0.507	99.3	266	73.2	25	
Mo	98	1	No Gas	0.829	42.9	29310	25.9	10000	
Ba	137	1	No Gas	0.024	26.0	310	18.0	25	
Tl	205	1	No Gas	0.025	6.2	1148	5.0	1	
U	238	1	No Gas	0.263	24.7	14345	24.4	25	
Na	23	2	he	-1.694	-15.5	112245	2.4	2500000	
Mg	24	2	he	0.022	133.7	459	17.8	2500000	
K	39	2	he	-3.792	-20.7	247811	0.7	5000000	
Se	82	3	HeHe	1.069	180.0	145	29.7	25	
Fe	57	3	HeHe	24.475	2.3	2860	3.9	2500000	
Cd	114	1	No Gas	0.056	38.2	1213	27.4	1	
Ca	44	1	No Gas	-12.353	-3.2	53216	0.9	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	10087572	0.13	9248342	109.07	70	120	
Sc	45	2	he	1877456	1.63	1744643	107.61	70	120	
Ge	72	1	No Gas	1067092	0.81	1012122	105.43	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	6218099	2.15	5760110	107.95	70	120	
Tb	159	1	No Gas	7471319	1.00	6952439	107.46	70	120	
Bi	209	1	No Gas	4106391	1.77	3846945	106.74	70	120	
Sc	45	3	HeHe	181745	2.07	171212	106.15	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	039LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T10:50:57-04:00
Sample Type	LLCCV
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	1.731	3.787	117296	4.26	2	86.6	70	130	
Cr	52	1	No Gas	1.904	1.257	129044	0.59	2	95.2	70	130	
Mn	55	1	No Gas	5.250	1.257	352595	0.75	5	105.0	70	130	
Co	59	1	No Gas	4.872	1.755	262083	0.71	5	97.4	70	130	
Ni	60	1	No Gas	5.082	1.056	61655	1.66	5	101.6	70	130	
Cu	63	1	No Gas	4.896	1.178	155643	0.66	5	97.9	70	130	
Sr	88	1	No Gas	4.669	1.261	322511	0.66	5	93.4	70	130	
Ag	107	1	No Gas	2.037	2.896	64468	1.46	2	101.8	70	130	
Al	27	1	No Gas	81.374	2.116	2825070	1.14	80	101.7	70	130	
Sn	118	1	No Gas	1.943	5.235	44260	5.73	2	97.1	70	130	
Tl	47	1	No Gas	4.674	1.580	20921	0.72	5	93.5	70	130	
Zn	66	1	No Gas	5.385	0.531	39627	1.80	5	107.7	70	130	
As	75	3	HeHe	2.862	9.480	1452	8.03	3	95.4	70	130	
As	75	1	No Gas	3.029	7.038	50971	4.15	3	101.0	70	130	
Sb	121	1	No Gas	2.594	4.444	67563	5.39	2	129.7	70	130	
Hg	201	1	No Gas	0.186	4.910	533	5.27	0.2	92.9	70	130	
Be	9	1	No Gas	0.940	1.347	6727	2.62	1	94.0	70	130	
Pb	208	1	No Gas	2.054	0.729	140035	0.48	2	102.7	70	130	
Se	82	1	No Gas	5.550	15.558	2199	14.62	5	111.0	70	130	
Mo	98	1	No Gas	1.725	3.339	47020	3.84	2	86.3	70	130	
Ba	137	1	No Gas	5.083	1.908	43632	2.13	5	101.7	70	130	
Tl	205	1	No Gas	1.003	2.341	43499	1.29	1	100.3	70	130	
U	238	1	No Gas	4.974	0.979	267021	0.48	5	99.5	70	130	
Na	23	2	he	86.193	2.224	506647	0.67	100	86.2	70	130	
Mg	24	2	he	91.469	2.141	231417	1.27	100	91.5	70	130	
K	39	2	he	87.616	4.092	586116	1.15	100	87.6	70	130	
Se	82	3	HeHe	3.413	19.545	205	9.21	5	68.3	70	130	LLCCV Main CR1 Failed
Fe	57	3	HeHe	57.323	4.450	6802	5.66	50	114.6	70	130	
Cd	114	1	No Gas	0.976	0.098	14797	1.35	1	97.6	70	130	
Ca	44	1	No Gas	89.606	2.774	192931	0.60	100	89.6	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	10040751	1.29	9248342	108.57	70	120	
Sc	45	2	he	1865473	1.56	1744643	106.93	70	120	
Ge	72	1	No Gas	1054335	0.11	1012122	104.17	70	120	
In	115	1	No Gas	6234496	1.44	5760110	108.24	70	120	
Tb	159	1	No Gas	7499164	1.06	6952439	107.86	70	120	
Bi	209	1	No Gas	4200209	0.77	3846945	109.18	70	120	
Sc	45	3	HeHe	184540	1.27	171212	107.78	70	120	

Sample Report

Sample Table

Sample Name	9980109007
Data File Name	040SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T10:54:52-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3209

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	29.815	29.815	1.18	1736842	0.00	1000	
Cr	52	1	No Gas	22.018	22.018	1.17	1160889	0.00	1000	
Mn	55	1	No Gas	25.559	25.559	2.31	1649353	0.00	1000	
Co	59	1	No Gas	0.991	0.991	1.17	56384	0.00	1000	
Ni	60	1	No Gas	3.555	3.555	3.09	45664	0.01	1000	
Cu	63	1	No Gas	2.469	2.469	2.23	89444	0.00	1000	
Sr	88	1	No Gas	33.995	33.995	1.50	2475222	0.00	1000	
Ag	107	1	No Gas	0.019	0.019	15.83	700	0.00	1000	
Al	27	1	No Gas	19859.017	19859.017	0.91	724333142	0.00	100000	
Sn	118	1	No Gas	0.771	0.771	16.46	22361	0.00	100	
Ti	47	1	No Gas	103.625	103.625	0.59	439892	0.02	2000	
Zn	66	1	No Gas	15.240	15.240	2.46	116185	0.01	1000	
As	75	3	HeHe	2.206	2.206	4.92	1134	0.19	1000	
As	75	1	No Gas	0.681	0.681	54.49	35827	0.00	1000	
Sb	121	1	No Gas	0.706	0.706	15.64	20951	0.00	100	
Hg	201	1	No Gas	0.053	0.053	22.58	172	0.03	4	
Be	9	1	No Gas	0.269	0.269	4.37	2049	0.01	1000	
Pb	208	1	No Gas	14.187	14.187	1.78	870741	0.00	1000	
Se	82	1	No Gas	0.952	0.952	51.26	459	0.21	1000	
Mo	98	1	No Gas	0.745	0.745	33.77	28051	0.00	2000	
Ba	137	1	No Gas	53.633	53.633	0.47	465952	0.01	1000	
Tl	205	1	No Gas	0.122	0.122	5.26	5442	0.00	1000	
U	238	1	No Gas	2.121	2.121	0.53	116092	0.00	1000	
Na	23	2	he	40.591	40.591	8.67	305760	0.01	100000	
Mg	24	2	he	569.107	569.107	3.99	1457938	0.04	100000	
K	39	2	he	778.673	778.673	3.53	3200722	0.02	100000	
Se	82	3	HeHe	2.200	2.200	39.41	176	1.25	1000	
Fe	57	3	HeHe	8342.967	8342.967	3.45	993880	0.84	100000	
Cd	114	1	No Gas	0.068	0.068	5.15	1407	0.00	1000	
Ca	44	1	No Gas	631.288	631.288	1.47	987812	0.06	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	10589197	0.60	9248342	114.50	70	120	
Sc	45	2	he	1892811	3.10	1744643	108.49	70	120	
Ge	72	1	No Gas	1079933	1.93	1012122	106.70	70	120	

In	115	1	No Gas	6323160	1.04	5760110	109.77	70	120	
Tb	159	1	No Gas	7632479	1.78	6952439	109.78	70	120	
Bi	209	1	No Gas	4209539	1.17	3846945	109.43	70	120	
Sc	45	3	HeHe	185428	2.05	171212	108.30	70	120	

Sample Report

Sample Table

Sample Name	9980109008
Data File Name	041SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T10:58:45-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3210

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	16.571	16.571	0.88	929025	0.00	1000	
Cr	52	1	No Gas	10.540	10.540	1.08	548317	0.00	1000	
Mn	55	1	No Gas	19.602	19.602	0.30	1213184	0.00	1000	
Co	59	1	No Gas	0.662	0.662	0.79	35920	0.00	1000	
Ni	60	1	No Gas	2.732	2.732	2.54	33523	0.01	1000	
Cu	63	1	No Gas	0.704	0.704	2.67	33425	0.00	1000	
Sr	88	1	No Gas	2.151	2.151	0.80	149254	0.00	1000	
Ag	107	1	No Gas	0.011	0.011	25.43	415	0.00	1000	
Al	27	1	No Gas	9690.663	9690.663	1.34	336415238	0.00	100000	
Sn	118	1	No Gas	0.579	0.579	20.43	18370	0.00	100	
Ti	47	1	No Gas	133.181	133.181	1.17	556430	0.02	2000	
Zn	66	1	No Gas	5.340	5.340	5.76	39463	0.01	1000	
As	75	3	HeHe	1.363	1.363	8.85	711	0.19	1000	
As	75	1	No Gas	0.975	0.975	22.82	36241	0.00	1000	
Sb	121	1	No Gas	0.405	0.405	20.41	13147	0.00	100	
Hg	201	1	No Gas	0.045	0.045	22.78	151	0.03	4	
Be	9	1	No Gas	0.083	0.083	3.92	617	0.01	1000	
Pb	208	1	No Gas	7.372	7.372	1.01	464982	0.00	1000	
Se	82	1	No Gas	0.911	0.911	55.11	421	0.22	1000	
Mo	98	1	No Gas	0.133	0.133	94.80	15515	0.00	2000	
Ba	137	1	No Gas	14.459	14.459	0.65	123806	0.01	1000	
Tl	205	1	No Gas	0.070	0.070	15.20	3160	0.00	1000	
U	238	1	No Gas	0.850	0.850	0.95	47022	0.00	1000	
Na	23	2	he	9.017	9.017	8.17	162278	0.01	100000	
Mg	24	2	he	221.477	221.477	1.57	569011	0.04	100000	
K	39	2	he	128.829	128.829	1.54	751631	0.02	100000	
Se	82	3	HeHe	0.593	0.593	19.40	135	0.44	1000	
Fe	57	3	HeHe	7307.742	7307.742	4.23	860774	0.85	100000	
Cd	114	1	No Gas	0.042	0.042	23.79	1007	0.00	1000	
Ca	44	1	No Gas	61.649	61.649	5.36	155166	0.04	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	10078794	0.83	9248342	108.98	70	120	
Sc	45	2	he	1896266	2.02	1744643	108.69	70	120	
Ge	72	1	No Gas	1047508	1.07	1012122	103.50	70	120	

In	115	1	No Gas	6227938	0.77	5760110	108.12	70	120	
Tb	159	1	No Gas	7685676	0.79	6952439	110.55	70	120	
Bi	209	1	No Gas	4175265	1.44	3846945	108.53	70	120	
Sc	45	3	HeHe	183448	3.70	171212	107.15	70	120	

Sample Report

Sample Table

Sample Name	9980109009
Data File Name	042SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T11:02:41-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3211

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	11.771	11.771	1.10	644704	0.00	1000	
Cr	52	1	No Gas	9.294	9.294	1.33	471854	0.00	1000	
Mn	55	1	No Gas	30.464	30.464	2.60	1802095	0.00	1000	
Co	59	1	No Gas	0.651	0.651	1.15	34123	0.00	1000	
Ni	60	1	No Gas	2.910	2.910	2.13	34498	0.01	1000	
Cu	63	1	No Gas	1.832	1.832	1.77	64286	0.00	1000	
Sr	88	1	No Gas	4.028	4.028	2.23	270164	0.00	1000	
Ag	107	1	No Gas	0.008	0.008	37.47	304	0.00	1000	
Al	27	1	No Gas	10083.527	10083.527	1.52	338546379	0.00	100000	
Sn	118	1	No Gas	0.426	0.426	20.27	14982	0.00	100	
Ti	47	1	No Gas	136.062	136.062	1.81	549959	0.02	2000	
Zn	66	1	No Gas	13.898	13.898	1.78	97638	0.01	1000	
As	75	3	HeHe	2.052	2.052	4.39	992	0.21	1000	
As	75	1	No Gas	1.236	1.236	21.35	36885	0.00	1000	
Sb	121	1	No Gas	0.252	0.252	13.96	9051	0.00	100	
Hg	201	1	No Gas	0.043	0.043	36.65	141	0.03	4	
Be	9	1	No Gas	0.094	0.094	10.69	675	0.01	1000	
Pb	208	1	No Gas	7.501	7.501	0.75	453894	0.00	1000	
Se	82	1	No Gas	0.562	0.562	146.05	279	0.20	1000	
Mo	98	1	No Gas	-0.084	-0.084	-151.86	10864	0.00	2000	
Ba	137	1	No Gas	14.053	14.053	1.99	116411	0.01	1000	
Tl	205	1	No Gas	0.051	0.051	7.44	2234	0.00	1000	
U	238	1	No Gas	1.474	1.474	1.47	78047	0.00	1000	
Na	23	2	he	25.786	25.786	1.82	230550	0.01	100000	
Mg	24	2	he	218.013	218.013	1.98	540451	0.04	100000	
K	39	2	he	155.548	155.548	0.58	822713	0.02	100000	
Se	82	3	HeHe	1.141	1.141	69.57	140	0.81	1000	
Fe	57	3	HeHe	3284.055	3284.055	4.05	366126	0.90	100000	
Cd	114	1	No Gas	0.080	0.080	2.52	1523	0.01	1000	
Ca	44	1	No Gas	338.106	338.106	1.83	518529	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9747909	0.94	9248342	105.40	70	120	
Sc	45	2	he	1829488	0.64	1744643	104.86	70	120	
Ge	72	1	No Gas	1019058	0.30	1012122	100.69	70	120	

In	115	1	No Gas	6026275	1.54	5760110	104.62	70	120	
Tb	159	1	No Gas	7377939	0.55	6952439	106.12	70	120	
Bi	209	1	No Gas	4081943	0.37	3846945	106.11	70	120	
Sc	45	3	HeHe	173680	5.23	171212	101.44	70	120	

Sample Report

Sample Table

Sample Name	9980109010
Data File Name	043SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T11:06:36-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3212

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	21.715	21.715	1.81	1187734	0.00	1000	
Cr	52	1	No Gas	17.252	17.252	2.16	857651	0.00	1000	
Mn	55	1	No Gas	27.617	27.617	0.69	1661526	0.00	1000	
Co	59	1	No Gas	1.166	1.166	2.34	61921	0.00	1000	
Ni	60	1	No Gas	5.129	5.129	2.26	61294	0.01	1000	
Cu	63	1	No Gas	0.404	0.404	3.38	24174	0.00	1000	
Sr	88	1	No Gas	5.060	5.060	1.37	344348	0.00	1000	
Ag	107	1	No Gas	0.008	0.008	10.73	337	0.00	1000	
Al	27	1	No Gas	17828.461	17828.461	1.11	607424613	0.00	100000	
Sn	118	1	No Gas	0.605	0.605	12.01	18559	0.00	100	
Ti	47	1	No Gas	250.280	250.280	0.90	1027355	0.02	2000	
Zn	66	1	No Gas	5.871	5.871	2.21	42461	0.01	1000	
As	75	3	HeHe	1.931	1.931	3.15	956	0.20	1000	
As	75	1	No Gas	1.193	1.193	8.61	37118	0.00	1000	
Sb	121	1	No Gas	0.162	0.162	31.54	6998	0.00	100	
Hg	201	1	No Gas	0.024	0.024	29.79	90	0.03	4	
Be	9	1	No Gas	0.116	0.116	7.46	841	0.01	1000	
Pb	208	1	No Gas	9.994	9.994	3.14	599439	0.00	1000	
Se	82	1	No Gas	0.887	0.887	27.14	404	0.22	1000	
Mo	98	1	No Gas	-0.143	-0.143	-73.44	9895	0.00	2000	
Ba	137	1	No Gas	20.222	20.222	0.54	170269	0.01	1000	
Tl	205	1	No Gas	0.106	0.106	5.18	4594	0.00	1000	
U	238	1	No Gas	1.894	1.894	1.44	100367	0.00	1000	
Na	23	2	he	26.947	26.947	7.95	237487	0.01	100000	
Mg	24	2	he	417.492	417.492	1.58	1042954	0.04	100000	
K	39	2	he	333.971	333.971	2.25	1485206	0.02	100000	
Se	82	3	HeHe	3.060	3.060	32.79	189	1.62	1000	
Fe	57	3	HeHe	4983.533	4983.533	1.22	568251	0.88	100000	
Cd	114	1	No Gas	0.032	0.032	27.42	850	0.00	1000	
Ca	44	1	No Gas	89.949	89.949	0.95	190555	0.05	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9891272	0.56	9248342	106.95	70	120	
Sc	45	2	he	1844245	1.45	1744643	105.71	70	120	
Ge	72	1	No Gas	1030809	0.90	1012122	101.85	70	120	

In	115	1	No Gas	6125868	0.13	5760110	106.35	70	120	
Tb	159	1	No Gas	7390867	1.01	6952439	106.31	70	120	
Bi	209	1	No Gas	4044044	1.51	3846945	105.12	70	120	
Sc	45	3	HeHe	177410	0.92	171212	103.62	70	120	

Sample Report

Sample Table

Sample Name	9980109011
Data File Name	044SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T11:10:29-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3301

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	17.577	17.577	1.05	945731	0.00	1000	
Cr	52	1	No Gas	10.622	10.622	1.72	530750	0.00	1000	
Mn	55	1	No Gas	39.483	39.483	2.63	2309311	0.00	1000	
Co	59	1	No Gas	0.632	0.632	1.61	32962	0.00	1000	
Ni	60	1	No Gas	3.374	3.374	2.35	39666	0.01	1000	
Cu	63	1	No Gas	3.844	3.844	1.49	120520	0.00	1000	
Sr	88	1	No Gas	4.491	4.491	0.78	299304	0.00	1000	
Ag	107	1	No Gas	0.011	0.011	21.03	419	0.00	1000	
Al	27	1	No Gas	11016.331	11016.331	1.16	367527022	0.00	100000	
Sn	118	1	No Gas	0.312	0.312	23.03	13058	0.00	100	
Ti	47	1	No Gas	114.822	114.822	2.32	469983	0.02	2000	
Zn	66	1	No Gas	12.390	12.390	1.91	86589	0.01	1000	
As	75	3	HeHe	1.765	1.765	14.61	879	0.20	1000	
As	75	1	No Gas	1.430	1.430	14.04	37998	0.00	1000	
Sb	121	1	No Gas	0.202	0.202	21.11	7939	0.00	100	
Hg	201	1	No Gas	0.048	0.048	18.01	155	0.03	4	
Be	9	1	No Gas	0.117	0.117	0.97	829	0.01	1000	
Pb	208	1	No Gas	7.208	7.208	1.17	439989	0.00	1000	
Se	82	1	No Gas	0.470	0.470	31.42	242	0.19	1000	
Mo	98	1	No Gas	0.168	0.168	83.52	15887	0.00	2000	
Ba	137	1	No Gas	27.565	27.565	1.61	231048	0.01	1000	
Tl	205	1	No Gas	0.059	0.059	3.18	2604	0.00	1000	
U	238	1	No Gas	1.032	1.032	0.93	55119	0.00	1000	
Na	23	2	he	14.466	14.466	7.39	182083	0.01	100000	
Mg	24	2	he	353.795	353.795	1.02	883773	0.04	100000	
K	39	2	he	198.173	198.173	0.61	985922	0.02	100000	
Se	82	3	HeHe	0.006	0.006	5905.44	117	0.01	1000	
Fe	57	3	HeHe	6932.729	6932.729	1.04	791112	0.88	100000	
Cd	114	1	No Gas	0.064	0.064	24.46	1307	0.00	1000	
Ca	44	1	No Gas	801.279	801.279	1.17	1128686	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9686329	1.26	9248342	104.74	70	120	
Sc	45	2	he	1843951	0.65	1744643	105.69	70	120	
Ge	72	1	No Gas	1025458	0.65	1012122	101.32	70	120	

In	115	1	No Gas	6100265	1.78	5760110	105.91	70	120	
Tb	159	1	No Gas	7430765	0.89	6952439	106.88	70	120	
Bi	209	1	No Gas	4068056	1.18	3846945	105.75	70	120	
Sc	45	3	HeHe	177559	1.81	171212	103.71	70	120	

Sample Report

Sample Table

Sample Name	1017048
Data File Name	045SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T11:14:23-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3302

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	58.533	58.533	2.05	3154217	0.00	1000	
Cr	52	1	No Gas	51.704	51.704	0.79	2490261	0.00	1000	
Mn	55	1	No Gas	80.256	80.256	1.92	4740915	0.00	1000	
Co	59	1	No Gas	38.653	38.653	2.32	2041478	0.00	1000	
Ni	60	1	No Gas	39.704	39.704	2.09	469482	0.01	1000	
Cu	63	1	No Gas	40.239	40.239	2.33	1166074	0.00	1000	
Sr	88	1	No Gas	41.466	41.466	1.87	2812097	0.00	1000	
Ag	107	1	No Gas	15.656	15.656	1.89	481626	0.00	1000	
Al	27	1	No Gas	14110.789	14110.789	0.61	479417196	0.00	100000	
Sn	118	1	No Gas	26.219	26.219	2.27	490584	0.01	100	
Ti	47	1	No Gas	227.465	227.465	1.18	924524	0.02	2000	
Zn	66	1	No Gas	403.061	403.061	2.77	2834869	0.01	1000	
As	75	3	HeHe	35.088	35.088	0.29	16648	0.21	1000	
As	75	1	No Gas	33.621	33.621	1.60	267428	0.01	1000	
Sb	121	1	No Gas	15.601	15.601	0.94	380059	0.00	100	
Hg	201	1	No Gas	0.416	0.416	6.05	1132	0.04	4	
Be	9	1	No Gas	34.228	34.228	2.50	239678	0.01	1000	
Pb	208	1	No Gas	45.069	45.069	2.16	2603473	0.00	1000	
Se	82	1	No Gas	36.088	36.088	4.24	13678	0.26	1000	
Mo	98	1	No Gas	30.159	30.159	2.11	592688	0.01	2000	
Ba	137	1	No Gas	425.668	425.668	0.91	3546469	0.01	1000	
Tl	205	1	No Gas	38.310	38.310	2.35	1614255	0.00	1000	
U	238	1	No Gas	20.801	20.801	2.11	1085070	0.00	1000	
Na	23	2	he	425.812	425.812	2.80	2013037	0.02	100000	
Mg	24	2	he	828.765	828.765	3.11	2072362	0.04	100000	
K	39	2	he	674.547	674.547	1.57	2741045	0.02	100000	
Se	82	3	HeHe	36.032	36.032	2.96	964	3.74	1000	
Fe	57	3	HeHe	7758.141	7758.141	0.43	883787	0.88	100000	
Cd	114	1	No Gas	36.101	36.101	1.10	518924	0.01	1000	
Ca	44	1	No Gas	1262.985	1262.985	1.19	1772149	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9864003	1.42	9248342	106.66	70	120	
Sc	45	2	he	1846572	0.90	1744643	105.84	70	120	
Ge	72	1	No Gas	1026555	0.99	1012122	101.43	70	120	

In	115	1	No Gas	6065272	1.51	5760110	105.30	70	120	
Tb	159	1	No Gas	7294762	1.89	6952439	104.92	70	120	
Bi	209	1	No Gas	4066886	0.23	3846945	105.72	70	120	
Sc	45	3	HeHe	177233	0.83	171212	103.52	70	120	

Sample Report

Sample Table

Sample Name	1017049
Data File Name	046SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T11:18:13-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3303

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	61.747	61.747	0.93	3288327	0.00	1000	
Cr	52	1	No Gas	53.264	53.264	1.15	2534872	0.00	1000	
Mn	55	1	No Gas	90.322	90.322	1.58	5269440	0.00	1000	
Co	59	1	No Gas	39.999	39.999	2.76	2088497	0.00	1000	
Ni	60	1	No Gas	41.070	41.070	0.72	480024	0.01	1000	
Cu	63	1	No Gas	41.935	41.935	0.17	1200941	0.00	1000	
Sr	88	1	No Gas	41.892	41.892	1.14	2808650	0.00	1000	
Ag	107	1	No Gas	15.712	15.712	1.18	482641	0.00	1000	
Al	27	1	No Gas	14243.680	14243.680	0.31	478384514	0.00	100000	
Sn	118	1	No Gas	36.045	36.045	0.61	670799	0.01	100	
Ti	47	1	No Gas	230.632	230.632	0.72	935976	0.02	2000	
Zn	66	1	No Gas	405.617	405.617	1.70	2820723	0.01	1000	
As	75	3	HeHe	37.370	37.370	1.91	17275	0.22	1000	
As	75	1	No Gas	36.392	36.392	0.67	283835	0.01	1000	
Sb	121	1	No Gas	35.967	35.967	2.32	870818	0.00	100	
Hg	201	1	No Gas	0.437	0.437	7.99	1200	0.04	4	
Be	9	1	No Gas	34.784	34.784	0.86	240810	0.01	1000	
Pb	208	1	No Gas	45.708	45.708	0.58	2667561	0.00	1000	
Se	82	1	No Gas	36.164	36.164	2.83	13551	0.27	1000	
Mo	98	1	No Gas	35.885	35.885	1.01	701868	0.01	2000	
Ba	137	1	No Gas	432.550	432.550	2.17	3598152	0.01	1000	
Tl	205	1	No Gas	38.412	38.412	3.07	1635384	0.00	1000	
U	238	1	No Gas	20.844	20.844	0.16	1098562	0.00	1000	
Na	23	2	he	428.667	428.667	0.08	2005665	0.02	100000	
Mg	24	2	he	875.113	875.113	2.25	2166535	0.04	100000	
K	39	2	he	672.789	672.789	0.57	2707291	0.02	100000	
Se	82	3	HeHe	36.723	36.723	1.85	955	3.84	1000	
Fe	57	3	HeHe	8395.816	8395.816	0.75	932069	0.90	100000	
Cd	114	1	No Gas	36.347	36.347	1.66	521651	0.01	1000	
Ca	44	1	No Gas	1417.953	1417.953	1.67	1958529	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9750393	0.55	9248342	105.43	70	120	
Sc	45	2	he	1828020	0.67	1744643	104.78	70	120	
Ge	72	1	No Gas	1016083	0.88	1012122	100.39	70	120	

In	115	1	No Gas	6055990	1.07	5760110	105.14	70	120	
Tb	159	1	No Gas	7368510	0.35	6952439	105.98	70	120	
Bi	209	1	No Gas	4055068	1.90	3846945	105.41	70	120	
Sc	45	3	HeHe	172731	1.63	171212	100.89	70	120	

Sample Report

Sample Table

Sample Name	9980109012
Data File Name	048SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T11:25:48-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3305

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	17.345	17.345	0.29	944529	0.00	1000	
Cr	52	1	No Gas	10.140	10.140	0.37	514344	0.00	1000	
Mn	55	1	No Gas	61.375	61.375	0.06	3611395	0.00	1000	
Co	59	1	No Gas	0.621	0.621	0.91	32735	0.00	1000	
Ni	60	1	No Gas	2.911	2.911	1.50	34705	0.01	1000	
Cu	63	1	No Gas	7.228	7.228	0.57	218341	0.00	1000	
Sr	88	1	No Gas	5.285	5.285	1.02	356322	0.00	1000	
Ag	107	1	No Gas	0.026	0.026	17.90	878	0.00	1000	
Al	27	1	No Gas	9819.174	9819.174	0.68	331471979	0.00	100000	
Sn	118	1	No Gas	0.325	0.325	20.29	13421	0.00	100	
Ti	47	1	No Gas	79.165	79.165	1.01	327477	0.02	2000	
Zn	66	1	No Gas	17.030	17.030	2.54	120041	0.01	1000	
As	75	3	HeHe	2.528	2.528	4.27	1233	0.21	1000	
As	75	1	No Gas	1.858	1.858	7.21	41472	0.00	1000	
Sb	121	1	No Gas	2.667	2.667	8.81	68505	0.00	100	
Hg	201	1	No Gas	0.056	0.056	6.57	176	0.03	4	
Be	9	1	No Gas	0.130	0.130	3.38	928	0.01	1000	
Pb	208	1	No Gas	7.863	7.863	0.36	478972	0.00	1000	
Se	82	1	No Gas	1.100	1.100	64.25	480	0.23	1000	
Mo	98	1	No Gas	1.553	1.553	27.70	43078	0.00	2000	
Ba	137	1	No Gas	30.805	30.805	1.35	260561	0.01	1000	
Tl	205	1	No Gas	0.077	0.077	4.47	3349	0.00	1000	
U	238	1	No Gas	1.117	1.117	8.14	59770	0.00	1000	
Na	23	2	he	15.516	15.516	9.27	185183	0.01	100000	
Mg	24	2	he	511.914	511.914	1.75	1268010	0.04	100000	
K	39	2	he	245.835	245.835	0.49	1151563	0.02	100000	
Se	82	3	HeHe	2.081	2.081	18.90	165	1.26	1000	
Fe	57	3	HeHe	7212.124	7212.124	1.67	819060	0.88	100000	
Cd	114	1	No Gas	0.086	0.086	12.80	1640	0.01	1000	
Ca	44	1	No Gas	1317.036	1317.036	0.95	1833261	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9800294	0.12	9248342	105.97	70	120	
Sc	45	2	he	1828721	0.38	1744643	104.82	70	120	
Ge	72	1	No Gas	1032218	0.26	1012122	101.99	70	120	

In	115	1	No Gas	6155337	0.85	5760110	106.86	70	120	
Tb	159	1	No Gas	7441516	0.68	6952439	107.03	70	120	
Bi	209	1	No Gas	4168009	0.87	3846945	108.35	70	120	
Sc	45	3	HeHe	176710	1.48	171212	103.21	70	120	

Sample Report

Sample Table

Sample Name	9980109013
Data File Name	049SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T11:29:42-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3306

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	71.175	71.175	0.46	3851270	0.00	1000	
Cr	52	1	No Gas	39.527	39.527	1.59	1922474	0.00	1000	
Mn	55	1	No Gas	31.694	31.694	0.20	1905760	0.00	1000	
Co	59	1	No Gas	2.298	2.298	0.49	122191	0.00	1000	
Ni	60	1	No Gas	10.885	10.885	1.28	129780	0.01	1000	
Cu	63	1	No Gas	1.190	1.190	0.82	46892	0.00	1000	
Sr	88	1	No Gas	8.841	8.841	1.09	602934	0.00	1000	
Ag	107	1	No Gas	0.018	0.018	5.23	630	0.00	1000	
Al	27	1	No Gas	39867.972	39867.972	0.63	1361674138	0.00	100000	
Sn	118	1	No Gas	1.019	1.019	6.20	25610	0.00	100	
Ti	47	1	No Gas	230.609	230.609	1.49	922264	0.03	2000	
Zn	66	1	No Gas	10.693	10.693	1.23	76655	0.01	1000	
As	75	3	HeHe	5.026	5.026	3.74	2410	0.21	1000	
As	75	1	No Gas	4.065	4.065	8.27	57741	0.01	1000	
Sb	121	1	No Gas	1.014	1.014	13.71	27097	0.00	100	
Hg	201	1	No Gas	0.044	0.044	18.64	143	0.03	4	
Be	9	1	No Gas	0.269	0.269	3.48	1919	0.01	1000	
Pb	208	1	No Gas	14.217	14.217	1.66	850924	0.00	1000	
Se	82	1	No Gas	1.286	1.286	34.86	555	0.23	1000	
Mo	98	1	No Gas	1.103	1.103	18.01	33250	0.00	2000	
Ba	137	1	No Gas	35.317	35.317	2.67	289592	0.01	1000	
Tl	205	1	No Gas	0.154	0.154	3.62	6680	0.00	1000	
U	238	1	No Gas	1.637	1.637	4.14	87404	0.00	1000	
Na	23	2	he	37.960	37.960	3.52	286742	0.01	100000	
Mg	24	2	he	801.009	801.009	1.99	2002186	0.04	100000	
K	39	2	he	495.501	495.501	2.52	2080828	0.02	100000	
Se	82	3	HeHe	1.718	1.718	34.12	156	1.10	1000	
Fe	57	3	HeHe	29856.640	29856.640	1.99	3386897	0.88	100000	
Cd	114	1	No Gas	0.054	0.054	17.02	1130	0.00	1000	
Ca	44	1	No Gas	123.700	123.700	1.48	236772	0.05	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9915798	1.04	9248342	107.22	70	120	
Sc	45	2	he	1845590	0.26	1744643	105.79	70	120	
Ge	72	1	No Gas	1017408	1.13	1012122	100.52	70	120	

In	115	1	No Gas	5968241	1.41	5760110	103.61	70	120	
Tb	159	1	No Gas	7443124	1.37	6952439	107.06	70	120	
Bi	209	1	No Gas	4027437	2.12	3846945	104.69	70	120	
Sc	45	3	HeHe	176526	1.59	171212	103.10	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	050_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T11:33:39-04:00
Sample Type	CCV
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag	
V	51	1	No Gas	106.161	1.514	5703622	0.85	100	106.2	90	110		
Cr	52	1	No Gas	104.423	0.314	4993070	0.78	100	104.4	90	110		
Mn	55	1	No Gas	107.054	0.891	6311894	0.55	100	107.1	90	110		
Co	59	1	No Gas	102.997	1.649	5441166	1.28	100	103.0	90	110		
Ni	60	1	No Gas	99.980	0.271	1181540	0.47	100	100.0	90	110		
Cu	63	1	No Gas	104.080	1.156	2997108	0.74	100	104.1	90	110		
Sr	88	1	No Gas	106.115	2.016	7197835	1.70	100	106.1	90	110		
Ag	107	1	No Gas	104.097	1.124	3241702	1.60	100	104.1	90	110		
Al	27	1	No Gas	106.557	0.659	3631766	0.11	100	106.6	90	110		
Sn	118	1	No Gas	106.102	1.166	1987525	0.87	100	106.1	90	110		
Tl	47	1	No Gas	93.620	0.890	386006	0.49	100	93.6	90	110		
Zn	66	1	No Gas	100.579	0.351	708460	0.32	100	100.6	90	110		
As	75	3	HeHe	100.477	2.105	47601	1.99	100	100.5	90	110		
As	75	1	No Gas	99.877	0.772	738371	0.27	100	99.9	90	110		
Sb	121	1	No Gas	95.402	1.783	2337085	2.22	100	95.4	90	110		
Hg	201	1	No Gas	2.014	0.942	5504	2.10	2	100.7	90	110		
Be	9	1	No Gas	94.509	0.356	661971	0.98	100	94.5	90	110		
Pb	208	1	No Gas	102.955	2.155	6051833	0.40	100	103.0	90	110		
Se	82	1	No Gas	102.682	0.475	38803	0.42	100	102.7	90	110		
Mo	98	1	No Gas	104.409	2.218	2045921	1.79	100	104.4	90	110		
Ba	137	1	No Gas	100.309	0.748	846077	1.14	100	100.3	90	110		
Tl	205	1	No Gas	100.346	2.335	4319653	0.83	100	100.3	90	110		
U	238	1	No Gas	113.811	0.921	6064699	1.10	100	113.8	90	110	CCV Main CR1 Failed	N/A
Na	23	2	he	1003.322	0.927	4574179	1.12	1000	100.3	90	110		
Mg	24	2	he	1019.102	1.211	2543258	1.49	1000	101.9	90	110		
K	39	2	he	996.849	1.468	3919413	1.40	1000	99.7	90	110		
Se	82	3	HeHe	98.614	4.953	2435	4.18	100	98.6	90	110		
Fe	57	3	HeHe	1115.578	2.806	127067	1.81	1000	111.6	90	110	CCV Main CR1 Failed	N/A
Cd	114	1	No Gas	100.525	2.117	1462196	2.60	100	100.5	90	110		
Ca	44	1	No Gas	1063.086	1.823	1502724	1.24	1000	106.3	90	110		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9865243	0.65	9248342	106.67	70	120	
Sc	45	2	he	1842766	1.59	1744643	105.62	70	120	
Ge	72	1	No Gas	1039972	0.45	1012122	102.75	70	120	
In	115	1	No Gas	6139314	0.49	5760110	106.58	70	120	
Tb	159	1	No Gas	7452391	1.75	6952439	107.19	70	120	
Bi	209	1	No Gas	4082296	0.77	3846945	106.12	70	120	
Sc	45	3	HeHe	177264	2.11	171212	103.53	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	051_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T11:37:27-04:00
Sample Type	CCB
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	-0.164	-17.1	13265	6.1	9	
Cr	52	1	No Gas	-0.140	-20.2	28717	2.7	4	
Mn	55	1	No Gas	0.415	15.8	60838	2.6	25	
Co	59	1	No Gas	0.004	41.9	382	28.0	1	
Ni	60	1	No Gas	0.003	74.0	563	6.2	25	
Cu	63	1	No Gas	-0.195	-9.2	6683	3.4	25	
Sr	88	1	No Gas	0.004	32.4	433	15.6	25	
Ag	107	1	No Gas	0.014	41.5	496	32.2	9	
Al	27	1	No Gas	0.471	7.3	26094	8.0	1000000	
Sn	118	1	No Gas	1.203	28.7	29498	22.9	25	
Ti	47	1	No Gas	0.325	42.6	2713	21.8	10000	
Zn	66	1	No Gas	0.018	78.6	1143	6.3	25	
As	75	3	HeHe	0.652	3.2	342	1.8	9	
As	75	1	No Gas	0.542	17.1	31266	6.4	9	
Sb	121	1	No Gas	1.757	14.5	45590	14.8	4	
Hg	201	1	No Gas	0.013	38.5	59	26.5	0.04	
Be	9	1	No Gas	0.008	28.1	73	17.7	1	
Pb	208	1	No Gas	-0.121	-5.5	11426	1.1	4	
Se	82	1	No Gas	0.040	408.8	82	77.5	25	
Mo	98	1	No Gas	0.693	55.8	25972	29.7	10000	
Ba	137	1	No Gas	0.014	35.5	213	18.9	25	
Tl	205	1	No Gas	0.026	16.8	1156	16.1	1	
U	238	1	No Gas	0.213	22.9	11364	21.7	25	
Na	23	2	he	-2.015	-107.8	112782	1.8	2500000	
Mg	24	2	he	0.013	207.6	444	17.5	2500000	
K	39	2	he	-9.611	-48.7	230268	1.0	5000000	
Se	82	3	HeHe	0.036	1516.6	115	9.9	25	
Fe	57	3	HeHe	34.578	10.3	3867	11.5	2500000	
Cd	114	1	No Gas	0.047	29.9	1053	21.9	1	
Ca	44	1	No Gas	-10.443	-24.5	52593	2.1	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9517483	4.64	9248342	102.91	70	120	
Sc	45	2	he	1919835	7.50	1744643	110.04	70	120	
Ge	72	1	No Gas	1028039	0.40	1012122	101.57	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	6074044	3.48	5760110	105.45	70	120	
Tb	159	1	No Gas	7273932	3.57	6952439	104.62	70	120	
Bi	209	1	No Gas	4135644	2.67	3846945	107.50	70	120	
Sc	45	3	HeHe	173847	1.48	171212	101.54	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	052LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T11:41:22-04:00
Sample Type	LLCCV
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	1.655	12.136	110306	10.88	2	82.8	70	130	
Cr	52	1	No Gas	1.857	1.741	123523	1.58	2	92.8	70	130	
Mn	55	1	No Gas	5.375	2.276	350742	0.38	5	107.5	70	130	
Co	59	1	No Gas	4.870	1.487	255261	0.89	5	97.4	70	130	
Ni	60	1	No Gas	4.933	1.330	58311	0.41	5	98.7	70	130	
Cu	63	1	No Gas	4.677	2.553	145376	0.96	5	93.5	70	130	
Sr	88	1	No Gas	4.582	1.913	308336	0.79	5	91.6	70	130	
Ag	107	1	No Gas	2.030	1.736	63033	0.26	2	101.5	70	130	
Al	27	1	No Gas	81.960	1.366	2772275	0.38	80	102.5	70	130	
Sn	118	1	No Gas	1.823	8.304	41144	5.57	2	91.2	70	130	
Ti	47	1	No Gas	4.631	2.010	20342	0.67	5	92.6	70	130	
Zn	66	1	No Gas	5.457	2.911	39102	1.53	5	109.1	70	130	
As	75	3	HeHe	3.038	6.828	1463	6.58	3	101.3	70	130	
As	75	1	No Gas	2.989	21.961	49333	8.36	3	99.6	70	130	
Sb	121	1	No Gas	2.575	4.711	65759	3.74	2	128.8	70	130	
Hg	201	1	No Gas	0.183	2.980	516	4.32	0.2	91.6	70	130	
Be	9	1	No Gas	0.956	2.976	6666	3.23	1	95.6	70	130	
Pb	208	1	No Gas	1.861	3.255	126202	1.74	2	93.0	70	130	
Se	82	1	No Gas	4.502	13.759	1751	12.24	5	90.0	70	130	
Mo	98	1	No Gas	1.813	8.805	47780	5.17	2	90.6	70	130	
Ba	137	1	No Gas	4.994	1.550	42038	1.24	5	99.9	70	130	
Tl	205	1	No Gas	0.992	3.183	42199	1.20	1	99.2	70	130	
U	238	1	No Gas	5.090	2.392	268019	0.40	5	101.8	70	130	
Na	23	2	he	85.765	2.807	502350	1.38	100	85.8	70	130	
Mg	24	2	he	90.648	1.445	228277	0.75	100	90.6	70	130	
K	39	2	he	88.614	1.904	587134	1.11	100	88.6	70	130	
Se	82	3	HeHe	5.529	5.000	244	2.34	5	110.6	70	130	
Fe	57	3	HeHe	68.031	2.354	7669	2.54	50	136.1	70	130	LLCCV Main CR1 Failed
Cd	114	1	No Gas	1.031	4.698	15311	4.78	1	103.1	70	130	
Ca	44	1	No Gas	88.334	1.204	186289	1.17	100	88.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9782872	1.72	9248342	105.78	70	120	
Sc	45	2	he	1856815	2.02	1744643	106.43	70	120	
Ge	72	1	No Gas	1023064	1.37	1012122	101.08	70	120	
In	115	1	No Gas	6114165	1.46	5760110	106.15	70	120	
Tb	159	1	No Gas	7358184	2.07	6952439	105.84	70	120	
Bi	209	1	No Gas	4050085	1.46	3846945	105.28	70	120	
Sc	45	3	HeHe	175372	0.30	171212	102.43	70	120	

Sample Report

Sample Table

Sample Name	9980109014
Data File Name	053SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T11:45:18-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3307

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	9.442	9.442	0.90	513863	0.00	1000	
Cr	52	1	No Gas	6.770	6.770	2.48	348238	0.00	1000	
Mn	55	1	No Gas	17.370	17.370	1.53	1028438	0.00	1000	
Co	59	1	No Gas	0.586	0.586	1.62	30286	0.00	1000	
Ni	60	1	No Gas	2.006	2.006	1.05	23590	0.01	1000	
Cu	63	1	No Gas	2.890	2.890	1.25	92862	0.00	1000	
Sr	88	1	No Gas	4.958	4.958	1.33	327539	0.00	1000	
Ag	107	1	No Gas	0.021	0.021	34.46	711	0.00	1000	
Al	27	1	No Gas	8592.698	8592.698	0.38	284233018	0.00	100000	
Sn	118	1	No Gas	0.401	0.401	30.37	14463	0.00	100	
Ti	47	1	No Gas	71.008	71.008	2.68	286223	0.02	2000	
Zn	66	1	No Gas	17.338	17.338	0.45	119738	0.01	1000	
As	75	3	HeHe	1.527	1.527	7.75	758	0.20	1000	
As	75	1	No Gas	1.133	1.133	16.59	35616	0.00	1000	
Sb	121	1	No Gas	0.564	0.564	22.62	16450	0.00	100	
Hg	201	1	No Gas	0.047	0.047	4.32	151	0.03	4	
Be	9	1	No Gas	0.122	0.122	2.45	857	0.01	1000	
Pb	208	1	No Gas	8.518	8.518	0.82	510703	0.00	1000	
Se	82	1	No Gas	1.191	1.191	43.04	504	0.24	1000	
Mo	98	1	No Gas	0.109	0.109	179.26	14486	0.00	2000	
Ba	137	1	No Gas	17.835	17.835	0.32	146999	0.01	1000	
Tl	205	1	No Gas	0.046	0.046	7.05	2015	0.00	1000	
U	238	1	No Gas	1.249	1.249	1.76	65921	0.00	1000	
Na	23	2	he	31.054	31.054	1.14	253919	0.01	100000	
Mg	24	2	he	327.135	327.135	0.73	811240	0.04	100000	
K	39	2	he	279.578	279.578	5.69	1275762	0.02	100000	
Se	82	3	HeHe	1.734	1.734	27.15	156	1.11	1000	
Fe	57	3	HeHe	2875.821	2875.821	2.31	325284	0.88	100000	
Cd	114	1	No Gas	0.106	0.106	4.17	1887	0.01	1000	
Ca	44	1	No Gas	892.591	892.591	3.45	1239411	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9603207	1.59	9248342	103.84	70	120	
Sc	45	2	he	1830435	0.12	1744643	104.92	70	120	
Ge	72	1	No Gas	1016395	0.31	1012122	100.42	70	120	

In	115	1	No Gas	5996177	1.24	5760110	104.10	70	120	
Tb	159	1	No Gas	7346761	1.69	6952439	105.67	70	120	
Bi	209	1	No Gas	4002255	0.33	3846945	104.04	70	120	
Sc	45	3	HeHe	176002	0.90	171212	102.80	70	120	

Sample Report

Sample Table

Sample Name	9980109015
Data File Name	054SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T11:49:12-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3308

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	12.923	12.923	0.62	701499	0.00	1000	
Cr	52	1	No Gas	7.756	7.756	0.27	397387	0.00	1000	
Mn	55	1	No Gas	67.534	67.534	1.06	3925340	0.00	1000	
Co	59	1	No Gas	0.750	0.750	0.82	39104	0.00	1000	
Ni	60	1	No Gas	4.113	4.113	1.15	48254	0.01	1000	
Cu	63	1	No Gas	9.703	9.703	0.10	285606	0.00	1000	
Sr	88	1	No Gas	4.214	4.214	1.63	280962	0.00	1000	
Ag	107	1	No Gas	0.011	0.011	24.69	411	0.00	1000	
Al	27	1	No Gas	8517.048	8517.048	0.91	284281455	0.00	100000	
Sn	118	1	No Gas	0.350	0.350	29.59	13525	0.00	100	
Ti	47	1	No Gas	183.433	183.433	1.99	738289	0.02	2000	
Zn	66	1	No Gas	21.820	21.820	1.12	151790	0.01	1000	
As	75	3	HeHe	1.184	1.184	3.71	588	0.20	1000	
As	75	1	No Gas	0.967	0.967	34.15	34799	0.00	1000	
Sb	121	1	No Gas	0.383	0.383	22.97	12131	0.00	100	
Hg	201	1	No Gas	0.038	0.038	11.88	125	0.03	4	
Be	9	1	No Gas	0.076	0.076	8.24	544	0.01	1000	
Pb	208	1	No Gas	6.854	6.854	0.32	411482	0.00	1000	
Se	82	1	No Gas	-0.195	-0.195	-394.79	-5	4.14	1000	
Mo	98	1	No Gas	0.087	0.087	186.55	14055	0.00	2000	
Ba	137	1	No Gas	30.218	30.218	2.18	249306	0.01	1000	
Tl	205	1	No Gas	0.082	0.082	5.28	3530	0.00	1000	
U	238	1	No Gas	0.647	0.647	2.24	34006	0.00	1000	
Na	23	2	he	55.470	55.470	2.31	356158	0.02	100000	
Mg	24	2	he	655.542	655.542	2.17	1600491	0.04	100000	
K	39	2	he	752.893	752.893	2.07	2957896	0.03	100000	
Se	82	3	HeHe	0.085	0.085	1096.93	116	0.07	1000	
Fe	57	3	HeHe	4597.854	4597.854	1.09	512076	0.90	100000	
Cd	114	1	No Gas	0.054	0.054	3.97	1150	0.00	1000	
Ca	44	1	No Gas	539.808	539.808	0.94	782782	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9690206	0.69	9248342	104.78	70	120	
Sc	45	2	he	1802712	0.77	1744643	103.33	70	120	
Ge	72	1	No Gas	1004568	0.83	1012122	99.25	70	120	

In	115	1	No Gas	6004352	1.29	5760110	104.24	70	120	
Tb	159	1	No Gas	7291897	0.74	6952439	104.88	70	120	
Bi	209	1	No Gas	4062058	0.20	3846945	105.59	70	120	
Sc	45	3	HeHe	173285	0.80	171212	101.21	70	120	

Sample Report

Sample Table

Sample Name	9980109016
Data File Name	055SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T11:53:08-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3309

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	8.015	8.015	2.27	438582	0.00	1000	
Cr	52	1	No Gas	7.195	7.195	1.85	367153	0.00	1000	
Mn	55	1	No Gas	8.198	8.198	0.57	504397	0.00	1000	
Co	59	1	No Gas	0.421	0.421	3.43	21744	0.00	1000	
Ni	60	1	No Gas	1.906	1.906	4.82	22405	0.01	1000	
Cu	63	1	No Gas	0.143	0.143	1.99	16154	0.00	1000	
Sr	88	1	No Gas	1.578	1.578	0.95	104168	0.00	1000	
Ag	107	1	No Gas	0.012	0.012	43.26	444	0.00	1000	
Al	27	1	No Gas	8487.138	8487.138	1.12	280167648	0.00	100000	
Sn	118	1	No Gas	0.289	0.289	30.57	12565	0.00	100	
Ti	47	1	No Gas	91.907	91.907	2.04	374970	0.02	2000	
Zn	66	1	No Gas	3.239	3.239	1.01	23162	0.01	1000	
As	75	3	HeHe	0.951	0.951	6.46	442	0.21	1000	
As	75	1	No Gas	0.334	0.334	88.52	30031	0.00	1000	
Sb	121	1	No Gas	0.251	0.251	28.60	9070	0.00	100	
Hg	201	1	No Gas	0.035	0.035	40.28	117	0.03	4	
Be	9	1	No Gas	0.121	0.121	1.15	849	0.01	1000	
Pb	208	1	No Gas	6.822	6.822	0.96	409216	0.00	1000	
Se	82	1	No Gas	0.493	0.493	117.31	247	0.20	1000	
Mo	98	1	No Gas	-0.152	-0.152	-89.24	9622	0.00	2000	
Ba	137	1	No Gas	7.046	7.046	2.45	58893	0.01	1000	
Tl	205	1	No Gas	0.028	0.028	21.16	1230	0.00	1000	
U	238	1	No Gas	0.982	0.982	1.81	51455	0.00	1000	
Na	23	2	he	17.550	17.550	14.80	182971	0.01	100000	
Mg	24	2	he	139.413	139.413	6.47	325664	0.04	100000	
K	39	2	he	69.213	69.213	10.64	478430	0.01	100000	
Se	82	3	HeHe	2.107	2.107	31.11	150	1.40	1000	
Fe	57	3	HeHe	2091.129	2091.129	9.40	214444	0.98	100000	
Cd	114	1	No Gas	0.025	0.025	41.30	740	0.00	1000	
Ca	44	1	No Gas	53.584	53.584	3.48	136962	0.04	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9583332	0.30	9248342	103.62	70	120	
Sc	45	2	he	1726396	4.49	1744643	98.95	70	120	
Ge	72	1	No Gas	1006813	0.56	1012122	99.48	70	120	

In	115	1	No Gas	6075708	1.61	5760110	105.48	70	120	
Tb	159	1	No Gas	7284689	1.01	6952439	104.78	70	120	
Bi	209	1	No Gas	4089425	2.39	3846945	106.30	70	120	
Sc	45	3	HeHe	160474	9.24	171212	93.73	70	120	

Sample Report

Sample Table

Sample Name	9980109017
Data File Name	056SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T11:57:02-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3310

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	53.725	53.725	0.86	2925398	0.00	1000	
Cr	52	1	No Gas	33.385	33.385	0.19	1636715	0.00	1000	
Mn	55	1	No Gas	22.735	22.735	1.96	1383978	0.00	1000	
Co	59	1	No Gas	1.796	1.796	3.22	95965	0.00	1000	
Ni	60	1	No Gas	7.229	7.229	3.12	86730	0.01	1000	
Cu	63	1	No Gas	0.525	0.525	4.07	27825	0.00	1000	
Sr	88	1	No Gas	5.668	5.668	1.28	388415	0.00	1000	
Ag	107	1	No Gas	0.011	0.011	30.07	396	0.00	1000	
Al	27	1	No Gas	34757.841	34757.841	1.68	1192214708	0.00	100000	
Sn	118	1	No Gas	1.081	1.081	9.04	26466	0.00	100	
Tl	47	1	No Gas	231.302	231.302	0.56	916125	0.03	2000	
Zn	66	1	No Gas	7.601	7.601	2.20	55038	0.01	1000	
As	75	3	HeHe	3.130	3.130	5.66	1560	0.20	1000	
As	75	1	No Gas	2.253	2.253	13.30	44954	0.01	1000	
Sb	121	1	No Gas	0.343	0.343	16.81	11019	0.00	100	
Hg	201	1	No Gas	0.044	0.044	21.49	141	0.03	4	
Be	9	1	No Gas	0.190	0.190	3.18	1366	0.01	1000	
Pb	208	1	No Gas	12.379	12.379	0.67	731317	0.00	1000	
Se	82	1	No Gas	1.454	1.454	58.86	628	0.23	1000	
Mo	98	1	No Gas	0.302	0.302	24.18	17894	0.00	2000	
Ba	137	1	No Gas	26.313	26.313	1.21	213735	0.01	1000	
Tl	205	1	No Gas	0.096	0.096	5.69	4108	0.00	1000	
U	238	1	No Gas	1.664	1.664	1.74	87412	0.00	1000	
Na	23	2	he	30.707	30.707	4.93	260915	0.01	100000	
Mg	24	2	he	667.033	667.033	1.29	1709975	0.04	100000	
K	39	2	he	431.082	431.082	1.95	1890805	0.02	100000	
Se	82	3	HeHe	2.263	2.263	15.98	174	1.30	1000	
Fe	57	3	HeHe	16830.034	16830.034	1.74	1964232	0.86	100000	
Cd	114	1	No Gas	0.047	0.047	31.00	1030	0.00	1000	
Ca	44	1	No Gas	50.304	50.304	3.04	137860	0.04	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9960582	2.22	9248342	107.70	70	120	
Sc	45	2	he	1893090	2.48	1744643	108.51	70	120	
Ge	72	1	No Gas	996324	0.66	1012122	98.44	70	120	

In	115	1	No Gas	5910037	1.00	5760110	102.60	70	120	
Tb	159	1	No Gas	7322033	1.62	6952439	105.32	70	120	
Bi	209	1	No Gas	4010531	0.79	3846945	104.25	70	120	
Sc	45	3	HeHe	181586	0.38	171212	106.06	70	120	

Sample Report

Sample Table

Sample Name	1017050
Data File Name	057SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T12:01:00-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3311

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	140.332	140.332	2.37	7797217	0.00	1000	
Cr	52	1	No Gas	93.485	93.485	1.64	4631044	0.00	1000	
Mn	55	1	No Gas	67.651	67.651	0.71	4144250	0.00	1000	
Co	59	1	No Gas	40.106	40.106	0.49	2193502	0.00	1000	
Ni	60	1	No Gas	47.867	47.867	0.92	585872	0.01	1000	
Cu	63	1	No Gas	35.596	35.596	1.44	1069597	0.00	1000	
Sr	88	1	No Gas	45.339	45.339	2.18	3183846	0.00	1000	
Ag	107	1	No Gas	15.767	15.767	2.41	478757	0.00	1000	
Al	27	1	No Gas	61174.053	61174.053	1.76	2151683648	0.00	100000	
Sn	118	1	No Gas	36.818	36.818	0.78	677083	0.01	100	
Tl	47	1	No Gas	582.220	582.220	1.93	2333382	0.02	2000	
Zn	66	1	No Gas	385.315	385.315	1.73	2806440	0.01	1000	
As	75	3	HeHe	38.499	38.499	2.40	19088	0.20	1000	
As	75	1	No Gas	36.133	36.133	1.62	295397	0.01	1000	
Sb	121	1	No Gas	21.261	21.261	0.59	510064	0.00	100	
Hg	201	1	No Gas	0.443	0.443	7.11	1221	0.04	4	
Be	9	1	No Gas	33.386	33.386	0.82	242093	0.01	1000	
Pb	208	1	No Gas	51.155	51.155	0.52	2998681	0.00	1000	
Se	82	1	No Gas	34.007	34.007	1.08	13350	0.25	1000	
Mo	98	1	No Gas	29.040	29.040	2.50	563773	0.01	2000	
Ba	137	1	No Gas	438.512	438.512	0.50	3605697	0.01	1000	
Tl	205	1	No Gas	38.548	38.548	1.62	1649654	0.00	1000	
U	238	1	No Gas	21.732	21.732	1.52	1151302	0.00	1000	
Na	23	2	he	465.026	465.026	0.82	2315444	0.02	100000	
Mg	24	2	he	1420.142	1420.142	0.78	3758652	0.04	100000	
K	39	2	he	1107.107	1107.107	1.03	4586260	0.02	100000	
Se	82	3	HeHe	36.582	36.582	3.74	1021	3.58	1000	
Fe	57	3	HeHe	28372.855	28372.855	0.97	3378861	0.84	100000	
Cd	114	1	No Gas	37.117	37.117	1.22	526568	0.01	1000	
Ca	44	1	No Gas	413.016	413.016	2.74	647881	0.06	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	10212874	1.22	9248342	110.43	70	120	
Sc	45	2	he	1954369	1.91	1744643	112.02	70	120	
Ge	72	1	No Gas	1008137	0.49	1012122	99.61	70	120	

In	115	1	No Gas	5985580	0.12	5760110	103.91	70	120	
Tb	159	1	No Gas	7406693	0.32	6952439	106.53	70	120	
Bi	209	1	No Gas	3954987	0.78	3846945	102.81	70	120	
Sc	45	3	HeHe	185304	2.63	171212	108.23	70	120	

Sample Report

Sample Table

Sample Name	1017051
Data File Name	058SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T12:04:54-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3312

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	97.292	97.292	1.04	5288546	0.00	1000	
Cr	52	1	No Gas	75.155	75.155	1.17	3644563	0.00	1000	
Mn	55	1	No Gas	61.507	61.507	1.02	3684214	0.00	1000	
Co	59	1	No Gas	40.146	40.146	1.39	2145082	0.00	1000	
Ni	60	1	No Gas	42.797	42.797	1.35	511785	0.01	1000	
Cu	63	1	No Gas	36.651	36.651	1.29	1075599	0.00	1000	
Sr	88	1	No Gas	41.701	41.701	2.32	2860663	0.00	1000	
Ag	107	1	No Gas	16.005	16.005	0.59	483268	0.00	1000	
Al	27	1	No Gas	36054.298	36054.298	1.11	1238982766	0.00	100000	
Sn	118	1	No Gas	37.949	37.949	1.71	693752	0.01	100	
Ti	47	1	No Gas	249.077	249.077	2.23	993405	0.03	2000	
Zn	66	1	No Gas	389.213	389.213	0.80	2769538	0.01	1000	
As	75	3	HeHe	33.977	33.977	0.38	16602	0.20	1000	
As	75	1	No Gas	32.270	32.270	2.24	260795	0.01	1000	
Sb	121	1	No Gas	27.221	27.221	1.00	648589	0.00	100	
Hg	201	1	No Gas	0.443	0.443	1.86	1207	0.04	4	
Be	9	1	No Gas	34.021	34.021	1.82	240989	0.01	1000	
Pb	208	1	No Gas	51.823	51.823	0.98	3000430	0.00	1000	
Se	82	1	No Gas	32.934	32.934	2.15	12633	0.26	1000	
Mo	98	1	No Gas	33.140	33.140	1.05	638029	0.01	2000	
Ba	137	1	No Gas	431.979	431.979	2.77	3531974	0.01	1000	
Tl	205	1	No Gas	39.303	39.303	2.49	1661489	0.00	1000	
U	238	1	No Gas	21.464	21.464	1.62	1123202	0.00	1000	
Na	23	2	he	420.526	420.526	0.45	2086034	0.02	100000	
Mg	24	2	he	1047.515	1047.515	1.11	2746663	0.04	100000	
K	39	2	he	778.360	778.360	1.50	3274304	0.02	100000	
Se	82	3	HeHe	33.265	33.265	8.59	926	3.59	1000	
Fe	57	3	HeHe	22055.902	22055.902	2.88	2586247	0.85	100000	
Cd	114	1	No Gas	37.460	37.460	1.40	528464	0.01	1000	
Ca	44	1	No Gas	415.272	415.272	1.69	636025	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9977067	0.75	9248342	107.88	70	120	
Sc	45	2	he	1935944	0.95	1744643	110.97	70	120	
Ge	72	1	No Gas	1006646	1.17	1012122	99.46	70	120	

In	115	1	No Gas	5952362	0.49	5760110	103.34	70	120	
Tb	159	1	No Gas	7316109	0.58	6952439	105.23	70	120	
Bi	209	1	No Gas	3959020	0.93	3846945	102.91	70	120	
Sc	45	3	HeHe	182496	1.83	171212	106.59	70	120	

Sample Report

Sample Table

Sample Name	9980109018
Data File Name	060SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T12:12:36-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3402

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	66.211	66.211	0.80	3636331	0.00	1000	
Cr	52	1	No Gas	46.948	46.948	1.08	2309608	0.00	1000	
Mn	55	1	No Gas	22.058	22.058	1.47	1357753	0.00	1000	
Co	59	1	No Gas	2.360	2.360	0.89	127290	0.00	1000	
Ni	60	1	No Gas	11.468	11.468	0.94	138696	0.01	1000	
Cu	63	1	No Gas	0.954	0.954	0.80	40674	0.00	1000	
Sr	88	1	No Gas	6.602	6.602	0.87	456835	0.00	1000	
Ag	107	1	No Gas	0.024	0.024	16.54	804	0.00	1000	
Al	27	1	No Gas	48930.565	48930.565	1.01	1695439933	0.00	100000	
Sn	118	1	No Gas	1.123	1.123	3.84	27142	0.00	100	
Ti	47	1	No Gas	279.514	279.514	0.97	1103694	0.03	2000	
Zn	66	1	No Gas	8.571	8.571	2.57	62548	0.01	1000	
As	75	3	HeHe	6.615	6.615	4.18	3307	0.20	1000	
As	75	1	No Gas	5.607	5.607	4.94	69736	0.01	1000	
Sb	121	1	No Gas	2.762	2.762	15.74	67811	0.00	100	
Hg	201	1	No Gas	0.045	0.045	23.08	143	0.03	4	
Be	9	1	No Gas	0.288	0.288	3.73	2083	0.01	1000	
Pb	208	1	No Gas	11.264	11.264	1.73	661251	0.00	1000	
Se	82	1	No Gas	2.469	2.469	1.16	1019	0.24	1000	
Mo	98	1	No Gas	1.720	1.720	27.55	44363	0.00	2000	
Ba	137	1	No Gas	26.941	26.941	1.83	218199	0.01	1000	
Tl	205	1	No Gas	0.130	0.130	1.59	5527	0.00	1000	
U	238	1	No Gas	2.677	2.677	1.15	139217	0.00	1000	
Na	23	2	he	45.304	45.304	2.95	336289	0.01	100000	
Mg	24	2	he	759.027	759.027	1.13	1997605	0.04	100000	
K	39	2	he	540.342	540.342	0.40	2364675	0.02	100000	
Se	82	3	HeHe	4.303	4.303	25.33	227	1.90	1000	
Fe	57	3	HeHe	45096.226	45096.226	1.92	5355731	0.84	100000	
Cd	114	1	No Gas	0.051	0.051	11.83	1087	0.00	1000	
Ca	44	1	No Gas	38.942	38.942	3.85	123632	0.03	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	10059918	0.66	9248342	108.78	70	120	
Sc	45	2	he	1943167	0.45	1744643	111.38	70	120	
Ge	72	1	No Gas	1014777	0.36	1012122	100.26	70	120	

In	115	1	No Gas	5893711	0.60	5760110	102.32	70	120	
Tb	159	1	No Gas	7257848	0.76	6952439	104.39	70	120	
Bi	209	1	No Gas	3901457	0.45	3846945	101.42	70	120	
Sc	45	3	HeHe	184838	3.00	171212	107.96	70	120	

Sample Report

Sample Table

Sample Name	9980109019
Data File Name	061SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T12:16:34-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3403

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	4.978	4.978	1.90	284615	0.00	1000	
Cr	52	1	No Gas	3.730	3.730	2.68	210218	0.00	1000	
Mn	55	1	No Gas	15.634	15.634	1.84	940391	0.00	1000	
Co	59	1	No Gas	0.185	0.185	7.59	9762	0.00	1000	
Ni	60	1	No Gas	1.215	1.215	1.71	14673	0.01	1000	
Cu	63	1	No Gas	1.497	1.497	3.49	54603	0.00	1000	
Sr	88	1	No Gas	2.079	2.079	0.61	139093	0.00	1000	
Ag	107	1	No Gas	0.022	0.022	16.56	767	0.00	1000	
Al	27	1	No Gas	3401.934	3401.934	2.53	113830914	0.00	100000	
Sn	118	1	No Gas	0.257	0.257	11.97	11990	0.00	100	
Ti	47	1	No Gas	89.882	89.882	1.15	367404	0.02	2000	
Zn	66	1	No Gas	5.110	5.110	1.99	36456	0.01	1000	
As	75	3	HeHe	1.132	1.132	13.03	584	0.19	1000	
As	75	1	No Gas	0.855	0.855	11.01	34105	0.00	1000	
Sb	121	1	No Gas	0.991	0.991	13.43	27053	0.00	100	
Hg	201	1	No Gas	0.038	0.038	28.22	123	0.03	4	
Be	9	1	No Gas	0.043	0.043	2.45	321	0.01	1000	
Pb	208	1	No Gas	4.790	4.790	0.43	291547	0.00	1000	
Se	82	1	No Gas	0.204	0.204	377.25	139	0.15	1000	
Mo	98	1	No Gas	0.248	0.248	86.00	17388	0.00	2000	
Ba	137	1	No Gas	8.777	8.777	1.63	73463	0.01	1000	
Tl	205	1	No Gas	0.024	0.024	7.93	1048	0.00	1000	
U	238	1	No Gas	0.794	0.794	2.80	41509	0.00	1000	
Na	23	2	he	11.672	11.672	13.03	169584	0.01	100000	
Mg	24	2	he	134.568	134.568	1.36	336374	0.04	100000	
K	39	2	he	103.190	103.190	2.31	636672	0.02	100000	
Se	82	3	HeHe	1.063	1.063	27.48	144	0.74	1000	
Fe	57	3	HeHe	1613.964	1613.964	1.98	186485	0.87	100000	
Cd	114	1	No Gas	0.043	0.043	12.75	1007	0.00	1000	
Ca	44	1	No Gas	448.100	448.100	3.30	662794	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9717041	2.23	9248342	105.07	70	120	
Sc	45	2	he	1844125	2.09	1744643	105.70	70	120	
Ge	72	1	No Gas	1035070	1.06	1012122	102.27	70	120	

In	115	1	No Gas	6085555	1.21	5760110	105.65	70	120	
Tb	159	1	No Gas	7253102	1.44	6952439	104.32	70	120	
Bi	209	1	No Gas	3970646	0.47	3846945	103.22	70	120	
Sc	45	3	HeHe	179781	0.67	171212	105.00	70	120	

Sample Report

Sample Table

Sample Name	9980109019L
Data File Name	062SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T12:20:29-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWODF25
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3404

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	0.767	0.767	9.88	61061	0.00	1000	
Cr	52	1	No Gas	0.591	0.591	14.86	61853	0.00	1000	
Mn	55	1	No Gas	3.593	3.593	9.66	239091	0.00	1000	
Co	59	1	No Gas	0.038	0.038	17.11	2100	0.00	1000	
Ni	60	1	No Gas	0.265	0.265	2.23	3537	0.01	1000	
Cu	63	1	No Gas	0.116	0.116	32.81	15212	0.00	1000	
Sr	88	1	No Gas	0.428	0.428	4.70	28042	0.00	1000	
Ag	107	1	No Gas	0.013	0.013	16.87	470	0.00	1000	
Al	27	1	No Gas	700.683	700.683	6.73	22851206	0.00	100000	
Sn	118	1	No Gas	-0.174	-0.174	-25.55	3860	0.00	100	
Tl	47	1	No Gas	18.549	18.549	7.40	74146	0.03	2000	
Zn	66	1	No Gas	1.072	1.072	3.66	8266	0.01	1000	
As	75	3	HeHe	0.250	0.250	42.71	156	0.16	1000	
As	75	1	No Gas	0.576	0.576	105.53	31229	0.00	1000	
Sb	121	1	No Gas	0.291	0.291	31.10	9659	0.00	100	
Hg	201	1	No Gas	0.010	0.010	30.43	48	0.02	4	
Be	9	1	No Gas	0.011	0.011	28.54	96	0.01	1000	
Pb	208	1	No Gas	0.819	0.819	8.67	62322	0.00	1000	
Se	82	1	No Gas	0.085	0.085	776.89	88	0.10	1000	
Mo	98	1	No Gas	-0.234	-0.234	-55.98	7702	0.00	2000	
Ba	137	1	No Gas	1.818	1.818	9.64	14727	0.01	1000	
Tl	205	1	No Gas	0.006	0.006	29.62	278	0.00	1000	
U	238	1	No Gas	0.155	0.155	6.54	7988	0.00	1000	
Na	23	2	he	7.952	7.952	22.53	128900	0.01	100000	
Mg	24	2	he	33.021	33.021	6.03	69720	0.05	100000	
K	39	2	he	34.585	34.585	11.90	323794	0.01	100000	
Se	82	3	HeHe	0.337	0.337	168.57	122	0.28	1000	
Fe	57	3	HeHe	324.027	324.027	2.74	36213	0.89	100000	
Cd	114	1	No Gas	-0.003	-0.003	-194.29	317	0.00	1000	
Ca	44	1	No Gas	87.409	87.409	8.60	179114	0.05	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9487994	5.74	9248342	102.59	70	120	
Sc	45	2	he	1554680	4.80	1744643	89.11	70	120	

Ge	72	1	No Gas	1009779	5.54	1012122	99.77	70	120	
In	115	1	No Gas	5882737	6.02	5760110	102.13	70	120	
Tb	159	1	No Gas	6968254	6.14	6952439	100.23	70	120	
Bi	209	1	No Gas	3873153	4.65	3846945	100.68	70	120	
Sc	45	3	HeHe	173920	1.46	171212	101.58	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	063_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T12:24:24-04:00
Sample Type	CCV
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	107.119	1.059	5790512	0.79	100	107.1	90	110	
Cr	52	1	No Gas	106.935	0.184	5143760	0.64	100	106.9	90	110	
Mn	55	1	No Gas	108.133	2.066	6414273	1.75	100	108.1	90	110	
Co	59	1	No Gas	102.854	1.007	5467275	1.00	100	102.9	90	110	
Ni	60	1	No Gas	99.452	1.419	1182487	0.86	100	99.5	90	110	
Cu	63	1	No Gas	104.729	1.041	3034367	1.06	100	104.7	90	110	
Sr	88	1	No Gas	105.552	0.221	7204145	0.74	100	105.6	90	110	
Ag	107	1	No Gas	106.176	0.892	3277888	1.04	100	106.2	90	110	
Al	27	1	No Gas	107.085	1.408	3672184	1.23	100	107.1	90	110	
Sn	118	1	No Gas	105.240	1.347	1954558	1.61	100	105.2	90	110	
Tl	47	1	No Gas	95.525	0.391	390457	0.77	100	95.5	90	110	
Zn	66	1	No Gas	99.420	1.767	704622	1.81	100	99.4	90	110	
As	75	3	HeHe	100.306	0.275	48531	0.75	100	100.3	90	110	
As	75	1	No Gas	98.918	0.770	736080	0.99	100	98.9	90	110	
Sb	121	1	No Gas	96.456	1.354	2342327	0.93	100	96.5	90	110	
Hg	201	1	No Gas	2.038	2.071	5385	1.12	2	101.9	90	110	
Be	9	1	No Gas	90.592	1.140	638406	0.63	100	90.6	90	110	
Pb	208	1	No Gas	101.857	1.629	5789754	0.70	100	101.9	90	110	
Se	82	1	No Gas	101.667	0.330	38658	0.87	100	101.7	90	110	
Mo	98	1	No Gas	105.201	1.666	2043674	1.45	100	105.2	90	110	
Ba	137	1	No Gas	101.375	1.534	847655	1.04	100	101.4	90	110	
Tl	205	1	No Gas	101.054	2.673	4206160	1.67	100	101.1	90	110	
U	238	1	No Gas	113.761	0.537	5861497	1.11	100	113.8	90	110	CCV Main CR1 Failed
Na	23	2	he	1003.641	1.247	4650860	2.79	1000	100.4	90	110	
Mg	24	2	he	1024.978	1.660	2599473	1.84	1000	102.5	90	110	
K	39	2	he	1003.834	2.067	4008927	1.38	1000	100.4	90	110	
Se	82	3	HeHe	96.809	3.095	2444	3.19	100	96.8	90	110	
Fe	57	3	HeHe	1047.025	0.683	121822	1.71	1000	104.7	90	110	
Cd	114	1	No Gas	98.817	0.703	1424917	1.05	100	98.8	90	110	
Ca	44	1	No Gas	1070.415	1.660	1521932	1.09	1000	107.0	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9925940	0.56	9248342	107.33	70	120	
Sc	45	2	he	1872981	2.60	1744643	107.36	70	120	
Ge	72	1	No Gas	1034283	0.36	1012122	102.19	70	120	
In	115	1	No Gas	6086505	0.49	5760110	105.67	70	120	
Tb	159	1	No Gas	7205248	1.11	6952439	103.64	70	120	
Bi	209	1	No Gas	3930457	1.86	3846945	102.17	70	120	
Sc	45	3	HeHe	181012	1.02	171212	105.72	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	064_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T12:31:04-04:00
Sample Type	CCB
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	-0.303	-43.7	6358	111.1	9	
Cr	52	1	No Gas	-0.176	-3.9	27849	1.3	4	
Mn	55	1	No Gas	0.324	9.0	57360	5.2	25	
Co	59	1	No Gas	0.003	45.6	330	21.9	1	
Ni	60	1	No Gas	-0.004	-172.4	497	17.6	25	
Cu	63	1	No Gas	-0.239	-2.5	5626	0.6	25	
Sr	88	1	No Gas	0.002	71.1	344	30.8	25	
Ag	107	1	No Gas	0.014	24.4	496	21.5	9	
Al	27	1	No Gas	0.463	20.6	26550	12.5	1000000	
Sn	118	1	No Gas	1.062	38.4	26237	27.8	25	
Ti	47	1	No Gas	0.135	86.0	1890	24.2	10000	
Zn	66	1	No Gas	0.015	216.3	1157	20.0	25	
As	75	3	HeHe	0.258	1.9	166	4.8	9	
As	75	1	No Gas	0.143	36.0	29312	1.6	9	
Sb	121	1	No Gas	1.037	20.5	27469	18.1	4	
Hg	201	1	No Gas	0.011	95.0	51	51.4	0.04	
Be	9	1	No Gas	0.006	56.4	65	36.6	1	
Pb	208	1	No Gas	-0.135	-2.1	10422	2.0	4	
Se	82	1	No Gas	0.399	221.9	219	152.4	25	
Mo	98	1	No Gas	0.177	139.0	15611	29.4	10000	
Ba	137	1	No Gas	0.014	84.2	210	45.9	25	
Tl	205	1	No Gas	0.009	3.6	411	2.7	1	
U	238	1	No Gas	0.109	23.7	5857	22.2	25	
Na	23	2	he	1.533	55.8	120735	2.4	2500000	
Mg	24	2	he	-0.005	-769.5	370	26.2	2500000	
K	39	2	he	1.215	171.3	253719	1.2	5000000	
Se	82	3	HeHe	0.449	116.3	130	11.8	25	
Fe	57	3	HeHe	16.215	4.3	1885	5.7	2500000	
Cd	114	1	No Gas	0.039	38.1	917	22.3	1	
Ca	44	1	No Gas	-5.348	-203.0	61150	25.6	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9786077	2.41	9248342	105.81	70	120	
Sc	45	2	he	1787518	1.99	1744643	102.46	70	120	
Ge	72	1	No Gas	1029592	1.44	1012122	101.73	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	5936421	0.74	5760110	103.06	70	120	
Tb	159	1	No Gas	7137623	0.71	6952439	102.66	70	120	
Bi	209	1	No Gas	3885738	1.75	3846945	101.01	70	120	
Sc	45	3	HeHe	180900	3.61	171212	105.66	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	065LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T12:34:59-04:00
Sample Type	LLCCV
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	1.722	5.305	113240	3.17	2	86.1	70	130	
Cr	52	1	No Gas	1.904	6.987	125113	0.76	2	95.2	70	130	
Mn	55	1	No Gas	5.463	2.849	354418	1.94	5	109.3	70	130	
Co	59	1	No Gas	4.946	5.254	257997	2.40	5	98.9	70	130	
Ni	60	1	No Gas	5.204	4.732	61193	0.79	5	104.1	70	130	
Cu	63	1	No Gas	4.826	5.470	148882	0.83	5	96.5	70	130	
Sr	88	1	No Gas	4.616	5.764	309057	1.54	5	92.3	70	130	
Ag	107	1	No Gas	2.050	2.362	62134	1.28	2	102.5	70	130	
Al	27	1	No Gas	86.086	2.654	2898818	1.65	80	107.6	70	130	
Sn	118	1	No Gas	1.912	8.854	41790	6.41	2	95.6	70	130	
Tl	47	1	No Gas	4.827	2.628	20643	1.55	5	96.5	70	130	
Zn	66	1	No Gas	5.364	5.301	38267	0.95	5	107.3	70	130	
As	75	3	HeHe	3.239	0.816	1552	3.10	3	108.0	70	130	
As	75	1	No Gas	3.004	15.145	49207	2.84	3	100.1	70	130	
Sb	121	1	No Gas	2.537	7.959	63269	6.30	2	126.8	70	130	
Hg	201	1	No Gas	0.184	6.441	496	5.65	0.2	91.9	70	130	
Be	9	1	No Gas	0.937	5.660	6499	2.28	1	93.7	70	130	
Pb	208	1	No Gas	1.853	2.344	120539	0.88	2	92.7	70	130	
Se	82	1	No Gas	5.013	5.496	1938	8.84	5	100.3	70	130	
Mo	98	1	No Gas	1.726	7.264	45023	4.14	2	86.3	70	130	
Ba	137	1	No Gas	5.040	1.489	41430	1.85	5	100.8	70	130	
Tl	205	1	No Gas	1.006	3.186	41044	0.93	1	100.6	70	130	
U	238	1	No Gas	5.111	4.256	257834	1.86	5	102.2	70	130	
Na	23	2	he	95.006	1.975	544768	0.88	100	95.0	70	130	
Mg	24	2	he	93.281	3.816	235265	1.50	100	93.3	70	130	
K	39	2	he	97.753	4.432	622020	0.19	100	97.8	70	130	
Se	82	3	HeHe	4.367	40.172	216	15.98	5	87.3	70	130	
Fe	57	3	HeHe	60.103	6.659	6742	3.98	50	120.2	70	130	
Cd	114	1	No Gas	1.045	5.289	15141	4.03	1	104.5	70	130	
Ca	44	1	No Gas	93.017	6.681	191625	0.99	100	93.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9746632	4.22	9248342	105.39	70	120	
Sc	45	2	he	1860511	2.44	1744643	106.64	70	120	
Ge	72	1	No Gas	1030582	3.29	1012122	101.82	70	120	
In	115	1	No Gas	5969928	1.29	5760110	103.64	70	120	
Tb	159	1	No Gas	7052243	2.60	6952439	101.44	70	120	
Bl	209	1	No Gas	3876905	4.32	3846945	100.78	70	120	
Sc	45	3	HeHe	174744	2.85	171212	102.06	70	120	

Sample Report

Sample Table

Sample Name	LDR 50 PPM
Data File Name	066SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T12:39:01-04:00
Sample Type	Sample
Dilution	1
Comment	37926 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3405

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	-0.293	-0.293	-41.02	6942	0.00	1000	
Cr	52	1	No Gas	0.056	0.056	28.47	39697	0.00	1000	
Mn	55	1	No Gas	0.408	0.408	10.81	63667	0.00	1000	
Co	59	1	No Gas	0.010	0.010	27.96	711	0.00	1000	
Ni	60	1	No Gas	0.038	0.038	42.92	1010	0.00	1000	
Cu	63	1	No Gas	-0.219	-0.219	-6.13	6342	0.00	1000	
Sr	88	1	No Gas	0.008	0.008	12.41	748	0.00	1000	
Ag	107	1	No Gas	0.012	0.012	9.58	448	0.00	1000	
Al	27	1	No Gas	49666.924	49666.924	0.26	1712803547	0.00	100000	99.3%
Sn	118	1	No Gas	0.031	0.031	428.72	7776	0.00	100	
Ti	47	1	No Gas	-0.029	-0.029	-236.26	1267	0.00	2000	
Zn	66	1	No Gas	0.222	0.222	3.92	2658	0.01	1000	
As	75	3	HeHe	0.064	0.064	7.02	74	0.09	1000	
As	75	1	No Gas	0.279	0.279	66.69	30989	0.00	1000	
Sb	121	1	No Gas	0.318	0.318	27.96	10660	0.00	100	
Hg	201	1	No Gas	0.010	0.010	20.51	49	0.02	4	
Be	9	1	No Gas	0.005	0.005	26.35	58	0.01	1000	
Pb	208	1	No Gas	-0.198	-0.198	-6.23	7002	0.00	1000	
Se	82	1	No Gas	-0.288	-0.288	-265.71	-39	0.74	1000	
Mo	98	1	No Gas	-0.271	-0.271	-45.66	7316	0.00	2000	
Ba	137	1	No Gas	0.021	0.021	25.59	277	0.01	1000	
Tl	205	1	No Gas	0.002	0.002	70.98	156	0.00	1000	
U	238	1	No Gas	0.034	0.034	34.36	2045	0.00	1000	
Na	23	2	he	0.078	0.078	591.15	127443	0.00	100000	
Mg	24	2	he	0.197	0.197	22.50	956	0.02	100000	
K	39	2	he	-5.791	-5.791	-15.17	254726	0.00	100000	
Se	82	3	HeHe	-0.693	-0.693	-56.00	105	-0.66	1000	
Fe	57	3	HeHe	6.976	6.976	11.25	830	0.84	100000	
Cd	114	1	No Gas	-0.002	-0.002	-139.03	350	0.00	1000	
Ca	44	1	No Gas	-8.695	-8.695	-10.25	57821	-0.02	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	10012036	0.98	9248342	108.26	70	120	
Sc	45	2	he	1989927	1.24	1744643	114.06	70	120	
Ge	72	1	No Gas	1052764	1.59	1012122	104.02	70	120	

In	115	1	No Gas	6050073	0.75	5760110	105.03	70	120	
Tb	159	1	No Gas	7237808	0.29	6952439	104.10	70	120	
Bi	209	1	No Gas	3889898	1.78	3846945	101.12	70	120	
Sc	45	3	HeHe	185029	1.20	171212	108.07	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	069_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T12:52:37-04:00
Sample Type	CCB
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	-0.268	-37.0	8099	65.8	9	
Cr	52	1	No Gas	-0.097	-9.1	31325	0.1	4	
Mn	55	1	No Gas	0.391	2.4	60756	2.0	25	
Co	59	1	No Gas	0.006	48.8	496	31.4	1	
Ni	60	1	No Gas	0.004	231.7	580	17.9	25	
Cu	63	1	No Gas	-0.240	-2.4	5556	2.2	25	
Sr	88	1	No Gas	0.005	20.9	556	12.2	25	
Ag	107	1	No Gas	0.016	12.3	567	11.8	9	
Al	27	1	No Gas	0.290	3.6	20535	2.9	1000000	
Sn	118	1	No Gas	1.870	30.3	40746	24.7	25	
Ti	47	1	No Gas	0.358	43.4	2774	22.0	10000	
Zn	66	1	No Gas	-0.001	-1496.9	1037	7.8	25	
As	75	3	HeHe	0.655	11.0	347	9.2	9	
As	75	1	No Gas	0.253	40.2	29856	1.2	9	
Sb	121	1	No Gas	1.713	13.4	43425	12.3	4	
Hg	201	1	No Gas	0.018	33.2	71	21.0	0.04	
Be	9	1	No Gas	0.011	14.7	102	10.2	1	
Pb	208	1	No Gas	-0.172	-9.1	8432	8.7	4	
Se	82	1	No Gas	1.172	58.6	501	50.6	25	
Mo	98	1	No Gas	0.768	50.8	26701	27.2	10000	
Ba	137	1	No Gas	0.008	29.9	160	12.5	25	
Tl	205	1	No Gas	0.026	6.5	1148	7.4	1	
U	238	1	No Gas	0.311	21.6	16369	22.8	25	
Na	23	2	he	0.918	30.4	122432	1.8	2500000	
Mg	24	2	he	0.013	131.9	430	11.9	2500000	
K	39	2	he	-0.778	-145.2	255691	1.0	5000000	
Se	82	3	HeHe	0.016	3482.2	116	11.4	25	
Fe	57	3	HeHe	17.138	10.1	1934	10.5	2500000	
Cd	114	1	No Gas	0.073	30.3	1390	22.0	1	
Ca	44	1	No Gas	-9.123	-10.7	55522	3.2	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9710532	1.19	9248342	105.00	70	120	
Sc	45	2	he	1852940	1.95	1744643	106.21	70	120	
Ge	72	1	No Gas	1020074	1.24	1012122	100.79	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	5931519	1.02	5760110	102.98	70	120	
Tb	159	1	No Gas	7198771	1.74	6952439	103.54	70	120	
Bi	209	1	No Gas	3879305	2.29	3846945	100.84	70	120	
Sc	45	3	HeHe	175486	0.64	171212	102.50	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	070LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:00:08-04:00
Sample Type	LLCCV
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	1.754	4.471	115299	2.25	2	87.7	70	130	
Cr	52	1	No Gas	1.880	4.742	124463	0.87	2	94.0	70	130	
Mn	55	1	No Gas	5.282	2.716	345009	0.11	5	105.6	70	130	
Co	59	1	No Gas	4.931	2.917	258153	1.34	5	98.6	70	130	
Ni	60	1	No Gas	4.972	2.213	58712	1.42	5	99.4	70	130	
Cu	63	1	No Gas	4.664	2.194	144900	0.74	5	93.3	70	130	
Sr	88	1	No Gas	4.584	2.520	308189	0.54	5	91.7	70	130	
Ag	107	1	No Gas	2.050	1.881	61636	0.64	2	102.5	70	130	
Al	27	1	No Gas	84.005	1.384	2839190	2.62	80	105.0	70	130	
Sn	118	1	No Gas	2.145	13.963	45612	10.26	2	107.3	70	130	
Tl	47	1	No Gas	4.740	0.190	20133	1.46	5	94.8	70	130	
Zn	66	1	No Gas	5.307	3.168	38014	0.85	5	106.1	70	130	
As	75	3	HeHe	3.086	4.381	1453	2.98	3	102.9	70	130	
As	75	1	No Gas	3.321	12.504	51624	3.62	3	110.7	70	130	
Sb	121	1	No Gas	2.499	5.689	61863	3.88	2	124.9	70	130	
Hg	201	1	No Gas	0.185	7.895	504	8.10	0.2	92.5	70	130	
Be	9	1	No Gas	0.948	1.752	6599	2.74	1	94.8	70	130	
Pb	208	1	No Gas	1.846	2.049	121306	1.29	2	92.3	70	130	
Se	82	1	No Gas	3.992	21.021	1558	19.29	5	79.8	70	130	
Mo	98	1	No Gas	1.775	7.478	45561	3.98	2	88.8	70	130	
Ba	137	1	No Gas	5.025	1.503	40975	3.01	5	100.5	70	130	
Tl	205	1	No Gas	0.968	1.094	39863	2.40	1	96.8	70	130	
U	238	1	No Gas	5.112	1.361	260510	0.28	5	102.2	70	130	
Na	23	2	he	90.605	0.630	525217	0.72	100	90.6	70	130	
Mg	24	2	he	92.476	1.448	233410	1.81	100	92.5	70	130	
K	39	2	he	97.706	2.901	622130	1.19	100	97.7	70	130	
Se	82	3	HeHe	4.870	11.736	224	8.36	5	97.4	70	130	
Fe	57	3	HeHe	56.379	5.850	6220	6.52	50	112.8	70	130	
Cd	114	1	No Gas	0.992	2.343	14277	1.58	1	99.2	70	130	
Ca	44	1	No Gas	87.034	5.532	184308	1.11	100	87.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9774994	2.54	9248342	105.69	70	120	
Sc	45	2	he	1860682	0.52	1744643	106.65	70	120	
Ge	72	1	No Gas	1023845	1.17	1012122	101.16	70	120	
In	115	1	No Gas	5921225	1.58	5760110	102.80	70	120	
Tb	159	1	No Gas	7118830	1.32	6952439	102.39	70	120	
Bi	209	1	No Gas	3884486	0.47	3846945	100.98	70	120	
Sc	45	3	HeHe	171623	2.48	171212	100.24	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	071_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:04:04-04:00
Sample Type	CCV
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	104.313	1.131	5608981	0.43	100	104.3	90	110	
Cr	52	1	No Gas	102.136	1.366	4888446	2.06	100	102.1	90	110	
Mn	55	1	No Gas	102.979	2.280	6078469	2.96	100	103.0	90	110	
Co	59	1	No Gas	99.751	0.652	5274049	1.36	100	99.8	90	110	
Ni	60	1	No Gas	97.719	0.452	1155685	0.26	100	97.7	90	110	
Cu	63	1	No Gas	100.944	0.199	2909426	0.52	100	100.9	90	110	
Sr	88	1	No Gas	102.149	0.766	6934255	0.76	100	102.1	90	110	
Ag	107	1	No Gas	103.306	1.699	3129874	1.21	100	103.3	90	110	
Al	27	1	No Gas	104.516	0.749	3565265	1.39	100	104.5	90	110	
Sn	118	1	No Gas	103.323	0.938	1883441	1.16	100	103.3	90	110	
Tl	47	1	No Gas	93.027	0.952	373206	0.46	100	93.0	90	110	
Zn	66	1	No Gas	98.262	0.557	692676	0.15	100	98.3	90	110	
As	75	3	HeHe	97.916	1.301	45707	1.09	100	97.9	90	110	
As	75	1	No Gas	95.677	1.241	709064	1.24	100	95.7	90	110	
Sb	121	1	No Gas	93.821	1.555	2236111	1.20	100	93.8	90	110	
Hg	201	1	No Gas	2.002	1.904	5256	0.62	2	100.1	90	110	
Be	9	1	No Gas	90.950	0.809	637488	0.12	100	91.0	90	110	
Pb	208	1	No Gas	99.521	1.552	5620664	0.39	100	99.5	90	110	
Se	82	1	No Gas	99.092	1.481	37475	0.96	100	99.1	90	110	
Mo	98	1	No Gas	102.963	0.277	1963362	0.37	100	103.0	90	110	
Ba	137	1	No Gas	98.494	1.591	808278	1.25	100	98.5	90	110	
Tl	205	1	No Gas	98.661	1.136	4080533	1.23	100	98.7	90	110	
U	238	1	No Gas	113.568	1.307	5813068	0.19	100	113.6	90	110	CCV Main CR1 Failed
Na	23	2	he	986.366	1.543	4498375	1.47	1000	98.6	90	110	
Mg	24	2	he	997.598	2.433	2488982	1.40	1000	99.8	90	110	
K	39	2	he	985.482	1.772	3877099	1.13	1000	98.5	90	110	
Se	82	3	HeHe	96.509	2.035	2351	0.52	100	96.5	90	110	
Fe	57	3	HeHe	1033.798	3.458	116045	3.65	1000	103.4	90	110	
Cd	114	1	No Gas	96.467	1.302	1365187	1.39	100	96.5	90	110	
Ca	44	1	No Gas	1035.556	0.218	1466786	0.86	1000	103.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9872611	0.70	9248342	106.75	70	120	
Sc	45	2	he	1842695	2.01	1744643	105.62	70	120	
Ge	72	1	No Gas	1021483	1.09	1012122	100.92	70	120	
In	115	1	No Gas	5973461	0.49	5760110	103.70	70	120	
Tb	159	1	No Gas	7158631	1.29	6952439	102.97	70	120	
Bi	209	1	No Gas	3938738	1.43	3846945	102.39	70	120	
Sc	45	3	HeHe	174651	1.66	171212	102.01	70	120	

Digestion Logbook

Microwave 3051 Prep (Soil) (Version 1 - 6/1/2010)

Batch: 37298	Queue: MDIG	HBN: 473510	RULE: D3051/6020	ALSI SOP: 09-3051
File Name: 37298_120731-072244			METHOD: SW3051	Microwave ID: MARS

COMMENTS:	Comment Codes:	Reagents:		Pipettes:		Start	Finish
	1. Sample failed initial digestion due to a weight loss >5g	HNO3:	L02030 JT BAKER		Date:	07/31/2012	07/31/2012
	2. Sample reacts with reagent	HCl:	K25031 MALLINCKRODT		Time:	07:54:00	08:28:00
	3. Less sample used due to high metal conten	Boiling Stones:	D1069103		Tech:	KMK	KMK
	4. Less sample used to result in successful microwave digestion				Reviewed/Approved By:		N/A
	5. Sample does not digest by microwave, digest by method 3050				Date:		

Sample ID	Cont ID	Samp Type	Vessel Initial WT, grams	Vessel Final WT, grams	Difference grams	Spike Amt uL of Each	Spike Lot#	Sample Size, grams	Final Vol mL	Parent Sample ID	Comment Code
1017046		MB	106.78	105.18	1.60			0.50	50		
1017047		LCS	109.31	108.20	1.11	/50/500/500/5	0360/MS0359/MS0	0.50	50		
9980109001	A	S	107.68	105.98	1.70			0.54	50		
9980109003	A	S	107.41	105.85	1.56			0.53	50		
9980109004	A	S	108.24	105.99	2.25			0.54	50		
9980109005	A	S	106.25	104.34	1.91			0.58	50		
9980109006	A	S	107.23	105.44	1.79			0.55	50		
9980109007	A	S	107.07	104.74	2.33			0.54	50		
9980109008	A	S	107.61	106.00	1.61			0.51	50		
9980109009	A	S	108.73	106.08	2.65			0.55	50		
9980109010	A	S	107.09	104.65	2.44			0.59	50		
9980109011	A	S	106.73	104.58	2.15			0.52	50		
1017048		MS	108.92	105.42	3.50	/50/500/500/5	0360/MS0359/MS0	0.52	50	9980109011	
1017049		MSD	108.63	106.40	2.23	/50/500/500/5	0360/MS0359/MS0	0.57	50	9980109011	
9980109012	A	S	107.41	105.84	1.57			0.59	50		
9980109013	A	S	107.59	105.51	2.08			0.58	50		
9980109014	A	S	107.42	104.55	2.87			0.58	50		
9980109015	A	S	106.71	104.32	2.39			0.56	50		
9980109016	A	S	107.56	105.63	1.93			0.58	50		
9980109017	A	S	108.06	106.38	1.68			0.54	50		
1017050		MS	110.12	107.64	2.48	/50/500/500/5	0360/MS0359/MS0	0.53	50	9980109017	
1017051		MSD	108.90	107.53	1.37	/50/500/500/5	0360/MS0359/MS0	0.57	50	9980109017	
9980109018	A	S	106.94	104.49	2.45			0.51	50		
9980109019	A	S	107.65	106.43	1.22			0.56	50		

End

Analytical Logbook

Batch Log

#	Acquired Date and Time	Sample Type	Sample Name	File Name	Comment	Vial#	Dilution Result	Operator
1	8/7/2012 8:10	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A080712.b\001CALB.d		1101	1	Matthew Olley
2	8/7/2012 8:14	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A080712.b\002CALB.d		1101	1	Matthew Olley
3	8/7/2012 8:18	CalStd	Standard 1	C:\Agilent\ICPMH\1\DATA\A080712.b\003CALS.d		2101	1	Matthew Olley
4	8/7/2012 8:22	CalStd	Standard 2	C:\Agilent\ICPMH\1\DATA\A080712.b\004CALS.d		2102	1	Matthew Olley
5	8/7/2012 8:26	CalStd	Standard 3	C:\Agilent\ICPMH\1\DATA\A080712.b\005CALS.d		2103	1	Matthew Olley
6	8/7/2012 8:30	CalStd	Standard 4	C:\Agilent\ICPMH\1\DATA\A080712.b\006CALS.d		2104	1	Matthew Olley
7	8/7/2012 8:34	CalStd	Standard 5	C:\Agilent\ICPMH\1\DATA\A080712.b\007CALS.d		2105	1	Matthew Olley
8	8/7/2012 8:38	ICV	ICV	C:\Agilent\ICPMH\1\DATA\A080712.b\008_ICV.d		1307	1	Matthew Olley
9	8/7/2012 8:41	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A080712.b\009_ICB.d		1101	1	Matthew Olley
10	8/7/2012 8:45	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A080712.b\010_ICB.d		1101	1	Matthew Olley
11	8/7/2012 8:49	LLICV	LLICV	C:\Agilent\ICPMH\1\DATA\A080712.b\011LICV.d		1305	1	Matthew Olley
12	8/7/2012 8:49							Matthew Olley
13	8/7/2012 8:55	ICSA	ICSA	C:\Agilent\ICPMH\1\DATA\A080712.b\012ICSA.d		2111	1	Matthew Olley
14	8/7/2012 8:59	ICSB	ICSAB	C:\Agilent\ICPMH\1\DATA\A080712.b\013ICSB.d		2112	1	Matthew Olley
15	8/7/2012 8:59							Matthew Olley
16	8/7/2012 9:07	Sample	1015362	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\014SMPL.d		3101	1	Matthew Olley
17	8/7/2012 9:11	Sample	1015363	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\015SMPL.d		3102	1	Matthew Olley
18	8/7/2012 9:14	Sample	1017907	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\016SMPL.d		3103	1	Matthew Olley
19	8/7/2012 9:18	Sample	1017908	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\017SMPL.d		3104	1	Matthew Olley
20	8/7/2012 9:22	Sample	9980583001	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\018SMPL.d		3105	1	Matthew Olley
21	8/7/2012 9:26	Sample	1017909	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\019SMPL.d		3106	1	Matthew Olley

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22	8/7/2012 9:30	Sample	1017910	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\020SMPL.d	3107	1	Matthew Olley
23	8/7/2012 9:34	Sample	9980583001PS	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\021SMPL.d	3108	1	Matthew Olley
24	8/7/2012 9:37	Sample	9980583002	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\022SMPL.d	3109	1	Matthew Olley
25	8/7/2012 9:41	Sample	9980583004	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\023SMPL.d	3110	1	Matthew Olley
26	8/7/2012 9:45						Matthew Olley
27	8/7/2012 9:45	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37925 MWO A\A080712.b\024_CCV.d	1307	1	Matthew Olley
28	8/7/2012 9:49	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37925 MWO A\A080712.b\025_CCB.d	1101	1	Matthew Olley
29	8/7/2012 9:53	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37925 MWO A\A080712.b\026LCCV.d	1305	1	Matthew Olley
30	8/7/2012 9:53						Matthew Olley
31	8/7/2012 9:58	Sample	9980583004L	C:\Agilent\ICPMH\1\DAT 37925 MWODF25 A\A080712.b\027SMPL.d	3111	1	Matthew Olley
32	8/7/2012 10:02						Matthew Olley
33	8/7/2012 10:02	Sample	LDR 2 PPM	C:\Agilent\ICPMH\1\DAT 37925 MWO A\A080712.b\028SMPL.d	3112	1	Matthew Olley
34	8/7/2012 10:02						Matthew Olley
35	8/7/2012 10:05						Matthew Olley
36	8/7/2012 10:08	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\029SMPL.d	3201	1	Matthew Olley
37	8/7/2012 10:08						Matthew Olley
38	8/7/2012 10:12						Matthew Olley
39	8/7/2012 10:13	Sample	1017046	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\030SMPL.d	3202	1	Matthew Olley
40	8/7/2012 10:13						Matthew Olley
41	8/7/2012 10:17						Matthew Olley
42	8/7/2012 10:18	Sample	1017047	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\031SMPL.d	3203	1	Matthew Olley
43	8/7/2012 10:22						Matthew Olley
44	8/7/2012 10:22	Sample	9980109001	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\032SMPL.d	3204	1	Matthew Olley
45	8/7/2012 10:26						Matthew Olley

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46	8/7/2012 10:26	Sample	9980109003	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\033SMPL.d	3205	1	Matthew Olley
47	8/7/2012 10:30						Matthew Olley
48	8/7/2012 10:30	Sample	9980109004	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\034SMPL.d	3206	1	Matthew Olley
49	8/7/2012 10:33						Matthew Olley
50	8/7/2012 10:33	Sample	9980109005	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\035SMPL.d	3207	1	Matthew Olley
51	8/7/2012 10:37						Matthew Olley
52	8/7/2012 10:37	Sample	9980109006	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\036SMPL.d	3208	1	Matthew Olley
53	8/7/2012 10:41						Matthew Olley
54	8/7/2012 10:41	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\037_CCV.d	1307	1	Matthew Olley
55	8/7/2012 10:45	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\038_CCB.d	1101	1	Matthew Olley
56	8/7/2012 10:49	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\039LCCV.d	1305	1	Matthew Olley
57	8/7/2012 10:53	Sample	9980109007	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\040SMPL.d	3209	1	Matthew Olley
58	8/7/2012 10:57						Matthew Olley
59	8/7/2012 10:57	Sample	9980109008	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\041SMPL.d	3210	1	Matthew Olley
60	8/7/2012 11:01						Matthew Olley
61	8/7/2012 11:01	Sample	9980109009	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\042SMPL.d	3211	1	Matthew Olley
62	8/7/2012 11:05						Matthew Olley
63	8/7/2012 11:05	Sample	9980109010	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\043SMPL.d	3212	1	Matthew Olley
64	8/7/2012 11:09						Matthew Olley
65	8/7/2012 11:09	Sample	9980109011	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\044SMPL.d	3301	1	Matthew Olley
66	8/7/2012 11:12						Matthew Olley
67	8/7/2012 11:12	Sample	1017048	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\045SMPL.d	3302	1	Matthew Olley
68	8/7/2012 11:16						Matthew Olley
69	8/7/2012 11:16	Sample	1017049	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\046SMPL.d	3303	1	Matthew Olley

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70	8/7/2012 11:20						Matthew Olley
71	8/7/2012 11:20	Sample	9980109011	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\047SMPL.d	3304	1	Matthew Olley
72	8/7/2012 11:24						Matthew Olley
73	8/7/2012 11:24	Sample	9980109012	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\048SMPL.d	3305	1	Matthew Olley
74	8/7/2012 11:28						Matthew Olley
75	8/7/2012 11:28	Sample	9980109013	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\049SMPL.d	3306	1	Matthew Olley
76	8/7/2012 11:32						Matthew Olley
77	8/7/2012 11:32	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\050_CCV.d	1307	1	Matthew Olley
78	8/7/2012 11:36	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\051_CCB.d	1101	1	Matthew Olley
79	8/7/2012 11:39	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\052LCCV.d	1305	1	Matthew Olley
80	8/7/2012 11:43	Sample	9980109014	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\053SMPL.d	3307	1	Matthew Olley
81	8/7/2012 11:47						Matthew Olley
82	8/7/2012 11:47	Sample	9980109015	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\054SMPL.d	3308	1	Matthew Olley
83	8/7/2012 11:51						Matthew Olley
84	8/7/2012 11:51	Sample	9980109016	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\055SMPL.d	3309	1	Matthew Olley
85	8/7/2012 11:55						Matthew Olley
86	8/7/2012 11:55	Sample	9980109017	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\056SMPL.d	3310	1	Matthew Olley
87	8/7/2012 11:59						Matthew Olley
88	8/7/2012 11:59	Sample	1017050	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\057SMPL.d	3311	1	Matthew Olley
89	8/7/2012 12:03						Matthew Olley
90	8/7/2012 12:03	Sample	1017051	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\058SMPL.d	3312	1	Matthew Olley
91	8/7/2012 12:07						Matthew Olley
92	8/7/2012 12:07	Sample	9980109017PS	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\059SMPL.d	3401	1	Matthew Olley
93	8/7/2012 12:11						Matthew Olley

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94	8/7/2012 12:11	Sample	9980109018	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\060SMPL.d	3402	1	Matthew Olley
95	8/7/2012 12:15						Matthew Olley
96	8/7/2012 12:15	Sample	9980109019	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\061SMPL.d	3403	1	Matthew Olley
97	8/7/2012 12:19						Matthew Olley
98	8/7/2012 12:19	Sample	9980109019L	C:\Agilent\ICPMH\1\DAT 37926 MWODF25 A\A080712.b\062SMPL.d	3404	1	Matthew Olley
99	8/7/2012 12:22						Matthew Olley
100	8/7/2012 12:22	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\063_CCV.d	1307	1	Matthew Olley
101	8/7/2012 12:22						Matthew Olley
102	8/7/2012 12:29	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\064_CCB.d	1101	1	Matthew Olley
103	8/7/2012 12:33	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\065LCCV.d	1305	1	Matthew Olley
104	8/7/2012 12:33						Matthew Olley
105	8/7/2012 12:37	Sample	LDR 50 PPM	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\066SMPL.d	3405	1	Matthew Olley
106	8/7/2012 12:37						Matthew Olley
107	8/7/2012 12:41						Matthew Olley
108	8/7/2012 12:42	Sample	CHECK	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\067SMPL.d	3406	1	Matthew Olley
109	8/7/2012 12:42						Matthew Olley
110	8/7/2012 12:46						Matthew Olley
111	8/7/2012 12:47	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\068_CCV.d	1307	1	Matthew Olley
112	8/7/2012 12:51	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\069_CCB.d	1101	1	Matthew Olley
113	8/7/2012 12:51						Matthew Olley
114	8/7/2012 12:58	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\070LCCV.d	1305	1	Matthew Olley
115	8/7/2012 13:02	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\071_CCV.d	1307	1	Matthew Olley
116	8/7/2012 13:02						Matthew Olley
117	8/7/2012 13:07	Sample	1017577	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\072SMPL.d	3407	1	Matthew Olley
118	8/7/2012 13:07						Matthew Olley

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119	8/7/2012 13:10						Matthew Olley
120	8/7/2012 13:27	Sample	1017578	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\073SMPL.d	3408	1	Matthew Olley
121	8/7/2012 13:31						Matthew Olley
122	8/7/2012 13:31	Sample	1019627	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\074SMPL.d	3409	1	Matthew Olley
123	8/7/2012 13:35						Matthew Olley
124	8/7/2012 13:35	Sample	1019628	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\075SMPL.d	3410	1	Matthew Olley
125	8/7/2012 13:39						Matthew Olley
126	8/7/2012 13:39	Sample	9980109002	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\076SMPL.d	3411	1	Matthew Olley
127	8/7/2012 13:43						Matthew Olley
128	8/7/2012 13:43	Sample	9980394006	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\077SMPL.d	3412	1	Matthew Olley
129	8/7/2012 13:47						Matthew Olley
130	8/7/2012 13:47	Sample	9980394006L	C:\Agilent\ICPMH\1\DAT 37932 MWODF5 A\A080712.b\078SMPL.d	3501	1	Matthew Olley
131	8/7/2012 13:51						Matthew Olley
132	8/7/2012 13:51	Sample	9980394014	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\079SMPL.d	3502	1	Matthew Olley
133	8/7/2012 13:51						Matthew Olley
134	8/7/2012 13:54						Matthew Olley
135	8/7/2012 13:58	Sample	9980394006PS	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\080SMPL.d	3503	1	Matthew Olley
136	8/7/2012 13:58						Matthew Olley
137	8/7/2012 14:02						Matthew Olley
138	8/7/2012 14:08	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\081_CCV.d	1307	1	Matthew Olley
139	8/7/2012 14:12	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\082_CCB.d	1101	1	Matthew Olley
140	8/7/2012 14:16	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\083LCCV.d	1305	1	Matthew Olley
141	8/7/2012 14:19	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\084_CCV.d	1307	1	Matthew Olley
142	8/7/2012 14:23	Sample	9980395006	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\085SMPL.d	3504	1	Matthew Olley
143	8/7/2012 14:23						Matthew Olley

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144	8/7/2012 14:27						Matthew Olley
145	8/7/2012 14:45	Sample	1017579	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\086SMPL.d	3505	1	Matthew Olley
146	8/7/2012 14:49						Matthew Olley
147	8/7/2012 14:49	Sample	1017580	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\087SMPL.d	3506	1	Matthew Olley
148	8/7/2012 14:53						Matthew Olley
149	8/7/2012 14:53	Sample	9980875015	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\088SMPL.d	3507	1	Matthew Olley
150	8/7/2012 14:57						Matthew Olley
151	8/7/2012 14:57	Sample	1019629	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\089SMPL.d	3508	1	Matthew Olley
152	8/7/2012 15:00						Matthew Olley
153	8/7/2012 15:00	Sample	1019630	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\090SMPL.d	3509	1	Matthew Olley
154	8/7/2012 15:04						Matthew Olley
155	8/7/2012 15:04	Sample	9980875015L	C:\Agilent\ICPMH\1\DAT 37932 MWODF5A\A080712.b\091SMPL.d	3510	1	Matthew Olley
156	8/7/2012 15:08						Matthew Olley
157	8/7/2012 15:08	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\092_CCV.d	1307	1	Matthew Olley
158	8/7/2012 15:12	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\093_CCB.d	1101	1	Matthew Olley
159	8/7/2012 15:16	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\094LCCV.d	1305	1	Matthew Olley
160	8/7/2012 15:26	CalBlk	blk		1101		Matthew Olley
161	8/7/2012 15:26	CalBlk	blk		1101		Matthew Olley
162	8/7/2012 15:26	CalStd	Standard 1		2101		Matthew Olley
163	8/7/2012 15:26	CalStd	Standard 2		2102		Matthew Olley
164	8/7/2012 15:26	CalStd	Standard 3		2103		Matthew Olley
165	8/7/2012 15:26	CalStd	Standard 4		2104		Matthew Olley
166	8/7/2012 15:26	CalStd	Standard 5		2105		Matthew Olley
167	8/7/2012 15:26	ICV	ICV		1307		Matthew Olley
168	8/7/2012 15:26	ICB	ICB		1101		Matthew Olley
169	8/7/2012 15:26	ICB	ICB		1101		Matthew Olley
170	8/7/2012 15:26	LLICV	LLICV		1305		Matthew Olley

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171	8/7/2012 15:26	ICSA	ICSA		2111		Matthew Olley
172	8/7/2012 15:26	ICSB	ICSAB		2112		Matthew Olley
173	8/7/2012 15:27	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\095_CCV.d	1307	1	Matthew Olley
174	8/7/2012 15:27						Matthew Olley
175	8/7/2012 15:47	Sample	9979663004	C:\Agilent\ICPMH\1\DAT 37936 MWODF5 A\A080712.b\096SMPL.d	3101	1	Matthew Olley
176	8/7/2012 15:51	Sample	9979678003	C:\Agilent\ICPMH\1\DAT 37936 MWODF5 A\A080712.b\097SMPL.d	3102	1	Matthew Olley
177	8/7/2012 15:51						Matthew Olley
178	8/7/2012 15:57	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\098_CCV.d	1307	1	Matthew Olley
179	8/7/2012 16:01	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\099_CCB.d	1101	1	Matthew Olley
180	8/7/2012 16:05	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\100LCCV.d	1305	1	Matthew Olley
181	8/7/2012 16:05						Matthew Olley
182	8/7/2012 16:41	Sample	9980477001	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\101SMPL.d	3101	1	Matthew Olley
183	8/7/2012 16:45	Sample	9980477002	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\102SMPL.d	3102	1	Matthew Olley
184	8/7/2012 16:49	Sample	9980478001	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\103SMPL.d	3103	1	Matthew Olley
185	8/7/2012 16:53	Sample	9980478002	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\104SMPL.d	3104	1	Matthew Olley
186	8/7/2012 16:56	Sample	9980478003	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\105SMPL.d	3105	1	Matthew Olley
187	8/7/2012 17:00	Sample	9980478004	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\106SMPL.d	3106	1	Matthew Olley
188	8/7/2012 17:04	Sample	9980478004L	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\107SMPL.d	3107	1	Matthew Olley
189	8/7/2012 17:08	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\108_CCV.d	1307	1	Matthew Olley
190	8/7/2012 17:12	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\109_CCB.d	1101	1	Matthew Olley
191	8/7/2012 17:16	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\110LCCV.d	1305	1	Matthew Olley
192	8/7/2012 17:20	Sample	9975539001	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A080712.b\111SMPL.d	3108	1	Matthew Olley

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193	8/7/2012 17:24	Sample	9975539002	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A080712.b\112SMPL.d	3109	1	Matthew Olley
194	8/7/2012 17:28	Sample	9975539001	C:\Agilent\ICPMH\1\DAT 99999 MWODF5 A\A080712.b\113SMPL.d	3110	1	Matthew Olley
195	8/7/2012 17:32	Sample	9975539002	C:\Agilent\ICPMH\1\DAT 99999 MWODF5 A\A080712.b\114SMPL.d	3111	1	Matthew Olley
196	8/7/2012 17:35	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\115SMPL.d	3112	1	Matthew Olley
197	8/7/2012 17:39	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\116SMPL.d	3201	1	Matthew Olley
198	8/7/2012 17:43	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\117SMPL.d	3202	1	Matthew Olley
199	8/7/2012 17:47	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\118SMPL.d	3203	1	Matthew Olley
200	8/7/2012 17:51	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\119SMPL.d	3204	1	Matthew Olley
201	8/7/2012 17:55	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\120SMPL.d	3205	1	Matthew Olley
202	8/7/2012 17:59						Matthew Olley
203	8/7/2012 17:59	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A080712.b\121_CCV.d	1307	1	Matthew Olley
204	8/7/2012 18:03	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A080712.b\122_CCB.d	1101	1	Matthew Olley
205	8/7/2012 18:07	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A080712.b\123LCCV.d	1305	1	Matthew Olley

Total Solids Summary Forms

Sample Description
FTSW-AA-SO-15

Form 7
Duplicate Summary

Analysis Method:	2540G	SDG No.:	ERT-001
Matrix (soil/water):	soil	Lab Sample ID:	9980109007
Units:	%	Lab File ID:	N/A
Instrument ID:	N/A	Lab Sample Dup. ID:	1016446
GC Column:	N/A	Dup. Lab File ID:	N/A
Sample % Moisture:	N/A	Dup. % Moisture:	N/A

Analyte	Sample Concentration	Duplicate Concentration	Relative Percent Difference (RPD)	(1)	Acceptable Limit
Total Solids	84.4	84.7	0.4		5%

(1) The following qualifiers are used:
* : Values outside of acceptable limits

Comments:

Sample Description
FTSW-AA-SO-08 [02]

Form 7
Duplicate Summary

Analysis Method: 2540G
SDG No.: ERT-001

Matrix (soil/water): soil
Units: %
Instrument ID: N/A
GC Column: N/A
Sample % Moisture: N/A

Lab Sample ID: 9980109017
Lab File ID: N/A
Lab Sample Dup. ID: 1016447
Dup. Lab File ID: N/A
Dup. % Moisture: N/A

Analyte	Sample Concentration	Duplicate Concentration	Relative Percent Difference (RPD)	(1)	Acceptable Limit
Total Solids	78.0	78.1	0.0		5%

(1) The following qualifiers are used:
* : Values outside of acceptable limits

Comments:

Total Solids Raw Data

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Total Solids

Batch: 113728 Queue: WETC Analyst: KED

File Name: 113728_120728-090130 Date/Time: 07/28/12 09:35

Misc:		1st Time In	9:35	2nd Time In	8:27	3rd Time In		4th Time In	
		1st Temp In °C	104	2nd Temp In °C	104	3rd Temp In °C		4th Temp In °C	
		1st Time Out	8:20	2nd Time Out	10:00	3rd Time Out		4th Time Out	
		1st Temp Out °C	104	2nd Temp Out °C	104	3rd Temp Out °C		4th Temp Out °C	

Sample ID	Cont ID	Samp Type	TVS	Weight of dish and sample (g) or Volume of sample (ml)	Dish Wt. (g)	1st Dish + Sample Wt (g)	2nd Dish + Sample Wt (g)	3rd Dish + Sample Wt (g)	4th Dish + Sample Wt (g)	TS (%) or (mg/l)	Result1 TARE (g)	Result2 IWT (g)	Result3 FWT (g)
1016443	BALCHK			0.1000	0.1000	0.1000	0.1000			#DIV/0!	0.1000	0.1000	0.1000
1016444	A	DUP	0.3	17.6805	1.1523	16.0825	16.0643			90.2216	1.1523	17.6805	16.0643
9980072001	A	S		17.8691	1.1435	16.2092	16.1936			89.9824	1.1435	17.8691	16.1936
9980072002	A	S		19.4542	1.1784	17.8098	17.7950			90.9213	1.1784	19.4542	17.7950
9980072003	A	S		18.5257	1.1786	17.1167	17.1050			91.8102	1.1786	18.5257	17.1050
9980072004	A	S		18.3761	1.1660	16.8340	16.8210			90.9640	1.1660	18.3761	16.8210
9980072005	A	S		22.9834	1.1486	20.7396	20.7204			89.6358	1.1486	22.9834	20.7204
9980072006	A	S		16.9223	1.1819	15.7324	15.7199			92.3611	1.1819	16.9223	15.7199
9980072007	A	S		17.1666	1.1688	16.0754	16.0635			93.1047	1.1688	17.1666	16.0635
9980073001	A	S		12.1225	1.1794	9.3255	9.3174			74.3665	1.1794	12.1225	9.3174
9980102001	A	S		21.7523	1.1799	18.1930	18.1810			82.6403	1.1799	21.7523	18.1810
9980102002	A	S		23.5659	1.1663	18.2069	18.1847			75.9764	1.1663	23.5659	18.1847
1016445	A	DUP	4.5	20.3800	1.1756	13.3257	13.3006			63.1366	1.1756	20.3800	13.3006
9980102003	A	S		17.9462	1.1798	12.2773	12.2550			66.0559	1.1798	17.9462	12.2550
9980102004	A	S		23.8231	1.1712	18.7064	18.6918			77.3472	1.1712	23.8231	18.6918
9980102005	A	S		18.1781	1.1700	15.0377	15.0277			81.4771	1.1700	18.1781	15.0277
9980102006	A	S		22.5710	1.1578	18.5070	18.4872			80.9286	1.1578	22.5710	18.4872
9980104001	A	S	XX	11.2638	1.1845	8.5932	8.5852			73.4247	1.1845	11.2638	8.5852
9980109001	A	S		34.5206	1.1632	27.7775	27.7730			79.7718	1.1632	34.5206	27.7730
9980109003	A	S		11.3479	1.1766	10.9491	10.9406			95.9956	1.1766	11.3479	10.9406
9980109004	A	S		34.8370	1.1783	27.4448	27.4390			78.0205	1.1783	34.8370	27.4390
9980109005	A	S		29.5337	1.1572	20.4901	20.4768			68.0831	1.1572	29.5337	20.4768
9980109006	A	S		36.3982	1.1776	30.1099	30.0978			82.1116	1.1776	36.3982	30.0978
1016446	A	DUP	0.4	14.4968	1.1543	12.4686	12.4579			84.7188	1.1543	14.4968	12.4579
9980109007	A	S		15.3496	1.1825	13.1431	13.1332			84.3553	1.1825	15.3496	13.1332
9980109008	A	S		29.0736	1.1777	22.3377	22.3312			75.8301	1.1777	29.0736	22.3312
9980109009	A	S		34.0520	1.1634	22.5179	22.5049			64.8903	1.1634	34.0520	22.5049
9980109010	A	S		22.3689	1.1632	20.7963	20.7912			92.5600	1.1632	22.3689	20.7912
9980109011	A	S		13.5192	1.1471	12.5561	12.5471			92.1428	1.1471	13.5192	12.5471
9980109012	A	S		13.0906	1.1588	12.5393	12.5313			95.3125	1.1588	13.0906	12.5313
9980109013	A	S		18.3252	1.1805	15.7539	15.7401			84.9219	1.1805	18.3252	15.7401

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9980109014	A	S		15.5960	1.1628	13.2150	13.2100			83.4687	1.1628	15.5960	13.2100
9980109015	A	S		14.7145	1.1692	13.8848	13.8818			93.8525	1.1692	14.7145	13.8818
9980109016	A	S		39.6525	1.1533	32.0442	32.0305			80.2022	1.1533	39.6525	32.0305
1016447	A	DUP	0.1	27.1016	1.1566	21.4184	21.4077			78.0540	1.1566	27.1016	21.4077
9980109017	A	S		30.1994	1.1825	23.8352	23.8201			78.0152	1.1825	30.1994	23.8201
9980109018	A	S		24.6307	1.1563	19.8337	19.8132			79.4776	1.1563	24.6307	19.8132
9980109019	A	S		28.3130	1.1699	20.9462	20.9401			72.8369	1.1699	28.3130	20.9401
9980124001	A	S		6.5738	1.1467	6.4516	6.4403			97.5401	1.1467	6.5738	6.4403
9980138001	A	S		18.5321	1.1768	15.7362	15.7254			83.8280	1.1768	18.5321	15.7254
9980139001	A	S		17.5279	1.1671	15.8041	15.7980			89.4266	1.1671	17.5279	15.7980
9980140001	A	S		18.6448	1.1457	16.6953	16.6863			88.8080	1.1457	18.6448	16.6863
1016448	BALCHK			0.1000	0.1000	0.1000	0.1000			#DIV/0!	0.1000	0.1000	0.1000

End

ANALYST Kristie Darrah
ENTER REVIEW Autopost
SECOND REVIEW 7-30-12
APPROVED 7-30-12

ALMDT.NOUSER

PROJECT TITLE:
Fort Stewart

Earth Resources Technology, Inc.
6100 Frost Place
Laurel, MD 20707

Data Deliverable Group ERT-009
ALS#9986940

DoD QSM V.4.2
DATA PACKAGE

SAMPLES COLLECTED
September 6, 2012

Total Number of Pages 838

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Case Narrative

Earth Resources Technology, Inc.
Fort Stewart

ALS-Middletown
Case Narrative
ERT-009

Sample Management

This report contains the results of the analysis of one (1) water sample collected on September 6, 2012. Analytical results and quality control information are summarized in this data package.

Qualifier Symbol Definitions:

U = Qualifier indicates that the analyte was not detected above the LOD.
J = Qualifier indicates that the analyte value is between the DL and the LOQ.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds the calibration range.
P = Qualifier indicates that the RPD between the two analytical columns is greater than 40%.
NSC = Qualifier indicates that spike recoveries were not calculated based on the spiking concentration.

Result Symbol Definitions:

DL = The smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence.
LOD = The smallest analyte concentration that must be present in a sample in order to be detected at a high level of confidence.
LOQ = The lowest concentration that produces a quantitative result within specified limits of precision or bias.

Sample Receipt

Samples arrived at ALS via courier on September 7, 2012. Upon receipt, the samples were inspected and compared to the Chain of Custody. Sample temperature was documented on the enclosed Chain of Custody. Samples were received intact and properly preserved, unless noted on the enclosed Certificate of Analysis and/or Chain of Custody.

TCLP Volatile Extraction (ZHE) by SW-846 1311

Sample handling. One (1) aqueous sample was filtered for extraction for volatiles by SW-846 Method 1311. The sample was extracted within the holding time established for the method.

TCLP Volatile Organics by SW-846 Method 8260

Sample Handling. One (1) TCLP extract sample was analyzed by SW-846 Method 8260 for volatile organic compounds. All analyses were performed within holding time.

Initial Calibrations. Initial calibrations were properly analyzed and met method criteria for all target analytes.

Initial Calibration Verification Check. Initial calibration verification standards (ICV) were properly analyzed and all results were within method criteria. The analytical batch LCS also serves as the second source.

Continuing Calibration Checks. Continuing calibration checks were properly analyzed and met method criteria for all target analytes.

Blanks. No target analytes were detected in the method blank.

Surrogates. All surrogate recovery results were within control limits.

Spiked Blanks. All target analytes were recovered within control limits.

Internal Standards. All internal standard results were within method criteria.

TCLP Leaching Procedure by SW-846 1311

Sample handling. One (1) aqueous sample was filtered for leachate by SW-846 Method 1311. The sample was leached within the holding time established for the method.

TCLP Semi-volatile Organic Compounds

Sample Handling. One (1) TCLP extract was extracted by SW-846 Method 3510 and the extracts were analyzed by SW-846 Method 8270 for semi-volatile organic compounds. All extractions and analyses were performed within the holding time

Initial Calibrations. An initial calibration was performed and met method criteria for all target analytes.

Initial Calibration Verification Checks. Initial calibration verification checks were properly analyzed and met method criteria for all target analytes.

Calibration Check. Calibration check standards were properly analyzed and met method criteria for all other target analytes.

Blank. No target analytes were detected in the method blank.

Surrogates. All surrogate recoveries were within control limits.

Blank Spikes. All target analytes were recovered within control limits.

Internal Standards. All internal standards results met method criteria.

TCLP Chlorinated Pesticides by SW-846 Method 8081

Sample Handling. One (1) TCLP leachate was extracted by SW-846 Method 3510 and analyzed Method 8081 for a select group of chlorinated pesticides. The sample extractions and analyses were performed within the holding times associated with the method.

Reporting. The samples are analyzed using dual-column instrumentation, and detected analytes are reported from the column that yields the lower result unless quality control data or poor chromatography warrants the selection of the higher result. Target analytes were not detected on the primary column for any of the samples in this deliverable

0001

group. As such, summary forms are provided for this column *only*. Raw data for both columns is provided for review.

Initial Calibrations. An initial calibration was properly performed and met method criteria for all target analytes.

Initial Calibration Verification Check. Initial verification checks were properly analyzed and met method criteria for all target analytes.

Calibration verification. The initial calibrations were verified with a continuing calibration verification standard (CCV) every 12 hours thereafter, and at the conclusion of the analytical run. If CCV data indicate a potential high bias, sample results are not qualified and no corrective action is taken unless there are positive results above the reporting limit on the column where the high bias exists. All CCV results were otherwise within control limits on the column selected for reporting results.

Method Blank. No target analytes were detected in the method blank.

Surrogates. All surrogate recoveries were within control limits.

Spiked Blanks. All target analytes were detected within control limits.

TCLP Chlorinated Herbicides by SW-846 Method 8151

Sample Handling. One (1) TCLP leachate was extracted and analyzed Method 8151 for a select group of chlorinated herbicides by GC-ECD. The sample extractions and analyses were performed within the holding times associated with the method.

Reporting. The samples are analyzed using dual-column instrumentation, and detected analytes are reported from the column that yields the lower result unless quality control data or poor chromatography warrants the selection of the higher result. Target analytes were not detected on the primary column (RTX-CLPEST) for any of the samples in this deliverable group. As such, summary forms are provided for this column *only*. Raw data for both columns is provided for review.

Initial Calibrations. Initial calibrations were properly performed and met method criteria for all target analytes.

Initial Calibration Verification Check. Initial verification checks were properly analyzed and met method criteria for all target analytes.

Calibration verification. Continuing calibration check standards were properly analyzed and met method criteria for all target analytes.

Method Blank. No target analytes were detected in the method blank.

Surrogates. All surrogate recoveries were within control limits.

Spiked Blanks. All target analytes were recovered within control limits.

Internal Standards. All internal standard results met method criteria.

TCLP Metals by SW-846 Method 6010C

Sample handling. One (1) TCLP extract was microwave digested by SW-846 Method 3015. The digestate was analyzed for TCLP metals on the ThermoFisher ICP6500_2 using SW-846 Method 6010C. The sample was digested and analyzed within the six-month holding time established for the method.

Calibration. All criteria associated with the calibration and check standards were within the control limits for this method.

Blanks. Metals were not detected in the blanks.

Laboratory Control Sample. Recoveries were within the control limits.

pH by SM 9040C

Sample handling. One (1) water sample was analyzed for pH by method 9040C. The sample was not analyzed within the 24-hour method-recommended holding time.

Calibration. The pH meter of the autotitrator was calibrated for the normal pH range of 4.00 to 10.00 on the day of analysis. The calibration was validated by analyzing a standard prior to the analysis of samples and after every ten samples during the run. All standards were found to be within QC limits of +/- 0.05 pH units.

Reactive Cyanide by SW-846 Method 7.3CN

Sample handling. One (1) water sample was analyzed for reactive cyanide by SW-846 Method 7.3CN. The sample was distilled and analyzed within the 14-day holding time established for the method.

Calibration. An initial six-point calibration was properly established, and continuing calibration standards were analyzed to verify the calibration. The recoveries were within the QC limits of 90-110%.

Blanks. A preparation blank, identified as 1036741 MB, was distilled and analyzed with the sample. Initial and continuing method blanks were analyzed within the analysis. Reactive cyanide was not detected above ½ the reporting limit of 0.005 mg/L in the blanks.

Laboratory Control Sample. A laboratory control sample, identified as 1036742 LCS, was distilled and analyzed with the sample. The recovery was within the QC limits of 0-92%.

Reactive Sulfide by SW 846 Method 7.3

Sample handling. One (1) water sample was analyzed for reactive sulfide by SW 846 Method 7.3. The sample was digested and analyzed within the 7-day holding time established for the method.

Calibration. Initial and continuing calibration standards were analyzed and recovered within the acceptable limits of 90-110%.

Blanks. A preparation blank, identified as 1036748 MB, was digested and analyzed with the sample. Reactive sulfide was not detected above ½ the reporting limit in the preparation blank. Initial and continuing blanks were analyzed in the run. Sulfide was not detected above ½ the reporting limit in the blanks.

Laboratory Control Sample. A laboratory control sample, identified as 1036749 LCS, was digested and analyzed with the samples. The recovery was within the QC limits of 49-148%.

Flashpoint by SW-846 1010

Sample handling. One (1) water sample was analyzed for flashpoint by SW-846 Method 1010. The sample was analyzed within the hold time established for the method.

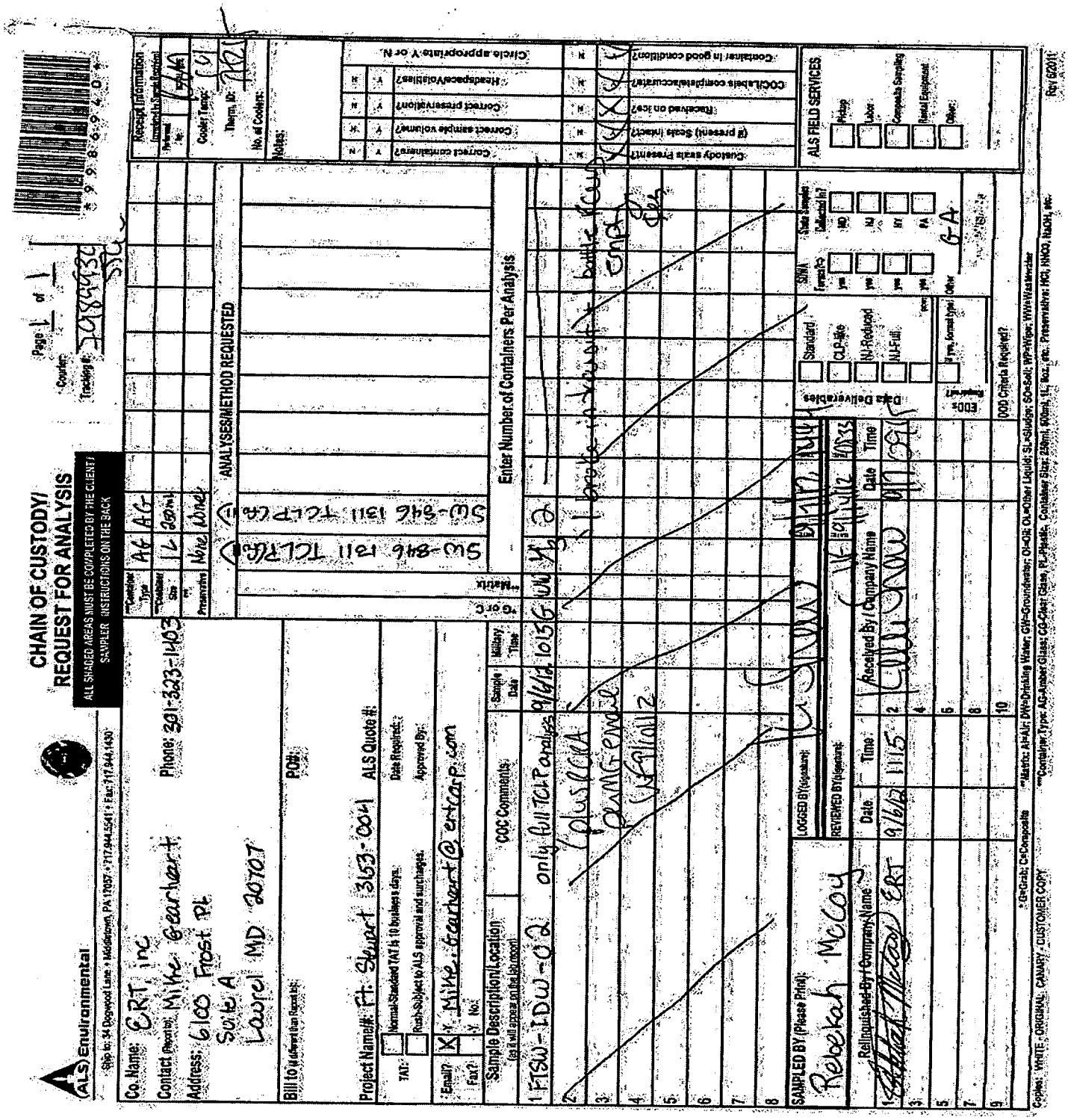
Calibration. A standard, identified as p-xylene, was analyzed with the sample. The flashpoint of the standard was within the QC limits of +/- 2° F.

Chain of Custody

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

Internal Chain of Custody
Work Order: 9986940

9986940001-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
09-20-12 08:45	NEW-WALKIN	storage	McIntyre, Ms. Lynn M.
09-20-12 07:30	WETC-LAB	Cyanide, Reactive Distillation	McIntyre, Ms. Lynn M.
09-20-12 07:30	WETC-LAB	Sulfide, Reactive Distillation	McIntyre, Ms. Lynn M.
09-17-12 11:46	ORGPREP-LAB	8151 Extraction	Wewer, Mr. James D.
09-07-12 15:47	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
09-07-12 14:44	RECEIVING	LOGIN	Snow, Ms. Kelli A.
09-07-12 09:15	*Sample Received At Lab*		

9986940001-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
09-17-12 10:51	META-LAB	6010/3015 ANALYSIS	Toney, Ms. Sarah
09-13-12 05:57	INORPREP-LAB		Kauffman, Mr. Kevin M

9986940001-A2	OPOP - Output Container -		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
09-14-12 10:38	SVOL-FR12	STORAGE	Hinchliffe, Mr. Kevin J
09-14-12 10:38	SVGC_LAB	8081 Analysis Prep'd by 3510	Hinchliffe, Mr. Kevin J
09-13-12 08:50	ORGPREP-LAB	3510 Extr for 8081	Chon, Go-En

9986940001-A3	OPOP - Output Container -		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
09-17-12 19:06	GC/MS-LAB	analysis	Sunday, Mr. Cliff G.
09-14-12 13:00	ORGPREP-LAB		Hinson, Lisa E.

9986940001-A4	OPOP - Output Container -		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
09-18-12 09:53	SR-FR4	STORAGE	Oblender, Matthew
09-17-12 11:47	ORGPREP-LAB	8151 Extraction	Wewer, Mr. James D.

9986940001-A5	OPWC - Output Container - Wet		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
09-20-12 07:30	WETC-LAB	Cyanide, Reactive Distillation	McIntyre, Ms. Lynn M.
09-20-12 07:19	WETC-LAB		McIntyre, Ms. Lynn M.

9986940001-A6	OPWC - Output Container - Wet		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
09-20-12 13:13	WETC-LAB	Sulfide, Reactive	McIntyre, Ms. Lynn M.
09-20-12 08:45	NEW-WALKIN	storage	McIntyre, Ms. Lynn M.
09-20-12 07:30	WETC-LAB	Sulfide, Reactive Distillation	McIntyre, Ms. Lynn M.
09-20-12 07:26	WETC-LAB		McIntyre, Ms. Lynn M.

9986940001-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
09-07-12 15:47	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
09-07-12 14:44	RECEIVING	LOGIN	Snow, Ms. Kelli A.

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

Internal Chain of Custody

Work Order: 9986940

9986940001-B (cont)	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
09-07-12 09:15	*Sample Received At Lab*		

9986940001-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
09-07-12 15:47	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
09-07-12 14:44	RECEIVING	LOGIN	Snow, Ms. Kelli A.
09-07-12 09:15	*Sample Received At Lab*		

9986940001-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
09-07-12 15:47	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
09-07-12 14:44	RECEIVING	LOGIN	Snow, Ms. Kelli A.
09-07-12 09:15	*Sample Received At Lab*		

9986940001-E	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
09-07-12 15:47	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
09-07-12 14:44	RECEIVING	LOGIN	Snow, Ms. Kelli A.
09-07-12 09:15	*Sample Received At Lab*		

9986940001-F	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
09-07-12 14:44	RECEIVING	LOGIN	Snow, Ms. Kelli A.
09-07-12 09:15	*Sample Received At Lab*		

9986940001-M	OPOP - Output Container -		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
09-21-12 10:48	ORGPREP-LAB		Wewer, Mr. James D.
09-07-12 09:15	*Sample Received At Lab*		

0014

Certificate of Analysis

ALS Environmental

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

October 18, 2012

Mr. Mike Gearhart
Earth Resources Technology, Inc.
6100 Frost Place
Suite A
Laurel, MD 20707

Certificate of Analysis

Project Name:	**Ft. Stewart GA project**	Workorder:	**9986940**
Purchase Order:		Workorder ID:	**ERT009|Ft. Stewart 3153-004**

Dear Mr. Gearhart,

Enclosed are the analytical results for samples received by the laboratory on Friday, September 07, 2012.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Vicki Forney (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

ALS Environmental

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SAMPLE SUMMARY

Workorder: 9986940 ERT009|Ft. Stewart 3153-004

Discard Date: 11/01/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9986940001	FTSW-IDW-02	Water	9/6/12 10:15	9/7/12 09:15	Customer

Workorder Comments:

This report was modified to correct the 8081 surrogate recovery reuslts. SEF 10/18/12

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

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ANALYTICAL RESULTS

Workorder: 9986940 ERT009|Ft. Stewart 3153-004

Lab ID: **9986940001** Date Collected: 9/6/2012 10:15 Matrix: Water

Sample ID: **FTSW-IDW-02** Date Received: 9/7/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
TCLP VOLATILE ORGANICS											
Benzene	75.0U	ug/L		100	75.0	33.0	SW846 8260B		9/21/12 11:38	GLQ	A
2-Butanone	375U	ug/L		500	375	160	SW846 8260B		9/21/12 11:38	GLQ	A
Carbon Tetrachloride	75.0U	ug/L		100	75.0	33.0	SW846 8260B		9/21/12 11:38	GLQ	A
Chlorobenzene	75.0U	ug/L		100	75.0	33.0	SW846 8260B		9/21/12 11:38	GLQ	A
Chloroform	53.2J	ug/L		100	75.0	33.0	SW846 8260B		9/21/12 11:38	GLQ	A
1,2-Dichloroethane	75.0U	ug/L		100	75.0	33.0	SW846 8260B		9/21/12 11:38	GLQ	A
1,1-Dichloroethene	75.0U	ug/L		100	75.0	33.0	SW846 8260B		9/21/12 11:38	GLQ	A
Tetrachloroethene	75.0U	ug/L		100	75.0	33.0	SW846 8260B		9/21/12 11:38	GLQ	A
Trichloroethene	75.0U	ug/L		100	75.0	33.0	SW846 8260B		9/21/12 11:38	GLQ	A
Vinyl Chloride	75.0U	ug/L		100	75.0	33.0	SW846 8260B		9/21/12 11:38	GLQ	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	98.4	%		70-120			SW846 8260B		9/21/12 11:38	GLQ	A
4-Bromofluorobenzene (S)	115	%		75-120			SW846 8260B		9/21/12 11:38	GLQ	A
Dibromofluoromethane (S)	103	%		85-115			SW846 8260B		9/21/12 11:38	GLQ	A
Toluene-d8 (S)	108	%		85-120			SW846 8260B		9/21/12 11:38	GLQ	A
TCLP SEMI-VOLATILES											
mp-Cresol	20.0U	ug/L		160	20.0	10.2	SW846 8270D	9/18/12	9/22/12 09:38	DHF	
o-Cresol	20.0U	ug/L		160	20.0	9.8	SW846 8270D	9/18/12	9/22/12 09:38	DHF	
1,4-Dichlorobenzene	20.0U	ug/L		160	20.0	12.6	SW846 8270D	9/18/12	9/22/12 09:38	DHF	
2,4-Dinitrotoluene	20.0U	ug/L		160	20.0	7.8	SW846 8270D	9/18/12	9/22/12 09:38	DHF	
Hexachlorobenzene	20.0U	ug/L		160	20.0	10.8	SW846 8270D	9/18/12	9/22/12 09:38	DHF	
Hexachlorobutadiene	20.0U	ug/L		160	20.0	10.0	SW846 8270D	9/18/12	9/22/12 09:38	DHF	
Hexachloroethane	20.0U	ug/L		160	20.0	17.4	SW846 8270D	9/18/12	9/22/12 09:38	DHF	
Nitrobenzene	40.0U	ug/L		160	40.0	13.8	SW846 8270D	9/18/12	9/22/12 09:38	DHF	
Pentachlorophenol	160U	ug/L		320	160	52.0	SW846 8270D	9/18/12	9/22/12 09:38	DHF	
Pyridine	40.0U	ug/L		160	40.0	22.0	SW846 8270D	9/18/12	9/22/12 09:38	DHF	
2,4,5-Trichlorophenol	60.0U	ug/L		160	60.0	34.0	SW846 8270D	9/18/12	9/22/12 09:38	DHF	
2,4,6-Trichlorophenol	20.0U	ug/L		160	20.0	11.0	SW846 8270D	9/18/12	9/22/12 09:38	DHF	

Library Search - SemiVolatiles

Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*	*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	82.3	%		40-125	SW846 8270D	9/18/12	9/22/12 09:38	DHF	
2-Fluorobiphenyl (S)	67.4	%		50-110	SW846 8270D	9/18/12	9/22/12 09:38	DHF	
2-Fluorophenol (S)	44.5	%		20-110	SW846 8270D	9/18/12	9/22/12 09:38	DHF	
Nitrobenzene-d5 (S)	68.5	%		40-110	SW846 8270D	9/18/12	9/22/12 09:38	DHF	
Phenol-d5 (S)	30.6	%		10-115	SW846 8270D	9/18/12	9/22/12 09:38	DHF	
Terphenyl-d14 (S)	58.4	%		50-135	SW846 8270D	9/18/12	9/22/12 09:38	DHF	

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ANALYTICAL RESULTS

Workorder: 9986940 ERT009|Ft. Stewart 3153-004

Lab ID: **9986940001** Date Collected: 9/6/2012 10:15 Matrix: Water

Sample ID: **FTSW-IDW-02** Date Received: 9/7/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
TCLP PESTICIDES											
gamma-BHC	1.7U	ug/L		3.3	1.7	0.40	SW846 8081B	9/13/12	9/14/12 01:35	KJH	A2
Chlordane	5.0U	ug/L		10.0	5.0	2.0	SW846 8081B	9/13/12	9/14/12 01:35	KJH	A2
Endrin	1.7U	ug/L		3.3	1.7	0.40	SW846 8081B	9/13/12	9/14/12 01:35	KJH	A2
Heptachlor	1.7U	ug/L		3.3	1.7	0.40	SW846 8081B	9/13/12	9/14/12 01:35	KJH	A2
Heptachlor Epoxide	1.7U	ug/L		3.3	1.7	0.40	SW846 8081B	9/13/12	9/14/12 01:35	KJH	A2
Methoxychlor	1.7U	ug/L		3.3	1.7	0.40	SW846 8081B	9/13/12	9/14/12 01:35	KJH	A2
Toxaphene	5.0U	ug/L		10.0	5.0	2.0	SW846 8081B	9/13/12	9/14/12 01:35	KJH	A2
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	30.4	%	3	30-135			SW846 8081B	9/13/12	9/14/12 01:35	KJH	A2
Tetrachloro-m-xylene (S)	70.2	%		25-140			SW846 8081B	9/13/12	9/14/12 01:35	KJH	A2
TCLP HERBICIDES											
2,4-D	3.2U	ug/L		4.0	3.2	3.2	SW846 8151A	9/17/12	9/18/12 12:30	JLH	A4
2,4,5-TP	3.2U	ug/L		4.0	3.2	3.2	SW846 8151A	9/17/12	9/18/12 12:30	JLH	A4
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
2,4-Dichlorophenylacetic acid (S)	98.3	%		14-172			SW846 8151A	9/17/12	9/18/12 12:30	JLH	A4
WET CHEMISTRY											
Corrosivity as pH	9.29	pH_Units					SW846 9040C		9/11/12 06:44	MBW	A
Cyanide, Reactive	10.01	ppm		10.0	10.0	0.011	SW-846 7.3CN	9/20/12	9/20/12 14:57	JEP	A5
Flashpoint/Ignitability	See comment	Deg. F	1,2				SW-846 1010A		9/19/12 05:55	SDL	A
Sulfide, Reactive	3.2J	ppm		6.3	6.3	1.3	SW846 7.3	9/20/12	9/20/12 14:23	LMM	A6
METALS											
Arsenic, Total	0.022	mg/L		0.018	0.012	0.0060	SW846 6010C	9/13/12	9/17/12 15:48	SRT	
Barium, Total	0.11	mg/L		0.022	0.015	0.0072	SW846 6010C	9/13/12	9/17/12 15:48	SRT	
Cadmium, Total	0.0028U	mg/L		0.0044	0.0028	0.0015	SW846 6010C	9/13/12	9/17/12 15:48	SRT	
Chromium, Total	0.29	mg/L		0.011	0.0080	0.0040	SW846 6010C	9/13/12	9/17/12 15:48	SRT	
Lead, Total	0.11	mg/L		0.013	0.0090	0.0044	SW846 6010C	9/13/12	9/17/12 15:48	SRT	
Selenium, Total	0.028U	mg/L		0.044	0.028	0.015	SW846 6010C	9/13/12	9/17/12 15:48	SRT	
Silver, Total	0.0058U	mg/L		0.0088	0.0058	0.0028	SW846 6010C	9/13/12	9/17/12 15:48	SRT	

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9986940 ERT009|Ft. Stewart 3153-004

Lab ID:	**9986940001**	Date Collected:	9/6/2012 10:15	Matrix:	Water
Sample ID:	**FTSW-IDW-02**	Date Received:	9/7/2012 09:15		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

The percent dry solid per the EPA leaching procedure was less than 0.5%. The sample was filtered to form the leachate.

Anna G Milliken
Technical Manager

ALS Environmental

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ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder: 9986940 ERT009|Ft. Stewart 3153-004

PARAMETER QUALIFIERS\FLAGS

[1] According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21)

[2] Sample did not flash up to 200 degrees F.

[3] The surrogate Decachlorobiphenyl for method SW846 8081B was outside of control limits. The % Recovery was reported as 15.2 and the control limits were 30 to 135. This result was reported at a dilution of 1.

TCLP Volatile Organics by 1311/8260B Summary Forms

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA-010 CASE No.: SAS No.: SDG NO.: ERT-009

	Sample NO.	SMC1 (BFB) #	SMC2 (DBFM)	SMC3 (DCE) #	SMC4 (TOL) #	TOT OUT
01	1037612(MB)	113	103	98.4	108	0
02	1037613(LCS)	112	103	101	107	0
03	FTSW-IDW-02-DL100	115	103	98.4	108	0

	QC LIMITS
SMC1 (BFB) = 4-Bromofluorobenzene	(75-120)
SMC2 (DBFM) = Dibromofluoromethane	(85-115)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(70-120)
SMC4 (TOL) = Toluene-d8	(85-120)

Column to be used to flag recovery values

* Values outside of contract required QC Limits

D Surrogate Diluted Out

WATER VOLATILE LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT-009

Laboratory Control Spike - Sample No: 1037613

COMPOUND	SPIKE ADDED (ug/L)		LCS CONCENTRATION (ug/L)	LCS % REC#	QC LIMIT REC
Benzene	20.0		22.9	115	(80-120)
2-Butanone	100		120	120	(30-150)
Carbon Tetrachloride	20.0		21.6	108	(65-140)
Chlorobenzene	20.0		22.0	110	(80-120)
Chloroform	20.0		19.7	98.5	(65-135)
1,2-Dichloroethane	20.0		20.6	103	(70-130)
1,1-Dichloroethene	20.0		21.0	105	(70-130)
Tetrachloroethene	20.0		23.0	115	(45-150)
Trichloroethene	20.0		21.7	109	(70-125)
Vinyl Chloride	20.0		18.1	90.7	(50-145)

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 10 outside limits

Comments:

0042

4A
VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.
1037612

Lab Name: ALS - Middletown Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG NO.: ERT-009

Lab File ID: 1092053A.D Lab Sample ID: 1037612

Date Analyzed: 9/21/2012 Time Analyzed: 01:34

GC Column: RTXVMS ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument ID: ms01.i

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
1037613(LCS)	1037613	1092054A.D	01:56
FTSW-IDW-02-DL100	9986940001	1092080.D	11:38

COMMENTS:

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS - Middletown Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG NO.: ERT-009

Lab File ID: 1091400.D BFB Injection Date: 9/14/2012

Instrument ID: ms01.i BFB Injection Time: 01:36

GC Column: RTXVMS ID: 0.25 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.8
75	30.0 - 60.0% of mass 95	51.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.0(0.0) 1
174	50.0 - 100.0% of mass 95	66.3
175	5.0 - 9.0% of mass 174	5.1 (7.6) 1
176	95.0 - 101.0% of mass 174	64.1 (96.6) 1
177	5.0 - 9.0% of mass 176	4.1 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1234	1234	1091404.D	9/14/2012	03:06
1235	1235	1091405.D	9/14/2012	03:29
1236	1236	1091406.D	9/14/2012	03:51
1237	1237	1091407.D	9/14/2012	04:13
1238	1238	1091408.D	9/14/2012	04:35
1239	1239	1091409.D	9/14/2012	04:58

0026

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS - Middletown Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG NO.: ERT-009

Lab File ID: 1092050.D BFB Injection Date: 9/21/2012

Instrument ID: ms01.i BFB Injection Time: 00:14

GC Column: RTXVMS ID: 0.25 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.1
75	30.0 - 60.0% of mass 95	47.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.0(0.0) 1
174	50.0 - 100.0% of mass 95	74.6
175	5.0 - 9.0% of mass 174	4.9 (6.5) 1
176	95.0 - 101.0% of mass 174	74.7 (100.1) 1
177	5.0 - 9.0% of mass 176	4.7 (6.3) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1800	1800	1092051.D	9/21/2012	00:40
1037612(MB)	1037612	1092053A.D	9/21/2012	01:34
1037613(LCS)	1037613	1092054A.D	9/21/2012	01:56
FTSW-IDW-02-DL100	9986940001	1092080.D	9/21/2012	11:38

0027

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS - Middletown Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT-009

Lab File ID: 1092051.D Date Analyzed: 9/21/2012

Instrument ID: ms01.i Time Analyzed: 00:40

GC Column: RTXVMS ID: 0.2 (mm) Heated Purge: (Y/N) N

	IS1 AREA #	RT#	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	750283	6.000	454343	7.779	1855731	3.992
UPPER LIMIT	1500566	6.500	908686	8.279	3711462	4.492
LOWER LIMIT	375142	5.500	227172	7.279	927866	3.492
SAMPLE NO.						
1800	758443	6.000	578778	7.779	1717091	3.992
1037612(MB)	716494	6.000	549987	7.779	1649910	3.992
1037613(LCS)	722643	6.000	560691	7.779	1649548	3.992
FTSW-IDW-02-DL100	690808	6.000	524152	7.778	1558833	3.992

IS1 = Chlorobenzene-d5
IS2 = 1,4-Dichlorobenzene-d4
IS3 = Fluorobenzene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

TCLP Volatile Organics by 1311/8260B Raw Data

Sample Raw Data

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-IDW-02-DL100

Lab Name: ALS - Middletown Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT-009

Matrix (soil/water): WATER Lab Sample ID: 9986940001

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 1092080.D

Level (low/med): Date Received: 9/7/12

% Moisture: not dec. 100.0 Date Analyzed: 9/21/12

GC Column: RTXVMS ID: 0.25 (mm) Dilution Factor: 100.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	75.0	U
78-93-3	2-Butanone	375	U
56-23-5	Carbon Tetrachloride	75.0	U
108-90-7	Chlorobenzene	75.0	U
67-66-3	Chloroform	53.2	J
107-06-2	1,2-Dichloroethane	75.0	U
75-35-4	1,1-Dichloroethene	75.0	U
127-18-4	Tetrachloroethene	75.0	U
79-01-6	Trichloroethene	75.0	U
75-01-4	Vinyl Chloride	75.0	U

0031

ALS - Middletown

VOLATILE REPORT SW-846 Method 8260

Data file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1092080.D
Lab Smp Id: 9986940001 Client Smp ID: FTSW-IDW-02
Inj Date : 21-SEP-2012 11:38
Operator : GLQ Inst ID: ms01.i
Smp Info : 9986940001;;1;;;;;100
Misc Info : ZZ VOMS 27572 D8260TCLP
Comment :
Method : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m
Meth Date : 21-Sep-2012 15:50 josh Quant Type: ISTD
Cal Date : 15-SEP-2012 01:42 Cal File: 1091459.D
Als bottle: 31
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: DODall.sub
Target Version: 4.12
Processing Host: ALMDTXP005

Concentration Formula: Amt * DF * Uf * 5/Vo * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged
DF	1.000	sample dilution factor
Cpnd Variable		Local Compound Variable

JMM 9/21/12
CAC 9/21/12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/L)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Pentane	41	Compound Not Detected.					
7 Trichlorofluoromethane	101	Compound Not Detected.					
8 Dichlorofluoromethane	67	Compound Not Detected.					
9 Ethyl Ether	74	Compound Not Detected.					
10 1,1-Dichloroethene	61	Compound Not Detected.					
12 Carbon Disulfide	76	Compound Not Detected.					
11 Freon 113	101	Compound Not Detected.					
13 Iodomethane	127	Compound Not Detected.					
14 Acrolein	56	Compound Not Detected.					
16 3-Chloro-1-propene	41	Compound Not Detected.					
15 Isopropyl Alcohol	45	Compound Not Detected.					
17 Methylene Chloride	84	Compound Not Detected.					
18 Acetone	58	Compound Not Detected.					
19 Methyl acetate	74	Compound Not Detected.					
20 trans-1,2-Dichloroethene	61	Compound Not Detected.					
21 Hexane	57	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/L)
	22 Methyl t-Butyl Ether	73	Compound Not Detected.					
	23 tert.- Butyl Alcohol	59	Compound Not Detected.					
	24 Acetonitrile	41	Compound Not Detected.					
	25 Diisopropyl ether	45	Compound Not Detected.					
	26 Chloroprene	53	Compound Not Detected.					
	27 1,1-Dichloroethane	63	Compound Not Detected.					
	28 Acrylonitrile	53	Compound Not Detected.					
	30 n-Propanol	41	Compound Not Detected.					
	29 Ethyl tert-butyl ether	59	Compound Not Detected.					
	31 Vinyl acetate	86	Compound Not Detected.					
	32 cis-1,2-Dichloroethene	61	Compound Not Detected.					
	33 2,2-Dichloropropane	77	Compound Not Detected.					
M	100 1,2-Dichloroethene, Total	61	Compound Not Detected.					
	34 Bromochloromethane	128	Compound Not Detected.					
	35 Cyclohexane	84	Compound Not Detected.					
	36 Chloroform	83	3.413	3.414	(0.855)	16185	0.53239	53.2391(a)
	37 Ethyl acetate	43	Compound Not Detected.					
	38 Methyl acrylate	55	Compound Not Detected.					
	39 Carbon Tetrachloride	117	Compound Not Detected.					
	40 Tetrahydrofuran	42	Compound Not Detected.					
$	41 Dibromofluoromethane	113	3.522	3.523	(0.882)	364741	30.9134	3091.34
	42 1,1,1-Trichloroethane	97	Compound Not Detected.					
	43 2-Butanone	72	Compound Not Detected.					
	44 1,1-Dichloropropene	75	Compound Not Detected.					
	45 1-Chlorobutane	41	Compound Not Detected.					
	46 Heptane	71	Compound Not Detected.					
	48 Propionitrile	54	Compound Not Detected.					
	47 Benzene	78	Compound Not Detected.					
	49 Methacrylonitrile	67	Compound Not Detected.					
	50 tert-amyl methyl Ether	73	Compound Not Detected.					
$	51 1,2-Dichloroethane-d4	65	3.834	3.834	(0.960)	452086	29.5165	2951.65
	54 Isobutyl alcohol	43	Compound Not Detected.					
	52 1,2-Dichloroethane	62	Compound Not Detected.					
	53 tert-Amyl Alcohol	59	Compound Not Detected.					
*	55 Fluorobenzene	96	3.992	3.992	(1.000)	1558833	30.0000	
	56 Diisobutylene	57	Compound Not Detected.					
	57 Trichloroethene	95	Compound Not Detected.					
	58 Methyl cyclohexane	83	Compound Not Detected.					
	59 tert-Amyl Ethylether	59	Compound Not Detected.					
	60 Dibromomethane	93	Compound Not Detected.					
	61 1,2-Dichloropropane	63	Compound Not Detected.					
	62 Bromodichloromethane	83	Compound Not Detected.					
	63 Methyl methacrylate	41	Compound Not Detected.					
	64 1,4-Dioxane	88	Compound Not Detected.					
	65 2-Chloroethylvinyl ether	63	Compound Not Detected.					
	66 cis-1,3-Dichloropropene	75	Compound Not Detected.					
	67 Octane	85	Compound Not Detected.					
$	68 Toluene-d8	98	4.947	4.947	(0.824)	1551156	32.2888	3228.88
	69 Toluene	92	Compound Not Detected.					
	70 Chloroacetonitrile	48	Compound Not Detected.					
	71 2-Nitropropane	41	Compound Not Detected.					
	72 1,1-Dichloro-2-propanone	63	Compound Not Detected.					
	73 4-Methyl-2-Pentanone (MIBK)	43	Compound Not Detected.					
	75 trans-1,3-Dichloropropene	75	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/L)	
	74 Tetrachloroethene	164	Compound Not Detected.						
	76 Ethyl methacrylate	69	Compound Not Detected.						
	77 1,1,2-Trichloroethane	83	Compound Not Detected.						
	78 Chlorodibromomethane	129	Compound Not Detected.						
	79 1,3-Dichloropropane	76	Compound Not Detected.						
	80 1,2-Dibromoethane	107	Compound Not Detected.						
	81 2-Hexanone	43	Compound Not Detected.						
	82 1-Chlorohexane	91	Compound Not Detected.						
*	83 Chlorobenzene-d5	82	6.000	6.000	(1.000)	690808	30.0000		
	85 Ethylbenzene	106	Compound Not Detected.						
	84 Chlorobenzene	112	Compound Not Detected.						
	86 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.						
	87 mp-Xylene	106	Compound Not Detected.						
M	120 1,3-Dichloropropene, Total	75	Compound Not Detected.						
	88 o-Xylene	106	Compound Not Detected.						
	89 Styrene	104	Compound Not Detected.						
	90 Bromoform	173	Compound Not Detected.						
	91 Isopropylbenzene	105	Compound Not Detected.						
$	92 4-Bromofluorobenzene	174	6.895	6.895	(0.886)	448320	34.4394	3443.94	
M	121 TOTAL XYLENES	106	Compound Not Detected.						
	94 n-Propylbenzene	120	Compound Not Detected.						
	93 Bromobenzene	156	Compound Not Detected.						
	95 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.						
	97 1,3,5-Trimethylbenzene	105	Compound Not Detected.						
	96 o-Chlorotoluene	91	Compound Not Detected.						
	98 1,2,3-Trichloropropane	110	Compound Not Detected.						
	99 trans-1,4-Dichloro-2-butene	53	Compound Not Detected.						
	101 p-Chlorotoluene	91	Compound Not Detected.						
	102 tert-Butylbenzene	134	Compound Not Detected.						
	103 Pentachloroethane	117	Compound Not Detected.						
	104 1,2,4-Trimethylbenzene	105	Compound Not Detected.						
	105 sec-Butylbenzene	105	Compound Not Detected.						
	106 p-Isopropyltoluene	134	Compound Not Detected.						
	107 1,3-Dichlorobenzene	146	Compound Not Detected.						
*	108 1,4-Dichlorobenzene-d4	152	7.778	7.779	(1.000)	524152	30.0000		(Q)
	109 1,4-Dichlorobenzene	146	Compound Not Detected.						
	111 n-Butylbenzene	134	Compound Not Detected.						
	110 Benzyl Chloride	126	Compound Not Detected.						
	112 Hexachloroethane	117	Compound Not Detected.						
	113 1,2-Dichlorobenzene	146	Compound Not Detected.						
	114 1,2-Dibromo-3-chloropropane	75	Compound Not Detected.						
	115 Nitrobenzene	77	Compound Not Detected.						
	116 Hexachlorobutadiene	225	Compound Not Detected.						
	117 1,2,4-Trichlorobenzene	180	Compound Not Detected.						
	118 Naphthalene	128	Compound Not Detected.						
	119 1,2,3-Trichlorobenzene	180	Compound Not Detected.						

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms01.i
Lab File ID: 1092080.D
Lab Smp Id: 9986940001
Analysis Type: VOA
Quant Type: ISTD
Operator: GLQ
Method File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m
Misc Info: ZZ VOMS 27572 D8260TCLP

Calibration Date: 21-SEP-2012
Calibration Time: 00:40
Client Smp ID: FTSW-IDW-02
Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	1717091	858546	3434182	1558833	-9.22
83 Chlorobenzene-d5	758443	379222	1516886	690808	-8.92
108 1,4-Dichlorobenze	578778	289389	1157556	524152	-9.44

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	3.99	3.49	4.49	3.99	-0.00
83 Chlorobenzene-d5	6.00	5.50	6.50	6.00	-0.00
108 1,4-Dichlorobenze	7.78	7.28	8.28	7.78	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

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RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: LIQUID
Lab Smp Id: 9986940001
Level: LOW
Data Type: MS DATA
SpikeList File: WATERQC2006.spk
Sublist File: DODall.sub
Client SDG: ERT009|Ft. Stewart
Fraction: VOA
Client Smp ID: FTSW-IDW-02
Operator: GLQ
SampleType: SAMPLE
Quant Type: ISTD
Method File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m
Misc Info: ZZ VOMS 27572 D8260TCLP

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 41 Dibromofluorometha	3000.00	3091.34	103.04	85-115
$ 51 1,2-Dichloroethane	3000.00	2951.65	98.39	70-120
$ 68 Toluene-d8	3000.00	3228.88	107.63	85-120
$ 92 4-Bromofluorobenze	3000.00	3443.94	114.80	75-120

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TARGET COMPOUNDS

Client Name: ERT Earth Resources
Lab Smp Id: 9986940001
Sample Location:
Sample Date: 06-SEP-2012
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info: ZZ VOMS 27572 D8260TCLP

Client SDG: ERT009|Ft. Stewart
Client Smp ID: FTSW-IDW-02
Sample Point:
Date Received: 07-SEP-2012
Quant Type: ISTD
Level: LOW
Operator: GLQ

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
67-66-3	Chloroform	53.2391	J
1868-53-7	Dibromofluoromethane	3091.34	
17060-07-0	1,2-Dichloroethane-d4	2951.65	
2037-26-5	Toluene-d8	3228.88	
460-00-4	4-Bromofluorobenzene	3443.94	

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TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: ERT Earth Resources
Lab Smp Id: 9986940001
Operator : GLQ
Sample Location:
Sample Matrix: WATER
Analysis Type: VOA
Inj Date: 21-SEP-2012 11:38

Client SDG: ERT009|Ft. Stewart
Client Smp ID: FTSW-IDW-02
Sample Date: 06-SEP-2012
Sample Point:
Date Received:07-SEP-2012 00:00
Level: LOW

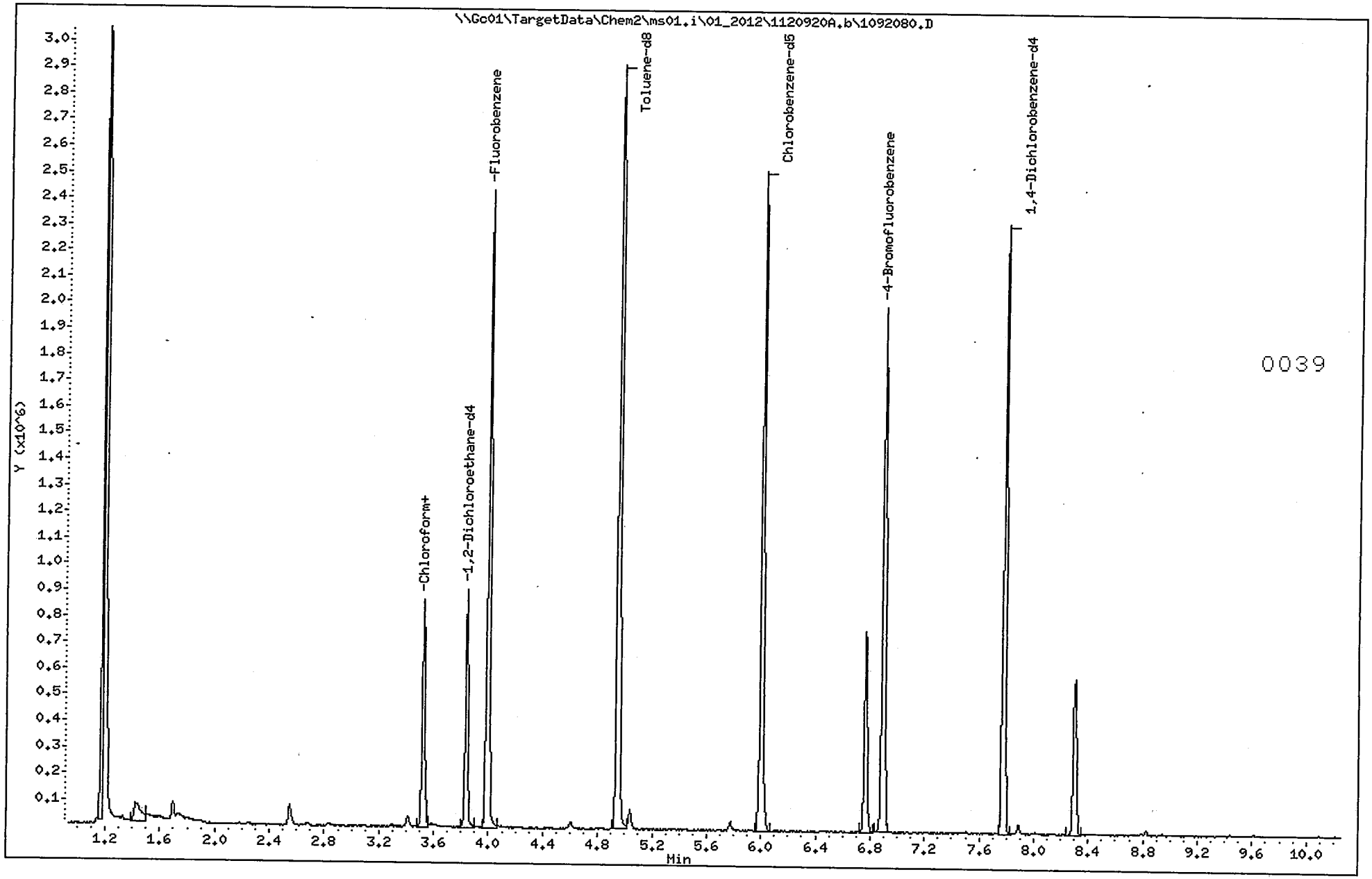
Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	1.177	2780.33	J
2. 3789-85-3	Benzoic acid, 2-[(trimethyl	8.303	862.209	NJ

Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1092080.D
Date : 21-SEP-2012 11:38
Client ID: FTSW-IDW-02
Sample Info: 9986940001;;1;;;;;100
Purge Volume: 5.0
Column phase: DB-VRX

Instrument: ms01.i
Operator: GLQ
Column diameter: 0.25



Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1092080.D

Date : 21-SEP-2012 11:38

Client ID: FTSW-IDW-02

Instrument: ms01.i

Sample Info: 9986940001;;1;;;;;100

Purge Volume: 5.0

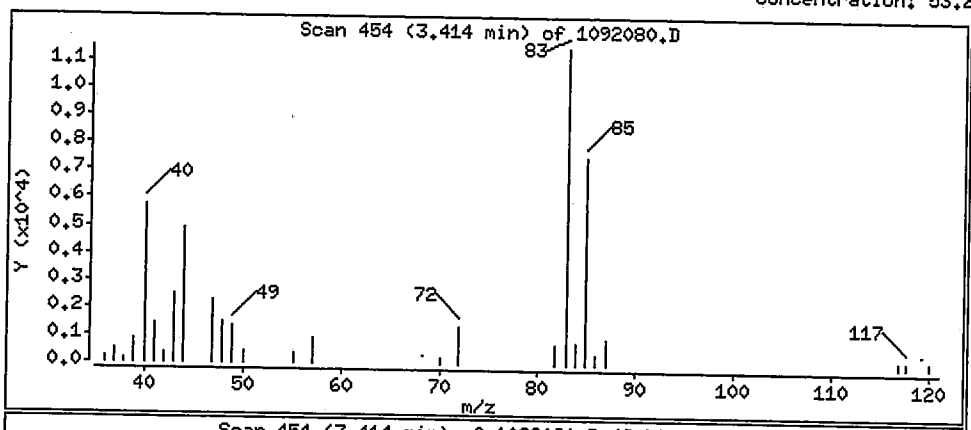
Operator: GLQ

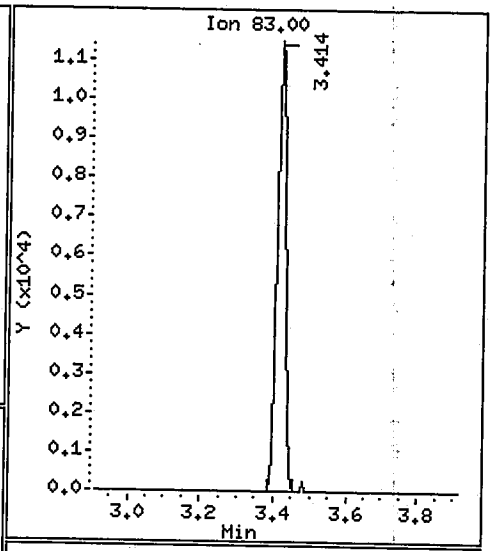
Column phase: DB-VRX

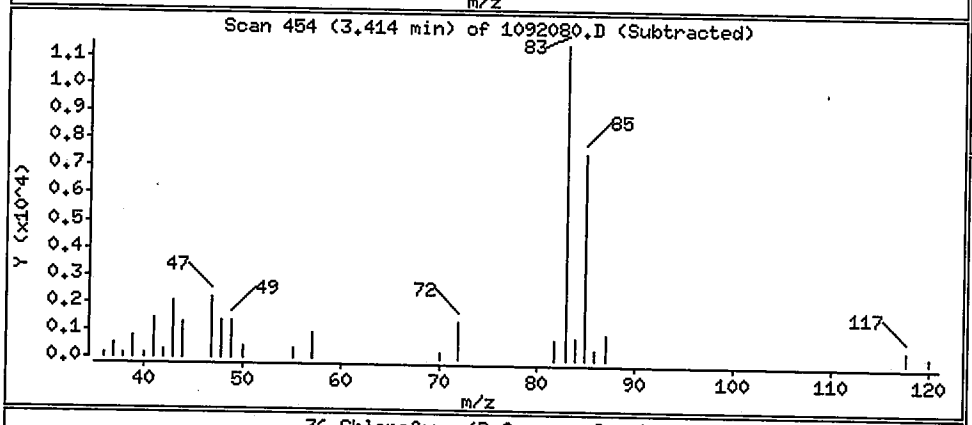
Column diameter: 0.25

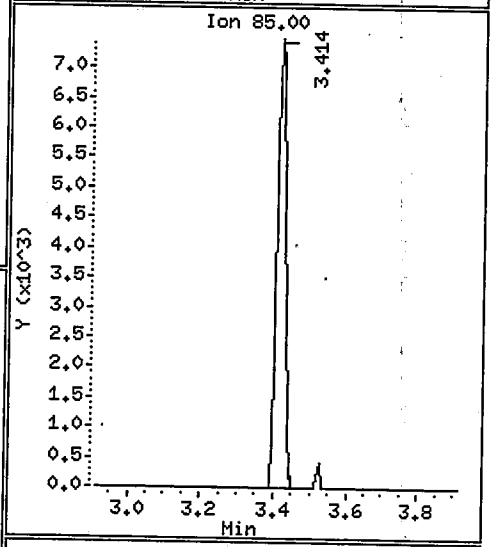
36 Chloroform

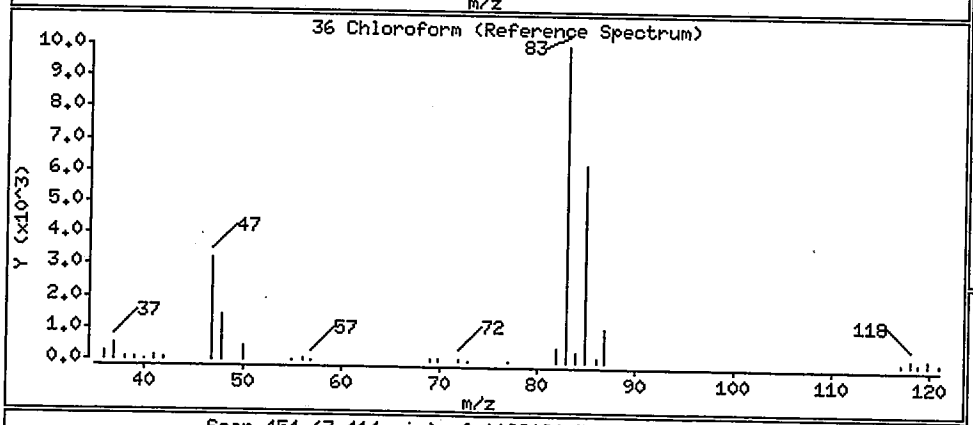
Concentration: 53.2391 ug/L

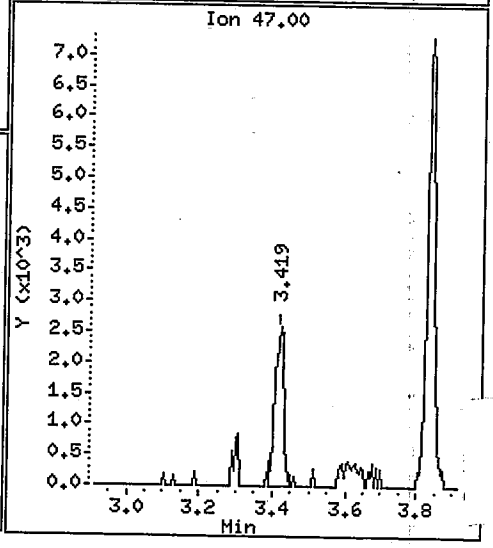


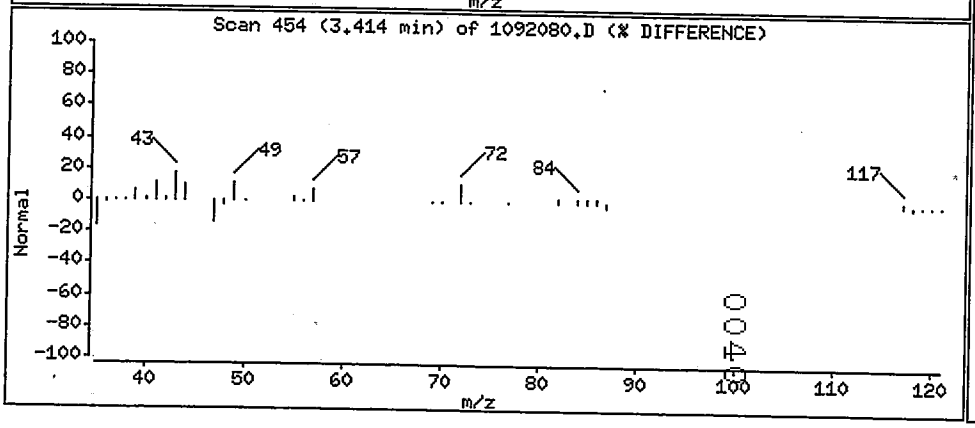












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VOLATILE REPORT SW-846 Method 8260

Data file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1092080.D
Lab Smp Id: 9986940001
Client Smp ID: FTSW-IDW-02
Inj Date : 21-SEP-2012 11:38
Operator : GLQ
Inst ID: ms01.i
Smp Info : 9986940001;;1;;;;;100
Misc Info : ZZ VOMS 27572 D8260TCLP
Comment :
Method : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m
Meth Date : 21-Sep-2012 15:22 josh
Quant Type: ISTD
Cal Date : 15-SEP-2012 01:42
Cal File: 1091459.D
Als bottle: 31
Dil Factor: 100.00000
Integrator: HP RTE
Compound Sublist: DODall.sub
Target Version: 4.12
Processing Host: ALMDTXP005

Concentration Formula: Amt.* DF * Uf * 5/Vo * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged
DF	1.000	sample dilution factor
Cpnd Variable		Local Compound Variable

RAW DATA
Before Manual Integration

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/L)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	1.427	1.815	(0.358)	138936	11.3198	1131.98(Q)
6 Pentane	41	Compound Not Detected.					
7 Trichlorofluoromethane	101	Compound Not Detected.					
8 Dichlorofluoromethane	67	Compound Not Detected.					
9 Ethyl Ether	74	Compound Not Detected.					
10 1,1-Dichloroethene	61	Compound Not Detected.					
12 Carbon Disulfide	76	Compound Not Detected.					
11 Freon 113	101	Compound Not Detected.					
13 Iodomethane	127	2.317	2.311	(0.580)	258	2.91404	291.404(Q)
14 Acrolein	56	Compound Not Detected.					
16 3-Chloro-1-propene	41	Compound Not Detected.					
15 Isopropyl Alcohol	45	Compound Not Detected.					
17 Methylene Chloride	84	Compound Not Detected.					
18 Acetone	58	Compound Not Detected.					
19 Methyl acetate	74	Compound Not Detected.					
20 trans-1,2-Dichloroethene	61	Compound Not Detected.					
21 Hexane	57	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/L)
	22 Methyl t-Butyl Ether	73	Compound Not Detected.					
	23 tert.- Butyl Alcohol	59	2.562	2.710	(0.642)	5178	5.02990	502.990(a)
	24 Acetonitrile	41	2.830	2.835	(0.709)	7787	5.41892	541.892(aQ)
	25 Diisopropyl ether	45	Compound Not Detected.					
	26 Chloroprene	53	Compound Not Detected.					
	27 1,1-Dichloroethane	63	Compound Not Detected.					
	28 Acrylonitrile	53	Compound Not Detected.					
	30 n-Propanol	41	Compound Not Detected.					
	29 Ethyl tert-butyl ether	59	Compound Not Detected.					
	31 Vinyl acetate	86	Compound Not Detected.					
	32 cis-1,2-Dichloroethene	61	Compound Not Detected.					
	33 2,2-Dichloropropane	77	Compound Not Detected.					
M	100 1,2-Dichloroethene, Total	61	Compound Not Detected.					
	34 Bromochloromethane	128	Compound Not Detected.					
	35 Cyclohexane	84	Compound Not Detected.					
	36 Chloroform	83	3.413	3.414	(0.855)	16185	0.53239	53.2391(a)
	37 Ethyl acetate	43	Compound Not Detected.					
	38 Methyl acrylate	55	Compound Not Detected.					
	39 Carbon Tetrachloride	117	Compound Not Detected.					
	40 Tetrahydrofuran	42	Compound Not Detected.					
$	41 Dibromofluoromethane	113	3.522	3.523	(0.882)	364741	30.9134	3091.34
	42 1,1,1-Trichloroethane	97	Compound Not Detected.					
	43 2-Butanone	72	3.408	3.583	(0.854)	2752	1.90743	190.743(aQ)
	44 1,1-Dichloropropene	75	Compound Not Detected.					
	45 1-Chlorobutane	41	Compound Not Detected.					
	46 Heptane	71	Compound Not Detected.					
	48 Propionitrile	54	Compound Not Detected.					
	47 Benzene	78	Compound Not Detected.					
	49 Methacrylonitrile	67	3.834	3.774	(0.960)	236817	40.8715	4087.15(Q)
	50 tert-amyl methyl Ether	73	Compound Not Detected.					
$	51 1,2-Dichloroethane-d4	65	3.834	3.834	(0.960)	452086	29.5165	2951.65
	54 Isobutyl alcohol	43	Compound Not Detected.					
	52 1,2-Dichloroethane	62	3.992	3.872	(1.000)	21771	1.10750	110.750
	53 tert-Amyl Alcohol	59	Compound Not Detected.					
*	55 Fluorobenzene	96	3.992	3.992	(1.000)	1558833	30.0000	
	56 Diisobutylene	57	Compound Not Detected.					
	57 Trichloroethene	95	3.992	4.090	(1.000)	136625	8.66489	866.489(Q)
	58 Methyl cyclohexane	83	Compound Not Detected.					
	59 tert-Amyl Ethylether	59	Compound Not Detected.					
	60 Dibromomethane	93	Compound Not Detected.					
	61 1,2-Dichloropropane	63	Compound Not Detected.					
	62 Bromodichloromethane	83	Compound Not Detected.					
	63 Methyl methacrylate	41	Compound Not Detected.					
	65 2-Chloroethylvinyl ether	63	Compound Not Detected.					
	66 cis-1,3-Dichloropropene	75	Compound Not Detected.					
	67 Octane	85	Compound Not Detected.					
$	68 Toluene-d8	98	4.947	4.947	(0.824)	1551156	32.2888	3228.88
	69 Toluene	92	Compound Not Detected.					
	70 Chloroacetonitrile	48	4.941	5.034	(0.824)	61027	152.037	15203.7(Q)
	71 2-Nitropropane	41	Compound Not Detected.					
	72 1,1-Dichloro-2-propanone	63	Compound Not Detected.					
	73 4-Methyl-2-Pentanone(MIBK)	43	Compound Not Detected.					
	75 trans-1,3-Dichloropropene	75	Compound Not Detected.					
	74 Tetrachloroethene	164	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/L)
76 Ethyl methacrylate	69	Compound Not Detected.					
77 1,1,2-Trichloroethane	83	Compound Not Detected.					
78 Chlorodibromomethane	129	Compound Not Detected.					
79 1,3-Dichloropropane	76	6.000	5.542	(1.000)	65509	2.93814	293.814(Q)
80 1,2-Dibromoethane	107	Compound Not Detected.					
81 2-Hexanone	43	Compound Not Detected.					
82 1-Chlorohexane	91	Compound Not Detected.					
* 83 Chlorobenzene-d5	82	6.000	6.000	(1.000)	690808	30.0000	
85 Ethylbenzene	106	Compound Not Detected.					
84 Chlorobenzene	112	Compound Not Detected.					
86 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
87 mp-Xylene	106	Compound Not Detected.					
M 120 1,3-Dichloropropene, Total	75	Compound Not Detected.					
88 o-Xylene	106	Compound Not Detected.					
89 Styrene	104	Compound Not Detected.					
90 Bromoform	173	Compound Not Detected.					
91 Isopropylbenzene	105	Compound Not Detected.					
$ 92 4-Bromofluorobenzene	174	6.895	6.895	(0.886)	448320	34.4394	3443.94
M 121 TOTAL XYLENES	106	Compound Not Detected.					
94 n-Propylbenzene	120	Compound Not Detected.					
93 Bromobenzene	156	Compound Not Detected.					
95 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
97 1,3,5-Trimethylbenzene	105	Compound Not Detected.					
96 o-Chlorotoluene	91	Compound Not Detected.					
98 1,2,3-Trichloropropane	110	6.764	7.151	(0.870)	5749	1.21136	121.136(aQ)
99 trans-1,4-Dichloro-2-butene	53	6.884	7.173	(0.885)	50	0.96524	96.5242(aQ)
101 p-Chlorotoluene	91	Compound Not Detected.					
102 tert-Butylbenzene	134	Compound Not Detected.					
103 Pentachloroethane	117	Compound Not Detected.					
104 1,2,4-Trimethylbenzene	105	Compound Not Detected.					
105 sec-Butylbenzene	105	Compound Not Detected.					
106 p-Isopropyltoluene	134	Compound Not Detected.					
107 1,3-Dichlorobenzene	146	Compound Not Detected.					
* 108 1,4-Dichlorobenzene-d4	152	7.778	7.779	(1.000)	524152	30.0000	(Q)
109 1,4-Dichlorobenzene	146	Compound Not Detected.					
111 n-Butylbenzene	134	Compound Not Detected.					
110 Benzyl Chloride	126	Compound Not Detected.					
112 Hexachloroethane	117	Compound Not Detected.					
113 1,2-Dichlorobenzene	146	Compound Not Detected.					
114 1,2-Dibromo-3-chloropropane	75	Compound Not Detected.					
115 Nitrobenzene	77	Compound Not Detected.					
116 Hexachlorobutadiene	225	Compound Not Detected.					
117 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
118 Naphthalene	128	Compound Not Detected.					
119 1,2,3-Trichlorobenzene	180	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

0045

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms01.i
Lab File ID: 1092080.D
Lab Smp Id: 9986940001
Analysis Type: VOA
Quant Type: ISTD
Operator: GLQ
Calibration Date: 21-SEP-2012
Calibration Time: 00:40
Client Smp ID: FTSW-IDW-02
Level: LOW
Sample Type: WATER
Method File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m
Misc Info: ZZ VOMS 27572 D8260TCLP

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	1717091	858546	3434182	1558833	-9.22
83 Chlorobenzene-d5	758443	379222	1516886	690808	-8.92
108 1,4-Dichlorobenze	578778	289389	1157556	524152	-9.44

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	3.99	3.49	4.49	3.99	-0.00
83 Chlorobenzene-d5	6.00	5.50	6.50	6.00	-0.00
108 1,4-Dichlorobenze	7.78	7.28	8.28	7.78	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: LIQUID
Lab Smp Id: 9986940001
Level: LOW
Data Type: MS DATA
SpikeList File: WATERQC2006.spk
Sublist File: DODall.sub
Method File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m
Misc Info: ZZ VOMS 27572 D8260TCLP

Client SDG: ERT009|Ft. Stewart
Fraction: VOA
Client Smp ID: FTSW-IDW-02
Operator: GLQ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 41 Dibromofluorometha	3000.00	3091.34	103.04	85-115
$ 51 1,2-Dichloroethane	3000.00	2951.65	98.39	70-120
$ 68 Toluene-d8	3000.00	3228.88	107.63	85-120
$ 92 4-Bromofluorobenze	3000.00	3443.94	114.80	75-120

ALS - Middletown

TARGET COMPOUNDS

Client Name: ERT Earth Resources
Lab Smp Id: 9986940001
Sample Location:
Sample Date: 06-SEP-2012
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info: ZZ VOMS 27572 D8260TCLP

Client SDG: ERT009|Ft. Stewart
Client Smp ID: FTSW-IDW-02
Sample Point:
Date Received: 07-SEP-2012
Quant Type: ISTD
Level: LOW
Operator: GLQ

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
75-00-3	Chloroethane	1131.98	
74-88-4	Iodomethane	291.404	
75-65-0	tert.- Butyl Alcohol	502.990	J
75-05-8	Acetonitrile	541.892	J
67-66-3	Chloroform	53.2391	J
78-93-3	2-Butanone	190.743	J
126-98-7	Methacrylonitrile	4087.15	
107-06-2	1,2-Dichloroethane	110.750	
79-01-6	Trichloroethene	866.489	
123-91-1	1,4-Dioxane	0.000000	J
107-14-2	Chloroacetonitrile	15203.7	
142-28-9	1,3-Dichloropropane	293.814	
96-18-4	1,2,3-Trichloropropane	121.136	J
110-57-6	trans-1,4-Dichloro-2-butene	96.5242	J
1868-53-7	Dibromofluoromethane	3091.34	
17060-07-0	1,2-Dichloroethane-d4	2951.65	
2037-26-5	Toluene-d8	3228.88	
460-00-4	4-Bromofluorobenzene	3443.94	

ALS - Middletown

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name: ERT Earth Resources
Lab Smp Id: 9986940001
Operator : GLQ
Sample Location:
Sample Matrix: WATER
Analysis Type: VOA
Inj Date: 21-SEP-2012 11:38

Client SDG: ERT009|Ft. Stewart
Client Smp ID: FTSW-IDW-02
Sample Date: 06-SEP-2012
Sample Point:
Date Received:07-SEP-2012 00:00
Level: LOW

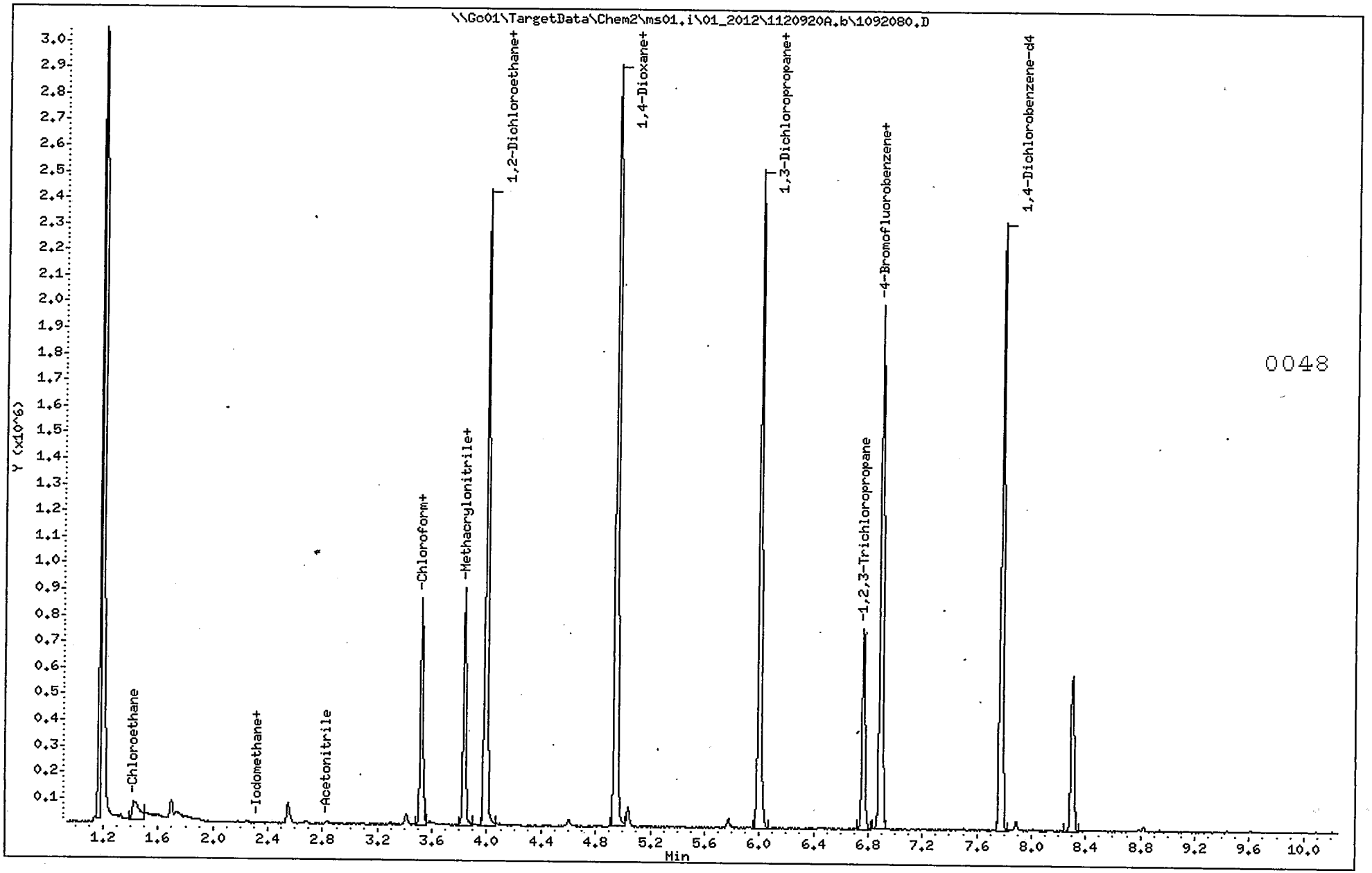
Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	1.177	2780.33	J
2. 3789-85-3	Benzoic acid, 2-[(trimethyl	8.303	862.209	NJ

Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1092080.D
Date : 21-SEP-2012 11:38
Client ID: FTSW-IDW-02
Sample Info: 9986940001;;1;;;;;100
Purge Volume: 5.0
Column phase: DB-VRX

Instrument: ms01.i
Operator: GLQ
Column diameter: 0.25



Standards Raw Data

Initial Calibrations

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms01.i Calibration Date(s): 9/14/2012 9/14/2012

Heated Purge: (Y/N) N Calibration Time(s): 03:06 04:58

GC Column: RTXVMS ID: 0.25 (mm)

LAB FILE ID: RRF001 = 1091404.D RRF005 = 1091405.D RRF020 = 1091406.D RRF050 = 1091407.D
RRF100 = 1091408.D RRF200 = 1091409.D

COMPOUND	RRF001	RRF005	RRF020	RRF050	RRF100	CT
Acetone	4141	14135	67291	152144	311479	L
Acrolein	0.00822	0.00858	0.01099	0.01019	0.01066	A
Acrylonitrile	0.03451	0.03848	0.04945	0.04630	0.04576	A
Acetonitrile	5288	19094	85987	190071	394764	L
tert-Amyl Ethylether	0.44703	0.46218	0.52949	0.51092	0.53419	A
tert-Amyl methyl ether	23004	134071	699144	1703657	3564723	L
tert-Amyl Alcohol	2109	12411	64528	161648	346845	L
Benzene	1.19711	1.18339	1.32900	1.32077	1.26092	A
Benzyl Chloride	692	4519	29438	73481	176640	L
Bromobenzene	0.93598	0.87941	0.97352	0.99307	0.97869	A
Bromochloromethane	0.09424	0.09921	0.11477	0.11091	0.10957	A
Bromodichloromethane	0.34185	0.34025	0.39625	0.39060	0.38640	A
Bromoform *	3236	17823	102209	248981	515090	L
Bromomethane	0.16453	0.15618	0.16005	0.17587	0.18386	A
2-Butanone	0.00926	0.01039	0.01350	0.01274	0.01276	A
tert.- Butyl Alcohol	0.00796	0.00991	0.01087	0.01033	0.01035	A
tert-Butylbenzene	0.84592	0.86768	0.92876	0.97124	0.93335	A
n-Butylbenzene	0.64691	0.73679	0.84695	0.91335	0.87092	A
sec-Butylbenzene	4.54935	4.75810	5.10564	5.33953	5.01348	A
Carbon Disulfide	1.07710	0.90535	0.96075	0.97410	0.91487	A
Carbon Tetrachloride	0.37450	0.38476	0.43589	0.44917	0.43440	A
Chloroacetonitrile	0.00987	0.00735	0.00851	0.00810	0.00842	A
Chlorobenzene *	1.86406	1.76509	1.92997	1.94788	1.89706	A
1-Chlorobutane	0.44073	0.40045	0.45034	0.45957	0.43976	A
Chlorodibromomethane	0.42288	0.40269	0.48498	0.48754	0.48869	A
Chloroethane	26814	86100	329084	790682	1559898	L
2-Chloroethylvinyl ether		279	2102	4116	6633	L
Chloroform **	52791	183407	757768	1878492	3699990	L
1-Chlorohexane	0.93809	1.00679	1.13021	1.18250	1.14770	A
Chloromethane *	0.53654	0.52370	0.46767	0.46979	0.45216	A
Chloroprene	0.47644	0.48339	0.54569	0.56515	0.54514	A
3-Chloro-1-propene	0.47975	0.47590	0.54381	0.55175	0.53468	A
o-Chlorotoluene	3.98232	3.96419	4.14215	4.32686	4.16628	A
p-Chlorotoluene	3.41406	3.51618	3.74557	3.87061	3.77138	A

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.
SPCC Compounds (*) with required minimum RRF.
CCC Compounds (**) with required maximum %RSD.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms01.i Calibration Date(s): 9/14/2012 9/14/2012

Heated Purge: (Y/N) N Calibration Time(s): 03:06 04:58

GC Column: RTXVMS ID: 0.25 (mm)

LAB FILE ID: RRF001 = 1091404.D RRF005 = 1091405.D RRF020 = 1091406.D RRF050 = 1091407.D
RRF100 = 1091408.D RRF200 = 1091409.D

COMPOUND	RRF001	RRF005	RRF020	RRF050	RRF100	CT
Cyclohexane	0.46921	0.49496	0.56544	0.57210	0.53939	A
1,2-Dibromo-3-Chloropropane	550	3749	18689	45836	96058	L
1,2-Dibromoethane	6531	34680	176504	413084	871784	L
Dibromomethane	0.10278	0.10375	0.12618	0.11654	0.11761	A
trans-1,4-Dichloro-2-butene	836	4075	31271	74686	166495	L
1,2-Dichlorobenzene	1.17461	1.19432	1.34437	1.34416	1.35917	A
1,3-Dichlorobenzene	1.55664	1.62833	1.78413	1.82479	1.79995	A
1,4-Dichlorobenzene	1.69169	1.58065	1.70039	1.74819	1.72857	A
Dichlorodifluoromethane	0.40288	0.45482	0.42337	0.42470	0.39567	A
1,1-Dichloroethane *	0.57741	0.58255	0.64544	0.65454	0.63395	A
1,2-Dichloroethene, Total	0.47402	0.44333	0.49299	0.49576	0.47776	A
1,2-Dichloroethane	15775	82671	395410	947095	1906472	L
1,1-Dichloroethene **	0.45353	0.45652	0.50565	0.51657	0.49177	A
cis-1,2-Dichloroethene	0.45670	0.42874	0.48077	0.47865	0.46658	A
trans-1,2-Dichloroethene	0.49134	0.45793	0.50520	0.51288	0.48894	A
Dichlorofluoromethane	0.56380	0.56742	0.63051	0.64286	0.61409	A
1,1-Dichloro-2-Propanone	191	2462	13877	31562	72094	L
2,2-Dichloropropane	0.39914	0.41272	0.45931	0.47009	0.45581	A
1,3-Dichloropropane	0.61651	0.66555	0.77296	0.74780	0.74732	A
1,2-Dichloropropane **	0.27634	0.29051	0.33643	0.33416	0.33152	A
1,1-Dichloropropene	0.44701	0.44495	0.49718	0.50888	0.48788	A
cis-1,3-Dichloropropene	0.85698	0.89303	1.06225	1.09761	1.10638	A
trans-1,3-Dichloropropene	0.57116	0.60244	0.75357	0.76825	0.78364	A
1,3-Dichloropropene, Total	0.71407	0.74774	0.90791	0.93293	0.94501	A
Diisobutylene	121002	343271	1339173	3302153	6250304	L
Diisopropyl ether	0.92616	0.93705	1.09845	1.10426	1.07648	A
1,4-Dioxane	883	4594	27415	55203	102527	L
Ethyl Acetate	5584	32276	170573	387219	845266	L
Ethyl ether	0.09832	0.11472	0.13408	0.13155	0.12836	A
Ethyl Methacrylate	8364	45398	256798	626650	1324151	L
Ethyl tert-butyl ether	0.63553	0.64282	0.78758	0.77676	0.78877	A
Ethylbenzene **	24121	123294	562911	1450178	2869192	L
Freon 113	0.27052	0.28246	0.31667	0.31563	0.30107	A
Heptane	0.19620	0.25023	0.28103	0.28673	0.27266	A

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.
SPCC Compounds (*) with required minimum RRF.
CCC Compounds (**) with required maximum %RSD.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms01.i Calibration Date(s): 9/14/2012 9/14/2012

Heated Purge: (Y/N) N Calibration Time(s): 03:06 04:58

GC Column: RTXVMS ID: 0.25 (mm)

LAB FILE ID: RRF001 = 1091404.D RRF005 = 1091405.D RRF020 = 1091406.D RRF050 = 1091407.D
RRF100 = 1091408.D RRF200 = 1091409.D

COMPOUND	RRF001	RRF005	RRF020	RRF050	RRF100	CT
Hexachlorobutadiene	0.35514	0.32266	0.35834	0.36244	0.33924	A
Hexachloroethane	5373	31549	171635	454637	962824	L
Hexane	0.60189	0.62359	0.69967	0.70246	0.67091	A
2-Hexanone	0.13896	0.14691	0.19387	0.18808	0.19607	A
Iodomethane	0.11925	0.14811	0.16133	0.17558	0.16655	A
Isobutyl alcohol	0.02073	0.02255	0.02804	0.02706	0.02771	A
Isopropyl Alcohol	2303	8414	35305	77357	165481	L
Isopropylbenzene	69339	372396	1728101	4364029	8461041	L
p-Isopropyltoluene	0.80398	0.94215	1.00843	1.07076	1.02547	A
Methyl acetate	677	5138	25888	63752	122665	L
Methyl acrylate	0.10121	0.10139	0.12565	0.12101	0.11918	A
Methacrylonitrile	2714	12866	70948	160357	336446	L
Methyl cyclohexane	1.23571	1.37587	1.49170	1.56729	1.47555	A
Methyl methacrylate	5913	33433	172324	426517	898721	L
Methyl t-Butyl Ether	0.43879	0.44779	0.55882	0.52022	0.52408	A
4-Methyl-2-Pentanone(MIBK)	0.23504	0.24432	0.31809	0.30743	0.31478	A
Methylene Chloride	30702	93302	372922	899926	1780074	L
Naphthalene	5319	28015	158500	390173	875390	L
Nitrobenzene	743	2885	16727	40427	99724	Q
2-Nitropropane	5413	35063	191411	466788	982144	L
Octane	0.39652	0.43587	0.48239	0.50399	0.48697	A
Pentachloroethane	0.53628	0.57207	0.67066	0.68774	0.68073	A
Pentane	0.25096	0.28055	0.29016	0.29624	0.27809	A
n-Propanol	0.01347	0.01447	0.01630	0.01596	0.01616	A
Propionitrile	0.01325	0.01284	0.01571	0.01531	0.01434	A
n-Propylbenzene	1.21778	1.31798	1.38422	1.48588	1.42644	A
Styrene	2.47983	2.75025	3.12289	3.26408	3.21410	A
1,1,1,2-Tetrachloroethane	0.51624	0.52480	0.59552	0.61919	0.62250	A
1,1,2,2-Tetrachloroethane *	0.43110	0.51977	0.62527	0.59669	0.59324	A
Tetrachloroethene	0.67258	0.61654	0.64019	0.66961	0.64484	A
Tetrahydrofuran	0.02546	0.03175	0.03909	0.03629	0.03661	A
Toluene **	1.84270	1.77238	1.97954	2.04863	1.98870	A
Total Xylenes	85437	430653	2001626	5074829	10063090	L
1,2,3-Trichlorobenzene	0.25644	0.21655	0.27769	0.27219	0.28470	A

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.
SPCC Compounds (*) with required minimum RRF.
CCC Compounds (**) with required maximum %RSD.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms01.i Calibration Date(s): 9/14/2012 9/14/2012

Heated Purge: (Y/N) N Calibration Time(s): 03:06 04:58

GC Column: RTXVMS ID: 0.25 (mm)

LAB FILE ID: RRF001 = 1091404.D RRF005 = 1091405.D RRF020 = 1091406.D RRF050 = 1091407.D
RRF100 = 1091408.D RRF200 = 1091409.D

COMPOUND	RRF001	RRF005	RRF020	RRF050	RRF100	CT
1,2,4-Trichlorobenzene	0.41998	0.38821	0.46121	0.45116	0.46994	A
1,1,1-Trichloroethane	0.44753	0.46333	0.50809	0.52032	0.50762	A
1,1,2-Trichloroethane	0.29737	0.30122	0.34759	0.34179	0.34021	A
Trichloroethene	0.33938	0.31595	0.35397	0.35534	0.34498	A
Trichlorofluoromethane	0.45677	0.51540	0.49674	0.50119	0.47263	A
1,2,3-Trichloropropane	0.14203	0.14647	0.16783	0.16736	0.16888	A
1,2,4-Trimethylbenzene	42726	255575	1218878	3062224	6075100	L
1,3,5-Trimethylbenzene	46556	272094	1275424	3240386	6346615	L
Vinyl Acetate	0.02506	0.02625	0.03318	0.03290	0.03348	A
Vinyl Chloride **	0.43151	0.47010	0.45045	0.45084	0.43149	A
o-Xylene	26689	131408	623032	1593375	3233074	L
mp-Xylene	58748	299245	1378594	3481454	6830016	L
4-Bromofluorobenzene	21074	70233	296333	706504	1422723	L
Dibromofluoromethane	24620	82978	333100	789835	1562581	L
1,2-Dichloroethane-d4	23751	78467	339643	749469	1492367	L
Toluene-d8	103492	350384	1428475	3417393	6596693	L

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.
SPCC Compounds (*) with required minimum RRF.
CCC Compounds (**) with required maximum %RSD.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms01.i Calibration Date(s): 9/14/2012 9/14/2012

Heated Purge: (Y/N) N Calibration Time(s): 03:06 04:58

GC Column: RTXVMS ID: 0.25 (mm)

LAB FILE ID: RRF001 = 1091404.D RRF005 = 1091405.D RRF020 = 1091406.D RRF050 = 1091407.D

RRF100 = 1091408.D RRF200 = 1091409.D

COMPOUND	RRF200			CT	b	m1	m2	% RSD or R^2
Acetone	628818			L	-0.111270	102		0.99987
Acrolein	0.01057			A		0.009870		11.85466
Acrylonitrile	0.04589			A		0.043400		13.03215
Acetonitrile	760619			L	-0.318140	84.152039		0.99924
tert-Amyl Ethylether	0.56408			A		0.507980		8.85553
tert-Amyl methyl ether	7314576			L	0.030600	1.744700		0.99992
tert-Amyl Alcohol	725366			L	0.320370	87.867897		0.99963
Benzene	1.12883			A		1.181080		13.91206
Benzyl Chloride	391214			L	0.185300	7.772590		0.99539
Bromobenzene	1.01882			A		0.963250		5.10567
Bromochloromethane	0.10952			A		0.106370		7.39799
Bromodichloromethane	0.39716			A		0.375420		7.16859
Bromoform *	1073702			L	0.066030	2.846590		0.99926
Bromomethane	0.19160			A		0.172010		8.17508
2-Butanone	0.01248			A		0.011850		13.89527
tert.- Butyl Alcohol	0.01044			A		0.009980		10.36169
tert-Butylbenzene	0.98811			A		0.922510		6.07553
n-Butylbenzene	0.93119			A		0.824350		13.41726
sec-Butylbenzene	4.53061			A		4.882780		6.64334
Carbon Disulfide	0.89721			A		0.954900		7.05947
Carbon Tetrachloride	0.45267			A		0.421900		7.98017
Chloroacetonitrile	0.00898			A		0.008540		9.89641
Chlorobenzene *	1.92096			A		1.887500		3.52985
1-Chlorobutane	0.45753			A		0.441400		4.91165
Chlorodibromomethane	0.50565			A		0.465410		9.00150
Chloroethane	3238697			L	-0.019490	3.980080		0.99980
2-Chloroethylvinyl ether	15748			L	-0.055520	840		0.98895
Chloroform **	7636005			L	-0.011260	1.683060		0.99988
1-Chlorohexane	1.26348			A		1.111460		10.70886
Chloromethane *	0.46597			A		0.485970		7.19946
Chloroprene	0.55836			A		0.529030		7.34560
3-Chloro-1-propene	0.54708			A		0.522160		6.66795
o-Chlorotoluene	4.19912			A		4.130150		3.32504
p-Chlorotoluene	3.79236			A		3.685030		4.83937
Cyclohexane	0.55665			A		0.532960		7.82574
1,2-Dibromo-3-Chloropropane	196796			L	0.055670	15.512970		0.99959

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic

SPCC Compounds (*) with required minimum RRF.

CCC Compounds (**) with required maximum %RSD.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms01.i Calibration Date(s): 9/14/2012 9/14/2012

Heated Purge: (Y/N) N Calibration Time(s): 03:06 04:58

GC Column: RTXVMS ID: 0.25 (mm)

LAB FILE ID: RRF001 = 1091404.D RRF005 = 1091405.D RRF020 = 1091406.D RRF050 = 1091407.D

RRF100 = 1091408.D RRF200 = 1091409.D

COMPOUND	RRF200			CT	b	m1	m2	% RSD or R^2
1,2-Dibromoethane	1750992			L	0.024560	2.881050		0.99987
Dibromomethane	0.11514			A		0.113670		7.86239
trans-1,4-Dichloro-2-butene	375481			L	0.163360	8.140370		0.99540
1,2-Dichlorobenzene	1.38347			A		1.300020		6.98915
1,3-Dichlorobenzene	1.86277			A		1.742770		6.97344
1,4-Dichlorobenzene	1.78246			A		1.705330		4.06950
Dichlorodifluoromethane	0.40986			A		0.418550		5.03599
1,1-Dichloroethane *	0.64894			A		0.623810		5.55400
1,2-Dichloroethene, Total	0.49268			A		0.479420		4.13077
1,2-Dichloroethane	3877146			L	-0.013630	3.307910		0.99992
1,1-Dichloroethene **	0.50955			A		0.488930		5.62423
cis-1,2-Dichloroethene	0.47571			A		0.464520		4.23459
trans-1,2-Dichloroethene	0.50965			A		0.494320		4.10582
Dichlorofluoromethane	0.62328			A		0.606990		5.50681
1,1-Dichloro-2-Propanone	152627			L	0.557430	165		0.99822
2,2-Dichloropropane	0.47926			A		0.446060		7.27372
1,3-Dichloropropane	0.75777			A		0.717980		8.67593
1,2-Dichloropropane **	0.33589			A		0.317480		8.44457
1,1-Dichloropropene	0.50857			A		0.482410		6.07123
cis-1,3-Dichloropropene	1.14536			A		1.026940		11.79767
trans-1,3-Dichloropropene	0.82712			A		0.717700		14.60339
1,3-Dichloropropene, Total	0.98624			A		0.872320		12.94608
Diisobutylene	12665372			L	-0.060050	1.018220		0.99969
Diisopropyl ether	1.02913			A		1.028590		7.74989
1,4-Dioxane	207432			L	-2.355120	1560		0.99821
Ethyl Acetate	1714044			L	0.028260	7.440380		0.99968
Ethyl ether	0.12947			A		0.122750		11.19427
Ethyl Methacrylate	2715839			L	0.060570	1.853220		0.99970
Ethyl tert-butyl ether	0.78449			A		0.735990		10.21012
Ethylbenzene **	5985259			L	0.033600	0.846510		0.99953
Freon 113	0.31011			A		0.299410		6.33729
Heptane	0.28057			A		0.261240		13.14634
Hexachlorobutadiene	0.35105			A		0.348150		4.24981
Hexachloroethane	2126617			L	0.134110	1.437340		0.99697
Hexane	0.68086			A		0.663230		6.24261
2-Hexanone	0.19643			A		0.176720		14.97230

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

SPCC Compounds (*) with required minimum RRF.

CCC Compounds (**) with required maximum %RSD.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms01.i Calibration Date(s): 9/14/2012 9/14/2012

Heated Purge: (Y/N) N Calibration Time(s): 03:06 04:58

GC Column: RTXVMS ID: 0.25 (mm)

LAB FILE ID: RRF001 = 1091404.D RRF005 = 1091405.D RRF020 = 1091406.D RRF050 = 1091407.D
RRF100 = 1091408.D RRF200 = 1091409.D

COMPOUND	RRF200			CT	b	m1	m2	% RSD or R^2
Iodomethane	0.17150			A		0.157050		13.26238
Isobutyl alcohol	0.02772			A		0.025640		12.33919
Isopropyl Alcohol	349885			L	0.133470	184		0.99908
Isopropylbenzene	14476662			L	-0.110680	0.207780		0.99349
p-Isopropyltoluene	1.09376			A		0.990760		10.66016
Methyl acetate	249272			L	-0.021140	51.404228		0.99967
Methyl acrylate	0.11986			A		0.114710		9.27176
Methacrylonitrile	668189			L	-0.001100	19.068150		0.99965
Methyl cyclohexane	1.55204			A		1.449700		8.61428
Methyl methacrylate	1833984			L	0.032360	6.950020		0.99993
Methyl t-Butyl Ether	0.52241			A		0.487750		11.81983
4-Methyl-2-Pentanone(MIBK)	0.31118			A		0.288470		13.19891
Methylene Chloride	3669569			L	-0.020830	3.508410		0.99988
Naphthalene	1790863			L	0.091900	1.696790		0.99916
Nitrobenzene	256709			Q	0.000630	0.004400	0.000060	0.99994
2-Nitropropane	1997206			L	0.256020	12.597020		0.99983
Octane	0.51397			A		0.469950		9.56085
Pentachloroethane	0.75484			A		0.650390		12.45163
Pentane	0.28594			A		0.280330		5.63762
n-Propanol	0.01642			A		0.015460		7.81347
Propionitrile	0.01434			A		0.014300		7.80857
n-Propylbenzene	1.50895			A		1.390210		7.85004
Styrene	3.30505			A		3.022700		11.00823
1,1,1,2-Tetrachloroethane	0.65463			A		0.588810		9.54665
1,1,2,2-Tetrachloroethane *	0.59820			A		0.560710		12.95930
Tetrachloroethene	0.67912			A		0.653820		3.68201
Tetrahydrofuran	0.03611			A		0.034220		14.31990
Toluene **	2.03814			A		1.849510		14.73968
Total Xylenes	19732820			L	-0.020920	0.765460		0.99985
1,2,3-Trichlorobenzene	0.28445			A		0.265340		9.82704
1,2,4-Trichlorobenzene	0.48106			A		0.445260		7.82725
1,1,1-Trichloroethane	0.53078			A		0.496280		6.68217
1,1,2-Trichloroethane	0.34953			A		0.329620		7.21293
Trichloroethene	0.35839			A		0.344670		4.57146
Trichlorofluoromethane	0.48484			A		0.487930		4.32136
1,2,3-Trichloropropane	0.16878			A		0.160230		7.78053

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.
SPCC Compounds (*) with required minimum RRF.
CCC Compounds (**) with required maximum %RSD.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms01.i Calibration Date(s): 9/14/2012 9/14/2012

Heated Purge: (Y/N) N Calibration Time(s): 03:06 04:58

GC Column: RTXVMS ID: 0.25 (mm)

LAB FILE ID: RRF001 = 1091404.D RRF005 = 1091405.D RRF020 = 1091406.D RRF050 = 1091407.D

RRF100 = 1091408.D RRF200 = 1091409.D

COMPOUND	RRF200			CT	b	m1	m2	% RSD or R^2
1,2,4-Trimethylbenzene	12035542			L	0.002800	0.253780		0.99992
1,3,5-Trimethylbenzene	12329796			L	-0.014600	0.247280		0.99973
Vinyl Acetate	0.03332			A		0.030700		12.80319
Vinyl Chloride **	0.44551			A		0.446650		3.23276
o-Xylene	6652333			L	0.035510	0.759840		0.99975
mp-Xylene	13080486			L	-0.056900	0.768300		0.99939
4-Bromofluorobenzene	2916841			L	0.012580	1.053970		0.99954
Dibromofluoromethane	3146809			L	-0.043670	4.087040		0.99992
1,2-Dichloroethane-d4	2997532			L	-0.056430	4.298310		0.99978
Toluene-d8	12797023			L	-0.063520	0.396270		0.99965

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.
SPCC Compounds (*) with required minimum RRF.
CCC Compounds (**) with required maximum %RSD.

ALS - Middletown

INITIAL CALIBRATION DATA

Start Cal Date : 14-SEP-2012 02:44
End Cal Date : 14-SEP-2012 04:58
Quant Method : ISTD
Target Version : 4.12
Integrator : HP RTE
Method file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Cal Date : 14-Sep-2012 11:00 ecr

Calibration File Names:
Level 1: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091404.D
Level 2: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091405.D
Level 3: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091406.D
Level 4: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091407.D
Level 5: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091408.D
Level 6: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091409.D
Level 8: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091403.D

Before curve fits applied
SDF 9/26/2012.

ICAL SUMMARY
Prior to Application of Curve Fits

Compound	1.0000 Level 1	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2
	0.5000000 Level 8										
1 Dichlorodifluoromethane	0.40288 +++++	0.45482	0.42337	0.42470	0.39567	0.40986	AVRG		0.41855		5.03599
2 Chloromethane	0.53654 +++++	0.52370	0.46767	0.46979	0.45216	0.46597	AVRG		0.48597		7.19946
3 Vinyl Chloride	0.43151 +++++	0.47010	0.45045	0.45084	0.43149	0.44551	AVRG		0.44665		3.23276
4 Bromomethane	0.16453 +++++	0.15618	0.16005	0.17587	0.18386	0.19160	AVRG		0.17201		8.17508

ALS - Middletown

INITIAL CALIBRATION DATA

Start Cal Date : 14-SEP-2012 02:44
End Cal Date : 14-SEP-2012 04:58
Quant Method : ISTD
Target Version : 4.12
Integrator : HP RTE
Method file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Cal Date : 14-Sep-2012 11:00 ecr

Compound	1.0000 Level 1	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
	0.5000000 Level 8											
5 Chloroethane	0.44553	0.28337	0.26697	0.25565	0.24740	0.25314						
0900	+++++						AVRG		0.29201		26.12304	<-
6 Pentane	0.25096	0.28055	0.29016	0.29624	0.27809	0.28594						
	+++++						AVRG		0.28033		5.63762	
7 Trichlorofluoromethane	0.45677	0.51540	0.49674	0.50119	0.47263	0.48484						
	+++++						AVRG		0.48793		4.32136	
8 Dichlorofluoromethane	0.56380	0.56742	0.63051	0.64286	0.61409	0.62328						
	+++++						AVRG		0.60699		5.50681	
9 Ethyl Ether	0.09832	0.11472	0.13408	0.13155	0.12836	0.12947						
	+++++						AVRG		0.12275		11.19427	
10 1,1-Dichloroethene	0.45353	0.45652	0.50565	0.51657	0.49177	0.50955						
	+++++						AVRG		0.48893		5.62423	
11 Freon 113	0.27052	0.28246	0.31667	0.31563	0.30107	0.31011						
	+++++						AVRG		0.29941		6.33729	

ALS - Middletown

INITIAL CALIBRATION DATA

Start Cal Date : 14-SEP-2012 02:44
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Quant Method : ISTD
Target Version : 4.12
Integrator : HP RTE
Method file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Cal Date : 14-Sep-2012 11:00 ecr

Compound	1.0000 Level 1	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
*	0.5000000 Level 8											
12 Carbon Disulfide T900	1.07710 +++++	0.90535	0.96075	0.97410	0.91487	0.89721	AVRG		0.95490		7.05947	
13 Iodomethane	0.11925 +++++	0.14811	0.16133	0.17558	0.16655	0.17150	AVRG		0.15705		13.26238	
14 Acrolein	0.00822 +++++	0.00858	0.01099	0.01019	0.01066	0.01057	AVRG		0.00987		11.85466	
15 Isopropyl Alcohol	0.00765 +++++	0.00554	0.00573	0.00500	0.00525	0.00547	AVRG		0.00577		16.52806	<-
16 3-Chloro-1-propene	0.47975 +++++	0.47590	0.54381	0.55175	0.53468	0.54708	AVRG		0.52216		6.66795	
17 Methylene Chloride	0.51014 +++++	0.30707	0.30253	0.29097	0.28233	0.28681	AVRG		0.32997		26.89877	<-
18 Acetone	0.01376 +++++	0.00930	0.01092	0.00984	0.00988	0.00983	AVRG		0.01059		15.49753	<-

ALS - Middletown

INITIAL CALIBRATION DATA

Start Cal Date : 14-SEP-2012 02:44
End Cal Date : 14-SEP-2012 04:58
Quant Method : ISTD
Target Version : 4.12
Integrator : HP RTE
Method file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Cal Date : 14-Sep-2012 11:00 ecr

Compound	1.0000 Level 1	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	0.5000000 Level 8											
19 Methyl acetate	0.01125 +++++	0.01691	0.02100	0.02061	0.01946	0.01948	AVRG		0.01812		20.17844	<-
20 trans-1,2-Dichloroethene	0.49134 +++++	0.45793	0.50520	0.51288	0.48894	0.50965	AVRG		0.49432		4.10582	
21 Hexane	0.60189 +++++	0.62359	0.69967	0.70246	0.67091	0.68086	AVRG		0.66323		6.24261	
22 Methyl t-Butyl Ether	0.43879 0.40218	0.44779	0.55882	0.52022	0.52408	0.52241	AVRG		0.48775		11.81983	
23 tert.- Butyl Alcohol	0.00796 +++++	0.00991	0.01087	0.01033	0.01035	0.01044	AVRG		0.00998		10.36169	
24 Acetonitrile	0.01757 +++++	0.01257	0.01395	0.01229	0.01252	0.01189	AVRG		0.01347		15.81008	<-
25 Diisopropyl ether	0.92616 +++++	0.93705	1.09845	1.10426	1.07648	1.02913	AVRG		1.02859		7.74989	

ALS - Middletown

INITIAL CALIBRATION DATA

Start Cal Date : 14-SEP-2012 02:44
End Cal Date : 14-SEP-2012 04:58
Quant Method : ISTD
Target Version : 4.12
Integrator : HP RTE
Method file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Cal Date : 14-Sep-2012 11:00 ecr

Compound	1.0000 Level 1	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	0.5000000 Level 8										
26 Chloroprene	0.47644 +++++	0.48339	0.54569	0.56515	0.54514	0.55836	AVRG		0.52903		7.34560
27 1,1-Dichloroethane	0.57741 +++++	0.58255	0.64544	0.65454	0.63395	0.64894	AVRG		0.62381		5.55400
28 Acrylonitrile	0.03451 +++++	0.03848	0.04945	0.04630	0.04576	0.04589	AVRG		0.04340		13.03215
29 Ethyl tert-butyl ether	0.63553 +++++	0.64282	0.78758	0.77676	0.78877	0.78449	AVRG		0.73599		10.21012
30 n-Propanol	0.01347 +++++	0.01447	0.01630	0.01596	0.01616	0.01642	AVRG		0.01546		7.81347
31 Vinyl Acetate	0.02506 +++++	0.02625	0.03318	0.03290	0.03348	0.03332	AVRG		0.03070		12.80319
32 cis-1,2-Dichloroethene	0.45670 +++++	0.42874	0.48077	0.47865	0.46658	0.47571	AVRG		0.46452		4.23459

ALS - Middletown

INITIAL CALIBRATION DATA

Start Cal Date : 14-SEP-2012 02:44
End Cal Date : 14-SEP-2012 04:58
Quant Method : ISTD
Target Version : 4.12
Integrator : HP RTE
Method file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Cal Date : 14-Sep-2012 11:00 ecr

Compound	1.0000 Level 1	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	0.5000000 Level 8											
33 2,2-Dichloropropane	0.39914	0.41272	0.45931	0.47009	0.45581	0.47926						
₸900	+++++						AVRG		0.44606		7.27372	
34 Bromochloromethane	0.09424	0.09921	0.11477	0.11091	0.10957	0.10952						
	+++++						AVRG		0.10637		7.39799	
35 Cyclohexane	0.46921	0.49496	0.56544	0.57210	0.53939	0.55665						
	+++++						AVRG		0.53296		7.82574	
36 Chloroform	0.87716	0.60362	0.61473	0.60736	0.58683	0.59683						
	+++++						AVRG		0.64776		17.41161	<-
37 Ethyl Acetate	0.09278	0.10623	0.13838	0.12520	0.13406	0.13397						
	+++++						AVRG		0.12177		15.00566	<-
38 Methyl acrylate	0.10121	0.10139	0.12565	0.12101	0.11918	0.11986						
	+++++						AVRG		0.11471		9.27176	
39 Carbon Tetrachloride	0.37450	0.38476	0.43589	0.44917	0.43440	0.45267						
	+++++						AVRG		0.42190		7.98017	

ALS - Middletown

INITIAL CALIBRATION DATA

Start Cal Date : 14-SEP-2012 02:44
End Cal Date : 14-SEP-2012 04:58
Quant Method : ISTD
Target Version : 4.12
Integrator : HP RTE
Method file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Cal Date : 14-Sep-2012 11:00 ecr

Compound	1.0000 Level 1	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2
	0.5000000 Level 8										
40 Tetrahydrofuran	0.02546	0.03175	0.03909	0.03629	0.03661	0.03611					
9900	+++++						AVRG		0.03422		14.31990
42 1,1,1-Trichloroethane	0.44753	0.46333	0.50809	0.52032	0.50762	0.53078					
	+++++						AVRG		0.49628		6.68217
43 2-Butanone	0.00926	0.01039	0.01350	0.01274	0.01276	0.01248					
	+++++						AVRG		0.01185		13.89527
44 1,1-Dichloropropene	0.44701	0.44495	0.49718	0.50888	0.48788	0.50857					
	+++++						AVRG		0.48241		6.07123
45 1-Chlorobutane	0.44073	0.40045	0.45034	0.45957	0.43976	0.45753					
	+++++						AVRG		0.44140		4.91165
46 Heptane	0.19620	0.25023	0.28103	0.28673	0.27266	0.28057					
	+++++						AVRG		0.26124		13.14634
47 Benzene	1.19711	1.18339	1.32900	1.32077	1.26092	1.12883					
	0.84757						AVRG		1.18108		13.91206

ALS - Middletown

INITIAL CALIBRATION DATA

Start Cal Date : 14-SEP-2012 02:44
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Quant Method : ISTD
Target Version : 4.12
Integrator : HP RTE
Method file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Cal Date : 14-Sep-2012 11:00 ecr

Compound	1.0000 Level 1	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	0.5000000 Level 8											
48 Propionitrile	0.01325	0.01284	0.01571	0.01531	0.01434	0.01434						
9900	+++++						AVRG		0.01430		7.80857	
49 Methacrylonitrile	0.02255	0.04234	0.05756	0.05185	0.05336	0.05223						
	+++++						AVRG		0.04665		27.47954	<-
50 tert-Amyl methyl ether	0.38223	0.44125	0.56717	0.55083	0.56538	0.57171						
	+++++						AVRG		0.51309		15.78675	<-
52 1,2-Dichloroethane	0.26211	0.27208	0.32077	0.30622	0.30237	0.30304						
	0.97884						AVRG		0.39221		66.16197	<-
53 tert-Amyl Alcohol	0.00701	0.00817	0.01047	0.01045	0.01100	0.01134						
	+++++						AVRG		0.00974		17.85244	<-
54 Isobutyl alcohol	0.02073	0.02255	0.02804	0.02706	0.02771	0.02772						
	+++++						AVRG		0.02564		12.33919	
56 Diisobutylene	2.01053	1.12976	1.08639	1.06766	0.99132	0.98993						
	+++++						AVRG		1.21260		32.55216	<-

ALS - Middletown

INITIAL CALIBRATION DATA

Start Cal Date : 14-SEP-2012 02:44
End Cal Date : 14-SEP-2012 04:58
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Target Version : 4.12
Integrator : HP RTE
Method file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Cal Date : 14-Sep-2012 11:00 ecr

Compound	1.0000 Level 1	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	0.5000000 Level 8											
57 Trichloroethene	0.33938 +++++	0.31595	0.35397	0.35534	0.34498	0.35839	AVRG		0.34467		4.57146	
58 Methyl cyclohexane	1.23571 +++++	1.37587	1.49170	1.56729	1.47555	1.55204	AVRG		1.44970		8.61428	
59 tert-Amyl Ethylether	0.44703 +++++	0.46218	0.52949	0.51092	0.53419	0.56408	AVRG		0.50798		8.85553	
60 Dibromomethane	0.10278 +++++	0.10375	0.12618	0.11654	0.11761	0.11514	AVRG		0.11367		7.86239	
61 1,2-Dichloropropane	0.27634 +++++	0.29051	0.33643	0.33416	0.33152	0.33589	AVRG		0.31748		8.44457	
62 Bromodichloromethane	0.34185 +++++	0.34025	0.39625	0.39060	0.38640	0.39716	AVRG		0.37542		7.16859	
63 Methyl methacrylate	0.09825 +++++	0.11003	0.13980	0.13790	0.14254	0.14334	AVRG		0.12864		15.11136	<-

ALS - Middletown

INITIAL CALIBRATION DATA

Start Cal Date : 14-SEP-2012 02:44
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Quant Method : ISTD
Target Version : 4.12
Integrator : HP RTE
Method file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Cal Date : 14-Sep-2012 11:00 ecr

Compound	1.0000 Level 1 / 0.5000000 Level 8	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
64 1,4-Dioxane	0.00059 +++++	0.00060	0.00089	0.00071	0.00065	0.00065	AVRG		0.00068		16.22006	<-
8900												
65 2-Chloroethylvinyl ether	+++++ +++++	0.00092	0.00171	0.00133	0.00105	0.00123	AVRG		0.00125		24.16153	<-
66 cis-1,3-Dichloropropene	0.85698 +++++	0.89303	1.06225	1.09761	1.10638	1.14536	AVRG		1.02694		11.79767	
67 Octane	0.39652 +++++	0.43587	0.48239	0.50399	0.48697	0.51397	AVRG		0.46995		9.56085	
69 Toluene	1.84270 1.27645	1.77238	1.97954	2.04863	1.98870	2.03814	AVRG		1.84951		14.73968	
70 Chloroacetonitrile	0.00987 +++++	0.00735	0.00851	0.00810	0.00842	0.00898	AVRG		0.00854		9.89641	
71 2-Nitropropane	0.04480 +++++	0.05737	0.07473	0.07466	0.07739	0.07909	AVRG		0.06801		20.29009	<-

ALS - Middletown

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Start Cal Date : 14-SEP-2012 02:44
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Integrator : HP RTE
Method file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Cal Date : 14-Sep-2012 11:00 ecr

Compound	1.0000 Level 1	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	0.5000000 Level 8											
72 1,1-Dichloro-2-Propanone	0.00158 +++++	0.00403	0.00542	0.00505	0.00568	0.00604	AVRG		0.00463		35.54149	<-
6900												
73 4-Methyl-2-Pentanone(MIBK)	0.23504 +++++	0.24432	0.31809	0.30743	0.31478	0.31118	AVRG		0.28847		13.19891	
74 Tetrachloroethene	0.67258 +++++	0.61654	0.64019	0.66961	0.64484	0.67912	AVRG		0.65382		3.68201	
75 trans-1,3-Dichloropropene	0.57116 +++++	0.60244	0.75357	0.76825	0.78364	0.82712	AVRG		0.71770		14.60339	
76 Ethyl Methacrylate	0.34612 +++++	0.37141	0.50127	0.50113	0.52170	0.53776	AVRG		0.46323		17.80217	<-
77 1,1,2-Trichloroethane	0.29737 +++++	0.30122	0.34759	0.34179	0.34021	0.34953	AVRG		0.32962		7.21293	
78 Chlorodibromomethane	0.42288 +++++	0.40269	0.48498	0.48754	0.48869	0.50565	AVRG		0.46541		9.00150	

ALS - Middletown

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Method file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Cal Date : 14-Sep-2012 11:00 ecr

Compound	1.0000 Level 1	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	0.5000000 Level 8											
79 1,3-Dichloropropane	0.61651	0.66555	0.77296	0.74780	0.74732	0.75777						
	+++++						AVRG		0.71798		8.67593	
80 1,2-Dibromoethane	0.27027	0.28372	0.34454	0.33034	0.34347	0.34671						
	0.21094						AVRG		0.30428		16.93291	<-
81 2-Hexanone	0.13896	0.14691	0.19387	0.18808	0.19607	0.19643						
	+++++						AVRG		0.17672		14.97230	
82 1-Chlorohexane	0.93809	1.00679	1.13021	1.18250	1.14770	1.26348						
	+++++						AVRG		1.11146		10.70886	
84 Chlorobenzene	1.86406	1.76509	1.92997	1.94788	1.89706	1.92096						
	+++++						AVRG		1.88750		3.52985	
85 Ethylbenzene	0.99818	1.00869	1.09881	1.15970	1.13043	1.18513						
	0.72086						AVRG		1.04312		15.23528	<-
86 1,1,1,2-Tetrachloroethane	0.51624	0.52480	0.59552	0.61919	0.62250	0.65463						
	+++++						AVRG		0.58881		9.54665	

ALS - Middletown

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Integrator : HP RTE
Method file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Cal Date : 14-Sep-2012 11:00 ecr

Compound	1.0000 Level 1	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	0.5000000 Level 8											
87 mp-Xylene	1.21556	1.22409	1.34552	1.39206	1.34548	1.29502						
T/00	0.83875						AVRG		1.23664		15.13472	<-
88 o-Xylene	1.10445	1.07507	1.21617	1.27422	1.27380	1.31721						
	0.69775						AVRG		1.13695		18.79996	<-
89 Styrene	2.47983	2.75025	3.12289	3.26408	3.21410	3.30505						
	+++++						AVRG		3.02270		11.00823	
90 Bromoform	0.23521	0.24889	0.32737	0.32880	0.33174	0.35136						
	+++++						AVRG		0.30389		16.08183	<-
91 Isopropylbenzene	5.03998	5.20031	5.53494	5.76309	5.44926	4.73733						
	3.23971						AVRG		4.99495		16.90779	<-
93 Bromobenzene	0.93598	0.87941	0.97352	0.99307	0.97869	1.01882						
	+++++						AVRG		0.96325		5.10567	
94 n-Propylbenzene	1.21778	1.31798	1.38422	1.48588	1.42644	1.50895						
	+++++						AVRG		1.39021		7.85004	

ALS - Middletown

INITIAL CALIBRATION DATA

Start Cal Date : 14-SEP-2012 02:44
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Target Version : 4.12
Integrator : HP RTE
Method file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Cal Date : 14-Sep-2012 11:00 ecr

Compound	1.0000 Level 1	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	0.5000000 Level 8											
95 1,1,2,2-Tetrachloroethane	0.43110	0.51977	0.62527	0.59669	0.59324	0.59820						
	+++++						AVRG		0.56071		12.95930	
96 o-Chlorotoluene	3.98232	3.96419	4.14215	4.32686	4.16628	4.19912						
	+++++						AVRG		4.13015		3.32504	
97 1,3,5-Trimethylbenzene	3.38397	3.79965	4.08506	4.27922	4.08748	4.03480						
	2.38146						AVRG		3.72166		17.65734	<-
98 1,2,3-Trichloropropane	0.14203	0.14647	0.16783	0.16736	0.16888	0.16878						
	+++++						AVRG		0.16023		7.78053	
99 trans-1,4-Dichloro-2-butene	0.06077	0.05691	0.10016	0.09863	0.10723	0.12287						
	+++++						AVRG		0.09109		29.03544	<-
M 100 1,2-Dichloroethene, Total	0.47402	0.44333	0.49299	0.49576	0.47776	0.49268						
	+++++						AVRG		0.47942		4.13077	
101 p-Chlorotoluene	3.41406	3.51618	3.74557	3.87061	3.77138	3.79236						
	+++++						AVRG		3.68503		4.83937	

ALS - Middletown

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Start Cal Date : 14-SEP-2012 02:44
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Integrator : HP RTE
Method file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Cal Date : 14-Sep-2012 11:00 ecr

Compound	1.0000 Level 1	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	0.5000000 Level 8											
102 tert-Butylbenzene	0.84592 +++++	0.86768	0.92876	0.97124	0.93335	0.98811	AVRG		0.92251		6.07553	
103 Pentachloroethane	0.53628 +++++	0.57207	0.67066	0.68774	0.68073	0.75484	AVRG		0.65039		12.45163	
104 1,2,4-Trimethylbenzene	3.10558 2.17362	3.56897	3.90395	4.04394	3.91261	3.93850	AVRG		3.52102		19.18577	<-
105 sec-Butylbenzene	4.54935 +++++	4.75810	5.10564	5.33953	5.01348	4.53061	AVRG		4.88278		6.64334	
106 p-Isopropyltoluene	0.80398 +++++	0.94215	1.00843	1.07076	1.02547	1.09376	AVRG		0.99076		10.66016	
107 1,3-Dichlorobenzene	1.55664 +++++	1.62833	1.78413	1.82479	1.79995	1.86277	AVRG		1.74277		6.97344	
109 1,4-Dichlorobenzene	1.69169 +++++	1.58065	1.70039	1.74819	1.72857	1.78246	AVRG		1.70533		4.06950	

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Cal Date : 14-Sep-2012 11:00 ecr

Compound	1.0000 Level 1 / 0.5000000 Level 8	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
110 Benzyl Chloride	0.05030 +++++	0.06311	0.09429	0.09704	0.11376	0.12802	AVRG		0.09109		32.45913	<-
111 n-Butylbenzene	0.64691 +++++	0.73679	0.84695	0.91335	0.87092	0.93119	AVRG		0.82435		13.41726	
112 Hexachloroethane	0.39054 +++++	0.44056	0.54973	0.60039	0.62010	0.69591	AVRG		0.54954		20.92977	<-
113 1,2-Dichlorobenzene	1.17461 +++++	1.19432	1.34437	1.34416	1.35917	1.38347	AVRG		1.30002		6.98915	
114 1,2-Dibromo-3-chloropropane	0.03998 +++++	0.05235	0.05986	0.06053	0.06187	0.06440	AVRG		0.05650		16.00671	<-
115 Nitrobenzene	0.00540 +++++	0.00403	0.00536	0.00534	0.00642	0.00840	AVRG		0.00582		25.29260	<-
116 Hexachlorobutadiene	0.35514 +++++	0.32266	0.35834	0.36244	0.33924	0.35105	AVRG		0.34815		4.24981	

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Cal Date : 14-Sep-2012 11:00 ecr

Compound	1.0000 Level 1	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	0.5000000 Level 8											
117 1,2,4-Trichlorobenzene	0.41998 +++++	0.38821	0.46121	0.45116	0.46994	0.48106	AVRG		0.44526		7.82725	
118 Naphthalene	0.38662 +++++	0.39121	0.50766	0.51526	0.56379	0.58604	AVRG		0.49176		17.26588	<-
119 1,2,3-Trichlorobenzene	0.25644 +++++	0.21655	0.27769	0.27219	0.28470	0.28445	AVRG		-0.26534		9.82704	
M 120 1,3-Dichloropropene, Total	0.71407 +++++	0.74774	0.90791	0.93293	0.94501	0.98624	AVRG		0.87232		12.94608	
M 121 Total Xylenes	1.17852 0.79175	1.17442	1.30240	1.35278	1.32159	1.30242	AVRG		1.20341		16.15595	<-
$ 41 Dibromofluoromethane	0.40908 +++++	0.27309	0.27022	0.25537	0.24783	0.24596	AVRG		0.28359		22.03667	<-
$ 51 1,2-Dichloroethane-d4	0.39464 +++++	0.25825	0.27553	0.24232	0.23669	0.23429	AVRG		0.27362		22.39589	<-

ALS - Middletown

INITIAL CALIBRATION DATA

Start Cal Date : 14-SEP-2012 02:44
End Cal Date : 14-SEP-2012 04:58
Quant Method : ISTD
Target Version : 4.12
Integrator : HP RTE
Method file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Cal Date : 14-Sep-2012 11:00 ecr

Compound	1.0000 Level 1	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	0.5000000 Level 8											
$ 68 Toluene-d8	4.28272	2.86656	2.78840	2.73288	2.59903	2.53391						
9L00	+++++						AVRG		2.96725		22.10387	<-
$ 92 4-Bromofluorobenzene	1.53179	0.98077	0.94913	0.93300	0.91629	0.95451						
	+++++						AVRG		1.04425		22.96607	<-

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INITIAL CALIBRATION DATA

Start Cal Date : 14-SEP-2012 02:44
End Cal Date : 14-SEP-2012 04:58
Quant Method : ISTD
Target Version : 4.12
Integrator : HP RTE
Method file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Cal Date : 14-Sep-2012 11:00 ecr

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response

7700

ALS - Middletown

VOLATILE REPORT SW-846 Method 8260

Data file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091403.D
Lab Smp Id: VSTD00.5
Inj Date : 14-SEP-2012 02:44
Operator : DD Inst ID: ms01.i
Smp Info : VSTD00.5;;1;1;8;;;;
Misc Info :
Comment :
Method : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Meth Date : 14-Sep-2012 19:03 ms01.i Quant Type: ISTD
Cal Date : 14-SEP-2012 02:44 Cal File: 1091403.D
Als bottle: 4 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: btexextras.sub
Target Version: 4.12
Processing Host: ALMDTXP003

Concentration Formula: Amt * DF * Uf * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged
DF	1.000	sample dilution factor
Cpnd Variable		Local Compound Variable

DATA REVIEW
REPORTED
APPROVED
2nd REVIEW CKS 9/14/12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
22 Methyl t-Butyl Ether	73	2.682	2.682	(0.672)	12034	0.50000	0.412275 (aQ)
23 tert.- Butyl Alcohol	59	2.710	2.710	(0.679)	1359	0.50000	2.27591 (a)
47 Benzene	78	3.763	3.763	(0.943)	25361	0.50000	0.358809 (a)
* 55 Fluorobenzene	96	3.992	3.992	(1.000)	1795327	30.0000	
69 Toluene	92	4.980	4.980	(0.830)	15570	0.50000	0.345079 (a)
80 1,2-Dibromoethane	107	5.651	5.651	(0.942)	2573	0.50000	1.04062 (M)
* 83 Chlorobenzene-d5	82	6.000	6.000	(1.000)	731871	30.0000	
85 Ethylbenzene	106	6.022	6.022	(1.004)	8793	0.50000	1.31308
88 o-Xylene	106	6.442	6.442	(1.074)	8511	0.50000	1.33037
$ 92 4-Bromofluorobenzene	174	6.895	6.895	(0.886)	10367	0.50000	1.14217
104 1,2,4-Trimethylbenzene	105	7.446	7.446	(0.957)	15530	0.50000	0.359878 (a)
* 108 1,4-Dichlorobenzene-d4	152	7.779	7.779	(1.000)	428686	30.0000	(Q)
118 Naphthalene	128	9.661	9.661	(1.242)	2805	0.50000	3.09013 (M)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms01.i
Lab File ID: 1091403.D
Lab Smp Id: VSTD00.5
Analysis Type: VOA
Quant Type: ISTD
Operator: DD
Method File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Misc Info:

Calibration Date: 14-SEP-2012
Calibration Time: 04:13

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	1855731	927866	3711462	1795327	-3.25
83 Chlorobenzene-d5	750283	375142	1500566	731871	-2.45
108 1,4-Dichlorobenze	454343	227172	908686	428686	-5.65

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	3.99	3.49	4.49	3.99	0.00
83 Chlorobenzene-d5	6.00	5.50	6.50	6.00	0.00
108 1,4-Dichlorobenze	7.78	7.28	8.28	7.78	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: VSTD00.5
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info:

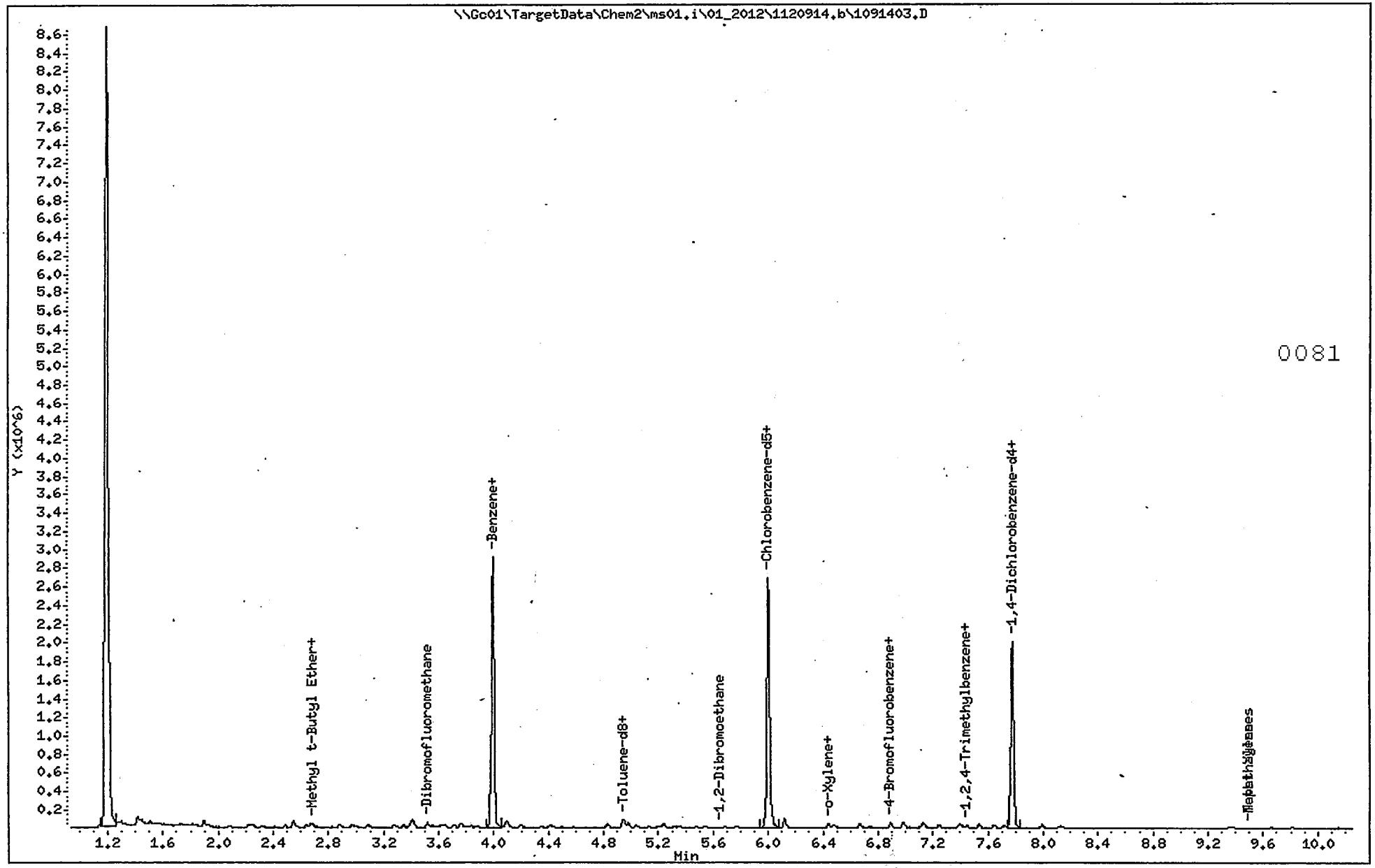
Client SDG: 1120914.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
1634-04-4	Methyl t-Butyl Ether	0.412275	J
75-65-0	tert.- Butyl Alcohol	2.27591	J
71-43-2	Benzene	0.358809	J
107-06-2	1,2-Dichloroethane	0.204429	J
108-88-3	Toluene	0.345079	J
106-93-4	1,2-Dibromoethane	1.04062	
100-41-4	Ethylbenzene	1.31308	
108383/106423	mp-Xylene	0.000000	J
95-47-6	o-Xylene	1.33037	
98-82-8	Isopropylbenzene	0.000000	J
1330-20-7	Total Xylenes	0.000000	J
108-67-8	1,3,5-Trimethylbenzene	0.000000	J
95-63-6	1,2,4-Trimethylbenzene	0.359878	J
135-98-8	sec-Butylbenzene	0.301837	J
104-51-8	n-Butylbenzene	0.279721	J
91-20-3	Naphthalene	3.09013	
1868-53-7	Dibromofluoromethane	0.000000	J
17060-07-0	1,2-Dichloroethane-d4	0.000000	J
2037-26-5	Toluene-d8	0.000000	J
460-00-4	4-Bromofluorobenzene	1.14217	

Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091403.D
Date : 14-SEP-2012 02:44
Client ID:
Sample Info: VSTD00.5;;1;1;8;;;;
Purge Volume: 5.0
Column phase: DB-VRX

Instrument: ms01.i
Operator: DD
Column diameter: 0.25



ALS - Middletown

VOLATILE REPORT SW-846 Method 8260

Data file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091404.D
Lab Smp Id: 1234
Inj Date : 14-SEP-2012 03:06
Operator : DD
Inst ID: ms01.i
Smp Info : 1234;;1;1;1;;;;
Misc Info :
Comment :
Method : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Meth Date : 14-Sep-2012 19:04 ms01.i
Quant Type: ISTD
Cal Date : 14-SEP-2012 02:44
Cal File: 1091403.D
Als bottle: 5
Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ALMDTXP003

Concentration Formula: Amt * DF * Uf * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged
DF	1.000	sample dilution factor
Cpnd Variable		Local Compound Variable

DATA REVIEW
REPORTED
APPROVED
2nd REVIEW 9/14/12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
1 Dichlorodifluoromethane	85	1.302	1.302	(0.326)	24247	1.00000	0.962568 (a)
2 Chloromethane	50	1.444	1.444	(0.362)	32291	1.00000	1.10405
3 Vinyl Chloride	62	1.504	1.504	(0.377)	25970	1.00000	0.966104 (aQ)
4 Bromomethane	94	1.733	1.733	(0.434)	9902	1.00000	0.956489 (a)
5 Chloroethane	64	1.815	1.815	(0.455)	26814	1.00000	1.18863
6 Pentane	41	1.897	1.897	(0.475)	15104	1.00000	0.895254 (a)
7 Trichlorofluoromethane	101	1.902	1.902	(0.477)	27490	1.00000	0.936131 (a)
8 Dichlorofluoromethane	67	1.930	1.930	(0.483)	33932	1.00000	0.928847 (a)
9 Ethyl Ether	74	2.082	2.082	(0.522)	5917	1.00000	0.800934 (aQ)
10 1,1-Dichloroethene	61	2.219	2.219	(0.556)	27295	1.00000	0.927584 (a)
11 Freon 113	101	2.235	2.235	(0.560)	16281	1.00000	0.903511 (a)
12 Carbon Disulfide	76	2.251	2.251	(0.564)	64824	1.00000	1.12797
13 Iodomethane	127	2.311	2.311	(0.579)	7177	1.00000	0.759299 (a)
14 Acrolein	56	2.404	2.404	(0.602)	4948	10.0000	8.32977 (a)
15 Isopropyl Alcohol	45	2.464	2.464	(0.617)	2303	5.00000	11.0400 (aM)
16 3-Chloro-1-propene	41	2.492	2.492	(0.624)	28873	1.00000	0.918768 (a)
17 Methylene Chloride	84	2.546	2.546	(0.638)	30702	1.00000	1.16483
18 Acetone	58	2.568	2.568	(0.643)	4141	5.00000	3.68197 (aQ)
19 Methyl acetate	74	2.628	2.628	(0.658)	677	1.00000	(aQ)
20 trans-1,2-Dichloroethene	61	2.639	2.639	(0.661)	29571	1.00000	0.993971 (a)
21 Hexane	57	2.677	2.677	(0.671)	36224	1.00000	0.907511 (a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
	22 Methyl t-Butyl Ether	73	2.682	2.682	(0.672)	26408	1.00000	0.899609 (a)
	23 tert.- Butyl Alcohol	59	2.710	2.710	(0.679)	2396	5.00000	3.98991 (a)
	24 Acetonitrile	41	2.835	2.835	(0.710)	5288	5.00000	(aQ)
	25 Diisopropyl ether	45	2.879	2.879	(0.721)	55740	1.00000	0.900419 (a)
	26 Chloroprene	53	2.966	2.966	(0.743)	28674	1.00000	0.900590 (a)
	27 1,1-Dichloroethane	63	2.983	2.983	(0.747)	34751	1.00000	0.925628 (a)
	28 Acrylonitrile	53	3.004	3.004	(0.753)	10386	5.00000	3.97639 (a)
	29 Ethyl tert-butyl ether	59	3.081	3.081	(0.772)	38249	1.00000	0.863507 (a)
	30 n-Propanol	41	3.086	3.086	(0.773)	8107	10.0000	8.71172 (a)
	31 Vinyl Acetate	86	3.092	3.092	(0.775)	1508	1.00000	0.816180 (aQ)
	32 cis-1,2-Dichloroethene	61	3.277	3.277	(0.821)	27486	1.00000	0.983156 (a)
	33 2,2-Dichloropropane	77	3.343	3.343	(0.837)	24022	1.00000	0.894827 (a)
	34 Bromochloromethane	128	3.392	3.392	(0.850)	5672	1.00000	0.886021 (aQ)
	35 Cyclohexane	84	3.408	3.408	(0.854)	28239	1.00000	0.880387 (a)
	36 Chloroform	83	3.419	3.419	(0.857)	52791	1.00000	1.13857
	37 Ethyl Acetate	43	3.463	3.463	(0.867)	5584	1.00000	1.53809 (aQ)
	38 Methyl acrylate	55	3.474	3.474	(0.870)	6091	1.00000	0.882245 (aQ)
	39 Carbon Tetrachloride	117	3.517	3.517	(0.881)	22539	1.00000	0.887662 (a)
	40 Tetrahydrofuran	42	3.523	3.523	(0.882)	7662	5.00000	3.72048 (a)
$	41 Dibromofluoromethane	113	3.523	3.523	(0.882)	24620	1.00000	0.361727 (a)
	42 1,1,1-Trichloroethane	97	3.556	3.556	(0.891)	26934	1.00000	0.901769 (a)
	43 2-Butanone	72	3.588	3.588	(0.899)	2787	5.00000	3.90630 (aQ)
	44 1,1-Dichloropropene	75	3.621	3.621	(0.907)	26903	1.00000	0.926621 (a)
	45 1-Chlorobutane	41	3.643	3.643	(0.913)	26525	1.00000	0.998489 (a)
	46 Heptane	71	3.708	3.708	(0.929)	11808	1.00000	0.751038 (aQ)
	47 Benzene	78	3.763	3.763	(0.943)	72047	1.00000	1.01357
	48 Propionitrile	54	3.757	3.757	(0.941)	3988	5.00000	4.63452 (a)
	49 Methacrylonitrile	67	3.774	3.774	(0.945)	2714	2.00000	0.826873 (aQ)
	50 tert-Amyl methyl ether	73	3.796	3.796	(0.951)	23004	1.00000	1.58489 (a)
$	51 1,2-Dichloroethane-d4	65	3.834	3.834	(0.960)	23751	1.00000	0.00334275 (a)
	52 1,2-Dichloroethane	62	3.872	3.872	(0.970)	15775	1.00000	0.757770 (a)
	53 tert-Amyl Alcohol	59	3.883	3.883	(0.973)	2109	5.00000	12.6902 (QM)
	54 Isobutyl alcohol	43	3.970	3.970	(0.995)	12477	10.0000	8.08702 (aQ)
*	55 Fluorobenzene	96	3.992	3.992	(1.000)	1805521	30.0000	
	56 Diisobutylene	57	3.997	3.997	(1.001)	121002	1.00000	0.245789 (aQ)
	57 Trichloroethene	95	4.090	4.090	(1.025)	20425	1.00000	0.984653 (a)
	58 Methyl cyclohexane	83	4.101	4.101	(0.684)	29861	1.00000	0.852394 (a)
	59 tert-Amyl Ethylether	59	4.199	4.199	(1.052)	26904	1.00000	0.880009 (aA)
	60 Dibromomethane	93	4.347	4.347	(1.089)	6186	1.00000	0.904269 (a)
	61 1,2-Dichloropropane	63	4.407	4.407	(1.104)	16631	1.00000	0.870414 (a)
	62 Bromodichloromethane	83	4.429	4.429	(1.109)	20574	1.00000	0.910583 (a)
	63 Methyl methacrylate	41	4.499	4.499	(1.127)	5913	1.00000	1.65377 (a)
	64 1,4-Dioxane	88	4.549	4.549	(1.139)	883	25.0000	(aQM)
	65 2-Chloroethylvinyl ether	63	Compound Not Detected.					
	66 cis-1,3-Dichloropropene	75	4.821	4.821	(0.804)	20709	1.00000	0.834503 (a)
	67 Octane	85	4.832	4.832	(0.805)	9582	1.00000	0.843752 (a)
$	68 Toluene-d8	98	4.947	4.947	(0.824)	103492	1.00000	(a)
	69 Toluene	92	4.980	4.980	(0.830)	44529	1.00000	0.996321 (a)
	70 Chloroacetonitrile	48	5.034	5.034	(0.839)	1192	5.00000	5.77663 (aQ)
	71 2-Nitropropane	41	5.121	5.121	(0.854)	5413	5.00000	10.5023 (Q)
	72 1,1-Dichloro-2-Propanone	63	5.149	5.149	(0.858)	191	5.00000	18.0258 (aM)
	73 4-Methyl-2-Pentanone (MIBK)	43	5.203	5.203	(0.867)	28399	5.00000	4.07389 (a)
	74 Tetrachloroethene	164	5.242	5.242	(0.874)	16253	1.00000	1.02871
	75 trans-1,3-Dichloropropene	75	5.236	5.236	(0.873)	13802	1.00000	0.795818 (a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
	76 Ethyl Methacrylate	69	5.318	5.318	(0.886)	8364	1.00000	2.45865
	77 1,1,2-Trichloroethane	83	5.351	5.351	(0.892)	7186	1.00000	0.902173 (a)
	78 Chlorodibromomethane	129	5.482	5.482	(0.914)	10219	1.00000	0.908635 (a)
	79 1,3-Dichloropropane	76	5.542	5.542	(0.924)	14898	1.00000	0.858668 (aQM)
	80 1,2-Dibromoethane	107	5.656	5.656	(0.943)	6531	1.00000	1.51541
	81 2-Hexanone	43	5.771	5.771	(0.962)	16790	5.00000	3.93164 (a)
	82 1-Chlorohexane	91	5.978	5.978	(0.996)	22669	1.00000	0.844014 (aQ)
*	83 Chlorobenzene-d5	82	6.000	6.000	(1.000)	724951	30.0000	
	84 Chlorobenzene	112	6.016	6.016	(1.003)	45045	1.00000	0.987579 (a)
	85 Ethylbenzene	106	6.022	6.022	(1.004)	24121	1.00000	1.85294 (Q)
	86 1,1,1,2-Tetrachloroethane	131	6.049	6.049	(1.008)	12475	1.00000	0.876748 (a)
	87 mp-Xylene	106	6.120	6.120	(1.020)	58748	2.00000	0.160883 (a)
	88 o-Xylene	106	6.442	6.442	(1.074)	26689	1.00000	1.90448
	89 Styrene	104	6.475	6.475	(0.832)	34117	1.00000	0.820402 (a)
	90 Bromoform	173	6.513	6.513	(0.837)	3236	1.00000	2.65043 (M)
	91 Isopropylbenzene	105	6.671	6.671	(0.858)	69339	1.00000	(a)
$	92 4-Bromofluorobenzene	174	6.895	6.895	(0.886)	21074	1.00000	1.99197
	93 Bromobenzene	156	6.982	6.982	(0.898)	12877	1.00000	0.971689 (a)
	94 n-Propylbenzene	120	6.988	6.988	(0.898)	16754	1.00000	0.875970 (aQ)
	95 1,1,2,2-Tetrachloroethane	83	7.031	7.031	(0.904)	5931	1.00000	0.768847 (a)
	96 o-Chlorotoluene	91	7.119	7.119	(0.915)	54788	1.00000	0.964207 (a)
	97 1,3,5-Trimethylbenzene	105	7.135	7.135	(0.917)	46556	1.00000	0.398887 (a)
	98 1,2,3-Trichloropropane	110	7.151	7.151	(0.919)	1954	1.00000	0.886431 (a)
	99 trans-1,4-Dichloro-2-butene	53	7.168	7.168	(0.921)	836	1.00000	5.39546 (QM)
M	100 1,2-Dichloroethene, Total	61				57057	2.00000	(a)
	101 p-Chlorotoluene	91	7.244	7.244	(0.931)	46970	1.00000	0.926469 (a)
	102 tert-Butylbenzene	134	7.397	7.397	(0.951)	11638	1.00000	0.916976 (a)
	103 Pentachloroethane	117	7.402	7.402	(0.952)	7378	1.00000	0.824553 (aQ)
	104 1,2,4-Trimethylbenzene	105	7.446	7.446	(0.957)	42726	1.00000	0.872194 (a)
	105 sec-Butylbenzene	105	7.533	7.533	(0.968)	62589	1.00000	0.931712 (a)
	106 p-Isopropyltoluene	134	7.648	7.648	(0.983)	11061	1.00000	0.811480 (a)
	107 1,3-Dichlorobenzene	146	7.719	7.719	(0.992)	21416	1.00000	0.893201 (a)
*	108 1,4-Dichlorobenzene-d4	152	7.779	7.779	(1.000)	412734	30.0000	(Q)
	109 1,4-Dichlorobenzene	146	7.790	7.790	(1.001)	23274	1.00000	0.992006 (aQ)
	110 Benzyl Chloride	126	7.975	7.975	(1.025)	692	1.00000	5.94986 (QM)
	111 n-Butylbenzene	134	7.992	7.992	(1.027)	8900	1.00000	0.784745 (aQ)
	112 Hexachloroethane	117	8.117	8.117	(1.043)	5373	1.00000	4.58470
	113 1,2-Dichlorobenzene	146	8.139	8.139	(1.046)	16160	1.00000	0.903531 (a)
	114 1,2-Dibromo-3-chloropropane	75	8.805	8.805	(1.132)	550	1.00000	2.29021 (aQ)
	115 Nitrobenzene	77	9.290	9.290	(1.194)	743	10.0000	7.94988 (aQM)
	116 Hexachlorobutadiene	225	9.361	9.361	(1.203)	4886	1.00000	1.02010 (a)
	117 1,2,4-Trichlorobenzene	180	9.383	9.383	(1.206)	5778	1.00000	0.943225 (a)
	118 Naphthalene	128	9.661	9.661	(1.242)	5319	1.00000	3.41306
	119 1,2,3-Trichlorobenzene	180	9.814	9.814	(1.262)	3528	1.00000	0.966462 (a)
M	120 1,3-Dichloropropene, Total	75				34511	2.00000	(a)
M	121 Total Xylenes	106				85437	3.00000	(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.

QC Flag Legend

M - Compound response manually integrated.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms01.i
Lab File ID: 1091404.D
Lab Smp Id: 1234
Analysis Type: VOA
Quant Type: ISTD
Operator: DD
Method File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Misc Info:

Calibration Date: 14-SEP-2012
Calibration Time: 04:13

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	1855731	927866	3711462	1805521	-2.71
83 Chlorobenzene-d5	750283	375142	1500566	724951	-3.38
108 1,4-Dichlorobenze	454343	227172	908686	412734	-9.16

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	3.99	3.49	4.49	3.99	0.00
83 Chlorobenzene-d5	6.00	5.50	6.50	6.00	0.00
108 1,4-Dichlorobenze	7.78	7.28	8.28	7.78	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1234
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info:

Client SDG: 1120914.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.962568	J
74-87-3	Chloromethane	1.10405	
75-01-4	Vinyl Chloride	0.966104	J
74-83-9	Bromomethane	0.956489	J
75-00-3	Chloroethane	1.18863	
109-66-0	Pentane	0.895254	J
75-69-4	Trichlorofluoromethane	0.936131	J
75-43-4	Dichlorofluoromethane	0.928847	J
60-29-7	Ethyl Ether	0.800934	J
75-35-4	1,1-Dichloroethene	0.927584	J
76-13-1	Freon 113	0.903511	J
75-15-0	Carbon Disulfide	1.12797	
74-88-4	Iodomethane	0.759299	J
107-02-8	Acrolein	8.32977	J
67-63-0	Isopropyl Alcohol	11.0400	J
107-05-1	3-Chloro-1-propene	0.918768	J
75-09-2	Methylene Chloride	1.16483	
67-64-1	Acetone	3.68197	J
79-20-9	Methyl acetate	0.000000	J
156-60-5	trans-1,2-Dichloroethene	0.993971	J
110-54-3	Hexane	0.907511	J
1634-04-4	Methyl t-Butyl Ether	0.899609	J
75-65-0	tert.- Butyl Alcohol	3.98991	J
75-05-8	Acetonitrile	0.000000	J
108-20-3	Diisopropyl ether	0.900419	J
126-99-8	Chloroprene	0.900590	J
75-34-3	1,1-Dichloroethane	0.925628	J
107-13-1	Acrylonitrile	3.97639	J
637-92-3	Ethyl tert-butyl ether	0.863507	J
71-23-8	n-Propanol	8.71172	J
108-05-4	Vinyl Acetate	0.816180	J
156-59-2	cis-1,2-Dichloroethene	0.983156	J
594-20-7	2,2-Dichloropropane	0.894827	J
74-97-5	Bromochloromethane	0.886021	J
110-82-7	Cyclohexane	0.880387	J
67-66-3	Chloroform	1.13857	
141-78-6	Ethyl Acetate	1.53809	J
96-33-3	Methyl acrylate	0.882245	J
56-23-5	Carbon Tetrachloride	0.887662	J
109-99-9	Tetrahydrofuran	3.72048	J
71-55-6	1,1,1-Trichloroethane	0.901769	J
78-93-3	2-Butanone	3.90630	J

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1234
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info:

Client SDG: 1120914.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
563-58-6	1,1-Dichloropropene	0.926621	J
109-69-3	1-Chlorobutane	0.998489	J
142-82-5	Heptane	0.751038	J
71-43-2	Benzene	1.01357	
107-12-0	Propionitrile	4.63452	J
126-98-7	Methacrylonitrile	0.826873	J
994-05-8	tert-Amyl methyl ether	1.58489	J
107-06-2	1,2-Dichloroethane	0.757770	J
75-85-4	tert-Amyl Alcohol	12.6902	
78-83-1	Isobutyl alcohol	8.08702	J
107-39-1	Diisobutylene	0.245789	J
79-01-6	Trichloroethene	0.984653	J
108-87-2	Methyl cyclohexane	0.852394	J
919-94-8	tert-Amyl Ethylether	0.880009	J
74-95-3	Dibromomethane	0.904269	J
78-87-5	1,2-Dichloropropane	0.870414	J
75-27-4	Bromodichloromethane	0.910583	J
80-62-6	Methyl methacrylate	1.65377	J
123-91-1	1,4-Dioxane	0.000000	J
10061-01-5	cis-1,3-Dichloropropene	0.834503	J
111-65-9	Octane	0.843752	J
108-88-3	Toluene	0.996321	J
107-14-2	Chloroacetonitrile	5.77663	J
79-46-9	2-Nitropropane	10.5023	
513-88-2	1,1-Dichloro-2-Propanone	18.0258	J
108-10-1	4-Methyl-2-Pentanone(MIBK)	4.07389	J
127-18-4	Tetrachloroethene	1.02871	
10061-02-6	trans-1,3-Dichloropropene	0.795818	J
97-63-2	Ethyl Methacrylate	2.45865	
79-00-5	1,1,2-Trichloroethane	0.902173	J
124-48-1	Chlorodibromomethane	0.908635	J
142-28-9	1,3-Dichloropropane	0.858668	J
106-93-4	1,2-Dibromoethane	1.51541	
591-78-6	2-Hexanone	3.93164	J
544-10-5	1-Chlorohexane	0.844014	J
108-90-7	Chlorobenzene	0.987579	J
100-41-4	Ethylbenzene	1.85294	
630-20-6	1,1,1,2-Tetrachloroethane	0.876748	J
108383/106423	mp-Xylene	0.160883	J
95-47-6	o-Xylene	1.90448	
100-42-5	Styrene	0.820402	J
75-25-2	Bromoform	2.65043	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1234
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info:

Client SDG: 1120914.b

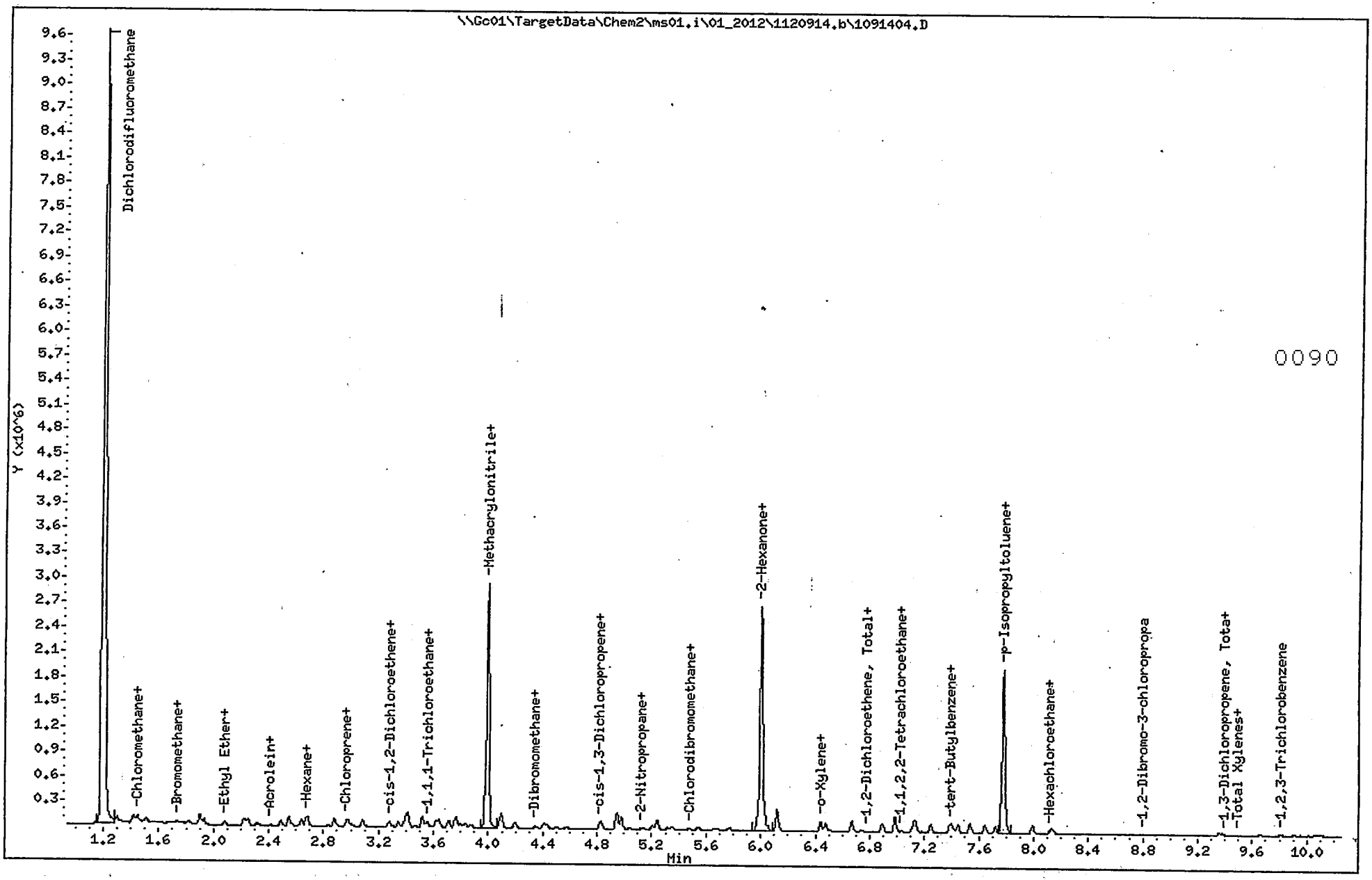
Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
98-82-8	Isopropylbenzene	0.000000	J
108-86-1	Bromobenzene	0.971689	J
103-65-1	n-Propylbenzene	0.875970	J
79-34-5	1,1,2,2-Tetrachloroethane	0.768847	J
95-49-8	o-Chlorotoluene	0.964207	J
108-67-8	1,3,5-Trimethylbenzene	0.398887	J
96-18-4	1,2,3-Trichloropropane	0.886431	J
110-57-6	trans-1,4-Dichloro-2-butene	5.39546	
540-59-0	1,2-Dichloroethene, Total	0.000000	J
106-43-4	p-Chlorotoluene	0.926469	J
98-06-6	tert-Butylbenzene	0.916976	J
76-01-7	Pentachloroethane	0.824553	J
95-63-6	1,2,4-Trimethylbenzene	0.872194	J
135-98-8	sec-Butylbenzene	0.931712	J
99-87-6	p-Isopropyltoluene	0.811480	J
541-73-1	1,3-Dichlorobenzene	0.893201	J
106-46-7	1,4-Dichlorobenzene	0.992006	J
100-44-7	Benzyl Chloride	5.94986	
104-51-8	n-Butylbenzene	0.784745	J
67-72-1	Hexachloroethane	4.58470	
95-50-1	1,2-Dichlorobenzene	0.903531	J
96-12-8	1,2-Dibromo-3-chloropropane	2.29021	J
98-95-3	Nitrobenzene	7.94988	J
87-68-3	Hexachlorobutadiene	1.02010	J
120-82-1	1,2,4-Trichlorobenzene	0.943225	J
91-20-3	Naphthalene	3.41306	
87-61-6	1,2,3-Trichlorobenzene	0.966462	J
542-75-6	1,3-Dichloropropene, Total	0.000000	J
1330-20-7	Total Xylenes	0.000000	J
1868-53-7	Dibromofluoromethane	0.361727	J
17060-07-0	1,2-Dichloroethane-d4	0.00334275	J
2037-26-5	Toluene-d8	0.000000	J
460-00-4	4-Bromofluorobenzene	1.99197	

6800

Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091404.D
Date : 14-SEP-2012 03:06
Client ID:
Sample Info: 1234;;1;1;1;;;;
Purge Volume: 5.0
Column phase: DB-VRX

Instrument: ms01.i
Operator: DD
Column diameter: 0.25



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VOLATILE REPORT SW-846 Method 8260

Data file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091405.D
Lab Smp Id: 1235
Inj Date : 14-SEP-2012 03:29
Operator : DD
Inst ID: ms01.i
Smp Info : 1235;;1;1;2;;;;
Misc Info :
Comment :
Method : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Meth Date : 14-Sep-2012 19:04 ms01.i
Quant Type: ISTD
Cal Date : 14-SEP-2012 03:06
Cal File: 1091404.D
Als bottle: 6
Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ALMDTXP003

Concentration Formula: Amt * DF * Uf * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged
DF	1.000	sample dilution factor
Cpnd Variable		Local Compound Variable

DATA REVIEW [signature] 9/14/12
REPORTED
APPROVED
2nd REVIEW [signature] 9/14/12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
1 Dichlorodifluoromethane	85	1.302	1.302	(0.326)	138196	5.00000	5.43334
2 Chloromethane	50	1.444	1.444	(0.362)	159125	5.00000	5.38821
3 Vinyl Chloride	62	1.509	1.509	(0.378)	142839	5.00000	5.26256
4 Bromomethane	94	1.733	1.733	(0.434)	47454	5.00000	4.53971
5 Chloroethane	64	1.815	1.815	(0.455)	86100	5.00000	5.05450
6 Pentane	41	1.897	1.897	(0.475)	85245	5.00000	5.00405
7 Trichlorofluoromethane	101	1.908	1.908	(0.478)	156602	5.00000	5.28151
8 Dichlorofluoromethane	67	1.929	1.929	(0.483)	172408	5.00000	4.67402
9 Ethyl Ether	74	2.082	2.082	(0.522)	34858	5.00000	4.67300
10 1,1-Dichloroethene	61	2.219	2.219	(0.556)	138712	5.00000	4.66856
11 Freon 113	101	2.235	2.235	(0.560)	85824	5.00000	4.71693
12 Carbon Disulfide	76	2.251	2.251	(0.564)	275087	5.00000	4.74058
13 Iodomethane	127	2.311	2.311	(0.579)	45004	5.00000	4.71541
14 Acrolein	56	2.410	2.410	(0.604)	26083	50.0000	43.4870
15 Isopropyl Alcohol	45	2.464	2.464	(0.617)	8414	25.0000	29.4622 (M)
16 3-Chloro-1-propene	41	2.486	2.486	(0.623)	144600	5.00000	4.55702
17 Methylene Chloride	84	2.546	2.546	(0.638)	93302	5.00000	4.76171
18 Acetone	58	2.568	2.568	(0.643)	14135	25.0000	20.3938 (Q)
19 Methyl acetate	74	2.628	2.628	(0.658)	5138	5.00000	3.71214 (Q)
20 trans-1,2-Dichloroethene	61	2.639	2.639	(0.661)	139140	5.00000	4.63189
21 Hexane	57	2.677	2.677	(0.671)	189475	5.00000	4.70117

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	22 Methyl t-Butyl Ether	73	2.688	2.688	(0.673)	136059	5.00000	4.59033
	23 tert.- Butyl Alcohol	59	2.710	2.710	(0.679)	15058	25.0000	24.8337
	24 Acetonitrile	41	2.835	2.835	(0.710)	19094	25.0000	16.8970(aQ)
	25 Diisopropyl ether	45	2.884	2.884	(0.723)	284717	5.00000	4.55501
	26 Chloroprene	53	2.966	2.966	(0.743)	146877	5.00000	4.56868
	27 1,1-Dichloroethane	63	2.983	2.983	(0.747)	177005	5.00000	4.66932
	28 Acrylonitrile	53	3.004	3.004	(0.753)	58460	25.0000	22.1666
	29 Ethyl tert-butyl ether	59	3.086	3.086	(0.773)	195317	5.00000	4.36701
	30 n-Propanol	41	3.081	3.081	(0.772)	43965	50.0000	46.7896(aQ)
	31 Vinyl Acetate	86	3.092	3.092	(0.774)	7977	5.00000	4.27585(aQ)
	32 cis-1,2-Dichloroethene	61	3.277	3.277	(0.821)	130270	5.00000	4.61481
	33 2,2-Dichloropropane	77	3.343	3.343	(0.837)	125402	5.00000	4.62629
	34 Bromochloromethane	128	3.392	3.392	(0.850)	30143	5.00000	4.66330
	35 Cyclohexane	84	3.408	3.408	(0.854)	150392	5.00000	4.64352
	36 Chloroform	83	3.414	3.414	(0.855)	183407	5.00000	4.74189
	37 Ethyl Acetate	43	3.457	3.457	(0.866)	32276	5.00000	4.79953
	38 Methyl acrylate	55	3.474	3.474	(0.870)	30806	5.00000	4.41911(Q)
	39 Carbon Tetrachloride	117	3.517	3.517	(0.881)	116908	5.00000	4.55990
	40 Tetrahydrofuran	42	3.517	3.517	(0.881)	48241	25.0000	23.1991
$	41 Dibromofluoromethane	113	3.523	3.523	(0.882)	82978	5.00000	4.27051
	42 1,1,1-Trichloroethane	97	3.555	3.555	(0.891)	140781	5.00000	4.66807
	43 2-Butanone	72	3.583	3.583	(0.897)	15783	25.0000	21.9087
	44 1,1-Dichloropropene	75	3.621	3.621	(0.907)	135196	5.00000	4.61173
	45 1-Chlorobutane	41	3.643	3.643	(0.913)	121676	5.00000	4.53619
	46 Heptane	71	3.714	3.714	(0.930)	76030	5.00000	4.78927
	47 Benzene	78	3.763	3.763	(0.943)	359568	5.00000	5.00977
	48 Propionitrile	54	3.763	3.763	(0.943)	19500	25.0000	22.4431(Q)
	49 Methacrylonitrile	67	3.774	3.774	(0.945)	12866	5.00000	4.00409(Q)
	50 tert-Amyl methyl ether	73	3.796	3.796	(0.951)	134071	5.00000	4.76724
$	51 1,2-Dichloroethane-d4	65	3.834	3.834	(0.960)	78467	5.00000	3.85717
	52 1,2-Dichloroethane	62	3.872	3.872	(0.970)	82671	5.00000	4.38313
	53 tert-Amyl Alcohol	59	3.883	3.883	(0.973)	12411	25.0000	27.5565(Q)
	54 Isobutyl alcohol	43	3.965	3.965	(0.993)	68517	50.0000	43.9820(aQ)
*	55 Fluorobenzene	96	3.992	3.992	(1.000)	1823073	30.0000	
	56 Diisobutylene	57	4.003	4.003	(1.003)	343271	5.00000	3.95031
	57 Trichloroethene	95	4.090	4.090	(1.025)	96000	5.00000	4.58343
	58 Methyl cyclohexane	83	4.101	4.101	(0.684)	168175	5.00000	4.74539
	59 tert-Amyl Ethylether	59	4.199	4.199	(1.052)	140432	5.00000	4.54920(A)
	60 Dibromomethane	93	4.347	4.347	(1.089)	31523	5.00000	4.56366
	61 1,2-Dichloropropane	63	4.407	4.407	(1.104)	88271	5.00000	4.57535
	62 Bromodichloromethane	83	4.428	4.428	(1.109)	103384	5.00000	4.53161
	63 Methyl methacrylate	41	4.499	4.499	(1.127)	33433	5.00000	4.79459
	64 1,4-Dioxane	88	4.549	4.549	(1.139)	4594	125.000	47.3012(aQM)
	65 2-Chloroethylvinyl ether	63	4.745	4.745	(1.189)	279	5.00000	2.18862(aM)
	66 cis-1,3-Dichloropropene	75	4.821	4.821	(0.804)	109157	5.00000	4.34805
	67 Octane	85	4.832	4.832	(0.805)	53277	5.00000	4.63738(a)
$	68 Toluene-d8	98	4.947	4.947	(0.824)	350384	5.00000	3.77397
	69 Toluene	92	4.980	4.980	(0.830)	216641	5.00000	4.79150
	70 Chloroacetonitrile	48	5.034	5.034	(0.839)	4493	25.0000	21.5233(a)
	71 2-Nitropropane	41	5.121	5.121	(0.854)	35063	25.0000	25.7483
	72 1,1-Dichloro-2-Propanone	63	5.143	5.143	(0.857)	2462	25.0000	33.3229(M)
	73 4-Methyl-2-Pentanone(MIBK)	43	5.203	5.203	(0.867)	149317	25.0000	21.1734
	74 Tetrachloroethene	164	5.241	5.241	(0.874)	75361	5.00000	4.71497
	75 trans-1,3-Dichloropropene	75	5.236	5.236	(0.873)	73637	5.00000	4.19703

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
	76 Ethyl Methacrylate	69	5.318	5.318	(0.886)	45398	5.00000	5.25873
	77 1,1,2-Trichloroethane	83	5.351	5.351	(0.892)	36818	5.00000	4.56917
	78 Chlorodibromomethane	129	5.476	5.476	(0.913)	49222	5.00000	4.32628
	79 1,3-Dichloropropane	76	5.542	5.542	(0.924)	81351	5.00000	4.63484 (QM)
	80 1,2-Dibromoethane	107	5.656	5.656	(0.943)	34680	5.00000	4.82387
	81 2-Hexanone	43	5.771	5.771	(0.962)	89787	25.0000	20.7831
	82 1-Chlorohexane	91	5.978	5.978	(0.996)	123062	5.00000	4.52914
*	83 Chlorobenzene-d5	82	6.000	6.000	(1.000)	733389	30.0000	
	84 Chlorobenzene	112	6.016	6.016	(1.003)	215749	5.00000	4.67572
	85 Ethylbenzene	106	6.022	6.022	(1.004)	123294	5.00000	5.27731
	86 1,1,1,2-Tetrachloroethane	131	6.054	6.054	(1.009)	64147	5.00000	4.45641
	87 mp-Xylene	106	6.120	6.120	(1.020)	299245	10.0000	7.69773
	88 o-Xylene	106	6.436	6.436	(1.073)	131408	5.00000	5.14970
	89 Styrene	104	6.475	6.475	(0.832)	196946	5.00000	4.54932
	90 Bromoform	173	6.507	6.507	(0.837)	17823	5.00000	5.52330
	91 Isopropylbenzene	105	6.671	6.671	(0.858)	372396	5.00000	2.08213
$	92 4-Bromofluorobenzene	174	6.895	6.895	(0.886)	70233	5.00000	5.54599
	93 Bromobenzene	156	6.988	6.988	(0.898)	62975	5.00000	4.56483
	94 n-Propylbenzene	120	6.988	6.988	(0.898)	94381	5.00000	4.74022
	95 1,1,2,2-Tetrachloroethane	83	7.031	7.031	(0.904)	37221	5.00000	4.63493
	96 o-Chlorotoluene	91	7.118	7.118	(0.915)	283877	5.00000	4.79908
	97 1,3,5-Trimethylbenzene	105	7.135	7.135	(0.917)	272094	5.00000	4.26003
	98 1,2,3-Trichloropropane	110	7.157	7.157	(0.920)	10489	5.00000	4.57086
	99 trans-1,4-Dichloro-2-butene	53	7.179	7.179	(0.923)	4075	5.00000	7.21695 (Q)
M	100 1,2-Dichloroethene, Total	61				269410	10.0000	(a)
	101 p-Chlorotoluene	91	7.249	7.249	(0.932)	251795	5.00000	4.77091
	102 tert-Butylbenzene	134	7.391	7.391	(0.950)	62135	5.00000	4.70283
	103 Pentachloroethane	117	7.413	7.413	(0.953)	40966	5.00000	4.39792 (Q)
	104 1,2,4-Trimethylbenzene	105	7.446	7.446	(0.957)	255575	5.00000	4.61266
	105 sec-Butylbenzene	105	7.533	7.533	(0.968)	340729	5.00000	4.87232
	106 p-Isopropyltoluene	134	7.648	7.648	(0.983)	67468	5.00000	4.75472
	107 1,3-Dichlorobenzene	146	7.719	7.719	(0.992)	116605	5.00000	4.67166
*	108 1,4-Dichlorobenzene-d4	152	7.779	7.779	(1.000)	429662	30.0000	(Q)
	109 1,4-Dichlorobenzene	146	7.790	7.790	(1.001)	113191	5.00000	4.63445
	110 Benzyl Chloride	126	7.992	7.992	(1.027)	4519	5.00000	8.01137 (Q)
	111 n-Butylbenzene	134	7.992	7.992	(1.027)	52762	5.00000	4.46893
	112 Hexachloroethane	117	8.117	8.117	(1.043)	31549	5.00000	7.18956
	113 1,2-Dichlorobenzene	146	8.139	8.139	(1.046)	85526	5.00000	4.59350
	114 1,2-Dibromo-3-chloropropane	75	8.805	8.805	(1.132)	3749	5.00000	5.73078 (a)
	115 Nitrobenzene	77	9.290	9.290	(1.194)	2885	50.0000	40.7246 (aQ)
	116 Hexachlorobutadiene	225	9.356	9.356	(1.203)	23106	5.00000	4.63400 (a)
	117 1,2,4-Trichlorobenzene	180	9.388	9.388	(1.207)	27800	5.00000	4.35939
	118 Naphthalene	128	9.656	9.656	(1.241)	28015	5.00000	6.07609
	119 1,2,3-Trichlorobenzene	180	9.808	9.808	(1.261)	15507	5.00000	4.08063
M	120 1,3-Dichloropropene, Total	75				182794	10.0000	(a)
M	121 Total Xylenes	106				430653	15.0000	(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.

QC Flag Legend

M - Compound response manually integrated.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms01.i
Lab File ID: 1091405.D
Lab Smp Id: 1235
Analysis Type: VOA
Quant Type: ISTD
Operator: DD
Method File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Misc Info:

Calibration Date: 14-SEP-2012
Calibration Time: 04:13

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	1855731	927866	3711462	1823073	-1.76
83 Chlorobenzene-d5	750283	375142	1500566	733389	-2.25
108 1,4-Dichlorobenze	454343	227172	908686	429662	-5.43

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	3.99	3.49	4.49	3.99	0.00
83 Chlorobenzene-d5	6.00	5.50	6.50	6.00	-0.00
108 1,4-Dichlorobenze	7.78	7.28	8.28	7.78	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1235
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info:

Client SDG: 1120914.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
75-71-8	Dichlorodifluoromethane	5.43334	
74-87-3	Chloromethane	5.38821	
75-01-4	Vinyl Chloride	5.26256	
74-83-9	Bromomethane	4.53971	
75-00-3	Chloroethane	5.05450	
109-66-0	Pentane	5.00405	
75-69-4	Trichlorofluoromethane	5.28151	
75-43-4	Dichlorofluoromethane	4.67402	
60-29-7	Ethyl Ether	4.67300	
75-35-4	1,1-Dichloroethene	4.66856	
76-13-1	Freon 113	4.71693	
75-15-0	Carbon Disulfide	4.74058	
74-88-4	Iodomethane	4.71541	
107-02-8	Acrolein	43.4870	
67-63-0	Isopropyl Alcohol	29.4622	
107-05-1	3-Chloro-1-propene	4.55702	
75-09-2	Methylene Chloride	4.76171	
67-64-1	Acetone	20.3938	
79-20-9	Methyl acetate	3.71214	
156-60-5	trans-1,2-Dichloroethene	4.63189	
110-54-3	Hexane	4.70117	
1634-04-4	Methyl t-Butyl Ether	4.59033	
75-65-0	tert.- Butyl Alcohol	24.8337	
75-05-8	Acetonitrile	16.8970	J
108-20-3	Diisopropyl ether	4.55501	
126-99-8	Chloroprene	4.56868	
75-34-3	1,1-Dichloroethane	4.66932	
107-13-1	Acrylonitrile	22.1666	
637-92-3	Ethyl tert-butyl ether	4.36701	
71-23-8	n-Propanol	46.7896	J
108-05-4	Vinyl Acetate	4.27585	J
156-59-2	cis-1,2-Dichloroethene	4.61481	
594-20-7	2,2-Dichloropropane	4.62629	
74-97-5	Bromochloromethane	4.66330	
110-82-7	Cyclohexane	4.64352	
67-66-3	Chloroform	4.74189	
141-78-6	Ethyl Acetate	4.79953	
96-33-3	Methyl acrylate	4.41911	
56-23-5	Carbon Tetrachloride	4.55990	
109-99-9	Tetrahydrofuran	23.1991	
71-55-6	1,1,1-Trichloroethane	4.66807	
78-93-3	2-Butanone	21.9087	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1235
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info:

Client SDG: 1120914.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
563-58-6	1,1-Dichloropropene	4.61173	
109-69-3	1-Chlorobutane	4.53619	
142-82-5	Heptane	4.78927	
71-43-2	Benzene	5.00977	
107-12-0	Propionitrile	22.4431	
126-98-7	Methacrylonitrile	4.00409	
994-05-8	tert-Amyl methyl ether	4.76724	
107-06-2	1,2-Dichloroethane	4.38313	
75-85-4	tert-Amyl Alcohol	27.5565	
78-83-1	Isobutyl alcohol	43.9820	J
107-39-1	Diisobutylene	3.95031	
79-01-6	Trichloroethene	4.58343	
108-87-2	Methyl cyclohexane	4.74539	
919-94-8	tert-Amyl Ethylether	4.54920	E
74-95-3	Dibromomethane	4.56366	
78-87-5	1,2-Dichloropropane	4.57535	
75-27-4	Bromodichloromethane	4.53161	
80-62-6	Methyl methacrylate	4.79459	
123-91-1	1,4-Dioxane	47.3012	J
110-75-8	2-Chloroethylvinyl ether	2.18862	J
10061-01-5	cis-1,3-Dichloropropene	4.34805	
111-65-9	Octane	4.63738	J
108-88-3	Toluene	4.79150	
107-14-2	Chloroacetonitrile	21.5233	J
79-46-9	2-Nitropropane	25.7483	
513-88-2	1,1-Dichloro-2-Propanone	33.3229	
108-10-1	4-Methyl-2-Pentanone(MIBK)	21.1734	
127-18-4	Tetrachloroethene	4.71497	
10061-02-6	trans-1,3-Dichloropropene	4.19703	
97-63-2	Ethyl Methacrylate	5.25873	
79-00-5	1,1,2-Trichloroethane	4.56917	
124-48-1	Chlorodibromomethane	4.32628	
142-28-9	1,3-Dichloropropane	4.63484	
106-93-4	1,2-Dibromoethane	4.82387	
591-78-6	2-Hexanone	20.7831	
544-10-5	1-Chlorohexane	4.52914	
108-90-7	Chlorobenzene	4.67572	
100-41-4	Ethylbenzene	5.27731	
630-20-6	1,1,1,2-Tetrachloroethane	4.45641	
108383/106423	mp-Xylene	7.69773	
95-47-6	o-Xylene	5.14970	
100-42-5	Styrene	4.54932	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1235
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info:

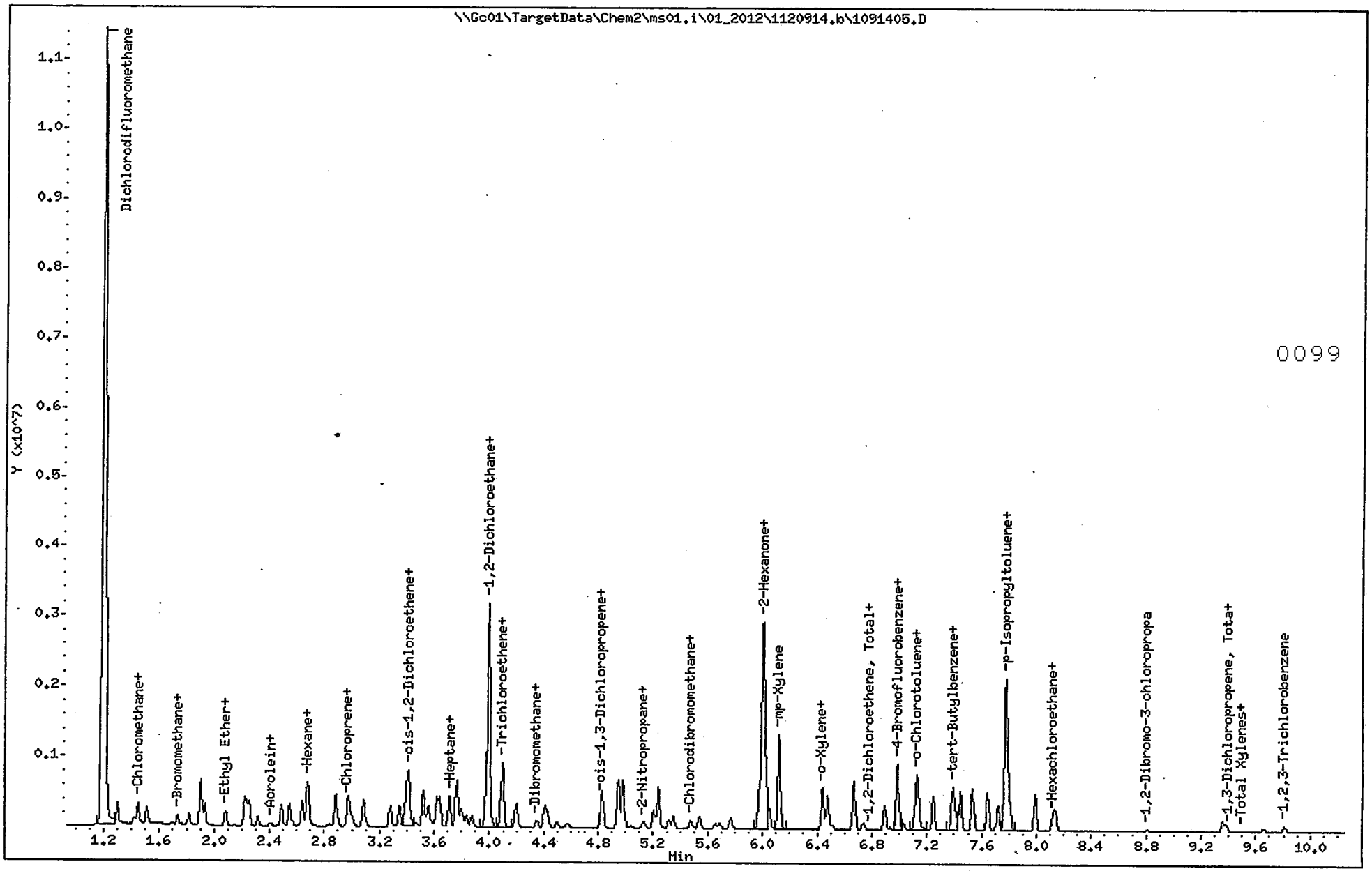
Client SDG: 1120914.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
75-25-2	Bromoform	5.52330	
98-82-8	Isopropylbenzene	2.08213	
108-86-1	Bromobenzene	4.56483	
103-65-1	n-Propylbenzene	4.74022	
79-34-5	1,1,2,2-Tetrachloroethane	4.63493	
95-49-8	o-Chlorotoluene	4.79908	
108-67-8	1,3,5-Trimethylbenzene	4.26003	
96-18-4	1,2,3-Trichloropropane	4.57086	
110-57-6	trans-1,4-Dichloro-2-butene	7.21695	
540-59-0	1,2-Dichloroethene, Total	0.000000	J
106-43-4	p-Chlorotoluene	4.77091	
98-06-6	tert-Butylbenzene	4.70283	
76-01-7	Pentachloroethane	4.39792	
95-63-6	1,2,4-Trimethylbenzene	4.61266	
135-98-8	sec-Butylbenzene	4.87232	
99-87-6	p-Isopropyltoluene	4.75472	
541-73-1	1,3-Dichlorobenzene	4.67166	
106-46-7	1,4-Dichlorobenzene	4.63445	
100-44-7	Benzyl Chloride	8.01137	
104-51-8	n-Butylbenzene	4.46893	
67-72-1	Hexachloroethane	7.18956	
95-50-1	1,2-Dichlorobenzene	4.59350	
96-12-8	1,2-Dibromo-3-chloropropane	5.73078	J
98-95-3	Nitrobenzene	40.7246	J
87-68-3	Hexachlorobutadiene	4.63400	J
120-82-1	1,2,4-Trichlorobenzene	4.35939	
91-20-3	Naphthalene	6.07609	
87-61-6	1,2,3-Trichlorobenzene	4.08063	
542-75-6	1,3-Dichloropropene, Total	0.000000	J
1330-20-7	Total Xylenes	0.000000	J
1868-53-7	Dibromofluoromethane	4.27051	
17060-07-0	1,2-Dichloroethane-d4	3.85717	
2037-26-5	Toluene-d8	3.77397	
460-00-4	4-Bromofluorobenzene	5.54599	

Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091405.D
Date : 14-SEP-2012 03:29
Client ID:
Sample Info: 1235;;1;1;2;;;;
Purge Volume: 5.0
Column phase: DB-VRX

Instrument: ms01.i
Operator: DD
Column diameter: 0.25



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VOLATILE REPORT SW-846 Method 8260

Data file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091406.D
Lab Smp Id: 1236
Inj Date : 14-SEP-2012 03:51
Operator : DD Inst ID: ms01.i
Smp Info : 1236;;1;1;3;;;;
Misc Info :
Comment :
Method : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Meth Date : 14-Sep-2012 19:04 ms01.i Quant Type: ISTD
Cal Date : 14-SEP-2012 03:29 Cal File: 1091405.D
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ALMDTXP003

Concentration Formula: Amt * DF * Uf * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged
DF	1.000	sample dilution factor
Cpnd Variable		Local Compound Variable

DATA REVIEW 9/14/12
REPORTED
APPROVED
2nd REVIEW 9/14/12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
1 Dichlorodifluoromethane	85	1.302	1.302	(0.326)	521875	20.0000	20.2302
2 Chloromethane	50	1.444	1.444	(0.362)	576489	20.0000	19.2468
3 Vinyl Chloride	62	1.509	1.509	(0.378)	555263	20.0000	20.1702
4 Bromomethane	94	1.733	1.733	(0.434)	197286	20.0000	18.6086
5 Chloroethane	64	1.815	1.815	(0.455)	329084	20.0000	20.6663
6 Pentane	41	1.897	1.897	(0.475)	357679	20.0000	20.7018
7 Trichlorofluoromethane	101	1.902	1.902	(0.477)	612327	20.0000	20.3613
8 Dichlorofluoromethane	67	1.929	1.929	(0.483)	777218	20.0000	20.7749
9 Ethyl Ether	74	2.082	2.082	(0.522)	165284	20.0000	21.8467
10 1,1-Dichloroethene	61	2.219	2.219	(0.556)	623306	20.0000	20.6839
11 Freon 113	101	2.235	2.235	(0.560)	390351	20.0000	21.1528
12 Carbon Disulfide	76	2.251	2.251	(0.564)	1184298	20.0000	20.1226
13 Iodomethane	127	2.311	2.311	(0.579)	198871	20.0000	20.5448
14 Acrolein	56	2.404	2.404	(0.602)	135500	200.000	222.743
15 Isopropyl Alcohol	45	2.464	2.464	(0.617)	35305	100.000	109.326(M)
16 3-Chloro-1-propene	41	2.486	2.486	(0.623)	670341	20.0000	20.8291
17 Methylene Chloride	84	2.546	2.546	(0.638)	372922	20.0000	20.6030
18 Acetone	58	2.568	2.568	(0.643)	67291	100.000	108.054
19 Methyl acetate	74	2.628	2.628	(0.658)	25888	20.0000	20.9571(Q)
20 trans-1,2-Dichloroethene	61	2.639	2.639	(0.661)	622747	20.0000	20.4399
21 Hexane	57	2.677	2.677	(0.671)	862467	20.0000	21.0988

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	22 Methyl t-Butyl Ether	73	2.682	2.682	(0.672)	688842	20.0000	22.9139
	23 tert.- Butyl Alcohol	59	2.710	2.710	(0.679)	67011	100.000	108.964
	24 Acetonitrile	41	2.835	2.835	(0.710)	85987	100.000	107.858
	25 Diisopropyl ether	45	2.884	2.884	(0.723)	1354040	20.0000	21.3584
	26 Chloroprene	53	2.966	2.966	(0.743)	672668	20.0000	20.6300
	27 1,1-Dichloroethane	63	2.983	2.983	(0.747)	795616	20.0000	20.6935
	28 Acrylonitrile	53	3.004	3.004	(0.753)	304784	100.000	113.945
	29 Ethyl tert-butyl ether	59	3.086	3.086	(0.773)	970832	20.0000	21.4018
	30 n-Propanol	41	3.086	3.086	(0.773)	200922	200.000	210.830(a)
	31 Vinyl Acetate	86	3.092	3.092	(0.774)	40905	20.0000	21.6183(Q)
	32 cis-1,2-Dichloroethene	61	3.277	3.277	(0.821)	592641	20.0000	20.6996
	33 2,2-Dichloropropane	77	3.343	3.343	(0.837)	566184	20.0000	20.5943
	34 Bromochloromethane	128	3.392	3.392	(0.850)	141474	20.0000	21.5797
	35 Cyclohexane	84	3.408	3.408	(0.854)	697012	20.0000	21.2190
	36 Chloroform	83	3.419	3.419	(0.856)	757768	20.0000	20.3548
	37 Ethyl Acetate	43	3.457	3.457	(0.866)	170573	20.0000	21.4391
	38 Methyl acrylate	55	3.474	3.474	(0.870)	154884	20.0000	21.9062
	39 Carbon Tetrachloride	117	3.517	3.517	(0.881)	537308	20.0000	20.6632
	40 Tetrahydrofuran	42	3.517	3.517	(0.881)	240923	100.000	114.234
$	41 Dibromofluoromethane	113	3.523	3.523	(0.882)	333100	20.0000	20.7781
	42 1,1,1-Trichloroethane	97	3.555	3.555	(0.891)	626310	20.0000	20.4760
	43 2-Butanone	72	3.583	3.583	(0.898)	83189	100.000	113.856
	44 1,1-Dichloropropene	75	3.621	3.621	(0.907)	612859	20.0000	20.6121
	45 1-Chlorobutane	41	3.643	3.643	(0.913)	555127	20.0000	20.4052
	46 Heptane	71	3.708	3.708	(0.929)	346421	20.0000	21.5154
	47 Benzene	78	3.763	3.763	(0.943)	1638237	20.0000	22.5048
	48 Propionitrile	54	3.763	3.763	(0.943)	96797	100.000	109.843
	49 Methacrylonitrile	67	3.774	3.774	(0.945)	70948	20.0000	21.9167(Q)
	50 tert-Amyl methyl ether	73	3.801	3.801	(0.952)	699144	20.0000	20.7090
$	51 1,2-Dichloroethane-d4	65	3.834	3.834	(0.960)	339643	20.0000	21.9935
	52 1,2-Dichloroethane	62	3.872	3.872	(0.970)	395410	20.0000	21.0692
	53 tert-Amyl Alcohol	59	3.877	3.877	(0.971)	64528	100.000	101.605
	54 Isobutyl alcohol	43	3.965	3.965	(0.993)	345597	200.000	218.730
*	55 Fluorobenzene	96	3.992	3.992	(1.000)	1849022	30.0000	
	56 Diisobutylene	57	4.003	4.003	(1.003)	1339173	20.0000	20.3223
	57 Trichloroethene	95	4.090	4.090	(1.025)	436328	20.0000	20.5397
	58 Methyl cyclohexane	83	4.101	4.101	(0.684)	764185	20.0000	20.5795
	59 tert-Amyl Ethylether	59	4.199	4.199	(1.052)	652693	20.0000	20.8468(A)
	60 Dibromomethane	93	4.347	4.347	(1.089)	155540	20.0000	22.2019
	61 1,2-Dichloropropane	63	4.407	4.407	(1.104)	414712	20.0000	21.1941
	62 Bromodichloromethane	83	4.428	4.428	(1.109)	488450	20.0000	21.1097
	63 Methyl methacrylate	41	4.499	4.499	(1.127)	172324	20.0000	20.4026
	64 1,4-Dioxane	88	4.543	4.543	(1.138)	27415	500.000	623.371(M)
	65 2-Chloroethylvinyl ether	63	4.745	4.745	(1.189)	2102	20.0000	26.9654(M)
	66 cis-1,3-Dichloropropene	75	4.821	4.821	(0.804)	544181	20.0000	20.6877
	67 Octane	85	4.832	4.832	(0.805)	247123	20.0000	20.5292
$	68 Toluene-d8	98	4.947	4.947	(0.824)	1428475	20.0000	20.1933
	69 Toluene	92	4.980	4.980	(0.830)	1014103	20.0000	21.4062
	70 Chloroacetonitrile	48	5.034	5.034	(0.839)	21807	100.000	99.6998
	71 2-Nitropropane	41	5.127	5.127	(0.855)	191411	100.000	101.815
	72 1,1-Dichloro-2-Propanone	63	5.143	5.143	(0.857)	13877	100.000	106.021(M)
	73 4-Methyl-2-Pentanone(MIBK)	43	5.203	5.203	(0.867)	814764	100.000	110.265
	74 Tetrachloroethene	164	5.241	5.241	(0.874)	327965	20.0000	19.5833
	75 trans-1,3-Dichloropropene	75	5.236	5.236	(0.873)	386049	20.0000	20.9998

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
	76 Ethyl Methacrylate	69	5.318	5.318	(0.886)	256798	20.0000	20.3966
	77 1,1,2-Trichloroethane	83	5.351	5.351	(0.892)	178066	20.0000	21.0904
	78 Chlorodibromomethane	129	5.476	5.476	(0.913)	248452	20.0000	20.8412
	79 1,3-Dichloropropane	76	5.542	5.542	(0.924)	395982	20.0000	21.5314 (M)
	80 1,2-Dibromoethane	107	5.656	5.656	(0.943)	176504	20.0000	20.5894
	81 2-Hexanone	43	5.771	5.771	(0.962)	496600	100.000	109.706
	82 1-Chlorohexane	91	5.978	5.978	(0.996)	578996	20.0000	20.3373
*	83 Chlorobenzene-d5	82	6.000	6.000	(1.000)	768437	30.0000	
	84 Chlorobenzene	112	6.011	6.011	(1.002)	988709	20.0000	20.4500
	85 Ethylbenzene	106	6.022	6.022	(1.004)	562911	20.0000	19.6110
	86 1,1,1,2-Tetrachloroethane	131	6.054	6.054	(1.009)	305081	20.0000	20.2279
	87 mp-Xylene	106	6.120	6.120	(1.020)	1378594	40.0000	39.6434
	88 o-Xylene	106	6.442	6.442	(1.074)	623032	20.0000	19.5471
	89 Styrene	104	6.475	6.475	(0.832)	975019	20.0000	20.6629
	90 Bromoform	173	6.507	6.507	(0.837)	102209	20.0000	20.6184
	91 Isopropylbenzene	105	6.671	6.671	(0.858)	1728101	20.0000	19.6802
$	92 4-Bromofluorobenzene	174	6.895	6.895	(0.886)	296333	20.0000	20.3845
	93 Bromobenzene	156	6.982	6.982	(0.898)	303950	20.0000	20.2133
	94 n-Propylbenzene	120	6.988	6.988	(0.898)	432178	20.0000	19.9139
	95 1,1,2,2-Tetrachloroethane	83	7.031	7.031	(0.904)	195220	20.0000	22.3028
	96 o-Chlorotoluene	91	7.118	7.118	(0.915)	1293247	20.0000	20.0581
	97 1,3,5-Trimethylbenzene	105	7.135	7.135	(0.917)	1275424	20.0000	19.7654
	98 1,2,3-Trichloropropane	110	7.151	7.151	(0.919)	52398	20.0000	20.9488
	99 trans-1,4-Dichloro-2-butene	53	7.173	7.173	(0.922)	31271	20.0000	21.2073 (Q)
M	100 1,2-Dichloroethene, Total	61				1215388	40.0000	(a)
	101 p-Chlorotoluene	91	7.249	7.249	(0.932)	1169428	20.0000	20.3286
	102 tert-Butylbenzene	134	7.391	7.391	(0.950)	289974	20.0000	20.1355
	103 Pentachloroethane	117	7.413	7.413	(0.953)	209391	20.0000	20.6234
	104 1,2,4-Trimethylbenzene	105	7.446	7.446	(0.957)	1218878	20.0000	19.8986
	105 sec-Butylbenzene	105	7.533	7.533	(0.968)	1594065	20.0000	20.9128
	106 p-Isopropyltoluene	134	7.648	7.648	(0.983)	314849	20.0000	20.3568
	107 1,3-Dichlorobenzene	146	7.719	7.719	(0.992)	557035	20.0000	20.4746
*	108 1,4-Dichlorobenzene-d4	152	7.779	7.779	(1.000)	468325	30.0000	
	109 1,4-Dichlorobenzene	146	7.790	7.790	(1.001)	530891	20.0000	19.9421
	110 Benzyl Chloride	126	7.991	7.991	(1.027)	29438	20.0000	20.2160 (Q)
	111 n-Butylbenzene	134	7.991	7.991	(1.027)	264433	20.0000	20.5484
	112 Hexachloroethane	117	8.117	8.117	(1.043)	171635	20.0000	19.8263
	113 1,2-Dichlorobenzene	146	8.139	8.139	(1.046)	419734	20.0000	20.6823
	114 1,2-Dibromo-3-chloropropane	75	8.810	8.810	(1.133)	18689	20.0000	20.2419
	115 Nitrobenzene	77	9.290	9.290	(1.194)	16727	200.000	217.684
	116 Hexachlorobutadiene	225	9.356	9.356	(1.203)	111880	20.0000	20.5856
	117 1,2,4-Trichlorobenzene	180	9.383	9.383	(1.206)	143998	20.0000	20.7165
	118 Naphthalene	128	9.661	9.661	(1.242)	158500	20.0000	19.9849
	119 1,2,3-Trichlorobenzene	180	9.808	9.808	(1.261)	86700	20.0000	20.9314
M	120 1,3-Dichloropropene, Total	75				930230	40.0000	(a)
M	121 Total Xylenes	106				2001626	60.0000	(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.

QC Flag Legend

M - Compound response manually integrated.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms01.i
Lab File ID: 1091406.D
Lab Smp Id: 1236
Analysis Type: VOA
Quant Type: ISTD
Operator: DD
Method File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Misc Info:

Calibration Date: 14-SEP-2012
Calibration Time: 04:13

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	1855731	927866	3711462	1849022	-0.36
83 Chlorobenzene-d5	750283	375142	1500566	768437	2.42
108 1,4-Dichlorobenze	454343	227172	908686	468325	3.08

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	3.99	3.49	4.49	3.99	-0.00
83 Chlorobenzene-d5	6.00	5.50	6.50	6.00	-0.00
108 1,4-Dichlorobenze	7.78	7.28	8.28	7.78	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1236
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info:

Client SDG: 1120914.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
75-71-8	Dichlorodifluoromethane	20.2302	
74-87-3	Chloromethane	19.2468	
75-01-4	Vinyl Chloride	20.1702	
74-83-9	Bromomethane	18.6086	
75-00-3	Chloroethane	20.6663	
109-66-0	Pentane	20.7018	
75-69-4	Trichlorofluoromethane	20.3613	
75-43-4	Dichlorofluoromethane	20.7749	
60-29-7	Ethyl Ether	21.8467	
75-35-4	1,1-Dichloroethene	20.6839	
76-13-1	Freon 113	21.1528	
75-15-0	Carbon Disulfide	20.1226	
74-88-4	Iodomethane	20.5448	
107-02-8	Acrolein	222.743	
67-63-0	Isopropyl Alcohol	109.326	
107-05-1	3-Chloro-1-propene	20.8291	
75-09-2	Methylene Chloride	20.6030	
67-64-1	Acetone	108.054	
79-20-9	Methyl acetate	20.9571	
156-60-5	trans-1,2-Dichloroethene	20.4399	
110-54-3	Hexane	21.0988	
1634-04-4	Methyl t-Butyl Ether	22.9139	
75-65-0	tert.- Butyl Alcohol	108.964	
75-05-8	Acetonitrile	107.858	
108-20-3	Diisopropyl ether	21.3584	
126-99-8	Chloroprene	20.6300	
75-34-3	1,1-Dichloroethane	20.6935	
107-13-1	Acrylonitrile	113.945	
637-92-3	Ethyl tert-butyl ether	21.4018	
71-23-8	n-Propanol	210.830	J
108-05-4	Vinyl Acetate	21.6183	
156-59-2	cis-1,2-Dichloroethene	20.6996	
594-20-7	2,2-Dichloropropane	20.5943	
74-97-5	Bromochloromethane	21.5797	
110-82-7	Cyclohexane	21.2190	
67-66-3	Chloroform	20.3548	
141-78-6	Ethyl Acetate	21.4391	
96-33-3	Methyl acrylate	21.9062	
56-23-5	Carbon Tetrachloride	20.6632	
109-99-9	Tetrahydrofuran	114.234	
71-55-6	1,1,1-Trichloroethane	20.4760	
78-93-3	2-Butanone	113.856	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1236
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info:

Client SDG: 1120914.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
563-58-6	1,1-Dichloropropene	20.6121	
109-69-3	1-Chlorobutane	20.4052	
142-82-5	Heptane	21.5154	
71-43-2	Benzene	22.5048	
107-12-0	Propionitrile	109.843	
126-98-7	Methacrylonitrile	21.9167	
994-05-8	tert-Amyl methyl ether	20.7090	
107-06-2	1,2-Dichloroethane	21.0692	
75-85-4	tert-Amyl Alcohol	101.605	
78-83-1	Isobutyl alcohol	218.730	
107-39-1	Diisobutylene	20.3223	
79-01-6	Trichloroethene	20.5397	
108-87-2	Methyl cyclohexane	20.5795	
919-94-8	tert-Amyl Ethylether	20.8468	E
74-95-3	Dibromomethane	22.2019	
78-87-5	1,2-Dichloropropane	21.1941	
75-27-4	Bromodichloromethane	21.1097	
80-62-6	Methyl methacrylate	20.4026	
123-91-1	1,4-Dioxane	623.371	
110-75-8	2-Chloroethylvinyl ether	26.9654	
10061-01-5	cis-1,3-Dichloropropene	20.6877	
111-65-9	Octane	20.5292	
108-88-3	Toluene	21.4062	
107-14-2	Chloroacetonitrile	99.6998	
79-46-9	2-Nitropropane	101.815	
513-88-2	1,1-Dichloro-2-Propanone	106.021	
108-10-1	4-Methyl-2-Pentanone(MIBK)	110.265	
127-18-4	Tetrachloroethene	19.5833	
10061-02-6	trans-1,3-Dichloropropene	20.9998	
97-63-2	Ethyl Methacrylate	20.3966	
79-00-5	1,1,2-Trichloroethane	21.0904	
124-48-1	Chlorodibromomethane	20.8412	
142-28-9	1,3-Dichloropropane	21.5314	
106-93-4	1,2-Dibromoethane	20.5894	
591-78-6	2-Hexanone	109.706	
544-10-5	1-Chlorohexane	20.3373	
108-90-7	Chlorobenzene	20.4500	
100-41-4	Ethylbenzene	19.6110	
630-20-6	1,1,1,2-Tetrachloroethane	20.2279	
108383/106423	mp-Xylene	39.6434	
95-47-6	o-Xylene	19.5471	
100-42-5	Styrene	20.6629	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1236
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info:

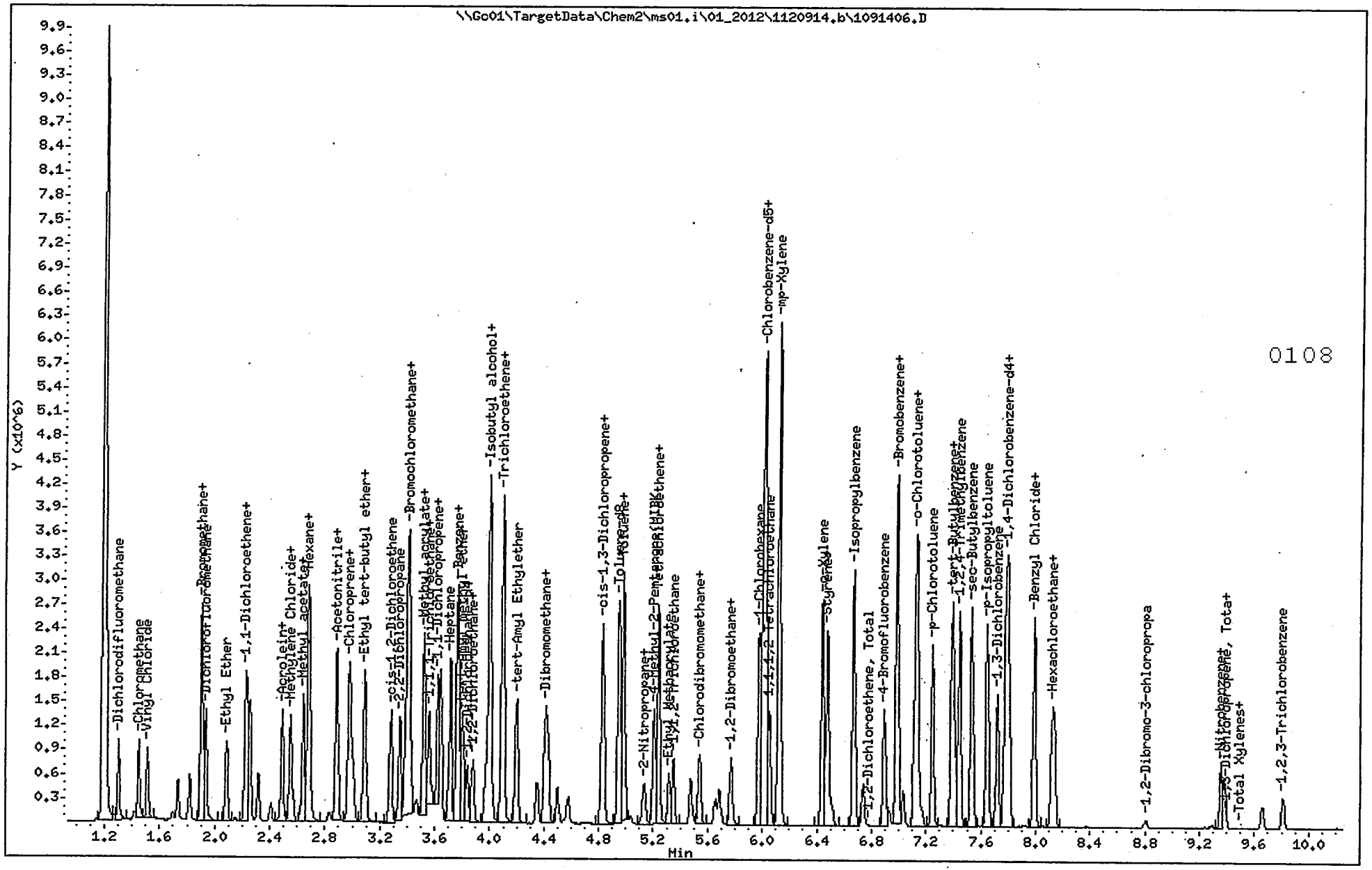
Client SDG: 1120914.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
75-25-2	Bromoform	20.6184	
98-82-8	Isopropylbenzene	19.6802	
108-86-1	Bromobenzene	20.2133	
103-65-1	n-Propylbenzene	19.9139	
79-34-5	1,1,2,2-Tetrachloroethane	22.3028	
95-49-8	o-Chlorotoluene	20.0581	
108-67-8	1,3,5-Trimethylbenzene	19.7654	
96-18-4	1,2,3-Trichloropropane	20.9488	
110-57-6	trans-1,4-Dichloro-2-butene	21.2073	
540-59-0	1,2-Dichloroethene, Total	0.000000	J
106-43-4	p-Chlorotoluene	20.3286	
98-06-6	tert-Butylbenzene	20.1355	
76-01-7	Pentachloroethane	20.6234	
95-63-6	1,2,4-Trimethylbenzene	19.8986	
135-98-8	sec-Butylbenzene	20.9128	
99-87-6	p-Isopropyltoluene	20.3568	
541-73-1	1,3-Dichlorobenzene	20.4746	
106-46-7	1,4-Dichlorobenzene	19.9421	
100-44-7	Benzyl Chloride	20.2160	
104-51-8	n-Butylbenzene	20.5484	
67-72-1	Hexachloroethane	19.8263	
95-50-1	1,2-Dichlorobenzene	20.6823	
96-12-8	1,2-Dibromo-3-chloropropane	20.2419	
98-95-3	Nitrobenzene	217.684	
87-68-3	Hexachlorobutadiene	20.5856	
120-82-1	1,2,4-Trichlorobenzene	20.7165	
91-20-3	Naphthalene	19.9849	
87-61-6	1,2,3-Trichlorobenzene	20.9314	
542-75-6	1,3-Dichloropropene, Total	0.000000	J
1330-20-7	Total Xylenes	0.000000	J
1868-53-7	Dibromofluoromethane	20.7781	
17060-07-0	1,2-Dichloroethane-d4	21.9935	
2037-26-5	Toluene-d8	20.1933	
460-00-4	4-Bromofluorobenzene	20.3845	

Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091406.D
Date : 14-SEP-2012 03:51
Client ID:
Sample Info: 1236;;1;1;3;;;;
Purge Volume: 5.0
Column phase: DB-VRX

Instrument: ms01.i
Operator: DD
Column diameter: 0.25



ALS - Middletown

VOLATILE REPORT SW-846 Method 8260

Data file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091407.D
Lab Smp Id: 1237
Inj Date : 14-SEP-2012 04:13
Operator : DD Inst ID: ms01.i
Smp Info : 1237;;1;1;4;;;;
Misc Info :
Comment :
Method : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Meth Date : 14-Sep-2012 19:04 ms01.i Quant Type: ISTD
Cal Date : 14-SEP-2012 03:51 Cal File: 1091406.D
Als bottle: 8 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ALMDTXP003

Concentration Formula: Amt * DF * Uf * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged
DF	1.000	sample dilution factor
Cpnd Variable		Local Compound Variable

DATA REVIEW
REPORTED
APPROVED
2nd REVIEW CMS 9/14/12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
1 Dichlorodifluoromethane	85	1.302	1.302	(0.326)	1313534	50.0000	50.7344
2 Chloromethane	50	1.444	1.444	(0.362)	1453014	50.0000	48.3353
3 Vinyl Chloride	62	1.509	1.509	(0.378)	1394381	50.0000	50.4686
4 Bromomethane	94	1.733	1.733	(0.434)	543948	50.0000	51.1213
5 Chloroethane	64	1.815	1.815	(0.455)	790682	50.0000	50.2898
6 Pentane	41	1.897	1.897	(0.475)	916239	50.0000	52.8385
7 Trichlorofluoromethane	101	1.902	1.902	(0.477)	1550124	50.0000	51.3589
8 Dichlorofluoromethane	67	1.929	1.929	(0.483)	1988298	50.0000	52.9546
9 Ethyl Ether	74	2.082	2.082	(0.522)	406878	50.0000	53.5855
10 1,1-Dichloroethene	61	2.219	2.219	(0.556)	1597706	50.0000	52.8268
11 Freon 113	101	2.235	2.235	(0.560)	976206	50.0000	52.7086
12 Carbon Disulfide	76	2.251	2.251	(0.564)	3012788	50.0000	51.0057
13 Iodomethane	127	2.311	2.311	(0.579)	543051	50.0000	55.8982
14 Acrolein	56	2.404	2.404	(0.602)	315319	500.000	516.465
15 Isopropyl Alcohol	45	2.459	2.459	(0.616)	77357	250.000	233.942(M)
16 3-Chloro-1-propene	41	2.486	2.486	(0.623)	1706504	50.0000	52.8334
17 Methylene Chloride	84	2.546	2.546	(0.638)	899926	50.0000	50.4166
18 Acetone	58	2.568	2.568	(0.643)	152144	250.000	247.608(H)
19 Methyl acetate	74	2.628	2.628	(0.658)	63752	50.0000	52.3443
20 trans-1,2-Dichloroethene	61	2.639	2.639	(0.661)	1586265	50.0000	51.8765
21 Hexane	57	2.677	2.677	(0.671)	2172641	50.0000	52.9579

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
22	Methyl t-Butyl Ether	73	2.688	2.688	(0.673)	1608987	50.0000	53.3284
23	tert.- Butyl Alcohol	59	2.704	2.704	(0.677)	159810	250.000	258.921
24	Acetonitrile	41	2.835	2.835	(0.710)	190071	250.000	249.031
25	Diisopropyl ether	45	2.884	2.884	(0.723)	3415340	50.0000	53.6784
26	Chloroprene	53	2.966	2.966	(0.743)	1747936	50.0000	53.4136
27	1,1-Dichloroethane	63	2.983	2.983	(0.747)	2024415	50.0000	52.4634
28	Acrylonitrile	53	3.004	3.004	(0.753)	715942	250.000	266.690
29	Ethyl tert-butyl ether	59	3.086	3.086	(0.773)	2402416	50.0000	52.7693
30	n-Propanol	41	3.081	3.081	(0.772)	493576	500.000	516.042(a)
31	Vinyl Acetate	86	3.092	3.092	(0.775)	101761	50.0000	53.5862
32	cis-1,2-Dichloroethene	61	3.277	3.277	(0.821)	1480399	50.0000	51.5202
33	2,2-Dichloropropane	77	3.343	3.343	(0.837)	1453943	50.0000	52.6944
34	Bromochloromethane	128	3.392	3.392	(0.850)	343020	50.0000	52.1333
35	Cyclohexane	84	3.408	3.408	(0.854)	1769453	50.0000	53.6724
36	Chloroform	83	3.419	3.419	(0.857)	1878492	50.0000	50.7732
37	Ethyl Acetate	43	3.457	3.457	(0.866)	387219	50.0000	47.4233
38	Methyl acrylate	55	3.474	3.474	(0.870)	374258	50.0000	52.7423
39	Carbon Tetrachloride	117	3.517	3.517	(0.881)	1389221	50.0000	53.2319
40	Tetrahydrofuran	42	3.517	3.517	(0.881)	561145	250.000	265.106
$ 41	Dibromofluoromethane	113	3.523	3.523	(0.882)	789835	50.0000	50.8755
42	1,1,1-Trichloroethane	97	3.555	3.555	(0.891)	1609290	50.0000	52.4223
43	2-Butanone	72	3.583	3.583	(0.898)	197054	250.000	268.721
44	1,1-Dichloropropene	75	3.621	3.621	(0.907)	1573896	50.0000	52.7430
45	1-Chlorobutane	41	3.643	3.643	(0.913)	1421403	50.0000	52.0586
46	Heptane	71	3.714	3.714	(0.930)	886820	50.0000	54.8793
47	Benzene	78	3.763	3.763	(0.943)	4084996	50.0000	55.9136
48	Propionitrile	54	3.763	3.763	(0.943)	236702	250.000	267.633
49	Methacrylonitrile	67	3.774	3.774	(0.945)	160357	50.0000	49.3984
50	tert-Amyl methyl ether	73	3.801	3.801	(0.952)	1703657	50.0000	48.9698
$ 51	1,2-Dichloroethane-d4	65	3.834	3.834	(0.960)	749469	50.0000	50.3854
52	1,2-Dichloroethane	62	3.872	3.872	(0.970)	947095	50.0000	50.4319
53	tert-Amyl Alcohol	59	3.883	3.883	(0.973)	161648	250.000	239.230
54	Isobutyl alcohol	43	3.965	3.965	(0.993)	837017	500.000	527.837
* 55	Fluorobenzene	96	3.992	3.992	(1.000)	1855731	30.0000	
56	Diisobutylene	57	4.003	4.003	(1.003)	3302153	50.0000	52.5542
57	Trichloroethene	95	4.090	4.090	(1.025)	1099015	50.0000	51.5481
58	Methyl cyclohexane	83	4.101	4.101	(0.684)	1959855	50.0000	54.0559
59	tert-Amyl Ethylether	59	4.199	4.199	(1.052)	1580223	50.0000	50.2894(AH)
60	Dibromomethane	93	4.347	4.347	(1.089)	360432	50.0000	51.2623
61	1,2-Dichloropropane	63	4.407	4.407	(1.104)	1033530	50.0000	52.6281
62	Bromodichloromethane	83	4.429	4.429	(1.109)	1208090	50.0000	52.0221
63	Methyl methacrylate	41	4.499	4.499	(1.127)	426517	50.0000	48.8922
64	1,4-Dioxane	88	4.543	4.543	(1.138)	55203	1250.00	1321.79(M)
65	2-Chloroethylvinyl ether	63	4.745	4.745	(1.189)	4116	50.0000	54.1951(M)
66	cis-1,3-Dichloropropene	75	4.821	4.821	(0.804)	1372530	50.0000	53.4410
67	Octane	85	4.832	4.832	(0.805)	630225	50.0000	53.6214
$ 68	Toluene-d8	98	4.947	4.947	(0.824)	3417393	50.0000	52.2417
69	Toluene	92	4.980	4.980	(0.830)	2561756	50.0000	55.3831
70	Chloroacetonitrile	48	5.034	5.034	(0.839)	50649	250.000	237.166
71	2-Nitropropane	41	5.127	5.127	(0.855)	466788	250.000	242.797
72	1,1-Dichloro-2-Propanone	63	5.138	5.138	(0.856)	31562	250.000	224.737(M)
73	4-Methyl-2-Pentanone(MIBK)	43	5.203	5.203	(0.867)	1922166	250.000	266.429
74	Tetrachloroethene	164	5.242	5.242	(0.874)	837333	50.0000	51.2082
75	trans-1,3-Dichloropropene	75	5.236	5.236	(0.873)	960673	50.0000	53.5218

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	
	76 Ethyl Methacrylate	69	5.312	5.312	(0.885)	626650	50.0000	48.2525	
	77 1,1,2-Trichloroethane	83	5.351	5.351	(0.892)	427396	50.0000	51.8462	
	78 Chlorodibromomethane	129	5.476	5.476	(0.913)	609655	50.0000	52.3780	
	79 1,3-Dichloropropane	76	5.542	5.542	(0.924)	935103	50.0000	52.0763	(M)
	80 1,2-Dibromoethane	107	5.656	5.656	(0.943)	413084	50.0000	48.3234	
	81 2-Hexanone	43	5.771	5.771	(0.962)	1175936	250.000	266.067	
	82 1-Chlorohexane	91	5.978	5.978	(0.996)	1478688	50.0000	53.1958	
*	83 Chlorobenzene-d5	82	6.000	6.000	(1.000)	750283	30.0000		
	84 Chlorobenzene	112	6.016	6.016	(1.003)	2435764	50.0000	51.5993	
	85 Ethylbenzene	106	6.022	6.022	(1.004)	1450178	50.0000	50.0931	
	86 1,1,1,2-Tetrachloroethane	131	6.055	6.055	(1.009)	774280	50.0000	52.5794	
	87 mp-Xylene	106	6.120	6.120	(1.020)	3481454	100.000	105.245	
	88 o-Xylene	106	6.442	6.442	(1.074)	1593375	50.0000	49.4754	
	89 Styrene	104	6.475	6.475	(0.832)	2471688	50.0000	53.9928	
	90 Bromoform	173	6.507	6.507	(0.837)	248981	50.0000	48.7791	
	91 Isopropylbenzene	105	6.671	6.671	(0.858)	4364029	50.0000	56.5513	
$	92 4-Bromofluorobenzene	174	6.895	6.895	(0.886)	706504	50.0000	49.5451	
	93 Bromobenzene	156	6.982	6.982	(0.898)	751988	50.0000	51.5478	
	94 n-Propylbenzene	120	6.988	6.988	(0.898)	1125163	50.0000	53.4408	
	95 1,1,2,2-Tetrachloroethane	83	7.031	7.031	(0.904)	451837	50.0000	53.2084	
	96 o-Chlorotoluene	91	7.119	7.119	(0.915)	3276463	50.0000	52.3813	
	97 1,3,5-Trimethylbenzene	105	7.135	7.135	(0.917)	3240386	50.0000	52.4710	
	98 1,2,3-Trichloropropane	110	7.151	7.151	(0.919)	126730	50.0000	52.2260	
	99 trans-1,4-Dichloro-2-butene	53	7.173	7.173	(0.922)	74686	50.0000	45.0448	(MH)
M	100 1,2-Dichloroethene, Total	61				3066664	100.000		(a)
	101 p-Chlorotoluene	91	7.249	7.249	(0.932)	2930973	50.0000	52.5181	
	102 tert-Butylbenzene	134	7.391	7.391	(0.950)	735458	50.0000	52.6410	
	103 Pentachloroethane	117	7.413	7.413	(0.953)	520783	50.0000	52.8717	
	104 1,2,4-Trimethylbenzene	105	7.446	7.446	(0.957)	3062224	50.0000	51.3967	
	105 sec-Butylbenzene	105	7.533	7.533	(0.968)	4043296	50.0000	54.6771	
	106 p-Isopropyltoluene	134	7.648	7.648	(0.983)	810821	50.0000	54.0374	
	107 1,3-Dichlorobenzene	146	7.719	7.719	(0.992)	1381802	50.0000	52.3532	
*	108 1,4-Dichlorobenzene-d4	152	7.779	7.779	(1.000)	454343	30.0000		
	109 1,4-Dichlorobenzene	146	7.790	7.790	(1.001)	1323796	50.0000	51.2567	
	110 Benzyl Chloride	126	7.992	7.992	(1.027)	73481	50.0000	43.2708	
	111 n-Butylbenzene	134	7.992	7.992	(1.027)	691622	50.0000	55.3980	
	112 Hexachloroethane	117	8.117	8.117	(1.043)	454637	50.0000	47.1714	
	113 1,2-Dichlorobenzene	146	8.139	8.139	(1.046)	1017853	50.0000	51.6980	
	114 1,2-Dibromo-3-chloropropane	75	8.805	8.805	(1.132)	45836	50.0000	48.6204	
	115 Nitrobenzene	77	9.290	9.290	(1.194)	40427	500.000	492.344	
	116 Hexachlorobutadiene	225	9.356	9.356	(1.203)	274457	50.0000	52.0533	
	117 1,2,4-Trichlorobenzene	180	9.388	9.388	(1.207)	341635	50.0000	50.6625	
	118 Naphthalene	128	9.661	9.661	(1.242)	390173	50.0000	46.4713	
	119 1,2,3-Trichlorobenzene	180	9.814	9.814	(1.262)	206111	50.0000	51.2913	
M	120 1,3-Dichloropropene, Total	75				2333203	100.000		(a)
M	121 Total Xylenes	106				5074829	150.000		(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

QC Flag Legend

H - Operator selected an alternate compound hit.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms01.i
Lab File ID: 1091407.D
Lab Smp Id: 1237
Analysis Type: VOA
Quant Type: ISTD
Operator: DD
Method File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Misc Info:

Calibration Date: 14-SEP-2012
Calibration Time: 04:13

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	1855731	927866	3711462	1855731	0.00
83 Chlorobenzene-d5	750283	375142	1500566	750283	0.00
108 1,4-Dichlorobenze	454343	227172	908686	454343	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	3.99	3.49	4.49	3.99	0.00
83 Chlorobenzene-d5	6.00	5.50	6.50	6.00	0.00
108 1,4-Dichlorobenze	7.78	7.28	8.28	7.78	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1237
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info:

Client SDG: 1120914.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
75-71-8	Dichlorodifluoromethane	50.7344	
74-87-3	Chloromethane	48.3353	
75-01-4	Vinyl Chloride	50.4686	
74-83-9	Bromomethane	51.1213	
75-00-3	Chloroethane	50.2898	
109-66-0	Pentane	52.8385	
75-69-4	Trichlorofluoromethane	51.3589	
75-43-4	Dichlorofluoromethane	52.9546	
60-29-7	Ethyl Ether	53.5855	
75-35-4	1,1-Dichloroethene	52.8268	
76-13-1	Freon 113	52.7086	
75-15-0	Carbon Disulfide	51.0057	
74-88-4	Iodomethane	55.8982	
107-02-8	Acrolein	516.465	
67-63-0	Isopropyl Alcohol	233.942	
107-05-1	3-Chloro-1-propene	52.8334	
75-09-2	Methylene Chloride	50.4166	
67-64-1	Acetone	247.608	
79-20-9	Methyl acetate	52.3443	
156-60-5	trans-1,2-Dichloroethene	51.8765	
110-54-3	Hexane	52.9579	
1634-04-4	Methyl t-Butyl Ether	53.3284	
75-65-0	tert.- Butyl Alcohol	258.921	
75-05-8	Acetonitrile	249.031	
108-20-3	Diisopropyl ether	53.6784	
126-99-8	Chloroprene	53.4136	
75-34-3	1,1-Dichloroethane	52.4634	
107-13-1	Acrylonitrile	266.690	
637-92-3	Ethyl tert-butyl ether	52.7693	
71-23-8	n-Propanol	516.042	J
108-05-4	Vinyl Acetate	53.5862	
156-59-2	cis-1,2-Dichloroethene	51.5202	
594-20-7	2,2-Dichloropropane	52.6944	
74-97-5	Bromochloromethane	52.1333	
110-82-7	Cyclohexane	53.6724	
67-66-3	Chloroform	50.7732	
141-78-6	Ethyl Acetate	47.4233	
96-33-3	Methyl acrylate	52.7423	
56-23-5	Carbon Tetrachloride	53.2319	
109-99-9	Tetrahydrofuran	265.106	
71-55-6	1,1,1-Trichloroethane	52.4223	
78-93-3	2-Butanone	268.721	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1237
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info:

Client SDG: 1120914.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
563-58-6	1,1-Dichloropropene	52.7430	
109-69-3	1-Chlorobutane	52.0586	
142-82-5	Heptane	54.8793	
71-43-2	Benzene	55.9136	
107-12-0	Propionitrile	267.633	
126-98-7	Methacrylonitrile	49.3984	
994-05-8	tert-Amyl methyl ether	48.9698	
107-06-2	1,2-Dichloroethane	50.4319	
75-85-4	tert-Amyl Alcohol	239.230	
78-83-1	Isobutyl alcohol	527.837	
107-39-1	Diisobutylene	52.5542	
79-01-6	Trichloroethene	51.5481	
108-87-2	Methyl cyclohexane	54.0559	
919-94-8	tert-Amyl Ethylether	50.2894	E
74-95-3	Dibromomethane	51.2623	
78-87-5	1,2-Dichloropropane	52.6281	
75-27-4	Bromodichloromethane	52.0221	
80-62-6	Methyl methacrylate	48.8922	
123-91-1	1,4-Dioxane	1321.79	
110-75-8	2-Chloroethylvinyl ether	54.1951	
10061-01-5	cis-1,3-Dichloropropene	53.4410	
111-65-9	Octane	53.6214	
108-88-3	Toluene	55.3831	
107-14-2	Chloroacetonitrile	237.166	
79-46-9	2-Nitropropane	242.797	
513-88-2	1,1-Dichloro-2-Propanone	224.737	
108-10-1	4-Methyl-2-Pentanone(MIBK)	266.429	
127-18-4	Tetrachloroethene	51.2082	
10061-02-6	trans-1,3-Dichloropropene	53.5218	
97-63-2	Ethyl Methacrylate	48.2525	
79-00-5	1,1,2-Trichloroethane	51.8462	
124-48-1	Chlorodibromomethane	52.3780	
142-28-9	1,3-Dichloropropane	52.0763	
106-93-4	1,2-Dibromoethane	48.3234	
591-78-6	2-Hexanone	266.067	
544-10-5	1-Chlorohexane	53.1958	
108-90-7	Chlorobenzene	51.5993	
100-41-4	Ethylbenzene	50.0931	
630-20-6	1,1,1,2-Tetrachloroethane	52.5794	
108383/106423	mp-Xylene	105.245	
95-47-6	o-Xylene	49.4754	
100-42-5	Styrene	53.9928	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1237
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info:

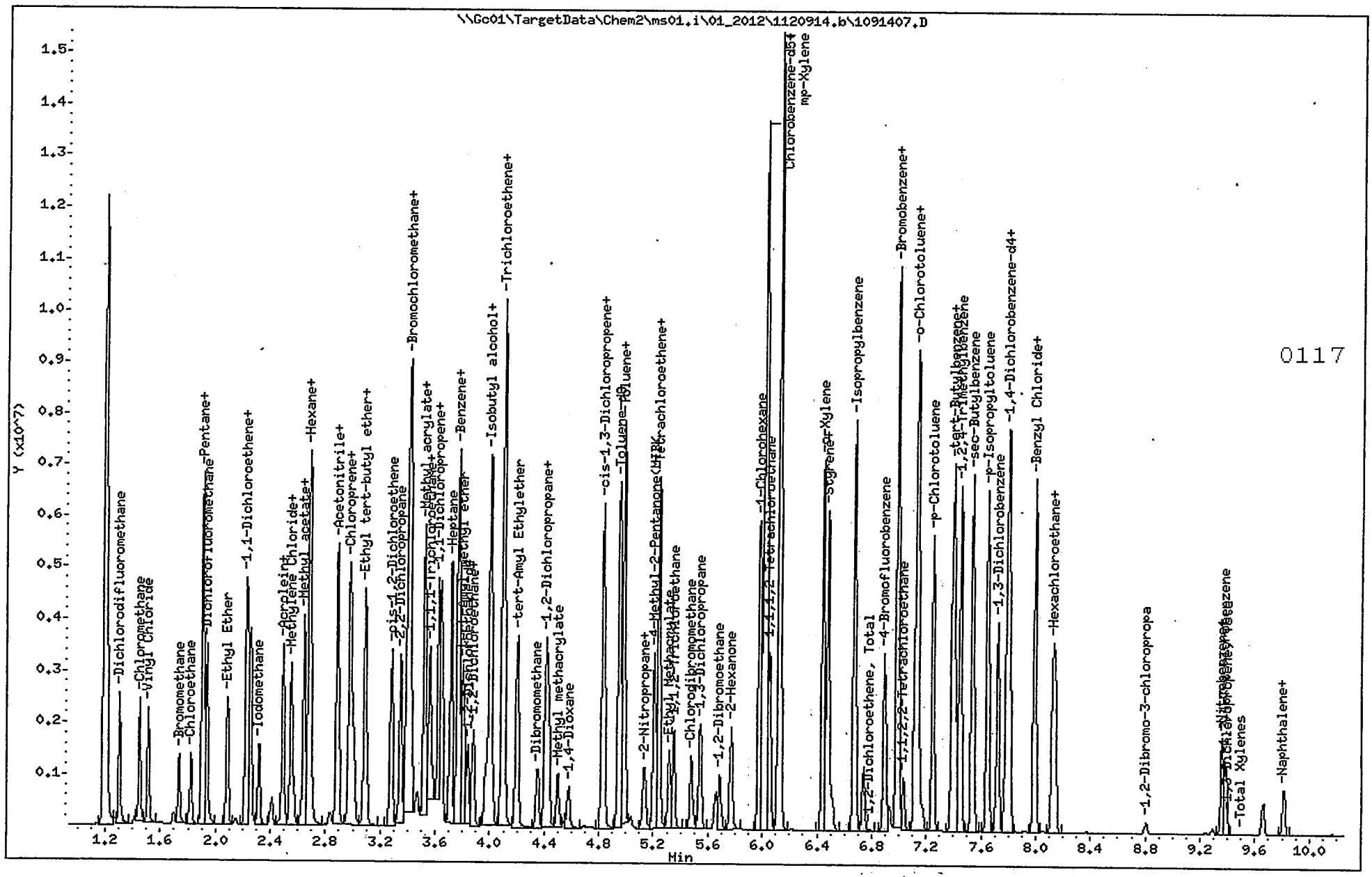
Client SDG: 1120914.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
75-25-2	Bromoform	48.7791	
98-82-8	Isopropylbenzene	56.5513	
108-86-1	Bromobenzene	51.5478	
103-65-1	n-Propylbenzene	53.4408	
79-34-5	1,1,2,2-Tetrachloroethane	53.2084	
95-49-8	o-Chlorotoluene	52.3813	
108-67-8	1,3,5-Trimethylbenzene	52.4710	
96-18-4	1,2,3-Trichloropropane	52.2260	
110-57-6	trans-1,4-Dichloro-2-butene	45.0448	
540-59-0	1,2-Dichloroethene, Total	0.000000	J
106-43-4	p-Chlorotoluene	52.5181	
98-06-6	tert-Butylbenzene	52.6410	
76-01-7	Pentachloroethane	52.8717	
95-63-6	1,2,4-Trimethylbenzene	51.3967	
135-98-8	sec-Butylbenzene	54.6771	
99-87-6	p-Isopropyltoluene	54.0374	
541-73-1	1,3-Dichlorobenzene	52.3532	
106-46-7	1,4-Dichlorobenzene	51.2567	
100-44-7	Benzyl Chloride	43.2708	
104-51-8	n-Butylbenzene	55.3980	
67-72-1	Hexachloroethane	47.1714	
95-50-1	1,2-Dichlorobenzene	51.6980	
96-12-8	1,2-Dibromo-3-chloropropane	48.6204	
98-95-3	Nitrobenzene	492.344	
87-68-3	Hexachlorobutadiene	52.0533	
120-82-1	1,2,4-Trichlorobenzene	50.6625	
91-20-3	Naphthalene	46.4713	
87-61-6	1,2,3-Trichlorobenzene	51.2913	
542-75-6	1,3-Dichloropropene, Total	0.000000	J
1330-20-7	Total Xylenes	0.000000	J
1868-53-7	Dibromofluoromethane	50.8755	
17060-07-0	1,2-Dichloroethane-d4	50.3854	
2037-26-5	Toluene-d8	52.2417	
460-00-4	4-Bromofluorobenzene	49.5451	

Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091407.D
Date : 14-SEP-2012 04:13
Client ID:
Sample Info: 1237;;1;1;4;;;;
Purge Volume: 5.0
Column phase: DB-VRX

Instrument: ms01.i
Operator: DD
Column diameter: 0.25



ALS - Middletown

VOLATILE REPORT SW-846 Method 8260

Data file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091408.D
Lab Smp Id: 1238
Inj Date : 14-SEP-2012 04:35
Operator : DD Inst ID: ms01.i
Smp Info : 1238;;1;1;5;;;;
Misc Info :
Comment :
Method : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Meth Date : 14-Sep-2012 19:04 ms01.i Quant Type: ISTD
Cal Date : 14-SEP-2012 04:13 Cal File: 1091407.D
Als bottle: 9 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ALMDTXP003

Concentration Formula: Amt * DF * Uf * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged
DF	1.000	sample dilution factor
Cpnd Variable		Local Compound Variable

DATA REVIEW
REPORTED
APPROVED
2nd REVIEW CHS 9/14/12

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
1	Dichlorodifluoromethane	85	1.302	1.302	(0.326)	2494701	100.000	94.5333
2	Chloromethane	50	1.444	1.444	(0.362)	2850909	100.000	93.0430
3	Vinyl Chloride	62	1.504	1.504	(0.377)	2720559	100.000	96.6058
4	Bromomethane	94	1.728	1.728	(0.433)	1159216	100.000	106.884
5	Chloroethane	64	1.815	1.815	(0.455)	1559898	100.000	97.8843
6	Pentane	41	1.897	1.897	(0.475)	1753400	100.000	99.2038
7	Trichlorofluoromethane	101	1.902	1.902	(0.477)	2979961	100.000	96.8647
8	Dichlorofluoromethane	67	1.929	1.929	(0.483)	3871844	100.000	101.169
9	Ethyl Ether	74	2.082	2.082	(0.522)	809288	100.000	104.566
10	1,1-Dichloroethene	61	2.219	2.219	(0.556)	3100633	100.000	100.580
11	Freon 113	101	2.230	2.230	(0.559)	1898262	100.000	100.555
12	Carbon Disulfide	76	2.251	2.251	(0.564)	5768279	100.000	95.8080
13	Iodomethane	127	2.311	2.311	(0.579)	1050105	100.000	106.046
14	Acrolein	56	2.404	2.404	(0.602)	671996	1000.00	1079.85
15	Isopropyl Alcohol	45	2.459	2.459	(0.616)	165481	500.000	486.579(M)
16	3-Chloro-1-propene	41	2.486	2.486	(0.623)	3371197	100.000	102.398
17	Methylene Chloride	84	2.546	2.546	(0.638)	1780074	100.000	98.4264
18	Acetone	58	2.562	2.562	(0.642)	311479	500.000	500.696
19	Methyl acetate	74	2.628	2.628	(0.658)	122665	100.000	99.3731(Q)
20	trans-1,2-Dichloroethene	61	2.639	2.639	(0.661)	3082813	100.000	98.9117
21	Hexane	57	2.677	2.677	(0.671)	4230100	100.000	101.158

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
	22 Methyl t-Butyl Ether	73	2.682	2.682	(0.672)	3304324	100.000	107.447
	23 tert.- Butyl Alcohol	59	2.704	2.704	(0.677)	326177	500.000	518.469
	24 Acetonitrile	41	2.830	2.830	(0.709)	394764	500.000	517.339
	25 Diisopropyl ether	45	2.884	2.884	(0.723)	6787229	100.000	104.656
	26 Chloroprene	53	2.966	2.966	(0.743)	3437146	100.000	103.046
	27 1,1-Dichloroethane	63	2.983	2.983	(0.747)	3997109	100.000	101.627
	28 Acrylonitrile	53	3.004	3.004	(0.753)	1442571	500.000	527.195
	29 Ethyl tert-butyl ether	59	3.081	3.081	(0.772)	4973248	100.000	107.171
	30 n-Propanol	41	3.081	3.081	(0.772)	1018778	1000.00	1045.00
	31 Vinyl Acetate	86	3.092	3.092	(0.775)	211104	100.000	109.062
	32 cis-1,2-Dichloroethene	61	3.277	3.277	(0.821)	2941794	100.000	100.442
	33 2,2-Dichloropropane	77	3.343	3.343	(0.837)	2873933	100.000	102.188
	34 Bromochloromethane	128	3.392	3.392	(0.850)	690818	100.000	103.006
	35 Cyclohexane	84	3.408	3.408	(0.854)	3400863	100.000	101.206
	36 Chloroform	83	3.419	3.419	(0.857)	3699990	100.000	98.4290
	37 Ethyl Acetate	43	3.457	3.457	(0.866)	845266	100.000	100.595
	38 Methyl acrylate	55	3.474	3.474	(0.870)	751444	100.000	103.894
	39 Carbon Tetrachloride	117	3.517	3.517	(0.881)	2738891	100.000	102.963
	40 Tetrahydrofuran	42	3.517	3.517	(0.881)	1154199	500.000	534.972
$	41 Dibromofluoromethane	113	3.523	3.523	(0.882)	1562581	100.000	99.9789
	42 1,1,1-Trichloroethane	97	3.555	3.555	(0.891)	3200550	100.000	102.285
	43 2-Butanone	72	3.583	3.583	(0.897)	402260	500.000	538.181
	44 1,1-Dichloropropene	75	3.621	3.621	(0.907)	3076120	100.000	101.134
	45 1-Chlorobutane	41	3.643	3.643	(0.913)	2772728	100.000	99.6295
	46 Heptane	71	3.714	3.714	(0.930)	1719162	100.000	104.375
	47 Benzene	78	3.763	3.763	(0.943)	7950142	100.000	106.759
	48 Propionitrile	54	3.763	3.763	(0.943)	452149	500.000	501.561
	49 Methacrylonitrile	67	3.774	3.774	(0.945)	336446	100.000	101.717 (Q)
	50 tert-Amyl methyl ether	73	3.796	3.796	(0.951)	3564723	100.000	99.5592
$	51 1,2-Dichloroethane-d4	65	3.834	3.834	(0.960)	1492367	100.000	100.045
	52 1,2-Dichloroethane	62	3.872	3.872	(0.970)	1906472	100.000	99.7021
	53 tert-Amyl Alcohol	59	3.877	3.877	(0.971)	346845	500.000	492.979 (Q)
	54 Isobutyl alcohol	43	3.965	3.965	(0.993)	1747192	1000.00	1080.97
*	55 Fluorobenzene	96	3.992	3.992	(1.000)	1891514	30.0000	
	56 Diisobutylene	57	4.003	4.003	(1.003)	6250304	100.000	99.1364
	57 Trichloroethene	95	4.090	4.090	(1.025)	2175094	100.000	100.090
	58 Methyl cyclohexane	83	4.101	4.101	(0.684)	3745147	100.000	101.784
	59 tert-Amyl Ethylether	59	4.199	4.199	(1.052)	3368081	100.000	105.159 (A)
	60 Dibromomethane	93	4.347	4.347	(1.089)	741510	100.000	103.466
	61 1,2-Dichloropropane	63	4.407	4.407	(1.104)	2090271	100.000	104.425
	62 Bromodichloromethane	83	4.429	4.429	(1.109)	2436301	100.000	102.926
	63 Methyl methacrylate	41	4.499	4.499	(1.127)	898721	100.000	100.036
	64 1,4-Dioxane	88	4.543	4.543	(1.138)	102527	2500.00	2466.56 (M)
	65 2-Chloroethylvinyl ether	63	4.740	4.740	(1.187)	6633	100.000	86.6519 (M)
	66 cis-1,3-Dichloropropene	75	4.821	4.821	(0.804)	2808140	100.000	107.736
	67 Octane	85	4.832	4.832	(0.805)	1235996	100.000	103.621
$	68 Toluene-d8	98	4.947	4.947	(0.825)	6596693	100.000	101.085
	69 Toluene	92	4.980	4.980	(0.830)	5047591	100.000	107.526
	70 Chloroacetonitrile	48	5.034	5.034	(0.839)	106891	500.000	493.188
	71 2-Nitropropane	41	5.127	5.127	(0.855)	982144	500.000	495.129
	72 1,1-Dichloro-2-Propanone	63	5.138	5.138	(0.856)	72094	500.000	484.907 (M)
	73 4-Methyl-2-Pentanone (MIBK)	43	5.203	5.203	(0.867)	3994757	500.000	545.594
	74 Tetrachloroethene	164	5.242	5.242	(0.874)	1636680	100.000	98.6267
	75 trans-1,3-Dichloropropene	75	5.236	5.236	(0.873)	1988986	100.000	109.188

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
	76 Ethyl Methacrylate	69	5.318	5.318	(0.886)	1324151	100.000	98.5002
	77 1,1,2-Trichloroethane	83	5.345	5.345	(0.891)	863498	100.000	103.214
	78 Chlorodibromomethane	129	5.476	5.476	(0.913)	1240351	100.000	105.002
	79 1,3-Dichloropropane	76	5.542	5.542	(0.924)	1896792	100.000	104.085 (QM)
	80 1,2-Dibromoethane	107	5.656	5.656	(0.943)	871784	100.000	99.6933
	81 2-Hexanone	43	5.765	5.765	(0.961)	2488239	500.000	554.738
	82 1-Chlorohexane	91	5.978	5.978	(0.996)	2913009	100.000	103.260
*	83 Chlorobenzene-d5	82	6.000	6.000	(1.000)	761440	30.0000	
	84 Chlorobenzene	112	6.016	6.016	(1.003)	4814990	100.000	100.506
	85 Ethylbenzene	106	6.022	6.022	(1.004)	2869192	100.000	96.7003
	86 1,1,1,2-Tetrachloroethane	131	6.055	6.055	(1.009)	1579994	100.000	105.721
	87 mp-Xylene	106	6.120	6.120	(1.020)	6830016	200.000	205.039
	88 o-Xylene	106	6.442	6.442	(1.074)	3233074	100.000	97.8537
	89 Styrene	104	6.475	6.475	(0.832)	4990516	100.000	106.332
	90 Bromoform	173	6.507	6.507	(0.837)	515090	100.000	96.4135
	91 Isopropylbenzene	105	6.671	6.671	(0.858)	8461041	100.000	109.902
$	92 4-Bromofluorobenzene	174	6.895	6.895	(0.886)	1422723	100.000	96.9516
	93 Bromobenzene	156	6.982	6.982	(0.898)	1519612	100.000	101.603
	94 n-Propylbenzene	120	6.988	6.988	(0.898)	2214823	100.000	102.606
	95 1,1,2,2-Tetrachloroethane	83	7.031	7.031	(0.904)	921116	100.000	105.801
	96 o-Chlorotoluene	91	7.119	7.119	(0.915)	6468975	100.000	100.875
	97 1,3,5-Trimethylbenzene	105	7.135	7.135	(0.917)	6346615	100.000	100.639
	98 1,2,3-Trichloropropane	110	7.151	7.151	(0.919)	262219	100.000	105.402
	99 trans-1,4-Dichloro-2-butene	53	7.173	7.173	(0.922)	166495	100.000	92.1897 (Q)
M	100 1,2-Dichloroethene, Total	61				6024607	200.000	(a)
	101 p-Chlorotoluene	91	7.249	7.249	(0.932)	5855806	100.000	102.343
	102 tert-Butylbenzene	134	7.391	7.391	(0.950)	1449217	100.000	101.176
	103 Pentachloroethane	117	7.413	7.413	(0.953)	1056969	100.000	104.666
	104 1,2,4-Trimethylbenzene	105	7.446	7.446	(0.957)	6075100	100.000	99.3766
	105 sec-Butylbenzene	105	7.533	7.533	(0.968)	7784416	100.000	102.677
	106 p-Isopropyltoluene	134	7.648	7.648	(0.983)	1592237	100.000	103.503
	107 1,3-Dichlorobenzene	146	7.719	7.719	(0.992)	2794779	100.000	103.281
*	108 1,4-Dichlorobenzene-d4	152	7.779	7.779	(1.000)	465809	30.0000	(Q)
	109 1,4-Dichlorobenzene	146	7.790	7.790	(1.001)	2683952	100.000	101.363
	110 Benzyl Chloride	126	7.992	7.992	(1.027)	176640	100.000	93.9826 (Q)
	111 n-Butylbenzene	134	7.992	7.992	(1.027)	1352272	100.000	105.649
	112 Hexachloroethane	117	8.117	8.117	(1.043)	962824	100.000	93.1524
	113 1,2-Dichlorobenzene	146	8.139	8.139	(1.046)	2110384	100.000	104.550
	114 1,2-Dibromo-3-chloropropane	75	8.805	8.805	(1.132)	96058	100.000	97.6415
	115 Nitrobenzene	77	9.290	9.290	(1.194)	99724	1000.00	1000.91
	116 Hexachlorobutadiene	225	9.356	9.356	(1.203)	526734	100.000	97.4410
	117 1,2,4-Trichlorobenzene	180	9.383	9.383	(1.206)	729673	100.000	105.543
	118 Naphthalene	128	9.661	9.661	(1.242)	875390	100.000	98.4199
	119 1,2,3-Trichlorobenzene	180	9.814	9.814	(1.262)	442046	100.000	107.297
M	120 1,3-Dichloropropene, Total	75				4797126	200.000	(a)
M	121 Total Xylenes	106				10063090	300.000	(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.

QC Flag Legend

M - Compound response manually integrated.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms01.i
Lab File ID: 1091408.D
Lab Smp Id: 1238
Analysis Type: VOA
Quant Type: ISTD
Operator: DD
Method File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Misc Info:

Calibration Date: 14-SEP-2012
Calibration Time: 04:13

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	1855731	927866	3711462	1891514	1.93
83 Chlorobenzene-d5	750283	375142	1500566	761440	1.49
108 1,4-Dichlorobenze	454343	227172	908686	465809	2.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	3.99	3.49	4.49	3.99	0.00
83 Chlorobenzene-d5	6.00	5.50	6.50	6.00	0.00
108 1,4-Dichlorobenze	7.78	7.28	8.28	7.78	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1238
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info:

Client SDG: 1120914.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
75-71-8	Dichlorodifluoromethane	94.5333	
74-87-3	Chloromethane	93.0430	
75-01-4	Vinyl Chloride	96.6058	
74-83-9	Bromomethane	106.884	
75-00-3	Chloroethane	97.8843	
109-66-0	Pentane	99.2038	
75-69-4	Trichlorofluoromethane	96.8647	
75-43-4	Dichlorofluoromethane	101.169	
60-29-7	Ethyl Ether	104.566	
75-35-4	1,1-Dichloroethene	100.580	
76-13-1	Freon 113	100.555	
75-15-0	Carbon Disulfide	95.8080	
74-88-4	Iodomethane	106.046	
107-02-8	Acrolein	1079.85	
67-63-0	Isopropyl Alcohol	486.579	
107-05-1	3-Chloro-1-propene	102.398	
75-09-2	Methylene Chloride	98.4264	
67-64-1	Acetone	500.696	
79-20-9	Methyl acetate	99.3731	
156-60-5	trans-1,2-Dichloroethene	98.9117	
110-54-3	Hexane	101.158	
1634-04-4	Methyl t-Butyl Ether	107.447	
75-65-0	tert - Butyl Alcohol	518.469	
75-05-8	Acetonitrile	517.339	
108-20-3	Diisopropyl ether	104.656	
126-99-8	Chloroprene	103.046	
75-34-3	1,1-Dichloroethane	101.627	
107-13-1	Acrylonitrile	527.195	
637-92-3	Ethyl tert-butyl ether	107.171	
71-23-8	n-Propanol	1045.00	
108-05-4	Vinyl Acetate	109.062	
156-59-2	cis-1,2-Dichloroethene	100.442	
594-20-7	2,2-Dichloropropane	102.188	
74-97-5	Bromochloromethane	103.006	
110-82-7	Cyclohexane	101.206	
67-66-3	Chloroform	98.4290	
141-78-6	Ethyl Acetate	100.595	
96-33-3	Methyl acrylate	103.894	
56-23-5	Carbon Tetrachloride	102.963	
109-99-9	Tetrahydrofuran	534.972	
71-55-6	1,1,1-Trichloroethane	102.285	
78-93-3	2-Butanone	538.181	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1238
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info:

Client SDG: 1120914.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
563-58-6	1,1-Dichloropropene	101.134	
109-69-3	1-Chlorobutane	99.6295	
142-82-5	Heptane	104.375	
71-43-2	Benzene	106.759	
107-12-0	Propionitrile	501.561	
126-98-7	Methacrylonitrile	101.717	
994-05-8	tert-Amyl methyl ether	99.5592	
107-06-2	1,2-Dichloroethane	99.7021	
75-85-4	tert-Amyl Alcohol	492.979	
78-83-1	Isobutyl alcohol	1080.97	
107-39-1	Diisobutylene	99.1364	
79-01-6	Trichloroethene	100.090	
108-87-2	Methyl cyclohexane	101.784	
919-94-8	tert-Amyl Ethylether	105.159	E
74-95-3	Dibromomethane	103.466	
78-87-5	1,2-Dichloropropane	104.425	
75-27-4	Bromodichloromethane	102.926	
80-62-6	Methyl methacrylate	100.036	
123-91-1	1,4-Dioxane	2466.56	
110-75-8	2-Chloroethylvinyl ether	86.6519	
10061-01-5	cis-1,3-Dichloropropene	107.736	
111-65-9	Octane	103.621	
108-88-3	Toluene	107.526	
107-14-2	Chloroacetonitrile	493.188	
79-46-9	2-Nitropropane	495.129	
513-88-2	1,1-Dichloro-2-Propanone	484.907	
108-10-1	4-Methyl-2-Pentanone(MIBK)	545.594	
127-18-4	Tetrachloroethene	98.6267	
10061-02-6	trans-1,3-Dichloropropene	109.188	
97-63-2	Ethyl Methacrylate	98.5002	
79-00-5	1,1,2-Trichloroethane	103.214	
124-48-1	Chlorodibromomethane	105.002	
142-28-9	1,3-Dichloropropane	104.085	
106-93-4	1,2-Dibromoethane	99.6933	
591-78-6	2-Hexanone	554.738	
544-10-5	1-Chlorohexane	103.260	
108-90-7	Chlorobenzene	100.506	
100-41-4	Ethylbenzene	96.7003	
630-20-6	1,1,1,2-Tetrachloroethane	105.721	
108383/106423	mp-Xylene	205.039	
95-47-6	o-Xylene	97.8537	
100-42-5	Styrene	106.332	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1238
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info:

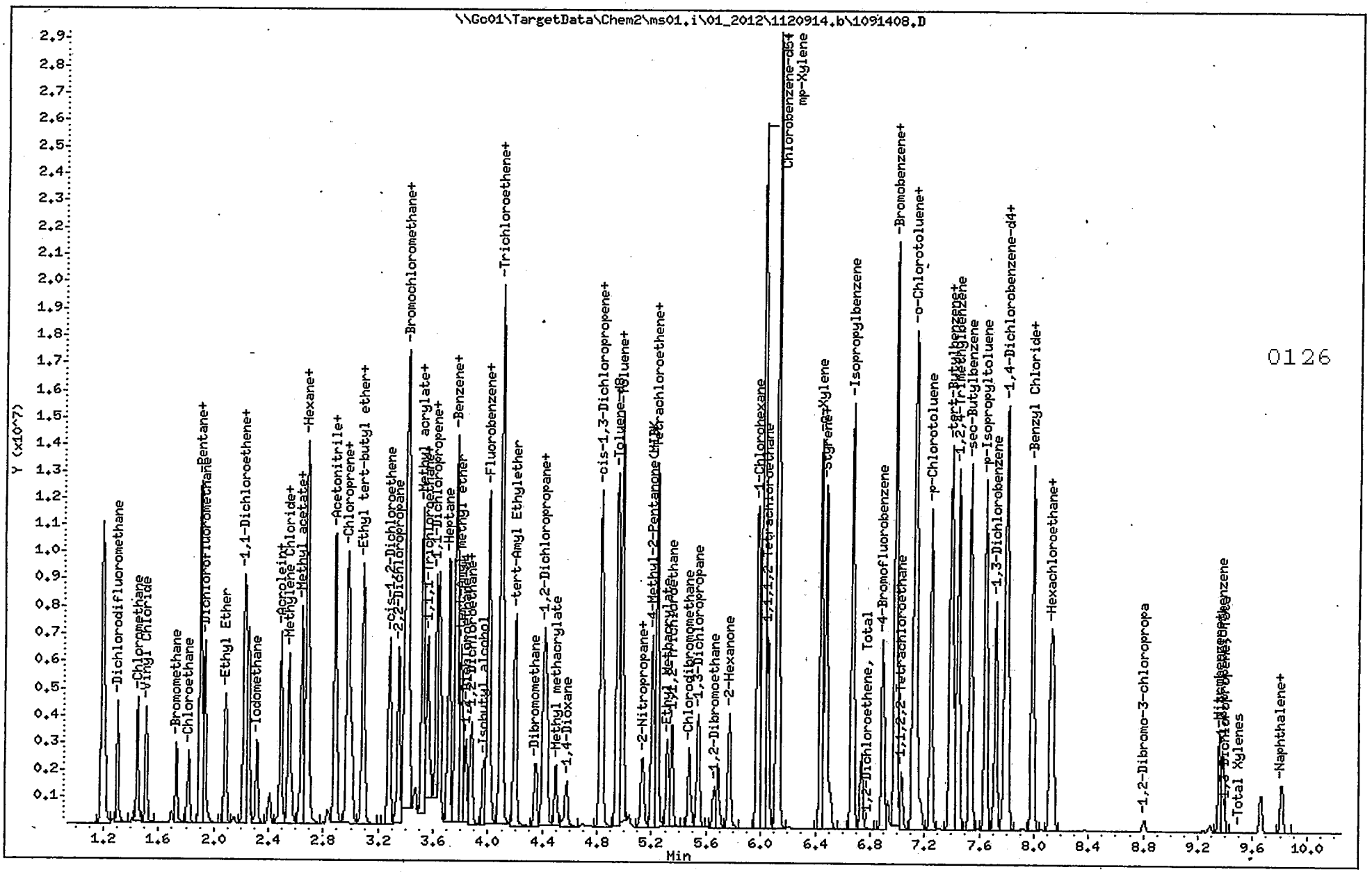
Client SDG: 1120914.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
75-25-2	Bromoform	96.4135	
98-82-8	Isopropylbenzene	109.902	
108-86-1	Bromobenzene	101.603	
103-65-1	n-Propylbenzene	102.606	
79-34-5	1,1,2,2-Tetrachloroethane	105.801	
95-49-8	o-Chlorotoluene	100.875	
108-67-8	1,3,5-Trimethylbenzene	100.639	
96-18-4	1,2,3-Trichloropropane	105.402	
110-57-6	trans-1,4-Dichloro-2-butene	92.1897	
540-59-0	1,2-Dichloroethene, Total	0.000000	J
106-43-4	p-Chlorotoluene	102.343	
98-06-6	tert-Butylbenzene	101.176	
76-01-7	Pentachloroethane	104.666	
95-63-6	1,2,4-Trimethylbenzene	99.3766	
135-98-8	sec-Butylbenzene	102.677	
99-87-6	p-Isopropyltoluene	103.503	
541-73-1	1,3-Dichlorobenzene	103.281	
106-46-7	1,4-Dichlorobenzene	101.363	
100-44-7	Benzyl Chloride	93.9826	
104-51-8	n-Butylbenzene	105.649	
67-72-1	Hexachloroethane	93.1524	
95-50-1	1,2-Dichlorobenzene	104.550	
96-12-8	1,2-Dibromo-3-chloropropane	97.6415	
98-95-3	Nitrobenzene	1000.91	
87-68-3	Hexachlorobutadiene	97.4410	
120-82-1	1,2,4-Trichlorobenzene	105.543	
91-20-3	Naphthalene	98.4199	
87-61-6	1,2,3-Trichlorobenzene	107.297	
542-75-6	1,3-Dichloropropene, Total	0.000000	J
1330-20-7	Total Xylenes	0.000000	J
1868-53-7	Dibromofluoromethane	99.9789	
17060-07-0	1,2-Dichloroethane-d4	100.045	
2037-26-5	Toluene-d8	101.085	
460-00-4	4-Bromofluorobenzene	96.9516	

Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091408.D
Date : 14-SEP-2012 04:35
Client ID:
Sample Info: 1238;;1;1;5;;;;
Purge Volume: 5.0
Column phase: DB-VRX

Instrument: ms01.i
Operator: DD
Column diameter: 0.25



ALS - Middletown

VOLATILE REPORT SW-846 Method 8260

Data file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091409.D
Lab Smp Id: 1239
Inj Date : 14-SEP-2012 04:58
Operator : DD Inst ID: ms01.i
Smp Info : 1239;;1;1;6;;;;
Misc Info :
Comment :
Method : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Meth Date : 14-Sep-2012 19:04 ms01.i Quant Type: ISTD
Cal Date : 14-SEP-2012 04:35 Cal File: 1091408.D
Als bottle: 10 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ALMDTXP003

Concentration Formula: Amt * DF * Uf * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged
DF	1.000	sample dilution factor
Cpnd Variable		Local Compound Variable

DATA REVIEW
REPORTED
APPROVED 9/14/12
2nd REVIEW 9/14/12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
1 Dichlorodifluoromethane	85	1.302	1.302	(0.326)	5243799	200.000	195.847
2 Chloromethane	50	1.444	1.444	(0.362)	5961675	200.000	191.766
3 Vinyl Chloride	62	1.509	1.509	(0.378)	5699927	200.000	199.489
4 Bromomethane	94	1.727	1.727	(0.433)	2451374	200.000	222.773(A)
5 Chloroethane	64	1.815	1.815	(0.455)	3238697	200.000	200.916(A)
6 Pentane	41	1.897	1.897	(0.475)	3658425	200.000	204.007(A)
7 Trichlorofluoromethane	101	1.902	1.902	(0.477)	6203207	200.000	198.735
8 Dichlorofluoromethane	67	1.929	1.929	(0.483)	7974378	200.000	205.366(A)
9 Ethyl Ether	74	2.082	2.082	(0.522)	1656495	200.000	210.951(A)
10 1,1-Dichloroethene	61	2.218	2.218	(0.556)	6519321	200.000	208.434(A)
11 Freon 113	101	2.235	2.235	(0.560)	3967647	200.000	207.149(A)
12 Carbon Disulfide	76	2.251	2.251	(0.564)	11479095	200.000	187.917
13 Iodomethane	127	2.311	2.311	(0.579)	2194154	200.000	218.390(A)
14 Acrolein	56	2.404	2.404	(0.602)	1352180	2000.00	2141.58
15 Isopropyl Alcohol	45	2.459	2.459	(0.616)	349885	1000.00	1009.65(AH)
16 3-Chloro-1-propene	41	2.486	2.486	(0.623)	6999519	200.000	209.546(A)
17 Methylene Chloride	84	2.546	2.546	(0.638)	3669569	200.000	200.627(A)
18 Acetone	58	2.562	2.562	(0.642)	628818	1000.00	999.567
19 Methyl acetate	74	2.628	2.628	(0.658)	249272	200.000	199.669(Q)
20 trans-1,2-Dichloroethene	61	2.639	2.639	(0.661)	6520596	200.000	206.201(A)
21 Hexane	57	2.677	2.677	(0.671)	8711056	200.000	205.316(A)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	22 Methyl t-Butyl Ether	73	2.688	2.688	(0.673)	6683799	200.000	214.209 (A)
	23 tert.- Butyl Alcohol	59	2.710	2.710	(0.679)	667926	1000.00	1046.41 (A)
	24 Acetonitrile	41	2.835	2.835	(0.710)	760619	1000.00	991.025
	25 Diisopropyl ether	45	2.879	2.879	(0.721)	13166982	200.000	200.106 (A)
	26 Chloroprene	53	2.966	2.966	(0.743)	7143814	200.000	211.089 (A)
	27 1,1-Dichloroethane	63	2.982	2.982	(0.747)	8302752	200.000	208.060 (A)
	28 Acrylonitrile	53	3.004	3.004	(0.753)	2935809	1000.00	1057.46 (A)
	29 Ethyl tert-butyl ether	59	3.086	3.086	(0.773)	10036998	200.000	213.180 (A)
	30 n-Propanol	41	3.086	3.086	(0.773)	2100548	2000.00	2123.60 (A)
	31 Vinyl Acetate	86	3.091	3.091	(0.774)	426319	200.000	217.078 (A)
	32 cis-1,2-Dichloroethene	61	3.277	3.277	(0.821)	6086311	200.000	204.815 (A)
	33 2,2-Dichloropropane	77	3.342	3.342	(0.837)	6131714	200.000	214.886 (A)
	34 Bromochloromethane	128	3.392	3.392	(0.850)	1401187	200.000	205.921 (A)
	35 Cyclohexane	84	3.408	3.408	(0.854)	7121913	200.000	208.890 (A)
	36 Chloroform	83	3.419	3.419	(0.856)	7636005	200.000	200.562 (A)
	37 Ethyl Acetate	43	3.457	3.457	(0.866)	1714044	200.000	200.205 (A)
	38 Methyl acrylate	55	3.473	3.473	(0.870)	1533490	200.000	208.967 (AQ)
	39 Carbon Tetrachloride	117	3.517	3.517	(0.881)	5791516	200.000	214.586 (A)
	40 Tetrahydrofuran	42	3.517	3.517	(0.881)	2309893	1000.00	1055.23 (A)
$	41 Dibromofluoromethane	113	3.523	3.523	(0.882)	3146809	200.000	199.735
	42 1,1,1-Trichloroethane	97	3.555	3.555	(0.891)	6790931	200.000	213.905 (A)
	43 2-Butanone	72	3.583	3.583	(0.897)	798237	1000.00	1052.59 (A)
	44 1,1-Dichloropropene	75	3.621	3.621	(0.907)	6506761	200.000	210.845 (A)
	45 1-Chlorobutane	41	3.643	3.643	(0.913)	5853758	200.000	207.310 (A)
	46 Heptane	71	3.713	3.713	(0.930)	3589659	200.000	214.801 (A)
	47 Benzene	78	3.757	3.757	(0.941)	14442461	200.000	191.151
	48 Propionitrile	54	3.763	3.763	(0.943)	917656	1000.00	1003.29 (AQ)
	49 Methacrylonitrile	67	3.774	3.774	(0.945)	668189	200.000	199.137
	50 tert-Amyl methyl ether	73	3.801	3.801	(0.952)	7314576	200.000	200.410 (A)
$	51 1,2-Dichloroethane-d4	65	3.834	3.834	(0.960)	2997532	200.000	199.715
	52 1,2-Dichloroethane	62	3.872	3.872	(0.970)	3877146	200.000	199.951
	53 tert-Amyl Alcohol	59	3.877	3.877	(0.971)	725366	1000.00	1005.94 (AQ)
	54 Isobutyl alcohol	43	3.964	3.964	(0.993)	3546734	2000.00	2162.74 (A)
*	55 Fluorobenzene	96	3.992	3.992	(1.000)	1919136	30.0000	
	56 Diisobutylene	57	4.003	4.003	(1.003)	12665372	200.000	199.791
	57 Trichloroethene	95	4.090	4.090	(1.025)	4585279	200.000	207.962 (A)
	58 Methyl cyclohexane	83	4.101	4.101	(0.684)	7838300	200.000	214.120 (A)
	59 tert-Amyl Ethylether	59	4.199	4.199	(1.052)	7216990	200.000	222.087 (A)
	60 Dibromomethane	93	4.346	4.346	(1.089)	1473174	200.000	202.600 (A)
	61 1,2-Dichloropropane	63	4.406	4.406	(1.104)	4297471	200.000	211.601 (A)
	62 Bromodichloromethane	83	4.428	4.428	(1.109)	5081365	200.000	211.582 (A)
	63 Methyl methacrylate	41	4.499	4.499	(1.127)	1833984	200.000	200.220 (A)
	64 1,4-Dioxane	88	4.543	4.543	(1.138)	207432	5000.00	4988.74 (Q)
	65 2-Chloroethylvinyl ether	63	4.745	4.745	(1.189)	15748	200.000	204.999 (AM)
	66 cis-1,3-Dichloropropene	75	4.821	4.821	(0.804)	5784448	200.000	223.064 (A)
	67 Octane	85	4.832	4.832	(0.805)	2595731	200.000	218.735 (A)
$	68 Toluene-d8	98	4.947	4.947	(0.824)	12797023	200.000	198.914
	69 Toluene	92	4.979	4.979	(0.830)	10293265	200.000	220.398 (AQ)
	70 Chloroacetonitrile	48	5.034	5.034	(0.839)	226776	1000.00	1051.71 (A)
	71 2-Nitropropane	41	5.127	5.127	(0.854)	1997206	1000.00	1004.01 (A)
	72 1,1-Dichloro-2-Propanone	63	5.143	5.143	(0.857)	152627	1000.00	1012.99 (AM)
	73 4-Methyl-2-Pentanone (MIBK)	43	5.203	5.203	(0.867)	7857904	1000.00	1078.73 (A)
	74 Tetrachloroethene	164	5.241	5.241	(0.874)	3429778	200.000	207.741 (A)
	75 trans-1,3-Dichloropropene	75	5.236	5.236	(0.873)	4177220	200.000	230.493 (A)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	76 Ethyl Methacrylate	69	5.318	5.318	(0.886)	2715839	200.000	201.133 (A)
	77 1,1,2-Trichloroethane	83	5.350	5.350	(0.892)	1765244	200.000	212.083 (A)
	78 Chlorodibromomethane	129	5.476	5.476	(0.913)	2553679	200.000	217.293 (A)
	79 1,3-Dichloropropane	76	5.541	5.541	(0.924)	3826977	200.000	211.082 (AQM)
	80 1,2-Dibromoethane	107	5.656	5.656	(0.943)	1750992	200.000	200.514 (A)
	81 2-Hexanone	43	5.771	5.771	(0.962)	4960261	1000.00	1111.54 (A)
	82 1-Chlorohexane	91	5.978	5.978	(0.996)	6380987	200.000	227.355 (A)
*	83 Chlorobenzene-d5	82	6.000	6.000	(1.000)	757547	30.0000	
	84 Chlorobenzene	112	6.016	6.016	(1.003)	9701435	200.000	203.545 (A)
	85 Ethylbenzene	106	6.022	6.022	(1.004)	5985259	200.000	201.652 (AQ)
	86 1,1,1,2-Tetrachloroethane	131	6.054	6.054	(1.009)	3306086	200.000	222.355 (A)
	87 mp-Xylene	106	6.120	6.120	(1.020)	13080486	400.000	396.277 (QM)
	88 o-Xylene	106	6.442	6.442	(1.074)	6652333	200.000	201.239 (AQ)
	89 Styrene	104	6.480	6.480	(0.833)	10099801	200.000	218.682 (A)
	90 Bromoform	173	6.507	6.507	(0.837)	1073702	200.000	202.015 (A)
	91 Isopropylbenzene	105	6.665	6.665	(0.857)	14476662	200.000	193.541
$	92 4-Bromofluorobenzene	174	6.895	6.895	(0.886)	2916841	200.000	201.581 (A)
	93 Bromobenzene	156	6.982	6.982	(0.898)	3113376	200.000	211.538 (A)
	94 n-Propylbenzene	120	6.987	6.987	(0.898)	4611160	200.000	217.083 (AQM)
	95 1,1,2,2-Tetrachloroethane	83	7.031	7.031	(0.904)	1828012	200.000	213.371 (A)
	96 o-Chlorotoluene	91	7.118	7.118	(0.915)	12831960	200.000	203.340 (A)
	97 1,3,5-Trimethylbenzene	105	7.135	7.135	(0.917)	12329796	200.000	199.110
	98 1,2,3-Trichloropropane	110	7.151	7.151	(0.919)	515784	200.000	210.685 (A)
	99 trans-1,4-Dichloro-2-butene	53	7.173	7.173	(0.922)	375481	200.000	204.946 (AQ)
M	100 1,2-Dichloroethene, Total	61				12606907	400.000	(a)
	101 p-Chlorotoluene	91	7.249	7.249	(0.932)	11588938	200.000	205.825 (A)
	102 tert-Butylbenzene	134	7.397	7.397	(0.951)	3019534	200.000	214.222 (A)
	103 Pentachloroethane	117	7.413	7.413	(0.953)	2306684	200.000	232.120 (AQ)
	104 1,2,4-Trimethylbenzene	105	7.446	7.446	(0.957)	12035542	200.000	199.983
	105 sec-Butylbenzene	105	7.533	7.533	(0.968)	13844952	200.000	185.575
	106 p-Isopropyltoluene	134	7.648	7.648	(0.983)	3342372	200.000	220.792 (A)
	107 1,3-Dichlorobenzene	146	7.718	7.718	(0.992)	5692387	200.000	213.772 (A)
*	108 1,4-Dichlorobenzene-d4	152	7.778	7.778	(1.000)	458380	30.0000	(Q)
	109 1,4-Dichlorobenzene	146	7.789	7.789	(1.001)	5446948	200.000	209.046 (A)
	110 Benzyl Chloride	126	7.991	7.991	(1.027)	391214	200.000	204.569 (AQ)
	111 n-Butylbenzene	134	7.991	7.991	(1.027)	2845595	200.000	225.921 (AQ)
	112 Hexachloroethane	117	8.122	8.122	(1.044)	2126617	200.000	204.076 (A)
	113 1,2-Dichlorobenzene	146	8.139	8.139	(1.046)	4227687	200.000	212.838 (A)
	114 1,2-Dibromo-3-chloropropane	75	8.804	8.804	(1.132)	196796	200.000	201.475 (A)
	115 Nitrobenzene	77	9.290	9.290	(1.194)	256709	2000.00	2000.02 (A)
	116 Hexachlorobutadiene	225	9.361	9.361	(1.203)	1072774	200.000	201.670 (A)
	117 1,2,4-Trichlorobenzene	180	9.383	9.383	(1.206)	1470041	200.000	216.079 (A)
	118 Naphthalene	128	9.661	9.661	(1.242)	1790863	200.000	201.635 (A)
	119 1,2,3-Trichlorobenzene	180	9.814	9.814	(1.262)	869249	200.000	214.410 (A)
M	120 1,3-Dichloropropene, Total	75				9961668	400.000	(a)
M	121 Total Xylenes	106				19732819	600.000	(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms01.i
Lab File ID: 1091409.D
Lab Smp Id: 1239
Analysis Type: VOA
Quant Type: ISTD
Operator: DD
Method File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Misc Info:

Calibration Date: 14-SEP-2012
Calibration Time: 04:13

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	1855731	927866	3711462	1919136	3.42
83 Chlorobenzene-d5	750283	375142	1500566	757547	0.97
108 1,4-Dichlorobenze	454343	227172	908686	458380	0.89

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	3.99	3.49	4.49	3.99	-0.01
83 Chlorobenzene-d5	6.00	5.50	6.50	6.00	-0.00
108 1,4-Dichlorobenze	7.78	7.28	8.28	7.78	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

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TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1239
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info:

Client SDG: 1120914.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
75-71-8	Dichlorodifluoromethane	195.847	
74-87-3	Chloromethane	191.766	
75-01-4	Vinyl Chloride	199.489	
74-83-9	Bromomethane	222.773	E
75-00-3	Chloroethane	200.916	E
109-66-0	Pentane	204.007	E
75-69-4	Trichlorofluoromethane	198.735	
75-43-4	Dichlorofluoromethane	205.366	E
60-29-7	Ethyl Ether	210.951	E
75-35-4	1,1-Dichloroethene	208.434	E
76-13-1	Freon 113	207.149	E
75-15-0	Carbon Disulfide	187.917	
74-88-4	Iodomethane	218.390	E
107-02-8	Acrolein	2141.58	
67-63-0	Isopropyl Alcohol	1009.65	E
107-05-1	3-Chloro-1-propene	209.546	E
75-09-2	Methylene Chloride	200.627	E
67-64-1	Acetone	999.567	
79-20-9	Methyl acetate	199.669	
156-60-5	trans-1,2-Dichloroethene	206.201	E
110-54-3	Hexane	205.316	E
1634-04-4	Methyl t-Butyl Ether	214.209	E
75-65-0	tert.- Butyl Alcohol	1046.41	E
75-05-8	Acetonitrile	991.025	
108-20-3	Diisopropyl ether	200.106	E
126-99-8	Chloroprene	211.089	E
75-34-3	1,1-Dichloroethane	208.060	E
107-13-1	Acrylonitrile	1057.46	E
637-92-3	Ethyl tert-butyl ether	213.180	E
71-23-8	n-Propanol	2123.60	E
108-05-4	Vinyl Acetate	217.078	E
156-59-2	cis-1,2-Dichloroethene	204.815	E
594-20-7	2,2-Dichloropropane	214.886	E
74-97-5	Bromochloromethane	205.921	E
110-82-7	Cyclohexane	208.890	E
67-66-3	Chloroform	200.562	E
141-78-6	Ethyl Acetate	200.205	E
96-33-3	Methyl acrylate	208.967	E
56-23-5	Carbon Tetrachloride	214.586	E
109-99-9	Tetrahydrofuran	1055.23	E
71-55-6	1,1,1-Trichloroethane	213.905	E
78-93-3	2-Butanone	1052.59	E

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1239
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info:

Client SDG: 1120914.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
563-58-6	1,1-Dichloropropene	210.845	E
109-69-3	1-Chlorobutane	207.310	E
142-82-5	Heptane	214.801	E
71-43-2	Benzene	191.151	
107-12-0	Propionitrile	1003.29	E
126-98-7	Methacrylonitrile	199.137	
994-05-8	tert-Amyl methyl ether	200.410	E
107-06-2	1,2-Dichloroethane	199.951	
75-85-4	tert-Amyl Alcohol	1005.94	E
78-83-1	Isobutyl alcohol	2162.74	E
107-39-1	Diisobutylene	199.791	
79-01-6	Trichloroethene	207.962	E
108-87-2	Methyl cyclohexane	214.120	E
919-94-8	tert-Amyl Ethylether	222.087	E
74-95-3	Dibromomethane	202.600	E
78-87-5	1,2-Dichloropropane	211.601	E
75-27-4	Bromodichloromethane	211.582	E
80-62-6	Methyl methacrylate	200.220	E
123-91-1	1,4-Dioxane	4988.74	
110-75-8	2-Chloroethylvinyl ether	204.999	E
10061-01-5	cis-1,3-Dichloropropene	223.064	E
111-65-9	Octane	218.735	E
108-88-3	Toluene	220.398	E
107-14-2	Chloroacetonitrile	1051.71	E
79-46-9	2-Nitropropane	1004.01	E
513-88-2	1,1-Dichloro-2-Propanone	1012.99	E
108-10-1	4-Methyl-2-Pentanone(MIBK)	1078.73	E
127-18-4	Tetrachloroethene	207.741	E
10061-02-6	trans-1,3-Dichloropropene	230.493	E
97-63-2	Ethyl Methacrylate	201.133	E
79-00-5	1,1,2-Trichloroethane	212.083	E
124-48-1	Chlorodibromomethane	217.293	E
142-28-9	1,3-Dichloropropane	211.082	E
106-93-4	1,2-Dibromoethane	200.514	E
591-78-6	2-Hexanone	1111.54	E
544-10-5	1-Chlorohexane	227.355	E
108-90-7	Chlorobenzene	203.545	E
100-41-4	Ethylbenzene	201.652	E
630-20-6	1,1,1,2-Tetrachloroethane	222.355	E
108383/106423	mp-Xylene	396.277	
95-47-6	o-Xylene	201.239	E
100-42-5	Styrene	218.682	E

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TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1239
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info:

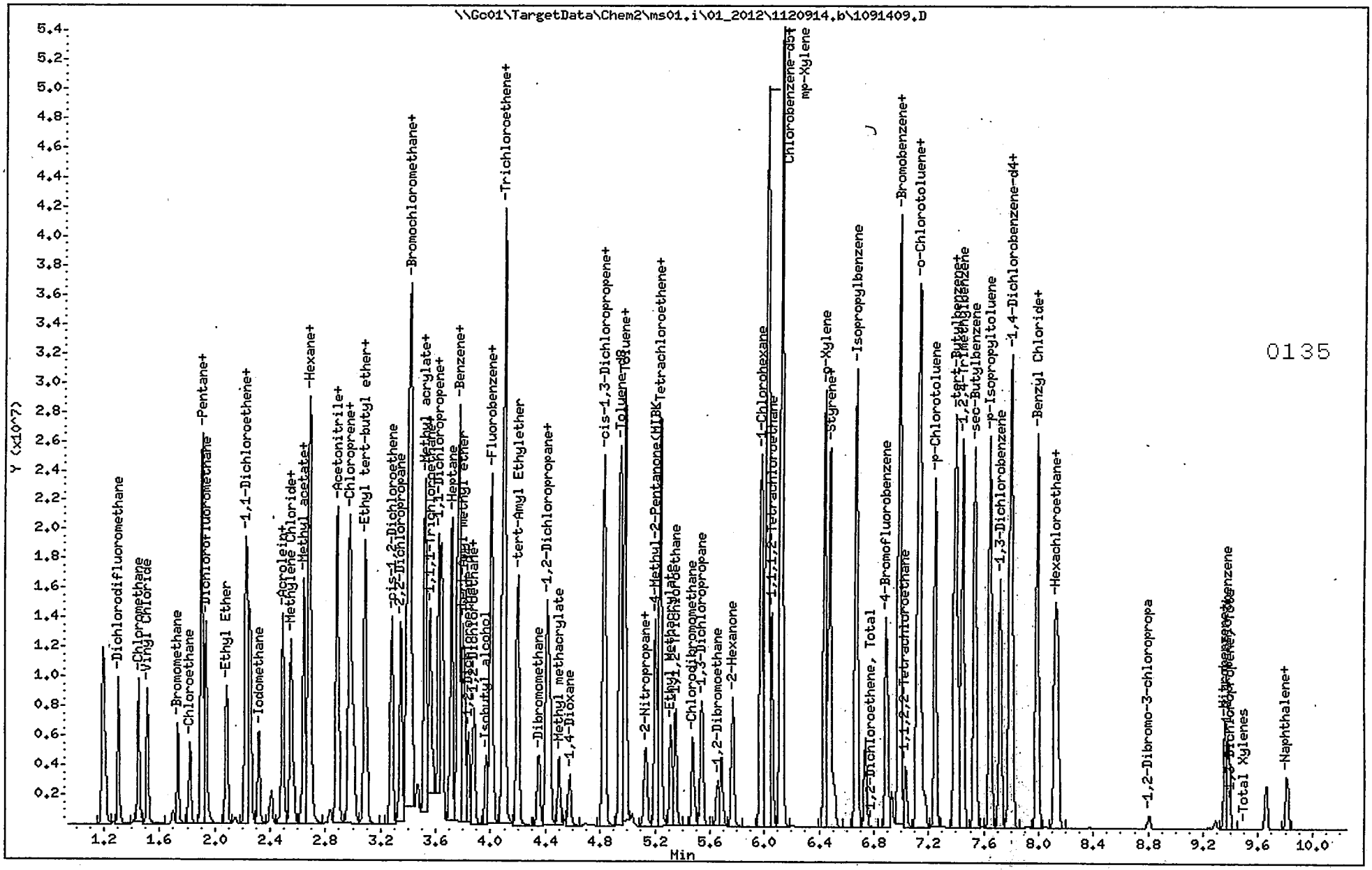
Client SDG: 1120914.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
75-25-2	Bromoform	202.015	E
98-82-8	Isopropylbenzene	193.541	
108-86-1	Bromobenzene	211.538	E
103-65-1	n-Propylbenzene	217.083	E
79-34-5	1,1,2,2-Tetrachloroethane	213.371	E
95-49-8	o-Chlorotoluene	203.340	E
108-67-8	1,3,5-Trimethylbenzene	199.110	
96-18-4	1,2,3-Trichloropropane	210.685	E
110-57-6	trans-1,4-Dichloro-2-butene	204.946	E
540-59-0	1,2-Dichloroethene, Total	0.000000	J
106-43-4	p-Chlorotoluene	205.825	E
98-06-6	tert-Butylbenzene	214.222	E
76-01-7	Pentachloroethane	232.120	E
95-63-6	1,2,4-Trimethylbenzene	199.983	
135-98-8	sec-Butylbenzene	185.575	
99-87-6	p-Isopropyltoluene	220.792	E
541-73-1	1,3-Dichlorobenzene	213.772	E
106-46-7	1,4-Dichlorobenzene	209.046	E
100-44-7	Benzyl Chloride	204.569	E
104-51-8	n-Butylbenzene	225.921	E
67-72-1	Hexachloroethane	204.076	E
95-50-1	1,2-Dichlorobenzene	212.838	E
96-12-8	1,2-Dibromo-3-chloropropane	201.475	E
98-95-3	Nitrobenzene	2000.02	E
87-68-3	Hexachlorobutadiene	201.670	E
120-82-1	1,2,4-Trichlorobenzene	216.079	E
91-20-3	Naphthalene	201.635	E
87-61-6	1,2,3-Trichlorobenzene	214.410	E
542-75-6	1,3-Dichloropropene, Total	0.000000	J
1330-20-7	Total Xylenes	0.000000	J
1868-53-7	Dibromofluoromethane	199.735	
17060-07-0	1,2-Dichloroethane-d4	199.715	
2037-26-5	Toluene-d8	198.914	
460-00-4	4-Bromofluorobenzene	201.581	E

Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091409.D
Date : 14-SEP-2012 04:58
Client ID:
Sample Info: 1239;;1;1;6;;;;
Purge Volume: 5.0
Column phase: DB-VRX

Instrument: ms01.i
Operator: DD
Column diameter: 0.25



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VOLATILE REPORT SW-846 Method 8260

Data file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091413.D
Lab Smp Id: 1034043 Client Smp ID: LCS for HBN 481311
Inj Date : 14-SEP-2012 06:26
Operator : DD Inst ID: ms01.i
Smp Info : 1034043;;1;3;;LCS;1;;
Misc Info : ZZ VOMS 27511 8260W
Comment :
Method : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Meth Date : 14-Sep-2012 19:04 ms01.i Quant Type: ISTD
Cal Date : 14-SEP-2012 04:58 Cal File: 1091409.D
Als bottle: 14 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ALMDTXP003

Concentration Formula: Amt * DF * Uf * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged
DF	1.000	sample dilution factor
Cpnd Variable		Local Compound Variable

DATA REVIEW CK 9/14/12
REPORTED
APPROVED
2nd REVIEW CK 9/17/12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/L)
1 Dichlorodifluoromethane	85	1.302	1.302	(0.326)	400660	15.9483	15.9483
2 Chloromethane	50	1.444	1.444	(0.362)	534379	18.3199	18.3199
3 Vinyl Chloride	62	1.504	1.509	(0.377)	509326	18.9982	18.9982
4 Bromomethane	94	1.728	1.727	(0.433)	167776	16.2500	16.2500
5 Chloroethane	64	1.815	1.815	(0.455)	309215	19.9193	19.9193
6 Pentane	41	1.897	1.897	(0.475)	299092	17.7756	17.7756
7 Trichlorofluoromethane	101	1.902	1.902	(0.477)	579960	19.8028	19.8028
8 Dichlorofluoromethane	67	1.929	1.929	(0.483)	765137	21.0010	21.0010
9 Ethyl Ether	74	2.082	2.082	(0.522)	143659	19.4982	19.4982
10 1,1-Dichloroethene	61	2.219	2.218	(0.556)	591329	20.1495	20.1495
11 Freon 113	101	2.229	2.235	(0.559)	332645	18.5097	18.5097
12 Carbon Disulfide	76	2.251	2.251	(0.564)	1069483	18.6596	18.6596
13 Iodomethane	127	2.311	2.311	(0.579)	181965	19.3029	19.3029
14 Acrolein	56	2.410	2.404	(0.604)	85684	144.633	144.633
15 Isopropyl Alcohol	45	2.459	2.459	(0.616)	34407	109.403	109.403 (M)
16 3-Chloro-1-propene	41	2.486	2.486	(0.623)	600809	19.1697	19.1697
17 Methylene Chloride	84	2.546	2.546	(0.638)	358813	20.3482	20.3482
18 Acetone	58	2.562	2.562	(0.642)	57513	94.4237	94.4237
19 Methyl acetate	74	2.628	2.628	(0.658)	23342	19.3563	19.3563 (Q)
20 trans-1,2-Dichloroethene	61	2.639	2.639	(0.661)	614289	20.7036	20.7036
21 Hexane	57	2.677	2.677	(0.671)	735890	18.4856	18.4856

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/L)
22	Methyl t-Butyl Ether	73	2.688	2.688	(0.673)	591363	20.1994	20.1994
23	tert.- Butyl Alcohol	59	2.704	2.710	(0.677)	61990	103.505	103.505
24	Acetonitrile	41	2.830	2.835	(0.709)	74879	95.4365	95.4365
25	Diisopropyl ether	45	2.884	2.879	(0.723)	1268632	20.5484	20.5484
26	Chloroprene	53	2.966	2.966	(0.743)	671330	21.1417	21.1417
27	1,1-Dichloroethane	63	2.982	2.982	(0.747)	783983	20.9383	20.9383
28	Acrylonitrile	53	3.004	3.004	(0.753)	267779	102.798	102.798
29	Ethyl tert-butyl ether	59	3.086	3.086	(0.773)	872425	19.7487	19.7487
30	n-Propanol	41	3.086	3.086	(0.773)	178791	192.644	192.644(a)
31	Vinyl Acetate	86	3.092	3.091	(0.774)	36234	19.6637	19.6637(Q)
32	cis-1,2-Dichloroethene	61	3.277	3.277	(0.821)	582965	20.9083	20.9083
33	2,2-Dichloropropane	77	3.343	3.342	(0.837)	541093	20.2100	20.2100
34	Bromochloromethane	128	3.392	3.392	(0.850)	131130	20.5388	20.5388
35	Cyclohexane	84	3.408	3.408	(0.854)	638831	19.9699	19.9699
36	Chloroform	83	3.419	3.419	(0.856)	749776	20.6862	20.6862
37	Ethyl Acetate	43	3.457	3.457	(0.866)	143892	18.6845	18.6845
38	Methyl acrylate	55	3.474	3.473	(0.870)	128599	18.6769	18.6769(Q)
39	Carbon Tetrachloride	117	3.517	3.517	(0.881)	532635	21.0333	21.0333
40	Tetrahydrofuran	42	3.517	3.517	(0.881)	210931	102.698	102.698
$ 41	Dibromofluoromethane	113	3.523	3.523	(0.882)	386717	25.0219	25.0219
42	1,1,1-Trichloroethane	97	3.555	3.555	(0.891)	629982	21.1489	21.1489
43	2-Butanone	72	3.583	3.583	(0.898)	69913	98.2545	98.2545
44	1,1-Dichloropropene	75	3.621	3.621	(0.907)	626604	21.6401	21.6401
45	1-Chlorobutane	41	3.637	3.643	(0.911)	542229	20.4661	20.4661
46	Heptane	71	3.708	3.713	(0.929)	303166	19.3344	19.3344
47	Benzene	78	3.763	3.757	(0.943)	1615528	22.7886	22.7886
48	Propionitrile	54	3.763	3.763	(0.943)	91456	106.568	106.568(Q)
49	Methacrylonitrile	67	3.774	3.774	(0.945)	60833	19.2926	19.2926(Q)
50	tert-Amyl methyl ether	73	3.801	3.801	(0.952)	619349	18.9208	18.9208
$ 51	1,2-Dichloroethane-d4	65	3.834	3.834	(0.960)	393036	26.4529	26.4529
52	1,2-Dichloroethane	62	3.872	3.872	(0.970)	364652	19.9462	19.9462
53	tert-Amyl Alcohol	59	3.883	3.877	(0.973)	56831	92.8066	92.8066
54	Isobutyl alcohol	43	3.965	3.964	(0.993)	308392	200.423	200.423
* 55	Fluorobenzene	96	3.992	3.992	(1.000)	1800682	30.0000	
56	Diisobutylene	57	4.003	4.003	(1.003)	1230566	19.0738	19.0738
57	Trichloroethene	95	4.090	4.090	(1.025)	434257	20.9910	20.9910
58	Methyl cyclohexane	83	4.101	4.101	(0.684)	713139	20.4266	20.4266
59	tert-Amyl Ethylether	59	4.199	4.199	(1.052)	607385	19.9205	19.9205(A)
60	Dibromomethane	93	4.347	4.346	(1.089)	138976	20.3701	20.3701
61	1,2-Dichloropropane	63	4.407	4.406	(1.104)	399536	20.9666	20.9666
62	Bromodichloromethane	83	4.428	4.428	(1.109)	458056	20.3276	20.3276
63	Methyl methacrylate	41	4.499	4.499	(1.127)	157739	19.2355	19.2355
64	1,4-Dioxane	88	4.548	4.543	(1.139)	22018	501.707	501.707(Q)
65	2-Chloroethylvinyl ether	63	Compound Not Detected.					
66	cis-1,3-Dichloropropene	75	4.821	4.821	(0.804)	512563	20.7253	20.7253
67	Octane	85	4.832	4.832	(0.805)	219393	19.3850	19.3850
$ 68	Toluene-d8	98	4.947	4.947	(0.824)	1750297	26.8946	26.8946
69	Toluene	92	4.980	4.979	(0.830)	1021824	22.9413	22.9413
70	Chloroacetonitrile	48	5.034	5.034	(0.839)	20979	102.016	102.016(QM)
71	2-Nitropropane	41	5.127	5.127	(0.855)	165687	94.3476	94.3476
72	1,1-Dichloro-2-Propanone	63	5.138	5.143	(0.856)	10841	90.9221	90.9221(M)
73	4-Methyl-2-Pentanone(MIBK)	43	5.203	5.203	(0.867)	675819	97.2797	97.2797
74	Tetrachloroethene	164	5.241	5.241	(0.874)	333849	21.2028	21.2028
75	trans-1,3-Dichloropropene	75	5.236	5.236	(0.873)	353797	20.4697	20.4697

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/L)
	76 Ethyl Methacrylate	69	5.312	5.318	(0.885)	230242	19.5350	19.5350
	77 1,1,2-Trichloroethane	83	5.345	5.350	(0.891)	161417	20.3347	20.3347
	78 Chlorodibromomethane	129	5.476	5.476	(0.913)	225030	20.0774	20.0774
	79 1,3-Dichloropropane	76	5.542	5.541	(0.924)	356186	20.5996	20.5996 (M)
	80 1,2-Dibromoethane	107	5.656	5.656	(0.943)	159880	19.8636	19.8636
	81 2-Hexanone	43	5.771	5.771	(0.962)	420149	98.7215	98.7215
	82 1-Chlorohexane	91	5.978	5.978	(0.996)	554091	20.7006	20.7006
*	83 Chlorobenzene-d5	82	6.000	6.000	(1.000)	722476	30.0000	
	84 Chlorobenzene	112	6.016	6.016	(1.003)	963487	21.1961	21.1961
	85 Ethylbenzene	106	6.022	6.022	(1.004)	576908	21.2865	21.2865
	86 1,1,1,2-Tetrachloroethane	131	6.049	6.054	(1.008)	299574	21.1263	21.1263
	87 mp-Xylene	106	6.120	6.120	(1.020)	1392595	42.7206	42.7206
	88 o-Xylene	106	6.442	6.442	(1.074)	632027	21.0067	21.0067
	89 Styrene	104	6.475	6.480	(0.832)	950167	22.1115	22.1115
	90 Bromoform	173	6.507	6.507	(0.837)	90032	20.0084	20.0084
	91 Isopropylbenzene	105	6.671	6.665	(0.858)	1736007	22.0520	22.0520
$	92 4-Bromofluorobenzene	174	6.895	6.895	(0.886)	381899	28.6907	28.6907
	93 Bromobenzene	156	6.982	6.982	(0.898)	290726	21.2304	21.2304
	94 n-Propylbenzene	120	6.987	6.987	(0.898)	438469	22.1857	22.1857
	95 1,1,2,2-Tetrachloroethane	83	7.031	7.031	(0.904)	164337	20.6162	20.6162
	96 o-Chlorotoluene	91	7.118	7.118	(0.915)	1282783	21.8474	21.8474
	97 1,3,5-Trimethylbenzene	105	7.135	7.135	(0.917)	1282099	21.8634	21.8634
	98 1,2,3-Trichloropropane	110	7.151	7.151	(0.919)	47673	20.9293	20.9293
	99 trans-1,4-Dichloro-2-butene	53	7.173	7.173	(0.922)	26284	19.9512	19.9512 (Q)
M	100 1,2-Dichloroethene, Total	61				1197254	41.6119	41.6119
	101 p-Chlorotoluene	91	7.249	7.249	(0.932)	1150262	21.9568	21.9568
	102 tert-Butylbenzene	134	7.391	7.397	(0.950)	284561	21.6979	21.6979
	103 Pentachloroethane	117	7.413	7.413	(0.953)	192772	20.8491	20.8491 (Q)
	104 1,2,4-Trimethylbenzene	105	7.446	7.446	(0.957)	1192840	21.3775	21.3775
	105 sec-Butylbenzene	105	7.533	7.533	(0.968)	1551975	22.3579	22.3579
	106 p-Isopropyltoluene	134	7.648	7.648	(0.983)	307213	21.8115	21.8115
	107 1,3-Dichlorobenzene	146	7.719	7.718	(0.992)	531020	21.4331	21.4331
*	108 1,4-Dichlorobenzene-d4	152	7.779	7.778	(1.000)	426489	30.0000	
	109 1,4-Dichlorobenzene	146	7.790	7.789	(1.001)	507337	20.9268	20.9268
	110 Benzyl Chloride	126	7.986	7.991	(1.027)	22595	17.9125	17.9125 (Q)
	111 n-Butylbenzene	134	7.991	7.991	(1.027)	255501	21.8019	21.8019
	112 Hexachloroethane	117	8.117	8.122	(1.043)	158534	20.0519	20.0519
	113 1,2-Dichlorobenzene	146	8.139	8.139	(1.046)	384509	20.8052	20.8052
	114 1,2-Dibromo-3-chloropropane	75	8.804	8.804	(1.132)	16117	19.2571	19.2571
	115 Nitrobenzene	77	9.285	9.290	(1.194)	12308	178.049	178.049
	116 Hexachlorobutadiene	225	9.361	9.361	(1.203)	100948	20.3961	20.3961
	117 1,2,4-Trichlorobenzene	180	9.383	9.383	(1.206)	119818	18.9288	18.9288
	118 Naphthalene	128	9.661	9.661	(1.242)	127121	17.9296	17.9296
	119 1,2,3-Trichlorobenzene	180	9.814	9.814	(1.262)	66793	17.7072	17.7072
M	120 1,3-Dichloropropene, Total	75				866360	41.1950	41.1950
M	121 Total Xylenes	106				2024622	63.7273	63.7273

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.

QC Flag Legend

M - Compound response manually integrated.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms01.i
Lab File ID: 1091413.D
Lab Smp Id: 1034043
Analysis Type: VOA
Quant Type: ISTD
Operator: DD

Calibration Date: 14-SEP-2012
Calibration Time: 04:13
Client Smp ID: LCS for HBN 481311
Level: LOW
Sample Type: WATER

Method File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Misc Info: ZZ VOMS 27511 8260W

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
55 Fluorobenzene	1855731	927866	3711462	1800682	-2.97
83 Chlorobenzene-d5	750283	375142	1500566	722476	-3.71
108 1,4-Dichlorobenze	454343	227172	908686	426489	-6.13

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
55 Fluorobenzene	3.99	3.49	4.49	3.99	-0.00
83 Chlorobenzene-d5	6.00	5.50	6.50	6.00	-0.00
108 1,4-Dichlorobenze	7.78	7.28	8.28	7.78	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1034043
Level: LOW
Data Type: MS DATA
SpikeList File: WATERQC2006.spk
Sublist File: all.sub
Method File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1-8260b09.m
Misc Info: ZZ VOMS 27511 8260W

Client SDG: 1120914.b
Fraction: VOA
Client Smp ID: LCS for HBN 481311
Operator: DD
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Dichlorodifluorome	20.0000	15.9483	79.74	17-166
2 Chloromethane	20.0000	18.3199	91.60	38-156
3 Vinyl Chloride	20.0000	18.9982	94.99	27-138
4 Bromomethane	20.0000	16.2500	81.25	45-148
5 Chloroethane	20.0000	19.9193	99.60	51-142
6 Pentane	20.0000	17.7756	88.88	33-143
7 Trichlorofluoromet	20.0000	19.8028	99.01	38-123
8 Dichlorofluorometh	20.0000	21.0010	105.01	4-121
9 Ethyl Ether	20.0000	19.4982	97.49	71-131
10 1,1-Dichloroethene	20.0000	20.1495	100.75	63-128
12 Carbon Disulfide	20.0000	18.6596	93.30	57-131
11 Freon 113	20.0000	18.5097	92.55	50-130
13 Iodomethane	20.0000	19.3029	96.51	37-128
14 Acrolein	150.000	144.633	96.42	18-183
16 3-Chloro-1-propene	20.0000	19.1697	95.85	59-135
15 Isopropyl Alcohol	100.000	109.403	109.40	5-172
17 Methylene Chloride	20.0000	20.3482	101.74	76-121
18 Acetone	100.000	94.4237	94.42	40-151
20 trans-1,2-Dichloro	20.0000	20.7036	103.52	71-122
19 Methyl acetate	20.0000	19.3563	96.78	70-130
21 Hexane	20.0000	18.4856	92.43	48-142
22 Methyl t-Butyl Eth	20.0000	20.1994	101.00	69-115
23 tert.- Butyl Alcoh	100.000	103.505	103.51	17-168
24 Acetonitrile	100.000	95.4365	95.44	19-130
25 Diisopropyl ether	20.0000	20.5484	102.74	74-131
26 Chloroprene	20.0000	21.1417	105.71	62-125
27 1,1-Dichloroethane	20.0000	20.9383	104.69	78-124
28 Acrylonitrile	100.000	102.798	102.80	71-151
31 Vinyl Acetate	20.0000	19.6637	98.32	58-136
30 n-Propanol	200.000	192.644	96.32	19-342
29 Ethyl tert-butyl e	20.0000	19.7487	98.74	75-123
32 cis-1,2-Dichloroet	20.0000	20.9083	104.54	78-125
33 2,2-Dichloropropan	20.0000	20.2100	101.05	64-129
35 Cyclohexane	20.0000	19.9699	99.85	66-130
34 Bromochloromethane	20.0000	20.5388	102.69	73-117
36 Chloroform	20.0000	20.6862	103.43	78-122
39 Carbon Tetrachlori	20.0000	21.0333	105.17	62-132
38 Methyl acrylate	20.0000	18.6769	93.38	70-130
37 Ethyl Acetate	20.0000	18.6845	93.42	63-138
42 1,1,1-Trichloroeth	20.0000	21.1489	105.74	66-130

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
40	Tetrahydrofuran	100.000	102.698	102.70	62-152
44	1,1-Dichloropropen	20.0000	21.6401	108.20	76-126
43	2-Butanone	100.000	98.2545	98.25	50-152
45	1-Chlorobutane	20.0000	20.4661	102.33	70-130
46	Heptane	20.0000	19.3344	96.67	56-130
47	Benzene	20.0000	22.7886	113.94	80-124
48	Propionitrile	100.000	106.568	106.57	59-158
49	Methacrylonitrile	20.0000	19.2926	96.46	68-155
50	tert-Amyl methyl e	20.0000	18.9208	94.60	75-121
52	1,2-Dichloroethane	20.0000	19.9462	99.73	70-133
M 100	1,2-Dichloroethene	40.0000	41.6119	104.03	78-125
54	Isobutyl alcohol	200.000	200.423	100.21	37-171
56	Diisobutylene	20.0000	19.0738	95.37	60-137
53	tert-Amyl Alcohol	100.000	92.8066	92.81	70-130
58	Methyl cyclohexane	20.0000	20.4266	102.13	70-130
57	Trichloroethene	20.0000	20.9910	104.96	77-124
59	tert-Amyl Ethyleth	20.0000	19.9205	99.60	70-130
60	Dibromomethane	20.0000	20.3701	101.85	81-125
61	1,2-Dichloropropan	20.0000	20.9666	104.83	81-127
62	Bromodichlorometha	20.0000	20.3276	101.64	79-126
63	Methyl methacrylat	20.0000	19.2355	96.18	63-135
64	1,4-Dioxane	500.000	501.707	100.34	1-280
65	2-Chloroethylviny	20.0000	0.000000	*	1-150
66	cis-1,3-Dichloropr	20.0000	20.7253	103.63	81-121
67	Octane	20.0000	19.3850	96.93	58-127
69	Toluene	20.0000	22.9413	114.71	80-125
70	Chloroacetonitrile	100.000	102.016	102.02	70-130
71	2-Nitropropane	100.000	94.3476	94.35	60-138
72	1,1-Dichloro-2-Pro	100.000	90.9221	90.92	70-130
74	Tetrachloroethene	20.0000	21.2028	106.01	72-124
75	trans-1,3-Dichloro	20.0000	20.4697	102.35	78-126
73	4-Methyl-2-Pentano	100.000	97.2797	97.28	71-146
77	1,1,2-Trichloroeth	20.0000	20.3347	101.67	82-126
76	Ethyl Methacrylate	20.0000	19.5350	97.67	74-128
78	Chlorodibromometha	20.0000	20.0774	100.39	77-122
79	1,3-Dichloropropan	20.0000	20.5996	103.00	82-126
80	1,2-Dibromoethane	20.0000	19.8636	99.32	80-124
81	2-Hexanone	100.000	98.7215	98.72	65-154
84	Chlorobenzene	20.0000	21.1961	105.98	85-117
82	1-Chlorohexane	20.0000	20.7006	103.50	73-130
85	Ethylbenzene	20.0000	21.2865	106.43	80-124
86	1,1,1,2-Tetrachlor	20.0000	21.1263	105.63	78-121
87	mp-Xylene	40.0000	42.7206	106.80	79-125
M 120	1,3-Dichloropropen	40.0000	41.1950	102.99	80-123
88	o-Xylene	20.0000	21.0067	105.03	79-124
90	Bromoform	20.0000	20.0084	100.04	70-123
89	Styrene	20.0000	22.1115	110.56	79-123
91	Isopropylbenzene	20.0000	22.0520	110.26	73-129
M 121	Total Xylenes	60.0000	63.7273	106.21	79-125
93	Bromobenzene	20.0000	21.2304	106.15	81-119
94	n-Propylbenzene	20.0000	22.1857	110.93	74-122
95	1,1,2,2-Tetrachlor	20.0000	20.6162	103.08	74-135
96	o-Chlorotoluene	20.0000	21.8474	109.24	78-125
98	1,2,3-Trichloropro	20.0000	20.9293	104.65	75-132

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
97	1,3,5-Trimethylben	20.0000	21.8634	109.32	76-125
99	trans-1,4-Dichloro	20.0000	19.9512	99.76	60-141
101	p-Chlorotoluene	20.0000	21.9568	109.78	78-125
103	Pentachloroethane	20.0000	20.8491	104.25	70-130
102	tert-Butylbenzene	20.0000	21.6979	108.49	72-124
104	1,2,4-Trimethylben	20.0000	21.3775	106.89	76-125
105	sec-Butylbenzene	20.0000	22.3579	111.79	72-127
106	p-Isopropyltoluene	20.0000	21.8115	109.06	72-123
107	1,3-Dichlorobenzen	20.0000	21.4331	107.17	81-118
109	1,4-Dichlorobenzen	20.0000	20.9268	104.63	81-116
110	Benzyl Chloride	20.0000	17.9125	89.56	59-130
111	n-Butylbenzene	20.0000	21.8019	109.01	71-130
112	Hexachloroethane	20.0000	20.0519	100.26	62-130
113	1,2-Dichlorobenzen	20.0000	20.8052	104.03	82-118
114	1,2-Dibromo-3-chlo	20.0000	19.2571	96.29	59-133
115	Nitrobenzene	200.000	178.049	89.02	23-139
117	1,2,4-Trichloroben	20.0000	18.9288	94.64	67-123
116	Hexachlorobutadien	20.0000	20.3961	101.98	55-128
118	Naphthalene	20.0000	17.9296	89.65	56-134
119	1,2,3-Trichloroben	20.0000	17.7072	88.54	61-126

	SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 41	Dibromofluorometha	30.0000	25.0219	83.41	78-116
$ 51	1,2-Dichloroethane	30.0000	26.4529	88.18	62-133
$ 68	Toluene-d8	30.0000	26.8946	89.65	76-127
$ 92	4-Bromofluorobenze	30.0000	28.6907	95.64	79-114

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1034043
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info: ZZ VOMS 27511 8260W

Client SDG: 1120914.b
Client Smp ID: LCS for HBN 481311
Sample Point:
Date Received: 13-SEP-2012
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
75-71-8	Dichlorodifluoromethane	15.9483	
74-87-3	Chloromethane	18.3199	
75-01-4	Vinyl Chloride	18.9982	
74-83-9	Bromomethane	16.2500	
75-00-3	Chloroethane	19.9193	
109-66-0	Pentane	17.7756	
75-69-4	Trichlorofluoromethane	19.8028	
75-43-4	Dichlorofluoromethane	21.0010	
60-29-7	Ethyl Ether	19.4982	
75-35-4	1,1-Dichloroethene	20.1495	
76-13-1	Freon 113	18.5097	
75-15-0	Carbon Disulfide	18.6596	
74-88-4	Iodomethane	19.3029	
107-02-8	Acrolein	144.633	
67-63-0	Isopropyl Alcohol	109.403	
107-05-1	3-Chloro-1-propene	19.1697	
75-09-2	Methylene Chloride	20.3482	
67-64-1	Acetone	94.4237	
79-20-9	Methyl acetate	19.3563	
156-60-5	trans-1,2-Dichloroethene	20.7036	
110-54-3	Hexane	18.4856	
1634-04-4	Methyl t-Butyl Ether	20.1994	
75-65-0	tert.- Butyl Alcohol	103.505	
75-05-8	Acetonitrile	95.4365	
108-20-3	Diisopropyl ether	20.5484	
126-99-8	Chloroprene	21.1417	
75-34-3	1,1-Dichloroethane	20.9383	
107-13-1	Acrylonitrile	102.798	
637-92-3	Ethyl tert-butyl ether	19.7487	
71-23-8	n-Propanol	192.644	J
108-05-4	Vinyl Acetate	19.6637	
156-59-2	cis-1,2-Dichloroethene	20.9083	
594-20-7	2,2-Dichloropropane	20.2100	
74-97-5	Bromochloromethane	20.5388	
110-82-7	Cyclohexane	19.9699	
67-66-3	Chloroform	20.6862	
141-78-6	Ethyl Acetate	18.6845	
96-33-3	Methyl acrylate	18.6769	
56-23-5	Carbon Tetrachloride	21.0333	
109-99-9	Tetrahydrofuran	102.698	
71-55-6	1,1,1-Trichloroethane	21.1489	
78-93-3	2-Butanone	98.2545	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1034043
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info: ZZ VOMS 27511 8260W

Client SDG: 1120914.b
Client Smp ID: LCS for HBN 481311
Sample Point:
Date Received: 13-SEP-2012
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
563-58-6	1,1-Dichloropropene	21.6401	
109-69-3	1-Chlorobutane	20.4661	
142-82-5	Heptane	19.3344	
71-43-2	Benzene	22.7886	
107-12-0	Propionitrile	106.568	
126-98-7	Methacrylonitrile	19.2926	
994-05-8	tert-Amyl methyl ether	18.9208	
107-06-2	1,2-Dichloroethane	19.9462	
75-85-4	tert-Amyl Alcohol	92.8066	
78-83-1	Isobutyl alcohol	200.423	
107-39-1	Diisobutylene	19.0738	
79-01-6	Trichloroethene	20.9910	
108-87-2	Methyl cyclohexane	20.4266	
919-94-8	tert-Amyl Ethylether	19.9205	E
74-95-3	Dibromomethane	20.3701	
78-87-5	1,2-Dichloropropane	20.9666	
75-27-4	Bromodichloromethane	20.3276	
80-62-6	Methyl methacrylate	19.2355	
123-91-1	1,4-Dioxane	501.707	
10061-01-5	cis-1,3-Dichloropropene	20.7253	
111-65-9	Octane	19.3850	
108-88-3	Toluene	22.9413	
107-14-2	Chloroacetonitrile	102.016	
79-46-9	2-Nitropropane	94.3476	
513-88-2	1,1-Dichloro-2-Propanone	90.9221	
108-10-1	4-Methyl-2-Pentanone(MIBK)	97.2797	
127-18-4	Tetrachloroethene	21.2028	
10061-02-6	trans-1,3-Dichloropropene	20.4697	
97-63-2	Ethyl Methacrylate	19.5350	
79-00-5	1,1,2-Trichloroethane	20.3347	
124-48-1	Chlorodibromomethane	20.0774	
142-28-9	1,3-Dichloropropane	20.5996	
106-93-4	1,2-Dibromoethane	19.8636	
591-78-6	2-Hexanone	98.7215	
544-10-5	1-Chlorohexane	20.7006	
108-90-7	Chlorobenzene	21.1961	
100-41-4	Ethylbenzene	21.2865	
630-20-6	1,1,1,2-Tetrachloroethane	21.1263	
108383/106423	mp-Xylene	42.7206	
95-47-6	o-Xylene	21.0067	
100-42-5	Styrene	22.1115	
75-25-2	Bromoform	20.0084	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1034043
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info: ZZ VOMS 27511 8260W

Client SDG: 1120914.b
Client Smp ID: LCS for HBN 481311
Sample Point:
Date Received: 13-SEP-2012
Quant Type: ISTD
Level: LOW
Operator: DD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
98-82-8	Isopropylbenzene	22.0520	
108-86-1	Bromobenzene	21.2304	
103-65-1	n-Propylbenzene	22.1857	
79-34-5	1,1,2,2-Tetrachloroethane	20.6162	
95-49-8	o-Chlorotoluene	21.8474	
108-67-8	1,3,5-Trimethylbenzene	21.8634	
96-18-4	1,2,3-Trichloropropane	20.9293	
110-57-6	trans-1,4-Dichloro-2-butene	19.9512	
540-59-0	1,2-Dichloroethene, Total	41.6119	
106-43-4	p-Chlorotoluene	21.9568	
98-06-6	tert-Butylbenzene	21.6979	
76-01-7	Pentachloroethane	20.8491	
95-63-6	1,2,4-Trimethylbenzene	21.3775	
135-98-8	sec-Butylbenzene	22.3579	
99-87-6	p-Isopropyltoluene	21.8115	
541-73-1	1,3-Dichlorobenzene	21.4331	
106-46-7	1,4-Dichlorobenzene	20.9268	
100-44-7	Benzyl Chloride	17.9125	
104-51-8	n-Butylbenzene	21.8019	
67-72-1	Hexachloroethane	20.0519	
95-50-1	1,2-Dichlorobenzene	20.8052	
96-12-8	1,2-Dibromo-3-chloropropane	19.2571	
98-95-3	Nitrobenzene	178.049	
87-68-3	Hexachlorobutadiene	20.3961	
120-82-1	1,2,4-Trichlorobenzene	18.9288	
91-20-3	Naphthalene	17.9296	
87-61-6	1,2,3-Trichlorobenzene	17.7072	
542-75-6	1,3-Dichloropropene, Total	41.1950	
1330-20-7	Total Xylenes	63.7273	
1868-53-7	Dibromofluoromethane	25.0219	
17060-07-0	1,2-Dichloroethane-d4	26.4529	
2037-26-5	Toluene-d8	26.8946	
460-00-4	4-Bromofluorobenzene	28.6907	

ALS - Middletown

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:
Lab Smp Id: 1034043
Operator : DD
Sample Location:
Sample Matrix: WATER
Analysis Type: VOA
Inj Date: 14-SEP-2012 06:26

Client SDG: 1120914.b
Client Smp ID: LCS for HBN 481311
Sample Date:
Sample Point:
Date Received:13-SEP-2012 00:00
Level: LOW

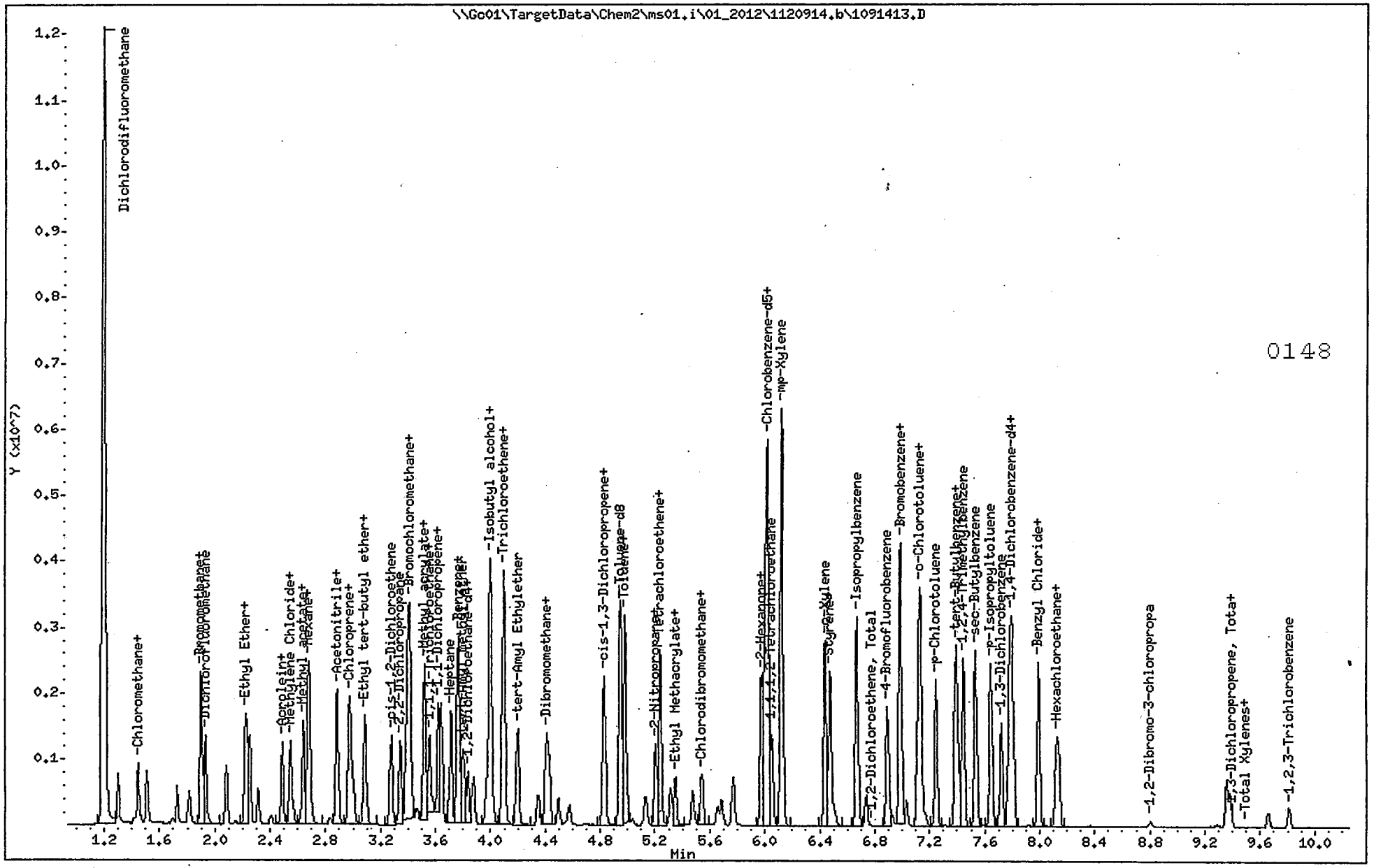
Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091413.D
Date : 14-SEP-2012 06:26
Client ID: LCS for HBN 481311
Sample Info: 1034043;;1;3;;LCS;1;;
Purge Volume: 5.0
Column phase: DB-VRX

Instrument: ms01.i
Operator: DD
Column diameter: 0.25



Continuing Calibrations

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms01.i Calibration Date/Time: 9/21/2012 00:40

Lab File ID: 1092051.D Init. Calib. Date(s): 9/14/2012 9/15/2012

Heated Purge: (Y/N) N Init. Calib. Time(s): 23:28 01:42

GC Column: RTXVMS ID: 0.25 (mm)

COMPOUND	RRF	RRF050	Conc. CC std	MIN RRF	%D	MAX%D	CT	
Acetone	0.0235	0.0201			-14.4	100.0	A	
Acrolein	0.0224	0.0313			39.7	100.0	A	NT
Acrylonitrile	0.0945	0.0870			-8.0	100.0	A	
Acetonitrile	0.0277	0.0300			8.3	100.0	A	
tert-Amyl Ethylether	0.6447	0.7374			14.4	100.0	A	
tert-Amyl methyl ether	50.0000		50.0714		0.1	100.0	L	
tert-Amyl Alcohol	0.0171	0.0152			-10.9	100.0	A	
Benzene	1.0989	1.2556			14.3	100.0	A	
Benzyl Chloride	50.0000		44.0892		-11.8	100.0	Q	
Bromobenzene	0.8401	0.8961			6.7	100.0	A	
Bromochloromethane	0.1282	0.1430			11.6	100.0	A	
Bromodichloromethane	0.3907	0.4300			10.1	100.0	A	
Bromoform	0.4332	0.4294		0.100	-0.9	100.0	A	
Bromomethane	0.1437	0.0812			-43.5	100.0	A	NT
2-Butanone	0.0278	0.0243			-12.4	100.0	A	
tert.- Butyl Alcohol	0.0198	0.0166			-16.0	100.0	A	
tert-Butylbenzene	0.7003	0.7027			0.3	100.0	A	
n-Butylbenzene	0.6705	0.6797			1.4	100.0	A	
sec-Butylbenzene	3.6984	3.7515			1.4	100.0	A	
Carbon Disulfide	0.8474	0.9063			6.9	100.0	A	
Carbon Tetrachloride	0.3709	0.4053			9.3	100.0	A	
Chloroacetonitrile	0.0174	0.0183			5.1	100.0	A	
Chlorobenzene	1.6653	1.8354		0.300	10.2	100.0	A	
1-Chlorobutane	0.3871	0.3926			1.4	100.0	A	
Chlorodibromomethane	0.5842	0.6355			8.8	100.0	A	
Chloroethane	50.0000		50.0889		0.2	100.0	L	
2-Chloroethylvinyl ether	50.0000		38.6944		-22.6	100.0	L	NT
Chloroform	0.5851	0.5778			-1.2	20.0	A	
1-Chlorohexane	0.9491	1.0018			5.6	100.0	A	
Chloromethane	0.4164	0.3962		0.100	-4.9	100.0	A	
Chloroprene	0.4749	0.5038			6.1	100.0	A	
3-Chloro-1-propene	0.4769	0.5056			6.0	100.0	A	
o-Chlorotoluene	3.1085	3.0945			-0.5	100.0	A	
p-Chlorotoluene	2.8759	2.8916			0.5	100.0	A	
Cyclohexane	0.4755	0.5070			6.6	100.0	A	
1,2-Dibromo-3-Chloropropane	0.1337	0.1065			-20.3	100.0	A	NT

Calibration Type: A=Average Response Factor, L=Linear Regression, Q=Quadratic Regression

Compounds with "Calibration Type" other than "A" are calculated as % Drift due to alternate calibration type.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms01.i Calibration Date/Time: 9/21/2012 00:40

Lab File ID: 1092051.D Init. Calib. Date(s): 9/14/2012 9/15/2012

Heated Purge: (Y/N) N Init. Calib. Time(s): 23:28 01:42

GC Column: RTXVMS ID: 0.25 (mm)

COMPOUND	RRF	RRF050	Conc. CC std	MIN RRF	%D	MAX%D	CT	
1,2-Dibromoethane	0.4870	0.5051			3.7	100.0	A	
Dibromomethane	0.1671	0.1736			3.9	100.0	A	
trans-1,4-Dichloro-2-butene	50.0000		40.1575		-19.7	100.0	Q	
1,2-Dichlorobenzene	1.3282	1.3534			1.9	100.0	A	
1,3-Dichlorobenzene	1.5187	1.5702			3.4	100.0	A	
1,4-Dichlorobenzene	1.5212	1.5873			4.3	100.0	A	
Dichlorodifluoromethane	0.3616	0.3821			5.7	100.0	A	
1,1-Dichloroethane	0.5615	0.6046		0.100	7.7	100.0	A	
1,2-Dichloroethene, Total	0.4265	0.4593			7.7	100.0	A	
1,2-Dichloroethane	0.3783	0.3914			3.5	100.0	A	
1,1-Dichloroethene	0.4286	0.4557			6.3	20.0	A	
cis-1,2-Dichloroethene	0.4247	0.4552			7.2	100.0	A	
trans-1,2-Dichloroethene	0.4282	0.4635			8.2	100.0	A	
Dichlorofluoromethane	0.5331	0.5555			4.2	100.0	A	
1,1-Dichloro-2-Propanone	250		189		-24.3	100.0	Q	NT
2,2-Dichloropropane	0.4033	0.4232			4.9	100.0	A	
1,3-Dichloropropane	0.9683	0.9985			3.1	100.0	A	
1,2-Dichloropropane	0.3152	0.3502			11.1	20.0	A	
1,1-Dichloropropene	0.4266	0.4568			7.1	100.0	A	
cis-1,3-Dichloropropene	1.0806	1.1980			10.9	100.0	A	
trans-1,3-Dichloropropene	0.9184	0.9704			5.7	100.0	A	
1,3-Dichloropropene, Total	0.9995	1.0842			8.5	100.0	A	
Diisobutylene	50.0000		50.4916		1.0	100.0	L	
Diisopropyl ether	1.0160	1.1423			12.4	100.0	A	
1,4-Dioxane	1250		3046		144.0 *	100.0	Q	NT
Ethyl Acetate	0.2730	0.2367			-13.3	100.0	A	
Ethyl ether	0.1663	0.1730			4.0	100.0	A	
Ethyl Methacrylate	0.7819	0.7608			-2.7	100.0	A	
Ethyl tert-butyl ether	0.8796	0.9661			9.8	100.0	A	
Ethylbenzene	0.9123	1.0181			11.6	20.0	A	
Freon 113	0.2634	0.2818			7.0	100.0	A	
Heptane	0.2431	0.2447			0.6	100.0	A	
Hexachlorobutadiene	0.3040	0.3061			0.7	100.0	A	
Hexachloroethane	50.0000		46.1912		-7.6	100.0	L	
Hexane	0.6712	0.6751			0.6	100.0	A	
2-Hexanone	0.4077	0.3384			-17.0	100.0	A	

Calibration Type: A=Average Response Factor, L=Linear Regression, Q=Quadratic Regression

Compounds with "Calibration Type" other than "A" are calculated as % Drift due to alternate calibration type.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms01.i Calibration Date/Time: 9/21/2012 00:40

Lab File ID: 1092051.D Init. Calib. Date(s): 9/14/2012 9/15/2012

Heated Purge: (Y/N) N Init. Calib. Time(s): 23:28 01:42

GC Column: RTXVMS ID: 0.25 (mm)

COMPOUND	RRF	RRF050	Conc. CC std	MIN RRF	%D	MAX%D	CT	
Iodomethane	50.0000		38.7164		-22.6	100.0	L	NT
Isobutyl alcohol	0.0531	0.0464			-12.6	100.0	A	
Isopropyl Alcohol	0.0102	0.0101			-1.1	100.0	A	
Isopropylbenzene	3.8581	4.0167			4.1	100.0	A	
p-Isopropyltoluene	0.7639	0.7846			2.7	100.0	A	
Methyl acetate	0.0438	0.0409			-6.5	100.0	A	
Methyl acrylate	0.2435	0.2195			-9.8	100.0	A	
Methacrylonitrile	50.0000		44.5350		-10.9	100.0	L	
Methyl cyclohexane	1.2288	1.2618			2.7	100.0	A	
Methyl methacrylate	0.2586	0.2314			-10.5	100.0	A	
Methyl t-Butyl Ether	0.7489	0.7353			-1.8	100.0	A	
4-Methyl-2-Pentanone(MIBK)	250		192		-23.1	100.0	Q	NT
Methylene Chloride	50.0000		54.4295		8.9	100.0	L	
Naphthalene	50.0000		39.7581		-20.5	100.0	L	NT
Nitrobenzene	500		489		-2.2	100.0	Q	
2-Nitropropane	0.1537	0.1312			-14.6	100.0	A	
Octane	0.4139	0.3989			-3.6	100.0	A	
Pentachloroethane	0.5856	0.5987			2.2	100.0	A	
Pentane	0.2483	0.2481			-0.1	100.0	A	
n-Propanol	0.0189	0.0190			0.6	100.0	A	
Propionitrile	0.0336	0.0313			-7.0	100.0	A	
n-Propylbenzene	1.0396	1.0575			1.7	100.0	A	
Styrene	2.4570	2.5957			5.6	100.0	A	
1,1,1,2-Tetrachloroethane	0.5596	0.6340			13.3	100.0	A	
1,1,2,2-Tetrachloroethane	0.8974	0.7562		0.300	-15.7	100.0	A	
Tetrachloroethene	0.5318	0.5742			8.0	100.0	A	
Tetrahydrofuran	0.0799	0.0696			-13.0	100.0	A	
Toluene	1.6020	1.8034			12.6	20.0	A	
Total Xylenes	1.0686	1.2180			14.0	100.0	A	
1,2,3-Trichlorobenzene	0.5300	0.4899			-7.6	100.0	A	
1,2,4-Trichlorobenzene	0.6117	0.6219			1.7	100.0	A	
1,1,1-Trichloroethane	0.4392	0.4756			8.3	100.0	A	
1,1,2-Trichloroethane	0.4551	0.4638			1.9	100.0	A	
Trichloroethene	0.3034	0.3301			8.8	100.0	A	
Trichlorofluoromethane	0.4358	0.4468			2.5	100.0	A	
1,2,3-Trichloropropane	0.2716	0.2242			-17.5	100.0	A	

Calibration Type: A=Average Response Factor, L=Linear Regression, Q=Quadratic Regression
Compounds with "Calibration Type" other than "A" are calculated as % Drift due to alternate calibration type.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms01.i

Lab File ID: 1092051.D

Heated Purge: (Y/N) N

GC Column: RTXVMS ID: 0.25 (mm)

Calibration Date/Time: 9/21/2012 00:40

Init. Calib. Date(s): 9/14/2012 9/15/2012

Init. Calib. Time(s): 23:28 01:42

COMPOUND	RRF	RRF050	Conc. CC std	MIN RRF	%D	MAX%D	CT
1,2,4-Trimethylbenzene	2.8596	3.0278			5.9	100.0	A
1,3,5-Trimethylbenzene	2.9657	3.0754			3.7	100.0	A
Vinyl Acetate	0.0559	0.0534			-4.6	100.0	A
Vinyl Chloride	0.3966	0.3953			-0.3	20.0	A
o-Xylene	1.0401	1.1777			13.2	100.0	A
mp-Xylene	1.0829	1.2382			14.3	100.0	A
4-Bromofluorobenzene	0.7451	0.8222			10.4	100.0	A
Dibromofluoromethane	0.2271	0.2450			7.9	100.0	A
1,2-Dichloroethane-d4	0.2948	0.2861			-2.9	100.0	A
Toluene-d8	2.0863	2.2840			9.5	100.0	A

Calibration Type: A=Average Response Factor, L=Linear Regression, Q=Quadratic Regression
Compounds with "Calibration Type" other than "A" are calculated as % Drift due to alternate calibration type.

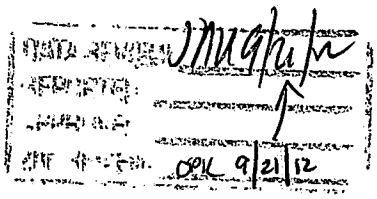
ALS - Middletown

VOLATILE REPORT SW-846 Method 8260

Data file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1092051.D
Lab Smp Id: 1800
Inj Date : 21-SEP-2012 00:40
Operator : GLQ Inst ID: ms01.i
Smp Info : 1800;;1;2;4;;;
Misc Info : ZZ VOMS 27567 8260W_CCV
Comment :
Method : \\gc01\targetdata\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m
Meth Date : 21-Sep-2012 15:22 josh Quant Type: ISTD
Cal Date : 15-SEP-2012 01:42 Cal File: 1091459.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ALMDTXP063

Concentration Formula: Amt * DF * Uf * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged
DF	1.000	sample dilution factor
Cpnd Variable		Local Compound Variable



Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
1 Dichlorodifluoromethane	85	1.302	1.302	(0.326)	1093607	50.0000	52.8389
2 Chloromethane	50	1.444	1.444	(0.362)	1133840	50.0000	47.5707
3 Vinyl Chloride	62	1.504	1.504	(0.377)	1131387	50.0000	49.8443
4 Bromomethane	94	1.728	1.728	(0.433)	232292	50.0000	28.2441
5 Chloroethane	64	1.815	1.815	(0.455)	646533	50.0000	50.0889
6 Pentane	41	1.897	1.897	(0.475)	710002	50.0000	49.9655
7 Trichlorofluoromethane	101	1.902	1.902	(0.477)	1278703	50.0000	51.2600
8 Dichlorofluoromethane	67	1.929	1.929	(0.483)	1589653	50.0000	52.1001
9 Ethyl Ether	74	2.082	2.082	(0.522)	495077	50.0000	52.0235
10 1,1-Dichloroethene	61	2.219	2.219	(0.556)	1304040	50.0000	53.1526
11 Freon 113	101	2.230	2.230	(0.559)	806436	50.0000	53.4829
12 Carbon Disulfide	76	2.251	2.251	(0.564)	2593630	50.0000	53.4741
13 Iodomethane	127	2.311	2.311	(0.579)	237174	50.0000	38.7164
14 Acrolein	56	2.404	2.404	(0.602)	895774	500.000	698.728
15 Isopropyl Alcohol	45	2.459	2.459	(0.616)	144938	250.000	247.233 (M)
16 3-Chloro-1-propene	41	2.486	2.486	(0.623)	1446898	50.0000	53.0087
17 Methylene Chloride	84	2.546	2.546	(0.638)	926866	50.0000	54.4295
18 Acetone	58	2.568	2.568	(0.643)	287707	250.000	213.966
19 Methyl acetate	74	2.628	2.628	(0.658)	117075	50.0000	46.7437
20 trans-1,2-Dichloroethene	61	2.639	2.639	(0.661)	1326449	50.0000	54.1204
21 Hexane	57	2.677	2.677	(0.671)	1931908	50.0000	50.2884

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
	22 Methyl t-Butyl Ether	73	2.682	2.682	(0.672)	2104186	50.0000	49.0890
	23 tert.- Butyl Alcohol	59	2.710	2.710	(0.679)	238114	250.000	209.985
	24 Acetonitrile	41	2.835	2.835	(0.710)	428702	250.000	270.835
	25 Diisopropyl ether	45	2.884	2.884	(0.723)	3269088	50.0000	56.2173
	26 Chloroprene	53	2.966	2.966	(0.743)	1441924	50.0000	53.0446
	27 1,1-Dichloroethane	63	2.982	2.982	(0.747)	1730182	50.0000	53.8322
	28 Acrylonitrile	53	3.004	3.004	(0.753)	1244678	250.000	230.062
	29 Ethyl tert-butyl ether	59	3.086	3.086	(0.773)	2764920	50.0000	54.9199
	30 n-Propanol	41	3.086	3.086	(0.773)	544186	500.000	502.766(a)
	31 Vinyl Acetate	86	3.092	3.092	(0.774)	152781	50.0000	47.7242
	32 cis-1,2-Dichloroethene	61	3.277	3.277	(0.821)	1302592	50.0000	53.5888
	33 2,2-Dichloropropane	77	3.343	3.343	(0.837)	1211257	50.0000	52.4689
	34 Bromochloromethane	128	3.392	3.392	(0.850)	409216	50.0000	55.7766
	35 Cyclohexane	84	3.408	3.408	(0.854)	1450894	50.0000	53.3130
	36 Chloroform	83	3.414	3.414	(0.855)	1653701	50.0000	49.3834
	37 Ethyl Acetate	43	3.457	3.457	(0.866)	677344	50.0000	43.3428
	38 Methyl acrylate	55	3.474	3.474	(0.870)	628239	50.0000	45.0833
	39 Carbon Tetrachloride	117	3.517	3.517	(0.881)	1159934	50.0000	54.6378
	40 Tetrahydrofuran	42	3.517	3.517	(0.881)	995536	250.000	217.606
$	41 Dibromofluoromethane	113	3.523	3.523	(0.882)	701294	50.0000	53.9596
	42 1,1,1-Trichloroethane	97	3.555	3.555	(0.891)	1360973	50.0000	54.1455
	43 2-Butanone	72	3.583	3.583	(0.897)	347961	250.000	218.946
	44 1,1-Dichloropropene	75	3.621	3.621	(0.907)	1307381	50.0000	53.5490
	45 1-Chlorobutane	41	3.643	3.643	(0.913)	1123464	50.0000	50.7132
	46 Heptane	71	3.714	3.714	(0.930)	700134	50.0000	50.3163
	47 Benzene	78	3.763	3.763	(0.943)	3593248	50.0000	57.1268
	48 Propionitrile	54	3.763	3.763	(0.943)	447275	250.000	232.609
	49 Methacrylonitrile	67	3.774	3.774	(0.945)	284930	50.0000	44.5350
	50 tert-Amyl methyl ether	73	3.795	3.795	(0.951)	2256185	50.0000	50.0714(M)
$	51 1,2-Dichloroethane-d4	65	3.834	3.834	(0.960)	818740	50.0000	48.5284
	52 1,2-Dichloroethane	62	3.872	3.872	(0.970)	1120190	50.0000	51.7327
	53 tert-Amyl Alcohol	59	3.877	3.877	(0.971)	217748	250.000	222.774
	54 Isobutyl alcohol	43	3.965	3.965	(0.993)	1329100	500.000	437.148
*	55 Fluorobenzene	96	3.992	3.992	(1.000)	1717091	30.0000	
	56 Diisobutylene	57	4.003	4.003	(1.003)	2692776	50.0000	50.4916
	57 Trichloroethene	95	4.090	4.090	(1.025)	944588	50.0000	54.3853
	58 Methyl cyclohexane	83	4.096	4.096	(0.683)	1594965	50.0000	51.3428
	59 tert-Amyl Ethylether	59	4.199	4.199	(1.052)	2110341	50.0000	57.1913(A)
	60 Dibromomethane	93	4.347	4.347	(1.089)	496867	50.0000	51.9392
	61 1,2-Dichloropropane	63	4.407	4.407	(1.104)	1002160	50.0000	55.5415
	62 Bromodichloromethane	83	4.428	4.428	(1.109)	1230619	50.0000	55.0370
	63 Methyl methacrylate	41	4.499	4.499	(1.127)	662349	50.0000	44.7546
	64 1,4-Dioxane	88	4.543	4.543	(1.138)	138716	1250.00	3045.85
	65 2-Chloroethylvinyl ether	63	4.756	4.756	(1.191)	22357	50.0000	38.6944(M)
	66 cis-1,3-Dichloropropene	75	4.821	4.821	(0.804)	1514359	50.0000	55.4340
	67 Octane	85	4.832	4.832	(0.805)	504185	50.0000	48.1797
$	68 Toluene-d8	98	4.947	4.947	(0.824)	2887094	50.0000	54.7383
	69 Toluene	92	4.980	4.980	(0.830)	2279611	50.0000	56.2865
	70 Chloroacetonitrile	48	5.034	5.034	(0.839)	115841	250.000	262.860
	71 2-Nitropropane	41	5.127	5.127	(0.855)	829532	250.000	213.524
	72 1,1-Dichloro-2-Propanone	63	5.138	5.138	(0.856)	57247	250.000	189.178(M)
	73 4-Methyl-2-Pentanone(MIBK)	43	5.203	5.203	(0.867)	3294370	250.000	192.337
	74 Tetrachloroethene	164	5.241	5.241	(0.874)	725858	50.0000	53.9918
	75 trans-1,3-Dichloropropene	75	5.236	5.236	(0.873)	1226637	50.0000	52.8290

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
	76 Ethyl Methacrylate	69	5.312	5.312	(0.885)	961736	50.0000	48.6547
	77 1,1,2-Trichloroethane	83	5.351	5.351	(0.892)	586293	50.0000	50.9613
	78 Chlorodibromomethane	129	5.476	5.476	(0.913)	803355	50.0000	54.3908
	79 1,3-Dichloropropane	76	5.542	5.542	(0.924)	1262156	50.0000	51.5607 (M)
	80 1,2-Dibromoethane	107	5.656	5.656	(0.943)	638504	50.0000	51.8577
	81 2-Hexanone	43	5.765	5.765	(0.961)	2138608	250.000	207.476
	82 1-Chlorohexane	91	5.978	5.978	(0.996)	1266360	50.0000	52.7756
*	83 Chlorobenzene-d5	82	6.000	6.000	(1.000)	758443	30.0000	
	84 Chlorobenzene	112	6.016	6.016	(1.003)	2320028	50.0000	55.1071
	85 Ethylbenzene	106	6.022	6.022	(1.004)	1286913	50.0000	55.7969
	86 1,1,1,2-Tetrachloroethane	131	6.054	6.054	(1.009)	801373	50.0000	56.6472
	87 mp-Xylene	106	6.120	6.120	(1.020)	3130267	100.000	114.337
	88 o-Xylene	106	6.442	6.442	(1.074)	1488755	50.0000	56.6183
	89 Styrene	104	6.475	6.475	(0.832)	2503891	50.0000	52.8225
	90 Bromoform	173	6.507	6.507	(0.837)	414170	50.0000	49.5611
	91 Isopropylbenzene	105	6.671	6.671	(0.858)	3874675	50.0000	52.0562
$	92 4-Bromofluorobenzene	174	6.895	6.895	(0.886)	793160	50.0000	55.1789
	93 Bromobenzene	156	6.982	6.982	(0.898)	864377	50.0000	53.3292
	94 n-Propylbenzene	120	6.987	6.987	(0.898)	1020088	50.0000	50.8597
	95 1,1,2,2-Tetrachloroethane	83	7.031	7.031	(0.904)	729481	50.0000	42.1364
	96 o-Chlorotoluene	91	7.118	7.118	(0.915)	2985024	50.0000	49.7747
	97 1,3,5-Trimethylbenzene	105	7.135	7.135	(0.917)	2966634	50.0000	51.8501
	98 1,2,3-Trichloropropane	110	7.151	7.151	(0.919)	216241	50.0000	41.2635
	99 trans-1,4-Dichloro-2-butene	53	7.173	7.173	(0.922)	161660	50.0000	40.1575
M	100 1,2-Dichloroethene, Total	61				2629041	100.000	107.709
	101 p-Chlorotoluene	91	7.249	7.249	(0.932)	2789347	50.0000	50.2736
	102 tert-Butylbenzene	134	7.391	7.391	(0.950)	677823	50.0000	50.1695
	103 Pentachloroethane	117	7.413	7.413	(0.953)	577523	50.0000	51.1177
	104 1,2,4-Trimethylbenzene	105	7.446	7.446	(0.957)	2920700	50.0000	52.9401
	105 sec-Butylbenzene	105	7.533	7.533	(0.968)	3618815	50.0000	50.7177
	106 p-Isopropyltoluene	134	7.648	7.648	(0.983)	756891	50.0000	51.3566
	107 1,3-Dichlorobenzene	146	7.719	7.719	(0.992)	1514622	50.0000	51.6958
*	108 1,4-Dichlorobenzene-d4	152	7.779	7.779	(1.000)	578778	30.0000	
	109 1,4-Dichlorobenzene	146	7.790	7.790	(1.001)	1531119	50.0000	52.1703
	110 Benzyl Chloride	126	7.991	7.991	(1.027)	195373	50.0000	44.0892
	111 n-Butylbenzene	134	7.991	7.991	(1.027)	655671	50.0000	50.6891
	112 Hexachloroethane	117	8.117	8.117	(1.043)	467443	50.0000	46.1912
	113 1,2-Dichlorobenzene	146	8.139	8.139	(1.046)	1305544	50.0000	50.9487
	114 1,2-Dibromo-3-chloropropane	75	8.804	8.804	(1.132)	102722	50.0000	39.8317
	115 Nitrobenzene	77	9.290	9.290	(1.194)	159431	500.000	488.979
	116 Hexachlorobutadiene	225	9.361	9.361	(1.203)	295288	50.0000	50.3431
	117 1,2,4-Trichlorobenzene	180	9.383	9.383	(1.206)	599934	50.0000	50.8351
	118 Naphthalene	128	9.661	9.662	(1.242)	1221689	50.0000	39.7581
	119 1,2,3-Trichlorobenzene	180	9.814	9.814	(1.262)	472602	50.0000	46.2181
M	120 1,3-Dichloropropene, Total	75				2740996	100.000	108.263
M	121 Total Xylenes	106				4619022	150.000	170.955

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms01.i
Lab File ID: 1092051.D
Lab Smp Id: 1800
Analysis Type: VOA
Quant Type: ISTD
Operator: GLQ
Method File: \\gc01\targetdata\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m
Misc Info: ZZ VOMS 27567 8260W_CCV

Calibration Date: 21-SEP-2012
Calibration Time: 00:40

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	1717091	858546	3434182	1717091	0.00
83 Chlorobenzene-d5	758443	379222	1516886	758443	0.00
108 1,4-Dichlorobenze	578778	289389	1157556	578778	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	3.99	3.49	4.49	3.99	0.00
83 Chlorobenzene-d5	6.00	5.50	6.50	6.00	0.00
108 1,4-Dichlorobenze	7.78	7.28	8.28	7.78	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: ms01.i
Lab File ID: 1092051.D
Analysis Type: WATER
Lab Sample ID: 1800
Method: \\gc01\targetdata\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m

Injection Date: 21-SEP-2012 00:40
Init. Cal. Date(s): 14-SEP-2012 15-SEP-2012
Init. Cal. Times: 23:28 01:42
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
1 Dichlorodifluoromethane	0.36161	0.38214	0.38214	0.010	5.67788	100	Averaged
2 Chloromethane	0.41643	0.39620	0.39620	0.100	-4.85859	100	Averaged
3 Vinyl Chloride	0.39657	0.39534	0.39534	0.010	-0.31133	20.00000	Averaged
4 Bromomethane	0.14369	0.08117	0.08117	0.010	-43.51184	100	Averaged
5 Chloroethane	50.00000	50.08890	4.42641	0.010	0.17780	100	Linear
6 Pentane	0.24827	0.24809	0.24809	0.010	-0.06899	100	Averaged
7 Trichlorofluoromethane	0.43583	0.44681	0.44681	0.010	2.51995	100	Averaged
8 Dichlorofluoromethane	0.53308	0.55547	0.55547	0.010	4.20023	100	Averaged
9 Ethyl Ether	0.16627	0.17299	0.17299	0.010	4.04699	100	Averaged
10 1,1-Dichloroethene	0.42864	0.45567	0.45567	0.010	6.30528	20.00000	Averaged
11 Freon 113	0.26344	0.28179	0.28179	0.010	6.96580	100	Averaged
12 Carbon Disulfide	0.84741	0.90629	0.90629	0.010	6.94823	100	Averaged
13 Iodomethane	50.00000	38.71637	12.06632	0.010	-22.56726	100	Linear
14 Acrolein	0.02240	0.03130	0.03130	0.000	39.74556	100	Averaged
15 Isopropyl Alcohol	0.01024	0.01013	0.01013	0.000	-1.10675	100	Averaged
16 3-Chloro-1-propene	0.47689	0.50559	0.50559	0.010	6.01747	100	Averaged
17 Methylene Chloride	50.00000	54.42950	3.08763	0.010	8.85899	100	Linear
18 Acetone	0.02349	0.02011	0.02011	0.000	-14.41366	100	Averaged
19 Methyl acetate	0.04376	0.04091	0.04091	0.005	-6.51263	100	Averaged
20 trans-1,2-Dichloroethene	0.42821	0.46350	0.46350	0.010	8.24089	100	Averaged
21 Hexane	0.67119	0.67506	0.67506	0.010	0.57677	100	Averaged
22 Methyl t-Butyl Ether	0.74891	0.73526	0.73526	0.010	-1.82195	100	Averaged
23 tert.- Butyl Alcohol	0.01981	0.01664	0.01664	0.000	-16.00592	100	Averaged
24 Acetonitrile	0.02766	0.02996	0.02996	0.000	8.33392	100	Averaged
25 Diisopropyl ether	1.01598	1.14231	1.14231	0.010	12.43454	100	Averaged
26 Chloroprene	0.47493	0.50385	0.50385	0.010	6.08918	100	Averaged
27 1,1-Dichloroethane	0.56154	0.60457	0.60457	0.100	7.66443	100	Averaged
28 Acrylonitrile	0.09452	0.08699	0.08699	0.000	-7.97527	100	Averaged
29 Ethyl tert-butyl ether	0.87959	0.96614	0.96614	0.010	9.83976	100	Averaged
30 n-Propanol	0.01891	0.01902	0.01902	0.000	0.55329	100	Averaged
31 Vinyl Acetate	0.05593	0.05339	0.05339	0.010	-4.55156	100	Averaged
32 cis-1,2-Dichloroethene	0.42468	0.45516	0.45516	0.010	7.17750	100	Averaged
33 2,2-Dichloropropane	0.40333	0.42325	0.42325	0.010	4.93785	100	Averaged
34 Bromochloromethane	0.12818	0.14299	0.14299	0.010	11.55313	100	Averaged
35 Cyclohexane	0.47548	0.50698	0.50698	0.010	6.62597	100	Averaged
36 Chloroform	0.58506	0.57785	0.57785	0.010	-1.23314	20.00000	Averaged
37 Ethyl Acetate	0.27304	0.23668	0.23668	0.010	-13.31430	100	Averaged
38 Methyl acrylate	0.24347	0.21952	0.21952	0.010	-9.83349	100	Averaged
39 Carbon Tetrachloride	0.37091	0.40531	0.40531	0.010	9.27561	100	Averaged
40 Tetrahydrofuran	0.07993	0.06957	0.06957	0.000	-12.95757	100	Averaged
$ 41 Dibromofluoromethane	0.22707	0.24505	0.24505	0.010	7.91913	100	Averaged
42 1,1,1-Trichloroethane	0.43915	0.47556	0.47556	0.010	8.29100	100	Averaged
43 2-Butanone	0.02777	0.02432	0.02432	0.000	-12.42151	100	Averaged

ALS - Middletown

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: ms01.i
Lab File ID: 1092051.D
Analysis Type: WATER
Lab Sample ID: 1800
Method: \\gc01\targetdata\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m

Injection Date: 21-SEP-2012 00:40
Init. Cal. Date(s): 14-SEP-2012 15-SEP-2012
Init. Cal. Times: 23:28 01:42
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
44 1,1-Dichloropropene	0.42656	0.45684	0.45684	0.010	7.09800	100	Averaged
45 1-Chlorobutane	0.38705	0.39257	0.39257	0.010	1.42638	100	Averaged
46 Heptane	0.24311	0.24465	0.24465	0.000	0.63253	100	Averaged
47 Benzene	1.09894	1.25558	1.25558	0.010	14.25363	100	Averaged
48 Propionitrile	0.03360	0.03126	0.03126	0.000	-6.95639	100	Averaged
49 Methacrylonitrile	50.00000	44.53500	10.04393	0.010	-10.93001	100	Linear
50 tert-Amyl methyl ether	50.00000	50.07136	1.26843	0.010	0.14273	100	Linear
$ 51 1,2-Dichloroethane-d4	0.29477	0.28609	0.28609	0.010	-2.94322	100	Averaged
52 1,2-Dichloroethane	0.37832	0.39143	0.39143	0.010	3.46536	100	Averaged
53 tert-Amyl Alcohol	0.01708	0.01522	0.01522	0.002	-10.89050	100	Averaged
54 Isobutyl alcohol	0.05312	0.04644	0.04644	0.000	-12.57045	100	Averaged
56 Diisobutylene	50.00000	50.49156	1.06278	0.010	0.98312	100	Linear
57 Trichloroethene	0.30345	0.33007	0.33007	0.010	8.77061	100	Averaged
58 Methyl cyclohexane	1.22877	1.26177	1.26177	0.005	2.68558	100	Averaged
59 tert-Amyl Ethylether	0.64469	0.73741	0.73741	0.010	14.38261	100	Averaged
60 Dibromomethane	0.16714	0.17362	0.17362	0.010	3.87840	100	Averaged
61 1,2-Dichloropropane	0.31524	0.35018	0.35018	0.010	11.08301	20.00000	Averaged
62 Bromodichloromethane	0.39066	0.43001	0.43001	0.010	10.07396	100	Averaged
63 Methyl methacrylate	0.25857	0.23144	0.23144	0.010	-10.49074	100	Averaged
64 1,4-Dioxane	1250	3046	516	0.000	144	100	Quadratic <-
65 2-Chloroethylvinyl ether	50.00000	38.69443	128	0.010	-22.61115	100	Linear
66 cis-1,3-Dichloropropene	1.08056	1.19800	1.19800	0.010	10.86801	100	Averaged
67 Octane	0.41393	0.39886	0.39886	0.010	-3.64053	100	Averaged
$ 68 Toluene-d8	2.08626	2.28396	2.28396	0.010	9.47661	100	Averaged
69 Toluene	1.60197	1.80339	1.80339	0.010	12.57300	20.00000	Averaged
70 Chloroacetonitrile	0.01743	0.01833	0.01833	0.000	5.14392	100	Averaged
71 2-Nitropropane	0.15367	0.13125	0.13125	0.005	-14.59030	100	Averaged
72 1,1-Dichloro-2-Propanone	250	189	110	0.001	-24.32877	100	Quadratic
73 4-Methyl-2-Pentanone (MIBK)	250	192	1.91853	0.010	-23.06527	100	Quadratic
74 Tetrachloroethene	0.53177	0.57422	0.57422	0.010	7.98350	100	Averaged
75 trans-1,3-Dichloropropene	0.91842	0.97039	0.97039	0.010	5.65802	100	Averaged
76 Ethyl Methacrylate	0.78186	0.76082	0.76082	0.010	-2.69061	100	Averaged
77 1,1,2-Trichloroethane	0.45506	0.46381	0.46381	0.010	1.92269	100	Averaged
78 Chlorodibromomethane	0.58423	0.63553	0.63553	0.010	8.78151	100	Averaged
79 1,3-Dichloropropane	0.96826	0.99848	0.99848	0.010	3.12147	100	Averaged
80 1,2-Dibromoethane	0.48702	0.50512	0.50512	0.010	3.71545	100	Averaged
81 2-Hexanone	0.40772	0.33837	0.33837	0.010	-17.00946	100	Averaged
82 1-Chlorohexane	0.94912	1.00181	1.00181	0.010	5.55119	100	Averaged
84 Chlorobenzene	1.66527	1.83536	1.83536	0.300	10.21427	100	Averaged
85 Ethylbenzene	0.91230	1.01807	1.01807	0.010	11.59386	20.00000	Averaged
86 1,1,1,2-Tetrachloroethane	0.55957	0.63396	0.63396	0.010	13.29449	100	Averaged
87 mp-Xylene	1.08291	1.23817	1.23817	0.010	14.33682	100	Averaged

ALS - Middletown

CONTINUING CALIBRATION COMPOUNDS

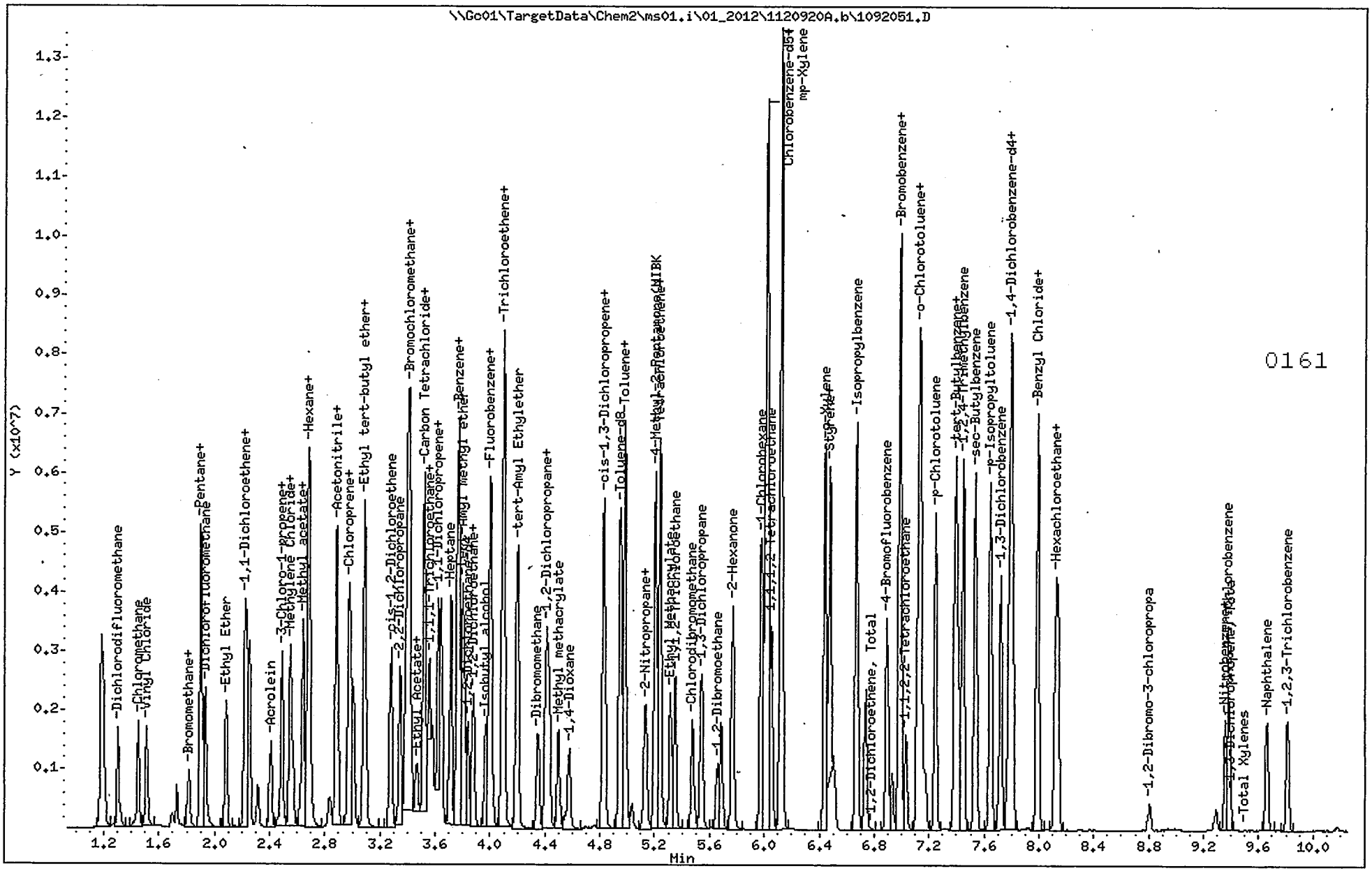
Instrument ID: ms01.i
Lab File ID: 1092051.D
Analysis Type: WATER
Lab Sample ID: 1800
Method: \\gc01\targetdata\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m

Injection Date: 21-SEP-2012 00:40
Init. Cal. Date(s): 14-SEP-2012 15-SEP-2012
Init. Cal. Times: 23:28 01:42
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
88 o-Xylene	1.04007	1.17775	1.17775	0.010	13.23667	100	Averaged
89 Styrene	2.45700	2.59570	2.59570	0.010	5.64508	100	Averaged
90 Bromoform	0.43316	0.42936	0.42936	0.100	-0.87771	100	Averaged
91 Isopropylbenzene	3.85809	4.01675	4.01675	0.010	4.11239	100	Averaged
$ 92 4-Bromofluorobenzene	0.74507	0.82224	0.82224	0.010	10.35776	100	Averaged
93 Bromobenzene	0.84013	0.89607	0.89607	0.010	6.65833	100	Averaged
94 n-Propylbenzene	1.03962	1.05749	1.05749	0.010	1.71944	100	Averaged
95 1,1,2,2-Tetrachloroethane	0.89736	0.75623	0.75623	0.300	-15.72729	100	Averaged
96 o-Chlorotoluene	3.10848	3.09448	3.09448	0.010	-0.45066	100	Averaged
97 1,3,5-Trimethylbenzene	2.96568	3.07541	3.07541	0.010	3.70016	100	Averaged
98 1,2,3-Trichloropropane	0.27163	0.22417	0.22417	0.010	-17.47302	100	Averaged
99 trans-1,4-Dichloro-2-butene	50.00000	40.15749	5.96703	0.010	-19.68503	100	Quadratic
M 100 1,2-Dichloroethene, Total	0.42645	0.45933	0.45933	0.010	7.71140	100	Averaged
101 p-Chlorotoluene	2.87589	2.89162	2.89162	0.010	0.54721	100	Averaged
102 tert-Butylbenzene	0.70030	0.70268	0.70268	0.010	0.33907	100	Averaged
103 Pentachloroethane	0.58561	0.59870	0.59870	0.010	2.23537	100	Averaged
104 1,2,4-Trimethylbenzene	2.85964	3.02779	3.02779	0.010	5.88030	100	Averaged
105 sec-Butylbenzene	3.69842	3.75151	3.75151	0.010	1.43536	100	Averaged
106 p-Isopropyltoluene	0.76392	0.78464	0.78464	0.010	2.71316	100	Averaged
107 1,3-Dichlorobenzene	1.51865	1.57016	1.57016	0.010	3.39163	100	Averaged
109 1,4-Dichlorobenzene	1.52123	1.58726	1.58726	0.010	4.34053	100	Averaged
110 Benzyl Chloride	50.00000	44.08919	4.93738	0.010	-11.82161	100	Quadratic
111 n-Butylbenzene	0.67047	0.67971	0.67971	0.010	1.37821	100	Averaged
112 Hexachloroethane	50.00000	46.19117	2.06363	0.010	-7.61767	100	Linear
113 1,2-Dichlorobenzene	1.32821	1.35341	1.35341	0.010	1.89742	100	Averaged
114 1,2-Dibromo-3-chloropropane	0.13367	0.10649	0.10649	0.010	-20.33667	100	Averaged
115 Nitrobenzene	500	489	60.50454	0.000	-2.20415	100	Quadratic
116 Hexachlorobutadiene	0.30403	0.30612	0.30612	0.000	0.68620	100	Averaged
117 1,2,4-Trichlorobenzene	0.61171	0.62193	0.62193	0.010	1.67022	100	Averaged
118 Naphthalene	50.00000	39.75812	0.78960	0.010	-20.48375	100	Linear
119 1,2,3-Trichlorobenzene	0.53002	0.48993	0.48993	0.010	-7.56381	100	Averaged
M 120 1,3-Dichloropropene, Total	0.99949	1.08419	1.08419	0.010	8.47431	100	Averaged
M 121 Total Xylenes	1.06863	1.21803	1.21803	0.010	13.97991	100	Averaged

Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1092051.D
Date : 21-SEP-2012 00:40
Client ID:
Sample Info: 1800;;1;2;4;;;
Purge Volume: 5.0
Column phase: DB-VRX

Instrument: ms01.i
Operator: GLQ
Column diameter: 0.25



QC Raw Data

Instrument Tune Raw Data

ALS - Middletown

Data file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091400.D
Lab Smp Id: 1000
Inj Date : 14-SEP-2012 01:36
Operator : DD Inst ID: ms01.i
Smp Info : 1000
Misc Info :
Comment :
Method : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\bfb288.m
Meth Date : 22-Aug-2012 01:35 carl Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: ALMDTXP076

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

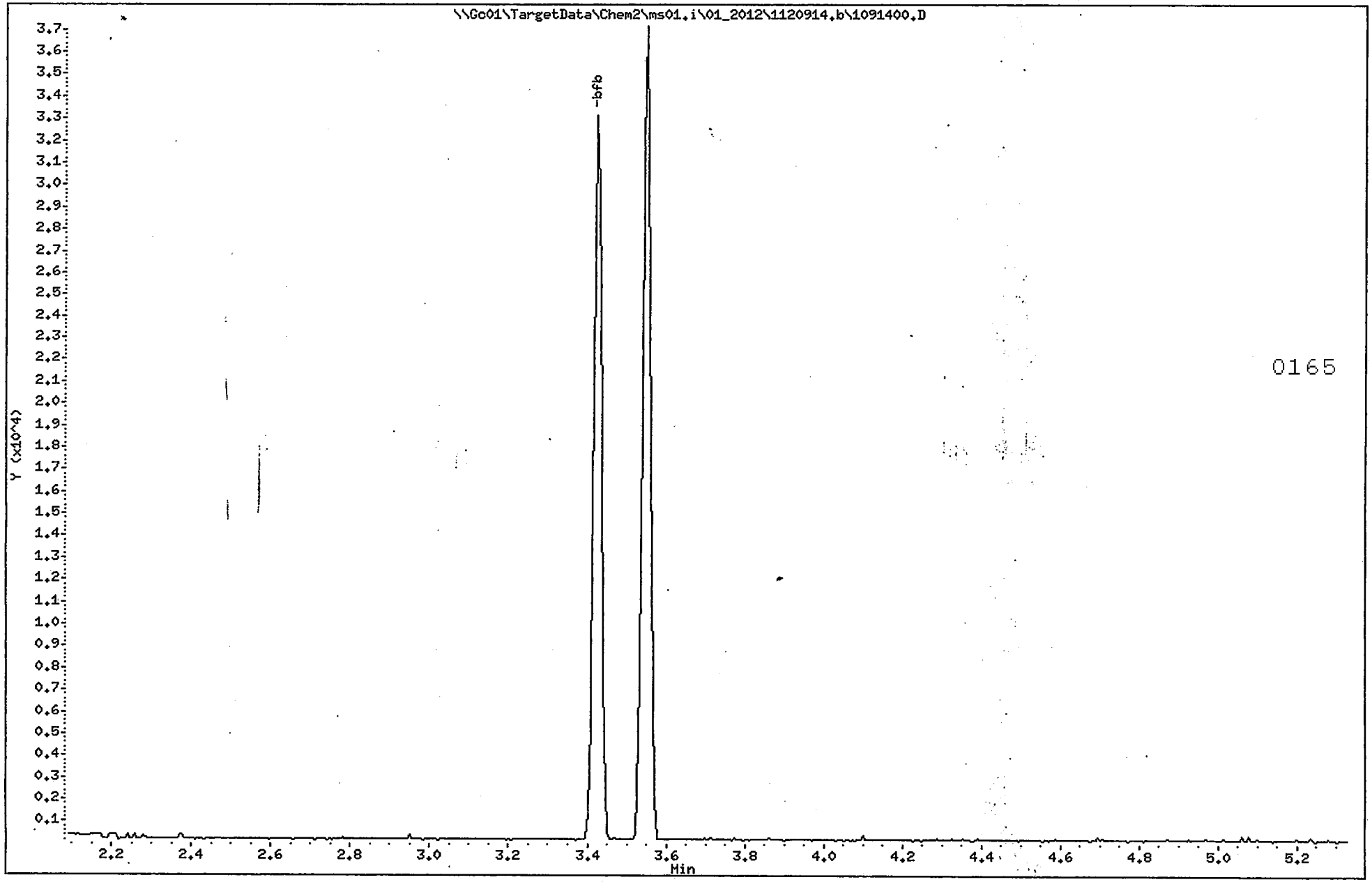
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
Vi	1.000	Injection Volume
Cpnd Variable		Local Compound Variable

DATA REVIEW 9/14/12
REPORTED
APPROVED
2nd REVIEW 9/17/12

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
3.423	3.162	(0.000)	95	6841			0.00- 100.00	100.00
3.423	3.162	(0.000)	50	1426			15.00- 40.00	20.84
3.423	3.162	(0.000)	75	3502			30.00- 60.00	51.19
3.423	3.162	(0.000)	96	449			5.00- 9.00	6.56
3.423	3.162	(0.000)	173	0	0.0	0.0	0.00- 2.00	0.00
3.423	3.162	(0.000)	174	4538			50.00- 0.00	66.34
3.423	3.162	(0.000)	175	346			5.00- 9.00	7.62
3.423	3.162	(0.000)	176	4383			95.00- 101.00	96.58
3.423	3.162	(0.000)	177	281			5.00- 9.00	6.41

Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091400.D
Date : 14-SEP-2012 01:36
Client ID:
Sample Info: 1000
Volume Injected (uL): 1.0
Column phase: DB624

Instrument: ms01.i
Operator: DD
Column diameter: 0.53



Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091400.D

Date : 14-SEP-2012 01:36

Client ID:

Instrument: ms01.i

Sample Info: 1000

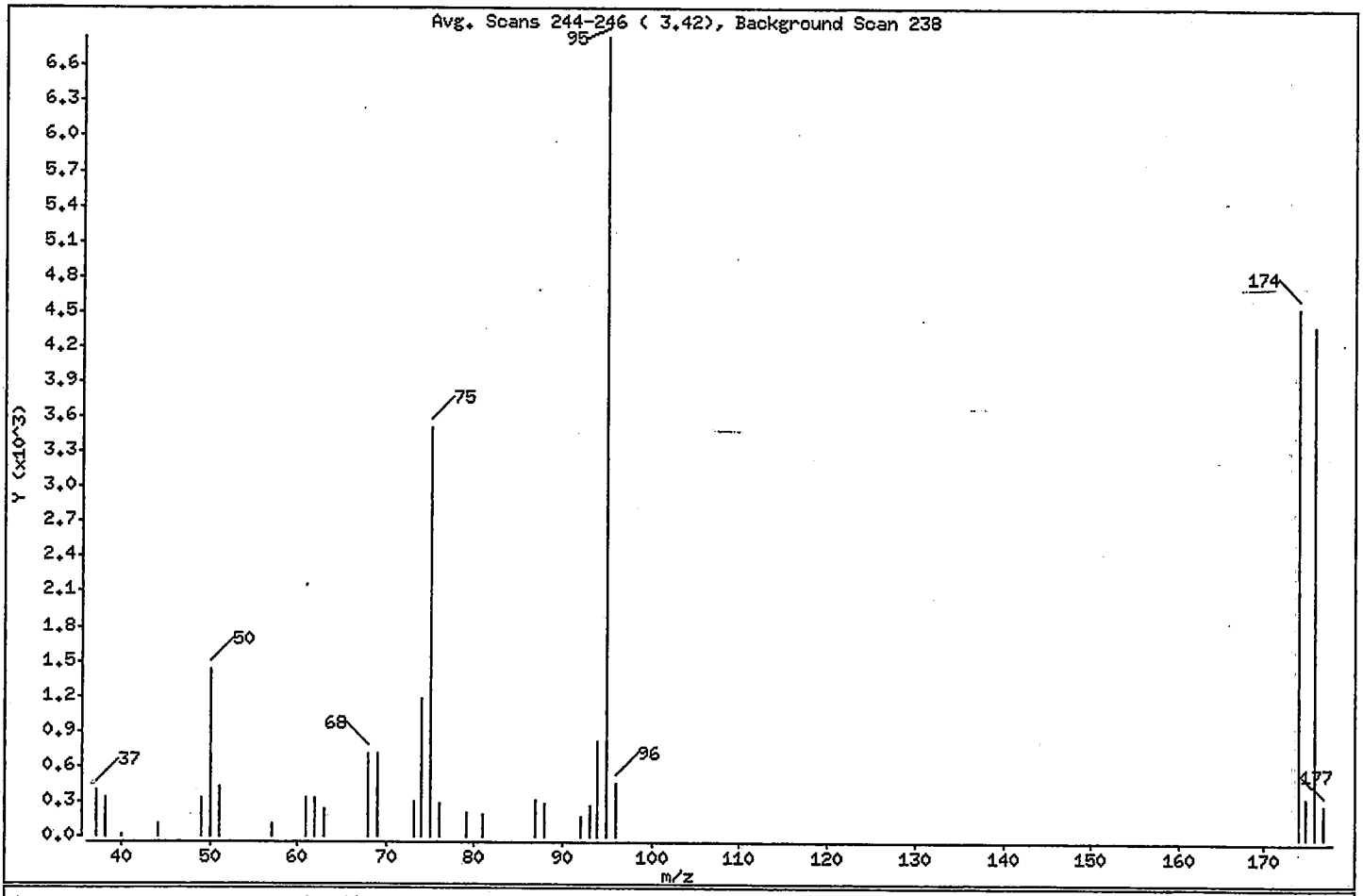
Volume Injected (uL): 1.0

Operator: DD

Column phase: DB624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	20.84
75	30.00 - 60.00% of mass 95	51.19
96	5.00 - 9.00% of mass 95	6.56
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	66.34
175	5.00 - 9.00% of mass 174	5.06 (7.62)
176	95.00 - 101.00% of mass 174	64.07 (96.58)
177	5.00 - 9.00% of mass 176	4.11 (6.41)

Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120914.b\1091400.D

Date : 14-SEP-2012 01:36

Client ID:

Instrument: ms01.i

Sample Info: 1000

Volume Injected (uL): 1.0

Operator: DD

Column phase: DB624

Column diameter: 0.53

Data File: 1091400.D

Spectrum: Avg. Scans 244-246 (3.42), Background Scan 238

Location of Maximum: 95.00

Number of points: 30

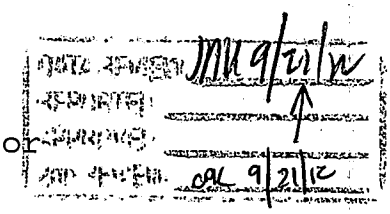
m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	387	61.00	327	76.00	286	95.00	6841
38.00	324	62.00	328	79.00	199	96.00	449
40.00	8	63.00	243	81.00	194	174.00	4538
44.00	111	68.00	708	87.00	307	175.00	346
49.00	323	69.00	708	88.00	285	176.00	4383
50.00	1426	73.00	300	92.00	174	177.00	281
51.00	429	74.00	1178	93.00	271		
57.00	113	75.00	3502	94.00	821		

ALS - Middletown

Data file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1092050.D
Lab Smp Id: 1000
Inj Date : 21-SEP-2012 00:14
Operator : GLQ Inst ID: ms01.i
Smp Info : 1000
Misc Info : ZZ VOMS 27567 BFBTUNE-A
Comment :
Method : \\gc01\targetdata\Chem2\ms01.i\01_2012\1120920A.b\bfb288.m
Meth Date : 22-Aug-2012 01:35 carl Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: ALMDTXP063

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

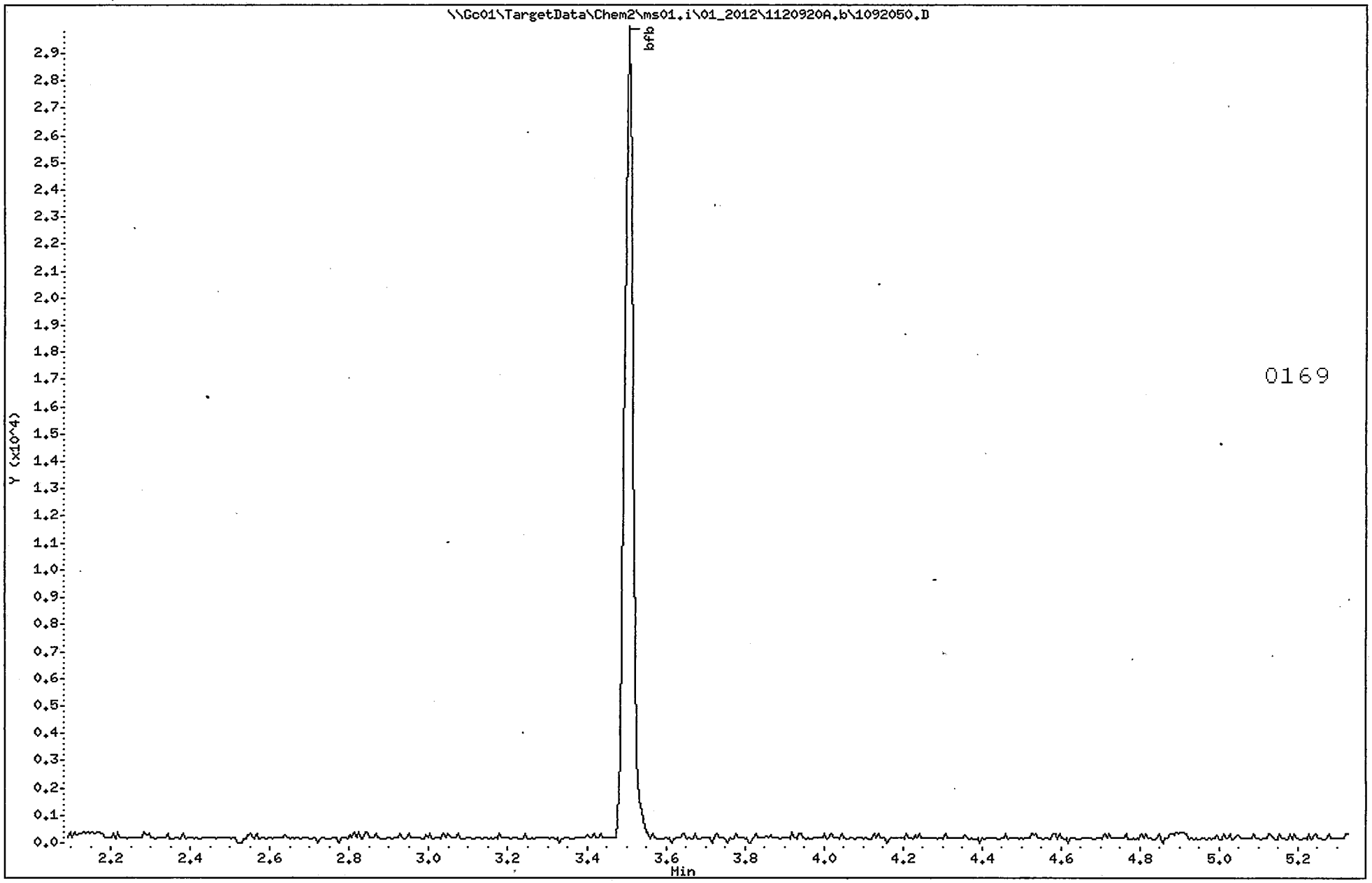
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
Vi	1.000	Injection Volume
Cpnd Variable		Local Compound Variable



RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
3.505	3.162	(0.000)	95	6101			0.00- 100.00	100.00
3.505	3.162	(0.000)	50	1164			15.00- 40.00	19.08
3.505	3.162	(0.000)	75	2918			30.00- 60.00	47.83
3.505	3.162	(0.000)	96	413			5.00- 9.00	6.77
3.505	3.162	(0.000)	173	0	0.0	0.0	0.00- 2.00	0.00
3.505	3.162	(0.000)	174	4553			50.00- 0.00	74.63
3.505	3.162	(0.000)	175	298			5.00- 9.00	6.55
3.505	3.162	(0.000)	176	4557			95.00- 101.00	100.09
3.505	3.162	(0.000)	177	287			5.00- 9.00	6.30

Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1092050.D
Date : 21-SEP-2012 00:14
Client ID:
Sample Info: 1000
Volume Injected (uL): 1.0
Column phase: DB624

Instrument: ms01.i
Operator: GLQ
Column diameter: 0.53



Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1092050.D

Date : 21-SEP-2012 00:14

Client ID:

Instrument: ms01.i

Sample Info: 1000

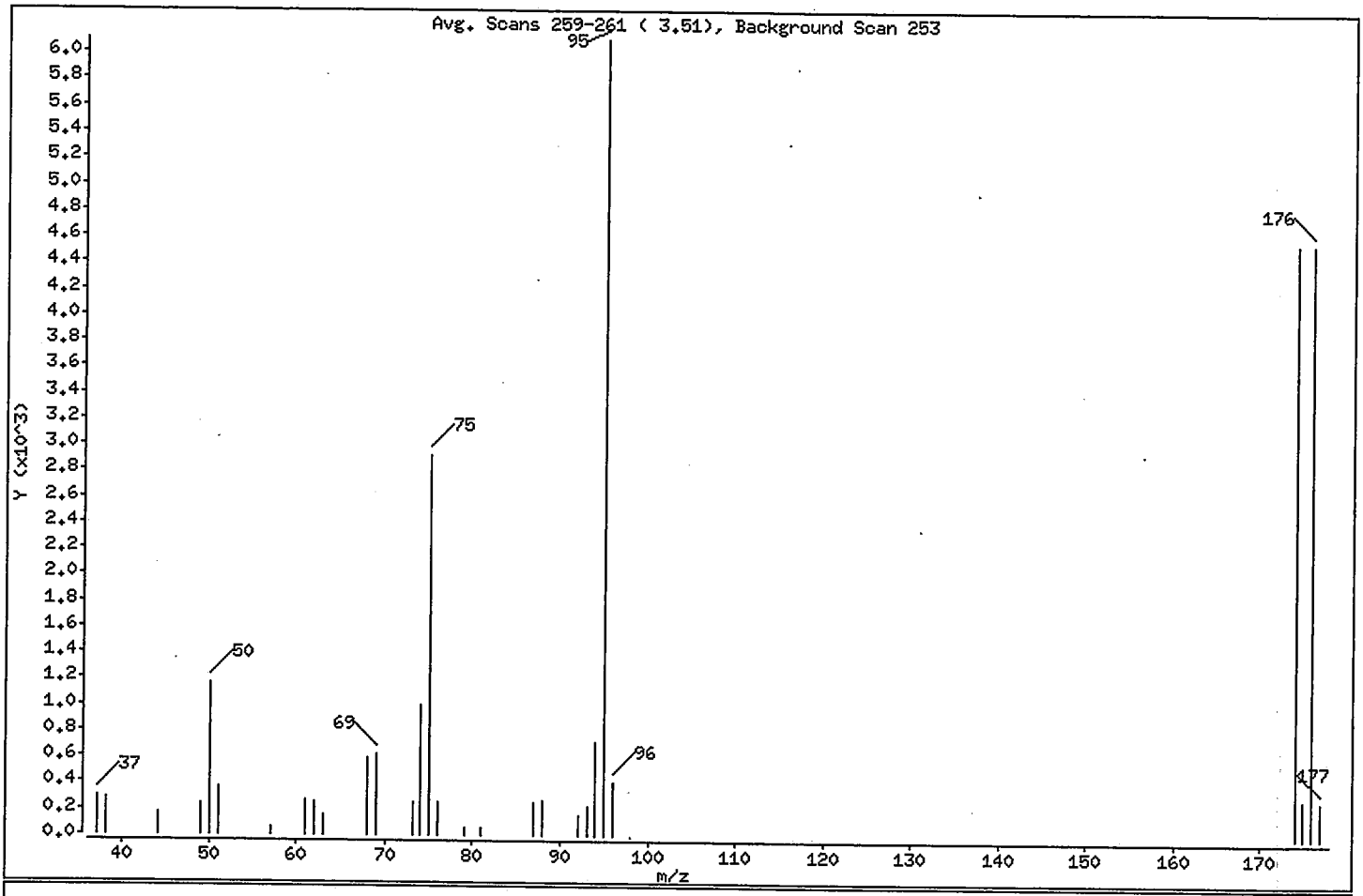
Volume Injected (uL): 1.0

Operator: GLQ

Column phase: DB624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.08
75	30.00 - 60.00% of mass 95	47.83
96	5.00 - 9.00% of mass 95	6.77
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	74.63
175	5.00 - 9.00% of mass 174	4.88 (6.55)
176	95.00 - 101.00% of mass 174	74.69 (100.09)
177	5.00 - 9.00% of mass 176	4.70 (6.30)

Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1092050.D

Date : 21-SEP-2012 00:14

Client ID:

Instrument: ms01.i

Sample Info: 1000

Volume Injected (uL): 1.0

Operator: GLQ

Column phase: DB624

Column diameter: 0.53

Data File: 1092050.D

Spectrum: Avg. Scans 259-261 (3.51), Background Scan 253

Location of Maximum: 95.00

Number of points: 29

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	300	62.00	257	79.00	55	96.00	413
38.00	279	63.00	149	81.00	59	174.00	4553
44.00	174	68.00	587	87.00	250	175.00	298
49.00	238	69.00	624	88.00	266	176.00	4557
50.00	1164	73.00	252	92.00	160	177.00	287
51.00	365	74.00	995	93.00	227		
57.00	61	75.00	2918	94.00	711		
61.00	272	76.00	252	95.00	6101		

Blank Raw Data

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1037612(MB)

Lab Name: ALS - Middletown Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT-009

Matrix (soil/water): WATER Lab Sample ID: 1037612

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 1092053A.D

Level (low/med): Date Received: 9/21/12

% Moisture: not dec. 100.0 Date Analyzed: 9/21/12

GC Column: RTXVMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.75	U
78-93-3	2-Butanone	3.8	U
56-23-5	Carbon Tetrachloride	0.75	U
108-90-7	Chlorobenzene	0.75	U
67-66-3	Chloroform	0.53	J
107-06-2	1,2-Dichloroethane	0.75	U
75-35-4	1,1-Dichloroethene	0.75	U
127-18-4	Tetrachloroethene	0.75	U
79-01-6	Trichloroethene	0.75	U
75-01-4	Vinyl Chloride	0.75	U

ALS - Middletown

VOLATILE REPORT SW-846 Method 8260

Data file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1092053A.D
Lab Smp Id: 1037612
Inj Date : 21-SEP-2012 01:34
Operator : GLQ Inst ID: ms01.i
Smp Info : 1037612;;1;3;;MB;;
Misc Info : ZZ VOMS 27572 D8260W
Comment :
Method : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m
Meth Date : 21-Sep-2012 15:22 josh Quant Type: ISTD
Cal Date : 15-SEP-2012 01:42 Cal File: 1091459.D
Als bottle: 4 QC Sample: MB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DODall.sub
Target Version: 4.12
Processing Host: ALMDTXP005

Concentration Formula: Amt * DF * Uf * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged
DF	1.000	sample dilution factor
Cpnd Variable		Local Compound Variable

DATA REVIEWED JMM 9/21/12
REPORTED
APPROVED
2ND REVIEW CAL 9/21/12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/L)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	1.727	1.728	(0.433)	4327	0.54754	0.547537(aQ)
5 Chloroethane	64	Compound Not Detected.					
6 Pentane	41	Compound Not Detected.					
7 Trichlorofluoromethane	101	Compound Not Detected.					
8 Dichlorofluoromethane	67	Compound Not Detected.					
9 Ethyl Ether	74	Compound Not Detected.					
10 1,1-Dichloroethene	61	Compound Not Detected.					
12 Carbon Disulfide	76	2.251	2.251	(0.564)	11592	0.24873	0.248729(a)
11 Freon 113	101	Compound Not Detected.					
13 Iodomethane	127	Compound Not Detected.					
14 Acrolein	56	Compound Not Detected.					
16 3-Chloro-1-propene	41	Compound Not Detected.					
15 Isopropyl Alcohol	45	Compound Not Detected.					
17 Methylene Chloride	84	Compound Not Detected.					
18 Acetone	58	Compound Not Detected.					
19 Methyl acetate	74	Compound Not Detected.					
20 trans-1,2-Dichloroethene	61	Compound Not Detected.					
21 Hexane	57	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/L)
	22 Methyl t-Butyl Ether	73	Compound Not Detected.					
	23 tert.- Butyl Alcohol	59	Compound Not Detected.					
	24 Acetonitrile	41	2.835	2.835	(0.710)	6413	4.21641	4.21641(aQH)
	25 Diisopropyl ether	45	Compound Not Detected.					
	26 Chloroprene	53	Compound Not Detected.					
	27 1,1-Dichloroethane	63	Compound Not Detected.					
	28 Acrylonitrile	53	Compound Not Detected.					
	30 n-Propanol	41	Compound Not Detected.					
	29 Ethyl tert-butyl ether	59	Compound Not Detected.					
	31 Vinyl acetate	86	Compound Not Detected.					
	32 cis-1,2-Dichloroethene	61	Compound Not Detected.					
	33 2,2-Dichloropropane	77	Compound Not Detected.					
M	100 1,2-Dichloroethene, Total	61	Compound Not Detected.					
	34 Bromochloromethane	128	Compound Not Detected.					
	35 Cyclohexane	84	Compound Not Detected.					
	36 Chloroform	83	3.419	3.414	(0.856)	17106	0.53163	0.531626(a)
	37 Ethyl acetate	43	Compound Not Detected.					
	38 Methyl acrylate	55	Compound Not Detected.					
	39 Carbon Tetrachloride	117	Compound Not Detected.					
	40 Tetrahydrofuran	42	Compound Not Detected.					
$	41 Dibromofluoromethane	113	3.523	3.523	(0.882)	386405	30.9417	30.9417
	42 1,1,1-Trichloroethane	97	Compound Not Detected.					
	43 2-Butanone	72	Compound Not Detected.					
	44 1,1-Dichloropropene	75	Compound Not Detected.					
	45 1-Chlorobutane	41	Compound Not Detected.					
	46 Heptane	71	Compound Not Detected.					
	48 Propionitrile	54	Compound Not Detected.					
	47 Benzene	78	Compound Not Detected.					
	49 Methacrylonitrile	67	Compound Not Detected.					
	50 tert-amyl methyl Ether	73	Compound Not Detected.					
$	51 1,2-Dichloroethane-d4	65	3.834	3.834	(0.960)	478710	29.5295	29.5295
	54 Isobutyl alcohol	43	Compound Not Detected.					
	52 1,2-Dichloroethane	62	Compound Not Detected.					
	53 tert-Amyl Alcohol	59	Compound Not Detected.					
*	55 Fluorobenzene	96	3.992	3.992	(1.000)	1649910	30.0000	
	56 Diisobutylene	57	Compound Not Detected.					
	57 Trichloroethene	95	Compound Not Detected.					
	58 Methyl cyclohexane	83	Compound Not Detected.					
	59 tert-Amyl Ethylether	59	Compound Not Detected.					
	60 Dibromomethane	93	Compound Not Detected.					
	61 1,2-Dichloropropane	63	Compound Not Detected.					
	62 Bromodichloromethane	83	Compound Not Detected.					
	63 Methyl methacrylate	41	Compound Not Detected.					
	64 1,4-Dioxane	88	Compound Not Detected.					
	65 2-Chloroethylvinyl ether	63	Compound Not Detected.					
	66 cis-1,3-Dichloropropene	75	Compound Not Detected.					
	67 Octane	85	Compound Not Detected.					
$	68 Toluene-d8	98	4.947	4.947	(0.824)	1614465	32.4018	32.4018
	69 Toluene	92	Compound Not Detected.					
	70 Chloroacetonitrile	48	Compound Not Detected.					
	71 2-Nitropropane	41	Compound Not Detected.					
	72 1,1-Dichloro-2-propanone	63	Compound Not Detected.					
	73 4-Methyl-2-Pentanone(MIBK)	43	Compound Not Detected.					
	75 trans-1,3-Dichloropropene	75	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/L)	
	74 Tetrachloroethene	164	Compound Not Detected.						
	76 Ethyl methacrylate	69	Compound Not Detected.						
	77 1,1,2-Trichloroethane	83	Compound Not Detected.						
	78 Chlorodibromomethane	129	Compound Not Detected.						
	79 1,3-Dichloropropane	76	Compound Not Detected.						
	80 1,2-Dibromoethane	107	Compound Not Detected.						
	81 2-Hexanone	43	Compound Not Detected.						
	82 1-Chlorohexane	91	Compound Not Detected.						
*	83 Chlorobenzene-d5	82	6.000	6.000	(1.000)	716494	30.0000		
	85 Ethylbenzene	106	Compound Not Detected.						
	84 Chlorobenzene	112	Compound Not Detected.						
	86 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.						
	87 mp-Xylene	106	Compound Not Detected.						
M	120 1,3-Dichloropropene, Total	75	Compound Not Detected.						
	88 o-Xylene	106	Compound Not Detected.						
	89 Styrene	104	Compound Not Detected.						
	90 Bromoform	173	Compound Not Detected.						
	91 Isopropylbenzene	105	Compound Not Detected.						
$	92 4-Bromofluorobenzene	174	6.895	6.895	(0.886)	462982	33.8950	33.8950	
M	121 TOTAL XYLENES	106	Compound Not Detected.						
	94 n-Propylbenzene	120	Compound Not Detected.						
	93 Bromobenzene	156	Compound Not Detected.						
	95 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.						
	97 1,3,5-Trimethylbenzene	105	Compound Not Detected.						
	96 o-Chlorotoluene	91	Compound Not Detected.						
	98 1,2,3-Trichloropropane	110	Compound Not Detected.						
	99 trans-1,4-Dichloro-2-butene	53	Compound Not Detected.						
	101 p-Chlorotoluene	91	Compound Not Detected.						
	102 tert-Butylbenzene	134	Compound Not Detected.						
	103 Pentachloroethane	117	Compound Not Detected.						
	104 1,2,4-Trimethylbenzene	105	Compound Not Detected.						
	105 sec-Butylbenzene	105	Compound Not Detected.						
	106 p-Isopropyltoluene	134	Compound Not Detected.						
	107 1,3-Dichlorobenzene	146	Compound Not Detected.						
*	108 1,4-Dichlorobenzene-d4	152	7.779	7.779	(1.000)	549987	30.0000		(Q)
	109 1,4-Dichlorobenzene	146	Compound Not Detected.						
	111 n-Butylbenzene	134	Compound Not Detected.						
	110 Benzyl Chloride	126	Compound Not Detected.						
	112 Hexachloroethane	117	Compound Not Detected.						
	113 1,2-Dichlorobenzene	146	Compound Not Detected.						
	114 1,2-Dibromo-3-chloropropane	75	Compound Not Detected.						
	115 Nitrobenzene	77	Compound Not Detected.						
	116 Hexachlorobutadiene	225	Compound Not Detected.						
	117 1,2,4-Trichlorobenzene	180	Compound Not Detected.						
	118 Naphthalene	128	Compound Not Detected.						
	119 1,2,3-Trichlorobenzene	180	Compound Not Detected.						

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms01.i
Lab File ID: 1092053A.D
Lab Smp Id: 1037612
Analysis Type: VOA
Quant Type: ISTD
Operator: GLQ
Calibration Date: 21-SEP-2012
Calibration Time: 00:40
Level: LOW
Sample Type: WATER
Method File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m
Misc Info: ZZ VOMS 27572 D8260W

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
55 Fluorobenzene	1717091	858546	3434182	1649910	-3.91
83 Chlorobenzene-d5	758443	379222	1516886	716494	-5.53
108 1,4-Dichlorobenze	578778	289389	1157556	549987	-4.97

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
55 Fluorobenzene	3.99	3.49	4.49	3.99	-0.00
83 Chlorobenzene-d5	6.00	5.50	6.50	6.00	-0.00
108 1,4-Dichlorobenze	7.78	7.28	8.28	7.78	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

RECOVERY REPORT

Client Name:
Client SDG: 1120920A.b
Sample Matrix: LIQUID
Fraction: VOA
Lab Smp Id: 1037612
Level: LOW
Operator: GLQ
Data Type: MS DATA
SampleType: MB
SpikeList File: WaterDOD2006.spk
Quant Type: ISTD
Sublist File: DODall.sub
Method File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m
Misc Info: ZZ VOMS 27572 D8260W

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 41 Dibromofluorometha	30.0000	30.9417	103.14	85-115
$ 51 1,2-Dichloroethane	30.0000	29.5295	98.43	70-120
$ 68 Toluene-d8	30.0000	32.4018	108.01	85-120
$ 92 4-Bromofluorobenze	30.0000	33.8950	112.98	75-120

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1037612
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info: ZZ VOMS 27572 D8260W

Client SDG: 1120920A.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: GLQ

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
74-83-9	Bromomethane	0.547537	J
75-15-0	Carbon Disulfide	0.248729	J
75-05-8	Acetonitrile	4.21641	J
67-66-3	Chloroform	0.531626	J
1868-53-7	Dibromofluoromethane	30.9417	
17060-07-0	1,2-Dichloroethane-d4	29.5295	
2037-26-5	Toluene-d8	32.4018	
460-00-4	4-Bromofluorobenzene	33.8950	

ALS - Middletown

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:
Client SDG: 1120920A.b
Lab Smp Id: 1037612
Operator : GLQ
Sample Date:
Sample Location:
Sample Point:
Sample Matrix: WATER
Date Received:
Analysis Type: VOA
Level: LOW
Inj Date: 21-SEP-2012 01:34

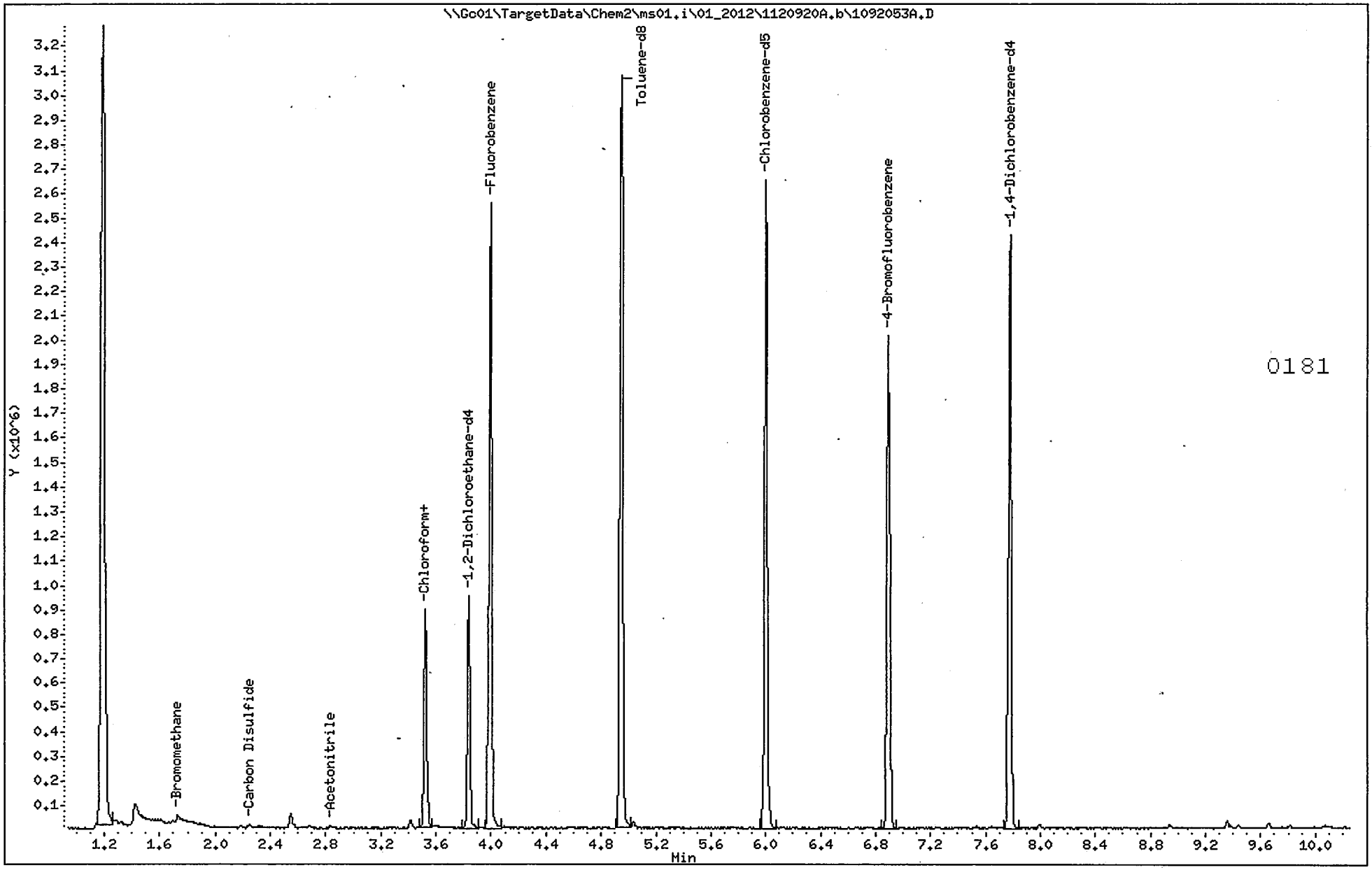
Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1092053A.D
Date : 21-SEP-2012 01:34
Client ID:
Sample Info: 1037612;;1;3;;MB;;
Purge Volume: 5.0
Column phase: DB-VRX

Instrument: ms01.i
Operator: GLQ
Column diameter: 0.25



ALS - Middletown

VOLATILE REPORT SW-846 Method 8260

Data file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1092053A.D
Lab Smp Id: 1037612
Inj Date : 21-SEP-2012 01:34
Operator : GLQ Inst ID: ms01.i
Smp Info : 1037612;;1;3;;MB;;
Misc Info : ZZ VOMS 27572 D8260W
Comment :
Method : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m
Meth Date : 21-Sep-2012 15:19 josh Quant Type: ISTD
Cal Date : 15-SEP-2012 01:42 Cal File: 1091459.D
Als bottle: 4 QC Sample: MB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DODall.sub
Target Version: 4.12
Processing Host: ALMDTXP005

Concentration Formula: Amt * DF * Uf * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged
DF	1.000	sample dilution factor
Cpnd Variable		Local Compound Variable

RAW DATA
Before Manual Integration

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/L)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	1.727	1.728	(0.433)	4327	0.54754	0.547537(aQ)
5 Chloroethane	64	1.422	1.815	(0.356)	178884	13.9222	13.9222(Q)
6 Pentane	41	Compound Not Detected.					
7 Trichlorofluoromethane	101	Compound Not Detected.					
8 Dichlorofluoromethane	67	Compound Not Detected.					
9 Ethyl Ether	74	Compound Not Detected.					
10 1,1-Dichloroethene	61	Compound Not Detected.					
12 Carbon Disulfide	76	2.251	2.251	(0.564)	11592	0.24873	0.248729(a)
11 Freon 113	101	Compound Not Detected.					
13 Iodomethane	127	2.317	2.311	(0.580)	3444	3.41279	3.41279(Q)
14 Acrolein	56	Compound Not Detected.					
16 3-Chloro-1-propene	41	Compound Not Detected.					
15 Isopropyl Alcohol	45	Compound Not Detected.					
17 Methylene Chloride	84	Compound Not Detected.					
18 Acetone	58	Compound Not Detected.					
19 Methyl acetate	74	Compound Not Detected.					
20 trans-1,2-Dichloroethene	61	Compound Not Detected.					
21 Hexane	57	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/L)
	22 Methyl t-Butyl Ether	73	Compound Not Detected.					
	23 tert.- Butyl Alcohol	59	2.557	2.710	(0.641)	2748	2.52205	2.52205(a)
	24 Acetonitrile	41	2.835	2.835	(0.710)	6413	4.21641	4.21641(aQ)
	25 Diisopropyl ether	45	Compound Not Detected.					
	26 Chloroprene	53	Compound Not Detected.					
	27 1,1-Dichloroethane	63	Compound Not Detected.					
	28 Acrylonitrile	53	Compound Not Detected.					
	30 n-Propanol	41	Compound Not Detected.					
	29 Ethyl tert-butyl ether	59	Compound Not Detected.					
	31 Vinyl acetate	86	Compound Not Detected.					
	32 cis-1,2-Dichloroethene	61	Compound Not Detected.					
	33 2,2-Dichloropropane	77	Compound Not Detected.					
M	100 1,2-Dichloroethene, Total	61	Compound Not Detected.					
	34 Bromochloromethane	128	Compound Not Detected.					
	35 Cyclohexane	84	Compound Not Detected.					
	36 Chloroform	83	3.419	3.414	(0.856)	17106	0.53163	0.531626(a)
	37 Ethyl acetate	43	Compound Not Detected.					
	38 Methyl acrylate	55	Compound Not Detected.					
	39 Carbon Tetrachloride	117	Compound Not Detected.					
	40 Tetrahydrofuran	42	Compound Not Detected.					
$	41 Dibromofluoromethane	113	3.523	3.523	(0.882)	386405	30.9417	30.9417
	42 1,1,1-Trichloroethane	97	Compound Not Detected.					
	43 2-Butanone	72	Compound Not Detected.					
	44 1,1-Dichloropropene	75	Compound Not Detected.					
	45 1-Chlorobutane	41	Compound Not Detected.					
	46 Heptane	71	3.992	3.714	(1.000)	14703	1.09968	1.09968(Q)
	48 Propionitrile	54	Compound Not Detected.					
	47 Benzene	78	Compound Not Detected.					
	49 Methacrylonitrile	67	3.834	3.774	(0.960)	249794	40.7354	40.7354(Q)
	50 tert-amyl methyl Ether	73	Compound Not Detected.					
$	51 1,2-Dichloroethane-d4	65	3.834	3.834	(0.960)	478710	29.5295	29.5295
	54 Isobutyl alcohol	43	Compound Not Detected.					
	52 1,2-Dichloroethane	62	3.992	3.872	(1.000)	21408	1.02892	1.02892
	53 tert-Amyl Alcohol	59	Compound Not Detected.					
*	55 Fluorobenzene	96	3.992	3.992	(1.000)	1649910	30.0000	
	56 Diisobutylene	57	Compound Not Detected.					
	57 Trichloroethene	95	Compound Not Detected.					
	58 Methyl cyclohexane	83	Compound Not Detected.					
	59 tert-Amyl Ethylether	59	Compound Not Detected.					
	60 Dibromomethane	93	Compound Not Detected.					
	61 1,2-Dichloropropane	63	Compound Not Detected.					
	62 Bromodichloromethane	83	Compound Not Detected.					
	63 Methyl methacrylate	41	Compound Not Detected.					
	65 2-Chloroethylvinyl ether	63	Compound Not Detected.					
	66 cis-1,3-Dichloropropene	75	Compound Not Detected.					
	67 Octane	85	Compound Not Detected.					
$	68 Toluene-d8	98	4.947	4.947	(0.824)	1614465	32.4018	32.4018
	69 Toluene	92	Compound Not Detected.					
	70 Chloroacetonitrile	48	4.947	5.034	(0.824)	63148	151.681	151.681(Q)
	71 2-Nitropropane	41	Compound Not Detected.					
	72 1,1-Dichloro-2-propanone	63	4.947	5.138	(0.824)	1955	8.48420	8.48420(aQ)
	73 4-Methyl-2-Pentanone(MIBK)	43	Compound Not Detected.					
	75 trans-1,3-Dichloropropene	75	Compound Not Detected.					
	74 Tetrachloroethene	164	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/L)
	76 Ethyl methacrylate	69	Compound Not Detected.					
	77 1,1,2-Trichloroethane	83	Compound Not Detected.					
	78 Chlorodibromomethane	129	Compound Not Detected.					
	79 1,3-Dichloropropane	76	6.000	5.542	(1.000)	72785	3.14745	3.14745(Q)
	80 1,2-Dibromoethane	107	Compound Not Detected.					
	81 2-Hexanone	43	Compound Not Detected.					
	82 1-Chlorohexane	91	Compound Not Detected.					
*	83 Chlorobenzene-d5	82	6.000	6.000	(1.000)	716494	30.0000	
	85 Ethylbenzene	106	Compound Not Detected.					
	84 Chlorobenzene	112	Compound Not Detected.					
	86 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	87 mp-Xylene	106	Compound Not Detected.					
M	120 1,3-Dichloropropene, Total	75	Compound Not Detected.					
	88 o-Xylene	106	Compound Not Detected.					
	89 Styrene	104	Compound Not Detected.					
	90 Bromoform	173	Compound Not Detected.					
	91 Isopropylbenzene	105	Compound Not Detected.					
$	92 4-Bromofluorobenzene	174	6.895	6.895	(0.886)	462982	33.8950	33.8950
M	121 TOTAL XYLENES	106	Compound Not Detected.					
	94 n-Propylbenzene	120	Compound Not Detected.					
	93 Bromobenzene	156	Compound Not Detected.					
	95 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
	97 1,3,5-Trimethylbenzene	105	Compound Not Detected.					
	96 o-Chlorotoluene	91	Compound Not Detected.					
	98 1,2,3-Trichloropropane	110	Compound Not Detected.					
	99 trans-1,4-Dichloro-2-butene	53	Compound Not Detected.					
	101 p-Chlorotoluene	91	Compound Not Detected.					
	102 tert-Butylbenzene	134	Compound Not Detected.					
	103 Pentachloroethane	117	Compound Not Detected.					
	104 1,2,4-Trimethylbenzene	105	Compound Not Detected.					
	105 sec-Butylbenzene	105	Compound Not Detected.					
	106 p-Isopropyltoluene	134	Compound Not Detected.					
	107 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	108 1,4-Dichlorobenzene-d4	152	7.779	7.779	(1.000)	549987	30.0000	(Q)
	109 1,4-Dichlorobenzene	146	Compound Not Detected.					
	111 n-Butylbenzene	134	Compound Not Detected.					
	110 Benzyl Chloride	126	Compound Not Detected.					
	112 Hexachloroethane	117	Compound Not Detected.					
	113 1,2-Dichlorobenzene	146	Compound Not Detected.					
	114 1,2-Dibromo-3-chloropropane	75	Compound Not Detected.					
	115 Nitrobenzene	77	9.295	9.290	(1.195)	842	12.5787	12.5787(aQ)
	116 Hexachlorobutadiene	225	Compound Not Detected.					
	117 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
	118 Naphthalene	128	9.661	9.661	(1.242)	7661	1.72287	1.72287(a)
	119 1,2,3-Trichlorobenzene	180	Compound Not Detected.					

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms01.i
Lab File ID: 1092053A.D
Lab Smp Id: 1037612
Analysis Type: VOA
Quant Type: ISTD
Operator: GLQ
Calibration Date: 21-SEP-2012
Calibration Time: 00:40
Level: LOW
Sample Type: WATER
Method File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m
Misc Info: ZZ VOMS 27572 D8260W

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	1717091	858546	3434182	1649910	-3.91
83 Chlorobenzene-d5	758443	379222	1516886	716494	-5.53
108 1,4-Dichlorobenze	578778	289389	1157556	549987	-4.97

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	3.99	3.49	4.49	3.99	-0.00
83 Chlorobenzene-d5	6.00	5.50	6.50	6.00	-0.00
108 1,4-Dichlorobenze	7.78	7.28	8.28	7.78	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1037612
Level: LOW
Data Type: MS DATA
SpikeList File: WaterDOD2006.spk
Sublist File: DODall.sub
Method File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m
Misc Info: ZZ VOMS 27572 D8260W

Client SDG: 1120920A.b
Fraction: VOA

Operator: GLQ
SampleType: MB
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 41 Dibromofluorometha	30.0000	30.9417	103.14	85-115
$ 51 1,2-Dichloroethane	30.0000	29.5295	98.43	70-120
$ 68 Toluene-d8	30.0000	32.4018	108.01	85-120
$ 92 4-Bromofluorobenze	30.0000	33.8950	112.98	75-120

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1037612
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info: ZZ VOMS 27572 D8260W

Client SDG: 1120920A.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: GLQ

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
74-83-9	Bromomethane	0.547537	J
75-00-3	Chloroethane	13.9222	
75-15-0	Carbon Disulfide	0.248729	J
74-88-4	Iodomethane	3.41279	
75-65-0	tert.- Butyl Alcohol	2.52205	J
75-05-8	Acetonitrile	4.21641	J
67-66-3	Chloroform	0.531626	J
142-82-5	Heptane	1.09968	
126-98-7	Methacrylonitrile	40.7354	
107-06-2	1,2-Dichloroethane	1.02892	
123-91-1	1,4-Dioxane	0.000000	J
107-14-2	Chloroacetonitrile	151.681	
513-88-2	1,1-Dichloro-2-propanone	8.48420	J
142-28-9	1,3-Dichloropropane	3.14745	
98-95-3	Nitrobenzene	12.5787	J
91-20-3	Naphthalene	1.72287	J
1868-53-7	Dibromofluoromethane	30.9417	
17060-07-0	1,2-Dichloroethane-d4	29.5295	
2037-26-5	Toluene-d8	32.4018	
460-00-4	4-Bromofluorobenzene	33.8950	

ALS - Middletown

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:
Lab Smp Id: 1037612
Operator : GLQ
Sample Location:
Sample Matrix: WATER
Analysis Type: VOA
Inj Date: 21-SEP-2012 01:34

Client SDG: 1120920A.b

Sample Date:
Sample Point:
Date Received:
Level: LOW

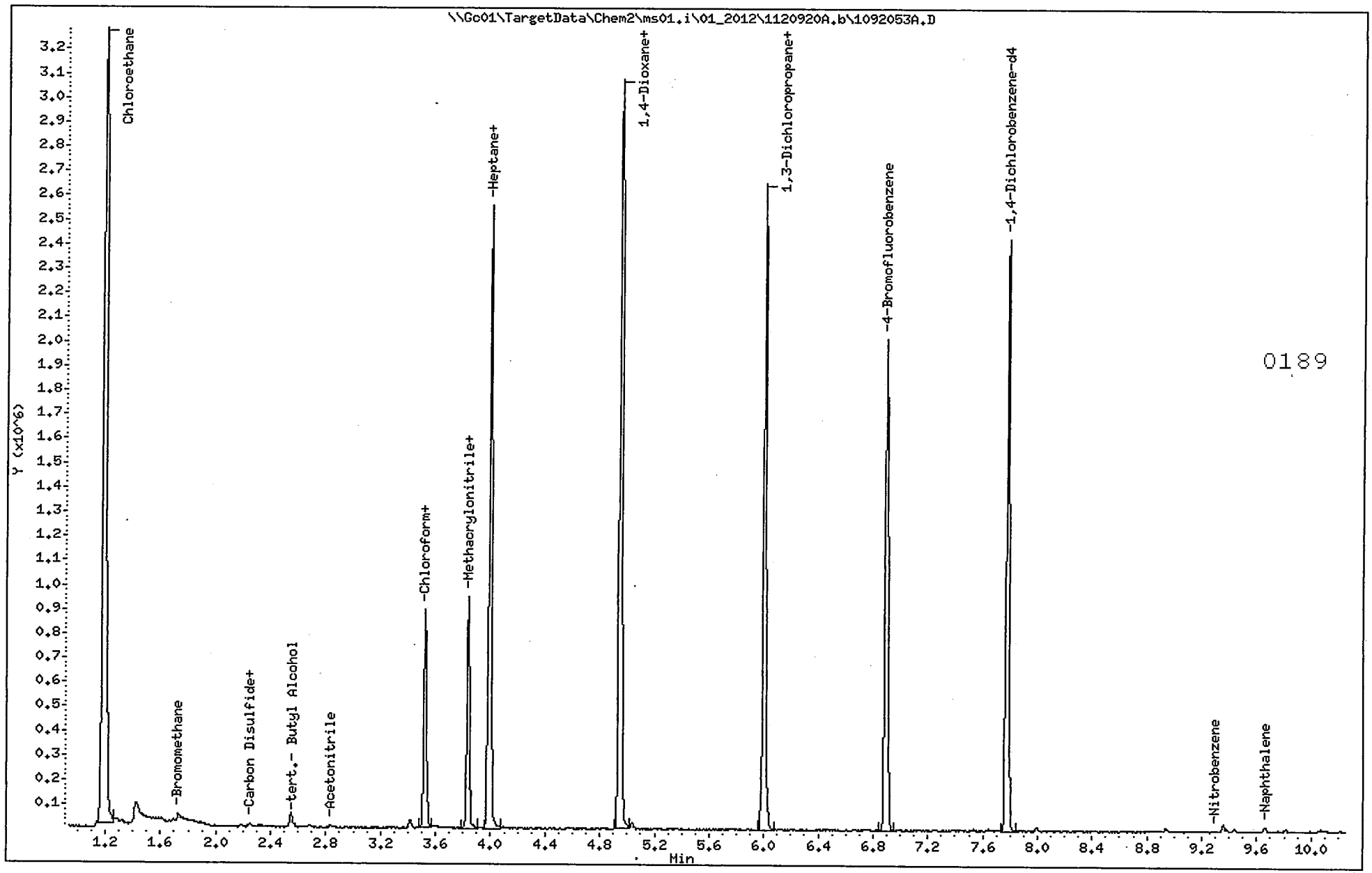
Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1092053A.D
Date : 21-SEP-2012 01:34
Client ID:
Sample Info: 1037612;;1;3;;MB;;
Purge Volume: 5.0
Column phase: DB-VRX

Instrument: ms01.i
Operator: GLQ
Column diameter: 0.25



LCS Raw Data

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1037613(LCS)

Lab Name: ALS - Middletown Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT-009

Matrix (soil/water): WATER Lab Sample ID: 1037613

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 1092054A.D

Level (low/med): Date Received: 9/21/12

% Moisture: not dec. 100.0 Date Analyzed: 9/21/12

GC Column: RTXVMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	22.9	
78-93-3	2-Butanone	120	
56-23-5	Carbon Tetrachloride	21.6	
108-90-7	Chlorobenzene	22.0	
67-66-3	Chloroform	19.7	
107-06-2	1,2-Dichloroethane	20.6	
75-35-4	1,1-Dichloroethene	21.0	
127-18-4	Tetrachloroethene	23.0	
79-01-6	Trichloroethene	21.7	
75-01-4	Vinyl Chloride	18.1	

0191

ALS - Middletown

VOLATILE REPORT SW-846 Method 8260

Data file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1092054A.D
Lab Smp Id: 1037613
Inj Date : 21-SEP-2012 01:56
Operator : GLQ Inst ID: ms01.i
Smp Info : 1037613;;1;3;;LCS;1;
Misc Info : ZZ VOMS 27572 D8260W
Comment :
Method : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m
Meth Date : 21-Sep-2012 15:22 josh Quant Type: ISTD
Cal Date : 15-SEP-2012 01:42 Cal File: 1091459.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DODall.sub
Target Version: 4.12
Processing Host: ALMDTXP005

Concentration Formula: Amt * DF * Uf * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged
DF	1.000	sample dilution factor
Cpnd Variable		Local Compound Variable

DATA REVIEW JMN 9/21/12
REPORTED
APPROVED
2ND REVIEW ORL 9/21/12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/L)
1 Dichlorodifluoromethane	85	1.302	1.302	(0.326)	326778	16.4352	16.4352
2 Chloromethane	50	1.444	1.444	(0.362)	379872	16.5903	16.5903
3 Vinyl Chloride	62	1.504	1.504	(0.377)	395379	18.1320	18.1320
4 Bromomethane	94	1.727	1.728	(0.433)	68796	8.70732	8.70732
5 Chloroethane	64	1.798	1.815	(0.451)	223166	17.5467	17.5467
6 Pentane	41	1.886	1.897	(0.472)	275563	20.1865	20.1865
7 Trichlorofluoromethane	101	1.891	1.902	(0.474)	464113	19.3669	19.3669
8 Dichlorofluoromethane	67	1.924	1.929	(0.482)	619883	21.1483	21.1483
9 Ethyl Ether	74	2.082	2.082	(0.522)	201589	22.0507	22.0507
10 1,1-Dichloroethene	61	2.213	2.219	(0.554)	494053	20.9622	20.9622
12 Carbon Disulfide	76	2.246	2.251	(0.563)	987199	21.1870	21.1870
11 Freon 113	101	2.229	2.230	(0.559)	302157	20.8596	20.8596
13 Iodomethane	127	2.311	2.311	(0.579)	65602	13.1918	13.1918
14 Acrolein	56	2.404	2.404	(0.602)	181937	147.727	147.727
16 3-Chloro-1-propene	41	2.486	2.486	(0.623)	530546	20.2330	20.2330
15 Isopropyl Alcohol	45	2.464	2.459	(0.617)	97793	173.644	173.644
17 Methylene Chloride	84	2.546	2.546	(0.638)	366563	20.9319	20.9319
18 Acetone	58	2.562	2.568	(0.642)	146101	113.103	113.103
19 Methyl acetate	74	2.628	2.628	(0.658)	59480	24.7205	24.7205(Q)
20 trans-1,2-Dichloroethene	61	2.639	2.639	(0.661)	496515	21.0878	21.0878
21 Hexane	57	2.677	2.677	(0.671)	755231	20.4639	20.4639

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/L)
	22 Methyl t-Butyl Ether	73	2.688	2.682	(0.673)	871413	21.1618	21.1618
	23 tert.- Butyl Alcohol	59	2.710	2.710	(0.679)	150137	137.822	137.822
	24 Acetonitrile	41	2.835	2.835	(0.710)	203728	133.976	133.976 (R)
	25 Diisopropyl ether	45	2.884	2.884	(0.723)	1187300	21.2536	21.2536
	26 Chloroprene	53	2.966	2.966	(0.743)	520328	19.9253	19.9253
	27 1,1-Dichloroethane	63	2.982	2.982	(0.747)	645668	20.9116	20.9116
	28 Acrylonitrile	53	3.004	3.004	(0.753)	625537	120.356	120.356
	30 n-Propanol	41	3.086	3.086	(0.773)	206059	198.170	198.170 (a)
	29 Ethyl tert-butyl ether	59	3.086	3.086	(0.773)	1043885	21.5838	21.5838
	31 Vinyl acetate	86	3.092	3.092	(0.774)	57740	18.7748	18.7748 (Q)
	32 cis-1,2-Dichloroethene	61	3.277	3.277	(0.821)	488085	20.9021	20.9021
	33 2,2-Dichloropropane	77	3.343	3.343	(0.837)	410663	18.5174	18.5174
M	100 1,2-Dichloroethene, Total	61				984600	41.9899	41.9899
	34 Bromochloromethane	128	3.392	3.392	(0.850)	160817	22.8170	22.8170
	35 Cyclohexane	84	3.408	3.408	(0.854)	565627	21.6349	21.6349
	36 Chloroform	83	3.413	3.414	(0.855)	634043	19.7093	19.7093
	37 Ethyl acetate	43	3.457	3.457	(0.866)	314035	20.9177	20.9177
	38 Methyl acrylate	55	3.473	3.474	(0.870)	287453	21.4726	21.4726
	39 Carbon Tetrachloride	117	3.517	3.517	(0.881)	440924	21.6198	21.6198
	40 Tetrahydrofuran	42	3.517	3.517	(0.881)	513439	116.824	116.824
$	41 Dibromofluoromethane	113	3.523	3.523	(0.882)	384015	30.7571	30.7571
	42 1,1,1-Trichloroethane	97	3.555	3.555	(0.891)	511059	21.1647	21.1647
	43 2-Butanone	72	3.583	3.583	(0.897)	183433	120.147	120.147
	44 1,1-Dichloropropene	75	3.615	3.621	(0.906)	498060	21.2353	21.2353
	45 1-Chlorobutane	41	3.637	3.643	(0.911)	419162	19.6957	19.6957
	46 Heptane	71	3.708	3.714	(0.929)	248697	18.6048	18.6048
	48 Propionitrile	54	3.763	3.763	(0.943)	228797	123.860	123.860 (Q)
	47 Benzene	78	3.763	3.763	(0.943)	1386753	22.9499	22.9499
	49 Methacrylonitrile	67	3.774	3.774	(0.945)	129723	21.7213	21.7213 (Q)
	50 tert-amyl methyl Ether	73	3.795	3.795	(0.951)	871956	20.6343	20.6343
$	51 1,2-Dichloroethane-d4	65	3.834	3.834	(0.960)	492675	30.3976	30.3976
	54 Isobutyl alcohol	43	3.965	3.965	(0.993)	596334	204.168	204.168
	52 1,2-Dichloroethane	62	3.872	3.872	(0.970)	428615	20.6048	20.6048
	53 tert-Amyl Alcohol	59	3.883	3.877	(0.973)	122247	130.190	130.190
*	55 Fluorobenzene	96	3.992	3.992	(1.000)	1649548	30.0000	
	56 Diisobutylene	57	4.003	4.003	(1.003)	1048260	19.2536	19.2536
	57 Trichloroethene	95	4.090	4.090	(1.025)	362580	21.7306	21.7306
	58 Methyl cyclohexane	83	4.096	4.096	(0.683)	603249	20.3809	20.3809
	59 tert-Amyl Ethylether	59	4.199	4.199	(1.052)	733158	20.6825	20.6825
	60 Dibromomethane	93	4.346	4.347	(1.089)	202969	22.0858	22.0858
	61 1,2-Dichloropropane	63	4.407	4.407	(1.104)	378455	21.8335	21.8335
	62 Bromodichloromethane	83	4.428	4.428	(1.109)	458492	21.3448	21.3448
	63 Methyl methacrylate	41	4.499	4.499	(1.127)	303203	21.3262	21.3262
	64 1,4-Dioxane	88	4.548	4.543	(1.139)	88117	2207.88	2207.88 (R)
	65 2-Chloroethylvinyl ether	63	5.138	4.756	(1.287)	31274	52.3565	52.3565 (Q)
	66 cis-1,3-Dichloropropene	75	4.821	4.821	(0.804)	550573	21.1525	21.1525
	67 Octane	85	4.832	4.832	(0.805)	181527	18.2060	18.2060
$	68 Toluene-d8	98	4.947	4.947	(0.824)	1619753	32.2313	32.2313
	69 Toluene	92	4.979	4.980	(0.830)	865105	22.4188	22.4188
	70 Chloroacetonitrile	48	5.039	5.034	(0.840)	61598	146.699	146.699 (R)
	71 2-Nitropropane	41	5.127	5.127	(0.855)	383333	103.559	103.559
	72 1,1-Dichloro-2-propanone	63	5.138	5.138	(0.856)	31274	110.680	110.680 (Q)
	73 4-Methyl-2-Pentanone (MIBK)	43	5.203	5.203	(0.867)	1617850	98.4415	98.4415
	75 trans-1,3-Dichloropropene	75	5.236	5.236	(0.873)	464117	20.9789	20.9789

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/L)
	74 Tetrachloroethene	164	5.236	5.241	(0.873)	294909	23.0231	23.0231
	76 Ethyl methacrylate	69	5.312	5.312	(0.885)	413237	21.9415	21.9415
	77 1,1,2-Trichloroethane	83	5.350	5.351	(0.892)	239842	21.8802	21.8802
	78 Chlorodibromomethane	129	5.476	5.476	(0.913)	311965	22.1678	22.1678
	79 1,3-Dichloropropane	76	5.541	5.542	(0.924)	508692	21.8102	21.8102 (QM)
	80 1,2-Dibromoethane	107	5.656	5.656	(0.943)	266560	22.7219	22.7219
	81 2-Hexanone	43	5.765	5.765	(0.961)	1084793	110.454	110.454
	82 1-Chlorohexane	91	5.978	5.978	(0.996)	473884	20.7275	20.7275
*	83 Chlorobenzene-d5	82	6.000	6.000	(1.000)	722643	30.0000	
	85 Ethylbenzene	106	6.022	6.022	(1.004)	497376	22.6332	22.6332
	84 Chlorobenzene	112	6.016	6.016	(1.003)	883014	22.0131	22.0131
	86 1,1,1,2-Tetrachloroethane	131	6.049	6.054	(1.008)	299054	22.1867	22.1867
	87 mp-Xylene	106	6.120	6.120	(1.020)	1206773	46.2625	46.2625
M	120 1,3-Dichloropropene, Total	75				1014690	42.1314	42.1314
	88 o-Xylene	106	6.442	6.442	(1.074)	580239	23.1601	23.1601
	89 Styrene	104	6.474	6.475	(0.832)	950486	20.6985	20.6985
	90 Bromoform	173	6.507	6.507	(0.837)	177745	21.9558	21.9558
	91 Isopropylbenzene	105	6.671	6.671	(0.858)	1506177	20.8882	20.8882
$	92 4-Bromofluorobenzene	174	6.895	6.895	(0.886)	469780	33.7361	33.7361
M	121 TOTAL XYLENES	106				1787012	69.4226	69.4226
	94 n-Propylbenzene	120	6.987	6.987	(0.898)	391517	20.1500	20.1500
	93 Bromobenzene	156	6.982	6.982	(0.898)	330255	21.0329	21.0329
	95 1,1,2,2-Tetrachloroethane	83	7.031	7.031	(0.904)	336822	20.0832	20.0832
	97 1,3,5-Trimethylbenzene	105	7.135	7.135	(0.917)	1146316	20.6813	20.6813
	96 o-Chlorotoluene	91	7.118	7.118	(0.915)	1157001	19.9151	19.9151
	98 1,2,3-Trichloropropane	110	7.151	7.151	(0.919)	101103	19.9150	19.9150
	99 trans-1,4-Dichloro-2-butene	53	7.173	7.173	(0.922)	78613	20.9579	20.9579 (Q)
	101 p-Chlorotoluene	91	7.249	7.249	(0.932)	1077073	20.0388	20.0388
	102 tert-Butylbenzene	134	7.391	7.391	(0.950)	266704	20.3771	20.3771
	103 Pentachloroethane	117	7.413	7.413	(0.953)	204779	18.7101	18.7101 (Q)
	104 1,2,4-Trimethylbenzene	105	7.446	7.446	(0.957)	1140371	21.3370	21.3370
	105 sec-Butylbenzene	105	7.533	7.533	(0.968)	1403968	20.3113	20.3113
	106 p-Isopropyltoluene	134	7.648	7.648	(0.983)	294633	20.6363	20.6363
	107 1,3-Dichlorobenzene	146	7.719	7.719	(0.992)	591949	20.8557	20.8557
*	108 1,4-Dichlorobenzene-d4	152	7.779	7.779	(1.000)	560691	30.0000	
	109 1,4-Dichlorobenzene	146	7.789	7.790	(1.001)	588492	20.6987	20.6987
	111 n-Butylbenzene	134	7.991	7.991	(1.027)	254952	20.3458	20.3458 (Q)
	110 Benzyl Chloride	126	7.986	7.991	(1.027)	60044	15.1642	15.1642 (Q)
	112 Hexachloroethane	117	8.117	8.117	(1.043)	163396	18.1026	18.1026
	113 1,2-Dichlorobenzene	146	8.139	8.139	(1.046)	519719	20.9362	20.9362
	114 1,2-Dibromo-3-chloropropane	75	8.804	8.804	(1.132)	52323	20.9433	20.9433
	115 Nitrobenzene	77	9.290	9.290	(1.194)	113810	383.159	383.159 (R)
	116 Hexachlorobutadiene	225	9.355	9.361	(1.203)	119313	20.9976	20.9976
	117 1,2,4-Trichlorobenzene	180	9.383	9.383	(1.206)	247932	21.6861	21.6861
	118 Naphthalene	128	9.661	9.662	(1.242)	596228	20.7589	20.7589
	119 1,2,3-Trichlorobenzene	180	9.808	9.814	(1.261)	214477	21.6514	21.6514

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms01.i
Lab File ID: 1092054A.D
Lab Smp Id: 1037613
Analysis Type: VOA
Quant Type: ISTD
Operator: GLQ
Calibration Date: 21-SEP-2012
Calibration Time: 00:40
Level: LOW
Sample Type: WATER
Method File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m
Misc Info: ZZ VOMS 27572 D8260W

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	1717091	858546	3434182	1649548	-3.93
83 Chlorobenzene-d5	758443	379222	1516886	722643	-4.72
108 1,4-Dichlorobenze	578778	289389	1157556	560691	-3.13

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	3.99	3.49	4.49	3.99	-0.00
83 Chlorobenzene-d5	6.00	5.50	6.50	6.00	-0.00
108 1,4-Dichlorobenze	7.78	7.28	8.28	7.78	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

RECOVERY REPORT

Client Name:
Client SDG: 1120920A.b
Sample Matrix: LIQUID
Fraction: VOA
Lab Smp Id: 1037613
Level: LOW
Operator: GLQ
Data Type: MS DATA
SampleType: LCS
SpikeList File: WaterDOD2006.spk
Quant Type: ISTD
Sublist File: DODall.sub
Method File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m
Misc Info: ZZ VOMS 27572 D8260W

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Dichlorodifluorome	20.0000	16.4352	82.18	30-155
2 Chloromethane	20.0000	16.5903	82.95	40-125
3 Vinyl Chloride	20.0000	18.1320	90.66	50-145
4 Bromomethane	20.0000	8.70732	43.54	30-145
5 Chloroethane	20.0000	17.5467	87.73	60-135
6 Pentane	20.0000	20.1865	100.93	33-143
7 Trichlorofluoromet	20.0000	19.3669	96.83	60-145
8 Dichlorofluorometh	20.0000	21.1483	105.74	4-121
9 Ethyl Ether	20.0000	22.0507	110.25	71-131
10 1,1-Dichloroethene	20.0000	20.9622	104.81	70-130
12 Carbon Disulfide	20.0000	21.1870	105.94	35-160
11 Freon 113	20.0000	20.8596	104.30	50-130
13 Iodomethane	20.0000	13.1918	65.96	37-128
14 Acrolein	150.000	147.727	98.48	18-183
16 3-Chloro-1-propene	20.0000	20.2330	101.16	59-135
17 Methylene Chloride	20.0000	20.9319	104.66	55-140
18 Acetone	100.000	113.103	113.10	40-140
20 trans-1,2-Dichloro	20.0000	21.0878	105.44	60-140
19 Methyl acetate	20.0000	24.7205	123.60	70-130
21 Hexane	20.0000	20.4639	102.32	48-142
22 Methyl t-Butyl Eth	20.0000	21.1618	105.81	65-125
23 tert.- Butyl Alcoh	0.000000	137.822	0.00	0-100
24 Acetonitrile	100.000	133.976	133.98*	19-130
25 Diisopropyl ether	20.0000	21.2536	106.27	74-131
27 1,1-Dichloroethane	20.0000	20.9116	104.56	70-135
28 Acrylonitrile	100.000	120.356	120.36	71-151
29 Ethyl tert-butyl e	20.0000	21.5838	107.92	75-123
31 Vinyl acetate	20.0000	18.7748	93.87	58-136
32 cis-1,2-Dichloroet	20.0000	20.9021	104.51	70-125
33 2,2-Dichloropropan	20.0000	18.5174	92.59	70-135
34 Bromochloromethane	20.0000	22.8170	114.08	65-130
35 Cyclohexane	20.0000	21.6349	108.17	66-130
36 Chloroform	20.0000	19.7093	98.55	65-135
37 Ethyl acetate	20.0000	20.9177	104.59	63-138
38 Methyl acrylate	20.0000	21.4726	107.36	70-130
39 Carbon Tetrachlori	20.0000	21.6198	108.10	65-140
40 Tetrahydrofuran	100.000	116.824	116.82	62-152
42 1,1,1-Trichloroeth	20.0000	21.1647	105.82	65-130
43 2-Butanone	100.000	120.147	120.15	30-150
44 1,1-Dichloropropen	20.0000	21.2353	106.18	75-130

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
45	1-Chlorobutane	20.0000	19.6957	98.48	70-130
46	Heptane	20.0000	18.6048	93.02	56-130
48	Propionitrile	100.000	123.860	123.86	59-158
47	Benzene	20.0000	22.9499	114.75	80-120
49	Methacrylonitrile	20.0000	21.7213	108.61	68-155
50	tert-amyl methyl E	20.0000	20.6343	103.17	75-121
54	Isobutyl alcohol	200.000	204.168	102.08	37-171
52	1,2-Dichloroethane	20.0000	20.6048	103.02	70-130
56	Diisobutylene	20.0000	19.2536	96.27	60-137
57	Trichloroethene	20.0000	21.7306	108.65	70-125
58	Methyl cyclohexane	20.0000	20.3809	101.90	70-130
60	Dibromomethane	20.0000	22.0858	110.43	75-125
61	1,2-Dichloropropan	20.0000	21.8335	109.17	75-125
62	Bromodichlorometha	20.0000	21.3448	106.72	75-120
63	Methyl methacrylat	20.0000	21.3262	106.63	63-135
64	1,4-Dioxane	500.000	2207.88	441.58*	1-280
66	cis-1,3-Dichloropr	20.0000	21.1525	105.76	70-130
67	Octane	20.0000	18.2060	91.03	58-127
69	Toluene	20.0000	22.4188	112.09	75-125
70	Chloroacetonitrile	100.000	146.699	146.70*	70-130
71	2-Nitropropane	100.000	103.559	103.56	60-138
72	1,1-Dichloro-2-pro	100.000	110.680	110.68	70-130
73	4-Methyl-2-Pentano	100.000	98.4415	98.44	60-135
75	trans-1,3-Dichloro	20.0000	20.9789	104.89	55-140
74	Tetrachloroethene	20.0000	23.0231	115.12	45-150
76	Ethyl methacrylate	20.0000	21.9415	109.71	74-128
77	1,1,2-Trichloroeth	20.0000	21.8802	109.40	75-125
78	Chlorodibromometha	20.0000	22.1678	110.84	60-135
79	1,3-Dichloropropan	20.0000	21.8102	109.05	75-125
80	1,2-Dibromoethane	20.0000	22.7219	113.61	80-120
81	2-Hexanone	100.000	110.454	110.45	55-130
82	1-Chlorohexane	20.0000	20.7275	103.64	73-130
85	Ethylbenzene	20.0000	22.6332	113.17	75-125
84	Chlorobenzene	20.0000	22.0131	110.07	80-120
86	1,1,1,2-Tetrachlor	20.0000	22.1867	110.93	80-130
87	mp-Xylene	40.0000	46.2625	115.66	75-130
88	o-Xylene	20.0000	23.1601	115.80	80-120
89	Styrene	20.0000	20.6985	103.49	65-135
90	Bromoform	20.0000	21.9558	109.78	70-130
91	Isopropylbenzene	20.0000	20.8882	104.44	75-125
M 121	TOTAL XYLENES	60.0000	69.4226	115.70	80-120
94	n-Propylbenzene	20.0000	20.1500	100.75	70-130
93	Bromobenzene	20.0000	21.0329	105.16	75-125
95	1,1,2,2-Tetrachlor	20.0000	20.0832	100.42	65-130
97	1,3,5-Trimethylben	20.0000	20.6813	103.41	75-130
96	o-Chlorotoluene	20.0000	19.9151	99.58	75-125
98	1,2,3-Trichloropro	20.0000	19.9150	99.58	75-125
99	trans-1,4-Dichloro	20.0000	20.9579	104.79	60-141
101	p-Chlorotoluene	20.0000	20.0388	100.19	75-130
102	tert-Butylbenzene	20.0000	20.3771	101.89	70-130
103	Pentachloroethane	20.0000	18.7101	93.55	70-130
104	1,2,4-Trimethylben	20.0000	21.3370	106.68	75-130
105	sec-Butylbenzene	20.0000	20.3113	101.56	70-125
106	p-Isopropyltoluene	20.0000	20.6363	103.18	65-130

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
107 1,3-Dichlorobenzen	20.0000	20.8557	104.28	75-125
109 1,4-Dichlorobenzen	20.0000	20.6987	103.49	75-125
111 n-Butylbenzene	20.0000	20.3458	101.73	70-135
110 Benzyl Chloride	20.0000	15.1642	75.82	59-130
112 Hexachloroethane	20.0000	18.1026	90.51	62-130
113 1,2-Dichlorobenzen	20.0000	20.9362	104.68	70-120
114 1,2-Dibromo-3-chlo	20.0000	20.9433	104.72	50-130
115 Nitrobenzene	200.000	383.159	191.58*	23-139
116 Hexachlorobutadien	20.0000	20.9976	104.99	50-140
117 1,2,4-Trichloroben	20.0000	21.6861	108.43	65-135
118 Naphthalene	20.0000	20.7589	103.79	55-140
119 1,2,3-Trichloroben	20.0000	21.6514	108.26	55-140

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 41 Dibromofluorometha	30.0000	30.7571	102.52	85-115
$ 51 1,2-Dichloroethane	30.0000	30.3976	101.33	70-120
$ 68 Toluene-d8	30.0000	32.2313	107.44	85-120
$ 92 4-Bromofluorobenze	30.0000	33.7361	112.45	75-120

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1037613
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info: ZZ VOMS 27572 D8260W

Client SDG: 1120920A.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: GLQ

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
75-71-8	Dichlorodifluoromethane	16.4352	
74-87-3	Chloromethane	16.5903	
75-01-4	Vinyl Chloride	18.1320	
74-83-9	Bromomethane	8.70732	
75-00-3	Chloroethane	17.5467	
109-66-0	Pentane	20.1865	
75-69-4	Trichlorofluoromethane	19.3669	
75-43-4	Dichlorofluoromethane	21.1483	
60-29-7	Ethyl Ether	22.0507	
75-35-4	1,1-Dichloroethene	20.9622	
75-15-0	Carbon Disulfide	21.1870	
76-13-1	Freon 113	20.8596	
74-88-4	Iodomethane	13.1918	
107-02-8	Acrolein	147.727	
107-05-1	3-Chloro-1-propene	20.2330	
67-63-0	Isopropyl Alcohol	173.644	
75-09-2	Methylene Chloride	20.9319	
67-64-1	Acetone	113.103	
79-20-9	Methyl acetate	24.7205	
156-60-5	trans-1,2-Dichloroethene	21.0878	
110-54-3	Hexane	20.4639	
1634-04-4	Methyl t-Butyl Ether	21.1618	
75-65-0	tert.- Butyl Alcohol	137.822	
75-05-8	Acetonitrile	133.976	
108-20-3	Diisopropyl ether	21.2536	
126-99-8	Chloroprene	19.9253	
75-34-3	1,1-Dichloroethane	20.9116	
107-13-1	Acrylonitrile	120.356	
71-23-8	n-Propanol	198.170	J
637-92-3	Ethyl tert-butyl ether	21.5838	
108-05-4	Vinyl acetate	18.7748	
156-59-2	cis-1,2-Dichloroethene	20.9021	
594-20-7	2,2-Dichloropropane	18.5174	
540-59-0	1,2-Dichloroethene, Total	41.9899	
74-97-5	Bromochloromethane	22.8170	
110-82-7	Cyclohexane	21.6349	
67-66-3	Chloroform	19.7093	
141-78-6	Ethyl acetate	20.9177	
96-33-3	Methyl acrylate	21.4726	
56-23-5	Carbon Tetrachloride	21.6198	
109-99-9	Tetrahydrofuran	116.824	
71-55-6	1,1,1-Trichloroethane	21.1647	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1037613
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info: ZZ VOMS 27572 D8260W

Client SDG: 1120920A.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: GLQ

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
78-93-3	2-Butanone	120.147	
563-58-6	1,1-Dichloropropene	21.2353	
109-69-3	1-Chlorobutane	19.6957	
142-82-5	Heptane	18.6048	
107-12-0	Propionitrile	123.860	
71-43-2	Benzene	22.9499	
126-98-7	Methacrylonitrile	21.7213	
994-05-8	tert-amyl methyl Ether	20.6343	
78-83-1	Isobutyl alcohol	204.168	
107-06-2	1,2-Dichloroethane	20.6048	
75-85-4	tert-Amyl Alcohol	130.190	
107-39-1	Diisobutylene	19.2536	
79-01-6	Trichloroethene	21.7306	
108-87-2	Methyl cyclohexane	20.3809	
919-94-8	tert-Amyl Ethylether	20.6825	
74-95-3	Dibromomethane	22.0858	
78-87-5	1,2-Dichloropropane	21.8335	
75-27-4	Bromodichloromethane	21.3448	
80-62-6	Methyl methacrylate	21.3262	
123-91-1	1,4-Dioxane	2207.88	
110-75-8	2-Chloroethylvinyl ether	52.3565	
10061-01-5	cis-1,3-Dichloropropene	21.1525	
111-65-9	Octane	18.2060	
108-88-3	Toluene	22.4188	
107-14-2	Chloroacetonitrile	146.699	
79-46-9	2-Nitropropane	103.559	
513-88-2	1,1-Dichloro-2-propanone	110.680	
108-10-1	4-Methyl-2-Pentanone(MIBK)	98.4415	
10061-02-6	trans-1,3-Dichloropropene	20.9789	
127-18-4	Tetrachloroethene	23.0231	
97-63-2	Ethyl methacrylate	21.9415	
79-00-5	1,1,2-Trichloroethane	21.8802	
124-48-1	Chlorodibromomethane	22.1678	
142-28-9	1,3-Dichloropropane	21.8102	
106-93-4	1,2-Dibromoethane	22.7219	
591-78-6	2-Hexanone	110.454	
544-10-5	1-Chlorohexane	20.7275	
100-41-4	Ethylbenzene	22.6332	
108-90-7	Chlorobenzene	22.0131	
630-20-6	1,1,1,2-Tetrachloroethane	22.1867	
108383/106423	mp-Xylene	46.2625	
542-75-6	1,3-Dichloropropene, Total	42.1314	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1037613
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info: ZZ VOMS 27572 D8260W

Client SDG: 1120920A.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: GLQ

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
95-47-6	o-Xylene	23.1601	
100-42-5	Styrene	20.6985	
75-25-2	Bromoform	21.9558	
98-82-8	Isopropylbenzene	20.8882	
1330-20-7	TOTAL XYLENES	69.4226	
103-65-1	n-Propylbenzene	20.1500	
108-86-1	Bromobenzene	21.0329	
79-34-5	1,1,2,2-Tetrachloroethane	20.0832	
108-67-8	1,3,5-Trimethylbenzene	20.6813	
95-49-8	o-Chlorotoluene	19.9151	
96-18-4	1,2,3-Trichloropropane	19.9150	
110-57-6	trans-1,4-Dichloro-2-butene	20.9579	
106-43-4	p-Chlorotoluene	20.0388	
98-06-6	tert-Butylbenzene	20.3771	
76-01-7	Pentachloroethane	18.7101	
95-63-6	1,2,4-Trimethylbenzene	21.3370	
135-98-8	sec-Butylbenzene	20.3113	
99-87-6	p-Isopropyltoluene	20.6363	
541-73-1	1,3-Dichlorobenzene	20.8557	
106-46-7	1,4-Dichlorobenzene	20.6987	
104-51-8	n-Butylbenzene	20.3458	
100-44-7	Benzyl Chloride	15.1642	
67-72-1	Hexachloroethane	18.1026	
95-50-1	1,2-Dichlorobenzene	20.9362	
96-12-8	1,2-Dibromo-3-chloropropane	20.9433	
98-95-3	Nitrobenzene	383.159	
87-68-3	Hexachlorobutadiene	20.9976	
120-82-1	1,2,4-Trichlorobenzene	21.6861	
91-20-3	Naphthalene	20.7589	
87-61-6	1,2,3-Trichlorobenzene	21.6514	
1868-53-7	Dibromofluoromethane	30.7571	
17060-07-0	1,2-Dichloroethane-d4	30.3976	
2037-26-5	Toluene-d8	32.2313	
460-00-4	4-Bromofluorobenzene	33.7361	

ALS - Middletown

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:
Lab Smp Id: 1037613
Operator : GLQ
Sample Location:
Sample Matrix: WATER
Analysis Type: VOA
Inj Date: 21-SEP-2012 01:56

Client SDG: 1120920A.b

Sample Date:
Sample Point:
Date Received:
Level: LOW

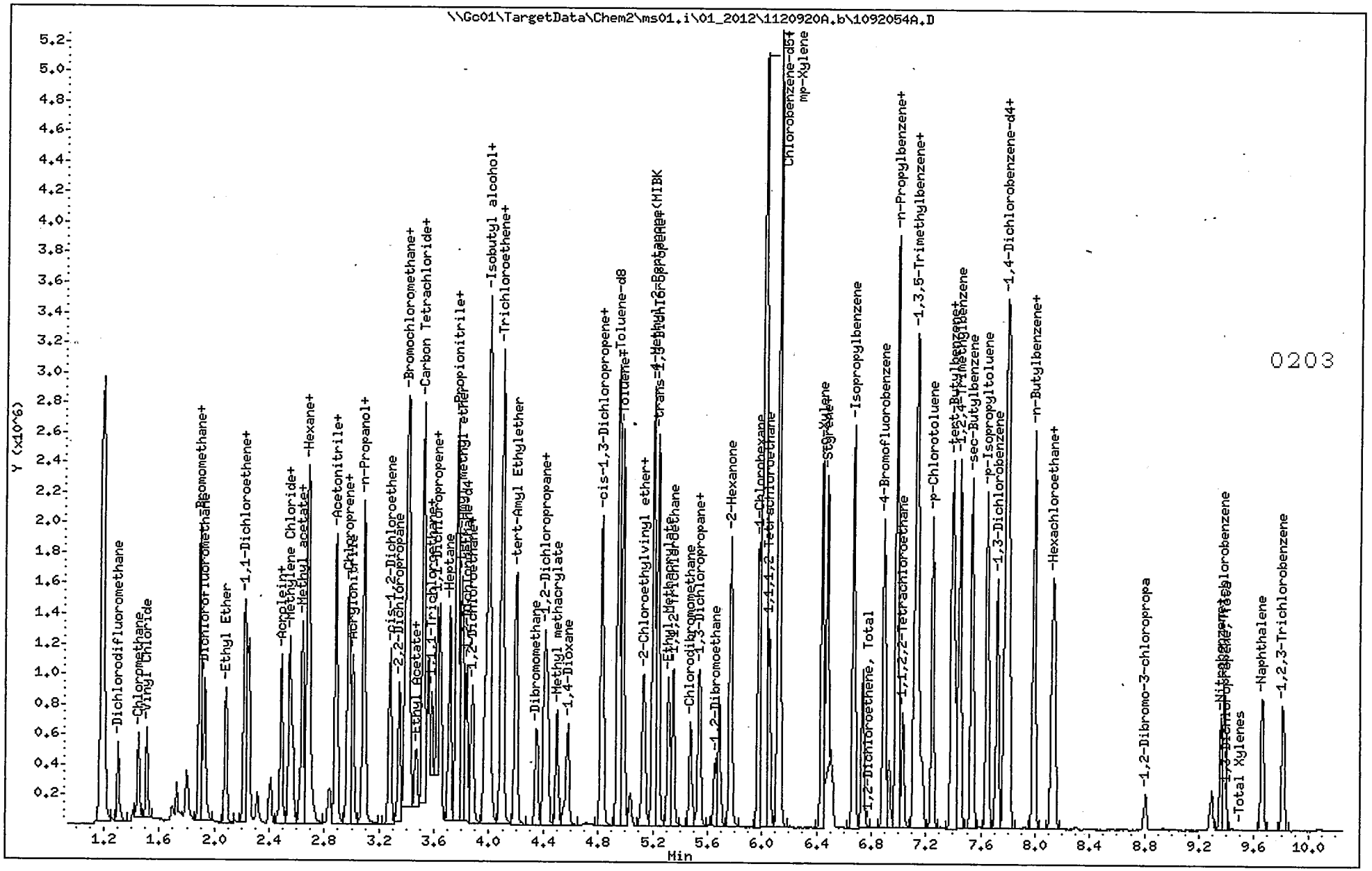
Number TICs found: 4

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	1.188	26.5487	J
2. 142-28-9	Propane, 1,3-dichloro-	5.542	4.25464	NJ
3. 123-86-4	Acetic acid, butyl ester	5.684	3.33994	NJ
4. 628-63-7	Acetic acid, pentyl ester	6.737	3.70775	NJ

Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1092054A.D
Date : 21-SEP-2012 01:56
Client ID:
Sample Info: 1037613;;1;3;;LCS;1;
Purge Volume: 5.0
Column phase: DB-VRX

Instrument: ms01.i
Operator: GLQ
Column diameter: 0.25



ALS - Middletown

VOLATILE REPORT SW-846 Method 8260

Data file : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1092054A.D
Lab Smp Id: 1037613
Inj Date : 21-SEP-2012 01:56
Operator : GLQ Inst ID: ms01.i
Smp Info : 1037613;;1;3;;LCS;1;
Misc Info : ZZ VOMS 27572 D8260W
Comment :
Method : \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m
Meth Date : 21-Sep-2012 15:19 josh Quant Type: ISTD
Cal Date : 15-SEP-2012 01:42 Cal File: 1091459.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DODall.sub
Target Version: 4.12
Processing Host: ALMDTXP005

Concentration Formula: Amt * DF * Uf * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged
DF	1.000	sample dilution factor
Cpnd Variable		Local Compound Variable

RAW DATA
Before Manual Integration

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/L)
1 Dichlorodifluoromethane	85	1.302	1.302	(0.326)	326778	16.4352	16.4352
2 Chloromethane	50	1.444	1.444	(0.362)	379872	16.5903	16.5903
3 Vinyl Chloride	62	1.504	1.504	(0.377)	395379	18.1320	18.1320
4 Bromomethane	94	1.727	1.728	(0.433)	68796	8.70732	8.70732
5 Chloroethane	64	1.798	1.815	(0.451)	223166	17.5467	17.5467
6 Pentane	41	1.886	1.897	(0.472)	275563	20.1865	20.1865
7 Trichlorofluoromethane	101	1.891	1.902	(0.474)	464113	19.3669	19.3669
8 Dichlorofluoromethane	67	1.924	1.929	(0.482)	619883	21.1483	21.1483
9 Ethyl Ether	74	2.082	2.082	(0.522)	201589	22.0507	22.0507
10 1,1-Dichloroethene	61	2.213	2.219	(0.554)	494053	20.9622	20.9622
12 Carbon Disulfide	76	2.246	2.251	(0.563)	987199	21.1870	21.1870
11 Freon 113	101	2.229	2.230	(0.559)	302157	20.8596	20.8596
13 Iodomethane	127	2.311	2.311	(0.579)	65602	13.1918	13.1918
14 Acrolein	56	2.404	2.404	(0.602)	181937	147.727	147.727
16 3-Chloro-1-propene	41	2.486	2.486	(0.623)	530546	20.2330	20.2330
15 Isopropyl Alcohol	45	2.464	2.459	(0.617)	97793	173.644	173.644
17 Methylene Chloride	84	2.546	2.546	(0.638)	366563	20.9319	20.9319
18 Acetone	58	2.562	2.568	(0.642)	146101	113.103	113.103
19 Methyl acetate	74	2.628	2.628	(0.658)	59480	24.7205	24.7205(Q)
20 trans-1,2-Dichloroethene	61	2.639	2.639	(0.661)	496515	21.0878	21.0878
21 Hexane	57	2.677	2.677	(0.671)	755231	20.4639	20.4639

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/L)
	22 Methyl t-Butyl Ether	73	2.688	2.682	(0.673)	871413	21.1618	21.1618
	23 tert.- Butyl Alcohol	59	2.710	2.710	(0.679)	150137	137.822	137.822
	24 Acetonitrile	41	2.835	2.835	(0.710)	203728	133.976	133.976(R)
	25 Diisopropyl ether	45	2.884	2.884	(0.723)	1187300	21.2536	21.2536
	26 Chloroprene	53	2.966	2.966	(0.743)	520328	19.9253	19.9253
	27 1,1-Dichloroethane	63	2.982	2.982	(0.747)	645668	20.9116	20.9116
	28 Acrylonitrile	53	3.004	3.004	(0.753)	625537	120.356	120.356
	30 n-Propanol	41	3.086	3.086	(0.773)	206059	198.170	198.170(a)
	29 Ethyl tert-butyl ether	59	3.086	3.086	(0.773)	1043885	21.5838	21.5838
	31 Vinyl acetate	86	3.092	3.092	(0.774)	57740	18.7748	18.7748(Q)
	32 cis-1,2-Dichloroethene	61	3.277	3.277	(0.821)	488085	20.9021	20.9021
	33 2,2-Dichloropropane	77	3.343	3.343	(0.837)	410663	18.5174	18.5174
M	100 1,2-Dichloroethene, Total	61				984600	41.9899	41.9899
	34 Bromochloromethane	128	3.392	3.392	(0.850)	160817	22.8170	22.8170
	35 Cyclohexane	84	3.408	3.408	(0.854)	565627	21.6349	21.6349
	36 Chloroform	83	3.413	3.414	(0.855)	634043	19.7093	19.7093
	37 Ethyl acetate	43	3.457	3.457	(0.866)	314035	20.9177	20.9177
	38 Methyl acrylate	55	3.473	3.474	(0.870)	287453	21.4726	21.4726
	39 Carbon Tetrachloride	117	3.517	3.517	(0.881)	440924	21.6198	21.6198
	40 Tetrahydrofuran	42	3.517	3.517	(0.881)	513439	116.824	116.824
$	41 Dibromofluoromethane	113	3.523	3.523	(0.882)	384015	30.7571	30.7571
	42 1,1,1-Trichloroethane	97	3.555	3.555	(0.891)	511059	21.1647	21.1647
	43 2-Butanone	72	3.583	3.583	(0.897)	183433	120.147	120.147
	44 1,1-Dichloropropene	75	3.615	3.621	(0.906)	498060	21.2353	21.2353
	45 1-Chlorobutane	41	3.637	3.643	(0.911)	419162	19.6957	19.6957
	46 Heptane	71	3.708	3.714	(0.929)	248697	18.6048	18.6048
	48 Propionitrile	54	3.763	3.763	(0.943)	228797	123.860	123.860(Q)
	47 Benzene	78	3.763	3.763	(0.943)	1386753	22.9499	22.9499
	49 Methacrylonitrile	67	3.774	3.774	(0.945)	129723	21.7213	21.7213(Q)
	50 tert-amyl methyl Ether	73	3.795	3.795	(0.951)	871956	20.6343	20.6343
$	51 1,2-Dichloroethane-d4	65	3.834	3.834	(0.960)	492675	30.3976	30.3976
	54 Isobutyl alcohol	43	3.965	3.965	(0.993)	596334	204.168	204.168
	52 1,2-Dichloroethane	62	3.872	3.872	(0.970)	428615	20.6048	20.6048
	53 tert-Amyl Alcohol	59	3.883	3.877	(0.973)	122247	130.190	130.190
*	55 Fluorobenzene	96	3.992	3.992	(1.000)	1649548	30.0000	
	56 Diisobutylene	57	4.003	4.003	(1.003)	1048260	19.2536	19.2536
	57 Trichloroethene	95	4.090	4.090	(1.025)	362580	21.7306	21.7306
	58 Methyl cyclohexane	83	4.096	4.096	(0.683)	603249	20.3809	20.3809
	59 tert-Amyl Ethylether	59	4.199	4.199	(1.052)	733158	20.6825	20.6825
	60 Dibromomethane	93	4.346	4.347	(1.089)	202969	22.0858	22.0858
	61 1,2-Dichloropropane	63	4.407	4.407	(1.104)	378455	21.8335	21.8335
	62 Bromodichloromethane	83	4.428	4.428	(1.109)	458492	21.3448	21.3448
	63 Methyl methacrylate	41	4.499	4.499	(1.127)	303203	21.3262	21.3262
	64 1,4-Dioxane	88	4.548	4.543	(1.139)	88117	2207.88	2207.88(R)
	65 2-Chloroethylvinyl ether	63	5.138	4.756	(1.287)	31274	52.3565	52.3565(Q)
	66 cis-1,3-Dichloropropene	75	4.821	4.821	(0.804)	550573	21.1525	21.1525
	67 Octane	85	4.832	4.832	(0.805)	181527	18.2060	18.2060
$	68 Toluene-d8	98	4.947	4.947	(0.824)	1619753	32.2313	32.2313
	69 Toluene	92	4.979	4.980	(0.830)	865105	22.4188	22.4188
	70 Chloroacetonitrile	48	5.039	5.034	(0.840)	61598	146.699	146.699(R)
	71 2-Nitropropane	41	5.127	5.127	(0.855)	383333	103.559	103.559
	72 1,1-Dichloro-2-propanone	63	5.138	5.138	(0.856)	31274	110.680	110.680(Q)
	73 4-Methyl-2-Pentanone (MIBK)	43	5.203	5.203	(0.867)	1617850	98.4415	98.4415
	75 trans-1,3-Dichloropropene	75	5.236	5.236	(0.873)	464117	20.9789	20.9789

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/L)
	74 Tetrachloroethene	164	5.236	5.241	(0.873)	294909	23.0231	23.0231
	76 Ethyl methacrylate	69	5.312	5.312	(0.885)	413237	21.9415	21.9415
	77 1,1,2-Trichloroethane	83	5.350	5.351	(0.892)	239842	21.8802	21.8802
	78 Chlorodibromomethane	129	5.476	5.476	(0.913)	311965	22.1678	22.1678
	79 1,3-Dichloropropane	76	6.005	5.542	(1.001)	127571	5.46962	5.46962(QR)
	80 1,2-Dibromoethane	107	5.656	5.656	(0.943)	266560	22.7219	22.7219
	81 2-Hexanone	43	5.765	5.765	(0.961)	1084793	110.454	110.454
	82 1-Chlorohexane	91	5.978	5.978	(0.996)	473884	20.7275	20.7275
*	83 Chlorobenzene-d5	82	6.000	6.000	(1.000)	722643	30.0000	
	85 Ethylbenzene	106	6.022	6.022	(1.004)	497376	22.6332	22.6332
	84 Chlorobenzene	112	6.016	6.016	(1.003)	883014	22.0131	22.0131
	86 1,1,1,2-Tetrachloroethane	131	6.049	6.054	(1.008)	299054	22.1867	22.1867
	87 mp-Xylene	106	6.120	6.120	(1.020)	1206773	46.2625	46.2625
M	120 1,3-Dichloropropene, Total	75				1014690	42.1314	42.1314
	88 o-Xylene	106	6.442	6.442	(1.074)	580239	23.1601	23.1601
	89 Styrene	104	6.474	6.475	(0.832)	950486	20.6985	20.6985
	90 Bromoform	173	6.507	6.507	(0.837)	177745	21.9558	21.9558
	91 Isopropylbenzene	105	6.671	6.671	(0.858)	1506177	20.8882	20.8882
$	92 4-Bromofluorobenzene	174	6.895	6.895	(0.886)	469780	33.7361	33.7361
M	121 TOTAL XYLENES	106				1787012	69.4226	69.4226
	94 n-Propylbenzene	120	6.987	6.987	(0.898)	391517	20.1500	20.1500
	93 Bromobenzene	156	6.982	6.982	(0.898)	330255	21.0329	21.0329
	95 1,1,2,2-Tetrachloroethane	83	7.031	7.031	(0.904)	336822	20.0832	20.0832
	97 1,3,5-Trimethylbenzene	105	7.135	7.135	(0.917)	1146316	20.6813	20.6813
	96 o-Chlorotoluene	91	7.118	7.118	(0.915)	1157001	19.9151	19.9151
	98 1,2,3-Trichloropropane	110	7.151	7.151	(0.919)	101103	19.9150	19.9150
	99 trans-1,4-Dichloro-2-butene	53	7.173	7.173	(0.922)	78613	20.9579	20.9579(Q)
	101 p-Chlorotoluene	91	7.249	7.249	(0.932)	1077073	20.0388	20.0388
	102 tert-Butylbenzene	134	7.391	7.391	(0.950)	266704	20.3771	20.3771
	103 Pentachloroethane	117	7.413	7.413	(0.953)	204779	18.7101	18.7101(Q)
	104 1,2,4-Trimethylbenzene	105	7.446	7.446	(0.957)	1140371	21.3370	21.3370
	105 sec-Butylbenzene	105	7.533	7.533	(0.968)	1403968	20.3113	20.3113
	106 p-Isopropyltoluene	134	7.648	7.648	(0.983)	294633	20.6363	20.6363
	107 1,3-Dichlorobenzene	146	7.719	7.719	(0.992)	591949	20.8557	20.8557
*	108 1,4-Dichlorobenzene-d4	152	7.779	7.779	(1.000)	560691	30.0000	
	109 1,4-Dichlorobenzene	146	7.789	7.790	(1.001)	588492	20.6987	20.6987
	111 n-Butylbenzene	134	7.991	7.991	(1.027)	254952	20.3458	20.3458(Q)
	110 Benzyl Chloride	126	7.986	7.991	(1.027)	60044	15.1642	15.1642(Q)
	112 Hexachloroethane	117	8.117	8.117	(1.043)	163396	18.1026	18.1026
	113 1,2-Dichlorobenzene	146	8.139	8.139	(1.046)	519719	20.9362	20.9362
	114 1,2-Dibromo-3-chloropropane	75	8.804	8.804	(1.132)	52323	20.9433	20.9433
	115 Nitrobenzene	77	9.290	9.290	(1.194)	113810	383.159	383.159(R)
	116 Hexachlorobutadiene	225	9.355	9.361	(1.203)	119313	20.9976	20.9976
	117 1,2,4-Trichlorobenzene	180	9.383	9.383	(1.206)	247932	21.6861	21.6861
	118 Naphthalene	128	9.661	9.661	(1.242)	596228	20.7589	20.7589
	119 1,2,3-Trichlorobenzene	180	9.808	9.814	(1.261)	214477	21.6514	21.6514

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms01.i
Lab File ID: 1092054A.D
Lab Smp Id: 1037613
Analysis Type: VOA
Quant Type: ISTD
Operator: GLQ
Method File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m
Misc Info: ZZ VOMS 27572 D8260W

Calibration Date: 21-SEP-2012
Calibration Time: 00:40

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	1717091	858546	3434182	1649548	-3.93
83 Chlorobenzene-d5	758443	379222	1516886	722643	-4.72
108 1,4-Dichlorobenze	578778	289389	1157556	560691	-3.13

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
55 Fluorobenzene	3.99	3.49	4.49	3.99	-0.00
83 Chlorobenzene-d5	6.00	5.50	6.50	6.00	-0.00
108 1,4-Dichlorobenze	7.78	7.28	8.28	7.78	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

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RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1037613
Level: LOW
Data Type: MS DATA
SpikeList File: WaterDOD2006.spk
Sublist File: DODall.sub
Method File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1-8260b09.m
Misc Info: ZZ VOMS 27572 D8260W

Client SDG: 1120920A.b
Fraction: VOA

Operator: GLQ
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Dichlorodifluorome	20.0000	16.4352	82.18	30-155
2 Chloromethane	20.0000	16.5903	82.95	40-125
3 Vinyl Chloride	20.0000	18.1320	90.66	50-145
4 Bromomethane	20.0000	8.70732	43.54	30-145
5 Chloroethane	20.0000	17.5467	87.73	60-135
6 Pentane	20.0000	20.1865	100.93	33-143
7 Trichlorofluoromet	20.0000	19.3669	96.83	60-145
8 Dichlorofluorometh	20.0000	21.1483	105.74	4-121
9 Ethyl Ether	20.0000	22.0507	110.25	71-131
10 1,1-Dichloroethene	20.0000	20.9622	104.81	70-130
12 Carbon Disulfide	20.0000	21.1870	105.94	35-160
11 Freon 113	20.0000	20.8596	104.30	50-130
13 Iodomethane	20.0000	13.1918	65.96	37-128
14 Acrolein	150.000	147.727	98.48	18-183
16 3-Chloro-1-propene	20.0000	20.2330	101.16	59-135
17 Methylene Chloride	20.0000	20.9319	104.66	55-140
18 Acetone	100.000	113.103	113.10	40-140
20 trans-1,2-Dichloro	20.0000	21.0878	105.44	60-140
19 Methyl acetate	20.0000	24.7205	123.60	70-130
21 Hexane	20.0000	20.4639	102.32	48-142
22 Methyl t-Butyl Eth	20.0000	21.1618	105.81	65-125
23 tert.- Butyl Alcoh	0.000000	137.822	0.00	0-100
24 Acetonitrile	100.000	133.976	133.98*	19-130
25 Diisopropyl ether	20.0000	21.2536	106.27	74-131
27 1,1-Dichloroethane	20.0000	20.9116	104.56	70-135
28 Acrylonitrile	100.000	120.356	120.36	71-151
29 Ethyl tert-butyl e	20.0000	21.5838	107.92	75-123
31 Vinyl acetate	20.0000	18.7748	93.87	58-136
32 cis-1,2-Dichloroet	20.0000	20.9021	104.51	70-125
33 2,2-Dichloropropan	20.0000	18.5174	92.59	70-135
34 Bromochloromethane	20.0000	22.8170	114.08	65-130
35 Cyclohexane	20.0000	21.6349	108.17	66-130
36 Chloroform	20.0000	19.7093	98.55	65-135
37 Ethyl acetate	20.0000	20.9177	104.59	63-138
38 Methyl acrylate	20.0000	21.4726	107.36	70-130
39 Carbon Tetrachlori	20.0000	21.6198	108.10	65-140
40 Tetrahydrofuran	100.000	116.824	116.82	62-152
42 1,1,1-Trichloroeth	20.0000	21.1647	105.82	65-130
43 2-Butanone	100.000	120.147	120.15	30-150
44 1,1-Dichloropropen	20.0000	21.2353	106.18	75-130

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
45	1-Chlorobutane	20.0000	19.6957	98.48	70-130
46	Heptane	20.0000	18.6048	93.02	56-130
48	Propionitrile	100.000	123.860	123.86	59-158
47	Benzene	20.0000	22.9499	114.75	80-120
49	Methacrylonitrile	20.0000	21.7213	108.61	68-155
50	tert-amyl methyl E	20.0000	20.6343	103.17	75-121
54	Isobutyl alcohol	200.000	204.168	102.08	37-171
52	1,2-Dichloroethane	20.0000	20.6048	103.02	70-130
56	Diisobutylene	20.0000	19.2536	96.27	60-137
57	Trichloroethene	20.0000	21.7306	108.65	70-125
58	Methyl cyclohexane	20.0000	20.3809	101.90	70-130
60	Dibromomethane	20.0000	22.0858	110.43	75-125
61	1,2-Dichloropropan	20.0000	21.8335	109.17	75-125
62	Bromodichlorometha	20.0000	21.3448	106.72	75-120
63	Methyl methacrylat	20.0000	21.3262	106.63	63-135
64	1,4-Dioxane	500.000	2207.88	441.58*	1-280
66	cis-1,3-Dichloropr	20.0000	21.1525	105.76	70-130
67	Octane	20.0000	18.2060	91.03	58-127
69	Toluene	20.0000	22.4188	112.09	75-125
70	Chloroacetonitrile	100.000	146.699	146.70*	70-130
71	2-Nitropropane	100.000	103.559	103.56	60-138
72	1,1-Dichloro-2-pro	100.000	110.680	110.68	70-130
73	4-Methyl-2-Pentano	100.000	98.4415	98.44	60-135
75	trans-1,3-Dichloro	20.0000	20.9789	104.89	55-140
74	Tetrachloroethene	20.0000	23.0231	115.12	45-150
76	Ethyl methacrylate	20.0000	21.9415	109.71	74-128
77	1,1,2-Trichloroeth	20.0000	21.8802	109.40	75-125
78	Chlorodibromometha	20.0000	22.1678	110.84	60-135
79	1,3-Dichloropropan	20.0000	5.46962	27.35*	75-125
80	1,2-Dibromoethane	20.0000	22.7219	113.61	80-120
81	2-Hexanone	100.000	110.454	110.45	55-130
82	1-Chlorohexane	20.0000	20.7275	103.64	73-130
85	Ethylbenzene	20.0000	22.6332	113.17	75-125
84	Chlorobenzene	20.0000	22.0131	110.07	80-120
86	1,1,1,2-Tetrachlor	20.0000	22.1867	110.93	80-130
87	mp-Xylene	40.0000	46.2625	115.66	75-130
88	o-Xylene	20.0000	23.1601	115.80	80-120
89	Styrene	20.0000	20.6985	103.49	65-135
90	Bromoform	20.0000	21.9558	109.78	70-130
91	Isopropylbenzene	20.0000	20.8882	104.44	75-125
M 121	TOTAL XYLENES	60.0000	69.4226	115.70	80-120
94	n-Propylbenzene	20.0000	20.1500	100.75	70-130
93	Bromobenzene	20.0000	21.0329	105.16	75-125
95	1,1,2,2-Tetrachlor	20.0000	20.0832	100.42	65-130
97	1,3,5-Trimethylben	20.0000	20.6813	103.41	75-130
96	o-Chlorotoluene	20.0000	19.9151	99.58	75-125
98	1,2,3-Trichloropro	20.0000	19.9150	99.58	75-125
99	trans-1,4-Dichloro	20.0000	20.9579	104.79	60-141
101	p-Chlorotoluene	20.0000	20.0388	100.19	75-130
102	tert-Butylbenzene	20.0000	20.3771	101.89	70-130
103	Pentachloroethane	20.0000	18.7101	93.55	70-130
104	1,2,4-Trimethylben	20.0000	21.3370	106.68	75-130
105	sec-Butylbenzene	20.0000	20.3113	101.56	70-125
106	p-Isopropyltoluene	20.0000	20.6363	103.18	65-130

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
107 1,3-Dichlorobenzen	20.0000	20.8557	104.28	75-125
109 1,4-Dichlorobenzen	20.0000	20.6987	103.49	75-125
111 n-Butylbenzene	20.0000	20.3458	101.73	70-135
110 Benzyl Chloride	20.0000	15.1642	75.82	59-130
112 Hexachloroethane	20.0000	18.1026	90.51	62-130
113 1,2-Dichlorobenzen	20.0000	20.9362	104.68	70-120
114 1,2-Dibromo-3-chlo	20.0000	20.9433	104.72	50-130
115 Nitrobenzene	200.000	383.159	191.58*	23-139
116 Hexachlorobutadien	20.0000	20.9976	104.99	50-140
117 1,2,4-Trichloroben	20.0000	21.6861	108.43	65-135
118 Naphthalene	20.0000	20.7589	103.79	55-140
119 1,2,3-Trichloroben	20.0000	21.6514	108.26	55-140

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 41 Dibromofluorometha	30.0000	30.7571	102.52	85-115
$ 51 1,2-Dichloroethane	30.0000	30.3976	101.33	70-120
$ 68 Toluene-d8	30.0000	32.2313	107.44	85-120
$ 92 4-Bromofluorobenze	30.0000	33.7361	112.45	75-120

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1037613
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info: ZZ VOMS 27572 D8260W

Client SDG: 1120920A.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: GLQ

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
75-71-8	Dichlorodifluoromethane	16.4352	
74-87-3	Chloromethane	16.5903	
75-01-4	Vinyl Chloride	18.1320	
74-83-9	Bromomethane	8.70732	
75-00-3	Chloroethane	17.5467	
109-66-0	Pentane	20.1865	
75-69-4	Trichlorofluoromethane	19.3669	
75-43-4	Dichlorofluoromethane	21.1483	
60-29-7	Ethyl Ether	22.0507	
75-35-4	1,1-Dichloroethene	20.9622	
75-15-0	Carbon Disulfide	21.1870	
76-13-1	Freon 113	20.8596	
74-88-4	Iodomethane	13.1918	
107-02-8	Acrolein	147.727	
107-05-1	3-Chloro-1-propene	20.2330	
67-63-0	Isopropyl Alcohol	173.644	
75-09-2	Methylene Chloride	20.9319	
67-64-1	Acetone	113.103	
79-20-9	Methyl acetate	24.7205	
156-60-5	trans-1,2-Dichloroethene	21.0878	
110-54-3	Hexane	20.4639	
1634-04-4	Methyl t-Butyl Ether	21.1618	
75-65-0	tert.- Butyl Alcohol	137.822	
75-05-8	Acetonitrile	133.976	
108-20-3	Diisopropyl ether	21.2536	
126-99-8	Chloroprene	19.9253	
75-34-3	1,1-Dichloroethane	20.9116	
107-13-1	Acrylonitrile	120.356	
71-23-8	n-Propanol	198.170	J
637-92-3	Ethyl tert-butyl ether	21.5838	
108-05-4	Vinyl acetate	18.7748	
156-59-2	cis-1,2-Dichloroethene	20.9021	
594-20-7	2,2-Dichloropropane	18.5174	
540-59-0	1,2-Dichloroethene, Total	41.9899	
74-97-5	Bromochloromethane	22.8170	
110-82-7	Cyclohexane	21.6349	
67-66-3	Chloroform	19.7093	
141-78-6	Ethyl acetate	20.9177	
96-33-3	Methyl acrylate	21.4726	
56-23-5	Carbon Tetrachloride	21.6198	
109-99-9	Tetrahydrofuran	116.824	
71-55-6	1,1,1-Trichloroethane	21.1647	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1037613
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info: ZZ VOMS 27572 D8260W

Client SDG: 1120920A.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: GLQ

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
78-93-3	2-Butanone	120.147	
563-58-6	1,1-Dichloropropene	21.2353	
109-69-3	1-Chlorobutane	19.6957	
142-82-5	Heptane	18.6048	
107-12-0	Propionitrile	123.860	
71-43-2	Benzene	22.9499	
126-98-7	Methacrylonitrile	21.7213	
994-05-8	tert-amyl methyl Ether	20.6343	
78-83-1	Isobutyl alcohol	204.168	
107-06-2	1,2-Dichloroethane	20.6048	
75-85-4	tert-Amyl Alcohol	130.190	
107-39-1	Diisobutylene	19.2536	
79-01-6	Trichloroethene	21.7306	
108-87-2	Methyl cyclohexane	20.3809	
919-94-8	tert-Amyl Ethylether	20.6825	
74-95-3	Dibromomethane	22.0858	
78-87-5	1,2-Dichloropropane	21.8335	
75-27-4	Bromodichloromethane	21.3448	
80-62-6	Methyl methacrylate	21.3262	
123-91-1	1,4-Dioxane	2207.88	
110-75-8	2-Chloroethylvinyl ether	52.3565	
10061-01-5	cis-1,3-Dichloropropene	21.1525	
111-65-9	Octane	18.2060	
108-88-3	Toluene	22.4188	
107-14-2	Chloroacetonitrile	146.699	
79-46-9	2-Nitropropane	103.559	
513-88-2	1,1-Dichloro-2-propanone	110.680	
108-10-1	4-Methyl-2-Pentanone(MIBK)	98.4415	
10061-02-6	trans-1,3-Dichloropropene	20.9789	
127-18-4	Tetrachloroethene	23.0231	
97-63-2	Ethyl methacrylate	21.9415	
79-00-5	1,1,2-Trichloroethane	21.8802	
124-48-1	Chlorodibromomethane	22.1678	
142-28-9	1,3-Dichloropropane	5.46962	
106-93-4	1,2-Dibromoethane	22.7219	
591-78-6	2-Hexanone	110.454	
544-10-5	1-Chlorohexane	20.7275	
100-41-4	Ethylbenzene	22.6332	
108-90-7	Chlorobenzene	22.0131	
630-20-6	1,1,1,2-Tetrachloroethane	22.1867	
108383/106423	mp-Xylene	46.2625	
542-75-6	1,3-Dichloropropene, Total	42.1314	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1037613
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info: ZZ VOMS 27572 D8260W

Client SDG: 1120920A.b

Sample Point:
Date Received:
Quant Type: ISTD
Level: LOW
Operator: GLQ

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
95-47-6	o-Xylene	23.1601	
100-42-5	Styrene	20.6985	
75-25-2	Bromoform	21.9558	
98-82-8	Isopropylbenzene	20.8882	
1330-20-7	TOTAL XYLENES	69.4226	
103-65-1	n-Propylbenzene	20.1500	
108-86-1	Bromobenzene	21.0329	
79-34-5	1,1,2,2-Tetrachloroethane	20.0832	
108-67-8	1,3,5-Trimethylbenzene	20.6813	
95-49-8	o-Chlorotoluene	19.9151	
96-18-4	1,2,3-Trichloropropane	19.9150	
110-57-6	trans-1,4-Dichloro-2-butene	20.9579	
106-43-4	p-Chlorotoluene	20.0388	
98-06-6	tert-Butylbenzene	20.3771	
76-01-7	Pentachloroethane	18.7101	
95-63-6	1,2,4-Trimethylbenzene	21.3370	
135-98-8	sec-Butylbenzene	20.3113	
99-87-6	p-Isopropyltoluene	20.6363	
541-73-1	1,3-Dichlorobenzene	20.8557	
106-46-7	1,4-Dichlorobenzene	20.6987	
104-51-8	n-Butylbenzene	20.3458	
100-44-7	Benzyl Chloride	15.1642	
67-72-1	Hexachloroethane	18.1026	
95-50-1	1,2-Dichlorobenzene	20.9362	
96-12-8	1,2-Dibromo-3-chloropropane	20.9433	
98-95-3	Nitrobenzene	383.159	
87-68-3	Hexachlorobutadiene	20.9976	
120-82-1	1,2,4-Trichlorobenzene	21.6861	
91-20-3	Naphthalene	20.7589	
87-61-6	1,2,3-Trichlorobenzene	21.6514	
1868-53-7	Dibromofluoromethane	30.7571	
17060-07-0	1,2-Dichloroethane-d4	30.3976	
2037-26-5	Toluene-d8	32.2313	
460-00-4	4-Bromofluorobenzene	33.7361	

ALS - Middletown

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:
Lab Smp Id: 1037613
Operator : GLQ
Sample Location:
Sample Matrix: WATER
Analysis Type: VOA
Inj Date: 21-SEP-2012 01:56

Client SDG: 1120920A.b

Sample Date:
Sample Point:
Date Received:
Level: LOW

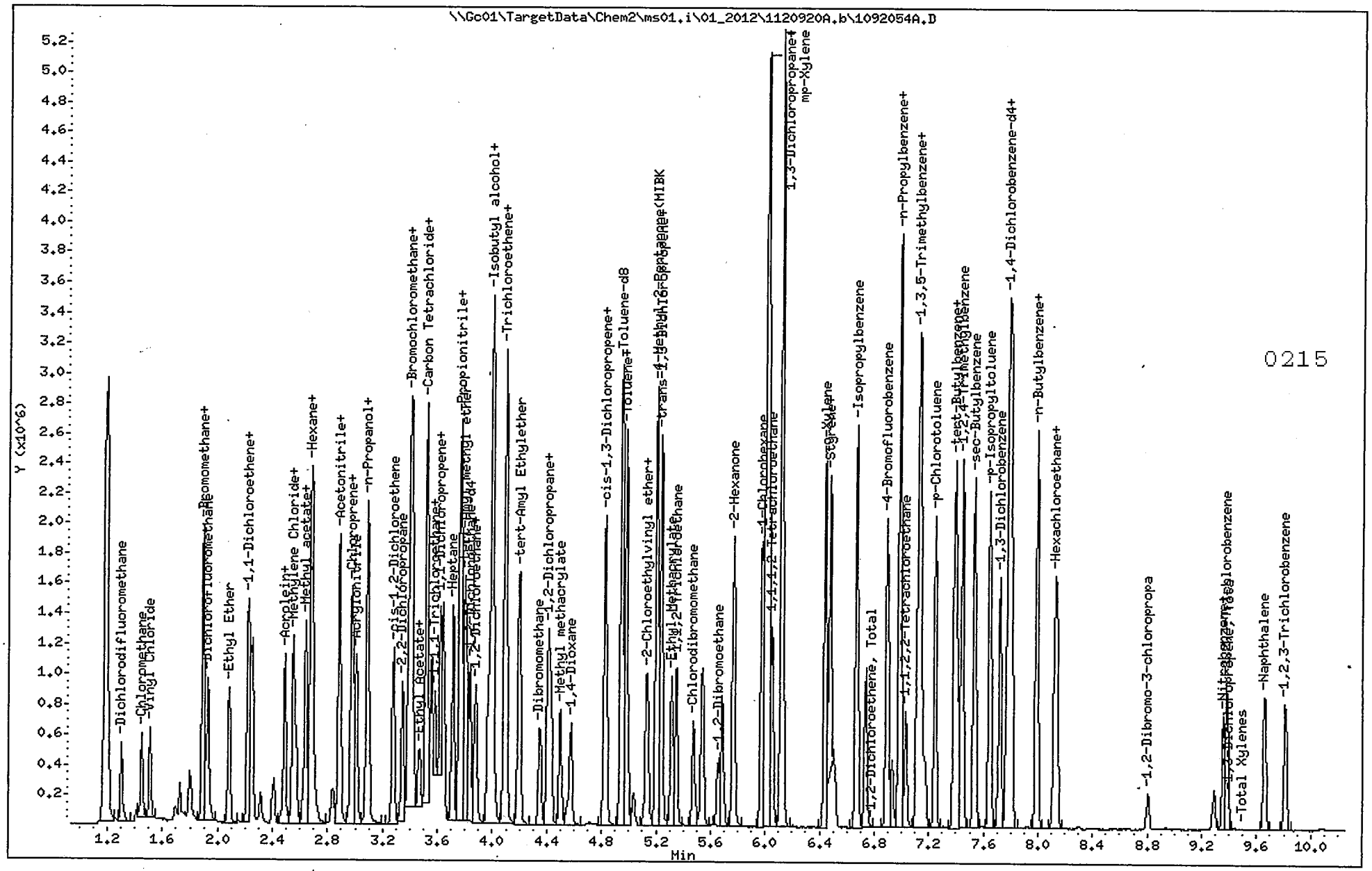
Number TICs found: 4

CONCENTRATION UNITS:
(ug/L or ug/KG) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	1.188	26.5487	J
2.	142-28-9	Propane, 1,3-dichloro-	5.542	4.25464	NJ
3.	123-86-4	Acetic acid, butyl ester	5.684	3.33994	NJ
4.	628-63-7	Acetic acid, pentyl ester	6.737	3.70775	NJ

Data File: \\Gc01\TargetData\Chem2\ms01.i\01_2012\1120920A.b\1092054A.D
Date : 21-SEP-2012 01:56
Client ID:
Sample Info: 1037613;;1;3;;LCS;1;
Purge Volume: 5.0
Column phase: DB-VRX

Instrument: ms01.i
Operator: GLQ
Column diameter: 0.25



Analytical Logbook

0216

Instrument MS01

DATE(S): 9/14/12	CALIBRATION VERIFIED BY: [illegible]	BATCH CONTINUED FROM PAGE: —
DATA FILE NAME: W914xv.d	BFB INJECTED: 0136 ICAL DATE: 9/14/12	BATCH CONTINUED TO PAGE: —
BATCH NAME: 1120914.b	12-HOUR ENDING: 1336	METHOD: 8260

Meth. #	POS. #	RUN #	SAMPLE	CLIENT	SAMPLE INFORMATION	DIL.	ANALYST	TEST	pH	HDSP / Wt.	Cl-	First Review	COMMENT	SDG
—	—	00	1000	AVS	WA10-001-06	1	W	BFB				CHB		
W	1	03	W		Cleanup	1		8260						
	2	02	W		↓	1								
	3	07	KSD1005		WA10-035-01	1						EEB		
		04	1234			1								
		05	1235			1								
		02	1236			1								
		07	1237			1								
		08	1238			1								
		09	1239			1								
		10	W		Cleanup	1						CHB		
		11	W		↓	1								
		12	1034042		MB	1								
		13	1034043		WA10-038-16(1.1)	1							naph	
		14	W		Cleanup	1								
		15	9987369004G	Pioneer	FB	1		Fig		M				
		16	9987369005G		EB	1				M				
		17	9987369006G		TB	1				M				
		18	9987588007A	BT Env.	TB	1		W84		M				
		19	9987013014B	Haley	DUP 050712	10		TCLV	<2	M	M		MB	
		20	9987369001G	Pioneer	Leachate WP	1		Fig		M				
		21	9987369002G		MW25	1				M				
		22	9987369003G		MW26	1				M				
		23	9987588001A	BT Env	SEPAVL MW1	1		W84		M				
		24	9987588002A		MW2	1				M				
		25	9987588003A		MW3	1				M				
		26	9987588004A		MW4	1				M			MSID for Batch 27496	
		27	9987588005A		MW5	1				M			MSID	
		28	9987588006A		MW6	1				M				
		29	1034074		MW4	1		8260		M			MB (5)	
		30	1034075		↓	1				M				
		31	1034076		MW5	1				M				
		32	1034077		↓	1				M				

IS: SS: 27511 Vgas: Qgas: Page: 352

Prev. 3 Marquis Current 13 Total 16 Hayde

Batch: Prev.: Current: Total:

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Instrument MS01

DATE(S): 9/20/12	CALIBRATION VERIFIED BY: GLQ		BATCH CONTINUED FROM PAGE:
DATA FILE NAME: 10920xx.d	BFB INJECTED: 0014	ICAL DATE: 9/15/12	BATCH CONTINUED TO PAGE: —
BATCH NAME: 1120920A.b	12-HOUR ENDING: 1214		METHOD: 8260

Meth. #	POS. #	RUN #	SAMPLE	CLIENT	SAMPLE INFORMATION	DIL.	ANALYST	TEST	pH	HDSP / Wt.	Cl-	First Review	COMMENT	SDG
		50	1000	ALS	VOA10-001-06	1	GLQ	BFB				JAA		
m1	1	51	1800		VOA10-040-01	1		8260						
	2	52	WP		Cleanup	1								
	3	53	1037210		MB	1							1037612	
	4	54	1037211		VOA10-038-16 (LCS)	1							1037613	
	5	55	WP		Cleanup	1								
	6	56	9988640015-B (RR)	AJA	MW-15	1		USTA	<2	N	Y		~~NB~~ Cl+ (S) Cmt	
	7	57	9988552002-B (RR)	Allen Myers	155-Christ Luthern	1		TCL	<2	N	N			
	8	58	9988552003-B (RR)		38-Cassell	1			<2	N	N		(S) Cmt	
	9	59	9988640001-B (RR)	AJA	MW-1	1		USTA	<2	N	Y		Cl+	
	10	60	9988642003-B (RR)		MW-3	1		U082	<2	N	N		~~NB~~	
	11	61	9988673001-B (RR)	EA Eng.-MD	PMW-1	1		F50	<2	N	N		NB	
	12	62	9988673002-B (RR)		PMW-2	1			<2	N	N		(S) Cmt	
	13	63	9988673003-B (RR)		PMW-3	1			<2	N	N		(S) Cmt	
	14	64	9988460007-B (RR)	Fairfax Cnty.	95-W17	1		8260	<2	N	N			
	15	65	9988640020-B (RR)	AJA	TFW-4	1		USTA	<2	N	Y		~~NB~~ Cl+	
	16	66	9988640021-B (RR)		TFW-5	1		USTA	<2	N	N			
	17	67	9988640022-A		TFW-6	1			<2	Y	Y		HDSP, ~~NB~~ Cl+	
	18	68	9988640013-A		MW-13	1			<2	N	N		~~NB~~ (S) Cmt	
	19	69	9988640016-A		MW-16	1			<2	N	Y		Cl+	
	20	70	9988642007-A		MW-7	1			<2	N	N			
	21	71	9988642008-A		MW-8	1			<2	N	N			
	22	72	9988642009-A		MW-9	1			<2	N	N		(S) Cmt	
	23	73	9988642010-A		MW-10	1			<2	N	Y		Cl+	
	24	74	9987206001-A	URS	Purge Water-01	20		TCLP						
	25	75	9988663007-A	ARM Group	GW-1	1		U084	<2	N	N		~~NB~~	
	26	76	9988789001-G	Chief Oil & Gas	Kerr-Flowback	5		USTA	<2	N	N		Matrix (Oily) or VNT	
	27	77	WP	ALS	Cleanup	1		8260						
	28	78	9987011001-A	Klines	Packaging Control Corp.	20	TWP	TCLP					(S) Cmt	
	29	79	9988218017-B (DL)	Penn Env. & Rem.	MW-16D	20		TCLV	<2	N	N			
	30	80	9986940001-A	ERT	FTSW-IDW-02	100		TCLP					Matrix DOD-	
	~~31~~	~~81~~	~~LOQVH (1037614)~~	~~ALS~~	~~LOQVH~~	~~1~~		~~8260~~						

IS: VOA10-031-26 SS: VOA10-017-11 #27567 Vgas: VOA10-040-23 Qgas: VOA10-041-01 Page: 050

Prev. 19 Has QC Current 1 Total 20 Has QC Batch: Prev.: Current: 18 Total: 18 Needs QC

Rev. 8/11

#27572 - DOD (D8260W)

TCLP Semi-Volatile Organics by 1311/8270D Summary Forms

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-009

	SAMPLE NO.	S1 (2FP) #	S2 (PHL) #	S3 (NBZ) #	S4 (FBP) #	S5 (TBP) #	S6 (TPH) #	S7	S8	TOT OUT
01	1037610(MB)	53.6	36.6	89.4	83.9	87.5	96.8			0
02	1037611(LCS)	61.6	34.3	90.2	88.1	94.0	99.2			0
03	FTSW-IDW-02	44.5	30.6	68.5	67.4	82.3	58.4			0

	QC LIMITS
S1 (2FP) = 2-Fluorophenol	(20-110)
S2 (PHL) = Phenol-d5	(10-115)
S3 (NBZ) = Nitrobenzene-d5	(40-110)
S4 (FBP) = 2-Fluorobiphenyl	(50-110)
S5 (TBP) = 2,4,6-Tribromophenol	(40-125)
S6 (TPH) = Terphenyl-d14	(50-135)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate Diluted Out

WATER SEMIVOLATILE LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-009

Laboratory Control Spike - Sample No: 1037611

COMPOUND	SPIKE ADDED (ug/L)		LCS CONCENTRATION (ug/L)	LCS % REC#	QC LIMIT REC
mp-Cresol	100		81.7	81.7	(30-110)
o-Cresol	100		91.8	91.8	(40-110)
1,4-Dichlorobenzene	50.0		38.7	77.3	(30-100)
2,4-Dinitrotoluene	50.0		54.9	110	(50-120)
Hexachlorobenzene	50.0		49.7	99.4	(50-110)
Hexachlorobutadiene	50.0		38.7	77.3	(25-105)
Hexachloroethane	50.0		38.5	77	(30-100)
Nitrobenzene	50.0		49.9	99.8	(45-110)
Pentachlorophenol	100		113	113	(40-115)
Pyridine	50.0		35.2	70.4	(14-82)
2,4,5-Trichlorophenol	100		98.8	98.8	(50-110)
2,4,6-Trichlorophenol	100		99.7	99.7	(50-115)

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 12 outside limits

Comments:

4B

SEMIVOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

1037610

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-009

Lab File ID: 14092126.D Lab Sample ID: 1037610

Instrument ID: ms14.i Date Extracted: 9/18/2012

Matrix: (soil/water) WATER Date Analyzed: 9/21/2012

Level: (low/med) LOW Time Analyzed: 21:25

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	1037611(LCS)	1037611	14092127.D	9/21/2012

COMMENTS:

Form IV SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-009

Lab File ID: 14092101.D DFTPP Injection Date: 9/21/2012

Instrument ID: ms14.i DFTPP Injection Time: 10:39

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	33.0
68	Less than 2.0% of mass 69	0.6 (1.5) 1
69	Mass 69 relative abundance	37.9
70	Less than 2.0% of mass 69	0.2 (0.4) 1
127	40.0 - 60.0% of mass 198	48.5
197	Less than 1.0% of mass 198	0.8
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	26.0
365	Greater than 1% of mass 198	3.3
441	Present, but less than mass 443	11.7
442	Greater than 40% of mass 198	79.7
443	17.0 - 23.0% of mass 442	15.6(19.5) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	1234	1234	14092106.D	9/21/2012	12:57
02	1235	1235	14092107.D	9/21/2012	13:23
03	1236	1236	14092108.D	9/21/2012	13:48
04	1237	1237	14092109.D	9/21/2012	14:13
05	1238	1238	14092110.D	9/21/2012	14:39
06	1239	1239	14092111.D	9/21/2012	15:04
07	1240	1240	14092112.D	9/21/2012	15:29
08	1241	1241	14092113.D	9/21/2012	15:54

0223

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-009

Lab File ID: 14092118.D DFTPP Injection Date: 9/21/2012

Instrument ID: ms14.i DFTPP Injection Time: 18:02

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	31.1
68	Less than 2.0% of mass 69	0.6 (1.5) 1
69	Mass 69 relative abundance	36.1
70	Less than 2.0% of mass 69	0.1 (0.4) 1
127	40.0 - 60.0% of mass 198	46.3
197	Less than 1.0% of mass 198	0.8
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	26.2
365	Greater than 1% of mass 198	3.4
441	Present, but less than mass 443	12.2
442	Greater than 40% of mass 198	83.4
443	17.0 - 23.0% of mass 442	16.3(19.5) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	1800	1800	14092119.D	9/21/2012	18:27
02	1037610(MB)	1037610	14092126.D	9/21/2012	21:25
03	1037611(LCS)	1037611	14092127.D	9/21/2012	21:50

02224

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-009

Lab File ID: 14092130.D DFTPP Injection Date: 9/21/2012

Instrument ID: ms14.i DFTPP Injection Time: 23:09

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.5
68	Less than 2.0% of mass 69	0.6 (1.5) 1
69	Mass 69 relative abundance	35.7
70	Less than 2.0% of mass 69	0.2 (0.5) 1
127	40.0 - 60.0% of mass 198	46.2
197	Less than 1.0% of mass 198	0.6
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	26.4
365	Greater than 1% of mass 198	3.4
441	Present, but less than mass 443	12.4
442	Greater than 40% of mass 198	85.6
443	17.0 - 23.0% of mass 442	16.5(19.3) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	1800	1800	14092131.D	9/21/2012	23:35
02	FTSW-IDW-02	9986940001	14092154.D	9/22/2012	09:38

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-009

Sample No.: 1800 Date Analyzed: 9/21/2012

Lab File ID: 14092119.D Time Analyzed: 18:27

Instrument ID: ms14.i GC Column: DB-5 ID: 0.18 (mm)

		IS1 (DCB) AREA	#	RT	#	IS2 (NPT) AREA	#	RT	#	IS3 (ANT) AREA	#	RT	#
	12 HOUR STD	188215		5.105		844217		6.309		488761		8.042	
	UPPER LIMIT	376430		5.605		1688434		6.809		977522		8.542	
	LOWER LIMIT	94108		4.605		422109		5.809		244381		7.542	
	SAMPLE NO.												
01	1800	188215		5.105		844217		6.309		488761		8.042	
02	1037610(MB)	207087		5.105		863683		6.303		518885		8.036	
03	1037611(LCS)	188066		5.105		878155		6.303		506446		8.041	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-009

Sample No.: 1800 Date Analyzed: 9/21/2012

Lab File ID: 14092119.D Time Analyzed: 18:27

Instrument ID: ms14.i GC Column: DB-5 ID: 0.18 (mm)

		IS4 (PHN) AREA	#	RT	#	IS5 (CRY) AREA	#	RT	#	IS6 (PRY) AREA	#	RT	#
	12 HOUR STD	879480		9.534		965239		12.197		1025699		13.802	
	UPPER LIMIT	1758960		10.034		1930478		12.697		2051398		14.302	
	LOWER LIMIT	439740		9.034		482620		11.697		512850		13.302	
	SAMPLE NO.												
01	1800	879480		9.534		965239		12.197		1025699		13.802	
02	1037610(MB)	922523		9.528		1006744		12.187		1040610		13.791	
03	1037611(LCS)	925843		9.534		1018540		12.197		1071383		13.802	

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG NO.: ERT-009

Sample No.: 1800 Date Analyzed: 9/21/2012

Lab File ID: 14092131.D Time Analyzed: 23:35

Instrument ID: ms14.i GC Column: DB-5 ID: 0.18 (mm)

		IS1 (DCB) AREA	#	RT	#	IS2 (NPT) AREA	#	RT	#	IS3 (ANT) AREA	#	RT	#
	12 HOUR STD	182972		5.105		860485		6.309		492967		8.042	
	UPPER LIMIT	365944		5.605		1720970		6.809		985934		8.542	
	LOWER LIMIT	91486		4.605		430243		5.809		246484		7.542	
	SAMPLE NO.												
01	1800	182972		5.105		860485		6.309		492967		8.042	
02	FTSW-IDW-02	200556		5.100		881472		6.303		526628		8.036	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-009

Sample No.: 1800 Date Analyzed: 9/21/2012

Lab File ID: 14092131.D Time Analyzed: 23:35

Instrument ID: ms14.i GC Column: DB-5 ID: 0.18 (mm)

		IS4 (PHN) AREA	#	RT	#	IS5 (CRY) AREA	#	RT	#	IS6 (PRY) AREA	#	RT	#
	12 HOUR STD	896892		9.534		977948		12.197		1028977		13.802	
	UPPER LIMIT	1793784		10.034		1955896		12.697		2057954		14.302	
	LOWER LIMIT	448446		9.034		488974		11.697		514489		13.302	
	SAMPLE NO.												
01	1800	896892		9.534		977948		12.197		1028977		13.802	
02	FTSW-IDW-02	925395		9.528		1013885		12.187		1038047		13.797	

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

TCLP Semi-Volatile Organics by 1311/8270D Raw Data

Sample Raw Data

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FTSW-IDW-02

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-009

Matrix (soil/water): WATER Lab Sample ID: 9986940001

Sample wt/vol: 50 (g/mL) ML Lab File ID: 14092154.D

Level: (low/med) Date Received: 9/7/2012

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 9/18/2012

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/22/2012

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N Extraction: (Type) SEPF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108394/106445	mp-Cresol	20.0	U
95-48-7	o-Cresol	20.0	U
106-46-7	1,4-Dichlorobenzene	20.0	U
121-14-2	2,4-Dinitrotoluene	20.0	U
118-74-1	Hexachlorobenzene	20.0	U
87-68-3	Hexachlorobutadiene	20.0	U
67-72-1	Hexachloroethane	20.0	U
98-95-3	Nitrobenzene	40.0	U
87-86-5	Pentachlorophenol	160	U
110-86-1	Pyridine	40.0	U
95-95-4	2,4,5-Trichlorophenol	60.0	U
88-06-2	2,4,6-Trichlorophenol	20.0	U

ALS - Middletown

Semivolatile Report for SW-846 Method 8270

Data file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14092
Lab Smp Id: 9986940001 Client Smp ID: FTSW-IDW-02
Inj Date : 22-SEP-2012 09:38
Operator : DHF Inst ID: ms14.i
Smp Info : 9986940001;1;;;;;50;;1000;;
Misc Info : ZZ SVMS 17662 D8270TCLP
Comment :
Method : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14-82
Meth Date : 24-Sep-2012 15:49 ms14.i Quant Type: ISTD
Cal Date : 21-SEP-2012 15:54 Cal File: 14092113.D
Als bottle: 46
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 12_tclp.sub
Target Version: 4.12
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	50.000	Sample Volume extracted(mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

DATA REVIEW 9/24/12
REPORTED 9/24/12
APPROVED
REVIEW

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	3 Pyridine	79	Compound Not Detected.					
$	4 2-Fluorophenol	112	3.971	3.971	(0.779)	315536	44.4577	889.154
$	7 Phenol-d5	99	4.736	4.741	(0.929)	240864	30.6424	612.849
*	14 1,4-Dichlorobenzene-d4	152	5.100	5.105	(1.000)	200556	40.0000	
	15 1,4-Dichlorobenzene	146	Compound Not Detected.					
	18 o-Cresol	107	Compound Not Detected.					
	20 mp-Cresol	107	Compound Not Detected.					
	24 Hexachloroethane	117	Compound Not Detected.					
$	25 Nitrobenzene-d5	128	5.608	5.619	(0.890)	134669	34.2432	684.865
	26 Nitrobenzene	77	Compound Not Detected.					
*	34 Naphthalene-d8	136	6.303	6.309	(1.000)	881472	40.0000	
	39 Hexachlorobutadiene	224	Compound Not Detected.					
	48 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	50 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	51 2-Fluorobiphenyl	172	7.346	7.352	(0.914)	601979	33.7073	674.145
*	63 Acenaphthene-d10	164	8.036	8.042	(1.000)	526628	40.0000	
	68 2,4-Dinitrotoluene	165	Compound Not Detected.					
$	82 2,4,6-Tribromophenol	330	8.822	8.828	(0.926)	212491	82.3111	1646.22
	85 Hexachlorobenzene	283	Compound Not Detected.					
	88 Pentachlorophenol	265	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 90 Phenanthrene-d10	188	9.528	9.534	(1.000)	925395	40.0000	
$ 98 Terphenyl-d14	244	11.106	11.112	(0.911)	613300	29.2158	584.316
* 104 Chrysene-d12	240	12.187	12.197	(1.000)	1013885	40.0000	
* 110 Perylene-d12	264	13.797	13.802	(1.000)	1038047	40.0000	

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms14.i
Lab File ID: 14092154.D
Lab Smp Id: 9986940001
Analysis Type: SV
Quant Type: ISTD
Operator: DHF
Calibration Date: 21-SEP-2012
Calibration Time: 23:35
Client Smp ID: FTSW-IDW-02
Level: LOW
Sample Type: WATER
Method File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14-8
Misc Info: ZZ SVMS 17662 D8270TCLP

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	201484	100742	402968	200556	-0.46
34 Naphthalene-d8	894115	447058	1788230	881472	-1.41
63 Acenaphthene-d10	515108	257554	1030216	526628	2.24
90 Phenanthrene-d10	924191	462096	1848382	925395	0.13
104 Chrysene-d12	1005497	502749	2010994	1013885	0.83
110 Perylene-d12	1050509	525255	2101018	1038047	-1.19

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	5.11	4.61	5.61	5.10	-0.11
34 Naphthalene-d8	6.31	5.81	6.81	6.30	-0.08
63 Acenaphthene-d10	8.04	7.54	8.54	8.04	-0.07
90 Phenanthrene-d10	9.53	9.03	10.03	9.53	-0.06
104 Chrysene-d12	12.20	11.70	12.70	12.19	-0.09
110 Perylene-d12	13.80	13.30	14.30	13.80	-0.04

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Client SDG: ERT009|Ft. Stewart
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: 9986940001
Client Smp ID: FTSW-IDW-02
Level: LOW
Operator: DHF
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: 3510-50-100.spk
Quant Type: ISTD
Sublist File: 12_tclp.sub
Method File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14-8
Misc Info: ZZ SVMS 17662 D8270TCLP

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 2-Fluorophenol	2000.00	889.154	44.46	20-75
$ 7 Phenol-d5	2000.00	612.849	30.64	13-49
$ 25 Nitrobenzene-d5	1000.00	684.865	68.49	40-110
$ 51 2-Fluorobiphenyl	1000.00	674.145	67.41	50-110
$ 82 2,4,6-Tribromophen	2000.00	1646.22	82.31	40-125
$ 98 Terphenyl-d14	1000.00	584.316	58.43	50-122

ALS - Middletown

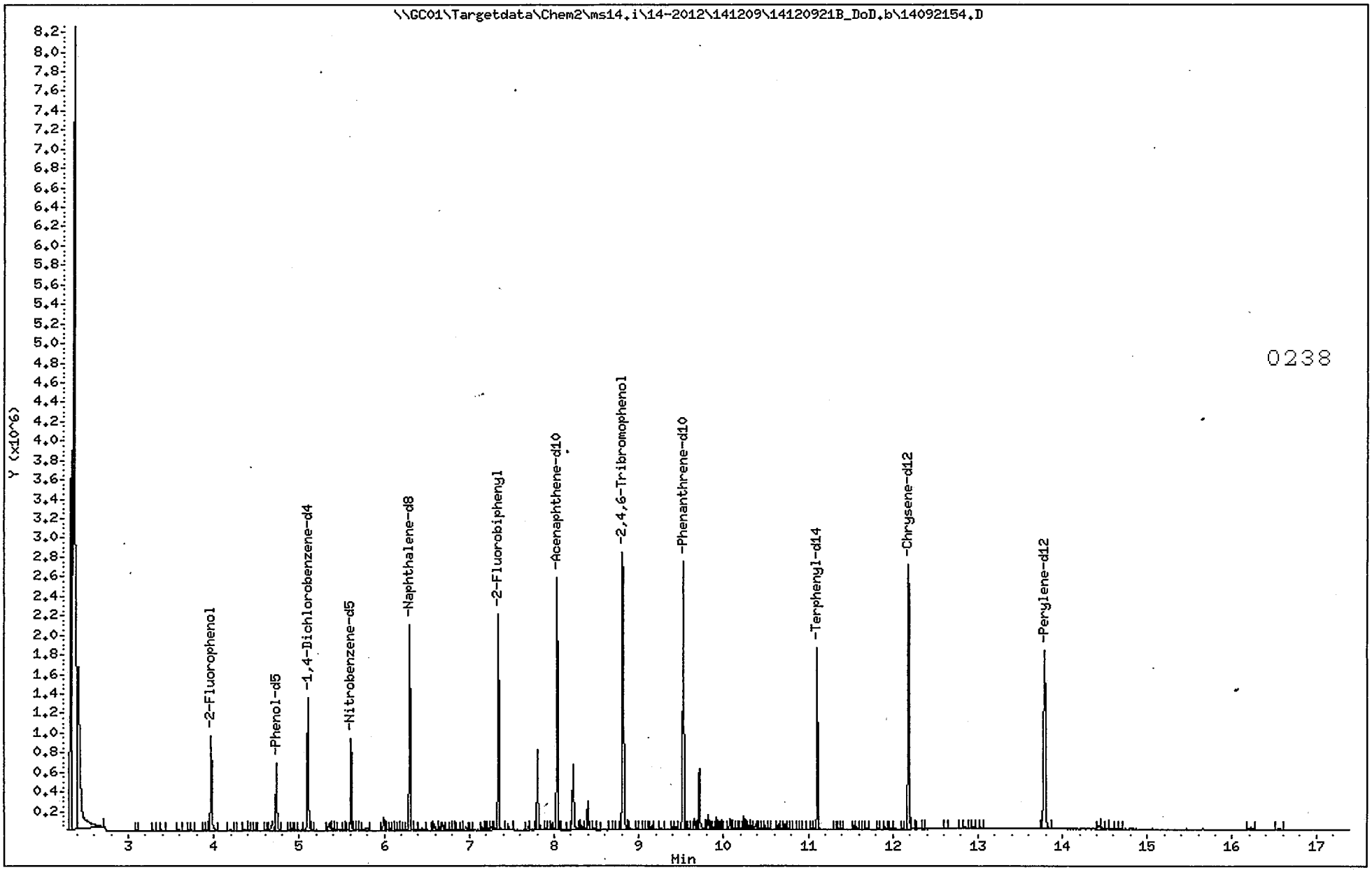
TARGET COMPOUNDS

Client Name: ERT Earth Resources
Lab Smp Id: 9986940001
Sample Location:
Sample Date: 06-SEP-2012
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 17662 D8270TCLP

Client SDG: ERT009|Ft. Stewart
Client Smp ID: FTSW-IDW-02
Sample Point:
Date Received: 07-SEP-2012
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
367-12-4	2-Fluorophenol	889.154	
4165-62-2	Phenol-d5	612.849	
4165-60-0	Nitrobenzene-d5	684.865	
321-60-8	2-Fluorobiphenyl	674.145	
118-79-6	2,4,6-Tribromophenol	1646.22	
98904-43-9	Terphenyl-d14	584.316	

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14092154.D
Date : 22-SEP-2012 09:38
Client ID: FTSW-IDW-02
Instrument: ms14.i
Sample Info: 9986940001;1;;;;;50;;1000;;
Volume Injected (uL): 1.0
Operator: DHF
Column phase: ZB-5
Column diameter: 0.25



Standards Raw Data

Initial Calibrations

6B

SEMI-VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms14.i Calibration Date(s): 9/21/2012 9/21/2012

GC Column: DB-5 ID: 0.18 (mm) Calibration Time(s): 12:57 15:54

LAB FILE ID: RRF01.5 = 14092106.D RRF003 = 14092107.D RRF008 = 14092108.D RRF016 = 14092109.D

RRF050 = 14092110.D RRF070 = 14092111.D RRF090 = 14092112.D RRF120 = 14092113.D RRF016

COMPOUND	RRF01.5	RRF003	RRF008	RRF016	RRF050	CT
Acenaphthene **	1.30576	1.26956	1.29091	1.25161	1.18731	A
Acenaphthylene	1.80856	1.83536	1.91393	1.89991	1.82175	A
Acetophenone	1.97670	2.05831	2.12220	2.14427	2.17490	A
Aniline	1.79091	1.81598	1.97434	2.03863	2.09662	A
Anthracene	1.12876	1.13242	1.15086	1.15427	1.08399	A
Atrazine	0.20969	0.22107	0.24159	0.23804	0.22247	A
Azobenzene	0.70530	0.73198	0.76417	0.77000	0.74987	A
Benzaldehyde	0.99511	1.02360	1.11036	1.12460	1.03481	A
Benzidine	6988	16798	69247	180826	610086	L
Benzo(a)anthracene	1.13520	1.12001	1.15931	1.16467	1.10930	A
Benzo(a)pyrene **	0.94472	0.98114	1.04676	1.07483	1.07308	A
Benzo(b)fluoranthene	1.02737	1.02999	1.08794	1.11340	1.16368	A
Benzo(g,h,i)perylene	0.98138	1.00937	1.05624	1.07728	1.07809	A
Benzoic acid	1683	7255	34310	94593	444388	Q
Benzo(k)fluoranthene	1.20668	1.17985	1.24829	1.24011	1.11853	A
Benzyl Alcohol	4360	9222	30829	71774	255498	L
Biphenyl	1.67146	1.66959	1.67663	1.64517	1.53995	A
4-Bromophenyl-phenylether	0.21763	0.22137	0.22974	0.23147	0.22441	A
Butylbenzylphthalate	0.41028	0.44026	0.52013	0.57215	0.59340	A
Caprolactam	0.11590	0.12199	0.11095	0.11391	0.11943	A
Carbazole	0.95104	0.96235	1.04258	1.05852	0.99054	A
4-Chloro-3-methylphenol **	0.28812	0.29761	0.31764	0.31483	0.30486	A
4-Chloroaniline	0.40529	0.42300	0.45256	0.44958	0.41881	A
Bis(2-Chloroethoxy)methane	0.42561	0.43577	0.44442	0.44038	0.42179	A
Bis(2-Chloroethyl)ether	1.53560	1.52049	1.50496	1.51632	1.49342	A
bis(2-Chloroisopropyl)ether	1.75687	1.73255	1.74947	1.79243	1.82286	A
2-Chloronaphthalene	1.20356	1.18970	1.20493	1.19255	1.12886	A
2-Chlorophenol	1.36949	1.39245	1.46801	1.49004	1.45358	A
4-Chlorophenyl-phenylether	0.69269	0.68770	0.70005	0.69759	0.66493	A
Chrysene	1.12592	1.09540	1.08375	1.08617	0.97754	A
mp-Cresol	1.54483	1.58366	1.69182	1.70612	1.66782	A
o-Cresol	1.09301	1.14006	1.18809	1.21164	1.21510	A
Di-n-Butylphthalate	1.17162	1.22623	1.36851	1.40927	1.36398	A
Di-n-Octylphthalate **	1.00546	1.12517	1.34943	1.48458	1.51665	A

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

SPCC Compounds (*) with required minimum RRF.

CCC Compounds (**) with required maximum %RSD.

12411

6B

SEMI-VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms14.i Calibration Date(s): 9/21/2012 9/21/2012

GC Column: DB-5 ID: 0.18 (mm) Calibration Time(s): 12:57 15:54

LAB FILE ID: RRF01.5 = 14092106.D RRF003 = 14092107.D RRF008 = 14092108.D RRF016 = 14092109.D
RRF050 = 14092110.D RRF070 = 14092111.D RRF090 = 14092112.D RRF120 = 14092113.D RRF016

COMPOUND		RRF01.5	RRF003	RRF008	RRF016	RRF050	CT
n-Decane		1.48337	1.50766	1.57180	1.56326	1.51974	A
Dibenzo(a,h)anthracene		0.96468	0.99179	1.06340	1.09882	1.06099	A
Dibenzofuran		1.71807	1.68502	1.73964	1.70442	1.60979	A
2,3-Dichloroaniline		0.64425	0.65438	0.68927	0.68094	0.63563	A
1,2-Dichlorobenzene		1.31252	1.26941	1.25598	1.20643	1.14749	A
1,3-Dichlorobenzene		1.64500	1.59260	1.63303	1.63282	1.63120	A
1,4-Dichlorobenzene	**	1.62915	1.58405	1.60439	1.59953	1.54880	A
3,3-Dichlorobenzidine		0.29342	0.33450	0.40201	0.43242	0.39994	A
2,4-Dichlorophenol	**	0.26901	0.28378	0.30221	0.30198	0.28192	A
2,6-Dichlorophenol		0.28501	0.29710	0.31618	0.31411	0.29646	A
Diethylphthalate		1.39668	1.53329	1.46450	1.45434	1.39312	A
Dimethoate		0.22439	0.25122	0.29514	0.31922	0.32475	A
2,4-Dimethylphenol		0.32607	0.34021	0.35451	0.35189	0.32665	A
Dimethylphthalate		1.33710	1.36500	1.39895	1.39385	1.35121	A
1,2-Dinitrobenzene		0.13350	0.14807	0.16146	0.16949	0.16848	A
1,3-Dinitrobenzene		0.17419	0.19656	0.23382	0.24714	0.24864	A
1,4-Dinitrobenzene		2267	5464	18409	40546	136755	L
2,4-Dinitrophenol	*	658	3732	20388	59134	236511	L
2,4-Dinitrotoluene		0.32823	0.35941	0.40520	0.43293	0.43551	A
2,6-Dinitrotoluene		0.26812	0.28877	0.32258	0.33234	0.32951	A
1,4-Dioxane		0.67328	0.65566	0.65910	0.66541	0.70805	A
Diphenylamine	**	0.63902	0.65493	0.68514	0.68026	0.64974	A
1,2-Diphenylhydrazine		0.69832	0.72474	0.75661	0.76238	0.74245	A
bis(2-Ethylhexyl)phthalate		0.61966	0.68453	0.80064	0.86689	0.85871	A
Di(2-Ethylhexyl)adipate		0.39734	0.43808	0.51955	0.57156	0.57882	A
Fluoranthene	**	1.18368	1.20266	1.27594	1.27017	1.20852	A
Fluorene		1.43259	1.42897	1.47385	1.46404	1.37467	A
n-Heptadecane		0.47668	0.50515	0.53132	0.52804	0.51032	A
Hexachlorobenzene		0.26507	0.25733	0.25672	0.25268	0.24379	A
Hexachlorobutadiene	**	0.20539	0.19482	0.20053	0.19505	0.18596	A
Hexachlorocyclopentadiene	*	3491	8187	27454	60723	209239	L
Hexachloroethane		0.63170	0.60842	0.65382	0.66187	0.68677	A
Indeno(1,2,3-cd)pyrene	*	1.13498	1.16385	1.25311	1.29333	1.28153	A
Isophorone		0.61652	0.61535	0.65581	0.66742	0.66301	A

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.
SPCC Compounds (*) with required minimum RRF.
CCC Compounds (**) with required maximum %RSD.

6B

SEMI-VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms14.i Calibration Date(s): 9/21/2012 9/21/2012

GC Column: DB-5 ID: 0.18 (mm) Calibration Time(s): 12:57 15:54

LAB FILE ID: RRF01.5 = 14092106.D RRF003 = 14092107.D RRF008 = 14092108.D RRF016 = 14092109.D

RRF050 = 14092110.D RRF070 = 14092111.D RRF090 = 14092112.D RRF120 = 14092113.D RRF016

COMPOUND		RRF01.5	RRF003	RRF008	RRF016	RRF050	CT
2-Methyl-4,6-dinitrophenol		3244	9565	37983	92060	325209	L
1-Methylnaphthalene		0.71226	0.71380	0.71638	0.70642	0.66027	A
2-Methylnaphthalene		0.76645	0.76553	0.77431	0.75786	0.70792	A
2-Napthylamine		17008	26065	55078	161797	653982	L
Naphthalene		1.17288	1.13649	1.14097	1.11754	1.03475	A
2-Nitroaniline		0.29398	0.31639	0.37260	0.39326	0.39925	A
3-Nitroaniline		0.25446	0.26998	0.30143	0.32481	0.33287	A
4-Nitroaniline		0.21876	0.25853	0.31693	0.33720	0.32827	A
Nitrobenzene		0.34307	0.34649	0.35791	0.35890	0.34618	A
2-Nitrophenol	**	0.16431	0.17535	0.19526	0.19888	0.19039	A
4-Nitrophenol	*	4322	11232	37487	83963	269836	L
N-Nitrosodi-n-butylamine		0.16152	0.17264	0.17785	0.18087	0.18195	A
N-Nitrosodiethylamine		0.58779	0.62415	0.69979	0.72450	0.76606	A
N-Nitrosodimethylamine		0.75215	0.77429	0.82952	0.87026	0.96029	A
N-Nitrosodi-n-propylamine	*	0.94924	0.98629	1.06170	1.09353	1.13167	A
N-Nitrosodiphenylamine	**	0.54462	0.55977	0.58497	0.58204	0.55438	A
N-Nitrosopyrrolidine		0.65509	0.70152	0.76866	0.78669	0.82044	A
n-Octadecane		0.49382	0.51450	0.54632	0.55399	0.52570	A
Pentachlorobenzene		0.57393	0.57601	0.58724	0.57637	0.54957	A
Pentachlorophenol	**		8378	36680	88481	328954	L
Phenanthrene		1.19988	1.17432	1.15786	1.14356	1.06720	A
Phenol	**	1.54528	1.56089	1.65988	1.67481	1.59140	A
Pyrene		1.12803	1.13787	1.17456	1.20212	1.13646	A
Pyridine		1.42698	1.43732	1.56616	1.62317	1.69552	A
Resorcinol		0.23491	0.26444	0.29292	0.31397	0.32325	A
alpha-Terpineol		0.23352	0.23378	0.22689	0.23399	0.23319	A
1,2,4,5-Tetrachlorobenzene		0.63221	0.63796	0.64161	0.62977	0.60067	A
2,3,4,6-Tetrachlorophenol		0.20433	0.22316	0.26446	0.27484	0.26415	A
2,3,5,6-Tetrachlorophenol		3007	6768	22528	50130	169183	L
1,2,4-Trichlorobenzene		0.35310	0.34364	0.34444	0.34087	0.32099	A
2,4,5-Trichlorophenol		0.34038	0.37307	0.40514	0.39912	0.37324	A
2,4,6-Trichlorophenol	**	0.32718	0.34474	0.37931	0.37573	0.35431	A
2-Fluorophenol		1.17428	1.23428	1.36249	1.40495	1.48395	A
Phenol-d5		1.44972	1.55951	1.65467	1.71496	1.65743	A

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

SPCC Compounds (*) with required minimum RRF.

CCC Compounds (**) with required maximum %RSD.

6B

SEMI-VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms14.i Calibration Date(s): 9/21/2012 9/21/2012

GC Column: DB-5 ID: 0.18 (mm) Calibration Time(s): 12:57 15:54

LAB FILE ID: RRF01.5 = 14092106.D RRF003 = 14092107.D RRF008 = 14092108.D RRF016 = 14092109.D

RRF050 = 14092110.D RRF070 = 14092111.D RRF090 = 14092112.D RRF120 = 14092113.D RRF016

COMPOUND	RRF01.5	RRF003	RRF008	RRF016	RRF050	CT
Nitrobenzene-d5	0.16146	0.16986	0.18189	0.18736	0.18536	A
2-Fluorobiphenyl	1.40872	1.44105	1.45045	1.42657	1.34037	A
2,4,6-Tribromophenol	0.08760	0.10029	0.11155	0.11764	0.12212	A
Terphenyl-d14	0.81119	0.84055	0.88237	0.89386	0.82348	A

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

SPCC Compounds (*) with required minimum RRF.

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6B

SEMI-VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms14.i Calibration Date(s): 9/21/2012 9/21/2012

GC Column: DB-5 ID: 0.18 (mm) Calibration Time(s): 12:57 15:54

LAB FILE ID: RRF01.5 = 14092106.D RRF003 = 14092107.D RRF008 = 14092108.D RRF016 = 14092109.D

RRF050 = 14092110.D RRF070 = 14092111.D RRF090 = 14092112.D RRF120 = 14092113.D

COMPOUND	RRF070	RRF090	RRF120		CT	b	m1	m2	% RSD or R^2
Acenaphthene **	1.16202	1.11614	1.06435		A		1.20596		7.2632
Acenaphthylene	1.78412	1.72523	1.66956		A		1.80730		4.5431
Acetophenone	2.17720	2.18036	2.21762		A		2.13145		3.6918
Aniline	2.14470	2.07213	1.97067		A		1.98800		6.4450
Anthracene	1.06171	1.00460	0.96245		A		1.08488		6.5482
Atrazine	0.21578	0.20442	0.19046		A		0.21794		7.7641
Azobenzene	0.73559	0.71312	0.69649		A		0.73332		3.6910
Benzaldehyde	0.97459	0.89782	0.76721		A		0.99101		11.7011
Benzidine	832390	1026928	1306662		L	0.0000	2.11572		0.9976
Benzo(a)anthracene	1.09018	1.06554	1.04287		A		1.11089		3.8833
Benzo(a)pyrene **	1.06093	1.03528	1.01261		A		1.02867		4.5118
Benzo(b)fluoranthene	1.17259	1.15317	1.18978		A		1.11724		5.6946
Benzo(g,h,i)perylene	1.08286	1.06327	1.04595		A		1.04931		3.4550
Benzoic acid	610284	879213	1230666		Q	0.0000	0.16297	0.01158	0.9990
Benzo(k)fluoranthene	1.08254	1.01937	0.95836		A		1.13172		9.3599
Benzyl Alcohol	349323	455142	611989		L	0.0000	0.89096		0.9931
Biphenyl	1.49579	1.43541	1.37757		A		1.56395		7.5846
4-Bromophenyl-phenylether	0.22187	0.21332	0.21048		A		0.22129		3.3242
Butylbenzylphthalate	0.59030	0.57899	0.56840		A		0.53424		13.3574
Caprolactam	0.11918	0.11660	0.11126		A		0.11615		3.4167
Carbazole	0.97383	0.94688	0.91984		A		0.98070		4.8892
4-Chloro-3-methylphenol **	0.29795	0.29005	0.28429		A		0.29942		4.0884
4-Chloroaniline	0.40651	0.38930	0.36718		A		0.41403		6.9472
Bis(2-Chloroethoxy)methane	0.41097	0.39861	0.38469		A		0.42028		4.9911
Bis(2-Chloroethyl)ether	1.40175	1.38396	1.34233		A		1.46236		5.0820
bis(2-Chloroisopropyl)ethe	1.86878	1.91613	1.99694		A		1.82951		5.0429
2-Chloronaphthalene	1.10156	1.07914	1.04385		A		1.14302		5.5297
2-Chlorophenol	1.42897	1.38919	1.33798		A		1.41621		3.7068
4-Chlorophenyl-phenylether	0.65111	0.63407	0.60956		A		0.66721		4.9892
Chrysene	0.96769	0.92709	0.91899		A		1.02282		8.1512
mp-Cresol	1.70674	1.74767	1.81893		A		1.68345		5.1700
o-Cresol	1.22077	1.23259	1.25175		A		1.19413		4.4134
Di-n-Butylphthalate	1.32551	1.25583	1.20580		A		1.29085		6.7697
Di-n-Octylphthalate **	1.49905	1.46323	1.41603		A		1.35745		14.0353
n-Decane	1.51392	1.49522	1.48878		A		1.51797		2.1765
Dibenzo(a,h)anthracene	1.05974	1.04097	1.02674		A		1.03839		4.1487

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

SPCC Compounds (*) with required minimum RRF.

CCC Compounds (**) with required maximum %RSD.

6B

SEMI-VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms14.i Calibration Date(s): 9/21/2012 9/21/2012

GC Column: DB-5 ID: 0.18 (mm) Calibration Time(s): 12:57 15:54

LAB FILE ID: RRF01.5 = 14092106.D RRF003 = 14092107.D RRF008 = 14092108.D RRF016 = 14092109.D

RRF050 = 14092110.D RRF070 = 14092111.D RRF090 = 14092112.D RRF120 = 14092113.D

COMPOUND	RRF070	RRF090	RRF120		CT	b	m1	m2	% RSD or R^2
Dibenzofuran	1.57519	1.51933	1.46828		A		1.62747		6.1493
2,3-Dichloroaniline	0.61045	0.58355	0.55896		A		0.63218		7.1955
1,2-Dichlorobenzene	1.02631	0.99502	1.11379		A		1.16587		9.9241
1,3-Dichlorobenzene	1.62655	1.62154	1.63181		A		1.62682		0.9431
1,4-Dichlorobenzene **	1.51839	1.47437	1.46241		A		1.55264		4.0128
3,3-Dichlorobenzidine	0.39771	0.37840	0.36359		A		0.37525		11.7464
2,4-Dichlorophenol **	0.27403	0.26176	0.24698		A		0.27771		6.8480
2,6-Dichlorophenol	0.28621	0.27785	0.26558		A		0.29231		5.9243
Diethylphthalate	1.35703	1.32801	1.30071		A		1.40346		5.5013
Dimethoate	0.32512	0.31553	0.31130		A		0.29583		12.7526
2,4-Dimethylphenol	0.31267	0.30017	0.28504		A		0.32465		7.5389
Dimethylphthalate	1.33626	1.30786	1.29288		A		1.34789		2.7905
1,2-Dinitrobenzene	0.16977	0.17077	0.16587		A		0.16093		8.2964
1,3-Dinitrobenzene	0.25285	0.25496	0.25634		A		0.23306		13.2273
1,4-Dinitrobenzene	191386	249468	332246		L	0.0000	4.48714		0.9990
2,4-Dinitrophenol *	344553	462061	602258		L	0.0000	4.95686		0.9955
2,4-Dinitrotoluene	0.43590	0.43256	0.43097		A		0.40759		10.1663
2,6-Dinitrotoluene	0.32609	0.32317	0.32017		A		0.31384		7.2856
1,4-Dioxane	0.71814	0.73297	0.77683		A		0.69868		6.1487
Diphenylamine **	0.63669	0.60789	0.58904		A		0.64284		5.1096
1,2-Diphenylhydrazine	0.72831	0.70605	0.68959		A		0.72605		3.6910
bis(2-Ethylhexyl)phthalate	0.84864	0.81143	0.79205		A		0.78532		11.2475
Di(2-Ethylhexyl)adipate	0.57626	0.55506	0.54094		A		0.52220		13.0821
Fluoranthene **	1.17748	1.12610	1.08614		A		1.19134		5.4370
Fluorene	1.33581	1.29265	1.24022		A		1.38035		6.1339
n-Heptadecane	0.49665	0.47268	0.45145		A		0.49654		5.6262
Hexachlorobenzene	0.23727	0.22922	0.22417		A		0.24578		5.9369
Hexachlorobutadiene **	0.17915	0.17288	0.16675		A		0.18757		7.3124
Hexachlorocyclopentadiene *	289133	373689	498440		L	0.0000	5.34228		0.9998
Hexachloroethane	0.69401	0.70882	0.73795		A		0.67292		6.2799
Indeno(1,2,3-cd)pyrene *	1.28123	1.26875	1.24829		A		1.24063		4.7355
Isophorone	0.65476	0.64476	0.63695		A		0.64432		3.0989
2-Methyl-4,6-dinitrophenol	449310	583613	770452		L	0.0000	7.00963		0.9993
1-Methylnaphthalene	0.63388	0.60636	0.57196		A		0.66517		8.4389
2-Methylnaphthalene	0.68289	0.64945	0.61773		A		0.71527		8.4206
2-Napthylamine	952935	1237370	1636152		L	0.0000	0.91182		0.9966

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

SPCC Compounds (*) with required minimum RRF.

CCC Compounds (**) with required maximum %RSD.

6B

SEMI-VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms14.i Calibration Date(s): 9/21/2012 9/21/2012

GC Column: DB-5 ID: 0.18 (mm) Calibration Time(s): 12:57 15:54

LAB FILE ID: RRF01.5 = 14092106.D RRF003 = 14092107.D RRF008 = 14092108.D RRF016 = 14092109.D

RRF050 = 14092110.D RRF070 = 14092111.D RRF090 = 14092112.D RRF120 = 14092113.D

COMPOUND	RRF070	RRF090	RRF120		CT	b	m1	m2	% RSD or R^2
Naphthalene	0.98767	0.94460	0.89042		A		1.05317		9.8957
2-Nitroaniline	0.40159	0.40235	0.40603		A		0.37318		11.6884
3-Nitroaniline	0.34348	0.34396	0.34925		A		0.31503		11.4542
4-Nitroaniline	0.33664	0.32760	0.30750		A		0.30393		14.0835
Nitrobenzene	0.34064	0.33763	0.33020		A		0.34513		2.8121
2-Nitrophenol **	0.18502	0.17776	0.17064		A		0.18220		6.7022
4-Nitrophenol *	376704	491558	660648		L	0.0000	4.53272		0.9989
N-Nitrosodi-n-butylamine	0.17828	0.17636	0.17250		A		0.17525		3.7149
N-Nitrosodiethylamine	0.79048	0.81341	0.83067		A		0.72960		12.0848
N-Nitrosodimethylamine	0.97924	1.00635	1.05200		A		0.90301		12.4004
N-Nitrosodi-n-propylamine *	1.13011	1.14701	1.17621		A		1.08447		7.4067
N-Nitrosodiphenylamine **	0.54325	0.51908	0.50309		A		0.54890		5.1464
N-Nitrosopyrrolidine	0.83905	0.85498	0.90191		A		0.79104		10.3106
n-Octadecane	0.51364	0.48579	0.46437		A		0.51227		5.9137
Pentachlorobenzene	0.53753	0.52582	0.51008		A		0.55457		5.0541
Pentachlorophenol **	456491	583343	741772		L	0.0000	7.11390		0.9977
Phenanthrene	1.03832	0.99191	0.94805		A		1.09014		8.4657
Phenol **	1.54348	1.37994	1.32839		A		1.53551		8.0103
Pyrene	1.12340	1.08587	1.05128		A		1.12995		4.1621
Pyridine	1.72975	1.76200	1.85770		A		1.63733		9.3924
Resorcinol	0.33055	0.33082	0.32669		A		0.30219		11.7623
alpha-Terpineol	0.22743	0.22574	0.22154		A		0.22951		2.0625
1,2,4,5-Tetrachlorobenzene	0.58425	0.56713	0.54607		A		0.60496		5.9719
2,3,4,6-Tetrachlorophenol	0.25189	0.24660	0.23812		A		0.24594		9.5442
2,3,5,6-Tetrachlorophenol	226764	298718	384746		L	0.0000	3.80311		0.9996
1,2,4-Trichlorobenzene	0.30993	0.29956	0.28540		A		0.32474		7.5648
2,4,5-Trichlorophenol	0.37055	0.37039	0.34897		A		0.37261		5.8871
2,4,6-Trichlorophenol **	0.34006	0.32578	0.30901		A		0.34452		7.1213
2-Fluorophenol	1.50766	1.54558	1.61125		A		1.41555		10.7591
Phenol-d5	1.63284	1.46774	1.40502		A		1.56774		7.3120
Nitrobenzene-d5	0.18320	0.18088	0.17768		A		0.17846		4.8790
2-Fluorobiphenyl	1.32020	1.25447	1.21004		A		1.35648		6.6553
2,4,6-Tribromophenol	0.12039	0.11668	0.11644		A		0.11159		10.5907
Terphenyl-d14	0.81351	0.79126	0.76923		A		0.82818		5.1568

CT Column contains the Calibration Type. A - Average Response Factor, L - Linear Regression, and Q - Quadratic.

SPCC Compounds (*) with required minimum RRF.

CCC Compounds (**) with required maximum %RSD.

ALS - Middletown

INITIAL CALIBRATION DATA

Start Cal Date : 21-SEP-2012 12:57
End Cal Date : 21-SEP-2012 15:54
Quant Method : ISTD
Origin : Force
Target Version : 4.12
Integrator : HP RTE
Method file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-8270DoD-120921.m
Cal Date : 24-Sep-2012 15:00 Lopez

ICAL SUMMARY
Prior to Application of Curve Fits

Calibration File Names:
Level 1: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092106.D
Level 2: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092107.D
Level 3: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092108.D
Level 4: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092109.D
Level 5: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092110.D
Level 6: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092111.D
Level 7: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092112.D
Level 8: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092113.D

Compound	1.5000 Level 1	3.0000 Level 2	8.0000 Level 3	16.0000 Level 4	50.0000 Level 5	70.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	90.0000 Level 7	120.0000 Level 8									
1 1,4-Dioxane	0.67328	0.65566	0.65910	0.66541	0.70805	0.71814					
	0.73297	0.77683					AVRG		0.69868		6.14869
2 N-Nitrosodimethylamine	0.75215	0.77429	0.82952	0.87026	0.96029	0.97924					
	1.00635	1.05200					AVRG		0.90301		12.40040
3 Pyridine	1.42698	1.43732	1.56616	1.62317	1.69552	1.72975					
	1.76200	1.85770					AVRG		1.63733		9.39236

No Curve fits

ALS - Middletown

INITIAL CALIBRATION DATA

Start Cal Date : 21-SEP-2012 12:57
End Cal Date : 21-SEP-2012 15:54
Quant Method : ISTD
Origin : Force
Target Version : 4.12
Integrator : HP RTE
Method file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-8270DoD-120921.m
Cal Date : 24-Sep-2012 15:00 Lopez

Compound	1.5000 Level 1	3.0000 Level 2	8.0000 Level 3	16.0000 Level 4	50.0000 Level 5	70.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	90.0000 Level 7	120.0000 Level 8									
5 N-Nitrosodiethylamine	0.58779	0.62415	0.69979	0.72450	0.76606	0.79048					
	0.81341	0.83067					AVRG		0.72960		12.08481
6 Benzaldehyde	0.99511	1.02360	1.11036	1.12460	1.03481	0.97459					
	0.89782	0.76721					AVRG		0.99101		11.70110
8 Phenol	1.54528	1.56089	1.65988	1.67481	1.59140	1.54348					
	1.37994	1.32839					AVRG		1.53551		8.01031
9 Aniline	1.79091	1.81598	1.97434	2.03863	2.09662	2.14470					
	2.07213	1.97067					AVRG		1.98800		6.44499
10 Bis(2-Chloroethyl)ether	1.53560	1.52049	1.50496	1.51632	1.49342	1.40175					
	1.38396	1.34233					AVRG		1.46236		5.08201
11 n-Decane	1.48337	1.50766	1.57180	1.56326	1.51974	1.51392					
	1.49522	1.48878					AVRG		1.51797		2.17651
12 2-Chlorophenol	1.36949	1.39245	1.46801	1.49004	1.45358	1.42897					
	1.38919	1.33798					AVRG		1.41621		3.70681

ALS - Middletown

INITIAL CALIBRATION DATA

Start Cal Date : 21-SEP-2012 12:57
End Cal Date : 21-SEP-2012 15:54
Quant Method : ISTD
Origin : Force
Target Version : 4.12
Integrator : HP RTE
Method file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-8270DoD-120921.m
Cal Date : 24-Sep-2012 15:00 Lopez

Compound	1.5000 Level 1	3.0000 Level 2	8.0000 Level 3	16.0000 Level 4	50.0000 Level 5	70.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	90.0000 Level 7	120.0000 Level 8										
13 1,3-Dichlorobenzene	1.64500	1.59260	1.63303	1.63282	1.63120	1.62655						
	1.62154	1.63181					AVRG		1.62682		0.94315	
15 1,4-Dichlorobenzene	1.62915	1.58405	1.60439	1.59953	1.54880	1.51839						
	1.47437	1.46241					AVRG		1.55264		4.01278	
16 Benzyl Alcohol	0.56648	0.60678	0.75989	0.87746	1.01446	1.05447						
	1.10102	1.18261					AVRG		0.89540		25.82985	<-
17 1,2-Dichlorobenzene	1.31252	1.26941	1.25598	1.20643	1.14749	1.02631						
	0.99502	1.11379					AVRG		1.16587		9.92414	
18 o-Cresol	1.09301	1.14006	1.18809	1.21164	1.21510	1.22077						
	1.23259	1.25175					AVRG		1.19413		4.41337	
19 bis(2-Chloroisopropyl)ether	1.75687	1.73255	1.74947	1.79243	1.82286	1.86878						
	1.91613	1.99694					AVRG		1.82951		5.04286	
20 mp-Cresol	1.54483	1.58366	1.69182	1.70612	1.66782	1.70674						
	1.74767	1.81893					AVRG		1.68345		5.16995	

ALS - Middletown

INITIAL CALIBRATION DATA

Start Cal Date : 21-SEP-2012 12:57
End Cal Date : 21-SEP-2012 15:54
Quant Method : ISTD
Origin : Force
Target Version : 4.12
Integrator : HP RTE
Method file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-8270DoD-120921.m
Cal Date : 24-Sep-2012 15:00 Lopez

Compound	1.5000 Level 1	3.0000 Level 2	8.0000 Level 3	16.0000 Level 4	50.0000 Level 5	70.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	90.0000 Level 7	120.0000 Level 8									
21 Acetophenone	1.97670	2.05831	2.12220	2.14427	2.17490	2.17720					
	2.18036	2.21762					AVRG		2.13145		3.69181
22 N-Nitrosodi-n-propylamine	0.94924	0.98629	1.06170	1.09353	1.13167	1.13011					
	1.14701	1.17621					AVRG		1.08447		7.40672
23 N-Nitrosopyrrolidine	0.65509	0.70152	0.76866	0.78669	0.82044	0.83905					
	0.85498	0.90191					AVRG		0.79104		10.31060
24 Hexachloroethane	0.63170	0.60842	0.65382	0.66187	0.68677	0.69401					
	0.70882	0.73795					AVRG		0.67292		6.27991
26 Nitrobenzene	0.34307	0.34649	0.35791	0.35890	0.34618	0.34064					
	0.33763	0.33020					AVRG		0.34513		2.81205
27 Isophorone	0.61652	0.61535	0.65581	0.66742	0.66301	0.65476					
	0.64476	0.63695					AVRG		0.64432		3.09888
28 2-Nitrophenol	0.16431	0.17535	0.19526	0.19888	0.19039	0.18502					
	0.17776	0.17064					AVRG		0.18220		6.70221

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Integrator : HP RTE
Method file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-8270DoD-120921.m
Cal Date : 24-Sep-2012 15:00 Lopez

Compound	1.5000 Level 1	3.0000 Level 2	8.0000 Level 3	16.0000 Level 4	50.0000 Level 5	70.0000 Level 6	90.0000 Level 7	120.0000 Level 8	Curve	Coefficients b	m1	m2	%RSD or R^2	
29 2,6-Dimethylphenol	0.32607	0.34021	0.35451	0.35189	0.32665	0.31267	0.30017	0.28504	AVRG		0.32465		7.53893	
30 Bis(2-Chloroethoxy)methane	0.42561	0.43577	0.44442	0.44038	0.42179	0.41097	0.39861	0.38469	AVRG		0.42028		4.99114	
31 Benzoic acid	0.02671	0.05857	0.10258	0.13777	0.19881	0.19952	0.22042	0.23058	AVRG		0.14687		52.84442	<-
32 2,4-Dichlorophenol	0.26901	0.28378	0.30221	0.30198	0.28192	0.27403	0.26176	0.24698	AVRG		0.27771		6.84802	
33 1,2,4-Trichlorobenzene	0.35310	0.34364	0.34444	0.34087	0.32099	0.30993	0.29956	0.28540	AVRG		0.32474		7.56481	
35 alpha-Terpineol	0.23352	0.23378	0.22689	0.23399	0.23319	0.22743	0.22574	0.22154	AVRG		0.22951		2.06249	
36 Naphthalene	1.17288	1.13649	1.14097	1.11754	1.03475	0.98767	0.94460	0.89042	AVRG		1.05317		9.89574	

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Method file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-8270DoD-120921.m
Cal Date : 24-Sep-2012 15:00 Lopez

Compound	1.5000 Level 1	3.0000 Level 2	8.0000 Level 3	16.0000 Level 4	50.0000 Level 5	70.0000 Level 6	90.0000 Level 7	120.0000 Level 8	Curve	Coefficients b	m1	m2	%RSD or R^2
37 4-Chloroaniline	0.40529	0.42300	0.45256	0.44958	0.41881	0.40651	0.38930	0.36718	AVRG		0.41403		6.94718
38 2,6-Dichlorophenol	0.28501	0.29710	0.31618	0.31411	0.29646	0.28621	0.27785	0.26558	AVRG		0.29231		5.92435
39 Hexachlorobutadiene	0.20539	0.19482	0.20053	0.19505	0.18596	0.17915	0.17288	0.16675	AVRG		0.18757		7.31243
40 N-Nitrosodi-n-butylamine	0.16152	0.17264	0.17785	0.18087	0.18195	0.17828	0.17636	0.17250	AVRG		0.17525		3.71490
41 Resorcinol	0.23491	0.26444	0.29292	0.31397	0.32325	0.33055	0.33082	0.32669	AVRG		0.30219		11.76230
42 Caprolactam	0.11590	0.12199	0.11095	0.11391	0.11943	0.11918	0.11660	0.11126	AVRG		0.11615		3.41670
43 4-Chloro-3-methylphenol	0.28812	0.29761	0.31764	0.31483	0.30486	0.29795	0.29005	0.28429	AVRG		0.29942		4.08843

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Method file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-8270DoD-120921.m
Cal Date : 24-Sep-2012 15:00 Lopez

Compound	1.5000 Level 1	3.0000 Level 2	8.0000 Level 3	16.0000 Level 4	50.0000 Level 5	70.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	90.0000 Level 7	120.0000 Level 8									
44 2-Methylnaphthalene	0.76645	0.76553	0.77431	0.75786	0.70792	0.68289					
	0.64945	0.61773					AVRG		0.71527		8.42058
45 1-Methylnaphthalene	0.71226	0.71380	0.71638	0.70642	0.66027	0.63388					
	0.60636	0.57196					AVRG		0.66517		8.43890
46 Hexachlorocyclopentadiene	0.11082	0.13218	0.16416	0.17689	0.18721	0.18905					
	0.18737	0.18677					AVRG		0.16681		17.80538
47 1,2,4,5-Tetrachlorobenzene	0.63221	0.63796	0.64161	0.62977	0.60067	0.58425					
	0.56713	0.54607					AVRG		0.60496		5.97193
48 2,4,6-Trichlorophenol	0.32718	0.34474	0.37931	0.37573	0.35431	0.34006					
	0.32578	0.30901					AVRG		0.34452		7.12130
49 2,3-Dichloroaniline	0.64425	0.65438	0.68927	0.68094	0.63563	0.61045					
	0.58355	0.55896					AVRG		0.63218		7.19548
50 2,4,5-Trichlorophenol	0.34038	0.37307	0.40514	0.39912	0.37324	0.37055					
	0.37039	0.34897					AVRG		0.37261		5.88715

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Method file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-8270DoD-120921.m
Cal Date : 24-Sep-2012 15:00 Lopez

Compound	1.5000 Level 1	3.0000 Level 2	8.0000 Level 3	16.0000 Level 4	50.0000 Level 5	70.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	90.0000 Level 7	120.0000 Level 8									
52 Biphenyl	1.67146	1.66959	1.67663	1.64517	1.53995	1.49579					
	1.43541	1.37757					AVRG		1.56395		7.58461
53 2-Chloronaphthalene	1.20356	1.18970	1.20493	1.19255	1.12886	1.10156					
	1.07914	1.04385					AVRG		1.14302		5.52970
55 2-Nitroaniline	0.29398	0.31639	0.37260	0.39326	0.39925	0.40159					
	0.40235	0.40603					AVRG		0.37318		11.68837
56 1,4-Dinitrobenzene	0.12188	0.14925	0.18703	0.20133	0.21239	0.22081					
	0.22296	0.22592					AVRG		0.19270		19.81633
57 Dimethylphthalate	1.33710	1.36500	1.39895	1.39385	1.35121	1.33626					
	1.30786	1.29288					AVRG		1.34789		2.79051
58 1,3-Dinitrobenzene	0.17419	0.19656	0.23382	0.24714	0.24864	0.25285					
	0.25496	0.25634					AVRG		0.23306		13.22730
59 2,6-Dinitrotoluene	0.26812	0.28877	0.32258	0.33234	0.32951	0.32609					
	0.32317	0.32017					AVRG		0.31384		7.28562

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Start Cal Date : 21-SEP-2012 12:57
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Integrator : HP RTE
Method file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-8270DoD-120921.m
Cal Date : 24-Sep-2012 15:00 Lopez

Compound	1.5000 Level 1	3.0000 Level 2	8.0000 Level 3	16.0000 Level 4	50.0000 Level 5	70.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	90.0000 Level 7	120.0000 Level 8										
60 1,2-Dinitrobenzene	0.13350	0.14807	0.16146	0.16949	0.16848	0.16977						
	0.17077	0.16587					AVRG		0.16093		8.29639	
61 Acenaphthylene	1.80856	1.83536	1.91393	1.89991	1.82175	1.78412						
	1.72523	1.66956					AVRG		1.80730		4.54307	
62 3-Nitroaniline	0.25446	0.26998	0.30143	0.32481	0.33287	0.34348						
	0.34396	0.34925					AVRG		0.31503		11.45418	
64 Acenaphthene	1.30576	1.26956	1.29091	1.25161	1.18731	1.16202						
	1.11614	1.06435					AVRG		1.20596		7.26315	
65 2,4-Dinitrophenol	0.01769	0.05097	0.10357	0.14681	0.18366	0.19876						
	0.20648	0.20476					AVRG		0.13909		53.13034	<-
66 4-Nitrophenol	0.11618	0.15340	0.19043	0.20846	0.20954	0.21731						
	0.21966	0.22462					AVRG		0.19245		19.91931	
67 Pentachlorobenzene	0.57393	0.57601	0.58724	0.57637	0.54957	0.53753						
	0.52582	0.51008					AVRG		0.55457		5.05406	

ALS - Middletown

INITIAL CALIBRATION DATA

Start Cal Date : 21-SEP-2012 12:57
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Origin : Force
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Integrator : HP RTE
Method file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-8270DoD-120921.m
Cal Date : 24-Sep-2012 15:00 Lopez

Compound	1.5000 Level 1	3.0000 Level 2	8.0000 Level 3	16.0000 Level 4	50.0000 Level 5	70.0000 Level 6	90.0000 Level 7	120.0000 Level 8	Curve	Coefficients b	m1	m2	%RSD or R^2	
68 2,4-Dinitrotoluene	0.32823	0.35941	0.40520	0.43293	0.43551	0.43590	0.43256	0.43097	AVRG		0.40759		10.16627	
69 Dibenzofuran	1.71807	1.68502	1.73964	1.70442	1.60979	1.57519	1.51933	1.46828	AVRG		1.62747		6.14929	
70 2,3,5,6-Tetrachlorophenol	0.16167	0.18487	0.22888	0.24892	0.26275	0.26163	0.26697	0.26162	AVRG		0.23466		17.14542	
71 2,3,4,6-Tetrachlorophenol	0.20433	0.22316	0.26446	0.27484	0.26415	0.25189	0.24660	0.23812	AVRG		0.24594		9.54420	
72 2-Napthylamine	0.91441	0.71196	0.55959	0.80339	1.01568	1.09945	1.10586	1.11256	AVRG		0.91536		22.60166	<-
73 Diethylphthalate	1.39668	1.53329	1.46450	1.45434	1.39312	1.35703	1.32801	1.30071	AVRG		1.40346		5.50131	
74 4-Chlorophenyl-phenylether	0.69269	0.68770	0.70005	0.69759	0.66493	0.65111	0.63407	0.60956	AVRG		0.66721		4.98924	

ALS - Middletown

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Method file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-8270DoD-120921.m
Cal Date : 24-Sep-2012 15:00 Lopez

Compound	1.5000 Level 1	3.0000 Level 2	8.0000 Level 3	16.0000 Level 4	50.0000 Level 5	70.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	90.0000 Level 7	120.0000 Level 8										
75 Fluorene	1.43259	1.42897	1.47385	1.46404	1.37467	1.33581						
	1.29265	1.24022					AVRG		1.38035		6.13386	
76 4-Nitroaniline	0.21876	0.25853	0.31693	0.33720	0.32827	0.33664						
	0.32760	0.30750					AVRG		0.30393		14.08347	
77 2-Methyl-4,6-dinitrophenol	0.04938	0.07370	0.10759	0.12729	0.14075	0.14386						
	0.14290	0.14294					AVRG		0.11605		31.34608	<-
78 N-Nitrosodiphenylamine	0.54462	0.55977	0.58497	0.58204	0.55438	0.54325						
	0.51908	0.50309					AVRG		0.54890		5.14636	
79 Diphenylamine	0.63902	0.65493	0.68514	0.68026	0.64974	0.63669						
	0.60789	0.58904					AVRG		0.64284		5.10962	
80 1,2-Diphenylhydrazine	0.69832	0.72474	0.75661	0.76238	0.74245	0.72831						
	0.70605	0.68959					AVRG		0.72605		3.69101	
81 Azobenzene	0.70530	0.73198	0.76417	0.77000	0.74987	0.73559						
	0.71312	0.69649					AVRG		0.73332		3.69101	

ALS - Middletown

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Compound	1.5000 Level 1	3.0000 Level 2	8.0000 Level 3	16.0000 Level 4	50.0000 Level 5	70.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	90.0000 Level 7	120.0000 Level 8										
83 n-Heptadecane	0.47668	0.50515	0.53132	0.52804	0.51032	0.49665						
	0.47268	0.45145					AVRG		0.49654		5.62616	
84 4-Bromophenyl-phenylether	0.21763	0.22137	0.22974	0.23147	0.22441	0.22187						
	0.21332	0.21048					AVRG		0.22129		3.32416	
85 Hexachlorobenzene	0.26507	0.25733	0.25672	0.25268	0.24379	0.23727						
	0.22922	0.22417					AVRG		0.24578		5.93687	
86 Dimethoate	0.22439	0.25122	0.29514	0.31922	0.32475	0.32512						
	0.31553	0.31130					AVRG		0.29583		12.75258	
87 Atrazine	0.20969	0.22107	0.24159	0.23804	0.22247	0.21578						
	0.20442	0.19046					AVRG		0.21794		7.76410	
88 Pentachlorophenol	+++++	0.06455	0.10390	0.12234	0.14237	0.14616						
	0.14283	0.13762					AVRG		0.12282		24.19768	<-
89 n-Octadecane	0.49382	0.51450	0.54632	0.55399	0.52570	0.51364						
	0.48579	0.46437					AVRG		0.51227		5.91370	

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Compound	1.5000 Level 1	3.0000 Level 2	8.0000 Level 3	16.0000 Level 4	50.0000 Level 5	70.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	90.0000 Level 7	120.0000 Level 8										
91 Phenanthrene	1.19988	1.17432	1.15786	1.14356	1.06720	1.03832						
	0.99191	0.94805					AVRG		1.09014		8.46568	
92 Anthracene	1.12876	1.13242	1.15086	1.15427	1.08399	1.06171						
	1.00460	0.96245					AVRG		1.08488		6.54817	
93 Carbazole	0.95104	0.96235	1.04258	1.05852	0.99054	0.97383						
	0.94688	0.91984					AVRG		0.98070		4.88916	
94 Di-n-Butylphthalate	1.17162	1.22623	1.36851	1.40927	1.36398	1.32551						
	1.25583	1.20580					AVRG		1.29085		6.76968	
95 Fluoranthene	1.18368	1.20266	1.27594	1.27017	1.20852	1.17748						
	1.12610	1.08614					AVRG		1.19134		5.43700	
96 Benzidine	0.19191	0.23162	0.34818	0.45414	0.48540	0.49933						
	0.47549	0.46084					AVRG		0.39337		30.90801	<-
97 Pyrene	1.12803	1.13787	1.17456	1.20212	1.13646	1.12340						
	1.08587	1.05128					AVRG		1.12995		4.16211	

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Compound	1.5000 Level 1	3.0000 Level 2	8.0000 Level 3	16.0000 Level 4	50.0000 Level 5	70.0000 Level 6	90.0000 Level 7	120.0000 Level 8	Curve	Coefficients b	m1	m2	%RSD or R^2
99 Butylbenzylphthalate	0.41028	0.44026	0.52013	0.57215	0.59340	0.59030	0.57899	0.56840	AVRG		0.53424		13.35743
100 Di(2-Ethylhexyl)adipate	0.39734	0.43808	0.51955	0.57156	0.57882	0.57626	0.55506	0.54094	AVRG		0.52220		13.08212
101 bis(2-Ethylhexyl)phthalate	0.61966	0.68453	0.80064	0.86689	0.85871	0.84864	0.81143	0.79205	AVRG		0.78532		11.24749
102 3,3-Dichlorobenzidine	0.29342	0.33450	0.40201	0.43242	0.39994	0.39771	0.37840	0.36359	AVRG		0.37525		11.74639
103 Benzo(a)anthracene	1.13520	1.12001	1.15931	1.16467	1.10930	1.09018	1.06554	1.04287	AVRG		1.11089		3.88328
105 Chrysene	1.12592	1.09540	1.08375	1.08617	0.97754	0.96769	0.92709	0.91899	AVRG		1.02282		8.15120
106 Di-n-Octylphthalate	1.00546	1.12517	1.34943	1.48458	1.51665	1.49905	1.46323	1.41603	AVRG		1.35745		14.03531

ALS - Middletown

INITIAL CALIBRATION DATA

Start Cal Date : 21-SEP-2012 12:57
End Cal Date : 21-SEP-2012 15:54
Quant Method : ISTD
Origin : Force
Target Version : 4.12
Integrator : HP RTE
Method file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-8270DoD-120921.m
Cal Date : 24-Sep-2012 15:00 Lopez

Compound	1.5000 Level 1	3.0000 Level 2	8.0000 Level 3	16.0000 Level 4	50.0000 Level 5	70.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	90.0000 Level 7	120.0000 Level 8									
107 Benzo(b)fluoranthene	1.02737	1.02999	1.08794	1.11340	1.16368	1.17259					
	1.15317	1.18978					AVRG		1.11724		5.69457
108 Benzo(k)fluoranthene	1.20668	1.17985	1.24829	1.24011	1.11853	1.08254					
	1.01937	0.95836					AVRG		1.13172		9.35986
109 Benzo(a)pyrene	0.94472	0.98114	1.04676	1.07483	1.07308	1.06093					
	1.03528	1.01261					AVRG		1.02867		4.51185
111 Indeno(1,2,3-cd)pyrene	1.13498	1.16385	1.25311	1.29333	1.28153	1.28123					
	1.26875	1.24829					AVRG		1.24063		4.73550
112 Dibenzo(a,h)anthracene	0.96468	0.99179	1.06340	1.09882	1.06099	1.05974					
	1.04097	1.02674					AVRG		1.03839		4.14869
113 Benzo(g,h,i)perylene	0.98138	1.00937	1.05624	1.07728	1.07809	1.08286					
	1.06327	1.04595					AVRG		1.04931		3.45499
$ 4 2-Fluorophenol	1.17428	1.23428	1.36249	1.40495	1.48395	1.50766					
	1.54558	1.61125					AVRG		1.41555		10.75906

ALS - Middletown

INITIAL CALIBRATION DATA

Start Cal Date : 21-SEP-2012 12:57
End Cal Date : 21-SEP-2012 15:54
Quant Method : ISTD
Origin : Force
Target Version : 4.12
Integrator : HP RTE
Method file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-8270DoD-120921.m
Cal Date : 24-Sep-2012 15:00 Lopez

Compound	1.5000 Level 1	3.0000 Level 2	8.0000 Level 3	16.0000 Level 4	50.0000 Level 5	70.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	90.0000 Level 7	120.0000 Level 8									
$ 7 Phenol-d5	1.44972	1.55951	1.65467	1.71496	1.65743	1.63284					
	1.46774	1.40502					AVRG		1.56774		7.31204
$ 25 Nitrobenzene-d5	0.16146	0.16986	0.18189	0.18736	0.18536	0.18320					
	0.18088	0.17768					AVRG		0.17846		4.87905
$ 51 2-Fluorobiphenyl	1.40872	1.44105	1.45045	1.42657	1.34037	1.32020					
	1.25447	1.21004					AVRG		1.35648		6.65533
$ 82 2,4,6-Tribromophenol	0.08760	0.10029	0.11155	0.11764	0.12212	0.12039					
	0.11668	0.11644					AVRG		0.11159		10.59072
$ 98 Terphenyl-d14	0.81119	0.84055	0.88237	0.89386	0.82348	0.81351					
	0.79126	0.76923					AVRG		0.82818		5.15683

ALS - Middletown

INITIAL CALIBRATION DATA

Start Cal Date : 21-SEP-2012 12:57
End Cal Date : 21-SEP-2012 15:54
Quant Method : ISTD
Origin : Force
Target Version : 4.12
Integrator : HP RTE
Method file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-8270DoD-120921.m
Cal Date : 24-Sep-2012 15:00 Lopez

Average %RSD Results.
Calculated Average %RSD = 6.96140
Maximun Average %RSD = 15.00000
* Passed Average %RSD Test.

0264

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response

ALS - Middletown

Semivolatile Report for SW-846 Method 8270

Data file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\140921
Lab Smp Id: 1234
Inj Date : 21-SEP-2012 12:57
Operator : DHF Inst ID: ms14.i
Smp Info : 1234;1;1;1;BNA-1.5;;;;;;SV0242
Misc Info : ZZ SVMS 8270/3510C BNA242
Comment :
Method : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-827
Meth Date : 24-Sep-2012 15:27 Lopez Quant Type: ISTD
Cal Date : 21-SEP-2012 12:57 Cal File: 14092106.D
Als bottle: 6 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 12_3510_3550all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Sample Volume extracted(mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
1	1,4-Dioxane	88	2.618	2.613	(0.513)	5182	1.50000	1.44547(a)
2	N-Nitrosodimethylamine	74	2.901	2.901	(0.568)	5789	1.50000	1.24939(a)
3	Pyridine	79	2.939	2.917	(0.576)	10983	1.50000	1.30730(a)
$ 4	2-Fluorophenol	112	3.971	3.971	(0.778)	9038	1.50000	1.24433(a)
5	N-Nitrosodiethylamine	102	4.169	4.185	(0.817)	4524	1.50000	1.20844(a)
$ 7	Phenol-d5	99	4.736	4.747	(0.928)	11158	1.50000	1.38708(a)
8	Phenol	94	4.747	4.763	(0.930)	23787	3.00000	3.01909(a)
9	Aniline	93	4.805	4.816	(0.941)	13784	1.50000	1.35129(a)
10	Bis(2-Chloroethyl)ether	93	4.843	4.859	(0.949)	11819	1.50000	1.57513(a)
12	2-Chlorophenol	128	4.912	4.923	(0.962)	21081	3.00000	2.90103(a)
11	n-Decane	57	4.912	4.918	(0.962)	11417	1.50000	1.46581(a)
13	1,3-Dichlorobenzene	146	5.051	5.057	(0.990)	12661	1.50000	1.51676(a)
* 14	1,4-Dichlorobenzene-d4	152	5.105	5.105	(1.000)	205244	40.0000	
15	1,4-Dichlorobenzene	146	5.116	5.121	(1.002)	12539	1.50000	1.57392(a)
16	Benzyl Alcohol	108	5.207	5.233	(1.020)	4360	1.50000	0.757068(a)
17	1,2-Dichlorobenzene	146	5.260	5.260	(1.030)	10102	1.50000	1.68868(a)
18	o-Cresol	107	5.292	5.308	(1.037)	16825	3.00000	2.74596(a)
19	bis(2-Chloroisopropyl)ether	45	5.319	5.335	(1.042)	13522	1.50000	1.44044(a)
20	mp-Cresol	107	5.431	5.469	(1.064)	23780	3.00000	2.75297(a)
23	N-Nitrosopyrrolidine	100	5.437	5.512	(1.065)	5042	1.50000	1.24220(a)
22	N-Nitrosodi-n-propylamine	70	5.442	5.490	(1.066)	7306	1.50000	1.31296(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
	21 Acetophenone	105	5.458	5.485	(1.069)	15214	1.50000	1.39110(a)
	24 Hexachloroethane	117	5.570	5.576	(1.091)	4862	1.50000	1.40812(a)
$	25 Nitrobenzene-d5	128	5.608	5.629	(0.890)	5086	1.50000	1.35706(a)
	26 Nitrobenzene	77	5.624	5.645	(0.892)	10807	1.50000	1.49105(a)
	27 Isophorone	82	5.838	5.886	(0.926)	19421	1.50000	1.43528(a)
	28 2-Nitrophenol	139	5.923	5.945	(0.940)	10352	3.00000	2.70545(a)
	29 2,4-Dimethylphenol	122	5.934	5.961	(0.941)	20543	3.00000	3.01310(a)
	30 Bis(2-Chloroethoxy)methane	93	6.030	6.046	(0.957)	13407	1.50000	1.51901(a)
	31 Benzoic acid	105	5.977	6.153	(0.948)	1683	3.00000	0.491322(a)
	32 2,4-Dichlorophenol	162	6.153	6.175	(0.976)	16948	3.00000	2.90598(a)
	33 1,2,4-Trichlorobenzene	180	6.239	6.244	(0.990)	11123	1.50000	1.63099(a)
*	34 Naphthalene-d8	136	6.303	6.309	(1.000)	840027	40.0000	
	36 Naphthalene	128	6.324	6.335	(1.003)	36947	1.50000	1.67051
	37 4-Chloroaniline	127	6.362	6.378	(1.009)	12767	1.50000	1.46834(a)
	38 2,6-Dichlorophenol	162	6.367	6.383	(1.010)	8978	1.50000	1.46252(a)
	39 Hexachlorobutadiene	225	6.421	6.426	(1.019)	6470	1.50000	1.64255(a)
	40 N-Nitrosodi-n-butylamine	57	6.661	6.699	(1.057)	5088	1.50000	1.38249(a)
	42 Caprolactam	56	6.677	6.838	(1.059)	3651	1.50000	1.49674(a)
	43 4-Chloro-3-methylphenol	107	6.811	6.849	(1.081)	18152	3.00000	2.88678(a)
	44 2-Methylnaphthalene	142	6.993	7.004	(1.109)	24144	1.50000	1.60734
	45 1-Methylnaphthalene	142	7.095	7.105	(1.126)	22437	1.50000	1.60621
	47 1,2,4,5-Tetrachlorobenzene	216	7.154	7.170	(0.890)	11759	1.50000	1.56756(a)
	48 2,4,6-Trichlorophenol	196	7.260	7.282	(0.903)	12171	3.00000	2.84903(a)
	49 2,3-Dichloroaniline	161	7.271	7.287	(0.905)	11983	1.50000	1.52864(a)
	50 2,4,5-Trichlorophenol	196	7.309	7.330	(0.909)	12662	3.00000	2.74050(a)
$	51 2-Fluorobiphenyl	172	7.346	7.357	(0.914)	26202	1.50000	1.55776
	52 Biphenyl	154	7.448	7.469	(0.927)	31089	1.50000	1.60312(a)
	53 2-Chloronaphthalene	162	7.480	7.496	(0.931)	22386	1.50000	1.57944(a)
	55 2-Nitroaniline	138	7.571	7.592	(0.942)	5468	1.50000	1.18165(a)
	56 1,4-Dinitrobenzene	168	7.710	7.731	(0.959)	2267	1.50000	0.820356(a)
	57 Dimethylphthalate	163	7.731	7.769	(0.962)	24870	1.50000	1.48800(a)
	58 1,3-Dinitrobenzene	168	7.779	7.817	(0.968)	3240	1.50000	1.12112(a)
	59 2,6-Dinitrotoluene	165	7.806	7.833	(0.971)	4987	1.50000	1.28147(a)
	60 1,2-Dinitrobenzene	168	7.860	7.902	(0.978)	2483	1.50000	1.24432(a)
	61 Acenaphthylene	152	7.897	7.913	(0.983)	33639	1.50000	1.50104
	62 3-Nitroaniline	138	7.977	8.009	(0.993)	4733	1.50000	1.21161(a)
*	63 Acenaphthene-d10	164	8.036	8.047	(1.000)	495997	40.0000	
	64 Acenaphthene	153	8.068	8.084	(1.004)	24287	1.50000	1.62414
	66 4-Nitrophenol	65	8.138	8.181	(1.013)	4322	3.00000	1.57988(a)
	67 Pentachlorobenzene	250	8.191	8.207	(1.019)	10675	1.50000	1.55236(a)
	68 2,4-Dinitrotoluene	165	8.207	8.239	(1.021)	6105	1.50000	1.20794(a)
	69 Dibenzofuran	168	8.239	8.255	(1.025)	31956	1.50000	1.58351(a)
	71 2,3,4,6-Tetrachlorophenol	230	8.352	8.373	(1.039)	7601	3.00000	2.49239(a)
	72 2-Napthylamine	143	8.394	8.421	(1.045)	17008	1.50000	1.25067(a)
	73 Diethylphthalate	149	8.426	8.459	(1.049)	25978	1.50000	1.49275(a)
	74 4-Chlorophenyl-phenylether	204	8.566	8.582	(1.066)	12884	1.50000	1.55728(a)
	75 Fluorene	166	8.582	8.603	(1.068)	26646	1.50000	1.55677
	76 4-Nitroaniline	138	8.587	8.651	(1.069)	4069	1.50000	1.07968(a)
	78 N-Nitrosodiphenylamine	169	8.683	8.710	(0.911)	20988	1.76000	1.74627(a)
	79 Diphenylamine	169	8.683	8.710	(0.911)	20988	1.50000	1.49108(a)
	80 1,2-Diphenylhydrazine	77	8.726	8.747	(0.916)	23165	1.51500	1.45712(a)
	81 Azobenzene	77	8.726	8.747	(0.916)	23165	1.50000	1.44270(a)
$	82 2,4,6-Tribromophenol	330	8.822	8.838	(0.926)	2877	1.50000	1.17749(a)
	83 n-Heptadecane	57	8.903	8.913	(0.934)	15656	1.50000	1.44000(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
84	4-Bromophenyl-phenylether	248	9.058	9.074	(0.951)	7148	1.50000	1.47523 (a)
86	Dimethoate	87	9.143	9.186	(0.960)	7370	1.50000	1.13776 (a)
85	Hexachlorobenzene	284	9.127	9.143	(0.958)	8706	1.50000	1.61772 (a)
89	n-Octadecane	57	9.352	9.363	(0.981)	16219	1.50000	1.44598 (a)
* 90	Phenanthrene-d10	188	9.528	9.539	(1.000)	875844	40.0000	
91	Phenanthrene	178	9.550	9.571	(1.002)	39409	1.50000	1.65100
92	Anthracene	178	9.603	9.625	(1.008)	37073	1.50000	1.56066
93	Carbazole	167	9.753	9.774	(1.024)	31236	1.50000	1.45464 (a)
94	Di-n-Butylphthalate	149	10.063	10.074	(1.056)	38481	1.50000	1.36146 (a)
95	Fluoranthene	202	10.748	10.764	(1.128)	38877	1.50000	1.49036 (a)
97	Pyrene	202	10.978	10.999	(0.900)	41074	1.50000	1.49746 (a)
$ 98	Terphenyl-d14	244	11.106	11.122	(0.911)	29537	1.50000	1.46922 (a)
99	Butylbenzylphthalate	149	11.577	11.593	(0.950)	14939	1.50000	1.15195 (a)
100	Di(2-Ethylhexyl)adipate	129	11.625	11.636	(0.953)	14468	1.50000	1.14134 (a)
101	bis(2-Ethylhexyl)phthalate	149	12.128	12.139	(0.995)	22563	1.50000	1.18358 (a)
103	Benzo(a)anthracene	228	12.176	12.197	(0.999)	41335	1.50000	1.53283
* 104	Chrysene-d12	240	12.192	12.208	(1.000)	970988	40.0000	
105	Chrysene	228	12.213	12.240	(1.002)	40997	1.50000	1.65120
106	Di-n-Octylphthalate	149	12.764	12.780	(1.047)	36611	1.50000	1.11105 (a)
107	Benzo(b)fluoranthene	252	13.294	13.342	(0.964)	37838	1.50000	1.37934 (a)
108	Benzo(k)fluoranthene	252	13.331	13.374	(0.966)	44442	1.50000	1.59936
109	Benzo(a)pyrene	252	13.711	13.759	(0.994)	34794	1.50000	1.37759 (a)
* 110	Perylene-d12	264	13.797	13.813	(1.000)	982129	40.0000	
111	Indeno(1,2,3-cd)pyrene	276	15.449	15.556	(1.120)	41801	1.50000	1.37226 (a)
112	Dibenzo(a,h)anthracene	278	15.471	15.572	(1.121)	35529	1.50000	1.39352 (a)
113	Benzo(g,h,i)perylene	276	15.968	16.075	(1.157)	36144	1.50000	1.40290 (a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms14.i
Lab File ID: 14092106.D
Lab Smp Id: 1234
Analysis Type: SV
Quant Type: ISTD
Operator: DHF
Method File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-82
Misc Info: ZZ SVMS 8270/3510C BNA242

Calibration Date: 21-SEP-2012
Calibration Time: 14:39

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	201484	100742	402968	205244	1.87
34 Naphthalene-d8	894115	447058	1788230	840027	-6.05
63 Acenaphthene-d10	515108	257554	1030216	495997	-3.71
90 Phenanthrene-d10	924191	462096	1848382	875844	-5.23
104 Chrysene-d12	1005497	502749	2010994	970988	-3.43
110 Perylene-d12	1050509	525255	2101018	982129	-6.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	5.11	4.61	5.61	5.11	-0.00
34 Naphthalene-d8	6.31	5.81	6.81	6.30	-0.09
63 Acenaphthene-d10	8.04	7.54	8.54	8.04	-0.07
90 Phenanthrene-d10	9.53	9.03	10.03	9.53	-0.06
104 Chrysene-d12	12.20	11.70	12.70	12.19	-0.09
110 Perylene-d12	13.80	13.30	14.30	13.80	-0.04

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1234
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
123-91-1	1,4-Dioxane	1.44547	J
62-75-9	N-Nitrosodimethylamine	1.24939	J
110-86-1	Pyridine	1.30730	J
55-18-5	N-Nitrosodiethylamine	1.20844	J
100-52-7	Benzaldehyde	1.50620	J
108-95-2	Phenol	3.01909	J
62-53-3	Aniline	1.35129	J
111-44-4	Bis(2-Chloroethyl)ether	1.57513	J
95-57-8	2-Chlorophenol	2.90103	J
124-18-5	n-Decane	1.46581	J
541-73-1	1,3-Dichlorobenzene	1.51676	J
106-46-7	1,4-Dichlorobenzene	1.57392	J
100-51-6	Benzyl Alcohol	0.757068	J
95-50-1	1,2-Dichlorobenzene	1.68868	J
95-48-7	o-Cresol	2.74596	J
108-60-1	bis(2-Chloroisopropyl)ether	1.44044	J
108394/106445	mp-Cresol	2.75297	J
930-55-2	N-Nitrosopyrrolidine	1.24220	J
621-64-7	N-Nitrosodi-n-propylamine	1.31296	J
98-86-2	Acetophenone	1.39110	J
67-72-1	Hexachloroethane	1.40812	J
98-95-3	Nitrobenzene	1.49105	J
78-59-1	Isophorone	1.43528	J
88-75-5	2-Nitrophenol	2.70545	J
105-67-9	2,4-Dimethylphenol	3.01310	J
111-91-1	Bis(2-Chloroethoxy)methane	1.51901	J
65-85-0	Benzoic acid	0.491322	J
120-83-2	2,4-Dichlorophenol	2.90598	J
120-82-1	1,2,4-Trichlorobenzene	1.63099	J
10482-56-1	alpha-Terpineol	0.381547	J
91-20-3	Naphthalene	1.67051	
106-47-8	4-Chloroaniline	1.46834	J
87-65-0	2,6-Dichlorophenol	1.46252	J
87-68-3	Hexachlorobutadiene	1.64255	J
924-16-3	N-Nitrosodi-n-butylamine	1.38249	J
108-46-3	Resorcinol	1.16604	J
105-60-2	Caprolactam	1.49674	J
59-50-7	4-Chloro-3-methylphenol	2.88678	J
91-57-6	2-Methylnaphthalene	1.60734	
90-12-0	1-Methylnaphthalene	1.60621	
77-47-4	Hexachlorocyclopentadiene	0.888062	J
95-94-3	1,2,4,5-Tetrachlorobenzene	1.56756	J

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1234
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
88-06-2	2,4,6-Trichlorophenol	2.84903	J
608-27-5	2,3-Dichloroaniline	1.52864	J
95-95-4	2,4,5-Trichlorophenol	2.74050	J
92-52-4	Biphenyl	1.60312	J
91-58-7	2-Chloronaphthalene	1.57944	J
88-74-4	2-Nitroaniline	1.18165	J
100-25-4	1,4-Dinitrobenzene	0.820356	J
131-11-3	Dimethylphthalate	1.48800	J
99-65-0	1,3-Dinitrobenzene	1.12112	J
606-20-2	2,6-Dinitrotoluene	1.28147	J
528-29-0	1,2-Dinitrobenzene	1.24432	J
208-96-8	Acenaphthylene	1.50104	
99-09-2	3-Nitroaniline	1.21161	J
83-32-9	Acenaphthene	1.62414	
51-28-5	2,4-Dinitrophenol	0.263035	J
100-02-7	4-Nitrophenol	1.57988	J
608-93-5	Pentachlorobenzene	1.55236	J
121-14-2	2,4-Dinitrotoluene	1.20794	J
132-64-9	Dibenzofuran	1.58351	J
935-95-5	2,3,5,6-Tetrachlorophenol	0.922259	J
58-90-2	2,3,4,6-Tetrachlorophenol	2.49239	J
91-59-8	2-Napthylamine	1.25067	J
84-66-2	Diethylphthalate	1.49275	J
7005-72-3	4-Chlorophenyl-phenylether	1.55728	J
86-73-7	Fluorene	1.55677	
100-01-6	4-Nitroaniline	1.07968	J
534-52-1	2-Methyl-4,6-dinitrophenol	1.03851	J
86-30-6	N-Nitrosodiphenylamine	1.74627	J
122-39-4	Diphenylamine	1.49108	J
122-66-7	1,2-Diphenylhydrazine	1.45712	J
103-33-3	Azobenzene	1.44270	J
629-78-7	n-Heptadecane	1.44000	J
101-55-3	4-Bromophenyl-phenylether	1.47523	J
60-51-5	Dimethoate	1.13776	J
118-74-1	Hexachlorobenzene	1.61772	J
1912-24-9	Atrazine	1.44319	J
593-45-3	n-Octadecane	1.44598	J
87-86-5	Pentachlorophenol	0.922048	J
85-01-8	Phenanthrene	1.65100	
120-12-7	Anthracene	1.56066	
86-74-8	Carbazole	1.45464	J
84-74-2	Di-n-Butylphthalate	1.36146	J

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1234
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
206-44-0	Fluoranthene	1.49036	J
92-87-5	Benzidine	0.609057	J
129-00-0	Pyrene	1.49746	J
85-68-7	Butylbenzylphthalate	1.15195	J
103-23-1	Di(2-Ethylhexyl)adipate	1.14134	J
117-81-7	bis(2-Ethylhexyl)phthalate	1.18358	J
91-94-1	3,3-Dichlorobenzidine	1.17290	J
56-55-3	Benzo(a)anthracene	1.53283	
218-01-9	Chrysene	1.65120	
117-84-0	Di-n-Octylphthalate	1.11105	J
205-99-2	Benzo(b)fluoranthene	1.37934	J
207-08-9	Benzo(k)fluoranthene	1.59936	
50-32-8	Benzo(a)pyrene	1.37759	J
193-39-5	Indeno(1,2,3-cd)pyrene	1.37226	J
53-70-3	Dibenzo(a,h)anthracene	1.39352	J
191-24-2	Benzo(g,h,i)perylene	1.40290	J
367-12-4	2-Fluorophenol	1.24433	J
4165-62-2	Phenol-d5	1.38708	J
4165-60-0	Nitrobenzene-d5	1.35706	J
321-60-8	2-Fluorobiphenyl	1.55776	
118-79-6	2,4,6-Tribromophenol	1.17749	J
98904-43-9	Terphenyl-d14	1.46922	J

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092106.D

Date : 21-SEP-2012 12:57

Client ID:

Sample Info: 1234;1;1;1;BNA-1.5;;;;;;SV0242

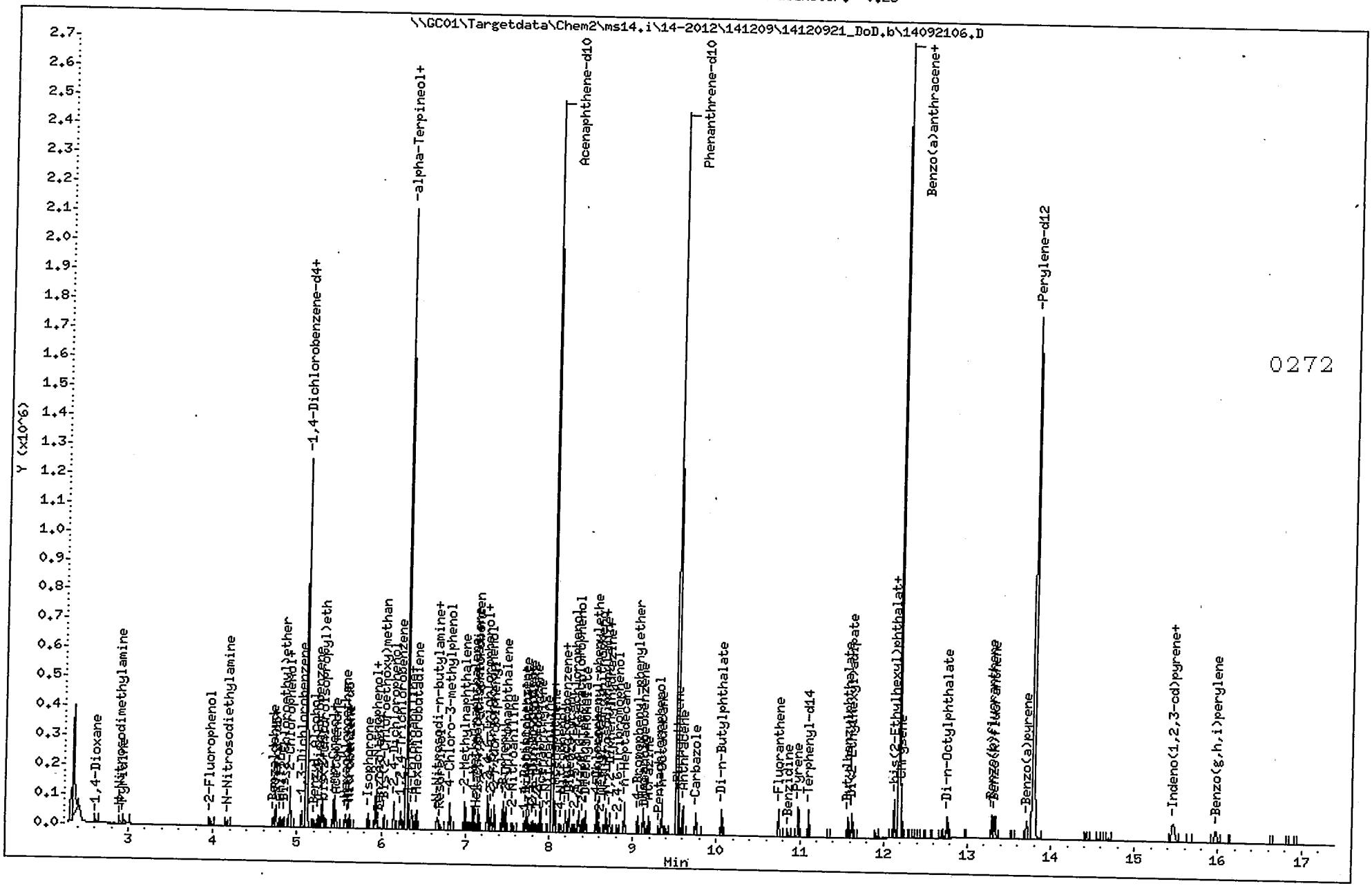
Volume Injected (uL): 1.0

Column phase: ZB-5

Instrument: ms14.i

Operator: DHF

Column diameter: 0.25



ALS - Middletown

Semivolatile Report for SW-846 Method 8270

Data file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\140921
Lab Smp Id: 1235
Inj Date : 21-SEP-2012 13:23
Operator : DHF Inst ID: ms14.i
Smp Info : 1235;1;1;2;BNA-3.0;;;;;;SV0242
Misc Info : ZZ SVMS 8270/3510C BNA242
Comment :
Method : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-827
Meth Date : 24-Sep-2012 15:27 Lopez Quant Type: ISTD
Cal Date : 21-SEP-2012 13:23 Cal File: 14092107.D
Als bottle: 7 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 12_3510_3550all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Sample Volume extracted(mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	1 1,4-Dioxane	88	2.618	2.613	(0.513)	9965	3.00000	2.81529(a)
	2 N-Nitrosodimethylamine	74	2.896	2.901	(0.567)	11768	3.00000	2.57237(a)
	3 Pyridine	79	2.934	2.917	(0.575)	21845	3.00000	2.63355(a)
$	4 2-Fluorophenol	112	3.971	3.971	(0.778)	18759	3.00000	2.61582
	5 N-Nitrosodiethylamine	102	4.169	4.185	(0.817)	9486	3.00000	2.56637(a)
$	7 Phenol-d5	99	4.736	4.747	(0.928)	23702	3.00000	2.98426
	8 Phenol	94	4.747	4.763	(0.930)	47446	6.00000	6.09917(a)
	9 Aniline	93	4.806	4.816	(0.941)	27600	3.00000	2.74042(a)
	10 Bis(2-Chloroethyl)ether	93	4.843	4.859	(0.949)	23109	3.00000	3.11927
	12 2-Chlorophenol	128	4.913	4.923	(0.962)	42326	6.00000	5.89933(a)
	11 n-Decane	57	4.913	4.918	(0.962)	22914	3.00000	2.97963(a)
	13 1,3-Dichlorobenzene	146	5.052	5.057	(0.990)	24205	3.00000	2.93690(a)
*	14 1,4-Dichlorobenzene-d4	152	5.105	5.105	(1.000)	202645	40.0000	
	15 1,4-Dichlorobenzene	146	5.116	5.121	(1.002)	24075	3.00000	3.06070
	16 Benzyl Alcohol	108	5.207	5.233	(1.020)	9222	3.00000	1.62184(a)
	17 1,2-Dichlorobenzene	146	5.260	5.260	(1.030)	19293	3.00000	3.26643
	18 o-Cresol	107	5.292	5.308	(1.037)	34654	6.00000	5.72832(a)
	19 bis(2-Chloroisopropyl)ether	45	5.319	5.335	(1.042)	26332	3.00000	2.84102(a)
	20 mp-Cresol	107	5.431	5.469	(1.064)	48138	6.00000	5.64433(a)
	23 N-Nitrosopyrrolidine	100	5.437	5.512	(1.065)	10662	3.00000	2.66050(a)
	22 N-Nitrosodi-n-propylamine	70	5.442	5.490	(1.066)	14990	3.00000	2.72840(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	21 Acetophenone	105	5.458	5.485	(1.069)	31283	3.00000	2.89706 (a)
	24 Hexachloroethane	117	5.571	5.576	(1.091)	9247	3.00000	2.71244 (a)
$	25 Nitrobenzene-d5	128	5.608	5.629	(0.890)	10521	3.00000	2.85542
	26 Nitrobenzene	77	5.624	5.645	(0.892)	21461	3.00000	3.01180
	27 Isophorone	82	5.838	5.886	(0.926)	38114	3.00000	2.86509 (a)
	28 2-Nitrophenol	139	5.924	5.945	(0.940)	21722	6.00000	5.77437 (a)
	29 2,4-Dimethylphenol	122	5.934	5.961	(0.941)	42145	6.00000	6.28761 (a)
	30 Bis(2-Chloroethoxy)methane	93	6.031	6.046	(0.957)	26991	3.00000	3.11055
	31 Benzoic acid	105	5.982	6.153	(0.949)	7255	6.00000	2.14800 (a)
	32 2,4-Dichlorophenol	162	6.154	6.175	(0.976)	35154	6.00000	6.13111 (a)
	33 1,2,4-Trichlorobenzene	180	6.239	6.244	(0.990)	21285	3.00000	3.17462
	35 alpha-Terpineol	59	6.303	6.325	(1.000)	3620	0.75000	0.763949 (a)
*	34 Naphthalene-d8	136	6.303	6.309	(1.000)	825854	40.0000	
	36 Naphthalene	128	6.325	6.335	(1.003)	70393	3.00000	3.23735
	37 4-Chloroaniline	127	6.357	6.378	(1.008)	26200	3.00000	3.06498
	38 2,6-Dichlorophenol	162	6.367	6.383	(1.010)	18402	3.00000	3.04914 (a)
	39 Hexachlorobutadiene	225	6.421	6.426	(1.019)	12067	3.00000	3.11604
	40 N-Nitrosodi-n-butylamine	57	6.662	6.699	(1.057)	10693	3.00000	2.95533 (a)
	41 Resorcinol	110	6.704	6.726	(1.064)	16379	3.00000	2.62518 (a)
	42 Caprolactam	56	6.678	6.838	(1.059)	7556	3.00000	3.15077 (a)
	43 4-Chloro-3-methylphenol	107	6.811	6.849	(1.081)	36867	6.00000	5.96373 (a)
	44 2-Methylnaphthalene	142	6.993	7.004	(1.109)	47416	3.00000	3.21080
	45 1-Methylnaphthalene	142	7.095	7.105	(1.126)	44212	3.00000	3.21934
	46 Hexachlorocyclopentadiene	237	7.138	7.143	(1.132)	8187	3.00000	2.11840 (a)
	47 1,2,4,5-Tetrachlorobenzene	216	7.154	7.170	(0.890)	23356	3.00000	3.16367
	48 2,4,6-Trichlorophenol	196	7.261	7.282	(0.903)	25242	6.00000	6.00390 (a)
	49 2,3-Dichloroaniline	161	7.271	7.287	(0.905)	23957	3.00000	3.10536 (a)
	50 2,4,5-Trichlorophenol	196	7.303	7.330	(0.909)	27316	6.00000	6.00735 (a)
$	51 2-Fluorobiphenyl	172	7.346	7.357	(0.914)	52757	3.00000	3.18702
	52 Biphenyl	154	7.448	7.469	(0.927)	61124	3.00000	3.20265 (a)
	53 2-Chloronaphthalene	162	7.480	7.496	(0.931)	43555	3.00000	3.12251
	55 2-Nitroaniline	138	7.571	7.592	(0.942)	11583	3.00000	2.54343 (a)
	56 1,4-Dinitrobenzene	168	7.710	7.731	(0.959)	5464	3.00000	2.00909 (a)
	57 Dimethylphthalate	163	7.731	7.769	(0.962)	49973	3.00000	3.03809 (a)
	58 1,3-Dinitrobenzene	168	7.780	7.817	(0.968)	7196	3.00000	2.53009 (a)
	59 2,6-Dinitrotoluene	165	7.806	7.833	(0.971)	10572	3.00000	2.76036 (a)
	60 1,2-Dinitrobenzene	168	7.860	7.902	(0.978)	5421	3.00000	2.76041 (a)
	61 Acenaphthylene	152	7.897	7.913	(0.983)	67193	3.00000	3.04658
	62 3-Nitroaniline	138	7.977	8.009	(0.993)	9884	3.00000	2.57097 (a)
*	63 Acenaphthene-d10	164	8.036	8.047	(1.000)	488136	40.0000	
	64 Acenaphthene	153	8.068	8.084	(1.004)	46479	3.00000	3.15823
	66 4-Nitrophenol	65	8.138	8.181	(1.013)	11232	6.00000	4.17191 (a)
	67 Pentachlorobenzene	250	8.191	8.207	(1.019)	21088	3.00000	3.11601
	68 2,4-Dinitrotoluene	165	8.207	8.239	(1.021)	13158	3.00000	2.64538 (a)
	69 Dibenzofuran	168	8.239	8.255	(1.025)	61689	3.00000	3.10610
	71 2,3,4,6-Tetrachlorophenol	230	8.352	8.373	(1.039)	16340	6.00000	5.44423 (a)
	72 2-Napthylamine	143	8.395	8.421	(1.045)	26065	3.00000	1.94754 (a)
	73 Diethylphthalate	149	8.427	8.459	(1.049)	56134	3.00000	3.27752 (a)
	74 4-Chlorophenyl-phenylether	204	8.566	8.582	(1.066)	25177	3.00000	3.09214
	75 Fluorene	166	8.582	8.603	(1.068)	52315	3.00000	3.10568
	76 4-Nitroaniline	138	8.587	8.651	(1.069)	9465	3.00000	2.55192 (a)
	77 2-Methyl-4,6-dinitrophenol	198	8.609	8.657	(0.903)	9565	6.00000	3.09962 (a)
	78 N-Nitrosodiphenylamine	169	8.683	8.710	(0.911)	42500	3.51000	3.57952
	79 Diphenylamine	169	8.683	8.710	(0.911)	42500	3.00000	3.05643

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	80 1,2-Diphenylhydrazine	77	8.726	8.747	(0.916)	47500	3.03000	3.02449
	81 Azobenzene	77	8.726	8.747	(0.916)	47500	3.00000	2.99455(a)
$	82 2,4,6-Tribromophenol	330	8.822	8.838	(0.926)	6508	3.00000	2.69626
	83 n-Heptadecane	57	8.903	8.913	(0.934)	32780	3.00000	3.05202(a)
	84 4-Bromophenyl-phenylether	248	9.058	9.074	(0.951)	14365	3.00000	3.00107
	86 Dimethoate	87	9.143	9.186	(0.960)	16302	3.00000	2.54754(a)
	85 Hexachlorobenzene	284	9.127	9.143	(0.958)	16699	3.00000	3.14101
	89 n-Octadecane	57	9.352	9.363	(0.981)	33387	3.00000	3.01308(a)
	88 Pentachlorophenol	266	9.325	9.341	(0.979)	8378	6.00000	2.75535(a)
*	90 Phenanthrene-d10	188	9.529	9.539	(1.000)	865230	40.0000	
	91 Phenanthrene	178	9.550	9.571	(1.002)	76204	3.00000	3.23166
	92 Anthracene	178	9.603	9.625	(1.008)	73485	3.00000	3.13145
	93 Carbazole	167	9.753	9.774	(1.024)	62449	3.00000	2.94388(a)
	94 Di-n-Butylphthalate	149	10.063	10.074	(1.056)	79573	3.00000	2.84984(a)
	95 Fluoranthene	202	10.748	10.764	(1.128)	78043	3.00000	3.02850
	97 Pyrene	202	10.978	10.999	(0.900)	82521	3.00000	3.02102
$	98 Terphenyl-d14	244	11.106	11.122	(0.911)	60959	3.00000	3.04480
	99 Butylbenzylphthalate	149	11.577	11.593	(0.950)	31929	3.00000	2.47229(a)
	100 Di(2-Ethylhexyl)adipate	129	11.625	11.636	(0.954)	31771	3.00000	2.51675(a)
	101 bis(2-Ethylhexyl)phthalate	149	12.128	12.139	(0.995)	49644	3.00000	2.61499(a)
	103 Benzo(a)anthracene	228	12.176	12.197	(0.999)	81226	3.00000	3.02464
*	104 Chrysene-d12	240	12.192	12.208	(1.000)	966967	40.0000	
	105 Chrysene	228	12.214	12.240	(1.002)	79441	3.00000	3.21288
	106 Di-n-Octylphthalate	149	12.764	12.780	(1.047)	81600	3.00000	2.48665(a)
	107 Benzo(b)fluoranthene	252	13.294	13.342	(0.964)	76617	3.00000	2.76572
	108 Benzo(k)fluoranthene	252	13.331	13.374	(0.966)	87764	3.00000	3.12759
	109 Benzo(a)pyrene	252	13.711	13.759	(0.994)	72983	3.00000	2.86139
*	110 Perylene-d12	264	13.797	13.813	(1.000)	991812	40.0000	
	111 Indeno(1,2,3-cd)pyrene	276	15.455	15.556	(1.120)	86574	3.00000	2.81433
	112 Dibenzo(a,h)anthracene	278	15.471	15.572	(1.121)	73775	3.00000	2.86536
	113 Benzo(g,h,i)perylene	276	15.968	16.075	(1.157)	75083	3.00000	2.88583

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms14.i
Lab File ID: 14092107.D
Lab Smp Id: 1235
Analysis Type: SV
Quant Type: ISTD
Operator: DHF

Calibration Date: 21-SEP-2012
Calibration Time: 14:39

Level: LOW
Sample Type: WATER

Method File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-82
Misc Info: ZZ SVMS 8270/3510C BNA242

Test Mode:
Use Last Continuing Calibrator.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	201484	100742	402968	202645	0.58
34 Naphthalene-d8	894115	447058	1788230	825854	-7.63
63 Acenaphthene-d10	515108	257554	1030216	488136	-5.24
90 Phenanthrene-d10	924191	462096	1848382	865230	-6.38
104 Chrysene-d12	1005497	502749	2010994	966967	-3.83
110 Perylene-d12.	1050509	525255	2101018	991812	-5.59

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	5.11	4.61	5.61	5.11	0.00
34 Naphthalene-d8	6.31	5.81	6.81	6.30	-0.08
63 Acenaphthene-d10	8.04	7.54	8.54	8.04	-0.06
90 Phenanthrene-d10	9.53	9.03	10.03	9.53	-0.05
104 Chrysene-d12	12.20	11.70	12.70	12.19	-0.09
110 Perylene-d12	13.80	13.30	14.30	13.80	-0.04

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1235
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
123-91-1	1,4-Dioxane	2.81529	J
62-75-9	N-Nitrosodimethylamine	2.57237	J
110-86-1	Pyridine	2.63355	J
55-18-5	N-Nitrosodiethylamine	2.56637	J
100-52-7	Benzaldehyde	3.09864	J
108-95-2	Phenol	6.09917	J
62-53-3	Aniline	2.74042	J
111-44-4	Bis(2-Chloroethyl)ether	3.11927	
95-57-8	2-Chlorophenol	5.89933	J
124-18-5	n-Decane	2.97963	J
541-73-1	1,3-Dichlorobenzene	2.93690	J
106-46-7	1,4-Dichlorobenzene	3.06070	
100-51-6	Benzyl Alcohol	1.62184	J
95-50-1	1,2-Dichlorobenzene	3.26643	
95-48-7	o-Cresol	5.72832	J
108-60-1	bis(2-Chloroisopropyl)ether	2.84102	J
108394/106445	mp-Cresol	5.64433	J
930-55-2	N-Nitrosopyrrolidine	2.66050	J
621-64-7	N-Nitrosodi-n-propylamine	2.72840	J
98-86-2	Acetophenone	2.89706	J
67-72-1	Hexachloroethane	2.71244	J
98-95-3	Nitrobenzene	3.01180	
78-59-1	Isophorone	2.86509	J
88-75-5	2-Nitrophenol	5.77437	J
105-67-9	2,4-Dimethylphenol	6.28761	J
111-91-1	Bis(2-Chloroethoxy)methane	3.11055	
65-85-0	Benzoic acid	2.14800	J
120-83-2	2,4-Dichlorophenol	6.13111	J
120-82-1	1,2,4-Trichlorobenzene	3.17462	
10482-56-1	alpha-Terpineol	0.763949	J
91-20-3	Naphthalene	3.23735	
106-47-8	4-Chloroaniline	3.06498	
87-65-0	2,6-Dichlorophenol	3.04914	J
87-68-3	Hexachlorobutadiene	3.11604	
924-16-3	N-Nitrosodi-n-butylamine	2.95533	J
108-46-3	Resorcinol	2.62518	J
105-60-2	Caprolactam	3.15077	J
59-50-7	4-Chloro-3-methylphenol	5.96373	J
91-57-6	2-Methylnaphthalene	3.21080	
90-12-0	1-Methylnaphthalene	3.21934	
77-47-4	Hexachlorocyclopentadiene	2.11840	J
95-94-3	1,2,4,5-Tetrachlorobenzene	3.16367	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1235
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
88-06-2	2,4,6-Trichlorophenol	6.00390	J
608-27-5	2,3-Dichloroaniline	3.10536	J
95-95-4	2,4,5-Trichlorophenol	6.00735	J
92-52-4	Biphenyl	3.20265	J
91-58-7	2-Chloronaphthalene	3.12251	
88-74-4	2-Nitroaniline	2.54343	J
100-25-4	1,4-Dinitrobenzene	2.00909	J
131-11-3	Dimethylphthalate	3.03809	J
99-65-0	1,3-Dinitrobenzene	2.53009	J
606-20-2	2,6-Dinitrotoluene	2.76036	J
528-29-0	1,2-Dinitrobenzene	2.76041	J
208-96-8	Acenaphthylene	3.04658	
99-09-2	3-Nitroaniline	2.57097	J
83-32-9	Acenaphthene	3.15823	
51-28-5	2,4-Dinitrophenol	1.51589	J
100-02-7	4-Nitrophenol	4.17191	J
608-93-5	Pentachlorobenzene	3.11601	
121-14-2	2,4-Dinitrotoluene	2.64538	J
132-64-9	Dibenzofuran	3.10610	
935-95-5	2,3,5,6-Tetrachlorophenol	2.10920	J
58-90-2	2,3,4,6-Tetrachlorophenol	5.44423	J
91-59-8	2-Napthylamine	1.94754	J
84-66-2	Diethylphthalate	3.27752	J
7005-72-3	4-Chlorophenyl-phenylether	3.09214	
86-73-7	Fluorene	3.10568	
100-01-6	4-Nitroaniline	2.55192	J
534-52-1	2-Methyl-4,6-dinitrophenol	3.09962	J
86-30-6	N-Nitrosodiphenylamine	3.57952	
122-39-4	Diphenylamine	3.05643	
122-66-7	1,2-Diphenylhydrazine	3.02449	
103-33-3	Azobenzene	2.99455	J
629-78-7	n-Heptadecane	3.05202	J
101-55-3	4-Bromophenyl-phenylether	3.00107	
60-51-5	Dimethoate	2.54754	J
118-74-1	Hexachlorobenzene	3.14101	
1912-24-9	Atrazine	3.04312	J
593-45-3	n-Octadecane	3.01308	J
87-86-5	Pentachlorophenol	2.75535	J
85-01-8	Phenanthrene	3.23166	
120-12-7	Anthracene	3.13145	
86-74-8	Carbazole	2.94388	J
84-74-2	Di-n-Butylphthalate	2.84984	J

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1235
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

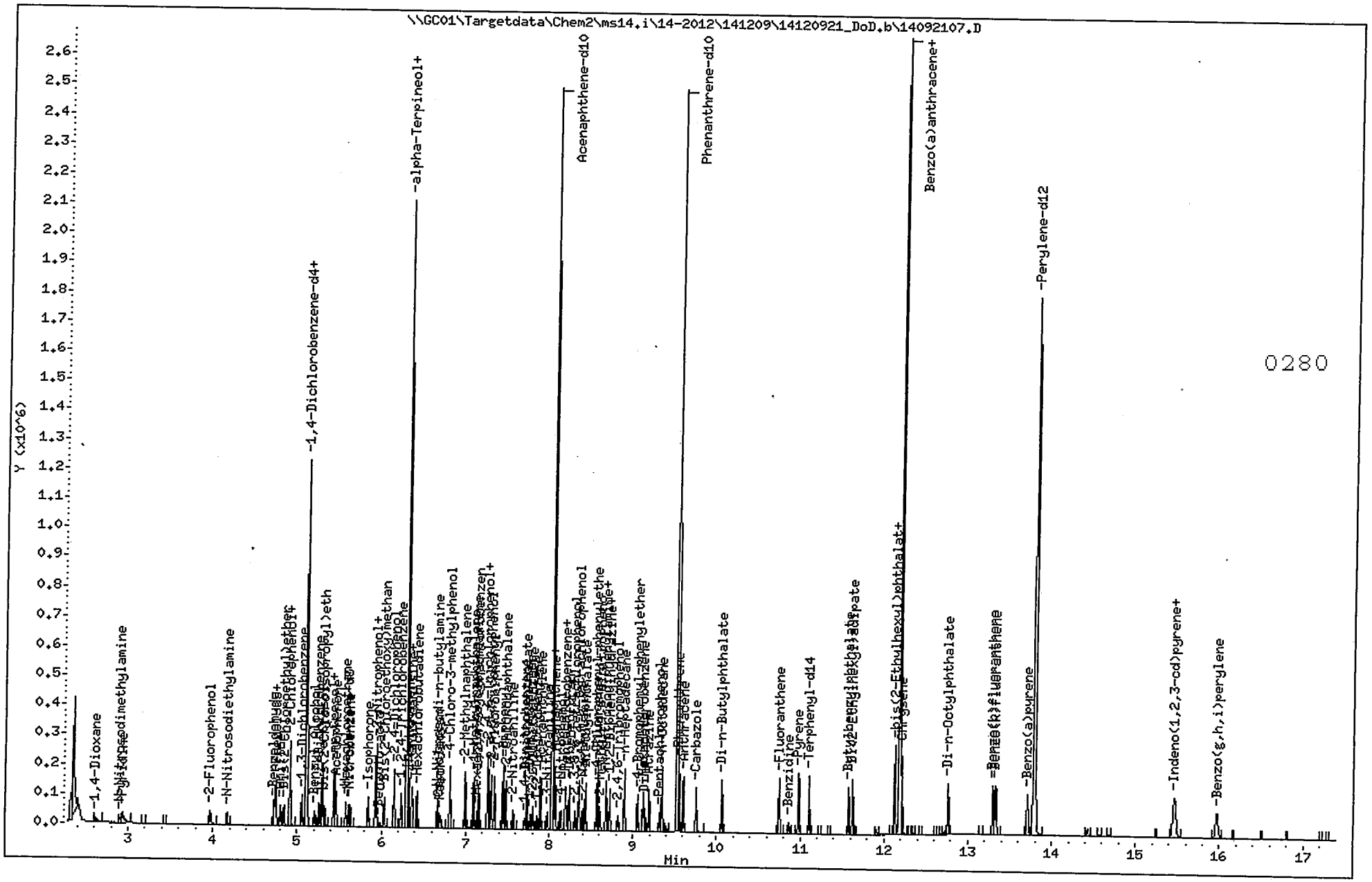
Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
206-44-0	Fluoranthene	3.02850	
92-87-5	Benzidine	1.47016	J
129-00-0	Pyrene	3.02102	
85-68-7	Butylbenzylphthalate	2.47229	J
103-23-1	Di(2-Ethylhexyl)adipate	2.51675	J
117-81-7	bis(2-Ethylhexyl)phthalate	2.61499	J
91-94-1	3,3-Dichlorobenzidine	2.67426	J
56-55-3	Benzo(a)anthracene	3.02464	
218-01-9	Chrysene	3.21288	
117-84-0	Di-n-Octylphthalate	2.48665	J
205-99-2	Benzo(b)fluoranthene	2.76572	
207-08-9	Benzo(k)fluoranthene	3.12759	
50-32-8	Benzo(a)pyrene	2.86139	
193-39-5	Indeno(1,2,3-cd)pyrene	2.81433	
53-70-3	Dibenzo(a,h)anthracene	2.86536	
191-24-2	Benzo(g,h,i)perylene	2.88583	
367-12-4	2-Fluorophenol	2.61582	
4165-62-2	Phenol-d5	2.98426	
4165-60-0	Nitrobenzene-d5	2.85542	
321-60-8	2-Fluorobiphenyl	3.18702	
118-79-6	2,4,6-Tribromophenol	2.69626	
98904-43-9	Terphenyl-d14	3.04480	

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092107.D
Date : 21-SEP-2012 13:23
Client ID:
Sample Info: 1235;1;1;2;BNA-3.0;;;;;;SV0242
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: ms14.i
Operator: DHF
Column diameter: 0.25



ALS - Middletown

Semivolatile Report for SW-846 Method 8270

Data file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\140921
Lab Smp Id: 1236
Inj Date : 21-SEP-2012 13:48
Operator : DHF Inst ID: ms14.i
Smp Info : 1236;1;1;3;BNA-8.0;;;;;;SV0242
Misc Info : ZZ SVMS 8270/3510C BNA242
Comment :
Method : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-827
Meth Date : 24-Sep-2012 15:27 Lopez Quant Type: ISTD
Cal Date : 21-SEP-2012 13:48 Cal File: 14092108.D
Als bottle: 8 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 12_3510_3550all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Sample Volume extracted(mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
	1 1,4-Dioxane	88	2.613	2.613	(0.512)	26740	8.00000	7.54677
	2 N-Nitrosodimethylamine	74	2.891	2.901	(0.566)	33654	8.00000	7.34888
	3 Pyridine	79	2.928	2.917	(0.574)	63540	8.00000	7.65227(a)
$	4 2-Fluorophenol	112	3.971	3.971	(0.778)	55277	8.00000	7.70011
	5 N-Nitrosodiethylamine	102	4.169	4.185	(0.817)	28391	8.00000	7.67312
	6 Benzaldehyde	106	4.720	4.725	(0.925)	45048	8.00000	8.96345(a)
$	7 Phenol-d5	99	4.736	4.747	(0.928)	67131	8.00000	8.44362
	8 Phenol	94	4.747	4.763	(0.930)	134685	16.0000	17.2960
	9 Aniline	93	4.806	4.816	(0.941)	80100	8.00000	7.94503
	10 Bis(2-Chloroethyl)ether	93	4.843	4.859	(0.949)	61057	8.00000	8.23306
	12 2-Chlorophenol	128	4.913	4.923	(0.962)	119116	16.0000	16.5852
	11 n-Decane	57	4.913	4.918	(0.962)	63769	8.00000	8.28371
	13 1,3-Dichlorobenzene	146	5.052	5.057	(0.990)	66253	8.00000	8.03054
*	14 1,4-Dichlorobenzene-d4	152	5.105	5.105	(1.000)	202853	40.0000	
	15 1,4-Dichlorobenzene	146	5.121	5.121	(1.003)	65091	8.00000	8.26665
	16 Benzyl Alcohol	108	5.207	5.233	(1.020)	30829	8.00000	5.41623(a)
	17 1,2-Dichlorobenzene	146	5.260	5.260	(1.030)	50956	8.00000	8.61835
	18 o-Cresol	107	5.292	5.308	(1.037)	96403	16.0000	15.9191
	19 bis(2-Chloroisopropyl)ether	45	5.319	5.335	(1.042)	70977	8.00000	7.65002
	20 mp-Cresol	107	5.431	5.443	(1.064)	137276	16.0000	16.0795
	23 N-Nitrosopyrrolidine	100	5.442	5.452	(1.066)	31185	8.00000	7.77364

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
	22 N-Nitrosodi-n-propylamine	70	5.442	5.490	(1.066)	43074	8.00000	7.83206
	21 Acetophenone	105	5.458	5.485	(1.069)	86099	8.00000	7.96530(a)
	24 Hexachloroethane	117	5.571	5.576	(1.091)	26526	8.00000	7.77295
$	25 Nitrobenzene-d5	128	5.608	5.629	(0.890)	30419	8.00000	8.15369
	26 Nitrobenzene	77	5.629	5.645	(0.893)	59857	8.00000	8.29638
	27 Isophorone	82	5.843	5.886	(0.927)	109677	8.00000	8.14266
	28 2-Nitrophenol	139	5.924	5.945	(0.940)	65310	16.0000	17.1467
	29 2,4-Dimethylphenol	122	5.934	5.961	(0.941)	118574	16.0000	17.4713
	30 Bis(2-Chloroethoxy)methane	93	6.030	6.046	(0.957)	74325	8.00000	8.45959
	31 Benzoic acid	105	5.998	6.153	(0.952)	34310	16.0000	9.89692(a)
	32 2,4-Dichlorophenol	162	6.154	6.175	(0.976)	101082	16.0000	17.4115
	33 1,2,4-Trichlorobenzene	180	6.239	6.244	(0.990)	57603	8.00000	8.48517
	35 alpha-Terpineol	59	6.303	6.325	(1.000)	9486	2.00000	1.97713(a)
*	34 Naphthalene-d8	136	6.303	6.309	(1.000)	836193	40.0000	
	36 Naphthalene	128	6.325	6.335	(1.003)	190815	8.00000	8.66701
	37 4-Chloroaniline	127	6.357	6.378	(1.008)	75685	8.00000	8.74446
	38 2,6-Dichlorophenol	162	6.367	6.383	(1.010)	52878	8.00000	8.65334
	39 Hexachlorobutadiene	225	6.421	6.426	(1.019)	33536	8.00000	8.55286
	40 N-Nitrosodi-n-butylamine	57	6.667	6.699	(1.058)	29744	8.00000	8.11900
	41 Resorcinol	110	6.704	6.726	(1.064)	48987	8.00000	7.75443(a)
	42 Caprolactam	56	6.694	6.838	(1.062)	18555	8.00000	7.64158(aH)
	43 4-Chloro-3-methylphenol	107	6.817	6.849	(1.081)	106242	16.0000	16.9736
	44 2-Methylnaphthalene	142	6.993	7.004	(1.109)	129495	8.00000	8.66039
	45 1-Methylnaphthalene	142	7.095	7.105	(1.126)	119806	8.00000	8.61593
	46 Hexachlorocyclopentadiene	237	7.138	7.143	(1.132)	27454	8.00000	7.01594(a)
	47 1,2,4,5-Tetrachlorobenzene	216	7.154	7.170	(0.890)	63151	8.00000	8.48464
	48 2,4,6-Trichlorophenol	196	7.261	7.282	(0.903)	74668	16.0000	17.6159
	49 2,3-Dichloroaniline	161	7.271	7.287	(0.905)	67842	8.00000	8.72243
	50 2,4,5-Trichlorophenol	196	7.303	7.330	(0.909)	79753	16.0000	17.3970
$	51 2-Fluorobiphenyl	172	7.346	7.357	(0.914)	142762	8.00000	8.55417
	52 Biphenyl	154	7.448	7.469	(0.927)	165024	8.00000	8.57639
	53 2-Chloronaphthalene	162	7.480	7.496	(0.931)	118597	8.00000	8.43335
	55 2-Nitroaniline	138	7.571	7.592	(0.942)	36674	8.00000	7.98763
	56 1,4-Dinitrobenzene	168	7.710	7.731	(0.959)	18409	8.00000	6.71397(a)
	57 Dimethylphthalate	163	7.737	7.769	(0.963)	137693	8.00000	8.30304
	58 1,3-Dinitrobenzene	168	7.779	7.817	(0.968)	23014	8.00000	8.02597
	59 2,6-Dinitrotoluene	165	7.806	7.833	(0.971)	31750	8.00000	8.22265
	60 1,2-Dinitrobenzene	168	7.865	7.902	(0.979)	15892	8.00000	8.02663
	61 Acenaphthylene	152	7.897	7.913	(0.983)	188381	8.00000	8.47199
	62 3-Nitroaniline	138	7.977	8.009	(0.993)	29669	8.00000	7.65467
*	63 Acenaphthene-d10	164	8.036	8.047	(1.000)	492131	40.0000	
	64 Acenaphthene	153	8.068	8.084	(1.004)	127059	8.00000	8.56353
	65 2,4-Dinitrophenol	184	8.084	8.116	(1.006)	20388	16.0000	8.21411(a)
	66 4-Nitrophenol	65	8.133	8.181	(1.012)	37487	16.0000	13.8108
	67 Pentachlorobenzene	250	8.191	8.207	(1.019)	57800	8.00000	8.47133
	68 2,4-Dinitrotoluene	165	8.207	8.239	(1.021)	39882	8.00000	7.95307
	69 Dibenzofuran	168	8.239	8.255	(1.025)	171226	8.00000	8.55139
	70 2,3,5,6-Tetrachlorophenol	230	8.309	8.325	(1.034)	22528	8.00000	6.96371(aM)
	71 2,3,4,6-Tetrachlorophenol	230	8.352	8.373	(1.039)	52060	16.0000	17.2048
	72 2-Napthylamine	143	8.395	8.421	(1.045)	55078	8.00000	4.08194(a)
	73 Diethylphthalate	149	8.432	8.459	(1.049)	144145	8.00000	8.34794
	74 4-Chlorophenyl-phenylether	204	8.566	8.582	(1.066)	68903	8.00000	8.39369
	75 Fluorene	166	8.582	8.603	(1.068)	145065	8.00000	8.54186
	76 4-Nitroaniline	138	8.587	8.691	(1.069)	31194	8.00000	8.34215

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	77 2-Methyl-4,6-dinitrophenol	198	8.614	8.657	(0.904)	37983	16.0000	12.0662
	78 N-Nitrosodiphenylamine	169	8.683	8.710	(0.911)	120944	9.37000	9.98569
	79 Diphenylamine	169	8.683	8.710	(0.911)	120944	8.00000	8.52646
	80 1,2-Diphenylhydrazine	77	8.726	8.747	(0.916)	134895	8.08000	8.42002
	81 Azobenzene	77	8.726	8.747	(0.916)	134895	8.00000	8.33666
$	82 2,4,6-Tribromophenol	330	8.822	8.838	(0.926)	19692	8.00000	7.99764
	83 n-Heptadecane	57	8.903	8.913	(0.934)	93791	8.00000	8.56047
	84 4-Bromophenyl-phenylether	248	9.058	9.074	(0.951)	40555	8.00000	8.30564
	86 Dimethoate	87	9.149	9.186	(0.960)	52099	8.00000	7.98119(a)
	85 Hexachlorobenzene	284	9.127	9.143	(0.958)	45317	8.00000	8.35601
	87 Atrazine	200	9.197	9.229	(0.965)	42646	8.00000	8.86800(a)
	89 n-Octadecane	57	9.352	9.363	(0.981)	96439	8.00000	8.53187
	88 Pentachlorophenol	266	9.325	9.341	(0.979)	36680	16.0000	11.8256(a)
*	90 Phenanthrene-d10	188	9.528	9.539	(1.000)	882619	40.0000	
	91 Phenanthrene	178	9.550	9.571	(1.002)	204389	8.00000	8.49696
	92 Anthracene	178	9.603	9.625	(1.008)	203155	8.00000	8.48657
	93 Carbazole	167	9.753	9.774	(1.024)	184040	8.00000	8.50481
	94 Di-n-Butylphthalate	149	10.063	10.074	(1.056)	241574	8.00000	8.48131
	95 Fluoranthene	202	10.748	10.764	(1.128)	225234	8.00000	8.56814
	97 Pyrene	202	10.978	10.999	(0.900)	233596	8.00000	8.31582
$	98 Terphenyl-d14	244	11.106	11.122	(0.911)	175487	8.00000	8.52346
	99 Butylbenzylphthalate	149	11.577	11.593	(0.950)	103444	8.00000	7.78876
	100 Di(2-Ethylhexyl)adipate	129	11.625	11.636	(0.953)	103329	8.00000	7.95941
	101 bis(2-Ethylhexyl)phthalate	149	12.128	12.139	(0.995)	159231	8.00000	8.15605
	102 3,3-Dichlorobenzidine	252	12.133	12.160	(0.995)	79951	8.00000	8.57045(a)
	103 Benzo(a)anthracene	228	12.176	12.197	(0.999)	230565	8.00000	8.34876
*	104 Chrysene-d12	240	12.192	12.208	(1.000)	994402	40.0000	
	105 Chrysene	228	12.214	12.240	(1.002)	215536	8.00000	8.47656
	106 Di-n-Octylphthalate	149	12.759	12.780	(1.046)	268375	8.00000	7.95273(a)
	107 Benzo(b)fluoranthene	252	13.299	13.342	(0.964)	221837	8.00000	7.79019
	108 Benzo(k)fluoranthene	252	13.326	13.374	(0.966)	254534	8.00000	8.82408
	109 Benzo(a)pyrene	252	13.711	13.759	(0.994)	213439	8.00000	8.14066
*	110 Perylene-d12	264	13.797	13.813	(1.000)	1019527	40.0000	
	111 Indeno(1,2,3-cd)pyrene	276	15.455	15.556	(1.120)	255515	8.00000	8.08043
	112 Dibenzo(a,h)anthracene	278	15.476	15.572	(1.122)	216832	8.00000	8.19264
	113 Benzo(g,h,i)perylene	276	15.968	16.075	(1.157)	215374	8.00000	8.05290

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms14.i
Lab File ID: 14092108.D
Lab Smp Id: 1236
Analysis Type: SV
Quant Type: ISTD
Operator: DHF
Method File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-82
Misc Info: ZZ SVMS 8270/3510C BNA242

Calibration Date: 21-SEP-2012
Calibration Time: 14:39

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	201484	100742	402968	202853	0.68
34 Naphthalene-d8	894115	447058	1788230	836193	-6.48
63 Acenaphthene-d10	515108	257554	1030216	492131	-4.46
90 Phenanthrene-d10	924191	462096	1848382	882619	-4.50
104 Chrysene-d12	1005497	502749	2010994	994402	-1.10
110 Perylene-d12	1050509	525255	2101018	1019527	-2.95

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	5.11	4.61	5.61	5.11	0.00
34 Naphthalene-d8	6.31	5.81	6.81	6.30	-0.08
63 Acenaphthene-d10	8.04	7.54	8.54	8.04	-0.06
90 Phenanthrene-d10	9.53	9.03	10.03	9.53	-0.05
104 Chrysene-d12	12.20	11.70	12.70	12.19	-0.09
110 Perylene-d12	13.80	13.30	14.30	13.80	-0.04

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1236
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
123-91-1	1,4-Dioxane	7.54677	
62-75-9	N-Nitrosodimethylamine	7.34888	
110-86-1	Pyridine	7.65227	J
55-18-5	N-Nitrosodiethylamine	7.67312	
100-52-7	Benzaldehyde	8.96345	J
108-95-2	Phenol	17.2960	
62-53-3	Aniline	7.94503	
111-44-4	Bis(2-Chloroethyl)ether	8.23306	
95-57-8	2-Chlorophenol	16.5852	
124-18-5	n-Decane	8.28371	
541-73-1	1,3-Dichlorobenzene	8.03054	
106-46-7	1,4-Dichlorobenzene	8.26665	
100-51-6	Benzyl Alcohol	5.41623	J
95-50-1	1,2-Dichlorobenzene	8.61835	
95-48-7	o-Cresol	15.9191	
108-60-1	bis(2-Chloroisopropyl)ether	7.65002	
108394/106445	mp-Cresol	16.0795	
930-55-2	N-Nitrosopyrrolidine	7.77364	
621-64-7	N-Nitrosodi-n-propylamine	7.83206	
98-86-2	Acetophenone	7.96530	J
67-72-1	Hexachloroethane	7.77295	
98-95-3	Nitrobenzene	8.29638	
78-59-1	Isophorone	8.14266	
88-75-5	2-Nitrophenol	17.1467	
105-67-9	2,4-Dimethylphenol	17.4713	
111-91-1	Bis(2-Chloroethoxy)methane	8.45959	
65-85-0	Benzoic acid	9.89692	J
120-83-2	2,4-Dichlorophenol	17.4115	
120-82-1	1,2,4-Trichlorobenzene	8.48517	
10482-56-1	alpha-Terpineol	1.97713	J
91-20-3	Naphthalene	8.66701	
106-47-8	4-Chloroaniline	8.74446	
87-65-0	2,6-Dichlorophenol	8.65334	
87-68-3	Hexachlorobutadiene	8.55286	
924-16-3	N-Nitrosodi-n-butylamine	8.11900	
108-46-3	Resorcinol	7.75443	J
105-60-2	Caprolactam	7.64158	J
59-50-7	4-Chloro-3-methylphenol	16.9736	
91-57-6	2-Methylnaphthalene	8.66039	
90-12-0	1-Methylnaphthalene	8.61593	
77-47-4	Hexachlorocyclopentadiene	7.01594	J
95-94-3	1,2,4,5-Tetrachlorobenzene	8.48464	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1236
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
88-06-2	2,4,6-Trichlorophenol	17.6159	
608-27-5	2,3-Dichloroaniline	8.72243	
95-95-4	2,4,5-Trichlorophenol	17.3970	
92-52-4	Biphenyl	8.57639	
91-58-7	2-Chloronaphthalene	8.43335	
88-74-4	2-Nitroaniline	7.98763	
100-25-4	1,4-Dinitrobenzene	6.71397	J
131-11-3	Dimethylphthalate	8.30304	
99-65-0	1,3-Dinitrobenzene	8.02597	
606-20-2	2,6-Dinitrotoluene	8.22265	
528-29-0	1,2-Dinitrobenzene	8.02663	
208-96-8	Acenaphthylene	8.47199	
99-09-2	3-Nitroaniline	7.65467	
83-32-9	Acenaphthene	8.56353	
51-28-5	2,4-Dinitrophenol	8.21411	J
100-02-7	4-Nitrophenol	13.8108	
608-93-5	Pentachlorobenzene	8.47133	
121-14-2	2,4-Dinitrotoluene	7.95307	
132-64-9	Dibenzofuran	8.55139	
935-95-5	2,3,5,6-Tetrachlorophenol	6.96371	J
58-90-2	2,3,4,6-Tetrachlorophenol	17.2048	
91-59-8	2-Napthylamine	4.08194	J
84-66-2	Diethylphthalate	8.34794	
7005-72-3	4-Chlorophenyl-phenylether	8.39369	
86-73-7	Fluorene	8.54186	
100-01-6	4-Nitroaniline	8.34215	
534-52-1	2-Methyl-4,6-dinitrophenol	12.0662	
86-30-6	N-Nitrosodiphenylamine	9.98569	
122-39-4	Diphenylamine	8.52646	
122-66-7	1,2-Diphenylhydrazine	8.42002	
103-33-3	Azobenzene	8.33666	
629-78-7	n-Heptadecane	8.56047	
101-55-3	4-Bromophenyl-phenylether	8.30564	
60-51-5	Dimethoate	7.98119	J
118-74-1	Hexachlorobenzene	8.35601	
1912-24-9	Atrazine	8.86800	J
593-45-3	n-Octadecane	8.53187	
87-86-5	Pentachlorophenol	11.8256	J
85-01-8	Phenanthrene	8.49696	
120-12-7	Anthracene	8.48657	
86-74-8	Carbazole	8.50481	
84-74-2	Di-n-Butylphthalate	8.48131	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1236
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
206-44-0	Fluoranthene	8.56814	
92-87-5	Benzidine	5.89329	J
129-00-0	Pyrene	8.31582	
85-68-7	Butylbenzylphthalate	7.78876	
103-23-1	Di(2-Ethylhexyl)adipate	7.95941	
117-81-7	bis(2-Ethylhexyl)phthalate	8.15605	
91-94-1	3,3-Dichlorobenzidine	8.57045	J
56-55-3	Benzo(a)anthracene	8.34876	
218-01-9	Chrysene	8.47656	
117-84-0	Di-n-Octylphthalate	7.95273	J
205-99-2	Benzo(b)fluoranthene	7.79019	
207-08-9	Benzo(k)fluoranthene	8.82408	
50-32-8	Benzo(a)pyrene	8.14066	
193-39-5	Indeno(1,2,3-cd)pyrene	8.08043	
53-70-3	Dibenzo(a,h)anthracene	8.19264	
191-24-2	Benzo(g,h,i)perylene	8.05290	
367-12-4	2-Fluorophenol	7.70011	
4165-62-2	Phenol-d5	8.44362	
4165-60-0	Nitrobenzene-d5	8.15369	
321-60-8	2-Fluorobiphenyl	8.55417	
118-79-6	2,4,6-Tribromophenol	7.99764	
98904-43-9	Terphenyl-d14	8.52346	

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092108.D

Date : 21-SEP-2012 13:48

Client ID:

Sample Info: 1236;1;1;3;BNA-8.0;;;;;;SV0242

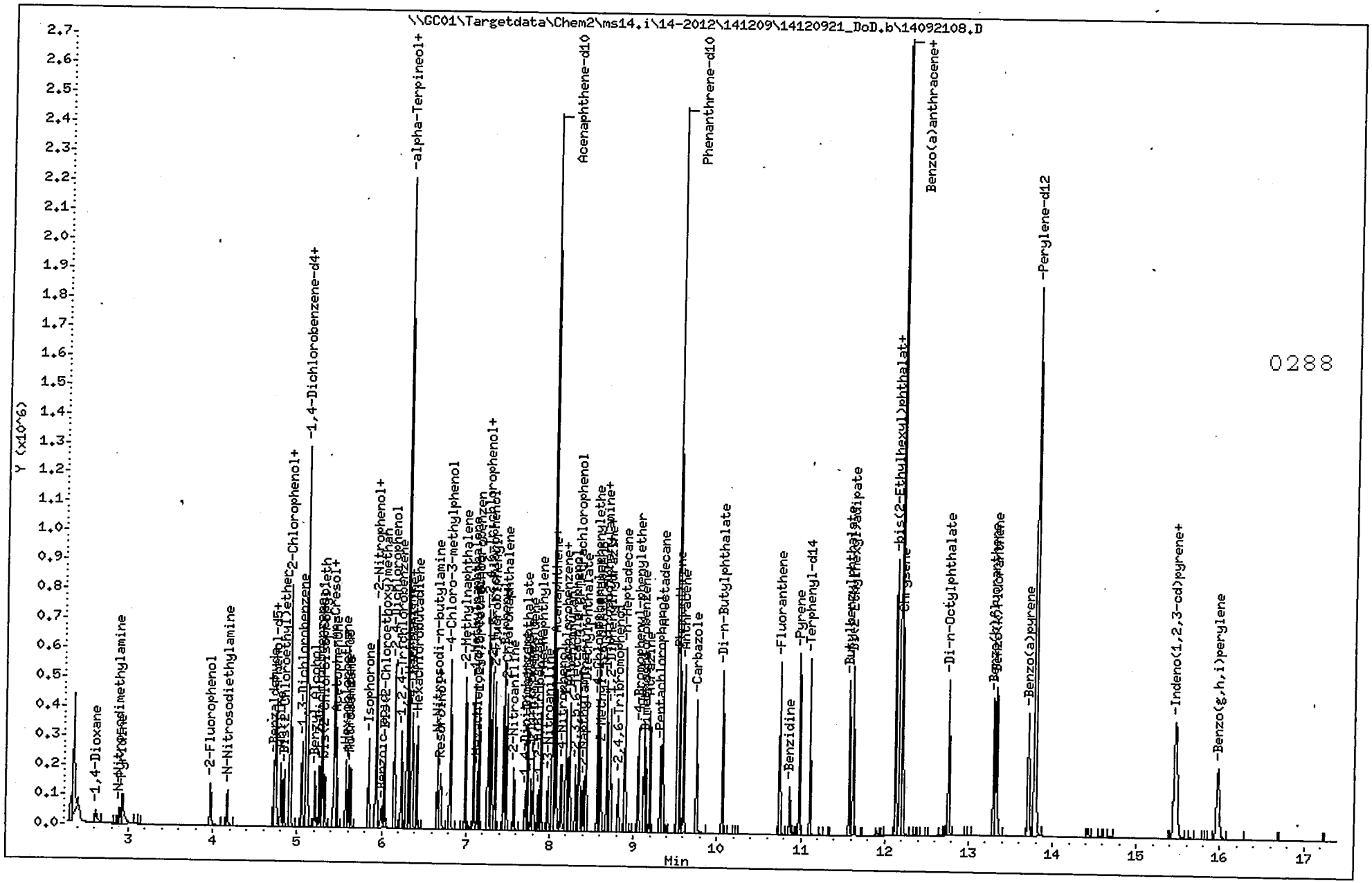
Volume Injected (uL): 1.0

Column phase: ZB-5

Instrument: ms14.i

Operator: DHF

Column diameter: 0.25



ALS - Middletown

Semivolatile Report for SW-846 Method 8270

Data file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\140921
Lab Smp Id: 1237
Inj Date : 21-SEP-2012 14:13
Operator : DHF Inst ID: ms14.i
Smp Info : 1237;1;1;4;BNA-16;;;;;;SV0242
Misc Info : ZZ SVMS 8270/3510C BNA242
Comment :
Method : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-827
Meth Date : 24-Sep-2012 15:27 Lopez Quant Type: ISTD
Cal Date : 21-SEP-2012 14:13 Cal File: 14092109.D
Als bottle: 9 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 12_3510_3550all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Sample Volume extracted(mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
	1 1,4-Dioxane	88	2.618	2.613	(0.513)	54429	16.0000	15.2382
	2 N-Nitrosodimethylamine	74	2.891	2.901	(0.566)	71185	16.0000	15.4197
	3 Pyridine	79	2.923	2.917	(0.573)	132771	16.0000	15.8617
$	4 2-Fluorophenol	112	3.971	3.971	(0.778)	114921	16.0000	15.8802
	5 N-Nitrosodiethylamine	102	4.169	4.185	(0.817)	59262	16.0000	15.8880
	6 Benzaldehyde	106	4.720	4.725	(0.925)	91989	16.0000	18.1568
$	7 Phenol-d5	99	4.736	4.747	(0.928)	140279	16.0000	17.5025
	8 Phenol	94	4.747	4.763	(0.930)	273990	32.0000	34.9030
	9 Aniline	93	4.805	4.816	(0.941)	166754	16.0000	16.4075
	10 Bis(2-Chloroethyl)ether	93	4.843	4.859	(0.949)	124031	16.0000	16.5905
	12 2-Chlorophenol	128	4.918	4.923	(0.963)	243762	32.0000	33.6681
	11 n-Decane	57	4.912	4.918	(0.962)	127870	16.0000	16.4773
	13 1,3-Dichlorobenzene	146	5.051	5.057	(0.990)	133560	16.0000	16.0590
*	14 1,4-Dichlorobenzene-d4	152	5.105	5.105	(1.000)	204493	40.0000	
	15 1,4-Dichlorobenzene	146	5.121	5.121	(1.003)	130837	16.0000	16.4832
	16 Benzyl Alcohol	108	5.207	5.233	(1.020)	71774	16.0000	12.5086
	17 1,2-Dichlorobenzene	146	5.260	5.260	(1.030)	98683	16.0000	16.5567
	18 o-Cresol	107	5.292	5.308	(1.037)	198218	32.0000	32.4694
	19 bis(2-Chloroisopropyl)ether	45	5.324	5.335	(1.043)	146616	16.0000	15.6758
	20 mp-Cresol	107	5.431	5.469	(1.064)	279112	32.0000	32.4310
	23 N-Nitrosopyrrolidine	100	5.447	5.512	(1.067)	64349	16.0000	15.9119

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
	22 N-Nitrosodi-n-propylamine	70	5.447	5.490	(1.067)	89448	16.0000	16.1337
	21 Acetophenone	105	5.463	5.485	(1.070)	175395	16.0000	16.0962
	24 Hexachloroethane	117	5.570	5.576	(1.091)	54139	16.0000	15.7372
$	25 Nitrobenzene-d5	128	5.613	5.629	(0.891)	64318	16.0000	16.7976
	26 Nitrobenzene	77	5.629	5.645	(0.893)	123206	16.0000	16.6384
	27 Isophorone	82	5.848	5.886	(0.928)	229117	16.0000	16.5735
	28 2-Nitrophenol	139	5.929	5.945	(0.941)	136544	32.0000	34.9285
	29 2,4-Dimethylphenol	122	5.939	5.961	(0.942)	241599	32.0000	34.6847
	30 Bis(2-Chloroethoxy)methane	93	6.030	6.046	(0.957)	151179	16.0000	16.7653
	31 Benzoic acid	105	6.020	6.153	(0.955)	94593	32.0000	25.8646
	32 2,4-Dichlorophenol	162	6.153	6.175	(0.976)	207336	32.0000	34.7970
	33 1,2,4-Trichlorobenzene	180	6.239	6.244	(0.990)	117016	16.0000	16.7945
	35 alpha-Terpineol	59	6.308	6.325	(1.001)	20082	4.00000	4.07817(a)
*	34 Naphthalene-d8	136	6.303	6.309	(1.000)	858224	40.0000	
	36 Naphthalene	128	6.324	6.335	(1.003)	383639	16.0000	16.9780
	37 4-Chloroaniline	127	6.362	6.378	(1.009)	154337	16.0000	17.3740
	38 2,6-Dichlorophenol	162	6.367	6.383	(1.010)	107829	16.0000	17.1929
	39 Hexachlorobutadiene	225	6.421	6.426	(1.019)	66958	16.0000	16.6383
	40 N-Nitrosodi-n-butylamine	57	6.667	6.699	(1.058)	62091	16.0000	16.5134
	41 Resorcinol	110	6.715	6.726	(1.065)	107781	16.0000	16.6233(a)
	42 Caprolactam	56	6.710	6.838	(1.064)	39104	16.0000	15.6909(M)
	43 4-Chloro-3-methylphenol	107	6.817	6.849	(1.081)	216157	32.0000	33.6474
	44 2-Methylnaphthalene	142	6.993	7.004	(1.109)	260165	16.0000	16.9527
	45 1-Methylnaphthalene	142	7.095	7.105	(1.126)	242506	16.0000	16.9923
	46 Hexachlorocyclopentadiene	237	7.137	7.143	(1.132)	60723	16.0000	15.1196
	47 1,2,4,5-Tetrachlorobenzene	216	7.153	7.170	(0.890)	126831	16.0000	16.6563
	48 2,4,6-Trichlorophenol	196	7.266	7.282	(0.904)	151339	32.0000	34.8996
	49 2,3-Dichloroaniline	161	7.271	7.287	(0.905)	137135	16.0000	17.2340
	50 2,4,5-Trichlorophenol	196	7.309	7.330	(0.909)	160759	32.0000	34.2768
$	51 2-Fluorobiphenyl	172	7.346	7.357	(0.914)	287299	16.0000	16.8267
	52 Biphenyl	154	7.453	7.469	(0.927)	331323	16.0000	16.8309
	53 2-Chloronaphthalene	162	7.485	7.496	(0.931)	240170	16.0000	16.6934
	55 2-Nitroaniline	138	7.576	7.592	(0.943)	79200	16.0000	16.8610
	56 1,4-Dinitrobenzene	168	7.710	7.731	(0.959)	40546	16.0000	14.4543
	57 Dimethylphthalate	163	7.737	7.769	(0.963)	280710	16.0000	16.5456
	58 1,3-Dinitrobenzene	168	7.785	7.817	(0.969)	49772	16.0000	16.9664
	59 2,6-Dinitrotoluene	165	7.806	7.833	(0.971)	66930	16.0000	16.9429
	60 1,2-Dinitrobenzene	168	7.870	7.902	(0.979)	34133	16.0000	16.8511
	61 Acenaphthylene	152	7.897	7.913	(0.983)	382626	16.0000	16.8199
	62 3-Nitroaniline	138	7.983	8.009	(0.993)	65415	16.0000	16.4968
*	63 Acenaphthene-d10	164	8.036	8.047	(1.000)	503479	40.0000	
	64 Acenaphthene	153	8.068	8.084	(1.004)	252064	16.0000	16.6057
	65 2,4-Dinitrophenol	184	8.084	8.116	(1.006)	59134	32.0000	23.2875
	66 4-Nitrophenol	65	8.138	8.181	(1.013)	83963	32.0000	30.2361
	67 Pentachlorobenzene	250	8.191	8.207	(1.019)	116076	16.0000	16.6290
	68 2,4-Dinitrotoluene	165	8.207	8.239	(1.021)	87188	16.0000	16.9947
	69 Dibenzofuran	168	8.239	8.255	(1.025)	343256	16.0000	16.7566
	70 2,3,5,6-Tetrachlorophenol	230	8.309	8.325	(1.034)	50130	16.0000	15.1466
	71 2,3,4,6-Tetrachlorophenol	230	8.352	8.373	(1.039)	110700	32.0000	35.7595
	72 2-Napthylamine	143	8.400	8.421	(1.045)	161797	16.0000	11.7208
	73 Diethylphthalate	149	8.432	8.459	(1.049)	292892	16.0000	16.5801
	74 4-Chlorophenyl-phenylether	204	8.566	8.582	(1.066)	140489	16.0000	16.7285
	75 Fluorene	166	8.582	8.603	(1.068)	294846	16.0000	16.9701
	76 4-Nitroaniline	138	8.592	8.651	(1.069)	67910	16.0000	17.7517

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	77 2-Methyl-4,6-dinitrophenol	198	8.619	8.657	(0.904)	92060	32.0000	28.5520
	78 N-Nitrosodiphenylamine	169	8.683	8.710	(0.911)	245995	18.7000	19.8291
	79 Diphenylamine	169	8.683	8.710	(0.911)	245995	16.0000	16.9315
	80 1,2-Diphenylhydrazine	77	8.726	8.747	(0.915)	278446	16.1600	16.9684
	81 Azobenzene	77	8.726	8.747	(0.915)	278446	16.0000	16.8004
$	82 2,4,6-Tribromophenol	330	8.822	8.838	(0.925)	42539	16.0000	16.8672
	83 n-Heptadecane	57	8.903	8.913	(0.934)	190948	16.0000	17.0151
	84 4-Bromophenyl-phenylether	248	9.063	9.074	(0.951)	83704	16.0000	16.7363
	86 Dimethoate	87	9.154	9.186	(0.960)	115436	16.0000	17.2649
	85 Hexachlorobenzene	284	9.127	9.143	(0.957)	91372	16.0000	16.4488
	87 Atrazine	200	9.202	9.229	(0.965)	86081	16.0000	17.4758
	89 n-Octadecane	57	9.352	9.363	(0.981)	200333	16.0000	17.3033
	88 Pentachlorophenol	266	9.325	9.341	(0.978)	88481	32.0000	27.8502
*	90 Phenanthrene-d10	188	9.534	9.539	(1.000)	904044	40.0000	
	91 Phenanthrene	178	9.555	9.571	(1.002)	413533	16.0000	16.7842
	92 Anthracene	178	9.603	9.625	(1.007)	417406	16.0000	17.0234
	93 Carbazole	167	9.758	9.774	(1.024)	382778	16.0000	17.2696
	94 Di-n-Butylphthalate	149	10.063	10.074	(1.056)	509618	16.0000	17.4679
	95 Fluoranthene	202	10.748	10.764	(1.127)	459316	16.0000	17.0588
	97 Pyrene	202	10.983	10.999	(0.901)	478650	16.0000	17.0220
$	98 Terphenyl-d14	244	11.106	11.122	(0.911)	355910	16.0000	17.2689
	99 Butylbenzylphthalate	149	11.577	11.593	(0.950)	227812	16.0000	17.1353
	100 Di(2-Ethylhexyl)adipate	129	11.625	11.636	(0.953)	227579	16.0000	17.5123
	101 bis(2-Ethylhexyl)phthalate	149	12.128	12.139	(0.995)	345170	16.0000	17.6619
	102 3,3-Dichlorobenzidine	252	12.133	12.160	(0.995)	172176	16.0000	18.4376
	103 Benzo(a)anthracene	228	12.176	12.197	(0.999)	463737	16.0000	16.7746
*	104 Chrysene-d12	240	12.192	12.208	(1.000)	995426	40.0000	
	105 Chrysene	228	12.219	12.240	(1.002)	432479	16.0000	16.9910
	106 Di-n-Octylphthalate	149	12.764	12.780	(1.047)	591117	16.0000	17.4985
	107 Benzo(b)fluoranthene	252	13.299	13.342	(0.964)	464154	16.0000	15.9450
	108 Benzo(k)fluoranthene	252	13.337	13.374	(0.967)	516975	16.0000	17.5324
	109 Benzo(a)pyrene	252	13.716	13.759	(0.994)	448074	16.0000	16.7180
*	110 Perylene-d12	264	13.797	13.813	(1.000)	1042196	40.0000	
	111 Indeno(1,2,3-cd)pyrene	276	15.465	15.556	(1.121)	539160	16.0000	16.6796
	112 Dibenzo(a,h)anthracene	278	15.481	15.572	(1.122)	458074	16.0000	16.9311
	113 Benzo(g,h,i)perylene	276	15.984	16.075	(1.159)	449093	16.0000	16.4265

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms14.i
Lab File ID: 14092109.D
Lab Smp Id: 1237
Analysis Type: SV
Quant Type: ISTD
Operator: DHF
Method File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-82
Misc Info: ZZ SVMS 8270/3510C BNA242

Calibration Date: 21-SEP-2012
Calibration Time: 14:39

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	201484	100742	402968	204493	1.49
34 Naphthalene-d8	894115	447058	1788230	858224	-4.01
63 Acenaphthene-d10	515108	257554	1030216	503479	-2.26
90 Phenanthrene-d10	924191	462096	1848382	904044	-2.18
104 Chrysene-d12	1005497	502749	2010994	995426	-1.00
110 Perylene-d12	1050509	525255	2101018	1042196	-0.79

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	5.11	4.61	5.61	5.11	-0.00
34 Naphthalene-d8	6.31	5.81	6.81	6.30	-0.09
63 Acenaphthene-d10	8.04	7.54	8.54	8.04	-0.07
90 Phenanthrene-d10	9.53	9.03	10.03	9.53	-0.00
104 Chrysene-d12	12.20	11.70	12.70	12.19	-0.09
110 Perylene-d12	13.80	13.30	14.30	13.80	-0.04

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1237
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
123-91-1	1,4-Dioxane	15.2382	
62-75-9	N-Nitrosodimethylamine	15.4197	
110-86-1	Pyridine	15.8617	
55-18-5	N-Nitrosodiethylamine	15.8880	
100-52-7	Benzaldehyde	18.1568	
108-95-2	Phenol	34.9030	
62-53-3	Aniline	16.4075	
111-44-4	Bis(2-Chloroethyl)ether	16.5905	
95-57-8	2-Chlorophenol	33.6681	
124-18-5	n-Decane	16.4773	
541-73-1	1,3-Dichlorobenzene	16.0590	
106-46-7	1,4-Dichlorobenzene	16.4832	
100-51-6	Benzyl Alcohol	12.5086	
95-50-1	1,2-Dichlorobenzene	16.5567	
95-48-7	o-Cresol	32.4694	
108-60-1	bis(2-Chloroisopropyl)ether	15.6758	
108394/106445	mp-Cresol	32.4310	
930-55-2	N-Nitrosopyrrolidine	15.9119	
621-64-7	N-Nitrosodi-n-propylamine	16.1337	
98-86-2	Acetophenone	16.0962	
67-72-1	Hexachloroethane	15.7372	
98-95-3	Nitrobenzene	16.6384	
78-59-1	Isophorone	16.5735	
88-75-5	2-Nitrophenol	34.9285	
105-67-9	2,4-Dimethylphenol	34.6847	
111-91-1	Bis(2-Chloroethoxy)methane	16.7653	
65-85-0	Benzoic acid	25.8646	
120-83-2	2,4-Dichlorophenol	34.7970	
120-82-1	1,2,4-Trichlorobenzene	16.7945	
10482-56-1	alpha-Terpineol	4.07817	J
91-20-3	Naphthalene	16.9780	
106-47-8	4-Chloroaniline	17.3740	
87-65-0	2,6-Dichlorophenol	17.1929	
87-68-3	Hexachlorobutadiene	16.6383	
924-16-3	N-Nitrosodi-n-butylamine	16.5134	
108-46-3	Resorcinol	16.6233	J
105-60-2	Caprolactam	15.6909	
59-50-7	4-Chloro-3-methylphenol	33.6474	
91-57-6	2-Methylnaphthalene	16.9527	
90-12-0	1-Methylnaphthalene	16.9923	
77-47-4	Hexachlorocyclopentadiene	15.1196	
95-94-3	1,2,4,5-Tetrachlorobenzene	16.6563	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1237
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
88-06-2	2,4,6-Trichlorophenol	34.8996	
608-27-5	2,3-Dichloroaniline	17.2340	
95-95-4	2,4,5-Trichlorophenol	34.2768	
92-52-4	Biphenyl	16.8309	
91-58-7	2-Chloronaphthalene	16.6934	
88-74-4	2-Nitroaniline	16.8610	
100-25-4	1,4-Dinitrobenzene	14.4543	
131-11-3	Dimethylphthalate	16.5456	
99-65-0	1,3-Dinitrobenzene	16.9664	
606-20-2	2,6-Dinitrotoluene	16.9429	
528-29-0	1,2-Dinitrobenzene	16.8511	
208-96-8	Acenaphthylene	16.8199	
99-09-2	3-Nitroaniline	16.4968	
83-32-9	Acenaphthene	16.6057	
51-28-5	2,4-Dinitrophenol	23.2875	
100-02-7	4-Nitrophenol	30.2361	
608-93-5	Pentachlorobenzene	16.6290	
121-14-2	2,4-Dinitrotoluene	16.9947	
132-64-9	Dibenzofuran	16.7566	
935-95-5	2,3,5,6-Tetrachlorophenol	15.1466	
58-90-2	2,3,4,6-Tetrachlorophenol	35.7595	
91-59-8	2-Napthylamine	11.7208	
84-66-2	Diethylphthalate	16.5801	
7005-72-3	4-Chlorophenyl-phenylether	16.7285	
86-73-7	Fluorene	16.9701	
100-01-6	4-Nitroaniline	17.7517	
534-52-1	2-Methyl-4,6-dinitrophenol	28.5520	
86-30-6	N-Nitrosodiphenylamine	19.8291	
122-39-4	Diphenylamine	16.9315	
122-66-7	1,2-Diphenylhydrazine	16.9684	
103-33-3	Azobenzene	16.8004	
629-78-7	n-Heptadecane	17.0151	
101-55-3	4-Bromophenyl-phenylether	16.7363	
60-51-5	Dimethoate	17.2649	
118-74-1	Hexachlorobenzene	16.4488	
1912-24-9	Atrazine	17.4758	
593-45-3	n-Octadecane	17.3033	
87-86-5	Pentachlorophenol	27.8502	
85-01-8	Phenanthrene	16.7842	
120-12-7	Anthracene	17.0234	
86-74-8	Carbazole	17.2696	
84-74-2	Di-n-Butylphthalate	17.4679	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1237
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
206-44-0	Fluoranthene	17.0588	
92-87-5	Benzidine	15.3734	J
129-00-0	Pyrene	17.0220	
85-68-7	Butylbenzylphthalate	17.1353	
103-23-1	Di(2-Ethylhexyl)adipate	17.5123	
117-81-7	bis(2-Ethylhexyl)phthalate	17.6619	
91-94-1	3,3-Dichlorobenzidine	18.4376	
56-55-3	Benzo(a)anthracene	16.7746	
218-01-9	Chrysene	16.9910	
117-84-0	Di-n-Octylphthalate	17.4985	
205-99-2	Benzo(b)fluoranthene	15.9450	
207-08-9	Benzo(k)fluoranthene	17.5324	
50-32-8	Benzo(a)pyrene	16.7180	
193-39-5	Indeno(1,2,3-cd)pyrene	16.6796	
53-70-3	Dibenzo(a,h)anthracene	16.9311	
191-24-2	Benzo(g,h,i)perylene	16.4265	
367-12-4	2-Fluorophenol	15.8802	
4165-62-2	Phenol-d5	17.5025	
4165-60-0	Nitrobenzene-d5	16.7976	
321-60-8	2-Fluorobiphenyl	16.8267	
118-79-6	2,4,6-Tribromophenol	16.8672	
98904-43-9	Terphenyl-d14	17.2689	

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092109.D

Date : 21-SEP-2012 14:13

Client ID:

Sample Info: 1237;1;1;4;BNA-16;;;;;;SV0242

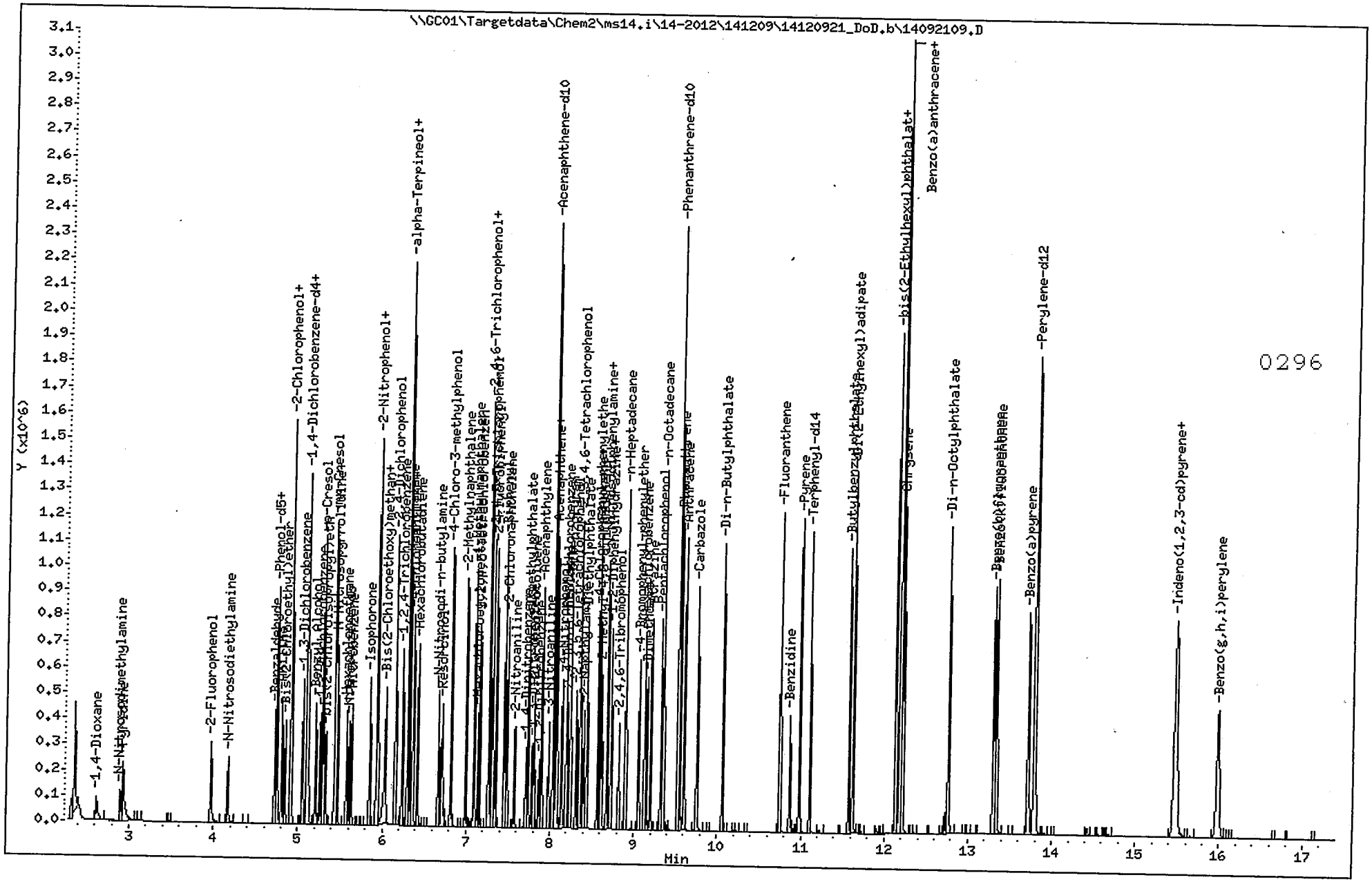
Volume Injected (uL): 1.0

Column phase: ZB-5

Instrument: ms14.i

Operator: DHF

Column diameter: 0.25



ALS - Middletown

Semivolatile Report for SW-846 Method 8270

Data file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\140921
Lab Smp Id: 1238
Inj Date : 21-SEP-2012 14:39
Operator : DHF
Inst ID: ms14.i
Smp Info : 1238;1;1;5;BNA-50A;;;;;;SV0242
Misc Info : ZZ SVMS 8270/3510C BNA242
Comment :
Method : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-827
Meth Date : 24-Sep-2012 15:27 Lopez
Quant Type: ISTD
Cal Date : 21-SEP-2012 14:39
Cal File: 14092110.D
Als bottle: 10
Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: 12_3510_3550all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Sample Volume extracted(mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	1 1,4-Dioxane	88	2.607	2.613	(0.511)	178327	50.0000	50.6708
	2 N-Nitrosodimethylamine	74	2.891	2.901	(0.566)	241854	50.0000	53.1715
	3 Pyridine	79	2.912	2.917	(0.570)	427026	50.0000	51.7772
$	4 2-Fluorophenol	112	3.966	3.971	(0.777)	373740	50.0000	52.4159
	5 N-Nitrosodiethylamine	102	4.174	4.185	(0.818)	192935	50.0000	52.4980
	6 Benzaldehyde	106	4.725	4.725	(0.926)	260621	50.0000	52.2096
$	7 Phenol-d5	99	4.741	4.747	(0.929)	417431	50.0000	52.8605
	8 Phenol	94	4.757	4.763	(0.932)	801606	100.000	103.640
	9 Aniline	93	4.811	4.816	(0.942)	528043	50.0000	52.7319
	10 Bis(2-Chloroethyl)ether	93	4.848	4.859	(0.950)	376125	50.0000	51.0621
	12 2-Chlorophenol	128	4.918	4.923	(0.963)	732185	100.000	102.639
	11 n-Decane	57	4.912	4.918	(0.962)	382754	50.0000	50.0583
	13 1,3-Dichlorobenzene	146	5.057	5.057	(0.991)	410827	50.0000	50.1348
*	14 1,4-Dichlorobenzene-d4	152	5.105	5.105	(1.000)	201484	40.0000	
	15 1,4-Dichlorobenzene	146	5.121	5.121	(1.003)	390074	50.0000	49.8766
	16 Benzyl Alcohol	108	5.212	5.233	(1.021)	255498	50.0000	45.1925
	17 1,2-Dichlorobenzene	146	5.260	5.260	(1.030)	289000	50.0000	49.2116
	18 o-Cresol	107	5.298	5.308	(1.038)	612060	100.000	101.757
	19 bis(2-Chloroisopropyl)ether	45	5.324	5.335	(1.043)	459097	50.0000	49.8184
	20 mp-Cresol	107	5.447	5.469	(1.067)	840098	100.000	99.0718
	23 N-Nitrosopyrrolidine	100	5.469	5.512	(1.071)	206632	50.0000	51.8581

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
	22 N-Nitrosodi-n-propylamine	70	5.463	5.490	(1.070)	285016	50.0000	52.1760
	21 Acetophenone	105	5.469	5.485	(1.071)	547760	50.0000	51.0194
	24 Hexachloroethane	117	5.576	5.576	(1.092)	172967	50.0000	51.0291
$	25 Nitrobenzene-d5	128	5.619	5.629	(0.891)	207171	50.0000	51.9339
	26 Nitrobenzene	77	5.635	5.645	(0.893)	386904	50.0000	50.1522
	27 Isophorone	82	5.859	5.886	(0.929)	741014	50.0000	51.4506
	28 2-Nitrophenol	139	5.934	5.945	(0.941)	425576	100.000	104.494
	29 2,4-Dimethylphenol	122	5.945	5.961	(0.942)	730166	100.000	100.617
	30 Bis(2-Chloroethoxy)methane	93	6.041	6.046	(0.958)	471407	50.0000	50.1792
	31 Benzoic acid	105	6.078	6.153	(0.964)	444388	100.000	103.107
	32 2,4-Dichlorophenol	162	6.159	6.175	(0.976)	630179	100.000	101.517
	33 1,2,4-Trichlorobenzene	180	6.239	6.244	(0.989)	358758	50.0000	49.4231
	35 alpha-Terpineol	59	6.314	6.325	(1.001)	65156	12.5000	12.7005
*	34 Naphthalene-d8	136	6.308	6.309	(1.000)	894115	40.0000	
	36 Naphthalene	128	6.330	6.335	(1.003)	1156484	50.0000	49.1258
	37 4-Chloroaniline	127	6.367	6.378	(1.009)	468085	50.0000	50.5780
	38 2,6-Dichlorophenol	162	6.378	6.383	(1.011)	331333	50.0000	50.7092
	39 Hexachlorobutadiene	225	6.426	6.426	(1.019)	207838	50.0000	49.5722
	40 N-Nitrosodi-n-butylamine	57	6.683	6.699	(1.059)	203356	50.0000	51.9126
	41 Resorcinol	110	6.747	6.726	(1.070)	361274	50.0000	53.4834(a)
	42 Caprolactam	56	6.795	6.838	(1.077)	133480	50.0000	51.4104(M)
	43 4-Chloro-3-methylphenol	107	6.833	6.849	(1.083)	681456	100.000	101.819
	44 2-Methylnaphthalene	142	6.998	7.004	(1.109)	791207	50.0000	49.4866
	45 1-Methylnaphthalene	142	7.100	7.105	(1.125)	737946	50.0000	49.6319
	46 Hexachlorocyclopentadiene	237	7.143	7.143	(1.132)	209239	50.0000	50.0076
	47 1,2,4,5-Tetrachlorobenzene	216	7.159	7.170	(0.890)	386760	50.0000	49.6452
	48 2,4,6-Trichlorophenol	196	7.271	7.282	(0.904)	456276	100.000	102.844
	49 2,3-Dichloroaniline	161	7.277	7.287	(0.905)	409273	50.0000	50.2730
	50 2,4,5-Trichlorophenol	196	7.314	7.330	(0.910)	480652	100.000	100.170
$	51 2-Fluorobiphenyl	172	7.351	7.357	(0.914)	863044	50.0000	49.4061
	52 Biphenyl	154	7.458	7.469	(0.927)	991553	50.0000	49.2330
	53 2-Chloronaphthalene	162	7.491	7.496	(0.931)	726854	50.0000	49.3805
	55 2-Nitroaniline	138	7.581	7.592	(0.943)	257068	50.0000	53.4921
	56 1,4-Dinitrobenzene	168	7.721	7.731	(0.960)	136755	50.0000	47.6513
	57 Dimethylphthalate	163	7.747	7.769	(0.963)	870024	50.0000	50.1232
	58 1,3-Dinitrobenzene	168	7.795	7.817	(0.969)	160095	50.0000	53.3416
	59 2,6-Dinitrotoluene	165	7.817	7.833	(0.972)	212164	50.0000	52.4955
	60 1,2-Dinitrobenzene	168	7.881	7.902	(0.980)	108483	50.0000	52.3478
	61 Acenaphthylene	152	7.908	7.913	(0.983)	1172999	50.0000	50.3998
	62 3-Nitroaniline	138	7.993	8.009	(0.994)	214330	50.0000	52.8310
*	63 Acenaphthene-d10	164	8.041	8.047	(1.000)	515108	40.0000	
	64 Acenaphthene	153	8.074	8.084	(1.004)	764488	50.0000	49.2266
	65 2,4-Dinitrophenol	184	8.095	8.116	(1.007)	236511	100.000	91.0374
	66 4-Nitrophenol	65	8.154	8.181	(1.014)	269836	100.000	94.9774
	67 Pentachlorobenzene	250	8.197	8.207	(1.019)	353860	50.0000	49.5493
	68 2,4-Dinitrotoluene	165	8.223	8.239	(1.023)	280421	50.0000	53.4258
	69 Dibenzofuran	168	8.245	8.255	(1.025)	1036518	50.0000	49.4569
	70 2,3,5,6-Tetrachlorophenol	230	8.314	8.325	(1.034)	169183	50.0000	49.9640
	71 2,3,4,6-Tetrachlorophenol	230	8.362	8.373	(1.040)	340160	100.000	107.401
	72 2-Napthylamine	143	8.405	8.421	(1.045)	653982	50.0000	46.3059
	73 Diethylphthalate	149	8.443	8.459	(1.050)	897006	50.0000	49.6315
	74 4-Chlorophenyl-phenylether	204	8.571	8.582	(1.066)	428140	50.0000	49.8291
	75 Fluorene	166	8.592	8.603	(1.069)	885127	50.0000	49.7941
	76 4-Nitroaniline	138	8.614	8.651	(1.071)	211371	50.0000	54.0051

	Compounds	QUANT SIG MASS	RT.	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	77 2-Methyl-4,6-dinitrophenol	198	8.630	8.657	(0.905)	325209	100.000	98.6633
	78 N-Nitrosodiphenylamine	169	8.694	8.710	(0.912)	750602	58.6000	59.1854
	79 Diphenylamine	169	8.694	8.710	(0.912)	750602	50.0000	50.5366
	80 1,2-Diphenylhydrazine	77	8.737	8.747	(0.916)	866280	50.5000	51.6401
	81 Azobenzene	77	8.737	8.747	(0.916)	866280	50.0000	51.1288
$	82 2,4,6-Tribromophenol	330	8.828	8.838	(0.926)	141073	50.0000	54.7176
	83 n-Heptadecane	57	8.908	8.913	(0.934)	589543	50.0000	51.3882
	84 4-Bromophenyl-phenylether	248	9.068	9.074	(0.951)	259246	50.0000	50.7051
	86 Dimethoate	87	9.165	9.186	(0.961)	375160	50.0000	54.8866
	85 Hexachlorobenzene	284	9.133	9.143	(0.958)	281640	50.0000	49.5956
	87 Atrazine	200	9.213	9.229	(0.966)	257008	50.0000	51.0394
	89 n-Octadecane	57	9.357	9.363	(0.981)	607311	50.0000	51.3115
	88 Pentachlorophenol	266	9.330	9.341	(0.979)	328954	100.000	101.284
*	90 Phenanthrene-d10	188	9.534	9.539	(1.000)	924191	40.0000	
	91 Phenanthrene	178	9.560	9.571	(1.003)	1232868	50.0000	48.9479
	92 Anthracene	178	9.614	9.625	(1.008)	1252263	50.0000	49.9588
	93 Carbazole	167	9.764	9.774	(1.024)	1144312	50.0000	50.5020
	94 Di-n-Butylphthalate	149	10.069	10.074	(1.056)	1575728	50.0000	52.8330
	95 Fluoranthene	202	10.753	10.764	(1.128)	1396125	50.0000	50.7211
	96 Benzidine	184	10.871	10.882	(0.891)	610086	50.0000	51.3486
	97 Pyrene	202	10.989	10.999	(0.901)	1428385	50.0000	50.2882
$	98 Terphenyl-d14	244	11.112	11.122	(0.911)	1035011	50.0000	49.7161
	99 Butylbenzylphthalate	149	11.582	11.593	(0.949)	745826	50.0000	55.5369
	100 Di(2-Ethylhexyl)adipate	129	11.630	11.636	(0.953)	727507	50.0000	55.4213
	101 bis(2-Ethylhexyl)phthalate	149	12.133	12.139	(0.994)	1079291	50.0000	54.6729
	102 3,3-Dichlorobenzidine	252	12.144	12.160	(0.995)	502671	50.0000	53.2899
	103 Benzo(a)anthracene	228	12.187	12.197	(0.999)	1394246	50.0000	49.9286
*'	104 Chrysene-d12	240	12.203	12.208	(1.000)	1005497	40.0000	
	105 Chrysene	228	12.229	12.240	(1.002)	1228639	50.0000	47.7865
	106 Di-n-Octylphthalate	149	12.770	12.780	(1.046)	1906232	50.0000	55.8639
	107 Benzo(b)fluoranthene	252	13.315	13.342	(0.965)	1528073	50.0000	52.0784
	108 Benzo(k)fluoranthene	252	13.353	13.374	(0.967)	1468780	50.0000	49.4173
	109 Benzo(a)pyrene	252	13.732	13.759	(0.995)	1409097	50.0000	52.1586
*	110 Perylene-d12	264	13.802	13.813	(1.000)	1050509	40.0000	
	111 Indeno(1,2,3-cd)pyrene	276	15.492	15.556	(1.122)	1682823	50.0000	51.6483
	112 Dibenzo(a,h)anthracene	278	15.519	15.572	(1.124)	1393228	50.0000	51.0883
	113 Benzo(g,h,i)perylene	276	16.022	16.075	(1.161)	1415682	50.0000	51.3717

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms14.i
Lab File ID: 14092110.D
Lab Smp Id: 1238
Analysis Type: SV
Quant Type: ISTD
Operator: DHF
Method File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-82
Misc Info: ZZ SVMS 8270/3510C BNA242

Calibration Date: 21-SEP-2012
Calibration Time: 14:39

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	201484	100742	402968	201484	0.00
34 Naphthalene-d8	894115	447058	1788230	894115	0.00
63 Acenaphthene-d10	515108	257554	1030216	515108	0.00
90 Phenanthrene-d10	924191	462096	1848382	924191	0.00
104 Chrysene-d12	1005497	502749	2010994	1005497	0.00
110 Perylene-d12	1050509	525255	2101018	1050509	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	5.11	4.61	5.61	5.11	0.00
34 Naphthalene-d8	6.31	5.81	6.81	6.31	0.00
63 Acenaphthene-d10	8.04	7.54	8.54	8.04	0.00
90 Phenanthrene-d10	9.53	9.03	10.03	9.53	0.00
104 Chrysene-d12	12.20	11.70	12.70	12.20	0.00
110 Perylene-d12	13.80	13.30	14.30	13.80	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1238
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
123-91-1	1,4-Dioxane	50.6708	
62-75-9	N-Nitrosodimethylamine	53.1715	
110-86-1	Pyridine	51.7772	
55-18-5	N-Nitrosodiethylamine	52.4980	
100-52-7	Benzaldehyde	52.2096	
108-95-2	Phenol	103.640	
62-53-3	Aniline	52.7319	
111-44-4	Bis(2-Chloroethyl)ether	51.0621	
95-57-8	2-Chlorophenol	102.639	
124-18-5	n-Decane	50.0583	
541-73-1	1,3-Dichlorobenzene	50.1348	
106-46-7	1,4-Dichlorobenzene	49.8766	
100-51-6	Benzyl Alcohol	45.1925	
95-50-1	1,2-Dichlorobenzene	49.2116	
95-48-7	o-Cresol	101.757	
108-60-1	bis(2-Chloroisopropyl)ether	49.8184	
108394/106445	mp-Cresol	99.0718	
930-55-2	N-Nitrosopyrrolidine	51.8581	
621-64-7	N-Nitrosodi-n-propylamine	52.1760	
98-86-2	Acetophenone	51.0194	
67-72-1	Hexachloroethane	51.0291	
98-95-3	Nitrobenzene	50.1522	
78-59-1	Isophorone	51.4506	
88-75-5	2-Nitrophenol	104.494	
105-67-9	2,4-Dimethylphenol	100.617	
111-91-1	Bis(2-Chloroethoxy)methane	50.1792	
65-85-0	Benzoic acid	103.107	
120-83-2	2,4-Dichlorophenol	101.517	
120-82-1	1,2,4-Trichlorobenzene	49.4231	
10482-56-1	alpha-Terpineol	12.7005	
91-20-3	Naphthalene	49.1258	
106-47-8	4-Chloroaniline	50.5780	
87-65-0	2,6-Dichlorophenol	50.7092	
87-68-3	Hexachlorobutadiene	49.5722	
924-16-3	N-Nitrosodi-n-butylamine	51.9126	
108-46-3	Resorcinol	53.4834	J
105-60-2	Caprolactam	51.4104	
59-50-7	4-Chloro-3-methylphenol	101.819	
91-57-6	2-Methylnaphthalene	49.4866	
90-12-0	1-Methylnaphthalene	49.6319	
77-47-4	Hexachlorocyclopentadiene	50.0076	
95-94-3	1,2,4,5-Tetrachlorobenzene	49.6452	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1238
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
88-06-2	2,4,6-Trichlorophenol	102.844	
608-27-5	2,3-Dichloroaniline	50.2730	
95-95-4	2,4,5-Trichlorophenol	100.170	
92-52-4	Biphenyl	49.2330	
91-58-7	2-Chloronaphthalene	49.3805	
88-74-4	2-Nitroaniline	53.4921	
100-25-4	1,4-Dinitrobenzene	47.6513	
131-11-3	Dimethylphthalate	50.1232	
99-65-0	1,3-Dinitrobenzene	53.3416	
606-20-2	2,6-Dinitrotoluene	52.4955	
528-29-0	1,2-Dinitrobenzene	52.3478	
208-96-8	Acenaphthylene	50.3998	
99-09-2	3-Nitroaniline	52.8310	
83-32-9	Acenaphthene	49.2266	
51-28-5	2,4-Dinitrophenol	91.0374	
100-02-7	4-Nitrophenol	94.9774	
608-93-5	Pentachlorobenzene	49.5493	
121-14-2	2,4-Dinitrotoluene	53.4258	
132-64-9	Dibenzofuran	49.4569	
935-95-5	2,3,5,6-Tetrachlorophenol	49.9640	
58-90-2	2,3,4,6-Tetrachlorophenol	107.401	
91-59-8	2-Napthylamine	46.3059	
84-66-2	Diethylphthalate	49.6315	
7005-72-3	4-Chlorophenyl-phenylether	49.8291	
86-73-7	Fluorene	49.7941	
100-01-6	4-Nitroaniline	54.0051	
534-52-1	2-Methyl-4,6-dinitrophenol	98.6633	
86-30-6	N-Nitrosodiphenylamine	59.1854	
122-39-4	Diphenylamine	50.5366	
122-66-7	1,2-Diphenylhydrazine	51.6401	
103-33-3	Azobenzene	51.1288	
629-78-7	n-Heptadecane	51.3882	
101-55-3	4-Bromophenyl-phenylether	50.7051	
60-51-5	Dimethoate	54.8866	
118-74-1	Hexachlorobenzene	49.5956	
1912-24-9	Atrazine	51.0394	
593-45-3	n-Octadecane	51.3115	
87-86-5	Pentachlorophenol	101.284	
85-01-8	Phenanthrene	48.9479	
120-12-7	Anthracene	49.9588	
86-74-8	Carbazole	50.5020	
84-74-2	Di-n-Butylphthalate	52.8330	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1238
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
206-44-0	Fluoranthene	50.7211	
92-87-5	Benzidine	51.3486	
129-00-0	Pyrene	50.2882	
85-68-7	Butylbenzylphthalate	55.5369	
103-23-1	Di(2-Ethylhexyl)adipate	55.4213	
117-81-7	bis(2-Ethylhexyl)phthalate	54.6729	
91-94-1	3,3-Dichlorobenzidine	53.2899	
56-55-3	Benzo(a)anthracene	49.9286	
218-01-9	Chrysene	47.7865	
117-84-0	Di-n-Octylphthalate	55.8639	
205-99-2	Benzo(b)fluoranthene	52.0784	
207-08-9	Benzo(k)fluoranthene	49.4173	
50-32-8	Benzo(a)pyrene	52.1586	
193-39-5	Indeno(1,2,3-cd)pyrene	51.6483	
53-70-3	Dibenzo(a,h)anthracene	51.0883	
191-24-2	Benzo(g,h,i)perylene	51.3717	
367-12-4	2-Fluorophenol	52.4159	
4165-62-2	Phenol-d5	52.8605	
4165-60-0	Nitrobenzene-d5	51.9339	
321-60-8	2-Fluorobiphenyl	49.4061	
118-79-6	2,4,6-Tribromophenol	54.7176	
98904-43-9	Terphenyl-d14	49.7161	

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092110.D

Date : 21-SEP-2012 14:39

Client ID:

Sample Info: 1238;1;1;5;BNA-50A;;;;;;SV0242

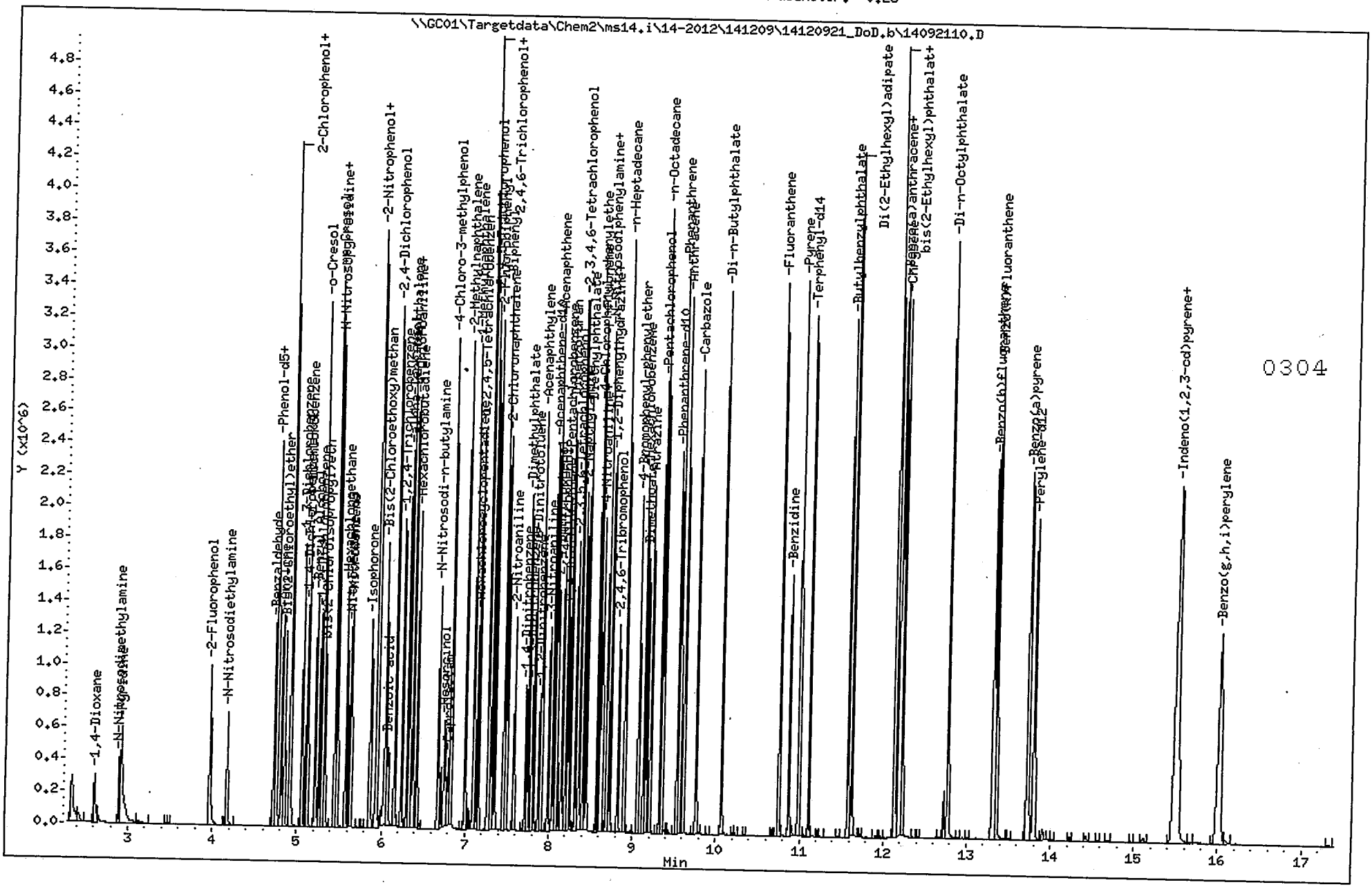
Volume Injected (uL): 1.0

Column phase: ZB-5

Instrument: ms14.i

Operator: DHF

Column diameter: 0.25



ALS - Middletown

Semivolatile Report for SW-846 Method 8270

Data file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\140921
Lab Smp Id: 1239
Inj Date : 21-SEP-2012 15:04
Operator : DHF Inst ID: ms14.i
Smp Info : 1239;1;1;6;BNA-70;;;;;;SV0242
Misc Info : ZZ SVMS 8270/3510C BNA242
Comment :
Method : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-827
Meth Date : 24-Sep-2012 15:27 Lopez Quant Type: ISTD
Cal Date : 21-SEP-2012 15:04 Cal File: 14092111.D
Als bottle: 11 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 12_3510_3550all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Sample Volume extracted(mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	1 1,4-Dioxane	88	2.613	2.613	(0.512)	237903	70.0000	71.9496
	2 N-Nitrosodimethylamine	74	2.896	2.901	(0.567)	324398	70.0000	75.9087
	3 Pyridine	79	2.917	2.917	(0.572)	573027	70.0000	73.9515
$	4 2-Fluorophenol	112	3.966	3.971	(0.777)	499454	70.0000	74.5549
	5 N-Nitrosodiethylamine	102	4.180	4.185	(0.819)	261867	70.0000	75.8404
	6 Benzaldehyde	106	4.725	4.725	(0.926)	322859	70.0000	68.8401
$	7 Phenol-d5	99	4.741	4.747	(0.929)	540922	70.0000	72.9069
	8 Phenol	94	4.757	4.763	(0.932)	1022639	140.000	140.727
	9 Aniline	93	4.811	4.816	(0.942)	710489	70.0000	75.5177
	10 Bis(2-Chloroethyl)ether	93	4.854	4.859	(0.951)	464368	70.0000	67.0991
	12 2-Chlorophenol	128	4.923	4.923	(0.964)	946771	140.000	141.261
	11 n-Decane	57	4.918	4.918	(0.963)	501527	70.0000	69.8133
	13 1,3-Dichlorobenzene	146	5.057	5.057	(0.991)	538837	70.0000	69.9883
*	14 1,4-Dichlorobenzene-d4	152	5.105	5.105	(1.000)	189301	40.0000	
	15 1,4-Dichlorobenzene	146	5.121	5.121	(1.003)	503008	70.0000	68.4561
	16 Benzyl Alcohol	108	5.217	5.233	(1.022)	349323	70.0000	65.7648
	17 1,2-Dichlorobenzene	146	5.260	5.260	(1.030)	339992	70.0000	61.6206
	18 o-Cresol	107	5.303	5.308	(1.039)	808826	140.000	143.124
	19 bis(2-Chloroisopropyl)ether	45	5.330	5.335	(1.044)	619085	70.0000	71.5029
	20 mp-Cresol	107	5.453	5.469	(1.068)	1130806	140.000	141.937
	23 N-Nitrosopyrrolidine	100	5.490	5.512	(1.075)	277958	70.0000	74.2482

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	22 N-Nitrosodi-n-propylamine	70	5.474	5.490	(1.072)	374380	70.0000	72.9460
	21 Acetophenone	105	5.474	5.485	(1.072)	721257	70.0000	71.5028
	24 Hexachloroethane	117	5.576	5.576	(1.092)	229910	70.0000	72.1939
$	25 Nitrobenzene-d5	128	5.619	5.629	(0.891)	280189	70.0000	71.8603
	26 Nitrobenzene	77	5.640	5.645	(0.894)	520973	70.0000	69.0904
	27 Isophorone	82	5.870	5.886	(0.930)	1001372	70.0000	71.1337
	28 2-Nitrophenol	139	5.939	5.945	(0.942)	565936	140.000	142.167
	29 2,4-Dimethylphenol	122	5.950	5.961	(0.943)	956384	140.000	134.833
	30 Bis(2-Chloroethoxy)methane	93	6.041	6.046	(0.958)	628532	70.0000	68.4496
	31 Benzoic acid	105	6.105	6.153	(0.968)	610284	140.000	137.714
	32 2,4-Dichlorophenol	162	6.164	6.175	(0.977)	838204	140.000	138.147
	33 1,2,4-Trichlorobenzene	180	6.244	6.244	(0.990)	473994	70.0000	66.8063
	35 alpha-Terpineol	59	6.314	6.325	(1.001)	86958	17.5000	17.3417
*	34 Naphthalene-d8	136	6.309	6.309	(1.000)	873932	40.0000	
	36 Naphthalene	128	6.330	6.335	(1.003)	1510528	70.0000	65.6469
	37 4-Chloroaniline	127	6.373	6.378	(1.010)	621706	70.0000	68.7286
	38 2,6-Dichlorophenol	162	6.378	6.383	(1.011)	437721	70.0000	68.5385
	39 Hexachlorobutadiene	225	6.426	6.426	(1.019)	273989	70.0000	66.8593
	40 N-Nitrosodi-n-butylamine	57	6.688	6.699	(1.060)	272665	70.0000	71.2133
	41 Resorcinol	110	6.715	6.726	(1.064)	505542	70.0000	76.5693 (aM)
	42 Caprolactam	56	6.811	6.838	(1.080)	182270	70.0000	71.8234
	43 4-Chloro-3-methylphenol	107	6.838	6.849	(1.084)	911348	140.000	139.312
	44 2-Methylnaphthalene	142	7.004	7.004	(1.110)	1044393	70.0000	66.8309
	45 1-Methylnaphthalene	142	7.100	7.105	(1.125)	969450	70.0000	66.7080
	46 Hexachlorocyclopentadiene	237	7.143	7.143	(1.132)	289133	70.0000	70.6979
	47 1,2,4,5-Tetrachlorobenzene	216	7.164	7.170	(0.891)	506393	70.0000	67.6038
	48 2,4,6-Trichlorophenol	196	7.277	7.282	(0.905)	589490	140.000	138.190
	49 2,3-Dichloroaniline	161	7.282	7.287	(0.906)	529104	70.0000	67.5943
	50 2,4,5-Trichlorophenol	196	7.319	7.330	(0.910)	642347	140.000	139.228
$	51 2-Fluorobiphenyl	172	7.351	7.357	(0.914)	1144269	70.0000	68.1277
	52 Biphenyl	154	7.458	7.469	(0.927)	1296463	70.0000	66.9495
	53 2-Chloronaphthalene	162	7.491	7.496	(0.931)	954763	70.0000	67.4608
	55 2-Nitroaniline	138	7.587	7.592	(0.943)	348073	70.0000	75.3286
	56 1,4-Dinitrobenzene	168	7.721	7.731	(0.960)	191386	70.0000	69.3568
	57 Dimethylphthalate	163	7.753	7.769	(0.964)	1158188	70.0000	69.3959
	58 1,3-Dinitrobenzene	168	7.801	7.817	(0.970)	219154	70.0000	75.9425
	59 2,6-Dinitrotoluene	165	7.822	7.833	(0.973)	282636	70.0000	72.7320
	60 1,2-Dinitrobenzene	168	7.886	7.902	(0.981)	147145	70.0000	73.8465
	61 Acenaphthylene	152	7.908	7.913	(0.983)	1546367	70.0000	69.1020
	62 3-Nitroaniline	138	7.999	8.009	(0.995)	297711	70.0000	76.3218
*	63 Acenaphthene-d10	164	8.041	8.047	(1.000)	495280	40.0000	
	64 Acenaphthene	153	8.079	8.084	(1.005)	1007172	70.0000	67.4498
	65 2,4-Dinitrophenol	184	8.100	8.116	(1.007)	344553	140.000	137.934
	66 4-Nitrophenol	65	8.159	8.181	(1.015)	376704	140.000	137.901
	67 Pentachlorobenzene	250	8.202	8.207	(1.020)	465903	70.0000	67.8499
	68 2,4-Dinitrotoluene	165	8.229	8.239	(1.023)	377810	70.0000	74.8620
	69 Dibenzofuran	168	8.250	8.255	(1.026)	1365276	70.0000	67.7513
	70 2,3,5,6-Tetrachlorophenol	230	8.314	8.325	(1.034)	226764	70.0000	69.6501
	71 2,3,4,6-Tetrachlorophenol	230	8.362	8.373	(1.040)	436651	140.000	143.387
	72 2-Napthylamine	143	8.411	8.421	(1.046)	952935	70.0000	70.1748
	73 Diethylphthalate	149	8.448	8.459	(1.051)	1176189	70.0000	67.6841
	74 4-Chlorophenyl-phenylether	204	8.576	8.582	(1.067)	564340	70.0000	68.3102
	75 Fluorene	166	8.592	8.603	(1.069)	1157800	70.0000	67.7413
	76 4-Nitroaniline	138	8.624	8.651	(1.072)	291777	70.0000	77.5332

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	77 2-Methyl-4,6-dinitrophenol	198	8.641	8.657	(0.906)	449310	140.000	141.175
	78 N-Nitrosodiphenylamine	169	8.699	8.710	(0.912)	994283	82.0400	81.1958
	79 Diphenylamine	169	8.699	8.710	(0.912)	994283	70.0000	69.3305
	80 1,2-Diphenylhydrazine	77	8.737	8.747	(0.916)	1148726	70.7000	70.9192
	81 Azobenzene	77	8.737	8.747	(0.916)	1148726	70.0000	70.2170
$	82 2,4,6-Tribromophenol	330	8.833	8.838	(0.926)	188007	70.0000	75.5224
	83 n-Heptadecane	57	8.908	8.913	(0.934)	775586	70.0000	70.0158
	84 4-Bromophenyl-phenylether	248	9.068	9.074	(0.951)	346489	70.0000	70.1855
	86 Dimethoate	87	9.170	9.186	(0.962)	507723	70.0000	76.9299
	85 Hexachlorobenzene	284	9.138	9.143	(0.958)	370527	70.0000	67.5752
	87 Atrazine	200	9.218	9.229	(0.967)	336970	70.0000	69.3056
	89 n-Octadecane	57	9.357	9.363	(0.981)	802116	70.0000	70.1873
	88 Pentachlorophenol	266	9.336	9.341	(0.979)	456491	140.000	145.565
*	90 Phenanthrene-d10	188	9.534	9.539	(1.000)	892367	40.0000	
	91 Phenanthrene	178	9.566	9.571	(1.003)	1621480	70.0000	66.6726
	92 Anthracene	178	9.614	9.625	(1.008)	1658005	70.0000	68.5047
	93 Carbazole	167	9.769	9.774	(1.025)	1520775	70.0000	69.5099
	94 Di-n-Butylphthalate	149	10.069	10.074	(1.056)	2069968	70.0000	71.8796
	95 Fluoranthene	202	10.759	10.764	(1.128)	1838808	70.0000	69.1861
	96 Benzidine	184	10.876	10.882	(0.891)	832390	70.0000	73.9514
	97 Pyrene	202	10.994	10.999	(0.901)	1872708	70.0000	69.5941
$	98 Terphenyl-d14	244	11.117	11.122	(0.911)	1356132	70.0000	68.7600
	99 Butylbenzylphthalate	149	11.588	11.593	(0.950)	984029	70.0000	77.3453
	100 Di(2-Ethylhexyl)adipate	129	11.630	11.636	(0.953)	960636	70.0000	77.2467
	101 bis(2-Ethylhexyl)phthalate	149	12.133	12.139	(0.994)	1414691	70.0000	75.6444
	102 3,3-Dichlorobenzidine	252	12.149	12.160	(0.996)	662978	70.0000	74.1894
	103 Benzo(a)anthracene	228	12.187	12.197	(0.999)	1817343	70.0000	68.6955
*	104 Chrysene-d12	240	12.203	12.208	(1.000)	952575	40.0000	
	105 Chrysene	228	12.229	12.240	(1.002)	1613145	70.0000	66.2272
	106 Di-n-Octylphthalate	149	12.775	12.780	(1.047)	2498927	70.0000	77.3020
	107 Benzo(b)fluoranthene	252	13.321	13.342	(0.965)	2088125	70.0000	73.4679
	108 Benzo(k)fluoranthene	252	13.358	13.374	(0.967)	1927754	70.0000	66.9580
	109 Benzo(a)pyrene	252	13.738	13.759	(0.995)	1889279	70.0000	72.1954
*	110 Perylene-d12	264	13.807	13.813	(1.000)	1017587	40.0000	
	111 Indeno(1,2,3-cd)pyrene	276	15.508	15.556	(1.123)	2281582	70.0000	72.2906
	112 Dibenzo(a,h)anthracene	278	15.535	15.572	(1.125)	1887155	70.0000	71.4390
	113 Benzo(g,h,i)perylene	276	16.038	16.075	(1.162)	1928334	70.0000	72.2385

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms14.i
Lab File ID: 14092111.D
Lab Smp Id: 1239
Analysis Type: SV
Quant Type: ISTD
Operator: DHF

Calibration Date: 21-SEP-2012
Calibration Time: 14:39

Level: LOW
Sample Type: WATER

Method File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-82
Misc Info: ZZ SVMS 8270/3510C BNA242

Test Mode:
Use Last Continuing Calibrator.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	201484	100742	402968	189301	-6.05
34 Naphthalene-d8	894115	447058	1788230	873932	-2.26
63 Acenaphthene-d10	515108	257554	1030216	495280	-3.85
90 Phenanthrene-d10	924191	462096	1848382	892367	-3.44
104 Chrysene-d12	1005497	502749	2010994	952575	-5.26
110 Perylene-d12	1050509	525255	2101018	1017587	-3.13

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	5.11	4.61	5.61	5.11	0.00
34 Naphthalene-d8	6.31	5.81	6.81	6.31	0.00
63 Acenaphthene-d10	8.04	7.54	8.54	8.04	0.00
90 Phenanthrene-d10	9.53	9.03	10.03	9.53	0.00
104 Chrysene-d12	12.20	11.70	12.70	12.20	0.00
110 Perylene-d12	13.80	13.30	14.30	13.81	0.04

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1239
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
123-91-1	1,4-Dioxane	71.9496	
62-75-9	N-Nitrosodimethylamine	75.9087	
110-86-1	Pyridine	73.9515	
55-18-5	N-Nitrosodiethylamine	75.8404	
100-52-7	Benzaldehyde	68.8401	
108-95-2	Phenol	140.727	
62-53-3	Aniline	75.5177	
111-44-4	Bis(2-Chloroethyl)ether	67.0991	
95-57-8	2-Chlorophenol	141.261	
124-18-5	n-Decane	69.8133	
541-73-1	1,3-Dichlorobenzene	69.9883	
106-46-7	1,4-Dichlorobenzene	68.4561	
100-51-6	Benzyl Alcohol	65.7648	
95-50-1	1,2-Dichlorobenzene	61.6206	
95-48-7	o-Cresol	143.124	
108-60-1	bis(2-Chloroisopropyl)ether	71.5029	
108394/106445	mp-Cresol	141.937	
930-55-2	N-Nitrosopyrrolidine	74.2482	
621-64-7	N-Nitrosodi-n-propylamine	72.9460	
98-86-2	Acetophenone	71.5028	
67-72-1	Hexachloroethane	72.1939	
98-95-3	Nitrobenzene	69.0904	
78-59-1	Isophorone	71.1337	
88-75-5	2-Nitrophenol	142.167	
105-67-9	2,4-Dimethylphenol	134.833	
111-91-1	Bis(2-Chloroethoxy)methane	68.4496	
65-85-0	Benzoic acid	137.714	
120-83-2	2,4-Dichlorophenol	138.147	
120-82-1	1,2,4-Trichlorobenzene	66.8063	
10482-56-1	alpha-Terpineol	17.3417	
91-20-3	Naphthalene	65.6469	
106-47-8	4-Chloroaniline	68.7286	
87-65-0	2,6-Dichlorophenol	68.5385	
87-68-3	Hexachlorobutadiene	66.8593	
924-16-3	N-Nitrosodi-n-butylamine	71.2133	
108-46-3	Resorcinol	76.5693	J
105-60-2	Caprolactam	71.8234	
59-50-7	4-Chloro-3-methylphenol	139.312	
91-57-6	2-Methylnaphthalene	66.8309	
90-12-0	1-Methylnaphthalene	66.7080	
77-47-4	Hexachlorocyclopentadiene	70.6979	
95-94-3	1,2,4,5-Tetrachlorobenzene	67.6038	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1239
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
88-06-2	2,4,6-Trichlorophenol	138.190	
608-27-5	2,3-Dichloroaniline	67.5943	
95-95-4	2,4,5-Trichlorophenol	139.228	
92-52-4	Biphenyl	66.9495	
91-58-7	2-Chloronaphthalene	67.4608	
88-74-4	2-Nitroaniline	75.3286	
100-25-4	1,4-Dinitrobenzene	69.3568	
131-11-3	Dimethylphthalate	69.3959	
99-65-0	1,3-Dinitrobenzene	75.9425	
606-20-2	2,6-Dinitrotoluene	72.7320	
528-29-0	1,2-Dinitrobenzene	73.8465	
208-96-8	Acenaphthylene	69.1020	
99-09-2	3-Nitroaniline	76.3218	
83-32-9	Acenaphthene	67.4498	
51-28-5	2,4-Dinitrophenol	137.934	
100-02-7	4-Nitrophenol	137.901	
608-93-5	Pentachlorobenzene	67.8499	
121-14-2	2,4-Dinitrotoluene	74.8620	
132-64-9	Dibenzofuran	67.7513	
935-95-5	2,3,5,6-Tetrachlorophenol	69.6501	
58-90-2	2,3,4,6-Tetrachlorophenol	143.387	
91-59-8	2-Napthylamine	70.1748	
84-66-2	Diethylphthalate	67.6841	
7005-72-3	4-Chlorophenyl-phenylether	68.3102	
86-73-7	Fluorene	67.7413	
100-01-6	4-Nitroaniline	77.5332	
534-52-1	2-Methyl-4,6-dinitrophenol	141.175	
86-30-6	N-Nitrosodiphenylamine	81.1958	
122-39-4	Diphenylamine	69.3305	
122-66-7	1,2-Diphenylhydrazine	70.9192	
103-33-3	Azobenzene	70.2170	
629-78-7	n-Heptadecane	70.0158	
101-55-3	4-Bromophenyl-phenylether	70.1855	
60-51-5	Dimethoate	76.9299	
118-74-1	Hexachlorobenzene	67.5752	
1912-24-9	Atrazine	69.3056	
593-45-3	n-Octadecane	70.1873	
87-86-5	Pentachlorophenol	145.565	
85-01-8	Phenanthrene	66.6726	
120-12-7	Anthracene	68.5047	
86-74-8	Carbazole	69.5099	
84-74-2	Di-n-Butylphthalate	71.8796	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1239
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

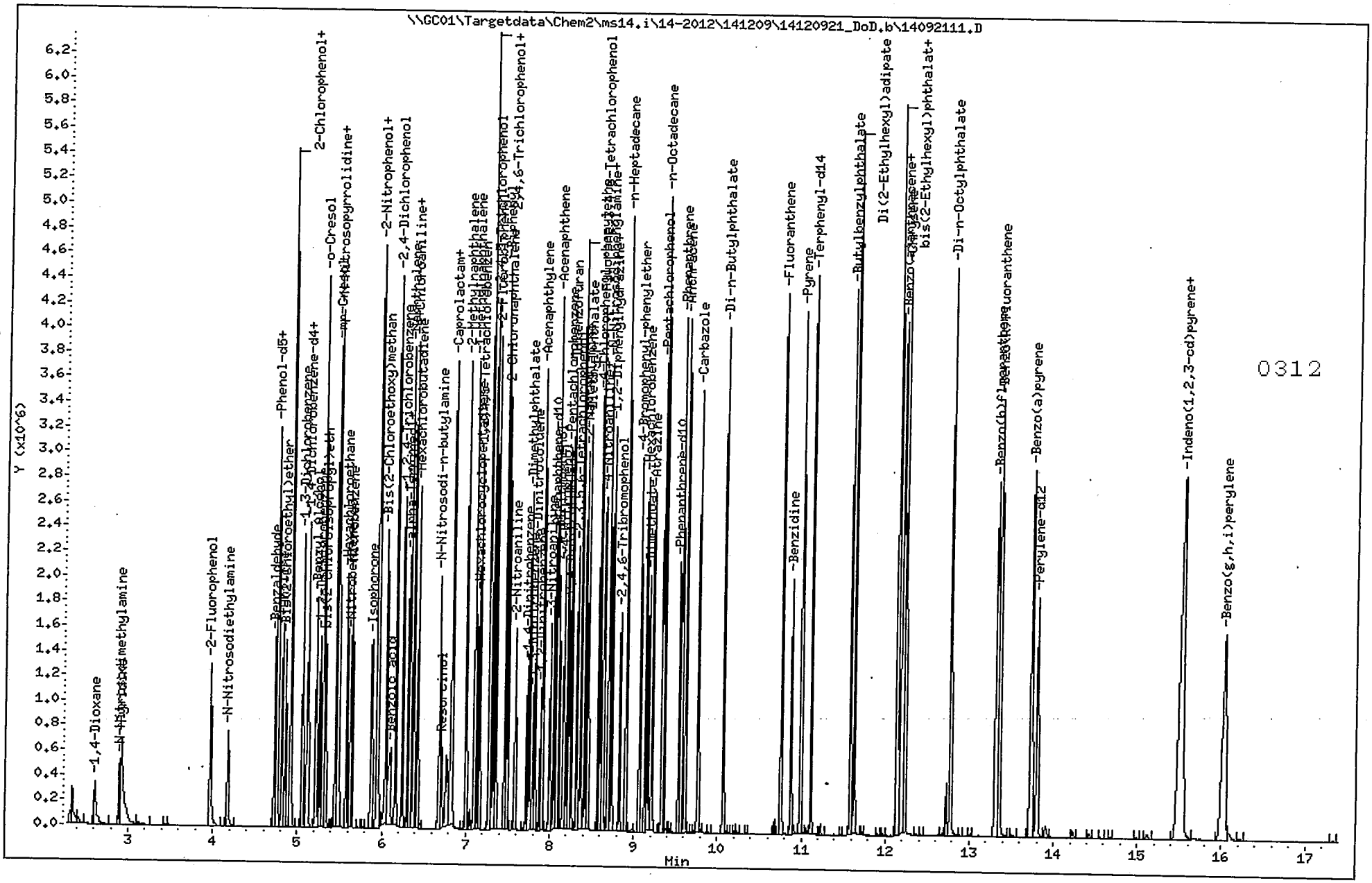
Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
206-44-0	Fluoranthene	69.1861	
92-87-5	Benzidine	73.9514	
129-00-0	Pyrene	69.5941	
85-68-7	Butylbenzylphthalate	77.3453	
103-23-1	Di(2-Ethylhexyl)adipate	77.2467	
117-81-7	bis(2-Ethylhexyl)phthalate	75.6444	
91-94-1	3,3-Dichlorobenzidine	74.1894	
56-55-3	Benzo(a)anthracene	68.6955	
218-01-9	Chrysene	66.2272	
117-84-0	Di-n-Octylphthalate	77.3020	
205-99-2	Benzo(b)fluoranthene	73.4679	
207-08-9	Benzo(k)fluoranthene	66.9580	
50-32-8	Benzo(a)pyrene	72.1954	
193-39-5	Indeno(1,2,3-cd)pyrene	72.2906	
53-70-3	Dibenzo(a,h)anthracene	71.4390	
191-24-2	Benzo(g,h,i)perylene	72.2385	
367-12-4	2-Fluorophenol	74.5549	
4165-62-2	Phenol-d5	72.9069	
4165-60-0	Nitrobenzene-d5	71.8603	
321-60-8	2-Fluorobiphenyl	68.1277	
118-79-6	2,4,6-Tribromophenol	75.5224	
98904-43-9	Terphenyl-d14	68.7600	

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092111.D
Date : 21-SEP-2012 15:04
Client ID:
Sample Info: 1239;1;1;6;BNA-70;;;;;;SV0242
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: ms14.i
Operator: DHF
Column diameter: 0.25



ALS - Middletown

Semivolatile Report for SW-846 Method 8270

Data file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\140921
Lab Smp Id: 1240
Inj Date : 21-SEP-2012 15:29
Operator : DHF Inst ID: ms14.i
Smp Info : 1240;1;1;7;BNA-90;;;;;;SV0242
Misc Info : ZZ SVMS 8270/3510C BNA242
Comment :
Method : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-827
Meth Date : 24-Sep-2012 15:27 Lopez Quant Type: ISTD
Cal Date : 21-SEP-2012 15:29 Cal File: 14092112.D
Als bottle: 12 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 12_3510_3550all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Sample Volume extracted(mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
	1 1,4-Dioxane	88	2.613	2.613	(0.512)	302996	90.0000	94.4169
	2 N-Nitrosodimethylamine	74	2.896	2.901	(0.567)	416008	90.0000	100.300
	3 Pyridine	79	2.918	2.917	(0.572)	728376	90.0000	96.8528
$	4 2-Fluorophenol	112	3.966	3.971	(0.777)	638913	90.0000	98.2669
	5 N-Nitrosodiethylamine	102	4.180	4.185	(0.819)	336247	90.0000	100.337
	6 Benzaldehyde	106	4.725	4.725	(0.926)	371142	90.0000	81.5367
$	7 Phenol-d5	99	4.747	4.747	(0.930)	606735	90.0000	84.2593
	8 Phenol	94	4.763	4.763	(0.933)	1140883	180.000	161.763
	9 Aniline	93	4.816	4.816	(0.943)	856579	90.0000	93.8088
	10 Bis(2-Chloroethyl)ether	93	4.854	4.859	(0.951)	572104	90.0000	85.1753
	12 2-Chlorophenol	128	4.923	4.923	(0.964)	1148530	180.000	176.565
	11 n-Decane	57	4.918	4.918	(0.963)	618097	90.0000	88.6513
	13 1,3-Dichlorobenzene	146	5.057	5.057	(0.991)	670313	90.0000	89.7078
*	14 1,4-Dichlorobenzene-d4	152	5.105	5.105	(1.000)	183725	40.0000	
	15 1,4-Dichlorobenzene	146	5.121	5.121	(1.003)	609478	90.0000	85.4633
	16 Benzyl Alcohol	108	5.223	5.233	(1.023)	455142	90.0000	88.2872
	17 1,2-Dichlorobenzene	146	5.260	5.260	(1.030)	411324	90.0000	76.8114
	18 o-Cresol	107	5.303	5.308	(1.039)	1019057	180.000	185.797
	19 bis(2-Chloroisopropyl)ether	45	5.330	5.335	(1.044)	792093	90.0000	94.2615
	20 mp-Cresol	107	5.464	5.469	(1.070)	1444905	180.000	186.867(M)
	23 N-Nitrosopyrrolidine	100	5.501	5.512	(1.078)	353433	90.0000	97.2744

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
	22 N-Nitrosodi-n-propylamine	70	5.480	5.490	(1.073)	474153	90.0000	95.1902
	21 Acetophenone	105	5.480	5.485	(1.073)	901320	90.0000	92.0654
	24 Hexachloroethane	117	5.576	5.576	(1.092)	293014	90.0000	94.8016
$	25 Nitrobenzene-d5	128	5.624	5.629	(0.891)	360753	90.0000	91.2212
	26 Nitrobenzene	77	5.645	5.645	(0.895)	673372	90.0000	88.0451
	27 Isophorone	82	5.875	5.886	(0.931)	1285905	90.0000	90.0609
	28 2-Nitrophenol	139	5.940	5.945	(0.942)	709053	180.000	175.613
	29 2,4-Dimethylphenol	122	5.956	5.961	(0.944)	1197320	180.000	166.427
	30 Bis(2-Chloroethoxy)methane	93	6.047	6.046	(0.958)	794986	90.0000	85.3593
	31 Benzoic acid	105	6.121	6.153	(0.970)	879213	180.000	183.589
	32 2,4-Dichlorophenol	162	6.170	6.175	(0.978)	1044127	180.000	169.665
	33 1,2,4-Trichlorobenzene	180	6.244	6.244	(0.990)	597450	90.0000	83.0221
	35 alpha-Terpineol	59	6.319	6.325	(1.002)	112552	22.5000	22.1301
*	34 Naphthalene-d8	136	6.309	6.309	(1.000)	886400	40.0000	
	36 Naphthalene	128	6.335	6.335	(1.004)	1883911	90.0000	80.7224
	37 4-Chloroaniline	127	6.373	6.378	(1.010)	776428	90.0000	84.6255
	38 2,6-Dichlorophenol	162	6.383	6.383	(1.012)	554142	90.0000	85.5473
	39 Hexachlorobutadiene	225	6.426	6.426	(1.019)	344797	90.0000	82.9546
	40 N-Nitrosodi-n-butylamine	57	6.694	6.699	(1.061)	351742	90.0000	90.5741
	41 Resorcinol	110	6.720	6.726	(1.065)	659794	90.0000	98.5267 (aM)
	42 Caprolactam	56	6.827	6.838	(1.082)	232551	90.0000	90.3477
	43 4-Chloro-3-methylphenol	107	6.843	6.849	(1.085)	1156941	180.000	174.367
	44 2-Methylnaphthalene	142	7.004	7.004	(1.110)	1295268	90.0000	81.7186
	45 1-Methylnaphthalene	142	7.106	7.105	(1.126)	1209328	90.0000	82.0435
	46 Hexachlorocyclopentadiene	237	7.143	7.143	(1.132)	373689	90.0000	90.0880
	47 1,2,4,5-Tetrachlorobenzene	216	7.164	7.170	(0.891)	634569	90.0000	84.3719
	48 2,4,6-Trichlorophenol	196	7.277	7.282	(0.905)	729050	180.000	170.213
	49 2,3-Dichloroaniline	161	7.282	7.287	(0.906)	652946	90.0000	83.0772
	50 2,4,5-Trichlorophenol	196	7.325	7.330	(0.911)	828877	180.000	178.930
$	51 2-Fluorobiphenyl	172	7.357	7.357	(0.915)	1403642	90.0000	83.2315
	52 Biphenyl	154	7.464	7.469	(0.928)	1606105	90.0000	82.6033
	53 2-Chloronaphthalene	162	7.496	7.496	(0.932)	1207465	90.0000	84.9702
	55 2-Nitroaniline	138	7.587	7.592	(0.943)	450192	90.0000	97.0338
	56 1,4-Dinitrobenzene	168	7.726	7.731	(0.961)	249468	90.0000	90.0388
	57 Dimethylphthalate	163	7.763	7.769	(0.965)	1463390	90.0000	87.3275
	58 1,3-Dinitrobenzene	168	7.806	7.817	(0.971)	285280	90.0000	98.4561
	59 2,6-Dinitrotoluene	165	7.828	7.833	(0.973)	361598	90.0000	92.6744
	60 1,2-Dinitrobenzene	168	7.892	7.902	(0.981)	191073	90.0000	95.5036
	61 Acenaphthylene	152	7.913	7.913	(0.984)	1930391	90.0000	85.9131
	62 3-Nitroaniline	138	8.004	8.009	(0.995)	384864	90.0000	98.2645
*	63 Acenaphthene-d10	164	8.042	8.047	(1.000)	497296	40.0000	
	64 Acenaphthene	153	8.084	8.084	(1.005)	1248867	90.0000	83.2970
	65 2,4-Dinitrophenol	184	8.106	8.116	(1.008)	462061	180.000	184.226
	66 4-Nitrophenol	65	8.170	8.181	(1.016)	491558	180.000	179.217
	67 Pentachlorobenzene	250	8.202	8.207	(1.020)	588344	90.0000	85.3338
	68 2,4-Dinitrotoluene	165	8.234	8.239	(1.024)	484003	90.0000	95.5150
	69 Dibenzofuran	168	8.255	8.255	(1.027)	1699999	90.0000	84.0198
	70 2,3,5,6-Tetrachlorophenol	230	8.320	8.325	(1.035)	298718	90.0000	91.3787
	71 2,3,4,6-Tetrachlorophenol	230	8.368	8.373	(1.041)	551846	180.000	180.479
	72 2-Napthylamine	143	8.416	8.421	(1.047)	1237370	90.0000	90.7514
	73 Diethylphthalate	149	8.453	8.459	(1.051)	1485936	90.0000	85.1619
	74 4-Chlorophenyl-phenylether	204	8.576	8.582	(1.067)	709469	90.0000	85.5291
	75 Fluorene	166	8.598	8.603	(1.069)	1446371	90.0000	84.2821
	76 4-Nitroaniline	138	8.635	8.651	(1.074)	366552	90.0000	97.0081

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	77 2-Methyl-4,6-dinitrophenol	198	8.646	8.657	(0.906)	583613	180.000	180.302
	78 N-Nitrosodiphenylamine	169	8.705	8.710	(0.913)	1241339	105.400	99.6730
	79 Diphenylamine	169	8.705	8.710	(0.913)	1241339	90.0000	85.1076
	80 1,2-Diphenylhydrazine	77	8.742	8.747	(0.916)	1456203	90.9000	88.3961
	81 Azobenzene	77	8.742	8.747	(0.916)	1456203	90.0000	87.5208
$	82 2,4,6-Tribromophenol	330	8.838	8.838	(0.927)	238260	90.0000	94.1058
	83 n-Heptadecane	57	8.908	8.913	(0.934)	965234	90.0000	85.6767
	84 4-Bromophenyl-phenylether	248	9.074	9.074	(0.951)	435613	90.0000	86.7607
	86 Dimethoate	87	9.181	9.186	(0.962)	644330	90.0000	95.9932
	85 Hexachlorobenzene	284	9.138	9.143	(0.958)	468082	90.0000	83.9369
	87 Atrazine	200	9.224	9.229	(0.967)	417441	90.0000	84.4182
	89 n-Octadecane	57	9.357	9.363	(0.981)	991996	90.0000	85.3484
	88 Pentachlorophenol	266	9.341	9.341	(0.979)	583343	180.000	182.899
*	90 Phenanthrene-d10	188	9.539	9.539	(1.000)	907569	40.0000	
	91 Phenanthrene	178	9.566	9.571	(1.003)	2025511	90.0000	81.8906
	92 Anthracene	178	9.619	9.625	(1.008)	2051423	90.0000	83.3400
	93 Carbazole	167	9.775	9.774	(1.025)	1933551	90.0000	86.8963
	94 Di-n-Butylphthalate	149	10.074	10.074	(1.056)	2564453	90.0000	87.5590
	95 Fluoranthene	202	10.759	10.764	(1.128)	2299540	90.0000	85.0721
	96 Benzidine	184	10.876	10.882	(0.891)	1026928	90.0000	90.5411
	97 Pyrene	202	10.999	10.999	(0.901)	2345170	90.0000	86.4894
$	98 Terphenyl-d14	244	11.117	11.122	(0.911)	1708901	90.0000	85.9879
	99 Butylbenzylphthalate	149	11.588	11.593	(0.949)	1250444	90.0000	97.5386
	100 Di(2-Ethylhexyl)adipate	129	11.630	11.636	(0.953)	1198767	90.0000	95.6626
	101 bis(2-Ethylhexyl)phthalate	149	12.139	12.139	(0.994)	1752453	90.0000	92.9925
	102 3,3-Dichlorobenzidine	252	12.155	12.160	(0.996)	817230	90.0000	90.7556
	103 Benzo(a)anthracene	228	12.192	12.197	(0.999)	2301257	90.0000	86.3263
*	104 Chrysene-d12	240	12.208	12.208	(1.000)	959871	40.0000	
	105 Chrysene	228	12.235	12.240	(1.002)	2002256	90.0000	81.5772
	106 Di-n-Octylphthalate	149	12.775	12.780	(1.046)	3160142	90.0000	97.0130
	107 Benzo(b)fluoranthene	252	13.331	13.342	(0.966)	2692156	90.0000	92.8941
	108 Benzo(k)fluoranthene	252	13.363	13.374	(0.968)	2379801	90.0000	81.0659
	109 Benzo(a)pyrene	252	13.749	13.759	(0.996)	2416936	90.0000	90.5785
*	110 Perylene-d12	264	13.807	13.813	(1.000)	1037588	40.0000	
	111 Indeno(1,2,3-cd)pyrene	276	15.519	15.556	(1.124)	2961999	90.0000	92.0401
	112 Dibenzo(a,h)anthracene	278	15.551	15.572	(1.126)	2430229	90.0000	90.2239
	113 Benzo(g,h,i)perylene	276	16.054	16.075	(1.163)	2482278	90.0000	91.1976

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms14.i
Lab File ID: 14092112.D
Lab Smp Id: 1240
Analysis Type: SV
Quant Type: ISTD
Operator: DHF
Method File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-82
Misc Info: ZZ SVMS 8270/3510C BNA242

Calibration Date: 21-SEP-2012
Calibration Time: 14:39

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	201484	100742	402968	183725	-8.81
34 Naphthalene-d8	894115	447058	1788230	886400	-0.86
63 Acenaphthene-d10	515108	257554	1030216	497296	-3.46
90 Phenanthrene-d10	924191	462096	1848382	907569	-1.80
104 Chrysene-d12	1005497	502749	2010994	959871	-4.54
110 Perylene-d12	1050509	525255	2101018	1037588	-1.23

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	5.11	4.61	5.61	5.11	0.00
34 Naphthalene-d8	6.31	5.81	6.81	6.31	0.00
63 Acenaphthene-d10	8.04	7.54	8.54	8.04	0.00
90 Phenanthrene-d10	9.53	9.03	10.03	9.54	0.06
104 Chrysene-d12	12.20	11.70	12.70	12.21	0.04
110 Perylene-d12	13.80	13.30	14.30	13.81	0.04

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1240
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
123-91-1	1,4-Dioxane	94.4169	
62-75-9	N-Nitrosodimethylamine	100.300	
110-86-1	Pyridine	96.8528	
55-18-5	N-Nitrosodiethylamine	100.337	
100-52-7	Benzaldehyde	81.5367	
108-95-2	Phenol	161.763	
62-53-3	Aniline	93.8088	
111-44-4	Bis(2-Chloroethyl)ether	85.1753	
95-57-8	2-Chlorophenol	176.565	
124-18-5	n-Decane	88.6513	
541-73-1	1,3-Dichlorobenzene	89.7078	
106-46-7	1,4-Dichlorobenzene	85.4633	
100-51-6	Benzyl Alcohol	88.2872	
95-50-1	1,2-Dichlorobenzene	76.8114	
95-48-7	o-Cresol	185.797	
108-60-1	bis(2-Chloroisopropyl)ether	94.2615	
108394/106445	mp-Cresol	186.867	
930-55-2	N-Nitrosopyrrolidine	97.2744	
621-64-7	N-Nitrosodi-n-propylamine	95.1902	
98-86-2	Acetophenone	92.0654	
67-72-1	Hexachloroethane	94.8016	
98-95-3	Nitrobenzene	88.0451	
78-59-1	Isophorone	90.0609	
88-75-5	2-Nitrophenol	175.613	
105-67-9	2,4-Dimethylphenol	166.427	
111-91-1	Bis(2-Chloroethoxy)methane	85.3593	
65-85-0	Benzoic acid	183.589	
120-83-2	2,4-Dichlorophenol	169.665	
120-82-1	1,2,4-Trichlorobenzene	83.0221	
10482-56-1	alpha-Terpineol	22.1301	
91-20-3	Naphthalene	80.7224	
106-47-8	4-Chloroaniline	84.6255	
87-65-0	2,6-Dichlorophenol	85.5473	
87-68-3	Hexachlorobutadiene	82.9546	
924-16-3	N-Nitrosodi-n-butylamine	90.5741	
108-46-3	Resorcinol	98.5267	J
105-60-2	Caprolactam	90.3477	
59-50-7	4-Chloro-3-methylphenol	174.367	
91-57-6	2-Methylnaphthalene	81.7186	
90-12-0	1-Methylnaphthalene	82.0435	
77-47-4	Hexachlorocyclopentadiene	90.0880	
95-94-3	1,2,4,5-Tetrachlorobenzene	84.3719	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1240
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
88-06-2	2,4,6-Trichlorophenol	170.213	
608-27-5	2,3-Dichloroaniline	83.0772	
95-95-4	2,4,5-Trichlorophenol	178.930	
92-52-4	Biphenyl	82.6033	
91-58-7	2-Chloronaphthalene	84.9702	
88-74-4	2-Nitroaniline	97.0338	
100-25-4	1,4-Dinitrobenzene	90.0388	
131-11-3	Dimethylphthalate	87.3275	
99-65-0	1,3-Dinitrobenzene	98.4561	
606-20-2	2,6-Dinitrotoluene	92.6744	
528-29-0	1,2-Dinitrobenzene	95.5036	
208-96-8	Acenaphthylene	85.9131	
99-09-2	3-Nitroaniline	98.2645	
83-32-9	Acenaphthene	83.2970	
51-28-5	2,4-Dinitrophenol	184.226	
100-02-7	4-Nitrophenol	179.217	
608-93-5	Pentachlorobenzene	85.3338	
121-14-2	2,4-Dinitrotoluene	95.5150	
132-64-9	Dibenzofuran	84.0198	
935-95-5	2,3,5,6-Tetrachlorophenol	91.3787	
58-90-2	2,3,4,6-Tetrachlorophenol	180.479	
91-59-8	2-Napthylamine	90.7514	
84-66-2	Diethylphthalate	85.1619	
7005-72-3	4-Chlorophenyl-phenylether	85.5291	
86-73-7	Fluorene	84.2821	
100-01-6	4-Nitroaniline	97.0081	
534-52-1	2-Methyl-4,6-dinitrophenol	180.302	
86-30-6	N-Nitrosodiphenylamine	99.6730	
122-39-4	Diphenylamine	85.1076	
122-66-7	1,2-Diphenylhydrazine	88.3961	
103-33-3	Azobenzene	87.5208	
629-78-7	n-Heptadecane	85.6767	
101-55-3	4-Bromophenyl-phenylether	86.7607	
60-51-5	Dimethoate	95.9932	
118-74-1	Hexachlorobenzene	83.9369	
1912-24-9	Atrazine	84.4182	
593-45-3	n-Octadecane	85.3484	
87-86-5	Pentachlorophenol	182.899	
85-01-8	Phenanthrene	81.8906	
120-12-7	Anthracene	83.3400	
86-74-8	Carbazole	86.8963	
84-74-2	Di-n-Butylphthalate	87.5590	

ALS - Middletown

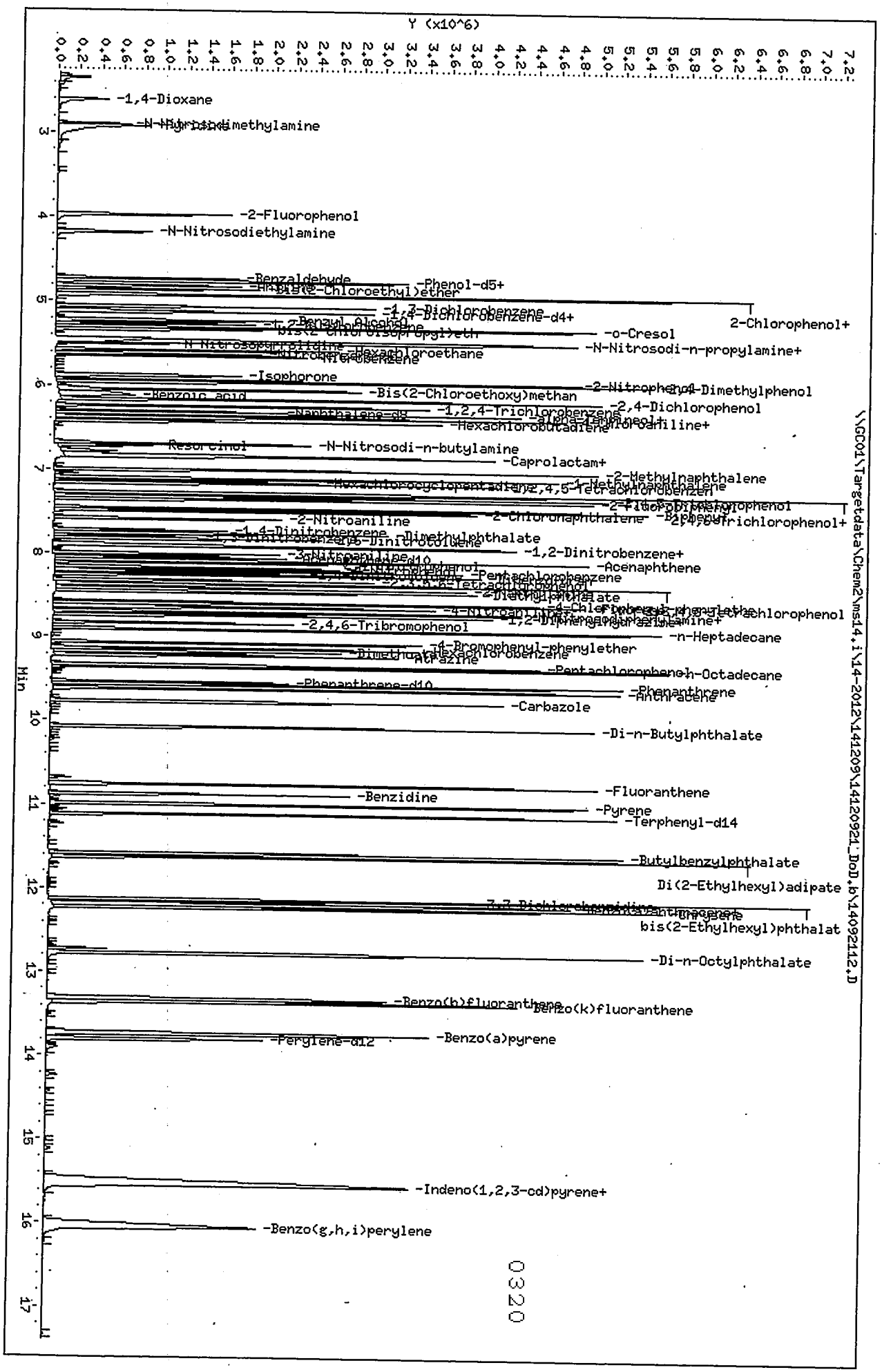
TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1240
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
206-44-0	Fluoranthene	85.0721	
92-87-5	Benzidine	90.5411	
129-00-0	Pyrene	86.4894	
85-68-7	Butylbenzylphthalate	97.5386	
103-23-1	Di(2-Ethylhexyl)adipate	95.6626	
117-81-7	bis(2-Ethylhexyl)phthalate	92.9925	
91-94-1	3,3-Dichlorobenzidine	90.7556	
56-55-3	Benzo(a)anthracene	86.3263	
218-01-9	Chrysene	81.5772	
117-84-0	Di-n-Octylphthalate	97.0130	
205-99-2	Benzo(b)fluoranthene	92.8941	
207-08-9	Benzo(k)fluoranthene	81.0659	
50-32-8	Benzo(a)pyrene	90.5785	
193-39-5	Indeno(1,2,3-cd)pyrene	92.0401	
53-70-3	Dibenzo(a,h)anthracene	90.2239	
191-24-2	Benzo(g,h,i)perylene	91.1976	
367-12-4	2-Fluorophenol	98.2669	
4165-62-2	Phenol-d5	84.2593	
4165-60-0	Nitrobenzene-d5	91.2212	
321-60-8	2-Fluorobiphenyl	83.2315	
118-79-6	2,4,6-Tribromophenol	94.1058	
98904-43-9	Terphenyl-d14	85.9879	



Data File: \\GC01\Targetdata\Chem2\ms14,i\14-2012\141209\14120921_DoD.b\14092112.D
Date : 21-SEP-2012 15:29
Client ID:
Sample Info: 1240;1;1;7;BNA-90;;;;;;SV0242
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: ms14,i
Operator: DHF
Column diameter: 0.25

0320

ALS - Middletown

Semivolatile Report for SW-846 Method 8270

Data file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\140921
Lab Smp Id: 1241
Inj Date : 21-SEP-2012 15:54
Operator : DHF
Inst ID: ms14.i
Smp Info : 1241;1;1;8;BNA-120;;;;;;SV0242
Misc Info : ZZ SVMS 8270/3510C BNA242
Comment :
Method : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-827
Meth Date : 24-Sep-2012 15:27 Lopez
Quant Type: ISTD
Cal Date : 21-SEP-2012 15:54
Cal File: 14092113.D
Als bottle: 13
Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: 12_3510_3550all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Sample Volume extracted(mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
1 1,4-Dioxane	88	2.613	2.613	(0.512)	402000	120.000	133.422(A)
2 N-Nitrosodimethylamine	74	2.901	2.901	(0.568)	544399	120.000	139.799(A)
3 Pyridine	79	2.917	2.917	(0.572)	961337	120.000	136.151(A)
$ 4 2-Fluorophenol	112	3.971	3.971	(0.778)	833800	120.000	136.589(A)
5 N-Nitrosodiethylamine	102	4.185	4.185	(0.820)	429861	120.000	136.622(A)
6 Benzaldehyde	106	4.725	4.725	(0.926)	397024	120.000	92.9007
$ 7 Phenol-d5	99	4.747	4.747	(0.930)	727083	120.000	107.545
8 Phenol	94	4.763	4.763	(0.933)	1374853	240.000	207.627
9 Aniline	93	4.816	4.816	(0.943)	1019799	120.000	118.954
10 Bis(2-Chloroethyl)ether	93	4.859	4.859	(0.952)	694641	120.000	110.151
12 2-Chlorophenol	128	4.923	4.923	(0.964)	1384774	240.000	226.741
11 n-Decane	57	4.918	4.918	(0.963)	770428	120.000	117.693
13 1,3-Dichlorobenzene	146	5.057	5.057	(0.991)	844443	120.000	120.368(A)
* 14 1,4-Dichlorobenzene-d4	152	5.105	5.105	(1.000)	172496	40.0000	
15 1,4-Dichlorobenzene	146	5.121	5.121	(1.003)	756778	120.000	113.026
16 Benzyl Alcohol	108	5.233	5.233	(1.025)	611989	120.000	126.440(A)
17 1,2-Dichlorobenzene	146	5.260	5.260	(1.030)	576372	120.000	114.639
18 o-Cresol	107	5.308	5.308	(1.040)	1295535	240.000	251.582(A)
19 bis(2-Chloroisopropyl)ether	45	5.335	5.335	(1.045)	1033394	120.000	130.982(A)
20 mp-Cresol	107	5.469	5.469	(1.071)	1882547	240.000	259.315(AM)
23 N-Nitrosopyrrolidine	100	5.512	5.512	(1.080)	466728	120.000	136.818(A)

0321

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	22 N-Nitrosodi-n-propylamine	70	5.490	5.490	(1.075)	608672	120.000	130.151 (A)
	21 Acetophenone	105	5.485	5.485	(1.074)	1147590	120.000	124.851 (A)
	24 Hexachloroethane	117	5.576	5.576	(1.092)	381881	120.000	131.597 (A)
$	25 Nitrobenzene-d5	128	5.629	5.629	(0.892)	474160	120.000	119.472
	26 Nitrobenzene	77	5.645	5.645	(0.895)	881204	120.000	114.811
	27 Isophorone	82	5.886	5.886	(0.933)	1699807	120.000	118.627
	28 2-Nitrophenol	139	5.945	5.945	(0.942)	910778	240.000	224.775
	29 2,4-Dimethylphenol	122	5.961	5.961	(0.945)	1521352	240.000	210.717
	30 Bis(2-Chloroethoxy)methane	93	6.046	6.046	(0.958)	1026623	120.000	109.840
	31 Benzoic acid	105	6.153	6.153	(0.975)	1230666	240.000	238.517
	32 2,4-Dichlorophenol	162	6.175	6.175	(0.979)	1318228	240.000	213.445
	33 1,2,4-Trichlorobenzene	180	6.244	6.244	(0.990)	761644	120.000	105.463
	35 alpha-Terpineol	59	6.325	6.325	(1.003)	147806	30.0000	28.9586
*	34 Naphthalene-d8	136	6.309	6.309	(1.000)	889556	40.0000	
	36 Naphthalene	128	6.335	6.335	(1.004)	2376231	120.000	101.456
	37 4-Chloroaniline	127	6.378	6.378	(1.011)	979870	120.000	106.420
	38 2,6-Dichlorophenol	162	6.383	6.383	(1.012)	708744	120.000	109.026
	39 Hexachlorobutadiene	225	6.426	6.426	(1.019)	444988	120.000	106.680
	40 N-Nitrosodi-n-butylamine	57	6.699	6.699	(1.062)	460333	120.000	118.116 (M)
	41 Resorcinol	110	6.726	6.726	(1.066)	871828	120.000	129.728 (AM)
	42 Caprolactam	56	6.838	6.838	(1.084)	296928	120.000	114.949
	43 4-Chloro-3-methylphenol	107	6.849	6.849	(1.086)	1517344	240.000	227.874
	44 2-Methylnaphthalene	142	7.004	7.004	(1.110)	1648523	120.000	103.637
	45 1-Methylnaphthalene	142	7.105	7.105	(1.126)	1526361	120.000	103.184
	46 Hexachlorocyclopentadiene	237	7.143	7.143	(1.132)	498440	120.000	119.736
	47 1,2,4,5-Tetrachlorobenzene	216	7.170	7.170	(0.891)	803066	120.000	108.320
	48 2,4,6-Trichlorophenol	196	7.282	7.282	(0.905)	908857	240.000	215.262
	49 2,3-Dichloroaniline	161	7.287	7.287	(0.906)	822018	120.000	106.102
	50 2,4,5-Trichlorophenol	196	7.330	7.330	(0.911)	1026415	240.000	224.777
$	51 2-Fluorobiphenyl	172	7.357	7.357	(0.914)	1779497	120.000	107.045
	52 Biphenyl	154	7.469	7.469	(0.928)	2025868	120.000	105.699
	53 2-Chloronaphthalene	162	7.496	7.496	(0.932)	1535107	120.000	109.589
	55 2-Nitroaniline	138	7.592	7.592	(0.944)	597119	120.000	130.564 (A)
	56 1,4-Dinitrobenzene	168	7.731	7.731	(0.961)	332246	120.000	121.650 (A)
	57 Dimethylphthalate	163	7.769	7.769	(0.965)	1901325	120.000	115.102
	58 1,3-Dinitrobenzene	168	7.817	7.817	(0.971)	376984	120.000	131.987 (A)
	59 2,6-Dinitrotoluene	165	7.833	7.833	(0.973)	470841	120.000	122.418 (A)
	60 1,2-Dinitrobenzene	168	7.902	7.902	(0.982)	243933	120.000	123.688 (A)
	61 Acenaphthylene	152	7.913	7.913	(0.983)	2455273	120.000	110.854
	62 3-Nitroaniline	138	8.009	8.009	(0.995)	513618	120.000	133.035 (A)
*	63 Acenaphthene-d10	164	8.047	8.047	(1.000)	490205	40.0000	
	64 Acenaphthene	153	8.084	8.084	(1.005)	1565251	120.000	105.909
	65 2,4-Dinitrophenol	184	8.116	8.116	(1.009)	602258	240.000	243.597 (A)
	66 4-Nitrophenol	65	8.181	8.181	(1.017)	660648	240.000	244.349 (A)
	67 Pentachlorobenzene	250	8.207	8.207	(1.020)	750124	120.000	110.372
	68 2,4-Dinitrotoluene	165	8.239	8.239	(1.024)	633787	120.000	126.883 (A)
	69 Dibenzofuran	168	8.255	8.255	(1.026)	2159269	120.000	108.262
	70 2,3,5,6-Tetrachlorophenol	230	8.325	8.325	(1.035)	384746	120.000	119.397
	71 2,3,4,6-Tetrachlorophenol	230	8.373	8.373	(1.041)	700360	240.000	232.364
	72 2-Napthylamine	143	8.421	8.421	(1.047)	1636152	120.000	121.735 (A)
	73 Diethylphthalate	149	8.459	8.459	(1.051)	1912848	120.000	111.215
	74 4-Chlorophenyl-phenylether	204	8.582	8.582	(1.066)	896429	120.000	109.631
	75 Fluorene	166	8.603	8.603	(1.069)	1823890	120.000	107.818
	76 4-Nitroaniline	138	8.651	8.651	(1.075)	452208	120.000	121.408 (A)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
77	2-Methyl-4,6-dinitrophenol	198	8.657	8.657	(0.907)	770452	240.000	240.464(A)
78	N-Nitrosodiphenylamine	169	8.710	8.710	(0.913)	1587496	140.500	128.774
79	Diphenylamine	169	8.710	8.710	(0.913)	1587496	120.000	109.956
80	1,2-Diphenylhydrazine	77	8.747	8.747	(0.917)	1877090	121.200	115.113
81	Azobenzene	77	8.747	8.747	(0.917)	1877090	120.000	113.974
$ 82	2,4,6-Tribromophenol	330	8.838	8.838	(0.927)	313814	120.000	125.218(A)
83	n-Heptadecane	57	8.913	8.913	(0.934)	1216689	120.000	109.104
84	4-Bromophenyl-phenylether	248	9.074	9.074	(0.951)	567271	120.000	114.141
86	Dimethoate	87	9.186	9.186	(0.963)	838984	120.000	126.274(A)
85	Hexachlorobenzene	284	9.143	9.143	(0.959)	604149	120.000	109.447
87	Atrazine	200	9.229	9.229	(0.967)	513308	120.000	104.869
89	n-Octadecane	57	9.363	9.363	(0.981)	1251503	120.000	108.779
88	Pentachlorophenol	266	9.341	9.341	(0.979)	741772	240.000	234.957
* 90	Phenanthrene-d10	188	9.539	9.539	(1.000)	898359	40.0000	
91	Phenanthrene	178	9.571	9.571	(1.003)	2555063	120.000	104.359
92	Anthracene	178	9.625	9.625	(1.009)	2593871	120.000	106.457
93	Carbazole	167	9.774	9.774	(1.025)	2479040	120.000	112.554
94	Di-n-Butylphthalate	149	10.074	10.074	(1.056)	3249722	120.000	112.094
95	Fluoranthene	202	10.764	10.764	(1.128)	2927221	120.000	109.404
96	Benzidine	184	10.882	10.882	(0.891)	1306662	120.000	117.001
97	Pyrene	202	10.999	10.999	(0.901)	2980797	120.000	111.645
$ 98	Terphenyl-d14	244	11.122	11.122	(0.911)	2181089	120.000	111.458
99	Butylbenzylphthalate	149	11.593	11.593	(0.950)	1611652	120.000	127.674(A)
100	Di(2-Ethylhexyl)adipate	129	11.636	11.636	(0.953)	1533777	120.000	124.305(A)
101	bis(2-Ethylhexyl)phthalate	149	12.139	12.139	(0.994)	2245773	120.000	121.028(A)
102	3,3-Dichlorobenzidine	252	12.160	12.160	(0.996)	1030937	120.000	116.273
103	Benzo(a)anthracene	228	12.197	12.197	(0.999)	2956946	120.000	112.652
* 104	Chrysene-d12	240	12.208	12.208	(1.000)	945135	40.0000	
105	Chrysene	228	12.240	12.240	(1.003)	2605698	120.000	107.818
106	Di-n-Octylphthalate	149	12.780	12.780	(1.047)	4015008	120.000	125.178(A)
107	Benzo(b)fluoranthene	252	13.342	13.342	(0.966)	3702399	120.000	127.791(A)
108	Benzo(k)fluoranthene	252	13.374	13.374	(0.968)	2982253	120.000	101.618
109	Benzo(a)pyrene	252	13.759	13.759	(0.996)	3151074	120.000	118.126
* 110	Perylene-d12	264	13.813	13.813	(1.000)	1037280	40.0000	
111	Indeno(1,2,3-cd)pyrene	276	15.556	15.556	(1.126)	3884465	120.000	120.740(A)
112	Dibenzo(a,h)anthracene	278	15.572	15.572	(1.127)	3195043	120.000	118.653
113	Benzo(g,h,i)perylene	276	16.075	16.075	(1.164)	3254837	120.000	119.617

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms14.i
Lab File ID: 14092113.D
Lab Smp Id: 1241
Analysis Type: SV
Quant Type: ISTD
Operator: DHF
Method File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-82
Misc Info: ZZ SVMS 8270/3510C BNA242

Calibration Date: 21-SEP-2012
Calibration Time: 14:39

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	201484	100742	402968	172496	-14.39
34 Naphthalene-d8	894115	447058	1788230	889556	-0.51
63 Acenaphthene-d10	515108	257554	1030216	490205	-4.83
90 Phenanthrene-d10	924191	462096	1848382	898359	-2.80
104 Chrysene-d12	1005497	502749	2010994	945135	-6.00
110 Perylene-d12	1050509	525255	2101018	1037280	-1.26

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	5.11	4.61	5.61	5.11	0.00
34 Naphthalene-d8	6.31	5.81	6.81	6.31	0.00
63 Acenaphthene-d10	8.04	7.54	8.54	8.05	0.07
90 Phenanthrene-d10	9.53	9.03	10.03	9.54	0.06
104 Chrysene-d12	12.20	11.70	12.70	12.21	0.04
110 Perylene-d12	13.80	13.30	14.30	13.81	0.08

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1241
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
123-91-1	1,4-Dioxane	133.422	E
62-75-9	N-Nitrosodimethylamine	139.799	E
110-86-1	Pyridine	136.151	E
55-18-5	N-Nitrosodiethylamine	136.622	E
100-52-7	Benzaldehyde	92.9007	
108-95-2	Phenol	207.627	
62-53-3	Aniline	118.954	
111-44-4	Bis(2-Chloroethyl)ether	110.151	
95-57-8	2-Chlorophenol	226.741	
124-18-5	n-Decane	117.693	
541-73-1	1,3-Dichlorobenzene	120.368	E
106-46-7	1,4-Dichlorobenzene	113.026	
100-51-6	Benzyl Alcohol	126.440	E
95-50-1	1,2-Dichlorobenzene	114.639	
95-48-7	o-Cresol	251.582	E
108-60-1	bis(2-Chloroisopropyl)ether	130.982	E
108394/106445	mp-Cresol	259.315	E
930-55-2	N-Nitrosopyrrolidine	136.818	E
621-64-7	N-Nitrosodi-n-propylamine	130.151	E
98-86-2	Acetophenone	124.851	E
67-72-1	Hexachloroethane	131.597	E
98-95-3	Nitrobenzene	114.811	
78-59-1	Isophorone	118.627	
88-75-5	2-Nitrophenol	224.775	
105-67-9	2,4-Dimethylphenol	210.717	
111-91-1	Bis(2-Chloroethoxy)methane	109.840	
65-85-0	Benzoic acid	238.517	
120-83-2	2,4-Dichlorophenol	213.445	
120-82-1	1,2,4-Trichlorobenzene	105.463	
10482-56-1	alpha-Terpineol	28.9586	
91-20-3	Naphthalene	101.456	
106-47-8	4-Chloroaniline	106.420	
87-65-0	2,6-Dichlorophenol	109.026	
87-68-3	Hexachlorobutadiene	106.680	
924-16-3	N-Nitrosodi-n-butylamine	118.116	
108-46-3	Resorcinol	129.728	E
105-60-2	Caprolactam	114.949	
59-50-7	4-Chloro-3-methylphenol	227.874	
91-57-6	2-Methylnaphthalene	103.637	
90-12-0	1-Methylnaphthalene	103.184	
77-47-4	Hexachlorocyclopentadiene	119.736	
95-94-3	1,2,4,5-Tetrachlorobenzene	108.320	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1241
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
88-06-2	2,4,6-Trichlorophenol	215.262	
608-27-5	2,3-Dichloroaniline	106.102	
95-95-4	2,4,5-Trichlorophenol	224.777	
92-52-4	Biphenyl	105.699	
91-58-7	2-Chloronaphthalene	109.589	
88-74-4	2-Nitroaniline	130.564	E
100-25-4	1,4-Dinitrobenzene	121.650	E
131-11-3	Dimethylphthalate	115.102	
99-65-0	1,3-Dinitrobenzene	131.987	E
606-20-2	2,6-Dinitrotoluene	122.418	E
528-29-0	1,2-Dinitrobenzene	123.688	E
208-96-8	Acenaphthylene	110.854	
99-09-2	3-Nitroaniline	133.035	E
83-32-9	Acenaphthene	105.909	
51-28-5	2,4-Dinitrophenol	243.597	E
100-02-7	4-Nitrophenol	244.349	E
608-93-5	Pentachlorobenzene	110.372	
121-14-2	2,4-Dinitrotoluene	126.883	E
132-64-9	Dibenzofuran	108.262	
935-95-5	2,3,5,6-Tetrachlorophenol	119.397	
58-90-2	2,3,4,6-Tetrachlorophenol	232.364	
91-59-8	2-Napthylamine	121.735	E
84-66-2	Diethylphthalate	111.215	
7005-72-3	4-Chlorophenyl-phenylether	109.631	
86-73-7	Fluorene	107.818	
100-01-6	4-Nitroaniline	121.408	E
534-52-1	2-Methyl-4,6-dinitrophenol	240.464	E
86-30-6	N-Nitrosodiphenylamine	128.774	
122-39-4	Diphenylamine	109.956	
122-66-7	1,2-Diphenylhydrazine	115.113	
103-33-3	Azobenzene	113.974	
629-78-7	n-Heptadecane	109.104	
101-55-3	4-Bromophenyl-phenylether	114.141	
60-51-5	Dimethoate	126.274	E
118-74-1	Hexachlorobenzene	109.447	
1912-24-9	Atrazine	104.869	
593-45-3	n-Octadecane	108.779	
87-86-5	Pentachlorophenol	234.957	
85-01-8	Phenanthrene	104.359	
120-12-7	Anthracene	106.457	
86-74-8	Carbazole	112.554	
84-74-2	Di-n-Butylphthalate	112.094	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1241
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
206-44-0	Fluoranthene	109.404	
92-87-5	Benzidine	117.001	
129-00-0	Pyrene	111.645	
85-68-7	Butylbenzylphthalate	127.674	E
103-23-1	Di(2-Ethylhexyl)adipate	124.305	E
117-81-7	bis(2-Ethylhexyl)phthalate	121.028	E
91-94-1	3,3-Dichlorobenzidine	116.273	
56-55-3	Benzo(a)anthracene	112.652	
218-01-9	Chrysene	107.818	
117-84-0	Di-n-Octylphthalate	125.178	E
205-99-2	Benzo(b)fluoranthene	127.791	E
207-08-9	Benzo(k)fluoranthene	101.618	
50-32-8	Benzo(a)pyrene	118.126	
193-39-5	Indeno(1,2,3-cd)pyrene	120.740	E
53-70-3	Dibenzo(a,h)anthracene	118.653	
191-24-2	Benzo(g,h,i)perylene	119.617	
367-12-4	2-Fluorophenol	136.589	E
4165-62-2	Phenol-d5	107.545	
4165-60-0	Nitrobenzene-d5	119.472	
321-60-8	2-Fluorobiphenyl	107.045	
118-79-6	2,4,6-Tribromophenol	125.218	E
98904-43-9	Terphenyl-d14	111.458	

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092113.D

Date : 21-SEP-2012 15:54

Client ID:

Sample Info: 1241;1;1;8;BNA-120;;;;;;SV0242

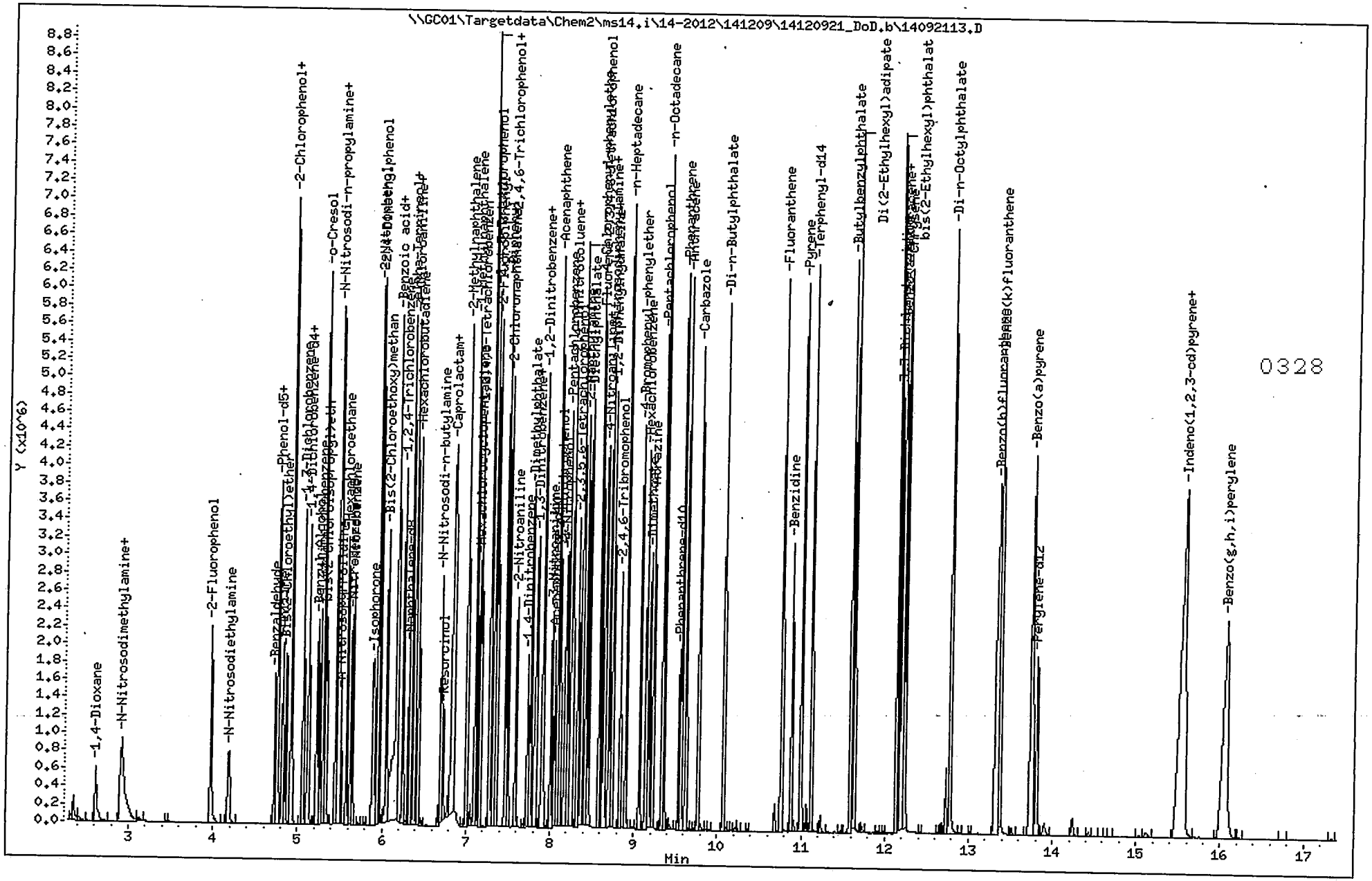
Volume Injected (uL): 1.0

Column phase: ZB-5

Instrument: ms14.i

Operator: DHF

Column diameter: 0.25



ALS - Middletown

Semivolatile Report for SW-846 Method 8270

Data file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\140921
Lab Smp Id: 2NDRTK
Inj Date : 21-SEP-2012 16:20
Operator : DHF Inst ID: ms14.i
Smp Info : 2NDRTK;1;3;;LCS;1;;;;;SV0242
Misc Info : ZZ SVMS 8270/3510C BNA242
Comment :
Method : \\Gc01\TargetData\Chem2\ms14.i\14-2012\141209\14120921.B\14-8270D-1
Meth Date : 21-Sep-2012 18:26 deb Quant Type: ISTD
Cal Date : 21-SEP-2012 15:54 Cal File: 14092113.D
Als bottle: 14 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2ND80-120.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Sample Volume extracted(mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	1 1,4-Dioxane	88	2.613	2.613	(0.512)	150034	45.3505	45.3505
	2 N-Nitrosodimethylamine	74	2.896	2.897	(0.567)	229213	53.6064	53.6064
	3 Pyridine	79	2.918	2.918	(0.572)	409640	52.8370	52.8370
$	4 2-Fluorophenol	112	3.971	3.966	(0.778)	332606	49.6220	49.6220
	5 N-Nitrosodiethylamine	102	4.175	4.179	(0.818)	175915	50.9198	50.9198
	6 Benzaldehyde	106	4.725	4.726	(0.926)	253929	54.1133	54.1133
$	7 Phenol-d5	99	4.741	4.742	(0.929)	386457	52.0594	52.0594
	8 Phenol	94	4.752	4.758	(0.931)	392980	54.0491	54.0491
	9 Aniline	93	4.811	4.811	(0.942)	488838	51.9302	51.9302
	10 Bis(2-Chloroethyl)ether	93	4.848	4.854	(0.950)	358342	51.7506	51.7506
	12 2-Chlorophenol	128	4.918	4.924	(0.963)	353662	52.7388	52.7388
	11 n-Decane	57	4.913	4.918	(0.962)	353712	49.2105	49.2105
	13 1,3-Dichlorobenzene	146	5.057	5.057	(0.991)	389983	50.6264	50.6264
*	14 1,4-Dichlorobenzene-d4	152	5.105	5.106	(1.000)	189404	40.0000	
	15 1,4-Dichlorobenzene	146	5.121	5.122	(1.003)	370747	50.4288	50.4288
	16 Benzyl Alcohol	108	5.212	5.218	(1.021)	245348	46.1650	46.1650
	17 1,2-Dichlorobenzene	146	5.260	5.261	(1.030)	239487	43.3813	43.3813
	18 o-Cresol	107	5.298	5.303	(1.038)	300573	53.1582	53.1582
	19 bis(2-Chloroisopropyl)ether	45	5.324	5.330	(1.043)	370292	42.7446	42.7446
	20 mp-Cresol	107	5.442	5.453	(1.066)	388421	48.7275	48.7275(H)
	21 Acetophenone	105	5.469	5.475	(1.071)	497115	49.2553	49.2553

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	23 N-Nitrosopyrrolidine	100	5.464	5.491	(1.070)	187801	50.1382	50.1382
	22 N-Nitrosodi-n-propylamine	70	5.458	5.475	(1.069)	272090	52.9865	52.9865
	24 Hexachloroethane	117	5.576	5.576	(1.092)	163336	51.2611	51.2611
$	25 Nitrobenzene-d5	128	5.619	5.619	(0.891)	190170	50.3645	50.3645
	26 Nitrobenzene	77	5.635	5.640	(0.893)	374164	51.2400	51.2400
	27 Isophorone	82	5.854	5.870	(0.928)	675607	49.5585	49.5585
	28 2-Nitrophenol	139	5.929	5.940	(0.940)	207937	53.9395	53.9395
	29 2,4-Dimethylphenol	122	5.945	5.951	(0.942)	347479	50.5869	50.5869
	30 Bis(2-Chloroethoxy)methane	93	6.036	6.042	(0.957)	449392	50.5374	50.5374
	31 Benzoic acid	105	6.041	6.106	(0.958)	169888	45.5801	45.5801
	32 2,4-Dichlorophenol	162	6.159	6.165	(0.976)	310781	52.8919	52.8919
	33 1,2,4-Trichlorobenzene	180	6.239	6.245	(0.989)	360679	52.4940	52.4940
*	34 Naphthalene-d8	136	6.309	6.309	(1.000)	846317	40.0000	
	35 alpha-Terpineol	59	6.309	6.314	(1.000)	77779	16.0173	16.0173 (R)
	36 Naphthalene	128	6.330	6.330	(1.003)	1102400	49.4731	49.4731
	37 4-Chloroaniline	127	6.367	6.373	(1.009)	445818	50.8926	50.8926
	38 2,6-Dichlorophenol	162	6.378	6.379	(1.011)	296578	47.9536	47.9536
	39 Hexachlorobutadiene	225	6.421	6.427	(1.018)	195701	49.3136	49.3136
	40 N-Nitrosodi-n-butylamine	57	6.672	6.689	(1.058)	184029	49.6321	49.6321
	41 Resorcinol	110	6.742	6.716	(1.069)	392904	61.4510	61.4510 (aR)
	42 Caprolactam	56	6.753	6.812	(1.070)	123824	50.3849	50.3849 (M)
	43 4-Chloro-3-methylphenol	107	6.827	6.839	(1.082)	330373	52.1500	52.1500
	44 2-Methylnaphthalene	142	6.999	7.004	(1.109)	751260	49.6419	49.6419
	45 1-Methylnaphthalene	142	7.100	7.101	(1.125)	705607	50.1372	50.1372
	47 1,2,4,5-Tetrachlorobenzene	216	7.159	7.165	(0.890)	346984	47.5516	47.5516
	46 Hexachlorocyclopentadiene	237	7.143	7.143	(1.132)	180928	45.6835	45.6835
	48 2,4,6-Trichlorophenol	196	7.271	7.277	(0.904)	224986	54.1412	54.1412
	49 2,3-Dichloroaniline	161	7.277	7.282	(0.905)	378797	49.6761	49.6761
	50 2,4,5-Trichlorophenol	196	7.314	7.320	(0.910)	251340	55.9230	55.9230
$	51 2-Fluorobiphenyl	172	7.352	7.352	(0.914)	793772	48.5136	48.5136
	52 Biphenyl	154	7.459	7.459	(0.927)	910090	48.2441	48.2441
	53 2-Chloronaphthalene	162	7.485	7.491	(0.931)	692384	50.2199	50.2199
	55 2-Nitroaniline	138	7.582	7.587	(0.943)	248573	55.2225	55.2225
	56 1,4-Dinitrobenzene	168	7.715	7.721	(0.959)	135842	50.5342	50.5342
	57 Dimethylphthalate	163	7.747	7.753	(0.963)	829968	51.0492	51.0492
	58 1,3-Dinitrobenzene	168	7.796	7.801	(0.969)	156712	55.7455	55.7455
	59 2,6-Dinitrotoluene	165	7.817	7.823	(0.972)	201994	53.3591	53.3591
	61 Acenaphthylene	152	7.903	7.908	(0.983)	1072852	49.2142	49.2142
	60 1,2-Dinitrobenzene	168	7.881	7.887	(0.980)	104806	53.9937	53.9937
	62 3-Nitroaniline	138	7.993	7.999	(0.994)	204214	53.7417	53.7417
*	63 Acenaphthene-d10	164	8.042	8.042	(1.000)	482479	40.0000	
	64 Acenaphthene	153	8.074	8.079	(1.004)	725121	49.8494	49.8494
	65 2,4-Dinitrophenol	184	8.090	8.101	(1.006)	104532	42.9574	42.9574
	66 4-Nitrophenol	65	8.149	8.160	(1.013)	134390	50.5018	50.5018
	69 Dibenzofuran	168	8.245	8.250	(1.025)	999843	50.9332	50.9332
	67 Pentachlorobenzene	250	8.197	8.202	(1.019)	319611	47.7802	47.7802
	68 2,4-Dinitrotoluene	165	8.218	8.228	(1.022)	266627	54.2331	54.2331
	70 2,3,5,6-Tetrachlorophenol	230	8.314	8.314	(1.034)	159502	50.2905	50.2905
	71 2,3,4,6-Tetrachlorophenol	230	8.357	8.363	(1.039)	303798	102.407	102.407
	72 2-Napthylamine	143	8.405	8.411	(1.045)	670797	50.7086	50.7086
	73 Diethylphthalate	149	8.443	8.448	(1.050)	849866	50.2033	50.2033
	74 4-Chlorophenyl-phenylether	204	8.571	8.577	(1.066)	408753	50.7900	50.7900
	75 Fluorene	166	8.587	8.593	(1.068)	844524	50.7229	50.7229
	76 4-Nitroaniline	138	8.609	8.615	(1.070)	215156	58.6898	58.6898

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	77 2-Methyl-4,6-dinitrophenol	198	8.625	8.641	(0.905)	154906	49.5423	49.5423
	78 N-Nitrosodiphenylamine	169	8.694	8.699	(0.912)	719497	59.8066	59.8066
	79 Diphenylamine	169	8.694	8.699	(0.912)	719497	51.0670	51.0670
	81 Azobenzene	77	8.732	8.737	(0.916)	840181	52.2752	52.2752
	80 1,2-Diphenylhydrazine	77	8.732	8.737	(0.916)	840181	52.7979	52.7979
$	82 2,4,6-Tribromophenol	330	8.828	8.834	(0.926)	126810	51.8504	51.8504
	83 n-Heptadecane	57	8.908	8.908	(0.934)	542965	49.8925	49.8925
	84 4-Bromophenyl-phenylether	248	9.063	9.069	(0.951)	247921	51.1174	51.1174
	85 Hexachlorobenzene	284	9.133	9.138	(0.958)	266100	49.3980	49.3980
	86 Dimethoate	87	9.165	9.171	(0.961)	345391	53.2692	53.2692
	87 Atrazine	200	9.213	9.219	(0.966)	238040	49.8338	49.8338
	89 n-Octadecane	57	9.357	9.358	(0.981)	572308	50.9739	50.9739
	88 Pentachlorophenol	266	9.331	9.336	(0.979)	157839	51.2340	51.2340
*	90 Phenanthrene-d10	188	9.534	9.534	(1.000)	876691	40.0000	
	91 Phenanthrene	178	9.561	9.566	(1.003)	1179537	49.3679	49.3679
	92 Anthracene	178	9.609	9.614	(1.008)	1211290	50.9424	50.9424
	93 Carbazole	167	9.764	9.770	(1.024)	1125075	52.3432	52.3432
	94 Di-n-Butylphthalate	149	10.069	10.069	(1.056)	1518634	53.6775	53.6775
	95 Fluoranthene	202	10.753	10.759	(1.128)	1343842	51.4668	51.4668
	96 Benzidine	184	10.871	10.877	(0.891)	659921	58.1720	58.1720
	97 Pyrene	202	10.989	10.994	(0.901)	1401175	51.6651	51.6651
$	98 Terphenyl-d14	244	11.112	11.117	(0.911)	982100	49.4074	49.4074
	99 Butylbenzylphthalate	149	11.582	11.588	(0.950)	717960	55.9924	55.9924
	100 Di(2-Ethylhexyl)adipate	129	11.631	11.631	(0.954)	705418	56.2821	56.2821
	102 3,3-Dichlorobenzidine	252	12.144	12.150	(0.996)	528971	58.7323	58.7323
	103 Benzo(a)anthracene	228	12.181	12.187	(0.999)	1337154	50.1505	50.1505
*	104 Chrysene-d12	240	12.197	12.203	(1.000)	960056	40.0000	
	105 Chrysene	228	12.224	12.230	(1.002)	1211292	49.3417	49.3417
	101 bis(2-Ethylhexyl)phthalate	149	12.133	12.134	(0.995)	1042396	55.3032	55.3032
	106 Di-n-Octylphthalate	149	12.770	12.776	(1.047)	1828556	56.1239	56.1239
	107 Benzo(b)fluoranthene	252	13.310	13.321	(0.964)	1407101	49.9624	49.9624(H)
	108 Benzo(k)fluoranthene	252	13.347	13.359	(0.967)	1528068	53.5637	53.5637
	109 Benzo(a)pyrene	252	13.733	13.738	(0.995)	1360362	52.4620	52.4620
*	110 Perylene-d12	264	13.802	13.808	(1.000)	1008311	40.0000	
	111 Indeno(1,2,3-cd)pyrene	276	15.492	15.509	(1.122)	1656993	52.9838	52.9838
	112 Dibenzo(a,h)anthracene	278	15.519	15.535	(1.124)	1379321	52.6951	52.6951
	113 Benzo(g,h,i)perylene	276	16.022	16.038	(1.161)	1381572	52.2320	52.2320

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms14.i
Lab File ID: 14092114.D
Lab Smp Id: 2NDRTK
Analysis Type: SV
Quant Type: ISTD
Operator: DHF
Method File: \\Gc01\TargetData\Chem2\ms14.i\14-2012\141209\14120921.B\14-8270D-
Misc Info: ZZ SVMS 8270/3510C BNA242

Calibration Date: 21-SEP-2012
Calibration Time: 14:39

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	201484	100742	402968	189404	-6.00
34 Naphthalene-d8	894115	447058	1788230	846317	-5.35
63 Acenaphthene-d10	515108	257554	1030216	482479	-6.33
90 Phenanthrene-d10	924191	462096	1848382	876691	-5.14
104 Chrysene-d12	1005497	502749	2010994	960056	-4.52
110 Perylene-d12	1050509	525255	2101018	1008311	-4.02

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	5.11	4.61	5.61	5.11	0.00
34 Naphthalene-d8	6.31	5.81	6.81	6.31	0.00
63 Acenaphthene-d10	8.04	7.54	8.54	8.04	0.00
90 Phenanthrene-d10	9.53	9.03	10.03	9.53	0.00
104 Chrysene-d12	12.20	11.70	12.70	12.20	-0.04
110 Perylene-d12	13.80	13.30	14.30	13.80	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

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RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 2NDRTK
Level: LOW
Data Type: MS DATA
SpikeList File: 2NDRTK80-120.spk
Sublist File: 2ND80-120.sub
Method File: \\Gc01\TargetData\Chem2\ms14.i\14-2012\141209\14120921.B\14-8270D-
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B
Fraction: SV

Operator: DHF
SampleType: LCS
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1	1,4-Dioxane	50.0000	45.3505	90.70	80-120
2	N-Nitrosodimethyla	50.0000	53.6064	107.21	80-120
3	Pyridine	50.0000	52.8370	105.67	80-120
5	N-Nitrosodiethylam	50.0000	50.9198	101.84	80-120
6	Benzaldehyde	50.0000	54.1133	108.23	80-120
8	Phenol	50.0000	54.0491	108.10	80-120
9	Aniline	50.0000	51.9302	103.86	80-120
10	Bis(2-Chloroethyl)	50.0000	51.7506	103.50	80-120
12	2-Chlorophenol	50.0000	52.7388	105.48	80-120
11	n-Decane	50.0000	49.2105	98.42	80-120
13	1,3-Dichlorobenzen	50.0000	50.6264	101.25	80-120
15	1,4-Dichlorobenzen	50.0000	50.4288	100.86	80-120
16	Benzyl Alcohol	50.0000	46.1650	92.33	80-120
17	1,2-Dichlorobenzen	50.0000	43.3813	86.76	80-120
18	o-Cresol	50.0000	53.1582	106.32	80-120
19	bis(2-Chloroisopro	50.0000	42.7446	85.49	80-120
20	mp-Cresol	50.0000	48.7275	97.45	80-120
22	N-Nitrosodi-n-prop	50.0000	52.9865	105.97	80-120
23	N-Nitrosopyrrolidi	50.0000	50.1382	100.28	80-120
21	Acetophenone	50.0000	49.2553	98.51	80-120
24	Hexachloroethane	50.0000	51.2611	102.52	80-120
26	Nitrobenzene	50.0000	51.2400	102.48	80-120
27	Isophorone	50.0000	49.5585	99.12	80-120
28	2-Nitrophenol	50.0000	53.9395	107.88	80-120
29	2,4-Dimethylphenol	50.0000	50.5869	101.17	80-120
30	Bis(2-Chloroethoxy	50.0000	50.5374	101.07	80-120
31	Benzoic acid	50.0000	45.5801	91.16	80-120
32	2,4-Dichlorophenol	50.0000	52.8919	105.78	80-120
33	1,2,4-Trichloroben	50.0000	52.4940	104.99	80-120
35	alpha-Terpineol	12.5000	16.0173	128.14*	80-120
36	Naphthalene	50.0000	49.4731	98.95	80-120
37	4-Chloroaniline	50.0000	50.8926	101.79	80-120
38	2,6-Dichlorophenol	50.0000	47.9536	95.91	80-120
39	Hexachlorobutadien	50.0000	49.3136	98.63	80-120
40	N-Nitrosodi-n-buty	50.0000	49.6321	99.26	80-120
41	Resorcinol	50.0000	61.4510	122.90*	80-120
42	Caprolactam	50.0000	50.3849	100.77	80-120
43	4-Chloro-3-methylp	50.0000	52.1500	104.30	80-120
44	2-Methylnaphthalen	50.0000	49.6419	99.28	80-120
45	1-Methylnaphthalen	50.0000	50.1372	100.27	80-120

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
46 Hexachlorocyclopen	50.0000	45.6835	91.37	80-120
47 1,2,4,5-Tetrachlor	50.0000	47.5516	95.10	80-120
48 2,4,6-Trichlorophe	50.0000	54.1412	108.28	80-120
49 2,3-Dichloroanilin	50.0000	49.6761	99.35	80-120
50 2,4,5-Trichlorophe	50.0000	55.9230	111.85	80-120
52 Biphenyl	50.0000	48.2441	96.49	80-120
53 2-Chloronaphthalen	50.0000	50.2199	100.44	80-120
55 2-Nitroaniline	50.0000	55.2225	110.44	80-120
56 1,4-Dinitrobenzene	50.0000	50.5342	101.07	80-120
57 Dimethylphthalate	50.0000	51.0492	102.10	80-120
58 1,3-Dinitrobenzene	50.0000	55.7455	111.49	80-120
59 2,6-Dinitrotoluene	50.0000	53.3591	106.72	80-120
60 1,2-Dinitrobenzene	50.0000	53.9937	107.99	80-120
61 Acenaphthylene	50.0000	49.2142	98.43	80-120
62 3-Nitroaniline	50.0000	53.7417	107.48	80-120
64 Acenaphthene	50.0000	49.8494	99.70	80-120
65 2,4-Dinitrophenol	50.0000	42.9574	85.91	80-120
66 4-Nitrophenol	50.0000	50.5018	101.00	80-120
67 Pentachlorobenzene	50.0000	47.7802	95.56	80-120
68 2,4-Dinitrotoluene	50.0000	54.2331	108.47	80-120
69 Dibenzofuran	50.0000	50.9332	101.87	80-120
70 2,3,5,6-Tetrachlor	50.0000	50.2905	100.58	80-120
71 2,3,4,6-Tetrachlor	100.000	102.407	102.41	80-120
72 2-Napthylamine	50.0000	50.7086	101.42	80-120
73 Diethylphthalate	50.0000	50.2033	100.41	80-120
74 4-Chlorophenyl-phe	50.0000	50.7900	101.58	80-120
75 Fluorene	50.0000	50.7229	101.45	80-120
76 4-Nitroaniline	50.0000	58.6898	117.38	80-120
77 2-Methyl-4,6-dinit	50.0000	49.5423	99.08	80-120
79 Diphenylamine	50.0000	51.0670	102.13	80-120
81 Azobenzene	50.0000	52.2752	104.55	80-120
83 n-Heptadecane	50.0000	49.8925	99.78	80-120
84 4-Bromophenyl-phen	50.0000	51.1174	102.23	80-120
86 Dimethoate	50.0000	53.2692	106.54	80-120
85 Hexachlorobenzene	50.0000	49.3980	98.80	80-120
87 Atrazine	50.0000	49.8338	99.67	80-120
89 n-Octadecane	50.0000	50.9739	101.95	80-120
88 Pentachlorophenol	50.0000	51.2340	102.47	80-120
91 Phenanthrene	50.0000	49.3679	98.74	80-120
92 Anthracene	50.0000	50.9424	101.88	80-120
93 Carbazole	50.0000	52.3432	104.69	80-120
94 Di-n-Butylphthalat	50.0000	53.6775	107.36	80-120
95 Fluoranthene	50.0000	51.4668	102.93	80-120
96 Benzidine	50.0000	58.1720	116.34	80-120
97 Pyrene	50.0000	51.6651	103.33	80-120
99 Butylbenzylphthala	50.0000	55.9924	111.98	80-120
100 Di(2-Ethylhexyl)ad	50.0000	56.2821	112.56	80-120
101 bis(2-Ethylhexyl)p	50.0000	55.3032	110.61	80-120
102 3,3-Dichlorobenzid	50.0000	58.7323	117.46	80-120
103 Benzo(a)anthracene	50.0000	50.1505	100.30	80-120
105 Chrysene	50.0000	49.3417	98.68	80-120
106 Di-n-Octylphthalat	50.0000	56.1239	112.25	80-120
107 Benzo(b)fluoranthe	50.0000	49.9624	99.92	80-120
108 Benzo(k)fluoranthe	50.0000	53.5637	107.13	80-120

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
109 Benzo(a)pyrene	50.0000	52.4620	104.92	80-120
111 Indeno(1,2,3-cd)py	50.0000	52.9838	105.97	80-120
112 Dibenzo(a,h)anthra	50.0000	52.6951	105.39	80-120
113 Benzo(g,h,i)peryle	50.0000	52.2320	104.46	80-120

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 2-Fluorophenol	50.0000	49.6220	99.24	80-120
$ 7 Phenol-d5	50.0000	52.0594	104.12	80-120
$ 25 Nitrobenzene-d5	50.0000	50.3645	100.73	80-120
$ 51 2-Fluorobiphenyl	50.0000	48.5136	97.03	80-120
$ 82 2,4,6-Tribromophen	50.0000	51.8504	103.70	80-120
$ 98 Terphenyl-d14	50.0000	49.4074	98.81	80-120

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TARGET COMPOUNDS

Client Name:
Lab Smp Id: 2NDRTK
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
123-91-1	1,4-Dioxane	45.3505	
62-75-9	N-Nitrosodimethylamine	53.6064	
110-86-1	Pyridine	52.8370	
55-18-5	N-Nitrosodiethylamine	50.9198	
100-52-7	Benzaldehyde	54.1133	
108-95-2	Phenol	54.0491	
62-53-3	Aniline	51.9302	
111-44-4	Bis(2-Chloroethyl)ether	51.7506	
95-57-8	2-Chlorophenol	52.7388	
124-18-5	n-Decane	49.2105	
541-73-1	1,3-Dichlorobenzene	50.6264	
106-46-7	1,4-Dichlorobenzene	50.4288	
100-51-6	Benzyl Alcohol	46.1650	
95-50-1	1,2-Dichlorobenzene	43.3813	
95-48-7	o-Cresol	53.1582	
108-60-1	bis(2-Chloroisopropyl)ether	42.7446	
108394/106445	mp-Cresol	48.7275	
98-86-2	Acetophenone	49.2553	
930-55-2	N-Nitrosopyrrolidine	50.1382	
621-64-7	N-Nitrosodi-n-propylamine	52.9865	
67-72-1	Hexachloroethane	51.2611	
98-95-3	Nitrobenzene	51.2400	
78-59-1	Isophorone	49.5585	
88-75-5	2-Nitrophenol	53.9395	
105-67-9	2,4-Dimethylphenol	50.5869	
111-91-1	Bis(2-Chloroethoxy)methane	50.5374	
65-85-0	Benzoic acid	45.5801	
120-83-2	2,4-Dichlorophenol	52.8919	
120-82-1	1,2,4-Trichlorobenzene	52.4940	
10482-56-1	alpha-Terpineol	16.0173	
91-20-3	Naphthalene	49.4731	
106-47-8	4-Chloroaniline	50.8926	
87-65-0	2,6-Dichlorophenol	47.9536	
87-68-3	Hexachlorobutadiene	49.3136	
924-16-3	N-Nitrosodi-n-butylamine	49.6321	
108-46-3	Resorcinol	61.4510	J
105-60-2	Caprolactam	50.3849	
59-50-7	4-Chloro-3-methylphenol	52.1500	
91-57-6	2-Methylnaphthalene	49.6419	
90-12-0	1-Methylnaphthalene	50.1372	
95-94-3	1,2,4,5-Tetrachlorobenzene	47.5516	
77-47-4	Hexachlorocyclopentadiene	45.6835	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 2NDRTK
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
88-06-2	2,4,6-Trichlorophenol	54.1412	
608-27-5	2,3-Dichloroaniline	49.6761	
95-95-4	2,4,5-Trichlorophenol	55.9230	
92-52-4	Biphenyl	48.2441	
91-58-7	2-Chloronaphthalene	50.2199	
88-74-4	2-Nitroaniline	55.2225	
100-25-4	1,4-Dinitrobenzene	50.5342	
131-11-3	Dimethylphthalate	51.0492	
99-65-0	1,3-Dinitrobenzene	55.7455	
606-20-2	2,6-Dinitrotoluene	53.3591	
208-96-8	Acenaphthylene	49.2142	
528-29-0	1,2-Dinitrobenzene	53.9937	
99-09-2	3-Nitroaniline	53.7417	
83-32-9	Acenaphthene	49.8494	
51-28-5	2,4-Dinitrophenol	42.9574	
100-02-7	4-Nitrophenol	50.5018	
132-64-9	Dibenzofuran	50.9332	
608-93-5	Pentachlorobenzene	47.7802	
121-14-2	2,4-Dinitrotoluene	54.2331	
935-95-5	2,3,5,6-Tetrachlorophenol	50.2905	
58-90-2	2,3,4,6-Tetrachlorophenol	102.407	
91-59-8	2-Napthylamine	50.7086	
84-66-2	Diethylphthalate	50.2033	
7005-72-3	4-Chlorophenyl-phenylether	50.7900	
86-73-7	Fluorene	50.7229	
100-01-6	4-Nitroaniline	58.6898	
534-52-1	2-Methyl-4,6-dinitrophenol	49.5423	
86-30-6	N-Nitrosodiphenylamine	59.8066	
122-39-4	Diphenylamine	51.0670	
103-33-3	Azobenzene	52.2752	
122-66-7	1,2-Diphenylhydrazine	52.7979	
629-78-7	n-Heptadecane	49.8925	
101-55-3	4-Bromophenyl-phenylether	51.1174	
118-74-1	Hexachlorobenzene	49.3980	
60-51-5	Dimethoate	53.2692	
1912-24-9	Atrazine	49.8338	
593-45-3	n-Octadecane	50.9739	
87-86-5	Pentachlorophenol	51.2340	
85-01-8	Phenanthrene	49.3679	
120-12-7	Anthracene	50.9424	
86-74-8	Carbazole	52.3432	
84-74-2	Di-n-Butylphthalate	53.6775	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 2NDRTK
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 8270/3510C BNA242

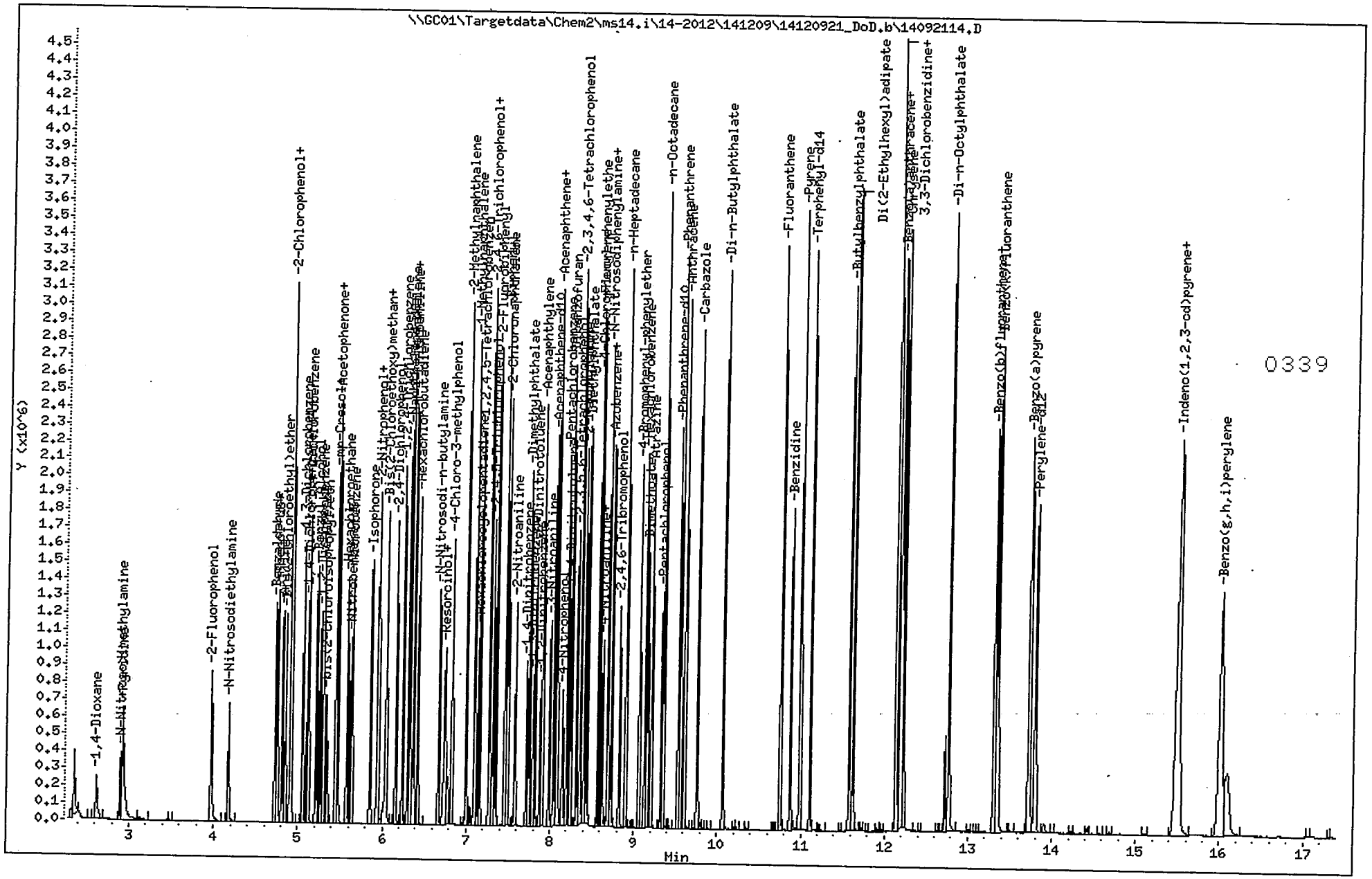
Client SDG: 14120921.B

Sample Point:
Date Received: 06-SEP-2007
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
206-44-0	Fluoranthene	51.4668	
92-87-5	Benzidine	58.1720	
129-00-0	Pyrene	51.6651	
85-68-7	Butylbenzylphthalate	55.9924	
103-23-1	Di(2-Ethylhexyl)adipate	56.2821	
91-94-1	3,3-Dichlorobenzidine	58.7323	
56-55-3	Benzo(a)anthracene	50.1505	
218-01-9	Chrysene	49.3417	
117-81-7	bis(2-Ethylhexyl)phthalate	55.3032	
117-84-0	Di-n-Octylphthalate	56.1239	
205-99-2	Benzo(b)fluoranthene	49.9624	
207-08-9	Benzo(k)fluoranthene	53.5637	
50-32-8	Benzo(a)pyrene	52.4620	
193-39-5	Indeno(1,2,3-cd)pyrene	52.9838	
53-70-3	Dibenzo(a,h)anthracene	52.6951	
191-24-2	Benzo(g,h,i)perylene	52.2320	
367-12-4	2-Fluorophenol	49.6220	
4165-62-2	Phenol-d5	52.0594	
4165-60-0	Nitrobenzene-d5	50.3645	
321-60-8	2-Fluorobiphenyl	48.5136	
118-79-6	2,4,6-Tribromophenol	51.8504	
98904-43-9	Terphenyl-d14	49.4074	

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092114.D
Date : 21-SEP-2012 16:20
Client ID:
Sample Info: 2NDRTK;1;3;;LCS;1;;;;;SV0242
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: ms14.i
Operator: DHF
Column diameter: 0.25



Continuing Calibrations

7B

SEMI-VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms14.i Calibration Date/Time: 9/21/2012 18:27

Lab File ID: 14092119.D Init. Calib. Date(s): 9/21/2012 9/21/2012

GC Column: DB-5 ID: 0.18 (mm) Init. Calib. Time(s): 12:57 15:54

COMPOUND	RRF	RRF050	Conc. CC std	MIN RRF	%D	MAX%D	CT
Acenaphthene	1.2060	1.1860		0.050	-1.7	20.0	A
Acenaphthylene	1.8073	1.8373		0.050	1.7	20.0	A
Acetophenone	2.1314	2.2245		0.050	4.4	20.0	A
Aniline	1.9880	2.1515		0.050	8.2	20.0	A
Anthracene	1.0849	1.1014		0.050	1.5	20.0	A
Atrazine	0.2179	0.2245		0.050	3.0	20.0	A
Azobenzene	0.7333	0.7556		0.050	3.0	20.0	A
Benzaldehyde	0.9910	1.0560		0.050	6.6	20.0	A
Benzidine	50.0000		54.4946	0.050	9.0	20.0	L
Benzo(a)anthracene	1.1109	1.1239		0.050	1.2	20.0	A
Benzo(a)pyrene	1.0287	1.0711		0.050	4.1	20.0	A
Benzo(b)fluoranthene	1.1172	1.1595		0.050	3.8	20.0	A
Benzo(g,h,i)perylene	1.0493	1.0798		0.050	2.9	20.0	A
Benzoic acid	100		93.9254	0.050	-6.1	20.0	Q
Benzo(k)fluoranthene	1.1317	1.1296		0.050	-0.2	20.0	A
Benzyl Alcohol	50.0000		46.2006	0.050	-7.6	20.0	L
Biphenyl	1.5639	1.5501		0.050	-0.9	20.0	A
4-Bromophenyl-phenylether	0.2213	0.2278		0.050	2.9	20.0	A
Butylbenzylphthalate	0.5342	0.5904		0.050	10.5	20.0	A
Caprolactam	0.1161	0.1200		0.050	3.3	20.0	A
Carbazole	0.9807	1.0129		0.050	3.3	20.0	A
4-Chloro-3-methylphenol	0.2994	0.3074		0.050	2.7	20.0	A
4-Chloroaniline	0.4140	0.4326		0.050	4.5	20.0	A
Bis(2-Chloroethoxy)methane	0.4203	0.4257		0.050	1.3	20.0	A
Bis(2-Chloroethyl)ether	1.4624	1.5221		0.050	4.1	20.0	A
bis(2-Chloroisopropyl)ether	1.8295	1.8513		0.050	1.2	20.0	A
2-Chloronaphthalene	1.1430	1.1354		0.050	-0.7	20.0	A
2-Chlorophenol	1.4162	1.4684		0.050	3.7	20.0	A
4-Chlorophenyl-phenylether	0.6672	0.6699		0.050	0.4	20.0	A
Chrysene	1.0228	0.9828		0.050	-3.9	20.0	A
mp-Cresol	1.6834	1.7051		0.050	1.3	20.0	A
o-Cresol	1.1941	1.2406		0.050	3.9	20.0	A
Di-n-Butylphthalate	1.2909	1.3756		0.050	6.6	20.0	A
Di-n-Octylphthalate	1.3575	1.5190		0.050	11.9	20.0	A
n-Decane	1.5180	1.5388		0.050	1.4	20.0	A
Dibenzo(a,h)anthracene	1.0384	1.0722		0.050	3.3	20.0	A

Calibration Type: A=Average Response Factor, L=Linear Regression, Q=Quadratic Regression
Compounds with "Calibration Type" other than "A" are calculated as % Drift due to alternate calibration type.

7B

SEMI-VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms14.i Calibration Date/Time: 9/21/2012 18:27

Lab File ID: 14092119.D Init. Calib. Date(s): 9/21/2012 9/21/2012

GC Column: DB-5 ID: 0.18 (mm) Init. Calib. Time(s): 12:57 15:54

COMPOUND	RRF	RRF050	Conc. CC std	MIN RRF	%D	MAX%D	CT
Dibenzofuran	1.6275	1.6197		0.050	-0.5	20.0	A
2,3-Dichloroaniline	0.6322	0.6372		0.050	0.8	20.0	A
1,2-Dichlorobenzene	1.1659	1.0050		0.050	-13.8	20.0	A
1,3-Dichlorobenzene	1.6268	1.6575		0.050	1.9	20.0	A
1,4-Dichlorobenzene	1.5526	1.5479		0.050	-0.3	20.0	A
3,3-Dichlorobenzidine	0.3753	0.4145		0.050	10.5	20.0	A
2,4-Dichlorophenol	0.2777	0.2851		0.050	2.7	20.0	A
2,6-Dichlorophenol	0.2923	0.3006		0.050	2.8	20.0	A
Diethylphthalate	1.4035	1.3986		0.050	-0.3	20.0	A
Dimethoate	0.2958	0.3273		0.050	10.6	20.0	A
2,4-Dimethylphenol	0.3246	0.3276		0.050	0.9	20.0	A
Dimethylphthalate	1.3479	1.3536		0.050	0.4	20.0	A
1,2-Dinitrobenzene	0.1609	0.1695		0.050	5.3	20.0	A
1,3-Dinitrobenzene	0.2331	0.2549		0.050	9.3	20.0	A
1,4-Dinitrobenzene	50.0000		48.9986	0.050	-2.0	20.0	L
2,4-Dinitrophenol	100		91.8667	0.050	-8.1	20.0	L
2,4-Dinitrotoluene	0.4076	0.4397		0.050	7.9	20.0	A
2,6-Dinitrotoluene	0.3138	0.3302		0.050	5.2	20.0	A
1,4-Dioxane	0.6987	0.6916		0.050	-1.0	20.0	A
Diphenylamine	0.6428	0.6526		0.050	1.5	20.0	A
1,2-Diphenylhydrazine	0.7261	0.7482		0.050	3.0	20.0	A
bis(2-Ethylhexyl)phthalate	0.7853	0.8544		0.050	8.8	20.0	A
Di(2-Ethylhexyl)adipate	0.5222	0.5827		0.050	11.6	20.0	A
Fluoranthene	1.1913	1.2244		0.050	2.8	20.0	A
Fluorene	1.3803	1.3908		0.050	0.8	20.0	A
n-Heptadecane	0.4965	0.5162		0.050	4.0	20.0	A
Hexachlorobenzene	0.2458	0.2445		0.050	-0.5	20.0	A
Hexachlorobutadiene	0.1876	0.1865		0.050	-0.5	20.0	A
Hexachlorocyclopentadiene	50.0000		50.6741	0.050	1.3	20.0	L
Hexachloroethane	0.6729	0.6978		0.050	3.7	20.0	A
Indeno(1,2,3-cd)pyrene	1.2406	1.2961		0.050	4.5	20.0	A
Isophorone	0.6443	0.6676		0.050	3.6	20.0	A
2-Methyl-4,6-dinitrophenol	100		100	0.050	0.4	20.0	L
1-Methylnaphthalene	0.6652	0.6632		0.050	-0.3	20.0	A
2-Methylnaphthalene	0.7153	0.7171		0.050	0.3	20.0	A
2-Napthylamine	50.0000		50.4543	0.050	0.9	20.0	L

Calibration Type: A=Average Response Factor, L=Linear Regression, Q=Quadratic Regression
Compounds with "Calibration Type" other than "A" are calculated as % Drift due to alternate calibration type.

7B

SEMI-VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms14.i Calibration Date/Time: 9/21/2012 18:27

Lab File ID: 14092119.D Init. Calib. Date(s): 9/21/2012 9/21/2012

GC Column: DB-5 ID: 0.18 (mm) Init. Calib. Time(s): 12:57 15:54

COMPOUND	RRF	RRF050	Conc. CC std	MIN RRF	%D	MAX%D	CT
Naphthalene	1.0532	1.0386		0.050	-1.4	20.0	A
2-Nitroaniline	0.3732	0.4045		0.050	8.4	20.0	A
3-Nitroaniline	0.3150	0.3489		0.050	10.7	20.0	A
4-Nitroaniline	0.3039	0.3477		0.050	14.4	20.0	A
Nitrobenzene	0.3451	0.3482		0.050	0.9	20.0	A
2-Nitrophenol	0.1822	0.1918		0.050	5.3	20.0	A
4-Nitrophenol	100		99.0000	0.050	-1.0	20.0	L
N-Nitrosodi-n-butylamine	0.1752	0.1812		0.050	3.4	20.0	A
N-Nitrosodiethylamine	0.7296	0.7751		0.050	6.2	20.0	A
N-Nitrosodimethylamine	0.9030	0.9470		0.050	4.9	20.0	A
N-Nitrosodi-n-propylamine	1.0845	1.1425		0.050	5.3	20.0	A
N-Nitrosodiphenylamine	0.5489	0.5568		0.050	1.4	20.0	A
N-Nitrosopyrrolidine	0.7910	0.8288		0.050	4.8	20.0	A
n-Octadecane	0.5123	0.5327		0.050	4.0	20.0	A
Pentachlorobenzene	0.5546	0.5608		0.050	1.1	20.0	A
Pentachlorophenol	100		103	0.050	3.2	20.0	L
Phenanthrene	1.0901	1.0785		0.050	-1.1	20.0	A
Phenol	1.5355	1.6187		0.050	5.4	20.0	A
Pyrene	1.1300	1.1418		0.050	1.1	20.0	A
Pyridine	1.6373	1.6914		0.050	3.3	20.0	A
Resorcinol	0.3022	0.3368		0.050	11.4	20.0	A
alpha-Terpineol	0.2295	0.2332		0.050	1.6	20.0	A
1,2,4,5-Tetrachlorobenzene	0.6050	0.6006		0.050	-0.7	20.0	A
2,3,4,6-Tetrachlorophenol	0.2459	0.2588		0.050	5.2	20.0	A
2,3,5,6-Tetrachlorophenol	50.0000		49.4381	0.050	-1.1	20.0	L
1,2,4-Trichlorobenzene	0.3247	0.3233		0.050	-0.5	20.0	A
2,4,5-Trichlorophenol	0.3726	0.3780		0.050	1.5	20.0	A
2,4,6-Trichlorophenol	0.3445	0.3553		0.050	3.1	20.0	A
2-Fluorophenol	1.4155	1.4990		0.050	5.9	20.0	A
Phenol-d5	1.5677	1.6922		0.050	7.9	20.0	A
Nitrobenzene-d5	0.1785	0.1877		0.050	5.2	20.0	A
2-Fluorobiphenyl	1.3565	1.3439		0.050	-0.9	20.0	A
2,4,6-Tribromophenol	0.1116	0.1214		0.050	8.8	20.0	A
Terphenyl-d14	0.8282	0.8370		0.050	1.1	20.0	A

Calibration Type: A=Average Response Factor, L=Linear Regression, Q=Quadratic Regression
Compounds with "Calibration Type" other than "A" are calculated as % Drift due to alternate calibration type.

ALS - Middletown

Semivolatile Report for SW-846 Method 8270

Data file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14092
Lab Smp Id: 1800
Inj Date : 21-SEP-2012 18:27
Operator : DHF Inst ID: ms14.i
Smp Info : 1800;1;2;5;BNA-50F;;;;;;SV0242
Misc Info : ZZ SVMS 17662 8270/3510C
Comment :
Method : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14-82
Meth Date : 24-Sep-2012 15:37 ms14.i Quant Type: ISTD
Cal Date : 21-SEP-2012 15:04 Cal File: 14092111.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 12_3510_3550all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Sample Volume extracted(mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

DATA REVIEW
REPORTED
APPROVED
REVIEW

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
	1 1,4-Dioxane	88	2.613	2.613	(0.512)	162705	50.0000	49.4912
	2 N-Nitrosodimethylamine	74	2.896	2.896	(0.567)	222795	50.0000	52.4345
	3 Pyridine	79	2.918	2.918	(0.572)	397943	50.0000	51.6525
$	4 2-Fluorophenol	112	3.966	3.966	(0.777)	352672	50.0000	52.9481
	5 N-Nitrosodiethylamine	102	4.174	4.174	(0.818)	182366	50.0000	53.1205
	6 Benzaldehyde	106	4.725	4.725	(0.926)	248448	50.0000	53.2798
$	7 Phenol-d5	99	4.741	4.741	(0.929)	398129	50.0000	53.9705
	8 Phenol	94	4.752	4.752	(0.931)	761671	100.000	105.419
	9 Aniline	93	4.811	4.811	(0.942)	506185	50.0000	54.1127
	10 Bis(2-Chloroethyl)ether	93	4.848	4.848	(0.950)	358103	50.0000	52.0428
	12 2-Chlorophenol	128	4.918	4.918	(0.963)	690957	100.000	103.688
	11 n-Decane	57	4.913	4.913	(0.962)	362024	50.0000	50.6851
	13 1,3-Dichlorobenzene	146	5.057	5.057	(0.991)	389950	50.0000	50.9419
*	14 1,4-Dichlorobenzene-d4	152	5.105	5.105	(1.000)	188215	40.0000	
	15 1,4-Dichlorobenzene	146	5.121	5.121	(1.003)	364176	50.0000	49.8479
	16 Benzyl Alcohol	108	5.212	5.212	(1.021)	243996	50.0000	46.2006
	17 1,2-Dichlorobenzene	146	5.260	5.260	(1.030)	236440	50.0000	43.1000
	18 o-Cresol	107	5.298	5.298	(1.038)	583746	100.000	103.891
	19 bis(2-Chloroisopropyl)ether	45	5.324	5.324	(1.043)	435543	50.0000	50.5945
	20 mp-Cresol	107	5.447	5.447	(1.067)	802303	100.000	101.285
	23 N-Nitrosopyrrolidine	100	5.469	5.469	(1.071)	194996	50.0000	52.3879

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
	22 N-Nitrosodi-n-propylamine	70	5.463	5.463	(1.070)	268784	50.0000	52.6734
	21 Acetophenone	105	5.469	5.469	(1.071)	523354	50.0000	52.1828
	24 Hexachloroethane	117	5.576	5.576	(1.092)	164164	50.0000	51.8465
$	25 Nitrobenzene-d5	128	5.619	5.619	(0.891)	198082	50.0000	52.5904
	26 Nitrobenzene	77	5.635	5.635	(0.893)	367400	50.0000	50.4388
	27 Isophorone	82	5.859	5.859	(0.929)	704552	50.0000	51.8103
	28 2-Nitrophenol	139	5.934	5.934	(0.941)	404874	100.000	105.287
	29 2,4-Dimethylphenol	122	5.945	5.945	(0.942)	691467	100.000	100.916
	30 Bis(2-Chloroethoxy)methane	93	6.036	6.036	(0.957)	449229	50.0000	50.6448
	31 Benzoic acid	105	6.079	6.079	(0.964)	376955	100.000	93.9254
	32 2,4-Dichlorophenol	162	6.159	6.159	(0.976)	601717	100.000	102.661
	33 1,2,4-Trichlorobenzene	180	6.239	6.239	(0.989)	341145	50.0000	49.7745
	35 alpha-Terpineol	59	6.314	6.314	(1.001)	61519	12.5000	12.7003
*	34 Naphthalene-d8	136	6.309	6.309	(1.000)	844217	40.0000	
	36 Naphthalene	128	6.330	6.330	(1.003)	1096020	50.0000	49.3092
	37 4-Chloroaniline	127	6.367	6.367	(1.009)	456555	50.0000	52.2479
	38 2,6-Dichlorophenol	162	6.373	6.373	(1.010)	317168	50.0000	51.4103
	39 Hexachlorobutadiene	225	6.421	6.421	(1.018)	196850	50.0000	49.7265
	40 N-Nitrosodi-n-butylamine	57	6.678	6.678	(1.058)	191235	50.0000	51.7038
	41 Resorcinol	110	6.747	6.747	(1.070)	355407	50.0000	55.7246(a)
	42 Caprolactam	56	6.795	6.795	(1.077)	126656	50.0000	51.6655(M)
	43 4-Chloro-3-methylphenol	107	6.833	6.833	(1.083)	648890	100.000	102.683
	44 2-Methylnaphthalene	142	6.999	6.999	(1.109)	756729	50.0000	50.1277
	45 1-Methylnaphthalene	142	7.100	7.100	(1.125)	699870	50.0000	49.8532
	46 Hexachlorocyclopentadiene	237	7.143	7.143	(1.132)	200195	50.0000	50.6741
	47 1,2,4,5-Tetrachlorobenzene	216	7.159	7.159	(0.890)	366936	50.0000	49.6395
	48 2,4,6-Trichlorophenol	196	7.271	7.271	(0.904)	434109	100.000	103.122
	49 2,3-Dichloroaniline	161	7.277	7.277	(0.905)	389324	50.0000	50.4004
	50 2,4,5-Trichlorophenol	196	7.314	7.314	(0.910)	461902	100.000	101.452
$	51 2-Fluorobiphenyl	172	7.352	7.352	(0.914)	821026	50.0000	49.5344
	52 Biphenyl	154	7.459	7.459	(0.927)	947035	50.0000	49.5573
	53 2-Chloronaphthalene	162	7.485	7.485	(0.931)	693663	50.0000	49.6660
	55 2-Nitroaniline	138	7.582	7.582	(0.943)	247109	50.0000	54.1916
	56 1,4-Dinitrobenzene	168	7.715	7.715	(0.959)	133429	50.0000	48.9986
	57 Dimethylphthalate	163	7.747	7.747	(0.963)	827008	50.0000	50.2133
	58 1,3-Dinitrobenzene	168	7.795	7.795	(0.969)	155700	50.0000	54.6737
	59 2,6-Dinitrotoluene	165	7.817	7.817	(0.972)	201742	50.0000	52.6076
	60 1,2-Dinitrobenzene	168	7.881	7.881	(0.980)	103538	50.0000	52.6549
	61 Acenaphthylene	152	7.902	7.902	(0.983)	1122522	50.0000	50.8308
	62 3-Nitroaniline	138	7.993	7.993	(0.994)	213144	50.0000	55.3708
*	63 Acenaphthene-d10	164	8.042	8.042	(1.000)	488761	40.0000	
	64 Acenaphthene	153	8.074	8.074	(1.004)	724557	50.0000	49.1704
	65 2,4-Dinitrophenol	184	8.095	8.095	(1.007)	226458	100.000	91.8667
	66 4-Nitrophenol	65	8.148	8.148	(1.013)	266975	100.000	99.0359
	67 Pentachlorobenzene	250	8.197	8.197	(1.019)	342608	50.0000	50.5598
	68 2,4-Dinitrotoluene	165	8.218	8.218	(1.022)	268640	50.0000	53.9402
	69 Dibenzofuran	168	8.245	8.245	(1.025)	989532	50.0000	49.7601
	70 2,3,5,6-Tetrachlorophenol	230	8.314	8.314	(1.034)	158840	50.0000	49.4381
	71 2,3,4,6-Tetrachlorophenol	230	8.357	8.357	(1.039)	316206	100.000	105.220
	72 2-Napthylamine	143	8.405	8.405	(1.045)	676123	50.0000	50.4543
	73 Diethylphthalate	149	8.443	8.443	(1.050)	854497	50.0000	49.8281
	74 4-Chlorophenyl-phenylether	204	8.571	8.571	(1.066)	409276	50.0000	50.2013
	75 Fluorene	166	8.587	8.587	(1.068)	849721	50.0000	50.3791
	76 4-Nitroaniline	138	8.614	8.614	(1.071)	212432	50.0000	57.2020

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	77 2-Methyl-4,6-dinitrophenol	198	8.630	8.630	(0.905)	315061	100.000	100.444
	78 N-Nitrosodiphenylamine	169	8.694	8.694	(0.912)	717444	58.6000	59.4469
	79 Diphenylamine	169	8.694	8.694	(0.912)	717444	50.0000	50.7598
	80 1,2-Diphenylhydrazine	77	8.731	8.731	(0.916)	830729	50.5000	52.0384
	81 Azobenzene	77	8.731	8.731	(0.916)	830729	50.0000	51.5232
$	82 2,4,6-Tribromophenol	330	8.828	8.828	(0.926)	133498	50.0000	54.4119
	83 n-Heptadecane	57	8.903	8.903	(0.934)	567491	50.0000	51.9808
	84 4-Bromophenyl-phenylether	248	9.063	9.063	(0.951)	250421	50.0000	51.4691
	86 Dimethoate	87	9.165	9.165	(0.961)	359823	50.0000	55.3190
	85 Hexachlorobenzene	284	9.133	9.133	(0.958)	268736	50.0000	49.7291
	87 Atrazine	200	9.213	9.213	(0.966)	246804	50.0000	51.5047
	89 n-Octadecane	57	9.352	9.352	(0.981)	585648	50.0000	51.9967
	88 Pentachlorophenol	266	9.331	9.331	(0.979)	318871	100.000	103.171
*	90 Phenanthrene-d10	188	9.534	9.534	(1.000)	879480	40.0000	
	91 Phenanthrene	178	9.561	9.561	(1.003)	1185696	50.0000	49.4683
	92 Anthracene	178	9.609	9.609	(1.008)	1210881	50.0000	50.7637
	93 Carbazole	167	9.764	9.764	(1.024)	1113515	50.0000	51.6411
	94 Di-n-Butylphthalate	149	10.069	10.069	(1.056)	1512292	50.0000	53.2838
	95 Fluoranthene	202	10.753	10.753	(1.128)	1346094	50.0000	51.3896
	96 Benzidine	184	10.871	10.871	(0.891)	621541	50.0000	54.4946
	97 Pyrene	202	10.989	10.989	(0.901)	1377689	50.0000	50.5263
$	98 Terphenyl-d14	244	11.112	11.112	(0.911)	1009823	50.0000	50.5293
	99 Butylbenzylphthalate	149	11.582	11.582	(0.950)	712397	50.0000	55.2602
	100 Di(2-Ethylhexyl)adipate	129	11.625	11.625	(0.953)	703054	50.0000	55.7923
	101 bis(2-Ethylhexyl)phthalate	149	12.128	12.128	(0.994)	1030864	50.0000	54.3977
	102 3,3-Dichlorobenzidine	252	12.139	12.139	(0.995)	500079	50.0000	55.2263
	103 Benzo(a)anthracene	228	12.181	12.181	(0.999)	1356078	50.0000	50.5872
*	104 Chrysene-d12	240	12.197	12.197	(1.000)	965239	40.0000	
	105 Chrysene	228	12.224	12.224	(1.002)	1185833	50.0000	48.0453
	106 Di-n-Octylphthalate	149	12.764	12.764	(1.046)	1832759	50.0000	55.9509
	107 Benzo(b)fluoranthene	252	13.310	13.310	(0.964)	1486643	50.0000	51.8919
	108 Benzo(k)fluoranthene	252	13.347	13.347	(0.967)	1448237	50.0000	49.9048
	109 Benzo(a)pyrene	252	13.727	13.727	(0.995)	1373233	50.0000	52.0606
*	110 Perylene-d12	264	13.802	13.802	(1.000)	1025699	40.0000	
	111 Indeno(1,2,3-cd)pyrene	276	15.492	15.492	(1.122)	1661815	50.0000	52.2372
	112 Dibenzo(a,h)anthracene	278	15.514	15.514	(1.124)	1374692	50.0000	51.6279
	113 Benzo(g,h,i)perylene	276	16.016	16.016	(1.160)	1384388	50.0000	51.4512

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms14.i
Lab File ID: 14092119.D
Lab Smp Id: 1800
Analysis Type: SV
Quant Type: ISTD
Operator: DHF
Method File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14-8
Misc Info: ZZ SVMS 17662 8270/3510C

Calibration Date: 21-SEP-2012
Calibration Time: 14:39

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	201484	100742	402968	188215	-6.59
34 Naphthalene-d8	894115	447058	1788230	844217	-5.58
63 Acenaphthene-d10	515108	257554	1030216	488761	-5.11
90 Phenanthrene-d10	924191	462096	1848382	879480	-4.84
104 Chrysene-d12	1005497	502749	2010994	965239	-4.00
110 Perylene-d12	1050509	525255	2101018	1025699	-2.36

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	5.11	4.61	5.61	5.11	0.00
34 Naphthalene-d8	6.31	5.81	6.81	6.31	0.00
63 Acenaphthene-d10	8.04	7.54	8.54	8.04	0.00
90 Phenanthrene-d10	9.53	9.03	10.03	9.53	0.00
104 Chrysene-d12	12.20	11.70	12.70	12.20	-0.04
110 Perylene-d12	13.80	13.30	14.30	13.80	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: ms14.i
Lab File ID: 14092119.D
Analysis Type: WATER
Lab Sample ID: 1800
Method: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14-8270Do

Injection Date: 21-SEP-2012 18:27
Init. Cal. Date(s): 21-SEP-2012 21-SEP-2012
Init. Cal. Times: 12:57 15:54
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
1 1,4-Dioxane	0.69868	0.69157	0.69157	0.050	-1.01765	20.00000	Averaged
2 N-Nitrosodimethylamine	0.90301	0.94698	0.94698	0.050	4.86905	20.00000	Averaged
3 Pyridine	1.63733	1.69144	1.69144	0.050	3.30500	20.00000	Averaged
$ 4 2-Fluorophenol	1.41555	1.49902	1.49902	0.050	5.89620	20.00000	Averaged
5 N-Nitrosodiethylamine	0.72960	0.77514	0.77514	0.050	6.24102	20.00000	Averaged
6 Benzaldehyde	0.99101	1.05602	1.05602	0.050	6.55958	20.00000	Averaged
$ 7 Phenol-d5	1.56774	1.69223	1.69223	0.050	7.94104	20.00000	Averaged
8 Phenol	1.53551	1.61873	1.61873	0.050	5.41934	20.00000	Averaged
9 Aniline	1.98800	2.15152	2.15152	0.050	8.22546	20.00000	Averaged
10 Bis(2-Chloroethyl)ether	1.46236	1.52210	1.52210	0.050	4.08565	20.00000	Averaged
12 2-Chlorophenol	1.41621	1.46844	1.46844	0.050	3.68783	20.00000	Averaged
11 n-Decane	1.51797	1.53877	1.53877	0.050	1.37010	20.00000	Averaged
13 1,3-Dichlorobenzene	1.62682	1.65747	1.65747	0.050	1.88386	20.00000	Averaged
15 1,4-Dichlorobenzene	1.55264	1.54791	1.54791	0.050	-0.30412	20.00000	Averaged
16 Benzyl Alcohol	50.00000	46.20060	0.96423	0.050	-7.59880	20.00000	Linear
17 1,2-Dichlorobenzene	1.16587	1.00498	1.00498	0.050	-13.80009	20.00000	Averaged
18 o-Cresol	1.19413	1.24059	1.24059	0.050	3.89134	20.00000	Averaged
19 bis(2-Chloroisopropyl)ether	1.82951	1.85126	1.85126	0.050	1.18893	20.00000	Averaged
20 mp-Cresol	1.68345	1.70508	1.70508	0.050	1.28490	20.00000	Averaged
23 N-Nitrosopyrrolidine	0.79104	0.82882	0.82882	0.050	4.77588	20.00000	Averaged
22 N-Nitrosodi-n-propylamine	1.08447	1.14246	1.14246	0.050	5.34677	20.00000	Averaged
21 Acetophenone	2.13145	2.22449	2.22449	0.050	4.36551	20.00000	Averaged
24 Hexachloroethane	0.67292	0.69777	0.69777	0.050	3.69293	20.00000	Averaged
$ 25 Nitrobenzene-d5	0.17846	0.18771	0.18771	0.050	5.18083	20.00000	Averaged
26 Nitrobenzene	0.34513	0.34816	0.34816	0.050	0.87768	20.00000	Averaged
27 Isophorone	0.64432	0.66765	0.66765	0.050	3.62064	20.00000	Averaged
28 2-Nitrophenol	0.18220	0.19183	0.19183	0.050	5.28673	20.00000	Averaged
29 2,4-Dimethylphenol	0.32465	0.32763	0.32763	0.050	0.91604	20.00000	Averaged
30 Bis(2-Chloroethoxy)methane	0.42028	0.42570	0.42570	0.050	1.28954	20.00000	Averaged
31 Benzoic acid	100	93.92538	5.59892	0.050	-6.07462	20.00000	Quadratic
32 2,4-Dichlorophenol	0.27771	0.28510	0.28510	0.050	2.66113	20.00000	Averaged
33 1,2,4-Trichlorobenzene	0.32474	0.32328	0.32328	0.050	-0.45100	20.00000	Averaged
35 alpha-Terpineol	0.22951	0.23319	0.23319	0.050	1.60245	20.00000	Averaged
36 Naphthalene	1.05317	1.03861	1.03861	0.050	-1.38168	20.00000	Averaged
37 4-Chloroaniline	0.41403	0.43264	0.43264	0.050	4.49582	20.00000	Averaged
38 2,6-Dichlorophenol	0.29231	0.30056	0.30056	0.050	2.82065	20.00000	Averaged
39 Hexachlorobutadiene	0.18757	0.18654	0.18654	0.050	-0.54702	20.00000	Averaged
40 N-Nitrosodi-n-butylamine	0.17525	0.18122	0.18122	0.050	3.40767	20.00000	Averaged
41 Resorcinol	0.30219	0.33679	0.33679	0.050	11.44926	20.00000	Averaged
42 Caprolactam	0.11615	0.12002	0.12002	0.050	3.33091	20.00000	Averaged
43 4-Chloro-3-methylphenol	0.29942	0.30745	0.30745	0.050	2.68337	20.00000	Averaged
44 2-Methylnaphthalene	0.71527	0.71709	0.71709	0.050	0.25531	20.00000	Averaged

ALS - Middletown

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: ms14.i
Lab File ID: 14092119.D
Analysis Type: WATER
Lab Sample ID: 1800
Method: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14-8270Do

Injection Date: 21-SEP-2012 18:27
Init. Cal. Date(s): 21-SEP-2012 21-SEP-2012
Init. Cal. Times: 12:57 15:54
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
45 1-Methylnaphthalene	0.66517	0.66321	0.66321	0.050	-0.29356	20.00000	Averaged
46 Hexachlorocyclopentadiene	50.00000	50.67406	5.27122	0.050	1.34812	20.00000	Linear
47 1,2,4,5-Tetrachlorobenzene	0.60496	0.60060	0.60060	0.050	-0.72092	20.00000	Averaged
48 2,4,6-Trichlorophenol	0.34452	0.35527	0.35527	0.050	3.12235	20.00000	Averaged
49 2,3-Dichloroaniline	0.63218	0.63724	0.63724	0.050	0.80089	20.00000	Averaged
50 2,4,5-Trichlorophenol	0.37261	0.37802	0.37802	0.050	1.45191	20.00000	Averaged
$ 51 2-Fluorobiphenyl	1.35648	1.34385	1.34385	0.050	-0.93129	20.00000	Averaged
52 Biphenyl	1.56395	1.55010	1.55010	0.050	-0.88538	20.00000	Averaged
53 2-Chloronaphthalene	1.14302	1.13538	1.13538	0.050	-0.66804	20.00000	Averaged
55 2-Nitroaniline	0.37318	0.40447	0.40447	0.050	8.38328	20.00000	Averaged
56 1,4-Dinitrobenzene	50.00000	48.99856	4.57885	0.050	-2.00288	20.00000	Linear
57 Dimethylphthalate	1.34789	1.35364	1.35364	0.050	0.42664	20.00000	Averaged
58 1,3-Dinitrobenzene	0.23306	0.25485	0.25485	0.050	9.34739	20.00000	Averaged
59 2,6-Dinitrotoluene	0.31384	0.33021	0.33021	0.050	5.21520	20.00000	Averaged
60 1,2-Dinitrobenzene	0.16093	0.16947	0.16947	0.050	5.30973	20.00000	Averaged
61 Acenaphthylene	1.80730	1.83733	1.83733	0.050	1.66170	20.00000	Averaged
62 3-Nitroaniline	0.31503	0.34887	0.34887	0.050	10.74165	20.00000	Averaged
64 Acenaphthene	1.20596	1.18595	1.18595	0.050	-1.65916	20.00000	Averaged
65 2,4-Dinitrophenol	100	91.86667	5.39571	0.050	-8.13333	20.00000	Linear
66 4-Nitrophenol	100	99	4.57684	0.050	-0.96412	20.00000	Linear
67 Pentachlorobenzene	0.55457	0.56078	0.56078	0.050	1.11964	20.00000	Averaged
68 2,4-Dinitrotoluene	0.40759	0.43971	0.43971	0.050	7.88045	20.00000	Averaged
69 Dibenzofuran	1.62747	1.61966	1.61966	0.050	-0.47980	20.00000	Averaged
70 2,3,5,6-Tetrachlorophenol	50.00000	49.43812	3.84633	0.050	-1.12376	20.00000	Linear
71 2,3,4,6-Tetrachlorophenol	0.24594	0.25878	0.25878	0.050	5.22005	20.00000	Averaged
72 2-Napthylamine	50.00000	50.45429	0.90361	0.050	0.90858	20.00000	Linear
73 Diethylphthalate	1.40346	1.39863	1.39863	0.050	-0.34381	20.00000	Averaged
74 4-Chlorophenyl-phenylether	0.66721	0.66990	0.66990	0.050	0.40268	20.00000	Averaged
75 Fluorene	1.38035	1.39082	1.39082	0.050	0.75820	20.00000	Averaged
76 4-Nitroaniline	0.30393	0.34771	0.34771	0.050	14.40391	20.00000	Averaged
77 2-Methyl-4,6-dinitrophenol	100	100	6.97865	0.050	0.44389	20.00000	Linear
78 N-Nitrosodiphenylamine	0.54890	0.55683	0.55683	0.050	1.44514	20.00000	Averaged
79 Diphenylamine	0.64284	0.65261	0.65261	0.050	1.51955	20.00000	Averaged
80 1,2-Diphenylhydrazine	0.72605	0.74817	0.74817	0.050	3.04636	20.00000	Averaged
81 Azobenzene	0.73332	0.75565	0.75565	0.050	3.04636	20.00000	Averaged
$ 82 2,4,6-Tribromophenol	0.11159	0.12143	0.12143	0.050	8.82380	20.00000	Averaged
83 n-Heptadecane	0.49654	0.51621	0.51621	0.050	3.96158	20.00000	Averaged
84 4-Bromophenyl-phenylether	0.22129	0.22779	0.22779	0.050	2.93818	20.00000	Averaged
86 Dimethoate	0.29583	0.32731	0.32731	0.050	10.63806	20.00000	Averaged
85 Hexachlorobenzene	0.24578	0.24445	0.24445	0.050	-0.54177	20.00000	Averaged
87 Atrazine	0.21794	0.22450	0.22450	0.050	3.00936	20.00000	Averaged
89 n-Octadecane	0.51227	0.53272	0.53272	0.050	3.99336	20.00000	Averaged

ALS - Middletown

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: ms14.i
Lab File ID: 14092119.D
Analysis Type: WATER
Lab Sample ID: 1800
Method: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14-8270Do

Injection Date: 21-SEP-2012 18:27
Init. Cal. Date(s): 21-SEP-2012 21-SEP-2012
Init. Cal. Times: 12:57 15:54
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
88 Pentachlorophenol	100	103	6.89526	0.050	3.17082	20.00000	Linear
91 Phenanthrene	1.09014	1.07854	1.07854	0.050	-1.06346	20.00000	Averaged
92 Anthracene	1.08488	1.10145	1.10145	0.050	1.52741	20.00000	Averaged
93 Carbazole	0.98070	1.01288	1.01288	0.050	3.28222	20.00000	Averaged
94 Di-n-Butylphthalate	1.29085	1.37562	1.37562	0.050	6.56767	20.00000	Averaged
95 Fluoranthene	1.19134	1.22445	1.22445	0.050	2.77917	20.00000	Averaged
96 Benzidine	50.00000	54.49462	1.94122	0.050	8.98925	20.00000	Linear
97 Pyrene	1.12995	1.14184	1.14184	0.050	1.05266	20.00000	Averaged
$ 98 Terphenyl-d14	0.82818	0.83695	0.83695	0.050	1.05867	20.00000	Averaged
99 Butylbenzylphthalate	0.53424	0.59044	0.59044	0.050	10.52040	20.00000	Averaged
100 Di(2-Ethylhexyl)adipate	0.52220	0.58270	0.58270	0.050	11.58460	20.00000	Averaged
101 bis(2-Ethylhexyl)phthalate	0.78532	0.85439	0.85439	0.050	8.79544	20.00000	Averaged
102 3,3-Dichlorobenzidine	0.37525	0.41447	0.41447	0.050	10.45252	20.00000	Averaged
103 Benzo(a)anthracene	1.11089	1.12393	1.12393	0.050	1.17436	20.00000	Averaged
105 Chrysene	1.02282	0.98283	0.98283	0.050	-3.90945	20.00000	Averaged
106 Di-n-Octylphthalate	1.35745	1.51901	1.51901	0.050	11.90175	20.00000	Averaged
107 Benzo(b)fluoranthene	1.11724	1.15952	1.15952	0.050	3.78383	20.00000	Averaged
108 Benzo(k)fluoranthene	1.13172	1.12956	1.12956	0.050	-0.19044	20.00000	Averaged
109 Benzo(a)pyrene	1.02867	1.07106	1.07106	0.050	4.12117	20.00000	Averaged
111 Indeno(1,2,3-cd)pyrene	1.24063	1.29614	1.29614	0.050	4.47437	20.00000	Averaged
112 Dibenzo(a,h)anthracene	1.03839	1.07220	1.07220	0.050	3.25589	20.00000	Averaged
113 Benzo(g,h,i)perylene	1.04931	1.07976	1.07976	0.050	2.90250	20.00000	Averaged

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14092119.D

Date : 21-SEP-2012 18:27

Client ID:

Sample Info: 1800;1;2;5;BNA-50F;;;;;;;SV0242

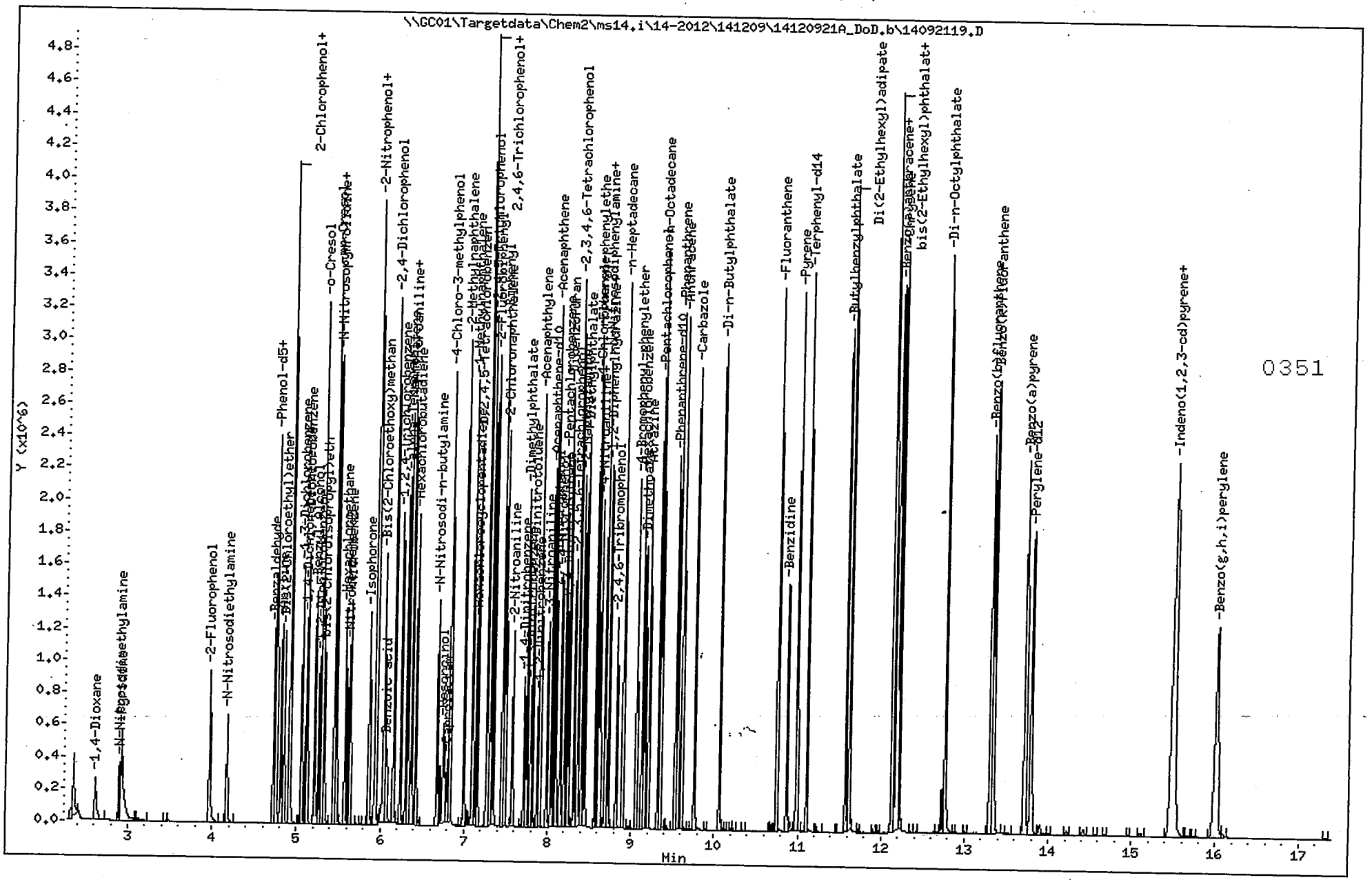
Volume Injected (uL): 1.0

Column phase: ZB-5

Instrument: ms14.i

Operator: DHF

Column diameter: 0.25



7B

SEMI-VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms14.i Calibration Date/Time: 9/21/2012 23:35

Lab File ID: 14092131.D Init. Calib. Date(s): 9/21/2012 9/21/2012

GC Column: DB-5 ID: 0.18 (mm) Init. Calib. Time(s): 12:57 15:54

COMPOUND	RRF	RRF050	Conc. CC std	MIN RRF	%D	MAX%D	CT
Acenaphthene	1.2060	1.2049		0.050	-0.1	20.0	A
Acenaphthylene	1.8073	1.8512		0.050	2.4	20.0	A
Acetophenone	2.1314	2.3255		0.050	9.1	20.0	A
Aniline	1.9880	2.2426		0.050	12.8	20.0	A
Anthracene	1.0849	1.0971		0.050	1.1	20.0	A
Atrazine	0.2179	0.2268		0.050	4.1	20.0	A
Azobenzene	0.7333	0.7466		0.050	1.8	20.0	A
Benzaldehyde	0.9910	1.0989		0.050	10.9	20.0	A
Benzidine	50.0000		54.2046	0.050	8.4	20.0	L
Benzo(a)anthracene	1.1109	1.1208		0.050	0.9	20.0	A
Benzo(a)pyrene	1.0287	1.0747		0.050	4.5	20.0	A
Benzo(b)fluoranthene	1.1172	1.1566		0.050	3.5	20.0	A
Benzo(g,h,i)perylene	1.0493	1.0593		0.050	0.9	20.0	A
Benzoic acid	100		92.9411	0.050	-7.1	20.0	Q
Benzo(k)fluoranthene	1.1317	1.1481		0.050	1.4	20.0	A
Benzyl Alcohol	50.0000		48.5895	0.050	-2.8	20.0	L
Biphenyl	1.5639	1.5607		0.050	-0.2	20.0	A
4-Bromophenyl-phenylether	0.2213	0.2252		0.050	1.7	20.0	A
Butylbenzylphthalate	0.5342	0.5985		0.050	12.0	20.0	A
Caprolactam	0.1161	0.1200		0.050	3.3	20.0	A
Carbazole	0.9807	1.0080		0.050	2.8	20.0	A
4-Chloro-3-methylphenol	0.2994	0.3067		0.050	2.4	20.0	A
4-Chloroaniline	0.4140	0.4265		0.050	3.0	20.0	A
Bis(2-Chloroethoxy)methane	0.4203	0.4226		0.050	0.5	20.0	A
Bis(2-Chloroethyl)ether	1.4624	1.5476		0.050	5.8	20.0	A
bis(2-Chloroisopropyl)ether	1.8295	1.9151		0.050	4.7	20.0	A
2-Chloronaphthalene	1.1430	1.1384		0.050	-0.4	20.0	A
2-Chlorophenol	1.4162	1.5345		0.050	8.3	20.0	A
4-Chlorophenyl-phenylether	0.6672	0.6738		0.050	1.0	20.0	A
Chrysene	1.0228	0.9877		0.050	-3.4	20.0	A
mp-Cresol	1.6834	1.7760		0.050	5.5	20.0	A
o-Cresol	1.1941	1.2958		0.050	8.5	20.0	A
Di-n-Butylphthalate	1.2909	1.3747		0.050	6.5	20.0	A
Di-n-Octylphthalate	1.3575	1.5269		0.050	12.5	20.0	A
n-Decane	1.5180	1.5636		0.050	3.0	20.0	A
Dibenzo(a,h)anthracene	1.0384	1.0683		0.050	2.9	20.0	A

Calibration Type: A=Average Response Factor, L=Linear Regression, Q=Quadratic Regression
Compounds with "Calibration Type" other than "A" are calculated as % Drift due to alternate calibration type.

7B

SEMI-VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms14.i Calibration Date/Time: 9/21/2012 23:35

Lab File ID: 14092131.D Init. Calib. Date(s): 9/21/2012 9/21/2012

GC Column: DB-5 ID: 0.18 (mm) Init. Calib. Time(s): 12:57 15:54

COMPOUND	RRF	RRF050	Conc. CC std	MIN RRF	%D	MAX%D	CT
Dibenzofuran	1.6275	1.6256		0.050	-0.1	20.0	A
2,3-Dichloroaniline	0.6322	0.6429		0.050	1.7	20.0	A
1,2-Dichlorobenzene	1.1659	0.9860		0.050	-15.4	20.0	A
1,3-Dichlorobenzene	1.6268	1.6952		0.050	4.2	20.0	A
1,4-Dichlorobenzene	1.5526	1.5387		0.050	-0.9	20.0	A
3,3-Dichlorobenzidine	0.3753	0.4182		0.050	11.5	20.0	A
2,4-Dichlorophenol	0.2777	0.2834		0.050	2.1	20.0	A
2,6-Dichlorophenol	0.2923	0.2991		0.050	2.3	20.0	A
Diethylphthalate	1.4035	1.4187		0.050	1.1	20.0	A
Dimethoate	0.2958	0.3249		0.050	9.8	20.0	A
2,4-Dimethylphenol	0.3246	0.3292		0.050	1.4	20.0	A
Dimethylphthalate	1.3479	1.3692		0.050	1.6	20.0	A
1,2-Dinitrobenzene	0.1609	0.1699		0.050	5.6	20.0	A
1,3-Dinitrobenzene	0.2331	0.2539		0.050	8.9	20.0	A
1,4-Dinitrobenzene	50.0000		48.9526	0.050	-2.1	20.0	L
2,4-Dinitrophenol	100		88.4291	0.050	-11.6	20.0	L
2,4-Dinitrotoluene	0.4076	0.4412		0.050	8.2	20.0	A
2,6-Dinitrotoluene	0.3138	0.3342		0.050	6.5	20.0	A
1,4-Dioxane	0.6987	0.7406		0.050	6.0	20.0	A
Diphenylamine	0.6428	0.6486		0.050	0.9	20.0	A
1,2-Diphenylhydrazine	0.7261	0.7392		0.050	1.8	20.0	A
bis(2-Ethylhexyl)phthalate	0.7853	0.8634		0.050	9.9	20.0	A
Di(2-Ethylhexyl)adipate	0.5222	0.5805		0.050	11.2	20.0	A
Fluoranthene	1.1913	1.2145		0.050	1.9	20.0	A
Fluorene	1.3803	1.3943		0.050	1.0	20.0	A
n-Heptadecane	0.4965	0.5097		0.050	2.6	20.0	A
Hexachlorobenzene	0.2458	0.2443		0.050	-0.6	20.0	A
Hexachlorobutadiene	0.1876	0.1869		0.050	-0.3	20.0	A
Hexachlorocyclopentadiene	50.0000		49.1456	0.050	-1.7	20.0	L
Hexachloroethane	0.6729	0.7349		0.050	9.2	20.0	A
Indeno(1,2,3-cd)pyrene	1.2406	1.2840		0.050	3.5	20.0	A
Isophorone	0.6443	0.6636		0.050	3.0	20.0	A
2-Methyl-4,6-dinitrophenol	100		95.3955	0.050	-4.6	20.0	L
1-Methylnaphthalene	0.6652	0.6608		0.050	-0.7	20.0	A
2-Methylnaphthalene	0.7153	0.7162		0.050	0.1	20.0	A
2-Napthylamine	50.0000		51.4048	0.050	2.8	20.0	L

Calibration Type: A=Average Response Factor, L=Linear Regression, Q=Quadratic Regression

Compounds with "Calibration Type" other than "A" are calculated as % Drift due to alternate calibration type.

7B

SEMI-VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ALS - Middletown SDG No.: ERT-009

Instrument ID: ms14.i Calibration Date/Time: 9/21/2012 23:35

Lab File ID: 14092131.D Init. Calib. Date(s): 9/21/2012 9/21/2012

GC Column: DB-5 ID: 0.18 (mm) Init. Calib. Time(s): 12:57 15:54

COMPOUND	RRF	RRF050	Conc. CC std	MIN RRF	%D	MAX%D	CT
Naphthalene	1.0532	1.0321		0.050	-2.0	20.0	A
2-Nitroaniline	0.3732	0.4075		0.050	9.2	20.0	A
3-Nitroaniline	0.3150	0.3464		0.050	10.0	20.0	A
4-Nitroaniline	0.3039	0.3483		0.050	14.6	20.0	A
Nitrobenzene	0.3451	0.3481		0.050	0.8	20.0	A
2-Nitrophenol	0.1822	0.1902		0.050	4.4	20.0	A
4-Nitrophenol	100		97.5807	0.050	-2.4	20.0	L
N-Nitrosodi-n-butylamine	0.1752	0.1805		0.050	3.0	20.0	A
N-Nitrosodiethylamine	0.7296	0.8217		0.050	12.6	20.0	A
N-Nitrosodimethylamine	0.9030	1.0152		0.050	12.4	20.0	A
N-Nitrosodi-n-propylamine	1.0845	1.1873		0.050	9.5	20.0	A
N-Nitrosodiphenylamine	0.5489	0.5534		0.050	0.8	20.0	A
N-Nitrosopyrrolidine	0.7910	0.8662		0.050	9.5	20.0	A
n-Octadecane	0.5123	0.5275		0.050	3.0	20.0	A
Pentachlorobenzene	0.5546	0.5567		0.050	0.4	20.0	A
Pentachlorophenol	100		102	0.050	2.1	20.0	L
Phenanthrene	1.0901	1.0716		0.050	-1.7	20.0	A
Phenol	1.5355	1.6462		0.050	7.2	20.0	A
Pyrene	1.1300	1.1509		0.050	1.9	20.0	A
Pyridine	1.6373	1.8170		0.050	11.0	20.0	A
Resorcinol	0.3022	0.3293		0.050	9.0	20.0	A
alpha-Terpineol	0.2295	0.2339		0.050	1.9	20.0	A
1,2,4,5-Tetrachlorobenzene	0.6050	0.6095		0.050	0.7	20.0	A
2,3,4,6-Tetrachlorophenol	0.2459	0.2575		0.050	4.7	20.0	A
2,3,5,6-Tetrachlorophenol	50.0000		49.9476	0.050	-0.1	20.0	L
1,2,4-Trichlorobenzene	0.3247	0.3209		0.050	-1.2	20.0	A
2,4,5-Trichlorophenol	0.3726	0.3793		0.050	1.8	20.0	A
2,4,6-Trichlorophenol	0.3445	0.3575		0.050	3.8	20.0	A
2-Fluorophenol	1.4155	1.5694		0.050	10.9	20.0	A
Phenol-d5	1.5677	1.7227		0.050	9.9	20.0	A
Nitrobenzene-d5	0.1785	0.1874		0.050	5.0	20.0	A
2-Fluorobiphenyl	1.3565	1.3522		0.050	-0.3	20.0	A
2,4,6-Tribromophenol	0.1116	0.1235		0.050	10.7	20.0	A
Terphenyl-d14	0.8282	0.8403		0.050	1.5	20.0	A

Calibration Type: A=Average Response Factor, L=Linear Regression, Q=Quadratic Regression
Compounds with "Calibration Type" other than "A" are calculated as % Drift due to alternate calibration type.

Data File: 14092131.D
Report Date: 24-Sep-2012 15:51

ALS - Middletown

Semivolatile Report for SW-846 Method 8270

Data file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14092
Lab Smp Id: 1800
Inj Date : 21-SEP-2012 23:35
Operator : DHF
Inst ID: ms14.i
Smp Info : 1800;1;2;5;BNA-50F;;;;;;SV0242
Misc Info : ZZ SVMS 8270/3510C BNA242
Comment :
Method : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14-82
Meth Date : 24-Sep-2012 15:49 ms14.i
Quant Type: ISTD
Cal Date : 21-SEP-2012 15:04
Cal File: 14092111.D
Als bottle: 2
Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: 12_3510_3550all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Sample Volume extracted(mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

DATA REVIEW [signature]
REPORTED —
APPROVED —
REVIEW [signature]

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
1 1,4-Dioxane	88	2.618	2.618	(0.513)	169397	50.0000	53.0032
2 N-Nitrosodimethylamine	74	2.896	2.896	(0.567)	232200	50.0000	56.2139
3 Pyridine	79	2.918	2.918	(0.572)	415582	50.0000	55.4877
$ 4 2-Fluorophenol	112	3.971	3.971	(0.778)	358952	50.0000	55.4352
5 N-Nitrosodiethylamine	102	4.174	4.174	(0.818)	187942	50.0000	56.3134
6 Benzaldehyde	106	4.725	4.725	(0.926)	251344	50.0000	55.4453
$ 7 Phenol-d5	99	4.741	4.741	(0.929)	394012	50.0000	54.9429
8 Phenol	94	4.752	4.752	(0.931)	753019	100.000	107.208
9 Aniline	93	4.811	4.811	(0.942)	512910	50.0000	56.4028
10 Bis(2-Chloroethyl)ether	93	4.848	4.848	(0.950)	353965	50.0000	52.9155
12 2-Chlorophenol	128	4.918	4.918	(0.963)	701909	100.000	108.350
11 n-Decane	57	4.913	4.913	(0.962)	357620	50.0000	51.5032
13 1,3-Dichlorobenzene	146	5.057	5.057	(0.991)	387720	50.0000	52.1020
* 14 1,4-Dichlorobenzene-d4	152	5.105	5.105	(1.000)	182972	40.0000	
15 1,4-Dichlorobenzene	146	5.121	5.121	(1.003)	351924	50.0000	49.5512
16 Benzyl Alcohol	108	5.212	5.212	(1.021)	249464	50.0000	48.5895
17 1,2-Dichlorobenzene	146	5.260	5.260	(1.030)	225504	50.0000	42.2844
18 o-Cresol	107	5.298	5.298	(1.038)	592757	100.000	108.518
19 bis(2-Chloroisopropyl)ether	45	5.324	5.324	(1.043)	438004	50.0000	52.3383
20 mp-Cresol	107	5.447	5.447	(1.067)	812409	100.000	105.500
23 N-Nitrosopyrrolidine	100	5.469	5.469	(1.071)	198119	50.0000	54.7522

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	22 N-Nitrosodi-n-propylamine	70	5.463	5.463	(1.070)	271563	50.0000	54.7429
	21 Acetophenone	105	5.469	5.469	(1.071)	531873	50.0000	54.5518
	24 Hexachloroethane	117	5.576	5.576	(1.092)	168082	50.0000	54.6050
$	25 Nitrobenzene-d5	128	5.619	5.619	(0.891)	201570	50.0000	52.5047
	26 Nitrobenzene	77	5.635	5.635	(0.893)	374374	50.0000	50.4246
	27 Isophorone	82	5.859	5.859	(0.929)	713728	50.0000	51.4928
	28 2-Nitrophenol	139	5.934	5.934	(0.941)	409089	100.000	104.372
	29 2,4-Dimethylphenol	122	5.945	5.945	(0.942)	708167	100.000	101.399
	30 Bis(2-Chloroethoxy)methane	93	6.041	6.041	(0.958)	454539	50.0000	50.2746
	31 Benzoic acid	105	6.079	6.079	(0.964)	379623	100.000	92.9411
	32 2,4-Dichlorophenol	162	6.159	6.159	(0.976)	609666	100.000	102.051
	33 1,2,4-Trichlorobenzene	180	6.239	6.239	(0.989)	345160	50.0000	49.4082
	35 alpha-Terpineol	59	6.314	6.314	(1.001)	62885	12.5000	12.7369
*	34 Naphthalene-d8	136	6.309	6.309	(1.000)	860485	40.0000	
	36 Naphthalene	128	6.330	6.330	(1.003)	1110088	50.0000	48.9979
	37 4-Chloroaniline	127	6.367	6.367	(1.009)	458786	50.0000	51.5106
	38 2,6-Dichlorophenol	162	6.378	6.378	(1.011)	321729	50.0000	51.1637
	39 Hexachlorobutadiene	225	6.421	6.421	(1.018)	201042	50.0000	49.8253
	40 N-Nitrosodi-n-butylamine	57	6.678	6.678	(1.058)	194114	50.0000	51.4900
	41 Resorcinol	110	6.753	6.753	(1.070)	354146	50.0000	54.4771(aM)
	42 Caprolactam	56	6.795	6.795	(1.077)	129101	50.0000	51.6672(M)
	43 4-Chloro-3-methylphenol	107	6.833	6.833	(1.083)	659863	100.000	102.446
	44 2-Methylnaphthalene	142	6.999	6.999	(1.109)	770350	50.0000	50.0652
	45 1-Methylnaphthalene	142	7.100	7.100	(1.125)	710760	50.0000	49.6718
	46 Hexachlorocyclopentadiene	237	7.143	7.143	(1.132)	197898	50.0000	49.1456
	47 1,2,4,5-Tetrachlorobenzene	216	7.159	7.159	(0.890)	375571	50.0000	50.3742
	48 2,4,6-Trichlorophenol	196	7.271	7.271	(0.904)	440636	100.000	103.780
	49 2,3-Dichloroaniline	161	7.277	7.277	(0.905)	396150	50.0000	50.8466
	50 2,4,5-Trichlorophenol	196	7.314	7.314	(0.910)	467453	100.000	101.795
$	51 2-Fluorobiphenyl	172	7.352	7.352	(0.914)	833245	50.0000	49.8426
	52 Biphenyl	154	7.459	7.459	(0.927)	961742	50.0000	49.8975
	53 2-Chloronaphthalene	162	7.485	7.485	(0.931)	701481	50.0000	49.7972
	55 2-Nitroaniline	138	7.582	7.582	(0.943)	251124	50.0000	54.6023
	56 1,4-Dinitrobenzene	168	7.715	7.715	(0.959)	134451	50.0000	48.9526
	57 Dimethylphthalate	163	7.747	7.747	(0.963)	843723	50.0000	50.7911
	58 1,3-Dinitrobenzene	168	7.795	7.795	(0.969)	156450	50.0000	54.4683
	59 2,6-Dinitrotoluene	165	7.817	7.817	(0.972)	205922	50.0000	53.2395
	60 1,2-Dinitrobenzene	168	7.881	7.881	(0.980)	104714	50.0000	52.7986
	61 Acenaphthylene	152	7.902	7.902	(0.983)	1140692	50.0000	51.2129
	62 3-Nitroaniline	138	7.993	7.993	(0.994)	213478	50.0000	54.9844
*	63 Acenaphthene-d10	164	8.042	8.042	(1.000)	492967	40.0000	
	64 Acenaphthene	153	8.074	8.074	(1.004)	742454	50.0000	49.9551
	65 2,4-Dinitrophenol	184	8.095	8.095	(1.007)	219860	100.000	88.4291
	66 4-Nitrophenol	65	8.154	8.154	(1.014)	265316	100.000	97.5807
	67 Pentachlorobenzene	250	8.197	8.197	(1.019)	343028	50.0000	50.1899
	68 2,4-Dinitrotoluene	165	8.223	8.223	(1.023)	271844	50.0000	54.1178
	69 Dibenzofuran	168	8.245	8.245	(1.025)	1001706	50.0000	49.9425
	70 2,3,5,6-Tetrachlorophenol	230	8.314	8.314	(1.034)	161858	50.0000	49.9476
	71 2,3,4,6-Tetrachlorophenol	230	8.357	8.357	(1.039)	317281	100.000	104.677
	72 2-Napthylamine	143	8.405	8.405	(1.045)	694788	50.0000	51.4048
	73 Diethylphthalate	149	8.443	8.443	(1.050)	874230	50.0000	50.5438
	74 4-Chlorophenyl-phenylether	204	8.571	8.571	(1.066)	415195	50.0000	50.4928
	75 Fluorene	166	8.587	8.587	(1.068)	859197	50.0000	50.5063
	76 4-Nitroaniline	138	8.614	8.614	(1.071)	214624	50.0000	57.2991

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	77 2-Methyl-4,6-dinitrophenol	198	8.630	8.630	(0.905)	305150	100.000	95.3955
	78 N-Nitrosodiphenylamine	169	8.694	8.694	(0.912)	727106	58.6000	59.0778
	79 Diphenylamine	169	8.694	8.694	(0.912)	727106	50.0000	50.4447
	80 1,2-Diphenylhydrazine	77	8.731	8.731	(0.916)	837022	50.5000	51.4147
	81 Azobenzene	77	8.731	8.731	(0.916)	837022	50.0000	50.9056
$	82 2,4,6-Tribromophenol	330	8.828	8.828	(0.926)	138459	50.0000	55.3383
	83 n-Heptadecane	57	8.903	8.903	(0.934)	571405	50.0000	51.3232
	84 4-Bromophenyl-phenylether	248	9.063	9.063	(0.951)	252418	50.0000	50.8724
	86 Dimethoate	87	9.165	9.165	(0.961)	364273	50.0000	54.9159
	85 Hexachlorobenzene	284	9.133	9.133	(0.958)	273861	50.0000	49.6937
	87 Atrazine	200	9.213	9.213	(0.966)	254258	50.0000	52.0301
	89 n-Octadecane	57	9.352	9.352	(0.981)	591412	50.0000	51.4891
	88 Pentachlorophenol	266	9.331	9.331	(0.979)	321896	100.000	102.128
*	90 Phenanthrene-d10	188	9.534	9.534	(1.000)	896892	40.0000	
	91 Phenanthrene	178	9.561	9.561	(1.003)	1201430	50.0000	49.1516
	92 Anthracene	178	9.609	9.609	(1.008)	1229983	50.0000	50.5635
	93 Carbazole	167	9.764	9.764	(1.024)	1130112	50.0000	51.3933
	94 Di-n-Butylphthalate	149	10.069	10.069	(1.056)	1541155	50.0000	53.2466
	95 Fluoranthene	202	10.753	10.753	(1.128)	1361615	50.0000	50.9730
	96 Benzidine	184	10.871	10.871	(0.891)	626373	50.0000	54.2046
	97 Pyrene	202	10.989	10.989	(0.901)	1406853	50.0000	50.9254
$	98 Terphenyl-d14	244	11.112	11.112	(0.911)	1027215	50.0000	50.7316
	99 Butylbenzylphthalate	149	11.582	11.582	(0.950)	731681	50.0000	56.0185
	100 Di(2-Ethylhexyl)adipate	129	11.625	11.625	(0.953)	709587	50.0000	55.5790
	101 bis(2-Ethylhexyl)phthalate	149	12.128	12.128	(0.994)	1055464	50.0000	54.9720
	102 3,3-Dichlorobenzidine	252	12.139	12.139	(0.995)	511258	50.0000	55.7271
	103 Benzo(a)anthracene	228	12.181	12.181	(0.999)	1370165	50.0000	50.4484
*	104 Chrysene-d12	240	12.197	12.197	(1.000)	977948	40.0000	
	105 Chrysene	228	12.224	12.224	(1.002)	1207379	50.0000	48.2825
	106 Di-n-Octylphthalate	149	12.764	12.764	(1.046)	1866590	50.0000	56.2431
	107 Benzo(b)fluoranthene	252	13.310	13.310	(0.964)	1487703	50.0000	51.7635
	108 Benzo(k)fluoranthene	252	13.347	13.347	(0.967)	1476719	50.0000	50.7241
	109 Benzo(a)pyrene	252	13.727	13.727	(0.995)	1382331	50.0000	52.2386
*	110 Perylene-d12	264	13.802	13.802	(1.000)	1028977	40.0000	
	111 Indeno(1,2,3-cd)pyrene	276	15.492	15.492	(1.122)	1651572	50.0000	51.7498
	112 Dibenzo(a,h)anthracene	278	15.514	15.514	(1.124)	1374072	50.0000	51.4403
	113 Benzo(g,h,i)perylene	276	16.016	16.016	(1.160)	1362450	50.0000	50.4746

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms14.i
Lab File ID: 14092131.D
Lab Smp Id: 1800
Analysis Type: SV
Quant Type: ISTD
Operator: DHF
Method File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14-8
Misc Info: ZZ SVMS 8270/3510C BNA242

Calibration Date: 21-SEP-2012
Calibration Time: 18:27

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	201484	100742	402968	182972	-9.19
34 Naphthalene-d8	894115	447058	1788230	860485	-3.76
63 Acenaphthene-d10	515108	257554	1030216	492967	-4.30
90 Phenanthrene-d10	924191	462096	1848382	896892	-2.95
104 Chrysene-d12	1005497	502749	2010994	977948	-2.74
110 Perylene-d12	1050509	525255	2101018	1028977	-2.05

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	5.11	4.61	5.61	5.11	0.00
34 Naphthalene-d8	6.31	5.81	6.81	6.31	0.00
63 Acenaphthene-d10	8.04	7.54	8.54	8.04	0.00
90 Phenanthrene-d10	9.53	9.03	10.03	9.53	0.00
104 Chrysene-d12	12.20	11.70	12.70	12.20	-0.04
110 Perylene-d12	13.80	13.30	14.30	13.80	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: ms14.i
Lab File ID: 14092131.D
Analysis Type: WATER
Lab Sample ID: 1800
Method: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14-8270Do

Injection Date: 21-SEP-2012 23:35
Init. Cal. Date(s): 21-SEP-2012 21-SEP-2012
Init. Cal. Times: 12:57 15:54
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
1 1,4-Dioxane	0.69868	0.74065	0.74065	0.050	6.00642	20.00000	Averaged
2 N-Nitrosodimethylamine	0.90301	1.01524	1.01524	0.050	12.42780	20.00000	Averaged
3 Pyridine	1.63733	1.81703	1.81703	0.050	10.97542	20.00000	Averaged
$ 4 2-Fluorophenol	1.41555	1.56943	1.56943	0.050	10.87034	20.00000	Averaged
5 N-Nitrosodiethylamine	0.72960	0.82173	0.82173	0.050	12.62682	20.00000	Averaged
6 Benzaldehyde	0.99101	1.09894	1.09894	0.050	10.89069	20.00000	Averaged
$ 7 Phenol-d5	1.56774	1.72272	1.72272	0.050	9.88586	20.00000	Averaged
8 Phenol	1.53551	1.64620	1.64620	0.050	7.20830	20.00000	Averaged
9 Aniline	1.98800	2.24257	2.24257	0.050	12.80567	20.00000	Averaged
10 Bis(2-Chloroethyl)ether	1.46236	1.54762	1.54762	0.050	5.83098	20.00000	Averaged
12 2-Chlorophenol	1.41621	1.53446	1.53446	0.050	8.34956	20.00000	Averaged
11 n-Decane	1.51797	1.56361	1.56361	0.050	3.00633	20.00000	Averaged
13 1,3-Dichlorobenzene	1.62682	1.69521	1.69521	0.050	4.20397	20.00000	Averaged
15 1,4-Dichlorobenzene	1.55264	1.53870	1.53870	0.050	-0.89756	20.00000	Averaged
16 Benzyl Alcohol	50.00000	48.58950	0.91683	0.050	-2.82101	20.00000	Linear
17 1,2-Dichlorobenzene	1.16587	0.98596	0.98596	0.050	-15.43129	20.00000	Averaged
18 o-Cresol	1.19413	1.29584	1.29584	0.050	8.51798	20.00000	Averaged
19 bis(2-Chloroisopropyl)ether	1.82951	1.91506	1.91506	0.050	4.67661	20.00000	Averaged
20 mp-Cresol	1.68345	1.77603	1.77603	0.050	5.49955	20.00000	Averaged
23 N-Nitrosopyrrolidine	0.79104	0.86623	0.86623	0.050	9.50434	20.00000	Averaged
22 N-Nitrosodi-n-propylamine	1.08447	1.18734	1.18734	0.050	9.48585	20.00000	Averaged
21 Acetophenone	2.13145	2.32548	2.32548	0.050	9.10357	20.00000	Averaged
24 Hexachloroethane	0.67292	0.73490	0.73490	0.050	9.20990	20.00000	Averaged
$ 25 Nitrobenzene-d5	0.17846	0.18740	0.18740	0.050	5.00942	20.00000	Averaged
26 Nitrobenzene	0.34513	0.34806	0.34806	0.050	0.84919	20.00000	Averaged
27 Isophorone	0.64432	0.66356	0.66356	0.050	2.98566	20.00000	Averaged
28 2-Nitrophenol	0.18220	0.19017	0.19017	0.050	4.37160	20.00000	Averaged
29 2,4-Dimethylphenol	0.32465	0.32919	0.32919	0.050	1.39936	20.00000	Averaged
30 Bis(2-Chloroethoxy)methane	0.42028	0.42259	0.42259	0.050	0.54924	20.00000	Averaged
31 Benzoic acid	100	92.94113	5.66671	0.050	-7.05887	20.00000	Quadratic
32 2,4-Dichlorophenol	0.27771	0.28341	0.28341	0.050	2.05083	20.00000	Averaged
33 1,2,4-Trichlorobenzene	0.32474	0.32090	0.32090	0.050	-1.18357	20.00000	Averaged
35 alpha-Terpineol	0.22951	0.23386	0.23386	0.050	1.89497	20.00000	Averaged
36 Naphthalene	1.05317	1.03206	1.03206	0.050	-2.00423	20.00000	Averaged
37 4-Chloroaniline	0.41403	0.42654	0.42654	0.050	3.02124	20.00000	Averaged
38 2,6-Dichlorophenol	0.29231	0.29911	0.29911	0.050	2.32741	20.00000	Averaged
39 Hexachlorobutadiene	0.18757	0.18691	0.18691	0.050	-0.34938	20.00000	Averaged
40 N-Nitrosodi-n-butylamine	0.17525	0.18047	0.18047	0.050	2.98003	20.00000	Averaged
41 Resorcinol	0.30219	0.32925	0.32925	0.050	8.95429	20.00000	Averaged
42 Caprolactam	0.11615	0.12003	0.12003	0.050	3.33439	20.00000	Averaged
43 4-Chloro-3-methylphenol	0.29942	0.30674	0.30674	0.050	2.44567	20.00000	Averaged
44 2-Methylnaphthalene	0.71527	0.71620	0.71620	0.050	0.13039	20.00000	Averaged

ALS - Middletown

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: ms14.i
Lab File ID: 14092131.D
Analysis Type: WATER
Lab Sample ID: 1800
Method: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14-8270Do

Injection Date: 21-SEP-2012 23:35
Init. Cal. Date(s): 21-SEP-2012 21-SEP-2012
Init. Cal. Times: 12:57 15:54
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
45 1-Methylnaphthalene	0.66517	0.66080	0.66080	0.050	-0.65647	20.00000	Averaged
46 Hexachlorocyclopentadiene	50.00000	49.14560	5.43515	0.050	-1.70880	20.00000	Linear
47 1,2,4,5-Tetrachlorobenzene	0.60496	0.60949	0.60949	0.050	0.74840	20.00000	Averaged
48 2,4,6-Trichlorophenol	0.34452	0.35754	0.35754	0.050	3.77976	20.00000	Averaged
49 2,3-Dichloroaniline	0.63218	0.64288	0.64288	0.050	1.69311	20.00000	Averaged
50 2,4,5-Trichlorophenol	0.37261	0.37930	0.37930	0.050	1.79514	20.00000	Averaged
$ 51 2-Fluorobiphenyl	1.35648	1.35221	1.35221	0.050	-0.31472	20.00000	Averaged
52 Biphenyl	1.56395	1.56074	1.56074	0.050	-0.20496	20.00000	Averaged
53 2-Chloronaphthalene	1.14302	1.13838	1.13838	0.050	-0.40557	20.00000	Averaged
55 2-Nitroaniline	0.37318	0.40753	0.40753	0.050	9.20453	20.00000	Averaged
56 1,4-Dinitrobenzene	50.00000	48.95261	4.58315	0.050	-2.09479	20.00000	Linear
57 Dimethylphthalate	1.34789	1.36922	1.36922	0.050	1.58224	20.00000	Averaged
58 1,3-Dinitrobenzene	0.23306	0.25389	0.25389	0.050	8.93666	20.00000	Averaged
59 2,6-Dinitrotoluene	0.31384	0.33418	0.33418	0.050	6.47891	20.00000	Averaged
60 1,2-Dinitrobenzene	0.16093	0.16993	0.16993	0.050	5.59714	20.00000	Averaged
61 Acenaphthylene	1.80730	1.85115	1.85115	0.050	2.42585	20.00000	Averaged
62 3-Nitroaniline	0.31503	0.34644	0.34644	0.050	9.96885	20.00000	Averaged
64 Acenaphthene	1.20596	1.20487	1.20487	0.050	-0.08985	20.00000	Averaged
65 2,4-Dinitrophenol	100	88.42911	5.60546	0.050	-11.57089	20.00000	Linear
66 4-Nitrophenol	100	97.58074	4.64509	0.050	-2.41926	20.00000	Linear
67 Pentachlorobenzene	0.55457	0.55667	0.55667	0.050	0.37979	20.00000	Averaged
68 2,4-Dinitrotoluene	0.40759	0.44116	0.44116	0.050	8.23570	20.00000	Averaged
69 Dibenzofuran	1.62747	1.62560	1.62560	0.050	-0.11498	20.00000	Averaged
70 2,3,5,6-Tetrachlorophenol	50.00000	49.94763	3.80709	0.050	-0.10473	20.00000	Linear
71 2,3,4,6-Tetrachlorophenol	0.24594	0.25745	0.25745	0.050	4.67697	20.00000	Averaged
72 2-Napthylamine	50.00000	51.40477	0.88690	0.050	2.80953	20.00000	Linear
73 Diethylphthalate	1.40346	1.41872	1.41872	0.050	1.08766	20.00000	Averaged
74 4-Chlorophenyl-phenylether	0.66721	0.67379	0.67379	0.050	0.98569	20.00000	Averaged
75 Fluorene	1.38035	1.39433	1.39433	0.050	1.01259	20.00000	Averaged
76 4-Nitroaniline	0.30393	0.34830	0.34830	0.050	14.59823	20.00000	Averaged
77 2-Methyl-4,6-dinitrophenol	100	95.39554	7.34796	0.050	-4.60446	20.00000	Linear
78 N-Nitrosodiphenylamine	0.54890	0.55338	0.55338	0.050	0.81538	20.00000	Averaged
79 Diphenylamine	0.64284	0.64856	0.64856	0.050	0.88933	20.00000	Averaged
80 1,2-Diphenylhydrazine	0.72605	0.73921	0.73921	0.050	1.81130	20.00000	Averaged
81 Azobenzene	0.73332	0.74660	0.74660	0.050	1.81130	20.00000	Averaged
$ 82 2,4,6-Tribromophenol	0.11159	0.12350	0.12350	0.050	10.67668	20.00000	Averaged
83 n-Heptadecane	0.49654	0.50968	0.50968	0.050	2.64641	20.00000	Averaged
84 4-Bromophenyl-phenylether	0.22129	0.22515	0.22515	0.050	1.74472	20.00000	Averaged
86 Dimethoate	0.29583	0.32492	0.32492	0.050	9.83188	20.00000	Averaged
85 Hexachlorobenzene	0.24578	0.24428	0.24428	0.050	-0.61270	20.00000	Averaged
87 Atrazine	0.21794	0.22679	0.22679	0.050	4.06027	20.00000	Averaged
89 n-Octadecane	0.51227	0.52752	0.52752	0.050	2.97811	20.00000	Averaged

ALS - Middletown

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: ms14.i
Lab File ID: 14092131.D
Analysis Type: WATER
Lab Sample ID: 1800
Method: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14-8270Do

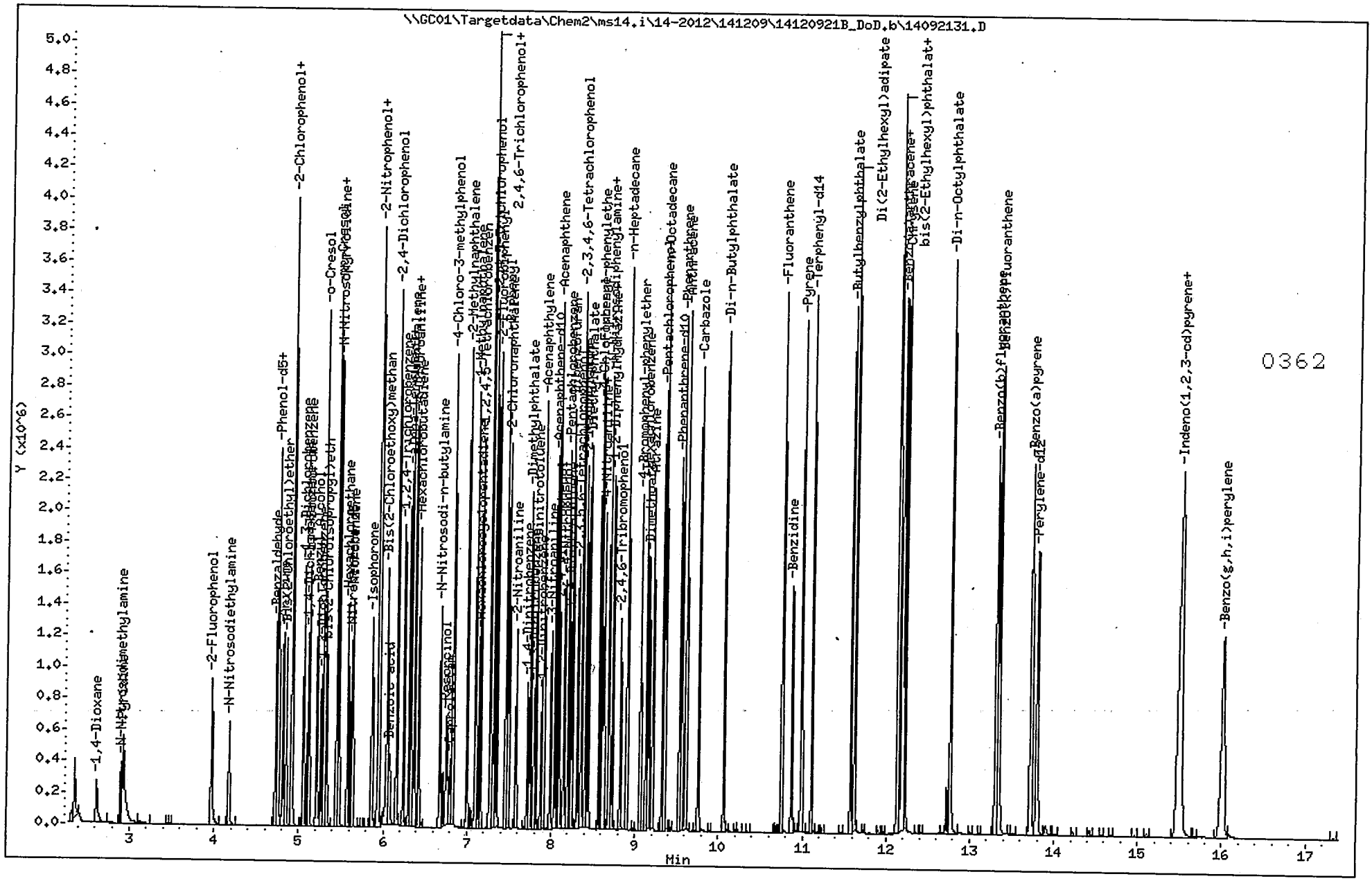
Injection Date: 21-SEP-2012 23:35
Init. Cal. Date(s): 21-SEP-2012 21-SEP-2012
Init. Cal. Times: 12:57 15:54
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
88 Pentachlorophenol	100	102	6.96570	0.050	2.12763	20.00000	Linear
91 Phenanthrene	1.09014	1.07164	1.07164	0.050	-1.69680	20.00000	Averaged
92 Anthracene	1.08488	1.09711	1.09711	0.050	1.12691	20.00000	Averaged
93 Carbazole	0.98070	1.00803	1.00803	0.050	2.78667	20.00000	Averaged
94 Di-n-Butylphthalate	1.29085	1.37466	1.37466	0.050	6.49321	20.00000	Averaged
95 Fluoranthene	1.19134	1.21452	1.21452	0.050	1.94592	20.00000	Averaged
96 Benzidine	50.00000	54.20458	1.95161	0.050	8.40916	20.00000	Linear
97 Pyrene	1.12995	1.15086	1.15086	0.050	1.85079	20.00000	Averaged
$ 98 Terphenyl-d14	0.82818	0.84030	0.84030	0.050	1.46325	20.00000	Averaged
99 Butylbenzylphthalate	0.53424	0.59854	0.59854	0.050	12.03694	20.00000	Averaged
100 Di(2-Ethylhexyl)adipate	0.52220	0.58047	0.58047	0.050	11.15790	20.00000	Averaged
101 bis(2-Ethylhexyl)phthalate	0.78532	0.86341	0.86341	0.050	9.94408	20.00000	Averaged
102 3,3-Dichlorobenzidine	0.37525	0.41823	0.41823	0.050	11.45415	20.00000	Averaged
103 Benzo(a)anthracene	1.11089	1.12085	1.12085	0.050	0.89689	20.00000	Averaged
105 Chrysene	1.02282	0.98768	0.98768	0.050	-3.43498	20.00000	Averaged
106 Di-n-Octylphthalate	1.35745	1.52694	1.52694	0.050	12.48627	20.00000	Averaged
107 Benzo(b)fluoranthene	1.11724	1.15665	1.15665	0.050	3.52697	20.00000	Averaged
108 Benzo(k)fluoranthene	1.13172	1.14811	1.14811	0.050	1.44827	20.00000	Averaged
109 Benzo(a)pyrene	1.02867	1.07472	1.07472	0.050	4.47710	20.00000	Averaged
111 Indeno(1,2,3-cd)pyrene	1.24063	1.28405	1.28405	0.050	3.49964	20.00000	Averaged
112 Dibenzo(a,h)anthracene	1.03839	1.06830	1.06830	0.050	2.88053	20.00000	Averaged
113 Benzo(g,h,i)perylene	1.04931	1.05927	1.05927	0.050	0.94921	20.00000	Averaged

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14092131.D
Date : 21-SEP-2012 23:35
Client ID:
Sample Info: 1800;1;2;5;BNA-50F;;;;;;SV0242
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: ms14.i

Operator: DHF
Column diameter: 0.25



QC Raw Data

Instrument Tune Raw Data

ALS - Middletown

Semivolatile Instrument Tune Report DFTPP

Data file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\140921
Lab Smp Id: 1000
Inj Date : 21-SEP-2012 10:39
Operator : DHF Inst ID: ms14.i
Smp Info : 1000;1;3;;DFTPP;SV0235
Misc Info : ZZ SVMS DFTPPTUNEA
Comment :
Method : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14-DFT
Meth Date : 15-Nov-2011 21:05 cliff Quant Type: AREA%
Cal Date : Cal File:
Als bottle: 1 QC Sample: DFTPP
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: ALMDTXP041

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
Vi	1.000	Injection Volume
Cpnd Variable		Local Compound Variable

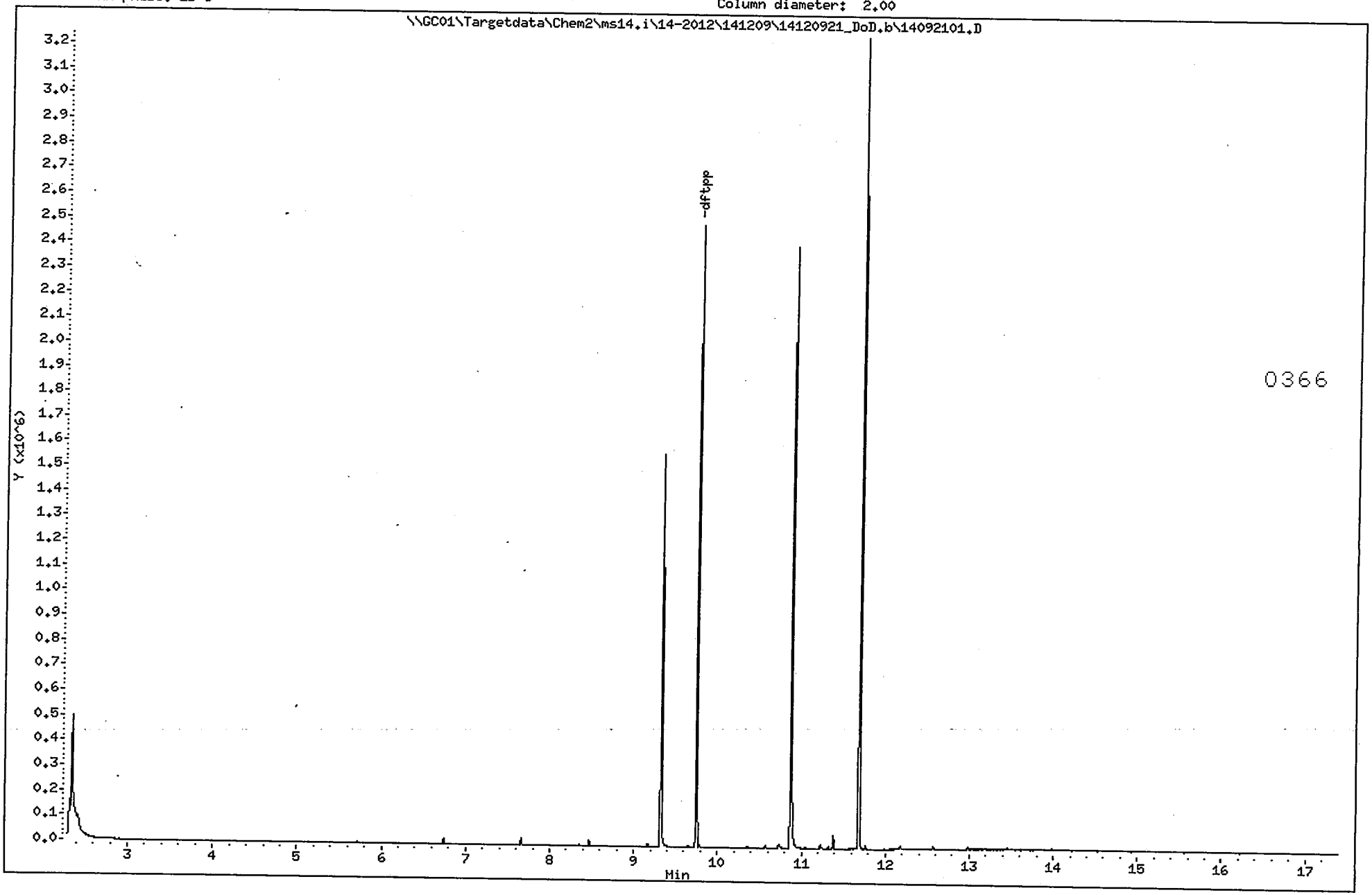
RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.324	180447	139073	0.771	1.96	
2.351	557556	446444	0.801	6.05	
6.742	17396	23159	1.331	0.18	
7.657	22998	28578	1.243	0.24	
8.470	15606	19049	1.221	0.16	
9.171	9914	11828	1.193	0.10	
9.326	1341717	1570744	1.171	14.58	
9.748	1916870	2485296	1.297	20.83	1 dftpp
9.786	8454	9007	1.065	0.09	
10.572	8611	11923	1.385	0.09	
10.732	22835	15412	0.675	0.24	
10.871	2219600	2403554	1.083	24.12	
11.230	19872	13117	0.660	0.21	
11.326	8699	9732	1.119	0.09	
11.385	41469	53337	1.286	0.45	
11.690	2764629	3244646	1.174	30.16	
11.765	9856	11437	1.160	0.10	
12.182	12317	11809	0.959	0.13	
12.572	11951	11568	0.968	0.12	
12.984	9804	8173	0.834	0.10	
	9200602	10527886		100.000	

Total unknown % area = 79

0365

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092101.D
Date : 21-SEP-2012 10:39
Client ID:
Sample Info: 1000;1;3;;DFTPP;SV0235
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: ms14.i
Operator: DHF
Column diameter: 2.00



Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092101.D

Date : 21-SEP-2012 10:39

Client ID:

Instrument: ms14.i

Sample Info: 1000;1;3;;DFTPP;SV0235

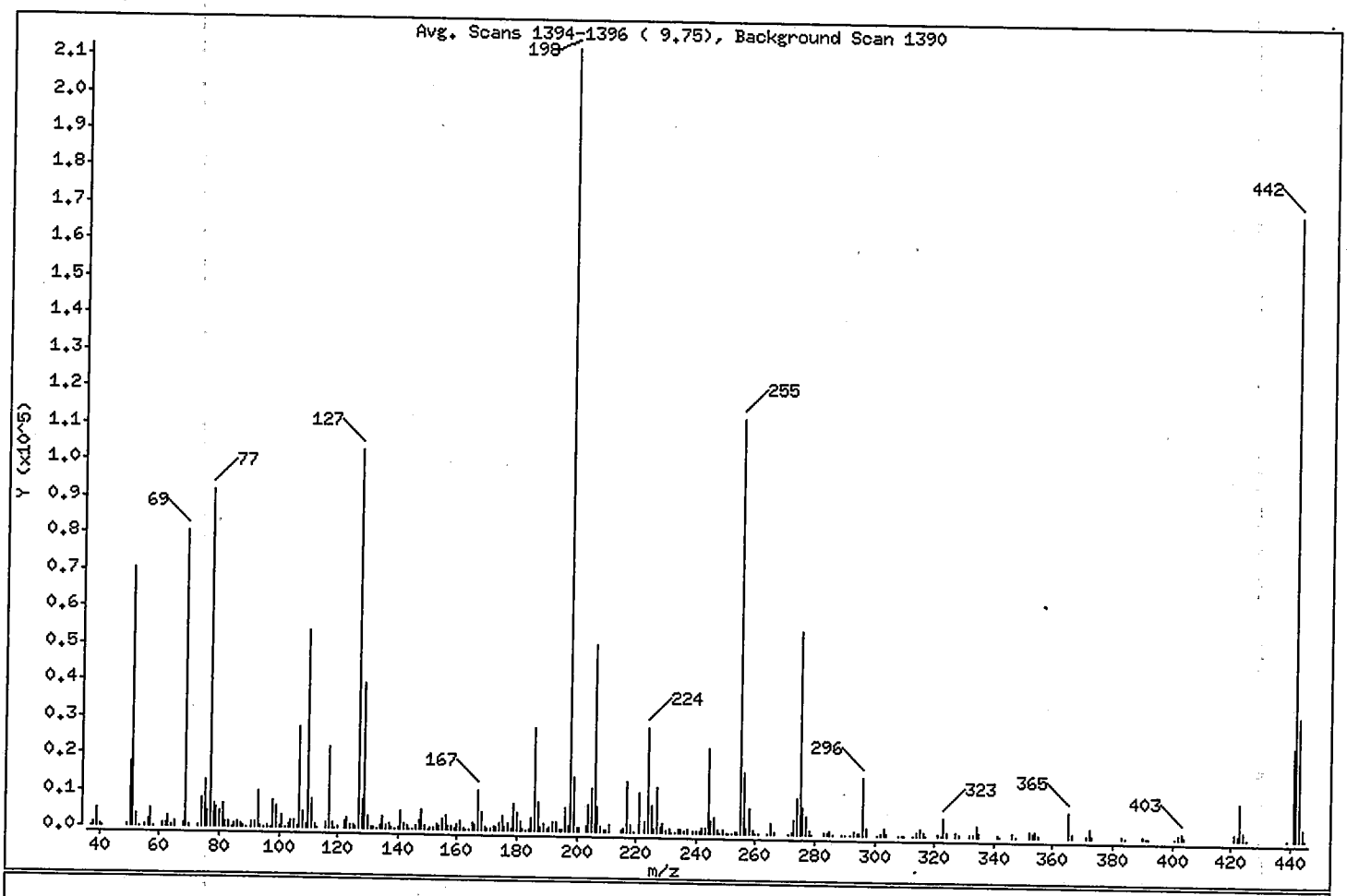
Volume Injected (uL): 1.0

Operator: DHF

Column phase: ZB-5

Column diameter: 2.00

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	33.00
68	Less than 2.00% of mass 69	0.57 (1.50)
69	Mass 69 relative abundance	37.94
70	Less than 2.00% of mass 69	0.17 (0.44)
127	40.00 - 60.00% of mass 198	48.47
197	Less than 1.00% of mass 198	0.79
199	5.00 - 9.00% of mass 198	6.91
275	10.00 - 30.00% of mass 198	25.98
365	Greater than 1.00% of mass 198	3.30
441	Present, but less than mass 443	11.66
442	Greater than 40.00% of mass 198	79.70
443	17.00 - 23.00% of mass 442	15.58 (19.54)

0036

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092101.D

Date : 21-SEP-2012 10:39

Client ID:

Instrument: ms14.i

Sample Info: 1000;1;3;;DFTPP;SV0235

Volume Injected (uL): 1.0

Operator: DHF

Column phase: ZB-5

Column diameter: 2.00

Data File: 14092101.D

Spectrum: Avg. Scans 1394-1396 (9.75), Background Scan 1390

Location of Maximum: 198.00

Number of points: 279

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	208	125.00	1208	195.00	337	278.00	787
38.00	777	126.00	301	196.00	6313	279.00	79
39.00	5098	127.00	102992	197.00	1680	283.00	529
40.00	253	128.00	7790	198.00	212480	284.00	344
41.00	82	129.00	39776	199.00	14687	285.00	804
49.00	425	130.00	3305	200.00	1081	286.00	72
50.00	17736	131.00	598	201.00	993	289.00	74
51.00	70128	132.00	356	203.00	1418	290.00	79
52.00	3601	133.00	68	204.00	7215	292.00	188
53.00	72	134.00	1086	205.00	11934	293.00	1047
55.00	271	135.00	3228	206.00	50888	294.00	264
56.00	2072	136.00	1199	207.00	6834	295.00	294
57.00	4923	137.00	1579	208.00	1662	296.00	15485
58.00	182	138.00	358	209.00	601	297.00	2090
61.00	881	139.00	92	210.00	443	301.00	79
62.00	1058	140.00	467	211.00	2021	302.00	290
63.00	2974	141.00	4849	215.00	585	303.00	1787
64.00	391	142.00	1591	216.00	1093	304.00	476
65.00	1448	143.00	1102	217.00	13868	308.00	100
68.00	1210	144.00	239	218.00	1767	309.00	70
69.00	80624	145.00	221	219.00	90	310.00	96
70.00	354	146.00	884	221.00	10978	313.00	75
73.00	646	147.00	2491	223.00	2993	314.00	751
74.00	7676	148.00	5389	224.00	28112	315.00	1731
75.00	12689	149.00	1173	225.00	7129	316.00	1033
76.00	4390	150.00	222	226.00	801	317.00	80
77.00	91672	151.00	676	227.00	12099	321.00	496
78.00	6152	152.00	335	228.00	1697	322.00	199
79.00	5488	153.00	1597	229.00	2458	323.00	4875
80.00	4324	154.00	1201	230.00	347	324.00	924
81.00	6284	155.00	2835	231.00	937	327.00	934
82.00	1506	156.00	3910	232.00	73	328.00	495
83.00	1468	157.00	827	233.00	91	332.00	356
84.00	85	158.00	909	234.00	741	333.00	554
85.00	1115	159.00	694	235.00	869	334.00	3087

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092101.D

Date : 21-SEP-2012 10:39

Client ID:

Instrument: ms14.i

Sample Info: 1000;1;3;;DFTPP;SV0235

Volume Injected (uL): 1.0

Operator: DHF

Column phase: ZB-5

Column diameter: 2.00

Data File: 14092101.D

Spectrum: Avg. Scans 1394-1396 (9.75), Background Scan 1390

Location of Maximum: 198.00

Number of points: 279

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	1646	160.00	1448	236.00	587	335.00	826
87.00	802	161.00	2346	237.00	1050	341.00	590
88.00	252	162.00	698	239.00	515	342.00	69
89.00	71	163.00	98	240.00	344	346.00	1082
91.00	1384	164.00	217	241.00	720	347.00	101
92.00	1614	165.00	1820	242.00	1529	352.00	1489
93.00	9591	166.00	1538	243.00	1685	353.00	1007
94.00	657	167.00	10597	244.00	23160	354.00	1463
95.00	98	168.00	4816	245.00	3181	355.00	250
96.00	451	169.00	906	246.00	4538	365.00	7011
97.00	78	170.00	247	247.00	862	366.00	1003
98.00	7392	171.00	392	248.00	92	371.00	392
99.00	5828	172.00	836	249.00	843	372.00	2630
100.00	548	173.00	1122	250.00	84	373.00	652
101.00	3475	174.00	2067	251.00	74	383.00	724
102.00	159	175.00	3824	252.00	152	384.00	175
103.00	1143	176.00	1121	253.00	525	390.00	271
104.00	2194	177.00	1787	254.00	323	391.00	224
105.00	2183	178.00	586	255.00	113000	392.00	74
106.00	705	179.00	7178	256.00	16656	401.00	81
107.00	27232	180.00	4992	257.00	1286	402.00	1061
108.00	4475	181.00	2377	258.00	6703	403.00	1558
109.00	763	182.00	381	259.00	1049	404.00	544
110.00	53792	183.00	94	260.00	80	421.00	1306
111.00	7864	184.00	580	261.00	111	422.00	1172
112.00	1009	185.00	3598	264.00	170	423.00	9699
113.00	237	186.00	27744	265.00	2778	424.00	2182
116.00	1508	187.00	7800	266.00	525	425.00	184
117.00	22168	188.00	844	271.00	181	439.00	166
118.00	1591	189.00	1739	272.00	343	441.00	24784
119.00	90	190.00	291	273.00	3669	442.00	169344
120.00	250	191.00	799	274.00	9563	443.00	33096
122.00	1733	192.00	2400	275.00	55208	444.00	3163
123.00	2862	193.00	2628	276.00	7208	445.00	82
124.00	1157	194.00	594	277.00	4700		

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092101.D

Date : 21-SEP-2012 10:39

Client ID:

Instrument: ms14.i

Sample Info: 1000;1;3;;DFTPP;SV0235

Volume Injected (uL): 1.0

Operator: DHF

Column phase: ZB-5

Column diameter: 2.00

Data File: 14092101.D

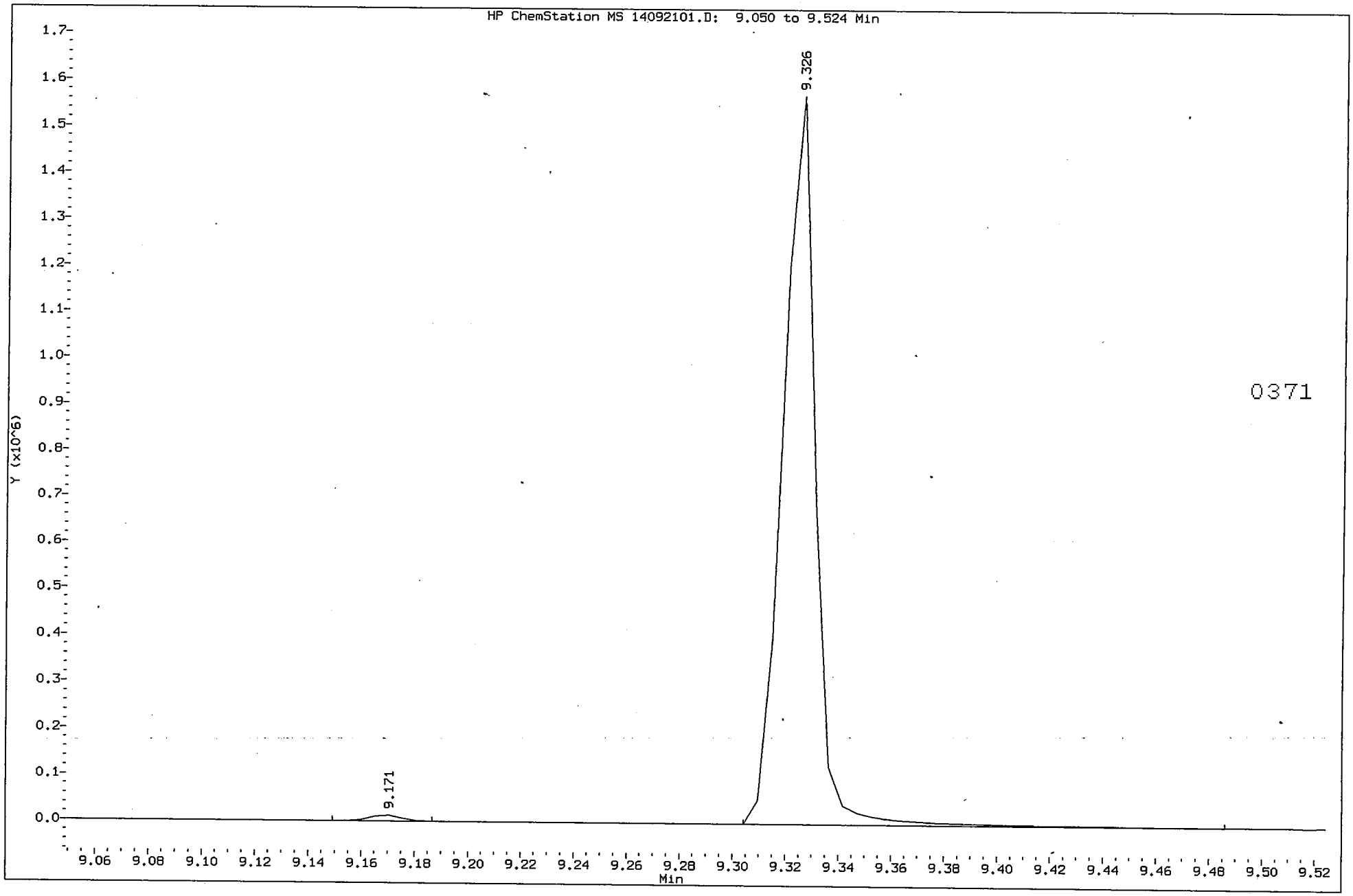
Spectrum: Avg. Scans 1394-1396 (9.75), Background Scan 1390

Location of Maximum: 198.00

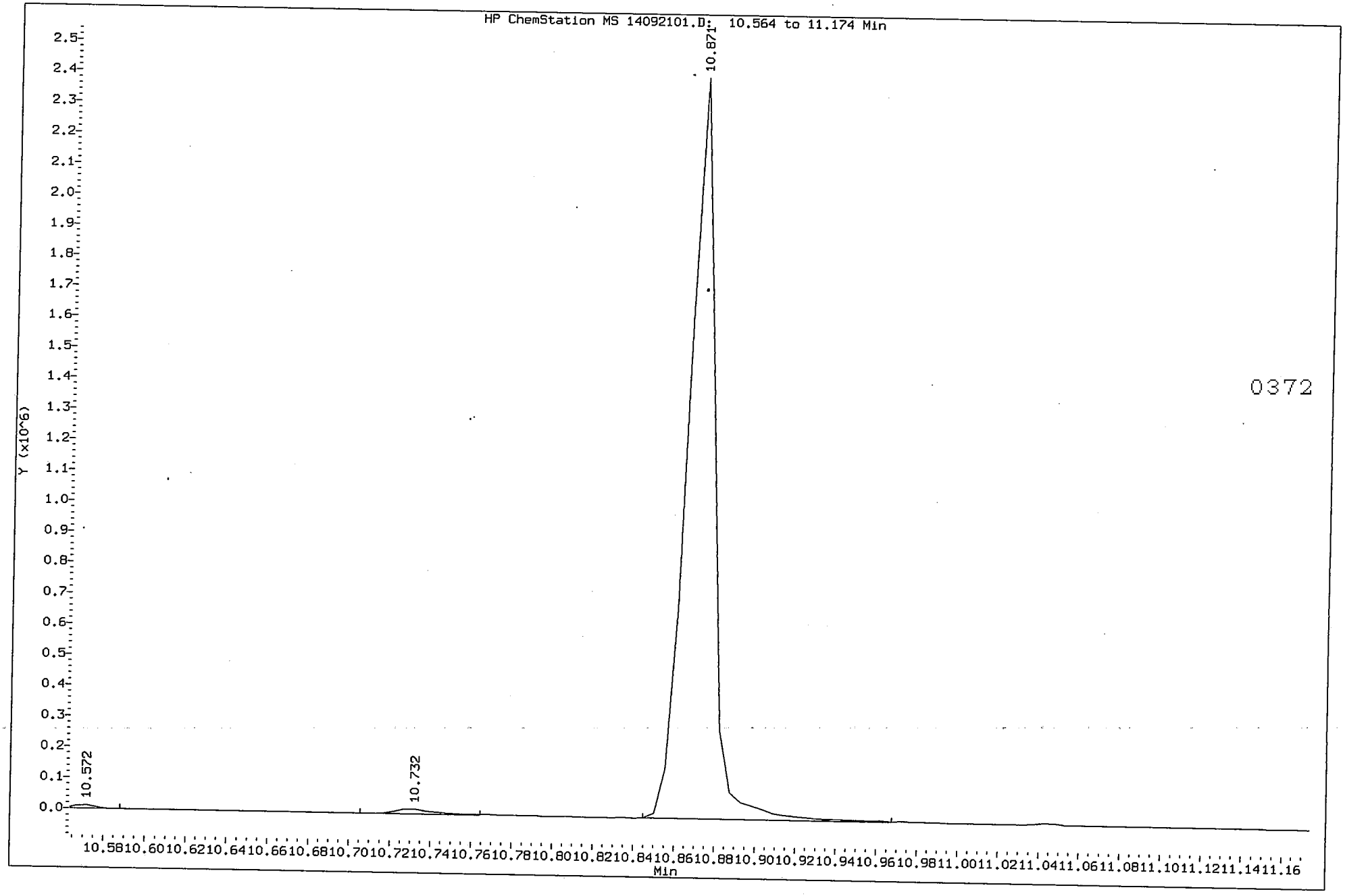
Number of points: 279

m/z	Y	m/z	Y	m/z	Y	m/z	Y

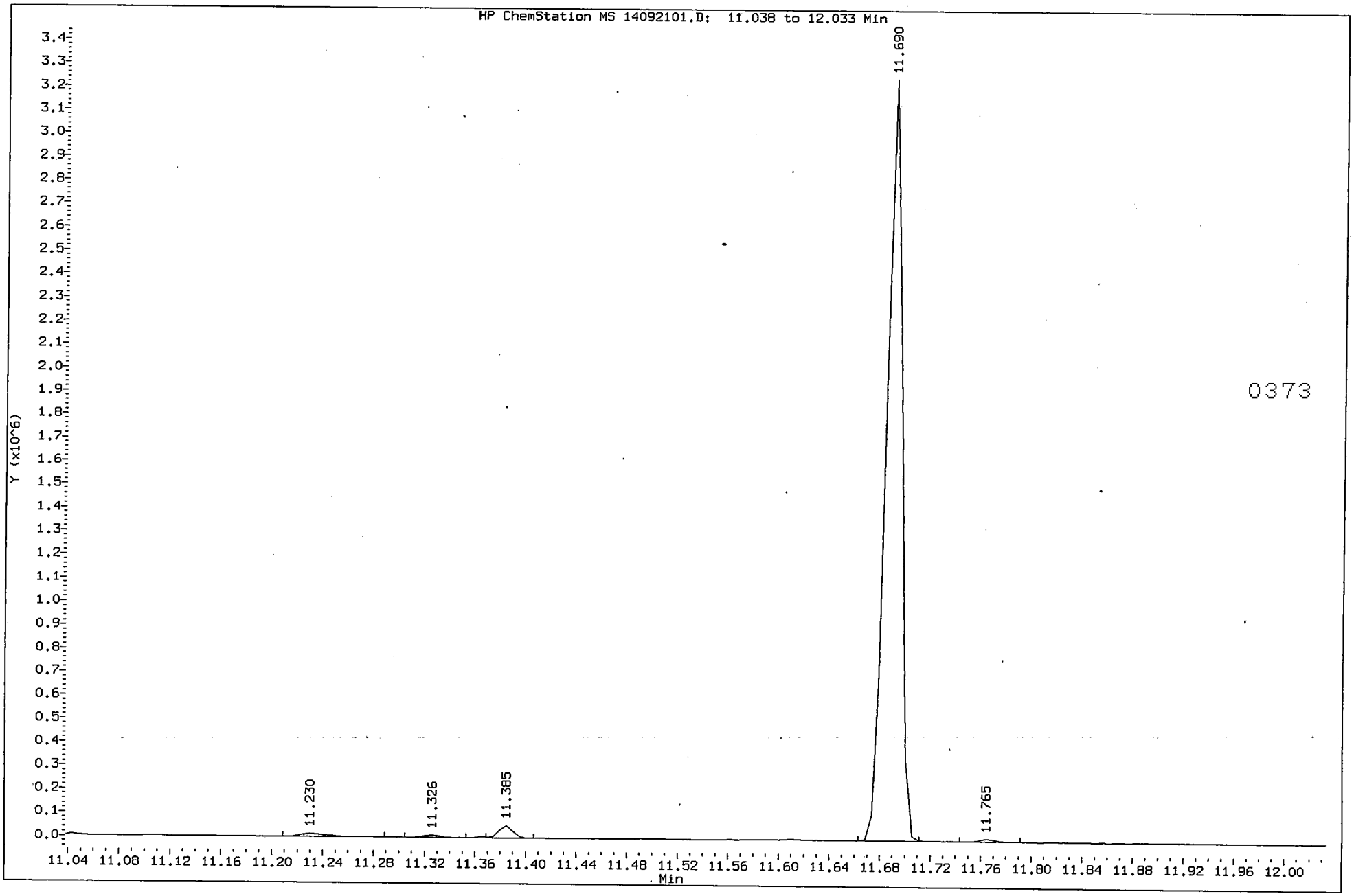
Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092101.D
Injection Date: 21-SEP-2012 10:39
Instrument: ms14.i
Client Sample ID:



Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092101.D
Injection Date: 21-SEP-2012 10:39
Instrument: ms14.i
Client Sample ID:



Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921_DoD.b\14092101.D
Injection Date: 21-SEP-2012 10:39
Instrument: ms14.i
Client Sample ID:



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Semivolatile Instrument Tune Report DFTPP

Data file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14092
Lab Smp Id: 1000
Inj Date : 21-SEP-2012 18:02
Operator : DHF Inst ID: ms14.i
Smp Info : 1000;1;3;;DFTPP;SV0235
Misc Info : ZZ SVMS 17662 DFTPPTUNEA
Comment :
Method : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14-DF
Meth Date : 15-Nov-2011 21:05 cliff Quant Type: AREA%
Cal Date : Cal File:
Als bottle: 1 QC Sample: DFTPP
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: ALMDTXP041

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
Vi	1.000	Injection Volume
Cpnd Variable		Local Compound Variable

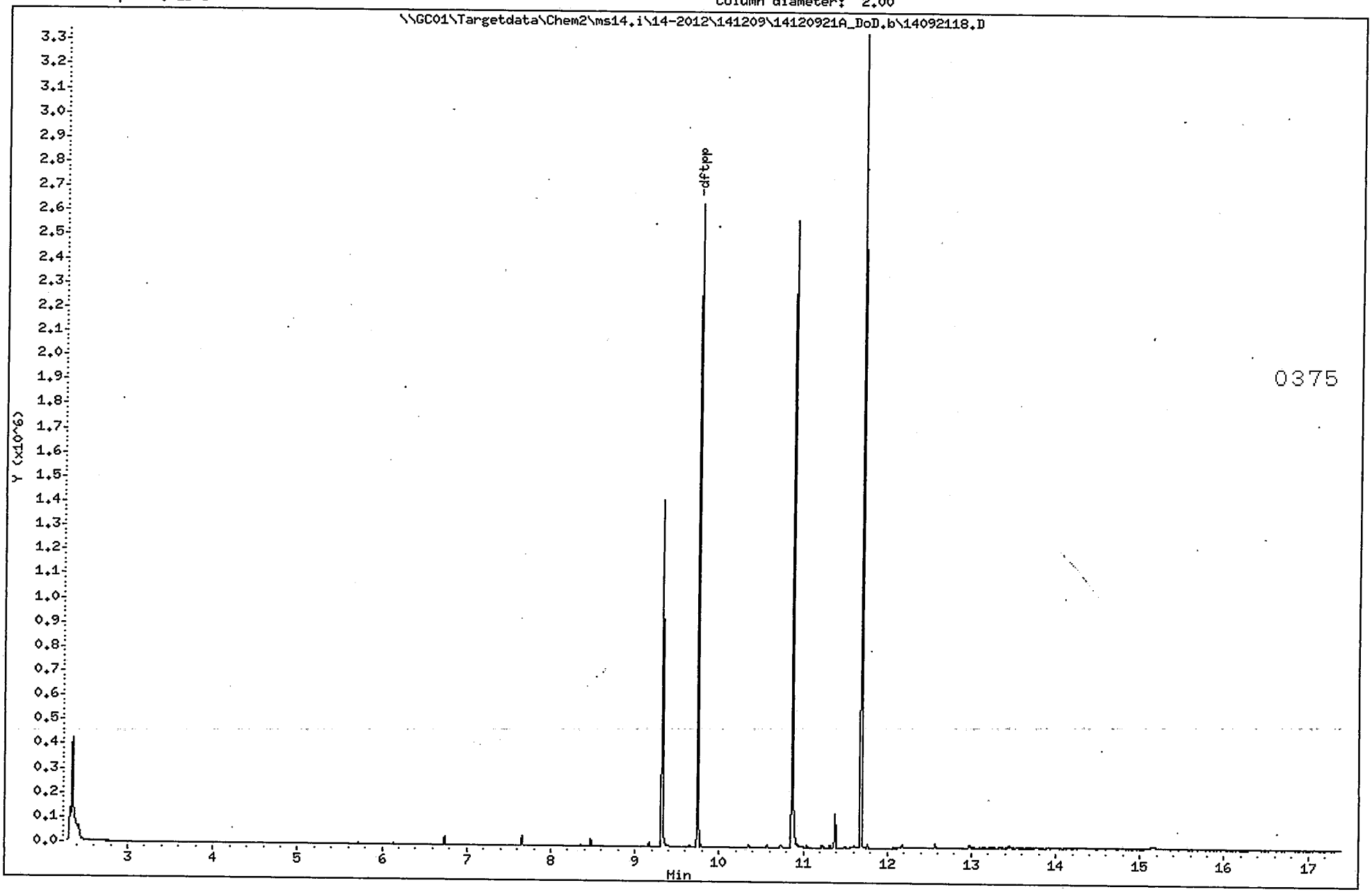
DATA REVIEW 9/24/12
REPORTED 9/24/12
APPROVED 9/24/12
PEER REVIEW

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.324	176511	129814	0.735	1.83	
2.351	513248	392230	0.764	5.32	
6.742	23648	31586	1.336	0.24	
7.657	29231	37886	1.296	0.30	
8.470	20078	25538	1.272	0.20	
9.170	12159	13894	1.143	0.12	
9.320	1333293	1423164	1.067	13.82	
9.748	2067114	2638982	1.277	21.43	1 dftpp
9.786	13342	12937	0.970	0.13	
10.566	10303	13062	1.268	0.10	
10.727	20071	12825	0.639	0.20	
10.871	2422830	2571497	1.061	25.11	
11.224	16257	12138	0.747	0.16	
11.385	113633	138378	1.218	1.17	
11.690	2806131	3333112	1.188	29.20	
11.765	13200	15200	1.152	0.13	
12.182	14713	15352	1.043	0.15	
12.572	14107	14462	1.025	0.14	
12.979	12785	9957	0.779	0.13	
13.444	12390	8328	0.672	0.12	
	9645044	10850342		100.000	

Total unknown % area = 79

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14092118.D
Date : 21-SEP-2012 18:02
Client ID:
Sample Info: 1000;1;3;;DFTPP;SV0235
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: ms14.i
Operator: DHF
Column diameter: 2.00



Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14092118.D

Date : 21-SEP-2012 18:02

Client ID:

Instrument: ms14.i

Sample Info: 1000;1;3;;DFTPP;SV0235

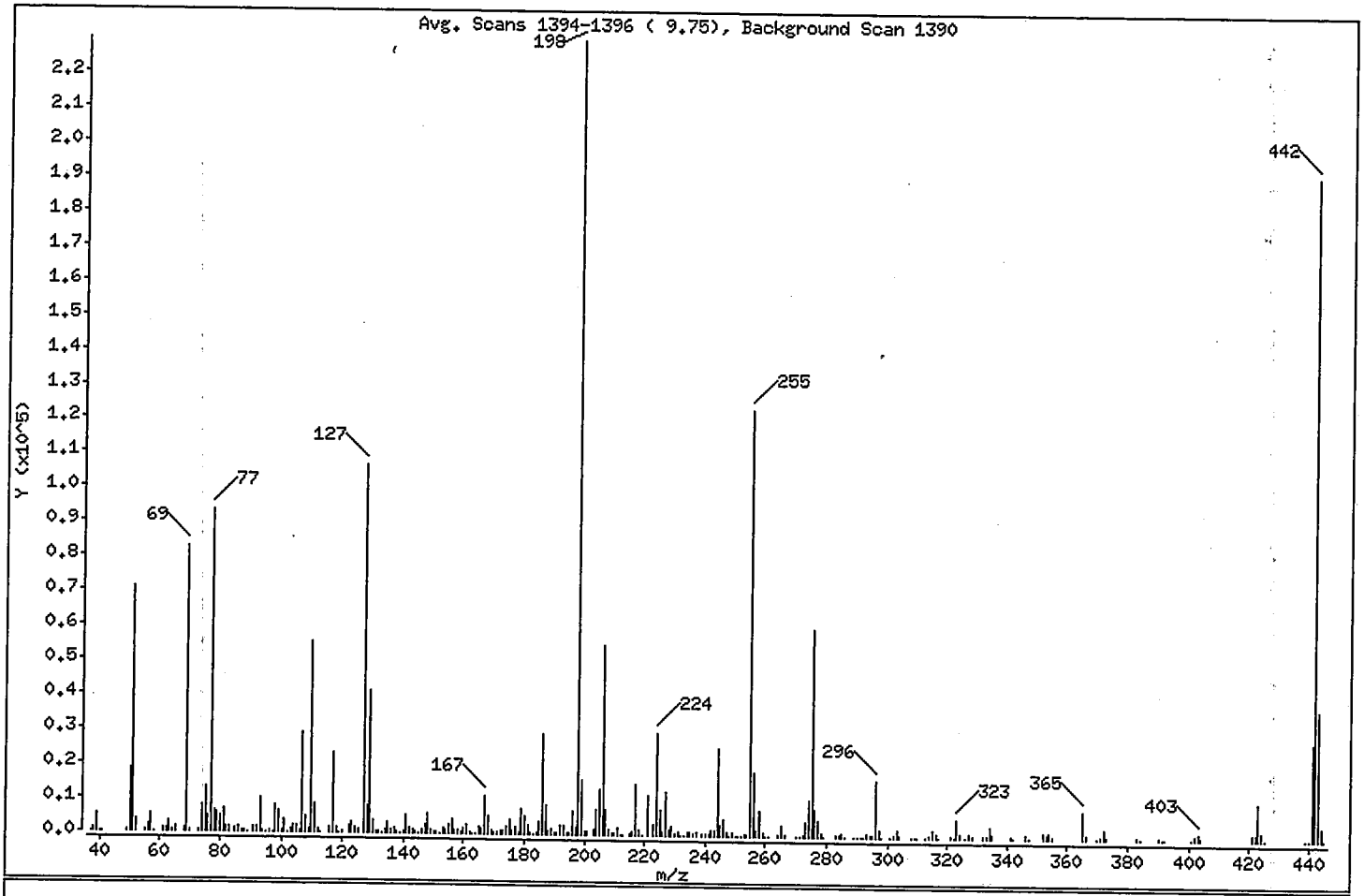
Volume Injected (uL): 1.0

Operator: DHF

Column phase: ZB-5

Column diameter: 2.00

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	31.07
68	Less than 2.00% of mass 69	0.55 (1.53)
69	Mass 69 relative abundance	36.12
70	Less than 2.00% of mass 69	0.14 (0.39)
127	40.00 - 60.00% of mass 198	46.32
197	Less than 1.00% of mass 198	0.84
199	5.00 - 9.00% of mass 198	6.80
275	10.00 - 30.00% of mass 198	26.19
365	Greater than 1.00% of mass 198	3.39
441	Present, but less than mass 443	12.21
442	Greater than 40.00% of mass 198	83.43
443	17.00 - 23.00% of mass 442	16.27 (19.50)

0031

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14092118.D

Date : 21-SEP-2012 18:02

Client ID:

Instrument: ms14.i

Sample Info: 1000;1;3;;DFTPP;SV0235

Volume Injected (uL): 1.0

Operator: DHF

Column phase: ZB-5

Column diameter: 2.00

Data File: 14092118.D

Spectrum: Avg. Scans 1394-1396 (9.75), Background Scan 1390

Location of Maximum: 198.00

Number of points: 284

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	220	130.00	3445	203.00	1484	289.00	96
38.00	833	131.00	668	204.00	7647	290.00	81
39.00	5014	132.00	371	205.00	12924	291.00	78
40.00	212	133.00	70	206.00	54800	292.00	107
41.00	73	134.00	1149	207.00	7220	293.00	1104
49.00	427	135.00	3292	208.00	1772	294.00	283
50.00	18360	136.00	1285	209.00	602	295.00	362
51.00	71296	137.00	1641	210.00	428	296.00	16552
52.00	3648	138.00	306	211.00	2148	297.00	2324
55.00	277	139.00	168	212.00	99	298.00	80
56.00	2121	140.00	474	213.00	67	301.00	106
57.00	5114	141.00	5021	215.00	586	302.00	276
58.00	183	142.00	1728	216.00	1269	303.00	1894
61.00	860	143.00	1138	217.00	14933	304.00	513
62.00	1007	144.00	267	218.00	1832	308.00	168
63.00	3026	145.00	237	219.00	149	309.00	74
64.00	391	146.00	883	221.00	11785	310.00	91
65.00	1555	147.00	2655	223.00	3214	313.00	67
68.00	1264	148.00	5931	224.00	29552	314.00	739
69.00	82880	149.00	1181	225.00	7579	315.00	1969
70.00	327	150.00	270	226.00	826	316.00	1118
73.00	657	151.00	683	227.00	12846	317.00	142
74.00	7897	152.00	230	228.00	1817	321.00	566
75.00	12956	153.00	1591	229.00	2757	322.00	216
76.00	4509	154.00	1215	230.00	376	323.00	5365
77.00	93464	155.00	2823	231.00	1138	324.00	1003
78.00	6360	156.00	4366	232.00	85	326.00	80
79.00	5759	157.00	869	233.00	185	327.00	1066
80.00	4498	158.00	978	234.00	814	328.00	482
81.00	6645	159.00	718	235.00	907	332.00	435
82.00	1538	160.00	1580	236.00	640	333.00	517
83.00	1553	161.00	2436	237.00	1064	334.00	3414
85.00	1098	162.00	715	239.00	494	335.00	899
86.00	1718	163.00	95	240.00	355	341.00	657
87.00	772	164.00	227	241.00	720	342.00	79

0377

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14092118.D

Date : 21-SEP-2012 18:02

Client ID:

Instrument: ms14.i

Sample Info: 1000;1;3;;DFTPP;SV0235

Volume Injected (uL): 1.0

Operator: DHF

Column phase: ZB-5

Column diameter: 2.00

Data File: 14092118.D

Spectrum: Avg. Scans 1394-1396 (9.75), Background Scan 1390

Location of Maximum: 198.00

Number of points: 284

m/z	Y	m/z	Y	m/z	Y	m/z	Y
88.00	268	165.00	1961	242.00	1659	346.00	1157
89.00	147	166.00	1531	243.00	1805	347.00	109
91.00	1476	167.00	11133	244.00	25504	352.00	1601
92.00	1702	168.00	5142	245.00	3276	353.00	1150
93.00	10072	169.00	874	246.00	4773	354.00	1637
94.00	755	170.00	295	247.00	960	355.00	330
95.00	160	171.00	440	248.00	189	365.00	7779
96.00	452	172.00	941	249.00	873	366.00	1038
97.00	171	173.00	1166	250.00	84	370.00	81
98.00	7717	174.00	2299	251.00	83	371.00	401
99.00	6211	175.00	4011	252.00	137	372.00	2855
100.00	595	176.00	1296	253.00	557	373.00	730
101.00	3674	177.00	1948	254.00	307	383.00	790
102.00	168	178.00	622	255.00	123448	384.00	178
103.00	1215	179.00	7643	256.00	18224	390.00	374
104.00	2241	180.00	5246	257.00	1470	391.00	212
105.00	2155	181.00	2496	258.00	7534	392.00	111
106.00	678	182.00	340	259.00	1216	401.00	78
107.00	28864	183.00	175	260.00	89	402.00	1146
108.00	4550	184.00	654	261.00	178	403.00	1633
109.00	834	185.00	3817	264.00	283	404.00	610
110.00	55360	186.00	29232	265.00	2961	421.00	1476
111.00	8266	187.00	8326	266.00	499	422.00	1339
112.00	1001	188.00	887	270.00	73	423.00	10632
113.00	251	189.00	1799	271.00	226	424.00	2327
116.00	1672	190.00	369	272.00	360	425.00	170
117.00	23152	191.00	787	273.00	4010	439.00	85
118.00	1693	192.00	2556	274.00	10595	440.00	192
119.00	180	193.00	2874	275.00	60088	441.00	28024
120.00	321	194.00	586	276.00	7722	442.00	191424
122.00	1984	195.00	376	277.00	4795	443.00	37328
123.00	2974	196.00	6849	278.00	856	444.00	3516
124.00	1368	197.00	1917	279.00	82	445.00	80
125.00	1262	198.00	229440	283.00	514		
127.00	106288	199.00	15609	284.00	371		

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14092118.D

Date : 21-SEP-2012 18:02

Client ID:

Instrument: ms14.i

Sample Info: 1000;1;3;;DFTPP;SV0235

Volume Injected (uL): 1.0

Operator: DHF

Column phase: ZB-5

Column diameter: 2.00

Data File: 14092118.D

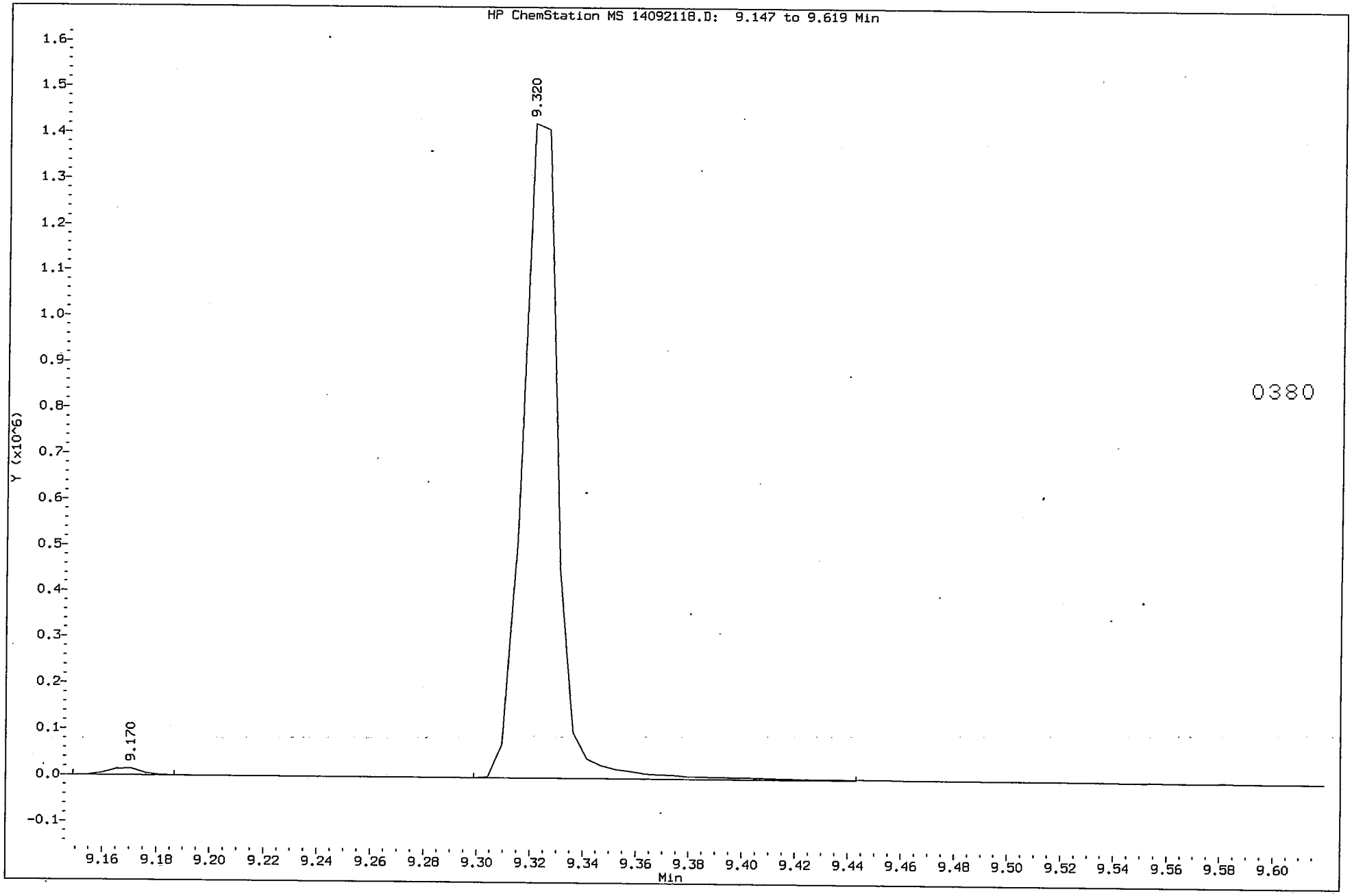
Spectrum: Avg. Scans 1394-1396 (9.75), Background Scan 1390

Location of Maximum: 198.00

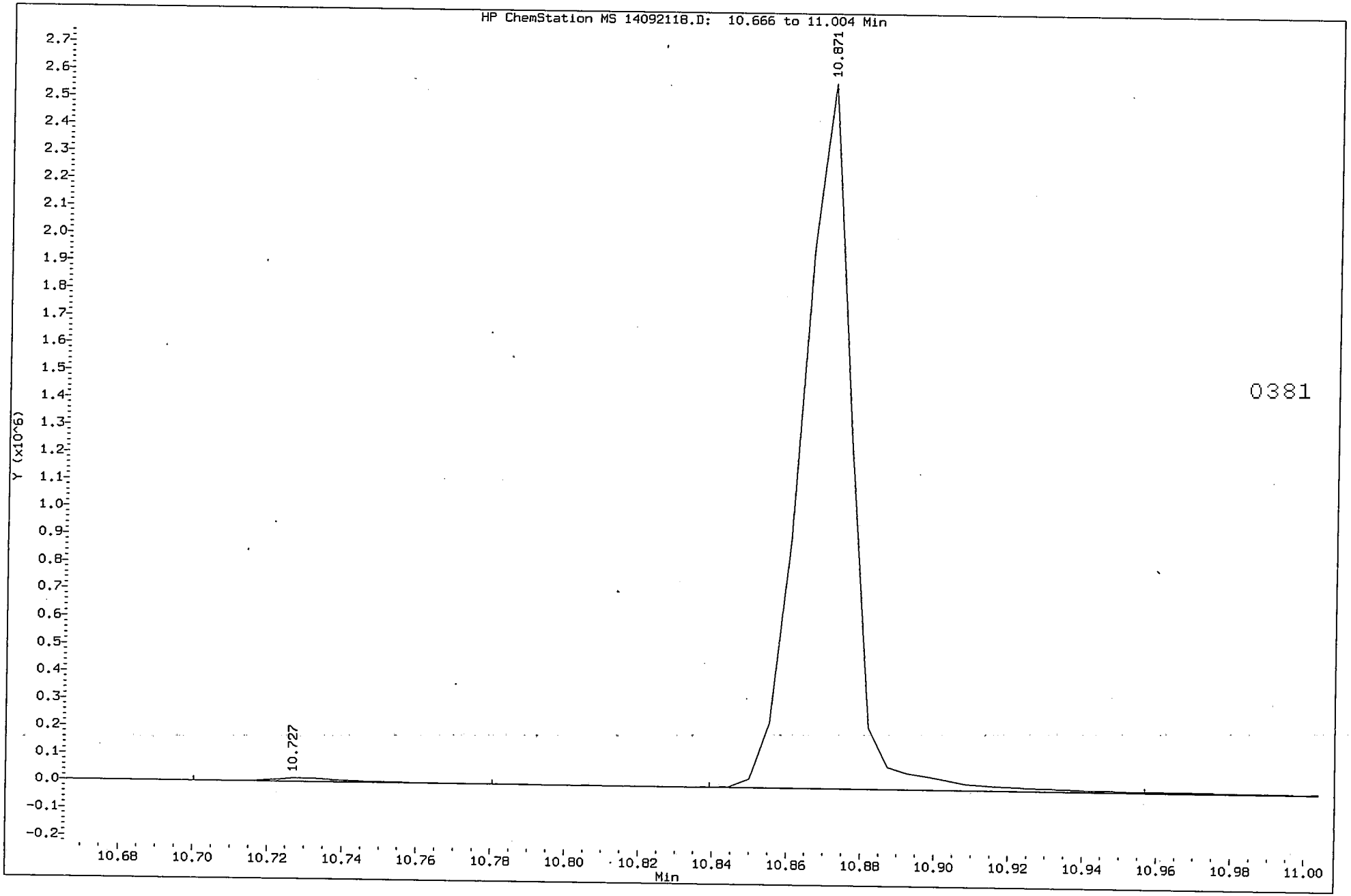
Number of points: 284

m/z	Y	m/z	Y	m/z	Y	m/z	Y
128.00	8086	200.00	1205	285.00	845		
129.00	41288	201.00	1077	286.00	76		

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14092118.D
Injection Date: 21-SEP-2012 18:02
Instrument: ms14.i
Client Sample ID:



Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14092118.D
Injection Date: 21-SEP-2012 18:02
Instrument: ms14.i
Client Sample ID:



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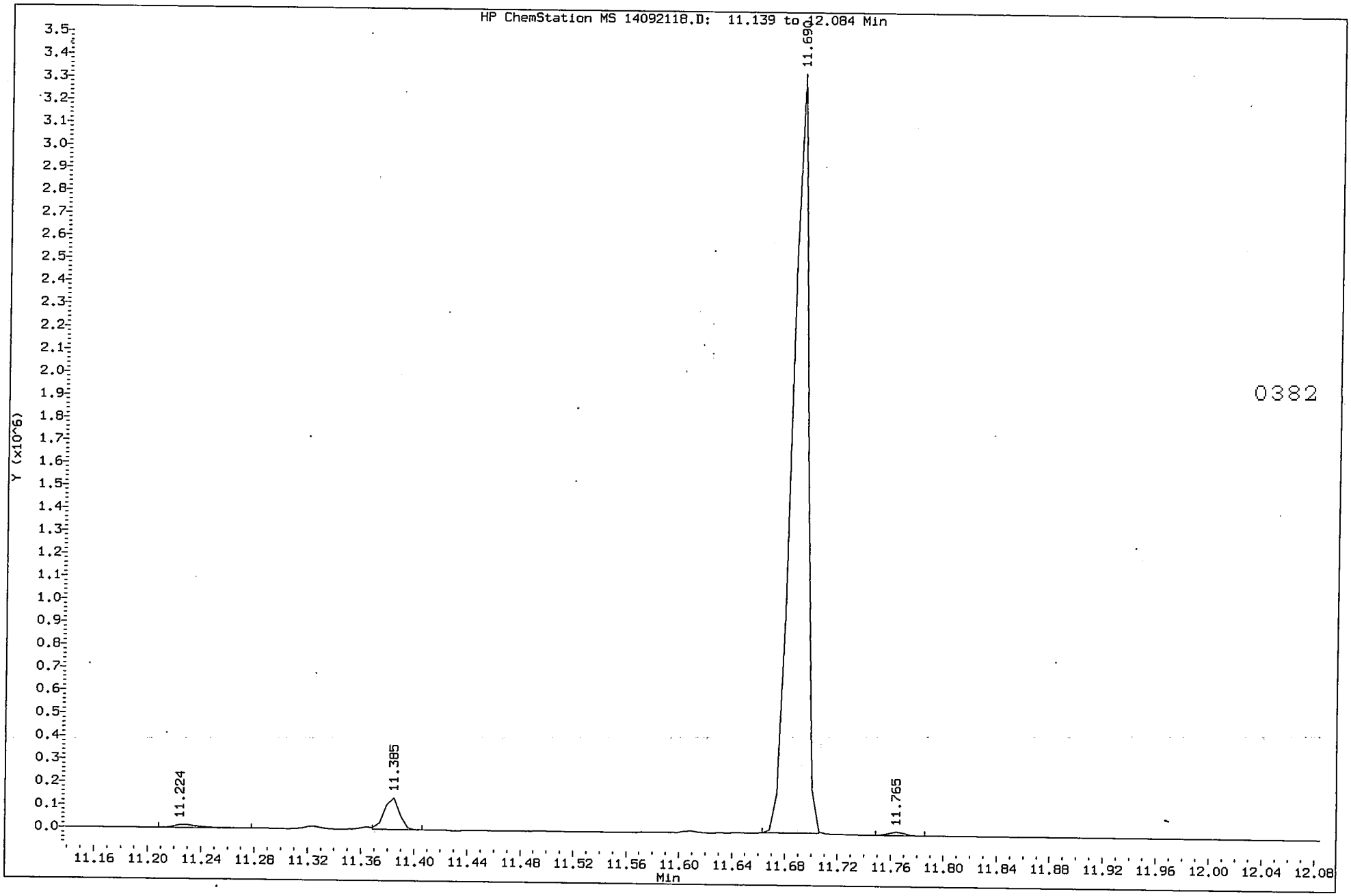
Injection Date: 21-SEP-2012 18:02
Instrument: ms14.i
Client Sample ID:



Data File: 14092130.D
Report Date: 24-Sep-2012 15:51

ALS - Middletown

Semivolatile Instrument Tune Report DFTPP

Data file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14092
Lab Smp Id: 1000
Inj Date : 21-SEP-2012 23:09
Operator : DHF Inst ID: ms14.i
Smp Info : 1000;1;3;;DFTPP;SV0235
Misc Info : ZZ SVMS DFTPPTUNEA
Comment :
Method : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14-DF
Meth Date : 15-Nov-2011 21:05 cliff Quant Type: AREA%
Cal Date : Cal File:
Als bottle: 1 QC Sample: DFTPP
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: ALMDTXP001

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
Vi	1.000	Injection Volume
Cpnd Variable		Local Compound Variable

DATA REVIEW 9/24/12
REPORTED
APPROVED
REVIEW

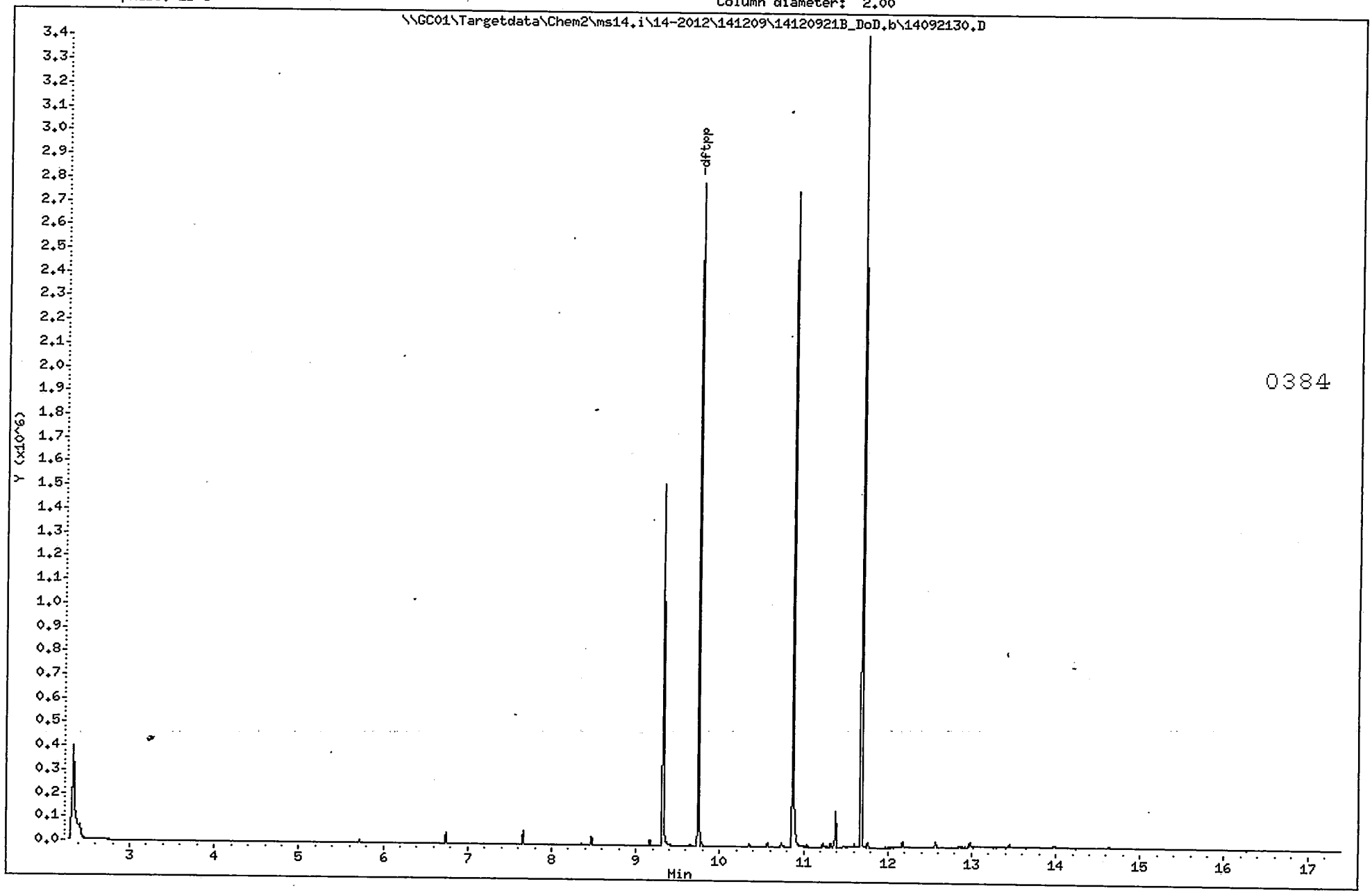
RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.330	257103	214293	0.833	2.44	
2.346	507242	368735	0.727	4.82	
6.742	33277	43324	1.302	0.31	
7.657	42870	54845	1.279	0.40	
8.470	28823	36312	1.260	0.27	
9.165	18930	22186	1.172	0.18	
9.326	1457882	1522028	1.044	13.87	
9.748	2223397	2788765	1.254	21.15	1 dftpp
9.786	17849	18667	1.046	0.16	
10.732	23532	14354	0.610	0.22	
10.871	2625586	2757531	1.050	24.98	
11.230	18216	12965	0.712	0.17	
11.326	15740	16850	1.071	0.14	
11.385	132151	151178	1.144	1.25	
11.690	3003164	3413303	1.137	28.67	
11.765	22315	22385	1.003	0.21	
12.176	22514	23831	1.059	0.21	
12.567	21374	21617	1.011	0.20	
12.979	20901	17814	0.852	0.19	
13.444	17533	13408	0.765	0.16	
	10510399	11534391		100.000	

Total unknown % area = 79

0388

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14092130.D
Date : 21-SEP-2012 23:09
Client ID:
Sample Info: 1000;1;3;;DFTPP;SV0235
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: ms14.i
Operator: DHF
Column diameter: 2.00



Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14092130.D

Date : 21-SEP-2012 23:09

Client ID:

Instrument: ms14.i

Sample Info: 1000;1;3;;DFTPP;SV0235

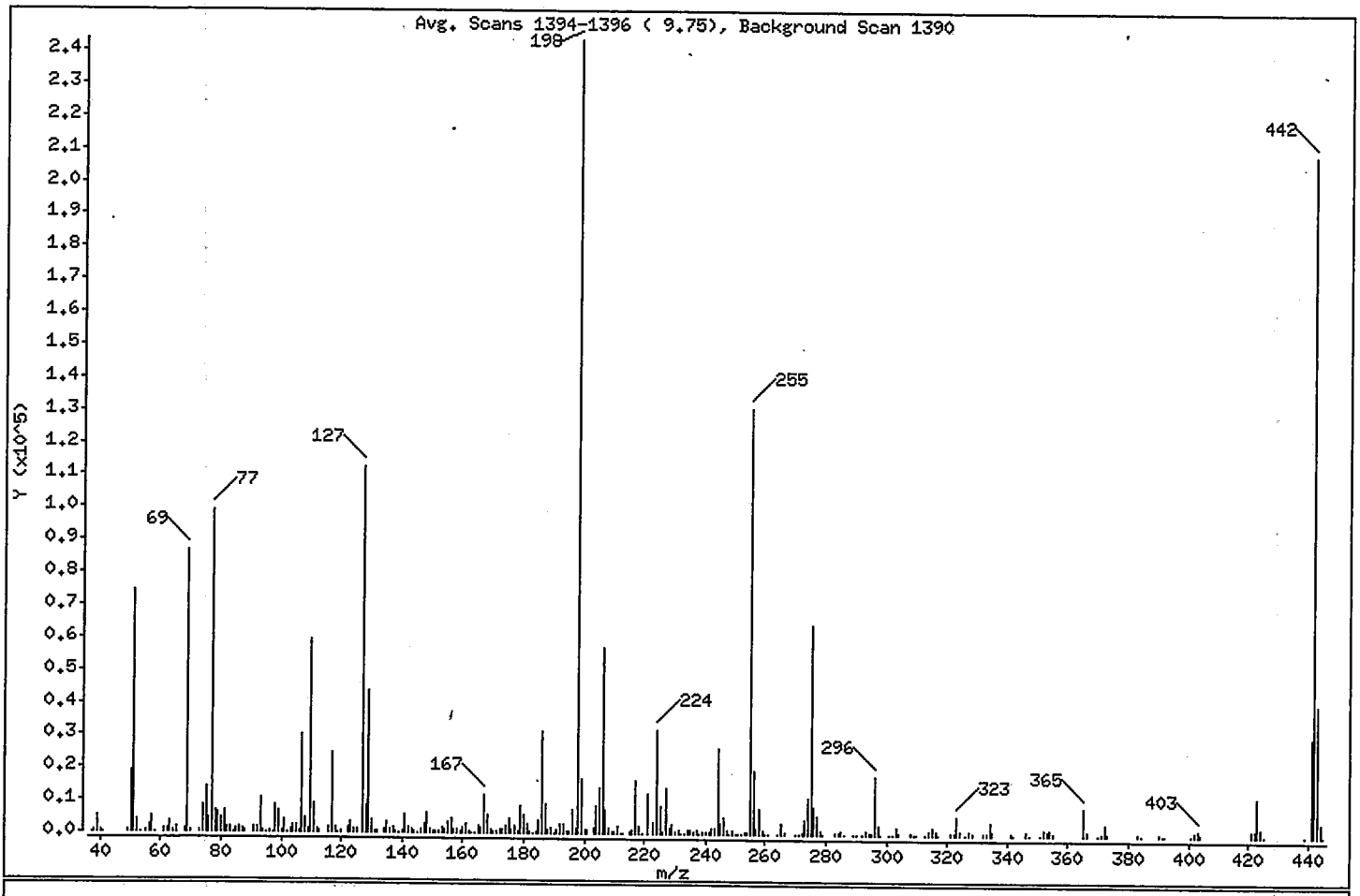
Volume Injected (uL): 1.0

Operator: DHF

Column phase: ZB-5

Column diameter: 2.00

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	30.52
68	Less than 2.00% of mass 69	0.55 (1.54)
69	Mass 69 relative abundance	35.70
70	Less than 2.00% of mass 69	0.17 (0.47)
127	40.00 - 60.00% of mass 198	46.22
197	Less than 1.00% of mass 198	0.63
199	5.00 - 9.00% of mass 198	6.83
275	10.00 - 30.00% of mass 198	26.39
365	Greater than 1.00% of mass 198	3.44
441	Present, but less than mass 443	12.36
442	Greater than 40.00% of mass 198	85.64
443	17.00 - 23.00% of mass 442	16.53 (19.30)

0300
01

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14092130.D

Date : 21-SEP-2012 23:09

Client ID:

Instrument: ms14.i

Sample Info: 1000;1;3;;DFTPP;SV0235

Volume Injected (uL): 1.0

Operator: DHF

Column phase: ZB-5

Column diameter: 2.00

Data File: 14092130.D

Spectrum: Avg. Scans 1394-1396 (9.75), Background Scan 1390

Location of Maximum: 198.00

Number of points: 284

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	245	129.00	43648	203.00	1618	286.00	81
38.00	834	130.00	3765	204.00	8190	289.00	160
39.00	5265	131.00	756	205.00	13863	290.00	88
40.00	288	132.00	322	206.00	57288	292.00	116
41.00	68	134.00	1211	207.00	7243	293.00	1193
49.00	480	135.00	3428	208.00	1930	294.00	347
50.00	19152	136.00	1396	209.00	604	295.00	453
51.00	74272	137.00	1655	210.00	460	296.00	17776
52.00	3797	138.00	396	211.00	2315	297.00	2580
53.00	71	139.00	164	212.00	90	298.00	96
55.00	287	140.00	508	213.00	76	301.00	174
56.00	2136	141.00	5370	215.00	655	302.00	251
57.00	5196	142.00	1771	216.00	1356	303.00	2063
58.00	207	143.00	1297	217.00	16013	304.00	565
61.00	1010	144.00	283	218.00	2046	308.00	299
62.00	1112	145.00	240	219.00	76	309.00	79
63.00	3205	146.00	967	221.00	12548	310.00	172
64.00	382	147.00	2753	223.00	3510	313.00	87
65.00	1653	148.00	6365	224.00	31912	314.00	893
68.00	1341	149.00	1232	225.00	8231	315.00	2068
69.00	86888	150.00	282	226.00	824	316.00	1204
70.00	411	151.00	718	227.00	13794	317.00	92
73.00	707	152.00	484	228.00	1931	321.00	560
74.00	8254	153.00	1747	229.00	2956	322.00	298
75.00	13781	154.00	1271	230.00	390	323.00	5771
76.00	4639	155.00	3114	231.00	1232	324.00	1133
77.00	98888	156.00	4464	232.00	97	326.00	73
78.00	6583	157.00	865	233.00	188	327.00	1078
79.00	5994	158.00	1006	234.00	847	328.00	589
80.00	4567	159.00	823	235.00	943	332.00	465
81.00	6955	160.00	1762	236.00	649	333.00	558
82.00	1749	161.00	2539	237.00	1112	334.00	3787
83.00	1687	162.00	745	238.00	68	335.00	934
84.00	68	163.00	191	239.00	593	341.00	620
85.00	1198	164.00	230	240.00	422	342.00	76

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14092130.D

Date : 21-SEP-2012 23:09

Client ID:

Instrument: ms14.i

Sample Info: 1000;1;3;;DFTPP;SV0235

Volume Injected (uL): 1.0

Operator: DHF

Column phase: ZB-5

Column diameter: 2.00

Data File: 14092130.D

Spectrum: Avg. Scans 1394-1396 (9.75), Background Scan 1390

Location of Maximum: 198.00

Number of points: 284

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	1907	165.00	1966	241.00	803	346.00	1241
87.00	930	166.00	1684	242.00	1849	347.00	110
88.00	325	167.00	11649	243.00	1872	351.00	75
91.00	1545	168.00	5323	244.00	26560	352.00	1667
92.00	1643	169.00	997	245.00	3370	353.00	1223
93.00	10717	170.00	285	246.00	5164	354.00	1779
94.00	760	171.00	474	247.00	1070	355.00	330
95.00	171	172.00	1006	248.00	201	365.00	8364
96.00	477	173.00	1271	249.00	976	366.00	1170
97.00	200	174.00	2329	250.00	154	370.00	74
98.00	8122	175.00	4285	251.00	195	371.00	460
99.00	6479	176.00	1289	252.00	197	372.00	3228
100.00	569	177.00	2053	253.00	574	373.00	754
101.00	3939	178.00	711	254.00	553	383.00	838
102.00	173	179.00	8581	255.00	130840	384.00	94
103.00	1286	180.00	5647	256.00	19480	390.00	446
104.00	2509	181.00	2666	257.00	1457	391.00	207
105.00	2261	182.00	348	258.00	7810	392.00	90
106.00	809	183.00	210	259.00	1179	401.00	164
107.00	29944	184.00	661	260.00	101	402.00	1269
108.00	4667	185.00	4063	261.00	197	403.00	1782
109.00	852	186.00	31344	264.00	214	404.00	627
110.00	59120	187.00	8796	265.00	3144	421.00	1492
111.00	8800	188.00	899	266.00	564	422.00	1442
112.00	1037	189.00	1917	270.00	78	423.00	11580
113.00	300	190.00	273	271.00	227	424.00	2415
116.00	1705	191.00	873	272.00	457	425.00	171
117.00	24888	192.00	2665	273.00	4269	439.00	80
118.00	1832	193.00	2900	274.00	11404	441.00	30088
119.00	215	194.00	665	275.00	64232	442.00	208448
120.00	324	195.00	399	276.00	8380	443.00	40232
122.00	1942	196.00	7329	277.00	5388	444.00	3668
123.00	3166	197.00	1532	278.00	853	445.00	112
124.00	1329	198.00	243392	279.00	72		
125.00	1347	199.00	16632	283.00	592		

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14092130.D

Date : 21-SEP-2012 23:09

Client ID:

Instrument: ms14.i

Sample Info: 1000;1;3;;DFTPP;SV0235

Volume Injected (uL): 1.0

Operator: DHF

Column phase: ZB-5

Column diameter: 2.00

Data File: 14092130.D

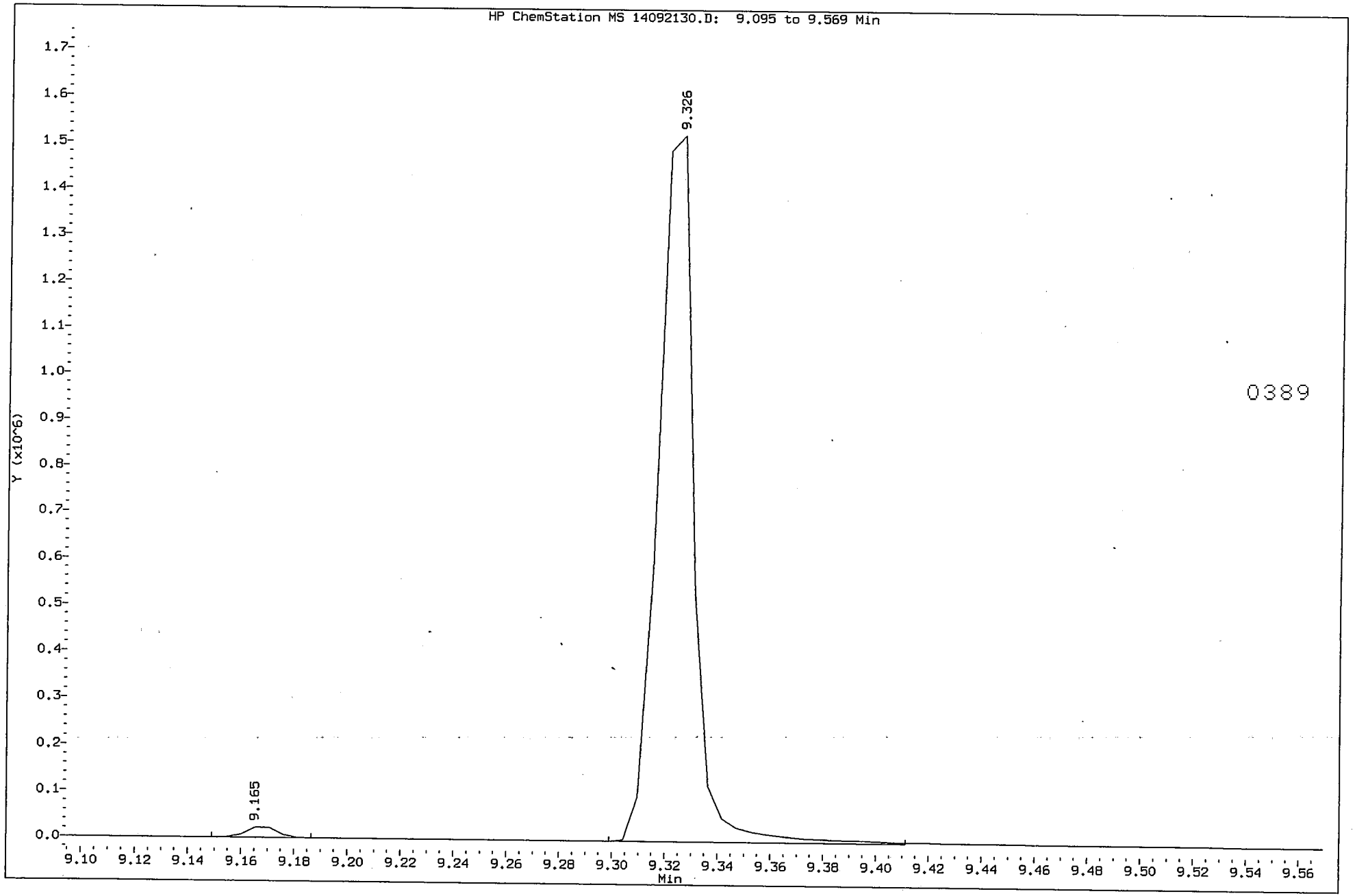
Spectrum: Avg. Scans 1394-1396 (9.75), Background Scan 1390

Location of Maximum: 198.00

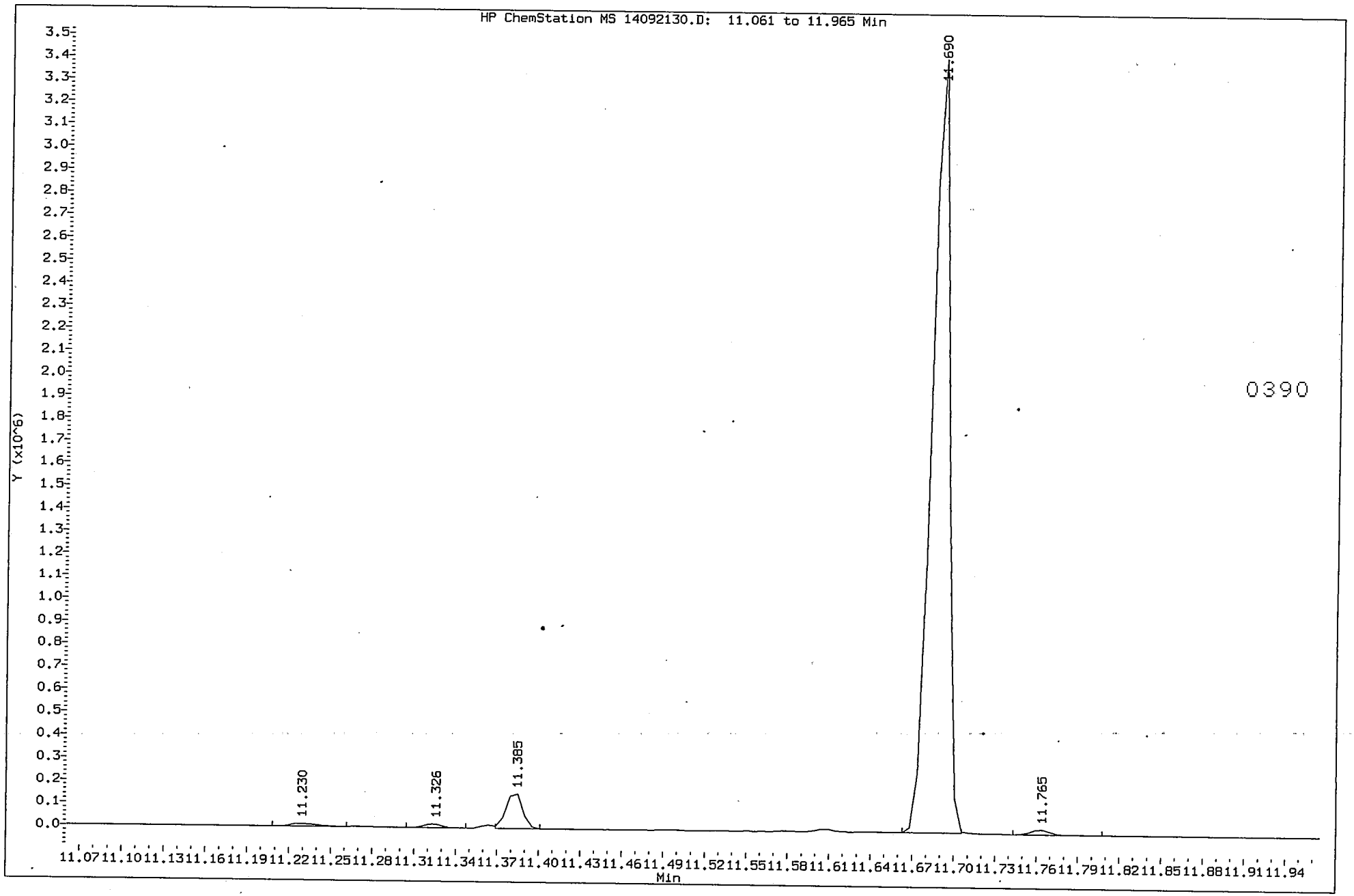
Number of points: 284

m/z	Y	m/z	Y	m/z	Y	m/z	Y
127.00	112496	200.00	1250	284.00	350		
128.00	8397	201.00	1151	285.00	932		

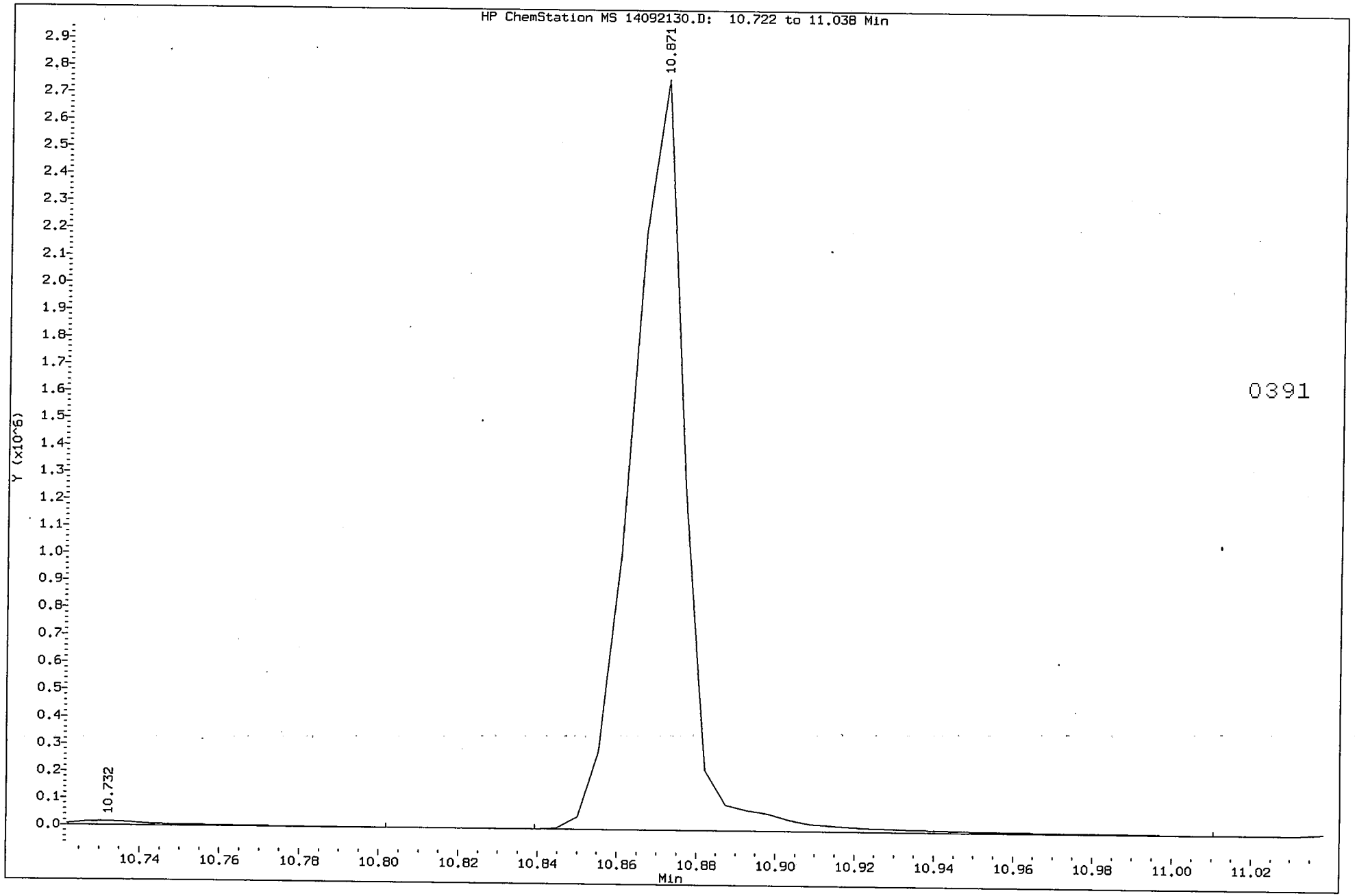
Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14092130.D
Injection Date: 21-SEP-2012 23:09
Instrument: ms14.i
Client Sample ID:



Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14092130.D
Injection Date: 21-SEP-2012 23:09
Instrument: ms14.i
Client Sample ID:



Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921B_DoD.b\14092130.D
Injection Date: 21-SEP-2012 23:09
Instrument: ms14.i
Client Sample ID:



Blank Raw Data

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1037610(MB)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-009

Matrix (soil/water): WATER Lab Sample ID: 1037610

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 14092126.D

Level: (low/med) Date Received: 9/21/2012

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 9/18/2012

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/21/2012

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N Extraction: (Type) SEPF

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
108394/106445	mp-Cresol	1.0	U
95-48-7	o-Cresol	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
121-14-2	2,4-Dinitrotoluene	1.0	U
118-74-1	Hexachlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
67-72-1	Hexachloroethane	1.0	U
98-95-3	Nitrobenzene	2.0	U
87-86-5	Pentachlorophenol	8.0	U
110-86-1	Pyridine	2.0	U
95-95-4	2,4,5-Trichlorophenol	3.0	U
88-06-2	2,4,6-Trichlorophenol	1.0	U

ALS - Middletown

Semivolatile Report for SW-846 Method 8270

Data file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14092
Lab Smp Id: 1037610 Client Smp ID: MB for HBN 482632 [
Inj Date : 21-SEP-2012 21:25
Operator : DHF Inst ID: ms14.i
Smp Info : 1037610;1;3;;MB;;1000;;1000;;
Misc Info : ZZ SVMS 17662 D8270W
Comment :
Method : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14-82
Meth Date : 24-Sep-2012 15:37 ms14.i Quant Type: ISTD
Cal Date : 21-SEP-2012 15:54 Cal File: 14092113.D
Als bottle: 22 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 12_3510_3550all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Sample Volume extracted(mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

DATA REVIEW
REPORTED
APPROVED

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
1	1,4-Dioxane	88	Compound Not Detected.					
2	N-Nitrosodimethylamine	74	Compound Not Detected.					
3	Pyridine	79	Compound Not Detected.					
$ 4	2-Fluorophenol	112	3.971	3.966	(0.778)	392502	53.5578	53.5578
5	N-Nitrosodiethylamine	102	Compound Not Detected.					
6	Benzaldehyde	106	Compound Not Detected.					
$ 7	Phenol-d5	99	4.736	4.741	(0.928)	296906	36.5808	36.5808
8	Phenol	94	Compound Not Detected.					
9	Aniline	93	Compound Not Detected.					
10	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
12	2-Chlorophenol	128	Compound Not Detected.					
11	n-Decane	57	Compound Not Detected.					
13	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 14	1,4-Dichlorobenzene-d4	152	5.105	5.105	(1.000)	207087	40.0000	
15	1,4-Dichlorobenzene	146	Compound Not Detected.					
16	Benzyl Alcohol	108	Compound Not Detected.					
17	1,2-Dichlorobenzene	146	Compound Not Detected.					
18	o-Cresol	107	Compound Not Detected.					
19	bis(2-Chloroisopropyl)ether	45	Compound Not Detected.					
20	mp-Cresol	107	Compound Not Detected.					
23	N-Nitrosopyrrolidine	100	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	22 N-Nitrosodi-n-propylamine	70	Compound Not Detected.					
	21 Acetophenone	105	Compound Not Detected.					
	24 Hexachloroethane	117	Compound Not Detected.					
$	25 Nitrobenzene-d5	128	5.613	5.619	(0.891)	172328	44.7216	44.7216
	26 Nitrobenzene	77	Compound Not Detected.					
	27 Isophorone	82	Compound Not Detected.					
	28 2-Nitrophenol	139	Compound Not Detected.					
	29 2,4-Dimethylphenol	122	Compound Not Detected.					
	30 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	31 Benzoic acid	105	Compound Not Detected.					
	32 2,4-Dichlorophenol	162	Compound Not Detected.					
	33 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
	35 alpha-Terpineol	59	Compound Not Detected.					
*	34 Naphthalene-d8	136	6.303	6.309	(1.000)	863683	40.0000	
	36 Naphthalene	128	Compound Not Detected.					
	37 4-Chloroaniline	127	Compound Not Detected.					
	38 2,6-Dichlorophenol	162	Compound Not Detected.					
	39 Hexachlorobutadiene	224	Compound Not Detected.					
	40 N-Nitrosodi-n-butylamine	57	Compound Not Detected.					
	41 Resorcinol	110	Compound Not Detected.					
	42 Caprolactam	56	Compound Not Detected.					
	43 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	44 2-Methylnaphthalene	142	Compound Not Detected.					
	45 1-Methylnaphthalene	142	Compound Not Detected.					
	46 Hexachlorocyclopentadiene	236	Compound Not Detected.					
	47 1,2,4,5-Tetrachlorobenzene	215	Compound Not Detected.					
	48 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	49 2,3-Dichloroaniline	161	Compound Not Detected.					
	50 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	51 2-Fluorobiphenyl	172	7.346	7.352	(0.914)	738511	41.9693	41.9693
	52 Biphenyl	154	Compound Not Detected.					
	53 2-Chloronaphthalene	162	Compound Not Detected.					
	55 2-Nitroaniline	138	Compound Not Detected.					
	56 1,4-Dinitrobenzene	168	Compound Not Detected.					
	57 Dimethylphthalate	163	Compound Not Detected.					
	58 1,3-Dinitrobenzene	168	Compound Not Detected.					
	59 2,6-Dinitrotoluene	165	Compound Not Detected.					
	60 1,2-Dinitrobenzene	168	Compound Not Detected.					
	61 Acenaphthylene	152	Compound Not Detected.					
	62 3-Nitroaniline	138	Compound Not Detected.					
*	63 Acenaphthene-d10	164	8.036	8.042	(1.000)	518885	40.0000	
	64 Acenaphthene	153	Compound Not Detected.					
	65 2,4-Dinitrophenol	184	Compound Not Detected.					
	66 4-Nitrophenol	65	Compound Not Detected.					
	67 Pentachlorobenzene	249	Compound Not Detected.					
	68 2,4-Dinitrotoluene	165	Compound Not Detected.					
	69 Dibenzofuran	168	Compound Not Detected.					
	70 2,3,5,6-Tetrachlorophenol	230	Compound Not Detected.					
	71 2,3,4,6-Tetrachlorophenol	230	Compound Not Detected.					
	72 2-Napthylamine	143	Compound Not Detected.					
	73 Diethylphthalate	149	Compound Not Detected.					
	74 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	75 Fluorene	166	Compound Not Detected.					
	76 4-Nitroaniline	138	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	77 2-Methyl-4,6-dinitrophenol	198	Compound Not Detected.					
	78 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	79 Diphenylamine	169	Compound Not Detected.					
	80 1,2-Diphenylhydrazine	77	Compound Not Detected.					
	81 Azobenzene	77	Compound Not Detected.					
$	82 2,4,6-Tribromophenol	330	8.822	8.828	(0.926)	225073	87.4563	87.4563
	83 n-Heptadecane	57	Compound Not Detected.					
	84 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	86 Dimethoate	87	Compound Not Detected.					
	85 Hexachlorobenzene	283	Compound Not Detected.					
	87 Atrazine	200	Compound Not Detected.					
	89 n-Octadecane	57	Compound Not Detected.					
	88 Pentachlorophenol	265	Compound Not Detected.					
*	90 Phenanthrene-d10	188	9.528	9.534	(1.000)	922523	40.0000	
	91 Phenanthrene	178	Compound Not Detected.					
	92 Anthracene	178	Compound Not Detected.					
	93 Carbazole	167	Compound Not Detected.					
	94 Di-n-Butylphthalate	149	Compound Not Detected.					
	95 Fluoranthene	202	Compound Not Detected.					
	96 Benzidine	184	Compound Not Detected.					
	97 Pyrene	202	Compound Not Detected.					
$	98 Terphenyl-d14	244	11.112	11.112	(0.912)	1008625	48.3887	48.3887
	99 Butylbenzylphthalate	149	Compound Not Detected.					
	100 Di(2-Ethylhexyl)adipate	129	Compound Not Detected.					
	101 bis(2-Ethylhexyl)phthalate	149	Compound Not Detected.					
	102 3,3-Dichlorobenzidine	252	Compound Not Detected.					
	103 Benzo(a)anthracene	228	Compound Not Detected.					
*	104 Chrysene-d12	240	12.187	12.197	(1.000)	1006744	40.0000	
	105 Chrysene	228	Compound Not Detected.					
	106 Di-n-Octylphthalate	149	Compound Not Detected.					
	107 Benzo(b)fluoranthene	252	Compound Not Detected.					
	108 Benzo(k)fluoranthene	252	Compound Not Detected.					
	109 Benzo(a)pyrene	252	Compound Not Detected.					
*	110 Perylene-d12	264	13.791	13.802	(1.000)	1040610	40.0000	
	111 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	112 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	113 Benzo(g,h,i)perylene	276	Compound Not Detected.					

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms14.i
Lab File ID: 14092126.D
Lab Smp Id: 1037610
Analysis Type: SV
Quant Type: ISTD
Operator: DHF
Method File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14-8
Misc Info: ZZ SVMS 17662 D8270W

Calibration Date: 21-SEP-2012
Calibration Time: 18:27
Client Smp ID: MB for HBN 482632
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	201484	100742	402968	207087	2.78
34 Naphthalene-d8	894115	447058	1788230	863683	-3.40
63 Acenaphthene-d10	515108	257554	1030216	518885	0.73
90 Phenanthrene-d10	924191	462096	1848382	922523	-0.18
104 Chrysene-d12	1005497	502749	2010994	1006744	0.12
110 Perylene-d12	1050509	525255	2101018	1040610	-0.94

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	5.11	4.61	5.61	5.11	-0.00
34 Naphthalene-d8	6.31	5.81	6.81	6.30	-0.09
63 Acenaphthene-d10	8.04	7.54	8.54	8.04	-0.07
90 Phenanthrene-d10	9.53	9.03	10.03	9.53	-0.06
104 Chrysene-d12	12.20	11.70	12.70	12.19	-0.09
110 Perylene-d12	13.80	13.30	14.30	13.79	-0.08

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

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RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1037610
Level: LOW
Data Type: MS DATA
SpikeList File: 3510-50-100.spk
Sublist File: 12_3510_3550all.sub
Method File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14-8
Misc Info: ZZ SVMS 17662 D8270W

Client SDG: 14120921A_8270.B
Fraction: SV
Client Smp ID: MB for HBN 482632 [
Operator: DHF
SampleType: BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 2-Fluorophenol	100.000	53.5578	53.56	20-75
$ 7 Phenol-d5	100.000	36.5808	36.58	13-49
$ 25 Nitrobenzene-d5	50.0000	44.7216	89.44	40-110
$ 51 2-Fluorobiphenyl	50.0000	41.9693	83.94	50-110
$ 82 2,4,6-Tribromophen	100.000	87.4563	87.46	40-125
$ 98 Terphenyl-d14	50.0000	48.3887	96.78	50-122

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TARGET COMPOUNDS

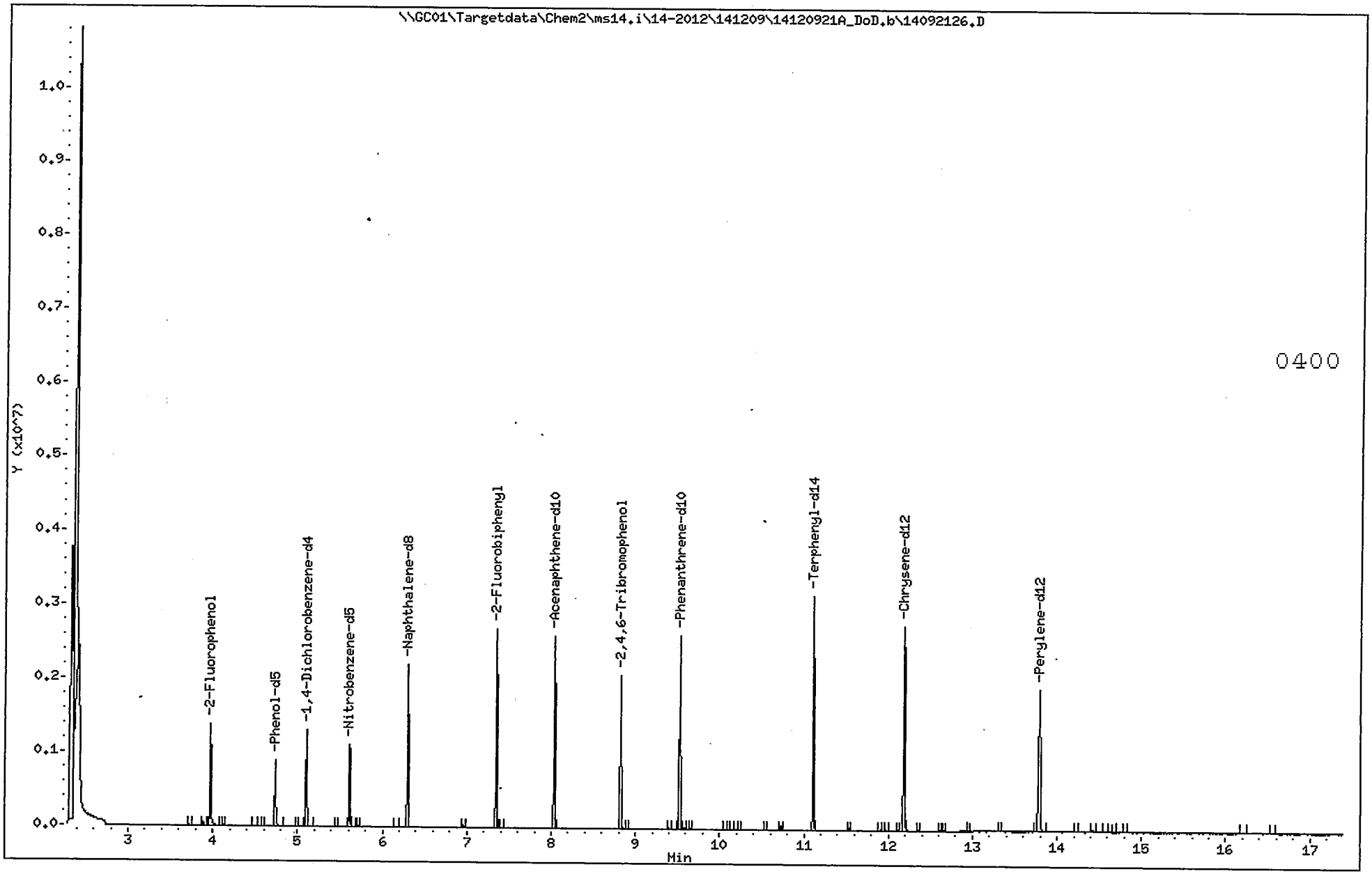
Client Name:
Lab Smp Id: 1037610
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 17662 D8270W

Client SDG: 14120921A_8270.B
Client Smp ID: MB for HBN 482632 [
Sample Point:
Date Received: 21-SEP-2012
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
367-12-4	2-Fluorophenol	53.5578	
4165-62-2	Phenol-d5	36.5808	
4165-60-0	Nitrobenzene-d5	44.7216	
321-60-8	2-Fluorobiphenyl	41.9693	
118-79-6	2,4,6-Tribromophenol	87.4563	
98904-43-9	Terphenyl-d14	48.3887	

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14092126.D
Date : 21-SEP-2012 21:25
Client ID: MB for HBN 482632 [
Sample Info: 1037610;1;3;;MB;;1000;;1000;;
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: ms14.i
Operator: DHF
Column diameter: 0.25



LCS Raw Data

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1037611(LCS)

Lab Name: ALS - Middletown Contract:

Lab Code: PA010 Case No.: SAS No.: SDG No.: ERT-009

Matrix (soil/water): WATER Lab Sample ID: 1037611

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 14092127.D

Level: (low/med) Date Received: 9/21/2012

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 9/18/2012

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/21/2012

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N Extraction: (Type) SEPF

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
108394/106445	mp-Cresol	81.7	
95-48-7	o-Cresol	91.8	
106-46-7	1,4-Dichlorobenzene	38.7	
121-14-2	2,4-Dinitrotoluene	54.9	
118-74-1	Hexachlorobenzene	49.7	
87-68-3	Hexachlorobutadiene	38.7	
67-72-1	Hexachloroethane	38.5	
98-95-3	Nitrobenzene	49.9	
87-86-5	Pentachlorophenol	113	
110-86-1	Pyridine	35.2	
95-95-4	2,4,5-Trichlorophenol	98.8	
88-06-2	2,4,6-Trichlorophenol	99.7	

0402

ALS - Middletown

Semivolatile Report for SW-846 Method 8270

Data file : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14092
Lab Smp Id: 1037611 Client Smp ID: LCS for HBN 482632
Inj Date : 21-SEP-2012 21:50
Operator : DHF Inst ID: ms14.i
Smp Info : 1037611;1;3;;LCS;1;1000;;1000;;
Misc Info : ZZ SVMS 17662 D8270W
Comment :
Method : \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14-82
Meth Date : 24-Sep-2012 15:37 ms14.i Quant Type: ISTD
Cal Date : 21-SEP-2012 15:54 Cal File: 14092113.D
Als bottle: 23 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 12_3510_3550all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Sample Volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

DATA REVIEW 9/24/12
REPORTED 9/24/12
APPROVED
REVIEW

See recovery issues in LIM

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	1 1,4-Dioxane	88	2.623	2.613	(0.514)	87060	26.5027	26.5027
	2 N-Nitrosodimethylamine	74	2.896	2.896	(0.567)	153923	36.2543	36.2543
	3 Pyridine	79	2.923	2.918	(0.573)	270928	35.1940	35.1940
$	4 2-Fluorophenol	112	3.976	3.966	(0.779)	410192	61.6326	61.6326
	5 N-Nitrosodiethylamine	102	4.174	4.174	(0.818)	166328	48.4873	48.4873
	6 Benzaldehyde	106	4.725	4.725	(0.926)	296476	63.6298	63.6298
$	7 Phenol-d5	99	4.741	4.741	(0.929)	253159	34.3455	34.3455
	8 Phenol	94	4.752	4.752	(0.931)	272996	37.8140	37.8140
	9 Aniline	93	4.805	4.811	(0.941)	483337	51.7111	51.7111
	10 Bis(2-Chloroethyl)ether	93	4.848	4.848	(0.950)	355746	51.7412	51.7412
	12 2-Chlorophenol	128	4.918	4.918	(0.963)	665579	99.9586	99.9586
	11 n-Decane	57	4.912	4.913	(0.962)	192124	26.9196	26.9196
	13 1,3-Dichlorobenzene	146	5.057	5.057	(0.991)	305539	39.9463	39.9463
*	14 1,4-Dichlorobenzene-d4	152	5.105	5.105	(1.000)	188066	40.0000	
	15 1,4-Dichlorobenzene	146	5.121	5.121	(1.003)	282176	38.6545	38.6545
	16 Benzyl Alcohol	108	5.212	5.212	(1.021)	225709	42.7718	42.7718
	17 1,2-Dichlorobenzene	146	5.260	5.260	(1.030)	164911	30.0850	30.0850
	18 o-Cresol	107	5.298	5.298	(1.038)	515343	91.7901	91.7901
	19 bis(2-Chloroisopropyl)ether	45	5.324	5.324	(1.043)	437141	50.8203	50.8203
	20 mp-Cresol	107	5.447	5.447	(1.067)	646497	81.6802	81.6802
	23 N-Nitrosopyrrolidine	100	5.463	5.469	(1.070)	171280	46.0528	46.0528

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	22 N-Nitrosodi-n-propylamine	70	5.458	5.463	(1.069)	269806	52.9156	52.9156
	21 Acetophenone	105	5.469	5.469	(1.071)	453517	45.2552	45.2552
	24 Hexachloroethane	117	5.576	5.576	(1.092)	121753	38.4826	38.4826
$	25 Nitrobenzene-d5	128	5.613	5.619	(0.891)	176653	45.0885	45.0885
	26 Nitrobenzene	77	5.634	5.635	(0.894)	377952	49.8822	49.8822
	27 Isophorone	82	5.859	5.859	(0.930)	702477	49.6613	49.6613
	28 2-Nitrophenol	139	5.934	5.934	(0.941)	400984	100.245	100.245
	29 2,4-Dimethylphenol	122	5.945	5.945	(0.943)	675771	94.8137	94.8137
	30 Bis(2-Chloroethoxy)methane	93	6.036	6.036	(0.958)	472761	51.2379	51.2379
	31 Benzoic acid	105	6.036	6.079	(0.958)	153025	39.9376	39.9376
	32 2,4-Dichlorophenol	162	6.159	6.159	(0.977)	592920	97.2507	97.2507
	33 1,2,4-Trichlorobenzene	180	6.239	6.239	(0.990)	283718	39.7958	39.7958
	35 alpha-Terpineol	59	6.308	6.314	(1.001)	65881	13.0752	13.0752
*	34 Naphthalene-d8	136	6.303	6.309	(1.000)	878155	40.0000	
	36 Naphthalene	128	6.330	6.330	(1.004)	1141018	49.3497	49.3497
	37 4-Chloroaniline	127	6.367	6.367	(1.010)	448985	49.3959	49.3959
	38 2,6-Dichlorophenol	162	6.373	6.373	(1.011)	302817	47.1872	47.1872
	39 Hexachlorobutadiene	225	6.421	6.421	(1.019)	159159	38.6515	38.6515
	40 N-Nitrosodi-n-butylamine	57	6.677	6.678	(1.059)	171473	44.5691	44.5691
	41 Resorcinol	110	Compound Not Detected.					
	42 Caprolactam	56	6.747	6.795	(1.070)	34870	13.6744	13.6744
	43 4-Chloro-3-methylphenol	107	6.822	6.833	(1.082)	639187	97.2389	97.2389
	44 2-Methylnaphthalene	142	6.998	6.999	(1.110)	686609	43.7250	43.7250
	45 1-Methylnaphthalene	142	7.100	7.100	(1.126)	662022	45.3347	45.3347
	46 Hexachlorocyclopentadiene	237	7.137	7.143	(1.132)	130293	31.7056	31.7056
	47 1,2,4,5-Tetrachlorobenzene	216	7.159	7.159	(0.890)	297630	38.8577	38.8577
	48 2,4,6-Trichlorophenol	196	7.271	7.271	(0.904)	435000	99.7256	99.7256
	49 2,3-Dichloroaniline	161	7.277	7.277	(0.905)	347853	43.4593	43.4593
	50 2,4,5-Trichlorophenol	196	7.314	7.314	(0.910)	466287	98.8387	98.8387
$	51 2-Fluorobiphenyl	172	7.351	7.352	(0.914)	756666	44.0572	44.0572
	52 Biphenyl	154	7.453	7.459	(0.927)	836546	42.2469	42.2469
	53 2-Chloronaphthalene	162	7.485	7.485	(0.931)	666855	46.0792	46.0792
	55 2-Nitroaniline	138	7.581	7.582	(0.943)	267319	56.5766	56.5766
	56 1,4-Dinitrobenzene	168	7.715	7.715	(0.959)	139914	49.5858	49.5858
	57 Dimethylphthalate	163	7.747	7.747	(0.963)	831989	48.7517	48.7517
	58 1,3-Dinitrobenzene	168	7.790	7.795	(0.969)	145928	49.4529	49.4529
	59 2,6-Dinitrotoluene	165	7.817	7.817	(0.972)	212948	53.5907	53.5907
	60 1,2-Dinitrobenzene	168	7.881	7.881	(0.980)	109651	53.8164	53.8164
	61 Acenaphthylene	152	7.902	7.902	(0.983)	1194737	52.2117	52.2117
	62 3-Nitroaniline	138	7.993	7.993	(0.994)	210122	52.6796	52.6796
*	63 Acenaphthene-d10	164	8.041	8.042	(1.000)	506446	40.0000	
	64 Acenaphthene	153	8.073	8.074	(1.004)	729920	47.8046	47.8046
	65 2,4-Dinitrophenol	184	8.095	8.095	(1.007)	237965	93.1637	93.1637
	66 4-Nitrophenol	65	8.148	8.148	(1.013)	130546	46.7357	46.7357
	67 Pentachlorobenzene	250	8.196	8.197	(1.019)	299014	42.5856	42.5856
	68 2,4-Dinitrotoluene	165	8.218	8.218	(1.022)	283471	54.9306	54.9306
	69 Dibenzofuran	168	8.245	8.245	(1.025)	1019256	49.4650	49.4650
	70 2,3,5,6-Tetrachlorophenol	230	8.314	8.314	(1.034)	171122	51.4010	51.4010
	71 2,3,4,6-Tetrachlorophenol	230	8.357	8.357	(1.039)	292548	93.9483	93.9483
	72 2-Napthylamine	143	8.405	8.405	(1.045)	522398	37.6216	37.6216
	73 Diethylphthalate	149	8.443	8.443	(1.050)	887988	49.9729	49.9729
	74 4-Chlorophenyl-phenylether	204	8.571	8.571	(1.066)	415011	49.1272	49.1272
	75 Fluorene	166	8.587	8.587	(1.068)	872971	49.9502	49.9502
	76 4-Nitroaniline	138	8.614	8.614	(1.071)	221731	57.6210	57.6210

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	77 2-Methyl-4,6-dinitrophenol	198	8.630	8.630	(0.905)	324202	98.1823	98.1823
	78 N-Nitrosodiphenylamine	169	8.694	8.694	(0.912)	749668	59.0063	59.0063
	79 Diphenylamine	169	8.694	8.694	(0.912)	749668	50.3836	50.3836
	80 1,2-Diphenylhydrazine	77	8.731	8.731	(0.916)	872203	51.9004	51.9004
	81 Azobenzene	77	8.731	8.731	(0.916)	872203	51.3866	51.3866
$	82 2,4,6-Tribromophenol	330	8.833	8.828	(0.926)	242900	94.0449	94.0449
	83 n-Heptadecane	57	8.903	8.903	(0.934)	502917	43.7591	43.7591
	84 4-Bromophenyl-phenylether	248	9.063	9.063	(0.951)	259388	50.6424	50.6424
	86 Dimethoate	87	9.165	9.165	(0.961)	326802	47.7264	47.7264
	85 Hexachlorobenzene	284	9.133	9.133	(0.958)	282836	49.7174	49.7174
	87 Atrazine	200	9.213	9.213	(0.966)	242259	48.0245	48.0245
	89 n-Octadecane	57	9.352	9.352	(0.981)	536952	45.2859	45.2859
	88 Pentachlorophenol	266	9.330	9.331	(0.979)	369075	113.434	113.434
*	90 Phenanthrene-d10	188	9.534	9.534	(1.000)	925843	40.0000	
	91 Phenanthrene	178	9.560	9.561	(1.003)	1261417	49.9920	49.9920
	92 Anthracene	178	9.614	9.609	(1.008)	1261504	50.2376	50.2376
	93 Carbazole	167	9.764	9.764	(1.024)	1195975	52.6878	52.6878
	94 Di-n-Butylphthalate	149	10.069	10.069	(1.056)	1534444	51.3570	51.3570
	95 Fluoranthene	202	10.753	10.753	(1.128)	1425230	51.6860	51.6860
	96 Benzidine	184	10.871	10.871	(0.891)	696774	57.8939	57.8939
	97 Pyrene	202	10.988	10.989	(0.901)	1474367	51.2423	51.2423
$	98 Terphenyl-d14	244	11.112	11.112	(0.911)	1045507	49.5772	49.5772
	99 Butylbenzylphthalate	149	11.582	11.582	(0.950)	780969	57.4091	57.4091
	100 Di(2-Ethylhexyl)adipate	129	11.625	11.625	(0.953)	732816	55.1109	55.1109
	101 bis(2-Ethylhexyl)phthalate	149	12.128	12.128	(0.994)	1122614	56.1392	56.1392
	102 3,3-Dichlorobenzidine	252	12.144	12.139	(0.996)	814336	85.2251	85.2251
	103 Benzo(a)anthracene	228	12.181	12.181	(0.999)	1435220	50.7377	50.7377
*	104 Chrysene-d12	240	12.197	12.197	(1.000)	1018540	40.0000	
	105 Chrysene	228	12.224	12.224	(1.002)	1334913	51.2551	51.2551
	106 Di-n-Octylphthalate	149	12.770	12.764	(1.047)	2004391	57.9883	57.9883
	107 Benzo(b)fluoranthene	252	13.347	13.310	(0.967)	1626878	54.3655	54.3655
	108 Benzo(k)fluoranthene	252	13.347	13.347	(0.967)	1626873	53.6700	53.6700
	109 Benzo(a)pyrene	252	13.732	13.727	(0.995)	1444907	52.4421	52.4421
*	110 Perylene-d12	264	13.802	13.802	(1.000)	1071383	40.0000	
	111 Indeno(1,2,3-cd)pyrene	276	15.497	15.492	(1.123)	1760113	52.9679	52.9679
	112 Dibenzo(a,h)anthracene	278	15.519	15.514	(1.124)	1451106	52.1740	52.1740
	113 Benzo(g,h,i)perylene	276	16.022	16.016	(1.161)	1459325	51.9237	51.9237

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: ms14.i
Lab File ID: 14092127.D
Lab Smp Id: 1037611
Analysis Type: SV
Quant Type: ISTD
Operator: DHF
Method File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14-8
Misc Info: ZZ SVMS 17662 D8270W

Calibration Date: 21-SEP-2012
Calibration Time: 18:27
Client Smp ID: LCS for HBN 482632
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	201484	100742	402968	188066	-6.66
34 Naphthalene-d8	894115	447058	1788230	878155	-1.79
63 Acenaphthene-d10	515108	257554	1030216	506446	-1.68
90 Phenanthrene-d10	924191	462096	1848382	925843	0.18
104 Chrysene-d12	1005497	502749	2010994	1018540	1.30
110 Perylene-d12	1050509	525255	2101018	1071383	1.99

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
14 1,4-Dichlorobenze	5.11	4.61	5.61	5.11	-0.00
34 Naphthalene-d8	6.31	5.81	6.81	6.30	-0.09
63 Acenaphthene-d10	8.04	7.54	8.54	8.04	-0.00
90 Phenanthrene-d10	9.53	9.03	10.03	9.53	-0.00
104 Chrysene-d12	12.20	11.70	12.70	12.20	-0.00
110 Perylene-d12	13.80	13.30	14.30	13.80	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1037611
Level: LOW
Data Type: MS DATA
SpikeList File: 3510-50-100.spk
Sublist File: 12_3510_3550all.sub
Method File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14-8
Misc Info: ZZ SVMS 17662 D8270W

Client SDG: 14120921A_8270.B
Fraction: SV
Client Smp ID: LCS for HBN 482632
Operator: DHF
SampleType: LCS
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 2-Fluorophenol	100.000	61.6326	61.63	20-75
$ 7 Phenol-d5	100.000	34.3455	34.35	13-49
$ 25 Nitrobenzene-d5	50.0000	45.0885	90.18	40-110
$ 51 2-Fluorobiphenyl	50.0000	44.0572	88.11	50-110
$ 82 2,4,6-Tribromophen	100.000	94.0449	94.04	40-125
$ 98 Terphenyl-d14	50.0000	49.5772	99.15	50-122

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1037611
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 17662 D8270W

Client SDG: 14120921A_8270.B
Client Smp ID: LCS for HBN 482632
Sample Point:
Date Received: 21-SEP-2012
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
123-91-1	1,4-Dioxane	26.5027	
62-75-9	N-Nitrosodimethylamine	36.2543	
110-86-1	Pyridine	35.1940	
55-18-5	N-Nitrosodiethylamine	48.4873	
100-52-7	Benzaldehyde	63.6298	
108-95-2	Phenol	37.8140	
62-53-3	Aniline	51.7111	
111-44-4	Bis(2-Chloroethyl)ether	51.7412	
95-57-8	2-Chlorophenol	99.9586	
124-18-5	n-Decane	26.9196	
541-73-1	1,3-Dichlorobenzene	39.9463	
106-46-7	1,4-Dichlorobenzene	38.6545	
100-51-6	Benzyl Alcohol	42.7718	
95-50-1	1,2-Dichlorobenzene	30.0850	
95-48-7	o-Cresol	91.7901	
108-60-1	bis(2-Chloroisopropyl)ether	50.8203	
108394/106445	mp-Cresol	81.6802	
930-55-2	N-Nitrosopyrrolidine	46.0528	
621-64-7	N-Nitrosodi-n-propylamine	52.9156	
98-86-2	Acetophenone	45.2552	
67-72-1	Hexachloroethane	38.4826	
98-95-3	Nitrobenzene	49.8822	
78-59-1	Isophorone	49.6613	
88-75-5	2-Nitrophenol	100.245	
105-67-9	2,4-Dimethylphenol	94.8137	
111-91-1	Bis(2-Chloroethoxy)methane	51.2379	
65-85-0	Benzoic acid	39.9376	
120-83-2	2,4-Dichlorophenol	97.2507	
120-82-1	1,2,4-Trichlorobenzene	39.7958	
10482-56-1	alpha-Terpineol	13.0752	
91-20-3	Naphthalene	49.3497	
106-47-8	4-Chloroaniline	49.3959	
87-65-0	2,6-Dichlorophenol	47.1872	
87-68-3	Hexachlorobutadiene	38.6515	
924-16-3	N-Nitrosodi-n-butylamine	44.5691	
105-60-2	Caprolactam	13.6744	
59-50-7	4-Chloro-3-methylphenol	97.2389	
91-57-6	2-Methylnaphthalene	43.7250	
90-12-0	1-Methylnaphthalene	45.3347	
77-47-4	Hexachlorocyclopentadiene	31.7056	
95-94-3	1,2,4,5-Tetrachlorobenzene	38.8577	
88-06-2	2,4,6-Trichlorophenol	99.7256	

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1037611
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 17662 D8270W

Client SDG: 14120921A_8270.B
Client Smp ID: LCS for HBN 482632
Sample Point:
Date Received: 21-SEP-2012
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
608-27-5	2,3-Dichloroaniline	43.4593	
95-95-4	2,4,5-Trichlorophenol	98.8387	
92-52-4	Biphenyl	42.2469	
91-58-7	2-Chloronaphthalene	46.0792	
88-74-4	2-Nitroaniline	56.5766	
100-25-4	1,4-Dinitrobenzene	49.5858	
131-11-3	Dimethylphthalate	48.7517	
99-65-0	1,3-Dinitrobenzene	49.4529	
606-20-2	2,6-Dinitrotoluene	53.5907	
528-29-0	1,2-Dinitrobenzene	53.8164	
208-96-8	Acenaphthylene	52.2117	
99-09-2	3-Nitroaniline	52.6796	
83-32-9	Acenaphthene	47.8046	
51-28-5	2,4-Dinitrophenol	93.1637	
100-02-7	4-Nitrophenol	46.7357	
608-93-5	Pentachlorobenzene	42.5856	
121-14-2	2,4-Dinitrotoluene	54.9306	
132-64-9	Dibenzofuran	49.4650	
935-95-5	2,3,5,6-Tetrachlorophenol	51.4010	
58-90-2	2,3,4,6-Tetrachlorophenol	93.9483	
91-59-8	2-Napthylamine	37.6216	
84-66-2	Diethylphthalate	49.9729	
7005-72-3	4-Chlorophenyl-phenylether	49.1272	
86-73-7	Fluorene	49.9502	
100-01-6	4-Nitroaniline	57.6210	
534-52-1	2-Methyl-4,6-dinitrophenol	98.1823	
86-30-6	N-Nitrosodiphenylamine	59.0063	
122-39-4	Diphenylamine	50.3836	
122-66-7	1,2-Diphenylhydrazine	51.9004	
103-33-3	Azobenzene	51.3866	
629-78-7	n-Heptadecane	43.7591	
101-55-3	4-Bromophenyl-phenylether	50.6424	
60-51-5	Dimethoate	47.7264	
118-74-1	Hexachlorobenzene	49.7174	
1912-24-9	Atrazine	48.0245	
593-45-3	n-Octadecane	45.2859	
87-86-5	Pentachlorophenol	113.434	
85-01-8	Phenanthrene	49.9920	
120-12-7	Anthracene	50.2376	
86-74-8	Carbazole	52.6878	
84-74-2	Di-n-Butylphthalate	51.3570	
206-44-0	Fluoranthene	51.6860	

ALS - Middletown

TARGET COMPOUNDS

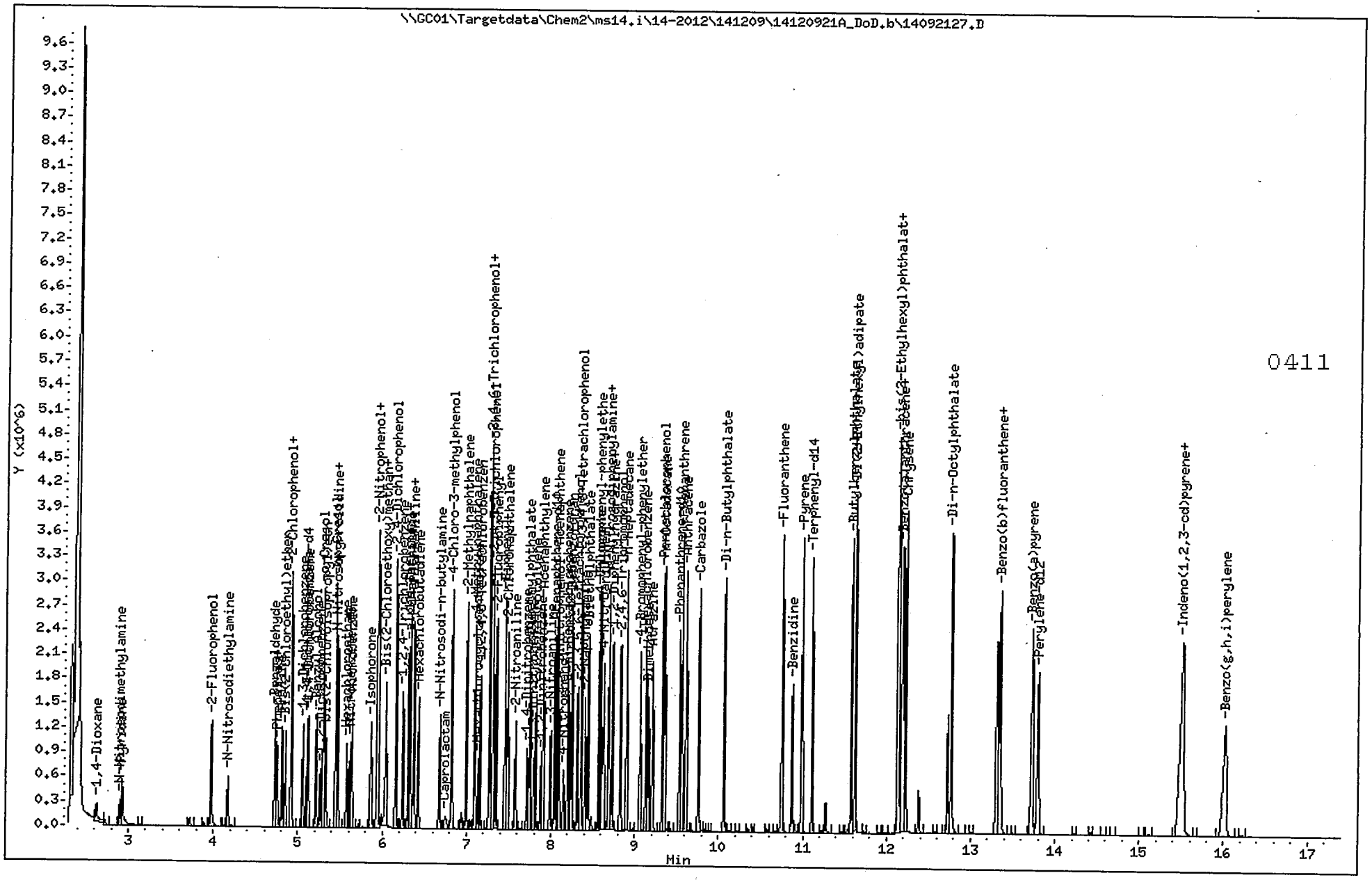
Client Name:
Lab Smp Id: 1037611
Sample Location:
Sample Date: 04-SEP-2007
Sample Matrix: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: ZZ SVMS 17662 D8270W

Client SDG: 14120921A_8270.B
Client Smp ID: LCS for HBN 482632
Sample Point:
Date Received: 21-SEP-2012
Quant Type: ISTD
Level: LOW
Operator: DHF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
92-87-5	Benzidine	57.8939	
129-00-0	Pyrene	51.2423	
85-68-7	Butylbenzylphthalate	57.4091	
103-23-1	Di(2-Ethylhexyl)adipate	55.1109	
117-81-7	bis(2-Ethylhexyl)phthalate	56.1392	
91-94-1	3,3-Dichlorobenzidine	85.2251	
56-55-3	Benzo(a)anthracene	50.7377	
218-01-9	Chrysene	51.2551	
117-84-0	Di-n-Octylphthalate	57.9883	
205-99-2	Benzo(b)fluoranthene	54.3655	
207-08-9	Benzo(k)fluoranthene	53.6700	
50-32-8	Benzo(a)pyrene	52.4421	
193-39-5	Indeno(1,2,3-cd)pyrene	52.9679	
53-70-3	Dibenzo(a,h)anthracene	52.1740	
191-24-2	Benzo(g,h,i)perylene	51.9237	
367-12-4	2-Fluorophenol	61.6326	
4165-62-2	Phenol-d5	34.3455	
4165-60-0	Nitrobenzene-d5	45.0885	
321-60-8	2-Fluorobiphenyl	44.0572	
118-79-6	2,4,6-Tribromophenol	94.0449	
98904-43-9	Terphenyl-d14	49.5772	

Data File: \\GC01\Targetdata\Chem2\ms14.i\14-2012\141209\14120921A_DoD.b\14092127.D
Date : 21-SEP-2012 21:50
Client ID: LCS for HBN 482632
Sample Info: 1037611;1;3;;LCS;1;1000;;1000;;
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: ms14.i
Operator: DHF
Column diameter: 0.25



Extraction Logbook

0412

Work continued from page:____

GENERAL ORGANIC EXTRACTION

EPA Method: 3510/8270	Surrogate Amount: 500ml	Steam Bath ID#: 117897 / 207290
Rule: 3510/8270 3510/8270 D3510/8270		Initial Temp. of Bath: 90°C / 91°C
HBN: 481923 481925 482632	Surrogate Lot #: ultraSeientific CJ-3038	Final Temp. of Bath: 89°C / 92°C
Extraction Apparatus Name: Floor Shaker	Tech: MDO	Thermometer ID#: TH-190 / TH-245
Extraction Apparatus ID#: 481700, 481701		

	Date	Time	Tech		Time On	Time Off	Total Hours	
Extraction:	09/18/12	12:05	SAS MJP LEH CAC MDO SHS	Soxhlet:				N-EVAP ID#:: 16584
				Acid:				Initial Temp.: 47°C
								Final Temp.: 46°C
Concentration:	9/21/12	6:50	SAP	Base:				Thermometer ID: TH-190

Line #	Sample #	pH (1)	Start/Stop Time (2)	Sample Amount	Final Volume	QC Spike lot#	QC Spike Amount	Cleanup Required	Cleanup Method	QC Type	Sample Specific Comments
1.)	1035577 / 1035581 1037610	1 1L	–	1000ml	1ml	–	–			MB	
2.)	1035578/1037611	1 1L	–	1000ml	1ml	OP17164 ①	1ml SA ①			LCS	
3.)	1035582	1 1L	–	1000ml	1ml	SV0239A SV0239B	1ml CAC 1ml CAC			LCS AB	
4.)	1035583	1 1L	–	1000ml	1ml	SV0239C	1ml CAC			LCS C	
5.)	9987849 004-E	1 1L	–	1060ml	1ml	–	–			–	App 9
6.)	9987642 001-J	1 1L	–	960ml	1ml	–	–			–	+
7.)	9988017 001-C	1 1L	–	960ml	1ml	–	–			–	
8.)	9987849 002-E	1 1L	–	1060ml	1ml	–	–			–	App 9
9.)	9987849 003-E	1 1L	–	1060ml	1ml	–	–			–	
10.)	9988202 001-E	1 1L	–	1060ml	1ml	–	–			–	
11.)	9987966 001-J	1 1L	–	960ml	1ml	–	–			–	
12.)	9987966 002-J	1 1L	–	970ml	1ml	–	–			–	
13.)	9988202 004-M	1 1L	–	1060ml	1ml	–	–			–	
14.)	1035579	1 1L	–	1060ml	1ml	OP17164 ①	1ml SAS ①			MS	9988202 004-N
15.)	1035580	1 1L	–	1060ml	1ml	OP17164 ①	1ml SA ①			MSD	9988202 004-O

Comments:

1.) Reagent 1:1 H2SO OP17146 10N NaOH OP17148
2.) Reagent: CH_2Cl_2 (4 BES) D6749, Na_2SO_4 OP17143
3.) Reagent: ① 500ml each NSI #062512-04, #071712-01, #050912-02, 9/18/12 SAP
4.)
5.)
6.) (1) pH adjustments for all extraction steps. (2) Start/Stop Time for SPE extractions.

Volume Aliquoted	I.S. Volume Added	I.S. ID#	Date	Time	Tech
200ml	4ml	Restek A087264	9/21/10	10:05	SAS

Approved by: SAP
Date Approved: 9/21/12
Revision 10/11

Page #: 25 Batched by: MJP

Reviewed by: MJP
Date Reviewed: 9/21/12

Work continued from page:____

Work continued to page:____

GENERAL ORGANIC EXTRACTION

EPA Method: —
Rule: Sm 6/25
HBN: —
Extraction Apparatus Name:
Extraction Apparatus ID#:

Surrogate Amount: —
Surrogate Lot #: Sm 6/25
Tech:

Steam Bath ID#: —
Initial Temp. of Bath: —
Final Temp. of Bath: Sm 6/25
Thermometer ID#: —

			Date	Time	Tech
Extraction:			—	—	Sm 6/25
Concentration:			—	—	—

	Time On	Time Off	Total Hours
Soxhlet:			
Acid:			
Base:			

N-EVAP ID#:: —
Initial Temp. : Sm 6/25
Final Temp. :
Thermometer ID:

Line #	Sample #	pH (1)	Start/Stop Time (2)	Sample Amount	Final Volume	QC Spike lot#	QC Spike Amount	Cleanup Required	Cleanup Method	QC Type	Sample Specific Comments
1.)	1035584	1 1	—	1060ml	1ml	SV0239A SV0239B	1ml CAC 1ml CAC			MS AD	9988202 004-P App 9
2.)	1035586	1 1	—	1060ml	1ml	SV0239A SV0239B	1ml CAC 1ml CAC			MSD AD	9988202 004-Q
3.)	1035585	1 1	—	1060ml	1ml	SV0239C	1ml CAC			MS C	9988202 004-R
4.)	1035587	1 1	—	1060ml	1ml	SV0239C	1ml CAC			MSD C	9988202 004-S
5.)	9988202 002-E	1 1	—	1060ml	1ml	—	—			—	
6.)	9988202 003-E	1 1	—	1060ml	1ml	—	—			—	
7.)	9988202 006-E	1 1	—	1060ml	1ml	—	—			—	
8.)	9986940 001-D	1	—	50mL	1ml	—	—			—	Tech
9.)											
10.)											
11.)											
12.)											
13.)											
14.)											
15.)											

STT 9/21/12

Comments:
1.) Reagent Sm 6/25
2.) Reagent:
3.) Reagent:
4.)
5.)
6.) (1) pH adjustments for all extraction steps. (2) Start/Stop Time for SPE extractions.

Volume Aliquoted	I.S. Volume Added	I.S. ID#	Date	Time	Tech
		Sm 6/25			

Approved by: STS
Date Approved: 9/21/12
Revision 10/11

Page #: 26 Batched by:____

Reviewed by: MSP
Date Reviewed: 9/21/12

Analytical Logbook

0415

Directory: C:\HPCHEM\1\DATA\14120921

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	14092101.d	1.	1000;1;3;;DFTPP;SV0235	ZZ SVMS DFTPPTUNEA	21 Sep 2012 10:39
2	2	14092102.d	1.	1800;1;2;5;BNA-50F;;;;;;SV0242	ZZ SVMS 8270/3510...	21 Sep 2012 11:04
3	3	14092103.d	1.	1800;1;2;5;AP9A-50B;;;;;;SV...	ZZ SVMS 8270/3510...	21 Sep 2012 11:29
4	4	14092104.d	1.	1800;1;2;5;AP9C-50B;;;;;;SV...	ZZ SVMS 8270/3510...	21 Sep 2012 11:54
5	5	14092105.d	1.	SOLV BLK;1;;;BNA-0;;;;;;SV0242	ZZ SVMS 8270/3510...	21 Sep 2012 12:31
6	6	14092106.d	1.	1234;1;1;1;BNA-1.5;;;;;;SV0242	ZZ SVMS 8270/3510...	21 Sep 2012 12:57
7	7	14092107.d	1.	1235;1;1;2;BNA-3.0;;;;;;SV0242	ZZ SVMS 8270/3510...	21 Sep 2012 13:23
8	8	14092108.d	1.	1236;1;1;3;BNA-8.0;;;;;;SV0242	ZZ SVMS 8270/3510...	21 Sep 2012 13:48
9	9	14092109.d	1.	1237;1;1;4;BNA-16;;;;;;SV0242	ZZ SVMS 8270/3510...	21 Sep 2012 14:13
10	10	14092110.d	1.	1238;1;1;5;BNA-50A;;;;;;SV0242	ZZ SVMS 8270/3510...	21 Sep 2012 14:39
11	11	14092111.d	1.	1239;1;1;6;BNA-70;;;;;;SV0242	ZZ SVMS 8270/3510...	21 Sep 2012 15:04
12	12	14092112.d	1.	1240;1;1;7;BNA-90;;;;;;SV0242	ZZ SVMS 8270/3510...	21 Sep 2012 15:29
13	13	14092113.d	1.	1241;1;1;8;BNA-120;;;;;;SV0242	ZZ SVMS 8270/3510...	21 Sep 2012 15:54
14	14	14092114.d	1.	2NDRTK;1;3;;LCS;1;;;;;SV0242	ZZ SVMS 8270/3510...	21 Sep 2012 16:20
15	15	14092115.d	1.	2NDSPK;1;3;;LCS;1;;;;;SV0242	ZZ SVMS 8270/3510...	21 Sep 2012 16:45
16	16	14092116.d	1.	2NDSRS;1;3;;LCS;1;;;;;SV0242	ZZ SVMS 8270/3510...	21 Sep 2012 17:11
17	17	14092117.d	1.	2NDAP9;1;3;;LCS;1;;;;;SV0242	ZZ SVMS 8270/3510...	21 Sep 2012 17:37
18	1	14092118.d	1.	1000;1;3;;DFTPP;SV0235	ZZ SVMS DFTPPTUNEA	21 Sep 2012 18:02
19	2	14092119.d	1.	1800;1;2;5;BNA-50F;;;;;;SV0242	ZZ SVMS 8270/3510...	21 Sep 2012 18:27
20	3	14092120.d	1.	1800;1;2;5;AP9A-50B;;;;;;SV...	ZZ SVMS 8270/3510...	21 Sep 2012 18:52
21	4	14092121.d	1.	1800;1;2;5;AP9C-50B;;;;;;SV...	ZZ SVMS 8270/3510...	21 Sep 2012 19:17
22	18	14092122.d	1.	1035069/70;1;3;;MB;;1000;;1...	EXTR 28546	21 Sep 2012 19:42
23	19	14092123.d	1.	1035071;1;3;;LCS;1;1000;;10...	EXTR 28546 8270	21 Sep 2012 20:08
24	20	14092124.d	1.	1035072;1;3;;LCS;1;1000;;10...	EXTR 28546 AP9A	21 Sep 2012 20:34
25	21	14092125.d	1.	1035073;1;3;;LCS;1;1000;;10...	EXTR 28546 AP9C	21 Sep 2012 21:00
26	22	14092126.d	1.	1035577/81/1037610;1;3;;MB;...	EXTR 28554/55	21 Sep 2012 21:25
27	23	14092127.d	1.	1035578/1037611;1;3;;LCS;1;...	EXTR 28554 8270	21 Sep 2012 21:50
28	24	14092128.d	1.	1035082;1;3;;LCS;1;1000;;10...	EXTR 28554/55 AP9A	21 Sep 2012 22:17
29	25	14092129.d	1.	1035083;1;3;;LCS;1;1000;;10...	EXTR 28554/55 AP9C	21 Sep 2012 22:43
30	1	14092130.d	1.	1000;1;3;;DFTPP;SV0235	ZZ SVMS DFTPPTUNEA	21 Sep 2012 23:09
31	2	14092131.d	1.	1800;1;2;5;BNA-50F;;;;;;SV0242	ZZ SVMS 8270/3510...	21 Sep 2012 23:35
32	3	14092132.d	1.	1800;1;2;5;AP9A-50B;;;;;;SV...	ZZ SVMS 8270/3510...	22 Sep 2012 00:02
33	4	14092133.d	1.	1800;1;2;5;AP9C-50B;;;;;;SV...	ZZ SVMS 8270/3510...	22 Sep 2012 00:28
34	26	14092134.d	1.	9987849002;1;;;;1060;;1000;;	EXTR 28554/55 FAI...	22 Sep 2012 00:54
35	27	14092135.d	1.	9987849003;1;;;;1060;;1000;;	EXTR 28554/55 FAI...	22 Sep 2012 01:21
36	28	14092136.d	1.	9987849004;1;;;;1060;;1000;;	EXTR 28554/55 FAI...	22 Sep 2012 01:48
37	29	14092137.d	1.	9988202001;1;;;;1060;;1000;;	EXTR 28554/55 FAI...	22 Sep 2012 02:15
38	30	14092138.d	1.	9988202002;1;;;;1060;;1000;;	EXTR 28554/55 FAI...	22 Sep 2012 02:41
39	31	14092139.d	1.	9988202003;1;;;;1060;;1000;;	EXTR 28554/55 FAI...	22 Sep 2012 03:08
40	32	14092140.d	1.	9988202004;1;;;;1060;;1000;;	EXTR 28554/55 FAI...	22 Sep 2012 03:34
41	33	14092141.d	1.	1035579;1;3;;MS;1;1060;;1000;;	EXTR 28554 8270	22 Sep 2012 04:00
42	34	14092142.d	1.	1035580;1;3;;MSD;1;1060;;10...	EXTR 28554 8270	22 Sep 2012 04:26
43	35	14092143.d	1.	1035584;1;3;;MS;1;1060;;1000;;	EXTR 28554/55 AP9A	22 Sep 2012 04:52
44	36	14092144.d	1.	1035586;1;3;;MSD;1;1060;;10...	EXTR 28554/55 AP9A C	22 Sep 2012 05:19
45	37	14092145.d	1.	1035585;1;3;;MS;1;1060;;1000;;	EXTR 28554/55 AP9A	22 Sep 2012 05:45
46	38	14092146.d	1.	1035587;1;3;;MSD;1;1060;;10...	EXTR 28554/55 AP9C	22 Sep 2012 06:10
47	39	14092147.d	1.	9988202006;1;;;;1060;;1000;;	EXTR 28554/55 FAI...	22 Sep 2012 06:35
48	40	14092148.d	1.	9987330001;1;;;;1010;;1000;;	EXTR 28546 SHAW	22 Sep 2012 07:02
49	41	14092149.d	1.	9987333001;1;;;;950;;1000;;	EXTR 28546 SHAW	22 Sep 2012 07:29
50	42	14092150.d	1.	9987643001;1;;;;1020;;1000;;	EXTR 28546 SHAW	22 Sep 2012 07:54
51	43	14092151.d	1.	9987642001;1;;;;960;;1000;;	EXTR 28554/55 SHAW	22 Sep 2012 08:20
52	44	14092152.d	1.	9987966001;1;;;;960;;1000;;	EXTR 28554/55 SHAW	22 Sep 2012 08:46
53	45	14092153.d	1.	9987966002;1;;;;970;;1000;;	EXTR 28554/55 SHAW	22 Sep 2012 09:13
54	46	14092154.d	1.	9986940001;1;;;;50;;1000;;	EXTR 28554 DOD TCLP	22 Sep 2012 09:38
55	47	14092155.d	1.	9988617001;1;;;;960;;1000;;	EXTR 28554 CAST	22 Sep 2012 10:04

103769
1035577, 1035578 - 8270/3510
1035581, 1035070 - APNA, C
1037610, 1037611 - DoD

Page 1

23 Sep 2012 12:23

TCLP Pesticides by 1311/8081A Summary Forms

FORM 2
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

	SAMPLE NO.	S1 (DCB)#	S2 (TCX)#	S3 #	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	ICV	101	112							0
02	1033731LCS	85	72							0
03	FTSW-IDW-02	30	70							0
04	1033730	89	77							0
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
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22										
23										
24										
25										
26										
27										
28										
29										
30										

	QC LIMITS	
S1 (DCB) = Decachlorobiphenyl	(30-135)	(advisory)
S2 (TCX) = Tetrachloro-m-xylene	(25-140)	

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

FORM 3
WATER SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
alpha-Chlordane	0.50000	0.00	0.47526	95	85-115
gamma-Chlordane	0.50000	0.00	0.46547	93	85-115
gamma-BHC	0.50000	0.00	0.45790	92	85-115
Endrin	0.50000	0.00	0.42523	85	85-115
Heptachlor	0.50000	0.00	0.47832	96	85-115
Heptachlor Epoxide	0.50000	0.00	0.48729	97	85-115
Methoxychlor	0.50000	0.00	0.46974	94	85-115

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 7 outside limits

COMMENTS: RTXCLPEST2

FORM 3
WATER SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Matrix Spike - DC WASA (ot Sample No.: 1033731LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
alpha-Chlordane	0.50000	0.00	0.38195	76	65-125
gamma-Chlordane	0.50000	0.00	0.36327	73	60-125
gamma-BHC	0.50000	0.00	0.38328	77	25-135
Endrin	0.50000	0.00	0.34233	68	55-135
Heptachlor	0.50000	0.00	0.34010	68	40-130
Heptachlor Epoxide	0.50000	0.00	0.39732	79	60-130
Methoxychlor	0.50000	0.00	0.37842	76	55-150

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 7 outside limits

COMMENTS: RTXCLPEST2

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

1033730

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Lab File ID: RIDB032A Lab Sample ID: 1033730

Instrument ID: GC14 Date Extracted: 09/13/12

Matrix: (soil/water) WATER Date Analyzed: 09/14/12

Level: (low/med) LOW Time Analyzed: 0405

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	1033731LCS	1033731	RIDB013A	09/13/12
02	FTSW-IDW-02	9986940001	RIDB025	09/14/12
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

FORM IV SV

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

GC Column: RTXCLPEST2 ID: 0.32(mm) Init. Calib. Date(s): 09/13/12 09/13/12

Instrument ID: GC14

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
TCX: 4.11 DCB: 14.92

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	DEGRAD	DEGRAD	09/13/12	1208		
02	ICAL1	ICAL1	09/13/12	1744	4.11	14.93
03	ICAL2	ICAL2	09/13/12	1806	4.11	14.92
04	ICAL3	ICAL3	09/13/12	1827	4.11	14.92
05	ICAL4	ICAL4	09/13/12	1849	4.11	14.92
06	ICAL5	ICAL5	09/13/12	1910	4.10	14.92
07	ICAL6	ICAL6	09/13/12	1931	4.10	14.92
08	ICAL7	ICAL7	09/13/12	1953	4.10	14.92
09	ICV	ICV	09/13/12	2014	4.10	14.91
10	1033731LCS	1033731	09/13/12	2118	4.10	14.92
11	FTSW-IDW-02	9986940001	09/14/12	0135	4.10	14.91
12	1033730	1033730	09/14/12	0405	4.10	14.91
13	TOX	TOX	09/14/12	0509		
14	CHLOR	CHLOR	09/14/12	0530		
15	CCV	CCV	09/14/12	0551	4.10	14.91
16	CCV	CCV	09/14/12	0613	4.10	14.91
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
TCX = Tetrachloro-m-xylene (+/- 0.03 MINUTES)
DCB = DECACHLOROBIPHENYL (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

0422

TCLP Pesticides by 1311/8081A Raw Data

Sample Raw Data

FORM 1 ERT Earth Resources SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FTSW-IDW-02

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Matrix: (soil/water) WATER Lab Sample ID: 9986940001

Sample wt/vol: 50.00 (g/ml) ML Lab File ID: RIDB025

Level: (low/med) LOW Date Received: 09/07/12

% Moisture: _____ Decanted: (Y/N)___ Date Extracted: 09/13/12

Concentrated Extract Volume: 5000(uL) Date Analyzed: 09/14/12

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
58-89-9	gamma-BHC	1.7	U
57-74-9	Chlordane	5.0	U
72-20-8	Endrin	1.7	U
76-44-8	Heptachlor	1.7	U
1024-57-3	Heptachlor Epoxide	1.7	U
72-43-5	Methoxychlor	1.7	U
8001-35-2	Toxaphene	5.0	U

ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB025.d
Lab Smp Id: 9986940001 Client Smp ID: FTSW-IDW-02
Inj Date : 14-SEP-2012 01:35
Operator : KJH Inst ID: gc14.i
Smp Info : 9986940001;50
Misc Info : ZZ SVGC 28222 D8081TCLP
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:53 Cal File: RIDB009.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: DoD.sub
Target Version: 4.12
Processing Host: WGC004

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)(1000 low, 2
Vo	50.000	VOLUME INITIAL (mL)
Vi	1.000	Volume injected (uL)
DF	1.000	DILUTION FACTOR
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
$ 1 Tetrachloro-m-xylene	4.100	4.098	0.002	1209452	0.17552	17.5523
2 alpha-BHC	Compound Not Detected.					
3 gamma-BHC	Compound Not Detected.					
4 beta-BHC	Compound Not Detected.					
5 delta-BHC	Compound Not Detected.					
6 Heptachlor	Compound Not Detected.					
15 Chlordane	Compound Not Detected.					
8 Aldrin	Compound Not Detected.					
9 Heptachlor Epoxide	Compound Not Detected.					
10 gamma-Chlordane	Compound Not Detected.					
12 alpha-Chlordane	Compound Not Detected.					
13 4,4'-DDE	Compound Not Detected.					
14 Endosulfan I	Compound Not Detected.					
16 Dieldrin	Compound Not Detected.					
17 Endrin	Compound Not Detected.					
18 4,4'-DDD	Compound Not Detected.					
19 Endosulfan II	Compound Not Detected.					
20 4,4'-DDT	Compound Not Detected.					
21 Endrin Aldehyde	Compound Not Detected.					
22 Methoxychlor	Compound Not Detected.					

9/14/12
9/14/12
9/14/12

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
11 Toxaphene	Compound Not Detected.					
24 Endosulfan Sulfate	Compound Not Detected.					
25 Endrin Ketone	Compound Not Detected.					
$ 33 Decachlorobiphenyl	14.911	14.908	0.003	490548	0.07610	7.6099

ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Client SDG: ERT009|Ft. Stewart
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: 9986940001
Client Smp ID: FTSW-IDW-02
Level: LOW
Operator: KJH
Data Type: GC MULTI COMP
SampleType: SAMPLE
SpikeList File: 3510waters.spk
Quant Type: ESTD
Sublist File: DoD.sub
Method File: \\GC01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m
Misc Info: ZZ SVGC 28222 D8081TCLP

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 Tetrachloro-m-xyle	25.0000	17.5523	70.21	25-140
$ 33 Decachlorobiphenyl	25.0000	7.6099	30.44	30-135

ALS - Middletown

TARGET COMPOUNDS

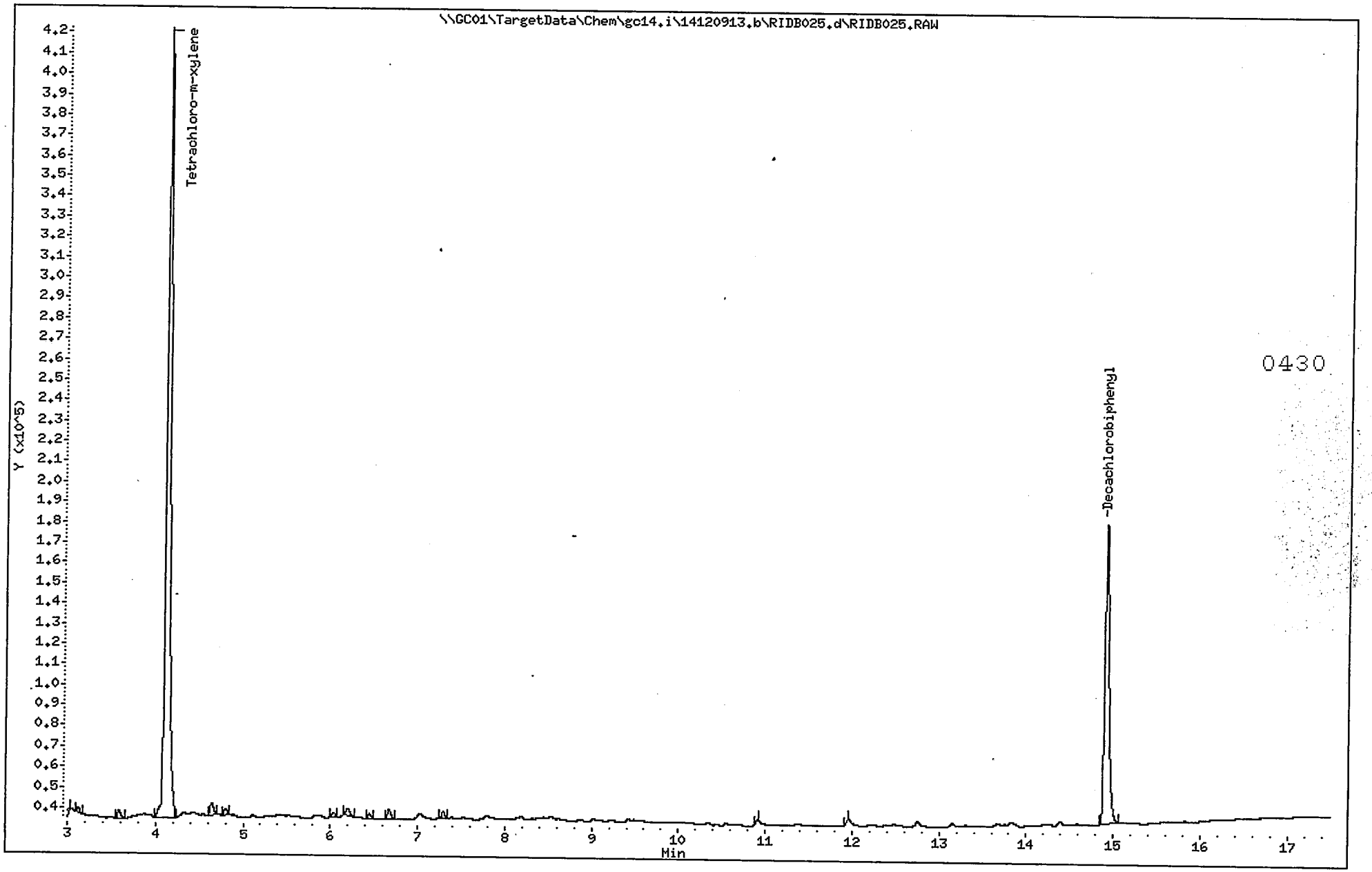
Client Name: ERT Earth Resources
Lab Smp Id: 9986940001
Sample Location:
Sample Date: 06-SEP-2012
Sample Matrix: WATER
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info: ZZ SVGC 28222 D8081TCLP

Client SDG: ERT009|Ft. Stewart
Client Smp ID: FTSW-IDW-02
Sample Point:
Date Received: 07-SEP-2012
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
877-09-8	Tetrachloro-m-xylene	17.5523	
2051-24-3	Decachlorobiphenyl	7.6099	

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB025.d
Date : 14-SEP-2012 01:35
Client ID: FTSW-IDW-02
Sample Info: 9986940001;50
Volume Injected (uL): 1.0
Column phase: RTXCLPEST2

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA025.d
Lab Smp Id: 9986940001 Client Smp ID: FTSW-IDW-02
Inj Date : 14-SEP-2012 01:35
Operator : KJH Inst ID: gc14.i
Smp Info : 9986940001;50
Misc Info : ZZ SVGC 28222 D8081TCLP
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:53 Cal File: RIDA009.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: DoD.sub
Target Version: 4.12
Processing Host: WGC004

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)(1000 low, 2
Vo	50.000	VOLUME INITIAL (mL)
Vi	1.000	Volume injected (uL)
DF	1.000	DILUTION FACTOR
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
$ 1 Tetrachloro-m-xylene	4.056	4.056	0.000	903315	0.16965	16.9655
2 alpha-BHC	4.846	4.866	-0.020	962	0.00271	0.27073(a)
3 gamma-BHC	Compound Not Detected.					
4 beta-BHC	Compound Not Detected.					
5 delta-BHC	Compound Not Detected.					
6 Heptachlor	6.143	6.150	-0.007	9887	0.00273	0.27262(a)
15 Chlordane	Compound Not Detected.					
8 Aldrin	Compound Not Detected.					
9 Heptachlor Epoxide	Compound Not Detected.					
10 gamma-Chlordane	Compound Not Detected.					
12 alpha-Chlordane	Compound Not Detected.					
13 4,4'-DDE	Compound Not Detected.					
14 Endosulfan I	Compound Not Detected.					
16 Dieldrin	Compound Not Detected.					
17 Endrin	Compound Not Detected.					
18 4,4'-DDD	9.530	9.535	-0.005	2156	0.00285	0.28530(a)
19 Endosulfan II	9.758	9.783	-0.025	5113	0.00253	0.25338(a)
20 4,4'-DDT	Compound Not Detected.					
21 Endrin Aldehyde	10.571	10.591	-0.020	8663	0.00168	0.16801(a)
22 Methoxychlor	Compound Not Detected.					

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	11 Toxaphene	Compound Not Detected.					
	24 Endosulfan Sulfate	Compound Not Detected.					
	25 Endrin Ketone	11.986	11.986	0.000	8753	0.00134	0.13426(a)
$	33 Decachlorobiphenyl	14.053	14.051	0.002	463316	0.07289	7.2892(R)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

ALS - Middletown

RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: LIQUID
Lab Smp Id: 9986940001
Level: LOW
Data Type: GC MULTI COMP
SpikeList File: 3510waters.spk
Sublist File: DoD.sub
Client SDG: ERT009|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-IDW-02
Operator: KJH
SampleType: SAMPLE
Quant Type: ESTD
Method File: \\GC01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m
Misc Info: ZZ SVGC 28222 D8081TCLP

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 Tetrachloro-m-xyle	25.0000	16.9655	67.86	25-140
$ 33 Decachlorobiphenyl	25.0000	7.2892	29.16*	30-135

ALS - Middletown

TARGET COMPOUNDS

Client Name: ERT Earth Resources
Lab Smp Id: 9986940001
Sample Location:
Sample Date: 06-SEP-2012
Sample Matrix: WATER
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info: ZZ SVGC 28222 D8081TCLP

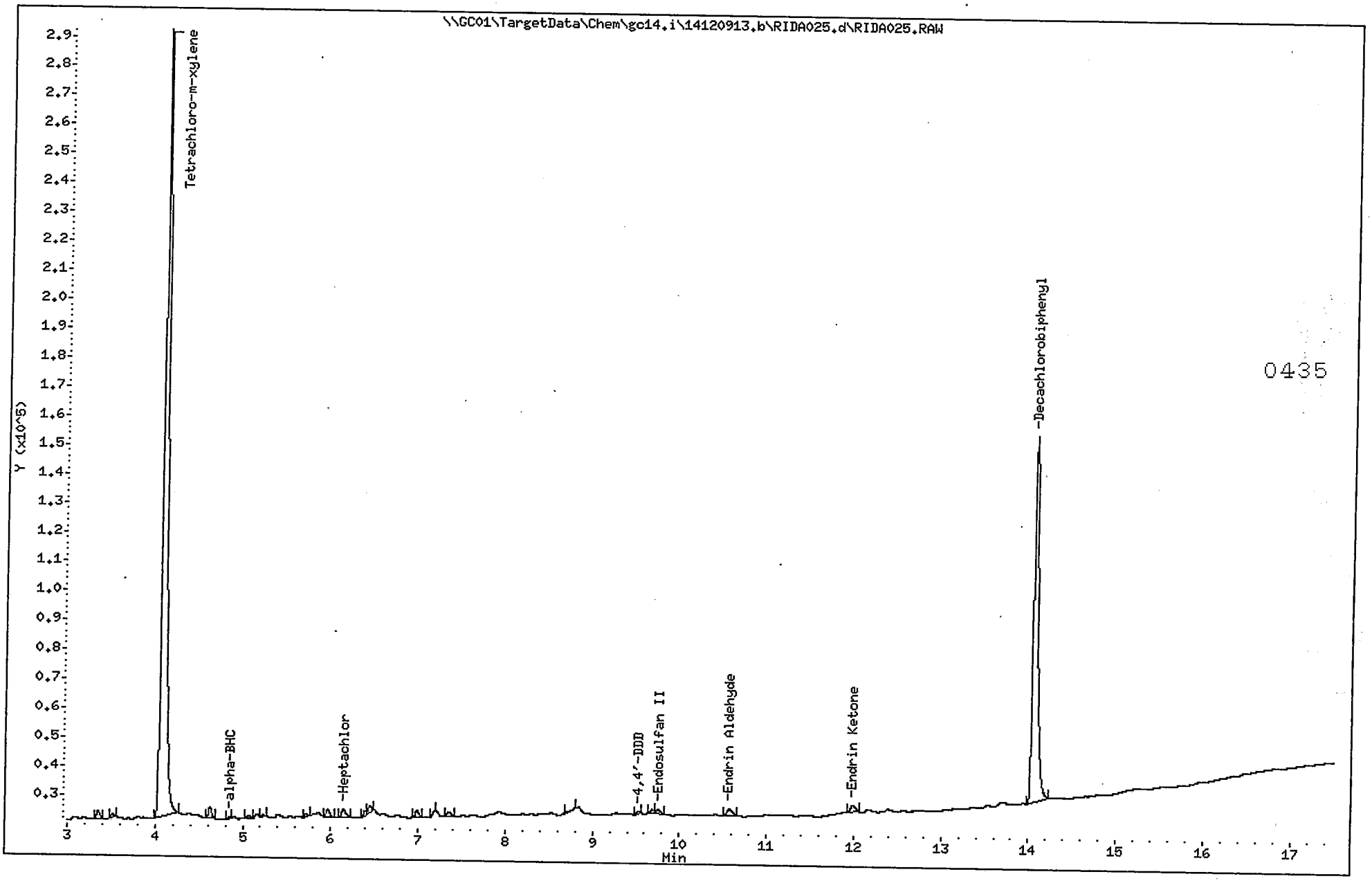
Client SDG: ERT009|Ft. Stewart
Client Smp ID: FTSW-IDW-02
Sample Point:
Date Received: 07-SEP-2012
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
319-84-6	alpha-BHC	0.27073	J
76-44-8	Heptachlor	0.27262	J
72-54-8	4,4'-DDD	0.28530	J
33213-65-9	Endosulfan II	0.25338	J
7421-93-4	Endrin Aldehyde	0.16801	J
53494-70-5	Endrin Ketone	0.13426	J
877-09-8	Tetrachloro-m-xylene	16.9655	
2051-24-3	Decachlorobiphenyl	7.2892	

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA025.d
Date : 14-SEP-2012 01:35
Client ID: FTSW-IDW-02
Sample Info: 9986940001;50
Volume Injected (uL): 1.0
Column phase: RTXCLPEST

Instrument: gc14.i

Operator: KJH
Column diameter: 0.32



Standards Raw Data

Initial Calibrations

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Instrument ID: GC14 Calibration Date(s): 09/13/12 09/13/12

Column: RTXCLPEST2 ID: 0.32 (mm) Calibration Time(s): 1744 1953

LAB FILE ID: RT1: RIDB003 RT2: RIDB004 RT3: RIDB005
RT4: RIDB006 RT5: RIDB007 RT6: RIDB008

COMPOUND	RT1	RT2	RT3	RT4	RT5	RT6
alpha-BHC	5.000	5.000	5.000	5.000	4.993	5.000
beta-BHC	5.740	5.740	5.740	5.740	5.730	5.740
delta-BHC	6.240	6.240	6.230	6.230	6.223	6.230
gamma-BHC	5.580	5.580	5.580	5.580	5.565	5.570
Heptachlor	6.320	6.310	6.310	6.310	6.298	6.310
Aldrin	6.880	6.870	6.870	6.870	6.862	6.870
Heptachlor epoxide	7.920	7.910	7.910	7.910	7.898	7.910
Endosulfan I	8.640	8.640	8.640	8.640	8.623	8.630
Dieldrin	9.160	9.160	9.150	9.150	9.140	9.150
4,4'-DDE	8.890	8.890	8.890	8.890	8.882	8.890
Endrin	9.740	9.730	9.730	9.730	9.717	9.730
Endosulfan II	10.160	10.160	10.160	10.150	10.142	10.150
4,4'-DDD	10.010	10.010	10.010	10.010	10.000	10.010
Endosulfan sulfate	11.370	11.360	11.360	11.360	11.348	11.360
4,4'-DDT	10.610	10.610	10.610	10.610	10.597	10.610
Methoxychlor	11.900	11.990	11.990	11.990	11.978	11.990
Endrin ketone	12.410	12.410	12.410	12.410	12.390	12.400
Endrin aldehyde	10.820	10.820	10.820	10.820	10.802	10.810
alpha-Chlordane	8.540	8.540	8.540	8.540	8.527	8.540
gamma-Chlordane	8.270	8.270	8.270	8.270	8.257	8.270
Mirex	12.310	12.310	12.310	12.310	12.292	12.300
Tetrachloro-m-xylene	4.110	4.110	4.110	4.110	4.098	4.100
DECACHLOROBIPHENYL	14.930	14.920	14.920	14.920	14.908	14.920

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Instrument ID: GC14 Calibration Date(s): 09/13/12 09/13/12

Column: RTXCLPEST2 ID: 0.32 (mm) Calibration Time(s): 1744 1953

RT7: RIDB009

COMPOUND	RT7	MEAN RT	RT WINDOW FROM	RT WINDOW TO
alpha-BHC	5.000	4.999	4.963	5.023
beta-BHC	5.730	5.737	5.715	5.745
delta-BHC	6.230	6.232	6.208	6.238
gamma-BHC	5.570	5.575	5.538	5.592
Heptachlor	6.310	6.310	6.283	6.313
Aldrin	6.870	6.870	6.847	6.877
Heptachlor epoxide	7.910	7.910	7.871	7.925
Endosulfan I	8.630	8.635	8.596	8.650
Dieldrin	9.150	9.151	9.125	9.155
4,4'-DDE	8.890	8.889	8.867	8.897
Endrin	9.730	9.729	9.693	9.741
Endosulfan II	10.150	10.153	10.115	10.169
4,4'-DDD	10.010	10.009	9.985	10.015
Endosulfan sulfate	11.360	11.360	11.333	11.363
4,4'-DDT	10.610	10.608	10.582	10.612
Methoxychlor	11.990	11.975	11.963	11.993
Endrin ketone	12.400	12.404	12.375	12.405
Endrin aldehyde	10.810	10.815	10.787	10.817
alpha-Chlordane	8.540	8.538	8.512	8.542
gamma-Chlordane	8.270	8.268	8.233	8.281
Mirex	12.300	12.305	12.265	12.319
Tetrachloro-m-xylene	4.100	4.106	4.068	4.128
DECACHLOROBIPHENYL	14.920	14.920	14.893	14.923

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Instrument ID: GC14 Calibration Date(s): 09/13/12 09/13/12

Column: RTXCLPEST2 ID: 0.32 (mm) Calibration Time(s): 1744 1953

LAB FILE ID: RF0.002: RIDB003 RF0.005: RIDB004 RF0.01: RIDB005
RF0.02: RIDB006 RF0.05: RIDB007 RF0.1: RIDB008

COMPOUND	RF0.002	RF0.005	RF0.01	RF0.02	RF0.05	RF0.1
alpha-BHC	11350	38596	86997	187444	561949	1136341
beta-BHC	5784	23552	51748	105660	289126	557062
delta-BHC	9960	31227	69300	149848	456855	926425
gamma-BHC	10767	37787	83815	179603	518034	1029055
Heptachlor	11307	41252	86494	178359	487383	961176
Aldrin	9556	36148	76575	158307	445523	882554
Heptachlor epoxide	9667	37910	79087	158362	421652	753558
Endosulfan I	9362	35027	72787	148314	404531	788384
Dieldrin	9252	34026	70312	145114	400447	796902
4,4'-DDE	8838	30644	66428	139252	399281	815434
Endrin	6343	24822	59633	108746	342530	659512
Endosulfan II	7344	29236	59977	123061	327327	636827
4,4'-DDD	6636	29052	57977	119254	320620	642135
Endosulfan sulfate	8794	30033	62184	127812	342044	668948
4,4'-DDT	3924	8580	31848	78214	268266	577369
Methoxychlor	17127	12919	27546	54576	160862	326490
Endrin ketone	11342	33754	70212	158330	422306	834079
Endrin aldehyde	7895	27587	55258	113873	298914	601455
alpha-Chlordane	11566	41066	83321	167410	443827	856401
gamma-Chlordane	10415	40968	83482	167929	456630	893020
Mirex	11512	35563	70666	137215	334687	612790
Tetrachloro-m-xylene	20315	67390	145472	290998	764548	1432893
DECACHLOROBIPHENYL	5544250.0	8124300.0	6817850.0	6694950.0	6461430.0	5922235.0

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Instrument ID: GC14 Calibration Date(s): 09/13/12 09/13/12

Column: RTXCLPEST2 ID: 0.32 (mm) Calibration Time(s): 1744 1953

RF0.2: RIDB009

COMPOUND	RF0.2	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
alpha-BHC	2283568	LINR	2.e-003	11544934.1		0.9998391	0.9900000
beta-BHC	1066697	LINR	-4.68e-004	5379828.45		0.9990672	0.9900000
delta-BHC	1840611	LINR	1.883e-003	9320695.07		0.9997334	0.9900000
gamma-BHC	2023492	LINR	1.049e-003	10226414.8		0.9997010	0.9900000
Heptachlor	1892263	LINR	4.27e-004	9526386.42		0.9997999	0.9900000
Aldrin	1734913	LINR	6.97e-004	8750044.40		0.9997491	0.9900000
Heptachlor epoxide	1574198	LINR	-7.83e-005	7829822.88		0.9990306	0.9900000
Endosulfan I	1559163	LINR	2.9e-004	7838453.43		0.9998065	0.9900000
Dieldrin	1560285	LINR	4.994e-004	7865198.13		0.9997434	0.9900000
4,4'-DDE	1602524	LINR	1.295e-003	8102992.65		0.9997585	0.9900000
Endrin	1330213	LINR	1.331e-003	6703542.41		0.9996161	0.9900000
Endosulfan II	1241651	LINR	-2.08e-004	6243707.18		0.9996250	0.9900000
4,4'-DDD	1250084	LINR	2.755e-004	6299504.27		0.9997072	0.9900000
Endosulfan sulfate	1312398	LINR	2.736e-005	6598131.27		0.9997513	0.9900000
4,4'-DDT	1205523	LINR	4.654e-003	6133145.62		0.9992352	0.9900000
Methoxychlor	636960	LINR	6.568e-005	3198839.13		0.9991211	0.9900000
Endrin ketone	1595075	LINR	-1.35e-004	8055563.70		0.9992096	0.9900000
Endrin aldehyde	1143078	LINR	-4.1e-004	5766209.05		0.9992247	0.9900000
alpha-Chlordane	1639123	LINR	-9.05e-004	8244132.05		0.9991826	0.9900000
gamma-Chlordane	1723819	LINR	-2.65e-004	8682500.47		0.9994376	0.9900000
Mirex	1140707	2ORDR	3495.71585	6671025.76	-4959870.6	0.9998001	0.9900000
Tetrachloro-m-xylene	2679657	LINR	-3.89e-003	6741082.83		0.9980170	0.9900000
DECACHLOROBIPHENYL	5558080.0	AVRG		6446156.43		14.009	20.000

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8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB003.d
Lab Smp Id: ICAL1
Inj Date : 13-SEP-2012 17:44
Operator : KJH Inst ID: gc14.i
Smp Info : ICAL1;;;1;1
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 17:44 Cal File: RIDB003.d
Als bottle: 14 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Calibration.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
$ 1 Tetrachloro-m-xylene	4.106	4.098	0.008	20315	0.00400	(a)
2 alpha-BHC	5.003	4.993	0.010	11350	0.00200	0.0029833 (a)
3 gamma-BHC	5.578	5.565	0.013	10767	0.00200	0.0021015 (a)
4 beta-BHC	5.743	5.730	0.013	5784	0.00200	0.00060683 (a)
5 delta-BHC	6.235	6.223	0.012	9960	0.00200	0.0029520 (a)
6 Heptachlor	6.315	6.298	0.017	11307	0.00200	0.0016140 (a)
8 Aldrin	6.876	6.861	0.015	9556	0.00200	0.0017891 (a)
9 Heptachlor epoxide	7.916	7.898	0.018	9667	0.00200	0.0011563 (a)
10 gamma-Chlordane	8.273	8.256	0.017	10415	0.00200	0.00093406 (a)
14 Endosulfan I	8.641	8.623	0.018	9362	0.00200	0.0014844 (a)
13 4,4'-DDE	8.895	8.881	0.014	8838	0.00200	0.0023858 (a)
16 Dieldrin	9.158	9.140	0.018	9252	0.00200	0.0016757 (a)
17 Endrin	9.735	9.716	0.019	6343	0.00200	0.0022775 (a)
18 4,4'-DDD	10.013	10.000	0.013	6636	0.00200	0.0013290 (a)
19 Endosulfan II	10.160	10.141	0.019	7344	0.00200	0.00096782 (a)
20 4,4'-DDT	10.613	10.596	0.017	3924	0.00200	0.0052937 (aM)
21 Endrin aldehyde	10.818	10.801	0.017	7895	0.00200	0.00095948 (a)
24 Endosulfan sulfate	11.365	11.348	0.017	8794	0.00200	0.0013602 (a)
22 Methoxychlor	11.900	11.978	-0.078	17127	0.00200	0.0054198 (aM)
23 Mirex	12.311	12.291	0.020	11512	0.00200	0.0012027 (a)
25 Endrin ketone	12.408	12.390	0.018	11342	0.00200	0.0012733 (a)

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
$ 33 DECACHLOROBIPHENYL	14.928	14.908	0.020	22177	0.00400	0.0034403 (a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: ICAL1
Sample Location:
Sample Date:
Sample Matrix: SOIL
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info:

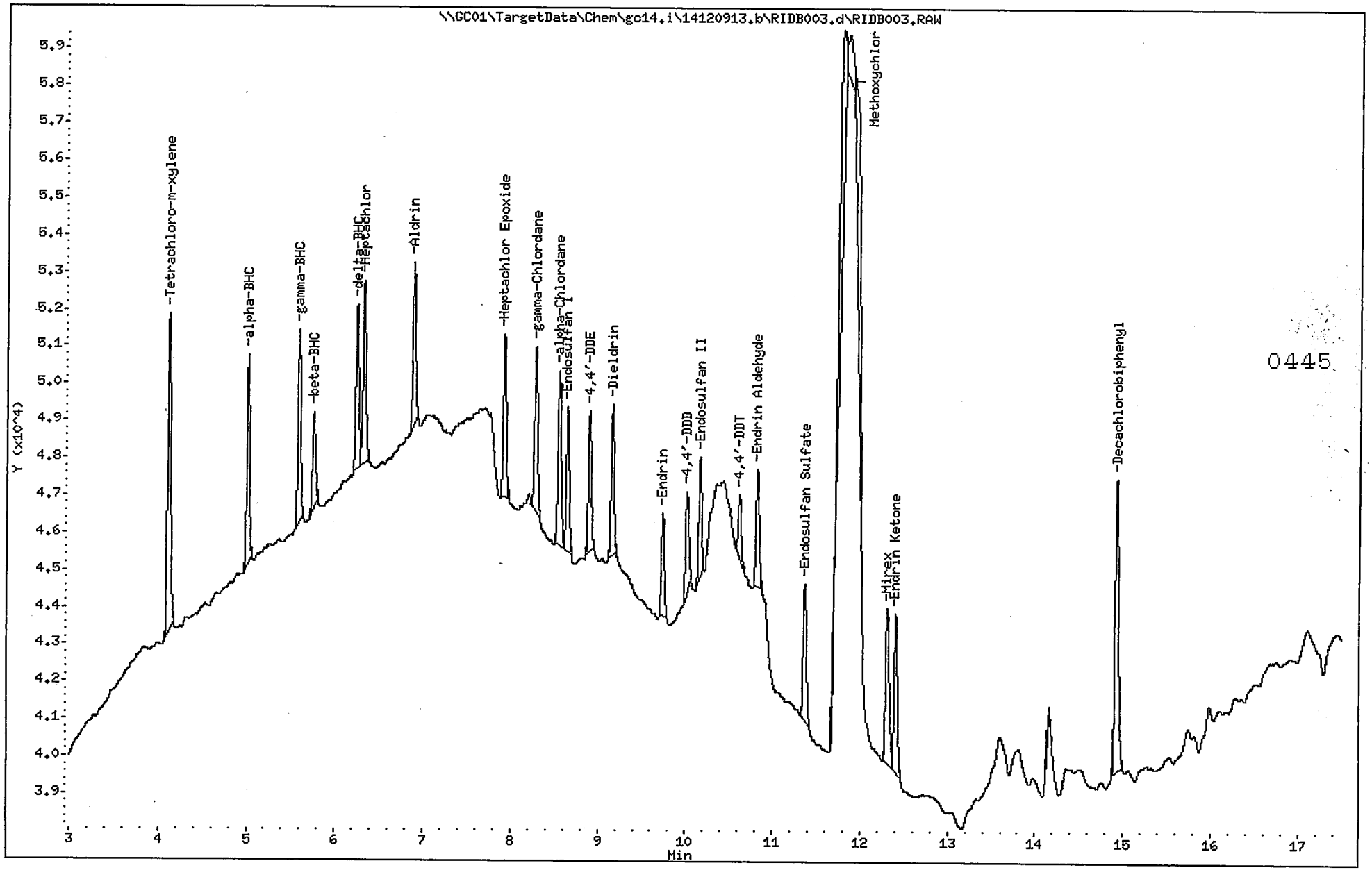
Client SDG: 14120913.b

Sample Point:
Date Received: 11-JAN-2008
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/kg	Q
319-84-6	alpha-BHC	0.0029833	J
58-89-9	gamma-BHC	0.0021015	J
319-85-7	beta-BHC	0.00060683	J
319-86-8	delta-BHC	0.0029520	J
76-44-8	Heptachlor	0.0016140	J
309-00-2	Aldrin	0.0017891	J
1024-57-3	Heptachlor epoxide	0.0011563	J
5103-74-2	gamma-Chlordane	0.00093406	J
5103-71-9	alpha-Chlordane	0.00049779	J
959-98-8	Endosulfan I	0.0014844	J
72-55-9	4,4'-DDE	0.0023858	J
60-57-1	Dieldrin	0.0016757	J
72-20-8	Endrin	0.0022775	J
72-54-8	4,4'-DDD	0.0013290	J
33213-65-9	Endosulfan II	0.00096782	J
50-29-3	4,4'-DDT	0.0052937	J
7421-93-4	Endrin aldehyde	0.00095948	J
1031-07-8	Endosulfan sulfate	0.0013602	J
72-43-5	Methoxychlor	0.0054198	J
2385-85-5	Mirex	0.0012027	J
53494-70-5	Endrin ketone	0.0012733	J
877-09-8	Tetrachloro-m-xylene	0.00000	J
2051-24-3	DECACHLOROBIPHENYL	0.0034403	J

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB003.d
Date : 13-SEP-2012 17:44
Client ID:
Sample Info: ICAL1:::1:1
Volume Injected (uL): 1.0
Column phase: RTXCLPEST2

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA003.d
Lab Smp Id: ICAL1
Inj Date : 13-SEP-2012 17:44
Operator : KJH Inst ID: gc14.i
Smp Info : ICAL1;;;1;1
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 17:44 Cal File: RIDA003.d
Als bottle: 14 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Calibration.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
$ 1 Tetrachloro-m-xylene	4.076	4.056	0.020	14897	0.00400	0.0027978 (a)
2 alpha-BHC	4.888	4.866	0.022	8530	0.00200	0.0034762 (a)
3 gamma-BHC	5.391	5.366	0.025	8811	0.00200	0.0028565 (a)
4 beta-BHC	5.548	5.523	0.025	5242	0.00200	0.0021463 (a)
5 delta-BHC	5.841	5.816	0.025	7026	0.00200	0.0042037 (a)
6 Heptachlor	6.180	6.150	0.030	8530	0.00200	0.0025590 (a)
8 Aldrin	6.698	6.668	0.030	7997	0.00200	0.0028757 (a)
9 Heptachlor epoxide	7.778	7.746	0.032	8025	0.00200	0.0025178 (a)
10 gamma-Chlordane	8.011	7.981	0.030	8292	0.00200	0.0021274 (a)
12 alpha-Chlordane	8.256	8.225	0.031	9081	0.00200	0.0022500 (a)
13 4,4'-DDE	8.428	8.403	0.025	7060	0.00200	0.0035133 (a)
14 Endosulfan I	8.500	8.468	0.032	7879	0.00200	0.0030300 (a)
16 Dieldrin	8.948	8.918	0.030	7177	0.00200	0.0032658 (a)
17 Endrin	9.385	9.353	0.032	5545	0.00200	0.0010778 (aM)
18 4,4'-DDD	9.558	9.535	0.023	5186	0.00200	0.0033802 (a)
19 Endosulfan II	9.815	9.783	0.032	7145	0.00200	0.0028936 (a)
20 4,4'-DDT	10.086	10.061	0.025	4880	0.00200	0.0049216 (a)
21 Endrin aldehyde	10.616	10.591	0.025	6400	0.00200	0.0012412 (a)
22 Methoxychlor	11.055	11.030	0.025	3311	0.00200	0.0045151 (aM)
23 Mirex	11.273	11.240	0.033	7865	0.00200	0.0014711 (a)
24 Endosulfan sulfate	11.466	11.436	0.030	6825	0.00200	0.0034338 (a)

0446

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
25 Endrin ketone	12.003	11.986	0.017	12649	0.00200	0.0018466(aM)
$ 33 DECACHLOROBIPHENYL	14.083	14.051	0.032	25144	0.00400	0.0039558(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: ICAL1
Sample Location:
Sample Date:
Sample Matrix: SOIL
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info:

Client SDG: 14120913.b

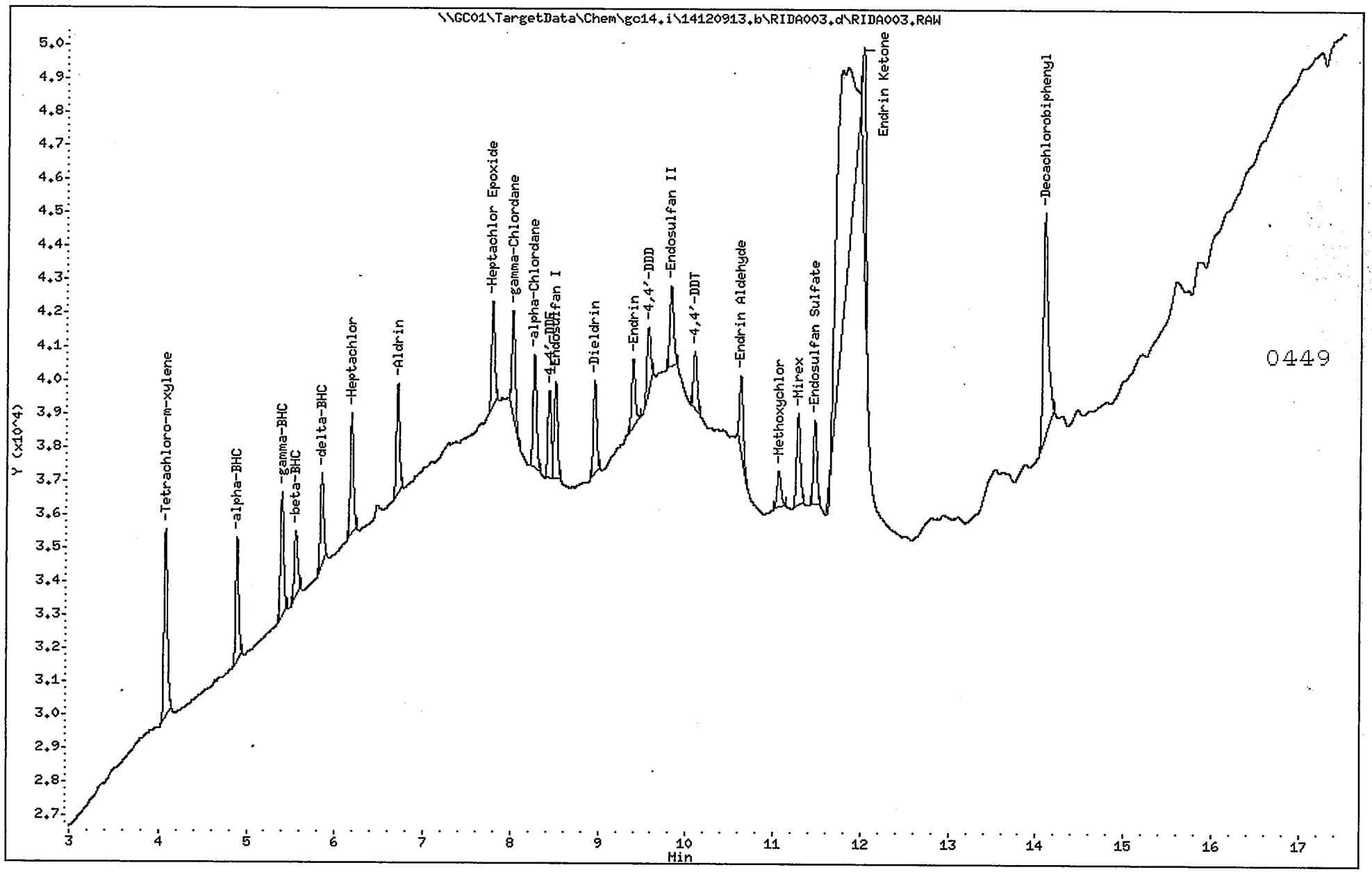
Sample Point:
Date Received: 11-JAN-2008
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/kg	Q
319-84-6	alpha-BHC	0.0034762	J
58-89-9	gamma-BHC	0.0028565	J
319-85-7	beta-BHC	0.0021463	J
319-86-8	delta-BHC	0.0042037	J
76-44-8	Heptachlor	0.0025590	J
309-00-2	Aldrin	0.0028757	J
1024-57-3	Heptachlor epoxide	0.0025178	J
5103-74-2	gamma-Chlordane	0.0021274	J
5103-71-9	alpha-Chlordane	0.0022500	J
72-55-9	4,4'-DDE	0.0035133	J
959-98-8	Endosulfan I	0.0030300	J
60-57-1	Dieldrin	0.0032658	J
72-20-8	Endrin	0.0010778	J
72-54-8	4,4'-DDD	0.0033802	J
33213-65-9	Endosulfan II	0.0028936	J
50-29-3	4,4'-DDT	0.0049216	J
7421-93-4	Endrin aldehyde	0.0012412	J
72-43-5	Methoxychlor	0.0045151	J
2385-85-5	Mirex	0.0014711	J
1031-07-8	Endosulfan sulfate	0.0034338	J
53494-70-5	Endrin ketone	0.0018466	J
877-09-8	Tetrachloro-m-xylene	0.0027978	J
2051-24-3	DECACHLOROBIPHENYL	0.0039558	J

0448

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA003.d
Date : 13-SEP-2012 17:44
Client ID:
Sample Info: ICAL1;;;1;1
Volume Injected (uL): 1.0
Column phase: RTXCLPEST

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB004.d
Lab Smp Id: ICAL2
Inj Date : 13-SEP-2012 18:06
Operator : KJH Inst ID: gc14.i
Smp Info : ICAL2;;;1;2
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 18:06 Cal File: RIDB004.d
Als bottle: 14 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Calibration.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
$ 1	Tetrachloro-m-xylene	4.108	4.098	0.010	67390	0.01000	0.0061045
2	alpha-BHC	5.003	4.993	0.010	38596	0.00500	0.0053433
3	gamma-BHC	5.576	5.565	0.011	37787	0.00500	0.0047437 (a)
4	beta-BHC	5.743	5.730	0.013	23552	0.00500	0.0039095 (a)
5	delta-BHC	6.235	6.223	0.012	31227	0.00500	0.0052337
6	Heptachlor	6.311	6.298	0.013	41252	0.00500	0.0047573 (a)
8	Aldrin	6.873	6.861	0.012	36148	0.00500	0.0048282 (a)
9	Heptachlor epoxide	7.911	7.898	0.013	37910	0.00500	0.0047634 (a)
10	gamma-Chlordane	8.270	8.256	0.014	40968	0.00500	0.0044530 (a)
12	alpha-Chlordane	8.541	8.526	0.015	41066	0.00500	0.0040761 (a)
14	Endosulfan I	8.638	8.623	0.015	35027	0.00500	0.0047586 (a)
13	4,4'-DDE	8.895	8.881	0.014	30644	0.00500	0.0050769 (a)
16	Dieldrin	9.155	9.140	0.015	34026	0.00500	0.0048255 (a)
17	Endrin	9.731	9.716	0.015	24822	0.00500	0.0050341 (a)
18	4,4'-DDD	10.013	10.000	0.013	29052	0.00500	0.0048873 (a)
19	Endosulfan II	10.155	10.141	0.014	29236	0.00500	0.0044741 (a)
20	4,4'-DDT	10.611	10.596	0.015	8580	0.00500	0.0060529 (a)
21	Endrin aldehyde	10.816	10.801	0.015	27587	0.00500	0.0043745 (a)
24	Endosulfan sulfate	11.361	11.348	0.013	30033	0.00500	0.0045791 (a)
22	Methoxychlor	11.988	11.978	0.010	12919	0.00500	0.0041043 (a)
23	Mirex	12.308	12.291	0.017	35563	0.00500	0.0048242 (a)

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
25 Endrin ketone	12.405	12.390	0.015	33754	0.00500	0.0040555(a)
$ 33 DECACHLOROBIPHENYL	14.923	14.908	0.015	81243	0.01000	0.012603

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: ICAL2
Sample Location:
Sample Date:
Sample Matrix: SOIL
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info:

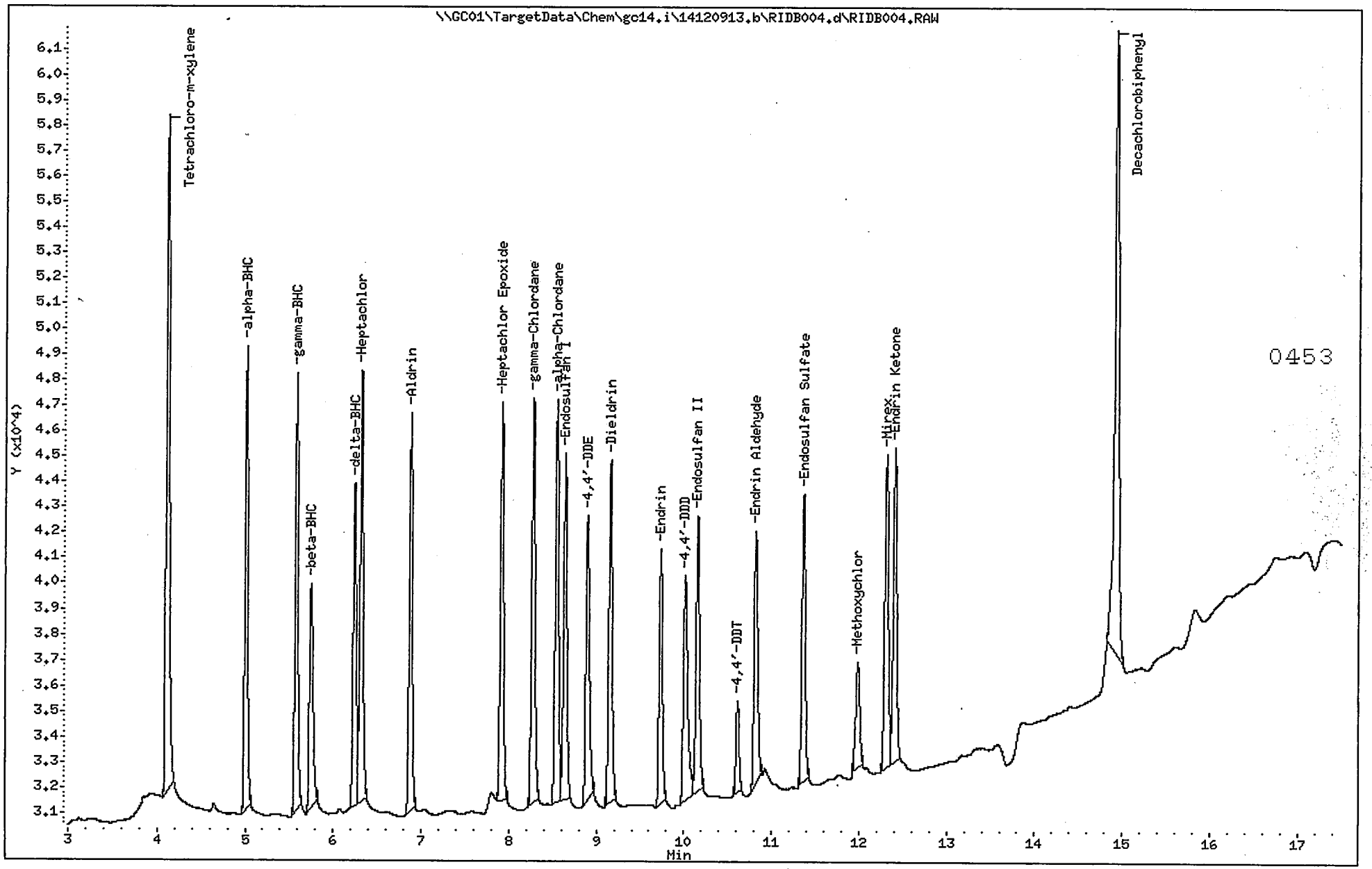
Client SDG: 14120913.b

Sample Point:
Date Received: 11-JAN-2008
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/kg	Q
319-84-6	alpha-BHC	0.0053433	
58-89-9	gamma-BHC	0.0047437	J
319-85-7	beta-BHC	0.0039095	J
319-86-8	delta-BHC	0.0052337	
76-44-8	Heptachlor	0.0047573	J
309-00-2	Aldrin	0.0048282	J
1024-57-3	Heptachlor epoxide	0.0047634	J
5103-74-2	gamma-Chlordane	0.0044530	J
5103-71-9	alpha-Chlordane	0.0040761	J
959-98-8	Endosulfan I	0.0047586	J
72-55-9	4,4'-DDE	0.0050769	J
60-57-1	Dieldrin	0.0048255	J
72-20-8	Endrin	0.0050341	J
72-54-8	4,4'-DDD	0.0048873	J
33213-65-9	Endosulfan II	0.0044741	J
50-29-3	4,4'-DDT	0.0060529	J
7421-93-4	Endrin aldehyde	0.0043745	J
1031-07-8	Endosulfan sulfate	0.0045791	J
72-43-5	Methoxychlor	0.0041043	J
2385-85-5	Mirex	0.0048242	J
53494-70-5	Endrin ketone	0.0040555	J
877-09-8	Tetrachloro-m-xylene	0.0061045	
2051-24-3	DECACHLOROBIPHENYL	0.012603	

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB004.d
Date : 13-SEP-2012 18:06
Client ID:
Sample Info: ICAL2;;;1;2
Volume Injected (uL): 1.0
Column phase: RTXCLPEST2

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA004.d
Lab Smp Id: ICAL2
Inj Date : 13-SEP-2012 18:06
Operator : KJH Inst ID: gc14.i
Smp Info : ICAL2;;;1;2
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 18:06 Cal File: RIDA004.d
Als bottle: 14 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Calibration.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
$ 1	Tetrachloro-m-xylene	4.066	4.056	0.010	48108	0.01000	0.0090353
2	alpha-BHC	4.876	4.866	0.010	26085	0.00500	0.0052598
3	gamma-BHC	5.378	5.366	0.012	26554	0.00500	0.0048183(a)
4	beta-BHC	5.536	5.523	0.013	16593	0.00500	0.0044360(a)
5	delta-BHC	5.830	5.816	0.014	18793	0.00500	0.0056063
6	Heptachlor	6.165	6.150	0.015	28978	0.00500	0.0050785(a)
8	Aldrin	6.683	6.668	0.015	27161	0.00500	0.0051895
9	Heptachlor epoxide	7.761	7.746	0.015	26359	0.00500	0.0049703(a)
10	gamma-Chlordane	7.996	7.981	0.015	30301	0.00500	0.0048436(a)
12	alpha-Chlordane	8.241	8.225	0.016	29873	0.00500	0.0049140(a)
13	4,4'-DDE	8.416	8.403	0.013	17489	0.00500	0.0052881(a)
14	Endosulfan I	8.485	8.468	0.017	29535	0.00500	0.0054128
16	Dieldrin	8.933	8.918	0.015	23751	0.00500	0.0054480(a)
17	Endrin	9.368	9.353	0.015	18400	0.00500	0.0035763(aM)
18	4,4'-DDD	9.550	9.535	0.015	15582	0.00500	0.0051891(a)
19	Endosulfan II	9.800	9.783	0.017	19150	0.00500	0.0050190(a)
20	4,4'-DDT	10.076	10.061	0.015	8791	0.00500	0.0056470(a)
21	Endrin aldehyde	10.608	10.591	0.017	24421	0.00500	0.0047362(a)
22	Methoxychlor	11.045	11.030	0.015	6062	0.00500	0.0054165(a)
23	Mirex	11.258	11.240	0.018	26066	0.00500	0.0048754(a)
24	Endosulfan sulfate	11.455	11.436	0.019	20209	0.00500	0.0055817(a)

0454

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
25 Endrin ketone	12.006	11.986	0.020	33815	0.00500	0.0045851(aM)
$ 33 DECACHLOROBIPHENYL	14.071	14.051	0.020	62853	0.01000	0.0098885

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: ICAL2
Sample Location:
Sample Date:
Sample Matrix: SOIL
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info:

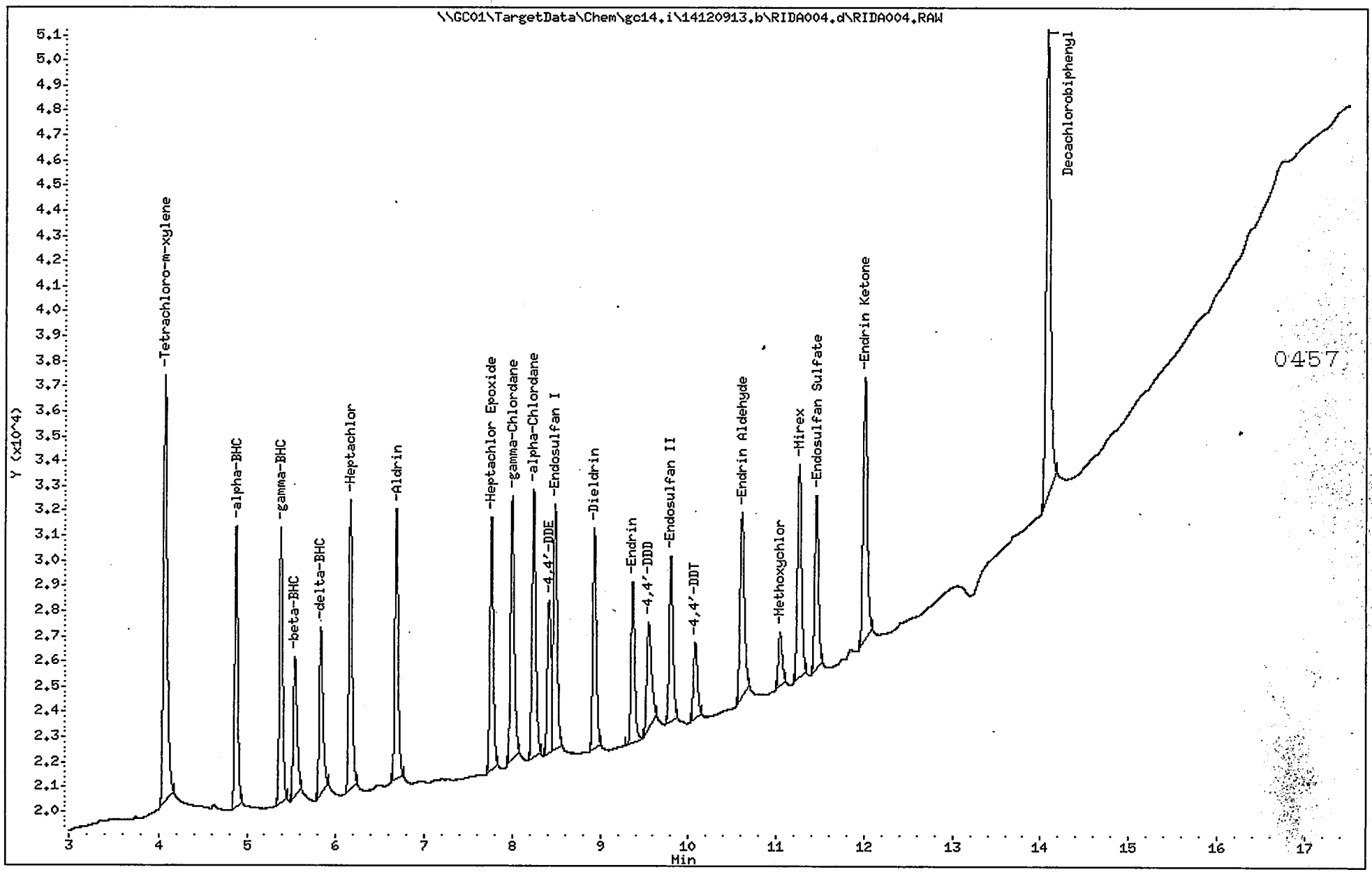
Client SDG: 14120913.b

Sample Point:
Date Received: 11-JAN-2008
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/kg	Q
319-84-6	alpha-BHC	0.0052598	
58-89-9	gamma-BHC	0.0048183	J
319-85-7	beta-BHC	0.0044360	J
319-86-8	delta-BHC	0.0056063	
76-44-8	Heptachlor	0.0050785	J
309-00-2	Aldrin	0.0051895	
1024-57-3	Heptachlor epoxide	0.0049703	J
5103-74-2	gamma-Chlordane	0.0048436	J
5103-71-9	alpha-Chlordane	0.0049140	J
72-55-9	4,4'-DDE	0.0052881	J
959-98-8	Endosulfan I	0.0054128	
60-57-1	Dieldrin	0.0054480	J
72-20-8	Endrin	0.0035763	J
72-54-8	4,4'-DDD	0.0051891	J
33213-65-9	Endosulfan II	0.0050190	J
50-29-3	4,4'-DDT	0.0056470	J
7421-93-4	Endrin aldehyde	0.0047362	J
72-43-5	Methoxychlor	0.0054165	J
2385-85-5	Mirex	0.0048754	J
1031-07-8	Endosulfan sulfate	0.0055817	J
53494-70-5	Endrin ketone	0.0045851	J
877-09-8	Tetrachloro-m-xylene	0.0090353	
2051-24-3	DECACHLOROBIPHENYL	0.0098885	

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA004.d
Date : 13-SEP-2012 18:06
Client ID:
Sample Info: ICAL2;;;1;2
Volume Injected (uL): 1.0
Column phase: RTXCLPEST

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB005.d
Lab Smp Id: ICAL3
Inj Date : 13-SEP-2012 18:27
Operator : KJH Inst ID: gc14.i
Smp Info : ICAL3;;;1;3
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 18:27 Cal File: RIDB005.d
Als bottle: 14 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Calibration.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
$ 1 Tetrachloro-m-xylene	4.105	4.098	0.007	145472	0.02000	0.017687
2 alpha-BHC	5.001	4.993	0.008	86997	0.01000	0.0095357
3 gamma-BHC	5.575	5.565	0.010	83815	0.01000	0.0092446
4 beta-BHC	5.741	5.730	0.011	51748	0.01000	0.0091506
5 delta-BHC	6.233	6.223	0.010	69300	0.01000	0.0093185
6 Heptachlor	6.310	6.298	0.012	86494	0.01000	0.0095065
8 Aldrin	6.873	6.861	0.012	76575	0.01000	0.0094484
9 Heptachlor epoxide	7.911	7.898	0.013	79087	0.01000	0.010022
10 gamma-Chlordane	8.270	8.256	0.014	83482	0.01000	0.0093495
12 alpha-Chlordane	8.540	8.526	0.014	83321	0.01000	0.0092016
14 Endosulfan I	8.636	8.623	0.013	72787	0.01000	0.0095759
13 4,4'-DDE	8.893	8.881	0.012	66428	0.01000	0.0094930(a)
16 Dieldrin	9.153	9.140	0.013	70312	0.01000	0.0094390(a)
17 Endrin	9.730	9.716	0.014	59633	0.01000	0.010227
18 4,4'-DDD	10.011	10.000	0.011	57977	0.01000	0.0094790(a)
19 Endosulfan II	10.155	10.141	0.014	59977	0.01000	0.0093976(a)
20 4,4'-DDT	10.610	10.596	0.014	31848	0.01000	0.0098467(a)
21 Endrin aldehyde	10.815	10.801	0.014	55258	0.01000	0.0091734(a)
24 Endosulfan sulfate	11.361	11.348	0.013	62184	0.01000	0.0094518(a)
22 Methoxychlor	11.990	11.978	0.012	27546	0.01000	0.0086769(a)
23 Mirex	12.306	12.291	0.015	70666	0.01000	0.010145

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
25 Endrin ketone	12.405	12.390	0.015	70212	0.01000	0.0085813 (a)
$ 33 DECACHLOROBIPHENYL	14.923	14.908	0.015	136357	0.02000	0.021153

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: ICAL3
Sample Location:
Sample Date:
Sample Matrix: SOIL
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info:

Client SDG: 14120913.b

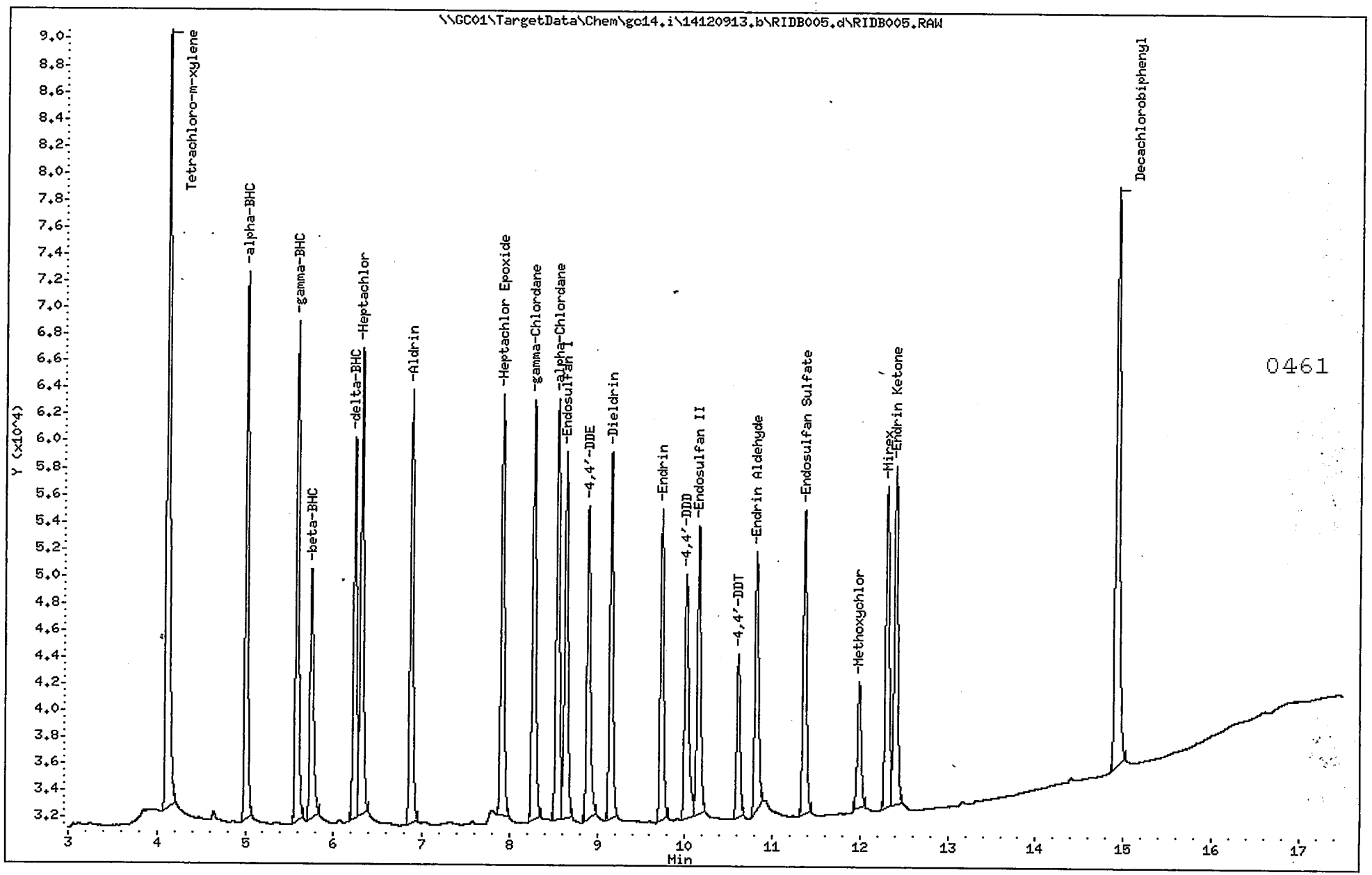
Sample Point:
Date Received: 11-JAN-2008
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/kg	Q
319-84-6	alpha-BHC	0.0095357	
58-89-9	gamma-BHC	0.0092446	
319-85-7	beta-BHC	0.0091506	
319-86-8	delta-BHC	0.0093185	
76-44-8	Heptachlor	0.0095065	
309-00-2	Aldrin	0.0094484	
1024-57-3	Heptachlor epoxide	0.010022	
5103-74-2	gamma-Chlordane	0.0093495	
5103-71-9	alpha-Chlordane	0.0092016	
959-98-8	Endosulfan I	0.0095759	
72-55-9	4,4'-DDE	0.0094930	J
60-57-1	Dieldrin	0.0094390	J
72-20-8	Endrin	0.010227	
72-54-8	4,4'-DDD	0.0094790	J
33213-65-9	Endosulfan II	0.0093976	J
50-29-3	4,4'-DDT	0.0098467	J
7421-93-4	Endrin aldehyde	0.0091734	J
1031-07-8	Endosulfan sulfate	0.0094518	J
72-43-5	Methoxychlor	0.0086769	J
2385-85-5	Mirex	0.010145	
53494-70-5	Endrin ketone	0.0085813	J
877-09-8	Tetrachloro-m-xylene	0.017687	
2051-24-3	DECACHLOROBIPHENYL	0.021153	

0460

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB005.d
Date : 13-SEP-2012 18:27
Client ID:
Sample Info: ICAL3;;;1;3
Volume Injected (uL): 1.0
Column phase: RTXCLPEST2

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA005.d
Lab Smp Id: ICAL3
Inj Date : 13-SEP-2012 18:27
Operator : KJH Inst ID: gc14.i
Smp Info : ICAL3;;;1;3
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 18:27 Cal File: RIDA005.d
Als bottle: 14 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Calibration.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
$ 1	Tetrachloro-m-xylene	4.063	4.056	0.007	110302	0.02000	0.020716
2	alpha-BHC	4.875	4.866	0.009	65347	0.01000	0.0092489
3	gamma-BHC	5.376	5.366	0.010	66024	0.01000	0.0091825
4	beta-BHC	5.533	5.523	0.010	39368	0.01000	0.0090302
5	delta-BHC	5.826	5.816	0.010	48290	0.01000	0.0091160
6	Heptachlor	6.161	6.150	0.011	65750	0.01000	0.0096094
8	Aldrin	6.681	6.668	0.013	60482	0.01000	0.0092125
9	Heptachlor epoxide	7.760	7.746	0.014	58432	0.01000	0.0092605
10	gamma-Chlordane	7.995	7.981	0.014	67185	0.01000	0.0093957
12	alpha-Chlordane	8.238	8.225	0.013	66896	0.01000	0.0096577
13	4,4'-DDE	8.413	8.403	0.010	40251	0.01000	0.0091616(a)
14	Endosulfan I	8.481	8.468	0.013	65235	0.01000	0.0093409
16	Dieldrin	8.931	8.918	0.013	54065	0.01000	0.0094393(a)
17	Endrin	9.366	9.353	0.013	46420	0.01000	0.0090224(aM)
18	4,4'-DDD	9.546	9.535	0.011	41783	0.01000	0.0097478(aM)
19	Endosulfan II	9.798	9.783	0.015	42039	0.01000	0.0090712(a)
20	4,4'-DDT	10.073	10.061	0.012	27880	0.01000	0.0091778(a)
21	Endrin aldehyde	10.606	10.591	0.015	51464	0.01000	0.0099808
22	Methoxychlor	11.041	11.030	0.011	18693	0.01000	0.0095554(a)
23	Mirex	11.256	11.240	0.016	55101	0.01000	0.010306
24	Endosulfan sulfate	11.451	11.436	0.015	45276	0.01000	0.0096044(a)

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
25 Endrin ketone	12.003	11.986	0.017	66237	0.01000	0.0087799 (aM)
$ 33 DECACHLOROBIPHENYL	14.070	14.051	0.019	131080	0.02000	0.020622

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

ALS - Middletown

TARGET COMPOUNDS

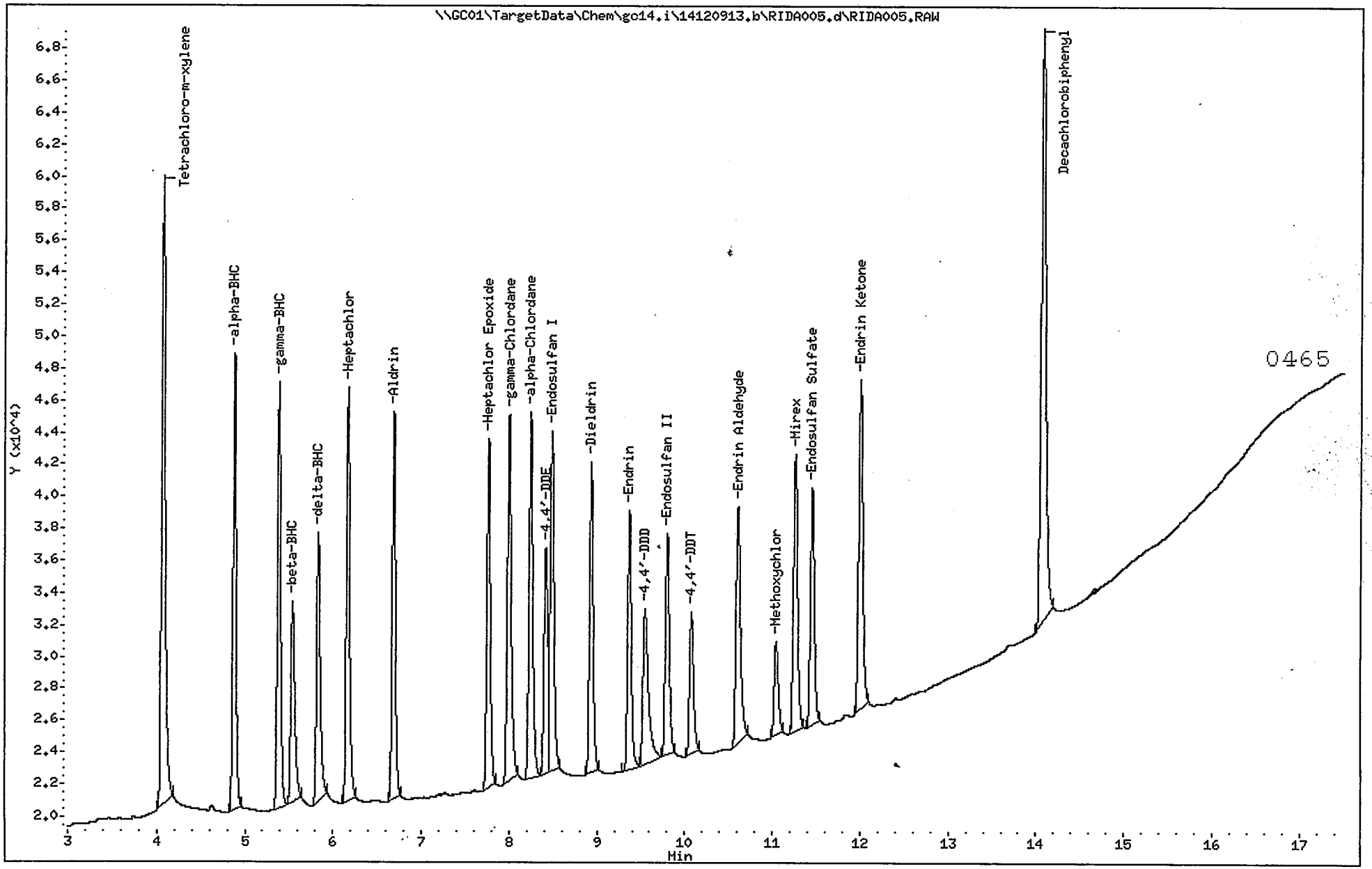
Client Name:
Lab Smp Id: ICAL3
Sample Location:
Sample Date:
Sample Matrix: SOIL
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info:

Client SDG: 14120913.b
Sample Point:
Date Received: 11-JAN-2008
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/kg	Q
319-84-6	alpha-BHC	0.0092489	
58-89-9	gamma-BHC	0.0091825	
319-85-7	beta-BHC	0.0090302	
319-86-8	delta-BHC	0.0091160	
76-44-8	Heptachlor	0.0096094	
309-00-2	Aldrin	0.0092125	
1024-57-3	Heptachlor epoxide	0.0092605	
5103-74-2	gamma-Chlordane	0.0093957	
5103-71-9	alpha-Chlordane	0.0096577	
72-55-9	4,4'-DDE	0.0091616	J
959-98-8	Endosulfan I	0.0093409	
60-57-1	Dieldrin	0.0094393	J
72-20-8	Endrin	0.0090224	J
72-54-8	4,4'-DDD	0.0097478	J
33213-65-9	Endosulfan II	0.0090712	J
50-29-3	4,4'-DDT	0.0091778	J
7421-93-4	Endrin aldehyde	0.0099808	
72-43-5	Methoxychlor	0.0095554	J
2385-85-5	Mirex	0.010306	
1031-07-8	Endosulfan sulfate	0.0096044	J
53494-70-5	Endrin ketone	0.0087799	J
877-09-8	Tetrachloro-m-xylene	0.020716	
2051-24-3	DECACHLOROBIPHENYL	0.020622	

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA005.d
Date : 13-SEP-2012 18:27
Client ID:
Sample Info: ICAL3:::1:3
Volume Injected (uL): 1.0
Column phase: RTXCLPEST

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB006.d
Lab Smp Id: ICAL4
Inj Date : 13-SEP-2012 18:49
Operator : KJH Inst ID: gc14.i
Smp Info : ICAL4;;;1;4
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 12:29 Cal File: RIDB002.d
Als bottle: 14 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Calibration.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
$ 1	Tetrachloro-m-xylene	4.105	4.098	0.007	290998	0.04000	0.039275
2	alpha-BHC	5.001	4.993	0.008	187444	0.02000	0.018236
3	gamma-BHC	5.576	5.565	0.011	179603	0.02000	0.018611
4	beta-BHC	5.740	5.730	0.010	105660	0.02000	0.019172
5	delta-BHC	6.233	6.223	0.010	149848	0.02000	0.017960
6	Heptachlor	6.310	6.298	0.012	178359	0.02000	0.019150
8	Aldrin	6.873	6.861	0.012	158307	0.02000	0.018789
9	Heptachlor epoxide	7.910	7.898	0.012	158362	0.02000	0.020147
10	gamma-Chlordane	8.270	8.256	0.014	167929	0.02000	0.019076
12	alpha-Chlordane	8.540	8.526	0.014	167410	0.02000	0.019401
14	Endosulfan I	8.636	8.623	0.013	148314	0.02000	0.019211
13	4,4'-DDE	8.893	8.881	0.012	139252	0.02000	0.018480
16	Dieldrin	9.153	9.140	0.013	145114	0.02000	0.018950
17	Endrin	9.730	9.716	0.014	108746	0.02000	0.017553
18	4,4'-DDD	10.011	10.000	0.011	119254	0.02000	0.019206
19	Endosulfan II	10.153	10.141	0.012	123061	0.02000	0.019501
20	4,4'-DDT	10.610	10.596	0.014	78214	0.02000	0.017407
21	Endrin aldehyde	10.815	10.801	0.014	113873	0.02000	0.019339
24	Endosulfan sulfate	11.361	11.348	0.013	127812	0.02000	0.019398
22	Methoxychlor	11.990	11.978	0.012	54576	0.02000	0.017127
23	Mirex	12.306	12.291	0.015	137215	0.02000	0.020353

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Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
25 Endrin ketone	12.405	12.390	0.015	158330	0.02000	0.019520
$ 33 DECACHLOROBIPHENYL	14.923	14.908	0.015	267798	0.04000	0.041544

ALS - Middletown

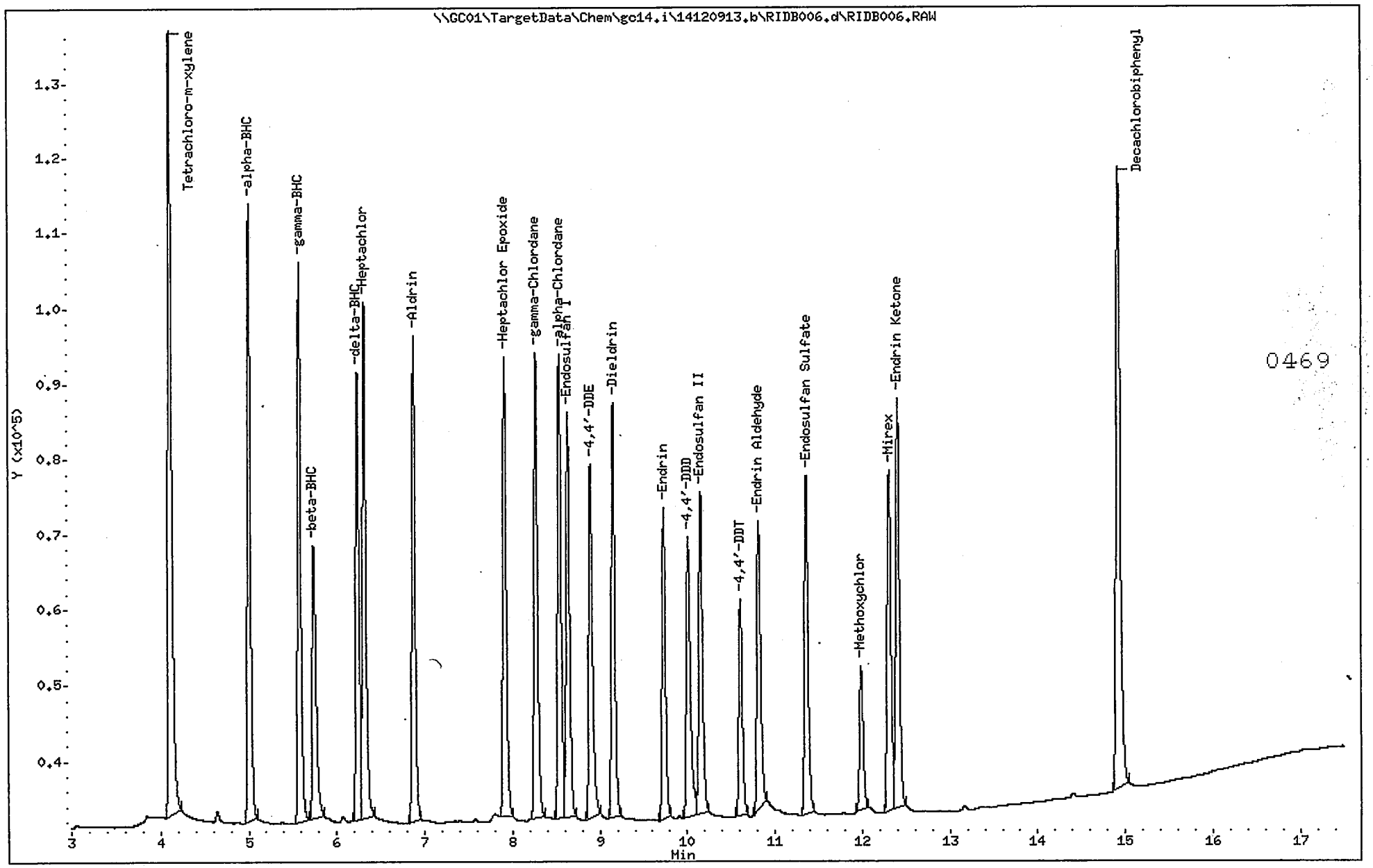
TARGET COMPOUNDS

Client Name: Client SDG: 14120913.b
Lab Smp Id: ICAL4
Sample Location: Sample Point:
Sample Date: Date Received: 11-JAN-2008
Sample Matrix: SOIL Quant Type: ESTD
Analysis Type: SV Level: LOW
Data Type: GC MULTI COMP Operator: KJH
Misc Info:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/kg	Q
319-84-6	alpha-BHC	0.018236	
58-89-9	gamma-BHC	0.018611	
319-85-7	beta-BHC	0.019172	
319-86-8	delta-BHC	0.017960	
76-44-8	Heptachlor	0.019150	
309-00-2	Aldrin	0.018789	
1024-57-3	Heptachlor epoxide	0.020147	
5103-74-2	gamma-Chlordane	0.019076	
5103-71-9	alpha-Chlordane	0.019401	
959-98-8	Endosulfan I	0.019211	
72-55-9	4,4'-DDE	0.018480	
60-57-1	Dieldrin	0.018950	
72-20-8	Endrin	0.017553	
72-54-8	4,4'-DDD	0.019206	
33213-65-9	Endosulfan II	0.019501	
50-29-3	4,4'-DDT	0.017407	
7421-93-4	Endrin aldehyde	0.019339	
1031-07-8	Endosulfan sulfate	0.019398	
72-43-5	Methoxychlor	0.017127	
2385-85-5	Mirex	0.020353	
53494-70-5	Endrin ketone	0.019520	
877-09-8	Tetrachloro-m-xylene	0.039275	
2051-24-3	DECACHLOROBIPHENYL	0.041544	

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB006.d
Date : 13-SEP-2012 18:49
Client ID:
Sample Info: ICAL4;;;1;4
Volume Injected (uL): 1.0
Column phase: RTXCLPEST2

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



ALS - Middletown

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Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA006.d
Lab Smp Id: ICAL4
Inj Date : 13-SEP-2012 18:49
Operator : KJH Inst ID: gc14.i
Smp Info : ICAL4;;;1;4
Misc Info :
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 18:49 Cal File: RIDA006.d
Als bottle: 14 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Calibration.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
$ 1 Tetrachloro-m-xylene	4.063	4.056	0.007	227041	0.04000	0.042641
2 alpha-BHC	4.875	4.866	0.009	150006	0.02000	0.017850
3 gamma-BHC	5.375	5.366	0.009	147127	0.02000	0.018150
4 beta-BHC	5.531	5.523	0.008	86396	0.02000	0.018517
5 delta-BHC	5.826	5.816	0.010	116813	0.02000	0.017235
6 Heptachlor	6.161	6.150	0.011	137897	0.02000	0.018499
8 Aldrin	6.680	6.668	0.012	134467	0.02000	0.018145
9 Heptachlor epoxide	7.760	7.746	0.014	126594	0.02000	0.018378
10 gamma-Chlordane	7.995	7.981	0.014	141557	0.02000	0.018574
12 alpha-Chlordane	8.238	8.225	0.013	141248	0.02000	0.019184
13 4,4'-DDE	8.413	8.403	0.010	88005	0.02000	0.017288
14 Endosulfan I	8.481	8.468	0.013	146467	0.02000	0.018279
16 Dieldrin	8.930	8.918	0.012	119958	0.02000	0.018115
17 Endrin	9.365	9.353	0.012	88726	0.02000	0.017245 (M)
18 4,4'-DDD	9.546	9.535	0.011	95754	0.02000	0.019138 (M)
19 Endosulfan II	9.796	9.783	0.013	100555	0.02000	0.019431 (M)
20 4,4'-DDT	10.073	10.061	0.012	68950	0.02000	0.016721
21 Endrin aldehyde	10.605	10.591	0.014	108985	0.02000	0.021136
22 Methoxychlor	11.041	11.030	0.011	43455	0.02000	0.017669
23 Mirex	11.255	11.240	0.015	114584	0.02000	0.021432
24 Endosulfan sulfate	11.450	11.436	0.014	100149	0.02000	0.018410

0470

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
25 Endrin ketone	12.001	11.986	0.015	149196	0.02000	0.019513
$ 33 DECACHLOROBIPHENYL	14.066	14.051	0.015	266188	0.04000	0.041879

QC Flag Legend

M - Compound response manually integrated.

0471

ALS - Middletown

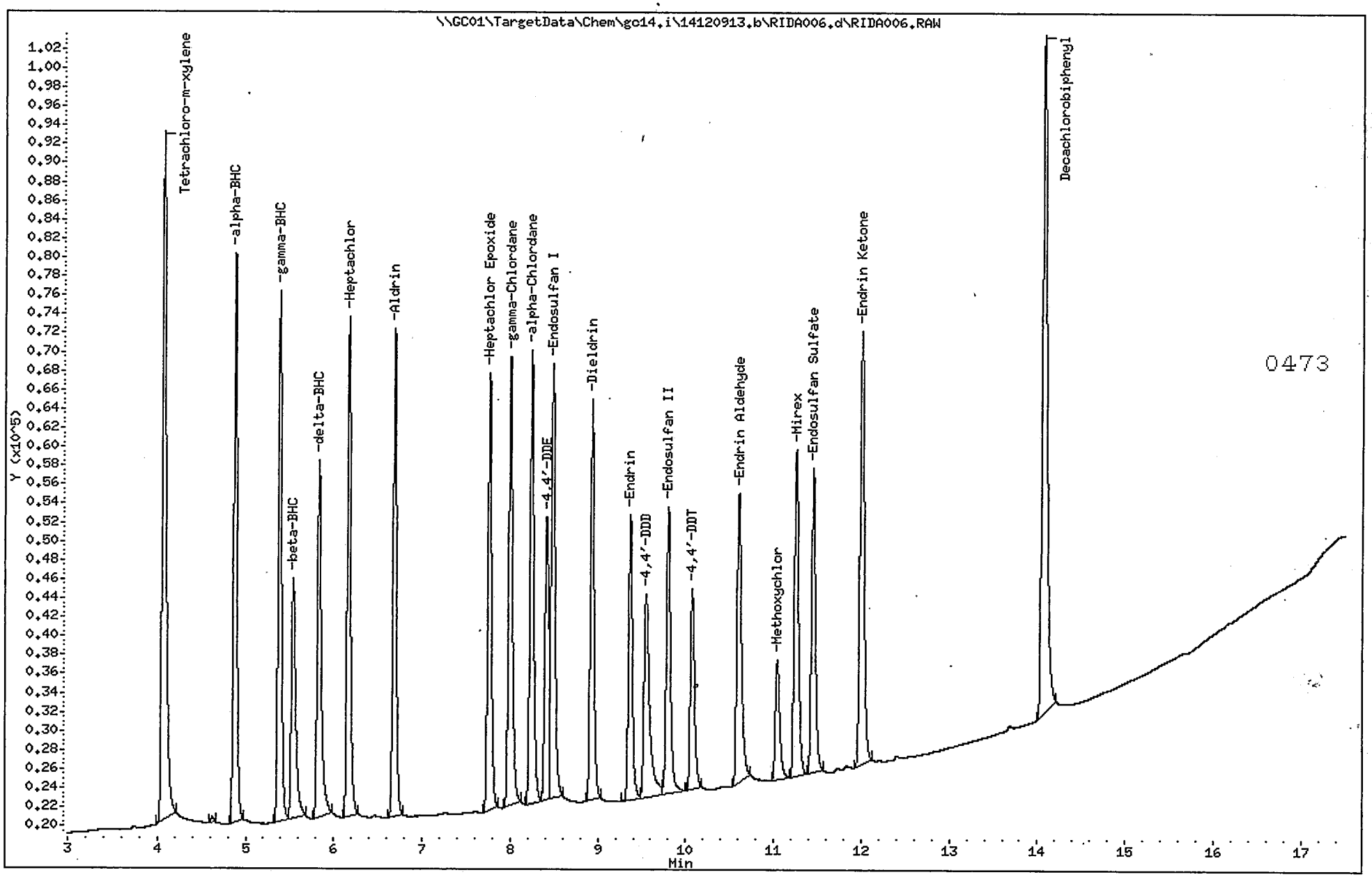
TARGET COMPOUNDS

Client Name: Client SDG: 14120913.b
Lab Smp Id: ICAL4
Sample Location: Sample Point:
Sample Date: Date Received: 11-JAN-2008
Sample Matrix: SOIL Quant Type: ESTD
Analysis Type: SV Level: LOW
Data Type: GC MULTI COMP Operator: KJH
Misc Info:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/kg	Q
319-84-6	alpha-BHC	0.017850	
58-89-9	gamma-BHC	0.018150	
319-85-7	beta-BHC	0.018517	
319-86-8	delta-BHC	0.017235	
76-44-8	Heptachlor	0.018499	
309-00-2	Aldrin	0.018145	
1024-57-3	Heptachlor epoxide	0.018378	
5103-74-2	gamma-Chlordane	0.018574	
5103-71-9	alpha-Chlordane	0.019184	
72-55-9	4,4'-DDE	0.017288	
959-98-8	Endosulfan I	0.018279	
60-57-1	Dieldrin	0.018115	
72-20-8	Endrin	0.017245	
72-54-8	4,4'-DDD	0.019138	
33213-65-9	Endosulfan II	0.019431	
50-29-3	4,4'-DDT	0.016721	
7421-93-4	Endrin aldehyde	0.021136	
72-43-5	Methoxychlor	0.017669	
2385-85-5	Mirex	0.021432	
1031-07-8	Endosulfan sulfate	0.018410	
53494-70-5	Endrin ketone	0.019513	
877-09-8	Tetrachloro-m-xylene	0.042641	
2051-24-3	DECACHLOROBIPHENYL	0.041879	

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA006.d
Date : 13-SEP-2012 18:49
Client ID:
Sample Info: ICAL4;;;1;4
Volume Injected (uL): 1.0
Column phase: RTXCLPEST

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB007.d
Lab Smp Id: ICAL5
Inj Date : 13-SEP-2012 19:10
Operator : KJH Inst ID: gc14.i
Smp Info : ICAL5;;;1;5
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:10 Cal File: RIDB007.d
Als bottle: 31 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Calibration.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
$ 1 Tetrachloro-m-xylene	4.103	4.098	0.005	764548	0.10000	0.10952
2 alpha-BHC	5.000	4.993	0.007	561949	0.05000	0.050675
3 gamma-BHC	5.573	5.565	0.008	518034	0.05000	0.051705
4 beta-BHC	5.736	5.730	0.006	289126	0.05000	0.053274
5 delta-BHC	6.230	6.223	0.007	456855	0.05000	0.050898
6 Heptachlor	6.308	6.298	0.010	487383	0.05000	0.051588
8 Aldrin	6.871	6.861	0.010	445523	0.05000	0.051614
9 Heptachlor epoxide	7.910	7.898	0.012	421652	0.05000	0.053774
10 gamma-Chlordane	8.268	8.256	0.012	456630	0.05000	0.052326
12 alpha-Chlordane	8.538	8.526	0.012	443827	0.05000	0.052930
14 Endosulfan I	8.635	8.623	0.012	404531	0.05000	0.051898
13 4,4'-DDE	8.891	8.881	0.010	399281	0.05000	0.050571
16 Dieldrin	9.153	9.140	0.013	400447	0.05000	0.051413
17 Endrin	9.730	9.716	0.014	342530	0.05000	0.052428
18 4,4'-DDD	10.008	10.000	0.008	320620	0.05000	0.051172
19 Endosulfan II	10.153	10.141	0.012	327327	0.05000	0.052217
20 4,4'-DDT	10.608	10.596	0.012	268266	0.05000	0.048394
21 Endrin aldehyde	10.813	10.801	0.012	298914	0.05000	0.051429
24 Endosulfan sulfate	11.360	11.348	0.012	342044	0.05000	0.051867
22 Methoxychlor	11.988	11.978	0.010	160862	0.05000	0.050353
23 Mirex	12.303	12.291	0.012	334687	0.05000	0.051628

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
25 Endrin ketone	12.403	12.390	0.013	422306	0.05000	0.052289
$ 33 DECACHLOROBIPHENYL	14.921	14.908	0.013	646143	0.10000	0.10024

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: ICAL5
Sample Location:
Sample Date:
Sample Matrix: SOIL
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info:

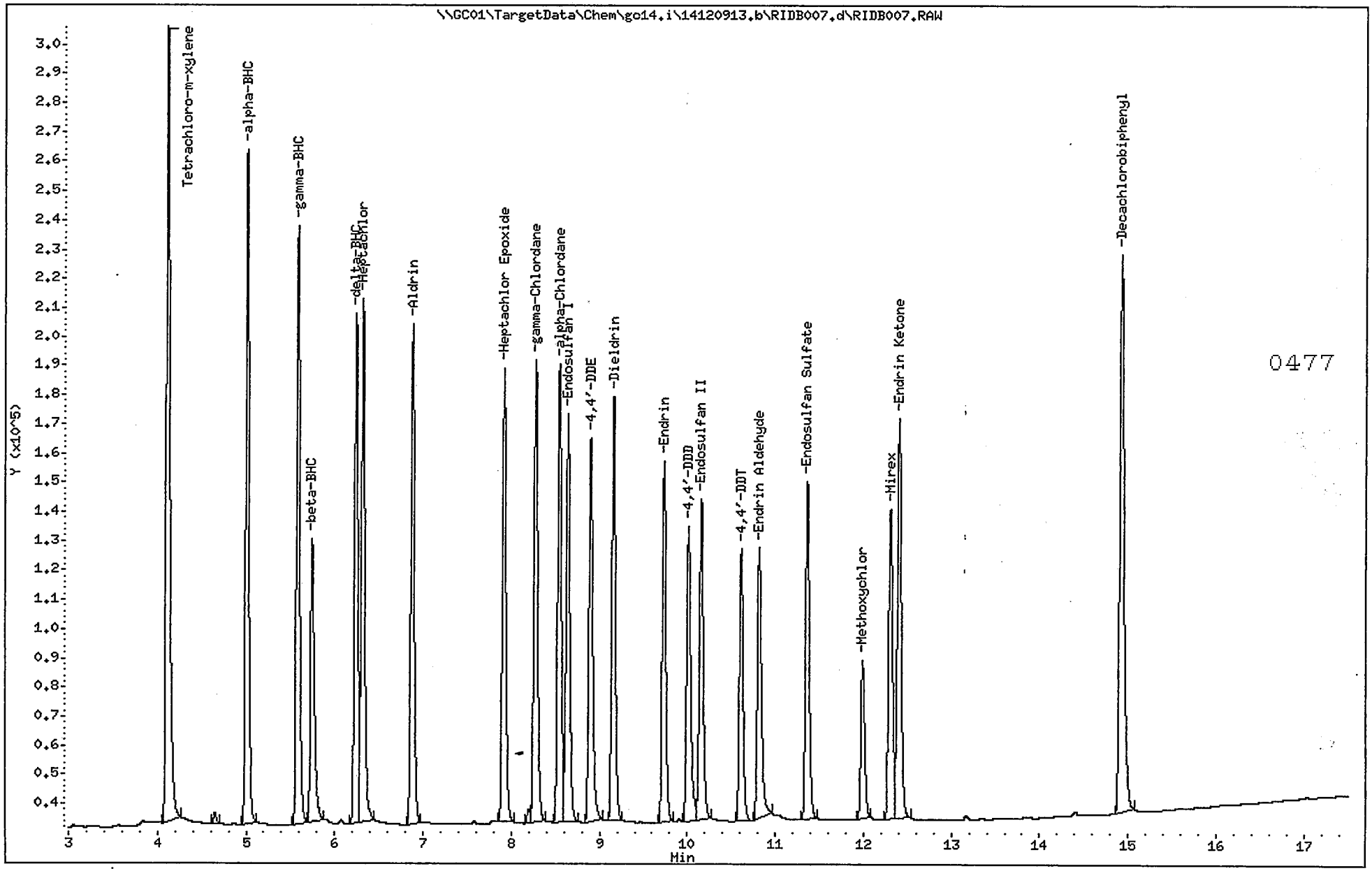
Client SDG: 14120913.b

Sample Point:
Date Received: 11-JAN-2008
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/kg	Q
319-84-6	alpha-BHC	0.050675	
58-89-9	gamma-BHC	0.051705	
319-85-7	beta-BHC	0.053274	
319-86-8	delta-BHC	0.050898	
76-44-8	Heptachlor	0.051588	
309-00-2	Aldrin	0.051614	
1024-57-3	Heptachlor epoxide	0.053774	
5103-74-2	gamma-Chlordane	0.052326	
5103-71-9	alpha-Chlordane	0.052930	
959-98-8	Endosulfan I	0.051898	
72-55-9	4,4'-DDE	0.050571	
60-57-1	Dieldrin	0.051413	
72-20-8	Endrin	0.052428	
72-54-8	4,4'-DDD	0.051172	
33213-65-9	Endosulfan II	0.052217	
50-29-3	4,4'-DDT	0.048394	
7421-93-4	Endrin aldehyde	0.051429	
1031-07-8	Endosulfan sulfate	0.051867	
72-43-5	Methoxychlor	0.050353	
2385-85-5	Mirex	0.051628	
53494-70-5	Endrin ketone	0.052289	
877-09-8	Tetrachloro-m-xylene	0.10952	
2051-24-3	DECACHLOROBIPHENYL	0.10024	

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB007.d
Date : 13-SEP-2012 19:10
Client ID:
Sample Info: ICAL5;;;1;5
Volume Injected (uL): 1.0
Column phase: RTXCLPEST2

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



ALS - Middletown

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Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA007.d
Lab Smp Id: ICAL5
Inj Date : 13-SEP-2012 19:10
Operator : KJH Inst ID: gc14.i
Smp Info : ICAL5;;;1;5
Misc Info :
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:10 Cal File: RIDA007.d
Als bottle: 31 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Calibration.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
$ 1 Tetrachloro-m-xylene	4.060	4.056	0.004	613009	0.10000	0.11513
2 alpha-BHC	4.873	4.866	0.007	473793	0.05000	0.050747
3 gamma-BHC	5.373	5.366	0.007	449781	0.05000	0.051614
4 beta-BHC	5.528	5.523	0.005	255583	0.05000	0.052645
5 delta-BHC	5.823	5.816	0.007	399024	0.05000	0.050186
6 Heptachlor	6.160	6.150	0.010	404196	0.05000	0.051311
8 Aldrin	6.678	6.668	0.010	407436	0.05000	0.051102
9 Heptachlor epoxide	7.758	7.746	0.012	374936	0.05000	0.051597
10 gamma-Chlordane	7.993	7.981	0.012	410500	0.05000	0.051766
12 alpha-Chlordane	8.236	8.225	0.011	400485	0.05000	0.052400
13 4,4'-DDE	8.411	8.403	0.008	280652	0.05000	0.050072
14 Endosulfan I	8.480	8.468	0.012	444743	0.05000	0.051098
16 Dieldrin	8.930	8.918	0.012	365704	0.05000	0.050471
17 Endrin	9.365	9.353	0.012	299229	0.05000	0.058160 (M)
18 4,4'-DDD	9.543	9.535	0.008	267764	0.05000	0.049067 (M)
19 Endosulfan II	9.795	9.783	0.012	271713	0.05000	0.049733 (M)
20 4,4'-DDT	10.071	10.061	0.010	250278	0.05000	0.049194
21 Endrin aldehyde	10.601	10.591	0.010	288888	0.05000	0.056026
22 Methoxychlor	11.038	11.030	0.008	141205	0.05000	0.049700
23 Mirex	11.253	11.240	0.013	296857	0.05000	0.055524
24 Endosulfan sulfate	11.448	11.436	0.012	296145	0.05000	0.049864

0478

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
25 Endrin ketone	12.000	11.986	0.014	398143	0.05000	0.051722
$ 33 DECACHLOROBIPHENYL	14.065	14.051	0.014	665318	0.10000	0.10467

QC Flag Legend

M - Compound response manually integrated.

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: ICAL5
Sample Location:
Sample Date:
Sample Matrix: SOIL
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info:

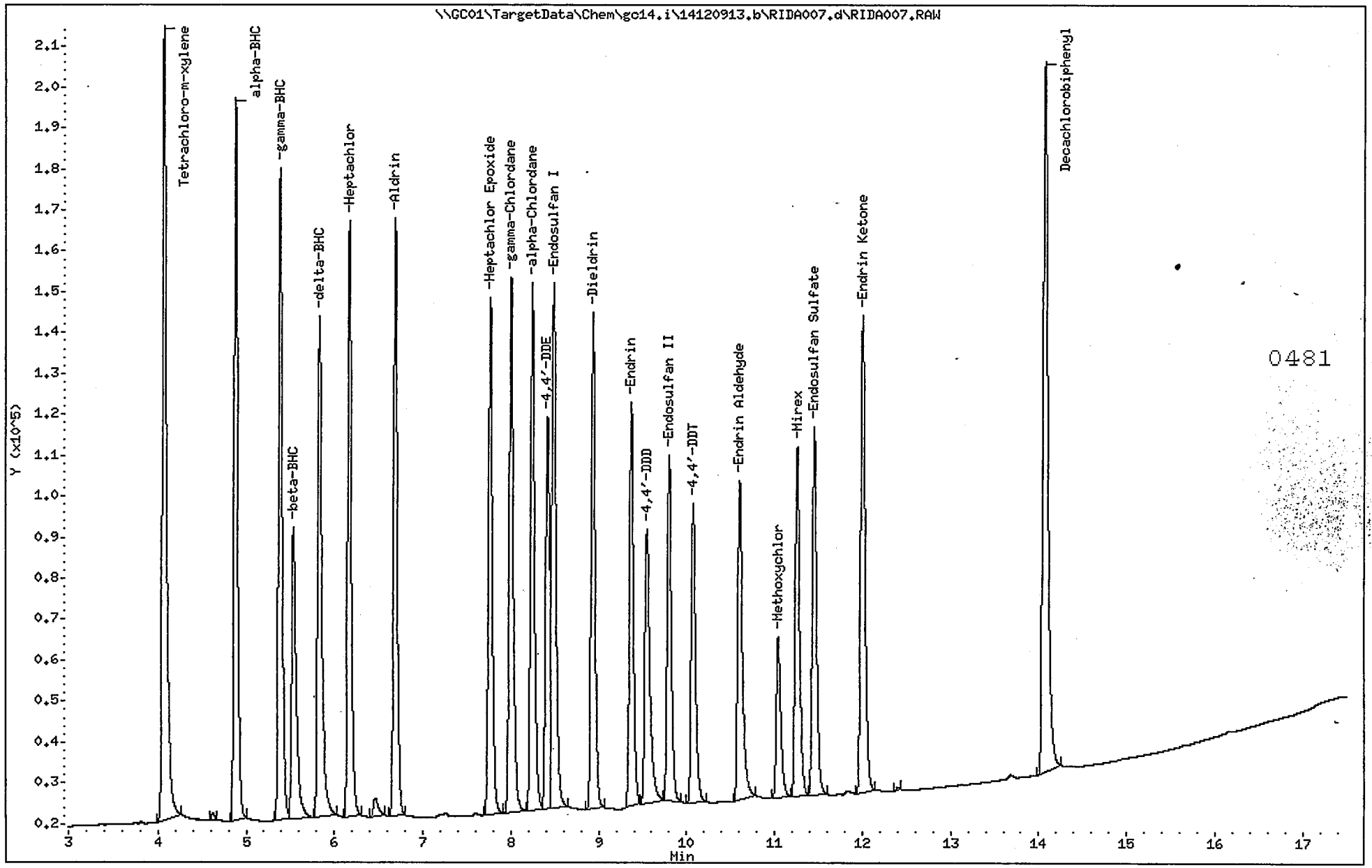
Client SDG: 14120913.b

Sample Point:
Date Received: 11-JAN-2008
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/kg	Q
319-84-6	alpha-BHC	0.050747	
58-89-9	gamma-BHC	0.051614	
319-85-7	beta-BHC	0.052645	
319-86-8	delta-BHC	0.050186	
76-44-8	Heptachlor	0.051311	
309-00-2	Aldrin	0.051102	
1024-57-3	Heptachlor epoxide	0.051597	
5103-74-2	gamma-Chlordane	0.051766	
5103-71-9	alpha-Chlordane	0.052400	
72-55-9	4,4'-DDE	0.050072	
959-98-8	Endosulfan I	0.051098	
60-57-1	Dieldrin	0.050471	
72-20-8	Endrin	0.058160	
72-54-8	4,4'-DDD	0.049067	
33213-65-9	Endosulfan II	0.049733	
50-29-3	4,4'-DDT	0.049194	
7421-93-4	Endrin aldehyde	0.056026	
72-43-5	Methoxychlor	0.049700	
2385-85-5	Mirex	0.055524	
1031-07-8	Endosulfan sulfate	0.049864	
53494-70-5	Endrin ketone	0.051722	
877-09-8	Tetrachloro-m-xylene	0.11513	
2051-24-3	DECACHLOROBIPHENYL	0.10467	

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA007.d
Date : 13-SEP-2012 19:10
Client ID:
Sample Info: ICAL5;;;1;5
Volume Injected (uL): 1.0
Column phase: RTXCLPEST

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB008.d
Lab Smp Id: ICAL6
Inj Date : 13-SEP-2012 19:31
Operator : KJH Inst ID: gc14.i
Smp Info : ICAL6;;;1;6
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:31 Cal File: RIDB008.d
Als bottle: 14 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Calibration.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
$ 1 Tetrachloro-m-xylene	4.101	4.098	0.003	1432893	0.20000	0.20867
2 alpha-BHC	5.000	4.993	0.007	1136341	0.10000	0.10043
3 gamma-BHC	5.573	5.565	0.008	1029055	0.10000	0.10168
4 beta-BHC	5.735	5.730	0.005	557062	0.10000	0.10308
5 delta-BHC	6.228	6.223	0.005	926425	0.10000	0.10128
6 Heptachlor	6.308	6.298	0.010	961176	0.10000	0.10132
8 Aldrin	6.870	6.861	0.009	882554	0.10000	0.10156
9 Heptachlor epoxide	7.908	7.898	0.010	753558	0.10000	0.096164
10 gamma-Chlordane	8.266	8.256	0.010	893020	0.10000	0.10259
12 alpha-Chlordane	8.538	8.526	0.012	856401	0.10000	0.10297
14 Endosulfan I	8.635	8.623	0.012	788384	0.10000	0.10087
13 4,4'-DDE	8.890	8.881	0.009	815434	0.10000	0.10193
16 Dieldrin	9.150	9.140	0.010	796902	0.10000	0.10182
17 Endrin	9.728	9.716	0.012	659512	0.10000	0.099714
18 4,4'-DDD	10.006	10.000	0.006	642135	0.10000	0.10221
19 Endosulfan II	10.151	10.141	0.010	636827	0.10000	0.10179
20 4,4'-DDT	10.606	10.596	0.010	577369	0.10000	0.098793
21 Endrin aldehyde	10.810	10.801	0.009	601455	0.10000	0.10390
24 Endosulfan sulfate	11.356	11.348	0.008	668948	0.10000	0.10141
22 Methoxychlor	11.986	11.978	0.008	326490	0.10000	0.10213
23 Mirex	12.303	12.291	0.012	612790	0.10000	0.098556

0480

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
25 Endrin ketone	12.400	12.390	0.010	834079	0.10000	0.10341
$ 33 DECACHLOROBIPHENYL	14.920	14.908	0.012	1184447	0.20000	0.18374

0483

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: ICAL6
Sample Location:
Sample Date:
Sample Matrix: SOIL
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info:

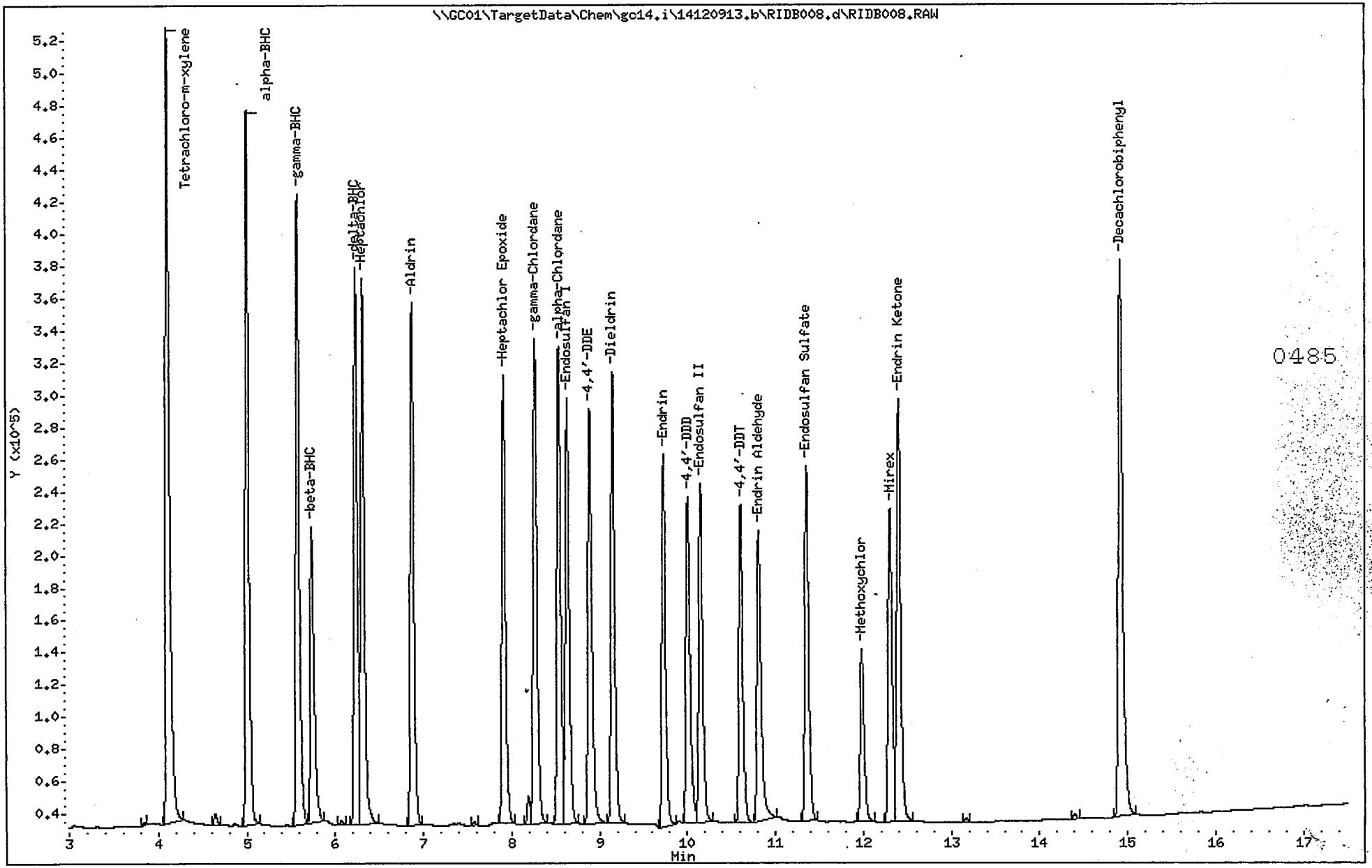
Client SDG: 14120913.b

Sample Point:
Date Received: 11-JAN-2008
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/kg	Q
319-84-6	alpha-BHC	0.10043	
58-89-9	gamma-BHC	0.10168	
319-85-7	beta-BHC	0.10308	
319-86-8	delta-BHC	0.10128	
76-44-8	Heptachlor	0.10132	
309-00-2	Aldrin	0.10156	
1024-57-3	Heptachlor epoxide	0.096164	
5103-74-2	gamma-Chlordane	0.10259	
5103-71-9	alpha-Chlordane	0.10297	
959-98-8	Endosulfan I	0.10087	
72-55-9	4,4'-DDE	0.10193	
60-57-1	Dieldrin	0.10182	
72-20-8	Endrin	0.099714	
72-54-8	4,4'-DDD	0.10221	
33213-65-9	Endosulfan II	0.10179	
50-29-3	4,4'-DDT	0.098793	
7421-93-4	Endrin aldehyde	0.10390	
1031-07-8	Endosulfan sulfate	0.10141	
72-43-5	Methoxychlor	0.10213	
2385-85-5	Mirex	0.098556	
53494-70-5	Endrin ketone	0.10341	
877-09-8	Tetrachloro-m-xylene	0.20867	
2051-24-3	DECACHLOROBIPHENYL	0.18374	

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB008.d
Date : 13-SEP-2012 19:31
Client ID:
Sample Info: ICAL6;;;1;6
Volume Injected (uL): 1.0
Column phase: RTXCLPEST2

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA008.d
Lab Smp Id: ICAL6
Inj Date : 13-SEP-2012 19:31
Operator : KJH Inst ID: gc14.i
Smp Info : ICAL6;;;1;6
Misc Info :
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:31 Cal File: RIDA008.d
Als bottle: 14 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Calibration.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
$ 1 Tetrachloro-m-xylene	4.060	4.056	0.004	1168539	0.20000	0.21947
2 alpha-BHC	4.871	4.866	0.005	965907	0.10000	0.10075
3 gamma-BHC	5.371	5.366	0.005	897533	0.10000	0.10112
4 beta-BHC	5.526	5.523	0.003	497054	0.10000	0.10135
5 delta-BHC	5.821	5.816	0.005	845618	0.10000	0.10083
6 Heptachlor	6.160	6.150	0.010	801110	0.10000	0.10022
8 Aldrin	6.678	6.668	0.010	821371	0.10000	0.10108
9 Heptachlor epoxide	7.756	7.746	0.010	743969	0.10000	0.10096
10 gamma-Chlordane	7.991	7.981	0.010	810385	0.10000	0.10112
12 alpha-Chlordane	8.235	8.225	0.010	757880	0.10000	0.098192
13 4,4'-DDE	8.410	8.403	0.007	590535	0.10000	0.10281
14 Endosulfan I	8.478	8.468	0.010	887897	0.10000	0.099858
16 Dieldrin	8.928	8.918	0.010	744708	0.10000	0.10037
17 Endrin	9.363	9.353	0.010	606655	0.10000	0.11791 (M)
18 4,4'-DDD	9.538	9.535	0.003	562380	0.10000	0.10033 (M)
19 Endosulfan II	9.793	9.783	0.010	563457	0.10000	0.10138 (M)
20 4,4'-DDT	10.068	10.061	0.007	558466	0.10000	0.10162
21 Endrin aldehyde	10.600	10.591	0.009	582684	0.10000	0.11300
22 Methoxychlor	11.035	11.030	0.005	293786	0.10000	0.099698
23 Mirex	11.251	11.240	0.011	565225	0.10000	0.10572
24 Endosulfan sulfate	11.446	11.436	0.010	607591	0.10000	0.099844

0480

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
25 Endrin ketone	11.996	11.986	0.010	784620	0.10000	0.10172
$ 33 DECACHLOROBIPHENYL	14.061	14.051	0.010	1240767	0.20000	0.19521

QC Flag Legend

M - Compound response manually integrated.

7880

ALS - Middletown

TARGET COMPOUNDS

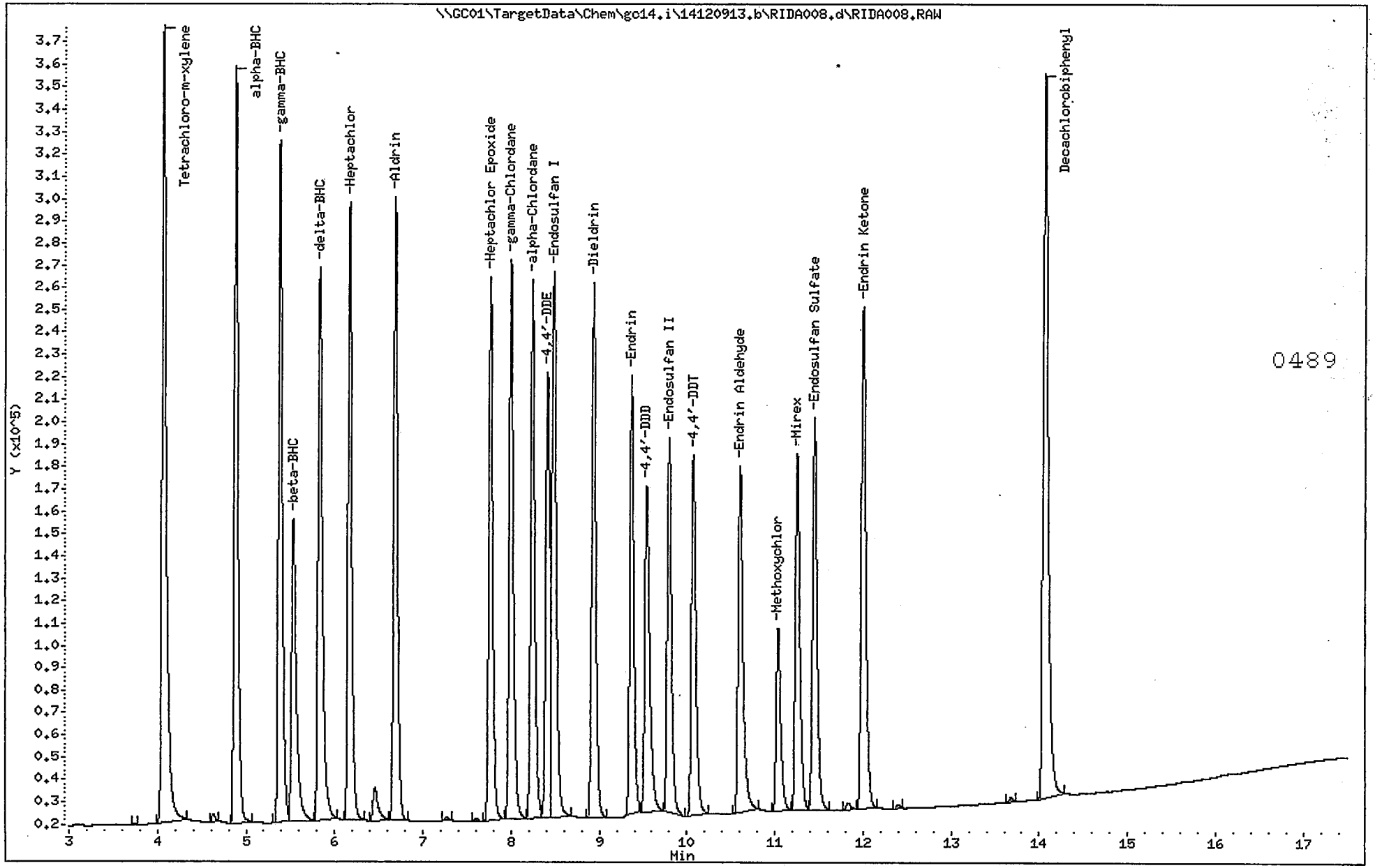
Client Name:
Lab Smp Id: ICAL6
Sample Location:
Sample Date:
Sample Matrix: SOIL
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info:

Client SDG: 14120913.b
Sample Point:
Date Received: 11-JAN-2008
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/kg	Q
319-84-6	alpha-BHC	0.10075	
58-89-9	gamma-BHC	0.10112	
319-85-7	beta-BHC	0.10135	
319-86-8	delta-BHC	0.10083	
76-44-8	Heptachlor	0.10022	
309-00-2	Aldrin	0.10108	
1024-57-3	Heptachlor epoxide	0.10096	
5103-74-2	gamma-Chlordane	0.10112	
5103-71-9	alpha-Chlordane	0.098192	
72-55-9	4,4'-DDE	0.10281	
959-98-8	Endosulfan I	0.099858	
60-57-1	Dieldrin	0.10037	
72-20-8	Endrin	0.11791	
72-54-8	4,4'-DDD	0.10033	
33213-65-9	Endosulfan II	0.10138	
50-29-3	4,4'-DDT	0.10162	
7421-93-4	Endrin aldehyde	0.11300	
72-43-5	Methoxychlor	0.099698	
2385-85-5	Mirex	0.10572	
1031-07-8	Endosulfan sulfate	0.099844	
53494-70-5	Endrin ketone	0.10172	
877-09-8	Tetrachloro-m-xylene	0.21947	
2051-24-3	DECACHLOROBIPHENYL	0.19521	

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA008.d
Date : 13-SEP-2012 19:31
Client ID:
Sample Info: ICAL6;;;1;6
Volume Injected (uL): 1.0
Column phase: RTXCLPEST

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB009.d
Lab Smp Id: ICAL7
Inj Date : 13-SEP-2012 19:53
Operator : KJH Inst ID: gc14.i
Smp Info : ICAL7;;;1;7
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:53 Cal File: RIDB009.d
Als bottle: 14 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Calibration.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
$ 1 Tetrachloro-m-xylene	4.100	4.098	0.002	2679657	0.40000	0.39362
2 alpha-BHC	4.998	4.993	0.005	2283568	0.20000	0.19980
3 gamma-BHC	5.571	5.565	0.006	2023492	0.20000	0.19892
4 beta-BHC	5.733	5.730	0.003	1066697	0.20000	0.19781
5 delta-BHC	6.226	6.223	0.003	1840611	0.20000	0.19936
6 Heptachlor	6.306	6.298	0.008	1892263	0.20000	0.19906
8 Aldrin	6.870	6.861	0.009	1734913	0.20000	0.19897
9 Heptachlor epoxide	7.908	7.898	0.010	1574198	0.20000	0.20097(A)
10 gamma-Chlordane	8.266	8.256	0.010	1723819	0.20000	0.19827
12 alpha-Chlordane	8.536	8.526	0.010	1639123	0.20000	0.19792
14 Endosulfan I	8.633	8.623	0.010	1559163	0.20000	0.19920
13 4,4'-DDE	8.888	8.881	0.007	1602524	0.20000	0.19906
16 Dieldrin	9.150	9.140	0.010	1560285	0.20000	0.19888
17 Endrin	9.726	9.716	0.010	1330213	0.20000	0.19976
18 4,4'-DDD	10.005	10.000	0.005	1250084	0.20000	0.19872
19 Endosulfan II	10.150	10.141	0.009	1241651	0.20000	0.19866
20 4,4'-DDT	10.605	10.596	0.009	1205523	0.20000	0.20121(A)
21 Endrin aldehyde	10.810	10.801	0.009	1143078	0.20000	0.19783
24 Endosulfan sulfate	11.356	11.348	0.008	1312398	0.20000	0.19893
22 Methoxychlor	11.986	11.978	0.008	636960	0.20000	0.19919
23 Mirex	12.301	12.291	0.010	1140707	0.20000	0.20030(A)

0490

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
25 Endrin ketone	12.400	12.390	0.010	1595075	0.20000	0.19787
$ 33 DECACHLOROBIPHENYL	14.918	14.908	0.010	2223232	0.40000	0.34489

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

ALS - Middletown

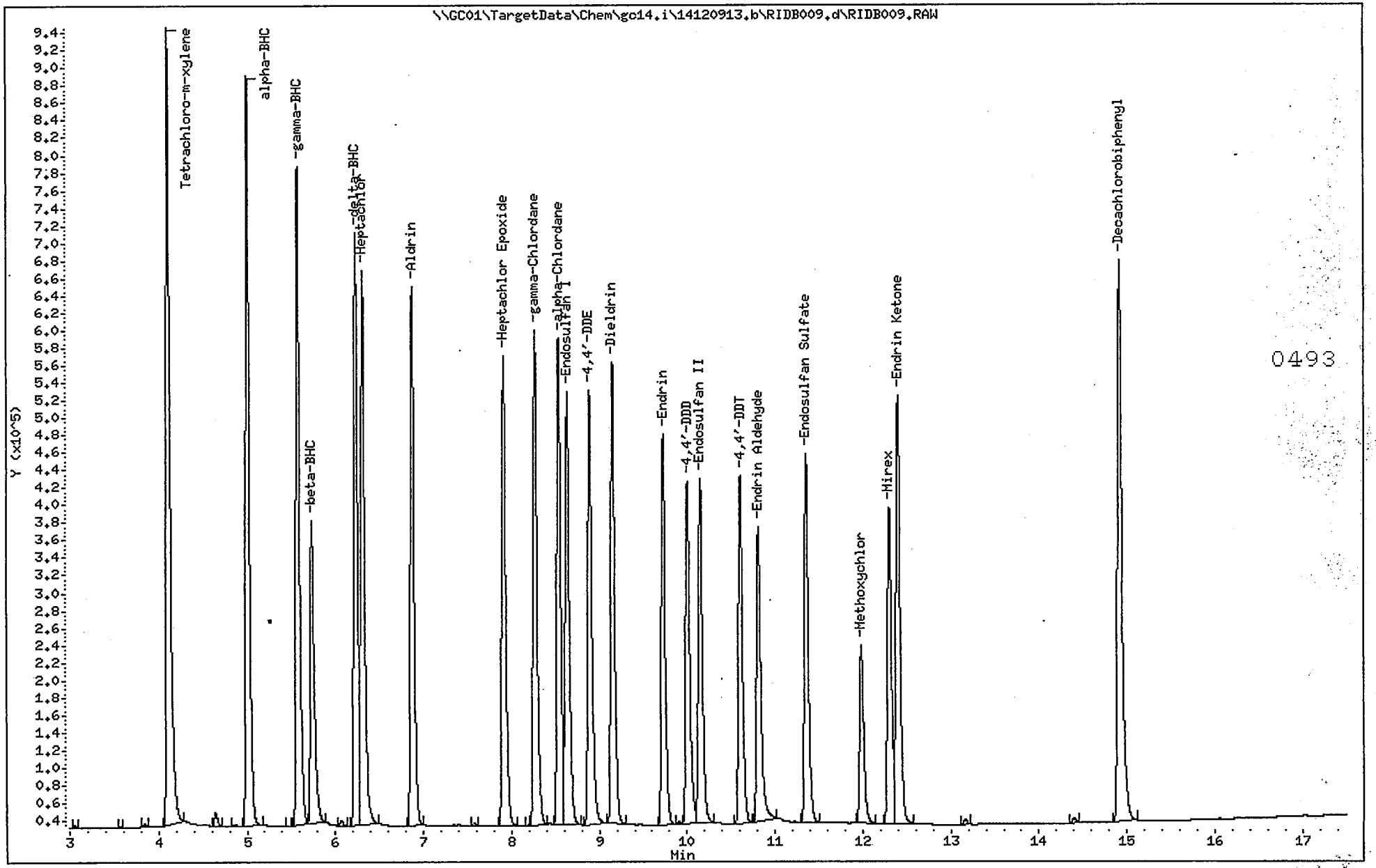
TARGET COMPOUNDS

Client Name: Client SDG: 14120913.b
Lab Smp Id: ICAL7
Sample Location: Sample Point:
Sample Date: Date Received: 11-JAN-2008
Sample Matrix: SOIL Quant Type: ESTD
Analysis Type: SV Level: LOW
Data Type: GC MULTI COMP Operator: KJH
Misc Info:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/kg	Q
319-84-6	alpha-BHC	0.19980	
58-89-9	gamma-BHC	0.19892	
319-85-7	beta-BHC	0.19781	
319-86-8	delta-BHC	0.19936	
76-44-8	Heptachlor	0.19906	
309-00-2	Aldrin	0.19897	
1024-57-3	Heptachlor epoxide	0.20097	E
5103-74-2	gamma-Chlordane	0.19827	
5103-71-9	alpha-Chlordane	0.19792	
959-98-8	Endosulfan I	0.19920	
72-55-9	4,4'-DDE	0.19906	
60-57-1	Dieldrin	0.19888	
72-20-8	Endrin	0.19976	
72-54-8	4,4'-DDD	0.19872	
33213-65-9	Endosulfan II	0.19866	
50-29-3	4,4'-DDT	0.20121	E
7421-93-4	Endrin aldehyde	0.19783	
1031-07-8	Endosulfan sulfate	0.19893	
72-43-5	Methoxychlor	0.19919	
2385-85-5	Mirex	0.20030	E
53494-70-5	Endrin ketone	0.19787	
877-09-8	Tetrachloro-m-xylene	0.39362	
2051-24-3	DECACHLOROBIPHENYL	0.34489	

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB009.d
Date : 13-SEP-2012 19:53
Client ID:
Sample Info: ICAL7;;;1;7
Volume Injected (uL): 1.0
Column phase: RTXCLPEST2

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA009.d
Lab Smp Id: ICAL7
Inj Date : 13-SEP-2012 19:53
Operator : KJH Inst ID: gc14.i
Smp Info : ICAL7;;;1;7
Misc Info :
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:53 Cal File: RIDA009.d
Als bottle: 14 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Calibration.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
$ 1 Tetrachloro-m-xylene	4.058	4.056	0.002	2228824	0.40000	0.41860 (A)
2 alpha-BHC	4.871	4.866	0.005	1939575	0.20000	0.19967
3 gamma-BHC	5.371	5.366	0.005	1785101	0.20000	0.19926
4 beta-BHC	5.523	5.523	0.000	980474	0.20000	0.19887
5 delta-BHC	5.818	5.816	0.002	1763696	0.20000	0.19982
6 Heptachlor	6.158	6.150	0.008	1608708	0.20000	0.19972
8 Aldrin	6.676	6.668	0.008	1635700	0.20000	0.19940
9 Heptachlor epoxide	7.756	7.746	0.010	1479247	0.20000	0.19931
10 gamma-Chlordane	7.991	7.981	0.010	1604914	0.20000	0.19917
12 alpha-Chlordane	8.235	8.225	0.010	1555606	0.20000	0.20040 (A)
13 4,4'-DDE	8.406	8.403	0.003	1155016	0.20000	0.19887
14 Endosulfan I	8.478	8.468	0.010	1797851	0.20000	0.19998
16 Dieldrin	8.926	8.918	0.008	1500549	0.20000	0.19989
17 Endrin	9.361	9.353	0.008	1212074	0.20000	0.23558 (AM)
18 4,4'-DDD	9.536	9.535	0.001	1136091	0.20000	0.20015 (AM)
19 Endosulfan II	9.791	9.783	0.008	1117487	0.20000	0.19947 (M)
20 4,4'-DDT	10.066	10.061	0.005	1186368	0.20000	0.19971 (M)
21 Endrin aldehyde	10.600	10.591	0.009	1161891	0.20000	0.22534 (A)
22 Methoxychlor	11.035	11.030	0.005	601247	0.20000	0.20044 (A)
23 Mirex	11.250	11.240	0.010	1090131	0.20000	0.20390 (A)
24 Endosulfan sulfate	11.445	11.436	0.009	1233328	0.20000	0.20026 (A)

0454

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
25 Endrin ketone	11.995	11.986	0.009	1535157	0.20000	0.19883
$ 33 DECACHLOROBIPHENYL	14.061	14.051	0.010	2342473	0.40000	0.36854

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

ALS - Middletown

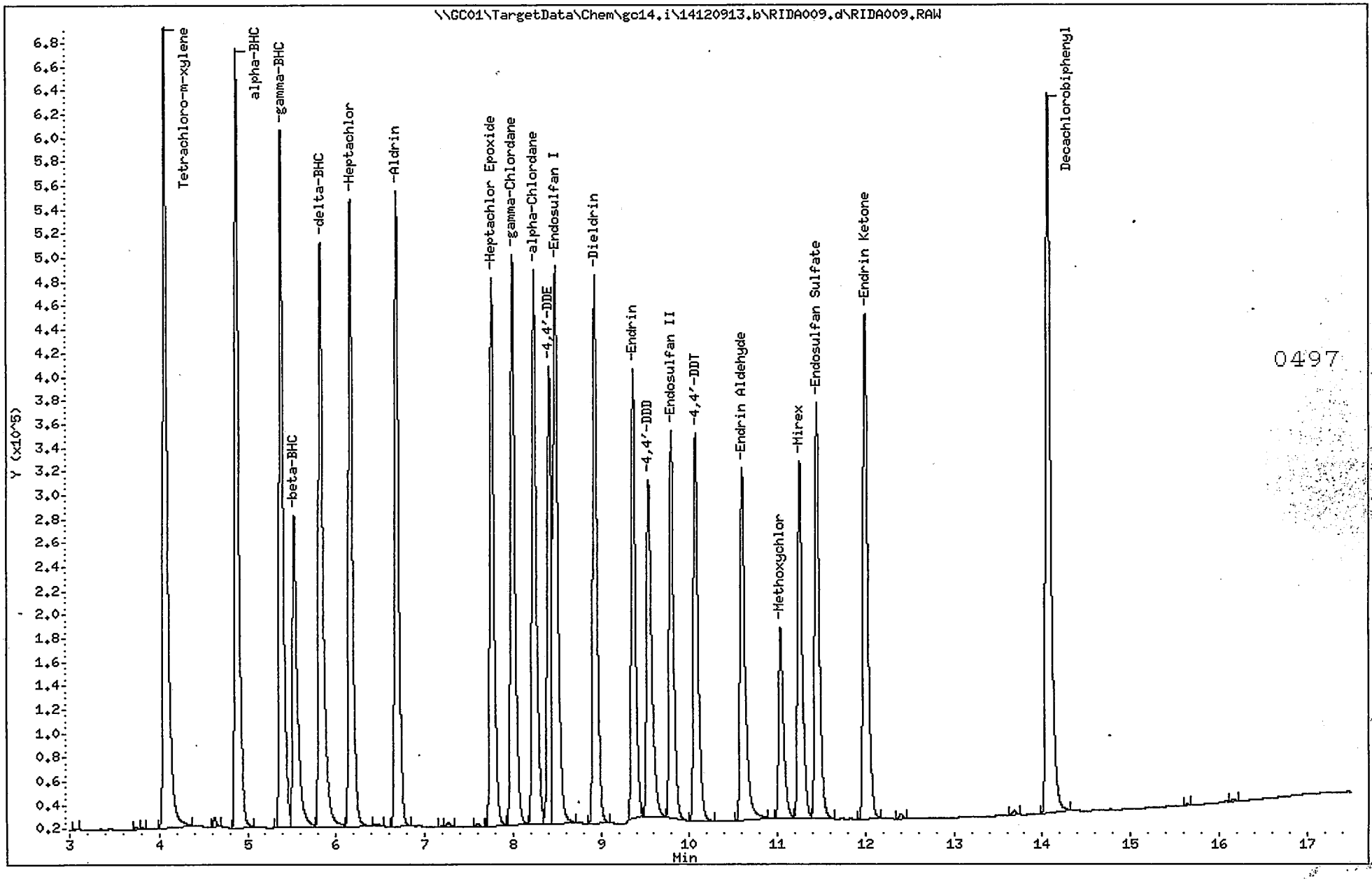
TARGET COMPOUNDS

Client Name: Client SDG: 14120913.b
Lab Smp Id: ICAL7
Sample Location: Sample Point:
Sample Date: Date Received: 11-JAN-2008
Sample Matrix: SOIL Quant Type: ESTD
Analysis Type: SV Level: LOW
Data Type: GC MULTI COMP Operator: KJH
Misc Info:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/kg	Q
319-84-6	alpha-BHC	0.19967	
58-89-9	gamma-BHC	0.19926	
319-85-7	beta-BHC	0.19887	
319-86-8	delta-BHC	0.19982	
76-44-8	Heptachlor	0.19972	
309-00-2	Aldrin	0.19940	
1024-57-3	Heptachlor epoxide	0.19931	
5103-74-2	gamma-Chlordane	0.19917	
5103-71-9	alpha-Chlordane	0.20040	E
72-55-9	4,4'-DDE	0.19887	
959-98-8	Endosulfan I	0.19998	
60-57-1	Dieldrin	0.19989	
72-20-8	Endrin	0.23558	E
72-54-8	4,4'-DDD	0.20015	E
33213-65-9	Endosulfan II	0.19947	
50-29-3	4,4'-DDT	0.19971	
7421-93-4	Endrin aldehyde	0.22534	E
72-43-5	Methoxychlor	0.20044	E
2385-85-5	Mirex	0.20390	E
1031-07-8	Endosulfan sulfate	0.20026	E
53494-70-5	Endrin ketone	0.19883	
877-09-8	Tetrachloro-m-xylene	0.41860	E
2051-24-3	DECACHLOROBIPHENYL	0.36854	

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA009.d
Date : 13-SEP-2012 19:53
Client ID:
Sample Info: ICAL7;;;1;7
Volume Injected (uL): 1.0
Column phase: RTXCLPEST

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



Continuing Calibrations

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Instrument ID: GC14 Calibration Date: 09/14/12 Time: 0551

Lab File ID: RIDB037 Init. Calib. Date(s): 09/13/12 09/13/12

Init. Calib. Times: 1744 1953

GC Column: RTXCLPEST2 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF5e-002 or AMOUNT	CCAL RRF5e-002	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
alpha-BHC	5.58e-002	5.e-002	8.06e-008	0.01	11.60	20.00	LINR
beta-BHC	5.81e-002	5.e-002	1.59e-007	0.01	16.20	20.00	LINR
delta-BHC	5.4e-002	5.e-002	1.03e-007	0.01	8.00	20.00	LINR
gamma-BHC	5.68e-002	5.e-002	8.77e-008	0.01	13.60	20.00	LINR
Heptachlor	5.89e-002	5.e-002	8.97e-008	0.01	17.80	20.00	LINR
Aldrin	5.72e-002	5.e-002	1.01e-007	0.01	14.40	20.00	LINR
Heptachlor epoxide	5.93e-002	5.e-002	1.08e-007	0.01	18.60	20.00	LINR
Endosulfan I	5.74e-002	5.e-002	1.12e-007	0.01	14.80	20.00	LINR
Dieldrin	5.68e-002	5.e-002	1.13e-007	0.01	13.60	20.00	LINR
4,4'-DDE	5.6e-002	5.e-002	1.13e-007	0.01	12.00	20.00	LINR
Endrin	5.88e-002	5.e-002	1.3e-007	0.01	17.60	20.00	LINR
Endosulfan II	5.84e-002	5.e-002	1.37e-007	0.01	16.80	20.00	LINR
4,4'-DDD	5.76e-002	5.e-002	1.38e-007	0.01	15.20	20.00	LINR
Endosulfan sulfate	5.65e-002	5.e-002	1.34e-007	0.01	13.00	20.00	LINR
4,4'-DDT	4.86e-002	5.e-002	1.86e-007	0.01	-2.80	20.00	LINR
Methoxychlor	5.42e-002	5.e-002	2.89e-007	0.01	8.40	20.00	LINR
Endrin ketone	5.58e-002	5.e-002	1.11e-007	0.01	11.60	20.00	LINR
Endrin aldehyde	5.54e-002	5.e-002	1.55e-007	0.01	10.80	20.00	LINR
alpha-Chlordane	5.8e-002	5.e-002	1.03e-007	0.01	16.00	20.00	LINR
gamma-Chlordane	5.74e-002	5.e-002	9.99e-008	0.01	14.80	20.00	LINR
Mirex	5.65e-002	5.e-002	1.37e-007	0.01	13.00	20.00	2RDR
Tetrachloro-m-xylene	0.1185980	0.1000000	1.21e-007	0.01	18.60	20.00	LINR
DECACHLOROBIPHENYL	6446156.4	7106810.0	7106810.0	0.01	10.25	20.00	AVRG

FORM VII SV

ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB037.d
Lab Smp Id: ccv
Inj Date : 14-SEP-2012 05:51
Operator : KJH Inst ID: gc14.i
Smp Info : ccv;;;2
Misc Info :
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:53 Cal File: RIDB009.d
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Calibration.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	30.300	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
$ 1	Tetrachloro-m-xylene	4.096	4.098	-0.002	825718	0.10000	0.11860
2	alpha-BHC	4.993	4.993	0.000	620657	0.05000	0.055760
3	gamma-BHC	5.566	5.565	0.001	570422	0.05000	0.056828
4	beta-BHC	5.730	5.730	0.000	315083	0.05000	0.058099
5	delta-BHC	6.223	6.223	0.000	485521	0.05000	0.053974
6	Heptachlor	6.300	6.298	0.002	557476	0.05000	0.058946
8	Aldrin	6.863	6.861	0.002	494618	0.05000	0.057224
9	Heptachlor epoxide	7.901	7.898	0.003	464783	0.05000	0.059282
10	gamma-Chlordane	8.260	8.256	0.004	500500	0.05000	0.057379
12	alpha-Chlordane	8.530	8.526	0.004	485610	0.05000	0.057998
14	Endosulfan I	8.625	8.623	0.002	447695	0.05000	0.057405
13	4,4'-DDE	8.885	8.881	0.004	443486	0.05000	0.056026
16	Dieldrin	9.143	9.140	0.003	443119	0.05000	0.056838
17	Endrin	9.720	9.716	0.004	385299	0.05000	0.058808
18	4,4'-DDD	10.001	10.000	0.001	361099	0.05000	0.057597
19	Endosulfan II	10.143	10.141	0.002	365810	0.05000	0.058380
20	4,4'-DDT	10.600	10.596	0.004	269288	0.05000	0.048561
21	Endrin aldehyde	10.803	10.801	0.002	321564	0.05000	0.055357
24	Endosulfan sulfate	11.350	11.348	0.002	372793	0.05000	0.056527
22	Methoxychlor	11.980	11.978	0.002	173024	0.05000	0.054155
23	Mirex	12.293	12.291	0.002	364746	0.05000	0.056528

0500

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
25 Endrin ketone	12.391	12.390	0.001	450370	0.05000	0.055773
$ 33 DECACHLOROBIPHENYL	14.910	14.908	0.002	710681	0.10000	0.11025

ALS - Middletown

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc14.i Injection Date: 14-SEP-2012 05:51
Lab File ID: RIDB037.d Init. Cal. Date(s): 13-SEP-2012 13-SEP-2012
Analysis Type: SOIL Init. Cal. Times: 12:29 19:53
Lab Sample ID: ccv Quant Type: ESTD
Method: \\GC01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m

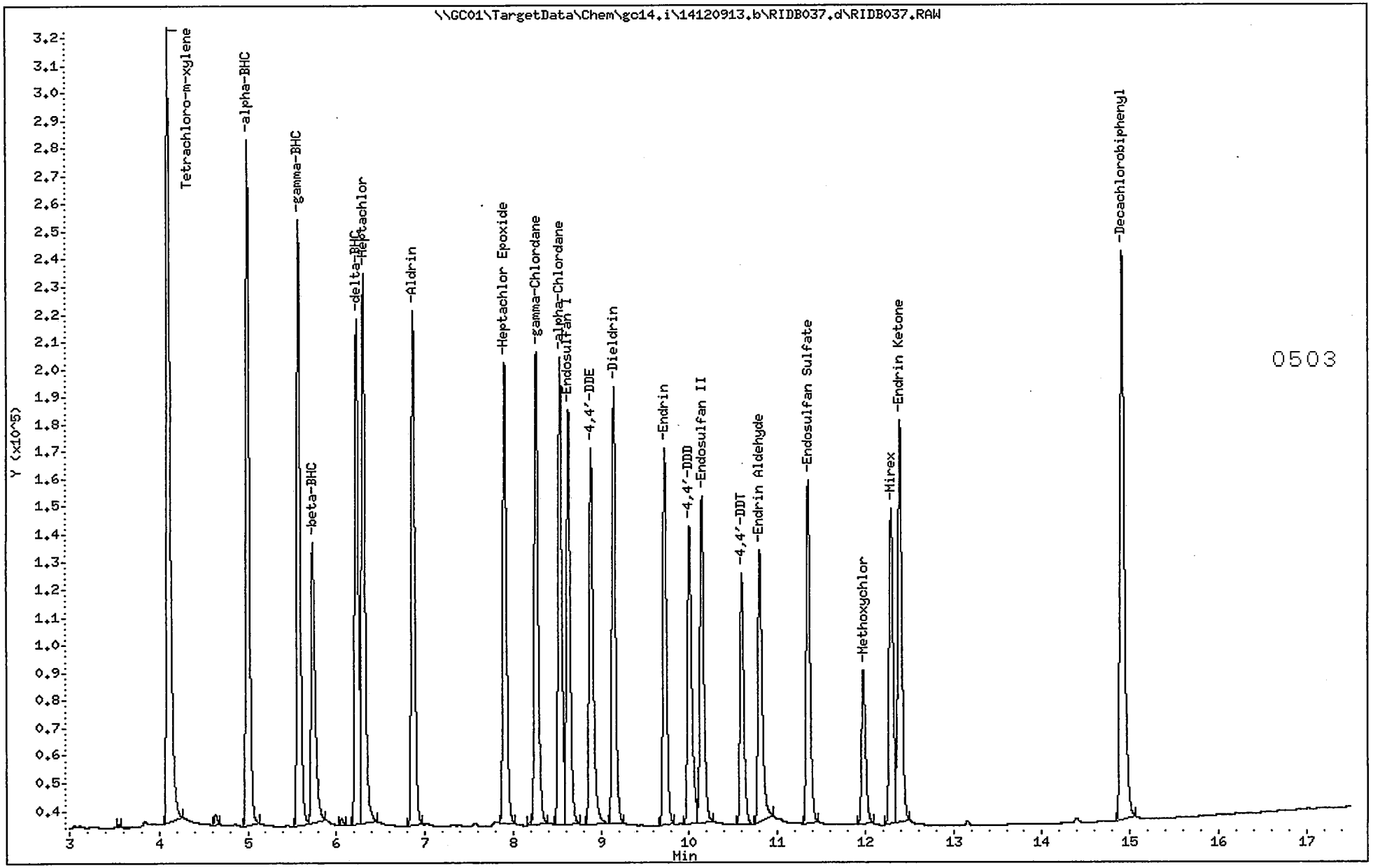
COMPOUND	RRF / AMOUNT	RF0.050	CCAL RRF0.050	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 Tetrachloro-m-xylene	0.10000	0.11860	0.00000	0.010	18.59797	20.00000	Linear
2 alpha-BHC	0.05000	0.05576	0.00000	0.010	11.52061	20.00000	Linear
3 gamma-BHC	0.05000	0.05683	0.00000	0.010	13.65591	20.00000	Linear
4 beta-BHC	0.05000	0.05810	0.00000	0.010	16.19837	20.00000	Linear
5 delta-BHC	0.05000	0.05397	0.00000	0.010	7.94811	20.00000	Linear
6 Heptachlor	0.05000	0.05895	0.00000	0.010	17.89239	20.00000	Linear
8 Aldrin	0.05000	0.05722	0.00000	0.010	14.44896	20.00000	Linear
9 Heptachlor Epoxide	0.05000	0.05928	0.00000	0.010	18.56457	20.00000	Linear
10 gamma-Chlordane	0.05000	0.05738	0.00000	0.010	14.75841	20.00000	Linear
12 alpha-Chlordane	0.05000	0.05800	0.00000	0.010	15.99714	20.00000	Linear
14 Endosulfan I	0.05000	0.05741	0.00000	0.010	14.81049	20.00000	Linear
13 4,4'-DDE	0.05000	0.05603	0.00000	0.010	12.05240	20.00000	Linear
16 Dieldrin	0.05000	0.05684	0.00000	0.010	13.67715	20.00000	Linear
17 Endrin	0.05000	0.05881	0.00000	0.010	17.61649	20.00000	Linear
18 4,4'-DDD	0.05000	0.05760	0.00000	0.010	15.19469	20.00000	Linear
19 Endosulfan II	0.05000	0.05838	0.00000	0.010	16.76038	20.00000	Linear
20 4,4'-DDT	0.05000	0.04856	0.00000	0.010	-2.87811	20.00000	Linear
21 Endrin Aldehyde	0.05000	0.05536	0.00000	0.010	10.71453	20.00000	Linear
24 Endosulfan Sulfate	0.05000	0.05653	0.00000	0.010	13.05430	20.00000	Linear
22 Methoxychlor	0.05000	0.05416	0.00000	0.010	8.31061	20.00000	Linear
23 Mirex	0.05000	0.05653	0.00000	0.010	13.05580	20.00000	Quadratic
25 Endrin Ketone	0.05000	0.05577	0.00000	0.010	11.54651	20.00000	Linear
$ 33 Decachlorobiphenyl	6446156	7106810	7106810	0.010	10.24880	20.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 15.17889
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB037.d
Date : 14-SEP-2012 05:51
Client ID:
Sample Info: ccv;;;2
Volume Injected (uL): 1.0
Column phase: RTXCLPEST2

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA037.d
Lab Smp Id: ccv
Inj Date : 14-SEP-2012 05:51
Operator : KJH Inst ID: gc14.i
Smp Info : ccv;;;2
Misc Info :
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:53 Cal File: RIDA009.d
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Calibration.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	30.300	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
$ 1	Tetrachloro-m-xylene	4.053	4.056	-0.003	609430	0.10000	0.11446
2	alpha-BHC	4.865	4.866	-0.001	466624	0.05000	0.050019
3	gamma-BHC	5.365	5.366	-0.001	441199	0.05000	0.050665
4	beta-BHC	5.521	5.523	-0.002	250974	0.05000	0.051715
5	delta-BHC	5.816	5.816	0.000	387269	0.05000	0.048828
6	Heptachlor	6.150	6.150	0.000	403690	0.05000	0.051249
8	Aldrin	6.668	6.668	0.000	403472	0.05000	0.050623
9	Heptachlor epoxide	7.748	7.746	0.002	374330	0.05000	0.051516
10	gamma-Chlordane	7.983	7.981	0.002	410769	0.05000	0.051799
12	alpha-Chlordane	8.226	8.225	0.001	402379	0.05000	0.052642
13	4,4'-DDE	8.403	8.403	0.000	256062	0.05000	0.045888
14	Endosulfan I	8.468	8.468	0.000	462173	0.05000	0.053016
16	Dieldrin	8.918	8.918	0.000	362604	0.05000	0.050063
17	Endrin	9.353	9.353	0.000	307784	0.05000	0.059822 (M)
18	4,4'-DDD	9.535	9.535	0.000	269361	0.05000	0.049345 (M)
19	Endosulfan II	9.785	9.783	0.002	268503	0.05000	0.049164 (M)
20	4,4'-DDT	10.061	10.061	0.000	221447	0.05000	0.044117
21	Endrin aldehyde	10.591	10.591	0.000	286148	0.05000	0.055495
22	Methoxychlor	11.030	11.030	0.000	134319	0.05000	0.047444
23	Mirex	11.240	11.240	0.000	303532	0.05000	0.056773
24	Endosulfan sulfate	11.436	11.436	0.000	297332	0.05000	0.050054

0504

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
25 Endrin ketone	11.988	11.986	0.002	395425	0.05000	0.051370
$ 33 DECACHLOROBIPHENYL	14.053	14.051	0.002	677225	0.10000	0.10655

QC Flag Legend

M - Compound response manually integrated.

ALS - Middletown

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc14.i Injection Date: 14-SEP-2012 05:51
Lab File ID: RIDA037.d Init. Cal. Date(s): 12-SEP-2012 13-SEP-2012
Analysis Type: SOIL Init. Cal. Times: 11:50 19:53
Lab Sample ID: ccv Quant Type: ESTD
Method: \\GC01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m

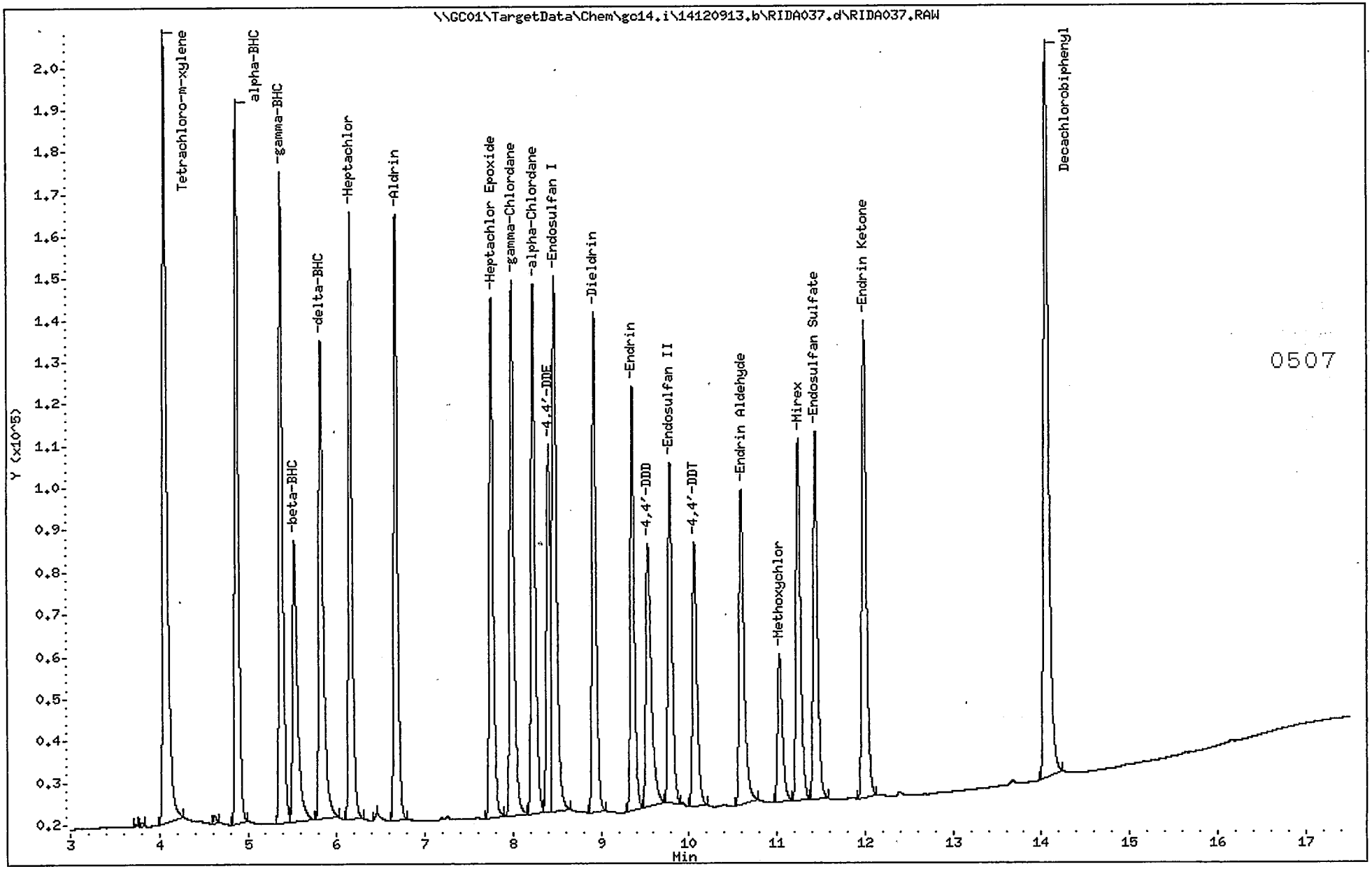
COMPOUND	RRF / AMOUNT	RF0.050	CCAL RRF0.050	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 Tetrachloro-m-xylene	5324431	6094300	6094300	0.010	14.45917	20.00000	Averaged
2 alpha-BHC	0.05000	0.05002	0.00000	0.010	0.03763	20.00000	Linear
3 gamma-BHC	0.05000	0.05066	0.00000	0.010	1.32988	20.00000	Linear
4 beta-BHC	0.05000	0.05172	0.00000	0.010	3.43098	20.00000	Linear
5 delta-BHC	0.05000	0.04883	0.00000	0.010	-2.34310	20.00000	Quadratic
6 Heptachlor	0.05000	0.05125	0.00000	0.010	2.49768	20.00000	Linear
8 Aldrin	0.05000	0.05062	0.00000	0.010	1.24689	20.00000	Linear
9 Heptachlor Epoxide	0.05000	0.05152	0.00000	0.010	3.03277	20.00000	Linear
10 gamma-Chlordane	0.05000	0.05180	0.00000	0.010	3.59843	20.00000	Linear
12 alpha-Chlordane	0.05000	0.05264	0.00000	0.010	5.28467	20.00000	Linear
13 4,4'-DDE	0.05000	0.04589	0.00000	0.010	-8.22457	20.00000	Linear
14 Endosulfan I	0.05000	0.05302	0.00000	0.010	6.03203	20.00000	Linear
16 Dieldrin	0.05000	0.05006	0.00000	0.010	0.12544	20.00000	Linear
17 Endrin	5144967	6155680	6155680	0.010	19.64470	20.00000	Averaged
18 4,4'-DDD	0.05000	0.04934	0.00000	0.010	-1.31044	20.00000	Linear
19 Endosulfan II	0.05000	0.04916	0.00000	0.010	-1.67092	20.00000	Linear
20 4,4'-DDT	0.05000	0.04412	0.00000	0.010	-11.76516	20.00000	Quadratic
21 Endrin Aldehyde	5156272	5722960	5722960	0.010	10.99026	20.00000	Averaged
22 Methoxychlor	0.05000	0.04744	0.00000	0.010	-5.11277	20.00000	Linear
23 Mirex	5346435	6070640	6070640	0.010	13.54557	20.00000	Averaged
24 Endosulfan Sulfate	0.05000	0.05005	0.00000	0.010	0.10824	20.00000	Linear
25 Endrin Ketone	0.05000	0.05137	0.00000	0.010	2.74053	20.00000	Linear
$ 33 Decachlorobiphenyl	6356171	6772250	6772250	0.010	6.54606	20.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 6.36127
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA037.d
Date : 14-SEP-2012 05:51
Client ID:
Sample Info: ccv;;;2
Volume Injected (uL): 1.0
Column phase: RTXCLPEST

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Instrument ID: GC14 Calibration Date: 09/14/12 Time: 0613

Lab File ID: RIDB038 Init. Calib. Date(s): 09/13/12 09/13/12

Init. Calib. Times: 1744 1953

GC Column: RTXCLPEST2 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF5e-002 or AMOUNT	CCAL RRF5e-002	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
alpha-BHC	5.64e-002	5.e-002	7.95e-008	0.01	12.80	20.00	LINR	
beta-BHC	5.89e-002	5.e-002	1.56e-007	0.01	17.80	20.00	LINR	
delta-BHC	5.5e-002	5.e-002	1.01e-007	0.01	10.0	20.00	LINR	
gamma-BHC	5.76e-002	5.e-002	8.64e-008	0.01	15.20	20.00	LINR	
Heptachlor	5.95e-002	5.e-002	8.89e-008	0.01	19.00	20.00	LINR	
Aldrin	5.81e-002	5.e-002	9.96e-008	0.01	16.20	20.00	LINR	
Heptachlor epoxide	5.99e-002	5.e-002	1.06e-007	0.01	19.80	20.00	LINR	
Endosulfan I	5.82e-002	5.e-002	1.1e-007	0.01	16.40	20.00	LINR	
Dieldrin	5.79e-002	5.e-002	1.11e-007	0.01	15.80	20.00	LINR	
4,4'-DDE	5.7e-002	5.e-002	1.11e-007	0.01	14.00	20.00	LINR	
Endrin	5.6e-002	5.e-002	1.36e-007	0.01	12.00	20.00	LINR	
Endosulfan II	5.96e-002	5.e-002	1.34e-007	0.01	19.20	20.00	LINR	
4,4'-DDD	5.95e-002	5.e-002	1.34e-007	0.01	19.00	20.00	LINR	
Endosulfan sulfate	5.77e-002	5.e-002	1.31e-007	0.01	15.40	20.00	LINR	
4,4'-DDT	4.82e-002	5.e-002	1.87e-007	0.01	-3.60	20.00	LINR	
Methoxychlor	5.43e-002	5.e-002	2.88e-007	0.01	8.60	20.00	LINR	
Endrin ketone	5.82e-002	5.e-002	1.06e-007	0.01	16.40	20.00	LINR	
Endrin aldehyde	5.74e-002	5.e-002	1.5e-007	0.01	14.80	20.00	LINR	
alpha-Chlordane	5.91e-002	5.e-002	1.01e-007	0.01	18.20	20.00	LINR	
gamma-Chlordane	5.82e-002	5.e-002	9.85e-008	0.01	16.40	20.00	LINR	
Mirex	5.73e-002	5.e-002	1.35e-007	0.01	14.60	20.00	2RDR	
Tetrachloro-m-xylene	0.1213529	0.1000000	1.18e-007	0.01	21.35	20.00	LINR	<-
DECACHLOROBIPHENYL	6446156.4	7254120.0	7254120.0	0.01	12.53	20.00	AVRG	

FORM VII SV

ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB038.d
Lab Smp Id: ccv
Inj Date : 14-SEP-2012 06:13
Operator : KJH Inst ID: gc14.i
Smp Info : ccv;;;2
Misc Info :
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:53 Cal File: RIDB009.d
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Calibration.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
$ 1	Tetrachloro-m-xylene	4.098	4.098	0.000	844289	0.10000	0.12135
2	alpha-BHC	4.993	4.993	0.000	628571	0.05000	0.056446
3	gamma-BHC	5.565	5.565	0.000	578398	0.05000	0.057608
4	beta-BHC	5.730	5.730	0.000	319622	0.05000	0.058943
5	delta-BHC	6.223	6.223	0.000	494919	0.05000	0.054982
6	Heptachlor	6.298	6.298	0.000	562471	0.05000	0.059470
8	Aldrin	6.861	6.861	0.000	502036	0.05000	0.058072
9	Heptachlor epoxide	7.898	7.898	0.000	469850	0.05000	0.059929
10	gamma-Chlordane	8.256	8.256	0.000	507434	0.05000	0.058178
12	alpha-Chlordane	8.526	8.526	0.000	494773	0.05000	0.059110
14	Endosulfan I	8.623	8.623	0.000	454043	0.05000	0.058215
13	4,4'-DDE	8.881	8.881	0.000	451284	0.05000	0.056988
16	Dieldrin	9.140	9.140	0.000	451636	0.05000	0.057921
17	Endrin	9.716	9.716	0.000	366564	0.05000	0.056013
18	4,4'-DDD	10.000	10.000	0.000	373166	0.05000	0.059513
19	Endosulfan II	10.141	10.141	0.000	373176	0.05000	0.059560
20	4,4'-DDT	10.596	10.596	0.000	267095	0.05000	0.048203
21	Endrin aldehyde	10.801	10.801	0.000	333405	0.05000	0.057411
24	Endosulfan sulfate	11.348	11.348	0.000	380543	0.05000	0.057702
22	Methoxychlor	11.978	11.978	0.000	173465	0.05000	0.054293
23	Mirex	12.291	12.291	0.000	369269	0.05000	0.057268

0506

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
25 Endrin ketone	12.390	12.390	0.000	469859	0.05000	0.058192
$ 33 DECACHLOROBIPHENYL	14.908	14.908	0.000	725412	0.10000	0.11253

ALS - Middletown

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc14.i Injection Date: 14-SEP-2012 06:13
Lab File ID: RIDB038.d Init. Cal. Date(s): 13-SEP-2012 13-SEP-2012
Analysis Type: SOIL Init. Cal. Times: 12:29 19:53
Lab Sample ID: ccv Quant Type: ESTD
Method: \\GC01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m

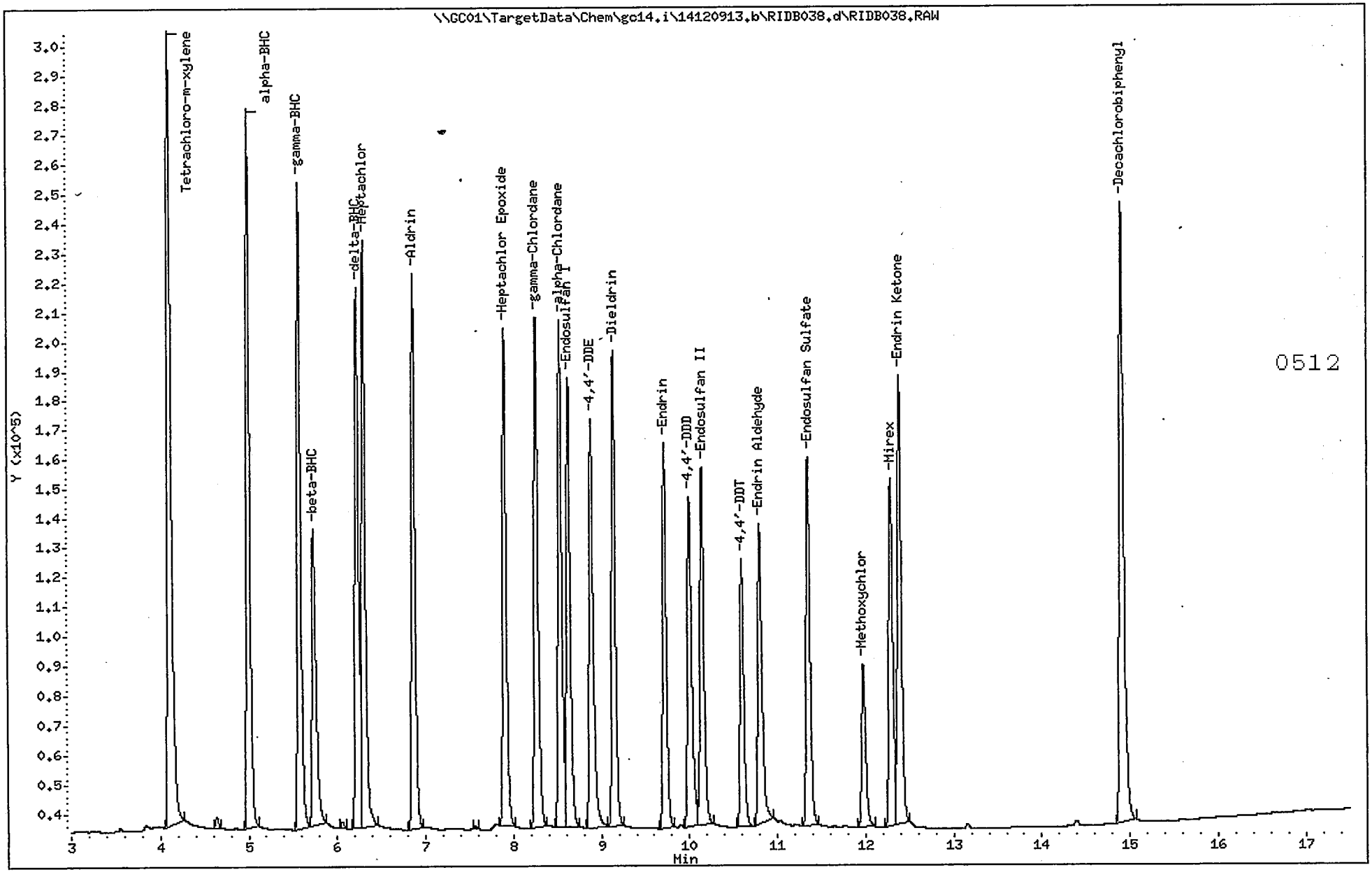
COMPOUND	RRF / AMOUNT	RF0.050	CCAL RRF0.050	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 Tetrachloro-m-xylene	0.10000	0.12135	0.00000	0.010	21.35287	20.00000	Linear	<-
2 alpha-BHC	0.05000	0.05645	0.00000	0.010	12.89161	20.00000	Linear	
3 gamma-BHC	0.05000	0.05761	0.00000	0.010	15.21579	20.00000	Linear	
4 beta-BHC	0.05000	0.05894	0.00000	0.010	17.88579	20.00000	Linear	
5 delta-BHC	0.05000	0.05498	0.00000	0.010	9.96470	20.00000	Linear	
6 Heptachlor	0.05000	0.05947	0.00000	0.010	18.94105	20.00000	Linear	
8 Aldrin	0.05000	0.05807	0.00000	0.010	16.14449	20.00000	Linear	
9 Heptachlor Epoxide	0.05000	0.05993	0.00000	0.010	19.85885	20.00000	Linear	
10 gamma-Chlordane	0.05000	0.05818	0.00000	0.010	16.35564	20.00000	Linear	
12 alpha-Chlordane	0.05000	0.05911	0.00000	0.010	18.22005	20.00000	Linear	
14 Endosulfan I	0.05000	0.05822	0.00000	0.010	16.43020	20.00000	Linear	
13 4,4'-DDE	0.05000	0.05699	0.00000	0.010	13.97712	20.00000	Linear	
16 Dieldrin	0.05000	0.05792	0.00000	0.010	15.84290	20.00000	Linear	
17 Endrin	0.05000	0.05601	0.00000	0.010	12.02691	20.00000	Linear	
18 4,4'-DDD	0.05000	0.05951	0.00000	0.010	19.02579	20.00000	Linear	
19 Endosulfan II	0.05000	0.05956	0.00000	0.010	19.11988	20.00000	Linear	
20 4,4'-DDT	0.05000	0.04820	0.00000	0.010	-3.59324	20.00000	Linear	
21 Endrin Aldehyde	0.05000	0.05741	0.00000	0.010	14.82156	20.00000	Linear	
24 Endosulfan Sulfate	0.05000	0.05770	0.00000	0.010	15.40345	20.00000	Linear	
22 Methoxychlor	0.05000	0.05429	0.00000	0.010	8.58633	20.00000	Linear	
23 Mirex	0.05000	0.05727	0.00000	0.010	14.53714	20.00000	Quadratic	
25 Endrin Ketone	0.05000	0.05819	0.00000	0.010	16.38516	20.00000	Linear	
$ 33 Decachlorobiphenyl	6446156	7254120	7254120	0.010	12.53404	20.00000	Averaged	

Average %D / Drift Results.

Calculated Average %D/Drift = 15.17889
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB038.d
Date : 14-SEP-2012 06:13
Client ID:
Sample Info: ccv;;;2
Volume Injected (uL): 1.0
Column phase: RTXCLPEST2

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA038.d
Lab Smp Id: ccv
Inj Date : 14-SEP-2012 06:13
Operator : KJH Inst ID: gc14.i
Smp Info : ccv;;;2
Misc Info :
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:53 Cal File: RIDA009.d
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Calibration.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
$ 1	Tetrachloro-m-xylene	4.056	4.056	0.000	618256	0.10000	0.11612
2	alpha-BHC	4.866	4.866	0.000	470906	0.05000	0.050454
3	gamma-BHC	5.366	5.366	0.000	445087	0.05000	0.051095
4	beta-BHC	5.523	5.523	0.000	253260	0.05000	0.052177
5	delta-BHC	5.816	5.816	0.000	390296	0.05000	0.049178
6	Heptachlor	6.150	6.150	0.000	405311	0.05000	0.051448
8	Aldrin	6.668	6.668	0.000	408931	0.05000	0.051282
9	Heptachlor epoxide	7.746	7.746	0.000	377520	0.05000	0.051943 (M)
10	gamma-Chlordane	7.981	7.981	0.000	412898	0.05000	0.052062 (M)
12	alpha-Chlordane	8.225	8.225	0.000	404753	0.05000	0.052946 (M)
13	4,4'-DDE	8.403	8.403	0.000	260920	0.05000	0.046714 (M)
14	Endosulfan I	8.468	8.468	0.000	469520	0.05000	0.053824 (M)
16	Dieldrin	8.918	8.918	0.000	367837	0.05000	0.050752
17	Endrin	9.353	9.353	0.000	292461	0.05000	0.056844
18	4,4'-DDD	9.535	9.535	0.000	287243	0.05000	0.052456
19	Endosulfan II	9.783	9.783	0.000	277852	0.05000	0.050820
20	4,4'-DDT	10.061	10.061	0.000	219787	0.05000	0.043824
21	Endrin aldehyde	10.591	10.591	0.000	295721	0.05000	0.057352
22	Methoxychlor	11.030	11.030	0.000	132413	0.05000	0.046819
23	Mirex	11.240	11.240	0.000	308205	0.05000	0.057647
24	Endosulfan sulfate	11.436	11.436	0.000	302378	0.05000	0.050864

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
25 Endrin ketone	11.986	11.986	0.000	411950	0.05000	0.053508
$ 33 DECACHLOROBIPHENYL	14.051	14.051	0.000	688465	0.10000	0.10831

QC Flag Legend

M - Compound response manually integrated.

ALS - Middletown

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc14.i
Lab File ID: RIDA038.d
Analysis Type: SOIL
Lab Sample ID: ccv
Method: \\GC01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m

Injection Date: 14-SEP-2012 06:13
Init. Cal. Date(s): 12-SEP-2012 13-SEP-2012
Init. Cal. Times: 11:50 19:53
Quant Type: ESTD

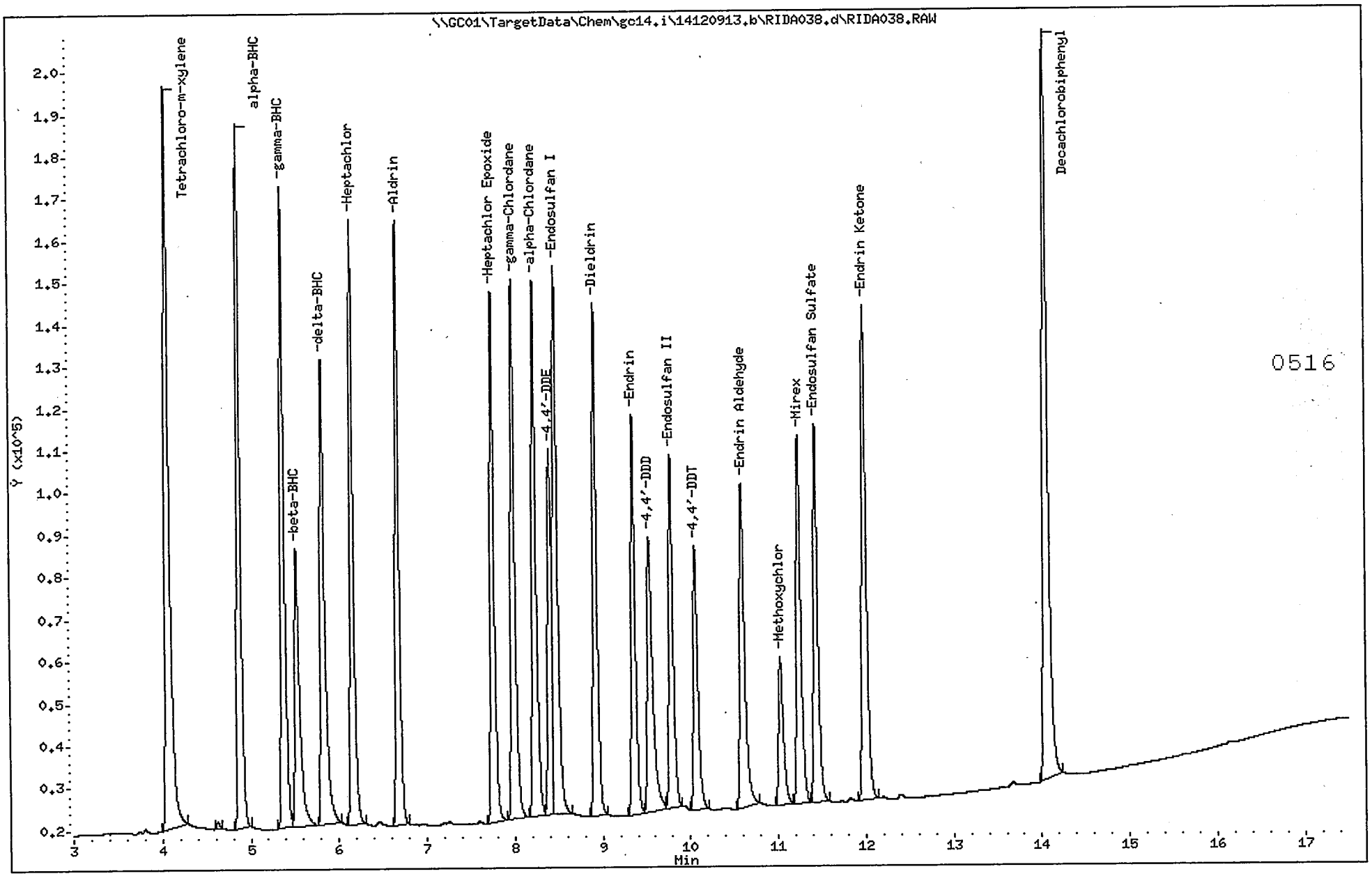
COMPOUND	RRF / AMOUNT	RF0.050	CCAL RRF0.050	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 Tetrachloro-m-xylene	5324431	6182560	6182560	0.010	16.11681	20.00000	Averaged
2 alpha-BHC	0.05000	0.05045	0.00000	0.010	0.90774	20.00000	Linear
3 gamma-BHC	0.05000	0.05109	0.00000	0.010	2.18966	20.00000	Linear
4 beta-BHC	0.05000	0.05218	0.00000	0.010	4.35325	20.00000	Linear
5 delta-BHC	0.05000	0.04918	0.00000	0.010	-1.64384	20.00000	Quadratic
6 Heptachlor	0.05000	0.05145	0.00000	0.010	2.89715	20.00000	Linear
8 Aldrin	0.05000	0.05128	0.00000	0.010	2.56507	20.00000	Linear
9 Heptachlor Epoxide	0.05000	0.05194	0.00000	0.010	3.88619	20.00000	Linear
10 gamma-Chlordane	0.05000	0.05206	0.00000	0.010	4.12393	20.00000	Linear
12 alpha-Chlordane	0.05000	0.05295	0.00000	0.010	5.89301	20.00000	Linear
13 4,4'-DDE	0.05000	0.04671	0.00000	0.010	-6.57113	20.00000	Linear
14 Endosulfan I	0.05000	0.05382	0.00000	0.010	7.64881	20.00000	Linear
16 Dieldrin	0.05000	0.05075	0.00000	0.010	1.50344	20.00000	Linear
17 Endrin	5144967	5849220	5849220	0.010	13.68820	20.00000	Averaged
18 4,4'-DDD	0.05000	0.05246	0.00000	0.010	4.91224	20.00000	Linear
19 Endosulfan II	0.05000	0.05082	0.00000	0.010	1.63938	20.00000	Linear
20 4,4'-DDT	0.05000	0.04382	0.00000	0.010	-12.35169	20.00000	Quadratic
21 Endrin Aldehyde	5156272	5914420	5914420	0.010	14.70341	20.00000	Averaged
22 Methoxychlor	0.05000	0.04682	0.00000	0.010	-6.36188	20.00000	Linear
23 Mirex	5346435	6164100	6164100	0.010	15.29365	20.00000	Averaged
24 Endosulfan Sulfate	0.05000	0.05086	0.00000	0.010	1.72780	20.00000	Linear
25 Endrin Ketone	0.05000	0.05351	0.00000	0.010	7.01654	20.00000	Linear
$ 33 Decachlorobiphenyl	6356171	6884650	6884650	0.010	8.31442	20.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 6.36127
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA038.d
Date : 14-SEP-2012 06:13
Client ID:
Sample Info: ccv;;;2
Volume Injected (uL): 1.0
Column phase: RTXCLPEST

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB035.d
Lab Smp Id: tox
Inj Date : 14-SEP-2012 05:09
Operator : KJH Inst ID: gc14.i
Smp Info : tox
Misc Info :
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:53 Cal File: RIDB009.d
Als bottle: 31
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/kg)

pattern recognition only

ALS - Middletown

TARGET COMPOUNDS

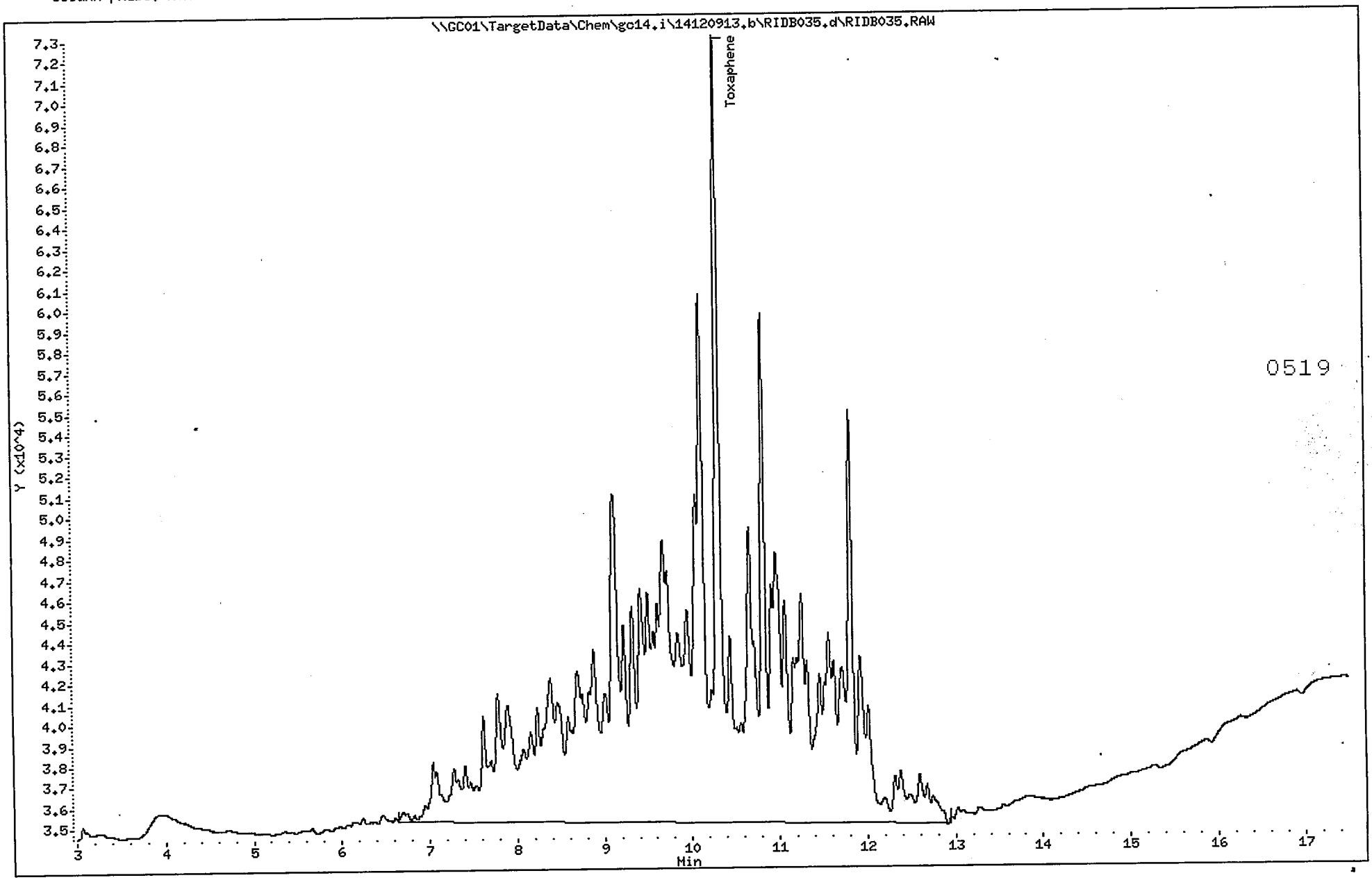
Client Name:
Client SDG: 14120913.b
Lab Smp Id: tox
Sample Location:
Sample Point:
Sample Date:
Date Received: 11-JAN-2008
Sample Matrix: SOIL
Quant Type: ESTD
Analysis Type: SV
Level: LOW
Data Type: GC MULTI COMP
Operator: KJH
Misc Info:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/kg	Q
8001-35-2	TOXAPHENE	0.00000	J

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB035.d
Date : 14-SEP-2012 05:09
Client ID:
Sample Info: tox
Volume Injected (uL): 1.0
Column phase: RTXCLPEST2

Instrument: gc14.i

Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA035.d
Lab Smp Id: tox
Inj Date : 14-SEP-2012 05:09
Operator : KJH Inst ID: gc14.i
Smp Info : tox
Misc Info :
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:53 Cal File: RIDA009.d
Als bottle: 31
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/kg)
11 TOXAPHENE	9.773	12.400	-2.627	1308903	419.914	139971 (AM)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

pattern recognition

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: tox
Sample Location:
Sample Date:
Sample Matrix: SOIL
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info:

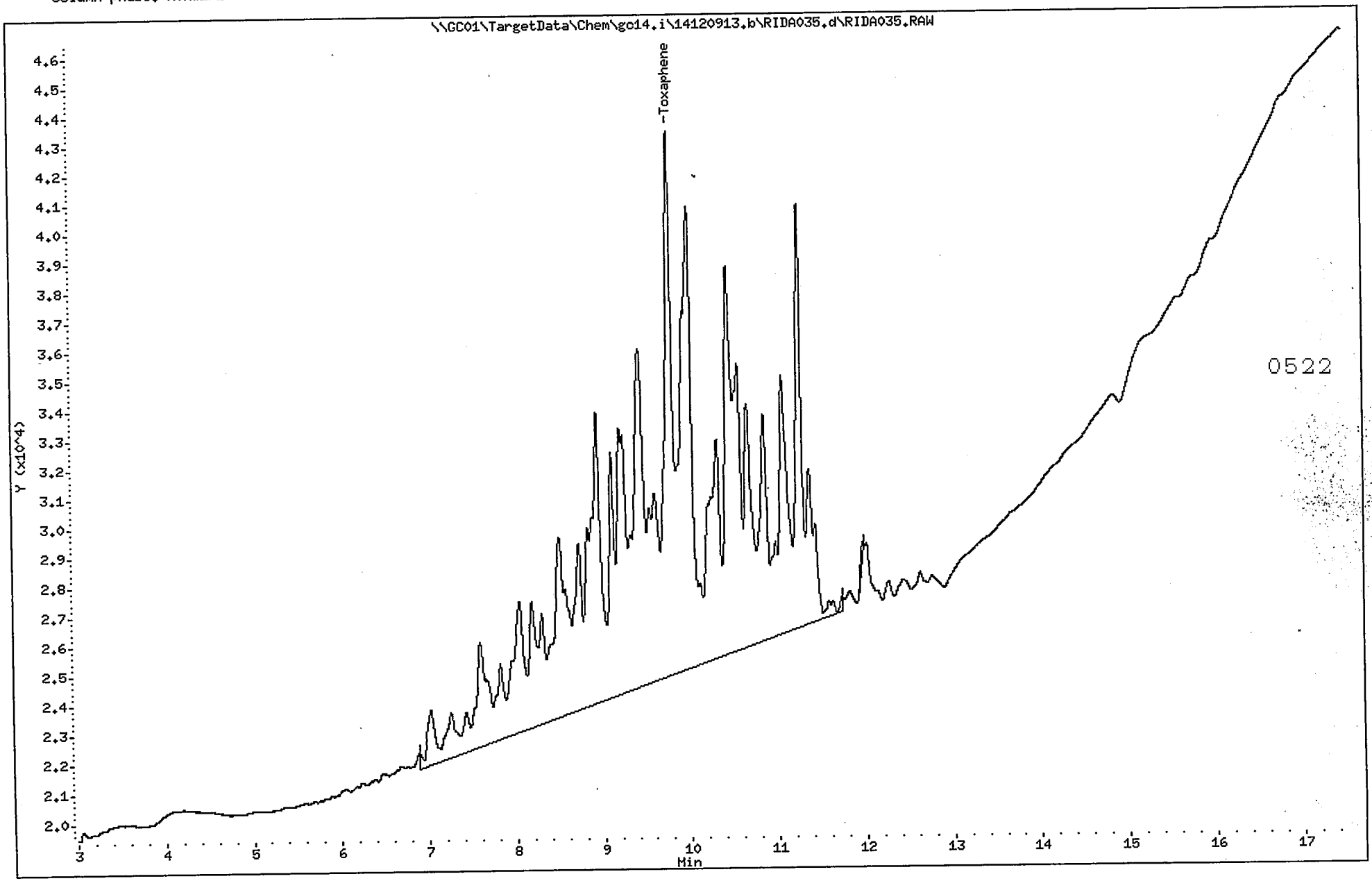
Client SDG: 14120913.b

Sample Point:
Date Received: 11-JAN-2008
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/kg	Q
8001-35-2	TOXAPHENE	139971	E

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA035.d
Date : 14-SEP-2012 05:09
Client ID:
Sample Info: tox
Volume Injected (uL): 1.0
Column phase: RTXCLPEST

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB036.d
Lab Smp Id: chlor
Inj Date : 14-SEP-2012 05:30
Operator : KJH Inst ID: gc14.i
Smp Info : chlor
Misc Info :
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:53 Cal File: RIDB009.d
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Chlor.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

				AMOUNTS	
				CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)

pattern recognition okay

ALS - Middletown

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc14.i
Lab File ID: RIDB036.d
Analysis Type: SOIL
Lab Sample ID: chlor
Method: \\GC01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m

Injection Date: 14-SEP-2012 05:30
Init. Cal. Date(s): 13-SEP-2012 13-SEP-2012
Init. Cal. Times: 12:29 19:53
Quant Type: ESTD

COMPOUND	RRF / AMOUNT	RF0.050	CCAL RRF0.050	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
15 Chlordane (1)	1.00000	++++	0.00013	0.010	++++	20.00000	Linear	<-
(2)	1.00000	++++	0.00007	0.010	++++	20.00000	Linear	<-
(3)	1.00000	++++	0.00003	0.010	++++	20.00000	Linear	<-
(4)	1.00000	++++	0.00003	0.010	++++	20.00000	Linear	<-
(5)	1.00000	++++	0.00012	0.010	++++	20.00000	Linear	<-
(6)	1.00000	++++	0.00028	0.010	++++	20.00000	Linear	<-

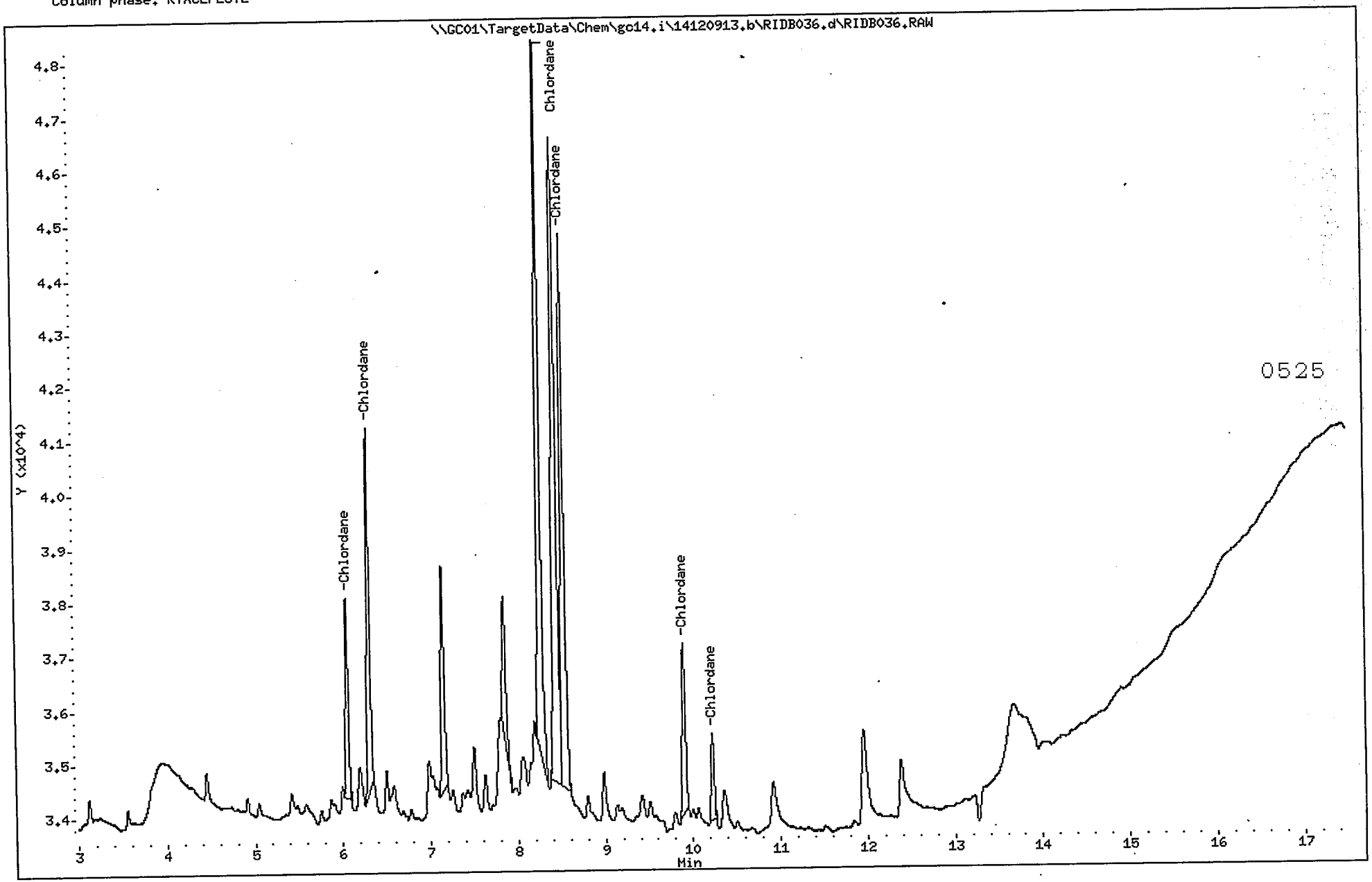
Average %D / Drift Results.

Calculated Average %D/Drift = 15.17889
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB036.d
Date : 14-SEP-2012 05:30
Client ID:
Sample Info: chlor
Volume Injected (uL): 1.0
Column phase: RTXCLPEST2

Instrument: gc14.i

Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA036.d
Lab Smp Id: chlor
Inj Date : 14-SEP-2012 05:30
Operator : KJH Inst ID: gc14.i
Smp Info : chlor
Misc Info :
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:53 Cal File: RIDA009.d
Als bottle: 31
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Chlor.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/kg)

pattern recognition by [illegible]

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: chlor
Sample Location:
Sample Date:
Sample Matrix: SOIL
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info:

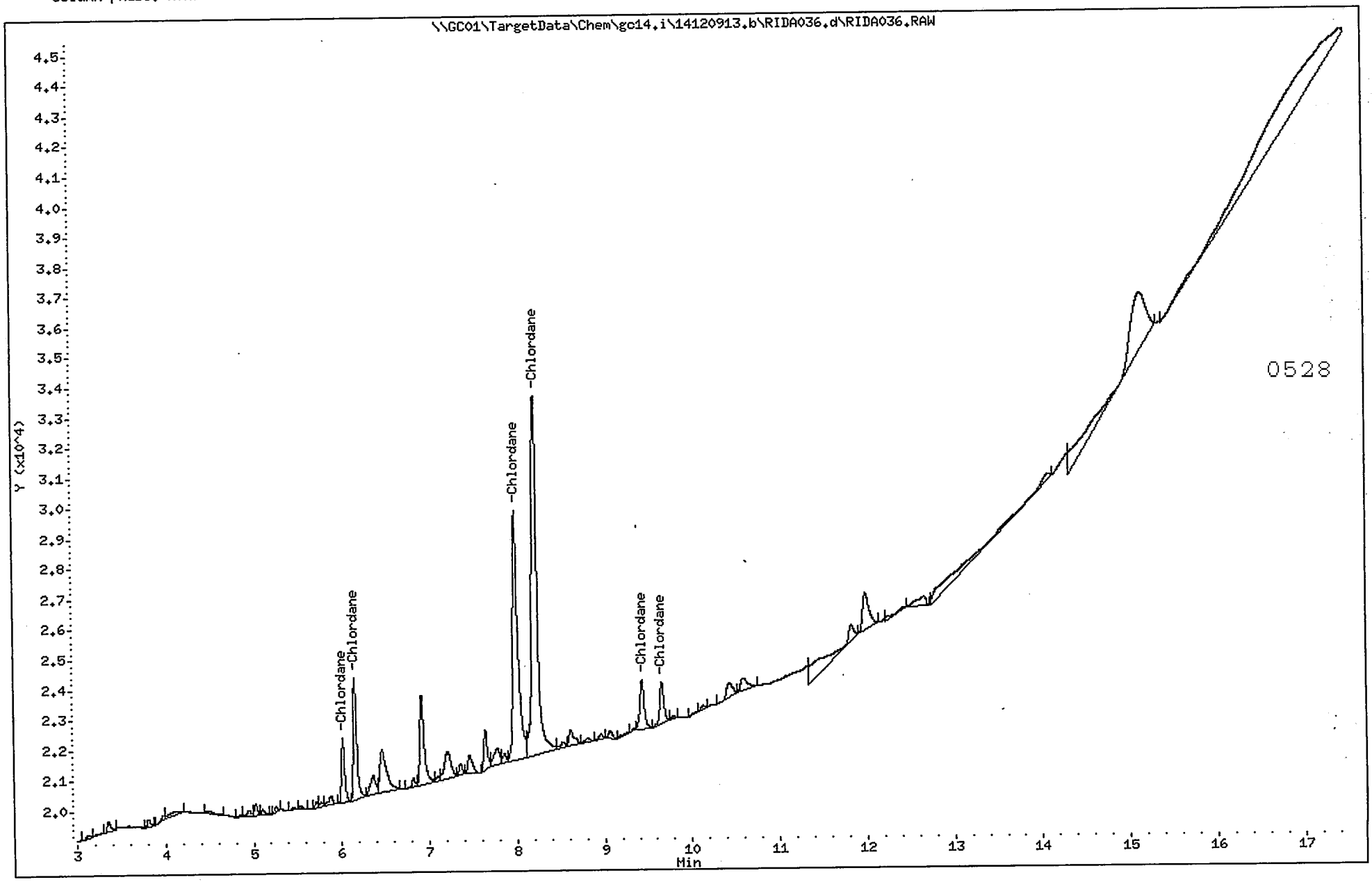
Client SDG: 14120913.b

Sample Point:
Date Received: 11-JAN-2008
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/kg	Q
57-74-9	CHLORDANE		J
	Peak found at 6.012	0.00000	J
	Peak found at 6.148	0.00000	J
	Peak found at 7.983	0.00000	J
	Peak found at 8.212	0.00000	J
	Peak found at 9.433	0.00000	J
	Peak found at 9.658	0.00000	J
	Average of Peak Amounts =	0.00000	J

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA036.d
Date : 14-SEP-2012 05:30
Client ID:
Sample Info: chlor
Volume Injected (uL): 1.0
Column phase: RTXCLPEST

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



QC Raw Data

Degradation Check Raw Data

Pesticide Degradation Calculation

8081A: Accept: <=15% breakdown
608/505: Accept: <=20% breakdown

Instrument: GC-14

Date: 9/13/2012

File name: **RIDA001**

	Area	DDT% Breakdown
4,4'-DDE	2504	2
4,4'-DDD	13550	
4,4'-DDT	779572	

	Area	Endrin% Breakdown
Endrin Aldehyde	13066	11
Endrin Ketone	37935	
Endrin	399762	

File name: **RIDB001**

	Area	DDT% Breakdown
4,4'-DDE	4153	4
4,4'-DDD	25724	
4,4'-DDT	795773	

	Area	Endrin% Breakdown
Endrin Aldehyde	14841	10
Endrin Ketone	37991	
Endrin	455385	

ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA001.d
Lab Smp Id: DEGRAD
Inj Date : 13-SEP-2012 12:08
Operator : KJH Inst ID: gc14.i
Smp Info : DEGRAD
Misc Info :
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 12-SEP-2012 13:58 Cal File: RICA008.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: DegCheck.sub
Target Version: 4.12
Processing Host: WGC004

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/kg)
13 4,4'-DDE	8.421	8.403	0.018	2504	0.00379	1.2631(aM)
17 Endrin	9.375	9.353	0.022	399762	0.07599	25.3287
18 4,4'-DDD	9.568	9.535	0.033	13550	0.00583	1.9443(aM)
20 4,4'-DDT	10.081	10.061	0.020	779572	0.14194	47.3134
21 Endrin aldehyde	10.616	10.591	0.025	13066	0.00253	0.84384(a)
25 Endrin ketone	12.011	11.986	0.025	37935	0.00577	1.9247(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

0563

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: DEGRAD
Sample Location:
Sample Date:
Sample Matrix: SOIL
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info:

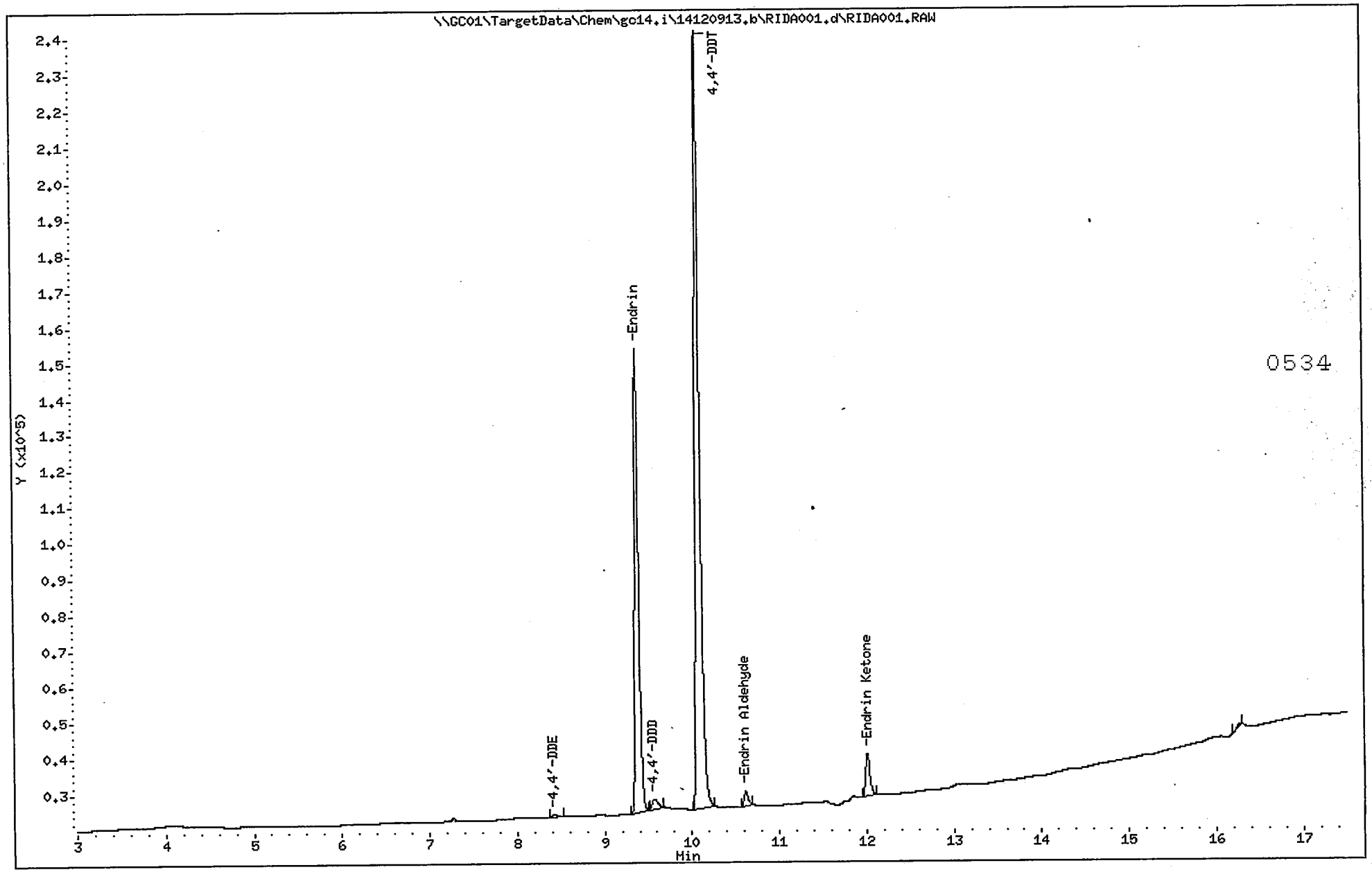
Client SDG: 14120913.b

Sample Point:
Date Received: 11-JAN-2008
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/kg	Q
72-55-9	4,4'-DDE	1.2631	J
72-20-8	Endrin	25.3287	
72-54-8	4,4'-DDD	1.9443	J
50-29-3	4,4'-DDT	47.3134	
7421-93-4	Endrin aldehyde	0.84384	J
53494-70-5	Endrin ketone	1.9247	J

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA001.d
Date : 13-SEP-2012 12:08
Client ID:
Sample Info: DEGRAD
Volume Injected (uL): 1.0
Column phase: RTXCLPEST

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB001.d
Lab Smp Id: DEGRAD
Inj Date : 13-SEP-2012 12:08
Operator : KJH Inst ID: gc14.i
Smp Info : DEGRAD
Misc Info :
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 12-SEP-2012 13:58 Cal File: RICB008.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: DegCheck.sub
Target Version: 4.12
Processing Host: WGC004

Concentration Formula: Amt * DF * (Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/kg)
17 Endrin	9.735	9.716	0.019	455385	0.06861	22.8706
18 4,4'-DDD	10.023	10.000	0.023	25724	0.00412	1.3735(a)
20 4,4'-DDT	10.613	10.596	0.017	795773	0.12725	42.4161
21 Endrin aldehyde	10.820	10.801	0.019	14841	0.00248	0.82673(a)
25 Endrin ketone	12.408	12.390	0.018	37991	0.00491	1.6362(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: DEGRAD
Sample Location:
Sample Date:
Sample Matrix: SOIL
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info:

Client SDG: 14120913.b

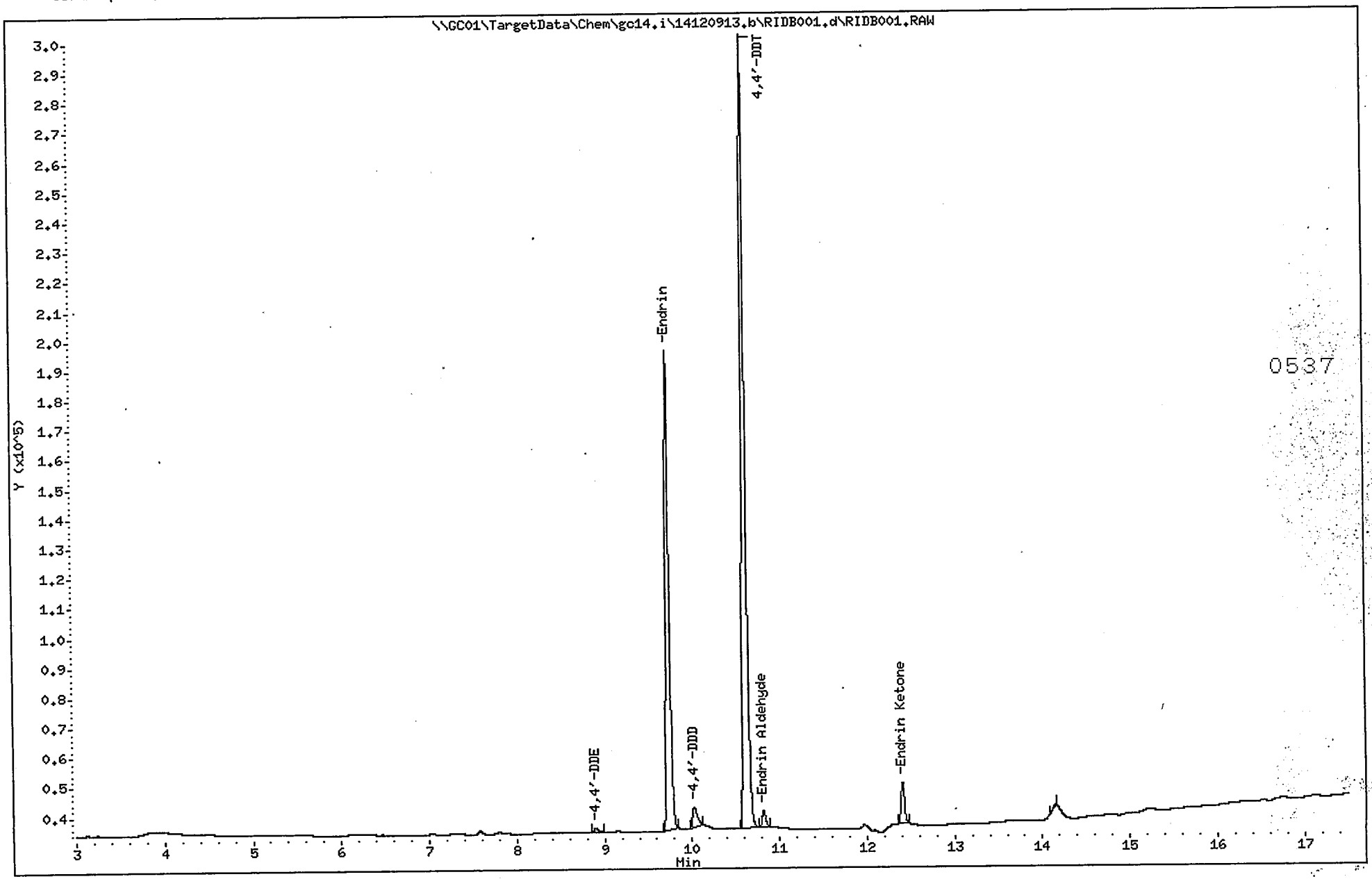
Sample Point:
Date Received: 11-JAN-2008
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/kg	Q
72-55-9	4,4'-DDE	0.18669	J
72-20-8	Endrin	22.8706	
72-54-8	4,4'-DDD	1.3735	J
50-29-3	4,4'-DDT	42.4161	
7421-93-4	Endrin aldehyde	0.82673	J
53494-70-5	Endrin ketone	1.6362	J

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB001.d
Date : 13-SEP-2012 12:08
Client ID:
Sample Info: DEGRAD
Volume Injected (uL): 1.0
Column phase: RTXCLPEST2

Instrument: gc14.i

Operator: KJH
Column diameter: 0.32



Blank Raw Data

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
1033730

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Matrix: (soil/water) WATER Lab Sample ID: 1033730

Sample wt/vol: 1000 (g/ml) ML Lab File ID: RIDB032A

Level: (low/med) LOW Date Received: 09/13/12

% Moisture: _____ Decanted: (Y/N)___ Date Extracted: 09/13/12

Concentrated Extract Volume: 5000(uL) Date Analyzed: 09/14/12

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
72-55-9	4,4'-DDE	0.013	U
72-20-8	Endrin	0.085	U
72-54-8	4,4'-DDD	0.013	U
50-29-3	4,4'-DDT	0.013	U
53494-70-5	Endrin ketone	0.013	U
7421-93-4	Endrin aldehyde	0.013	U

ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB032a.d
Lab Smp Id: 1033730 Client Smp ID: MB for HBN 481071 [
Inj Date : 14-SEP-2012 04:05
Operator : KJH Inst ID: gc14.i
Smp Info : 1033730;1000
Misc Info : ZZ SVGC 28222 D8081WB
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:53 Cal File: RIDB009.d
Als bottle: 31 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: DoD.sub
Target Version: 4.12
Processing Host: WGC004

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL (mL)
Vi	1.000	Volume injected (uL)
DF	1.000	DILUTION FACTOR
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
$ 1 Tetrachloro-m-xylene	4.098	4.098	0.000	1318803	0.19174	0.95872
2 alpha-BHC	Compound Not Detected.					
3 gamma-BHC	Compound Not Detected.					
4 beta-BHC	Compound Not Detected.					
5 delta-BHC	Compound Not Detected.					
6 Heptachlor	Compound Not Detected.					
15 Chlordane	Compound Not Detected.					
8 Aldrin	Compound Not Detected.					
9 Heptachlor Epoxide	Compound Not Detected.					
10 gamma-Chlordane	Compound Not Detected.					
12 alpha-Chlordane	Compound Not Detected.					
13 4,4'-DDE	Compound Not Detected.					
14 Endosulfan I	Compound Not Detected.					
16 Dieldrin	Compound Not Detected.					
17 Endrin	Compound Not Detected.					
18 4,4'-DDD	Compound Not Detected.					
19 Endosulfan II	Compound Not Detected.					
20 4,4'-DDT	Compound Not Detected.					
21 Endrin Aldehyde	Compound Not Detected.					
22 Methoxychlor	Compound Not Detected.					

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
11 Toxaphene	Compound Not Detected.					
24 Endosulfan Sulfate	Compound Not Detected.					
25 Endrin Ketone	Compound Not Detected.					
$ 33 Decachlorobiphenyl	14.908	14.908	0.000	1440375	0.22345	1.1172

ALS - Middletown

RECOVERY REPORT

Client Name:
Client SDG: 14120913.b
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: 1033730
Client Smp ID: MB for HBN 481071 [
Level: LOW
Operator: KJH
Data Type: GC MULTI COMP
SampleType: BLANK
SpikeList File: 3510waters.spk
Quant Type: ESTD
Sublist File: DoD.sub
Method File: \\GC01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m
Misc Info: ZZ SVGC 28222 D8081WB

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 Tetrachloro-m-xyle	1.2500	0.95872	76.70	25-140
$ 33 Decachlorobiphenyl	1.2500	1.1172	89.38	30-135

ALS - Middletown

TARGET COMPOUNDS

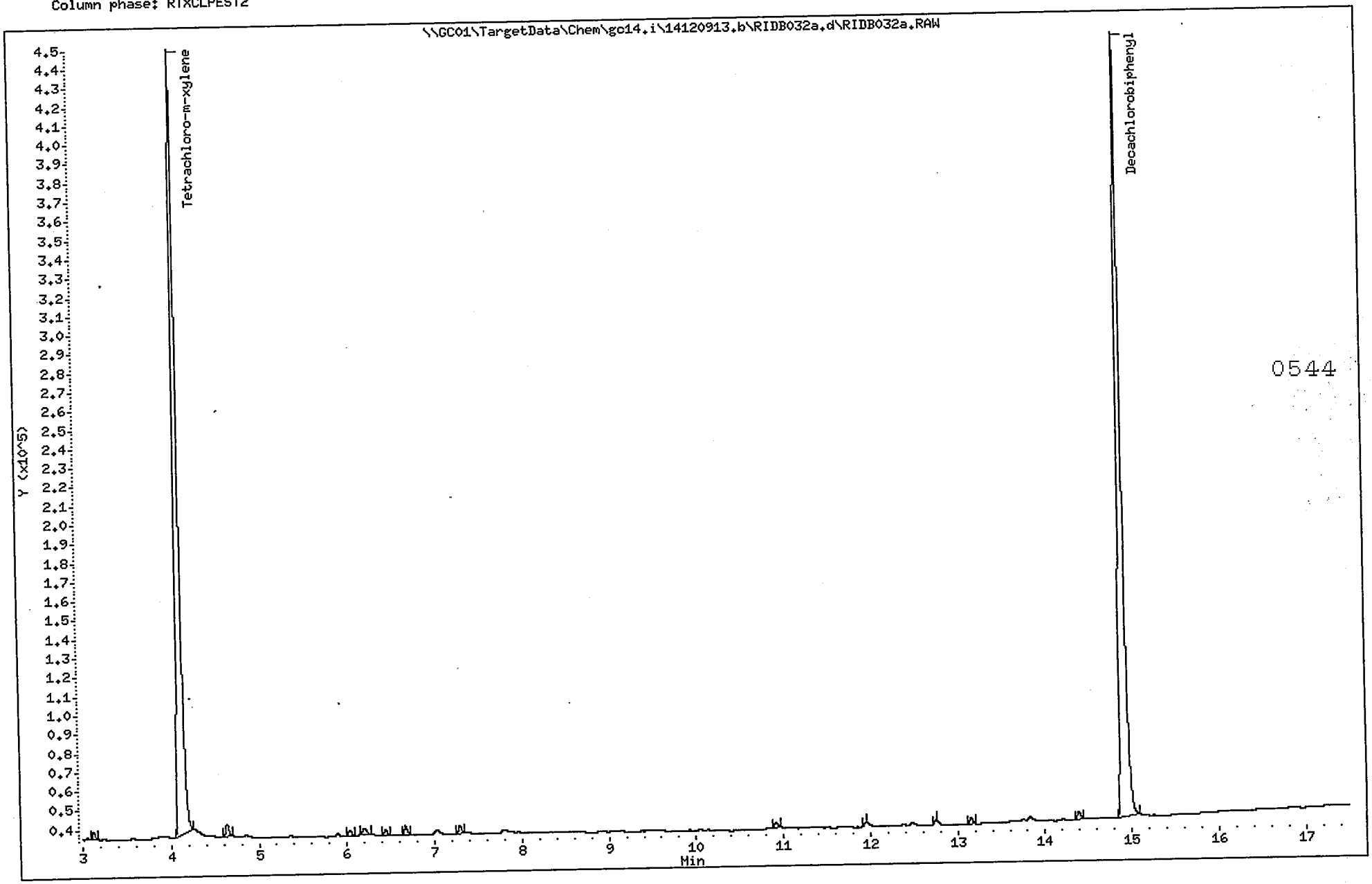
Client Name:
Lab Smp Id: 1033730
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info: ZZ SVGC 28222 D8081WB

Client SDG: 14120913.b
Client Smp ID: MB for HBN 481071 [
Sample Point:
Date Received: 13-SEP-2012
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
877-09-8	Tetrachloro-m-xylene	0.95872	
2051-24-3	Decachlorobiphenyl	1.1172	

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB032a.d
Date : 14-SEP-2012 04:05
Client ID: MB for HBN 481071 [
Sample Info: 1033730;1000
Volume Injected (uL): 1.0
Column phase: RTXCLPEST2

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA032a.d
Lab Smp Id: 1033730 Client Smp ID: MB for HBN 481071 [
Inj Date : 14-SEP-2012 04:05
Operator : KJH Inst ID: gc14.i
Smp Info : 1033730;1000
Misc Info : ZZ SVGC 28222 D8081WB
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:53 Cal File: RIDA009.d
Als bottle: 31 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: DoD.sub
Target Version: 4.12
Processing Host: WGC004

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
$ 1 Tetrachloro-m-xylene	4.055	4.056	-0.001	995406	0.18695	0.93475
2 alpha-BHC	Compound Not Detected.					
3 gamma-BHC	Compound Not Detected.					
4 beta-BHC	Compound Not Detected.					
5 delta-BHC	Compound Not Detected.					
6 Heptachlor	6.133	6.150	-0.017	4650	0.00208	0.010405(a)
15 Chlordane	Compound Not Detected.					
8 Aldrin	Compound Not Detected.					
9 Heptachlor Epoxide	Compound Not Detected.					
10 gamma-Chlordane	Compound Not Detected.					
12 alpha-Chlordane	Compound Not Detected.					
13 4,4'-DDE	Compound Not Detected.					
14 Endosulfan I	Compound Not Detected.					
16 Dieldrin	Compound Not Detected.					
17 Endrin	Compound Not Detected.					
18 4,4'-DDD	Compound Not Detected.					
19 Endosulfan II	Compound Not Detected.					
20 4,4'-DDT	Compound Not Detected.					
21 Endrin Aldehyde	Compound Not Detected.					
22 Methoxychlor	Compound Not Detected.					
11 Toxaphene	Compound Not Detected.					

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24 Endosulfan Sulfate	Compound Not Detected.					
25 Endrin Ketone	Compound Not Detected.					
$ 33 Decachlorobiphenyl	14.048	14.051	-0.003	1406322	0.22125	1.1063

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

ALS - Middletown

RECOVERY REPORT

Client Name:
Client SDG: 14120913.b
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: 1033730
Client Smp ID: MB for HBN 481071 [
Level: LOW
Operator: KJH
Data Type: GC MULTI COMP
SampleType: BLANK
SpikeList File: 3510waters.spk
Quant Type: ESTD
Sublist File: DoD.sub
Method File: \\GC01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m
Misc Info: ZZ SVGC 28222 D8081WB

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 Tetrachloro-m-xyle	1.2500	0.93475	74.78	25-140
$ 33 Decachlorobiphenyl	1.2500	1.1063	88.50	30-135

ALS - Middletown

TARGET COMPOUNDS

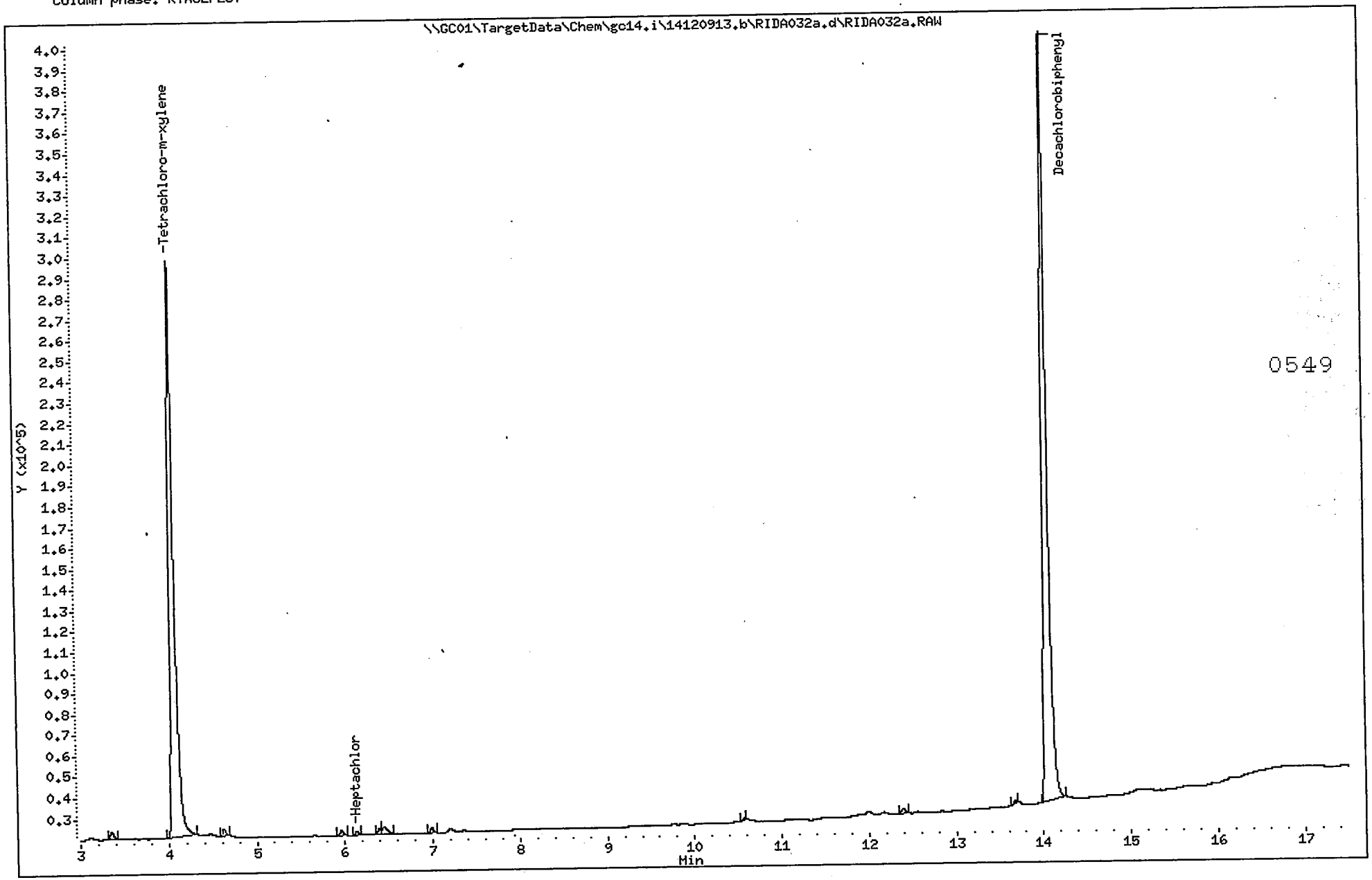
Client Name:
Lab Smp Id: 1033730
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info: ZZ SVGC 28222 D8081WB

Client SDG: 14120913.b
Client Smp ID: MB for HBN 481071 [
Sample Point:
Date Received: 13-SEP-2012
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
76-44-8	Heptachlor	0.010405	J
877-09-8	Tetrachloro-m-xylene	0.93475	
2051-24-3	Decachlorobiphenyl	1.1063	

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA032a.d
Date : 14-SEP-2012 04:05
Client ID: MB for HBN 481071 [
Sample Info: 1033730;1000
Volume Injected (uL): 1.0
Column phase: RTXCLPEST

Instrument: gc14.i
Operator: KJH
Column diameter: 0.32



LCS Raw Data

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

ICV

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Matrix: (soil/water) WATER Lab Sample ID: ICV

Sample wt/vol: 1000 (g/ml) ML Lab File ID: RIDB010

Level: (low/med) LOW Date Received: 01/11/08

% Moisture: _____ Decanted: (Y/N)___ Date Extracted:

Concentrated Extract Volume: 10000(uL) Date Analyzed: 09/13/12

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
58-89-9	gamma-BHC	0.46	
57-74-9	Chlordane	0.50	U
72-20-8	Endrin	0.43	
76-44-8	Heptachlor	0.48	
1024-57-3	Heptachlor Epoxide	0.49	
72-43-5	Methoxychlor	0.47	
8001-35-2	Toxaphene	0.50	U

ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB010.d
Lab Smp Id: ICV
Inj Date : 13-SEP-2012 20:14 Inst ID: gc14.i
Operator : KJH
Smp Info : ICV;;;3;;LCS;1
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:53 Cal File: RIDB009.d
Als bottle: 14 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Calibration.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL (mL)
Vi	1.000	Volume injected (uL)
DF	1.000	DILUTION FACTOR
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
$ 1 Tetrachloro-m-xylene	4.096	4.098	-0.002	780917	0.11195	1.1195
2 alpha-BHC	4.995	4.993	0.002	494470	0.04483	0.44830
3 gamma-BHC	5.566	5.565	0.001	457546	0.04579	0.45790
4 beta-BHC	5.730	5.730	0.000	245698	0.04520	0.45202
5 delta-BHC	6.223	6.223	0.000	390984	0.04383	0.43831
6 Heptachlor	6.301	6.298	0.003	451596	0.04783	0.47832
8 Aldrin	6.863	6.861	0.002	395298	0.04587	0.45874
9 Heptachlor epoxide	7.901	7.898	0.003	382155	0.04873	0.48729
10 gamma-Chlordane	8.258	8.256	0.002	406448	0.04655	0.46547
12 alpha-Chlordane	8.530	8.526	0.004	399271	0.04753	0.47526
14 Endosulfan I	8.626	8.623	0.003	373614	0.04795	0.47954
13 4,4'-DDE	8.883	8.881	0.002	356189	0.04525	0.45253
16 Dieldrin	9.143	9.140	0.003	352408	0.04531	0.45305
17 Endrin	9.720	9.716	0.004	276132	0.04252	0.42523 (M)
18 4,4'-DDD	10.000	10.000	0.000	280628	0.04482	0.44823
19 Endosulfan II	10.143	10.141	0.002	345314	0.05510	0.55098
20 4,4'-DDT	10.598	10.596	0.002	237406	0.04336	0.43363
21 Endrin aldehyde	10.803	10.801	0.002	265779	0.04568	0.45683
24 Endosulfan sulfate	11.348	11.348	0.000	300541	0.04558	0.45577
22 Methoxychlor	11.980	11.978	0.002	150052	0.04697	0.46974
23 Mirex	12.293	12.291	0.002	284360	0.04351	0.43510

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
25 Endrin ketone	12.391	12.390	0.001	377243	0.04670	0.46695
$ 33 DECACHLOROBIPHENYL	14.911	14.908	0.003	652610	0.10124	1.0124

QC Flag Legend

M - Compound response manually integrated.

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: ICV
Level: LOW
Data Type: GC MULTI COMP
SpikeList File: SecondSource.spk
Sublist File: Calibration.sub
Method File: \\Gc01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m
Misc Info:

Client SDG: 14120913.b
Fraction: SV

Operator: KJH
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
2 alpha-BHC	0.50000	0.44830	89.66	85-115
3 gamma-BHC	0.50000	0.45790	91.58	85-115
4 beta-BHC	0.50000	0.45202	90.40	85-115
5 delta-BHC	0.50000	0.43831	87.66	85-115
6 Heptachlor	0.50000	0.47832	95.66	85-115
8 Aldrin	0.50000	0.45874	91.75	85-115
9 Heptachlor epoxide	0.50000	0.48729	97.46	85-115
10 gamma-Chlordane	0.50000	0.46547	93.09	85-115
12 alpha-Chlordane	0.50000	0.47526	95.05	85-115
14 Endosulfan I	0.50000	0.47954	95.91	80-120
13 4,4'-DDE	0.50000	0.45253	90.51	85-115
16 Dieldrin	0.50000	0.45305	90.61	85-115
17 Endrin	0.50000	0.42523	85.05	85-115
18 4,4'-DDD	0.50000	0.44823	89.65	85-115
19 Endosulfan II	0.50000	0.55098	110.20	80-120
20 4,4'-DDT	0.50000	0.43363	86.73	85-115
21 Endrin aldehyde	0.50000	0.45683	91.37	85-115
24 Endosulfan sulfate	0.50000	0.45577	91.15	85-115
22 Methoxychlor	0.50000	0.46974	93.95	85-115
23 Mirex	0.50000	0.43510	87.02	85-115
25 Endrin ketone	0.50000	0.46695	93.39	85-115

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 Tetrachloro-m-xyle	1.0000	1.1195	111.95	30-116
$ 33 DECACHLOROBIPHENYL	1.0000	1.0124	101.24	30-152

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: ICV
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info:

Client SDG: 14120913.b

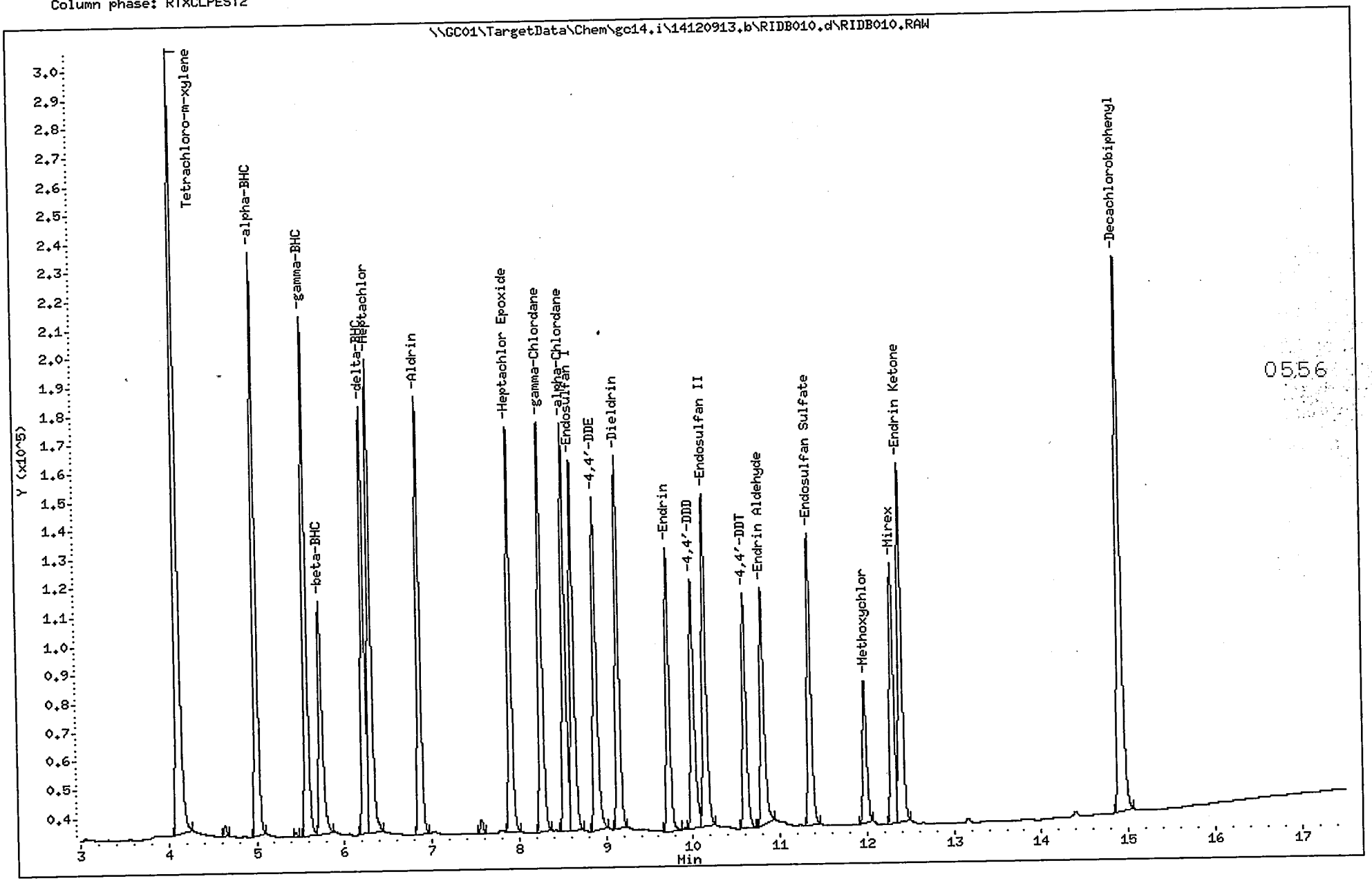
Sample Point:
Date Received: 11-JAN-2008
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
319-84-6	alpha-BHC	0.44830	
58-89-9	gamma-BHC	0.45790	
319-85-7	beta-BHC	0.45202	
319-86-8	delta-BHC	0.43831	
76-44-8	Heptachlor	0.47832	
309-00-2	Aldrin	0.45874	
1024-57-3	Heptachlor epoxide	0.48729	
5103-74-2	gamma-Chlordane	0.46547	
5103-71-9	alpha-Chlordane	0.47526	
959-98-8	Endosulfan I	0.47954	
72-55-9	4,4'-DDE	0.45253	
60-57-1	Dieldrin	0.45305	
72-20-8	Endrin	0.42523	
72-54-8	4,4'-DDD	0.44823	
33213-65-9	Endosulfan II	0.55098	
50-29-3	4,4'-DDT	0.43363	
7421-93-4	Endrin aldehyde	0.45683	
1031-07-8	Endosulfan sulfate	0.45577	
72-43-5	Methoxychlor	0.46974	
2385-85-5	Mirex	0.43510	
53494-70-5	Endrin ketone	0.46695	
877-09-8	Tetrachloro-m-xylene	1.1195	
2051-24-3	DECACHLOROBIPHENYL	1.0124	

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB010.d
Date : 13-SEP-2012 20:14
Client ID:
Sample Info: ICV;;;3;;LCS;1
Volume Injected (uL): 1.0
Column phase: RTXCLPEST2

Instrument: gc14.i

Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA010.d
Lab Smp Id: ICV
Inj Date : 13-SEP-2012 20:14
Operator : KJH Inst ID: gc14.i
Smp Info : ICV;;;3;;LCS;1
Misc Info :
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:53 Cal File: RIDA009.d
Als bottle: 14 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Calibration.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
$ 1 Tetrachloro-m-xylene	4.055	4.056	-0.001	651916	0.12244	1.2244 (R)
2 alpha-BHC	4.866	4.866	0.000	411785	0.04445	0.44447
3 gamma-BHC	5.366	5.366	0.000	384040	0.04434	0.44345
4 beta-BHC	5.523	5.523	0.000	215531	0.04457	0.44566
5 delta-BHC	5.818	5.816	0.002	340654	0.04343	0.43433
6 Heptachlor	6.153	6.150	0.003	366182	0.04663	0.46627
8 Aldrin	6.671	6.668	0.003	349997	0.04417	0.44167
9 Heptachlor epoxide	7.750	7.746	0.004	327334	0.04523	0.45230
10 gamma-Chlordane	7.985	7.981	0.004	362721	0.04587	0.45869
12 alpha-Chlordane	8.228	8.225	0.003	356371	0.04675	0.46747
13 4,4'-DDE	8.403	8.403	0.000	240478	0.04324	0.43236
14 Endosulfan I	8.471	8.468	0.003	407844	0.04704	0.47038
16 Dieldrin	8.920	8.918	0.002	312426	0.04346	0.43456
17 Endrin	9.355	9.353	0.002	228045	0.04432	0.44324 (M)
18 4,4'-DDD	9.535	9.535	0.000	239612	0.04417	0.44169 (M)
19 Endosulfan II	9.786	9.783	0.003	300097	0.05476	0.54758 (M)
20 4,4'-DDT	10.063	10.061	0.002	220381	0.04393	0.43929 (M)
21 Endrin aldehyde	10.593	10.591	0.002	262368	0.05088	0.50883 (M)
22 Methoxychlor	11.030	11.030	0.000	124452	0.04421	0.44210
23 Mirex	11.243	11.240	0.003	242969	0.04545	0.45445
24 Endosulfan sulfate	11.440	11.436	0.004	252511	0.04286	0.42861
25 Endrin ketone	11.990	11.986	0.004	356234	0.04630	0.46300

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
$ 33 DECACHLOROBIPHENYL	14.055	14.051	0.004	667690	0.10505	1.0504

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: ICV
Level: LOW
Data Type: GC MULTI COMP
SpikeList File: SecondSource.spk
Sublist File: Calibration.sub
Method File: \\GC01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m
Misc Info:

Client SDG: 14120913.b
Fraction: SV

Operator: KJH
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
2 alpha-BHC	0.50000	0.44447	88.89	85-115
3 gamma-BHC	0.50000	0.44345	88.69	85-115
4 beta-BHC	0.50000	0.44566	89.13	85-115
5 delta-BHC	0.50000	0.43433	86.87	85-115
6 Heptachlor	0.50000	0.46627	93.25	85-115
8 Aldrin	0.50000	0.44167	88.33	85-115
9 Heptachlor epoxide	0.50000	0.45230	90.46	85-115
10 gamma-Chlordane	0.50000	0.45869	91.74	85-115
12 alpha-Chlordane	0.50000	0.46747	93.49	85-115
13 4,4'-DDE	0.50000	0.43236	86.47	85-115
14 Endosulfan I	0.50000	0.47038	94.08	80-120
16 Dieldrin	0.50000	0.43456	86.91	85-115
17 Endrin	0.50000	0.44324	88.65	85-115
18 4,4'-DDD	0.50000	0.44169	88.34	85-115
19 Endosulfan II	0.50000	0.54758	109.52	80-120
20 4,4'-DDT	0.50000	0.43929	87.86	85-115
21 Endrin aldehyde	0.50000	0.50883	101.77	85-115
22 Methoxychlor	0.50000	0.44210	88.42	85-115
23 Mirex	0.50000	0.45445	90.89	85-115
24 Endosulfan sulfate	0.50000	0.42861	85.72	85-115
25 Endrin ketone	0.50000	0.46300	92.60	85-115

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 Tetrachloro-m-xyle	1.0000	1.2244	122.44*	30-116
$ 33 DECACHLOROBIPHENYL	1.0000	1.0504	105.05	30-152

ALS - Middletown

TARGET COMPOUNDS

Client Name:
Lab Smp Id: ICV
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info:

Client SDG: 14120913.b

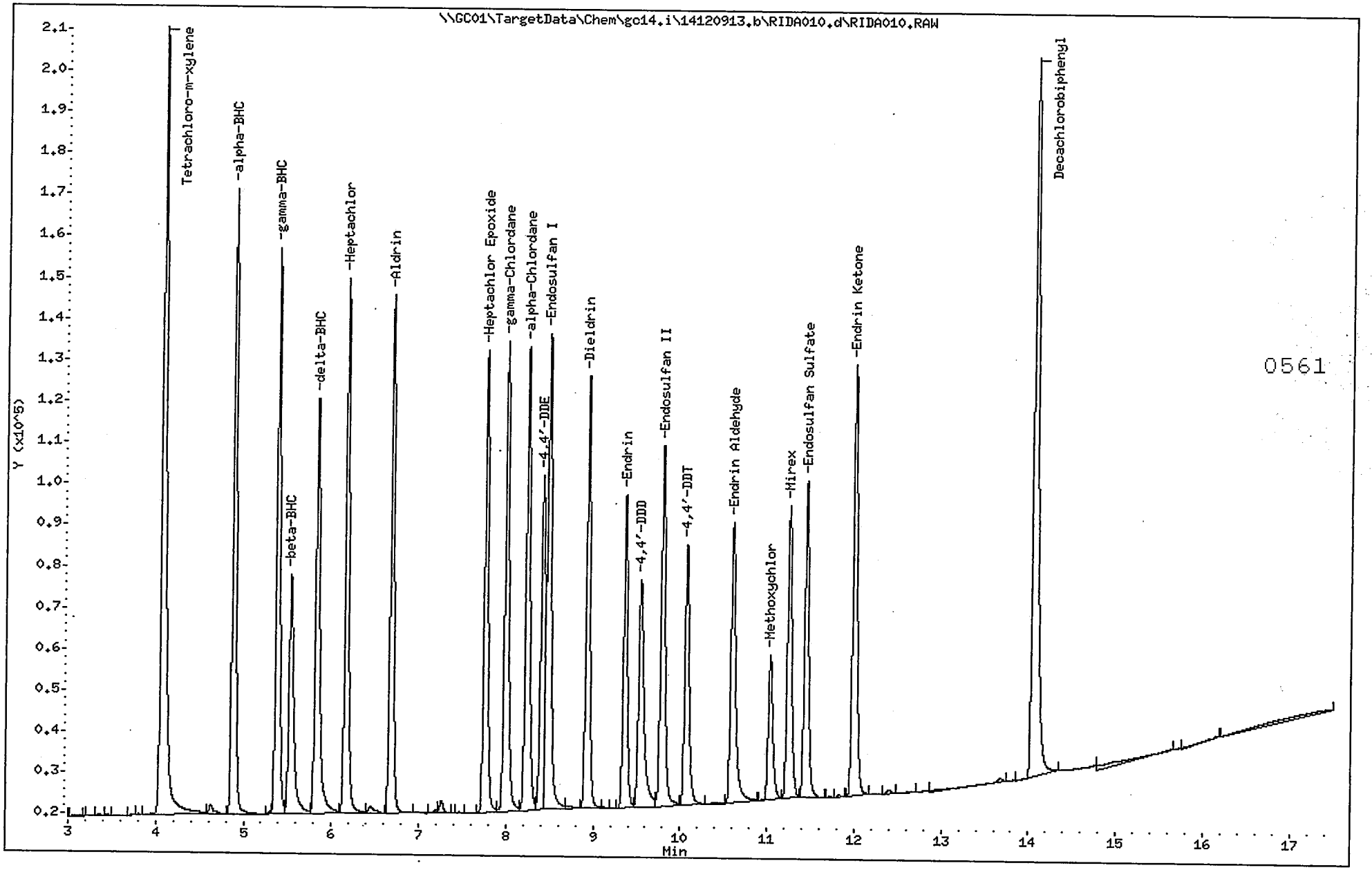
Sample Point:
Date Received: 11-JAN-2008
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
319-84-6	alpha-BHC	0.44447	
58-89-9	gamma-BHC	0.44345	
319-85-7	beta-BHC	0.44566	
319-86-8	delta-BHC	0.43433	
76-44-8	Heptachlor	0.46627	
309-00-2	Aldrin	0.44167	
1024-57-3	Heptachlor epoxide	0.45230	
5103-74-2	gamma-Chlordane	0.45869	
5103-71-9	alpha-Chlordane	0.46747	
72-55-9	4,4'-DDE	0.43236	
959-98-8	Endosulfan I	0.47038	
60-57-1	Dieldrin	0.43456	
72-20-8	Endrin	0.44324	
72-54-8	4,4'-DDD	0.44169	
33213-65-9	Endosulfan II	0.54758	
50-29-3	4,4'-DDT	0.43929	
7421-93-4	Endrin aldehyde	0.50883	
72-43-5	Methoxychlor	0.44210	
2385-85-5	Mirex	0.45445	
1031-07-8	Endosulfan sulfate	0.42861	
53494-70-5	Endrin ketone	0.46300	
877-09-8	Tetrachloro-m-xylene	1.2244	
2051-24-3	DECACHLOROBIPHENYL	1.0504	

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA010.d
Date : 13-SEP-2012 20:14
Client ID:
Sample Info: ICV;;;3;;LCS;1
Volume Injected (uL): 1.0
Column phase: RTXCLPEST

Instrument: gc14.i

Operator: KJH
Column diameter: 0.32



FORM 1 DC WASA (other) SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

1033731LCS

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Matrix: (soil/water) WATER Lab Sample ID: 1033731

Sample wt/vol: 1000 (g/ml) ML Lab File ID: RIDB013A

Level: (low/med) LOW Date Received: 09/13/12

% Moisture: _____ Decanted: (Y/N)___ Date Extracted: 09/13/12

Concentrated Extract Volume: 5000(uL) Date Analyzed: 09/13/12

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
58-89-9	gamma-BHC	0.38	
57-74-9	Chlordane	0.25	U
72-20-8	Endrin	0.34	
76-44-8	Heptachlor	0.34	
1024-57-3	Heptachlor Epoxide	0.40	
72-43-5	Methoxychlor	0.38	
8001-35-2	Toxaphene	0.25	U

ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB013a.d
Lab Smp Id: 1033731 Client Smp ID: LCS for HBN 481071
Inj Date : 13-SEP-2012 21:18
Operator : KJH Inst ID: gc14.i
Smp Info : 1033731;1000
Misc Info : ZZ SVGC 28222 D8081WQ
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:53 Cal File: RIDB009.d
Als bottle: 14 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: DoD.sub
Target Version: 4.12
Processing Host: WGC004

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
$ 1 Tetrachloro-m-xylene	4.101	4.098	0.003	1234267	0.17920	0.89602
2 alpha-BHC	4.998	4.993	0.005	844024	0.07511	0.37554
3 gamma-BHC	5.570	5.565	0.005	773191	0.07666	0.38328
4 beta-BHC	5.733	5.730	0.003	407022	0.07519	0.37594
5 delta-BHC	6.226	6.223	0.003	673059	0.07409	0.37047
6 Heptachlor	6.303	6.298	0.005	643919	0.06802	0.34010
15 Chlordane	Compound Not Detected.					
8 Aldrin	6.866	6.861	0.005	538016	0.06218	0.31092
9 Heptachlor Epoxide	7.905	7.898	0.007	622804	0.07946	0.39732
10 gamma-Chlordane	8.261	8.256	0.005	633128	0.07265	0.36327
12 alpha-Chlordane	8.533	8.526	0.007	637235	0.07639	0.38195
13 4,4'-DDE	8.885	8.881	0.004	593065	0.07449	0.37243
14 Endosulfan I	8.630	8.623	0.007	573002	0.07339	0.36696
16 Dieldrin	9.146	9.140	0.006	603623	0.07725	0.38623
17 Endrin	9.723	9.716	0.007	450045	0.06847	0.34233
18 4,4'-DDD	10.001	10.000	0.001	482449	0.07686	0.38430
19 Endosulfan II	10.146	10.141	0.005	556459	0.08891	0.44457
20 4,4'-DDT	10.601	10.596	0.005	461268	0.07986	0.39931
21 Endrin Aldehyde	10.806	10.801	0.005	421873	0.07275	0.36377
22 Methoxychlor	11.981	11.978	0.003	241894	0.07568	0.37842
11 Toxaphene	Compound Not Detected.					

0563

14 9/14/12
wa 9/14/12
J 9/14/12
J 9/14/12

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
24 Endosulfan Sulfate	11.351	11.348	0.003	504028	0.07642	0.38208
25 Endrin Ketone	12.395	12.390	0.005	661896	0.08203	0.41016
$ 33 Decachlorobiphenyl	14.915	14.908	0.007	1376849	0.21359	1.0680

ALS - Middletown

RECOVERY REPORT

Client Name: DC WASA (other)
Sample Matrix: LIQUID
Lab Smp Id: 1033731
Level: LOW
Data Type: GC MULTI COMP
SpikeList File: DoDWaters.spk
Sublist File: DoD.sub
Client SDG: Biosolids (Bio)
Fraction: SV
Client Smp ID: LCS for HBN 481071
Operator: KJH
SampleType: LCS
Quant Type: ESTD
Method File: \\GC01\TargetData\Chem\gc14.i\14120913.b\B_PEST_CLP2.m
Misc Info: ZZ SVGC 28222 D8081WQ

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
2 alpha-BHC	0.50000	0.37554	75.11	60-130
3 gamma-BHC	0.50000	0.38328	76.66	25-135
4 beta-BHC	0.50000	0.37594	75.19	65-125
5 delta-BHC	0.50000	0.37047	74.09	45-135
6 Heptachlor	0.50000	0.34010	68.02	40-130
8 Aldrin	0.50000	0.31092	62.18	25-140
9 Heptachlor Epoxide	0.50000	0.39732	79.46	60-130
10 gamma-Chlordane	0.50000	0.36327	72.65	60-125
12 alpha-Chlordane	0.50000	0.38195	76.39	65-125
13 4,4'-DDE	0.50000	0.37243	74.49	35-140
14 Endosulfan I	0.50000	0.36696	73.39	50-110
16 Dieldrin	0.50000	0.38623	77.25	60-130
17 Endrin	0.50000	0.34233	68.47	55-135
18 4,4'-DDD	0.50000	0.38430	76.86	25-150
19 Endosulfan II	0.50000	0.44457	88.91	30-130
20 4,4'-DDT	0.50000	0.39931	79.86	45-140
21 Endrin Aldehyde	0.50000	0.36377	72.75	55-135
22 Methoxychlor	0.50000	0.37842	75.68	55-150
24 Endosulfan Sulfate	0.50000	0.38208	76.42	55-135
25 Endrin Ketone	0.50000	0.41016	82.03	75-125

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 Tetrachloro-m-xyle	1.2500	0.89602	71.68	25-140
$ 33 Decachlorobiphenyl	1.2500	1.0680	85.44	30-135

ALS - Middletown

TARGET COMPOUNDS

Client Name: DC WASA (other)
Lab Smp Id: 1033731
Sample Location:
Sample Date: 06-SEP-2012
Sample Matrix: WATER
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info: ZZ SVGC 28222 D8081WQ

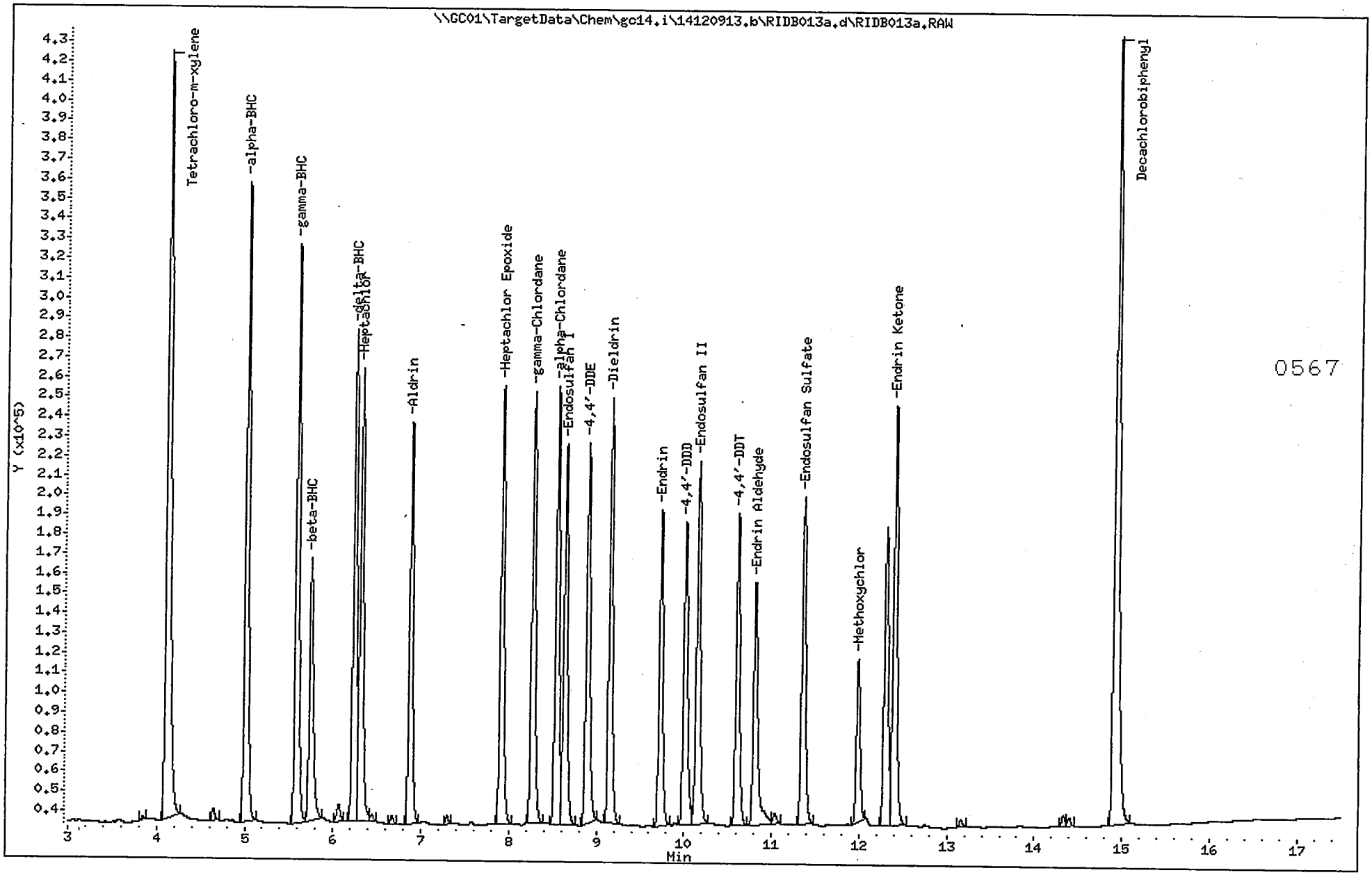
Client SDG: Biosolids (Bio)
Client Smp ID: LCS for HBN 481071
Sample Point:
Date Received: 13-SEP-2012
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
319-84-6	alpha-BHC	0.37554	
58-89-9	gamma-BHC	0.38328	
319-85-7	beta-BHC	0.37594	
319-86-8	delta-BHC	0.37047	
76-44-8	Heptachlor	0.34010	
309-00-2	Aldrin	0.31092	
1024-57-3	Heptachlor Epoxide	0.39732	
5103-74-2	gamma-Chlordane	0.36327	
5103-71-9	alpha-Chlordane	0.38195	
72-55-9	4,4'-DDE	0.37243	
959-98-8	Endosulfan I	0.36696	
60-57-1	Dieldrin	0.38623	
72-20-8	Endrin	0.34233	
72-54-8	4,4'-DDD	0.38430	
33213-65-9	Endosulfan II	0.44457	
50-29-3	4,4'-DDT	0.39931	
7421-93-4	Endrin Aldehyde	0.36377	
72-43-5	Methoxychlor	0.37842	
1031-07-8	Endosulfan Sulfate	0.38208	
53494-70-5	Endrin Ketone	0.41016	
877-09-8	Tetrachloro-m-xylene	0.89602	
2051-24-3	Decachlorobiphenyl	1.0680	

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDB013a.d
Date : 13-SEP-2012 21:18
Client ID: LCS for HBN 481071
Sample Info: 1033731;1000
Volume Injected (uL): 1.0
Column phase: RTXCLPEST2

Instrument: gc14.i

Operator: KJH
Column diameter: 0.32



ALS - Middletown

8081/608

Data file : \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA013a.d
Lab Smp Id: 1033731 Client Smp ID: LCS for HBN 481071
Inj Date : 13-SEP-2012 21:18
Operator : KJH Inst ID: gc14.i
Smp Info : 1033731;1000
Misc Info : ZZ SVGC 28222 D8081WQ
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m
Meth Date : 14-Sep-2012 10:35 kjh Quant Type: ESTD
Cal Date : 13-SEP-2012 19:53 Cal File: RIDA009.d
Als bottle: 14 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: DoD.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
$ 1	Tetrachloro-m-xylene	4.058	4.056	0.002	972358	0.18262	0.91311
2	alpha-BHC	4.870	4.866	0.004	686565	0.07236	0.36182
3	gamma-BHC	5.370	5.366	0.004	648931	0.07363	0.36817
4	beta-BHC	5.525	5.523	0.002	357154	0.07313	0.36567
5	delta-BHC	5.820	5.816	0.004	629442	0.07653	0.38267
6	Heptachlor	6.155	6.150	0.005	521277	0.06574	0.32869
15	Chlordane	Compound Not Detected.					
8	Aldrin	6.673	6.668	0.005	473767	0.05911	0.29555
9	Heptachlor Epoxide	7.753	7.746	0.007	542865	0.07406	0.37030
10	gamma-Chlordane	7.988	7.981	0.007	562565	0.07053	0.35266
12	alpha-Chlordane	8.230	8.225	0.005	569259	0.07402	0.37012
13	4,4'-DDE	8.405	8.403	0.002	417666	0.07339	0.36694
14	Endosulfan I	8.473	8.468	0.005	623431	0.07076	0.35380
16	Dieldrin	8.923	8.918	0.005	545240	0.07411	0.37055
17	Endrin	9.358	9.353	0.005	395756	0.07692	0.38460
18	4,4'-DDD	9.535	9.535	0.000	430156	0.07732	0.38661
19	Endosulfan II	9.788	9.783	0.005	489374	0.08827	0.44134
20	4,4'-DDT	10.063	10.061	0.002	436458	0.08125	0.40625
21	Endrin Aldehyde	10.595	10.591	0.004	384246	0.07452	0.37260
22	Methoxychlor	11.031	11.030	0.001	224510	0.07700	0.38499
11	Toxaphene	Compound Not Detected.					
24	Endosulfan Sulfate	11.441	11.436	0.005	441665	0.07322	0.36608

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
25 Endrin Ketone	11.991	11.986	0.005	621152	0.08057	0.40287
$ 33 Decachlorobiphenyl	14.056	14.051	0.005	1430188	0.22501	1.1250

ALS - Middletown

RECOVERY REPORT

Client Name: DC WASA (other)
Sample Matrix: LIQUID
Lab Smp Id: 1033731
Level: LOW
Data Type: GC MULTI COMP
SpikeList File: DoDWaters.spk
Sublist File: DoD.sub
Client SDG: Biosolids (Bio)
Fraction: SV
Client Smp ID: LCS for HBN 481071
Operator: KJH
SampleType: LCS
Quant Type: ESTD
Method File: \\GC01\TargetData\Chem\gc14.i\14120913.b\A_PEST_CLP.m
Misc Info: ZZ SVGC 28222 D8081WQ

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
2 alpha-BHC	0.50000	0.36182	72.36	60-130
3 gamma-BHC	0.50000	0.36817	73.63	25-135
4 beta-BHC	0.50000	0.36567	73.13	65-125
5 delta-BHC	0.50000	0.38267	76.53	45-135
6 Heptachlor	0.50000	0.32869	65.74	40-130
8 Aldrin	0.50000	0.29555	59.11	25-140
9 Heptachlor Epoxide	0.50000	0.37030	74.06	60-130
10 gamma-Chlordane	0.50000	0.35266	70.53	60-125
12 alpha-Chlordane	0.50000	0.37012	74.02	65-125
13 4,4'-DDE	0.50000	0.36694	73.39	35-140
14 Endosulfan I	0.50000	0.35380	70.76	50-110
16 Dieldrin	0.50000	0.37055	74.11	60-130
17 Endrin	0.50000	0.38460	76.92	55-135
18 4,4'-DDD	0.50000	0.38661	77.32	25-150
19 Endosulfan II	0.50000	0.44134	88.27	30-130
20 4,4'-DDT	0.50000	0.40625	81.25	45-140
21 Endrin Aldehyde	0.50000	0.37260	74.52	55-135
22 Methoxychlor	0.50000	0.38499	77.00	55-150
24 Endosulfan Sulfate	0.50000	0.36608	73.22	55-135
25 Endrin Ketone	0.50000	0.40287	80.57	75-125

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 Tetrachloro-m-xyle	1.2500	0.91311	73.05	25-140
$ 33 Decachlorobiphenyl	1.2500	1.1250	90.00	30-135

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ALS - Middletown

TARGET COMPOUNDS

Client Name: DC WASA (other)
Lab Smp Id: 1033731
Sample Location:
Sample Date: 06-SEP-2012
Sample Matrix: WATER
Analysis Type: SV
Data Type: GC MULTI COMP
Misc Info: ZZ SVGC 28222 D8081WQ

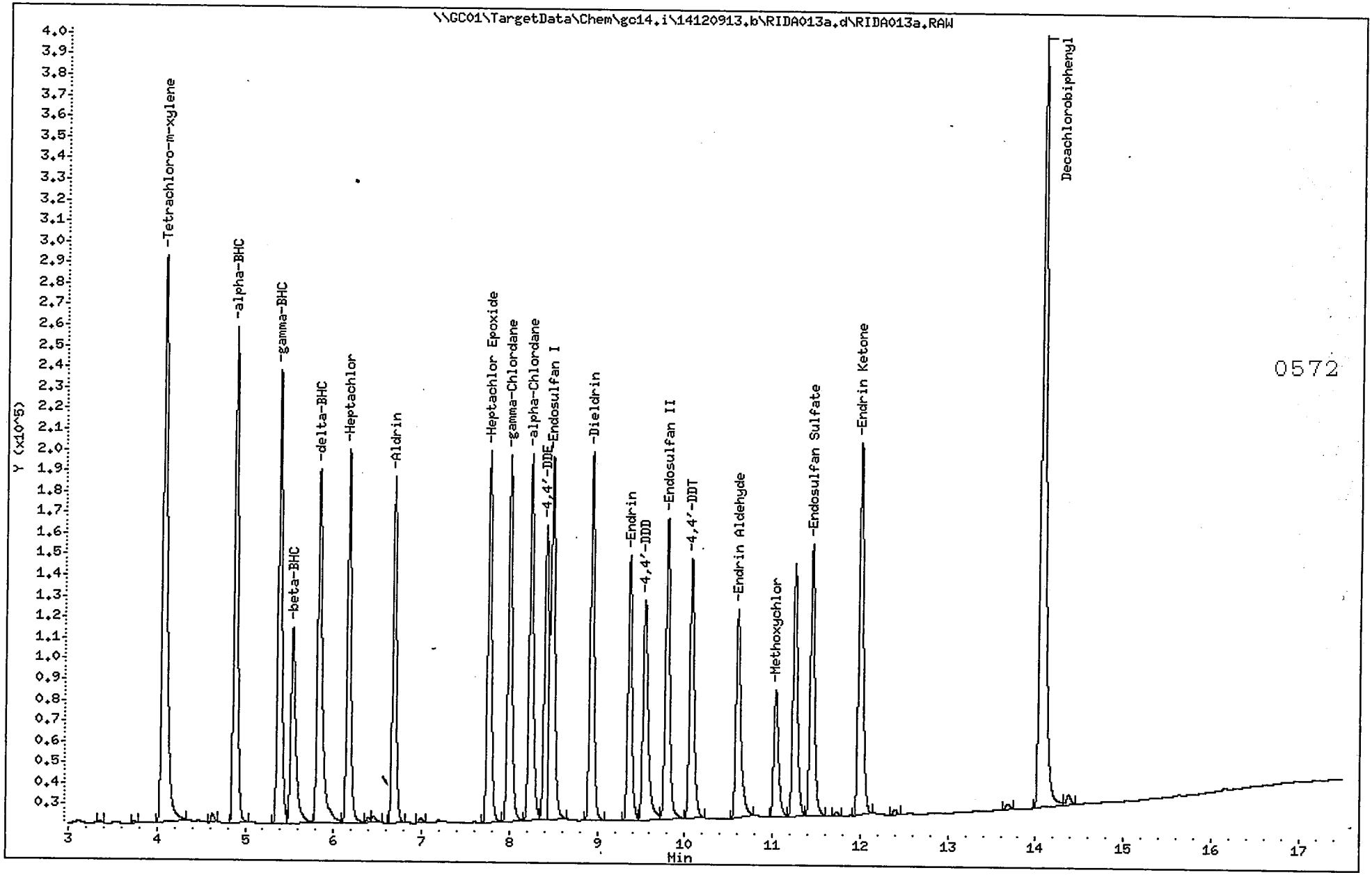
Client SDG: Biosolids (Bio)
Client Smp ID: LCS for HBN 481071
Sample Point:
Date Received: 13-SEP-2012
Quant Type: ESTD
Level: LOW
Operator: KJH

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
319-84-6	alpha-BHC	0.36182	
58-89-9	gamma-BHC	0.36817	
319-85-7	beta-BHC	0.36567	
319-86-8	delta-BHC	0.38267	
76-44-8	Heptachlor	0.32869	
309-00-2	Aldrin	0.29555	
1024-57-3	Heptachlor Epoxide	0.37030	
5103-74-2	gamma-Chlordane	0.35266	
5103-71-9	alpha-Chlordane	0.37012	
72-55-9	4,4'-DDE	0.36694	
959-98-8	Endosulfan I	0.35380	
60-57-1	Dieldrin	0.37055	
72-20-8	Endrin	0.38460	
72-54-8	4,4'-DDD	0.38661	
33213-65-9	Endosulfan II	0.44134	
50-29-3	4,4'-DDT	0.40625	
7421-93-4	Endrin Aldehyde	0.37260	
72-43-5	Methoxychlor	0.38499	
1031-07-8	Endosulfan Sulfate	0.36608	
53494-70-5	Endrin Ketone	0.40287	
877-09-8	Tetrachloro-m-xylene	0.91311	
2051-24-3	Decachlorobiphenyl	1.1250	

Data File: \\GC01\TargetData\Chem\gc14.i\14120913.b\RIDA013a.d
Date : 13-SEP-2012 21:18
Client ID: LCS for HBN 481071
Sample Info: 1033731:1000
Volume Injected (uL): 1.0
Column phase: RTXCLPEST

Instrument: gc14.i

Operator: KJH
Column diameter: 0.32



Extraction Logbook

Work continued to page:

GENERAL ORGANIC EXTRACTION

EPA Method: 3510C/8081B
Rule: 3510/8081 / D3510/8081
HBN: 481070 / 481071
Extraction Apparatus Name: Floor shaker
Extraction Apparatus ID#: 481700, 481701

Surrogate Amount: 250ml
Surrogate Lot #: OP 17140
Tech: FPM

Steam Bath ID#: 205752 | 207290 | 11737-361
Initial Temp. of Bath: 94°C | 92°C | 96°C
Final Temp. of Bath: 93°C | 92°C | 85°C
Thermometer ID#: TH-245 | TH-245 | TH-190

			Date	Time	Tech
Extraction:			9/13/12	10:05	FPM JEK
Concentration:			9/13/12	11:40	GEC FPM

	Time On	Time Off	Total Hours
Soxhlet:			
Acid:			
Base:			

N-EVAP ID#: 80280
Initial Temp.: 43°C
Final Temp.: 45°C
Thermometer ID: TH-212

Line #	Sample #	pH (1)	Start/Stop Time (2)	Sample Amount	Final Volume	QC Spike lot#	QC Spike Amount	Cleanup Required	Cleanup Method	QC Type	Sample Specific Comments
1.)	1033726 1033730	7		1000ml	5ml	—	—	YES	①	MB	8081 D3510/8081
2.)	1033727 1033731	7		1000ml	5ml	OP17115	250ml GEC	YES	①	LCS	↓ ↓
3.)	9986 434 002-A	6		50ml	5ml	—	—	9/13/12 GEC ~~YES~~ NO	N/A	—	
4.)	9985 960 001-~~A~~B 9/13/12 GEC	6		50ml	5ml	—	—	NO	N/A	—	
* 5.)	9986 916 001-B	5		50ml	5ml	—	—	YES	①	—	
6.)	9986 916 002-B	5		50ml	5ml	—	—	YES	①	—	
7.)	9986 916 003-B	5		50ml	5ml	—	—	YES	①	—	
8.)	1033728	5		50ml	5ml	OP17115	250ml GEC	YES	①	MS	9986 916 003-B
9.)	1033729	5		50ml	5ml	OP17115	250ml GEC	YES	①	MSD	↓
10.)	9986 916 004-B	5		50ml	5ml	—	—	YES	①	—	
11.)	9986 916 005-B	5		50ml	5ml	—	—	YES	①	—	
12.)	9986 916 006-B	5		50ml	5ml	—	—	YES	①	—	
13.)	9986 916 007-B	5		50ml	5ml	—	—	YES	①	—	
14.)	9987 030 001-A	5		50ml	5ml	—	—	NO	N/A	—	
15.)	9987 012 002-A	5		50ml	5ml	—	—	NO	N/A	—	

Comments:

1.) Reagent PO_4 BUFFER (OP17156), CH_2Cl_2 (DG903, B+J) F:Hn-Pepper (VOC) recover
2.) Reagent: Na_2SO_4 OP17143 Hexane (BAKER) L08A7
3.) Reagent: ① 3620B
4.)
*5.) WO 9986 916 require Internal Conc. #426919 - GEC 9/13/12
6.) (1) pH adjustments for all extraction steps. (2) Start/Stop Time for SPE extractions.

Volume Aliquoted	I.S. Volume Added	I.S. ID#	Date	Time	Tech
—	—	—	—	—	—
—	—	—	—	—	—

Approved by: LEH
Date Approved: 9/13/12
Revision 10/11

Page #: 71 Batched by: GEC

Reviewed by: KCF
Date Reviewed: 09/13/12

GENERAL ORGANIC EXTRACTION

Work continued to page:

EPA Method:
Rule: See p. 71
HBN: See p. 71
Extraction Apparatus Name:
Extraction Apparatus ID#:

Surrogate Amount:
Surrogate Lot #: See p. 71
Tech:

Steam Bath ID#:
Initial Temp. of Bath:
Final Temp. of Bath: See p. 71
Thermometer ID#:

Extraction:			Date	Time	Tech	Soxhlet:	Time On	Time Off	Total Hours	N-EVAP ID#:: See
Concentration:			See p. 71			Acid:				Initial Temp. :
						Base:				Final Temp. : p. 71
										Thermometer ID:

Line #	Sample #	pH (1)	Start/Stop Time (2)	Sample Amount	Final Volume	QC Spike lot#	QC Spike Amount	Cleanup Required	Cleanup Method	QC Type	Sample Specific Comments
1.)	9987 454 001-A	5		50ml	5ml	—	—	NO	N/A	—	
2.)	9987 454 002-A	5		50ml	5ml	—	—	YES	①	—	
3.)	1030346	6		50ml	5ml	—	—	NO	N/A	LB	
4.)	1032185	6		50ml	5ml	—	—	NO	N/A	LB	
5.)	1032516	6		50ml	5ml	—	—	NO	N/A	LB	
6.)	1032996	6		50ml	5ml	—	—	NO	N/A	LB	
7.)	9988 [illegible] 001-A	6		50ml	5ml	—	—	YES	①	—	D35 to 8085
8.)											
9.)											
10.)											
11.)											
12.)											
13.)											
14.)											
15.)											LEH 9/13/12

Comments:

1.) Reagent See p. 71
2.) Reagent:
3.) Reagent:
4.)
5.)

Volume Aliquoted	I.S. Volume Added	I.S. ID#	Date	Time	Tech
	See p. 71				

6.) (1) pH adjustments for all extraction steps. (2) Start/Stop Time for SPE extractions.

Approved by: LEH
Date Approved: 9/13/12
Revision 10/11

Page #: 72 Batched by: CEC

Reviewed by: KCF
Date Reviewed: 09/13/12

Work continued from page:____ Work continued to page:____

ORGANIC SAMPLE PREPARATION

EPA Clean Up Method: 3620B
Clean Up Description: Microcolumn Florisil Cleanup of Organochlorine Pesticides

	Date	Time	Tech
Extract Clean Up:	9/13/12	14:55	GEC
Extract Concentration:	9/13/12	15:50	LEH

	Sample #	Extract Volume before cleanup	Date/Tech aliquot removed for PCB analysis	Volume Removed for cleanup	Final Volume after cleanup	Effective Final Volume recorded in extraction log	Sample Specific Comments
1.)	1033726 1033730	5mL	–	2mL	2mL	5mL	MB 8081 ↓ D3534/8082 ↓
2.)	1033727 1033731	5mL	–	2mL	2mL	5mL	LCS
3.)	9986 916 001-B	5mL	–	2mL	2mL	5mL	
4.)	9986 916 002-B	5mL	–	2mL	2mL	5mL	
5.)	9986 916 003-B	5mL	–	2mL	2mL	5mL	
6.)	1033728	5mL	–	2mL	2mL	5mL	MS
7.)	1033729	5mL	–	2mL	2mL	5mL	MSD
8.)	9986 916 004-B	5mL	–	2mL	2mL	5mL	
9.)	9986 916 005-B	5mL	–	2mL	2mL	5mL	
10.)	9986 916 006-B	5mL	–	2mL	2mL	5mL	
11.)	9986 916 007-B	5mL	–	2mL	2mL	5mL	
12.)	9987 454 002-A	5mL	–	2mL	2mL	5mL	
13.)	9986 940 001-A	5mL	–	2mL	2mL	5mL	
14.)							
15.)							
16.)							
17.)							
18.)							
19.)							
20.)							
21.)							
22.)							
23.)							
24.)							LEH 9/13/12

GPC cleanup conditions and sequence information: _____
Cleanup Apparatus ID#: _____

Reagents: Florisil (Baker) J40593 Na2SO4 0P19091
9:1 Hexane:Acetone 0P19157 Hexane (Baker) 100697

Conc. Apparatus ID#: #50280
Initial Temp. Of Bath: 41°C
Final Temp. Of Bath: 45°C
Thermometer ID#: TH-212

Comments: _____

Reviewed By: KCF
Date Reviewed: 09/13/12
Revision 10/11

Approved By: LEH
Date Approved: 9/13/12

Analytical Logbook

0577

Turbochrom Sequence File C:\METH_SEQ\GC14\RIDA.seq
Printed by : manager on: 9/14/2012 9:07:31 AM
Created by : manager on: 9/13/2012 10:39:04 AM
Edited by : manager on: 9/14/2012 9:07:29 AM
Number of Times Edited : 2
Description: Pesticides default sequence

Sequence File Header Information:
Number of Rows : 59
Instrument Type : 900 Series Intelligent Interface
Injection Type : SINGLE

Sequence Sample Descriptions - Channel A

Row	Name	Sample Amt	Int Std Amt	Sample Vol	Dil Factor	Multiplier	Divisor	Addend	Norm Factor
1	DEGRAD	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
2	1.01016_1260;;;1;4	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
3	ICAL1;;;1;1	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
4	ICAL2;;;1;2	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
5	ICAL3;;;1;3	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
6	ICAL4;;;1;4	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
7	ICAL5;;;1;5	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
8	ICAL6;;;1;6	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
9	ICAL7;;;1;7	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
10	ICV;;;3;;LCS;1	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
11	instrument blank	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
12	1032684;1000	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
13	1033727;1000 \1033731	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
14	9986779001;;;30.4;;;;;5	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
15	9986916001;50	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
16	9986916002;50	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
17	9986916003;50	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
18	1033728;50	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
19	1033729;50	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
20	9986916004;50	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
21	9986916005;50	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
22	9986916006;50	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
23	9986916007;50	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
24	9987454002;50	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
25	9986940001;50	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
26	9987474001	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
27	9987012002;50	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
28	9987030001;50	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
29	9986434002;50	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
30	9985960001;50	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
31	1032996;50	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
32	1033726;1000 \1033730	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
33	1032683;1000	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
34	1032685;1000	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
35	tox	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
36	chlor	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
37	ccv;;;2	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
38	ccv;;;2	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
39	9987029001;;;30.3;;;;;5	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
40	9986496001;990;;;;;;10	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
41	9986763001;1060	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
42	9987118001;1000;;;;;;10	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
43	1032687;1000;;;;;;10	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
44	9987200001;1030	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
45	1032686;1030	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
46	9987107002;980	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
47	9987118003;1030	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
48	1032516;50	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
49	1032185;50	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
50	1030346;50	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
51	ccv;;;2	1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
52		1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
53		1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
54		1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
55		1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
56		1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
57		1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
58		1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000
59		1.000000	1.000000	1.000	1.000000	1.000000	1.000000	0.000000	100.000

0578

TCLP Herbicides by 1311/8151A Summary Forms

FORM 2
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

	SAMPLE NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	1035026	114								0
02	1035027LCS	113								0
03	FTSW-IDW-02	98								0
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										

		QC LIMITS
S1	= 2,4-Dichlorophenyl ace	(14-172)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

0500

FORM 3
WATER SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Matrix Spike - Sample No.: 1035027LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
2,4-D	2.0000	0.00	1.8701	94	35-115
2,4,5-TP	2.0000	0.00	2.0513	103	50-115

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS: RTX-CLPEST

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

1035026

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Lab File ID: 4IIB0003A Lab Sample ID: 1035026

Instrument ID: GC04 Date Extracted: 05/13/09

Matrix: (soil/water) WATER Date Analyzed: 09/18/12

Level:(low/med) LOW Time Analyzed: 1115

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	1035027LCS	1035027	4IIB0004A	09/18/12
02	FTSW-IDW-02	9986940001	4IIB0005	09/18/12
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

FORM IV SV

0508

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS | Contract:

Lab Code: PA-010 Case No.: | SAS No.: SDG No.: ERT009

EPA Sample No. (SSTD050##): LEVEL4 | Date Analyzed: 09/18/12

Lab File ID (Standard): 4IIB0001 | Time Analyzed: 1000

Instrument ID: GC04 | GC Column: RTX-CLPEST ID:0.32(mm)

		IS1 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	847865	17.85				
	UPPER LIMIT	1271798	17.95				
	LOWER LIMIT	423933	17.75				
	CLIENT SAMPLE NO.						
01	1035026	854041	17.85				
02	1035027LCS	788236	17.85				
03	FTSW-IDW-02	827867	17.85				
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = 4,4'-Dibromooctafluorobiphenyl

AREA UPPER LIMIT = + 50% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.10 minutes of internal standard RT
RT LOWER LIMIT = - 0.10 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits

FORM VIII SV

0508

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

GC Column: RTX-CLPEST ID: 0.32(mm) Init. Calib. Date(s): 08/20/12 08/20/12

Instrument ID: GC04

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 15.18

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01	LEVEL1	LEVEL1	08/20/12	1710	15.20	
02	LEVEL2	LEVEL2	08/20/12	1748	15.19	
03	LEVEL3	LEVEL3	08/20/12	1826	15.19	
04	LEVEL4	LEVEL4	08/20/12	1903	15.19	
05	LEVEL5	LEVEL5	08/20/12	1941	15.18	
06	LEVEL6	LEVEL6	08/20/12	2018	15.18	
07	ICV	ICV	08/21/12	1031	15.17	
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S1 = 2,4-Dichlorophenyl ace (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

GC Column: RTX-CLPEST ID: 0.32(mm) Init. Calib. Date(s): 08/20/12 08/20/12

Instrument ID: GC04

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 14.97

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01	LEVEL4	LEVEL4	09/18/12	1000	14.97	
02	1035026	1035026	09/18/12	1115	14.98	
03	1035027LCS	1035027	09/18/12	1153	14.97	
04	FTSW-IDW-02	9986940001	09/18/12	1230	14.98	
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS

S1 = 2,4-Dichlorophenyl ace (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

TCLP Herbicides by 1311/8151A Raw Data

Sample Raw Data

FORM 1 ERT Earth Resources SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FTSW-IDW-02

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Matrix: (soil/water) WATER Lab Sample ID: 9986940001

Sample wt/vol: 50.00 (g/ml) ML Lab File ID: 4IIB0005

Level: (low/med) LOW Date Received: 09/07/12

% Moisture: _____ Decanted: (Y/N)___ Date Extracted: 05/13/09

Concentrated Extract Volume: 10000(uL) Date Analyzed: 09/18/12

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
94-75-7	2,4-D	3.2	U
93-72-1	2,4,5-TP	3.2	U

ALS - Middletown

8151

Data file : \\GC01\TargetData\Chem\gc04.i\O4120918.b\4IIB0005.D
Lab Smp Id: 9986940001 Client Smp ID: FTSW-IDW-02
Inj Date : 18-SEP-2012 12:30
Operator : JLH Inst ID: gc04.i
Smp Info : 9986940001;50
Misc Info : ZZ SVGC 28252 D8151TCLP
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc04.i\O4120918.b\B8151CLP.m
Meth Date : 19-Sep-2012 08:33 gc Quant Type: ISTD
Cal Date : 20-AUG-2012 20:18 Cal File: 4HKB0007.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TCLP.sub
Target Version: 4.12
Processing Host: ALMDTW7077

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)(1000 low, 2
Vo	50.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
$	3 2,4-Dichlorophenyl acetic acid	14.976	14.966	(0.839)	625000	0.49132	98.2640
	8 2,4-D	Compound Not Detected.					
*	10 4,4'-Dibromooctafluorobiphenyl	17.853	17.850	(1.000)	827867	0.05000	
	11 2,4,5-TP	Compound Not Detected.					

DATA REVIEW 9/19/12
REPORTED 9/19/12
APPROVED mg 9/19/12
2nd REVIEW mg 9/19/12

6809

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4IIB0005.D
Lab Smp Id: 9986940001
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Calibration Date: 18-SEP-2012
Calibration Time: 10:00
Client Smp ID: FTSW-IDW-02
Level: LOW
Sample Type: WATER
Method File: \\GC01\TargetData\Chem\gc04.i\O4120918.b\B8151CLP.m
Misc Info: ZZ SVGC 28252 D8151TCLP

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	847865	423933	1271798	827867	-2.36

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	17.85	17.75	17.95	17.85	0.02

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

ALS - Middletown

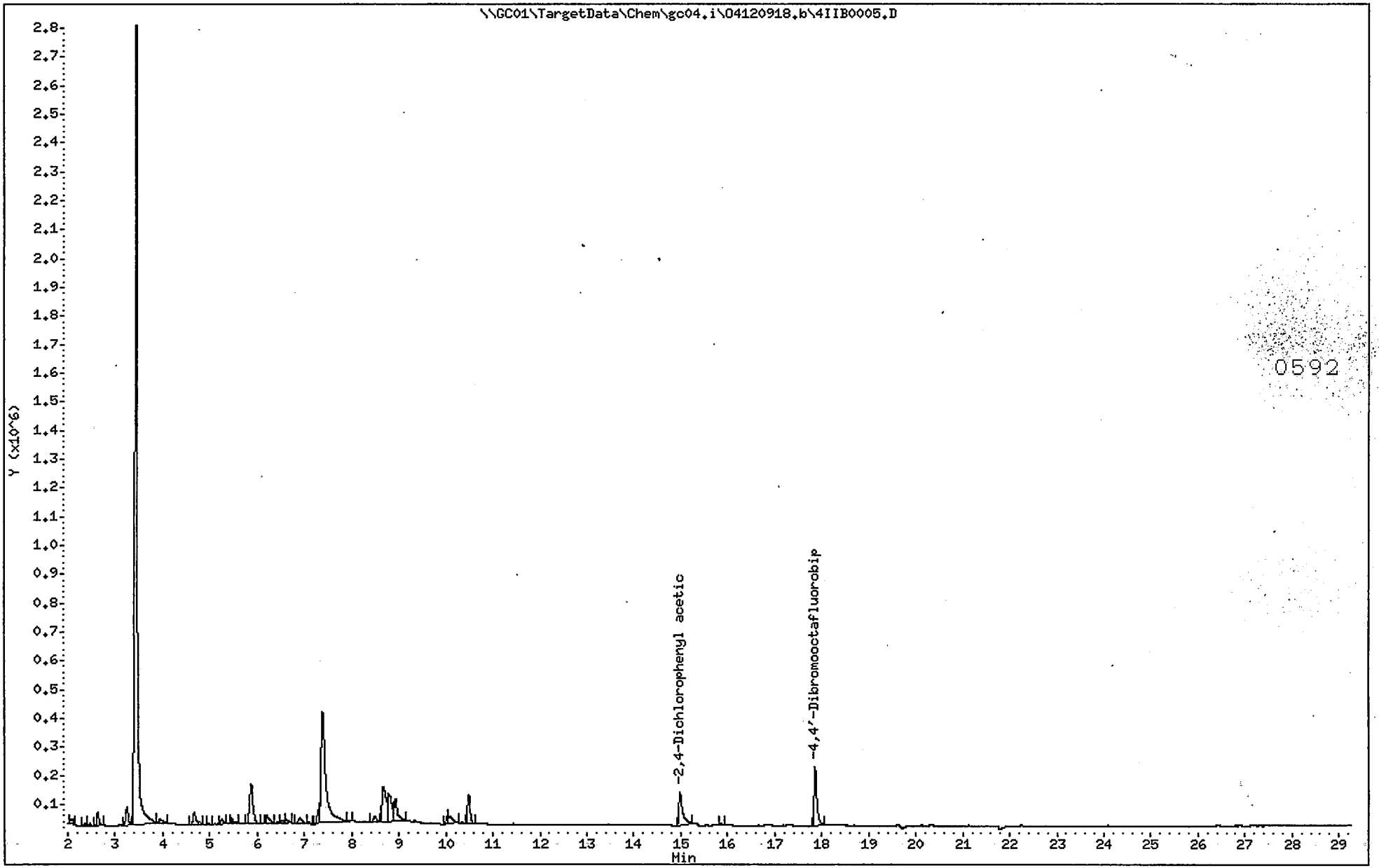
RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: LIQUID
Lab Smp Id: 9986940001
Level: LOW
Data Type: GC MULTI COMP
SpikeList File: Water.spk
Sublist File: TCLP.sub
Client SDG: ERT009|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-IDW-02
Operator: JLH
SampleType: SAMPLE
Quant Type: ISTD
Method File: \\GC01\TargetData\Chem\gc04.i\O4120918.b\B8151CLP.m
Misc Info: ZZ SVGC 28252 D8151TCLP

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 3 2,4-Dichlorophenyl	100.000	98.2640	98.26	14-172

Data File: \\GC01\TargetData\Chem\gc04.i\04120918.b\4IIB0005.D
Date : 18-SEP-2012 12:30
Client ID: FTSW-IDW-02
Sample Info: 9986940001;50
Volume Injected (uL): 1.0
Column phase: RTX-CLPEST

Instrument: gc04.i
Operator: JLH
Column diameter: 0.32



ALS - Middletown

8151

Data file : \\GC01\TargetData\Chem\gc04.i\O4120918.b\4IIF0005.D
Lab Smp Id: 9986940001 Client Smp ID: FTSW-IDW-02
Inj Date : 18-SEP-2012 12:30
Operator : JLH Inst ID: gc04.i
Smp Info : 9986940001;50
Misc Info : ZZ SVGC 28252 D8151TCLP
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc04.i\O4120918.b\F8151RTX.m
Meth Date : 19-Sep-2012 08:45 gc Quant Type: ISTD
Cal Date : 20-AUG-2012 20:18 Cal File: 4HKF0007.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TCLP.sub
Target Version: 4.12
Processing Host: ALMDTW7077

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)(1000 low, 2
Vo	50.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

			RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
$	3	2,4-Dichlorophenyl acetic acid	15.150	15.136	(0.860)	521449	0.51752	103.503
	8	2,4-D	Compound Not Detected.					
*	10	4,4'-Dibromooctafluorobiphenyl	17.610	17.600	(1.000)	640327	0.05000	
	11	2,4,5-TP	Compound Not Detected.					

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4IIF0005.D
Lab Smp Id: 9986940001
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Calibration Date: 18-SEP-2012
Calibration Time: 10:00
Client Smp ID: FTSW-IDW-02
Level: LOW
Sample Type: WATER
Method File: \\GC01\TargetData\Chem\gc04.i\O4120918.b\F8151RTX.m
Misc Info: ZZ SVGC 28252 D8151TCLP

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	561867	280934	842801	640327	13.96

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	17.60	17.50	17.70	17.61	0.06

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

ALS - Middletown

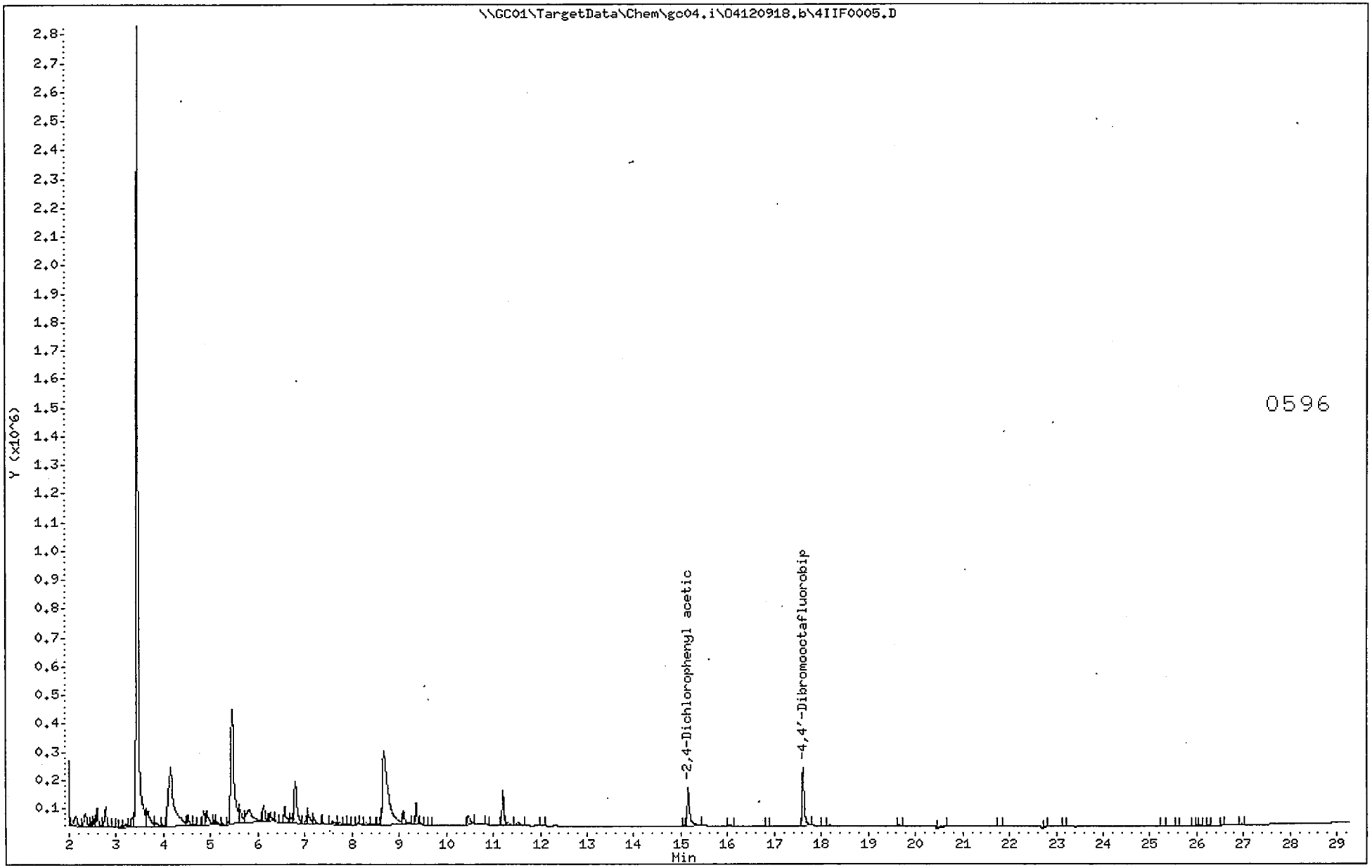
RECOVERY REPORT

Client Name: ERT Earth Resources
Sample Matrix: LIQUID
Lab Smp Id: 9986940001
Level: LOW
Data Type: GC MULTI COMP
SpikeList File: Water.spk
Sublist File: TCLP.sub
Client SDG: ERT009|Ft. Stewart
Fraction: SV
Client Smp ID: FTSW-IDW-02
Operator: JLH
SampleType: SAMPLE
Quant Type: ISTD
Method File: \\GC01\TargetData\Chem\gc04.i\O4120918.b\F8151RTX.m
Misc Info: ZZ SVGC 28252 D8151TCLP

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 3 2,4-Dichlorophenyl	100.000	103.503	103.50	14-172

Data File: \\GC01\TargetData\Chem\gc04.i\04120918.b\4IIF0005.D
Date : 18-SEP-2012 12:30
Client ID: FTSW-IDW-02
Sample Info: 9986940001;50
Volume Injected (uL): 1.0
Column phase: RTX-5

Instrument: gc04.i
Operator: JLH
Column diameter: 0.32



Standards Raw Data

Initial Calibrations

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Instrument ID: GC04 Calibration Date(s): 08/20/12 08/20/12

Column: RTX-CLPEST ID: 0.32 (mm) Calibration Time(s): 1710 2018

LAB FILE ID: RT1: 4HKB0002 RT2: 4HKB0003 RT3: 4HKB0004
RT4: 4HKB0005 RT5: 4HKB0006 RT6: 4HKB0007

COMPOUND	RT1	RT2	RT3	RT4	RT5	RT6
Dalapon	4.690	4.700	4.690	4.697	4.690	4.690
4-Nitrophenol	14.700	14.690	14.680	14.680	14.680	14.670
Dicamba	15.530	15.530	15.520	15.523	15.520	15.520
MCPP	15.930	15.930	15.930	15.927	15.920	15.920
MCPA	16.210	16.200	16.200	16.200	16.200	16.200
Dichloroprop	16.870	16.870	16.860	16.857	16.850	16.850
2,4-D	17.270	17.260	17.250	17.250	17.240	17.240
Pentachlorophenol	17.620	17.620	17.620	17.617	17.610	17.610
2,4,5-TP	18.640	18.640	18.630	18.630	18.620	18.620
2,4,5-T	19.080	19.070	19.060	19.060	19.050	19.050
2,4-DB	19.930	19.910	19.900	19.893	19.890	19.880
Dinoseb	21.490	21.490	21.480	21.480	21.480	21.470
2,4-Dichlorophenyl acetic ac	15.200	15.190	15.190	15.190	15.180	15.180

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Instrument ID: GC04 Calibration Date(s): 08/20/12 08/20/12

Column: RTX-CLPEST ID: 0.32 (mm) Calibration Time(s): 1710 2018

COMPOUND	MEAN RT	RT WINDOW FROM	RT WINDOW TO
Dalapon	4.693	4.678	4.708
4-Nitrophenol	14.683	14.658	14.688
Dicamba	15.524	15.502	15.532
MCPP	15.926	15.908	15.938
MCPA	16.202	16.182	16.212
Dichloroprop	16.859	16.835	16.865
2,4-D	17.252	17.225	17.255
Pentachlorophenol	17.616	17.595	17.625
2,4,5-TP	18.630	18.605	18.635
2,4,5-T	19.062	19.038	19.068
2,4-DB	19.901	19.868	19.898
Dinoseb	21.482	21.458	21.488
2,4-Dichlorophenyl acetic ac	15.188	15.168	15.198

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Instrument ID: GC04 Calibration Date(s): 08/20/12 08/20/12

Column: RTX-CLPEST ID: 0.32 (mm) Calibration Time(s): 1710 2018

LAB FILE ID: RF0.02: 4HKB0002 RF0.04: 4HKB0003 RF0.1: 4HKB0004
RF0.2: 4HKB0005 RF0.3: 4HKB0006 RF0.4: 4HKB0007

COMPOUND	RF0.02	RF0.04	RF0.1	RF0.2	RF0.3	RF0.4
Dalapon	71454	134392	275410	503456	643032	869170
4-Nitrophenol	33936	67420	153057	260068	329311	425624
Dicamba	125897	245515	539689	943452	1214860	1583847
MCPP	10304	20498	52971	93131	120697	183637
MCPA	12239	35203	80832	146359	184435	273994
Dichloroprop	43903	84817	186759	312286	395346	508172
2,4-D	49155	98028	219886	369159	466645	603231
Pentachlorophenol	401748	790013	1801259	3130621	4105281	5574820
2,4,5-TP	170660	339846	777069	1339067	1712723	2232530
2,4,5-T	165828	336444	781153	1317378	1675759	2171876
2,4-DB	14075	43645	123393	258079	347099	468682
Dinoseb	127404	247878	551886	939695	1198327	1562224
2,4-Dichlorophenyl acetic ac	89412	174802	366638	627351	802537	1050934

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Instrument ID: GC04 Calibration Date(s): 08/20/12 08/20/12

Column: RTX-CLPEST ID: 0.32 (mm) Calibration Time(s): 1710 2018

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Dalapon	2ORDR	0.00000000	0.17393873	-4.8e-003	0.9972355	0.9900000
4-Nitrophenol	2ORDR	0.00000000	9.547e-002	-3.63e-003	0.9979689	0.9900000
Dicamba	2ORDR	0.00000000	0.33933022	-1.14e-002	0.9983008	0.9900000
MCPP	2ORDR	0.00000000	2.821e-004	1.404e-009	0.9933784	0.9900000
MCPA	2ORDR	0.00000000	4.559e-004	-4.1e-008	0.9933061	0.9900000
Dichloroprop	2ORDR	0.00000000	0.11650539	-4.66e-003	0.9973667	0.9900000
2,4-D	2ORDR	0.00000000	0.13650820	-5.3e-003	0.9975024	0.9900000
Pentachlorophenol	2ORDR	0.00000000	1.08049222	-2.63e-002	0.9977071	0.9900000
2,4,5-TP	2ORDR	0.00000000	0.48340640	-1.68e-002	0.9982796	0.9900000
2,4,5-T	2ORDR	0.00000000	0.48231861	-1.79e-002	0.9979232	0.9900000
2,4-DB	2ORDR	0.00000000	7.91e-002	-5.85e-004	0.9994777	0.9900000
Dinoseb	2ORDR	0.00000000	0.34265066	-1.24e-002	0.9977120	0.9900000
2,4-Dichlorophenyl acetic ac	2ORDR	6.973e-002	7.648e-002	-6.87e-004	0.9991062	0.9900000

FORM VI SV

ALS - Middletown

8151

Data file : \\Gc01\TargetData\Chem\gc04.i\04120820.b\4HKB0002.D
Lab Smp Id: LEVEL1
Inj Date : 20-AUG-2012 17:10
Operator : JLH Inst ID: gc04.i
Smp Info : LEVEL1;;;1;1
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc04.i\04120820.b\B8151CLP.m
Meth Date : 21-Aug-2012 13:35 jhall Quant Type: ISTD
Cal Date : 20-AUG-2012 17:10 Cal File: 4HKB0002.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TargetList.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	1 Dalapon	4.693	4.693	(0.259)	71454	0.02000	0.0293213(a)
	2 4-Nitrophenol	14.696	14.673	(0.811)	33936	0.02000	0.0254533(a)
$	3 2,4-Dichlorophenyl acetic acid	15.196	15.183	(0.839)	89412	0.05000	0.0367498
	4 Dicamba	15.526	15.516	(0.857)	125897	0.02000	0.0265270
	7 Dichloroprop	16.866	16.850	(0.931)	43903	0.02000	0.0270458
	8 2,4-D	17.266	17.240	(0.953)	49155	0.02000	0.0258027
	9 Pentachlorophenol	17.620	17.610	(0.973)	401748	0.02000	0.0264501
*	10 4,4'-Dibromooctafluorobiphenyl	18.116	18.106	(1.000)	712050	0.05000	
	11 2,4,5-TP	18.640	18.620	(1.029)	170660	0.02000	0.0252325
	12 2,4,5-T	19.080	19.053	(1.053)	165828	0.02000	0.0245911
	13 2,4-DB	19.933	19.883	(0.000)	14075	0.02000	0.0125176(aM)
	14 Dinoseb	21.490	21.473	(1.186)	127404	0.02000	0.0266201(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

0603

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4HKB0002.D
Lab Smp Id: LEVEL1
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Method File: \\Gc01\TargetData\Chem\gc04.i\O4120820.b\B8151CLP.m
Misc Info:

Calibration Date: 20-AUG-2012
Calibration Time: 19:03

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

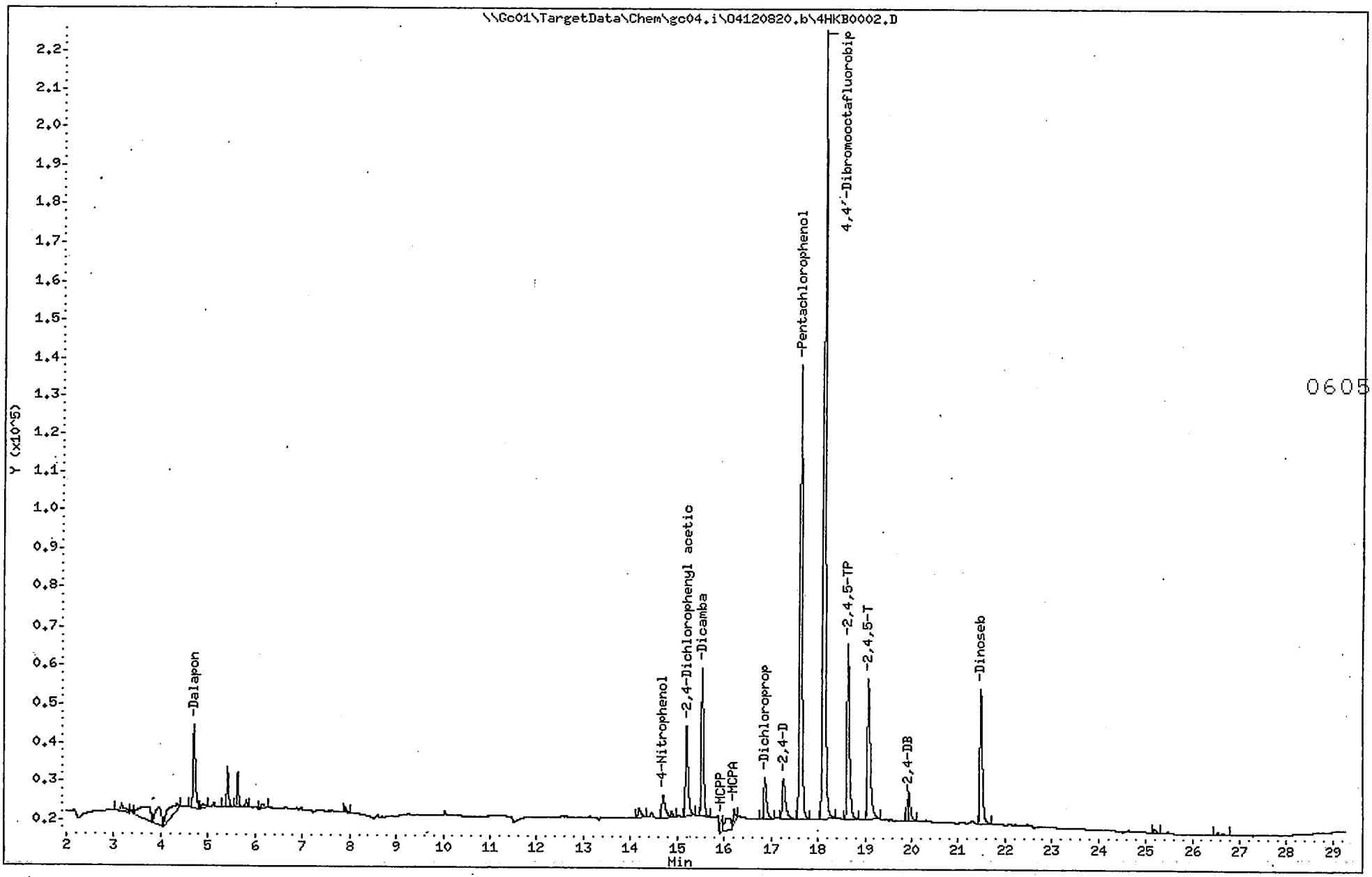
10 4,4'-Dibromooctaf	820844	410422	1231266	712050	-13.25

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	18.11	18.01	18.21	18.12	0.02

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

Data File: \\Gc01\TargetData\Chem\gc04.i\04120820.b\4HKB0002.D
Date : 20-AUG-2012 17:10
Client ID:
Sample Info: LEVEL1;;;1;1
Volume Injected (uL): 1.0
Column phase: RTX-CLPEST

Instrument: gc04.i
Operator: JLH
Column diameter: 0.32



ALS - Middletown

8151

Data file : \\Gc01\TargetData\Chem\gc04.i\O4120820.b\4HKF0002.D
Lab Smp Id: LEVEL1
Inj Date : 20-AUG-2012 17:10
Operator : JLH Inst ID: gc04.i
Smp Info : LEVEL1;;;1;1
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc04.i\O4120820.b\F8151RTX.m
Meth Date : 21-Aug-2012 13:35 jhall Quant Type: ISTD
Cal Date : 20-AUG-2012 17:10 Cal File: 4HKF0002.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TargetList.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL) (1000 low, 2
Vo	1000.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
	1 Dalapon	4.580	4.580	(0.253)	47097	0.02000	0.0290805 (a)
	2 4-Nitrophenol	13.976	13.946	(0.772)	25144	0.02000	0.0194914 (a)
$	3 2,4-Dichlorophenyl acetic acid	15.606	15.596	(0.862)	65932	0.05000	0.0380231
	4 Dicamba	15.856	15.846	(0.876)	86085	0.02000	0.0272775
	7 Dichloroprop	17.186	17.170	(0.949)	28528	0.02000	0.0265440
	8 2,4-D	17.496	17.470	(0.966)	31193	0.02000	0.0246546
	9 Pentachlorophenol	18.823	18.813	(1.039)	266988	0.02000	0.0267139
*	10 4,4'-Dibromooctafluorobiphenyl	18.110	18.103	(1.000)	464824	0.05000	
	11 2,4,5-TP	19.136	19.120	(1.057)	118705	0.02000	0.0260507
	12 2,4,5-T	19.513	19.490	(1.077)	114454	0.02000	0.0254842
	13 2,4-DB	20.336	20.306	(1.123)	11677	0.02000	0.0171211 (a)
	14 Dinoseb	20.416	20.403	(1.127)	95265	0.02000	0.0276657 (a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation (BLOQ).

9009

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4HKF0002.D
Lab Smp Id: LEVEL1
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Method File: \\Gc01\TargetData\Chem\gc04.i\O4120820.b\F8151RTX.m
Misc Info:

Calibration Date: 20-AUG-2012
Calibration Time: 19:03

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	553396	276698	830094	464824	-16.01

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	18.11	18.01	18.21	18.11	0.02

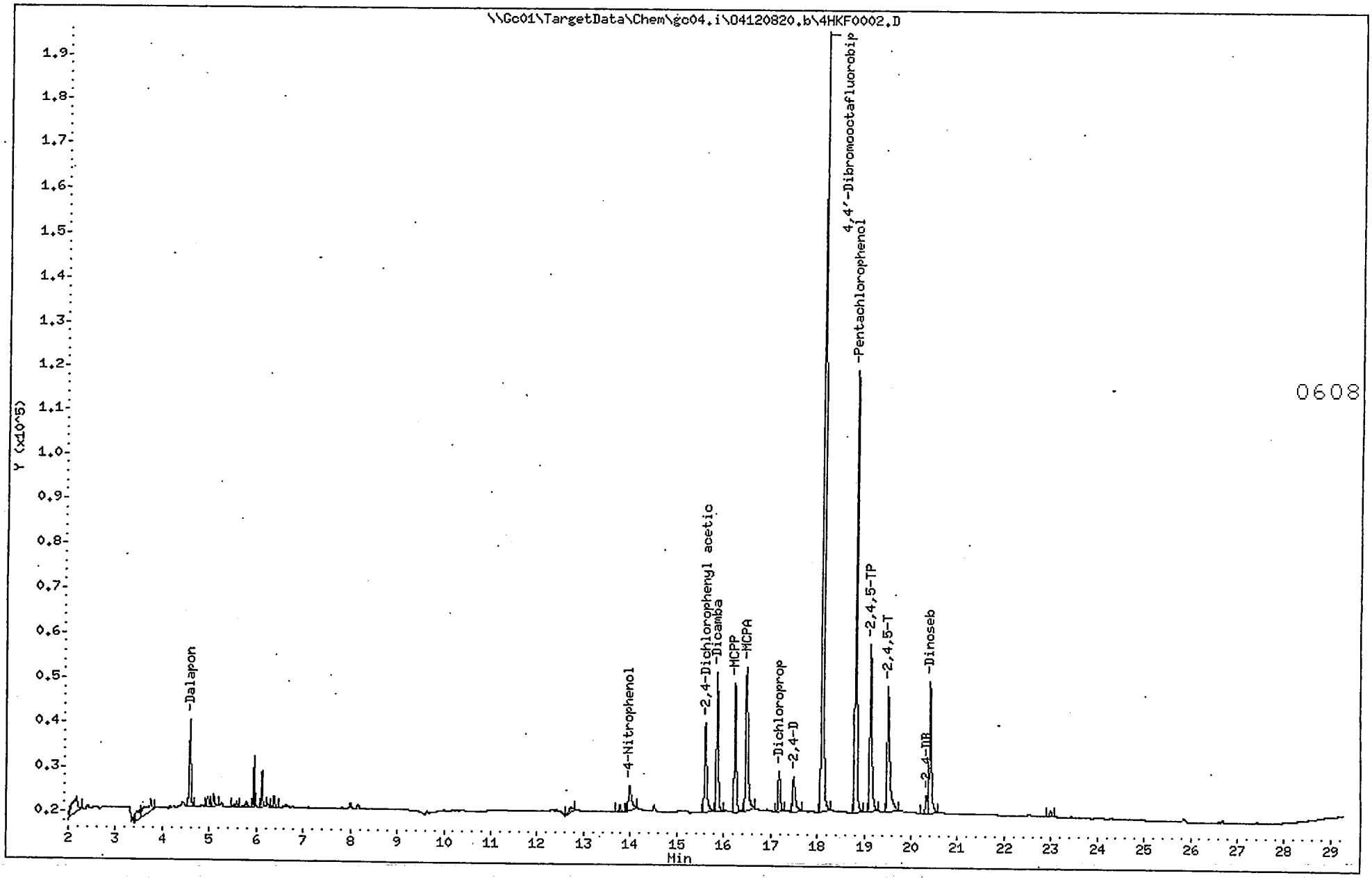
AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

0607

Data File: \\Gc01\TargetData\Chem\gc04.i\04120820.b\4HKF0002.D
Date : 20-AUG-2012 17:10
Client ID:
Sample Info: LEVEL1;;;1;1
Volume Injected (uL): 1.0
Column phase: RTX-5

Instrument: gc04.i

Operator: JLH
Column diameter: 0.32



ALS - Middletown

8151

Data file : \\Gc01\TargetData\Chem\gc04.i\04120820.b\4HKB0003.D
Lab Smp Id: LEVEL2
Inj Date : 20-AUG-2012 17:48
Operator : JLH Inst ID: gc04.i
Smp Info : LEVEL2;;;1;2
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc04.i\04120820.b\B8151CLP.m
Meth Date : 21-Aug-2012 13:35 jhall Quant Type: ISTD
Cal Date : 20-AUG-2012 17:48 Cal File: 4HKB0003.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TargetList.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	1 Dalapon	4.696	4.693	(0.259)	134392	0.04000	0.0533877(a)
	2 4-Nitrophenol	14.693	14.673	(0.811)	67420	0.04000	0.0491965(a)
$	3 2,4-Dichlorophenyl acetic acid	15.193	15.183	(0.839)	174802	0.10000	0.109849
	4 Dicamba	15.526	15.516	(0.857)	245515	0.04000	0.0502197
	5 MCPP	15.930	15.923	(0.879)	20498	4.00000	4.87002(M)
	6 MCPA	16.203	16.196	(0.894)	35203	4.00000	5.22720(M)
	7 Dichloroprop	16.866	16.850	(0.931)	84817	0.04000	0.0508902
	8 2,4-D	17.263	17.240	(0.953)	98028	0.04000	0.0501073
	9 Pentachlorophenol	17.620	17.610	(0.973)	790013	0.04000	0.0502628
*	10 4,4'-Dibromooctafluorobiphenyl	18.116	18.106	(1.000)	745604	0.05000	
	11 2,4,5-TP	18.636	18.620	(1.029)	339846	0.04000	0.0487993
	12 2,4,5-T	19.073	19.053	(1.053)	336444	0.04000	0.0485245
	13 2,4-DB	19.910	19.883	(0.000)	43645	0.04000	0.0372049(M)
	14 Dinoseb	21.486	21.473	(1.186)	247878	0.04000	0.0503393(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

6090

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4HKB0003.D
Lab Smp Id: LEVEL2
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Method File: \\Gc01\TargetData\Chem\gc04.i\O4120820.b\B8151CLP.m
Misc Info:

Calibration Date: 20-AUG-2012
Calibration Time: 19:03

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

10 4,4'-Dibromooctaf	820844	410422	1231266	745604	-9.17

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	18.11	18.01	18.21	18.12	0.02

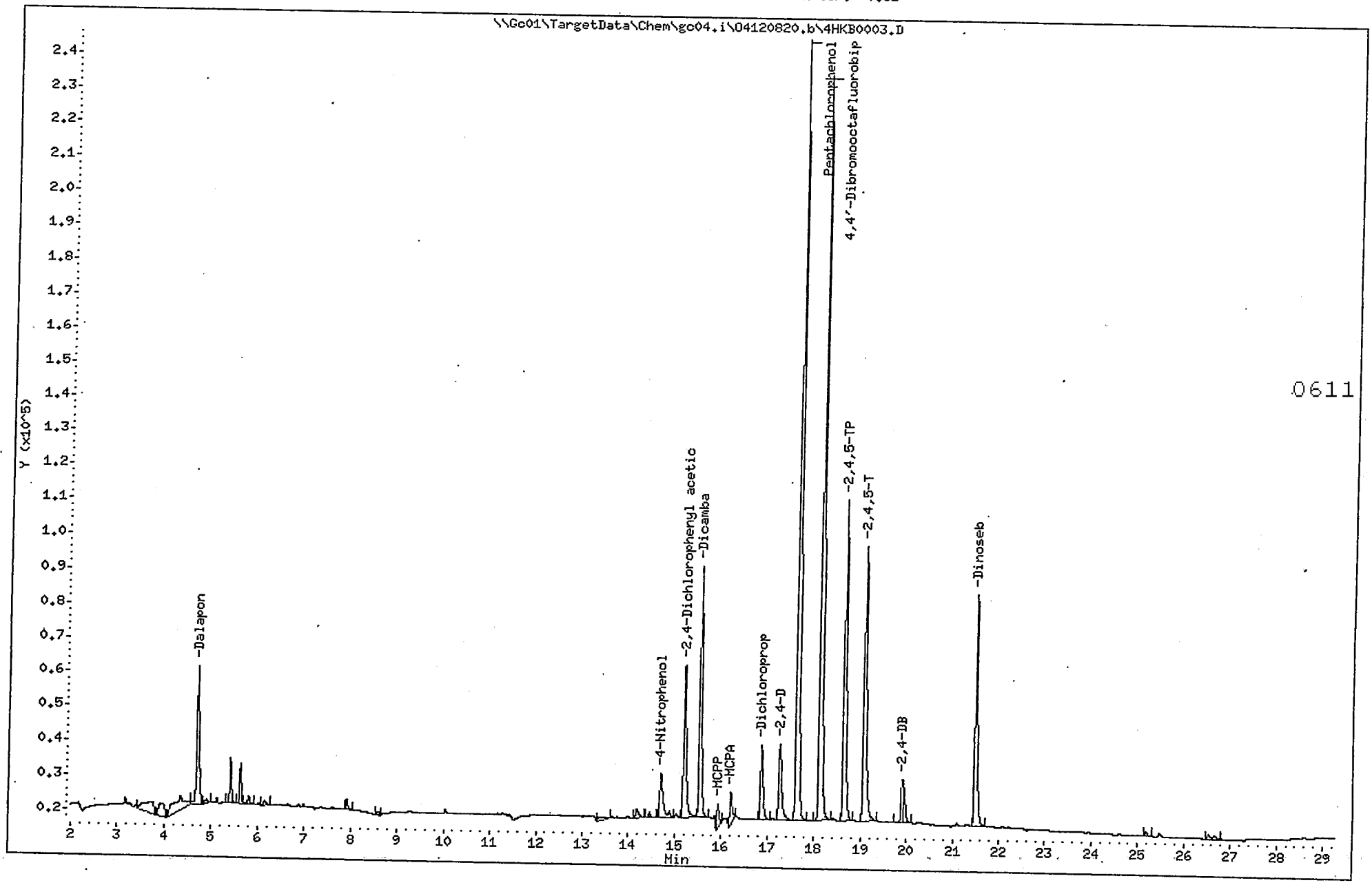
AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

0610

Data File: \\Gc01\TargetData\Chem\gc04.i\04120820.b\4HKB0003.D
Date : 20-AUG-2012 17:48
Client ID:
Sample Info: LEVEL2;;;1;2
Volume Injected (uL): 1.0
Column phase: RTX-CLPEST

Instrument: gc04.i

Operator: JLH
Column diameter: 0.32



ALS - Middletown

8151

Data file : \\Gc01\TargetData\Chem\gc04.i\O4120820.b\4HKF0003.D
Lab Smp Id: LEVEL2
Inj Date : 20-AUG-2012 17:48
Operator : JLH Inst ID: gc04.i
Smp Info : LEVEL2;;;1;2
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc04.i\O4120820.b\F8151RTX.m
Meth Date : 21-Aug-2012 13:35 jhall Quant Type: ISTD
Cal Date : 20-AUG-2012 17:10 Cal File: 4HKF0002.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TargetList.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	1 Dalapon	4.583	4.580	(0.253)	89808	0.04000	0.0528812(a)
	2 4-Nitrophenol	13.966	13.946	(0.771)	59417	0.04000	0.0436878(a)
$	3 2,4-Dichlorophenyl acetic acid	15.606	15.596	(0.862)	122891	0.10000	0.107635
	4 Dicamba	15.856	15.846	(0.876)	166213	0.04000	0.0502792
	5 MCPP	16.240	16.240	(0.897)	133166	4.00000	4.91150
	6 MCPA	16.483	16.483	(0.910)	166627	4.00000	4.93389
	7 Dichloroprop	17.183	17.170	(0.949)	57089	0.04000	0.0508879
	8 2,4-D	17.493	17.470	(0.966)	64993	0.04000	0.0491209
	9 Pentachlorophenol	18.823	18.813	(1.039)	527975	0.04000	0.0503266
*	10 4,4'-Dibromooctafluorobiphenyl	18.110	18.103	(1.000)	494863	0.05000	
	11 2,4,5-TP	19.133	19.120	(1.057)	236598	0.04000	0.0496301
	12 2,4,5-T	19.506	19.490	(1.077)	238570	0.04000	0.0509417
	13 2,4-DB	20.326	20.306	(1.122)	29831	0.04000	0.0415974
	14 Dinoseb	20.413	20.403	(1.127)	184932	0.04000	0.0514027(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

0612

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4HKF0003.D
Lab Smp Id: LEVEL2
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Calibration Date: 20-AUG-2012
Calibration Time: 19:03
Level: LOW
Sample Type: WATER
Method File: \\Gc01\TargetData\Chem\gc04.i\O4120820.b\F8151RTX.m
Misc Info:

Test Mode:
Use Last Continuing Calibrator.

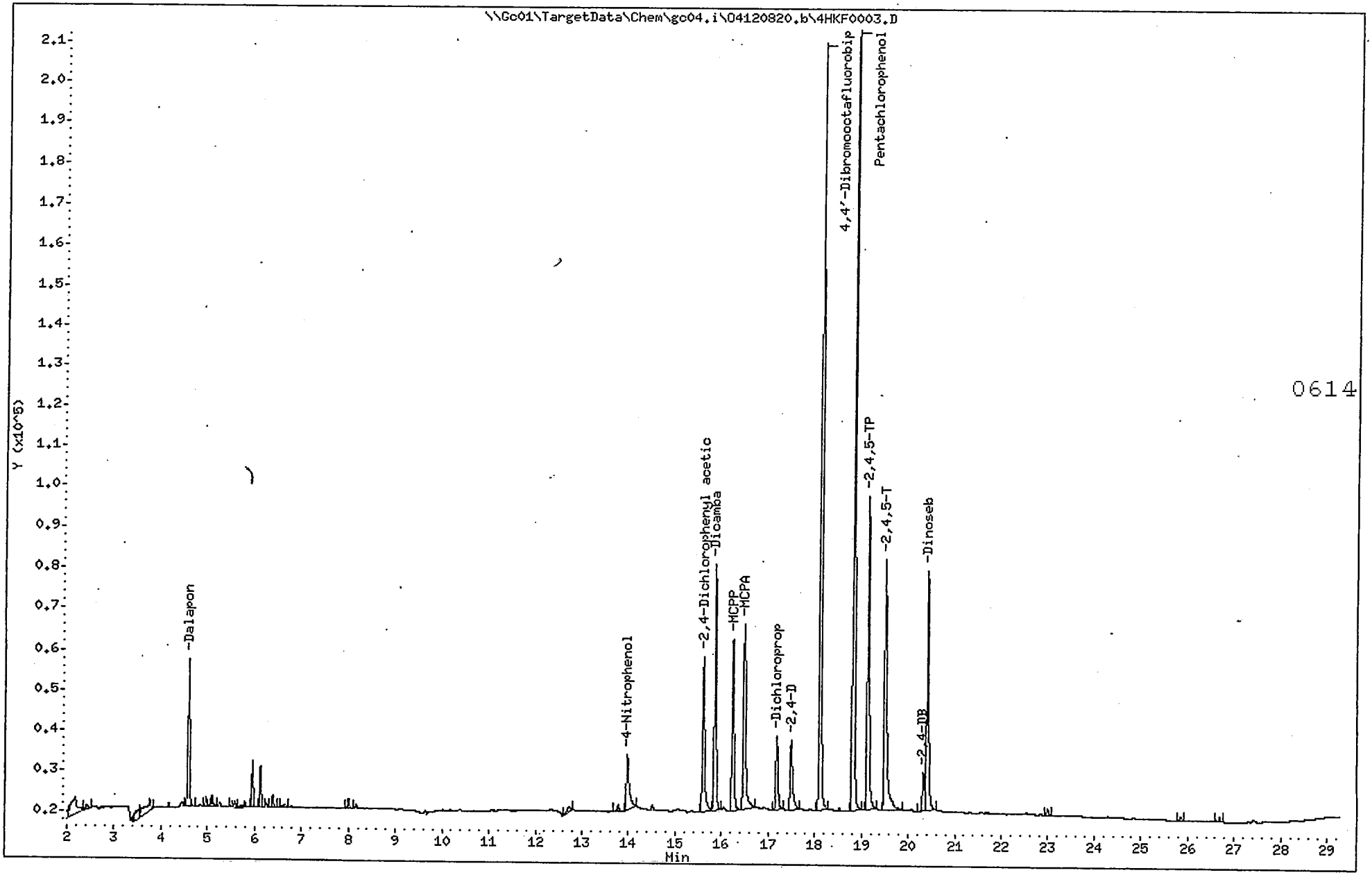
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	553396	276698	830094	494863	-10.58

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	18.11	18.01	18.21	18.11	0.02

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

Data File: \\Gc01\TargetData\Chem\gc04.i\04120820.b\4HKF0003.D
Date : 20-AUG-2012 17:48
Client ID:
Sample Info: LEVEL2;;;1;2
Volume Injected (uL): 1.0
Column phase: RTX-5

Instrument: gc04.i
Operator: JLH
Column diameter: 0.32



ALS - Middletown

8151

Data file : \\Gc01\TargetData\Chem\gc04.i\O4120820.b\4HKB0004.D
Lab Smp Id: LEVEL3
Inj Date : 20-AUG-2012 18:26
Operator : JLH Inst ID: gc04.i
Smp Info : LEVEL3;;;1;3
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc04.i\O4120820.b\B8151CLP.m
Meth Date : 21-Aug-2012 13:35 jhall Quant Type: ISTD
Cal Date : 20-AUG-2012 18:26 Cal File: 4HKB0004.D
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TargetList.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL) (1000 low, 2
Vo	1000.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	1 Dalapon	4.693	4.693	(0.259)	275410	0.10000	0.102612(a)
	2 4-Nitrophenol	14.683	14.673	(0.811)	153057	0.10000	0.106647(a)
$	3 2,4-Dichlorophenyl acetic acid	15.190	15.183	(0.839)	366638	0.25000	0.259567
	4 Dicamba	15.523	15.516	(0.857)	539689	0.10000	0.104603
	5 MCPP	15.926	15.923	(0.879)	52971	10.0000	11.4651(M)
	6 MCPA	16.200	16.196	(0.894)	80832	10.0000	11.0585(M)
	7 Dichloroprop	16.860	16.850	(0.931)	186759	0.10000	0.107177
	8 2,4-D	17.253	17.240	(0.953)	219886	0.10000	0.107440
	9 Pentachlorophenol	17.616	17.610	(0.973)	1801259	0.10000	0.107549
*	10 4,4'-Dibromooctafluorobiphenyl	18.113	18.106	(1.000)	817904	0.05000	
	11 2,4,5-TP	18.630	18.620	(1.029)	777069	0.10000	0.106089
	12 2,4,5-T	19.063	19.053	(1.052)	781153	0.10000	0.107595
	13 2,4-DB	19.900	19.883	(1.099)	123393	0.10000	0.0967441(M)
	14 Dinoseb	21.483	21.473	(1.186)	551886	0.10000	0.106666(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

0615

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4HKB0004.D
Lab Smp Id: LEVEL3
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Method File: \\Gc01\TargetData\Chem\gc04.i\O4120820.b\B8151CLP.m
Misc Info:

Calibration Date: 20-AUG-2012
Calibration Time: 19:03

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

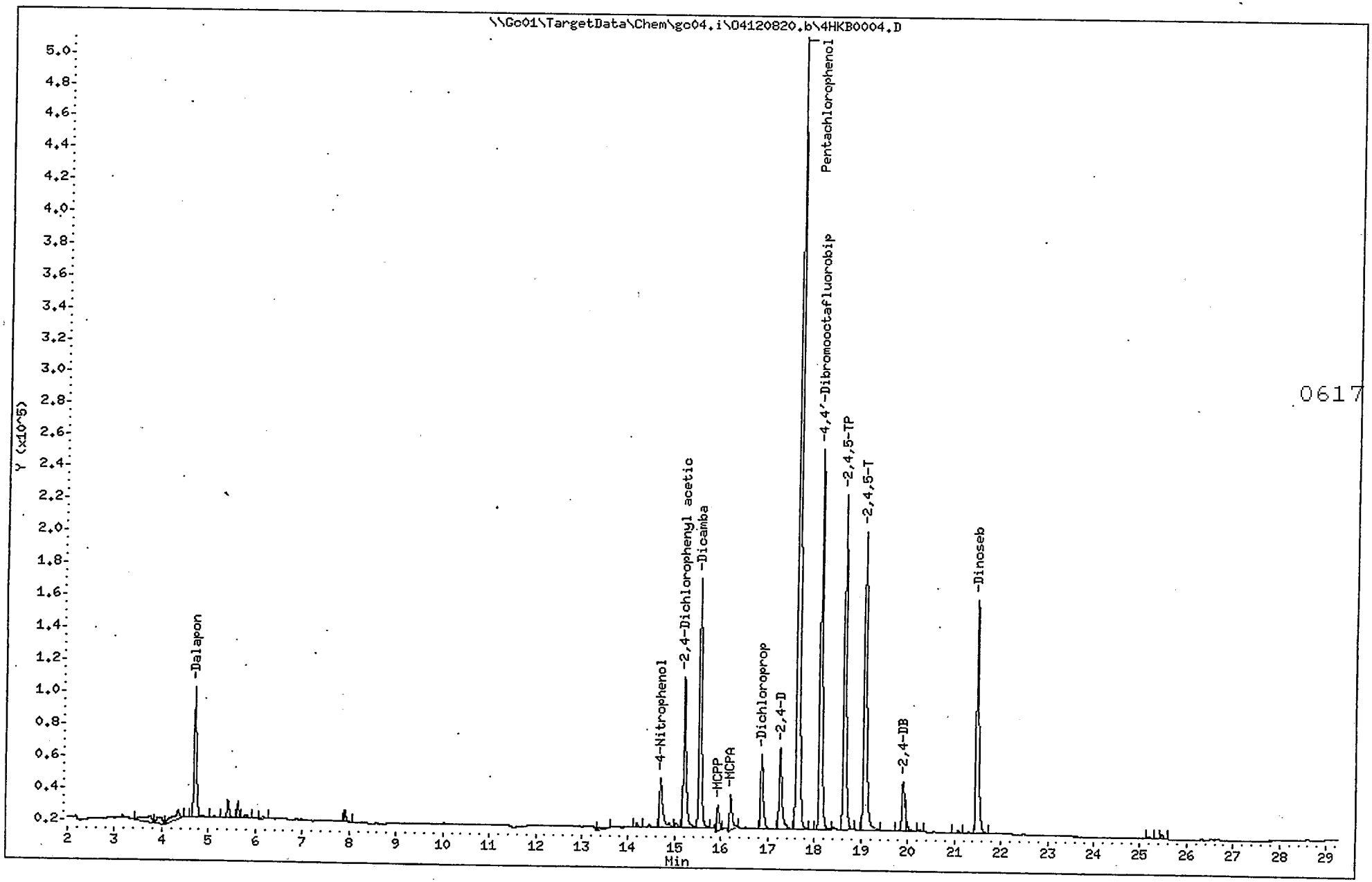
10 4,4'-Dibromooctaf	820844	410422	1231266	817904	-0.36

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	18.11	18.01	18.21	18.11	0.00

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

Data File: \\Gc01\TargetData\Chem\gc04.i\04120820.b\4HKB0004.D
Date : 20-AUG-2012 18:26
Client ID:
Sample Info: LEVEL3;;;1;3
Volume Injected (uL): 1.0
Column phase: RTX-CLPEST

Instrument: gc04.i
Operator: JLH
Column diameter: 0.32



ALS - Middletown

8151

Data file : \\Gc01\TargetData\Chem\gc04.i\O4120820.b\4HKF0004.D
Lab Smp Id: LEVEL3
Inj Date : 20-AUG-2012 18:26
Operator : JLH Inst ID: gc04.i
Smp Info : LEVEL3;;;1;3
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc04.i\O4120820.b\F8151RTX.m
Meth Date : 21-Aug-2012 13:35 jhall Quant Type: ISTD
Cal Date : 20-AUG-2012 17:48 Cal File: 4HKF0003.D
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TargetList.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	1 Dalapon	4.583	4.580	(0.253)	190013	0.10000	0.104800(a)
	2 4-Nitrophenol	13.960	13.946	(0.771)	159096	0.10000	0.108797(a)
$	3 2,4-Dichlorophenyl acetic acid	15.603	15.596	(0.862)	258258	0.25000	0.261166
	4 Dicamba	15.853	15.846	(0.875)	376645	0.10000	0.107547
	5 MCPP	16.240	16.240	(0.897)	211591	10.0000	11.1327
	6 MCPA	16.483	16.483	(0.910)	253521	10.0000	10.0336
	7 Dichloroprop	17.180	17.170	(0.949)	126044	0.10000	0.106594
	8 2,4-D	17.483	17.470	(0.965)	150495	0.10000	0.107633
	9 Pentachlorophenol	18.820	18.813	(1.039)	1199379	0.10000	0.107195
*	10 4,4'-Dibromooctafluorobiphenyl	18.110	18.103	(1.000)	546500	0.05000	
	11 2,4,5-TP	19.130	19.120	(1.056)	541451	0.10000	0.107490
	12 2,4,5-T	19.500	19.490	(1.077)	546870	0.10000	0.111269
	13 2,4-DB	20.320	20.306	(1.122)	78360	0.10000	0.102097
	14 Dinoseb	20.410	20.403	(1.127)	409880	0.10000	0.108056(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

0618

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4HKF0004.D
Lab Smp Id: LEVEL3
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Method File: \\Gc01\TargetData\Chem\gc04.i\04120820.b\F8151RTX.m
Misc Info:

Calibration Date: 20-AUG-2012
Calibration Time: 19:03

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

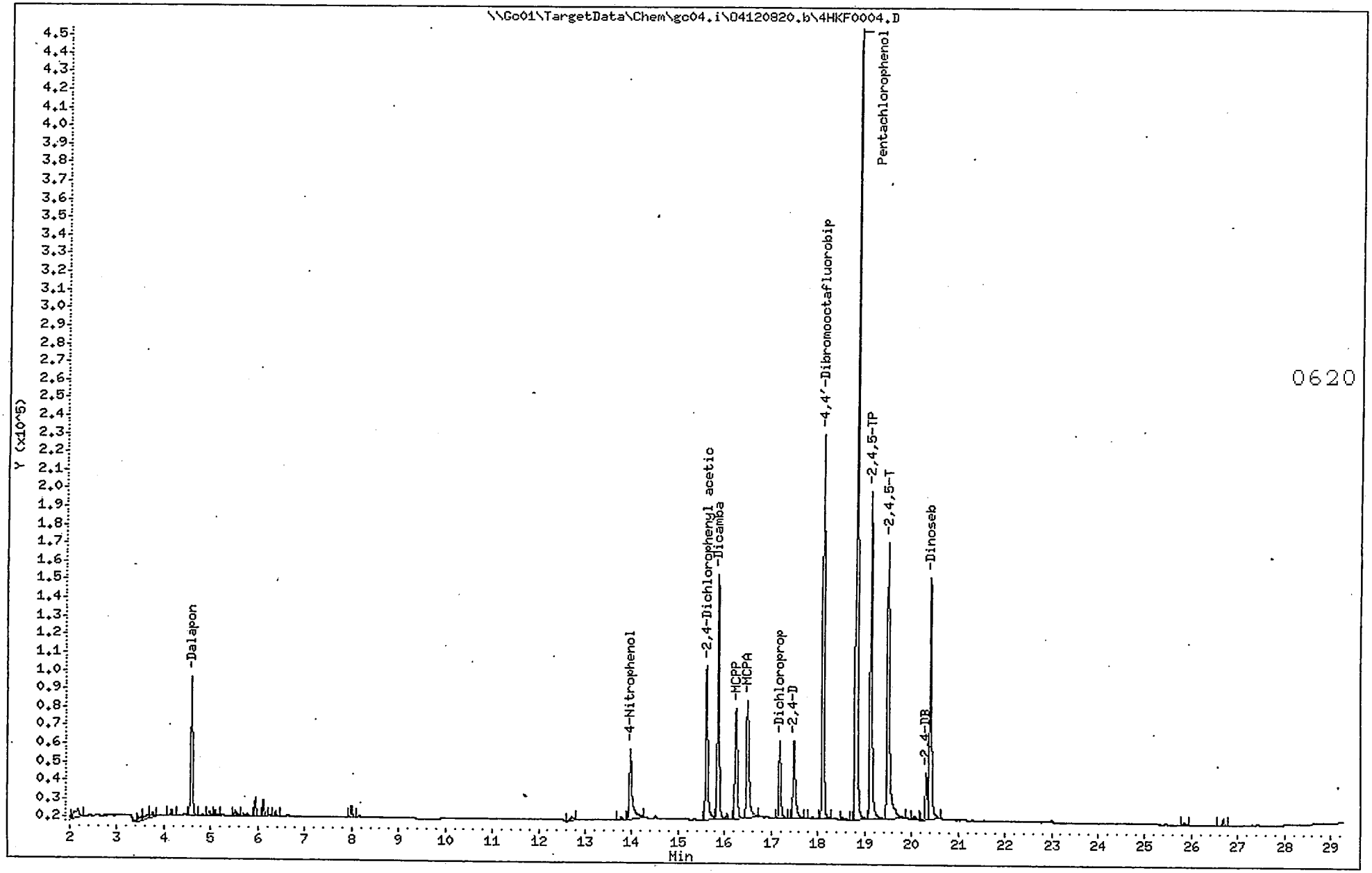
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	553396	276698	830094	546500	-1.25

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	18.11	18.01	18.21	18.11	0.02

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

Data File: \\Go01\TargetData\Chem\gc04.i\04120820.b\4HKF0004.D
Date : 20-AUG-2012 18:26
Client ID:
Sample Info: LEVEL3;;;1;3
Volume Injected (uL): 1.0
Column phase: RTX-5

Instrument: gc04.i
Operator: JLH
Column diameter: 0.32



ALS - Middletown

8151

Data file : \\Gc01\TargetData\Chem\gc04.i\O4120820.b\4HKB0005.D
Lab Smp Id: LEVEL4
Inj Date : 20-AUG-2012 19:03
Operator : JLH Inst ID: gc04.i
Smp Info : LEVEL4;;;1;4
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc04.i\O4120820.b\B8151CLP.m
Meth Date : 21-Aug-2012 13:35 jhall Quant Type: ISTD
Cal Date : 20-AUG-2012 19:03 Cal File: 4HKB0005.D
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TargetList.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL) (1000 low, 2
Vo	1000.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
	1 Dalapon	4.696	4.693	(0.259)	503456	0.20000	0.197960
	2 4-Nitrophenol	14.680	14.673	(0.810)	260068	0.20000	0.194736 (a)
$	3 2,4-Dichlorophenyl acetic acid	15.190	15.183	(0.839)	627351	0.50000	0.498733
	4 Dicamba	15.523	15.516	(0.857)	943452	0.20000	0.194988
	5 MCPP	15.926	15.923	(0.879)	93131	20.0000	20.0680 (M)
	6 MCPA	16.200	16.196	(0.894)	146359	20.0000	20.2950 (M)
	7 Dichloroprop	16.856	16.850	(0.931)	312286	0.20000	0.193069
	8 2,4-D	17.250	17.240	(0.952)	369159	0.20000	0.193959
	9 Pentachlorophenol	17.616	17.610	(0.973)	3130621	0.20000	0.195029
*	10 4,4'-Dibromooctafluorobiphenyl	18.113	18.106	(1.000)	820844	0.05000	
	11 2,4,5-TP	18.630	18.620	(1.029)	1339067	0.20000	0.195212
	12 2,4,5-T	19.060	19.053	(1.052)	1317378	0.20000	0.194409
	13 2,4-DB	19.893	19.883	(1.098)	258079	0.20000	0.204945
	14 Dinoseb	21.480	21.473	(1.186)	939695	0.20000	0.194265 (a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

0621

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4HKB0005.D
Lab Smp Id: LEVEL4
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Method File: \\Gc01\TargetData\Chem\gc04.i\O4120820.b\B8151CLP.m
Misc Info:

Calibration Date: 20-AUG-2012
Calibration Time: 19:03

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

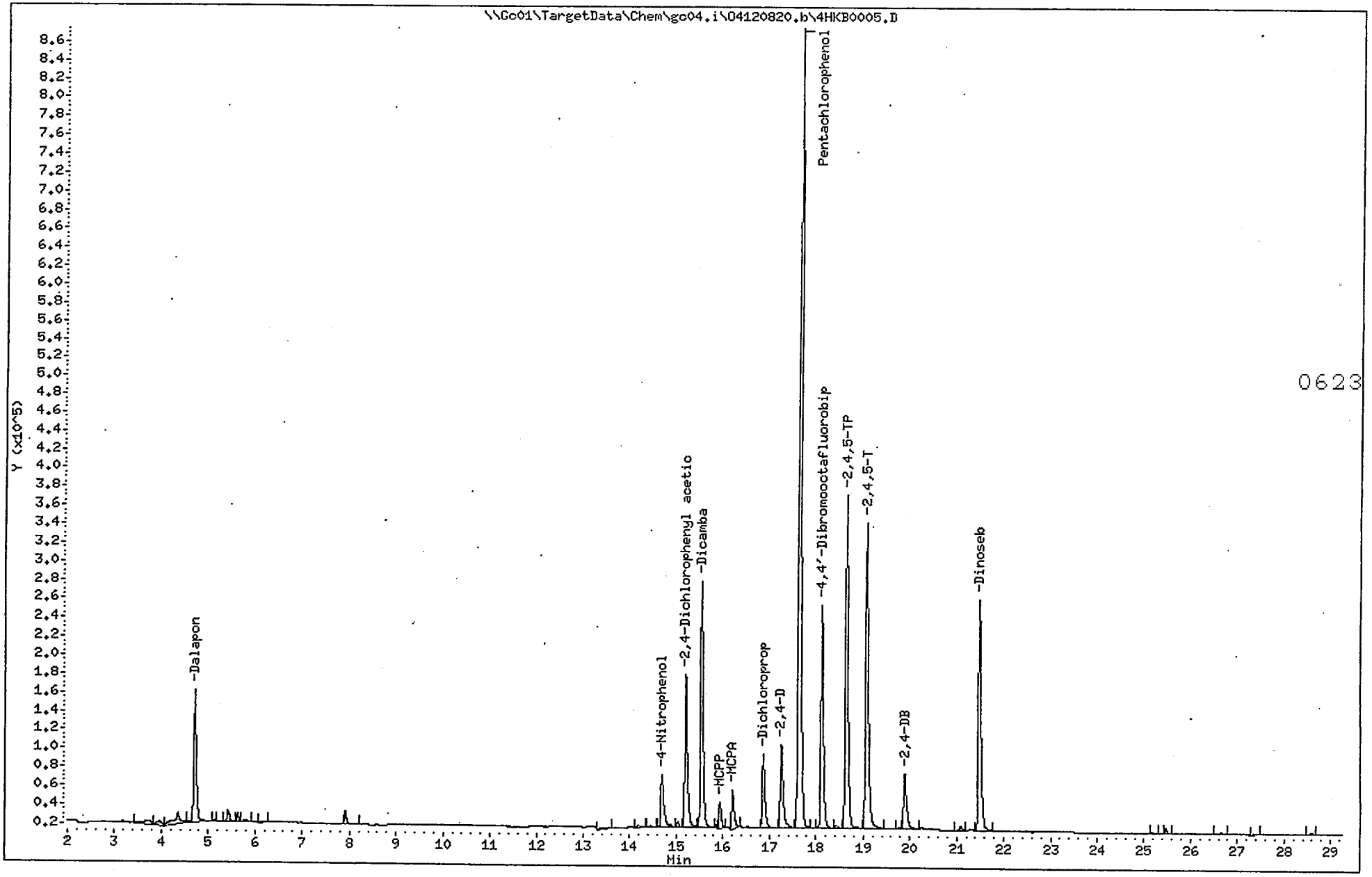
10 4,4'-Dibromooctaf	820844	410422	1231266	820844	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	18.11	18.01	18.21	18.11	0.00

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

Data File: \\Go01\TargetData\Chem\go04.i\04120820.b\4HKB0005.D
Date : 20-AUG-2012 19:03
Client ID:
Sample Info: LEVEL4;;;1;4
Volume Injected (uL): 1.0
Column phase: RTX-CLPEST

Instrument: go04.i
Operator: JLH
Column diameter: 0.32



ALS - Middletown

8151

Data file : \\Gc01\TargetData\Chem\gc04.i\O4120820.b\4HKF0005.D
Lab Smp Id: LEVEL4
Inj Date : 20-AUG-2012 19:03
Operator : JLH Inst ID: gc04.i
Smp Info : LEVEL4;;;1;4
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc04.i\O4120820.b\F8151RTX.m
Meth Date : 21-Aug-2012 13:35 jhall Quant Type: ISTD
Cal Date : 20-AUG-2012 18:26 Cal File: 4HKF0004.D
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TargetList.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	1 Dalapon	4.583	4.580	(0.253)	332159	0.20000	0.192019
	2 4-Nitrophenol	13.953	13.946	(0.771)	286273	0.20000	0.201048(a)
$	3 2,4-Dichlorophenyl acetic acid	15.600	15.596	(0.862)	436903	0.50000	0.497787
	4 Dicamba	15.853	15.846	(0.876)	642365	0.20000	0.193446
	5 MCPP	16.240	16.240	(0.897)	282182	20.0000	19.0708
	6 MCPA	16.483	16.483	(0.910)	368438	20.0000	19.8337
	7 Dichloroprop	17.176	17.170	(0.949)	214162	0.20000	0.193199
	8 2,4-D	17.480	17.470	(0.965)	253243	0.20000	0.191148
	9 Pentachlorophenol	18.820	18.813	(1.039)	2089184	0.20000	0.195091
*	10 4,4'-Dibromooctafluorobiphenyl	18.106	18.103	(1.000)	553396	0.05000	
	11 2,4,5-TP	19.126	19.120	(1.056)	922688	0.20000	0.193988
	12 2,4,5-T	19.493	19.490	(1.077)	920851	0.20000	0.200547
	13 2,4-DB	20.310	20.306	(1.122)	148516	0.20000	0.201675
	14 Dinoseb	20.406	20.403	(1.127)	686068	0.20000	0.192139(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

0624

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4HKF0005.D
Lab Smp Id: LEVEL4
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Method File: \\Gc01\TargetData\Chem\gc04.i\04120820.b\F8151RTX.m
Misc Info:

Calibration Date: 20-AUG-2012
Calibration Time: 19:03

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

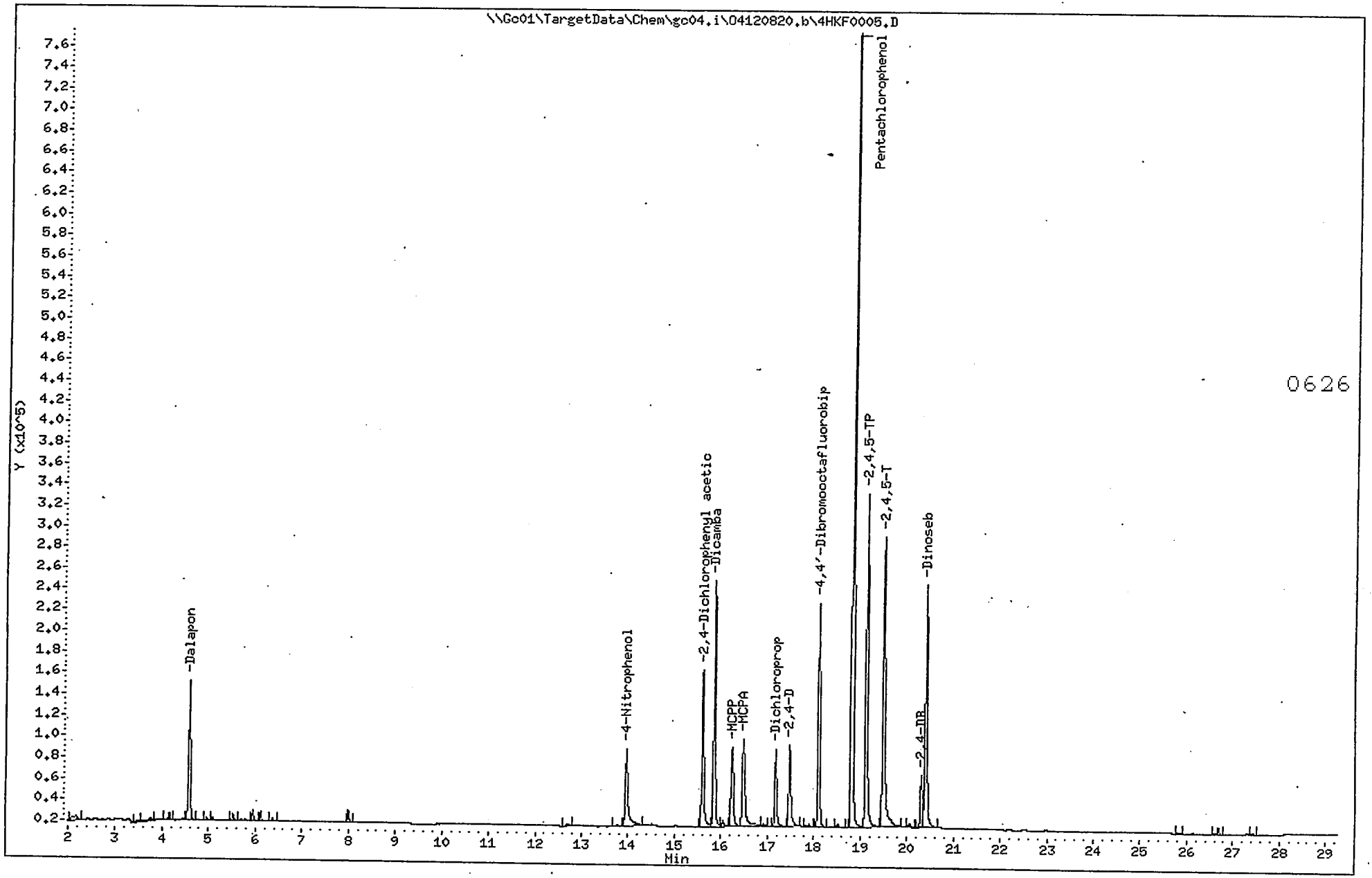
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	553396	276698	830094	553396	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	18.11	18.01	18.21	18.11	0.00

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

Data File: \\Gc01\TargetData\Chem\gc04.i\04120820.b\4HKF0005.D
Date : 20-AUG-2012 19:03
Client ID:
Sample Info: LEVEL4:::1:4
Volume Injected (uL): 1.0
Column phase: RTX-5

Instrument: gc04.i
Operator: JLH
Column diameter: 0.32



ALS - Middletown

8151

Data file : \\Gc01\TargetData\Chem\gc04.i\O4120820.b\4HKB0006.D
Lab Smp Id: LEVEL5
Inj Date : 20-AUG-2012 19:41
Operator : JLH Inst ID: gc04.i
Smp Info : LEVEL5;;;1;5
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc04.i\O4120820.b\B8151CLP.m
Meth Date : 21-Aug-2012 13:35 jhall Quant Type: ISTD
Cal Date : 20-AUG-2012 19:41 Cal File: 4HKB0006.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TargetList.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (. ng)
	1 Dalapon	4.690	4.693	(0.259)	643032	0.30000	0.287286
	2 4-Nitrophenol	14.676	14.673	(0.810)	329311	0.30000	0.288895
$	3 2,4-Dichlorophenyl acetic acid	15.183	15.183	(0.838)	802537	0.75000	0.738329
	4 Dicamba	15.520	15.516	(0.857)	1214860	0.30000	0.291232
	5 MCPP	15.923	15.923	(0.879)	120697	30.0000	27.8919(M)
	6 MCPA	16.196	16.196	(0.894)	184435	30.0000	27.8403(M)
	7 Dichloroprop	16.853	16.850	(0.931)	395346	0.30000	0.288268
	8 2,4-D	17.243	17.240	(0.952)	466645	0.30000	0.287883
	9 Pentachlorophenol	17.610	17.610	(0.972)	4105281	0.30000	0.289143
*	10 4,4'-Dibromooctafluorobiphenyl	18.110	18.106	(1.000)	764807	0.05000	
	11 2,4,5-TP	18.623	18.620	(1.028)	1712723	0.30000	0.290112
	12 2,4,5-T	19.053	19.053	(1.052)	1675759	0.30000	0.289165
	13 2,4-DB	19.886	19.883	(1.098)	347099	0.30000	0.300193
	14 Dinoseb	21.476	21.473	(1.186)	1198327	0.30000	0.288772(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

0627

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4HKB0006.D
Lab Smp Id: LEVEL5
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Method File: \\Gc01\TargetData\Chem\gc04.i\O4120820.b\B8151CLP.m
Misc Info:

Calibration Date: 20-AUG-2012
Calibration Time: 19:03
Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

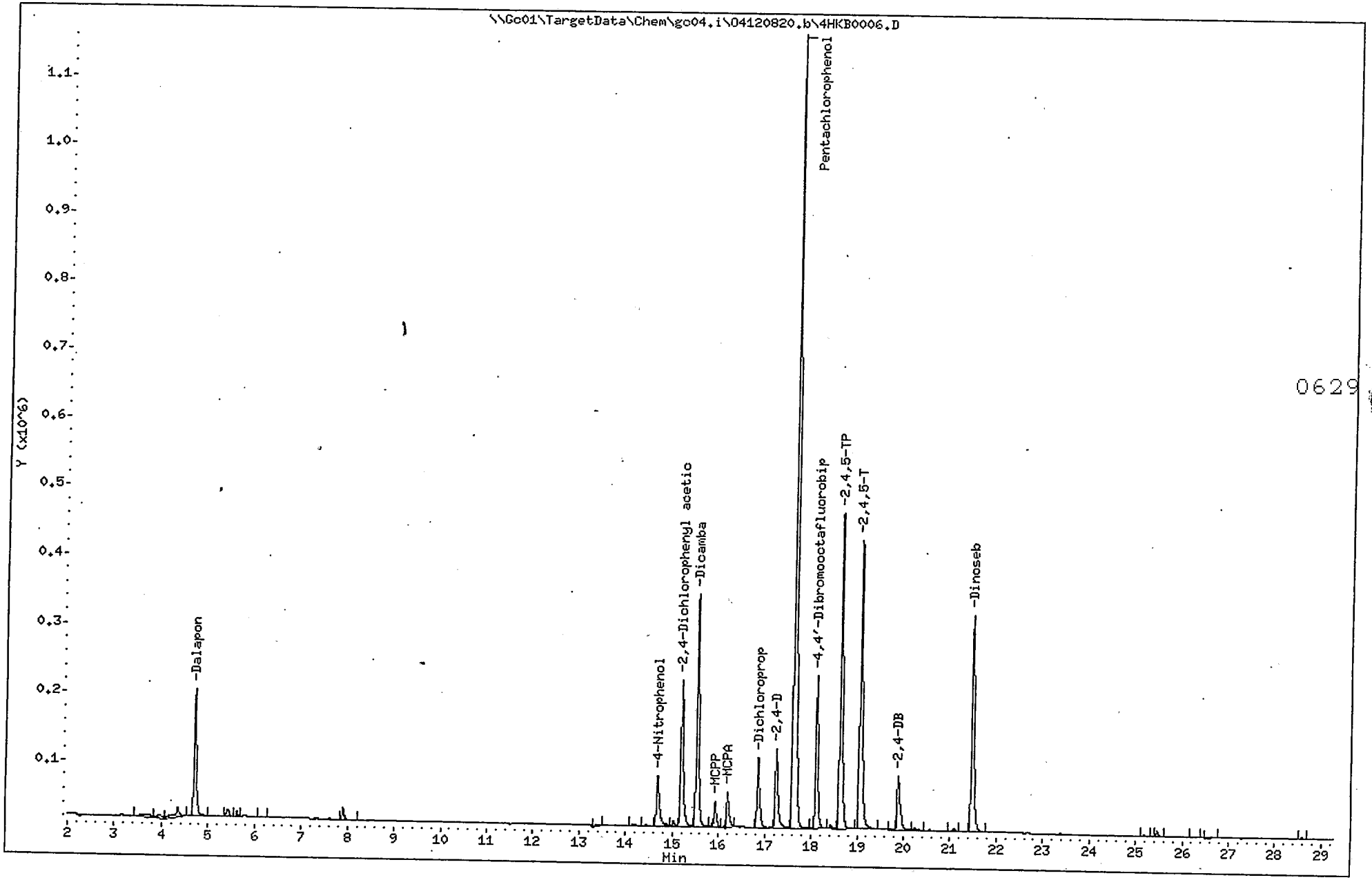
10 4,4'-Dibromooctaf	820844	410422	1231266	764807	-6.83

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	18.11	18.01	18.21	18.11	-0.02

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

Data File: \\Gc01\TargetData\Chem\gc04.i\04120820.b\4HKB0006.D
Date : 20-AUG-2012 19:41
Client ID:
Sample Info: LEVEL5;;;1;5
Volume Injected (uL): 1.0
Column phase: RTX-CLPEST

Instrument: gc04.i
Operator: JLH
Column diameter: 0.32



0629

ALS - Middletown

8151

Data file : \\Gc01\TargetData\Chem\gc04.i\04120820.b\4HKF0006.D
Lab Smp Id: LEVEL5
Inj Date : 20-AUG-2012 19:41
Operator : JLH Inst ID: gc04.i
Smp Info : LEVEL5;;;1;5
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc04.i\04120820.b\F8151RTX.m
Meth Date : 21-Aug-2012 13:35 jhall Quant Type: ISTD
Cal Date : 20-AUG-2012 19:03 Cal File: 4HKF0005.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TargetList.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	1 Dalapon	4.576	4.580	(0.253)	442130	0.30000	0.293367
	2 4-Nitrophenol	13.950	13.946	(0.771)	367864	0.30000	0.285882
$	3 2,4-Dichlorophenyl acetic acid	15.596	15.596	(0.862)	558676	0.75000	0.738391
	4 Dicamba	15.850	15.846	(0.876)	832407	0.30000	0.289081
	5 MCPP	16.240	16.240	(0.897)	322622	30.0000	29.2449
	6 MCPA	16.483	16.483	(0.911)	421958	30.0000	29.7224
	7 Dichloroprop	17.173	17.170	(0.949)	274135	0.30000	0.289375
	8 2,4-D	17.473	17.470	(0.965)	334842	0.30000	0.294410
	9 Pentachlorophenol	18.816	18.813	(1.039)	2718594	0.30000	0.288354
*	10 4,4'-Dibromooctafluorobiphenyl	18.103	18.103	(1.000)	519163	0.05000	
	11 2,4,5-TP	19.123	19.120	(1.056)	1186507	0.30000	0.288828
	12 2,4,5-T	19.490	19.490	(1.077)	1089129	0.30000	0.270668
	13 2,4-DB	20.310	20.306	(1.122)	193091	0.30000	0.294748
	14 Dinoseb	20.403	20.403	(1.127)	882161	0.30000	0.288321(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

0630

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4HKF0006.D
Lab Smp Id: LEVEL5
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Method File: \\Gc01\TargetData\Chem\gc04.i\O4120820.b\F8151RTX.m
Misc Info:

Calibration Date: 20-AUG-2012
Calibration Time: 19:03
Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

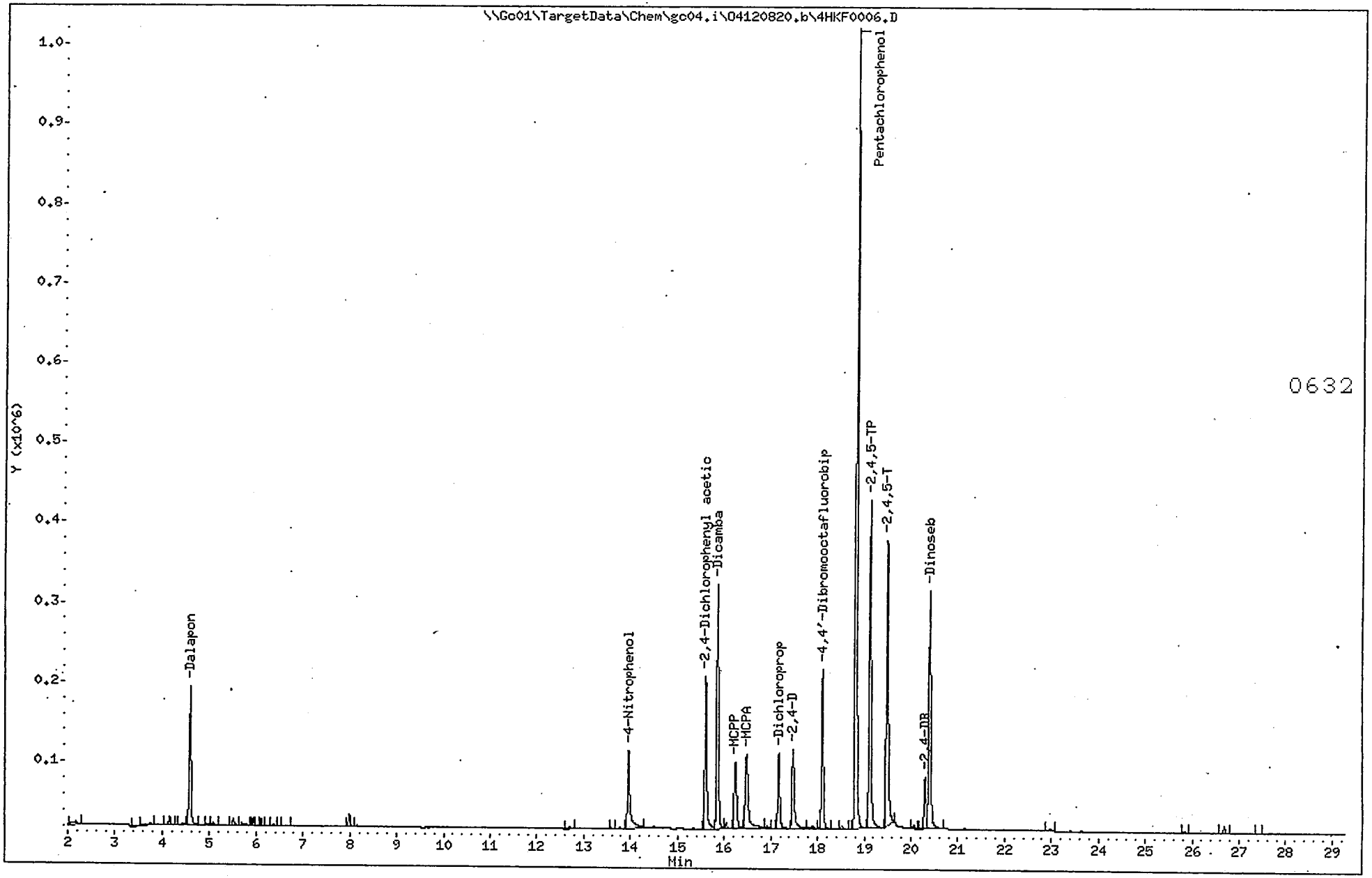
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	553396	276698	830094	519163	-6.19

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	18.11	18.01	18.21	18.10	-0.02

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

Data File: \\Gc01\TargetData\Chem\gc04.i\04120820.b\4HKF0006.D
Date : 20-AUG-2012 19:41
Client ID:
Sample Info: LEVEL5:::1:5
Volume Injected (uL): 1.0
Column phase: RTX-5

Instrument: gc04.i
Operator: JLH
Column diameter: 0.32



ALS - Middletown

8151

Data file : \\Gc01\TargetData\Chem\gc04.i\O4120820.b\4HKB0007.D
Lab Smp Id: LEVEL6
Inj Date : 20-AUG-2012 20:18
Operator : JLH Inst ID: gc04.i
Smp Info : LEVEL6;;;1;6
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc04.i\O4120820.b\B8151CLP.m
Meth Date : 21-Aug-2012 13:35 jhall Quant Type: ISTD
Cal Date : 20-AUG-2012 20:18 Cal File: 4HKB0007.D
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TargetList.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	1 Dalapon	4.693	4.693	(0.259)	869170	0.40000	0.408922(A)
	2 4-Nitrophenol	14.673	14.673	(0.810)	425624	0.40000	0.410203(A)
$	3 2,4-Dichlorophenyl acetic acid	15.183	15.183	(0.839)	1050934	1.00000	1.00698(A)
	4 Dicamba	15.516	15.516	(0.857)	1583847	0.40000	0.407741(A)
	5 MCPP	15.923	15.923	(0.879)	183637	40.0000	41.0651(A)
	6 MCPA	16.196	16.196	(0.895)	273994	40.0000	41.1059(A)
	7 Dichloroprop	16.850	16.850	(0.931)	508172	0.40000	0.411945(A)
	8 2,4-D	17.240	17.240	(0.952)	603231	0.40000	0.411510(A)
	9 Pentachlorophenol	17.610	17.610	(0.973)	5574820	0.40000	0.407950(A)
*	10 4,4'-Dibromooctafluorobiphenyl	18.106	18.106	(1.000)	789321	0.05000	
	11 2,4,5-TP	18.620	18.620	(1.028)	2232530	0.40000	0.408508(A)
	12 2,4,5-T	19.053	19.053	(1.052)	2171876	0.40000	0.409836(A)
	13 2,4-DB	19.883	19.883	(1.098)	468682	0.40000	0.398846
	14 Dinoseb	21.473	21.473	(1.186)	1562224	0.40000	0.410084(aA)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.

0633

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4HKB0007.D
Lab Smp Id: LEVEL6
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Method File: \\Gc01\TargetData\Chem\gc04.i\O4120820.b\B8151CLP.m
Misc Info:

Calibration Date: 20-AUG-2012
Calibration Time: 19:03

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

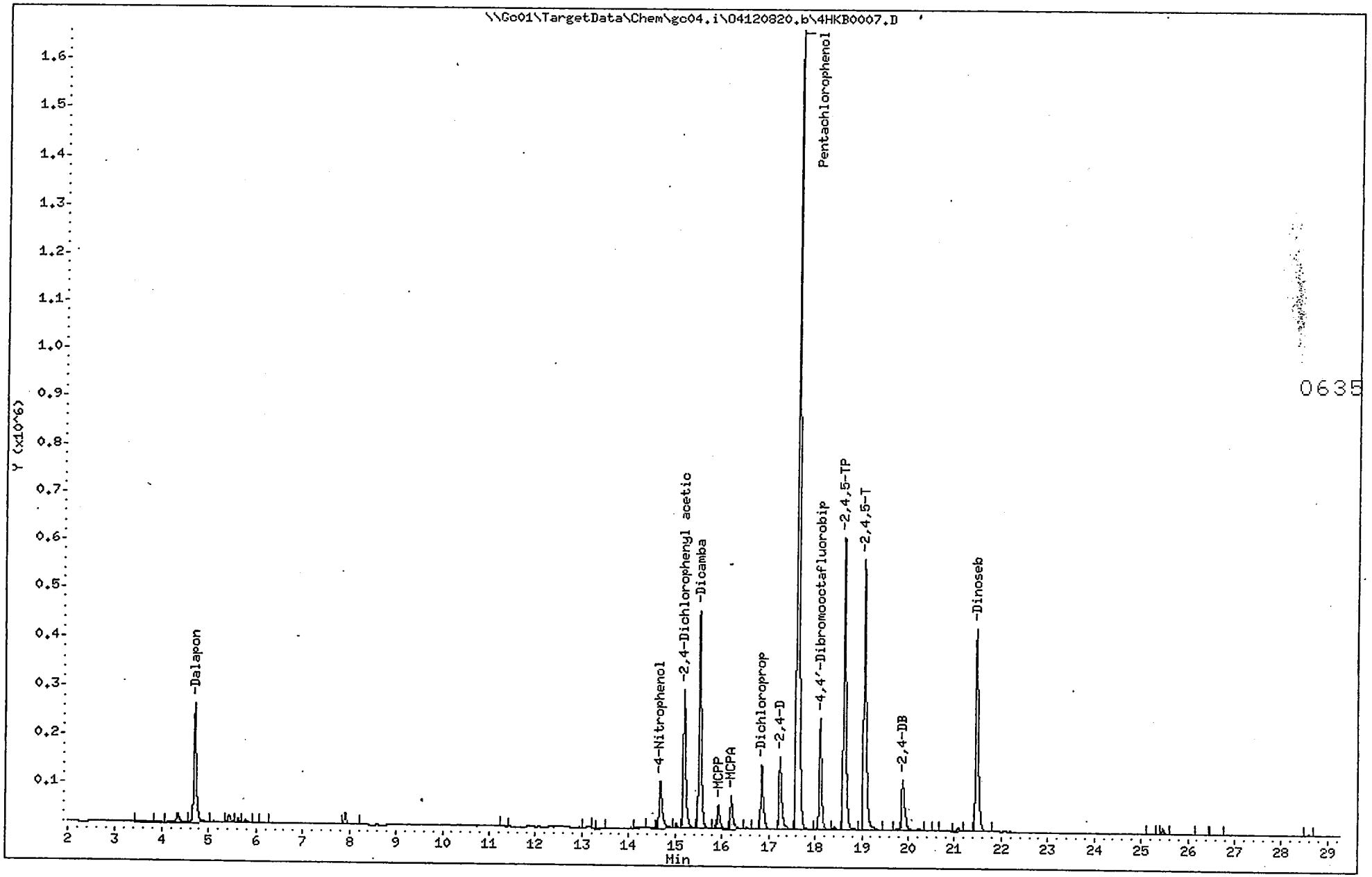
10 4,4'-Dibromooctaf	820844	410422	1231266	789321	-3.84

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	18.11	18.01	18.21	18.11	-0.04

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

Data File: \\Gc01\TargetData\Chem\gc04.i\04120820.b\4HKB0007.D
Date : 20-AUG-2012 20:18
Client ID:
Sample Info: LEVEL6:::1:6
Volume Injected (uL): 1.0
Column phase: RTX-CLPEST

Instrument: gc04.i
Operator: JLH
Column diameter: 0.32



ALS - Middletown

8151

Data file : \\Gc01\TargetData\Chem\gc04.i\O4120820.b\4HKF0007.D
Lab Smp Id: LEVEL6
Inj Date : 20-AUG-2012 20:18
Operator : JLH Inst ID: gc04.i
Smp Info : LEVEL6;;;1;6
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc04.i\O4120820.b\F8151RTX.m
Meth Date : 21-Aug-2012 13:35 jhall Quant Type: ISTD
Cal Date : 20-AUG-2012 19:41 Cal File: 4HKF0006.D
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TargetList.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	1 Dalapon	4.580	4.580	(0.253)	584312	0.40000	0.406930(A)
	2 4-Nitrophenol	13.946	13.946	(0.770)	517114	0.40000	0.407858(A)
$	3 2,4-Dichlorophenyl acetic acid	15.596	15.596	(0.862)	732726	1.00000	1.00726(A)
	4 Dicamba	15.846	15.846	(0.875)	1102936	0.40000	0.409760(A)
	5 MCPP	16.240	16.240	(0.897)	372667	40.0000	42.0098(A)
	6 MCPA	16.483	16.483	(0.911)	491154	40.0000	40.3997(A)
	7 Dichloroprop	17.170	17.170	(0.948)	355627	0.40000	0.410801(A)
	8 2,4-D	17.470	17.470	(0.965)	433602	0.40000	0.406823(A)
	9 Pentachlorophenol	18.813	18.813	(1.039)	3678593	0.40000	0.408978(A)
*	10 4,4'-Dibromooctafluorobiphenyl	18.103	18.103	(1.000)	541209	0.05000	
	11 2,4,5-TP	19.120	19.120	(1.056)	1562525	0.40000	0.410063(A)
	12 2,4,5-T	19.490	19.490	(1.077)	1503705	0.40000	0.423683(A)
	13 2,4-DB	20.306	20.306	(1.122)	257603	0.40000	0.402697(A)
	14 Dinoseb	20.403	20.403	(1.127)	1153482	0.40000	0.411752(aA)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.

0636

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4HKF0007.D
Lab Smp Id: LEVEL6
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Method File: \\Gc01\TargetData\Chem\gc04.i\O4120820.b\F8151RTX.m
Misc Info:

Calibration Date: 20-AUG-2012
Calibration Time: 19:03

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

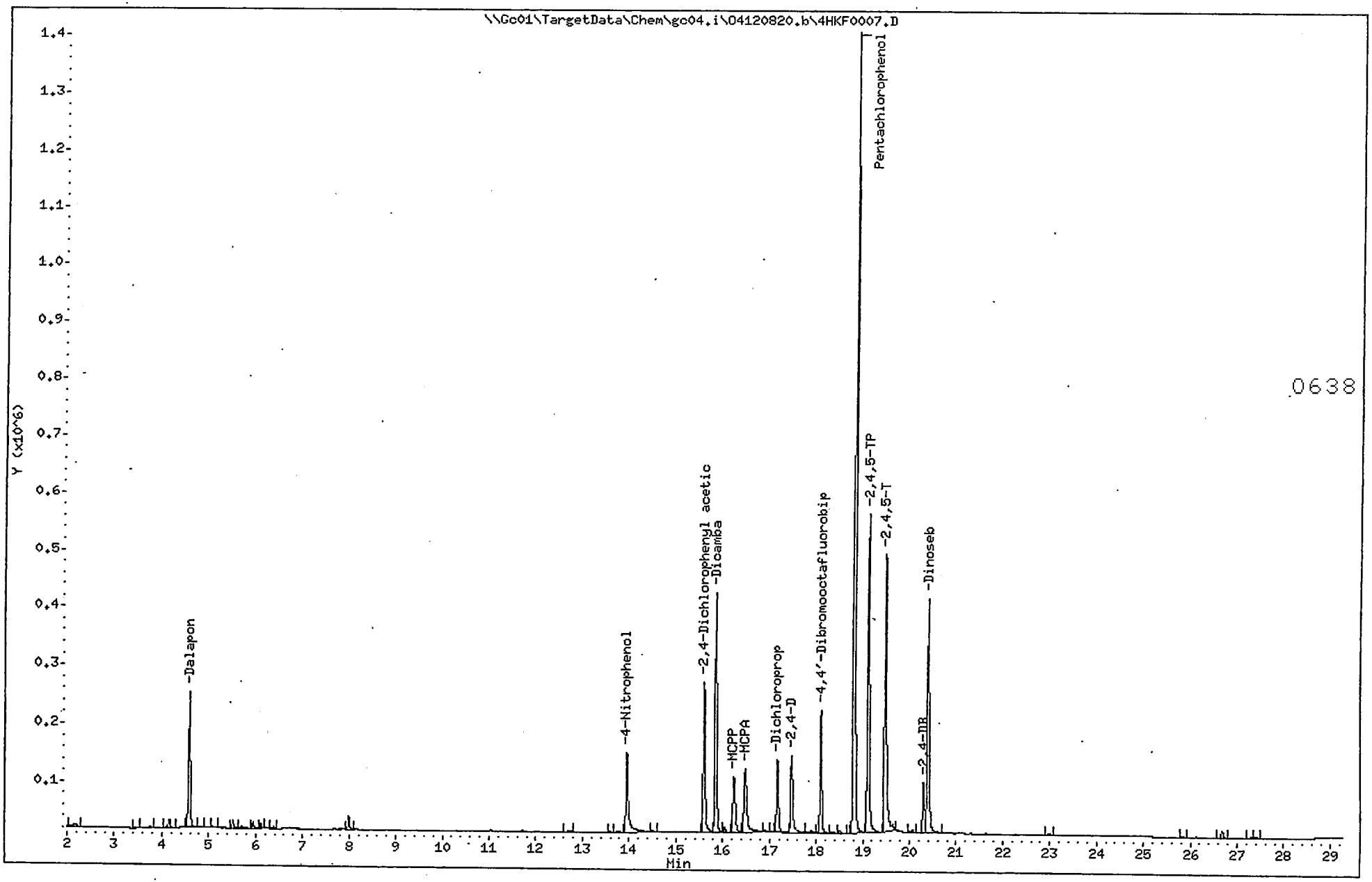
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	553396	276698	830094	541209	-2.20

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	18.11	18.01	18.21	18.10	-0.02

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

Data File: \\Gc01\TargetData\Chem\gc04.i\04120820.b\4HKF0007.D
Date : 20-AUG-2012 20:18
Client ID:
Sample Info: LEVEL6;;;1;6
Volume Injected (uL): 1.0
Column phase: RTX-5

Instrument: gc04.i
Operator: JLH
Column diameter: 0.32



Continuing Calibrations

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Instrument ID: GC04 Calibration Date: 08/21/12 Time: 1031

Lab File ID: 4HKB0008 Init. Calib. Date(s): 08/20/12 08/20/12

Init. Calib. Times: 1710 2018

GC Column: RTX-CLPEST ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2000 or AMOUNT	CCAL RRF0.2000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dalapon	0.2003486	0.2000000	6.4534775	0.01	0.17	20.00	2RDR
4-Nitrophenol	0.1813569	0.2000000	13.396720	0.01	-9.32	20.00	2RDR
Dicamba	0.1997229	0.2000000	3.4101974	0.01	-0.14	20.00	2RDR
MCPP	18.716349	20.000000	3780.6655	0.01	-6.42	20.00	2RDR
MCPA	19.887423	20.000000	2287.6066	0.01	-0.56	20.00	2RDR
Dichloroprop	0.1936449	0.2000000	10.488444	0.01	-3.18	20.00	2RDR
2,4-D	0.2055322	0.2000000	8.4832299	0.01	2.77	20.00	2RDR
Pentachlorophenol	0.1982129	0.2000000	1.0337181	0.01	-0.89	20.00	2RDR
2,4,5-TP	0.1988206	0.2000000	2.4144921	0.01	-0.59	20.00	2RDR
2,4,5-T	0.2020968	0.2000000	2.4136328	0.01	1.05	20.00	2RDR
2,4-DB	0.2004193	0.2000000	13.000649	0.01	0.21	20.00	2RDR
Dinoseb	0.1953112	0.2000000	3.4784262	0.01	-2.34	20.00	2RDR
2,4-Dichlorophenyl acetic ac	0.5337632	0.5000000	12.377444	0.01	6.75	20.00	2RDR

ALS - Middletown

8151

Data file : \\Gc01\TargetData\Chem\gc04.i\04120820a.b\4HKB0008.D
Lab Smp Id: ICV
Inj Date : 21-AUG-2012 10:31
Operator : JLH Inst ID: gc04.i
Smp Info : ICV;;;2
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc04.i\04120820a.b\B8151CLP.m
Meth Date : 21-Aug-2012 10:59 jhall Quant Type: ISTD
Cal Date : 20-AUG-2012 20:18 Cal File: 4HKB0007.D
Als bottle: 8 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TargetList.sub
Target Version: 4.12
Processing Host: ALMDTXP028

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	1 Dalapon	4.683	4.683	(0.259)	465527	0.20000	0.200349
	2 4-Nitrophenol	14.666	14.666	(0.810)	224254	0.20000	0.181357(a)
$	3 2,4-Dichlorophenyl acetic acid	15.173	15.173	(0.838)	606803	0.50000	0.533763
	4 Dicamba	15.506	15.506	(0.857)	880966	0.20000	0.199723
	5 MCPP	15.910	15.916	(0.879)	79464	20.0000	18.7163(M)
	6 MCPA	16.183	16.183	(0.894)	131328	20.0000	19.8874
	7 Dichloroprop	16.840	16.840	(0.931)	286436	0.20000	0.193645
	8 2,4-D	17.233	17.233	(0.952)	354142	0.20000	0.205532
	9 Pentachlorophenol	17.596	17.613	(0.972)	2906274	0.20000	0.198213
*	10 4,4'-Dibromooctafluorobiphenyl	18.096	18.096	(1.000)	751067	0.05000	
	11 2,4,5-TP	18.613	18.613	(1.029)	1244265	0.20000	0.198821
	12 2,4,5-T	19.050	19.050	(1.053)	1244708	0.20000	0.202097
	13 2,4-DB	19.890	19.890	(1.099)	231086	0.20000	0.200419
	14 Dinoseb	21.463	21.463	(1.186)	863686	0.20000	0.195311(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4HKB0008.D
Lab Smp Id: ICV
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Method File: \\Gc01\TargetData\Chem\gc04.i\04120820a.b\B8151CLP.m
Misc Info:

Calibration Date: 20-AUG-2012
Calibration Time: 19:03

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

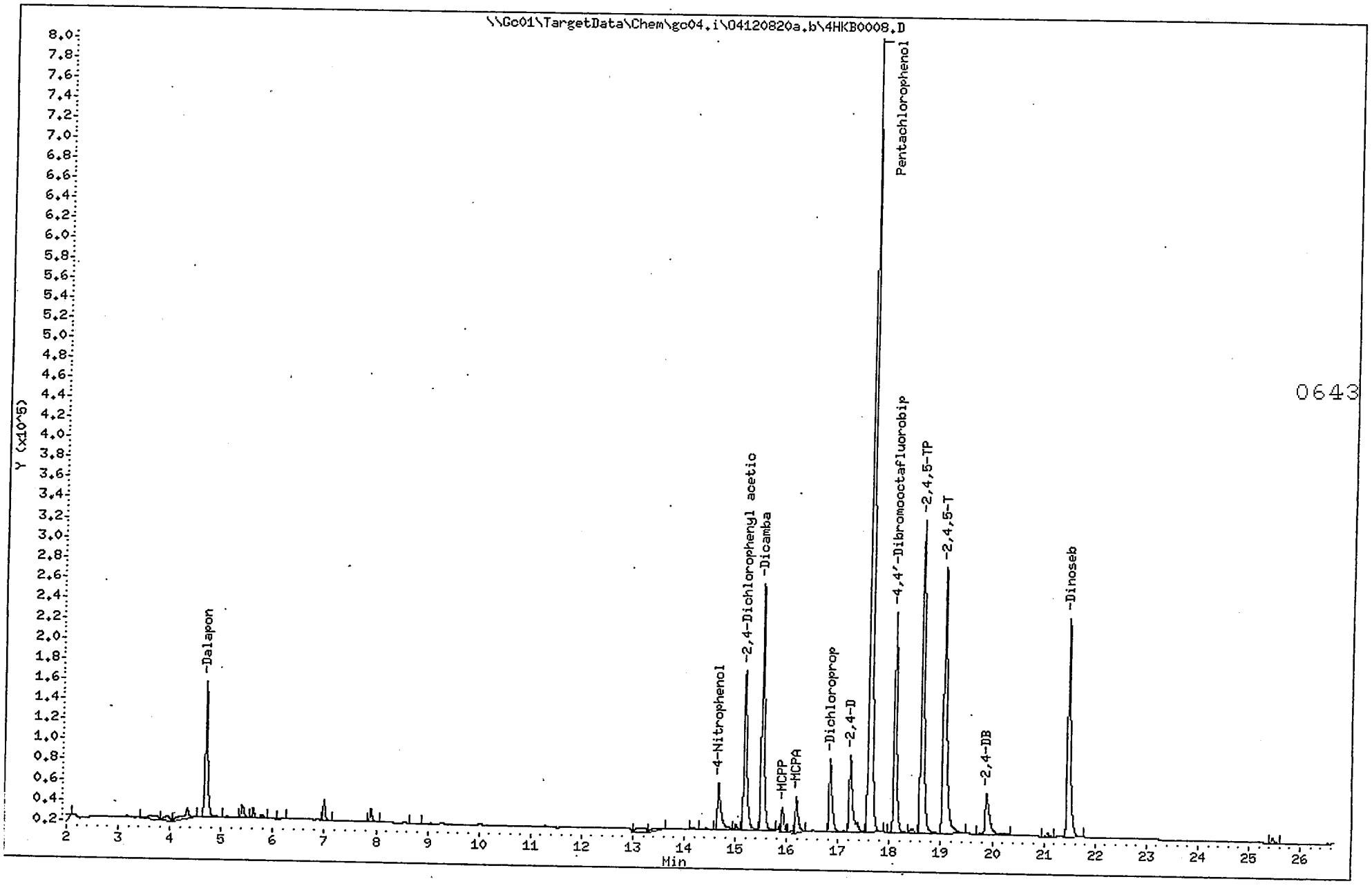
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	751067	375534	1126601	751067	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	18.10	18.00	18.20	18.10	0.00

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

Data File: \\Gc01\TargetData\Chem\gc04.i\04120820a.b\4HKB0008.D
Date : 21-AUG-2012 10:31
Client ID:
Sample Info: ICV;;;2
Volume Injected (uL): 1.0
Column phase: RTX-CLPEST

Instrument: gc04.i
Operator: JLH
Column diameter: 0.32



ALS - Middletown

8151

Data file : \\Gc01\TargetData\Chem\gc04.i\04120820a.b\4HKB0008.D
Lab Smp Id: ICV
Inj Date : 21-AUG-2012 10:31
Operator : JLH Inst ID: gc04.i
Smp Info : ICV;;;2
Misc Info :
Comment : RTXCLPEST D
Method : \\Gc01\TargetData\Chem\gc04.i\04120820a.b\B8151CLP.m
Meth Date : 21-Aug-2012 10:59 jhall Quant Type: ISTD
Cal Date : 20-AUG-2012 20:18 Cal File: 4HKB0007.D
Als bottle: 8 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TargetList.sub
Target Version: 4.12
Processing Host: ALMDTXP028

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
	1 Dalapon	4.683	4.683	(0.259)	465527	0.20000	0.200349
	2 4-Nitrophenol	14.666	14.666	(0.810)	224254	0.20000	0.181357(a)
$	3 2,4-Dichlorophenyl acetic acid	15.173	15.173	(0.838)	606803	0.50000	0.533763
	4 Dicamba	15.506	15.506	(0.857)	880966	0.20000	0.199723
	5 MCPP	15.910	15.916	(0.879)	79464	20.0000	18.7163(M)
	6 MCPA	16.183	16.183	(0.894)	131328	20.0000	19.8874
	7 Dichloroprop	16.840	16.840	(0.931)	286436	0.20000	0.193645
	8 2,4-D	17.233	17.233	(0.952)	354142	0.20000	0.205532
	9 Pentachlorophenol	17.596	17.613	(0.972)	2906274	0.20000	0.198213
*	10 4,4'-Dibromooctafluorobiphenyl	18.096	18.096	(1.000)	751067	0.05000	
	11 2,4,5-TP	18.613	18.613	(1.029)	1244265	0.20000	0.198821
	12 2,4,5-T	19.050	19.050	(1.053)	1244708	0.20000	0.202097
	13 2,4-DB	19.890	19.890	(1.099)	231086	0.20000	0.200419
	14 Dinoseb	21.463	21.463	(1.186)	863686	0.20000	0.195311(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4HKB0008.D
Lab Smp Id: ICV
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Method File: \\Gc01\TargetData\Chem\gc04.i\O4120820a.b\B8151CLP.m
Misc Info:

Calibration Date: 20-AUG-2012
Calibration Time: 19:03

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

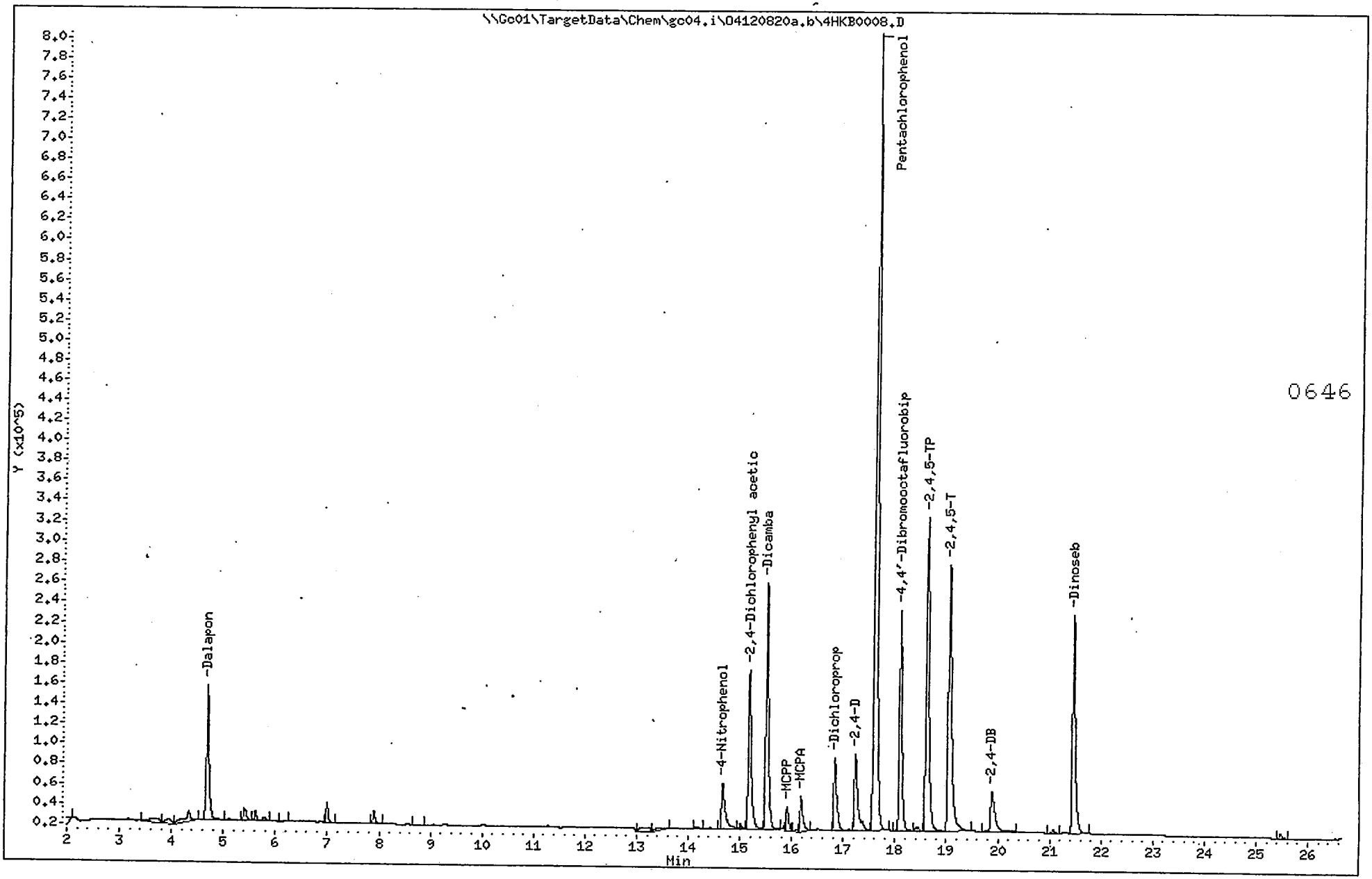
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	751067	375534	1126601	751067	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	18.10	18.00	18.20	18.10	0.00

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

Data File: \\Gc01\TargetData\Chem\gc04.i\04120820a.b\4HKB0008.D
Date : 21-AUG-2012 10:31
Client ID:
Sample Info: ICV;;;2
Volume Injected (uL): 1.0
Column phase: RTX-CLPEST

Instrument: gc04.i
Operator: JLH
Column diameter: 0.32



FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Instrument ID: GC04 Calibration Date: 09/18/12 Time: 1000

Lab File ID: 4IIB0001 Init. Calib. Date(s): 08/20/12 08/20/12

Init. Calib. Times: 1710 2018

GC Column: RTX-CLPEST ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2000 or AMOUNT	CCAL RRF0.2000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
2,4-D	0.1964759	0.2000000	8.8005522	0.01	-1.76	20.00	2RDR
2,4,5-TP	0.2103169	0.2000000	2.3038652	0.01	5.16	20.00	2RDR
2,4-Dichlorophenyl acetic ac	0.5434698	0.5000000	12.196671	0.01	8.69	20.00	2RDR

FORM VII SV

ALS - Middletown

8151

Data file : \\GC01\TargetData\Chem\gc04.i\O4120918.b\4IIB0001.D
Lab Smp Id: LEVEL4
Inj Date : 18-SEP-2012 10:00
Operator : JLH Inst ID: gc04.i
Smp Info : LEVEL4;;;2
Misc Info :
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc04.i\O4120918.b\B8151CLP.m
Meth Date : 19-Sep-2012 08:33 gc Quant Type: ISTD
Cal Date : 20-AUG-2012 20:18 Cal File: 4HKB0007.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TargetList.sub
Target Version: 4.12
Processing Host: ALMDTW7077

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
1	Dalapon	4.470	4.430	(0.250)	506492	0.20000	0.192109
2	4-Nitrophenol	14.396	14.396	(0.807)	232864	0.20000	0.164360(a)
$ 3	2,4-Dichlorophenyl acetic acid	14.966	14.966	(0.838)	695161	0.50000	0.543470
4	Dicamba	15.306	15.306	(0.858)	1105492	0.20000	0.226795
5	MCPP	15.713	15.713	(0.880)	94272	20.0000	19.6673
6	MCPA	15.956	15.983	(0.894)	146375	20.0000	19.6258
7	Dichloroprop	16.626	16.626	(0.931)	331100	0.20000	0.199363
8	2,4-D	16.990	16.990	(0.952)	385369	0.20000	0.196476
9	Pentachlorophenol	17.320	17.320	(0.970)	3416512	0.20000	0.207443
* 10	4,4'-Dibromooctafluorobiphenyl	17.850	17.850	(1.000)	847865	0.05000	
11	2,4,5-TP	18.376	18.376	(1.030)	1472074	0.20000	0.210317
12	2,4,5-T	18.790	18.790	(1.053)	1578704	0.20000	0.233448
13	2,4-DB	19.636	19.636	(1.100)	199311	0.20000	0.152005
14	Dinoseb	21.153	21.153	(1.185)	1058064	0.20000	0.215628(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ)

0348

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4IIB0001.D
Lab Smp Id: LEVEL4
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Method File: \\GC01\TargetData\Chem\gc04.i\O4120918.b\B8151CLP.m
Misc Info:

Calibration Date: 17-SEP-2012
Calibration Time: 10:56

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

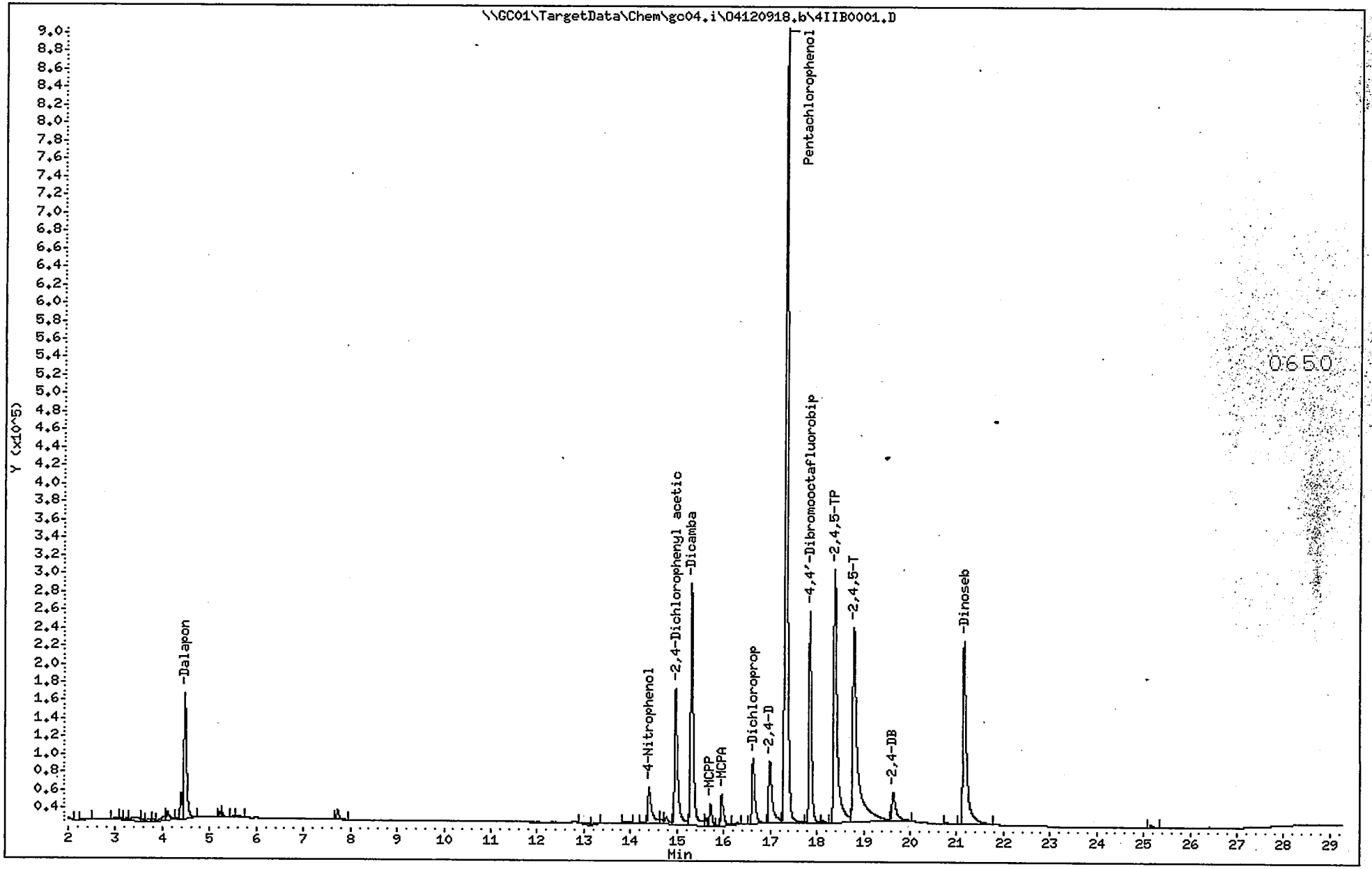
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	847865	423933	1271798	847865	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	17.85	17.75	17.95	17.85	0.00

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

Data File: \\GC01\TargetData\Chem\gc04.i\04120918.b\4IIB0001.D
Date : 18-SEP-2012 10:00
Client ID:
Sample Info: LEVEL4:::2
Volume Injected (uL): 1.0
Column phase: RTX-CLPEST

Instrument: gc04.i
Operator: JLH
Column diameter: 0.32



ALS - Middletown

8151

Data file : \\GC01\TargetData\Chem\gc04.i\O4120918.b\4IIF0001.D
Lab Smp Id: LEVEL4
Inj Date : 18-SEP-2012 10:00
Operator : JLH Inst ID: gc04.i
Smp Info : LEVEL4;;;2
Misc Info :
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc04.i\O4120918.b\F8151RTX.m
Meth Date : 19-Sep-2012 08:45 gc Quant Type: ISTD
Cal Date : 20-AUG-2012 20:18 Cal File: 4HKF0007.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TargetList.sub
Target Version: 4.12
Processing Host: ALMDTW7077

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL) (1000 low, 2
Vo	1000.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	1 Dalapon	4.253	4.253	(0.242)	408533	0.20000	0.240895
	2 4-Nitrophenol	13.520	13.520	(0.768)	278641	0.20000	0.191984(a)
$	3 2,4-Dichlorophenyl acetic acid	15.136	15.136	(0.860)	453547	0.50000	0.511833
	4 Dicamba	15.390	15.390	(0.874)	723493	0.20000	0.219026
	5 MCPP	15.776	15.776	(0.896)	301293	20.0000	21.0982
	6 MCPA	16.023	16.023	(0.910)	373709	20.0000	19.7967
	7 Dichloroprop	16.700	16.700	(0.949)	224328	0.20000	0.200716
	8 2,4-D	17.010	17.010	(0.966)	259539	0.20000	0.193287
	9 Pentachlorophenol	18.293	18.293	(1.039)	2281573	0.20000	0.212248
*	10 4,4'-Dibromooctafluorobiphenyl	17.600	17.600	(1.000)	561867	0.05000	
	11 2,4,5-TP	18.636	18.636	(1.059)	1047166	0.20000	0.222055
	12 2,4,5-T	19.016	19.016	(1.080)	985098	0.20000	0.214012
	13 2,4-DB	19.830	19.830	(1.127)	78600	0.20000	0.0994716
	14 Dinoseb	19.900	19.900	(1.131)	795343	0.20000	0.226360(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4IIF0001.D
Lab Smp Id: LEVEL4
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Method File: \\GC01\TargetData\Chem\gc04.i\O4120918.b\F8151RTX.m
Misc Info:

Calibration Date: 17-SEP-2012
Calibration Time: 10:56

Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	561867	280934	842801	561867	0.00

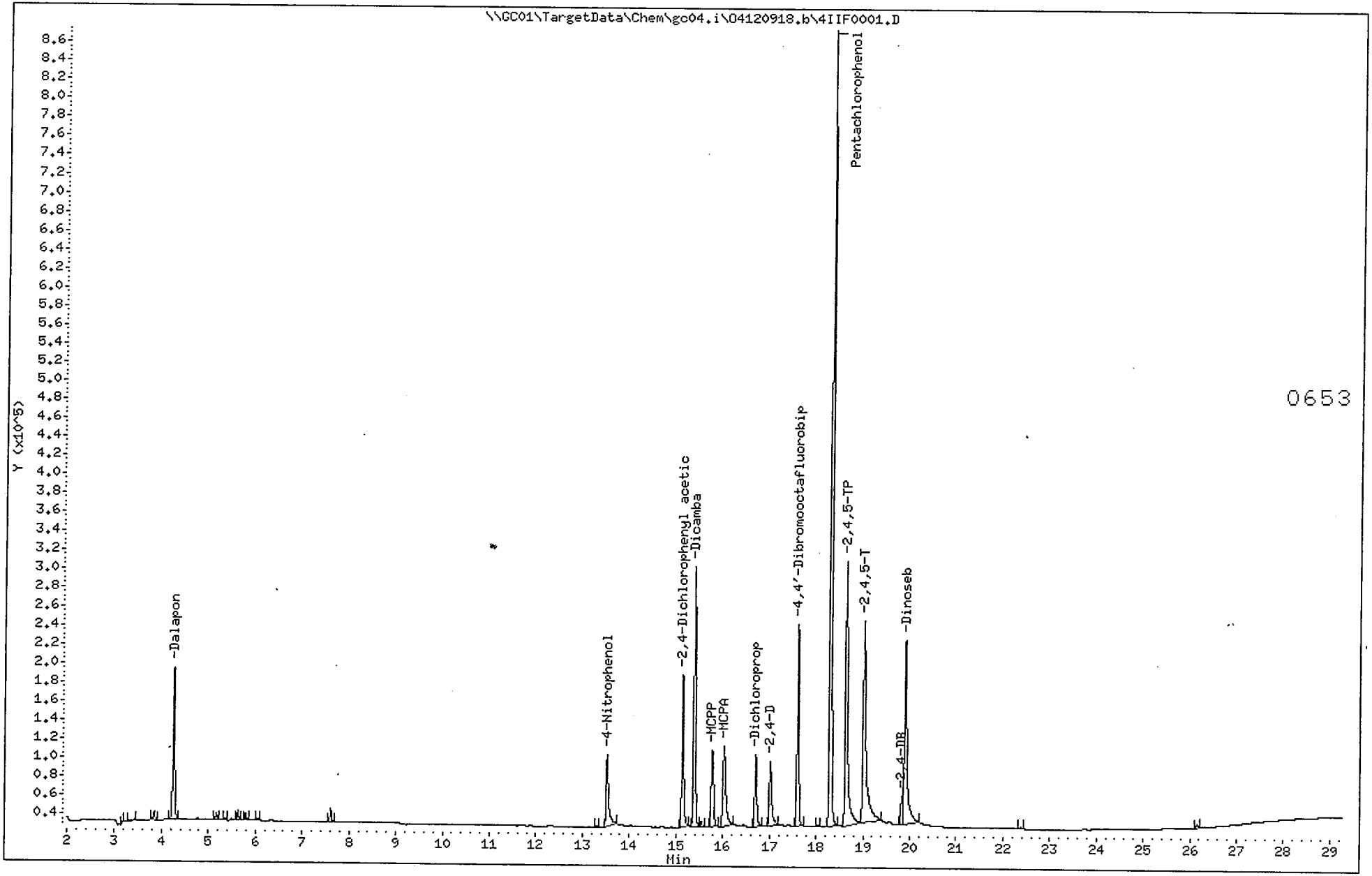
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	17.60	17.50	17.70	17.60	0.00

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

Data File: \\GC01\TargetData\Chem\gc04.i\04120918.b\4IIF0001.D
Date : 18-SEP-2012 10:00
Client ID:
Sample Info: LEVEL4;;;2
Volume Injected (uL): 1.0
Column phase: RTX-5

Instrument: gc04.i

Operator: JLH
Column diameter: 0.32



QC Raw Data

Blank Raw Data

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
1035026

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Matrix: (soil/water) WATER Lab Sample ID: 1035026

Sample wt/vol: 1000 (g/ml) ML Lab File ID: 4IIB0003A

Level: (low/med) LOW Date Received: 09/17/12

% Moisture: _____ Decanted: (Y/N)___ Date Extracted: 05/13/09

Concentrated Extract Volume: 10000(uL) Date Analyzed: 09/18/12

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
94-75-7	2,4-D	0.16	U
93-72-1	2,4,5-TP	0.16	U

ALS - Middletown

8151

Data file : \\GC01\TargetData\Chem\gc04.i\O4120918.b\4IIB0003b.D
Lab Smp Id: 1035026 Client Smp ID: MB for HBN 481638 [
Inj Date : 18-SEP-2012 11:15
Operator : JLH Inst ID: gc04.i
Smp Info : 1035026
Misc Info : ZZ SVGC 28252 D8151A
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc04.i\O4120918.b\B8151CLP.m
Meth Date : 19-Sep-2012 08:33 gc Quant Type: ISTD
Cal Date : 20-AUG-2012 20:18 Cal File: 4HKB0007.D
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SHAWKNOX.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS	
	Compounds	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng)	FINAL (ug/L)
$	3 2,4-Dichlorophenyl acetic acid	14.976	14.966	(0.839)	725884	0.56801	5.68011
	8 2,4-D	Compound Not Detected.					
*	10 4,4'-Dibromooctafluorobiphenyl	17.853	17.850	(1.000)	854041	0.05000	
	11 2,4,5-TP	Compound Not Detected.					
	12 2,4,5-T	Compound Not Detected.					
	14 Dinoseb	Compound Not Detected.					

DATA REVIEW 9/19
REPORTED
APPROVED 9/19/12
2nd REVIEW 9/19/12

0651

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4IIB0003b.D
Lab Smp Id: 1035026
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Calibration Date: 18-SEP-2012
Calibration Time: 10:00
Client Smp ID: MB for HBN 481638
Level: LOW
Sample Type: WATER
Method File: \\GC01\TargetData\Chem\gc04.i\O4120918.b\B8151CLP.m
Misc Info: ZZ SVGC 28252 D8151A

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	847865	423933	1271798	854041	0.73

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	17.85	17.75	17.95	17.85	0.02

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

ALS - Middletown

RECOVERY REPORT

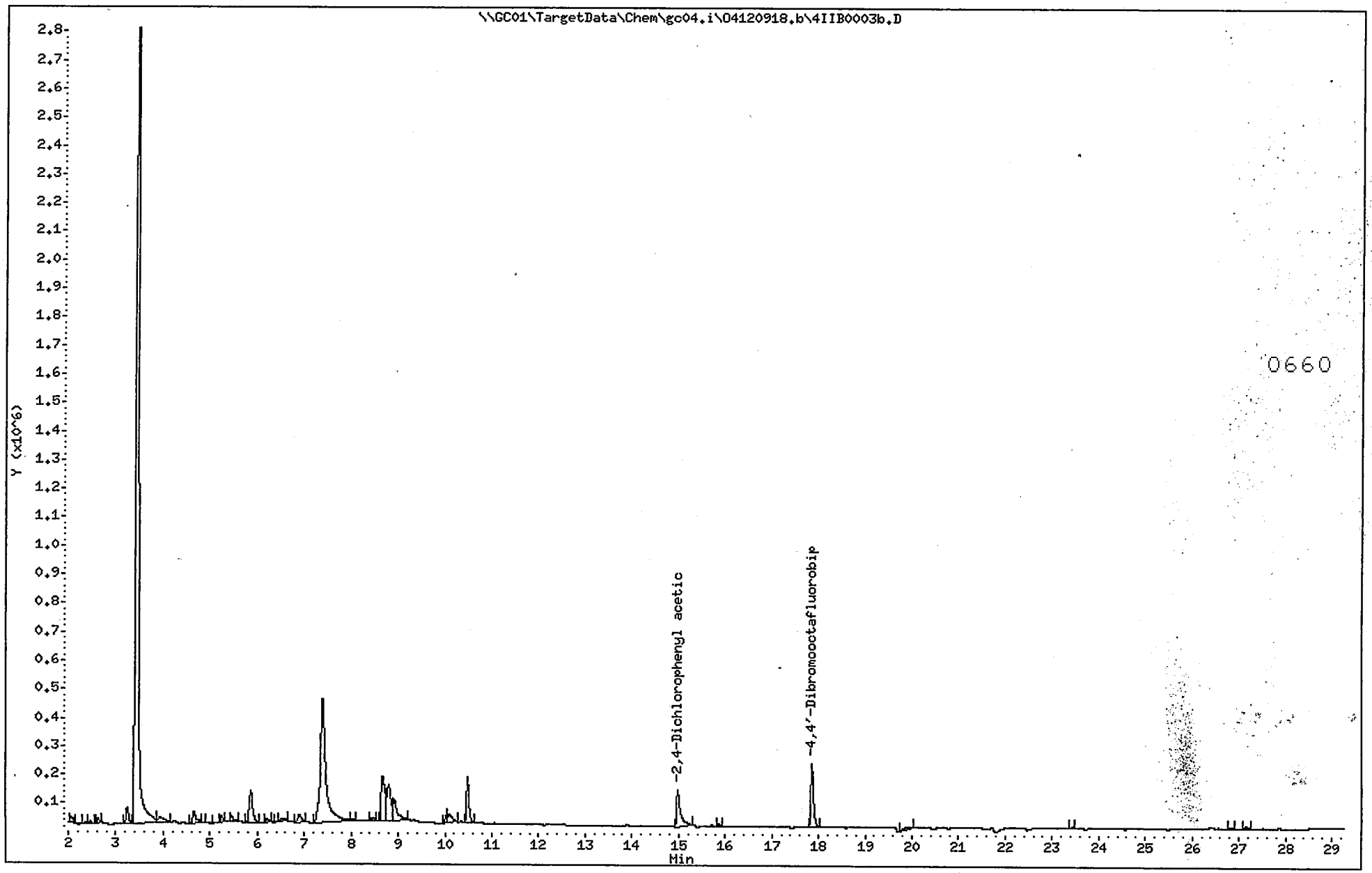
Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1035026
Level: LOW
Data Type: GC MULTI COMP
SpikeList File: Water.spk
Sublist File: SHAWKNOX.sub
Client SDG: O4120918.b
Fraction: SV
Client Smp ID: MB for HBN 481638 [
Operator: JLH
SampleType: BLANK
Quant Type: ISTD
Method File: \\GC01\TargetData\Chem\gc04.i\O4120918.b\B8151CLP.m
Misc Info: ZZ SVGC 28252 D8151A

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 3 2,4-Dichlorophenyl	5.00000	5.68011	113.60	14-172

0690

Data File: \\GC01\TargetData\Chem\gc04.i\04120918.b\4IIB0003b.D
Date : 18-SEP-2012 11:15
Client ID: MB for HBN 481638 [
Sample Info: 1035026
Volume Injected (uL): 1.0
Column phase: RTX-CLPEST

Instrument: gc04.i
Operator: JLH
Column diameter: 0.32



ALS - Middletown

8151

Data file : \\GC01\TargetData\Chem\gc04.i\O4120918.b\4IIF0003b.D
Lab Smp Id: 1035034 Client Smp ID: MB for HBN 481642 [
Inj Date : 18-SEP-2012 11:15
Operator : JLH Inst ID: gc04.i
Smp Info : 1035034
Misc Info : ZZ SVGC 28251 8151A
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc04.i\O4120918.b\F8151RTX.m
Meth Date : 19-Sep-2012 08:45 gc Quant Type: ISTD
Cal Date : 20-AUG-2012 20:18 Cal File: 4HKF0007.D
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TargetList.sub
Target Version: 4.12
Processing Host: ALMDTW7077

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
1	Dalapon	Compound Not Detected.					
2	4-Nitrophenol	Compound Not Detected.					
$ 3	2,4-Dichlorophenyl acetic acid	15.150	15.136	(0.860)	472261	0.45441	4.54413
4	Dicamba	Compound Not Detected.					
5	MCPP	Compound Not Detected.					
6	MCPA	Compound Not Detected.					
7	Dichloroprop	Compound Not Detected.					
8	2,4-D	Compound Not Detected.					
9	Pentachlorophenol	Compound Not Detected.					
* 10	4,4'-Dibromooctafluorobiphenyl	17.606	17.600	(1.000)	643406	0.05000	
11	2,4,5-TP	Compound Not Detected.					
12	2,4,5-T	Compound Not Detected.					
13	2,4-DB	Compound Not Detected.					
14	Dinoseb	Compound Not Detected.					

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4IIF0003b.D
Lab Smp Id: 1035034
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Method File: \\GC01\TargetData\Chem\gc04.i\O4120918.b\F8151RTX.m
Misc Info: ZZ SVGC 28251 8151A

Calibration Date: 18-SEP-2012
Calibration Time: 10:00
Client Smp ID: MB for HBN 4816
Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	561867	280934	842801	643406	14.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	17.60	17.50	17.70	17.61	0.04

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

ALS - Middletown

RECOVERY REPORT

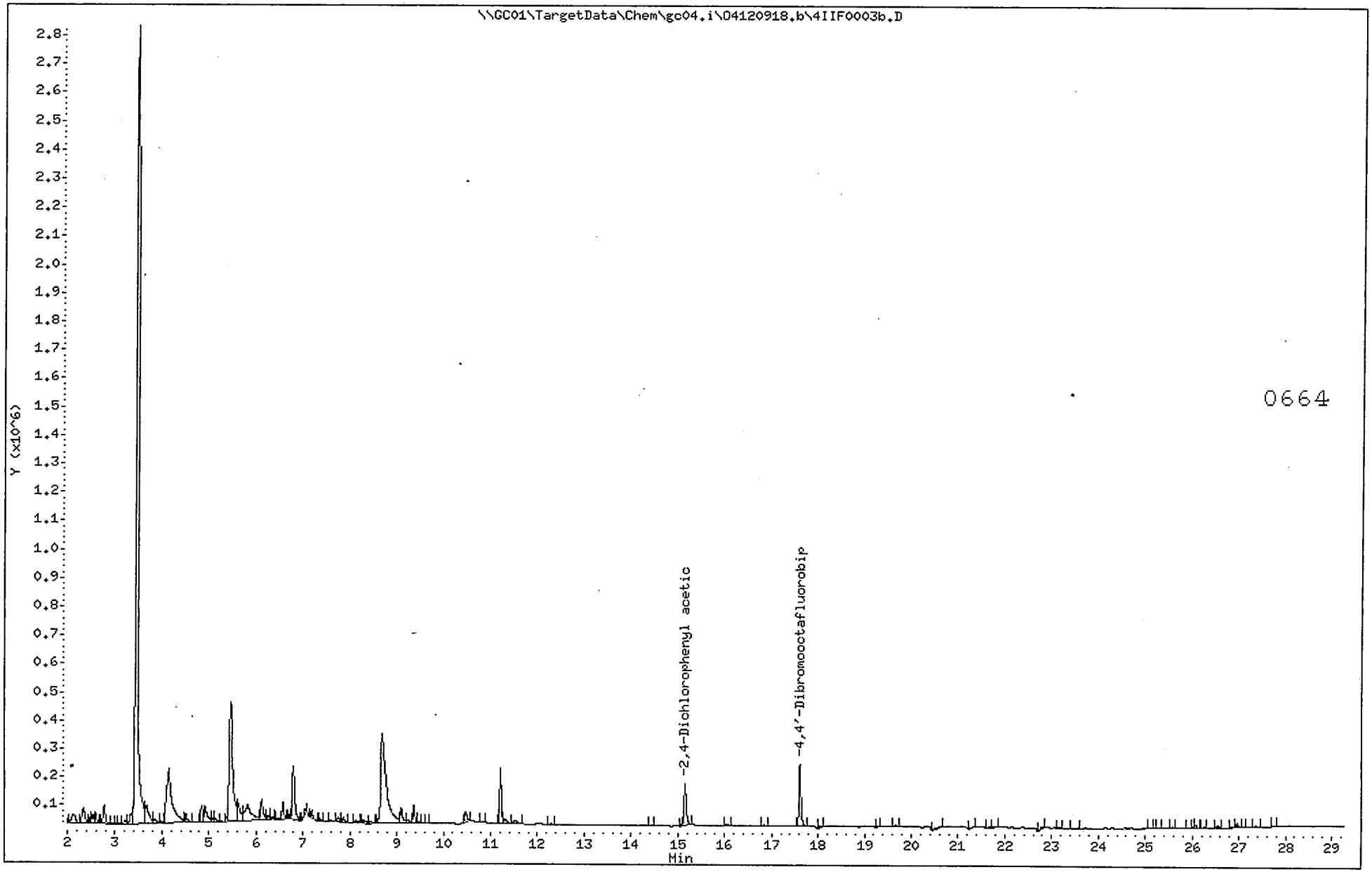
Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1035034
Level: LOW
Data Type: GC MULTI COMP
SpikeList File: Water.spk
Sublist File: TargetList.sub
Method File: \\GC01\TargetData\Chem\gc04.i\O4120918.b\F8151RTX.m
Misc Info: ZZ SVGC 28251 8151A

Client SDG: O4120918.b
Fraction: SV
Client Smp ID: MB for HBN 481642 [
Operator: JLH
SampleType: BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 3 2,4-Dichlorophenyl	5.00000	4.54413	90.88	14-172

Data File: \\GC01\TargetData\Chem\gc04.i\04120918.b\4IIF0003b.D
Date : 18-SEP-2012 11:15
Client ID: MB for HBN 481642 [
Sample Info: 1035034
Volume Injected (uL): 1.0
Column phase: RTX-5

Instrument: gc04.i
Operator: JLH
Column diameter: 0.32



LCS Raw Data

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
1035027LCS

Lab Name: ALS Contract:

Lab Code: PA-010 Case No.: SAS No.: SDG No.: ERT009

Matrix: (soil/water) WATER Lab Sample ID: 1035027

Sample wt/vol: 1000 (g/ml) ML Lab File ID: 4IIB0004A

Level: (low/med) LOW Date Received: 09/17/12

% Moisture: _____ Decanted: (Y/N)___ Date Extracted: 05/13/09

Concentrated Extract Volume: 10000(uL) Date Analyzed: 09/18/12

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
94-75-7	2,4-D	1.9	_____
93-72-1	2,4,5-TP	2.1	_____

ALS - Middletown

8151

Data file : \\GC01\TargetData\Chem\gc04.i\O4120918.b\4IIB0004b.D
Lab Smp Id: 1035027 Client Smp ID: LCS for HBN 481638
Inj Date : 18-SEP-2012 11:53
Operator : JLH Inst ID: gc04.i
Smp Info : 1035027
Misc Info : ZZ SVGC 28252 D8151A
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc04.i\O4120918.b\B8151CLP.m
Meth Date : 19-Sep-2012 09:30 gc Quant Type: ISTD
Cal Date : 20-AUG-2012 20:18 Cal File: 4HKB0007.D
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TargetList.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	1 Dalapon	4.430	4.430	(0.248)	573927	0.24153	2.19996
	2 4-Nitrophenol	14.393	14.396	(0.806)	198329	0.14853	1.34952(a)
$	3 2,4-Dichlorophenyl acetic acid	14.966	14.966	(0.838)	668025	0.56600	5.66002
	4 Dicamba	15.306	15.306	(0.858)	1081358	0.24144	2.26960
	5 MCPP	15.713	15.713	(0.880)	88983	19.9676	187.452
	6 MCPA	15.956	15.983	(0.894)	123338	17.7253	165.689
	7 Dichloroprop	16.626	16.626	(0.931)	342803	0.22831	2.15477
	8 2,4-D	16.990	16.990	(0.952)	361935	0.19894	1.87006
	9 Pentachlorophenol	17.323	17.320	(0.970)	3223592	0.21094	2.00403
*	10 4,4'-Dibromooctafluorobiphenyl	17.850	17.850	(1.000)	788236	0.05000	
	11 2,4,5-TP	18.376	18.376	(1.030)	1397865	0.21578	2.05127
	12 2,4,5-T	18.786	18.790	(1.052)	1214475	0.18515	1.75533
	13 2,4-DB	19.626	19.636	(1.100)	194363	0.15963	1.51135
	14 Dinoseb	21.153	21.153	(1.185)	751279	0.15681	1.48178(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

DATA REVIEW 9/19
REPORTED 9/19/12
APPROVED 9/19/12
2nd REVIEW 9/19/12

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4IIB0004b.D
Lab Smp Id: 1035027
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Method File: \\GC01\TargetData\Chem\gc04.i\O4120918.b\B8151CLP.m
Misc Info: ZZ SVGC 28252 D8151A

Calibration Date: 18-SEP-2012
Calibration Time: 10:00
Client Smp ID: LCS for HBN 481
Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	847865	423933	1271798	788236	-7.03

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	17.85	17.75	17.95	17.85	0.00

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1035027
Level: LOW
Data Type: GC MULTI COMP
SpikeList File: Water.spk
Sublist File: TargetList.sub
Method File: \\GC01\TargetData\Chem\gc04.i\O4120918.b\B8151CLP.m
Misc Info: ZZ SVGC 28252 D8151A

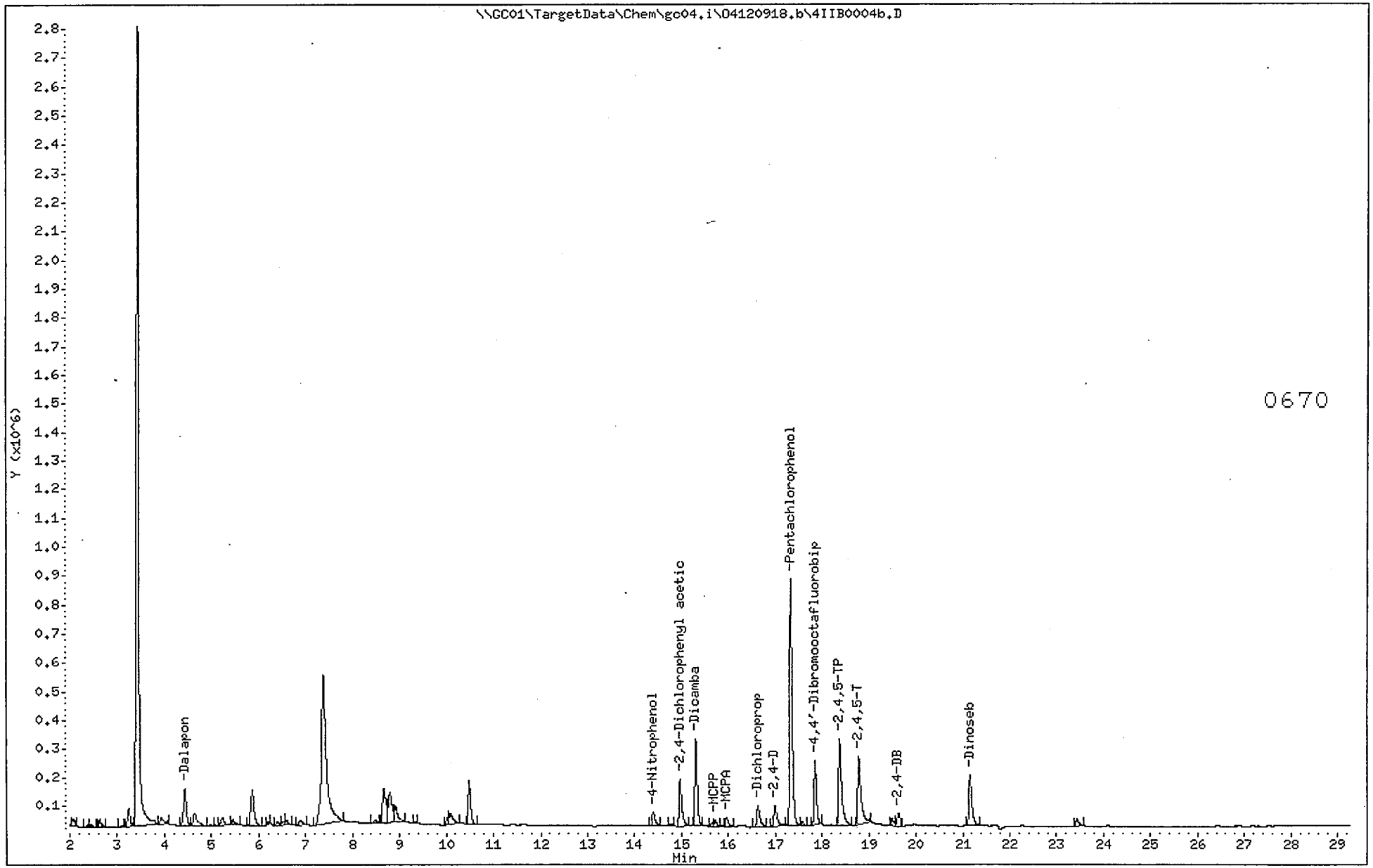
Client SDG: O4120918.b
Fraction: SV
Client Smp ID: LCS for HBN 481638
Operator: JLH
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Dalapon	2.00000	2.19996	110.00	35-171
2 4-Nitrophenol	2.00000	1.34952	67.48	1-167
4 Dicamba	2.00000	2.26960	113.48	64-115
5 MCPP	200.000	187.452	93.73	14-205
6 MCPA	200.000	165.689	82.84	11-194
7 Dichloroprop	2.00000	2.15477	107.74	61-125
8 2,4-D	2.00000	1.87006	93.50	56-156
9 Pentachlorophenol	2.00000	2.00403	100.20	63-109
11 2,4,5-TP	2.00000	2.05127	102.56	58-123
12 2,4,5-T	2.00000	1.75533	87.77	57-127
13 2,4-DB	2.00000	1.51135	75.57	23-174
14 Dinoseb	2.00000	1.48178	74.09	1-98

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 3 2,4-Dichlorophenyl	5.00000	5.66002	113.20	14-172

Data File: \\GC01\TargetData\Chem\gc04.i\04120918.b\4IIB0004b.D
Date : 18-SEP-2012 11:53
Client ID: LCS for HBN 481638
Sample Info: 1035027
Volume Injected (uL): 1.0
Column phase: RTX-CLPEST

Instrument: gc04.i
Operator: JLH
Column diameter: 0.32



ALS - Middletown

8151

Data file : \\GC01\TargetData\Chem\gc04.i\O4120918.b\4IIF0004b.D
Lab Smp Id: 1035027 Client Smp ID: LCS for HBN 481638
Inj Date : 18-SEP-2012 11:53
Operator : JLH Inst ID: gc04.i
Smp Info : 1035027
Misc Info : ZZ SVGC 28252 D8151A
Comment : RTXCLPEST D
Method : \\GC01\TargetData\Chem\gc04.i\O4120918.b\F8151RTX.m
Meth Date : 19-Sep-2012 08:45 gc Quant Type: ISTD
Cal Date : 20-AUG-2012 20:18 Cal File: 4HKF0007.D
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TargetList.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/(Vo * Vi)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)(1000 low, 2
Vo	1000.000	VOLUME INITIAL
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	1 Dalapon	4.243	4.253	(0.241)	566298	0.33502	3.05144(RM)
	2 4-Nitrophenol	13.516	13.520	(0.768)	301018	0.19398	1.76240(a)
$	3 2,4-Dichlorophenyl acetic acid	15.140	15.136	(0.860)	497571	0.52806	5.28061
	4 Dicamba	15.390	15.390	(0.874)	750780	0.21103	1.98374
	5 MCPP	15.776	15.776	(0.896)	296108	17.8075	167.173
	6 MCPA	16.026	16.023	(0.910)	368337	16.9714	158.642
	7 Dichloroprop	16.703	16.700	(0.949)	251222	0.21235	2.00419
	8 2,4-D	17.013	17.010	(0.966)	283745	0.19828	1.86391
	9 Pentachlorophenol	18.296	18.293	(1.039)	2466037	0.21473	2.04009
*	10 4,4'-Dibromooctafluorobiphenyl	17.603	17.600	(1.000)	601269	0.05000	
	11 2,4,5-TP	18.636	18.636	(1.059)	1077632	0.21165	2.01202
	12 2,4,5-T	19.013	19.016	(1.080)	1041420	0.21077	1.99822
	13 2,4-DB	19.820	19.830	(1.126)	129519	0.15804	1.49631
	14 Dinoseb	19.900	19.900	(1.130)	644294	0.16163	1.52731(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ALS - Middletown

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: gc04.i
Lab File ID: 4IIF0004b.D
Lab Smp Id: 1035027
Analysis Type: SV
Quant Type: ISTD
Operator: JLH
Method File: \\GC01\TargetData\Chem\gc04.i\O4120918.b\F8151RTX.m
Misc Info: ZZ SVGC 28252 D8151A

Calibration Date: 18-SEP-2012
Calibration Time: 10:00
Client Smp ID: LCS for HBN 481
Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	561867	280934	842801	601269	7.01

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
10 4,4'-Dibromooctaf	17.60	17.50	17.70	17.60	0.02

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.10 minutes of internal standard RT.
RT LOWER LIMIT = - 0.10 minutes of internal standard RT.

ALS - Middletown

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1035027
Level: LOW
Data Type: GC MULTI COMP
SpikeList File: DoDW.spk
Sublist File: TargetList.sub
Method File: \\GC01\TargetData\Chem\gc04.i\O4120918.b\F8151RTX.m
Misc Info: ZZ SVGC 28252 D8151A

Client SDG: O4120918.b
Fraction: SV
Client Smp ID: LCS for HBN 481638
Operator: JLH
SampleType: LCS
Quant Type: ISTD

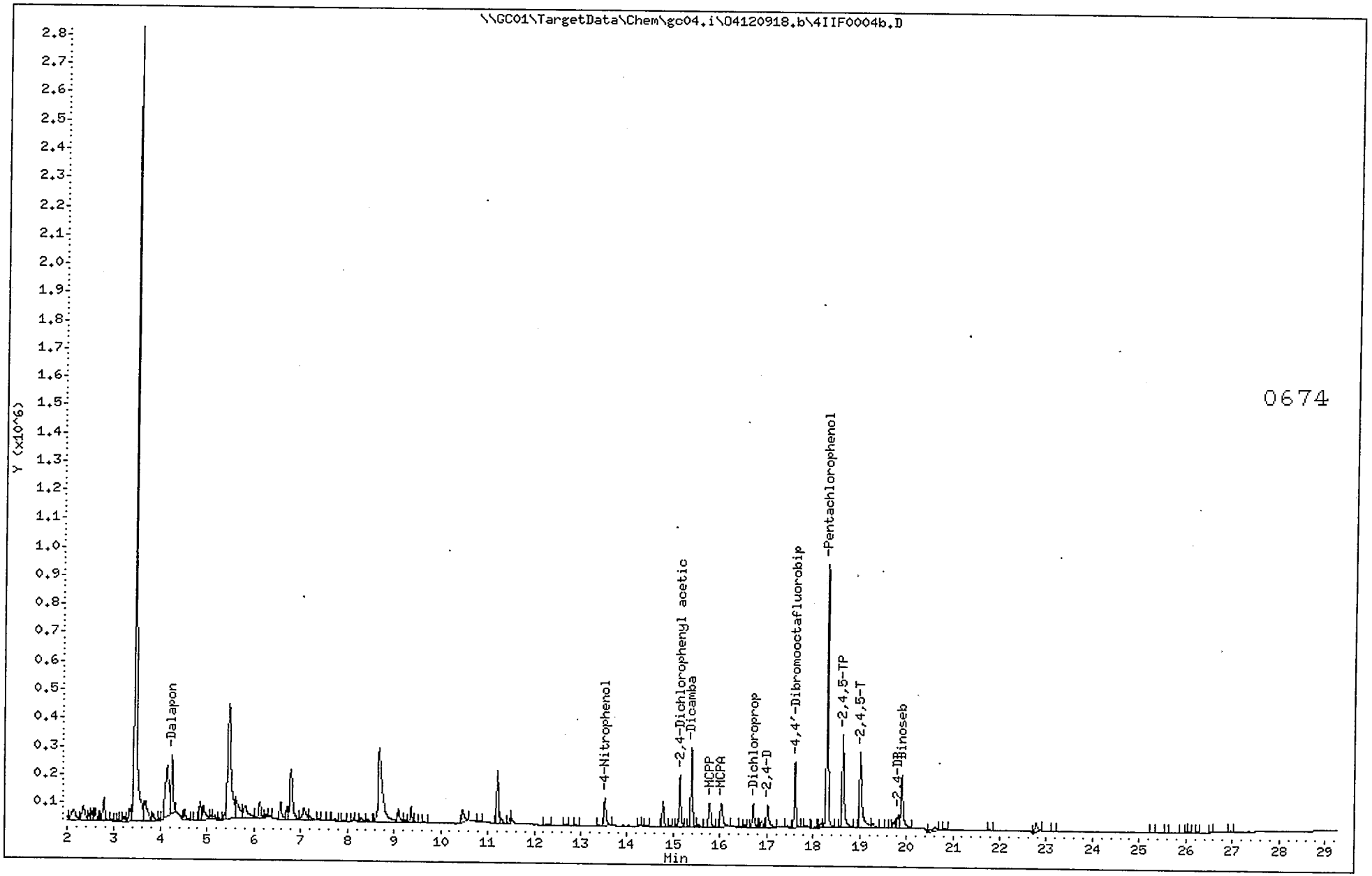
SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Dalapon	2.00000	3.05144	152.57*	40-110
2 4-Nitrophenol	2.00000	1.76240	88.12	1-167
4 Dicamba	2.00000	1.98374	99.19	60-110
5 MCPP	200.000	167.173	83.59	14-205
6 MCPA	200.000	158.642	79.32	60-145
7 Dichloroprop	2.00000	2.00419	100.21	70-120
8 2,4-D	2.00000	1.86391	93.20	35-115
9 Pentachlorophenol	2.00000	2.04009	102.00	63-109
11 2,4,5-TP	2.00000	2.01202	100.60	50-115
12 2,4,5-T	2.00000	1.99822	99.91	35-110
13 2,4-DB	2.00000	1.49631	74.82	45-130
14 Dinoseb	2.00000	1.52731	76.37	20-100

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 3 2,4-Dichlorophenyl	5.00000	5.28061	105.61	14-172

Data File: \\GC01\TargetData\Chem\gc04.i\04120918.b\4IIF0004b.D
Date : 18-SEP-2012 11:53
Client ID: LCS for HBN 481638
Sample Info: 1035027
Volume Injected (uL): 1.0
Column phase: RTX-5

Instrument: gc04.i

Operator: JLH
Column diameter: 0.32



Extraction Logbook

0675

Work continued from page:____

Work continued to page:____

9-17-12 JDW

GENERAL ORGANIC EXTRACTION

EPA Method: 3510C ~~SBTD~~ 8151A
Rule: D8151WEXTR 8151WEXTR
HBN: 481638 481642
Extraction Apparatus Name:
Extraction Apparatus ID#:

Surrogate Amount: 50mL
Surrogate Lot #: ~~Accustandard 211 21123~~
Tech: LEH

Steam Bath ID#: 207290 / 205752
Initial Temp. of Bath: 84°C / 85°C
Final Temp. of Bath: 82°C / 85°C
Thermometer ID#: TH-245

		Date	Time	Tech		Time On	Time Off	Total Hours	N-EVAP ID#:: N/A
Extraction:		9/17/12	1850	PDKS LEH KCF	Soxhlet:	—	—	—	Initial Temp. : —
					Acid:	—	—	—	Final Temp. : —
Concentration:		09/18/12	0630	MDO	Base:	—	—	—	Thermometer ID: —

Line #	Sample #	pH (1)	Start/Stop Time (2)	Sample Amount	Final Volume	QC Spike lot#	QC Spike Amount	Cleanup Required	Cleanup Method	QC Type	Sample Specific Comments
1.)	1035026 1035034	12 1		1000mL	10mL	—	—			MB	D8151W 8151W
2.)	1035027 1035035	12 1		1000mL	10mL	OP17132	500µl KCF			LCS	↓ ↓
3.)	9986940001-A	12 1		50ml	10mL					—	↓ TCLP
4.)	9986434002-A	12 1		50ml	10mL					—	8151W
5.)	9987633001-B	12 1		50ml	10mL					—	
6.)	9987633002-B	12 1		50ml	10mL					—	
7.)	9987633003-B	12 1		50ml	10mL					—	
8.)	9987633004-B	12 1		50ml	10mL					—	
9.)	9987633005-B	12 1		50ml	10mL					—	
10.)	9987633006-B	12 1		50ml	10mL					—	
11.)	9987633007-B	12 1		50ml	10mL					—	
12.)	1035036	12 1		50ml	10mL	OP17132	500µl KCF			MS	9986733001-B
13.)	1035037	12 1		50ml	10mL	OP17132	500µl KCF			MSD	9986733001-B
14.)	9987634001-B	12 1		50ml	10mL	—	—			—	
15.)	9987634002-B	12 1		50ml	10mL	—	—			—	

Comments:

	Volume Aliquoted	I.S. Volume Added	I.S. ID#	Date	Time	Tech
1.) Reagent 6N NaOH OP17125 NaCl OP17140 CH_2Cl_2 (DCM) JDA349						
2.) Reagent: 12N H_2SO_4 OP17163 Anhydrous Na_2SO_4 OP17094 Ether (Baker) L05305 Lot 08						
3.) Reagent: 37% HCl OP17074 Hexane (Baker) L08017 Methanol (Baker) L20037	—	—	—	—	—	—
4.) ~~Fluorotene (DMF) L#F51060~~ Carbitol (Baker) J56510	—	—	—	—	—	—

(1) 5.) Sample required internal COC. D8151WEXTR Raw sample Nos. 427713, 8151WEXTR raw sample Nos # 427718 9-17-12 JDW

6.) (1) pH adjustments for all extraction steps. (2) Start/Stop Time for SPE extractions: Diazald (Aldrich) L#MKBD8272V Sulfuric Acid (Caledon) L#0708160 Acidified Water OP16940

Approved by: MDO
Date Approved: 09/18/12
Revision 10/11

Page #: 6

Batched by: JDW

Reviewed by: KCF
Date Reviewed: 9/18/12

Work continued from page:____

Work continued to page:____

GENERAL ORGANIC EXTRACTION

EPA Method: See page 6
Rule: –
HBN: –
Extraction Apparatus Name: –
Extraction Apparatus ID#: –

Surrogate Amount: See page 6
Surrogate Lot #: –
Tech: –

Steam Bath ID#: See page 6
Initial Temp. of Bath: –
Final Temp. of Bath: –
Thermometer ID#: –

			Date	Time	Tech		Time On	Time Off	Total Hours
Extraction:			See page 6	–		Soxhlet:	–	–	–
						Acid:	–	–	–
Concentration:			–	–	–	Base:	–	–	–

N-EVAP ID#:: See page 6
Initial Temp. : –
Final Temp. : –
Thermometer ID: –

Line #	Sample #	pH (1)	Start/Stop Time (2)	Sample Amount	Final Volume	QC Spike lot#	QC Spike Amount	Cleanup Required	Cleanup Method	QC Type	Sample Specific Comments
1.)	9987634003-B	12	1	50 ml	10 mL					–	TCLP
2.)	9987634004-B	12	1	50 ml	10 mL					–	
3.)	9987634005-B	12	1	50 ml	10 mL					–	
4.)	9987634006-B	12	1	50 ml	10 mL					–	
5.)	9987634007-B	12	1	50 ml	10 mL					–	
6.)	9987333001-X	12	1	920 ml	10 mL					–	water
7.)	9987330001-M (4/30)	12	1	920 ml	10 mL					–	↓
8.)	1032996	12	1	50 ml	10 mL					LB	TCLP
9.)	1033657	12	1	50 ml	10 mL					LB	↓
10.)											
11.)											
12.)											
13.)											
14.)											
15.)											09/19/12 MDO

Comments:

	Volume Aliquoted	I.S. Volume Added	I.S. ID#	Date	Time	Tech
1.) Reagent: See page 6						
2.) Reagent:						
3.) Reagent:	–	–	–	–	–	–
4.)	–	–	–	–	–	–

5.)

6.) (1) pH adjustments for all extraction steps. (2) Start/Stop Time for SPE extractions.

Approved by: MDO
Date Approved: 09/18/12
Revision 10/11

Batched by: JDW

Reviewed by: MDO
Date Reviewed: 9/18/12

Analytical Logbook

0678

04120820 4HKB7F Herb

1	4HKB	Hexane	blank
2		Level 1	I cal
3		Level 2	
4		Level 3	
5		Level 4	
6		Level 5	
7		Level 6	
8		ICV	ICV
9		1022854 ;; 30.0	LCS
10		1022853 ;; 30.0	MB
11		9980372017 ;; 30.0	
12		9980372017 ;; 30.0 ;;;;;5	

* Electronic run log failed.
[illegible] 8/29/12

0679

Simulate Run Sequence Wed Sep 19 11:11:08 2012

Instrument Name: GC-4
Sequence File: C:\HPCHEM\1\SEQUENCE\04120918.S
Comment: 8151
Operator: JJH
Data Path: C:\HPCHEM\2\DATA\04120918\
Method Path: C:\HPCHEM\1\METHODS\

Line	Type	Vial	DataFile	Method	Sample Name
1)	UNLINKED: 'C:\HPCHEM\2\DATA\04120918' Unlinked Sequencing initiated to : C:\HPCHEM\2\DATA\04120918\				
2)	2nd Info	1	4IIB0001	HERB	LEVEL4;;;2
3)	Sample	1	4IIF0001	HERB	LEVEL4;;;2
4)	2nd Info	2	4IIB0002	HERB	HEXANE
5)	Sample	2	4IIF0002	HERB	HEXANE
6)	2nd Info	3	4IIB0003	HERB	1035026
7)	Sample	3	4IIF0003	HERB	1035026
8)	2nd Info	4	4IIB0004	HERB	1035027
9)	Sample	4	4IIF0004	HERB	1035027
10)	2nd Info	5	4IIB0005	HERB	9986940001;50
11)	Sample	5	4IIF0005	HERB	9986940001;50
12)	2nd Info	6	4IIB0006	HERB	9986434002;50
13)	Sample	6	4IIF0006	HERB	9986434002;50
14)	2nd Info	7	4IIB0007	HERB	9987633001;50
15)	Sample	7	4IIF0007	HERB	9987633001;50
16)	2nd Info	8	4IIB0008	HERB	9987633002;50
17)	Sample	8	4IIF0008	HERB	9987633002;50
18)	2nd Info	9	4IIB0009	HERB	9987633003;50
19)	Sample	9	4IIF0009	HERB	9987633003;50
20)	2nd Info	10	4IIB0010	HERB	9987633004;50
21)	Sample	10	4IIF0010	HERB	9987633004;50
22)	2nd Info	11	4IIB0011	HERB	9987633005;50
23)	Sample	11	4IIF0011	HERB	9987633005;50
24)	2nd Info	12	4IIB0012	HERB	9987633006;50
25)	Sample	12	4IIF0012	HERB	9987633006;50
26)	2nd Info	13	4IIB0013	HERB	9987633007;50
27)	Sample	13	4IIF0013	HERB	9987633007;50
28)	2nd Info	14	4IIB0014	HERB	1030536;50
29)	Sample	14	4IIF0014	HERB	1030536;50
30)	2nd Info	15	4IIB0015	HERB	1035037;50
31)	Sample	15	4IIF0015	HERB	1035037;50
32)	2nd Info	16	4IIB0016	HERB	9987634001;50
33)	Sample	16	4IIF0016	HERB	9987634001;50
34)	2nd Info	17	4IIB0017	HERB	LEVEL4;;;2
35)	Sample	17	4IIF0017	HERB	LEVEL4;;;2
36)	2nd Info	18	4IIB0018	HERB	HEXANE
37)	Sample	18	4IIF0018	HERB	HEXANE
38)	2nd Info	19	4IIB0019	HERB	9987634002;50
39)	Sample	19	4IIF0019	HERB	9987634002;50
40)	2nd Info	20	4IIB0020	HERB	9987634003;50
41)	Sample	20	4IIF0020	HERB	9987634003;50
42)	2nd Info	21	4IIB0021	HERB	9987634004;50
43)	Sample	21	4IIF0021	HERB	9987634004;50
44)	2nd Info	22	4IIB0022	HERB	9987634005;50
45)	Sample	22	4IIF0022	HERB	9987634005;50
46)	2nd Info	23	4IIB0023	HERB	9987634006;50
47)	Sample	23	4IIF0023	HERB	9987634006;50
48)	2nd Info	24	4IIB0024	HERB	9987634007;50
49)	Sample	24	4IIF0024	HERB	9987634007;50
50)	2nd Info	25	4IIB0025	HERB	9987333001;920
51)	Sample	25	4IIF0025	HERB	9987333001;920

TCLP Metals by 1311/6010C Summary Forms

ALS ENVIRONMENTAL

6010C / TCLP
- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, Inc

SDG No.: ERT-009 **Method Type:** 6010C / TCLP **SOW No.:** _____

Contract: ERT009|Ft. Stewart 3 **Lab Code:** _____ **Case No.:** _____ **SAS No.:** _____

Lab Sample ID	Client Sample ID	QC Description
9986940001	FTSW-IDW-02	

Were ICP interelement corrections applied? Yes/No Yes _____

Were ICP background corrections applied? Yes/No Yes _____

If yes - were raw data generated before applications of background corrections? Yes/No No _____

Comments: _____

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: _____

Date: _____ Title: Metals Manager

0682

ALS ENVIRONMENTAL

6010C / TCLP

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-009 **Method Type:** 6010C / TCLP

Sample ID: 9986940001 **Client ID:** FTSW-IDW-02

Matrix: TCLP **Date Received:** 9/7/2012 **Level:** LOW

% Solids: **Sample Wt/Vol:** 45.00 **Final Vol:** 50.0

Prep Batch ID: 481042 **Prep Date:** 9/13/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.022	mg/L			P	0.018	0.012	0.006	2.00	9/17/2012	15:48:21
Barium	7440-39-3	0.11	mg/L			P	0.022	0.0146	0.0072	2.00	9/17/2012	15:48:21
Cadmium	7440-43-9	0.0028	mg/L	U		P	0.0044	0.0028	0.0015	2.00	9/17/2012	15:48:21
Chromium	7440-47-3	0.2936	mg/L			P	0.0111	0.0080	0.0040	2.00	9/17/2012	15:48:21
Lead	7439-92-1	0.11	mg/L			P	0.013	0.0090	0.0044	2.00	9/17/2012	15:48:21
Selenium	7782-49-2	0.028	mg/L	U		P	0.044	0.028	0.015	2.00	9/17/2012	15:48:21
Silver	7440-22-4	0.0058	mg/L	U		P	0.0089	0.0058	0.0028	2.00	9/17/2012	15:48:21

Comments:

3990

6010C / TCLP

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-009

Contract: ERT009|Ft. Stewart 3153-004 **Lab Code:** _____ **Case No.:** _____ **SAS No.:** _____

Initial Calibration Source: VHG

Continuing Calibration Source: High Purity

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
ICV										
	Arsenic	0.983	1.000	98		90 - 110	P	9/17/2012	13:02	091712A 30
	Barium	1.011	1.000	101		90 - 110	P	9/17/2012	13:02	091712A 30
	Cadmium	1.0130	1.0000	101		90 - 110	P	9/17/2012	13:02	091712A 30
	Chromium	1.000	1.0000	100		90 - 110	P	9/17/2012	13:02	091712A 30
	Lead	1.0290	1.0000	103		90 - 110	P	9/17/2012	13:02	091712A 30
	Selenium	0.954	1.000	95		90 - 110	P	9/17/2012	13:02	091712A 30
	Silver	0.9806	1.0000	98		90 - 110	P	9/17/2012	13:02	091712A 30
CCV										
	Arsenic	0.499	0.500	100		90 - 110	P	9/17/2012	13:16	091712A 30
	Barium	2.482	2.500	99		90 - 110	P	9/17/2012	13:16	091712A 30
	Cadmium	0.4940	0.5000	99		90 - 110	P	9/17/2012	13:16	091712A 30
	Chromium	0.503	0.5000	101		90 - 110	P	9/17/2012	13:16	091712A 30
	Lead	0.4922	0.5000	98		90 - 110	P	9/17/2012	13:16	091712A 30
	Selenium	2.460	2.500	98		90 - 110	P	9/17/2012	13:16	091712A 30
	Silver	0.4976	0.5000	100		90 - 110	P	9/17/2012	13:16	091712A 30
CCV										
	Arsenic	0.507	0.500	101		90 - 110	P	9/17/2012	14:22	091712A 30
	Barium	2.510	2.500	100		90 - 110	P	9/17/2012	14:22	091712A 30
	Cadmium	0.4944	0.5000	99		90 - 110	P	9/17/2012	14:22	091712A 30
	Chromium	0.493	0.5000	99		90 - 110	P	9/17/2012	14:22	091712A 30
	Lead	0.4962	0.5000	99		90 - 110	P	9/17/2012	14:22	091712A 30
	Selenium	2.524	2.500	101		90 - 110	P	9/17/2012	14:22	091712A 30
	Silver	0.4931	0.5000	99		90 - 110	P	9/17/2012	14:22	091712A 30
CCV										
	Arsenic	0.508	0.500	102		90 - 110	P	9/17/2012	15:19	091712A 30
	Barium	2.521	2.500	101		90 - 110	P	9/17/2012	15:19	091712A 30
	Cadmium	0.4949	0.5000	99		90 - 110	P	9/17/2012	15:19	091712A 30
	Chromium	0.496	0.5000	99		90 - 110	P	9/17/2012	15:19	091712A 30
	Lead	0.4975	0.5000	100		90 - 110	P	9/17/2012	15:19	091712A 30
	Selenium	2.526	2.500	101		90 - 110	P	9/17/2012	15:19	091712A 30
	Silver	0.4939	0.5000	99		90 - 110	P	9/17/2012	15:19	091712A 30

6010C / TCLP

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-009

Contract: ERT009|Ft. Stewart 3153-004 **Lab Code:** _____ **Case No.:** _____ **SAS No.:** _____

Initial Calibration Source: VHG

Continuing Calibration Source: High Purity

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
CCV										
	Arsenic	0.509	0.500	102		90 - 110	P	9/17/2012	16:15	091712A 30
	Barium	2.547	2.500	102		90 - 110	P	9/17/2012	16:15	091712A 30
	Cadmium	0.4959	0.5000	99		90 - 110	P	9/17/2012	16:15	091712A 30
	Chromium	0.488	0.5000	98		90 - 110	P	9/17/2012	16:15	091712A 30
	Lead	0.4931	0.5000	99		90 - 110	P	9/17/2012	16:15	091712A 30
	Selenium	2.520	2.500	101		90 - 110	P	9/17/2012	16:15	091712A 30
	Silver	0.4958	0.5000	99		90 - 110	P	9/17/2012	16:15	091712A 30
LLCCV										
	Arsenic	0.012	0.010	120		70 - 130	P	9/17/2012	16:24	091712A 30
	Barium	0.011	0.010	110		70 - 130	P	9/17/2012	16:24	091712A 30
	Cadmium	0.0017	0.0020	85		70 - 130	P	9/17/2012	16:24	091712A 30
	Chromium	0.006	0.0050	120		70 - 130	P	9/17/2012	16:24	091712A 30
	Lead	0.0062	0.0060	103		70 - 130	P	9/17/2012	16:24	091712A 30
	Selenium	0.022	0.020	110		70 - 130	P	9/17/2012	16:24	091712A 30
	Silver	0.0042	0.0040	105		70 - 130	P	9/17/2012	16:24	091712A 30

ALS ENVIRONMENTAL

6010C / TCLP

- 2b -

CRDL STANDARD FOR AA & ICP

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-009

Contract: ERT009|Ft. Stewart 3153-004 **Lab Code:** _____ **Case No.:** _____ **SAS No.:** _____

AA CRDL Standard Source: High Purity

ICP CRDL Standard Source: _____

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	Advisory Limits (%R)	M	Analysis Date	Analysis Time	Run Number
CRDL										
	Arsenic	0.011	0.010	110		70 - 130	P	9/17/2012	13:11	091712A 3
	Barium	0.010	0.010	100		70 - 130	P	9/17/2012	13:11	091712A 3
	Cadmium	0.0021	0.002	105		70 - 130	P	9/17/2012	13:11	091712A 3
	Chromium	0.0055	0.005	110		70 - 130	P	9/17/2012	13:11	091712A 3
	Lead	0.0072	0.006	120		70 - 130	P	9/17/2012	13:11	091712A 3
	Selenium	0.020	0.020	100		70 - 130	P	9/17/2012	13:11	091712A 3
	Silver	0.0042	0.004	105		70 - 130	P	9/17/2012	13:11	091712A 3

6010C / TCLP

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-009

Contract: ERT009|Ft. Stewart 3153-004 **Lab Code:** **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Conc Qual	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
ICB										
	Arsenic	0.008	U	0.0066	0.003	0.008	P	9/17/2012	13:06	091712A 3015
	Barium	0.010	U	0.0088	0.004	0.010	P	9/17/2012	13:06	091712A 3015
	Cadmium	0.0020	U	0.0015	0.0007	0.0020	P	9/17/2012	13:06	091712A 3015
	Chromium	0.0050	U	0.0044	0.0020	0.0050	P	9/17/2012	13:06	091712A 3015
	Lead	0.006	U	0.0044	0.002	0.006	P	9/17/2012	13:06	091712A 3015
	Selenium	0.020	U	0.015	0.007	0.020	P	9/17/2012	13:06	091712A 3015
	Silver	0.0040	U	0.0031	0.0014	0.0040	P	9/17/2012	13:06	091712A 3015
CCB										
	Arsenic	0.008	U	0.0066	0.003	0.008	P	9/17/2012	14:27	091712A 3015
	Barium	0.010	U	0.0088	0.004	0.010	P	9/17/2012	14:27	091712A 3015
	Cadmium	0.0020	U	0.0015	0.0007	0.0020	P	9/17/2012	14:27	091712A 3015
	Chromium	0.0050	U	0.0044	0.0020	0.0050	P	9/17/2012	14:27	091712A 3015
	Lead	0.006	U	0.0044	0.002	0.006	P	9/17/2012	14:27	091712A 3015
	Selenium	0.020	U	0.015	0.007	0.020	P	9/17/2012	14:27	091712A 3015
	Silver	0.0040	U	0.0031	0.0014	0.0040	P	9/17/2012	14:27	091712A 3015
CCB										
	Arsenic	0.008	U	0.0066	0.003	0.008	P	9/17/2012	15:24	091712A 3015
	Barium	0.010	U	0.0088	0.004	0.010	P	9/17/2012	15:24	091712A 3015
	Cadmium	0.0020	U	0.0015	0.0007	0.0020	P	9/17/2012	15:24	091712A 3015
	Chromium	0.0050	U	0.0044	0.0020	0.0050	P	9/17/2012	15:24	091712A 3015
	Lead	0.006	U	0.0044	0.002	0.006	P	9/17/2012	15:24	091712A 3015
	Selenium	0.020	U	0.015	0.007	0.020	P	9/17/2012	15:24	091712A 3015
	Silver	0.0040	U	0.0031	0.0014	0.0040	P	9/17/2012	15:24	091712A 3015
CCB										
	Arsenic	0.008	U	0.0066	0.003	0.008	P	9/17/2012	16:20	091712A 3015
	Barium	0.010	U	0.0088	0.004	0.010	P	9/17/2012	16:20	091712A 3015
	Cadmium	0.0020	U	0.0015	0.0007	0.0020	P	9/17/2012	16:20	091712A 3015
	Chromium	0.0050	U	0.0044	0.0020	0.0050	P	9/17/2012	16:20	091712A 3015
	Lead	0.006	U	0.0044	0.002	0.006	P	9/17/2012	16:20	091712A 3015
	Selenium	0.020	U	0.015	0.007	0.020	P	9/17/2012	16:20	091712A 3015
	Silver	0.0040	U	0.0031	0.0014	0.0040	P	9/17/2012	16:20	091712A 3015

6010C / TCLP
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PREPARATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-009

Contract: ERT009|Ft. Stewart 3153-004 **Lab Code:** **Case No.:** **SAS No.:**

Sample ID	Analyte	Result (mg/L)	Conc Qual	Q	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
1033609			QC-WATER								
	Arsenic	0.009	U		0.0045	0.003	0.009	P	9/17/2012	13:35	091712A 3015_
	Barium	0.011	U		0.0055	0.004	0.011	P	9/17/2012	13:35	091712A 3015_
	Cadmium	0.0022	U		0.0011	0.0007	0.0022	P	9/17/2012	13:35	091712A 3015_
	Chromium	0.0056	U		0.0028	0.0020	0.0056	P	9/17/2012	13:35	091712A 3015_
	Lead	0.007	U		0.0035	0.002	0.007	P	9/17/2012	13:35	091712A 3015_
	Selenium	0.022	U		0.011	0.007	0.022	P	9/17/2012	13:35	091712A 3015_
	Silver	0.004	U		0.0020	0.001	0.004	P	9/17/2012	13:35	091712A 3015_

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INTERFERENCE CHECK SAMPLE

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-009

Contract: ERT009|Ft. Stewart 3153-004 **Lab Code:** **Case No.:** **SAS No.:**

ICS Source: **Instrument ID:** Thermo ICP 6500_2

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	Analysis Date	Analysis Time	Run Number
ICSA									
	Arsenic	-0.001				-0.0073 - -0.0073	9/17/2012	13:25	091712A 3015
	Barium	0.001				-0.0073 - -0.0073	9/17/2012	13:25	091712A 3015
	Cadmium	-0.0005				-0.00146 - -0.00146	9/17/2012	13:25	091712A 3015
	Chromium	0.000				-0.0036 - -0.0036	9/17/2012	13:25	091712A 3015
	Lead	0.0018				-0.00440 - -0.00440	9/17/2012	13:25	091712A 3015
	Selenium	0.005				-0.0146 - -0.0146	9/17/2012	13:25	091712A 3015
	Silver	0.0003				-0.00290 - -0.00290	9/17/2012	13:25	091712A 3015
ICSAB									
	Arsenic	2.600	2.500	104		80 - 120%	9/17/2012	13:29	091712A 3015
	Barium	0.767	0.750	102		80 - 120%	9/17/2012	13:29	091712A 3015
	Cadmium	0.797	0.750	106		80 - 120%	9/17/2012	13:29	091712A 3015
	Chromium	0.767	0.750	102		80 - 120%	9/17/2012	13:29	091712A 3015
	Lead	2.71	2.50	108		80 - 120%	9/17/2012	13:29	091712A 3015
	Selenium	1.267	1.250	101		80 - 120%	9/17/2012	13:29	091712A 3015
	Silver	0.780	0.750	104		80 - 120%	9/17/2012	13:29	091712A 3015
ICSA									
	Arsenic	-0.002				-0.0073 - -0.0073	9/17/2012	16:30	091712A 3015
	Barium	0.001				-0.0073 - -0.0073	9/17/2012	16:30	091712A 3015
	Cadmium	-0.0007				-0.00146 - -0.00146	9/17/2012	16:30	091712A 3015
	Chromium	0.000				-0.0036 - -0.0036	9/17/2012	16:30	091712A 3015
	Lead	0.0019				-0.00440 - -0.00440	9/17/2012	16:30	091712A 3015
	Selenium	0.004				-0.0146 - -0.0146	9/17/2012	16:30	091712A 3015
	Silver	0.0003				-0.00290 - -0.00290	9/17/2012	16:30	091712A 3015
ICSAB									
	Arsenic	2.588	2.500	104		80 - 120%	9/17/2012	16:34	091712A 3015
	Barium	0.775	0.750	103		80 - 120%	9/17/2012	16:34	091712A 3015
	Cadmium	0.792	0.750	106		80 - 120%	9/17/2012	16:34	091712A 3015
	Chromium	0.764	0.750	102		80 - 120%	9/17/2012	16:34	091712A 3015
	Lead	2.70	2.50	108		80 - 120%	9/17/2012	16:34	091712A 3015
	Selenium	1.264	1.250	101		80 - 120%	9/17/2012	16:34	091712A 3015
	Silver	0.774	0.750	103		80 - 120%	9/17/2012	16:34	091712A 3015

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LABORATORY CONTROL SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-009

Contract: ERT009|Ft. Stewart 3153-004 **Lab Code:** **Case No.:** **SAS No.:**

Aqueous LCS Source: High Purity **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Q	QC Criteria	M
1033610									
	Arsenic	mg/L	0.111	0.1198		108		80 - 120	P
	Barium	mg/L	1.11	1.180		106		80 - 120	P
	Cadmium	mg/L	0.111	0.1171		105		80 - 120	P
	Chromium	mg/L	0.111	0.1190		107		80 - 120	P
	Lead	mg/L	0.111	0.1187		107		80 - 120	P
	Selenium	mg/L	1.11	1.163		105		80 - 120	P
	Silver	mg/L	0.111	0.1178		106		80 - 120	P

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LABORATORY CONTROL SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-009

Contract: ERT009|Ft. Stewart 3153-004 **Lab Code:** **Case No.:** **SAS No.:**

Aqueous LCS Source: High Purity **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Q	QC Criteria	M
1033611									
	Arsenic	mg/L	0.111	0.1197		108		80 - 120	P
	Barium	mg/L	1.11	1.157		104		80 - 120	P
	Cadmium	mg/L	0.111	0.1134		102		80 - 120	P
	Chromium	mg/L	0.111	0.1181		106		80 - 120	P
	Lead	mg/L	0.111	0.1164		105		80 - 120	P
	Selenium	mg/L	1.11	1.132		102		80 - 120	P
	Silver	mg/L	0.111	0.1168		105		80 - 120	P

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SERIAL DILUTION SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-009

Contract: ERT009|Ft. Stewart 3153-004 **Lab Code:** _____ **Case No.:** _____ **SAS No.:** _____

Matrix: WATER **Level:** LOW **Client ID:** FTSW-IDW-02L

Sample ID: 9986940001 **Serial Dilution ID:** 9986940001L

Analyte	Initial Result mg/L	C	Serial Result mg/L	C	% Difference	Qual	Acceptance Limits	M
Barium	0.102		0.094	J	7.8		10.00 %	P
Chromium	0.264		0.248		6.1		10.00 %	P

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ICP INTERELEMENT CORRECTION FACTORS

Client: ERT Earth Resources Technology, Inc. SDG No.: ERT-009

Contract: ERT009|Ft. Stewart 3153-004 Lab Code: _____ Case No.: _____ SAS No.: _____

Instrument ID: Thermo ICP 6500_2 Date: 1/1/2010

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Al	Ca	Fe	Mg	As
Aluminum	308.215	0.0000000	0.0000000	0.0005270	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000090	0.0000650	0.0000000	0.0000000
Arsenic	189.042	0.0000050	0.0000000	-0.0000810	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000010	0.0000000	0.0000000	0.0000370
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0003450	0.0000000	0.0000000
Boron	223.061	0.0000000	0.0000000	0.0000980	0.0000000	0.0000000
Cadmium	228.802	0.0000000	0.0000000	-0.0000060	0.0000111	0.0070730
Calcium	317.933	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000050	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000190	0.0000000	0.0000000
Copper	324.754	-0.0000030	0.0000000	0.0000390	0.0000000	0.0000000
Iron	259.94	0.0000300	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0001740	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	-0.0000080	0.0000200	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	-0.0000060	0.0000000	0.0000000
Nickel	231.604	0.0000030	0.0000010	-0.0000030	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	-0.0002530	0.0000000	0.0000000
Silver	320.8	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000100	0.0000000	0.0000000	0.0000000
Thallium	190.864	-0.0000170	0.0000000	0.0000110	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000050	0.0000000	0.0000000
Titanium	334.941	0.0000000	-0.0000010	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	-0.0000170	0.0000040	0.0000000
Zinc	213.856	0.0000000	0.0000020	0.0001370	0.0000370	0.0000000

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ICP INTERELEMENT CORRECTION FACTORS

Client: ERT Earth Resources Technology, Inc. SDG No.: ERT-009

Contract: ERT009|Ft. Stewart 3153-004 Lab Code: _____ Case No.: _____ SAS No.: _____

Instrument ID: Thermo ICP 6500_2 Date: 1/1/2010

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Co	Cr	Mn	Mo	Ni
Aluminum	308.215	-0.0004690	0.0000000	0.0000000	0.0201000	0.0000000
Antimony	206.838	0.0002240	0.0120000	0.0000000	-0.0092230	-0.0006070
Arsenic	189.042	0.0000000	-0.0031000	-0.0000060	0.0000490	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	-0.0000200	0.0000000
Boron	249.678	0.0010360	0.0002370	0.0000000	-0.0011930	0.0000000
Boron	223.061	-0.0056250	0.0000000	0.0000000	-0.0001450	0.0002340
Cadmium	228.802	0.0000000	0.0000000	0.0000000	0.0000180	-0.0001600
Calcium	317.933	0.0002040	0.0000000	0.0000000	0.0022740	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0005340	-0.0000370	0.0000000
Cobalt	228.616	0.0000000	-0.0000370	0.0000000	-0.0014940	0.0001230
Copper	324.754	-0.0009810	-0.0000400	0.0000000	0.0001050	0.0000000
Iron	259.94	0.0000000	0.0001870	0.0001640	-0.0006660	0.0000000
Lead	220.353	0.0001390	0.0000000	0.0001190	-0.0020450	0.0000460
Magnesium	279.079	0.0000000	0.0000000	-0.0021180	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	-0.0000190	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	-0.0001550	0.0000000	0.0000000
Nickel	231.604	-0.0001360	0.0000000	0.0000000	0.0013140	0.0000000
Selenium	196.0	-0.0001930	0.0000000	0.0006620	0.0000580	0.0000000
Silver	320.8	0.0000050	0.0000000	0.0001820	0.0001170	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0015200	0.0000000	0.0011230	0.0000660	0.0000000
Tin	189.989	0.0000120	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.941	0.0000000	0.0003560	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	-0.0047630	-0.0002540	-0.0000340	0.0000070
Zinc	213.856	0.0000000	0.0000000	0.0000000	-0.0001180	0.0068950

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ICP INTERELEMENT CORRECTION FACTORS

Client: ERT Earth Resources Technology, Inc. SDG No.: ERT-009

Contract: ERT009|Ft. Stewart 3153-004 Lab Code: _____ Case No.: _____ SAS No.: _____

Instrument ID: Thermo ICP 6500_2 Date: 1/1/2010

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Sb	Sn	Ti	V	
Aluminum	308.215	0.0000000	0.0000000	0.0010770	0.0945900	
Antimony	206.838	0.0000000	-0.0106350	0.0003650	-0.0010340	
Arsenic	189.042	0.0000530	0.0000000	0.0000000	0.0000450	
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	
Beryllium	313.042	0.0000000	0.0000000	-0.0002880	0.0001230	
Boron	249.678	0.0000000	0.0000000	0.0001940	-0.0002630	
Boron	223.061	0.0000000	0.0000900	0.0000000	-0.0012140	
Cadmium	228.802	0.0000000	0.0000000	0.0000000	0.0000690	
Calcium	317.933	0.0000710	0.0001430	0.0000000	-0.0004010	
Chromium	267.716	0.0000000	0.0000000	0.0000000	-0.0000660	
Cobalt	228.616	0.0000000	0.0000000	0.0019740	0.0000060	
Copper	324.754	0.0000000	0.0000000	-0.0013320	-0.0003190	
Iron	259.94	0.0000000	0.0000230	0.0000000	0.0000000	
Lead	220.353	0.0000000	0.0000000	0.0000180	-0.0001460	
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	
Manganese	257.61	0.0000000	0.0000000	0.0000290	-0.0000160	
Molybdenum	202.03	0.0000000	0.0000000	0.0000030	-0.0001210	
Nickel	231.604	-0.0005790	0.0000000	0.0000000	-0.0000150	
Selenium	196.0	0.0000000	0.0000000	0.0000000	-0.0000210	
Silver	320.8	0.0000000	0.0000000	-0.0000320	0.0001090	
Strontium	421.552	0.0000000	0.0000840	0.0000000	0.0000000	
Thallium	190.864	0.0000000	0.0000000	-0.0016340	-0.0258650	
Tin	189.989	0.0000000	0.0000000	-0.0001030	0.0000000	
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	
Vanadium	292.402	0.0000000	0.0000000	0.0003480	0.0000000	
Zinc	213.856	0.0000000	0.0000230	-0.0004540	0.0000000	

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ICP INTERELEMENT CORRECTION FACTORS

Client: ERT Earth Resources Technology, Inc. SDG No.: ERT-009

Contract: ERT009|Ft. Stewart 3153-004 Lab Code: _____ Case No.: _____ SAS No.: _____

Instrument ID: Thermo ICP 6500_2 Date: 1/1/2010

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For:				
Aluminum	308.215					
Antimony	206.838					
Arsenic	189.042					
Barium	493.409					
Beryllium	313.042					
Boron	249.678					
Boron	223.061					
Cadmium	228.802					
Calcium	317.933					
Chromium	267.716					
Cobalt	228.616					
Copper	324.754					
Iron	259.94					
Lead	220.353					
Magnesium	279.079					
Magnesium	285.213					
Manganese	257.61					
Molybdenum	202.03					
Nickel	231.604					
Selenium	196.0					
Silver	320.8					
Strontium	421.552					
Thallium	190.864					
Tin	189.989					
Titanium	334.941					
Vanadium	292.402					
Zinc	213.856					

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LINEAR RANGES

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-009

Contract: ERT009|Ft. Stewart 3153-004 **Lab Code:** _____ **Case No.:** _____ **SAS No.:** _____

Instrument ID: Thermo ICP 6500 2 **Date:** 7/31/2012

Analyte	Integration Time (sec)	LDR mg/L
Arsenic	100.00	68
Barium	100.00	54
Cadmium	100.00	18
Chromium	100.00	27
Lead	100.00	270
Selenium	100.00	135
Silver	100.00	5

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SAMPLE PREPARATION SUMMARY

Client: ERT Earth Resources Technology, Inc.

SDG No.: ERT-009

Contract: ERT009|Ft. Stewart 3153-004 **Lab Code:**

Method: P

Case No.: **SAS No.:**

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	481042						
1033609	MB for HBN 481042 [MDIG/3789	MB	QC-WAT	9/13/12	45.0	50.0	
1033610	LCS for HBN 481042 [MDIG/3789	LCS	QC-WAT	9/13/12	45.0	50.0	
1033611	LCS for HBN 481042 [MDIG/3789	LCS	QC-WAT	9/13/12	45.0	50.0	
9986940001	FTSW-IDW-02	SAM	TCLP	9/13/12	45.0	50.0	

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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT009|Ft. Stewart 3153-004

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: ERT-009

Instrument ID Number: Thermo ICP 6500_2 Method: P Run Number: 091712A 3015

Start Date: 9/17/2012 End Date: 9/17/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ICAL1	1.00	1238				X	X		X		X				X						X	X					
ICAL2	1.00	1243				X	X		X		X				X						X	X					
ICAL3	1.00	1248				X	X		X		X				X						X	X					
ICAL4	1.00	1253				X	X		X		X				X						X	X					
ICAL5	1.00	1257				X	X		X		X				X						X	X					
ICV1	1.00	1302				X	X		X		X				X						X	X					
ICB1	1.00	1306				X	X		X		X				X						X	X					
CRDL1	1.00	1311				X	X		X		X				X						X	X					
CCV1	1.00	1316				X	X		X		X				X						X	X					
HIGH	1.00	1320				X	X		X		X				X						X	X					
ICS-A1	1.00	1325				X	X		X		X				X						X	X					
ICS-AB1	1.00	1329				X	X		X		X				X						X	X					
1033609	1.00	1335				X	X		X		X				X						X	X					
1033610	1.00	1340				X	X		X		X				X						X	X					
1033611	1.00	1345				X	X		X		X				X						X	X					
ZZZZZZ	1.00	1349																									
ZZZZZZ	1.00	1354																									
ZZZZZZ	2.00	1359																									
ZZZZZZ	2.00	1403																									
ZZZZZZ	2.00	1408																									
ZZZZZZ	2.00	1413																									
ZZZZZZ	2.00	1418																									
CCV2	1.00	1422				X	X		X		X				X						X	X					
CCB1	1.00	1427				X	X		X		X				X						X	X					
ZZZZZZ	2.00	1432																									
ZZZZZZ	2.00	1436																									
ZZZZZZ	2.00	1441																									
ZZZZZZ	2.00	1446																									
ZZZZZZ	2.00	1451																									
ZZZZZZ	2.00	1456																									
ZZZZZZ	2.00	1500																									
ZZZZZZ	2.00	1505																									
ZZZZZZ	2.00	1510																									
ZZZZZZ	2.00	1515																									
CCV3	1.00	1519				X	X		X		X				X						X	X					
CCB2	1.00	1524				X	X		X		X				X						X	X					

6010C / TCLP

14

ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT009|Ft. Stewart 3153-004

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: ERT-009

Instrument ID Number: Thermo ICP 6500_2 Method: P Run Number: 091712A 3015

Start Date: 9/17/2012 End Date: 9/17/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	2.00	1529																										
ZZZZZZ	2.00	1533																										
ZZZZZZ	2.00	1538																										
ZZZZZZ	2.00	1543																										
9986940001	2.00	1548				X	X		X		X				X						X	X						
9986940001L	10.00	1553				X	X		X		X				X						X	X						
ZZZZZZ	10.00	1557																										
ZZZZZZ	2.00	1602																										
ZZZZZZ	2.00	1609																										
CCV4	1.00	1615				X	X		X		X				X						X	X						
CCB3	1.00	1620				X	X		X		X				X						X	X						
LLCCV	1.00	1624				X	X		X		X				X						X	X						
ICS-A2	1.00	1630				X	X		X		X				X						X	X						
ICS-AB2	1.00	1634				X	X		X		X				X						X	X						
ZZZZZZ	1.00	1639																										
ZZZZZZ	1.00	1644																										
ZZZZZZ	2.00	1648																										
ZZZZZZ	2.00	1653																										
ZZZZZZ	2.00	1658																										
ZZZZZZ	2.00	1702																										
ZZZZZZ	2.00	1707																										
ZZZZZZ	2.00	1712																										
ZZZZZZ	2.00	1716																										
ZZZZZZ	2.00	1721																										
ZZZZZZ	1.00	1726																										
ZZZZZZ	1.00	1730																										
ZZZZZZ	2.00	1735																										
ZZZZZZ	2.00	1740																										
ZZZZZZ	2.00	1745																										
ZZZZZZ	2.00	1750																										
ZZZZZZ	2.00	1754																										
ZZZZZZ	2.00	1759																										
ZZZZZZ	2.00	1804																										
ZZZZZZ	2.00	1809																										
ZZZZZZ	2.00	1813																										
ZZZZZZ	10.00	1818																										

6010C / TCLP

14

ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT009|Ft. Stewart 3153-004

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: ERT-009

Instrument ID Number: Thermo ICP 6500_2 Method: P Run Number: 091712A 3015

Start Date: 9/17/2012 End Date: 9/17/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1823																								
ZZZZZZ	1.00	1827																								
ZZZZZZ	1.00	1832																								
ZZZZZZ	1.00	1837																								
ZZZZZZ	1.00	1842																								

0701

TCLP Metals by 1311/6010C
Raw Data

Status

Revision	183	
Date Created	8/29/2007 16:18:50	by jknight
Date Modified	9/17/2012 12:12:06	by SRT
Date Calibrated	9/17/2012 13:02:06	
Current Status	by SRT	
Number of Elements	31	
Number of Wavelengths	36	
Calibration Type	External	
Notes:		
SW-846 method 6010C		

Analysis Preferences

Sample Options	# Repeats:	3			
	Delay Time:	0.0 seconds			
	Sample Flush Time:	65 seconds			
	Analysis mode	Precision			
Source	Sample Introduction	Nebulizer			
	Plasma View:	Line Selection			
Analysis Maximum Integration Times (sec)	Low WL Range	Axial	15	Radial	15
	High WL Range:	Axial	10	Radial	10
Calibration Mode	Concentration				
Trailing Full Frame Options	Intelli-Frame:		Yes		
	Max Integration Time (sec):		30		
	WL Range:		Both		
	View:		Radial		
	Auto-Increment Sample Names:		Yes		
	Use Sample Weight Corrections:		No		

Source Settings

Nebulizer Pump	Flush Pump Rate (rpm):	50	
	Analysis Pump Rate (rpm):	50	
	Pump Relaxation Time (sec):	5	
	Pump Tubing Type:	Tygon Orange/White	
	RF Power:	1150	W
	Nebulizer Flow:	0.60	L/min
	Auxiliary Gas:	0.5	L/min

Automated Output

Option	Unknowns	QC Std	Blanks	Standards	Recoveries	Duplicate	Time Scan
Save results to database	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Print results	Yes	Yes	Yes	Yes	Yes	Yes	No
Export results to comma delimited text file	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Acquire and save trailing Full Frame to database	No	No	No	No	No	No	No
Library	ANADATA	ANADATA	ANADATA	ANADATA	ANADATA	ANADATA	ANADATA
Export filename	results.txt	results.txt	results.txt	results.txt	results.txt	results.txt	ts_data.txt

Export filename	results.txt	results.txt	results.txt	results.txt	results.txt	results.txt	ts_data.txt
Export action	Append	Append	Append	Append	Append	Append	Append

Report Preferences

Option	Unknowns	QC Std	Blanks	Standards	Recoveries	Duplicate
Output Mode	Conc	Conc	Conc	IR	Conc	Conc
Default View	Results for All Lines	Results for All Lines	Results for All Lines	Results for All Lines	Results for All Lines	Results for All Lines
In Concentration Output Mode, apply...						
Print Limits	No	No	No	No	No	No
Significant Figures	Yes	Yes	Yes	Yes	Yes	Yes
Blank Subtraction	No	No	No	No	No	No
Line Switching	Yes	Yes	No	Yes	Yes	Yes
IECs	Yes	Yes	Yes	Yes	Yes	Yes
Correction Factor	1	1	1	1	1	1
Checking?	No	Yes	No	No	Yes	Yes
Table						
Screen Report Include...						
Averages	Yes	Yes	Yes	Yes	Yes	Yes
Statistics	Yes	Yes	Yes	Yes	Yes	Yes
Repeats	Yes	Yes	Yes	Yes	Yes	Yes
Errors	Yes	Yes	Yes	Yes	Yes	Yes
Wavelengths	Yes	Yes	Yes	Yes	Yes	No
Int.Std. ref	Yes	Yes	Yes	Yes	Yes	No
Print units	Yes	Yes	Yes	Yes	Yes	Yes
Checks	Yes	Yes	Yes	No	Yes	Yes
Int.Std. Checks	No	No	No	No	No	No
Printed Report Include...						
Averages	Yes	Yes	Yes	Yes	Yes	Yes
Statistics	Yes	Yes	Yes	Yes	Yes	Yes
Repeats	Yes	Yes	Yes	Yes	Yes	Yes
Errors	No	Yes	Yes	Yes	Yes	Yes
Wavelengths	Yes	Yes	Yes	Yes	Yes	No
Int.Std. ref	Yes	Yes	Yes	Yes	Yes	No
Print units	Yes	Yes	Yes	Yes	Yes	Yes
Checks	No	Yes	Yes	No	Yes	Yes
Int.Std. Checks	No	No	No	No	No	No
Exported Report Include...						
Averages	Yes	Yes	Yes	Yes	Yes	Yes
Statistics	Yes	Yes	Yes	Yes	Yes	Yes
Repeats	Yes	Yes	Yes	Yes	Yes	Yes
Errors	No	Yes	Yes	Yes	Yes	Yes
Wavelengths	Yes	Yes	Yes	Yes	Yes	No
Int.Std. ref	Yes	Yes	Yes	Yes	Yes	No
Print units	Yes	Yes	Yes	Yes	Yes	Yes
Checks	Yes	Yes	Yes	No	Yes	Yes
Int.Std. Checks	No	No	No	No	No	No

	Element, Wavelength and Order	Element Name	Gate 1	Gate 2	IS	IEC			Intensity Factor	Print Units	Significant Figures
						?	Priority level	Concentration Threshold			
	Al 167.079 {502}	Al1670	0	0	☐	☒	0	0	1	ppm	4
	Al 308.215 {109}	Al3082	0	0	☐	☒	0	0	1	ppm	4
	Sb 206.833 {463}	Sb2068	0	0	☐	☒	0	0	1	ppm	4
	As 189.042 {478}	As1890	0	0	☐	☒	0	0	1	ppm	4
	Ba 455.403 { 74}	Ba4554	0	0	☐	☒	0	0	1	ppm	4
	Ba 493.409 { 68}	Ba4934	0	0	☐	☒	0	0	1	ppm	4
	Be 313.042 {108}	Be3130	0	0	☐	☒	0	0	1	ppm	4
	Bi 223.061 {451}	Bi2230	0	0	☐	☒	0	0	1	ppm	4
	B 249.678 {135}	B_2496	0	0	☐	☒	0	0	1	ppm	4
	Cd 228.802 {447}	Cd2288	0	0	☐	☒	0	0	1	ppm	4
	Ca 315.887 {107}	Ca3158	0	0	☐	☒	0	0	1	ppm	4
	Cr 205.552 {464}	Cr2055	0	0	☐	☒	0	0	1	ppm	4
	Cr 267.716 {126}	Cr2677	0	0	☐	☒	0	0	1	ppm	4
	Co 228.616 {447}	Co2286	0	0	☐	☒	0	0	1	ppm	4
	Cu 324.754 {104}	Cu3247	0	0	☐	☒	0	0	1	ppm	4
	Fe 259.940 {130}	Fe2599	0	0	☐	☒	0	0	1	ppm	4
	Pb 220.353 {453}	Pb2203	0	0	☐	☒	0	0	1	ppm	4
	Li 670.784 { 50}	Li6707	0	0	☐	☒	0	0	1	ppm	4
	Mg 285.213 {118}	Mg2852	0	0	☐	☒	0	0	1	ppm	4
	Mn 257.610 {131}	Mn2576	0	0	☐	☒	0	0	1	ppm	4
	Mo 202.030 {467}	Mo2020	0	0	☐	☒	0	0	1	ppm	4
	Na 589.592 { 57}	Na5895	0	0	☐	☒	0	0	1	ppm	4
	Ni 231.604 {445}	Ni2316	0	0	☐	☒	0	0	1	ppm	4
	K 766.490 { 44}	K_7664	0	0	☐	☐	n/a	n/a	1	ppm	4
	Se 196.090 {472}	Se1960	0	0	☐	☒	0	0	1	ppm	4
	Ag 328.068 {103}	Ag3280	0	0	☐	☒	0	0	1	ppm	4
	Sr 407.771 { 83}	Sr4077	0	0	☐	☒	0	0	1	ppm	4
	Sn 189.989 {477}	Sn1899	0	0	☐	☒	0	0	1	ppm	4
	Ti 334.941 {101}	Ti3349	0	0	☐	☒	0	0	1	ppm	4
	Tl 190.856 {477}	Tl1908	0	0	☐	☒	0	0	1	ppm	4
	V 292.402 {115}	V_2924	0	0	☐	☒	0	0	1	ppm	4
	Zn 213.856 {458}	Zn2138	0	0	☐	☒	0	0	1	ppm	4
	S 182.034 {485}	S_1820	0	0	☐	☒	0	0	1	ppm	4
	Sc 188.060 {479}*	Sc1880	0	0	☒	☐	n/a	n/a	1	ppm	4
	Sc 357.253 { 94}*	Sc3572	0	0	☒	☐	n/a	n/a	1	ppm	4
	Sc 361.384 { 93}*	Sc3613	0	0	☒	☐	n/a	n/a	1	ppm	4

	Element, Wavelength and Order	Concentration Factor	Display In Report	Line Switch			Print Limit					
				?	Low	High	Apply PL Low	Low PL Value	Apply PL High	High PL	Apply MQL	Ap ply
	Al 167.079 {502}	1	☒	☒	-10	1.05	☒	0	☐	10	☐	☐
	Al 308.215 {109}	1	☒	☒	1.05	10000	☒	0	☐	10	☐	☐
	Sb 206.833 {463}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	As 189.042 {478}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Ba 455.403 { 74}	1	☒	☒	-10	5	☒	0	☐	10	☐	☐
	Ba 493.409 { 68}	1	☒	☒	5	10000	☒	0	☐	10	☐	☐
	Be 313.042 {108}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Bi 223.061 {451}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	B 249.678 {135}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Cd 228.802 {447}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Ca 315.887 {107}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Cr 205.552 {464}	1	☒	☒	-10	0.295	☒	0	☐	10	☐	☐
	Cr 267.716 {126}	1	☒	☒	0.3	10000	☒	0	☐	10	☐	☐
	Co 228.616 {447}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Cu 324.754 {104}	1	☒	☐	0.1	10000	☒	0	☐	10	☐	☐
	Fe 259.940 {130}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Pb 220.353 {453}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Li 670.784 { 50}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Mg 285.213 {118}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Mn 257.610 {131}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Mo 202.030 {467}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Na 589.592 { 57}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Ni 231.604 {445}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	K 766.490 { 44}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Se 196.090 {472}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Ag 328.068 {103}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Sr 407.771 { 83}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Sn 189.989 {477}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Ti 334.941 {101}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Tl 190.856 {477}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	V 292.402 {115}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Zn 213.856 {458}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	S 182.034 {485}	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Sc 188.060 {479}*	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Sc 357.253 { 94}*	1	☒	☐	0	10	☒	0	☐	10	☐	☐
	Sc 361.384 { 93}*	1	☒	☐	0	10	☒	0	☐	10	☐	☐

Element, Wavelength and Order	Calibration Standards									
	ICAL1		ICAL2		ICAL3		ICAL4		ICAL5	
	?	Conc	?	Conc	?	Conc	?	Conc	?	Conc
Al 167.079 {502}	☒	0	☒	0.1	☒	0.5	☒	1	☐	5
Al 308.215 {109}	☒		☒		☒		☒		☒	
Sb 206.833 {463}	☒	0	☒	0.02	☒	0.1	☒	0.2	☒	1
As 189.042 {478}	☒	0	☒	0.01	☒	0.1	☒	0.2	☒	1
Ba 455.403 { 74}	☒	0	☒	0.01	☒	0.5	☒	1	☒	5
Ba 493.409 { 68}	☒		☒		☒		☒		☒	
Be 313.042 {108}	☒	0	☒	0.004	☒	0.1	☒	0.2	☒	1
Bi 223.061 {451}	☒	0	☒	0.05	☒	0.5	☒	1	☒	5
B 249.678 {135}	☒	0	☒	0.1	☒	0.5	☒	1	☒	5
Cd 228.802 {447}	☒	0	☒	0.002	☒	0.1	☒	0.2	☒	1
Ca 315.887 {107}	☒	0	☒	0.1	☒	0.5	☒	1	☒	5
Cr 205.552 {464}	☒	0	☒	0.005	☒	0.1	☒	0.2	☒	1
Cr 267.716 {126}	☒		☒		☒		☒		☒	
Co 228.616 {447}	☒	0	☒	0.005	☒	0.5	☒	1	☒	5
Cu 324.754 {104}	☒	0	☒	0.01	☒	0.5	☒	1	☒	5
Fe 259.940 {130}	☒	0	☒	0.06	☒	0.5	☒	1	☒	5
Pb 220.353 {453}	☒	0	☒	0.006	☒	0.1	☒	0.2	☒	1
Li 670.784 { 50}	☒	0	☒	0.1	☒	0.5	☒	1	☒	5
Mg 285.213 {118}	☒	0	☒	0.1	☒	0.5	☒	1	☒	5
Mn 257.610 {131}	☒	0	☒	0.005	☒	0.1	☒	0.2	☒	1
Mo 202.030 {467}	☒	0	☒	0.02	☒	0.5	☒	1	☒	5
Na 589.592 { 57}	☒	0	☒	0.5	☒	10	☒	20	☐	
Ni 231.604 {445}	☒	0	☒	0.02	☒	0.5	☒	1	☒	5
K 766.490 { 44}	☒	0	☒	0.5	☒	10	☒	20	☐	
Se 196.090 {472}	☒	0	☒	0.02	☒	0.5	☒	1	☒	5
Ag 328.068 {103}	☒	0	☒	0.004	☒	0.1	☒	0.2	☒	1
Sr 407.771 { 83}	☒	0	☒	0.005	☒	0.1	☒	0.2	☒	1
Sn 189.989 {477}	☒	0	☒	0.02	☒	0.1	☒	0.2	☒	1
Ti 334.941 {101}	☒	0	☒	0.02	☒	0.1	☒	0.2	☒	1
Tl 190.856 {477}	☒	0	☒	0.02	☒	0.1	☒	0.2	☒	1
V 292.402 {115}	☒	0	☒	0.005	☐		☒	0.2	☒	1
Zn 213.856 {458}	☒	0	☒	0.02	☒	0.25	☒	0.5	☒	2.5
S 182.034 {485}	☒	0	☒	0.1	☒	1	☒	2	☒	10
Sc 188.060 {479}*	☐		☒	0	☐		☐		☐	
Sc 357.253 { 94}*	☐		☒		☐		☐		☐	
Sc 361.384 { 93}*	☐		☒		☐		☐		☐	

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Al 167.079 {502}	☒	2	Fe	0.001614	0.000000	No
			Sb	0.000060	0.000000	No
Al 308.215 {109}	☒	9	Co	-0.000469	0.000000	No
			V	0.118040	0.000000	No
			Mo	0.020100	0.000000	No
			Ti	0.001077	0.000000	No
			Fe	0.000527	0.000000	No
			Cr	0.000009	0.000000	No
			Se	-0.000027	0.000000	No
			Pb	-0.000095	0.000000	No
			Bi	-0.000114	0.000000	No
Sb 206.833 {463}	☒	12	Cr	0.006820	0.000000	No
			Ni	-0.000073	0.000000	No
			V	-0.000633	0.000000	No
			Fe	0.000046	0.000000	No
			Zn	0.000027	0.000000	No
			Na	0.000006	0.000000	No
			Mo	-0.000070	0.000000	No
			Be	-0.000105	0.000000	No
			Sn	-0.001342	0.000000	No
			Ti	0.000018	0.000000	No
			Ca	-0.000003	0.000000	No
			Co	0.000224	0.000000	No
As 189.042 {478}	☒	10	Cr	-0.003273	0.000000	No
			Fe	-0.000017	0.000000	No
			Mo	0.000139	0.000000	No
			Mn	-0.000006	0.000000	No
			Sb	0.000013	0.000000	No
			Al	0.000005	0.000000	No
			V	0.000057	0.000000	No
			B	0.000059	0.000000	No
			Ba	0.000105	0.000000	No
			Cd	-0.003611	0.000000	No
Ba 455.403 { 74}	☒	3	Ca	0.000001	0.000000	No
			Co	0.000003	0.000000	No
			As	0.000037	0.000000	No
Ba 493.409 { 68}	☒	3	V	0.000037	0.000000	No
			Fe	0.000012	0.000000	No
			Sr	0.000918	0.000000	No
Be 313.042 {108}	☒	4	V	0.000177	0.000000	No
			Mo	-0.000020	0.000000	No
			Ti	-0.000061	0.000000	No
			Cr	-0.005187	0.000000	No
Bi 223.061 {451}	☒	15	Co	-0.002631	0.000000	No
			Cr	0.001017	0.000000	No
			Ni	0.000234	0.000000	No
			V	-0.000142	0.000000	No
			Fe	-0.000287	0.000000	No
			Cu	-0.001536	0.000000	No
			Mo	-0.000026	0.000000	No
			Sr	0.000147	0.000000	No
			Ti	0.000113	0.000000	No
			Sn	0.000090	0.000000	No
			Mg	0.000248	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Al	0.000133	0.000000	No
			Ca	0.000121	0.000000	No
			As	0.000130	0.000000	No
			Pb	-0.000273	0.000000	No
B 249.678 {135}	☒	8	Co	0.001036	0.000000	No
			Cr	0.000237	0.000000	No
			V	-0.000041	0.000000	No
			Fe	-0.000041	0.000000	No
			Mo	-0.000152	0.000000	No
			Ti	0.000194	0.000000	No
			Cu	-0.000011	0.000000	No
			As	-0.000050	0.000000	No
Cd 228.802 {447}	☒	9	Ni	-0.000045	0.000000	No
			V	0.000090	0.000000	No
			Fe	0.000014	0.000000	No
			Ba	-0.000015	0.000000	No
			Mo	0.000018	0.000000	No
			Bi	0.000003	0.000000	No
			As	0.012242	0.000000	No
			Mg	0.000003	0.000000	No
			Co	-0.000428	0.000000	No
Ca 315.887 {107}	☒	10	Co	0.000204	0.000000	No
			Cr	0.000000	0.000000	No
			Mo	0.002274	0.000000	No
			V	-0.000401	0.000000	No
			Sn	0.000143	0.000000	No
			Be	-0.001045	0.000000	No
			Sb	0.000071	0.000000	No
			Al	0.000104	0.000000	No
			Bi	-0.000068	0.000000	No
			Cd	0.000003	0.000000	No
Cr 205.552 {464}	☒	6	Fe	0.000000	0.000000	No
			Ni	0.000044	0.000000	No
			Mo	0.000000	0.000000	No
			Be	-0.001740	0.000000	No
			Al	0.000000	0.000000	No
			Sb	0.000000	0.000000	No
Cr 267.716 {126}	☒	6	Al	0.000017	0.000000	No
			V	-0.000976	0.000000	No
			Mo	0.000536	0.000000	No
			Mn	0.000534	0.000000	No
			As	-0.000380	0.000000	No
			Sb	0.009053	0.000000	No
Co 228.616 {447}	☒	11	Ni	-0.000180	0.000000	No
			Fe	0.000019	0.000000	No
			Mo	-0.000040	0.000000	No
			Ti	0.001674	0.000000	No
			V	0.000006	0.000000	No
			Cr	-0.000037	0.000000	No
			B	-0.000005	0.000000	No
			Ba	0.000040	0.000000	No
			Cd	0.000230	0.000000	No
			Tl	-0.003362	0.000000	No
			Bi	0.003064	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Cu 324.754 {104}	☒	10	Co	0.000023	0.000000	No
			V	-0.000073	0.000000	No
			Al	-0.000003	0.000000	No
			Fe	-0.000027	0.000000	No
			Mo	0.000105	0.000000	No
			Ti	-0.000049	0.000000	No
			Cr	0.000097	0.000000	No
			Zn	0.000213	0.000000	No
			Pb	0.000089	0.000000	No
			Bi	0.003154	0.000000	No
Fe 259.940 {130}	☒	12	Al	0.000030	0.000000	No
			Mo	-0.000666	0.000000	No
			Cr	0.000187	0.000000	No
			Mn	0.000156	0.000000	No
			Sn	0.000023	0.000000	No
			Mg	-0.000459	0.000000	No
			V	-0.000058	0.000000	No
			Cu	-0.000062	0.000000	No
			Zn	0.000159	0.000000	No
			Cd	-0.000012	0.000000	No
			Pb	0.000036	0.000000	No
			Bi	0.000331	0.000000	No
Pb 220.353 {453}	☒	14	Al	0.000268	0.000000	No
			V	-0.000048	0.000000	No
			Fe	0.000004	0.000000	No
			Co	0.000017	0.000000	No
			Ni	0.000259	0.000000	No
			Cu	0.000206	0.000000	No
			Ca	0.000000	0.000000	No
			Zn	-0.000082	0.000000	No
			Mo	-0.001060	0.000000	No
			Mn	0.000119	0.000000	No
			Ti	0.000018	0.000000	No
			Bi	-0.000208	0.000000	No
			B	0.000034	0.000000	No
			Tl	0.000025	0.000000	No
Li 670.784 { 50}	☒	2	Ca	0.000008	0.000000	No
			Sn	0.000037	0.000000	No
Mg 285.213 {118}	☒	1	Bi	0.000000	0.000000	No
Mn 257.610 {131}	☒	6	Fe	0.000010	0.000000	No
			Mo	-0.000019	0.000000	No
			Ti	0.000029	0.000000	No
			V	-0.000016	0.000000	No
			Mg	0.000033	0.000000	No
			Tl	-0.000579	0.000000	No
Mo 202.030 {467}	☒	7	V	-0.000012	0.000000	No
			Fe	-0.000006	0.000000	No
			Zn	-0.000027	0.000000	No
			Mn	-0.000155	0.000000	No
			Ti	0.000003	0.000000	No
			As	0.000368	0.000000	No
			Pb	0.000488	0.000000	No
Na 589.592 { 57}	☒	3	Mo	0.002023	0.000000	No
			Al	0.000108	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			S	0.000946	0.000000	No
Ni 231.604 {445}	☒	13	Co	0.000230	0.000000	No
			Fe	0.000002	0.000000	No
			Mo	0.001032	0.000000	No
			Be	-0.000657	0.000000	No
			Sb	0.000002	0.000000	No
			Tl	0.000185	0.000000	No
			Al	0.000003	0.000000	No
			Ca	0.000001	0.000000	No
			V	-0.000015	0.000000	No
			Zn	-0.002335	0.000000	No
			Cd	-0.000883	0.000000	No
			Pb	-0.000139	0.000000	No
			Bi	0.000884	0.000000	No
K 766.490 { 44}	☒	3	Fe	0.000007	0.000000	No
			Ni	-0.000584	0.000000	No
			Na	0.000499	0.000000	No
Se 196.090 {472}	☒	6	Co	0.000051	0.000000	No
			V	-0.000021	0.000000	No
			Fe	-0.000076	0.000000	No
			Mo	0.000058	0.000000	No
			Mn	0.000518	0.000000	No
			Tl	0.000105	0.000000	No
Ag 328.068 {103}	☒	5	Mo	-0.000077	0.000000	No
			Mn	0.000058	0.000000	No
			V	-0.000100	0.000000	No
			Co	0.000005	0.000000	No
			Ti	0.000088	0.000000	No
Sr 407.771 { 83}	☒	5	Ca	0.000021	0.000000	No
			Ba	0.000005	0.000000	No
			Sn	0.000007	0.000000	No
			Li	0.000040	0.000000	No
			Bi	0.000041	0.000000	No
Sn 189.989 {477}	☒	8	Fe	0.000005	0.000000	No
			Cu	0.000002	0.000000	No
			Bi	0.000089	0.000000	No
			Sr	0.000102	0.000000	No
			Ti	-0.000103	0.000000	No
			Li	0.000046	0.000000	No
			Co	0.000012	0.000000	No
			B	0.000008	0.000000	No
Ti 334.941 {101}	☒	7	Ca	0.000003	0.000000	No
			Cr	0.000189	0.000000	No
			Cu	0.000027	0.000000	No
			Ag	0.000510	0.000000	No
			V	0.000753	0.000000	No
			Co	0.000253	0.000000	No
			Tl	-0.000807	0.000000	No
Tl 190.856 {477}	☒	12	Co	0.005218	0.000000	No
			V	0.002532	0.000000	No
			Al	-0.000017	0.000000	No
			Fe	0.000011	0.000000	No
			Ba	0.000017	0.000000	No
			Pb	-0.000037	0.000000	No

	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
				Bi	0.000062	0.000000	No
				Mn	0.001417	0.000000	No
				Ti	-0.000507	0.000000	No
				Mo	0.000066	0.000000	No
				Ni	0.000108	0.000000	No
				Se	-0.000100	0.000000	No
	V 292.402 {115}	☒	14	Fe	0.000004	0.000000	No
				Cu	-0.000126	0.000000	No
				Mo	-0.000198	0.000000	No
				Mn	-0.000007	0.000000	No
				Ti	0.000621	0.000000	No
				Cr	-0.001046	0.000000	No
				Ni	0.000007	0.000000	No
				Be	0.000113	0.000000	No
				Ag	-0.000963	0.000000	No
				Cd	-0.000025	0.000000	No
				Sb	-0.001636	0.000000	No
				Tl	-0.012080	0.000000	No
				Pb	-0.000105	0.000000	No
				Bi	0.000562	0.000000	No
	Zn 213.856 {458}	☒	9	Ni	0.006919	0.000000	No
				Fe	0.000104	0.000000	No
				Cu	0.000669	0.000000	No
				Mo	-0.000118	0.000000	No
				Ti	-0.000091	0.000000	No
				Mg	0.000016	0.000000	No
				Ca	0.000002	0.000000	No
				Sn	0.000023	0.000000	No
				Bi	0.000026	0.000000	No
	S 182.034 {485}	☒	1	Mn	0.004293	0.000000	No
	Sc 188.060 {479}*	☒	None				
	Sc 357.253 { 94}*	☒	None				
	Sc 361.384 { 93}*	☒	None				

Sample Name: ICAL1 Acquired: 9/17/2012 12:38:46 Type: Cal
Method: 6010C_3015 DOD(v183) Mode: IR Corr. Factor: 1.000000
User: SRT ALSI Analyst: META Batch: Dilution Factor:
Comment:

Elem	Al1670	Al3082	Sb2068	As1890	Ba4554	Ba4934
Line	167.079 {502}	308.215 {109}	206.833 {463}	189.042 {478}	455.403 { 74}	493.409 { 68}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0013**	**.0003**	**.0059**	**-.0057**	**.0018**	**-.0100**
Stddev	.0001	.0000	.0008	.0005	.0001	.0006
%RSD	4.129	9.782	12.91	8.328	6.366	6.123
#1	.0014	.0003	.0055	-.0055	.0019	-.0097
#2	.0013	.0003	.0068	-.0063	.0018	-.0097
#3	.0014	.0003	.0054	-.0054	.0016	-.0108

Elem	Be3130	Bi2230	B_2496	Cd2288	Ca3158	Cr2055
Line	313.042 {108}	223.061 {451}	249.678 {135}	228.802 {447}	315.887 {107}	205.552 {464}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0008**	**.0058**	**.0001**	**.0652**	**.0001**	**-.0123**
Stddev	.0000	.0009	.0001	.0015	.0001	.0015
%RSD	3.410	16.14	103.6	2.228	61.29	12.39
#1	.0008	.0069	.0001	.0635	.0002	-.0109
#2	.0008	.0051	.0000	.0659	.0001	-.0139
#3	.0007	.0054	.0000	.0662	.0000	-.0122

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Line	267.716 {126}	228.616 {447}	324.754 {104}	259.940 {130}	220.353 {453}	670.784 { 50}
IS Ref	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)	(Sc1880)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0000**	**-.0097**	**.0016**	**.0001**	**-.0035**	**-.0003**
Stddev	.000	.0009	.0001	.0000	.0003	.0002
%RSD	1680.	9.551	3.361	58.13	9.158	67.71
#1	-.0001	-.0088	.0016	.0001	-.0032	-.0001
#2	.0000	-.0097	.0017	.0001	-.0038	-.0002
#3	.0001	-.0106	.0016	.0000	-.0035	-.0006

Sample Name: ICAL1 Acquired: 9/17/2012 12:38:46 Type: Cal
Method: 6010C_3015 DOD(v183) Mode: IR Corr. Factor: 1.000000
User: SRT ALSI Analyst: META Batch: Dilution Factor:
Comment:

Elem	Mg2852	Mn2576	Mo2020	Na5895	Ni2316	K_7664
Line	285.213 {118}	257.610 {131}	202.030 {467}	589.592 { 57}	231.604 {445}	766.490 { 44}
IS Ref	(Sc3613)	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0001**	**.0000**	**.0081**	**.0028**	**.0050**	**.0028**
Stddev	.0000	.0000	.0001	.0004	.0005	.0002
%RSD	20.54	42.63	.8529	12.78	9.659	5.342
#1	.0001	.0000	.0080	.0030	.0055	.0028
#2	.0001	.0000	.0082	.0030	.0049	.0027
#3	.0001	.0000	.0081	.0023	.0045	.0030

Elem	Se1960	Ag3280	Sr4077	Sn1899	Ti3349	Tl1908
Line	196.090 {472}	328.068 {103}	407.771 { 83}	189.989 {477}	334.941 {101}	190.856 {477}
IS Ref	(Sc1880)	(Sc3572)	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0092**	**.0000**	**.0005**	**.0082**	**.0003**	**-.0116**
Stddev	.0001	.0000	.0000	.0007	.0001	.0006
%RSD	.5439	66.25	5.685	8.871	28.89	5.444
#1	.0093	.0000	.0005	.0091	.0002	-.0121
#2	.0093	.0000	.0005	.0077	.0004	-.0118
#3	.0092	.0000	.0006	.0079	.0003	-.0109

Elem	V_2924	Zn2138	S_1820
Line	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc3572)	(Sc1880)	(Sc1880)
Units	Cts/S	Cts/S	Cts/S
Avg	**.0001**	**.0138**	**-.0023**
Stddev	.0000	.0001	.0004
%RSD	9.092	1.002	16.65
#1	.0001	.0137	-.0019
#2	.0001	.0139	-.0026
#3	.0001	.0140	-.0024

Sample Name: ICAL1 Acquired: 9/17/2012 12:38:46 Type: Cal
Method: 6010C_3015 DOD(v183) Mode: IR Corr. Factor: 1.000000
User: SRT ALSI Analyst: META Batch: Dilution Factor:
Comment:

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**841.58**	**199500.**	**30738.**
Stddev	4.76	1583.	154.
%RSD	.56576	.79354	.50131
#1	847.02	199230.	30576.
#2	838.21	198060.	30755.
#3	839.50	201190.	30883.

Sample Name: ICAL2 Acquired: 9/17/2012 12:43:36 Type: Cal
Method: 6010C_3015 DOD(v183) Mode: IR Corr. Factor: 1.000000
User: SRT ALSI Analyst: META Batch: Dilution Factor:
Comment:

Elem	Al1670	Al3082	Sb2068	As1890	Ba4554	Ba4934
Line	167.079 {502}	308.215 {109}	206.833 {463}	189.042 {478}	455.403 { 74}	493.409 { 68}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0643**	**.0012**	**.0258**	**.0026**	**.0135**	**.0059**
Stddev	.0002	.0000	.0005	.0005	.0002	.0003
%RSD	.3869	2.725	2.059	20.27	1.343	5.663
#1	.0644	.0012	.0264	.0025	.0137	.0058
#2	.0645	.0012	.0254	.0031	.0134	.0056
#3	.0640	.0011	.0256	.0021	.0135	.0062

Elem	Be3130	Bi2230	B_2496	Cd2288	Ca3158	Cr2055
Line	313.042 {108}	223.061 {451}	249.678 {135}	228.802 {447}	315.887 {107}	205.552 {464}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0066**	**.0515**	**.0024**	**.1002**	**.0019**	**.0183**
Stddev	.0000	.0006	.0000	.0005	.0000	.0005
%RSD	.4257	1.138	.8965	.4741	1.949	2.559
#1	.0066	.0508	.0024	.1008	.0019	.0187
#2	.0066	.0518	.0024	.1001	.0018	.0184
#3	.0065	.0518	.0024	.0999	.0019	.0178

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Line	267.716 {126}	228.616 {447}	324.754 {104}	259.940 {130}	220.353 {453}	670.784 { 50}
IS Ref	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)	(Sc1880)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0002**	**.0302**	**.0032**	**.0017**	**.0036**	**.0502**
Stddev	.0000	.0008	.0000	.0000	.0008	.0005
%RSD	20.08	2.689	.6957	1.519	23.10	.9309
#1	.0002	.0295	.0033	.0017	.0029	.0508
#2	.0002	.0300	.0032	.0017	.0033	.0500
#3	.0002	.0311	.0032	.0017	.0045	.0499

Sample Name: ICAL2 Acquired: 9/17/2012 12:43:36 Type: Cal
Method: 6010C_3015 DOD(v183) Mode: IR Corr. Factor: 1.000000
User: SRT ALSI Analyst: META Batch: Dilution Factor:
Comment:

Elem	Mg2852	Mn2576	Mo2020	Na5895	Ni2316	K_7664
Line	285.213 {118}	257.610 {131}	202.030 {467}	589.592 { 57}	231.604 {445}	766.490 { 44}
IS Ref	(Sc3613)	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0139**	**.0009**	**.0674**	**.0370**	**.1007**	**.0113**
Stddev	.0000	.0000	.0006	.0003	.0013	.0003
%RSD	.3489	3.967	.8239	.7727	1.318	2.452
#1	.0139	.0010	.0680	.0373	.0993	.0116
#2	.0139	.0009	.0670	.0371	.1019	.0111
#3	.0138	.0009	.0671	.0367	.1010	.0113

Elem	Se1960	Ag3280	Sr4077	Sn1899	Ti3349	Tl1908
Line	196.090 {472}	328.068 {103}	407.771 { 83}	189.989 {477}	334.941 {101}	190.856 {477}
IS Ref	(Sc1880)	(Sc3572)	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0219**	**.0003**	**.0111**	**.0422**	**.0034**	**-.0032**
Stddev	.0007	.0000	.0000	.0010	.0001	.0003
%RSD	3.398	9.633	.4507	2.317	2.123	8.917
#1	.0211	.0004	.0110	.0411	.0034	-.0030
#2	.0220	.0004	.0111	.0423	.0033	-.0031
#3	.0226	.0003	.0111	.0430	.0035	-.0035

Elem	V_2924	Zn2138	S_1820
Line	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc3572)	(Sc1880)	(Sc1880)
Units	Cts/S	Cts/S	Cts/S
Avg	**.0006**	**.1998**	**.0551**
Stddev	.0000	.0003	.0014
%RSD	2.158	.1663	2.599
#1	.0006	.1996	.0544
#2	.0006	.1997	.0568
#3	.0006	.2002	.0542

Sample Name: ICAL2 Acquired: 9/17/2012 12:43:36 Type: Cal
Method: 6010C_3015 DOD(v183) Mode: IR Corr. Factor: 1.000000
User: SRT ALSI Analyst: META Batch: Dilution Factor:
Comment:

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**842.94**	**200930.**	**30885.**
Stddev	3.14	777.	152.
%RSD	.37303	.38664	.49113
#1	841.03	200630.	30948.
#2	841.21	200350.	30996.
#3	846.57	201810.	30712.

Sample Name: ICAL3 Acquired: 9/17/2012 12:48:27 Type: Cal
Method: 6010C_3015 DOD(v183) Mode: IR Corr. Factor: 1.000000
User: SRT ALSI Analyst: META Batch: Dilution Factor:
Comment:

Elem	Al1670	Al3082	Sb2068	As1890	Ba4554	Ba4934
Line	167.079 {502}	308.215 {109}	206.833 {463}	189.042 {478}	455.403 { 74}	493.409 { 68}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.2937**	**.0047**	**.1005**	**.0727**	**.5715**	**.7465**
Stddev	.0007	.0000	.0016	.0016	.0020	.0035
%RSD	.2402	.7244	1.571	2.224	.3451	.4723
#1	.2932	.0047	.0999	.0724	.5693	.7425
#2	.2934	.0047	.0993	.0712	.5722	.7490
#3	.2945	.0046	.1023	.0744	.5730	.7480

Elem	Be3130	Bi2230	B_2496	Cd2288	Ca3158	Cr2055
Line	313.042 {108}	223.061 {451}	249.678 {135}	228.802 {447}	315.887 {107}	205.552 {464}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.1400**	**.5500**	**.0113**	**1.666**	**.0092**	**.5535**
Stddev	.0003	.0041	.0001	.008	.0001	.0027
%RSD	.2300	.7503	.6974	.4582	.8240	.4902
#1	.1396	.5497	.0112	1.668	.0091	.5518
#2	.1400	.5460	.0113	1.658	.0092	.5521
#3	.1403	.5542	.0114	1.672	.0091	.5566

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Line	267.716 {126}	228.616 {447}	324.754 {104}	259.940 {130}	220.353 {453}	670.784 { 50}
IS Ref	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)	(Sc1880)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0034**	**3.814**	**.0791**	**.0134**	**.1106**	**.2403**
Stddev	.0000	.018	.0003	.0001	.0011	.0012
%RSD	.3726	.4729	.3957	.7649	.9794	.5093
#1	.0034	3.814	.0793	.0133	.1099	.2389
#2	.0034	3.795	.0792	.0134	.1118	.2412
#3	.0034	3.832	.0787	.0135	.1100	.2407

Sample Name: ICAL3 Acquired: 9/17/2012 12:48:27 Type: Cal
Method: 6010C_3015 DOD(v183) Mode: IR Corr. Factor: 1.000000
User: SRT ALSI Analyst: META Batch: Dilution Factor:
Comment:

Elem	Mg2852	Mn2576	Mo2020	Na5895	Ni2316	K_7664
Line	285.213 {118}	257.610 {131}	202.030 {467}	589.592 { 57}	231.604 {445}	766.490 { 44}
IS Ref	(Sc3613)	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0668**	**.0171**	**1.461**	**.6824**	**2.339**	**.1728**
Stddev	.0002	.0001	.008	.0007	.007	.0008
%RSD	.3609	.3417	.5397	.0990	.3047	.4575
#1	.0665	.0171	1.458	.6825	2.336	.1720
#2	.0669	.0172	1.455	.6830	2.334	.1736
#3	.0670	.0171	1.470	.6817	2.347	.1729

Elem	Se1960	Ag3280	Sr4077	Sn1899	Ti3349	Tl1908
Line	196.090 {472}	328.068 {103}	407.771 { 83}	189.989 {477}	334.941 {101}	190.856 {477}
IS Ref	(Sc1880)	(Sc3572)	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.2992**	**.0073**	**.1945**	**.1656**	**.0157**	**.0317**
Stddev	.0030	.0000	.0004	.0011	.0001	.0000
%RSD	1.002	.1405	.2134	.6542	.9108	.1323
#1	.2983	.0073	.1949	.1667	.0158	.0317
#2	.2967	.0073	.1944	.1645	.0155	.0317
#3	.3025	.0073	.1941	.1655	.0156	.0317

Elem	Zn2138	S_1820
Line	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc1880)
Units	Cts/S	Cts/S
Avg	**2.264**	**.5692**
Stddev	.007	.0027
%RSD	.3207	.4766
#1	2.260	.5687
#2	2.259	.5667
#3	2.272	.5721

Sample Name: ICAL3 Acquired: 9/17/2012 12:48:27 Type: Cal
Method: 6010C_3015 DOD(v183) Mode: IR Corr. Factor: 1.000000
User: SRT ALSI Analyst: META Batch: Dilution Factor:
Comment:

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**852.53**	**202300.**	**30543.**
Stddev	3.28	1082.	150.
%RSD	.38515	.53464	.49009
#1	851.81	201380.	30710.
#2	856.12	202020.	30421.
#3	849.67	203490.	30499.

Sample Name: ICAL4 Acquired: 9/17/2012 12:53:08 Type: Cal
Method: 6010C_3015 DOD(v183) Mode: IR Corr. Factor: 1.000000
User: SRT ALSI Analyst: META Batch: Dilution Factor:
Comment:

Elem	Al1670	Al3082	Sb2068	As1890	Ba4554	Ba4934
Line	167.079 {502}	308.215 {109}	206.833 {463}	189.042 {478}	455.403 { 74}	493.409 { 68}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.5743**	**.0091**	**.2014**	**.1524**	**1.154**	**1.522**
Stddev	.0004	.0001	.0009	.0013	.004	.006
%RSD	.0683	.8539	.4598	.8630	.3245	.4147
#1	.5739	.0092	.2014	.1517	1.150	1.515
#2	.5743	.0091	.2005	.1517	1.156	1.527
#3	.5747	.0090	.2024	.1539	1.157	1.524

Elem	Be3130	Bi2230	B_2496	Cd2288	Ca3158	Cr2055
Line	313.042 {108}	223.061 {451}	249.678 {135}	228.802 {447}	315.887 {107}	205.552 {464}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.2809**	**1.115**	**.0225**	**3.303**	**.0183**	**1.130**
Stddev	.0007	.009	.0001	.020	.0000	.005
%RSD	.2347	.8541	.2852	.5955	.2157	.4494
#1	.2803	1.110	.0225	3.291	.0182	1.129
#2	.2809	1.109	.0225	3.292	.0183	1.125
#3	.2816	1.126	.0224	3.326	.0183	1.135

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Line	267.716 {126}	228.616 {447}	324.754 {104}	259.940 {130}	220.353 {453}	670.784 { 50}
IS Ref	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)	(Sc1880)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0068**	**7.727**	**.1584**	**.0270**	**.2178**	**.4851**
Stddev	.0001	.042	.0010	.0002	.0013	.0022
%RSD	1.153	.5473	.6075	.5975	.6089	.4451
#1	.0069	7.702	.1582	.0269	.2190	.4828
#2	.0068	7.704	.1576	.0272	.2164	.4855
#3	.0067	7.776	.1595	.0271	.2180	.4870

Sample Name: ICAL4 Acquired: 9/17/2012 12:53:08 Type: Cal
Method: 6010C_3015 DOD(v183) Mode: IR Corr. Factor: 1.000000
User: SRT ALSI Analyst: META Batch: Dilution Factor:
Comment:

Elem	Mg2852	Mn2576	Mo2020	Na5895	Ni2316	K_7664
Line	285.213 {118}	257.610 {131}	202.030 {467}	589.592 { 57}	231.604 {445}	766.490 { 44}
IS Ref	(Sc3613)	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.1343**	**.0345**	**2.952**	**1.376**	**4.708**	**.3421**
Stddev	.0002	.0001	.014	.003	.020	.0010
%RSD	.1678	.2892	.4765	.2044	.4180	.2820
#1	.1341	.0344	2.942	1.375	4.697	.3413
#2	.1343	.0346	2.946	1.374	4.696	.3418
#3	.1346	.0344	2.968	1.379	4.730	.3431

Elem	Se1960	Ag3280	Sr4077	Sn1899	Ti3349	Tl1908
Line	196.090 {472}	328.068 {103}	407.771 { 83}	189.989 {477}	334.941 {101}	190.856 {477}
IS Ref	(Sc1880)	(Sc3572)	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.6026**	**.0146**	**.3914**	**.3265**	**.0309**	**.0758**
Stddev	.0070	.0001	.0014	.0017	.0002	.0006
%RSD	1.157	.8487	.3620	.5172	.5063	.8418
#1	.6016	.0147	.3903	.3250	.0309	.0752
#2	.5961	.0145	.3908	.3263	.0308	.0765
#3	.6100	.0147	.3930	.3284	.0311	.0756

Elem	V_2924	Zn2138	S_1820
Line	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc3572)	(Sc1880)	(Sc1880)
Units	Cts/S	Cts/S	Cts/S
Avg	**.0222**	**4.545**	**1.154**
Stddev	.0001	.020	.008
%RSD	.6427	.4301	.6553
#1	.0223	4.536	1.154
#2	.0220	4.531	1.147
#3	.0223	4.567	1.162

Sample Name: ICAL4 Acquired: 9/17/2012 12:53:08 Type: Cal
Method: 6010C_3015 DOD(v183) Mode: IR Corr. Factor: 1.000000
User: SRT ALSI Analyst: META Batch: Dilution Factor:
Comment:

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**840.68**	**201570.**	**30632.**
Stddev	7.04	891.	83.
%RSD	.83710	.44179	.27113
#1	846.45	201110.	30560.
#2	842.76	202600.	30613.
#3	832.84	201010.	30723.

Sample Name: ICAL5 Acquired: 9/17/2012 12:57:42 Type: Cal
Method: 6010C_3015 DOD(v183) Mode: IR Corr. Factor: 1.000000
User: SRT ALSI Analyst: META Batch: Dilution Factor:
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Ba4934	Be3130
Line	308.215 {109}	206.833 {463}	189.042 {478}	455.403 { 74}	493.409 { 68}	313.042 {108}
IS Ref	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0446**	**1.010**	**.7943**	**5.802**	**7.675**	**1.399**
Stddev	.0002	.004	.0028	.019	.030	.005
%RSD	.5515	.4328	.3511	.3273	.3968	.3885
#1	.0449	1.005	.7915	5.822	7.708	1.404
#2	.0444	1.012	.7942	5.802	7.670	1.401
#3	.0446	1.013	.7971	5.784	7.648	1.393

Elem	Bi2230	B_2496	Cd2288	Ca3158	Cr2055	Cr2677
Line	223.061 {451}	249.678 {135}	228.802 {447}	315.887 {107}	205.552 {464}	267.716 {126}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5.631**	**.1111**	**16.33**	**.0909**	**5.700**	**.0338**
Stddev	.028	.0001	.03	.0007	.007	.0001
%RSD	.5040	.1140	.2116	.7558	.1288	.2291
#1	5.601	.1110	16.30	.0910	5.692	.0338
#2	5.634	.1112	16.32	.0915	5.704	.0338
#3	5.658	.1112	16.37	.0901	5.704	.0337

Elem	Co2286	Cu3247	Fe2599	Pb2203	Li6707	Mg2852
Line	228.616 {447}	324.754 {104}	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}
IS Ref	(Sc1880)	(Sc3572)	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**39.06**	**.7860**	**.1347**	**1.135**	**2.431**	**.6700**
Stddev	.03	.0039	.0012	.002	.010	.0027
%RSD	.0820	.4949	.8629	.1535	.4094	.3959
#1	39.02	.7815	.1357	1.135	2.442	.6719
#2	39.08	.7877	.1350	1.137	2.426	.6710
#3	39.08	.7887	.1334	1.133	2.424	.6669

Sample Name: ICAL5 Acquired: 9/17/2012 12:57:42 Type: Cal
Method: 6010C_3015 DOD(v183) Mode: IR Corr. Factor: 1.000000
User: SRT ALSI Analyst: META Batch: Dilution Factor:
Comment:

Elem	Mn2576	Mo2020	Ni2316	Se1960	Ag3280	Sr4077
Line	257.610 {131}	202.030 {467}	231.604 {445}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc1880)	(Sc1880)	(Sc3572)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.1696**	**14.67**	**23.55**	**3.023**	**.0737**	**1.992**
Stddev	.0002	.04	.05	.005	.0004	.002
%RSD	.1055	.2433	.2186	.1590	.5369	.0788
#1	.1698	14.63	23.50	3.019	.0733	1.993
#2	.1695	14.67	23.54	3.021	.0739	1.991
#3	.1696	14.70	23.60	3.028	.0740	1.991

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.614**	**.1530**	**.4307**	**.1091**	**22.12**	**5.875**
Stddev	.007	.0004	.0008	.0007	.04	.008
%RSD	.4362	.2667	.1766	.6057	.1965	.1402
#1	1.607	.1532	.4302	.1088	22.10	5.870
#2	1.617	.1533	.4303	.1099	22.09	5.871
#3	1.620	.1526	.4316	.1087	22.17	5.885

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**829.16**	**200840.**	**30572.**
Stddev	.76	199.	270.
%RSD	.09154	.09924	.88440
#1	829.55	201070.	30360.
#2	829.65	200690.	30479.
#3	828.28	200760.	30876.

	Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)
	Al 167.079 {502}	9/17/2012 12:57:38	9/17/2012 12:57:38	Linear	1/Conc	0.001340	0.579242	0.000000	1.000000
	Al 308.215 {109}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	0.000314	0.008487	0.000000	1.000000
	Sb 206.833 {463}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	0.005882	0.990105	0.000000	1.000000
	As 189.042 {478}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	-0.005721	0.801857	0.000000	1.000000
	Ba 455.403 { 74}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	0.001752	1.157377	0.000000	1.000000
	Ba 493.409 { 68}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	-0.010046	1.534172	0.000000	1.000000
	Be 313.042 {108}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	0.000768	1.405863	0.000000	1.000000
	Bi 223.061 {451}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	0.005780	1.122203	0.000000	1.000000
	B 249.678 {135}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	0.000065	0.022261	0.000000	1.000000
	Cd 228.802 {447}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	0.065197	16.071650	0.000000	1.000000
	Ca 315.887 {107}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	0.000121	0.018095	0.000000	1.000000
	Cr 205.552 {464}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	-0.012319	5.718336	0.000000	1.000000
	Cr 267.716 {126}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	-0.000004	0.033489	0.000000	1.000000
	Co 228.616 {447}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	-0.009674	7.769283	0.000000	1.000000
	Cu 324.754 {104}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	0.001613	0.156194	0.000000	1.000000
	Fe 259.940 {130}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	0.000060	0.026944	0.000000	1.000000
	Pb 220.353 {453}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	-0.003513	1.138020	0.000000	1.000000
	Li 670.784 { 50}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	-0.000320	0.486003	0.000000	1.000000
	Mg 285.213 {118}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	0.000075	0.134042	0.000000	1.000000
	Mn 257.610 {131}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	0.000034	0.170194	0.000000	1.000000
	Mo 202.030 {467}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	0.008107	2.931423	0.000000	1.000000
	Na 589.592 { 57}	9/17/2012 12:57:38	9/17/2012 12:57:38	Linear	1/Conc	0.002755	0.068423	0.000000	1.000000
	Ni 231.604 {445}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	0.004972	4.701665	0.000000	1.000000
	K 766.490 { 44}	9/17/2012 12:57:38	9/17/2012 12:57:38	Linear	1/Conc	0.002813	0.016969	0.000000	1.000000
	Se 196.090 {472}	9/17/2012 13:02:05	9/17/2012 13:02:05	Linear	1/Conc	0.009246	0.599535	0.000000	1.000000
	Ag 328.068 {103}	9/17/2012 13:02:06	9/17/2012 13:02:06	Linear	1/Conc	0.000020	0.073543	0.000000	1.000000
	Sr 407.771 { 83}	9/17/2012 13:02:06	9/17/2012 13:02:06	Linear	1/Conc	0.000528	1.980821	0.000000	1.000000
	Sn 189.989 {477}	9/17/2012 13:02:06	9/17/2012 13:02:06	Linear	1/Conc	0.008217	1.601658	0.000000	1.000000
	Ti 334.941 {101}	9/17/2012 13:02:06	9/17/2012 13:02:06	Linear	1/Conc	0.000274	0.152659	0.000000	1.000000
	Tl 190.856 {477}	9/17/2012 13:02:06	9/17/2012 13:02:06	Linear	1/Conc	-0.011601	0.427760	0.000000	1.000000
	V 292.402 {115}	9/17/2012 13:02:06	9/17/2012 13:02:06	Linear	1/Conc	0.000056	0.110902	0.000000	1.000000
	Zn 213.856 {458}	9/17/2012 13:02:06	9/17/2012 13:02:06	Linear	1/Conc	0.013859	8.757667	0.000000	1.000000
	S 182.034 {485}	9/17/2012 13:02:06	9/17/2012 13:02:06	Linear	1/Conc	-0.002278	0.584707	0.000000	1.000000
	Sc 188.060 {479}*	9/17/2012 12:48:24	9/17/2012 12:48:24	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	Sc 357.253 { 94}*	9/17/2012 12:48:24	9/17/2012 12:48:24	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	Sc 361.384 { 93}*	9/17/2012 12:48:24	9/17/2012 12:48:24	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000

Element, Wavelength and Order	Correlation	Std Error of Est	Predicted MDL	Predicted MQL	Status	Reslope		QC Norm	
						Slope	Y-int	Slope factor	Offset
Al 167.079 {502}	0.999711	0.000249	0.000562	0.001873	OK.	1.000000	0.000000	1	0
Al 308.215 {109}	0.999996	0.000001	0.014055	0.046850	OK.	1.000000	0.000000	1	0
Sb 206.833 {463}	0.999848	0.000115	0.001089	0.003630	OK.	1.000000	0.000000	1	0
As 189.042 {478}	0.999975	0.000027	0.001259	0.004197	OK.	1.000000	0.000000	1	0
Ba 455.403 { 74}	0.999987	0.000061	0.000179	0.000598	OK.	1.000000	0.000000	1	0
Ba 493.409 { 68}	0.999990	0.000071	0.000388	0.001293	OK.	1.000000	0.000000	1	0
Be 313.042 {108}	0.999997	0.000010	0.000061	0.000203	OK.	1.000000	0.000000	1	0
Bi 223.061 {451}	0.999819	0.000496	0.001510	0.005032	OK.	1.000000	0.000000	1	0
B 249.678 {135}	0.999966	0.000006	0.003414	0.011380	OK.	1.000000	0.000000	1	0
Cd 228.802 {447}	0.999990	0.000151	0.000097	0.000325	OK.	1.000000	0.000000	1	0
Ca 315.887 {107}	0.999994	0.000002	0.005332	0.017774	OK.	1.000000	0.000000	1	0
Cr 205.552 {464}	0.999986	0.000098	0.000250	0.000833	OK.	1.000000	0.000000	1	0
Cr 267.716 {126}	0.999898	0.000002	0.002046	0.006821	OK.	1.000000	0.000000	1	0
Co 228.616 {447}	0.999980	0.000365	0.000201	0.000669	OK.	1.000000	0.000000	1	0
Cu 324.754 {104}	0.999994	0.000005	0.000162	0.000540	OK.	1.000000	0.000000	1	0
Fe 259.940 {130}	0.999996	0.000002	0.002010	0.006700	OK.	1.000000	0.000000	1	0
Pb 220.353 {453}	0.999940	0.000045	0.001908	0.006361	OK.	1.000000	0.000000	1	0
Li 670.784 { 50}	0.999984	0.000091	0.000690	0.002302	OK.	1.000000	0.000000	1	0
Mg 285.213 {118}	0.999992	0.000018	0.000724	0.002412	OK.	1.000000	0.000000	1	0
Mn 257.610 {131}	0.999982	0.000003	0.000371	0.001238	OK.	1.000000	0.000000	1	0
Mo 202.030 {467}	0.999996	0.000129	0.000321	0.001070	OK.	1.000000	0.000000	1	0
Na 589.592 { 57}	0.999988	0.000058	0.005261	0.017538	OK.	1.000000	0.000000	1	0
Ni 231.604 {445}	0.999997	0.000174	0.000342	0.001141	OK.	1.000000	0.000000	1	0
K 766.490 { 44}	0.999999	0.000003	0.018627	0.062090	OK.	1.000000	0.000000	1	0
Se 196.090 {472}	0.999935	0.000101	0.001498	0.004992	OK.	1.000000	0.000000	1	0
Ag 328.068 {103}	0.999972	0.000002	0.000368	0.001228	OK.	1.000000	0.000000	1	0
Sr 407.771 { 83}	0.999952	0.000064	0.000071	0.000238	OK.	1.000000	0.000000	1	0
Sn 189.989 {477}	0.999955	0.000101	0.000598	0.001994	OK.	1.000000	0.000000	1	0
Ti 334.941 {101}	0.999994	0.000004	0.000792	0.002639	OK.	1.000000	0.000000	1	0
Tl 190.856 {477}	0.999978	0.000019	0.002273	0.007578	OK.	1.000000	0.000000	1	0
V 292.402 {115}	0.999967	0.000003	0.000251	0.000836	OK.	1.000000	0.000000	1	0
Zn 213.856 {458}	0.999946	0.000965	0.000100	0.000333	OK.	1.000000	0.000000	1	0
S 182.034 {485}	0.999960	0.000244	0.001663	0.005544	OK.	1.000000	0.000000	1	0
Sc 188.060 {479}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
Sc 357.253 { 94}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
Sc 361.384 { 93}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0

Sample Name: ICV Acquired: 9/17/2012 13:02:09 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Al1670	Sb2068	As1890	Ba4554	Be3130	Bi2230
Line	167.079 {502}	206.833 {463}	189.042 {478}	455.403 { 74}	313.042 {108}	223.061 {451}
IS Ref	(Sc1880)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.011**	**1.013**	**.9833**	**1.011**	**1.013**	**.9764**
Stddev	.005	.004	.0025	.004	.002	.0035
%RSD	.5486	.3458	.2584	.3616	.1448	.3597
#1	1.005	1.017	.9862	1.014	1.011	.9803
#2	1.012	1.010	.9823	1.011	1.013	.9735
#3	1.016	1.012	.9814	1.007	1.014	.9754
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	B_2496	Cd2288	Ca3158	Cr2677	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	267.716 {126}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.012**	**1.013**	**.9947**	**.9997**	**1.031**	**1.012**
Stddev	.006	.000	.0044	.0047	.004	.014
%RSD	.6306	.0443	.4399	.4746	.3788	1.336
#1	1.020	1.012	.9916	.9965	1.035	1.026
#2	1.007	1.013	.9929	.9975	1.028	.9985
#3	1.011	1.013	.9997	1.005	1.030	1.012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICV Acquired: 9/17/2012 13:02:09 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9928**	**1.029**	**1.015**	**.9931**	**1.022**	**1.064**
Stddev	.0022	.002	.006	.0020	.005	.005
%RSD	.2188	.1841	.6359	.2061	.4725	.4479
#1	.9943	1.027	1.019	.9909	1.017	1.068
#2	.9903	1.031	1.018	.9950	1.021	1.059
#3	.9937	1.029	1.007	.9933	1.027	1.066
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.011**	**1.049**	**9.976**	**.9537**	**.9806**	**1.042**
Stddev	.019	.001	.072	.0053	.0097	.003
%RSD	1.919	.0492	.7216	.5516	.9864	.2906
#1	1.032	1.049	10.06	.9591	.9893	1.045
#2	1.008	1.049	9.957	.9486	.9702	1.042
#3	.9930	1.050	9.915	.9533	.9824	1.039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICV Acquired: 9/17/2012 13:02:09 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.031**	**1.017**	**.9926**	**1.023**	**1.025**	**.9254**
Stddev	.003	.000	.0000	.008	.001	.0010
%RSD	.2769	.0290	.0043	.7418	.1107	.1029
#1	1.034	1.017	.9926	1.030	1.025	.9259
#2	1.029	1.017	.9925	1.015	1.023	.9260
#3	1.030	1.017	.9926	1.024	1.025	.9243
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**799.38**	**199820.**	**30527.**
Stddev	6.58	3168.	141.
%RSD	.82275	1.5854	.46228
#1	791.87	196270.	30366.
#2	802.15	202380.	30630.
#3	804.12	200800.	30585.

Sample Name: ICB Acquired: 9/17/2012 13:06:38 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Al1670	Sb2068	As1890	Ba4554	Be3130	Bi2230
Line	167.079 {502}	206.833 {463}	189.042 {478}	455.403 { 74}	313.042 {108}	223.061 {451}
IS Ref	(Sc1880)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0007**	**.0007**	**.0000**	**.0002**	**-.0008**
Stddev	.0009	.0002	.0011	.0001	.0000	.0004
%RSD	149.7	37.51	149.8	260.7	21.91	50.87
#1	.0006	.0009	-.0005	.0001	.0002	-.0012
#2	-.0003	.0005	.0010	.0001	.0001	-.0004
#3	.0014	.0006	.0016	-.0001	.0002	-.0007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	B_2496	Cd2288	Ca3158	Cr2055	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	205.552 {464}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0038**	**.0001**	**.0014**	**.0005**	**.0000**	**-.0003**
Stddev	.0021	.0001	.0018	.0001	.0000	.0001
%RSD	54.88	161.0	128.8	27.33	46.88	32.19
#1	.0022	.0000	.0001	.0007	.0001	-.0003
#2	.0061	.0002	.0034	.0004	.0001	-.0002
#3	.0031	.0000	.0006	.0005	.0000	-.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICB Acquired: 9/17/2012 13:06:38 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**-.0006**	**.0008**	**.0002**	**-.0002**	**.0009**
Stddev	.0004	.0011	.0001	.0003	.0002	.0003
%RSD	65.80	204.1	11.61	148.4	106.1	32.40
#1	-.0001	.0000	.0008	.0005	.0001	.0012
#2	-.0007	-.0019	.0008	-.0001	-.0004	.0009
#3	-.0009	.0002	.0009	.0003	-.0004	.0006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0068**	**-.0001**	**.0329**	**.0011**	**.0001**	**.0002**
Stddev	.0016	.0003	.0196	.0005	.0001	.0001
%RSD	22.98	322.2	59.46	44.87	66.77	74.87
#1	.0086	.0002	.0535	.0015	.0001	.0003
#2	.0059	-.0003	.0145	.0006	.0001	.0001
#3	.0059	-.0002	.0307	.0014	.0002	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICB Acquired: 9/17/2012 13:06:38 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0005**	**.0012**	**.0000**	**.0003**	**.0002**
Stddev	.0006	.0005	.0021	.0001	.0001	.0008
%RSD	879.6	116.3	176.0	237.6	24.22	455.7
#1	.0006	-.0002	-.0004	.0001	.0003	-.0007
#2	-.0005	-.0011	.0036	.0000	.0004	.0002
#3	-.0002	-.0001	.0004	.0000	.0003	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**854.83**	**204410.**	**31154.**
Stddev	2.36	1595.	250.
%RSD	.27660	.78042	.80314
#1	852.49	206230.	31273.
#2	857.22	203760.	31323.
#3	854.78	203240.	30867.

Sample Name: CRDL Acquired: 9/17/2012 13:11:29 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Al1670	Sb2068	As1890	Ba4554	Be3130	Bi2230
Line	167.079 {502}	206.833 {463}	189.042 {478}	455.403 { 74}	313.042 {108}	223.061 {451}
IS Ref	(Sc1880)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1097**	**.0201**	**.0110**	**.0103**	**.0042**	**.0430**
Stddev	.0005	.0003	.0012	.0001	.0000	.0004
%RSD	.4143	1.667	10.83	.7118	.2103	.9766
#1	.1103	.0197	.0118	.0103	.0042	.0435
#2	.1094	.0201	.0117	.0103	.0042	.0428
#3	.1095	.0204	.0097	.0102	.0042	.0428
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	B_2496	Cd2288	Ca3158	Cr2055	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	205.552 {464}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1069**	**.0021**	**.1044**	**.0055**	**.0051**	**.0103**
Stddev	.0035	.0000	.0028	.0000	.0001	.0001
%RSD	3.303	1.375	2.642	.6450	2.948	1.191
#1	.1082	.0021	.1066	.0054	.0049	.0103
#2	.1029	.0020	.1013	.0054	.0052	.0104
#3	.1096	.0020	.1053	.0055	.0051	.0102
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CRDL Acquired: 9/17/2012 13:11:29 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0613**	F **.0072**	**.1055**	**.1044**	**.0052**	**.0205**
Stddev	.0033	.0023	.0005	.0004	.0003	.0003
%RSD	5.327	31.06	.4301	.3830	5.054	1.420
#1	.0619	.0098	.1058	.1048	.0051	.0207
#2	.0577	.0054	.1057	.1044	.0050	.0206
#3	.0642	.0065	.1049	.1040	.0055	.0201
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.0060				
Range		20.00%				

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5106**	**.0214**	**.5475**	**.0204**	**.0042**	**.0053**
Stddev	.0025	.0001	.0071	.0009	.0003	.0000
%RSD	.4884	.2435	1.302	4.477	6.240	.7129
#1	.5114	.0213	.5410	.0195	.0045	.0053
#2	.5078	.0214	.5552	.0213	.0040	.0053
#3	.5126	.0214	.5465	.0203	.0042	.0053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CRDL Acquired: 9/17/2012 13:11:29 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0206**	**.0218**	**.0211**	**.0054**	**.0213**	**.0977**
Stddev	.0003	.0003	.0007	.0002	.0001	.0011
%RSD	1.271	1.540	3.420	3.584	.4452	1.111
#1	.0208	.0220	.0203	.0054	.0213	.0967
#2	.0208	.0219	.0213	.0052	.0214	.0989
#3	.0203	.0214	.0217	.0056	.0212	.0976
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**851.08**	**202650.**	**30791.**
Stddev	3.33	1117.	18.
%RSD	.39122	.55115	.05751
#1	848.50	203170.	30773.
#2	849.89	201370.	30790.
#3	854.84	203410.	30808.

Sample Name: CCV Acquired: 9/17/2012 13:16:19 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3130	Bi2230
Line	308.215 {109}	206.833 {463}	189.042 {478}	455.403 { 74}	313.042 {108}	223.061 {451}
IS Ref	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.526**	**.4938**	**.4986**	**2.482**	**.4989**	**2.471**
Stddev	.017	.0008	.0007	.004	.0004	.008
%RSD	.6801	.1713	.1319	.1807	.0842	.3162
#1	2.507	.4937	.4985	2.482	.4988	2.467
#2	2.533	.4930	.4993	2.477	.4994	2.466
#3	2.539	.4946	.4980	2.486	.4986	2.480
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	B_2496	Cd2288	Ca3158	Cr2677	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	267.716 {126}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.515**	**.4940**	**2.533**	**.5028**	**2.463**	**2.492**
Stddev	.008	.0010	.004	.0007	.003	.004
%RSD	.3304	.2040	.1579	.1453	.1267	.1561
#1	2.506	.4945	2.537	.5036	2.465	2.490
#2	2.522	.4928	2.534	.5025	2.460	2.490
#3	2.516	.4947	2.529	.5022	2.465	2.497
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCV Acquired: 9/17/2012 13:16:19 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.506**	**.4922**	**2.465**	**2.497**	**.5104**	**2.498**
Stddev	.005	.0007	.009	.002	.0028	.004
%RSD	.2062	.1520	.3799	.0723	.5568	.1805
#1	2.503	.4929	2.464	2.495	.5096	2.494
#2	2.502	.4924	2.456	2.498	.5136	2.503
#3	2.512	.4914	2.475	2.498	.5081	2.497
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.29**	**2.494**	**48.15**	**2.460**	**.4976**	**.4931**
Stddev	.04	.003	.15	.011	.0025	.0004
%RSD	.0914	.1038	.3055	.4588	.5046	.0869
#1	49.31	2.497	48.13	2.452	.4954	.4933
#2	49.24	2.493	48.02	2.456	.4970	.4926
#3	49.32	2.492	48.31	2.473	.5003	.4933
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCV Acquired: 9/17/2012 13:16:19 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4996**	**.4998**	**.4897**	**.5078**	**1.256**	**4.915**
Stddev	.0012	.0023	.0010	.0028	.001	.023
%RSD	.2414	.4616	.2000	.5472	.0995	.4717
#1	.4983	.4979	.4901	.5071	1.256	4.925
#2	.5000	.4991	.4903	.5055	1.254	4.889
#3	.5006	.5024	.4885	.5109	1.257	4.932
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**852.13**	**200790.**	**30326.**
Stddev	2.21	821.	69.
%RSD	.25892	.40880	.22707
#1	854.15	201190.	30369.
#2	852.48	201320.	30246.
#3	849.77	199840.	30363.

Sample Name: HIGH Acquired: 9/17/2012 13:20:49 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	Bi2230
Line	308.215 {109}	206.833 {463}	189.042 {478}	493.409 { 68}	313.042 {108}	223.061 {451}
IS Ref	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.198**	**1.043**	**1.037**	**5.195**	**1.030**	**5.214**
Stddev	.047	.005	.004	.013	.001	.027
%RSD	.9065	.4437	.3550	.2456	.1378	.5140
#1	5.240	1.038	1.033	5.209	1.029	5.190
#2	5.207	1.044	1.037	5.190	1.032	5.209
#3	5.147	1.048	1.041	5.185	1.030	5.243
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	B_2496	Cd2288	Ca3158	Cr2677	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	267.716 {126}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.169**	**1.035**	**5.141**	**1.024**	**5.170**	**5.192**
Stddev	.008	.007	.022	.002	.037	.058
%RSD	.1592	.6362	.4198	.2242	.7176	1.120
#1	5.174	1.029	5.140	1.026	5.132	5.127
#2	5.173	1.035	5.162	1.024	5.172	5.238
#3	5.160	1.042	5.119	1.021	5.206	5.212
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: HIGH Acquired: 9/17/2012 13:20:49 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.138**	**1.035**	**5.204**	**5.150**	**1.037**	**5.174**
Stddev	.017	.008	.014	.003	.009	.017
%RSD	.3267	.7847	.2594	.0501	.8266	.3262
#1	5.149	1.027	5.212	5.147	1.045	5.159
#2	5.147	1.036	5.189	5.152	1.038	5.171
#3	5.119	1.043	5.212	5.151	1.028	5.193
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**101.4**	**5.173**	**98.14**	**5.176**	**1.024**	**1.032**
Stddev	.6	.017	.08	.020	.013	.007
%RSD	.5484	.3354	.0861	.3895	1.303	.6819
#1	100.9	5.160	98.10	5.154	1.010	1.025
#2	101.3	5.165	98.08	5.194	1.037	1.032
#3	102.0	5.193	98.24	5.181	1.025	1.039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: HIGH Acquired: 9/17/2012 13:20:49 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.032**	**1.034**	**1.036**	**1.025**	**2.567**	**10.30**
Stddev	.003	.001	.002	.016	.006	.05
%RSD	.3004	.1053	.2197	1.555	.2391	.5234
#1	1.030	1.035	1.034	1.008	2.561	10.24
#2	1.030	1.034	1.036	1.039	2.568	10.33
#3	1.036	1.033	1.038	1.028	2.573	10.33
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**831.39**	**202260.**	**30709.**
Stddev	7.66	2854.	126.
%RSD	.92181	1.4113	.41188
#1	839.81	205510.	30573.
#2	829.51	200160.	30731.
#3	824.83	201100.	30823.

Sample Name: ICSA Acquired: 9/17/2012 13:25:11 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3130	Bi2230
Line	308.215 {109}	206.833 {463}	189.042 {478}	455.403 { 74}	313.042 {108}	223.061 {451}
IS Ref	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**31.05**	**.0013**	**-.0014**	**.0010**	**.0003**	**.0079**
Stddev	.15	.0013	.0001	.0010	.0002	.0010
%RSD	.4905	103.6	9.217	100.7	91.17	12.24
#1	31.16	.0028	-.0015	.0022	.0005	.0087
#2	31.10	.0002	-.0015	.0008	.0001	.0081
#3	30.87	.0009	-.0013	.0001	.0001	.0068
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	B_2496	Cd2288	Ca3158	Cr2055	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	205.552 {464}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0068**	**-.0005**	**157.2**	**.0004**	**-.0012**	**.0033**
Stddev	.0033	.0001	.8	.0002	.0004	.0009
%RSD	47.91	10.08	.5263	53.06	36.82	26.65
#1	.0096	-.0005	156.2	.0005	-.0007	.0042
#2	.0077	-.0005	157.6	.0001	-.0016	.0030
#3	.0032	-.0006	157.7	.0005	-.0012	.0026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICSA Acquired: 9/17/2012 13:25:11 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**126.9**	**.0018**	**.0028**	**76.91**	**.0006**	**.0040**
Stddev	.5	.0009	.0012	.03	.0001	.0014
%RSD	.3715	51.40	44.29	.0433	12.47	34.83
#1	126.4	.0013	.0042	76.91	.0006	.0055
#2	127.0	.0029	.0019	76.87	.0006	.0038
#3	127.3	.0012	.0024	76.94	.0005	.0028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.19**	**.0091**	**.1255**	**.0048**	**.0003**	**-.0012**
Stddev	.10	.0008	.0370	.0015	.0004	.0003
%RSD	.3789	8.331	29.47	30.62	131.4	22.45
#1	26.30	.0098	.1657	.0065	.0007	-.0009
#2	26.13	.0093	.1180	.0040	.0003	-.0012
#3	26.13	.0083	.0929	.0040	-.0001	-.0014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICSA Acquired: 9/17/2012 13:25:11 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0036**	**.0039**	**-.0122**	**-.0001**	**.0070**	**.0345**
Stddev	.0002	.0004	.0023	.0002	.0003	.0012
%RSD	6.092	10.98	18.52	189.6	4.594	3.615
#1	.0038	.0036	-.0148	.0001	.0073	.0331
#2	.0038	.0037	-.0106	-.0002	.0068	.0355
#3	.0034	.0044	-.0112	-.0003	.0068	.0349
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**751.31**	**197380.**	**29954.**
Stddev	8.39	1381.	163.
%RSD	1.1170	.69987	.54302
#1	741.92	195790.	29766.
#2	753.94	198030.	30048.
#3	758.07	198310.	30047.

Sample Name: ICSAB Acquired: 9/17/2012 13:29:50 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3130	Bi2230
Line	308.215 {109}	206.833 {463}	189.042 {478}	455.403 { 74}	313.042 {108}	223.061 {451}
IS Ref	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**31.59**	**-.0010**	**2.600**	**.7666**	**.2615**	**.0029**
Stddev	.22	.0005	.009	.0014	.0001	.0016
%RSD	.6943	47.41	.3452	.1852	.0475	56.04
#1	31.34	-.0013	2.610	.7657	.2615	.0037
#2	31.69	-.0013	2.597	.7682	.2617	.0040
#3	31.75	-.0004	2.594	.7658	.2614	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	B_2496	Cd2288	Ca3158	Cr2677	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	267.716 {126}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0007**	**.7966**	**158.1**	**.7671**	**.8161**	**.7842**
Stddev	.0009	.0020	1.4	.0032	.0016	.0023
%RSD	127.7	.2515	.8668	.4147	.2003	.2939
#1	-.0006	.7965	156.6	.7652	.8166	.7850
#2	.0001	.7946	158.8	.7653	.8143	.7860
#3	-.0016	.7986	159.1	.7708	.8175	.7816
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICSAB Acquired: 9/17/2012 13:29:50 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**127.3**	**2.705**	**.0033**	**77.27**	**.5224**	**-.0003**
Stddev	1.0	.003	.0004	.19	.0053	.0006
%RSD	.7513	.1175	12.24	.2505	1.014	160.2
#1	126.2	2.705	.0037	77.04	.5164	.0002
#2	127.8	2.701	.0031	77.39	.5242	-.0003
#3	128.0	2.708	.0030	77.37	.5265	-.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.17**	**.8261**	**50.76**	**1.267**	**.7795**	**-.0013**
Stddev	.15	.0027	.08	.008	.0009	.0000
%RSD	.5830	.3285	.1641	.6077	.1160	2.232
#1	26.34	.8231	50.73	1.268	.7805	-.0012
#2	26.10	.8268	50.85	1.273	.7795	-.0012
#3	26.06	.8284	50.69	1.258	.7787	-.0013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICSAB Acquired: 9/17/2012 13:29:50 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0027**	**.0057**	**2.632**	**.7987**	**.8227**	**.0327**
Stddev	.0005	.0002	.015	.0032	.0008	.0006
%RSD	18.48	2.634	.5639	.3969	.1021	1.774
#1	.0033	.0055	2.643	.7950	.8218	.0328
#2	.0023	.0058	2.615	.8005	.8235	.0321
#3	.0026	.0057	2.637	.8004	.8227	.0332
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**756.96**	**196560.**	**29502.**
Stddev	4.83	1388.	25.
%RSD	.63861	.70593	.08574
#1	751.77	195700.	29524.
#2	757.78	195810.	29475.
#3	761.33	198160.	29508.

Sample Name: 1033609 Acquired: 9/17/2012 13:35:37 Type: Unk
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38382T Dilution Factor:
Comment: MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be3130	Bi2230
Line	167.079 {502}	206.833 {463}	189.042 {478}	455.403 { 74}	313.042 {108}	223.061 {451}
IS Ref	(Sc1880)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0306**	**.0007**	**.0017**	**-.0001**	**.0001**	**.0006**
Stddev	.0012	.0005	.0012	.0000	.0000	.0010
%RSD	3.850	74.22	67.91	41.31	30.84	159.5
#1	.0317	.0003	.0031	-.0001	.0001	.0003
#2	.0307	.0013	.0012	.0000	.0001	-.0001
#3	.0293	.0005	.0009	.0000	.0000	.0017

Elem	B_2496	Cd2288	Ca3158	Cr2055	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	205.552 {464}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**.0000**	**.0400**	**.0004**	**.0005**	**-.0005**
Stddev	.0034	.000	.0059	.0001	.0002	.0001
%RSD	220.4	161.2	14.80	33.88	49.44	16.33
#1	-.0024	-.0001	.0384	.0005	.0007	-.0006
#2	.0039	.0000	.0465	.0003	.0004	-.0005
#3	.0031	.0000	.0350	.0003	.0003	-.0004

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0205**	**.0011**	**.0003**	**.0120**	**-.0001**	**.0004**
Stddev	.0031	.0006	.0005	.0020	.0002	.0002
%RSD	15.12	58.43	162.6	16.61	292.9	58.16
#1	.0192	.0015	.0008	.0124	.0002	.0005
#2	.0241	.0015	.0000	.0137	-.0002	.0001
#3	.0183	.0004	.0001	.0098	-.0002	.0005

Sample Name: 1033609 Acquired: 9/17/2012 13:35:37 Type: Unk
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38382T Dilution Factor:
Comment: MB

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0367**	**-.0002**	**.0564**	**.0011**	**.0002**	**.0006**
Stddev	.0043	.0002	.0029	.0003	.0001	.0000
%RSD	11.74	76.65	5.219	30.20	46.28	5.343
#1	.0365	-.0001	.0597	.0010	.0001	.0005
#2	.0326	-.0001	.0552	.0009	.0002	.0006
#3	.0412	-.0004	.0542	.0015	.0002	.0006

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0005**	**-.0001**	**.0001**	**.0009**	**.0009**
Stddev	.0005	.0004	.0001	.0001	.0000	.0031
%RSD	198.9	79.99	170.3	116.8	2.085	341.7
#1	-.0003	-.0002	.0001	.0000	.0009	.0041
#2	.0007	-.0009	-.0002	.0000	.0009	.0008
#3	.0005	-.0003	-.0001	.0001	.0010	-.0022

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**873.67**	**208620.**	**31259.**
Stddev	8.84	1750.	46.
%RSD	1.0122	.83880	.14677
#1	881.58	210610.	31310.
#2	875.31	207330.	31220.
#3	864.12	207920.	31246.

Sample Name: 1033610 Acquired: 9/17/2012 13:40:29 Type: Unk
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38382T Dilution Factor:
Comment: LCS

Elem	Al3082	Sb2068	As1890	Ba4554	Be3130	Bi2230
Line	308.215 {109}	206.833 {463}	189.042 {478}	455.403 { 74}	313.042 {108}	223.061 {451}
IS Ref	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.059**	**.2110**	**.1078**	**1.062**	**.2095**	**1.077**
Stddev	.009	.0019	.0007	.001	.0005	.008
%RSD	.8043	.8986	.6525	.1156	.2366	.7789
#1	1.061	.2131	.1086	1.063	.2100	1.085
#2	1.050	.2096	.1073	1.064	.2092	1.068
#3	1.067	.2102	.1076	1.061	.2091	1.077

Elem	B_2496	Cd2288	Ca3158	Cr2055	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	205.552 {464}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.074**	**.1054**	**1.082**	**.1071**	**1.048**	**1.051**
Stddev	.005	.0002	.009	.0003	.001	.009
%RSD	.4724	.2175	.8821	.3006	.0835	.8292
#1	1.068	.1056	1.071	.1075	1.049	1.059
#2	1.078	.1052	1.088	.1069	1.047	1.041
#3	1.075	.1053	1.086	.1069	1.048	1.052

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.069**	**.1068**	**1.067**	**1.068**	**.1079**	**1.068**
Stddev	.001	.0015	.001	.001	.0008	.002
%RSD	.1103	1.406	.0900	.1101	.7733	.2135
#1	1.070	.1086	1.068	1.067	.1088	1.070
#2	1.068	.1060	1.066	1.069	.1076	1.066
#3	1.070	.1060	1.067	1.068	.1072	1.069

Sample Name: 1033610 Acquired: 9/17/2012 13:40:29 Type: Unk
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38382T Dilution Factor:
Comment: LCS

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**20.51**	**1.060**	**20.99**	**1.047**	**.1060**	**.1055**
Stddev	.04	.004	.04	.004	.0008	.0002
%RSD	.1983	.3663	.2087	.4243	.8012	.1905
#1	20.55	1.064	21.01	1.049	.1059	.1058
#2	20.52	1.057	21.01	1.049	.1052	.1055
#3	20.47	1.060	20.93	1.041	.1069	.1054

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1024**	**.1068**	**.1040**	**.0542**	**.5394**	**10.25**
Stddev	.0002	.0009	.0018	.0002	.0017	.03
%RSD	.1717	.8836	1.767	.4269	.3133	.3222
#1	.1025	.1077	.1026	.0544	.5408	10.29
#2	.1022	.1069	.1034	.0541	.5375	10.24
#3	.1025	.1058	.1061	.0539	.5398	10.23

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**851.97**	**204840.**	**31270.**
Stddev	3.73	622.	185.
%RSD	.43824	.30343	.59172
#1	847.79	204490.	31414.
#2	853.11	205560.	31334.
#3	854.99	204480.	31061.

Sample Name: 1033611 Acquired: 9/17/2012 13:45:05 Type: Unk
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38382T Dilution Factor:
Comment: LCSD

Elem	Al3082	Sb2068	As1890	Ba4554	Be3130	Bi2230
Line	308.215 {109}	206.833 {463}	189.042 {478}	455.403 { 74}	313.042 {108}	223.061 {451}
IS Ref	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.063**	**.2033**	**.1077**	**1.041**	**.2080**	**1.049**
Stddev	.007	.0006	.0011	.007	.0001	.003
%RSD	.6732	.2769	1.048	.6387	.0568	.2451
#1	1.062	.2031	.1065	1.049	.2078	1.046
#2	1.070	.2039	.1076	1.037	.2080	1.051
#3	1.056	.2028	.1088	1.038	.2081	1.049

Elem	B_2496	Cd2288	Ca3158	Cr2055	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	205.552 {464}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.083**	**.1021**	**1.073**	**.1063**	**1.022**	**1.036**
Stddev	.004	.0003	.008	.0007	.003	.001
%RSD	.3553	.2524	.7074	.6901	.3145	.1023
#1	1.079	.1018	1.081	.1054	1.019	1.036
#2	1.084	.1023	1.067	.1066	1.025	1.035
#3	1.087	.1021	1.069	.1068	1.021	1.037

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.059**	**.1048**	**1.039**	**1.057**	**.1095**	**1.058**
Stddev	.003	.0011	.011	.003	.0003	.004
%RSD	.3077	1.034	1.040	.2973	.3134	.3592
#1	1.062	.1042	1.052	1.056	.1093	1.054
#2	1.058	.1060	1.032	1.054	.1099	1.061
#3	1.056	.1040	1.035	1.060	.1094	1.060

Sample Name: 1033611 Acquired: 9/17/2012 13:45:05 Type: Unk
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38382T Dilution Factor:
Comment: LCSD

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**20.28**	**1.049**	**20.76**	**1.019**	**.1051**	**.1032**
Stddev	.05	.002	.10	.004	.0003	.0003
%RSD	.2641	.1573	.4931	.4029	.2765	.3120
#1	20.34	1.047	20.87	1.022	.1053	.1036
#2	20.27	1.050	20.68	1.021	.1048	.1031
#3	20.23	1.049	20.72	1.015	.1052	.1030

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1009**	**.1072**	**.1038**	**.0542**	**.5447**	**10.06**
Stddev	.0007	.0009	.0013	.0002	.0009	.02
%RSD	.6548	.8781	1.259	.3803	.1562	.2464
#1	.1010	.1076	.1024	.0540	.5437	10.09
#2	.1002	.1062	.1050	.0544	.5451	10.05
#3	.1015	.1079	.1040	.0544	.5453	10.05

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**873.94**	**204360.**	**30708.**
Stddev	1.33	697.	203.
%RSD	.15243	.34124	.66098
#1	875.47	205160.	30907.
#2	873.29	203940.	30716.
#3	873.06	203970.	30502.

Sample Name: CCV Acquired: 9/17/2012 14:22:48 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3130	Bi2230
Line	308.215 {109}	206.833 {463}	189.042 {478}	455.403 { 74}	313.042 {108}	223.061 {451}
IS Ref	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.517**	**.5038**	**.5068**	**2.510**	**.4921**	**2.539**
Stddev	.005	.0033	.0041	.003	.0009	.006
%RSD	.2198	.6463	.8130	.1223	.1840	.2392
#1	2.513	.5020	.5038	2.514	.4926	2.536
#2	2.524	.5019	.5052	2.509	.4926	2.535
#3	2.515	.5076	.5115	2.508	.4910	2.546
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	B_2496	Cd2288	Ca3158	Cr2677	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	267.716 {126}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.474**	**.4944**	**2.497**	**.4925**	**2.471**	**2.531**
Stddev	.008	.0006	.036	.0013	.002	.023
%RSD	.3103	.1291	1.431	.2546	.0645	.8990
#1	2.466	.4949	2.527	.4931	2.472	2.510
#2	2.482	.4937	2.507	.4933	2.469	2.528
#3	2.474	.4948	2.457	.4910	2.471	2.556
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCV Acquired: 9/17/2012 14:22:48 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.465**	**.4962**	**2.518**	**2.474**	**.5048**	**2.524**
Stddev	.021	.0031	.006	.009	.0020	.006
%RSD	.8515	.6220	.2557	.3585	.3936	.2222
#1	2.474	.4984	2.525	2.480	.5031	2.530
#2	2.479	.4927	2.515	2.478	.5070	2.519
#3	2.441	.4974	2.513	2.463	.5044	2.522
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.36**	**2.506**	**48.73**	**2.524**	**.4931**	**.4981**
Stddev	.08	.000	.06	.012	.0028	.0019
%RSD	.1501	.0171	.1318	.4733	.5706	.3878
#1	50.32	2.506	48.79	2.516	.4904	.4967
#2	50.32	2.506	48.66	2.519	.4929	.4972
#3	50.45	2.505	48.75	2.538	.4960	.5003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCV Acquired: 9/17/2012 14:22:48 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4984**	**.4981**	**.4939**	**.5019**	**1.262**	**4.944**
Stddev	.0024	.0007	.0015	.0030	.001	.032
%RSD	.4759	.1480	.2978	.5910	.1003	.6563
#1	.4958	.4983	.4933	.5015	1.263	4.922
#2	.4991	.4987	.4929	.4991	1.261	4.928
#3	.5004	.4973	.4956	.5050	1.263	4.981
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**833.30**	**201020.**	**31132.**
Stddev	5.65	1628.	156.
%RSD	.67788	.80989	.50093
#1	837.24	202330.	31036.
#2	835.83	201540.	31049.
#3	826.83	199200.	31312.

Sample Name: CCB Acquired: 9/17/2012 14:27:17 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Al1670	Sb2068	As1890	Ba4554	Be3130	Bi2230
Line	167.079 {502}	206.833 {463}	189.042 {478}	455.403 { 74}	313.042 {108}	223.061 {451}
IS Ref	(Sc1880)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0025**	**.0009**	**.0019**	**.0004**	**.0002**	**.0004**
Stddev	.0023	.0002	.0014	.0004	.0001	.0015
%RSD	92.13	27.46	72.32	95.76	63.15	332.9
#1	.0051	.0009	.0030	.0008	.0003	.0011
#2	.0016	.0006	.0003	.0003	.0002	.0014
#3	.0008	.0011	.0025	.0001	.0001	-.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	B_2496	Cd2288	Ca3158	Cr2055	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	205.552 {464}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0076**	**.0000**	**.0048**	**.0006**	**.0002**	**-.0002**
Stddev	.0011	.0001	.0033	.0002	.0002	.0004
%RSD	14.51	532.5	68.95	38.02	61.69	167.7
#1	.0083	.0000	.0020	.0008	.0004	.0001
#2	.0063	.0002	.0085	.0007	.0002	-.0002
#3	.0082	-.0001	.0040	.0003	.0001	-.0006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 9/17/2012 14:27:17 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0009**	**.0015**	**.0008**	**.0001**	**.0012**
Stddev	.0016	.0009	.0007	.0007	.0003	.0008
%RSD	300.6	106.3	47.10	84.25	407.7	66.54
#1	-.0007	.0013	.0016	.0013	.0004	.0021
#2	.0024	.0015	.0022	.0010	.0001	.0012
#3	-.0001	-.0002	.0008	.0001	-.0002	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2889**	**.0002**	**.0703**	**.0002**	**.0000**	**.0002**
Stddev	.0363	.0002	.0032	.0019	.000	.0001
%RSD	12.57	94.78	4.590	1043.	623.8	52.64
#1	.3262	.0002	.0732	.0022	.0002	.0003
#2	.2871	.0004	.0708	-.0002	-.0001	.0001
#3	.2536	.0000	.0668	-.0015	-.0003	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 9/17/2012 14:27:17 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0003**	**-.0018**	**.0000**	**.0005**	**.0009**
Stddev	.0001	.0002	.0013	.000	.0001	.0007
%RSD	85.64	69.74	74.60	1089.	23.12	78.69
#1	-.0001	-.0001	-.0003	.0002	.0006	.0013
#2	.0000	-.0002	-.0030	.0000	.0005	.0012
#3	-.0001	-.0006	-.0021	-.0002	.0004	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**854.21**	**202930.**	**30606.**
Stddev	5.66	1050.	166.
%RSD	.66271	.51714	.54296
#1	856.23	202190.	30793.
#2	847.82	204130.	30476.
#3	858.59	202480.	30549.

Sample Name: CCV Acquired: 9/17/2012 15:19:46 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3130	Bi2230
Line	308.215 {109}	206.833 {463}	189.042 {478}	455.403 { 74}	313.042 {108}	223.061 {451}
IS Ref	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.500**	**.5048**	**.5078**	**2.521**	**.4926**	**2.544**
Stddev	.005	.0009	.0040	.010	.0009	.010
%RSD	.2170	.1869	.7822	.3830	.1760	.3964
#1	2.504	.5059	.5094	2.510	.4919	2.555
#2	2.501	.5040	.5033	2.526	.4924	2.542
#3	2.494	.5046	.5107	2.528	.4936	2.535
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	B_2496	Cd2288	Ca3158	Cr2677	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	267.716 {126}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.475**	**.4949**	**2.506**	**.4956**	**2.473**	**2.537**
Stddev	.015	.0016	.013	.0010	.014	.022
%RSD	.6123	.3217	.5310	.2115	.5511	.8797
#1	2.481	.4945	2.516	.4949	2.466	2.562
#2	2.487	.4936	2.491	.4968	2.464	2.528
#3	2.458	.4967	2.510	.4952	2.488	2.520
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCV Acquired: 9/17/2012 15:19:46 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.465**	**.4975**	**2.535**	**2.472**	**.5063**	**2.530**
Stddev	.022	.0048	.009	.011	.0031	.005
%RSD	.8902	.9748	.3631	.4240	.6178	.2095
#1	2.442	.4987	2.524	2.461	.5089	2.536
#2	2.466	.4922	2.540	2.476	.5071	2.526
#3	2.486	.5016	2.541	2.480	.5028	2.528
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.90**	**2.509**	**49.04**	**2.526**	**.4939**	**.4985**
Stddev	.20	.007	.16	.009	.0011	.0008
%RSD	.3860	.2714	.3315	.3580	.2172	.1666
#1	51.12	2.516	48.86	2.532	.4950	.4979
#2	50.80	2.502	49.14	2.515	.4928	.4983
#3	50.77	2.509	49.14	2.530	.4938	.4995
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCV Acquired: 9/17/2012 15:19:46 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5006**	**.4986**	**.4928**	**.5033**	**1.264**	**4.936**
Stddev	.0030	.0022	.0013	.0040	.004	.022
%RSD	.5987	.4497	.2650	.7949	.2920	.4383
#1	.5003	.4970	.4936	.5065	1.268	4.941
#2	.4977	.5012	.4913	.4988	1.261	4.912
#3	.5037	.4976	.4935	.5047	1.263	4.954
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**834.38**	**200700.**	**30757.**
Stddev	1.71	1651.	49.
%RSD	.20453	.82283	.15951
#1	836.06	198810.	30705.
#2	834.43	201860.	30764.
#3	832.65	201420.	30802.

Sample Name: CCB Acquired: 9/17/2012 15:24:16 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Al1670	Sb2068	As1890	Ba4554	Be3130	Bi2230
Line	167.079 {502}	206.833 {463}	189.042 {478}	455.403 { 74}	313.042 {108}	223.061 {451}
IS Ref	(Sc1880)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**.0004**	**.0009**	**.0003**	**.0001**	**-.0010**
Stddev	.0006	.0016	.0003	.0001	.0001	.0010
%RSD	53.11	440.9	36.58	38.97	43.34	102.6
#1	.0011	-.0012	.0010	.0005	.0002	.0001
#2	.0004	.0020	.0011	.0002	.0001	-.0012
#3	.0015	.0003	.0005	.0003	.0001	-.0018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	B_2496	Cd2288	Ca3158	Cr2055	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	205.552 {464}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0050**	**-.0002**	**.0015**	**.0004**	**.0004**	**-.0004**
Stddev	.0013	.0001	.0077	.0001	.0001	.0001
%RSD	26.33	30.31	514.5	27.90	21.11	36.46
#1	.0037	-.0003	.0050	.0003	.0003	-.0002
#2	.0063	-.0001	.0068	.0005	.0004	-.0005
#3	.0051	-.0002	-.0073	.0005	.0003	-.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 9/17/2012 15:24:16 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**-.0002**	**.0008**	**.0006**	**.0004**	**.0012**
Stddev	.0016	.0009	.0005	.0006	.0000	.0007
%RSD	374.4	488.1	60.64	103.1	9.241	59.81
#1	.0001	.0001	.0013	.0013	.0003	.0017
#2	-.0022	-.0012	.0007	.0003	.0003	.0015
#3	.0008	.0006	.0004	.0002	.0004	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.5430**	**.0002**	**.0385**	**.0005**	**.0000**	**.0001**
Stddev	.0418	.0004	.0316	.0010	.0001	.0000
%RSD	7.696	204.0	82.09	193.1	216.4	33.37
		n/a				
#1	.5906	.0000	.0751	.0015	.0001	.0002
#2	.5264	.0006	.0202	.0007	.0000	.0001
#3	.5121	-.0001	.0203	-.0006	.0000	.0001
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.3670					
Low Limit	-.3670					

Sample Name: CCB Acquired: 9/17/2012 15:24:16 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**-.0004**	**-.0004**	**.0001**	**.0003**	**.0019**
Stddev	.0005	.0005	.0026	.0001	.0001	.0016
%RSD	97.55	147.8	645.0	47.51	41.98	82.90
#1	.0001	-.0003	-.0008	.0002	.0003	.0019
#2	.0004	.0001	-.0028	.0001	.0004	.0035
#3	.0010	-.0009	.0024	.0001	.0002	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**860.59**	**203880.**	**30246.**
Stddev	.84	951.	204.
%RSD	.09723	.46660	.67594
#1	859.86	204380.	30294.
#2	860.41	202790.	30421.
#3	861.51	204480.	30021.

Sample Name: 9986940001 Acquired: 9/17/2012 15:48:21 Type: Unk
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38382T Dilution Factor: 2
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3130	Bi2230
Line	308.215 {109}	206.833 {463}	189.042 {478}	455.403 { 74}	313.042 {108}	223.061 {451}
IS Ref	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**44.87**	**-.0091**	**.0100**	**.0512**	**.0015**	**.0916**
Stddev	.23	.0009	.0008	.0003	.0000	.0023
%RSD	.5200	9.704	7.829	.5346	1.936	2.500
#1	45.09	-.0087	.0108	.0515	.0015	.0891
#2	44.90	-.0102	.0097	.0510	.0015	.0922
#3	44.62	-.0086	.0094	.0510	.0014	.0936

Elem	B_2496	Cd2288	Ca3158	Cr2055	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	205.552 {464}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0748**	**-.0043**	**31.51**	**.1321**	**-.0041**	**.0181**
Stddev	.0031	.0001	.26	.0006	.0002	.0003
%RSD	4.194	1.632	.8250	.4641	5.165	1.731
#1	.0784	-.0044	31.37	.1314	-.0043	.0184
#2	.0733	-.0043	31.36	.1324	-.0041	.0178
#3	.0727	-.0043	31.81	.1325	-.0039	.0180

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**286.9**	**.0513**	**.0094**	**3.054**	**.7362**	**.1308**
Stddev	1.6	.0022	.0007	.002	.0034	.0006
%RSD	.5483	4.309	7.808	.0572	.4631	.4675
#1	286.1	.0535	.0087	3.053	.7400	.1304
#2	285.9	.0514	.0093	3.053	.7350	.1306
#3	288.7	.0490	.0102	3.056	.7335	.1315

Sample Name: 9986940001 Acquired: 9/17/2012 15:48:21 Type: Unk
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38382T Dilution Factor: 2
Comment:

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**633.4**	**.0705**	**1.466**	**.0016**	**.0011**	**.1277**
Stddev	4.0	.0002	.014	.0008	.0005	.0003
%RSD	.6239	.3107	.9504	51.68	44.35	.2139
#1	635.2	.0702	1.452	.0015	.0006	.1274
#2	636.1	.0707	1.466	.0008	.0011	.1279
#3	628.9	.0704	1.480	.0025	.0015	.1277

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0066**	**.2508**	**-.0116**	**.0558**	**.5039**	**38.56**
Stddev	.0004	.0016	.0005	.0005	.0018	.38
%RSD	5.394	.6253	3.961	.8297	.3600	.9885
#1	.0062	.2510	-.0117	.0554	.5034	38.26
#2	.0070	.2491	-.0111	.0557	.5023	38.42
#3	.0066	.2523	-.0120	.0563	.5059	38.99

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**765.60**	**194630.**	**29610.**
Stddev	3.40	552.	143.
%RSD	.44382	.28382	.48370
#1	767.12	194180.	29613.
#2	767.96	195240.	29752.
#3	761.70	194460.	29465.

Sample Name: 9986940001L Acquired: 9/17/2012 15:53:01 Type: Unk
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38382T Dilution Factor: 10
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3130	Bi2230
Line	308.215 {109}	206.833 {463}	189.042 {478}	455.403 { 74}	313.042 {108}	223.061 {451}
IS Ref	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.502**	**-.0016**	**.0022**	**.0094**	**.0003**	**.0177**
Stddev	.029	.0006	.0013	.0001	.0000	.0011
%RSD	.3387	35.06	60.68	1.143	6.755	6.032
#1	8.479	-.0010	.0035	.0095	.0003	.0184
#2	8.492	-.0016	.0024	.0093	.0003	.0182
#3	8.534	-.0022	.0008	.0094	.0003	.0165

Elem	B_2496	Cd2288	Ca3158	Cr2055	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	205.552 {464}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0158**	**-.0009**	**6.163**	**.0248**	**-.0014**	**.0029**
Stddev	.0015	.0001	.013	.0001	.0002	.0001
%RSD	9.192	5.940	.2154	.4959	17.82	5.062
#1	.0171	-.0009	6.164	.0249	-.0012	.0031
#2	.0142	-.0010	6.149	.0249	-.0016	.0029
#3	.0160	-.0009	6.176	.0247	-.0014	.0028

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**58.48**	**.0091**	**.0021**	**.5839**	**.1411**	**.0242**
Stddev	.09	.0010	.0004	.0005	.0003	.0002
%RSD	.1492	11.36	16.51	.0858	.2025	.8102
#1	58.50	.0091	.0023	.5844	.1413	.0242
#2	58.38	.0080	.0023	.5834	.1408	.0243
#3	58.56	.0101	.0017	.5838	.1413	.0240

Sample Name: 9986940001L Acquired: 9/17/2012 15:53:01 Type: Unk
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38382T Dilution Factor: 10
Comment:

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**132.2**	**.0121**	**.2278**	**.0022**	**.0003**	**.0246**
Stddev	.3	.0004	.0139	.0004	.0003	.0002
%RSD	.2237	3.310	6.083	17.67	92.52	.6728
#1	132.4	.0117	.2207	.0022	.0005	.0248
#2	131.9	.0125	.2438	.0026	.0003	.0247
#3	132.4	.0120	.2189	.0018	.0000	.0244

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**.0376**	**-.0031**	**.0107**	**.0928**	**7.306**
Stddev	.0004	.0011	.0010	.0003	.0003	.043
%RSD	35.31	2.870	32.55	2.501	.3179	.5868
#1	.0015	.0387	-.0042	.0107	.0926	7.353
#2	.0007	.0365	-.0022	.0110	.0927	7.269
#3	.0011	.0378	-.0029	.0105	.0932	7.295

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**818.75**	**200820.**	**30077.**
Stddev	1.23	1452.	54.
%RSD	.15027	.72303	.18119
#1	818.08	201660.	30068.
#2	818.00	199140.	30136.
#3	820.17	201650.	30028.

Sample Name: 9986940001PS Acquired: 9/17/2012 16:09:56 Type: Unk
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor: 2
Comment: PS

Elem	Al3082	Sb2068	As1890	Ba4554	Be3130	Bi2230
Line	308.215 {109}	206.833 {463}	189.042 {478}	455.403 { 74}	313.042 {108}	223.061 {451}
IS Ref	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**43.33**	**.3895**	**.4150**	**.6650**	**.3746**	**2.135**
Stddev	.08	.0014	.0028	.0074	.0011	.002
%RSD	.1897	.3501	.6789	1.108	.2965	.0718
#1	43.32	.3883	.4152	.6568	.3734	2.134
#2	43.26	.3892	.4121	.6710	.3750	2.137
#3	43.42	.3910	.4177	.6674	.3755	2.136

Elem	B_2496	Cd2288	Ca3158	Cr2677	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	267.716 {126}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.961**	**.4000**	**31.30**	**.4899**	**1.955**	**1.969**
Stddev	.010	.0006	.14	.0034	.004	.008
%RSD	.5325	.1555	.4484	.6928	.2309	.4270
#1	1.949	.3994	31.31	.4929	1.952	1.959
#2	1.967	.4001	31.16	.4904	1.952	1.974
#3	1.966	.4006	31.44	.4862	1.960	1.972

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**269.6**	**.3673**	**2.060**	**4.728**	**1.057**	**2.099**
Stddev	1.1	.0016	.026	.015	.004	.002
%RSD	.4079	.4243	1.288	.3195	.3546	.1001
#1	268.9	.3670	2.029	4.712	1.060	2.098
#2	269.0	.3660	2.072	4.729	1.057	2.098
#3	270.9	.3691	2.078	4.742	1.053	2.102

Sample Name: 9986940001PS Acquired: 9/17/2012 16:09:56 Type: Unk
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor: 2
Comment: PS

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**620.3**	**2.033**	**41.62**	**1.985**	**.0614**	**.4969**
Stddev	2.0	.004	.41	.007	.0010	.0023
%RSD	.3177	.1893	.9961	.3612	1.627	.4708
#1	622.3	2.033	41.16	1.989	.0625	.4942
#2	618.3	2.029	41.76	1.977	.0608	.4985
#3	620.2	2.037	41.95	1.989	.0608	.4980

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4009**	**.6050**	**.3806**	**.4254**	**1.466**	**40.22**
Stddev	.0024	.0036	.0023	.0014	.002	.33
%RSD	.5961	.6022	.6000	.3289	.1176	.8089
#1	.3996	.6017	.3790	.4246	1.466	39.93
#2	.3994	.6044	.3795	.4270	1.464	40.14
#3	.4037	.6089	.3832	.4246	1.468	40.57

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**786.30**	**195550.**	**29202.**
Stddev	3.01	495.	176.
%RSD	.38293	.25306	.60331
#1	782.84	195490.	29128.
#2	787.74	195090.	29403.
#3	788.31	196070.	29075.

Sample Name: CCV Acquired: 9/17/2012 16:15:30 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3130	Bi2230
Line	308.215 {109}	206.833 {463}	189.042 {478}	455.403 { 74}	313.042 {108}	223.061 {451}
IS Ref	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.520**	**.5055**	**.5091**	**2.547**	**.4889**	**2.544**
Stddev	.011	.0023	.0017	.015	.0022	.008
%RSD	.4528	.4621	.3416	.5677	.4520	.3236
#1	2.511	.5032	.5106	2.563	.4863	2.547
#2	2.533	.5078	.5094	2.536	.4902	2.550
#3	2.516	.5053	.5072	2.540	.4901	2.535
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	B_2496	Cd2288	Ca3158	Cr2677	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	267.716 {126}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.473**	**.4959**	**2.448**	**.4884**	**2.457**	**2.561**
Stddev	.008	.0022	.014	.0051	.011	.018
%RSD	.3396	.4418	.5787	1.041	.4601	.7072
#1	2.471	.4934	2.432	.4826	2.445	2.568
#2	2.482	.4969	2.455	.4922	2.461	2.575
#3	2.466	.4974	2.458	.4903	2.466	2.541
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCV Acquired: 9/17/2012 16:15:30 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.485**	**.4931**	**2.594**	**2.455**	**.5038**	**2.520**
Stddev	.020	.0008	.028	.002	.0015	.004
%RSD	.7901	.1595	1.097	.0613	.2931	.1453
#1	2.505	.4931	2.627	2.456	.5030	2.517
#2	2.483	.4923	2.576	2.455	.5055	2.524
#3	2.466	.4938	2.579	2.453	.5028	2.520
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**51.24**	**2.515**	**49.77**	**2.520**	**.4958**	**.4978**
Stddev	.19	.003	.25	.003	.0016	.0009
%RSD	.3726	.1050	.4956	.1181	.3150	.1711
#1	51.46	2.513	50.05	2.524	.4941	.4982
#2	51.11	2.514	49.59	2.519	.4971	.4968
#3	51.16	2.518	49.67	2.518	.4962	.4984
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCV Acquired: 9/17/2012 16:15:30 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5005**	**.4981**	**.4917**	**.5049**	**1.271**	**5.387**
Stddev	.0015	.0010	.0002	.0069	.001	.079
%RSD	.2943	.2052	.0340	1.363	.0679	1.457
#1	.4992	.4989	.4918	.4980	1.270	5.468
#2	.5002	.4969	.4915	.5118	1.271	5.382
#3	.5021	.4984	.4916	.5050	1.271	5.311
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**834.58**	**199150.**	**29955.**
Stddev	1.58	1988.	301.
%RSD	.18932	.99806	1.0063
#1	836.14	200740.	30303.
#2	832.98	196920.	29786.
#3	834.61	199800.	29776.

Sample Name: CCB Acquired: 9/17/2012 16:20:00 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Al1670	Sb2068	As1890	Ba4554	Be3130	Bi2230
Line	167.079 {502}	206.833 {463}	189.042 {478}	455.403 { 74}	313.042 {108}	223.061 {451}
IS Ref	(Sc1880)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0020**	**.0023**	**.0002**	**.0006**	**.0001**	**.0011**
Stddev	.0002	.0014	.0016	.0003	.0001	.0007
%RSD	9.902	60.21	628.0	49.47	98.16	63.74
#1	.0020	.0039	.0000	.0009	.0002	.0004
#2	.0022	.0016	.0019	.0003	.0001	.0012
#3	.0018	.0014	-.0012	.0005	.0000	.0017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	B_2496	Cd2288	Ca3158	Cr2055	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	205.552 {464}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0079**	**.0001**	**.0033**	**.0003**	**.0005**	**.0000**
Stddev	.0023	.0000	.0031	.0003	.0002	.0003
%RSD	28.61	78.03	92.33	97.45	34.18	1141.
#1	.0076	.0001	.0039	.0006	.0006	.0001
#2	.0058	.0001	.0061	.0004	.0004	.0003
#3	.0102	.0000	.0000	.0000	.0003	-.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 9/17/2012 16:20:00 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0062**	**-.0034**	**.0014**	**.0005**	**.0001**	**.0019**
Stddev	.0010	.0011	.0002	.0006	.0003	.0007
%RSD	15.83	30.52	14.33	112.6	227.7	36.93
#1	.0051	-.0023	.0012	.0006	-.0001	.0026
#2	.0069	-.0038	.0016	.0010	.0001	.0018
#3	.0067	-.0043	.0015	-.0001	.0005	.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.4760**	**.0009**	**.0449**	**.0020**	**-.0001**	**.0002**
Stddev	.0297	.0004	.0231	.0010	.0001	.0001
%RSD	6.232	47.20	51.44	51.82	80.24	49.26
#1	.5063	.0013	.0603	.0032	-.0001	.0002
#2	.4746	.0011	.0561	.0014	.0000	.0002
#3	.4471	.0004	.0183	.0014	-.0002	.0001
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.3670					
Low Limit	-.3670					

Sample Name: CCB Acquired: 9/17/2012 16:20:00 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0009**	**-.0004**	**.0001**	**.0005**	F **.1823**
Stddev	.0004	.0004	.0016	.0001	.0001	.0263
%RSD	90.42	37.81	409.0	76.14	12.37	14.44
#1	.0004	.0013	-.0009	.0000	.0005	.2081
#2	.0001	.0006	-.0017	.0002	.0005	.1833
#3	.0009	.0008	.0014	.0001	.0004	.1555
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						.0730
Low Limit						-.0730

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**838.25**	**201490.**	**30384.**
Stddev	4.24	996.	145.
%RSD	.50530	.49452	.47804
#1	841.92	201130.	30281.
#2	833.61	200720.	30321.
#3	839.20	202620.	30550.

Sample Name: LLCCV Acquired: 9/17/2012 16:24:52 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Al1670	Sb2068	As1890	Ba4554	Be3130	Bi2230
Line	167.079 {502}	206.833 {463}	189.042 {478}	455.403 { 74}	313.042 {108}	223.061 {451}
IS Ref	(Sc1880)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1115**	**.0204**	**.0118**	**.0105**	**.0041**	**.0433**
Stddev	.0008	.0006	.0003	.0001	.0001	.0003
%RSD	.7087	3.084	2.301	.7516	1.362	.7228
#1	.1122	.0207	.0115	.0106	.0040	.0433
#2	.1115	.0196	.0121	.0105	.0041	.0437
#3	.1107	.0208	.0119	.0106	.0041	.0430
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	B_2496	Cd2288	Ca3158	Cr2055	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	205.552 {464}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1057**	**.0017**	**.1046**	**.0055**	**.0051**	**.0096**
Stddev	.0021	.0001	.0023	.0001	.0001	.0001
%RSD	1.992	3.473	2.188	2.106	1.633	1.346
#1	.1034	.0017	.1070	.0053	.0052	.0097
#2	.1076	.0016	.1043	.0056	.0050	.0095
#3	.1059	.0016	.1024	.0055	.0051	.0095
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: LLCCV Acquired: 9/17/2012 16:24:52 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0628**	**.0062**	**.1066**	**.1020**	**.0050**	**.0204**
Stddev	.0019	.0010	.0011	.0005	.0002	.0005
%RSD	2.986	15.98	.9917	.4599	4.097	2.261
#1	.0648	.0073	.1078	.1024	.0048	.0209
#2	.0611	.0060	.1063	.1015	.0052	.0203
#3	.0625	.0053	.1058	.1019	.0050	.0200
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.8886**	**.0207**	**.5449**	**.0216**	**.0042**	**.0052**
Stddev	.0204	.0003	.0223	.0008	.0006	.0001
%RSD	2.291	1.216	4.095	3.872	14.68	1.106
#1	.9113	.0210	.5686	.0220	.0044	.0053
#2	.8828	.0206	.5243	.0207	.0035	.0052
#3	.8718	.0205	.5417	.0222	.0047	.0052
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.5000					
Range	20.00%					

Sample Name: LLCCV Acquired: 9/17/2012 16:24:52 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0200**	**.0204**	**.0190**	**.0053**	**.0213**	F **.1904**
Stddev	.0001	.0000	.0007	.0000	.0001	.0088
%RSD	.6547	.2376	3.872	.3837	.4666	4.599
#1	.0199	.0203	.0197	.0054	.0214	.1992
#2	.0201	.0204	.0192	.0053	.0214	.1903
#3	.0201	.0204	.0182	.0053	.0212	.1817
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value						.1000
Range						20.00%

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**855.22**	**203860.**	**30008.**
Stddev	1.56	1506.	177.
%RSD	.18293	.73896	.58919
#1	853.58	202150.	30013.
#2	856.69	204460.	29829.
#3	855.38	204970.	30183.

Sample Name: ICSA Acquired: 9/17/2012 16:30:08 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3130	Bi2230
Line	308.215 {109}	206.833 {463}	189.042 {478}	455.403 { 74}	313.042 {108}	223.061 {451}
IS Ref	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**30.60**	**.0031**	**-.0022**	**.0005**	**.0002**	**.0045**
Stddev	.03	.0010	.0010	.0002	.0000	.0013
%RSD	.0927	31.03	46.92	31.30	7.991	27.98
#1	30.60	.0021	-.0021	.0007	.0001	.0055
#2	30.58	.0032	-.0013	.0005	.0002	.0031
#3	30.64	.0041	-.0033	.0003	.0002	.0049
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	B_2496	Cd2288	Ca3158	Cr2055	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	205.552 {464}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**-.0007**	**152.0**	**.0004**	**-.0013**	**.0018**
Stddev	.0018	.0001	1.4	.0003	.0003	.0001
%RSD	434.3	13.50	.8940	77.90	22.16	6.811
#1	-.0022	-.0008	150.5	.0006	-.0012	.0019
#2	-.0005	-.0007	153.1	.0000	-.0010	.0017
#3	.0014	-.0006	152.5	.0007	-.0015	.0017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICSA Acquired: 9/17/2012 16:30:08 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**122.5**	**.0019**	**.0015**	**74.24**	**.0005**	**.0020**
Stddev	.7	.0029	.0006	.26	.0002	.0006
%RSD	.6080	147.9	39.11	.3518	35.40	32.24
#1	121.6	.0040	.0021	73.94	.0003	.0023
#2	122.8	-.0013	.0009	74.41	.0007	.0024
#3	122.9	.0031	.0014	74.38	.0006	.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.33**	**.0092**	**-.0259**	**.0039**	**.0003**	**-.0012**
Stddev	.03	.0003	.0143	.0022	.0003	.0001
%RSD	.1004	2.852	55.13	55.26	82.17	4.204
#1	26.35	.0094	-.0172	.0048	.0005	-.0012
#2	26.30	.0092	-.0181	.0015	.0000	-.0013
#3	26.32	.0089	-.0424	.0055	.0004	-.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICSA Acquired: 9/17/2012 16:30:08 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0032**	**.0046**	**-.0109**	**-.0001**	**.0069**	F **.0900**
Stddev	.0001	.0004	.0001	.0001	.0001	.0060
%RSD	2.875	9.415	.8131	88.12	1.582	6.648
#1	.0031	.0046	-.0109	-.0001	.0070	.0955
#2	.0033	.0050	-.0109	.0000	.0070	.0908
#3	.0031	.0041	-.0110	.0000	.0068	.0837
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						.0730
Low Limit						-.0730

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**754.88**	**196550.**	**29064.**
Stddev	6.41	1781.	243.
%RSD	.84960	.90608	.83655
#1	747.51	194520.	28915.
#2	759.13	197840.	28933.
#3	758.01	197290.	29345.

Sample Name: ICSAB Acquired: 9/17/2012 16:34:48 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3130	Bi2230
Line	308.215 {109}	206.833 {463}	189.042 {478}	455.403 { 74}	313.042 {108}	223.061 {451}
IS Ref	(Sc3613)	(Sc1880)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**31.14**	**-.0009**	**2.588**	**.7750**	**.2586**	**.0048**
Stddev	.09	.0007	.002	.0027	.0005	.0009
%RSD	.2866	71.20	.0604	.3534	.2003	18.49
#1	31.20	-.0010	2.586	.7778	.2580	.0049
#2	31.18	-.0002	2.589	.7749	.2591	.0039
#3	31.04	-.0015	2.589	.7723	.2587	.0056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	B_2496	Cd2288	Ca3158	Cr2677	Co2286	Cu3247
Line	249.678 {135}	228.802 {447}	315.887 {107}	267.716 {126}	228.616 {447}	324.754 {104}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc1880)	(Sc3572)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0035**	**.7921**	**157.5**	**.7643**	**.8135**	**.7780**
Stddev	.0030	.0023	.8	.0076	.0010	.0023
%RSD	87.51	.2886	.4992	.9947	.1193	.2944
#1	-.0070	.7904	156.8	.7560	.8134	.7806
#2	-.0015	.7912	158.4	.7708	.8126	.7767
#3	-.0020	.7947	157.4	.7662	.8146	.7766
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICSAB Acquired: 9/17/2012 16:34:48 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Fe2599	Pb2203	Li6707	Mg2852	Mn2576	Mo2020
Line	259.940 {130}	220.353 {453}	670.784 { 50}	285.213 {118}	257.610 {131}	202.030 {467}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc3613)	(Sc3613)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**126.1**	**2.695**	**.0024**	**76.11**	**.5184**	**-.0008**
Stddev	.4	.005	.0008	.05	.0026	.0006
%RSD	.2964	.1709	32.36	.0637	.5106	77.02
#1	126.0	2.691	.0026	76.10	.5161	-.0010
#2	126.5	2.693	.0031	76.16	.5213	-.0001
#3	125.8	2.700	.0016	76.06	.5177	-.0014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Na5895	Ni2316	K_7664	Se1960	Ag3280	Sr4077
Line	589.592 { 57}	231.604 {445}	766.490 { 44}	196.090 {472}	328.068 {103}	407.771 { 83}
IS Ref	(Sc3613)	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.74**	**.8255**	**51.45**	**1.264**	**.7741**	**-.0012**
Stddev	.07	.0010	.13	.005	.0023	.0001
%RSD	.2498	.1225	.2580	.4314	.2962	5.549
#1	26.79	.8267	51.49	1.259	.7717	-.0012
#2	26.66	.8248	51.56	1.270	.7763	-.0013
#3	26.76	.8250	51.31	1.265	.7743	-.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICSAB Acquired: 9/17/2012 16:34:48 Type: QC
Method: 6010C_3015 DOD(v183) Mode: CONC Corr. Factor: 1.000000
User: SRT ALSI Analyst: SRT META Batch: 38381T Dilution Factor:
Comment:

Elem	Sn1899	Ti3349	Tl1908	V_2924	Zn2138	S_1820
Line	189.989 {477}	334.941 {101}	190.856 {477}	292.402 {115}	213.856 {458}	182.034 {485}
IS Ref	(Sc1880)	(Sc3613)	(Sc1880)	(Sc3572)	(Sc1880)	(Sc1880)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0033**	**.0056**	**2.605**	**.7975**	**.8211**	**.0684**
Stddev	.0004	.0003	.011	.0005	.0003	.0033
%RSD	12.62	5.679	.4133	.0597	.0371	4.852
#1	.0033	.0055	2.599	.7981	.8211	.0722
#2	.0037	.0059	2.599	.7973	.8213	.0663
#3	.0029	.0053	2.618	.7972	.8207	.0666
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Sc1880	Sc3572	Sc3613
Line	188.060 {479}	357.253 { 94}	361.384 { 93}
Units	Cts/S	Cts/S	Cts/S
Avg	**755.51**	**196240.**	**28439.**
Stddev	4.46	1746.	151.
%RSD	.59059	.88957	.53254
#1	750.99	194420.	28349.
#2	755.63	196400.	28355.
#3	759.91	197900.	28614.

Digestion Logbook

0789

Microwave 3015 Prep (Water) (Version 1- 6/1/2010)

Note: All TCLP matrix spikes are spiked prior to preservation as noted in the TCLP logbook.

Batch: 37892	Queue: MDIG	HBN: 481042	RULE: D3015TCLP	ALSI SOP: 09-3015
File Name: 37892_120913-064150			METHOD: 3015	Microwave ID: MARS

Batch Type:	Comment Codes:	Reagents:		Pipettes:		Start	Finish
T: TCLP	1. Sample failed initial digestion due to a weight loss >5g	HNO3:	L10023 JT BAKER		Date:	09/13/2012	09/13/2012
S: SPLP	2. Sample reacts with reagent				Time:	06:44:00	07:19:00
M: 6020	3. Less sample used due to high metal content				Tech:	KMK	KMK
W: 6010	4. Less sample used to result in successful microwave digestion				Reviewed/Approved By:		N/A
A: ASTM	5. Sample does not digest by microwave, digest by method 3050				Date:		

Sample ID	Cont ID	Samp Type	Vessel Initial WT, grams	Vessel Final WT, grams	Difference grams	Spike Amt uL of Each	Spike Lot#	Sample Size, mL	Final Vol mL	Batch Type	Parent Sample ID	Comment Code
1033609		MB	208.56	207.34	1.22			45	50	T		
1033610		LCS	211.50	211.37	0.13	50	/MA1410/MA1411/	45	50	T		
1033611	,	LCS	211.31	211.16	0.15	50	/MA1410/MA1411/	45	50	T		
9986940001	A	S	210.66	206.14	4.52			45	50	T		

End

0790

Analytical Logbook

0791

THERMOFISHER ICP6500_2
Analytical Worksheet

(3015) Acid Matrix: 10% HNO3 + 1% HCl

Instrument Method:6010C
Sequence #:091712A
Date Started: 09/17/12
Analyst: SRT

*(ICAL5) High Std: 5 ml each of MA1433 + MA1434

*ICAL4: 4 mL High Std into 20 mL
*ICAL3: 2 mL High Std into 20 mL
*ICAL2 / LLCCV: 0.1 ml MB5536 into 20 ml
*CCV: 10 ml of High Std into 20 ml
*Second Source: 1.0 ml of MA1398 + 0.1 mL each of MA1420 + MA1338 + MA1408 + 0.1 ml each of MA1427 + MA1362 + MA1359 + MA1341 + MA1406 into 100 ml
*ICSA: 2.5 ml of MA1376 into 100 ml
*ICSAB: 2.5 ml of MA1376 + 0.250 ml of MA1377 & MA1378 into 100 ml
*Additional Second Source: 0.1 mL of MA1308 into 100 ml
*Cal Blank: 1000 ml HNO3 Lot #: K50030 HCl Lot#: K25031

* All Standards are prepared daily prior to analysis of samples in acid matrix listed.

* Post digestion spikes:
9mL sample, 0.375mL 1:1 mix
of calibration std. A and calibration std. B

	ICAL1		CCV / CCB		/
	ICAL2		LLCCV		/
	ICAL3		ICSA	71	/
	ICAL4		ICSAB	72	/
	ICAL5	31	1035064-a MB	73	/
	ICV	32	1035065-a LCS	74	/
	ICB	33	9988251001-b1 (2)	75	/
	CRDL / LLCCV	34	1035066-a MS (251-1) (2)	76	/
	CCV	35	1035067-a MSD (251-1) (2)	77	/
	HIGH STD	36	9988251002-b1 (2)	78	/
	ICSA	37	9988251003-b1 (2)	79	/
	ICSAB	38	9988251004-b1 (2)	80	/
	/	39	9988251005-b1 (2)		/
	/	40	9988251006-b1 (2)		/
	/		/		/
	/		CCV		/
	/		CCB	81	/
	/		/	82	/
	/	41	9988251007-b1 (2)	83	/
	/	42	9988398005-a2 (2)	84	/
1	1033609-a MB	43	9988398006-a2 (2)	85	/
2	1033610-a LCS	44	9988398007-a4 (2)	86	/
3	1033611-a LCSD	45	9988398008-a1 (2)	87	/
4	1034322-a MB	46	9988380004-a1 (2)	88	/
5	1034323-a LCS	47	9988380005-a1 (2)	89	/
6	9987892001-b1 (2)	48	9988380006-a1 (2)	90	/
7	9987633001-b1 (2)	49	1034675-a LB (2)		/
8	1034324-a MS (633-1) (2)	50	9988251007-b1 (10)		/
9	1034325-a MSD (633-1)		CCV / CCB		/
10	9987633002-b1 (2)		LLCCV		/
	/		ICSA	91	/
	CCV		ICSAB	92	/
	CCB	51	/	93	/
	/	52	/	94	/
11	9987633003-b1 (2)	53	/	95	/
12	9987633004-b1 (2)	54	/	96	/
13	9987633005-b1 (2)	55	/	97	/
14	9987633006-b1 (2)	56	/	98	/
15	9987633007-b1 (2)	57	/	99	/
16	9987634001-b1 (2)	58	/	100	/
17	9987634002-b1 (2)	59	/		/
18	9987634003-b1 (2)	60	/		/
19	9987634004-b1 (2)		/		/
20	9987634005-b1 (2)		/		/
	/		/	101	/
	CCV		/	102	/
	CCB	61	/	103	/
	/	62	/	104	/
21	9987634006-b1 (2)	63	/	105	/
22	9987634007-b1 (2)	64	/	106	/
23	1033657-a LB (2)	65	/	107	/
24	9987590001-a1 (2)	66	/	108	/
25	9986940001-a1 (2)	67	/	109	/
26	9986940001-a1 (10)	68	/	110	/
27	9987634003-b1 (10)	69	/		/
28	9986940001-a1 (2) PS	70	/		/
29	9986940001-a1 (2) PS		/		/
30	/		/		/

PIPETTE ID#S
Pipette ID # 03-042 / 03-118
Pipette ID # 03-043 / 03-045
Pipette ID # 03-044 / 03-050

0760

Corrosivity as pH by 9040C Summary Forms

Form 6B
Inorganic Initial and Continuing Calibration Summary

Analysis Method: 4500B

SDG No.: ERT-009

Instrument ID: PC-Titration Plus

Concentration Units: pH units

Analyte	Initial Calibration					Continuing Calibration						
	True Conc.	Conc. Recovered (1)9/11/12	Difference (pH units)	(2)	Acc. Limit (pH units)	True Conc.	Conc. Recovered (1)9/11/12	Difference (pH units)	(2)	Conc. Recovered (1)9/11/12	Difference (pH units)	(2)	Acc. Limit (pH units)
pH	4.00	4.01	0.01		+/-0.05	7.00	7.00	0.00		7.00	0.00		+/-0.05
	7.00	7.02	0.02		+/-0.05								
	10.00	9.99	-0.01		+/-0.05								

(1) Analysis Date

(2) The following qualifiers are used:

*: Values outside of acceptable limits

Comments:

0794

Corrosivity as pH by 9040C Raw Data

Autotitrator Analytical Checklist

	Initials	Date
Analyst	MBW	9/11/12
Schedule Rev	MBW	9/14/12
1st Review	EA	9-13-12
2nd Review	MBW	9/14/12
Approval	MBW	9/14/12

Batch Numbers	115431
	115433

Standards/Reagents	
4 Buffer	120807011
7 Buffer	120510031
10 Buffer	120612021
1413 Std	WS120328001
10K Std	WS120328002
100K Std	WS120328003
50 Std	WS120907032
200 Std	WS120907033
0.02N H_2SO_4	120614002
0.10N H_2SO_4	111019006

Analyst/Schedule Reviewer Checklist

	Analyst	Reviewer
All samples run, including those not entered by Sample Receiving	EA	
All samples run within their hold time	EA	
All samples run for the appropriate analysis (pH / SpC / Alk)	EA	
Calibration Passes	EA	
All openning QC passes (especially pH)	EA	
If openning QC fails, was it put back on? If not why?	EA	

Entry/ Approval Checklist

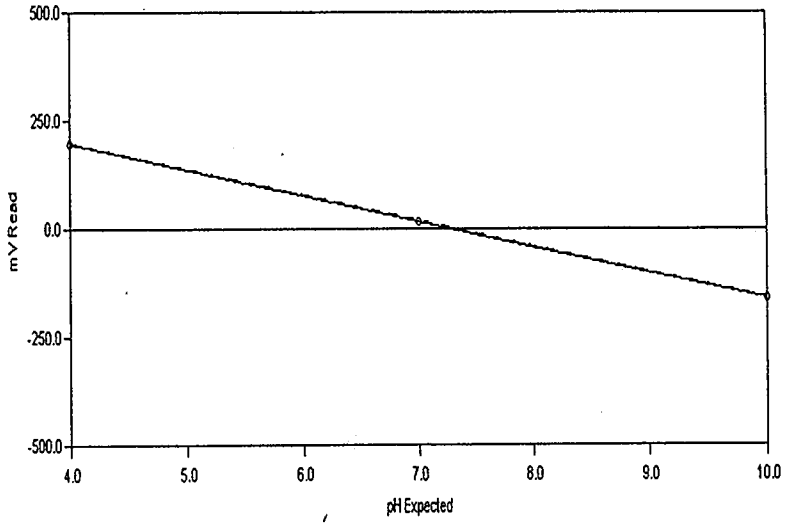
All QC Criteria was calculated and checked (for all analyses)

	1st Review	2nd Review
pH standards within 0.05 pH units	EA	
SpC standards within 10%	EA	
Alkalinity standards within 10%	EA	
pH duplicates within 0.1 pH units	EA	
SpC duplicates within 10%	EA	
Alkalinity duplicates within 20%	EA	
If QC failed were samples rerun within hold time? If not why?	EA	
All samples run within hold time? If not appropriate comment entered in LIMS.	EA	
All samples comply with sample identification / correlated data /historical data. (2nd Review only)		

Comments:

PC-TitratION PLUS
Calibration Report

Calibration Record # 2136



Calibration Settings

Calibration ID	PH CAL 4-7-10	Date	09/11/2012
Channel	1	Time	1:06 AM
Probe Type	pH	Temperature	295.37 K 22.22 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit

Calibration Results

Slope	-59.120	CorrCoeff	0.9999
Intercept	18.023	Equation: Y = (-59.120) X + (18.023)	

Calibration Validity True Operator

	Result	Minimum	Maximum
Slope	-59.120	-63.00	-53.00
Intercept	18.023	-30.00	30.00
Correlation Coefficient	0.9999	1.00	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	Standard	Reading
	4.00	196.77
	7.00	15.25
	10.00	-157.95

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AutoTitrator Instrument File Printout

Queue: WETC Analytical Batch: 115431 Temp Batch: 115433 Instrument: AUTOT

#	Sample Id	Type	pH	Temp	Cond	ALKT	ALKP	CO3	HCO3	OH	Run Date	Analyst
32797	1032326	STD 4	4.0066	22.1111							9/11/2012 1:10:26 AM	MBW
32798	1032327	STD 7	7.0200	22.1263							9/11/2012 1:15:01 AM	MBW
32799	1032328	STD 10	9.9882	22.0958							9/11/2012 1:19:22 AM	MBW
32804	1032329	MB	5.9431	21.3386	0.6900	0.3573	0.0000	0.0000	0.3573	0	9/11/2012 2:13:43 AM	MBW
32806	1032330	STDL	10.0595	21.3820	99.8	49.8881	16.6573	33.3145	16.5736	0	9/11/2012 2:35:42 AM	MBW
32807	1032331	STDH	10.2810	21.7728	100	200.7797	78.9503	157.9006	42.8791	0	9/11/2012 2:46:29 AM	MBW
32808	1032332	CCV1			1437.0000	102					9/11/2012 2:48:38 AM	MBW
32809	1032333	CCV2			9590.0000	95.9					9/11/2012 2:50:18 AM	MBW
32810	1032334	CCV3			90800.0000	90.8					9/11/2012 2:51:58 AM	MBW
32811	1032344	DUP	7.7358	21.6570		2759.0923	0.0000	0.0000	2759.0923	0	9/11/2012 3:01:32 AM	MBW
32812	9986472001	SAMPL	7.6952	21.2372		2781.3823	0.0000	0.0000	2781.3823	0	9/11/2012 3:11:54 AM	MBW
32813	9986484001	SAMPL	7.3098	21.3820		1892.7996	0.0000	0.0000	1892.7996	0	9/11/2012 3:20:26 AM	MBW
32814	9986484002	SAMPL	7.2935	21.2372		3269.5774	0.0000	0.0000	3269.5774	0	9/11/2012 3:31:40 AM	MBW
32815	9986484003	SAMPL	7.6684	21.2227		2146.5540	0.0000	0.0000	2146.5540	0	9/11/2012 3:40:46 AM	MBW
32816	9986484004	SAMPL	7.3719	21.3675		4298.5796	0.0000	0.0000	4298.5796	0	9/11/2012 3:53:16 AM	MBW
32817	9986484005	SAMPL	7.2578	21.8162		4125.0522	0.0000	0.0000	4125.0522	0	9/11/2012 4:05:26 AM	MBW
32818	9986484006	SAMPL	7.1088	22.2633		1890.1208	0.0000	0.0000	1890.1208	0	9/11/2012 4:13:44 AM	MBW
32819	9986490001	SAMPL	7.0839	22.3395		953.0865	0.0000	0.0000	953.0865	0	9/11/2012 4:21:34 AM	MBW
32820	9986490002	SAMPL	7.7083	21.8596		1646.6803	0.0000	0.0000	1646.6803	0	9/11/2012 4:29:36 AM	MBW
32821	9986490003	SAMPL	8.0688	21.6570		2303.9014	0.0000	0.0000	2303.9014	0	9/11/2012 4:38:46 AM	MBW
32822	1032345	STD 7	7.0034	21.3965							9/11/2012 4:44:03 AM	MBW
32823	1032346	STDL	9.9578	21.2372	98.9	49.4400	15.8861	31.7722	17.6678	0	9/11/2012 4:53:21 AM	MBW
32824	1032347	STDH	10.2462	21.3675	99.3	198.6057	84.8600	169.7200	28.8857	0	9/11/2012 5:00:27 AM	MBW
32825	1032348	MB	6.1798	21.5268		1.0238	0.0000	0.0000	1.0238	0	9/11/2012 5:07:59 AM	MBW

First Review Date/By:

Second Review Date/By:

Approved Date/By:

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File Name: \\Alsifilesrvr\public\WET CHEM DEPT\Group D Benchsheets\AutoTitrate\2012 - Autotitrate\115431.TXT

Program: ALS0016-03

AutoTitrator Instrument File Printout

Queue: WETC Analytical Batch: 115431 Temp Batch: 115433 Instrument: AUTOT

#	Sample Id	Type	pH	Temp	Cond	ALKT	ALKP	CO3	HCO3	OH Run Date	Analyst
32826	1032349	DUP	7.4024	21.7728	90.6000	17.2069	0.0000	0.0000	17.2069	09/11/2012 5:16:35 AM	MBW
32827	9987068003	SAMPL	7.4082	22.0958	88.9000	17.1400	0.0000	0.0000	17.1400	09/11/2012 5:25:25 AM	MBW
32828	9986490004	SAMPL	7.8044	22.2633		3316.9695	0.0000	0.0000	3316.9695	09/11/2012 5:35:29 AM	MBW
32829	9986490005	SAMPL	7.3173	22.1567		3553.2385	0.0000	0.0000	3553.2385	09/11/2012 5:46:49 AM	MBW
32830	9986490006	SAMPL	7.1978	21.9464		2293.3562	0.0000	0.0000	2293.3562	09/11/2012 5:55:47 AM	MBW
32831	9986490007	SAMPL	7.3466	21.8307		2222.8574	0.0000	0.0000	2222.8574	09/11/2012 6:05:23 AM	MBW
32832	9986490008	SAMPL	7.3136	21.6426		3596.1074	0.0000	0.0000	3596.1074	09/11/2012 6:17:10 AM	MBW
32833	9986490009	SAMPL	7.3610	21.8017		2869.8916	0.0000	0.0000	2869.8916	09/11/2012 6:27:13 AM	MBW
32834	9986933001	SAMPL	7.9126	21.9753		4693.3506	0.0000	0.0000	4693.3506	09/11/2012 6:39:54 AM	MBW
32835	9986940001	SAMPL	9.2929	22.0044						9/11/2012 6:44:01 AM	MBW
32836	9987068004	SAMPL	7.6701	22.2786	242.0000	110.7094	0.0000	0.0000	110.7094	09/11/2012 6:52:35 AM	MBW
32837	1032350	STD 7	6.9974	22.5373						9/11/2012 6:56:55 AM	MBW
32838	1032351	STDL	9.8402	22.2329		49.5597	13.8154	27.6308	21.9289	09/11/2012 7:06:09 AM	MBW
32839	1032352	STDH	10.1891	22.0654		194.7292	75.3678	150.7356	43.9936	09/11/2012 7:14:03 AM	MBW
32840	1032353	MB	6.2016	21.9608		0.6297	0.0000	0.0000	0.6297	09/11/2012 7:21:22 AM	MBW
32841	1032354	DUP	7.8611	21.8885	320.0000	78.6635	0.0000	0.0000	78.6635	09/11/2012 7:30:13 AM	MBW
32842	9987068005	SAMPL	7.8941	21.9464	313.0000	77.4105	0.0000	0.0000	77.4105	09/11/2012 7:39:02 AM	MBW
32843	9987068006	SAMPL	7.9084	22.0197	438.0000	140.7888	0.0000	0.0000	140.7888	09/11/2012 7:47:52 AM	MBW
32844	9987068007	SAMPL	7.7921	22.2024	237.0000	119.9550	0.0000	0.0000	119.9550	09/11/2012 7:56:30 AM	MBW
32845	9987068008	SAMPL	7.8803	22.4003	508.0000	135.7518	0.0000	0.0000	135.7518	09/11/2012 8:05:20 AM	MBW
32846	9987068009	SAMPL	8.0727	22.8567	255.0000	107.6272	0.0000	0.0000	107.6272	09/11/2012 8:14:59 AM	MBW
32847	9987068010	SAMPL	7.4980	22.7351	83.5000	23.1691	0.0000	0.0000	23.1691	09/11/2012 8:23:26 AM	MBW
32848	9987068011	SAMPL	7.9189	22.5830	224.0000	109.8114	0.0000	0.0000	109.8114	09/11/2012 8:32:15 AM	MBW
32849	9987068012	SAMPL	7.2799	22.5069	89.6000	44.0939	0.0000	0.0000	44.0939	09/11/2012 8:43:20 AM	MBW
32850	9987068013	SAMPL	8.1593	22.2938	244.0000	129.0619	0.0000	0.0000	129.0619	09/11/2012 8:52:35 AM	MBW

First Review Date/By: _____

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Program: ALS0016-03

AutoTitrator Instrument File Printout

Queue: WETC Analytical Batch: 115431 Temp Batch: 115433 Instrument: AUTOT

#	Sample Id	Type	pH	Temp	Cond	ALKT	ALKP	CO3	HCO3	OH	Run Date	Analyst
32851	9987068014	SAMPL	8.0536	22.4308	233.0000	120.8173	0.0000	0.0000	120.8173	0	9/11/2012 9:01:31 AM	MBW
32852	1032355	STD 7	6.9767	22.4460							9/11/2012 9:05:55 AM	MBW
32853	1032356	STDL	9.7573	22.4764		49.1061	12.3920	24.7841	24.3220	0	9/11/2012 9:15:06 AM	MBW
32854	1032357	MB	6.2491	22.7807		0.8794	0.0000	0.0000	0.8794	0	9/11/2012 9:22:39 AM	MBW
32855	1032358	DUP	7.5472	22.8719	124.6000	61.9109	0.0000	0.0000	61.9109	0	9/11/2012 9:31:23 AM	MBW
32856	9987068015	SAMPL	7.5044	22.6438	122.2000	61.2282	0.0000	0.0000	61.2282	0	9/11/2012 9:39:51 AM	MBW
32857	9987078001	SAMPL	7.7667	22.4764	1250.0000	323.4224	0.0000	0.0000	323.4224	0	9/11/2012 9:50:18 AM	MBW
32858	9987087002	SAMPL	8.1546	22.4764	23800.0000						9/11/2012 9:56:01 AM	MBW
32859	9987142001	SAMPL	6.9931	22.4764	299.0000	124.7611	0.0000	0.0000	124.7611	0	9/11/2012 10:04:13 AM	MBW
32860	9987149001	SAMPL	8.1440	22.5373	327.0000	183.1169	0.0000	0.0000	183.1169	0	9/11/2012 10:13:09 AM	MBW
32861	9987150001	SAMPL	6.9848	22.3547	60.1000	13.4403	0.0000	0.0000	13.4403	0	9/11/2012 10:21:18 AM	MBW
32862	9987175001	SAMPL	7.4554	22.3242	82.9000	25.2843	0.0000	0.0000	25.2843	0	9/11/2012 10:29:56 AM	MBW
32863	9987175002	SAMPL	7.6016	22.4308	106.6000	33.9715	0.0000	0.0000	33.9715	0	9/11/2012 10:38:44 AM	MBW
32864	9987192001	SAMPL	7.6877	22.7351	440.0000	178.3253	0.0000	0.0000	178.3253	0	9/11/2012 10:47:35 AM	MBW
32865	9987192002	SAMPL	7.4841	22.4917	608.0000	252.9955	0.0000	0.0000	252.9955	0	9/11/2012 10:56:33 AM	MBW
32866	1032362	STD 7	6.9952	22.1567							9/11/2012 11:00:58 AM	MBW
32867	1032363	STDL	9.6851	22.0501		50.1054	11.3445	22.6889	27.4165	0	9/11/2012 11:10:19 AM	MBW
32868	1032364	MB	6.0285	22.0958		0.3787	0.0000	0.0000	0.3787	0	9/11/2012 11:17:29 AM	MBW
32869	1032365	DUP	7.0283	22.0654	747.0000	168.9098	0.0000	0.0000	168.9098	0	9/11/2012 11:26:40 AM	MBW
32870	9987192003	SAMPL	7.0490	22.0654	747.0000	168.3600	0.0000	0.0000	168.3600	0	9/11/2012 11:35:04 AM	MBW
32871	9987199001	SAMPL	8.0093	22.0806	995.0000	137.1799	0.0000	0.0000	137.1799	0	9/11/2012 11:44:01 AM	MBW
32872	9987203001	SAMPL	6.1735	22.2633	201.0000	8.0548	0.0000	0.0000	8.0548	0	9/11/2012 11:51:44 AM	MBW
32873	9987203002	SAMPL	6.5971	22.5373	183.6000	17.9433	0.0000	0.0000	17.9433	0	9/11/2012 11:59:45 AM	MBW
32874	9987203003	SAMPL	6.2543	22.3699	201.0000	9.5263	0.0000	0.0000	9.5263	0	9/11/2012 12:07:37 PM	MBW
32875	9987203004	SAMPL	7.6473	22.3547	222.0000	74.5816	0.0000	0.0000	74.5816	0	9/11/2012 12:16:10 PM	MBW

First Review Date/By: _____

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Program: ALS0016-03

AutoTitrator Instrument File Printout

Queue: WETC Analytical Batch: 115431 Temp Batch: 115433 Instrument: AUTOT

#	Sample Id	Type	pH	Temp	Cond	ALKT	ALKP	CO3	HCO3	OH Run Date	Analyst
32876	9987205001	SAMPL	7.0097	22.3090	79.6000	36.3766	0.0000	0.0000	36.3766	0 9/11/2012 12:24:19 PM	MBW
32877	9987205002	SAMPL	7.7564	22.4460	162.9000	82.6789	0.0000	0.0000	82.6789	0 9/11/2012 12:32:57 PM	MBW
32878	9987205003	SAMPL	8.0252	22.3090	221.0000	119.3902	0.0000	0.0000	119.3902	0 9/11/2012 12:41:40 PM	MBW
32879	9987205004	SAMPL	8.0129	22.2786	218.0000	118.9290	0.0000	0.0000	118.9290	0 9/11/2012 12:50:35 PM	MBW
32880	1032366	STD 7	6.9974	22.3090						9/11/2012 12:54:53 PM	MBW
32881	1032367	STDL	9.5708	22.3547		50.1774	8.7664	17.5327	32.6447	0 9/11/2012 1:04:52 PM	MBW
32882	1032368	MB	5.9531	22.9480		0.3017	0.0000	0.0000	0.3017	0 9/11/2012 1:11:59 PM	MBW
32883	1032369	DUP	7.9944	22.8567	366.0000	151.6257	0.0000	0.0000	151.6257	0 9/11/2012 1:20:57 PM	MBW
32884	9987205005	SAMPL	8.0217	22.7199	355.0000	144.2936	0.0000	0.0000	144.2936	0 9/11/2012 1:29:53 PM	MBW
32885	9987205006	SAMPL	7.5870	22.5525	162.9000	87.6303	0.0000	0.0000	87.6303	0 9/11/2012 1:38:24 PM	MBW
32886	9987205007	SAMPL	6.9602	22.7503	90.4000	41.2360	0.0000	0.0000	41.2360	0 9/11/2012 1:46:36 PM	MBW
32887	9987205008	SAMPL	6.0214	22.4612	0.8100	0.5292	0.0000	0.0000	0.5292	0 9/11/2012 1:54:40 PM	MBW
32888	9987212001	SAMPL	7.9902	22.2481						9/11/2012 1:59:48 PM	MBW
32889	9987215002	SAMPL	7.9885	22.1263						9/11/2012 2:04:57 PM	MBW
32890	9987216001	SAMPL	6.1713	22.1720	551.0000	205.3838	0.0000	0.0000	205.3838	0 9/11/2012 2:13:11 PM	MBW
32891	9987216002	SAMPL	7.3433	22.7959	205.0000	22.0046	0.0000	0.0000	22.0046	0 9/11/2012 2:21:43 PM	MBW
32892	9987148001	SAMPL	7.3927	22.8111	84.2000	24.1182	0.0000	0.0000	24.1182	0 9/11/2012 2:33:11 PM	MBW
32893	9986668008	SAMPL	7.5021	22.6894						9/11/2012 2:39:49 PM	MBW
32894	1032423	STD 7	6.9870	22.5677						9/11/2012 2:46:24 PM	MBW
32895	1032424	STDL	9.4571	22.6134		49.4678	7.2461	14.4922	34.9755	0 9/11/2012 2:57:44 PM	MBW
32897	1032425	MB	5.6920	22.5830	0.8500	0.0795	0.0000	0.0000	0.0795	0 9/11/2012 3:15:01 PM	MBW
32898	1032426	CCV1			1450.0000					9/11/2012 3:16:45 PM	MBW

First Review Date/By: SA 9-13-12

Second Review Date/By: MBW 9/14/12

Approved Date/By: MBW 9/14/12

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Program: ALS0016-03

Reactive Cyanide by SW-846 7.3 Summary Forms

Form 4B
Inorganic Blank Summary

Analysis Method: 7.3 CN

SDG No.: ERT-009

Prep Blank A Matrix (soil/water): water

Units: ppm

Prep Blank B Matrix (soil/water):

Units:

Analyte	Initial Calibration Blank (mg/L) (1)9/20/12 (2)		Continuing Calibration Blanks (mg/L) (1)9/20/12 (2)		(1)9/20/12 (2)		(1)9/20/12 (2)		Preparation Blank A ID: 1036741 (1)9/20/12 (2)		Preparation Blank B ID: (1) (2)	
Cyanide	0.003	U	0.003	U	0.003	U	0.003	U	--	--		
Cyanide, Reactive	--	--	--	--	--	--	--	--	0.003	U		

(1) Analysis Date

(2) The following qualifiers are used:

U: The analyte concentration is less than 1/2 the reporting limit listed

J: The analyte concentration is less than 1/2 the reporting limit but greater than the method detection limit

Comments:

0080

Form 6B
Inorganic Initial and Continuing Calibration Summary

Analysis Method: 7.3 CN

SDG No.: ERT-009

Instrument ID: AA3

Concentration Units: mg/L

Analyte	Initial Calibration					Continuing Calibration							
	True Conc.	Conc. Recovered (1)9/20/12	Recovery (%)	(2)	Acc. Limit (%)	True Conc.	Conc. Recovered (1)9/20/12	Recovery (%)	(2)	Conc. Recovered (1)9/20/12	Recovery (%)	(2)	Acc. Limit (%)
Cyanide	0.050	0.047	94		90-110	0.050	--	--		--	--		90-110
						0.200	0.210	105		0.205	103		90-110

(1) Analysis Date

(2) The following qualifiers are used:

* : Values outside of acceptable limits

Comments:

0804

Form 6B2
Inorganic Initial and Continuing Calibration Summary

Analysis Method: 7.3 CN

SDG No.: ERT-009

Instrument ID: AA3

Concentration Units: mg/L

Analyte	Continuing Calibration											
	True Conc.	Conc. Recovered (1)9/20/12	Recovery (%)	(2)	Conc. Recovered (1)	Recovery (%)	(2)	Conc. Recovered (1)	Recovery (%)	(2)	Acc. Limit (%)	
Cyanide	0.050	0.049	98								90-110	
	0.200	--	--								90-110	

(1) Analysis Date

(2) The following qualifiers are used:

* : Values outside of acceptable limits

Comments:

5080

Form 8B
Laboratory Control Sample (LCS) Recovery Summary

Analysis Method: 7.3 CN
SDG No.: ERT-009

Matrix (soil/water): water
Units: ppm
Date Analyzed: 9/20/2012

Lab Sample ID: 1036742
Lab File ID: N/A
Instrument ID: AA3
GC Column: N/A

Analyte	Concentration Added	Concentration Recovered	LCS Recovery (%)	(1)	Acceptable Limits (%)
Cyanide, Reactive	10.0	1.30	13		0-92

(1) The following qualifiers are used:
* : Values outside of acceptable limits

Comments: Results are not prep. factor corrected.

9080

Reactive Cyanide by SW-846 7.3 Raw Data

REACTIVITY PREPARATION

Method:	Ch. 7.3.3.2/7.3.4.2	Rule:	CNRDIST	Reagents:		Reviewed By:	
SOP:	09-R	Batch:	23957	0.01 N H2SO4:	WR120917004/2010		
Queue	WCPR	HBN:	482345	0.25 N NaOH:	WR120913009/20006		
Date:	9/20/2012	Rule:	S02RDIST	CN Spike:	WS120920016	Reviewed Date:	
Time:	8:15	Batch:	23958	SO2 Spike:	WS120920017	9/20/12	
Tech:	LMM	HBN:	482347	0.01 N H2SO4:	WR120905005		

Line#	Sample #	Sample Amount (mL or g)	Spike Amount (mL)	Final Volume (mL)	Time On:	Time Off:	Comments
1.)	1036741/1036748 MB	20.16	-	100	12:45	13:45	
2.)	1036742 RCN LCS	10.04	10	50	12:45	13:45	
3.)	1036749 RSO2 LCS	10.06	10	50	12:45	13:45	
4.)	9985997001-A	20.04	-	100	10:00	10:30	
5.)	9987590001-A	9.12	-	100	12:00	12:30	Extremely limited sample
6.)	9988161001-A	20.35	-	100	11:00	11:30	
7.)	9986940001-A	19.95	-	100	12:00	12:30	
8.)	9987012001-A	19.64	-	100	12:00	12:30	
9.)	9987029001-A	10.04	-	50	11:00	11:30	rcn-only
10.)	9987510001-A	20.4	-	100	12:00	12:30	
11.)	9987510002-A	19.98	-	100	12:45	13:45	
12.)	9988578005-A	20.58	-	100	9:00	9:30	
13.)	9988608001-A	20.36	-	100	10:00	10:30	
14.)	DUP 1036743/103675(	20.01	-	100	10:00	10:30	9988608001-A
15.)	9988609001-A	20.12	-	100	10:00	10:30	
16.)	9988803001-A	20.24	-	100	11:00	11:30	
17.)	9988810001-A	20.42	-	100	11:00	11:30	
18.)	9988911001-B	20.43	-	100	8:15	8:45	
19.)	9988911002-B	20.57	-	100	8:15	8:45	
20.)	9988911003-B	19.94	-	100	8:15	8:45	
21.)	9988911004-B	20.59	-	100	8:15	8:45	
22.)	9988911005-B	20.2	-	100	9:00	9:30	
23.)	9988911006-B	20.26	-	100	9:00	9:30	
24.)	9988911007-B	20.58	-	100	9:00	9:30	

Comments:

LMM 9/20/12

CYANIDE PREPARATION

Rule: CNTWDIST	Distillation		Cooling		Method: 335.4/9010C/4500CNI		
Batch: NA	Starting	Date: 09/24/12	Starting	Date: 09/24/12	SOP: 09-CNDIS		
HBN: NA		Time: 7:00:00		Time: 8:30:00	Queue: WCPR		
Rule: N/A		Tech: JEP		Tech: JEP			
Batch: N/A	Finishing	Date: 09/24/12	Finishing	Date: 09/24/12	Reviewed By: KLR		
HBN: N/A		Time: 8:30:00		Time: 8:30:00	Date Reviewed: 9/25/12		
		Tech: JEP		Tech: JEP			

Midi Position #	Sample #	Sample Amount (mL or g)	Spike Amount (mL)	Final Volume (mL)	Cl⁻ check (+/-)	S check (+/-)	Comments
1.)	0.25 STD	50 mL		50 mL	-	-	WS120924015
2.)	0.25 STD	50 mL		50 mL	-	-	WS120924015
3.)	0.25 STD	50 mL		50 mL	-	-	WS120924015
4.)	0.25 STD	50 mL		50 mL	-	-	WS120924015
5.)	0.10 STD	50 mL		50 mL	-	-	WS120924016
6.)	0.05 STD	50 mL		50 mL	-	-	WS120924017
7.)	0.025 STD	50 mL		50 mL	-	-	WS120924018
8.)	0.01 STD	50 mL		50 mL	-	-	WS120924019
9.)	0.005 STD	50 mL		50 mL	-	-	WS120924020
10.)	0.2 QC	50 mL		50 mL	-	-	WS120924023
11.)	0.2 QC	50 mL		50 mL	-	-	WS120924023
12.)	0.2 QC	50 mL		50 mL	-	-	WS120924023
13.)	0.2 QC	50 mL		50 mL	-	-	WS120924023
14.)	0.05 QC	50 mL		50 mL	-	-	WS120924022
15.)	0.05 QC	50 mL		50 mL	-	-	WS120924022
16.)	0.05 QC	50 mL		50 mL	-	-	WS120924022
17.)	0.05 QC	50 mL		50 mL	-	-	WS120924022
18.)	MB	50 mL		50 mL	-	-	
19.)							
20.)							

Reagents:		Standards:	Comments:
Total		5 ppm: WS120924014	
4% H_3NSO_3:	WR120420008	0.125 ppm: WS120924024	
50% H_2SO_4:	111011010		
51% $MgCl_2$:	120405008	**Midi Serial Numbers:**	KLR 9/25/12
Weak		AA00409	
Zn Acetate:	N/A	A5P0152	
Na Acetate:	N/A	**DigiTUBE® Lot #:**	
10% Acetic Acid:	N/A	J 137071-261	
Methyl Red Indicator:	N/A		

Cyanide Analysis Checklist

Instrument:	Bran Luebbe
Analyst:	JBP
1st Review/Enter:	AUTOPOST JBP 9/20/12
2nd Review:	9-21-12
Approval:	9-21-12

Batch Numbers	
Waters:	115902
Soils:	115902
Weaks:	—
Reactivities:	115902

Pipettes:	NA

Standards / Reagents	
0.25N NaOH	WR120906005
Pyridine/Barbituric Acid	WR120917003
Buffer	WR120919007
Chloramine-T	WR120919003
0.25 Std	WS120904005
0.10 Std	WS120904006
0.05 Std	WS120904007
0.025 Std	WS120904008
0.010 Std	WS120904009
0.005 Std	WS120904010
0.050 QC	WS120904011
0.200 QC	WS120904012

Entry / Approval

All QC Criteria was calculated and checked	**Initials & Date 1st Rev / 2nd Rev**
Blanks less than 0.005	JBP 9/20/12 / 9/21/12
QC's w/in 10%	JBP 9/20/12 / 9/21/12
LCS's w/in 10%	JBP 9/20/12 / 9/21/12
RPD's less than 10%	JBP 9/20/12 / 9/21/12
MS/MSD's w/in 10%	JBP 9/20/12 / 9/21/12

All samples run within hold time. If not the appropriate comment was placed on the sample. 9/21/12

All samples comply with sample identification/ correlated data/ historical data. 9/21/12

Chromatogram checked for correct peak integration. JBP 9/20/12

Reruns: List sample ID and dilution (if applicable)

Comments:

AA3

ALS Environmental

Name of Run	: 115902	Name of Analysis	:Cn.ANL
Date of Report	: 9/20/2012	System No.	:1
Date of Run	: 9/20/2012	Type of System	:AA3
Operator	: JEP	Start/Stop time	:14:57 - 17:00
Comment	:WETC		

Channel	:	2
Method	:	Method 2
Unit	:	mg/L
Calibr. Fit	:	Linear
Corr. Coeff.	:	1.0000
Base	:	-16692
Gain	:	32
Sensitivity	:	0.2132
Sample Limit 1	:	
Sample Limit 2	:	

Pk	Cup		Sample Id	Value	
0	0	B	Baseline	-0.001	
1	1	P	Primer	0.242	
2	2	D	Drift	0.248	
3	3	C	CP1	0.250	
4	4	C	CP2	0.101	
5	5	C	CP3	0.050	
6	6	C	CP4	0.025	
7	7	C	CP5	0.010	
8	8	C	CP6	0.005	
9	9	C	CP7	0.000	
10	10	D	Drift	0.248	
11	11	S	RINSE	0.004	
12	12	QC1	ICB	-0.001	
13	13	QC2	ICV0.05	0.047	94%
14	14	S	00~1036737~1	0.000	
15	15	S	00~1036038~1	0.000	
16	16	S	00~1036043~1	-0.001	
17	17	S	03~1036741~1	-0.001	
18	18	S	00~1036738~1	0.120	96%
19	19	S	00~1036039~1	0.117	94%
20	20	S	00~1036044~1	0.122	98%
21	21	S	03~1036742~5	0.051	
22	22	S	RINSE	0.000	

0811

	23	23	S	00~9988970001~1	0.001
	24	24	S	00~9988380006~1	0.013
	25	25	S	RINSE	-0.001
●	26	26	QC1	CCB	-0.001
●	27	27	QC3	CCV0.2	0.210 105%
	28	28	S	RINSE	0.000
	29	29	S	00~9988999008~1	0.007
	30	30	S	00~9989020004~1	0.027
	31	31	S	00~9989020005~1	0.002
	32	32	S	00~1036739~1	0.100 100%
	33	33	S	00~1036740~1	0.095 95%
	34	34	S	RINSE	-0.001
	35	35	S	00~9989020006~1	0.001
	36	36	S	00~9988687001~1	-0.001 RP
	37	37	S	00~1036035~1	-0.001 CA
	38	38	S	00~1036036~1	-0.001 CA
	39	39	S	RINSE	-0.001
	40	40	S	00~9987215002~1	-0.001 RP
	41	41	S	RINSE	-0.001
	42	42	QC1	CCB	-0.001
	43	43	QC2	CCV0.05	0.050 100%
	44	44	S	00~1036037~1	-0.001 CA
	45	45	S	RINSE	-0.001
	46	46	S	00~9987268001~1	-0.001 RP
	47	47	S	00~9987268002~1	-0.001
	48	48	S	00~9987268004~1	-0.001
	49	49	S	00~9987268005~1	0.000
	50	50	S	00~9987268006~1	-0.001
	51	51	S	00~9987268008~1	-0.001
	52	52	S	00~9987268009~1	-0.001
	53	53	S	00~9987268010~1	-0.001
	54	54	S	00~9987268011~1	-0.001
	55	55	S	RINSE	-0.001
●	56	56	QC1	CCB	-0.001
●	57	57	QC3	CCV0.2	0.205 103%
	58	58	S	RINSE	0.000
	59	59	S	00~9987268012~1	0.000
	60	60	S	00~9987268013~1	0.000
	61	61	S	03~9985997001~1	-0.001
	62	62	S	03~9987590001~1	0.015
	63	63	S	03~9988161001~1	-0.001
●	64	64	S	03~9986940001~1	-0.001
	65	65	S	03~9987012001~1	-0.001
	66	66	S	03~9987029001~1	-0.001
	67	67	S	03~9987510001~1	-0.001
	68	68	S	03~9987510002~1	-0.001
●	69	69	QC2	CCV0.05	0.049 98%
	70	70	S	RINSE	-0.001
●	71	71	QC1	CCB	-0.001

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72	72	S	03~9988578005~1	-0.001
73	73	S	03~9988608001~1	-0.001
74	74	S	03~1036743~1	-0.001
75	75	S	03~9988609001~1	-0.001
76	76	S	03~9988803001~1	-0.001
77	77	S	03~9988810001~1	-0.001
78	78	S	03~9988911001~1	-0.001
79	79	S	03~9988911002~1	-0.001
80	80	S	03~9988911003~1	-0.001
81	81	S	03~9988911004~1	-0.001
82	82	QC3	CCV0.2	0.202
83	83	S	RINSE	0.000
84	84	QC1	CCB	-0.001
85	85	S	03~9988911005~1	-0.001
86	86	S	03~9988911006~1	-0.001
87	87	S	03~9988911007~1	-0.001
88	88	QC2	CCV0.05	0.049
89	89	S	RINSE	-0.001
90	90	QC1	CCB	-0.001
91	91	D	DRIFT	0.248
92	0	B	FinalBase	-0.001

CORRECTIONS

Channel	:	2
Baseline	:	Yes
Drift	:	Yes
Carry over	:	No
%:		0.0

** <END OF REPORT> **

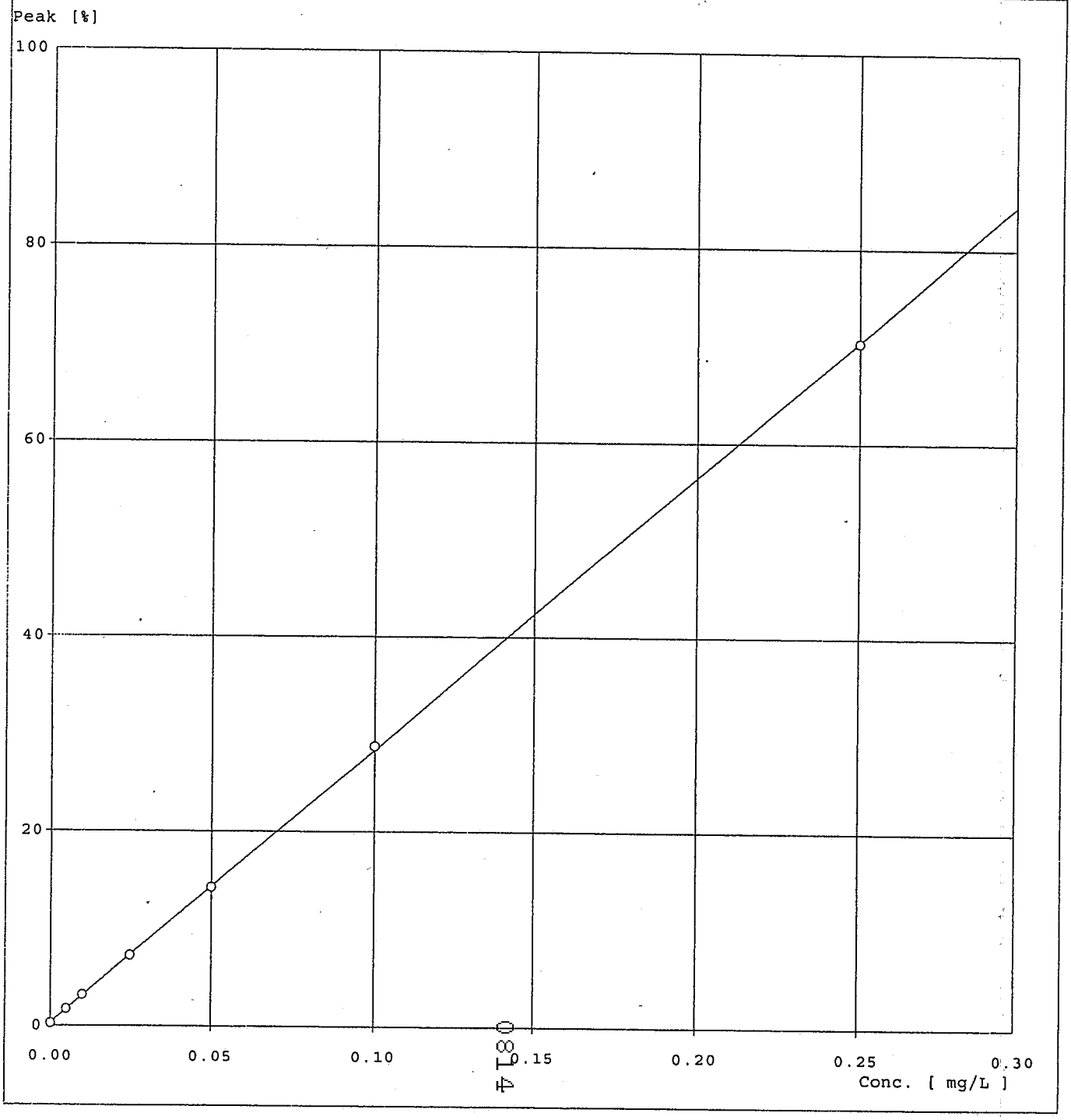
AA3

ALS Environmental

Name of run :115902.run
Comment :WETC

Name of analysis :Cn.ANL

Channel :2
Method :Method 2
Curve fit :linear a=-1.8983E-002 b=5.4396E-006
Corr. coeff. :1.0000

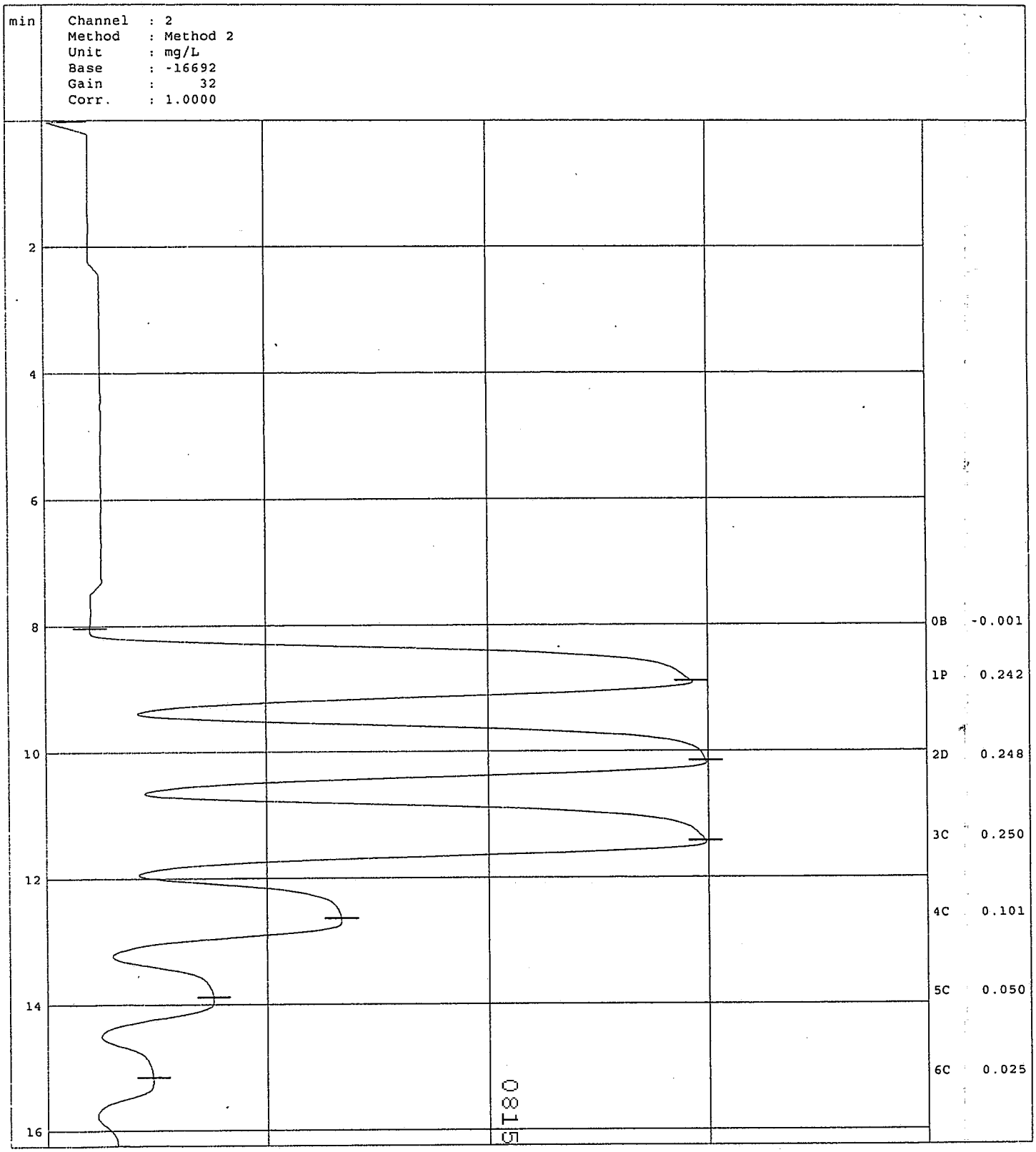


AA3

ALS Environmental

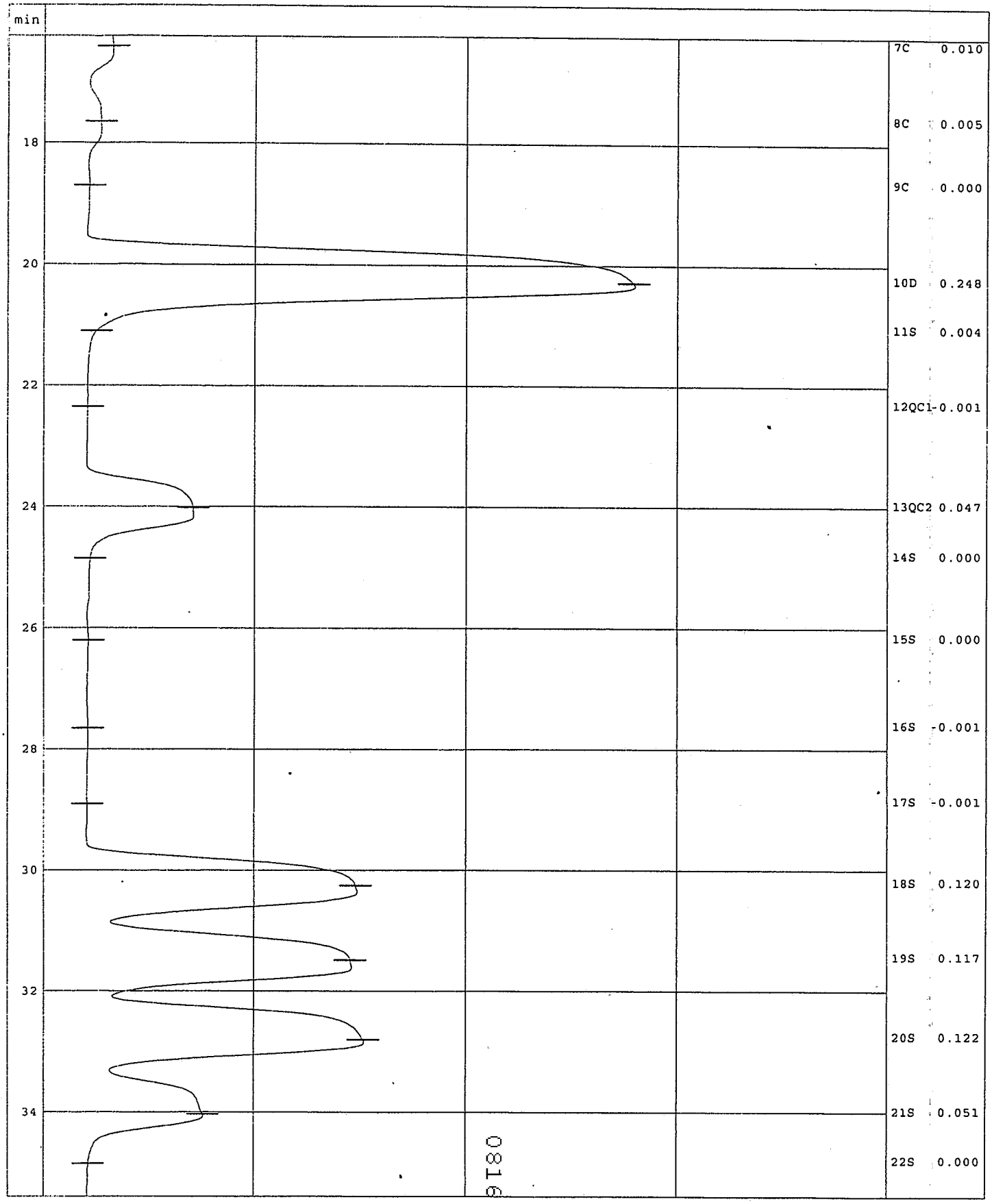
Name of run :115902.RUN
Comment :WETC

Name of analysis :Cn.ANL



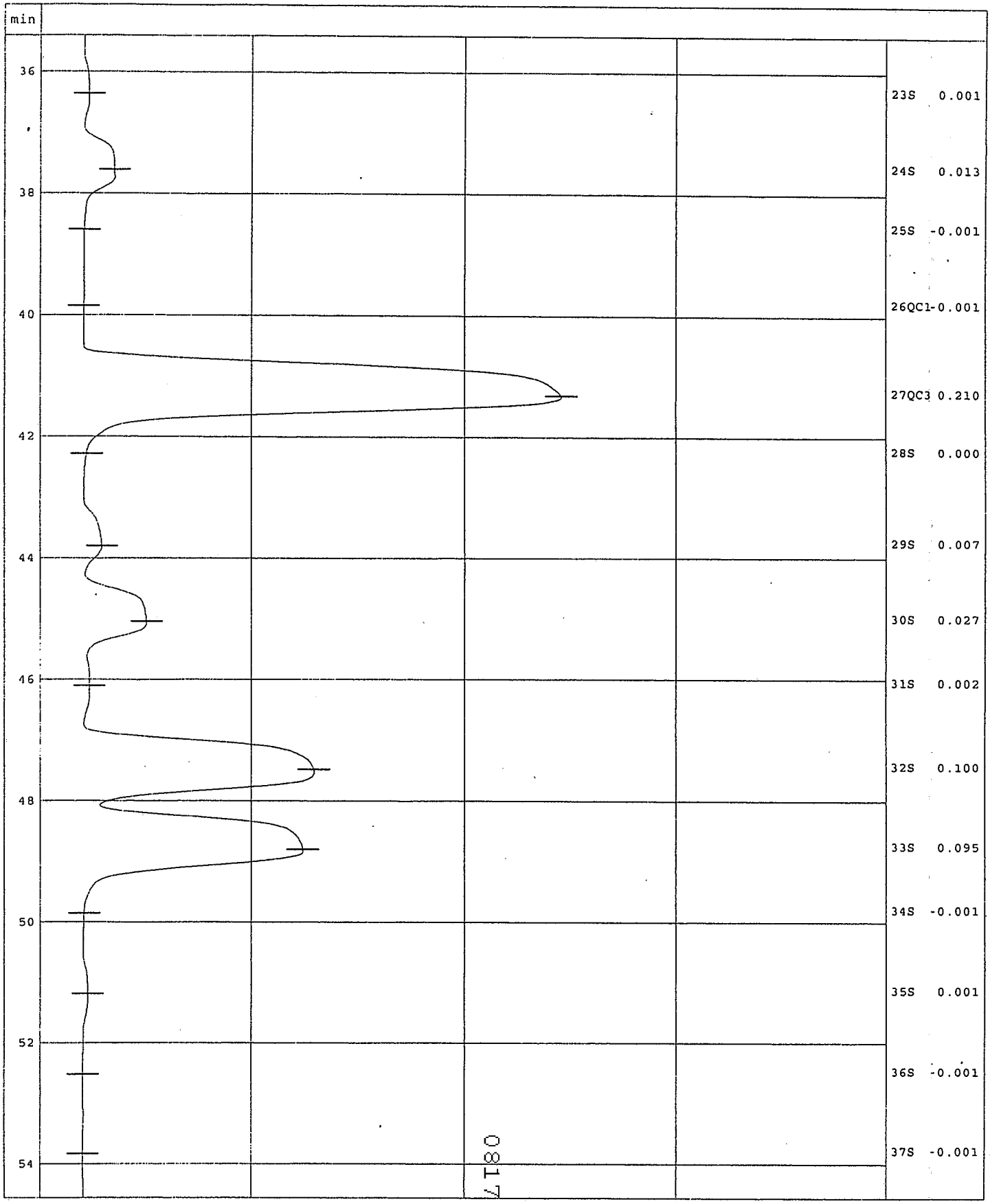
Name of run :115902.RUN
Comment :WETC

Name of analysis :Cn.ANL



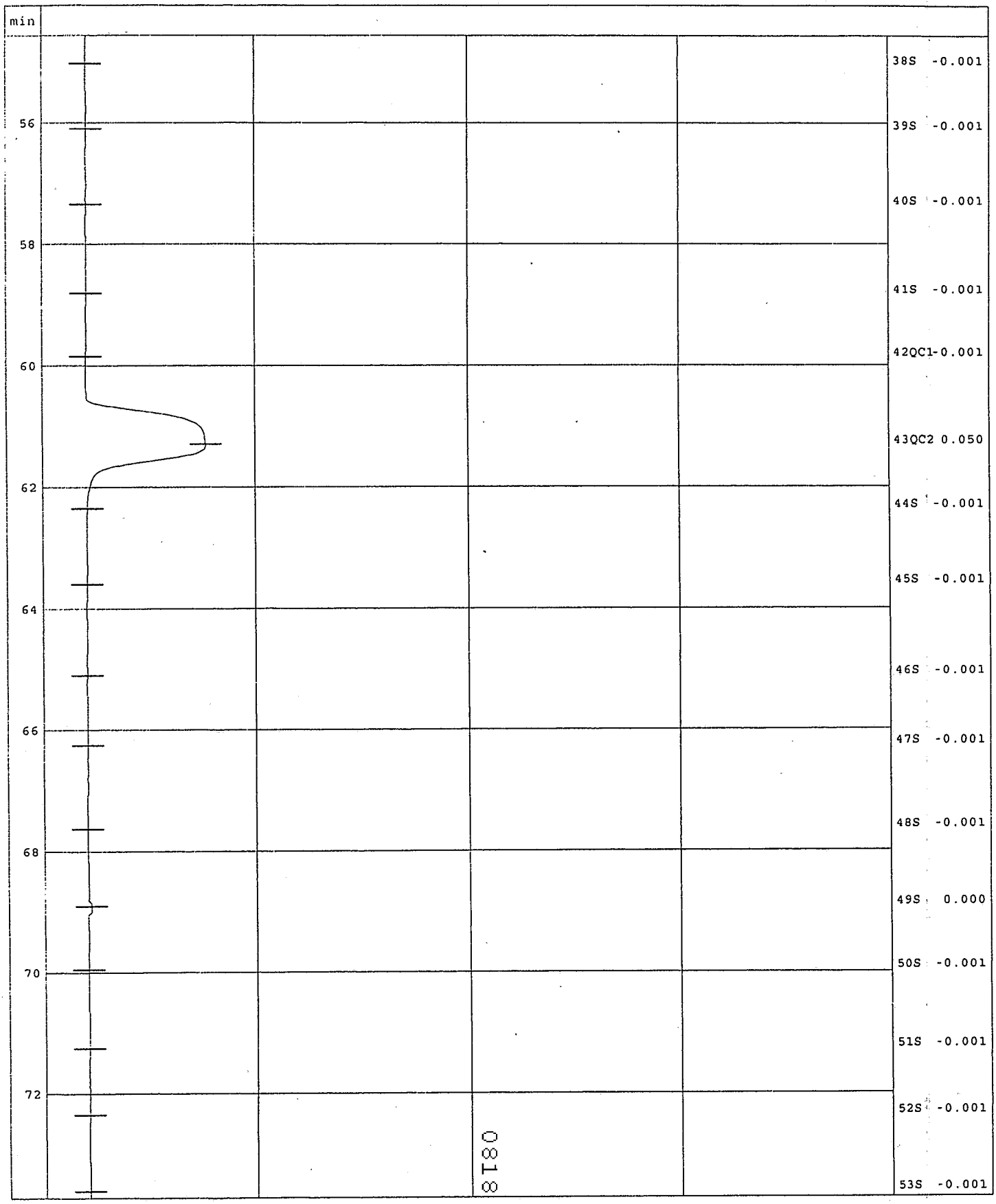
Name of run :115902.RUN
Comment :WETC

Name of analysis :Cn.ANL



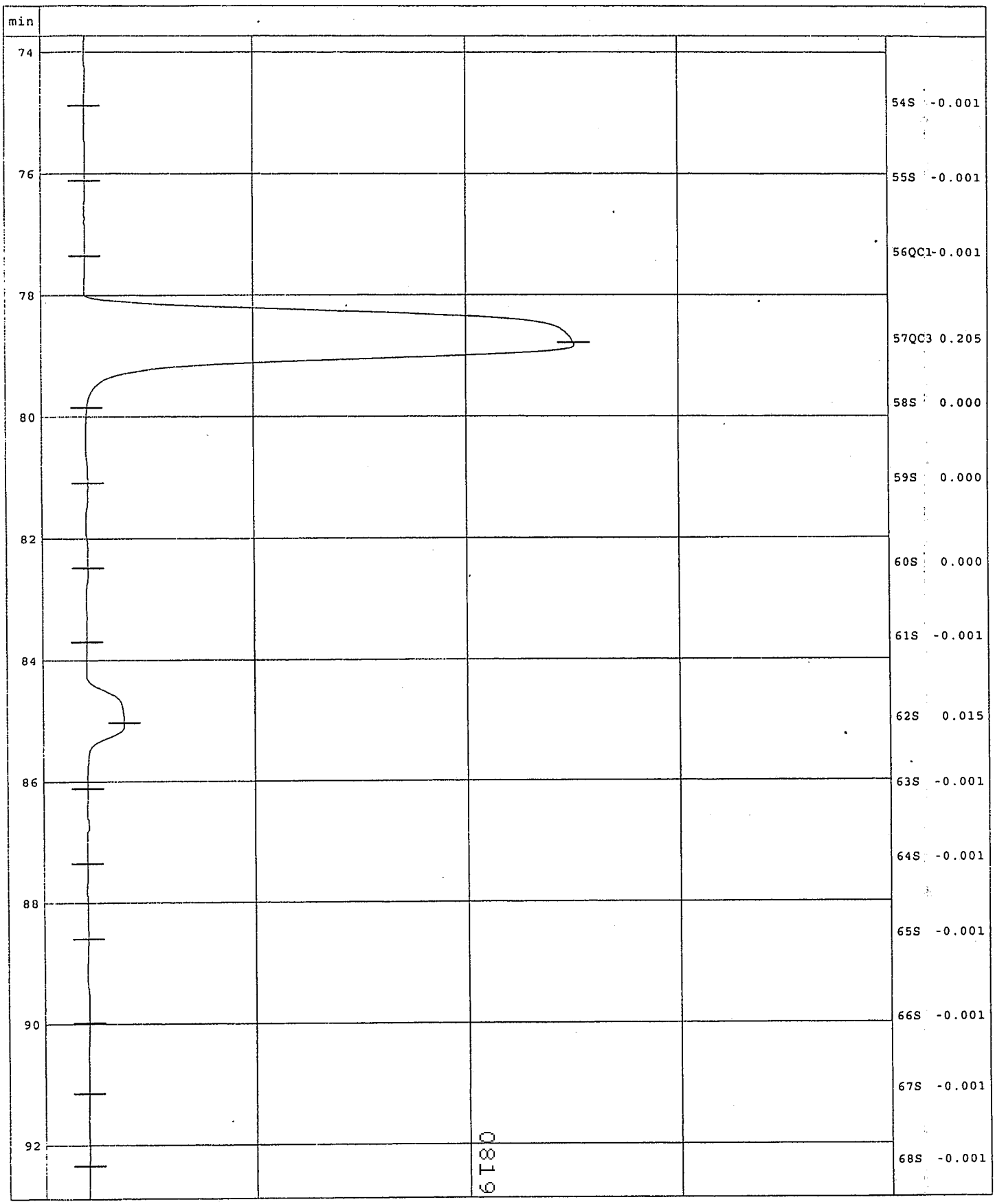
Name of run :115902.RUN
Comment :WETC

Name of analysis :Cn.ANL



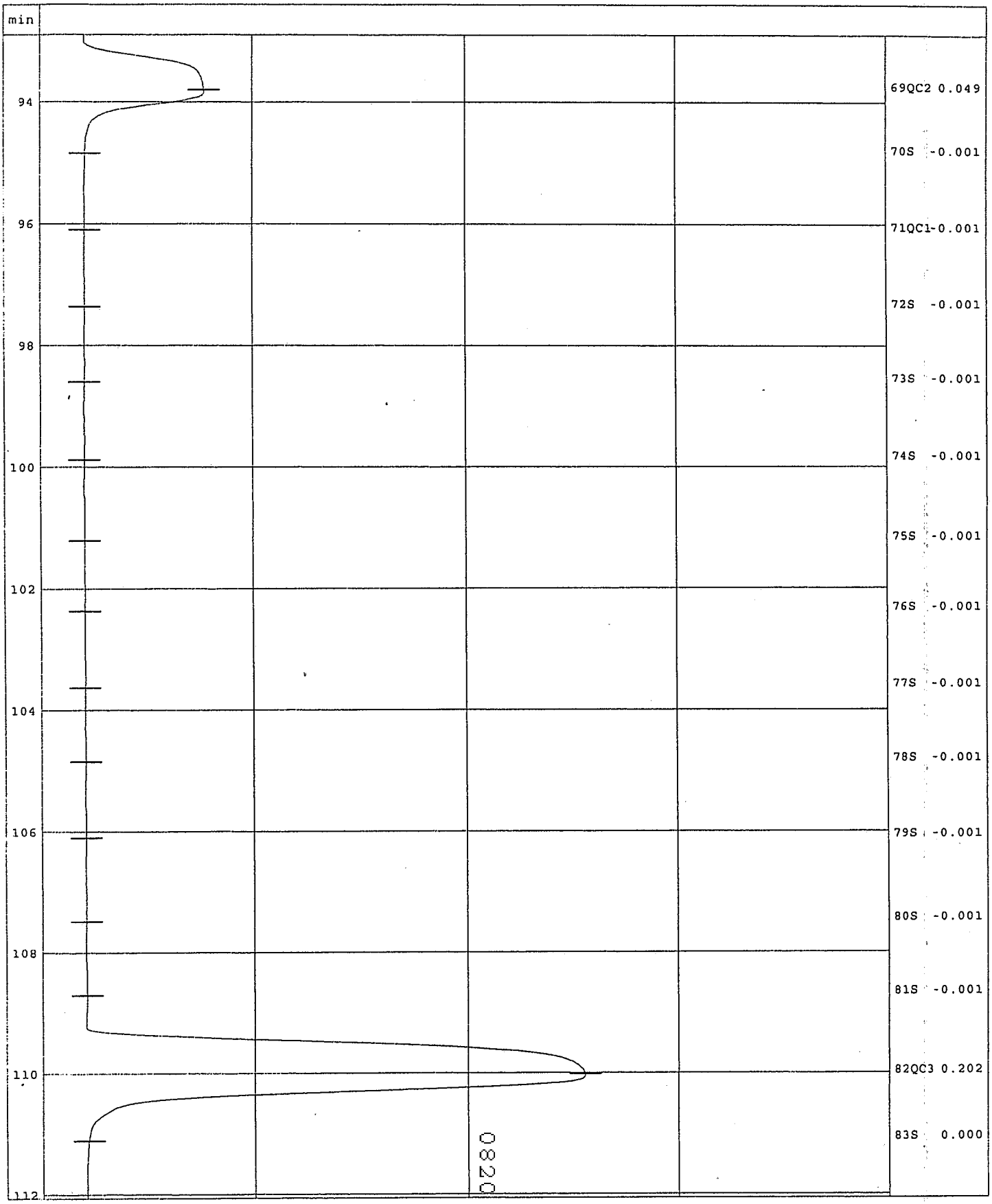
Name of run :115902.RUN
Comment :WETC

Name of analysis :Cn.ANL



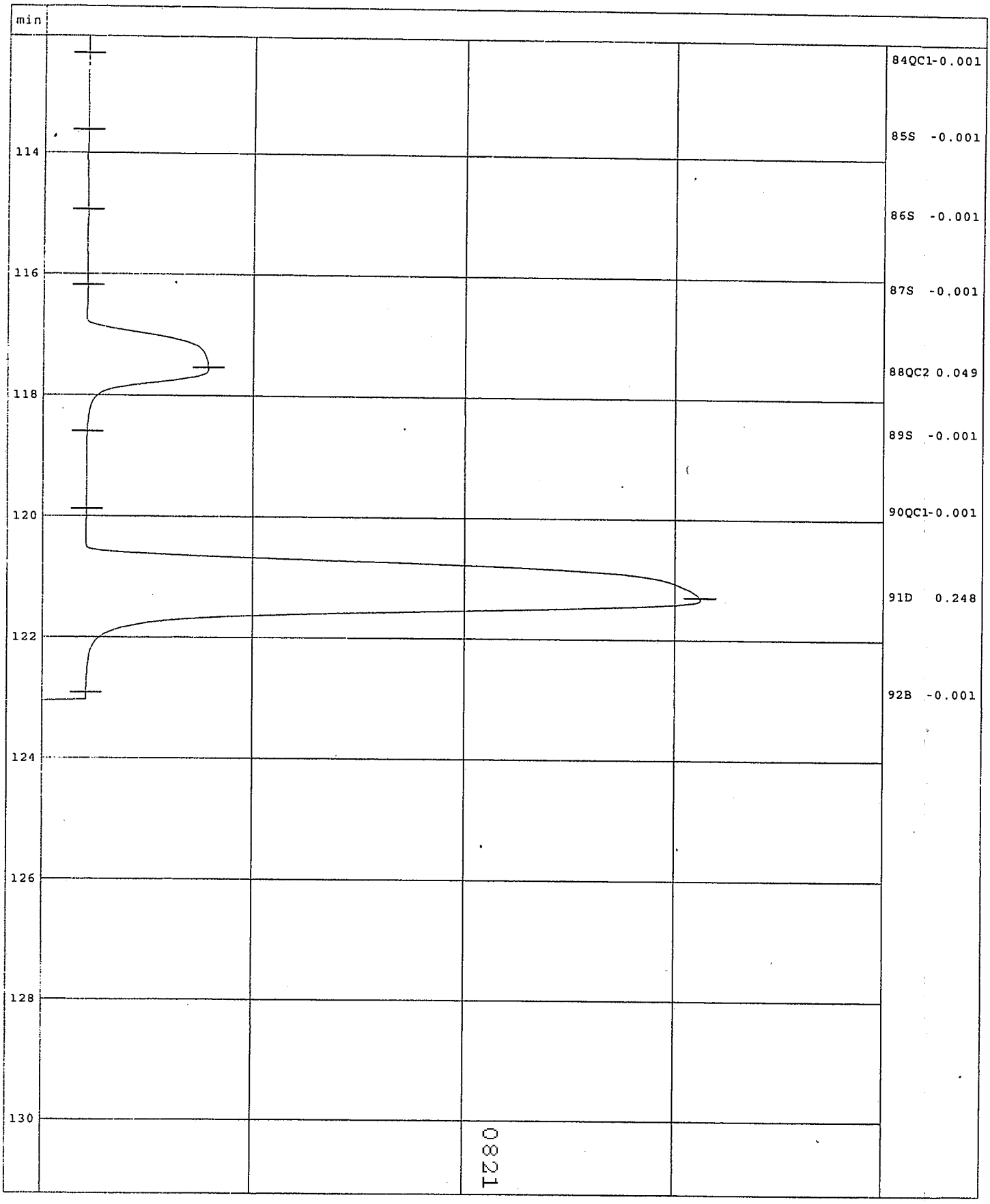
Name of run :115902.RUN
Comment :WETC

Name of analysis :Cn.ANL



Name of run :115902.RUN
Comment :WETC

Name of analysis :Cn.ANL



Reactive Sulfide by SW-846 7.3 Summary Forms

0822

Form 4B
Inorganic Blank Summary

Analysis Method: 7.3 SDG No.: ERT-009

Prep Blank A Matrix (soil/water): water Units: ppm

Prep Blank B Matrix (soil/water): Units:

Analyte	Initial Calibration Blank (mg/L) (1)9/2/12	(2)	Continuing Calibration Blanks (mg/L) (1)9/20/12	(2)	(1)	(2)	(1)	(2)	Preparation Blank A ID: 1036748 (1)9/20/12	(2)	Preparation Blank B ID: (1)	(2)
Sulfide	1.0	U	1.0	U					--	--		
Sulfide, Reactive	--	--	--	--					6.25	U		

(1) Analysis Date
(2) The following qualifiers are used:
U: The analyte concentration is less than 1/2 the reporting limit listed
J: The analyte concentration is less than 1/2 the reporting limit but greater than the method detection limit

Comments:

0823

Form 6B
Inorganic Initial and Continuing Calibration Summary

Analysis Method: 7.3

SDG No.: ERT-009

Instrument ID: N/A

Concentration Units: mg/L

Analyte	Initial Calibration					Continuing Calibration							
	True Conc.	Conc. Recovered (1)9/20/12	Recovery (%)	(2)	Acc. Limit (%)	True Conc.	Conc. Recovered (1)9/20/12	Recovery (%)	(2)	Conc. Recovered (1)	Recovery (%)	(2)	Acc. Limit (%)
Sulfide	25.0	24.2	97		90-110	25.0	23.5	94					90-110

(1) Analysis Date

(2) The following qualifiers are used:

* : Values outside of acceptable limits

Comments:

Form 8B
Laboratory Control Sample (LCS) Recovery Summary

Analysis Method: 7.3
SDG No.: ERT-009

Matrix (soil/water): water
Units: ppm
Date Analyzed: 9/20/2012

Lab Sample ID: 1036749
Lab File ID: N/A
Instrument ID: N/A
GC Column: N/A

Analyte	Concentration Added	Concentration Recovered	LCS Recovery (%)	(1)	Acceptable Limits (%)
Sulfide, Reactive	567	468	83		49-148

(1) The following qualifiers are used:
* : Values outside of acceptable limits

Comments: Results are not prep. factor corrected.

0825

Reactive Sulfide by SW-846 7.3 Raw Data

REACTIVITY PREPARATION

Method:	Ch. 7.3.3.2/7.3.4.2	Rule:	CNRDIST	Reagents:	Reviewed By:
SOP:	09-R	Batch:	23957	0.01 N H2SO4: WR120917004/2010	
Queue	WCPR	HBN:	482345	0.25 N NaOH: WR120913009/20006	
Date:	9/20/2012	Rule:	S02RDIST	CN Spike: WS120920016	Reviewed Date:
Time:	8:15	Batch:	23958	SO2 Spike: WS120920017	9/20/12
Tech:	LMM	HBN:	482347	0.01 N H2SO4: WR120905005	

Line#	Sample #	Sample Amount (mL or g)	Spike Amount (mL)	Final Volume (mL)	Time On:	Time Off:	Comments
1.)	1036741/1036748 MB	20.16	-	100	12:45	13:45	
2.)	1036742 RCN LCS	10.04	10	50	12:45	13:45	
3.)	1036749 RSO2 LCS	10.06	10	50	12:45	13:45	
4.)	9985997001-A	20.04	-	100	10:00	10:30	
5.)	9987590001-A	9.12	-	100	12:00	12:30	Extremely limited sample
6.)	9988161001-A	20.35	-	100	11:00	11:30	
7.)	9986940001-A	19.95	-	100	12:00	12:30	
8.)	9987012001-A	19.64	-	100	12:00	12:30	
9.)	9987029001-A	10.04	-	50	11:00	11:30	rcn-only
10.)	9987510001-A	20.4	-	100	12:00	12:30	
11.)	9987510002-A	19.98	-	100	12:45	13:45	
12.)	9988578005-A	20.58	-	100	9:00	9:30	
13.)	9988608001-A	20.36	-	100	10:00	10:30	
14.)	DUP 1036743/1036750	20.01	-	100	10:00	10:30	9988608001-A
15.)	9988609001-A	20.12	-	100	10:00	10:30	
16.)	9988803001-A	20.24	-	100	11:00	11:30	
17.)	9988810001-A	20.42	-	100	11:00	11:30	
18.)	9988911001-B	20.43	-	100	8:15	8:45	
19.)	9988911002-B	20.57	-	100	8:15	8:45	
20.)	9988911003-B	19.94	-	100	8:15	8:45	
21.)	9988911004-B	20.59	-	100	8:15	8:45	
22.)	9988911005-B	20.2	-	100	9:00	9:30	
23.)	9988911006-B	20.26	-	100	9:00	9:30	
24.)	9988911007-B	20.58	-	100	9:00	9:30	

Comments:

LMM 9/20/12

Sulfide

Queue:	WETC	Titration:		1st Review By/Date:	LMM 9/20/12
Rule:	SO2R	Date:	9/20/2012	2nd Review By/Date:	[illegible] 9/20/12
Batch:	115901	Time:	14:23	Approved By/Date:	[illegible] 9/20/12
HBN:	482424	Tech:	LMM		

				Sodium Thiosulfate					
Sample ID	Type	Sample Volume (mL)	Initial Titrant (mL)	Final Titrant (mL)	Total Titrant Used (mL)	Iodine Added (mL)	Sulfide (mg/L)	Percent Recovery
ICB		250	0.00	4.90	4.90	5	0.00250	
ICV	CCV	50	4.90	6.78	1.88	5	24.16	96.64
				LMM 9/20/12				
MB 1036748		50	0.00	5.02	5.02	5	-0.96	
LCS 1036749	RS	50	5.02	13.14	8.12	20	94.24	82.66667
9985997001-A		50	0.00	5.00	5.00	5	-0.80	
9987590001-A		50	5.00	9.80	4.80	5	0.80	
9988161001-A		50	0.00	4.90	4.90	5	0.00	
9986940001-A		50	4.90	9.72	4.82	5	0.64	
9987012001-A		50	0.00	4.98	4.98	5	-0.64	
9987510001-A		50	0.00	4.92	4.92	5	-0.16	
9987510002-A		50	4.92	9.98	5.06	5	-1.28	
BLANK		250	0.00	4.86	4.86	5	0.06	
CCV	CCV	50	4.86	6.82	1.96	5	23.52	94.08
9988578005-A		50	0.00	5.00	5.00	5	-0.80	
9988608001-A		50	5.00	9.96	4.96	5	-0.48	
DUP 1036750		50	0.00	5.02	5.02	5	-0.96	
9988609001-A		50	5.02	9.98	4.96	5	-0.48	
9988803001-A		50	0.00	4.88	4.88	5	0.16	
9988810001-A		50	4.88	9.70	4.82	5	0.64	
9988911001-B		50	0.00	4.86	4.86	5	0.32	
9988911002-B		50	4.86	9.66	4.80	5	0.80	
9988911003-B		50	0.00	4.82	4.82	5	0.64	
9988911004-B		50	4.82	9.62	4.80	5	0.80	
BLANK		250	0.00	4.78	4.78	5	0.19	
CCV	CCV	50	4.78	6.78	2.00	5	23.20	92.8

Standard/Reagent	Normality	Reagent/Standard Number
Sodium Thiosulfate Solution	0.025	120626014
Iodine Solution	0.025	120626022
Starch Indicator		120626016.00
6N (1:1) Hydrochloric Acid		WR120712011
25 mg/L CCV		WS120920019

Comments:

LMM 9/20/12

Sulfide

Queue:	WETC	Titration:		1st Review By/Date:	Laura 9/20/12
Rule:	SO2TALL / SO2R	Date:	9/20/2012	2nd Review By/Date:	9-21-12
Batch:	115901 / 115914	Time:	14:23	Approved By/Date:	9/21/12
HBN:	482424/482478	Tech:	LMM		

			Sodium Thiosulfate					
Sample ID	Type	Sample Volume (mL)	Initial Titrant (mL)	Final Titrant (mL)	Total Titrant Used (mL)	Iodine Added (mL)	Sulfide (mg/L)	Percent Recovery
ICB **		250	0.00	4.90	4.90	5	0.00250	
ICV **	CCV	50	4.90	6.78	1.88	5	24.16	96.64
				LMM 9/20/12				
9988911005-B		50	0.00	4.80	4.80	5	0.80	
9988911006-B		50	4.80	9.76	4.96	5	-0.48	
9988911007-B		50	0.00	4.92	4.92	5	-0.16	
BLANK 1037068		250	4.92	9.86	4.94	5	-0.06	
CCV 1037069	CCV	50	0.00	1.92	1.92	5	23.84	95.36
9989124001-a		250	1.92	6.72	4.80	5	0.16	
9989126001-a		250	0.00	5.00	5.00	5	-0.16	
9989126001-B dup 1037070		250	5.00	9.84	4.84	5	0.10	
9989126002-a		250	0.00	5.00	5.00	5	-0.16	
9989126003-a		250	5.00	10.00	5.00	5	-0.16	
9989126004-a		250	0.00	4.92	4.92	5	-0.03	
9989126005-a		250	4.92	9.92	5.00	5	-0.16	
9989126006-a		250	0.00	5.04	5.04	5	-0.22	
9989126007-a		250	5.04	9.56	4.52	5	0.61	
9989130001-a		250	0.00	5.12	5.12	5	-0.35	
BLANK 1037071		250	5.12	10.08	4.96	5	-0.10	
CCV 1037072	CCV	50	0.00	1.84	1.84	5	24.48	97.92
9989130002-a		250	1.84	6.84	5.00	5	-0.16	
9989130003-a		250	0.00	5.02	5.02	5	-0.19	
9989130004-a		250	5.02	10.22	5.20	5	-0.48	
9989130005-a		250	0.00	5.24	5.24	5	-0.54	
9989130006-a		250	5.24	10.46	5.22	5	-0.51	
9989130007-a		250	0.00	5.12	5.12	5	-0.35	

Standard/Reagent	Normality	Reagent/Standard Number
Sodium Thiosulfate Solution	0.025	120626014
Iodine Solution	0.025	120626022
Starch Indicator		120626016.00
6N (1:1) Hydrochloric Acid		WR120712011
25 mg/L CCV		WS120920019

Comments:
** CARRIED OVER FROM PREVIOUS PAGE

LMM 9/20/12

Flashpoint/Ignitability by 1010A Summary Forms

Form 6B
Inorganic Initial and Continuing Calibration Summary

Analysis Method: 1010

SDG No.: ERT-009

Instrument ID: Koehler

Concentration Units: ° F

Analyte	Initial Calibration					Continuing Calibration							
	True Conc.	Conc. Recovered (1)9/19/12	Difference (° F)	(2)	Acc. Limit (° F)	True Conc.	Conc. Recovered (1)	Difference (° F)	(2)	Conc. Recovered (1)	Difference (° F)	(2)	Acc. Limit (° F)
Flashpoint	81	82	-1		+/- 2								

(1) Analysis Date

(2) The following qualifiers are used:

* : Values outside of acceptable limits

Comments:

0831

Flashpoint/Ignitability by 1010A Raw Data

Flashpoint

Queue:	WETC
Rule:	1010FP
Batch:	115822
HBN:	482124

Analysis	
Date:	9/19/2012
Time:	5:55
Tech:	SDL

Reviewed By:	SDL
Reviewed Date:	9/19/2012
Approved By:	
Approved Date:	9/23/12

Sample Number	Temperature (°F)	Corrected Temperature (°F)	Result	Comment
p-Xylene	82	82	Sample is ignitable	
9986914001-A	200	200	Sample is not ignitable	
9987510002-A	200	200	Sample is not ignitable	
9986940001-A	200	200	Sample is not ignitable	
9986960001-A	200	200	Sample is not ignitable	
9987897001-A	200	200	Sample is not ignitable	482124 HBN/115823

9-23-12

Barometric Pressure (mmHg)	766
p-Xylene	110803001

p-Xylene Standard control limits 79-83 °F
Duplicate control limits ± 4 °F

0033

TCLP Extraction Logs

Work continued from page: _____

Work continued to page: _____

VOLATILE SPLP / TCLP PREPARATION (ZHE)

EPA Method: 1311	Tech Starting: SDL		Temp. Min.	Rotator #	Rotator #	Date Filtered: 9-20-12 14:00		
LIMS ID. Number: ZHELEAC		Date / Time	Temp. Max.					
ALSI SOP 09-2HE	Rotator On / Rotator Off		Thermometer ID # / rpm Rate			Tech Filtering: SDL		

Line #	Sample #	Sample Amount	Ex. Fl. Number	pH of Extraction Fuid	Amount of Ex.Fl.	Extractor Number	Sample has T Sample	Pressure Test Pass / Fail
1.)	~~9987204005~~ ~~9987204006~~ SDL 9-20-12 9986940001	FILTER ONLY				1		
2.)						4		
3.)								
4.)								
5.)	9880							
6.)								
7.)								
8.)								

Reagents 1: ENVIRO EXPRESS LOT# 100053 Reagents 3: —

Reagents 2: — Reagents 4: —

Comments: HDW 482394/~~482395~~ 482430 BATCH 8823/~~8824~~ SDL 9-20-12 8826

Reviewed By: _____

Date Reviewed: _____

Revision 12/01

Page #: 29

Approved By: SDL

Date Approved: 9-20-12

TCLP/SPLP PREPARATION

Work continued to page:____

EPA Method: 1311	Tech Starting: EL		Rotator # —	Rotator # —	Date Filtered: 9/11/12 5:45
LIMS ID. Number: TCLP LEAC	Date / Time	Temp. Min.			
		Temp. Max.			
WLSI SOP: 09-TCLP	Rotator On / Rotator Off	Thermometer ID #			Tech Filtering: EL
		rpm Rate			

Line #	Sample #	Sample Amount	pH after 5 minutes	pH after in HCl	Ex. Fl. Number	pH of Ex. Fl.	Amount of Ex. Fl.	Initial pH	Final pH	Rotator Number	Sample has T sample	Was 1mm size Sample used for Ex. Fl Determination ?	Method used to achieve 1mm size	ICP Spike	Hg Spike
1.)	9986940001		FILTER ONLY						9.28						
2.)	9987206001								8.98						
3.)															
4.)															
5.)															
6.)															
7.)	9880														
8.)															
9.)															
10.)															

Reagents 1: 1N HCl —

Reagents 2: Extraction Fluid 1 —

Reagents 3: Extraction Fluid 2: —

Reagents 4: Filter Paper ENVIRO EXPRESS COT# 400019

Reagents 5: Concentrated HNO_3 —

Comments: HBN#480 589 BATCH#8797 HBN#480 590 BATCH#8798 **Samples Requiring Initial Filtrate Added Back:**

% Dry solid comment entered EL 9/12/12

Reviewed By:____

Date Reviewed:____

Revision 2/06

Page #:____

Approved By: EL

Date Approved: 9/12/12

Work continued to page:_____

EPA Method # 9040 B
Leachate Type: TCLP
Leachate Batch #: 8791-8792

Date: 9-11-12
Time: —
Tech: SDL

#	Sample	Reading #1 pH	Reading #1 Time	Reading #1 Temp C	Reading #2 pH	Reading #2 Time	Reading #2 Temp C	Reading #3 pH	Reading #3 Time	Reading #3 Temp C	Reading #4 pH	Reading #4 Time	Reading #4 Temp C
1.)	Calpt 2.00	2.04	11:23	25.0	ID#			>	95.1	% SLOPE			
2.)	Calpt 7.00	7.01	11:24	25.0	↓								
3.)	CHECK 4.00	4.01	11:25	25.0									
4.)	1032184 LB	4.92	11:26	25.0	4.92	11:27	25.0						
5.)	9987059001	4.91	11:28	25.0	4.91	11:29	25.0						
6.)	1032185 LB	4.95	11:30	25.0	4.95	11:31	25.0						
7.)	9986916001	5.78	11:32	25.0	5.77	11:33	25.0						
8.)	9986916002	5.28	11:34	25.0	5.28	11:35	25.0						
9.)	9986916003	5.17	11:36	25.0	5.17	11:37	25.0						
10.)	9986916004	5.41	11:38	25.0	5.42	11:39	25.0						
11.)	9986916005	5.24	11:40	25.0	5.24	11:41	25.0						
12.)	9986916006	5.55	11:42	25.0	5.51	11:43	25.0						
13.)	9986916007	5.43	11:44	25.0	5.43	11:45	25.0						
14.)	CHECK 4.00	3.99	11:46	25.0									
15.)	SDL 9-11-12 ~~9986~~ 9987030001	4.92	11:47	25.0	4.93	11:48	25.0						
16.)	9986915001	5.03	11:49	25.0	5.02	11:50	25.0						
17.)	9986915002	5.19	11:51	25.0	5.19	11:52	25.0						
18.)	9986915003	5.32	11:53	25.0	5.32	11:54	25.0						
19.)	9986915004	4.96	11:55	25.0	4.96	11:56	25.0						
20.)	CHECK 4.00	3.98	11:57	25.0									

Comments:

Reviewed By:_____
Date Reviewed:_____
Revision 4/03

Approved By:_____
Date Approved:_____

EPA Method #
Leachate Type:
Leachate Batch #:

Date:
Time:
Tech:

#	Sample	Reading #1 pH	Reading #1 Time	Reading #1 Temp C	Reading #2 pH	Reading #2 Time	Reading #2 Temp C	Reading #3 pH	Reading #3 Time	Reading #3 Temp C	Reading #4 pH	Reading #4 Time	Reading #4 Temp C
1.)	1032516 LB	4.90	4:18	25.0	4.91	4:16	25.0						
2.)	9987012002	4.99	4:17	25.0	5.00	4:18	25.0						
3.)	9987204005	4.90	4:19	25.0	4.90	4:20	25.0						
4.)	1032517 LB	4.89	4:21	25.0	4.90	4:22	25.1						
5.)	9986749001	4.92	4:23	25.0	4.93	4:24	25.0						
6.)	9987057002	4.88	4:25	25.0	4.89	4:26	25.0						
7.)	9987135001	5.04	4:27	25.0	5.05	4:28	25.0						
8.)	9987235002	5.04	4:29	25.0	5.05	4:30	25.0						
9.)	9987236002	5.37	4:31	25.0	5.39	4:32	25.0						
10.)	1032518 LB	9.16	4:33	25.0	9.21	4:34	25.1						
11.)	Check 4.00	4.01	4:35	25.0									
12.)	8879870800 1	6.09	4:36	25.0	6.13	4:37	25.0						
13.)	9986940001	9.25	4:38	25.0	9.28	4:39	25.0						
14.)	9987206001	9.01	4:40	25.0	8.98	4:41	25.0						
15.)	1032519 LB	7.81	4:42	25.0	7.84	4:43	25.0						
16.)	9987012003	6.41	4:44	25.0	6.44	4:45	25.0						
17.)	Check 4.00	3.99	4:46	25.0									
18.)													
19.)													
20.)													

Comments:

Reviewed By:
Date Reviewed:
Revision 4/03

Page #

Approved By: SL
Date Approved: 9/12/12

Case Narrative

Method: ALS-LC/MS
Analysis: Agent Breakdown Products
ALS WO ID(s): 1222302

Client: ALS Laboratory Group
Account: 08001
Matrix: Soil
HBN #: 92002

General Set Information: There were two field samples in this workorder. The samples were analyzed for thiodiglycol (TDG).

Method Summary: Each sample was prepared as noted below and analyzed using an Agilent 1200 LC/MSD system in select ion monitoring (SIM) mode at m/z 97, 125, 139, 146, 181, 105 and 113. ChemStation software was used for instrument control and data analysis.

Sample Preparation: Approximately 1.00g of each sample was weighed into a 15-mL centrifuge tube, and 9.9mL of ASTM Type II water was added to each tube. 100µL of internal standard solution was then added to each sample, bringing the total extract volume to 10mL. The samples were capped, vortexed, rotated for at least 30 minutes, and filtered with Phenomenex Phenex 0.45µm PES syringe filters.

Holding Times: Holding times were met for all samples.

Dilutions: No dilutions were necessary.

Method QC data: The method blank criteria were met. The method blanks (LMB 290920 & 290925) were less than 1/2 the RL of 0.5ug/g for all analytes. The recoveries for LCS 290921 & 290926 were within acceptable parameters.

MS/MSD Analysis: The matrix spikes and matrix spike duplicates were performed on parent samples 1222142001 & 1222167001, which were in the same analytical batch. Recoveries and RPDs were within acceptable limits for all analytes.

Instrument QC: Instrument initial and continuing calibrations were performed in accordance with established procedures.

NC/CAR(s): None.

Sample Calculation: Samples were reported in µg/g. Results were calculated in µg/g by the equation (A)x(B)x(C)/(D),

where: A = Analyte concentration from the standard curve (µg/mL)
B = Dilution performed at time of analysis
C = Volume of extract (10mL)
D = Actual weight of sample aliquot (g)

Miscellaneous Comments: None.

Thomas T. McKay — August 20, 2012
Date

Case Narrative

Method: 8270D
Analysis: Semivolatiles by GC/MS
SOP ref: OE-SW-3550, OS-SW-8270D

Set ID: 1222302
Client: ALS Laboratory Group
Matrix: Soil

General Set Information: There are ten field samples plus MS/MSD in this reporting group.

Method Summary: This is a GC/MS method for determination of semivolatile organic compounds in soil according to the SW-846 Guidelines. Thirty grams of soil were extracted by sonication and then concentrated to final volume of 1.0 mL. The resulting extract is analyzed using an Agilent model 5975 GC/MS system with an electron impact ionization source and a quadrapole mass-filter detector.

Sample Preparation: All samples were prepared in accordance with method 3550.

Holding Times: All preparation and analysis holding times were met for all samples.

Dilutions: None.

Method and Sample QC data: All target compounds were within recovery limits for the laboratory control sample. The method blank met the acceptance criteria with no target compounds detected above the reporting limit. All samples met pertinent internal standard area criteria. Sample 1222167001 (FTSW-HR-SO-43) had low area of the last internal standard. The MS and MSD had the same result and therefore confirmed that this is a matrix effect. This last internal standard is not pertinent to that analysis because the requested target analytes do not reference that internal standard. All surrogate recoveries were within QC limits.

MS/MSD Analysis: Matrix spiking was performed on Sample 1222167001. All recoveries were within expected ranges.

Instrument QC: The instrument was tuned with 50 ng DFTPP. A six-point initial calibration curve was analyzed prior to sample analysis. The concentrations of the standards were: 5, 20, 35, 50, 65 and 80 µg/mL. A calibration verification standard at a concentration of 50 ug/mL was analyzed to verify instrument response against the initial calibration. The initial calibration and continuing calibration verification passed all method criteria.

Miscellaneous Comments: None.

8-20-12

Reed A. Hendricks August 20, 2012

ANALYTICAL REPORT

Report Date: August 20, 2012

Vicki Forney
ALS Environmental-Middletown
34 Dogwood Lane
Middletown, PA 17057

Phone: (717) 944-5541 x 3162
Fax: (717) 944-1430
E-mail: vicki.forney@ALSglobal.com

Workorder: **34-1222302**
Project ID: ALS Middletown 080912
Purchase Order: NA

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
FTSW-HR-SO-61 (9.5)	1222302001	08/07/12	08/09/12	ERT, Inc
FTSW-HR-SO-62 (10)	1222302002	08/07/12	08/09/12	ERT, Inc

ANALYTICAL REPORT

Workorder: 34-1222302
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-61 (9.5)** | Sampling Site: ERT, Inc | Collected: 08/07/2012
Lab ID: 1222302001 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/09/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1296 (HBN: 91939)	**Initial:** 1.13 grams	**Batch:**	ELMS/1297 (HBN: 92002)	**Percent Solid:** 82.8
Prepared:	08/14/2012	**Final:** 10 mL	**Analyzed:**	08/18/2012 11:02	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.53	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15840 (HBN: 91685)	**Initial:** 30.67 grams	**Batch:**	ESVO/3827 (HBN: 91984)	**Percent Solid:** 82.8
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/16/2012 17:07	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.4	7.4	200	1	U
1,4-Dithiane	5.6	5.6	200	1	U

Sample ID: **FTSW-HR-SO-62 (10)** | Sampling Site: ERT, Inc | Collected: 08/07/2012
Lab ID: 1222302002 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/09/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1296 (HBN: 91939)	**Initial:** 1.55 grams	**Batch:**	ELMS/1297 (HBN: 92002)	**Percent Solid:** 82.5
Prepared:	08/14/2012	**Final:** 10 mL	**Analyzed:**	08/18/2012 11:39	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.020	0.020	0.39	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15840 (HBN: 91685)	**Initial:** 30.73 grams	**Batch:**	ESVO/3827 (HBN: 91984)	**Percent Solid:** 82.5
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/16/2012 17:36	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.5	7.5	200	1	U
1,4-Dithiane	5.6	5.6	200	1	U

Report Authorization

Method	Analyst	Peer Review
Chemical Agent Breakdown	Thomas T. McKay	Thomas J. Masoian
SW 8270	Reed A. Hendricks	Matt Garvin
Solids/Moisture Determination	Ilse J. Ovalle	Ashley Waganheim

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alsslc.com

ANALYTICAL REPORT

Workorder: 34-1222302
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint ,Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.
RL = Reporting Limit, a verified value of method/media/instrument sensitivity.
CRDL = Contract Required Detection Limit
Reg. Limit = Regulatory Limit.
ND = Not Detected, testing result not detected above the MDL or RL.
< This testing result is less than the numerical value.
** No result could be reported, see sample comments for details.

Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.
J = Qualifier Indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds calibration range.
P = Qualifier indicates that the RPD between the two columns is greater than 40%.

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1222302**

Limits: Historical/Performance	**Preparation:** Chemical Agent Breakdown, Soil Prep	**Analysis:** Chemical Agent Breakdown
Basis: ALS Laboratory Group	**Batch:** ELMS/1296 (HBN: 91939)	**Batch:** ELMS/1297 (HBN: 92002)
	Prepared By: Thomas T. McKay	**Analyzed By:** Thomas T. McKay

Blank

LMB: 290920
Analyzed: 08/17/2012 16:51
Units: ug/g

Analyte	Result	RL
Thiodiglycol	ND	0.5

LMB: 290925
Analyzed: 08/18/2012 03:09
Units: ug/g

Analyte	Result	RL
Thiodiglycol	ND	0.5

Laboratory Control Sample

LCS: 290921
Analyzed: 08/17/2012 17:27
Units: ug/g

Analyte	Result	Target	% Recovery	QC Limits	
Thiodiglycol	20.1	20	101	80	120

LCS: 290926
Analyzed: 08/18/2012 03:46
Units: ug/g

Analyte	Result	Target	% Recovery	QC Limits	
Thiodiglycol	21.2	20	106	80	120

Matrix Spike - Matrix Spike Duplicate

Sample: 1222167001
Analyzed: 08/18/2012 04:22
MS: 290927
Analyzed: 08/18/2012 04:58
MSD: 290928
Analyzed: 08/18/2012 06:11
Units: ug/g

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
Thiodiglycol	ND	37	36.5	101	80	120	37.6	94.9	1.62	0	20

Sample: 1222142001
Analyzed: 08/17/2012 18:40
MS: 290922
Analyzed: 08/17/2012 19:16
MSD: 290923
Analyzed: 08/17/2012 19:53
Units: ug/g

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
Thiodiglycol	ND	36.3	37.9	95.8	80	120	40.7	103	11.5	0	20

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1222302**

Limits: Historical/Performance	**Preparation:** Chemical Agent Breakdown, Soil Prep	**Analysis:** Chemical Agent Breakdown
Basis: ALS Laboratory Group	**Batch:** ELMS/1296 (HBN: 91939)	**Batch:** ELMS/1297 (HBN: 92002)
	Prepared By: Thomas T. McKay	**Analyzed By:** Thomas T. McKay

QC Data Approved and Reviewed by

Thomas T. McKay	Thomas J. Masoian	8/20/2012
Analyst	**Peer Review**	**Date**

Symbols and Definitions

* - Analyte above reporting limit or outside of control limits
▲ - Sample result is greater than 4 times the spike added
◓ - Sample and Matrix Duplicate less than 5 times the reporting limit

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable

Quality Control Sample
Batch Report

Analysis Information

Workorder: 1222302

Limits: Historical/Performance	**Preparation:** EPA 3550, Sonic Ext, SVOA Soil	**Analysis:** SW 8270
Basis: ALS Laboratory Group	**Batch:** ENVX/15840 (HBN: 91685)	**Batch:** ESVO/3827 (HBN: 91984)
	Prepared By: Dustin Calder	**Analyzed By:** Reed A. Hendricks

Blank

MB: 289984
Analyzed: 08/16/2012 12:44
Units: ug/Kg

Analyte	Result	RL
1,4-Oxathiane	ND	167
1,4-Dithiane	ND	167

Laboratory Control Sample

LCS: 289985
Analyzed: 08/16/2012 13:12
Units: ug/Kg

Analyte	Result	Target	% Recovery	QC Limits	
1,4-Oxathiane	785	1330	58.9	30	170
1,4-Dithiane	967	1330	72.5	30	170

Matrix Spike - Matrix Spike Duplicate

Sample: 1222167001	**MS:** 289986	**MSD:** 289987
Analyzed: 08/16/2012 18:34	**Analyzed:** 08/16/2012 19:03	**Analyzed:** 08/16/2012 19:32
Units: ug/Kg		

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
1,4-Oxathiane	ND	567	1330	42.6	30	170	737	55.5	26	0	50
1,4-Dithiane	ND	624	1330	46.9	30	170	828	62.4	28	0	50

Surrogate Recoveries

Surrogate	2-Fluorobiphenyl			2-Fluorophenol			Phenol-d5		
QC Limits	38.1	125.1		15.3	128.2		14.5	131.9	
Units	ug/Kg			ug/Kg			ug/Kg		
Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
289984-MB	1280	1670	77.1	1060	1670	63.9	1340	1670	80.3
289985-LCS	1440	1670	86.4	1200	1670	72.2	1480	1670	88.6
289986-MS	1260	1660	76	945	1660	56.8	1240	1660	74.6
289987-MSD	1430	1660	86.3	1110	1660	67.1	1420	1660	85.6
1222167001	1240	1620	76.2	974	1620	60	1260	1620	77.6
1222167002	1320	1660	79.9	1040	1660	62.6	1310	1660	79.1
1222167003	1190	1660	72	937	1660	56.6	1190	1660	71.8
1222167004	1360	1660	81.9	1030	1660	61.9	1340	1660	80.8
1222167006	849	1630	52.1	680	1630	41.7	889	1630	54.5
1222167007	1380	1650	84	1130	1650	68.7	1460	1650	88.6
1222167008	1270	1650	77.2	1010	1650	61.3	1310	1650	79.4
1222302001	668	1630	40.9	767	1630	47.1	1030	1630	63.5
1222302002	815	1630	50.1	721	1630	44.3	1040	1630	64

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1222302**

Limits: Historical/Performance	**Preparation:** EPA 3550, Sonic Ext, SVOA Soil	**Analysis:** SW 8270
Basis: ALS Laboratory Group	**Batch:** ENVX/15840 (HBN: 91685)	**Batch:** ESVO/3827 (HBN: 91984)
	Prepared By: Dustin Calder	**Analyzed By:** Reed A. Hendricks

Surrogate Recoveries

Surrogate	Terphenyl-d14			Nitrobenzene-d5			2,4,6-Tribromophenol		
QC Limits	17.7	171.2		17.4	135.5		22.1	146.8	
Units	ug/Kg			ug/Kg			ug/Kg		
Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
289984-MB	1620	1670	97.2	1190	1670	71.6	1160	1670	69.4
289985-LCS	1770	1670	106	1360	1670	81.7	1290	1670	77.6
289986-MS	1870	1660	113	1110	1660	66.8	1340	1660	80.5
289987-MSD	2090	1660	126	1240	1660	74.7	1470	1660	88.4
1222167001	1650	1620	101	1110	1620	68.6	1240	1620	76.2
1222167002	1480	1660	89.3	1180	1660	71.1	1290	1660	77.6
1222167003	1450	1660	87.6	1070	1660	64.9	1230	1660	74.5
1222167004	1800	1660	108	1180	1660	71.2	1400	1660	84.1
1222167006	1130	1630	69.2	749	1630	45.9	881	1630	54.1
1222167007	1800	1650	109	1240	1650	75.1	1390	1650	84.2
1222167008	1670	1650	101	1110	1650	67.5	1230	1650	74.9
1222302001	1380	1630	84.6	735	1630	45.1	1050	1630	64.2
1222302002	1450	1630	89.3	750	1630	46.1	1040	1630	64.2

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1222302**

Limits: Historical/Performance	**Preparation:** EPA 3550, Sonic Ext, SVOA Soil	**Analysis:** SW 8270
Basis: ALS Laboratory Group	**Batch:** ENVX/15840 (HBN: 91685)	**Batch:** ESVO/3827 (HBN: 91984)
	Prepared By: Dustin Calder	**Analyzed By:** Reed A. Hendricks

QC Data Approved and Reviewed by

Reed A. Hendricks	Matt Garvin	8/20/2012
Analyst	**Peer Review**	**Date**

Symbols and Definitions

* - Analyte above reporting limit or outside of control limits
▲ - Sample result is greater than 4 times the spike added
◓ - Sample and Matrix Duplicate less than 5 times the reporting limit

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable

Subcontract to ALS Salt Lake City, UT 9855/#1+2 1222302

ALS Environmental W 1222302

Ship to: 34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 1

Courier:

Tracking #:

9981774

Co. Name: ERT, Inc

Contact (Report to): Mike Gearheart

Phone:

Address: 6100 Frost Place Suite A Laurel MD 20707

Bill to (if different than Report to):

PO#:

Project Name/#: Ft Stewart 3153-004

ALS Quote #:

TAT: [ ] Normal-Standard TAT is 10 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? [X] -Y Mike.Gearheart@ertcorp.com

Fax? [ ] -Y No.:

					***Container Type	GG	AG	AG	AG							
					***Container Size	4oz	8oz	250ml	1L							
					*** Preservative	–	–	+	–							
					ANALYSES/METHOD REQUESTED											
						SW-846 6020	SW-846 8270D/8321	SW-846 6020	SW-846 8270D/8321	HR-analyzed only 8/8/12						
Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	Enter Number of Containers Per Analysis										
1 FTSW-HR-SO-15 (9.5)	ME 8/10/12	8/07/12	0706	G	SO	1	1									
2 FTSW-HR-SO-16 (10.)	ME 8/10/12	8/7/12	0815	G	SO	1	1									
3 FTSW-IDW-01		8/7/12	0905	C	H2O			1	1/2	1A 1L BROKEN						
4										IN TRANSIT						
5												SM 8/8/12				
6										Hold Water sample						
7												KG 8-9-12				
8																

Receipt Information (completed by Sample Receiving)

Performed by: [signature]

Cooler Temp: 4°C

Therm. ID: TH 2F5

No. of Coolers:

Notes:

Sample Description/Location	Sample Date	Military Time	*G or C	**Matrix	Custody seals Present?	(If present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
1 FTSW-HR-SO-15 (9.5)	8/07/12	0706	G	SO	Y	Y	Y	Y	Y
2 FTSW-HR-SO-16 (10.)	8/7/12	0815	G	SO	N	N	N	N	N
3 FTSW-IDW-01	8/7/12	0905	C	H2O	Y	Y	Y	Y	Y

Correct containers? Y N; Correct sample volume? Y N; Correct preservation? Y N; Headspace/Volatiles? Y N; Circle appropriate Y or N.

SAMPLED BY (Please Print): LYNELLE BRODE

LOGGED BY(signature): [signature] DATE: 8/7/12 TIME: 915

REVIEWED BY(signature): [signature] DATE: 8/7/12 TIME: 915

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature]	8/7/12	1330	2 [signature] ALS	8/8/12	0925
3 [signature]	8/8/12	1640	4 Merrill Elwood	8/9/12	1023
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [X] CLP-like [ ] NJ-Reduced [ ] NJ-Full [X] DOD (other)

SDWA Forms?⇒ yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

Other GA

EDDs Required? [X] If yes, format type: SEDD

DOD Criteria Required? QAPP

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 6/2011

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task:	Split:	Workorder ID: 1222302
Client: ALS Laboratory Group		Account: 8001
Comments:		

Type: 8ozGWM

Preservatives: COOL

Containers

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	ID(s)	Count	Chemical Agent Breakdown	SW8270
1	08/07/2012 07:06	FTSW-HR-SO-~~15~~ 61(9.5) MES 8/10/12	1222302001		Soil/Solid/Sediment	A	1	A	A
2	08/07/2012 08:15	FTSW-HR-SO-~~16~~ 62(10) MES 8/10/12	1222302002		Soil/Solid/Sediment	A	1	A	A
3									
4									
5									
6									
7									
8									
9									
10									

Requested Analysis

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Edwards, Meredith D.	08/09/2012 10:23	ALS Sample Receiving	Sample Login
Meredith Edwards	8/10/12 9:15	14B	Storage
R-33-1 14 B IJO	8/13/12 11:00	Ilse J Ovalle	Solid
Ilse J Ovalle	8/13/12 18:30	R-33-1 IJO14B	storage

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: SV

Lab Notebook No.:

Prepared / Analyzed by:

Date / Time:

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
	08/15/12 13:00	[illegible]	[illegible]
[illegible]	08/15/12 16:00	W-728 [illegible]	Storage

Fri, 08/10/12 9:12 AM

ALSCOCV2.4

1222302

Kevin Griffiths

From: Vicki Forney
Sent: Friday, August 10, 2012 5:57 AM
To: Kevin Griffiths
Subject: FW: Letter of Receipt for Workorder 9981774: Received 8/8/2012

Here are the sample description changes for the samples we re-submitted to you yesterday for your receipt today. Thanks.

Take our short online customer survey for a chance to win a FREE iPad!
Vicki Forney
Project Manager
NORTH AMERICA
ALS | Environmental
Address
34 Dogwood Lane
Middletown, PA 17057

PHONE +1 717 944-5541x 3162
FAX +1 717 944-1430
www.alsglobal.com

-----Original Message-----
From: Mike Gearheart [mailto:Mike.Gearheart@ertcorp.com]
Sent: Thursday, August 09, 2012 2:33 PM
To: Vicki Forney
Cc: Jennifer Harlan
Subject: RE: Letter of Receipt for Workorder 9981774: Received 8/8/2012

Vicki,

Hi. We've encountered another issue. Our field crew got confused on the sample nomenclature during the last days of sampling (we switched crews mid-way through). As a result, we request the following sample ID changes, please.

ID number from Lab	What ID Should be
FTSW-HR-SO - 5 (10)	FTSW-HR-SO-50 (10)
FTSW-HR-SO - 6 (10)	FTSW-HR-SO-51 (10)
FTSW-HR-SO - 8 (10)	FTSW-HR-SO-52 (10)
FTSW-HR-SO - 03 (10)	FTSW-HR-SO-53 (10)
FTSW-HR-SO - 12 (10)	FTSW-HR-SO-54 (10)
FTSW-HR-SO - 04 (7.5)	FTSW-HR-SO-55 (07.5)
FTSW-HR-SO - 09 (10)	FTSW-HR-SO-56 (10)
FTSW-HR-SO - 10 (10)	FTSW-HR-SO-57 (10)
FTSW-HR-SO - 11 (10)	FTSW-HR-SO-58 (10)
FTSW-HR-SO - 13 (10)	FTSW-HR-SO-59 (10)
FTSW-HR-SO - 14 (7.5)	FTSW-HR-SO-60 (07.5)
FTSW-HR-SO - 14 ERB	FTSW-HR-SO-60 (07.5) ERB
FTSW-HR-SO-15 (9.5)	FTSW-HR-SO-61 (09.5)
FTSW-HR-SO-16 (10)	FTSW-HR-SO-62 (10)

1222142

1222302

Sorry for the inconveniences, and I really appreciate your responsiveness.

Thank you,

Michael Gearheart
ERT, Inc.

-----Original Message-----
From: Vicki Forney [mailto:Vicki.Forney@ALSGlobal.com]
Sent: Thursday, August 09, 2012 12:36 PM
To: Mike Gearheart
Subject: RE: Letter of Receipt for Workorder 9981774: Received 8/8/2012

Can you call me regarding this requested change? We really should have more volume to complete that testing and one of the containers broke in transit. Thanks.

Take our short online customer survey for a chance to win a FREE iPad!
Vicki Forney
Project Manager
NORTH AMERICA
ALS | Environmental
Address
34 Dogwood Lane
Middletown, PA 17057

PHONE +1 717 944-5541x 3162
FAX +1 717 944-1430
www.alsglobal.com

-----Original Message-----
From: Mike Gearheart [mailto:Mike.Gearheart@ertcorp.com]
Sent: Thursday, August 09, 2012 10:04 AM
To: Vicki Forney
Cc: Jennifer Harlan; Rebekah Mccoy; Lynelle Brode
Subject: FW: Letter of Receipt for Workorder 9981774: Received 8/8/2012

Vicki,

The sample labeled as IDW (Lab ID 9981774003) should not be analyzed for what's listed on the sample login sheet (and what's on the COC). This sample should be analyzed for full TCLP parameters and RCRA Characteristics. This sample is for disposal characterization. Could you please make the change?

Thank you,

Michael Gearheart
ERT, Inc.

-----Original Message-----
From: ALMDT.LIMSAutoEmail@alsglobal.com [mailto:ALMDT.LIMSAutoEmail@alsglobal.com]
Sent: Thursday, August 09, 2012 9:50 AM
To: Mike Gearheart
Subject: Letter of Receipt for Workorder 9981774: Received 8/8/2012

The following reports are attached:

WO 9981774 , Work ID ERT008|Ft. Stewart 3153-004 []

--- End Of List ---

****
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****

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From: (717) 944-5541
Steve Smith

34 DOGWOOD LANE

MIDDLETOWN, PA 17057

Origin ID: MDTA

FedEx Express

J122012071603 25

Ship Date: 08AUG12
ActWgt: 15.0 LB
CAD: 7121996/INET3300

Delivery Address Bar Code

SHIP TO: (000) 000-0000

BILL SENDER

ALS - UT
ALS - UT
960 LEVOY DR

SALT LAKE CITY, UT 84123

Ref # Summa's
Invoice #
PO #
Dept #

THU - 09 AUG A1
PRIORITY OVERNIGHT

TRK# 7938 8287 3690
0201

84123
UT-US
SLC

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ALS LABORATORY GROUP SALT LAKE CITY-RELATED INFORMATION REPORT (CRIR)

COOLER OR CONTAINER INFORMATION CHECKLIST (Fill In or Circle)

Client Name: ALS Middletown — Project/Task/Site: 102302

Date/Time of Receipt: 8/9/12 1023 — Number of Coolers Received: _____

Condition of Coolers:	Acceptable/Unacceptable	Temperature Control:	Present/Not Included
Custody Seals:	Present/Absent/NA	Location Temp Taken:	Control/Between Samples
	Intact/Broken/NA	Are all temperatures within	
Tamper Evident:	Yes/No/NA	project specific guidelines?	Yes/No/NA
Ice Present:	Yes/No/NA	Are all applicable pHs within	
	Frozen/Melted/NA	specific guidelines?	Yes/No/NA

pH Check Performed:	Metals	Yes/No/NA	Total Phenolics	Yes/No/NA	NO3/NO2	Yes/No/NA
	Cyanide	Yes/No/NA	TPH – 418.1	Yes/No/NA	Oil & Grease	Yes/No/NA
	Sulfide	Yes/No/NA	COD	Yes/No/NA	Total Phosphorous	Yes/No/NA
	Ammonia	Yes/No/NA	TKN	Yes/No/NA	Gross A.B, Gamma Spec	Yes/No/NA
Residual Chlorine Check Performed:	8270	Yes/No/NA	8310	Yes/No/NA	8330	Yes/No/NA
	8081	Yes/No/NA	8151	Yes/No/NA		

Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.
1	C12- 8405	6 °C	4	C12-	°C	7	C12-	°C
2	C12-	°C	5	C12-	°C	8	C12-	°C
3	C12-	°C	6	C12-	°C	9	C12-	°C

Taken By: Meredith Edwards (Signature) — Meredith Edwards (Printed Name) — 8-9-12 (Date)

CLIENT-RELATED INFORMATION

☐ Missing Cooler	☐ Missing Samples/Bottles	☐ Incorrect Preservation	☐ Insufficient Sample Volume
☐ Cooler Conditions	☐ Broken/Leaking Samples	☐ pH Criteria Not Met	☐ Chain of Custody Problems
☐ Missing Paperwork	☐ Incorrect Bottle Type	☐ Residual Chlorine Present	☐ Other:
☐ Missing/Incorrect Bottle Labels	☐ Cooler Temperatures Out of Range	☐ Head Space in Bottles	EPA Custody Seal:

BRIEFLY DESCRIBE THE PROBLEM AND THE ACTION TAKEN:

Faxed to Client? YES ☐ NO ☐ (if yes, attach Fax Cover Sheet)

Response Required Within 24 Hours

PROJECT MANAGEMENT

PROJECT MANAGER COMMENTS:

ALS Project Manager: _____ (Printed Name) Returned to Sample Receipt by: _____ (Signature) Date: _____

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Chemical Breakdown

Analytical Documentation

ALS WO ID #(S):1222142; 1222167; 1222302
ALS Sample #(S):1222142001-011; 1222167001-008; 1222302001-002
ALS Account #(s): 8001 Method: ALS LC/MS Matrix: Soil
Sequence: \\CHEM32\1\SEQUENCE\17AUG12-ABP-S.S
Prep Date: 08/14/2012 Analysis Date: 08/17/12 - 08/18/12
Prep/Analysis HBN #s: 91939/92002 Instrument LOD: 0.050µg/mL
Analyte: **Thiodiglycol (TDG)**
Reported MDL: See Report Reported LOD: See Report

SAMPLE PREPARATION: All ALS sample #'s agreed with field ID #'s. Approximately 1.00g of each sample was weighed into a 15-mL centrifuge tube, and 9.9mL of ASTM Type II water was added to each tube. 100µL of internal standard solution was then added to each sample, bringing the total extraction volume to 10.0mL. The samples were capped, vortexed, rotated for at least 30 minutes, and filtered with Pall 0.45µm Ion Chromatography Acrodiscs prior to analysis.

REAGENTS: Eluent A: 100% ASTM Type II water/0.1% glacial acetic acid.
Eluent B: 95% ACN/ 5% ASTM Type II water/0.1% glacial acetic acid.

HORIZON STANDARD(S): TDG (14169); MPA (14170); IMPA (14172); EMPA (14174); DIMP (14179)
All standards are at 1000µg/mL. Standards used to create calibration standards and those used for CCVs (target = 5.00µg/mL) and RLVS (target = 0.050µg/mL).
Internal Standard Solution: TDG-D8 (14177) at 100ug/mL.

CALIBRATION CURVE: Run 05/01/2012.
Raw data can be found in \\Alsltws013\DataReview\85766.

INSTRUMENT CONDITIONS: Samples were analyzed with an Agilent 1200 LC/MSD system, in positive SIM mode, monitoring m/z 97, 125, 139, 146, 181, 105 and 113.
Instrument ID: LCMS03 Run Time: 35.00 min. Flow Rate: 0.8mL/min Temp: 30°C
Output Gain: 3 Injection Volume: 10µL Fragmentor Voltage: 75 & 125
Column: Phenomenex Synergi Hydro-RP 4 micron (4.6 x 250mm) s/n: 245485-24

GRADIENT:

Time(min)	%Eluent A	%Eluent B
0.00	100.0	0.0
15.00	100.0	0.0
17.00	50.0	50.0
25.00	50.0	50.0
25.01	100.0	0.0

QC DATA: LMB/LCS **290920/21** & **290925/26** were run with the batch. 1.00g of washed sand (EMD Lot# 36211706) was prepared in the same manner as the samples. 20µl of Horizon QC standard 13383 was added to 10.0mL of sample preparation for the LCSs. Target = 20.0ug/g. ASTM Type II water was used for LMB extractions.

MS/MSD: MS/MSDs were performed on samples 1222142001 & 1222167001. 50µl of Horizon standard 14169 was added to 10.0mL of sample preparation. Spike target = 50.0µg/g.

COMMENTS: 1) Quantitation was done using m/z 105 for TDG. No confirmation ions were available for TDG. Results are reported in ug/g.
2) All CCV, LMB, LCS and MS/MSD results were within acceptable limits.

Batch Worklist

Batch: ELMS/ 1296
Rule: Chemical Agent BD, Soil Prep

Created: 8/17/2012 15:09
Analyst: T. McKay

Instrument: NONE
Status: NA

HBN: 91939

Workorder: 1222142
Workorder: 1222167
Workorder: 1222302

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	290920	LMB for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LMB		DCAB....4P	5948	8/31/2012	8/10/2012	8/14/2012
2	290921	LCS for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LCS		DCAB....4P	5948	8/31/2012	8/10/2012	8/14/2012
3	290922	FTSW-HR-SO-50...(1222142001MS)	1.32 grams	10 mL	4	MS		DCAB....4P	5948	8/17/2012	8/10/2012	8/14/2012
4	290923	FTSW-HR-SO-5...(1222142001MSD)	1.27 grams	10 mL	4	MSD		DCAB....4P	5948	8/17/2012	8/10/2012	8/14/2012
5	290924	RLVS for HBN 91939 [ELMS/1296]	1 grams	10 mL	3	RLVS		DCAB....4P	5948	8/31/2012	8/10/2012	8/14/2012
6	1222142001	FTSW-HR-SO-50 (10)	1.51 grams	10 mL	4	SAMPLE	1222142001-A	DCAB....4P	5480	8/17/2012	8/13/2012	8/14/2012
7	1222142002	FTSW-HR-SO-51 (10)	1.22 grams	10 mL	4	SAMPLE	1222142002-A	DCAB....4P	5480	8/17/2012	8/13/2012	8/14/2012
8	1222142003	FTSW-HR-SO-52 (10)	1.65 grams	10 mL	4	SAMPLE	1222142003-A	DCAB....4P	5480	8/17/2012	8/13/2012	8/14/2012
9	1222142004	FTSW-HR-SO-53 (10)	1.25 grams	10 mL	4	SAMPLE	1222142004-A	DCAB....4P	5480	8/17/2012	8/13/2012	8/14/2012
10	1222142005	FTSW-HR-SO-54 (10)	1.62 grams	10 mL	4	SAMPLE	1222142005-A	DCAB....4P	5480	8/20/2012	8/13/2012	8/14/2012
11	1222142006	FTSW-HR-SO-55 (7.5)	1.38 grams	10 mL	4	SAMPLE	1222142006-A	DCAB....4P	5480	8/20/2012	8/13/2012	8/14/2012
12	1222142007	FTSW-HR-SO-56 (10)	1.11 grams	10 mL	4	SAMPLE	1222142007-A	DCAB....4P	5480	8/20/2012	8/13/2012	8/14/2012
13	1222142008	FTSW-HR-SO-57 (10)	1.2 grams	10 mL	4	SAMPLE	1222142008-A	DCAB....4P	5480	8/20/2012	8/13/2012	8/14/2012
14	1222142009	FTSW-HR-SO-58 (10)	1.38 grams	10 mL	4	SAMPLE	1222142009-A	DCAB....4P	5480	8/20/2012	8/13/2012	8/14/2012
15	1222142010	FTSW-HR-SO-59 (10)	1.28 grams	10 mL	4	SAMPLE	1222142010-A	DCAB....4P	5480	8/20/2012	8/13/2012	8/14/2012
16	1222142011	FTSW-HR-SO-60 (7.5)	1.16 grams	10 mL	4	SAMPLE	1222142011-A	DCAB....4P	5480	8/20/2012	8/13/2012	8/14/2012
17	290925	LMB for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LMB		DCAB....4P	5948	8/31/2012	8/10/2012	8/14/2012
18	290926	LCS for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LCS		DCAB....4P	5948	8/31/2012	8/10/2012	8/14/2012
19	1222167001	FTSW-HR-So-43	1.42 grams	10 mL	4	SAMPLE	1222167001-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012
20	290927	FTSW-HR-So-43(1222167001MS)	1.37 grams	10 mL	4	MS		DCAB....4P	5948	8/15/2012	8/10/2012	8/14/2012
21	290928	FTSW-HR-So-43(1222167001MSD)	1.26 grams	10 mL	4	MSD		DCAB....4P	5948	8/15/2012	8/10/2012	8/14/2012
22	1222167002	FTSW-HR-So-44	1.26 grams	10 mL	4	SAMPLE	1222167002-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012
23	1222167003	FTSW-HR-So-45	1.32 grams	10 mL	4	SAMPLE	1222167003-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012
24	1222167004	FTSW-HR-So-46	1.27 grams	10 mL	4	SAMPLE	1222167004-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012
25	1222167005	FTSW-HR-So-46Dup	1.1 grams	10 mL	4	DUP	1222167005-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012
26	1222167006	FTSW-HR-So-47	1.24 grams	10 mL	4	SAMPLE	1222167006-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012
27	1222167007	FTSW-HR-So-48	1.05 grams	10 mL	4	SAMPLE	1222167007-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012

Batch Worklist

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
28	1222167008	FTSW-HR-So-49	1.2 grams	10 mL	4	SAMPLE	1222167008-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012
29	1222302001	FTSW-HR-SO-61 (9.5)	1.13 grams	10 mL	4	SAMPLE	1222302001-A	DCAB....4P	5480	8/21/2012	8/14/2012	8/14/2012
30	1222302002	FTSW-HR-SO-62 (10)	1.55 grams	10 mL	4	SAMPLE	1222302002-A	DCAB....4P	5480	8/21/2012	8/14/2012	8/14/2012

Batch Worklist

Batch: ELMS/ 1297
Rule: Chemical Agent BD, Soil

Created: 8/20/2012 12:36
Analyst: T. McKay

Instrument: LCMS03
Status: WP

HBN: 92002

Workorder: 1222142
Workorder: 1222167
Workorder: 1222302

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	290920	LMB for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LMB		DCAB....4Q	5948	9/22/2012	8/20/2012	8/17/2012
2	290921	LCS for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LCS		DCAB....4Q	5948	9/22/2012	8/20/2012	8/17/2012
3	290924	RLVS for HBN 91939 [ELMS/1296]	1 grams	10 mL	3	RLVS		DCAB...C4Q	5948		8/20/2012	8/17/2012
4	1222167001	FTSW-HR-So-43	1.42 grams	10 mL	4	SAMPLE	1222167001-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
5	290927	FTSW-HR-So-43(1222167001MS)	1.37 grams	10 mL	4	MS		DCAB....4Q	5948	9/22/2012	8/20/2012	8/18/2012
6	290928	FTSW-HR-So-43(1222167001MSD)	1.26 grams	10 mL	4	MSD		DCAB....4Q	5948	9/22/2012	8/20/2012	8/18/2012
7	1222167002	FTSW-HR-So-44	1.26 grams	10 mL	4	SAMPLE	1222167002-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
8	1222167003	FTSW-HR-So-45	1.32 grams	10 mL	4	SAMPLE	1222167003-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
9	1222167004	FTSW-HR-So-46	1.27 grams	10 mL	4	SAMPLE	1222167004-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
10	1222167005	FTSW-HR-So-46Dup	1.1 grams	10 mL	4	DUP	1222167005-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
11	1222167006	FTSW-HR-So-47	1.24 grams	10 mL	4	SAMPLE	1222167006-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
12	1222167007	FTSW-HR-So-48	1.05 grams	10 mL	4	SAMPLE	1222167007-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
13	1222167008	FTSW-HR-So-49	1.2 grams	10 mL	4	SAMPLE	1222167008-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
14	290925	LMB for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LMB		DCAB....4Q	5948	9/22/2012	8/20/2012	8/18/2012
15	290926	LCS for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LCS		DCAB....4Q	5948	9/22/2012	8/20/2012	8/18/2012
16	1222142001	FTSW-HR-SO-50 (10)	1.51 grams	10 mL	4	SAMPLE	1222142001-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/17/2012
17	290922	FTSW-HR-SO-50...(1222142001MS)	1.32 grams	10 mL	4	MS		DCAB....4Q	5948	9/22/2012	8/20/2012	8/17/2012
18	290923	FTSW-HR-SO-5...(1222142001MSD)	1.27 grams	10 mL	4	MSD		DCAB....4Q	5948	9/22/2012	8/20/2012	8/17/2012
19	1222142002	FTSW-HR-SO-51 (10)	1.22 grams	10 mL	4	SAMPLE	1222142002-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/17/2012
20	1222142003	FTSW-HR-SO-52 (10)	1.65 grams	10 mL	4	SAMPLE	1222142003-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/17/2012
21	1222142004	FTSW-HR-SO-53 (10)	1.25 grams	10 mL	4	SAMPLE	1222142004-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/17/2012
22	1222142005	FTSW-HR-SO-54 (10)	1.62 grams	10 mL	4	SAMPLE	1222142005-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/17/2012
23	1222142006	FTSW-HR-SO-55 (7.5)	1.38 grams	10 mL	4	SAMPLE	1222142006-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/17/2012
24	1222142007	FTSW-HR-SO-56 (10)	1.11 grams	10 mL	4	SAMPLE	1222142007-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/18/2012
25	1222142008	FTSW-HR-SO-57 (10)	1.2 grams	10 mL	4	SAMPLE	1222142008-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/18/2012
26	1222142009	FTSW-HR-SO-58 (10)	1.38 grams	10 mL	4	SAMPLE	1222142009-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/18/2012
27	1222142010	FTSW-HR-SO-59 (10)	1.28 grams	10 mL	4	SAMPLE	1222142010-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/18/2012

Batch Worklist

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
28	1222142011	FTSW-HR-SO-60 (7.5)	1.16 grams	10 mL	4	SAMPLE	1222142011-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/18/2012
29	1222302001	FTSW-HR-SO-61 (9.5)	1.13 grams	10 mL	4	SAMPLE	1222302001-A	DCAB.....4	5480	9/22/2012	8/22/2012	8/18/2012
30	1222302002	FTSW-HR-SO-62 (10)	1.55 grams	10 mL	4	SAMPLE	1222302002-A	DCAB.....4	5480	9/22/2012	8/22/2012	8/18/2012

STANDARD REPORT

Working Standard - TDG WRK

TDG WRK				Description - Thiodiglycol Working Std.	
Standard:	14169	Expires:	01/31/2013	Usable:	Yes
Lab Lot:	TDG WRK	Created By:	T. McKay	Amount:	12.15 mL
Part ID:		Create Date:	01/31/2012	Validated By:	
MFG:		MFG Lot:		Validated Date:	

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume Added	Expires
3824	TDG STOCK		TDG STK	12.15 mg	1/1/2025

STANDARD REPORT

Constituent

Stock Standard - TDG STOCK

TDG STOCK				Description - (Thiodiglycol Stock Std.)	
Standard:	3824	Expires:	1/1/2025	Usable:	Yes
Lab Lot:	TDG STK	Created By:	T. McKay	Amount:	100 grams
Part ID:	166782	Create Date:	4/1/2009	Validated By:	T. Bosch
MFG:	Aldrich	MFG Lot:	11613AR	Validated Date:	4/19/2009

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 mg/g

3824

Certificate of Analysis

SIGMA-ALDRICH

Product Name	2,2'-Thiodiethanol, ≥99%
Product Number	166782
Product Brand	Aldrich
CAS Number	111-48-8
Molecular Formula	$S(CH_2CH_2OH)_2$
Molecular Weight	122.19

TEST	SPECIFICATION	LOT 11613AR RESULTS
APPEARANCE	COLORLESS LIQUID	COLORLESS LIQUID
INFRARED SPECTRUM	CONFORMS TO STRUCTURE.	CONFORMS TO STRUCTURE AND STANDARD AS ILLUSTRATED ON PAGE 276B OF EDITION I, VOLUME 1 OF "THE ALDRICH LIBRARY OF FT-IR SPECTRA".
GAS LIQUID CHROMATOGRAPHY	99.0% (MINIMUM)	99.6 %
QUALITY CONTROL ACCEPTANCE DATE		JANUARY 1997

Barbara Rajzer

Barbara Rajzer, Supervisor
Quality Control
Milwaukee, Wisconsin USA

STANDARD REPORT

Working Standard - TDG QC WRK

TDG QC WRK					Description - Thiodiglycol QC Wrk
Standard:	13383	Expires:	11/21/2012	Usable:	Yes
Lab Lot:	TDG QC WRK	Created By:	T. McKay	Amount:	8.44 mL
Part ID:		Create Date:	11/21/2011	Validated By:	
MFG:		MFG Lot:		Validated Date:	

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume Added	Expires
5844	TDG QC STK	Thiodiglycol QC Stock	TDG QC STK	8.44 mg	1/1/2025

STANDARD REPORT

Constituent

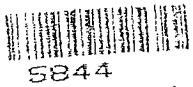
Stock Standard - TDG QC STK

TDG QC STK					Description - Thiodiglycol QC Stock
Standard:	5844	Expires:	1/1/2025	Usable:	Yes
Lab Lot:	TDG QC STK	Created By:	T. McKay	Amount:	50 grams
Part ID:	88559	Create Date:	10/7/2009	Validated By:	T. Bosch
MFG:	Fluka	MFG Lot:	1410377	Validated Date:	10/7/2009

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 mg/g

5844





SIGMA-ALDRICH

Fluka

Sigma-Aldrich Production GmbH
CH-9471 Buchs/Schweiz
www.sigma-aldrich.com

Telefon +41 81 755 2511
Telefax +41 81 755 2272
Email fluka@sial.com

Certificate of Analysis

Product Brand	Fluka
PRODUCT-NO	88559
PRODUCT	2,2'-THIODIETHANOL
	BioChemika
FORMULA	$C_4H_{10}O_2S$
MOLECULAR MASS	122.19
CAS NUMBER	111-48-8
LOT	1410377

Test	Specification	Result
APPEARANCE (COLOR)	COLORLESS	COLORLESS
APPEARANCE (FORM)	CLEAR TO CLEAR VISCOUS LIQUID	CLEAR VISCOUS LIQUID
PURITY (GC AREA %)	≥ 99.0 % REL	99.9 % REL
GC (METHOD)	--	100% POLYETHYLENEGLYCOL (30 M X 0.32 MM X 0.25 UM), IN DICHLORMETHANE
REFRACTIVE INDEX N20/D	1.520 - 1.522	1.522
RESIDUE ON IGNITION	≤ 0.1 %	< 0.05 %
CARBON CONTENT	39.32 % (THEORY)	38.90 %
HYDROGEN CONTENT	8.25 % (THEORY)	8.49 %
INFRARED SPECTRUM	CONFORMS TO STRUCTURE	CONFORMS
QC RELEASE DATE	28/OCT/08	

E. Schwärzler

Edeltraud Schwärzler, Manager
Quality Control
Buchs, Switzerland

Sigma-Aldrich guarantees the 'Sales-Specification' values only, additional lot specific tests may be included for further information. The current 'Sales-Specifications' sheet is available on request. For further inquiries, please contact our Technical Service.Sigma-Aldrich warrants, that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice for additional terms and conditions of sale. The values given on the 'Certificate of Analysis' are the results determined at the time of analysis.

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

atch Report: C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG12-ABP.B

Batch Review Method: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M

['#' ==> Run has not been reprocessed with Batch Review Method
'*' ==> Run has been saved with batch file]

#	Sample	Location	Inj	Dilution	Thiodiglycol-D8 RT	Thiodiglycol-D8 Area	Thiodiglycol-D8 Amount
*	PRIME	Vial 51	1	1	12.991	2.28450e6	10.00000
*	CCV1	Vial 51	1	1	13.037	2.36740e6	10.00000
*	290920 LMB	Vial 52	1	1	13.021	2.17404e6	100.00000
*	290921 LCS	Vial 53	1	1	12.996	2.22191e6	100.00000
*	290924 RLVS	Vial 54	1	1	12.985	1.95173e6	10.00000
*	1222142001	Vial 55	1	1	13.007	1.76561e6	100.00000
*	290922 MS	Vial 56	1	1	12.996	1.77332e6	100.00000
*	290923 MSD	Vial 57	1	1	12.984	1.70778e6	100.00000
*	1222142002	Vial 58	1	1	12.990	1.89639e6	100.00000
*	1222142003	Vial 59	1	1	12.998	1.90070e6	100.00000
*	1222142004	Vial 60	1	1	13.007	1.83797e6	100.00000
*	1222142005	Vial 61	1	1	13.040	1.77543e6	100.00000
*	CCV2	Vial 51	1	1	13.000	2.26015e6	10.00000
*	1222142006	Vial 62	1	1	12.987	1.85223e6	100.00000
*	1222142007	Vial 63	1	1	12.993	1.80946e6	100.00000
*	1222142008	Vial 64	1	1	13.001	1.82786e6	100.00000
*	1222142009	Vial 65	1	1	13.006	1.84889e6	100.00000
*	1222142010	Vial 66	1	1	12.995	1.92324e6	100.00000
*	1222142011	Vial 67	1	1	12.994	1.71416e6	100.00000
*	290925 LMB	Vial 68	1	1	12.999	1.49852e6	100.00000
*	290926 LCS	Vial 69	1	1	12.995	1.59193e6	100.00000
*	1222167001	Vial 70	1	1	13.013	1.52356e6	100.00000
*	290927 MS	Vial 71	1	1	13.009	1.64084e6	100.00000
*	CCV3	Vial 51	1	1	13.035	2.16551e6	10.00000
*	290928 MSD	Vial 72	1	1	13.034	1.73775e6	100.00000
*	1222167002	Vial 73	1	1	13.051	1.61201e6	100.00000
*	1222167003	Vial 74	1	1	13.057	1.54112e6	100.00000
*	1222167004	Vial 75	1	1	13.045	1.48944e6	100.00000
*	1222167005	Vial 76	1	1	13.055	1.59211e6	100.00000
*	1222167006	Vial 77	1	1	13.072	1.62917e6	100.00000
*	1222167007	Vial 78	1	1	13.032	1.71610e6	100.00000
*	1222167008	Vial 79	1	1	13.034	1.59766e6	100.00000
*	1222302001	Vial 80	1	1	13.043	1.66377e6	100.00000
*	1222302002	Vial 81	1	1	13.038	1.60788e6	100.00000
*	CCV4	Vial 51	1	1	13.009	2.13155e6	10.00000

#	Sample	Location	Inj	Dilution	Thiodiglycol RT	Thiodiglycol Area	Thiodiglycol Amount
*	PRIME	Vial 51	1	1	13.591	9.52971e6	4.94520
*	CCV1	Vial 51	1	1	13.627	1.00182e7	5.02078
*	290920 LMB	Vial 52	1	1	0.000	0.00000	0.00000
*	290921 LCS	Vial 53	1	1	13.583	3.88291e6	20.11193

#*	Sample	Location	Inj	Dilution	Thiodiglycol RT	Thiodiglycol Area	Thiodiglycol Amount
*	290924 RLVS	Vial 54	1	1	13.555	6.89958e4	4.90956e-2
*	1222142001	Vial 55	1	1	0.000	0.00000	0.00000
*	290922 MS	Vial 56	1	1	13.583	7.17668e6	47.89601
*	290923 MSD	Vial 57	1	1	13.577	7.42725e6	51.68282
*	1222142002	Vial 58	1	1	0.000	0.00000	0.00000
*	1222142003	Vial 59	1	1	0.000	0.00000	0.00000
*	1222142004	Vial 60	1	1	0.000	0.00000	0.00000
*	1222142005	Vial 61	1	1	0.000	0.00000	0.00000
*	CCV2	Vial 51	1	1	13.591	9.15080e6	4.79177
*	1222142006	Vial 62	1	1	0.000	0.00000	0.00000
*	1222142007	Vial 63	1	1	0.000	0.00000	0.00000
*	1222142008	Vial 64	1	1	0.000	0.00000	0.00000
*	1222142009	Vial 65	1	1	0.000	0.00000	0.00000
*	1222142010	Vial 66	1	1	0.000	0.00000	0.00000
*	1222142011	Vial 67	1	1	0.000	0.00000	0.00000
*	290925 LMB	Vial 68	1	1	0.000	0.00000	0.00000
*	290926 LCS	Vial 69	1	1	13.581	2.92822e6	21.18889
*	1222167001	Vial 70	1	1	0.000	0.00000	0.00000
*	290927 MS	Vial 71	1	1	13.603	7.01301e6	50.73884
*	CCV3	Vial 51	1	1	13.627	8.96610e6	4.90631
*	290928 MSD	Vial 72	1	1	13.625	6.96716e6	47.42531
*	1222167002	Vial 73	1	1	0.000	0.00000	0.00000
*	1222167003	Vial 74	1	1	0.000	0.00000	0.00000
*	1222167004	Vial 75	1	1	0.000	0.00000	0.00000
*	1222167005	Vial 76	1	1	0.000	0.00000	0.00000
*	1222167006	Vial 77	1	1	0.000	0.00000	0.00000
*	1222167007	Vial 78	1	1	0.000	0.00000	0.00000
*	1222167008	Vial 79	1	1	0.000	0.00000	0.00000
*	1222302001	Vial 80	1	1	0.000	0.00000	0.00000
*	1222302002	Vial 81	1	1	0.000	0.00000	0.00000
*	CCV4	Vial 51	1	1	13.602	8.61050e6	4.78026

*** End of Report ***

Sequence Table:

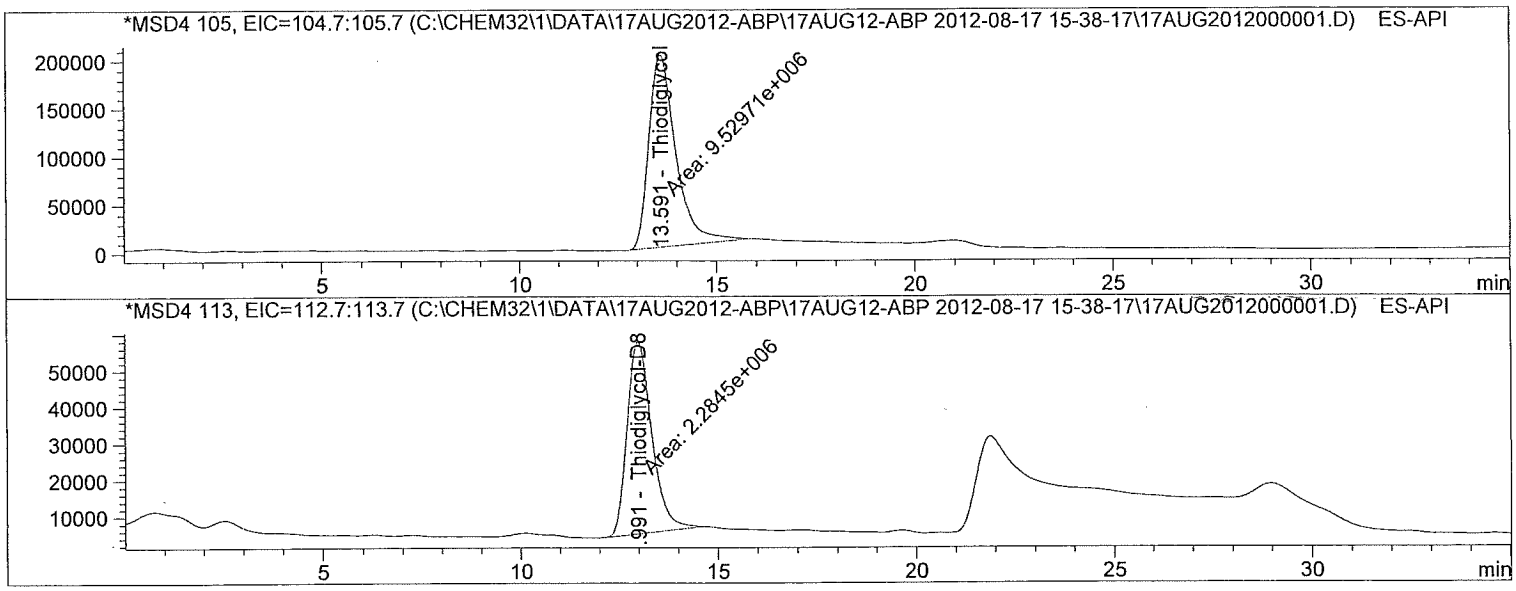
Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 51	PRIME	ABP-ON	1	Ctrl Samp	
2	Vial 51	CCV1	ABP-ON	1	Ctrl Samp	
3	Vial 52	290920 LMB	ABP-ON	1	Ctrl Samp	
4	Vial 53	290921 LCS	ABP-ON	1	Ctrl Samp	
5	Vial 54	290924 RLVS	ABP-ON	1	Ctrl Samp	
6	Vial 55	1222142001	ABP-ON	1	Sample	
7	Vial 56	290922 MS	ABP-ON	1	Ctrl Samp	
8	Vial 57	290923 MSD	ABP-ON	1	Ctrl Samp	
9	Vial 58	1222142002	ABP-ON	1	Sample	
10	Vial 59	1222142003	ABP-ON	1	Sample	
11	Vial 60	1222142004	ABP-ON	1	Sample	
12	Vial 61	1222142005	ABP-ON	1	Sample	
13	Vial 51	CCV2	ABP-ON	1	Ctrl Samp	
14	Vial 62	1222142006	ABP-ON	1	Sample	
15	Vial 63	1222142007	ABP-ON	1	Sample	
16	Vial 64	1222142008	ABP-ON	1	Sample	
17	Vial 65	1222142009	ABP-ON	1	Sample	
18	Vial 66	1222142010	ABP-ON	1	Sample	
19	Vial 67	1222142011	ABP-ON	1	Sample	
20	Vial 68	290925 LMB	ABP-ON	1	Ctrl Samp	
21	Vial 69	290926 LCS	ABP-ON	1	Ctrl Samp	

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
22	Vial 70	1222167001	ABP-ON	1	Sample	
23	Vial 71	290927 MS	ABP-ON	1	Ctrl Samp	
24	Vial 51	CCV3	ABP-ON	1	Ctrl Samp	
25	Vial 72	290928 MSD	ABP-ON	1	Ctrl Samp	
26	Vial 73	1222167002	ABP-ON	1	Sample	
27	Vial 74	1222167003	ABP-ON	1	Sample	
28	Vial 75	1222167004	ABP-ON	1	Sample	
29	Vial 76	1222167005	ABP-ON	1	Sample	
30	Vial 77	1222167006	ABP-ON	1	Sample	
31	Vial 78	1222167007	ABP-ON	1	Sample	
32	Vial 79	1222167008	ABP-ON	1	Sample	
33	Vial 80	1222302001	ABP-ON	1	Sample	
34	Vial 81	1222302002	ABP-ON	1	Sample	
35	Vial 51	CCV4	ABP-ON	1	Ctrl Samp	

atch Run # 1 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000001.D
ample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/17/2012 3:38:44 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	7/9/2012 11:13:05 AM
Multiplier	:	1.0000
Dilution	:	1.0000
Sample Amount	:	5.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.591	MM	1	9.52971e6	1.18548e-1	4.94520		Thiodiglycol

Batch Run # 1 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000001.D
Sample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/17/2012 3:38:44 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Totals without ISTD(s) : 4.94520

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

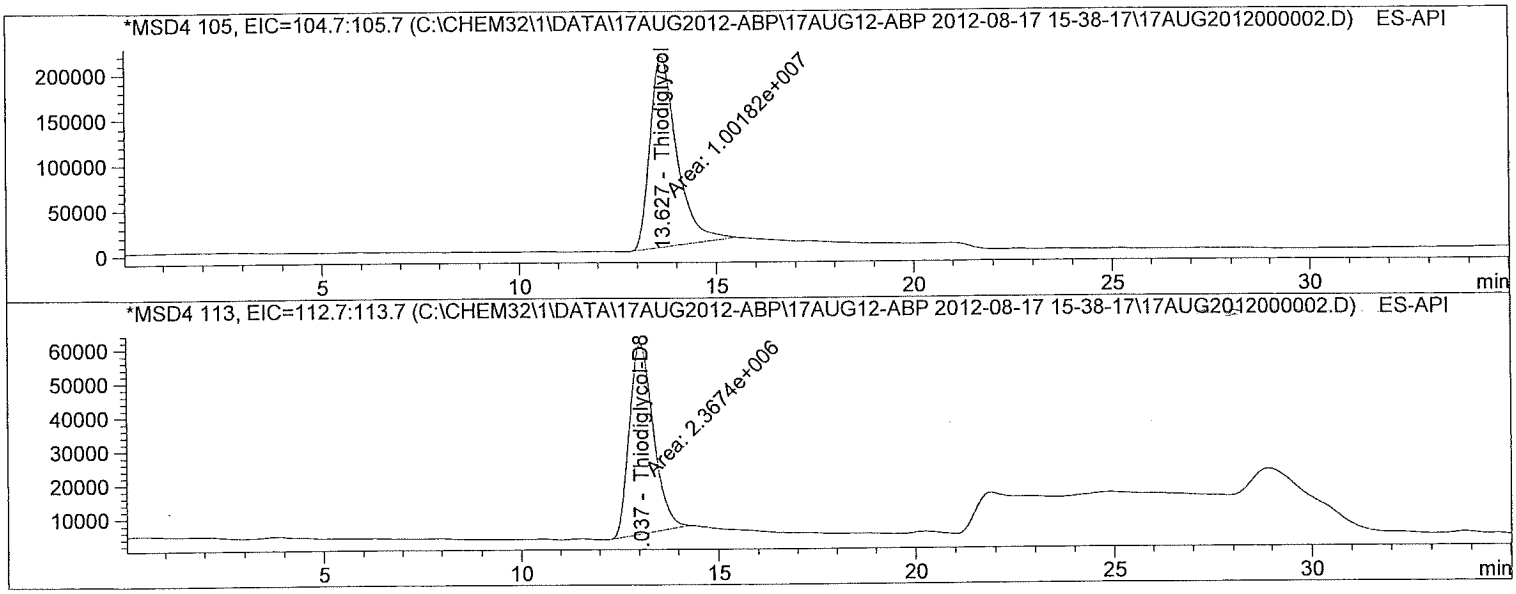
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.991	MM	I	1 2.28450e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 2 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000002.D
ample Name: CCV1

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/17/2012 4:15:07 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	7/9/2012 11:13:05 AM
Multiplier	:	1.0000
Dilution	:	1.0000
Sample Amount	:	5.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.627	MM	1	1.00182e7	1.18646e-1	5.02078		Thiodiglycol

atch Run # 2 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000002.D
ample Name: CCV1

Acq. Operator : TTM Seq. Line : 2
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/17/2012 4:15:07 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 5.02078

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.037	MM	I	1 2.36740e6	1.00000	10.00000		Thiodiglycol-D8

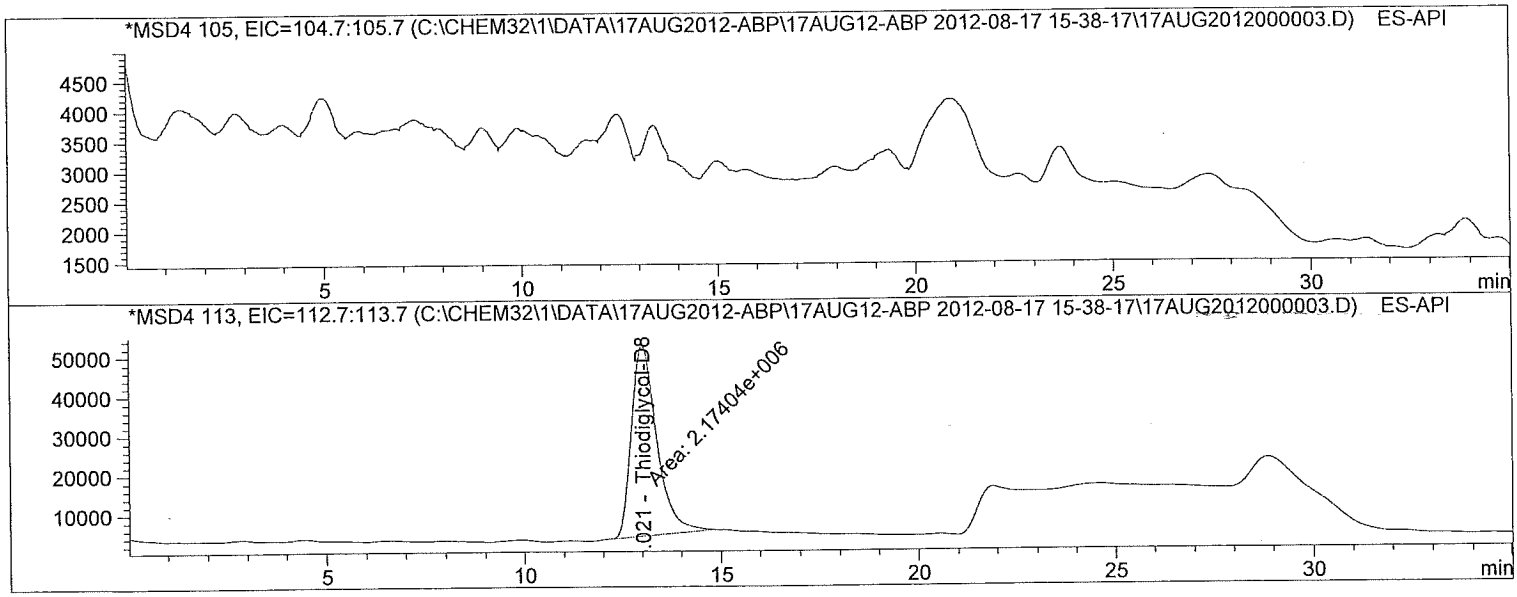
Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 3 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000003.D
ample Name: 290920 LMB

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 52
Injection Date	: 8/17/2012 4:51:28 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 3 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000003.D
Sample Name: 290920 LMB

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 52
Injection Date	: 8/17/2012 4:51:28 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.021	MM	I 1	2.17404e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

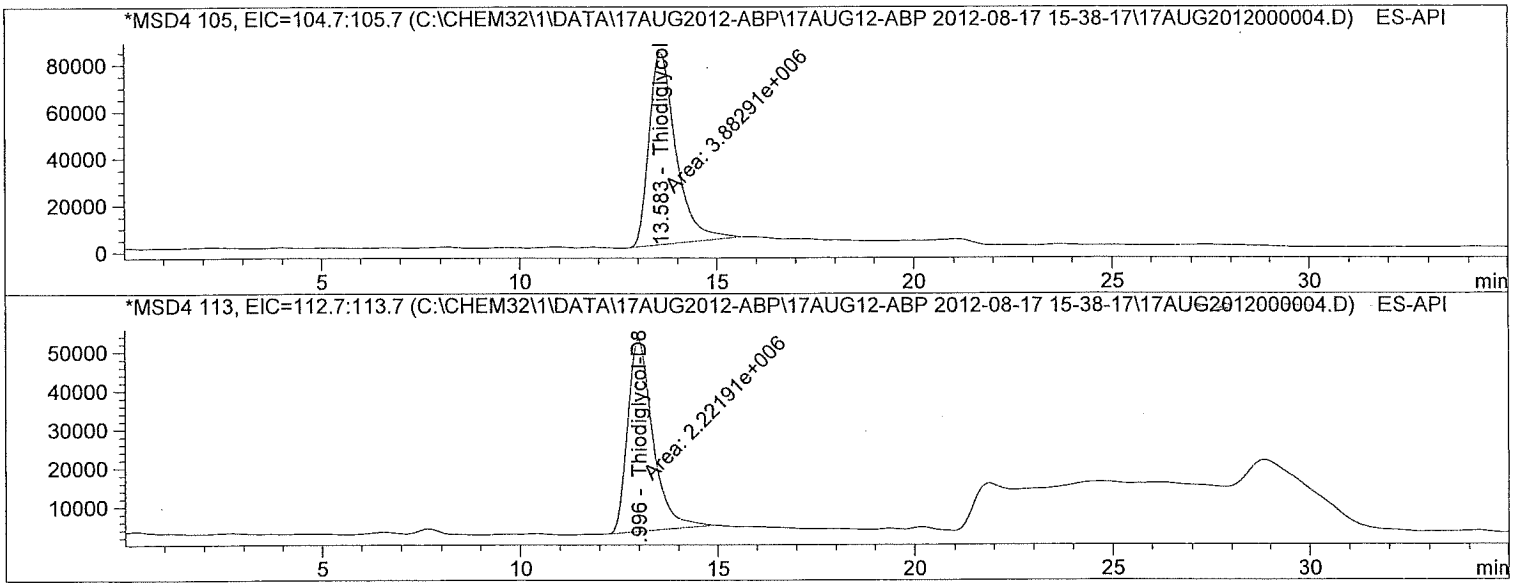
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 4 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000004.D
Sample Name: 290921 LCS

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 53
Injection Date	: 8/17/2012 5:27:52 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	7/9/2012 11:13:05 AM
Multiplier	:	10.0000
Dilution	:	1.0000
Sample Amount	:	20.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.583	MM	1	3.88291e6	1.15086e-1	20.11193		Thiodiglycol

atch Run # 4 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000004.D
ample Name: 290921 LCS

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 8/17/2012 5:27:52 PM
Seq. Line : 4
Location : Vial 53
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 20.11193

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

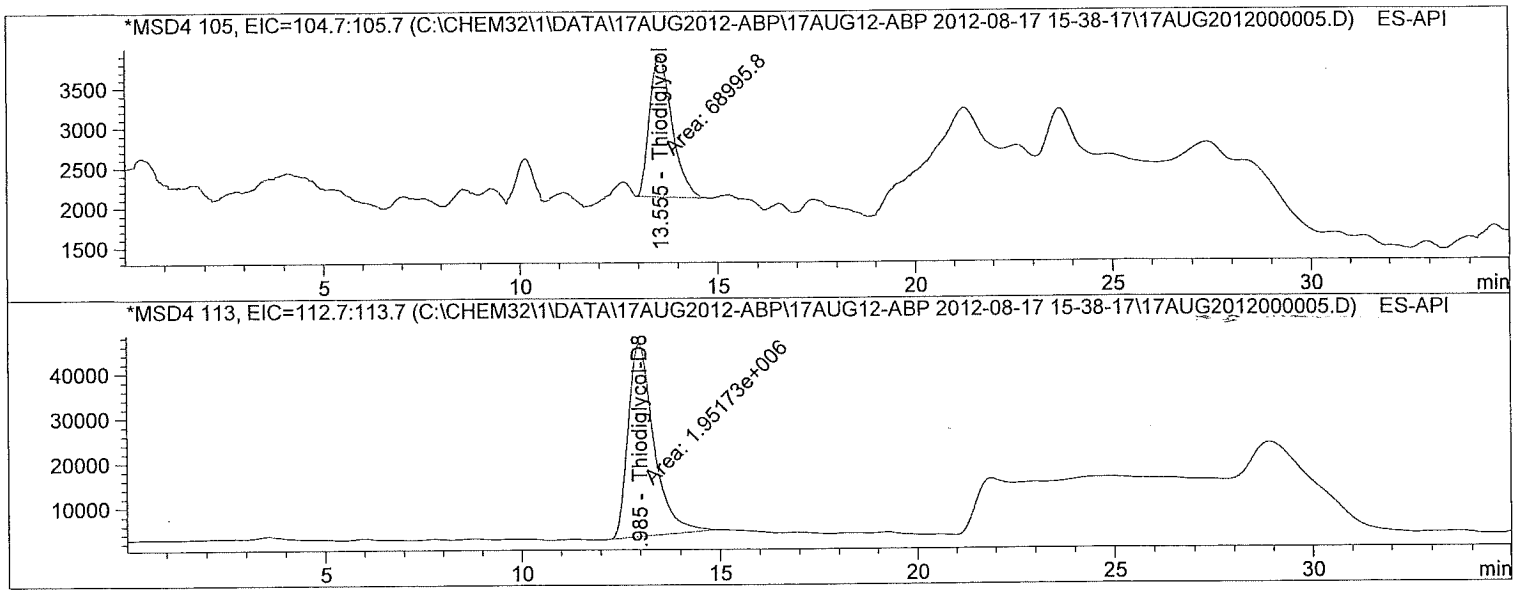
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.996	MM	I	1 2.22191e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 5 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000005.D
ample Name: 290924 RLVS

Acq. Operator : TTM Seq. Line : 5
Acq. Instrument : LCMS3 Location : Vial 54
Injection Date : 8/17/2012 6:04:13 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000e-1 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.555	MM	1	6.89958e4	1.38880e-1	4.90956e-2		Thiodiglycol

Batch Run # 5 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000005.D
Sample Name: 290924 RLVS

Acq. Operator : TTM Seq. Line : 5
Acq. Instrument : LCMS3 Location : Vial 54
Injection Date : 8/17/2012 6:04:13 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 4.90956e-2

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

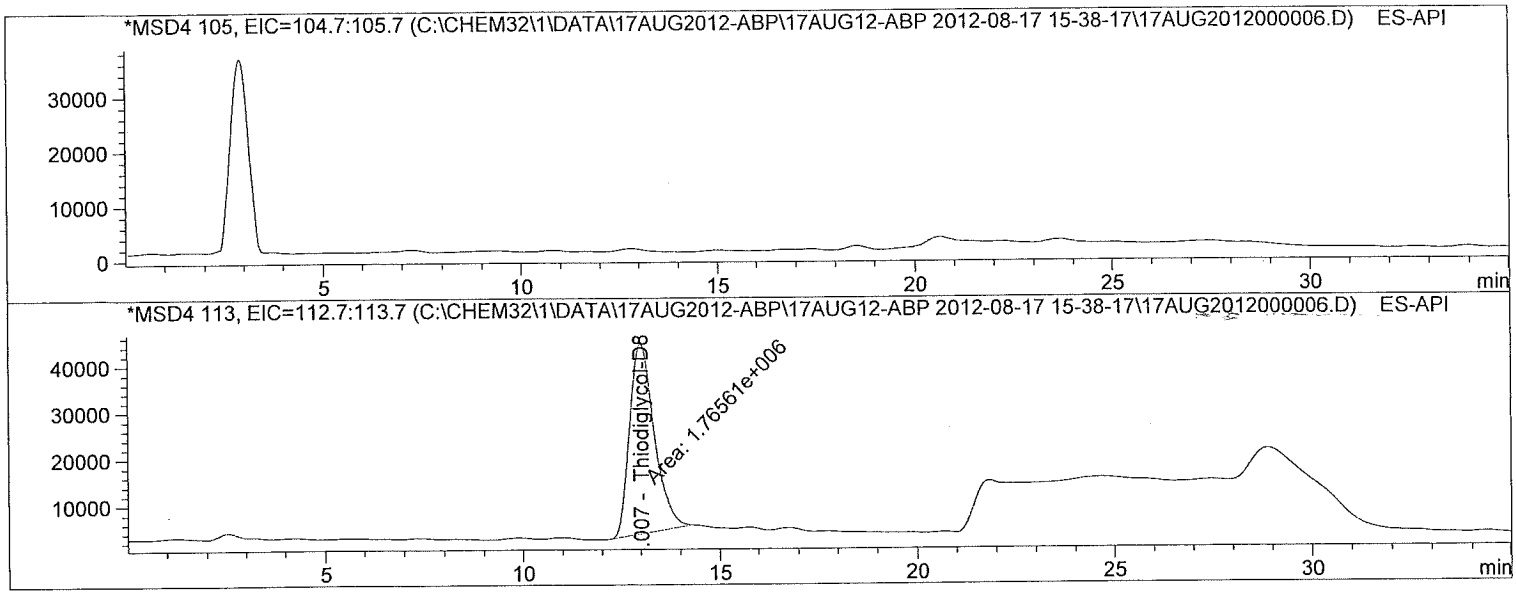
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.985	MM	I	1 1.95173e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 6 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000006.D
ample Name: 1222142001

Acq. Operator : TTM
Seq. Line : 6
Acq. Instrument : LCMS3
Location : Vial 55
Injection Date : 8/17/2012 6:40:36 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 6 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000006.D
Sample Name: 1222142001

==========

Acq. Operator : TTM Seq. Line : 6
Acq. Instrument : LCMS3 Location : Vial 55
Injection Date : 8/17/2012 6:40:36 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

==========

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.007	MM	I	1 1.76561e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

1 Warnings or Errors :

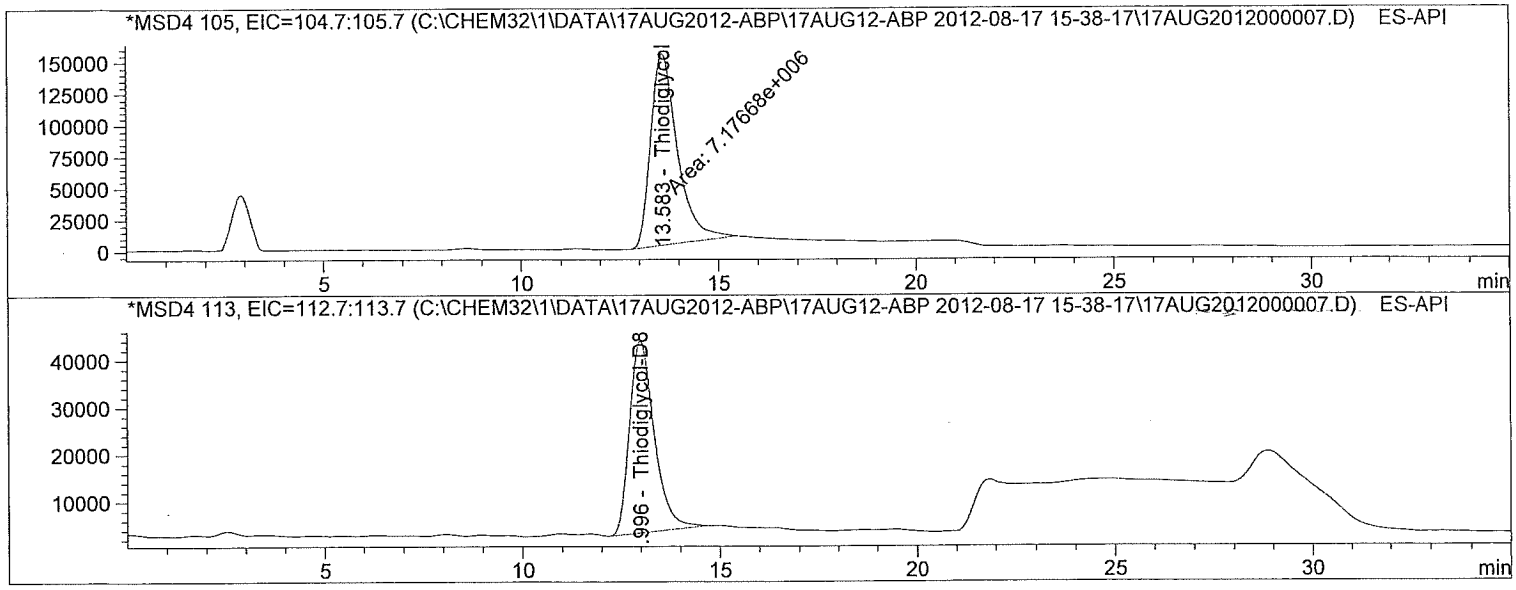
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Batch Run # 7 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000007.D
Sample Name: 290922 MS

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 56
Injection Date	: 8/17/2012 7:16:58 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.583	MM	1	7.17668e6	1.18349e-1	47.89601		Thiodiglycol

Totals without ISTD(s) : 47.89601

Batch Run # 7 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000007.D
Sample Name: 290922 MS

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 56
Injection Date	: 8/17/2012 7:16:58 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

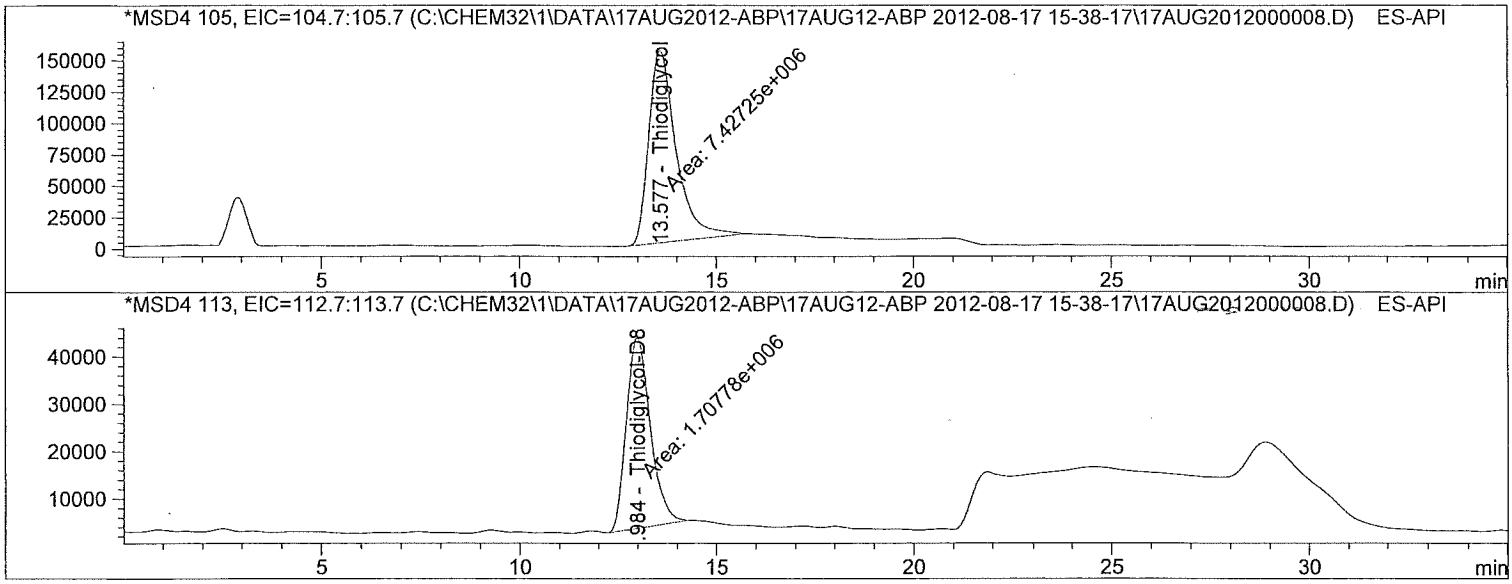
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.996	BB	I 1	1.77332e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 8 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000008.D
ample Name: 290923 MSD

Acq. Operator : TTM Seq. Line : 8
Acq. Instrument : LCMS3 Location : Vial 57
Injection Date : 8/17/2012 7:53:21 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.577	MM	1	7.42725e6	1.18836e-1	51.68282		Thiodiglycol

Totals without ISTD(s) : 51.68282

Batch Run # 8 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000008.D
Sample Name: 290923 MSD

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 57
Injection Date	: 8/17/2012 7:53:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

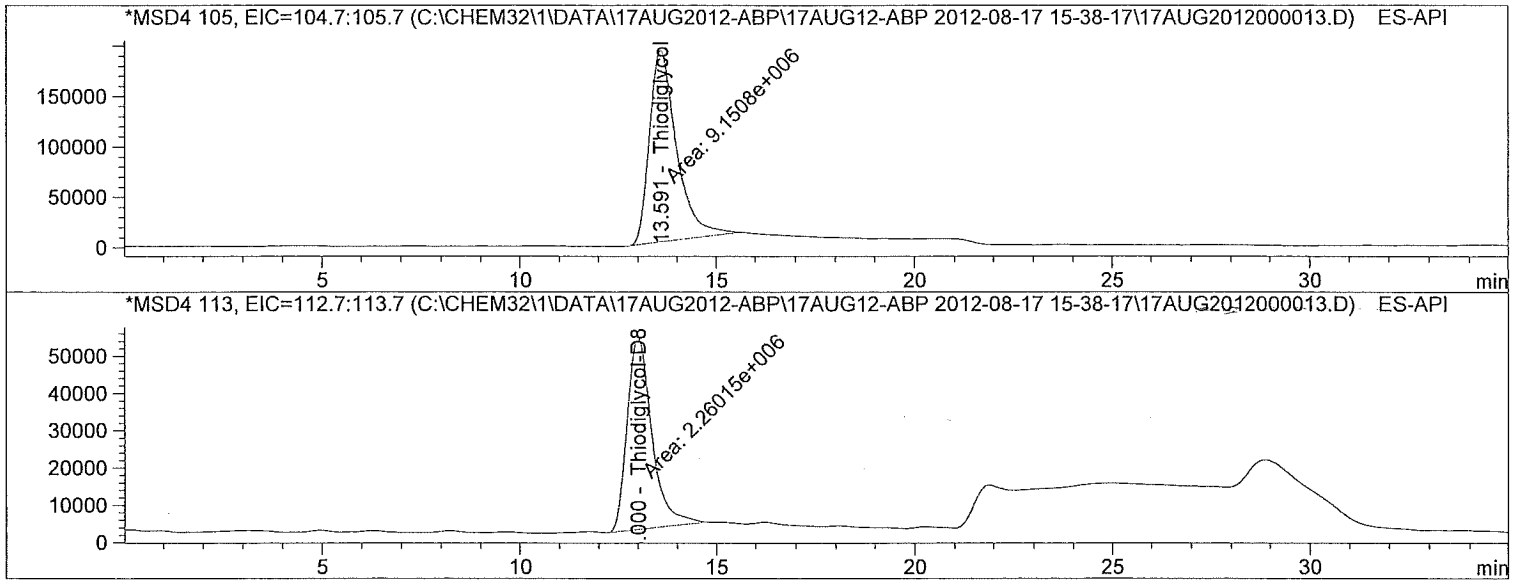
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.984	MM	I 1	1.70778e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 13 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000013.D
Sample Name: CCV2

Acq. Operator	: TTM	Seq. Line	: 13
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/17/2012 10:55:12 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 5.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs

Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.591	MM	1	9.15080e6	1.18351e-1	4.79177		Thiodiglycol

atch Run # 13 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000013.D
ample Name: CCV2

Acq. Operator : TTM Seq. Line : 13
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/17/2012 10:55:12 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 4.79177

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

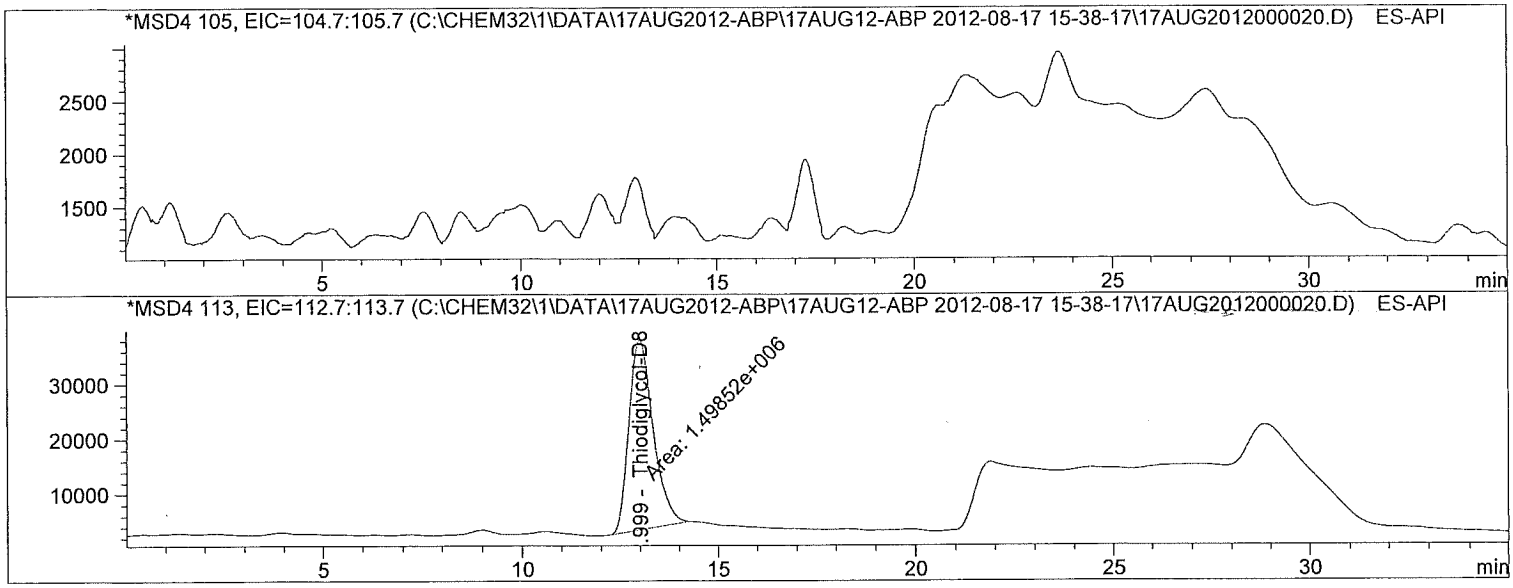
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.000	MM	I	1 2.26015e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 20 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000020.D
ample Name: 290925 LMB

Acq. Operator : TTM Seq. Line : 20
Acq. Instrument : LCMS3 Location : Vial 68
Injection Date : 8/18/2012 3:09:50 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

atch Run # 20 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000020.D
ample Name: 290925 LMB

Acq. Operator : TTM Seq. Line : 20
Acq. Instrument : LCMS3 Location : Vial 68
Injection Date : 8/18/2012 3:09:50 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.999	MM	I	1 1.49852e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

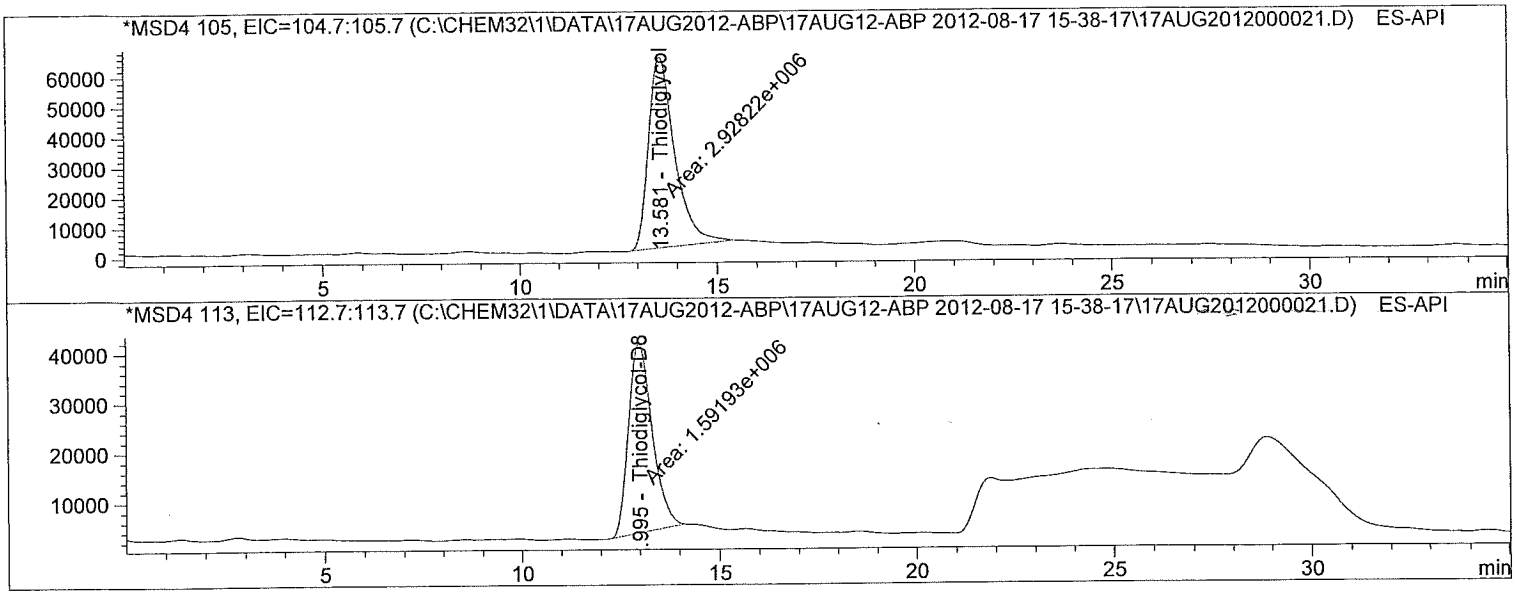
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

atch Run # 21 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000021.D
ample Name: 290926 LCS

Acq. Operator : TTM Seq. Line : 21
Acq. Instrument : LCMS3 Location : Vial 69
Injection Date : 8/18/2012 3:46:13 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Sample Amount : 20.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.581	MM	1	2.92822e6	1.15193e-1	21.18889		Thiodiglycol

atch Run # 21 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000021.D
ample Name: 290926 LCS

Acq. Operator : TTM Seq. Line : 21
Acq. Instrument : LCMS3 Location : Vial 69
Injection Date : 8/18/2012 3:46:13 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 21.18889

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

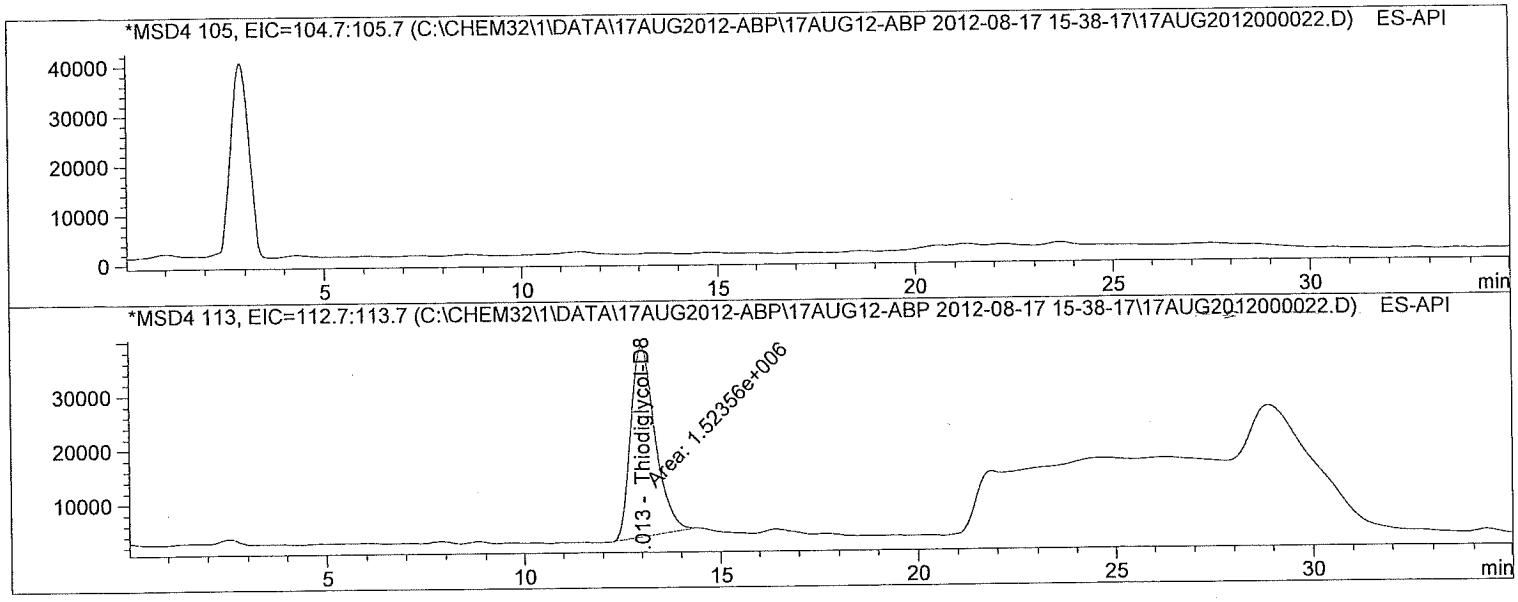
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.995	MM	I	1 1.59193e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 22 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000022.D
ample Name: 1222167001

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 8/18/2012 4:22:35 AM
Seq. Line : 22
Location : Vial 70
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

atch Run # 22 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000022.D
ample Name: 1222167001

Acq. Operator : TTM
Seq. Line : 22
Acq. Instrument : LCMS3
Location : Vial 70
Injection Date : 8/18/2012 4:22:35 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.013	MM	I	1 1.52356e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

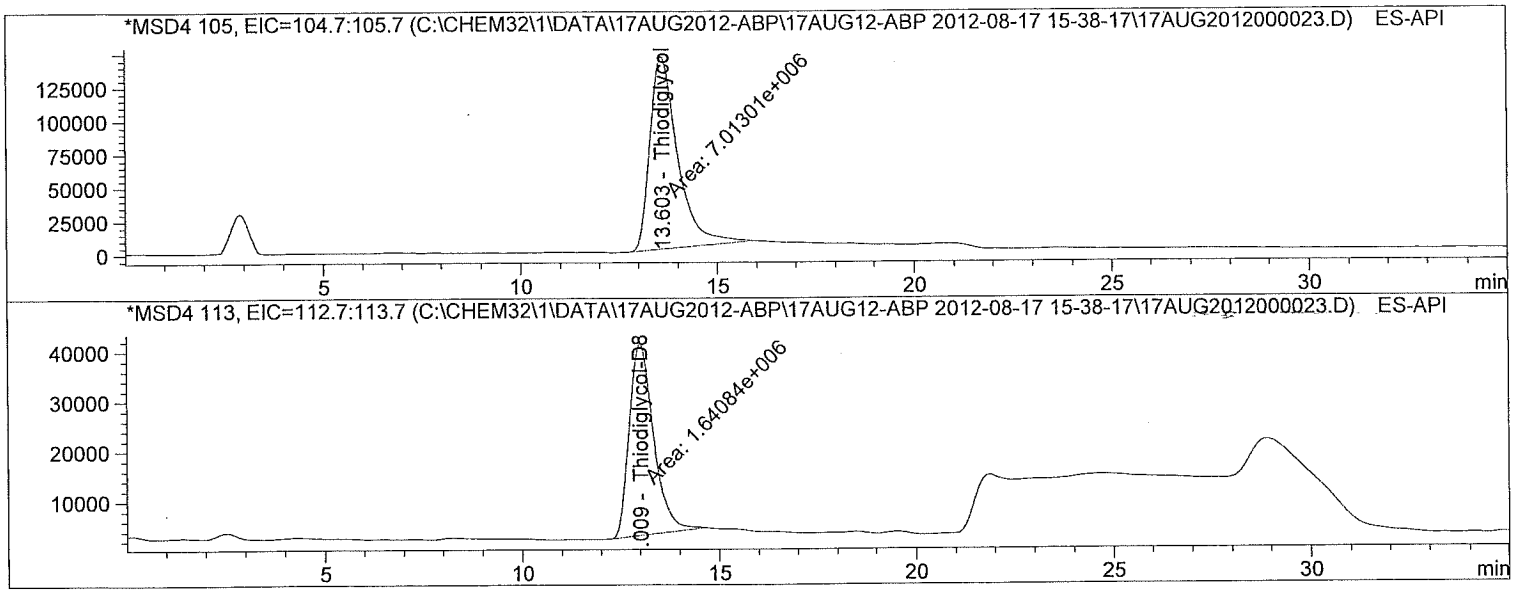
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

atch Run # 23 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000023.D
ample Name: 290927 MS

Acq. Operator	: TTM	Seq. Line	: 23
Acq. Instrument	: LCMS3	Location	: Vial 71
Injection Date	: 8/18/2012 4:58:59 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	7/9/2012 11:13:05 AM	
Multiplier	:	10.0000	
Dilution	:	1.0000	

Use Multiplier & Dilution Factor with ISTDs

Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.603	MM	1	7.01301e6	1.18714e-1	50.73884		Thiodiglycol

Totals without ISTD(s) : 50.73884

Batch Run # 23 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000023.D
Sample Name: 290927 MS

Acq. Operator	: TTM	Seq. Line	: 23
Acq. Instrument	: LCMS3	Location	: Vial 71
Injection Date	: 8/18/2012 4:58:59 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

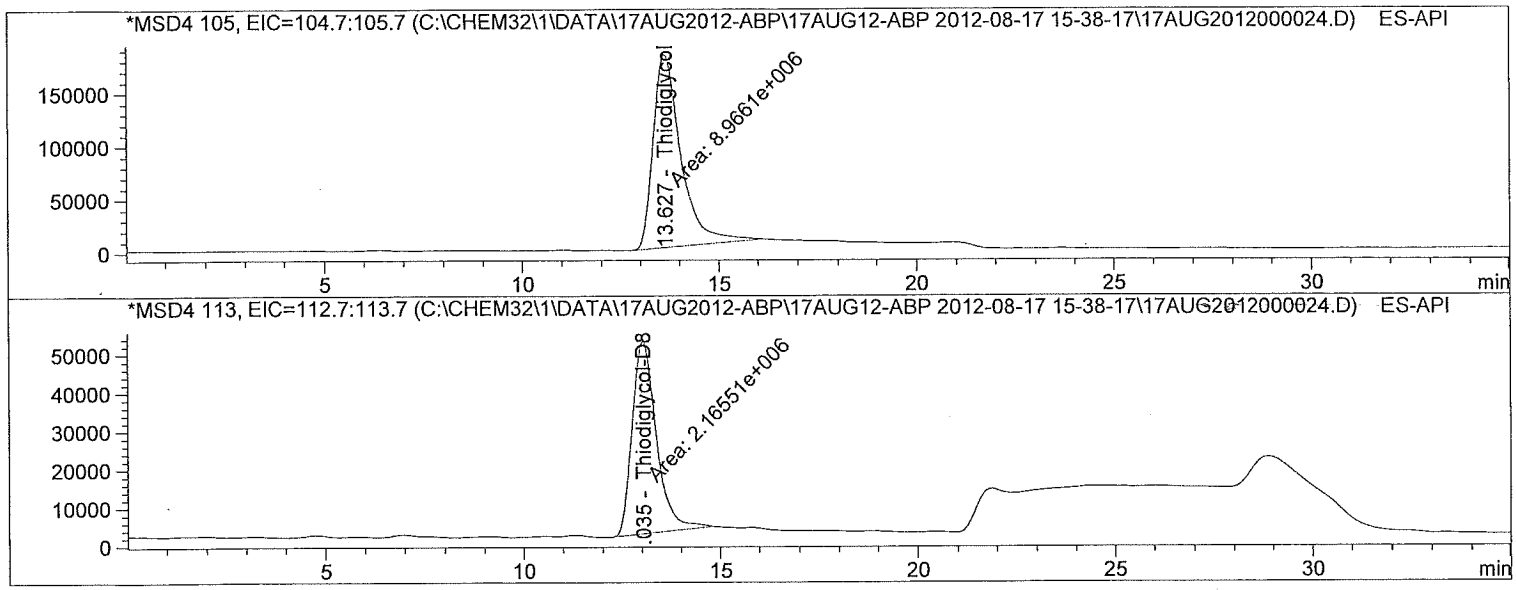
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.009	MM	I 1	1.64084e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 24 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000024.D
Sample Name: CCV3

Acq. Operator	: TTM	Seq. Line	: 24
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/18/2012 5:35:21 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	7/9/2012 11:13:05 AM
Multiplier	:	1.0000
Dilution	:	1.0000
Sample Amount	:	5.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs

Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.627	MM	1	8.96610e6	1.18498e-1	4.90631		Thiodiglycol

Batch Run # 24 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000024.D
Sample Name: CCV3

Acq. Operator : TTM Seq. Line : 24
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/18/2012 5:35:21 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 4.90631

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

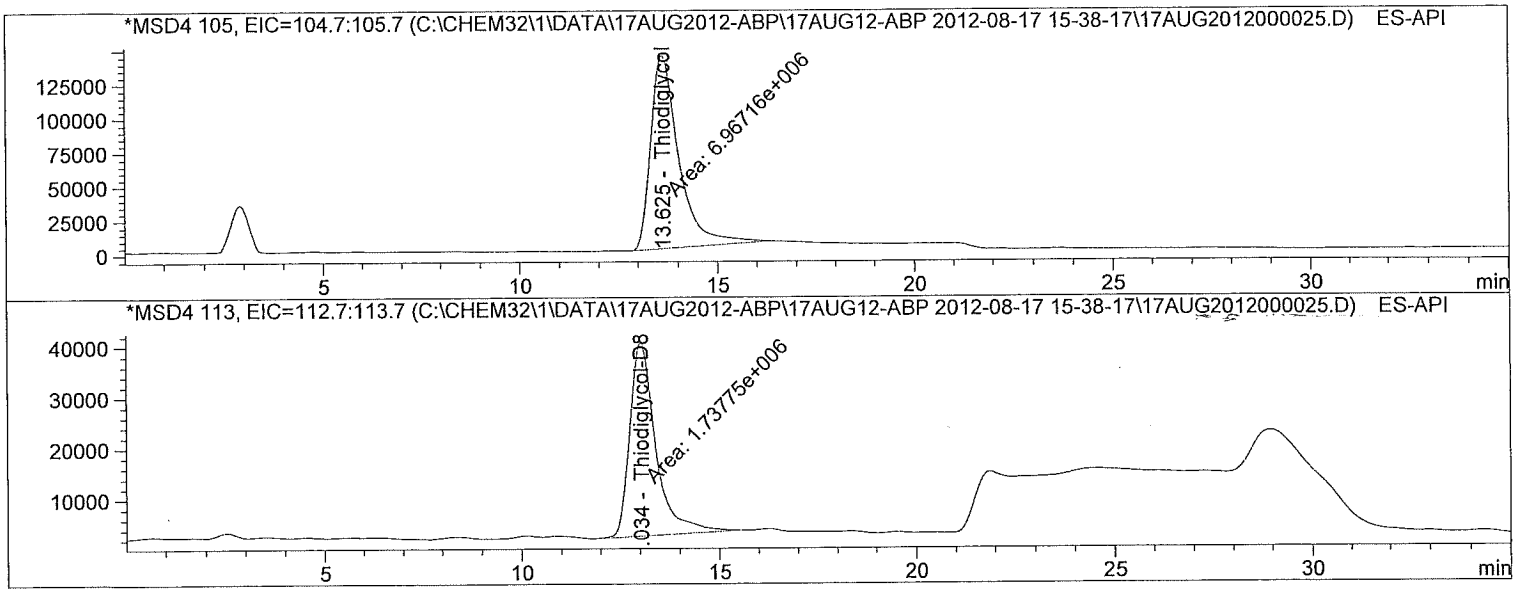
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.035	MM	I	1 2.16551e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 25 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000025.D
ample Name: 290928 MSD

Acq. Operator : TTM Seq. Line : 25
Acq. Instrument : LCMS3 Location : Vial 72
Injection Date : 8/18/2012 6:11:45 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.625	MM	1	6.96716e6	1.18289e-1	47.42531		Thiodiglycol

Totals without ISTD(s) : 47.42531

Batch Run # 25 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000025.D
Sample Name: 290928 MSD

Acq. Operator	: TTM	Seq. Line	: 25
Acq. Instrument	: LCMS3	Location	: Vial 72
Injection Date	: 8/18/2012 6:11:45 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

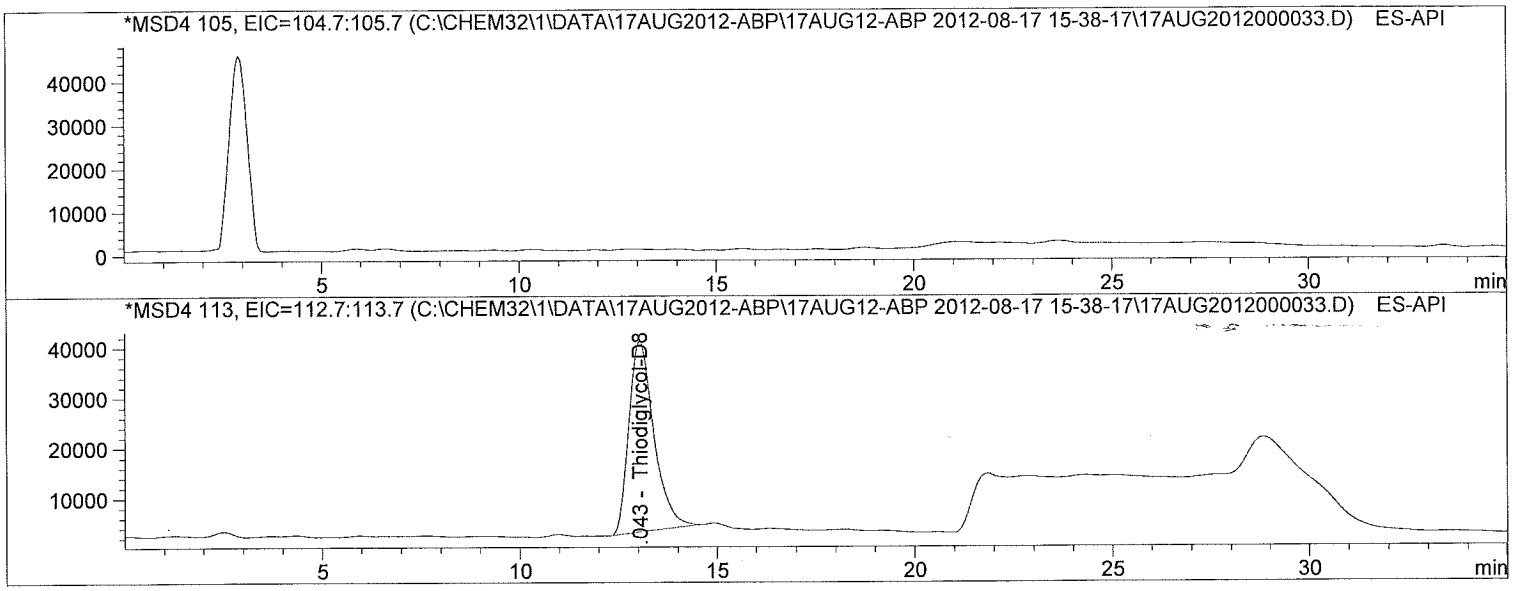
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.034	MM	I	1 1.73775e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 33 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000033.D
Sample Name: 1222302001

Acq. Operator	: TTM	Seq. Line	: 33
Acq. Instrument	: LCMS3	Location	: Vial 80
Injection Date	: 8/18/2012 11:02:46 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 33 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000033.D
Sample Name: 1222302001

Acq. Operator : TTM Seq. Line : 33
Acq. Instrument : LCMS3 Location : Vial 80
Injection Date : 8/18/2012 11:02:46 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.043	BB	I	1 1.66377e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

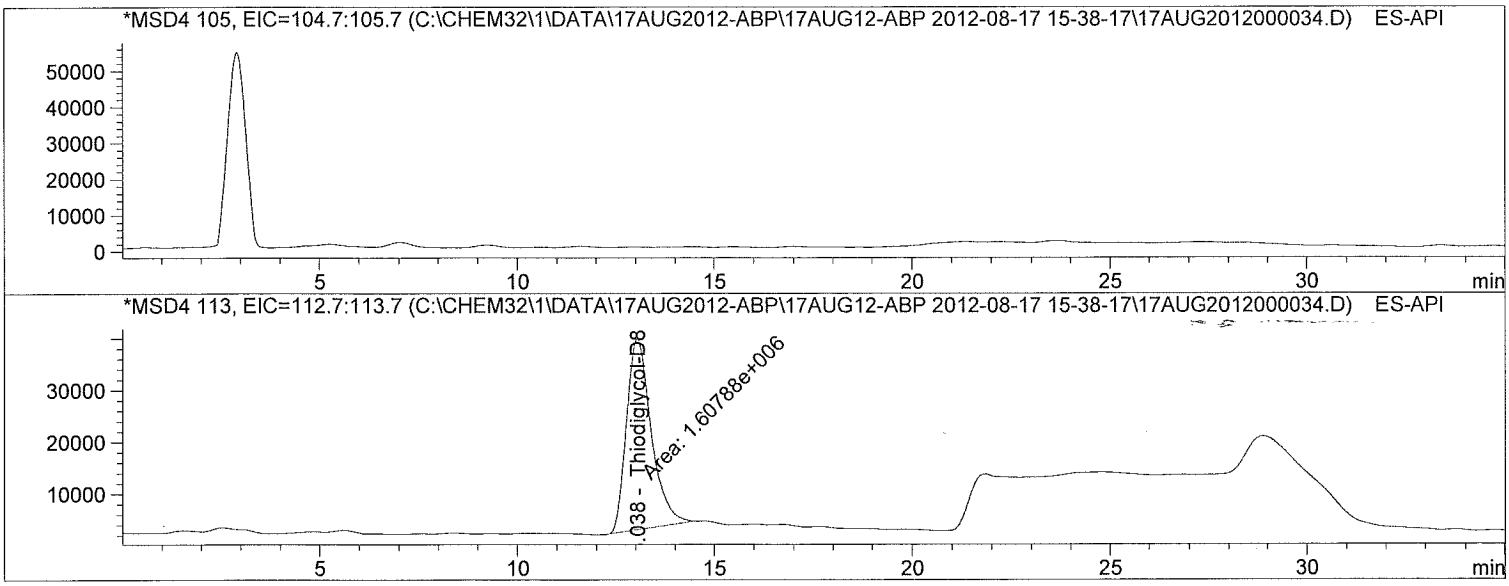
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 34 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000034.D
Sample Name: 1222302002

Acq. Operator	: TTM	Seq. Line	: 34
Acq. Instrument	: LCMS3	Location	: Vial 81
Injection Date	: 8/18/2012 11:39:07 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 34 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000034.D
Sample Name: 1222302002

Acq. Operator : TTM Seq. Line : 34
Acq. Instrument : LCMS3 Location : Vial 81
Injection Date : 8/18/2012 11:39:07 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.038	MM	I	1 1.60788e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

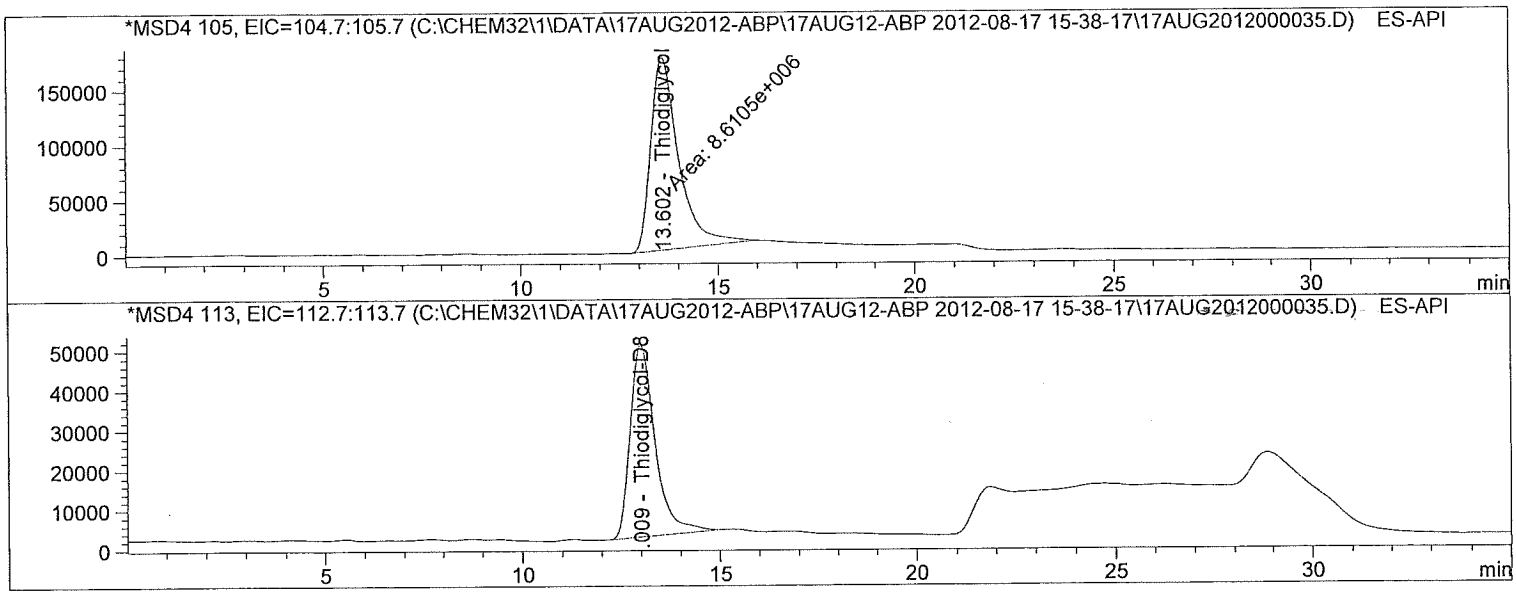
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

atch Run # 35 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000035.D
ample Name: CCV4

Acq. Operator	: TTM	Seq. Line	: 35
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/18/2012 12:15:30 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	7/9/2012 11:13:05 AM
Multiplier	:	1.0000
Dilution	:	1.0000
Sample Amount	:	5.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.602	MM	1	8.61050e6	1.18337e-1	4.78026		Thiodiglycol

Batch Run # 35 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000035.D
Sample Name: CCV4

Acq. Operator : TTM Seq. Line : 35
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/18/2012 12:15:30 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 4.78026

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.009	BB	I	1 2.13155e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Calibration

Raw Data

Method C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M

Calibration Table

Agent Breakdown Products

Calib. Data Modified : 7/9/2012 11:13:05 AM

Calculate : Internal Standard
Based on : Peak Area

Rel. Reference Window : 10.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 10.000 %
Abs. Non-ref. Window : 0.000 min
Use Multiplier & Dilution Factor with ISTDs
Uncalibrated Peaks : not reported
Partial Calibration : No recalibration if peaks missing

Curve Type : Quadratic (some peaks differ, see below)
Origin : Ignored (some peaks differ, see below)
Weight : Linear (Amnt) (some peaks differ, see below)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Default Sample ISTD Information (if not set in sample table):

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal 2: MSD4 113, EIC=112.7:113.7

RetTime [min]	Sig	Lvl	Amount	Area	Amt/Area	Ref	Grp	Name
12.890	2	1	10.00000	2.44245e6	4.09425e-6	I2		Thiodiglycol-D8
		2	10.00000	2.37259e6	4.21481e-6			
		3	10.00000	2.75981e6	3.62344e-6			
		4	10.00000	2.61922e6	3.81792e-6			
		5	10.00000	2.65549e6	3.76579e-6			
		6	10.00000	2.67017e6	3.74508e-6			
13.460	1	6	5.00000e-2	1.14698e5	4.35926e-7	2		Thiodiglycol
		5	1.00000e-1	2.17683e5	4.59383e-7			
		4	5.00000e-1	1.04468e6	4.78617e-7			
		3	1.00000	2.09084e6	4.78276e-7			
		2	5.00000	1.06254e7	4.70571e-7			
		1	10.00000	1.91630e7	5.21840e-7			

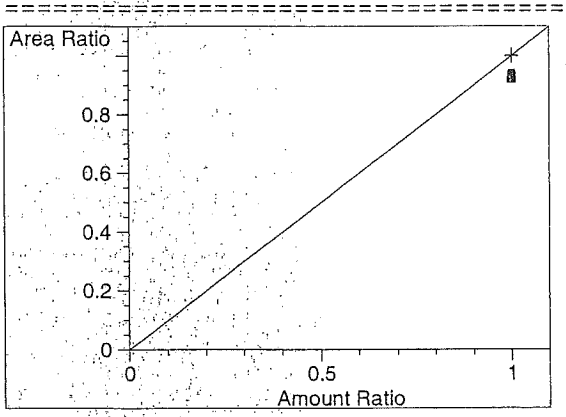
More compound-specific settings:

Compound: Thiodiglycol-D8
  Curve Type : Linear
  Origin : Included
  Calibration Level Weights:/
    Level 1 : 1
    Level 2 : 1
    Level 3 : 1
    Level 4 : 1
    Level 5 : 1
    Level 6 : 1

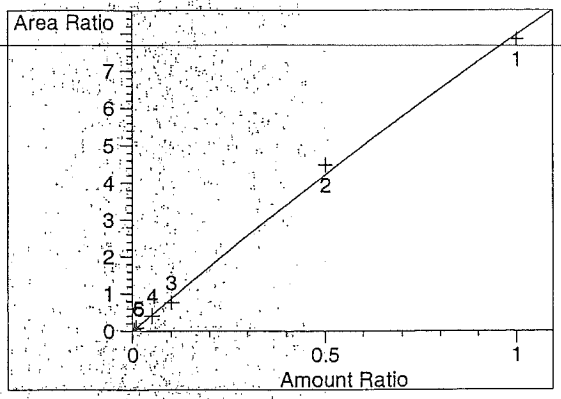
Peak Sum Table

No Entries in table

Calibration Curves



Thiodiglycol-D8 at exp. RT: 12.890
MSD4 113, EIC=112.7:113.7
Correlation: 1.00000
Residual Std. Dev.: 0.00000
Formula: y = mx + b
  m: 1.00000
  b: 0.00000
  x: Amount
  y: Area
Calibration Level Weights:
  Level 1 : 1
  Level 2 : 1
  Level 3 : 1
  Level 4 : 1
  Level 5 : 1
  Level 6 : 1



Thiodiglycol at exp. RT: 13.460
MSD4 105, EIC=104.7:105.7
Correlation: 0.99844
Residual Std. Dev.: 0.15671
Formula: y = ax² + bx + c
  a: -9.49682e-1
  b: 8.92207
  c: -8.42930e-3
  x: Amount
  y: Area
Calibration Level Weights:
  Level 6 : 1
  Level 5 : 0.5
  Level 4 : 0.1
  Level 3 : 0.05
  Level 2 : 0.01
  Level 1 : 0.005

Sequence Table:

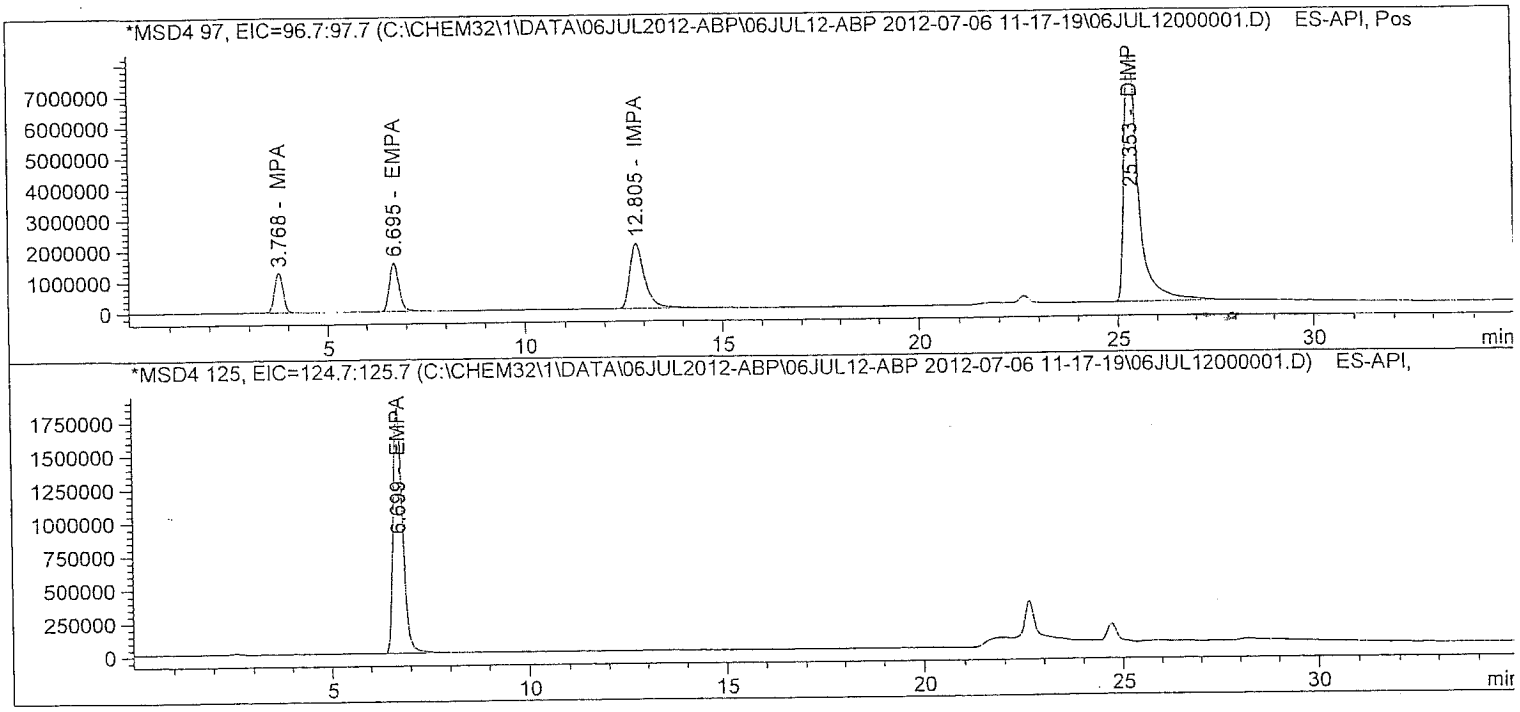
Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 1	PRIME	ABP-ON	1	Ctrl Samp	
2	Vial 1	$10	ABP-ON	1	Ctrl Samp	
3	Vial 2	$5	ABP-ON	1	Ctrl Samp	
4	Vial 3	$1	ABP-ON	1	Ctrl Samp	
5	Vial 4	$05	ABP-ON	1	Ctrl Samp	
6	Vial 5	$0.1	ABP-ON	1	Ctrl Samp	
7	Vial 6	$0.05	ABP-ON	1	Ctrl Samp	
8	Vial 7	ICV	ABP-ON	1	Ctrl Samp	
9	Vial 8	283055 LMB	ABP-ON	1	Ctrl Samp	
10	Vial 9	283056 LCS	ABP-ON	1	Ctrl Samp	
11	Vial 10	283057 RLVS	ABP-ON	1	Ctrl Samp	
12	Vial 11	1217861001	ABP-ON	1	Sample	
13	Vial 12	1217861002 MS	ABP-ON	1	Ctrl Samp	
14	Vial 13	1217861003 MSD	ABP-ON	1	Ctrl Samp	
15	Vial 2	CCV	ABP-ON	1	Ctrl Samp	

atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

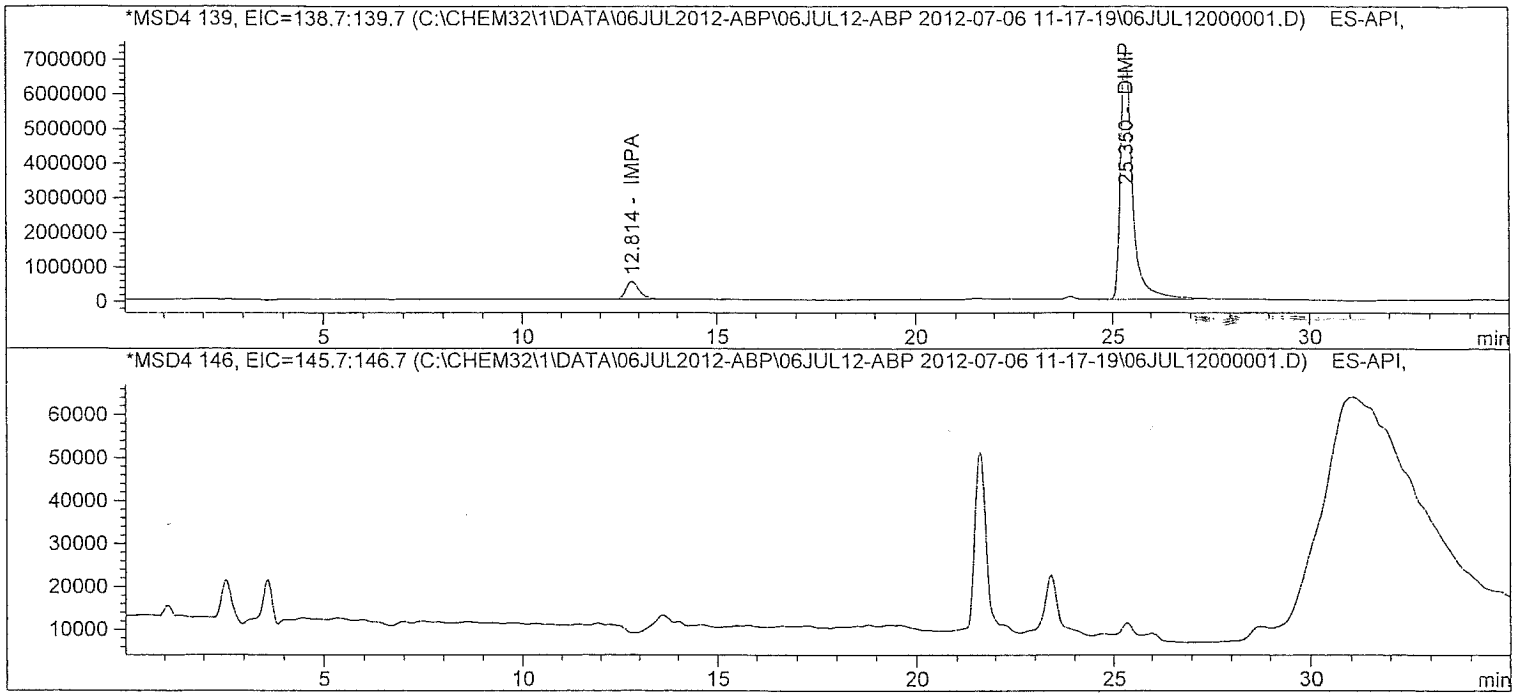
Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



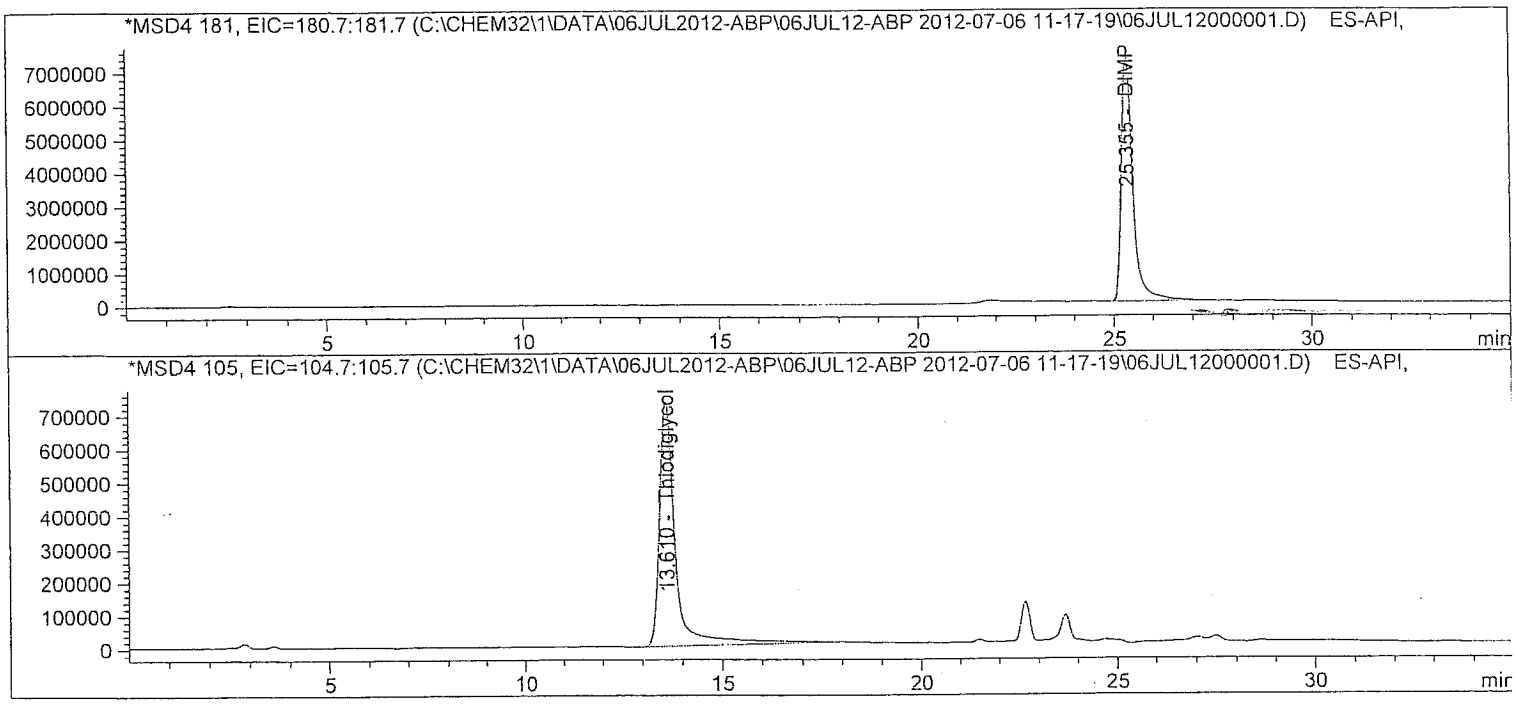
Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



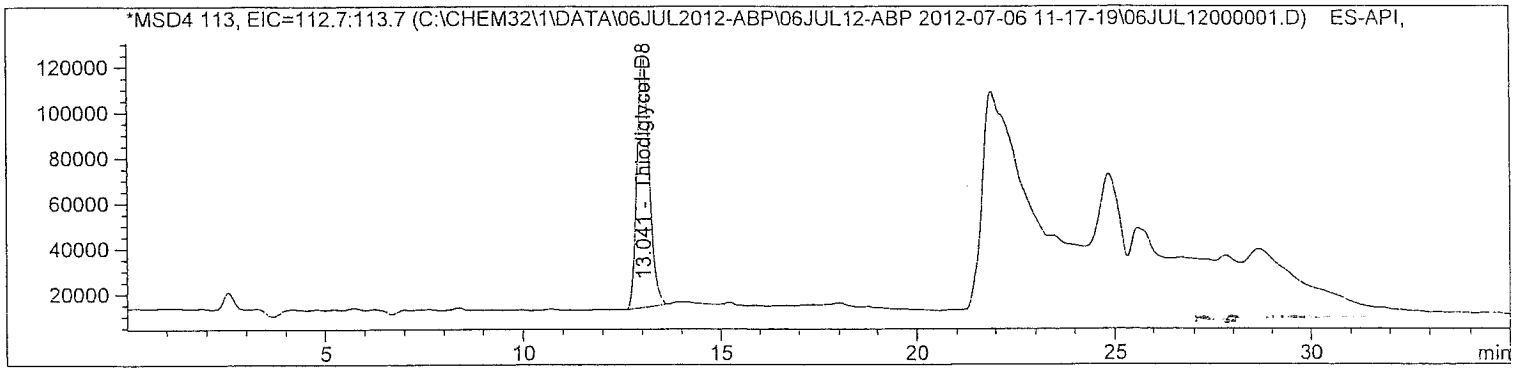
atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 11:17:43 AM
Seq. Line : 1
Location : Vial 1
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 10.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.768	BB	1	1.91978e7	1.32528e-1	10.64848		MPA
12.805	BBA	1	5.64639e7	4.37087e-2	10.32924		IMPA

Totals without ISTD(s) : 20.97773

atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator : TTM Seq. Line : 1
Acq. Instrument : LCMS3 Location : Vial 1
Injection Date : 7/6/2012 11:17:43 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.699	BB	1	3.05963e7	7.98724e-2	10.22810		EMPA

Totals without ISTD(s) : 10.22810

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.355	BBA	1	1.54432e8	1.54383e-2	9.97853		DIMP

Totals without ISTD(s) : 9.97853

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.610	BBA	1	2.03461e7	1.26756e-1	10.79391		Thiodiglycol

Totals without ISTD(s) : 10.79391

Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

Acq. Operator	: TTM	Seq. Line :	1
Acq. Instrument	: LCMS3	Location :	Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj :	1
		Inj Volume :	10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

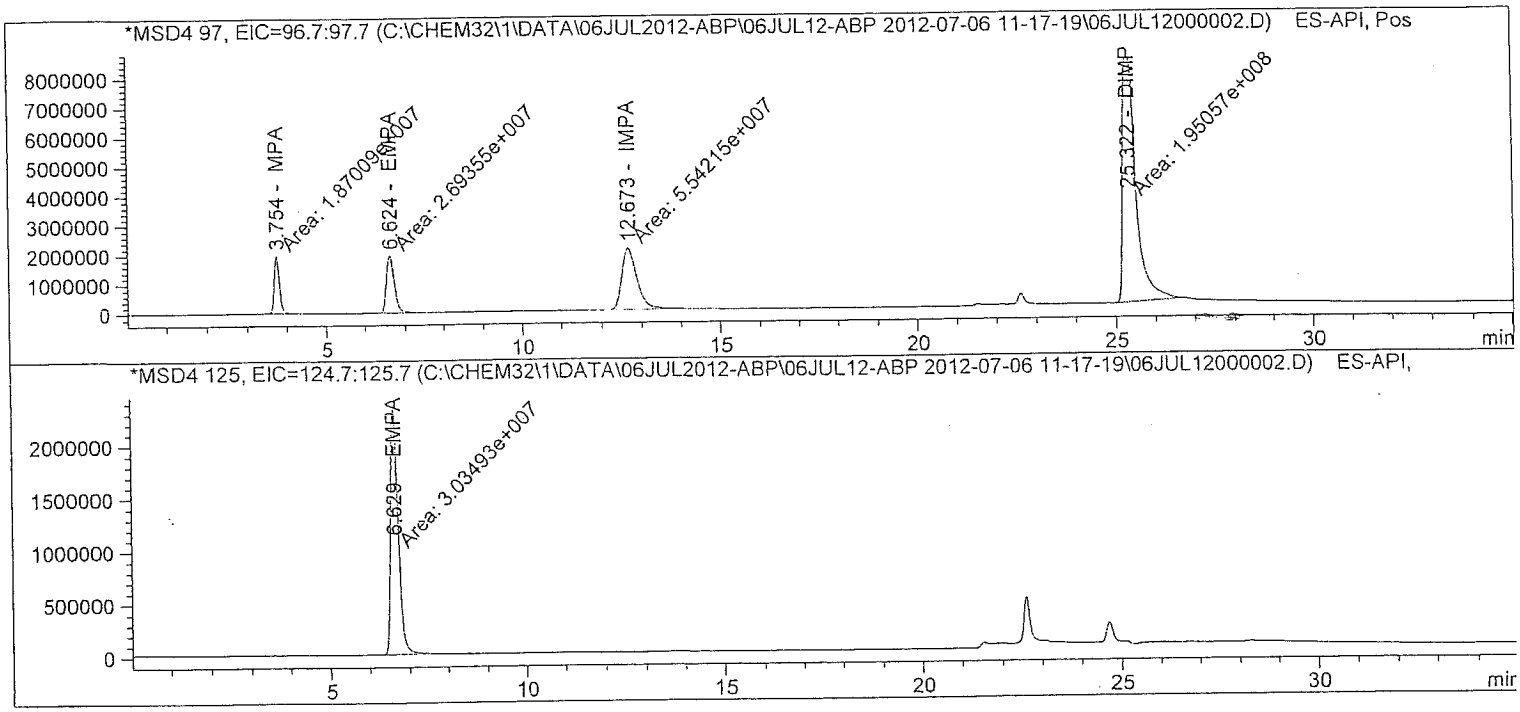
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.041	BB	I	1 2.38930e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

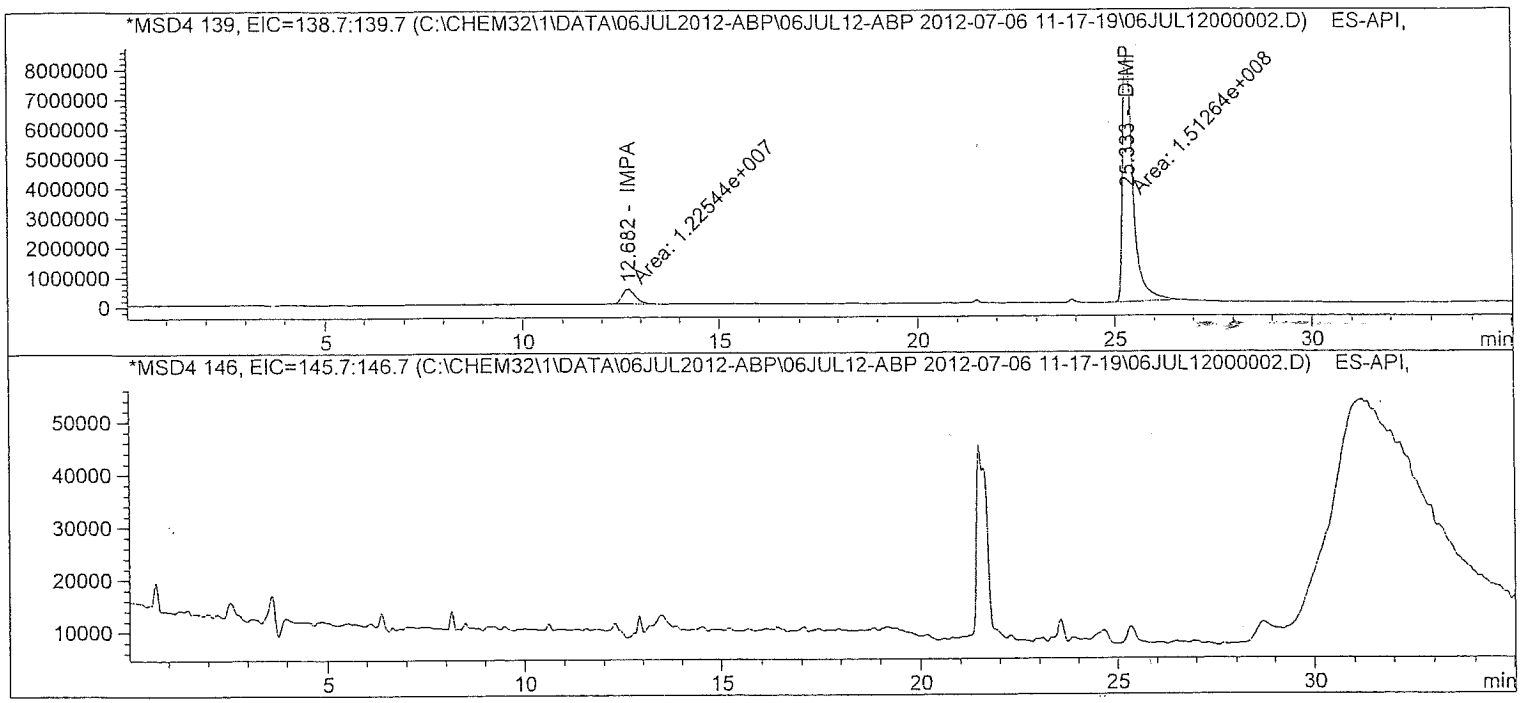
atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



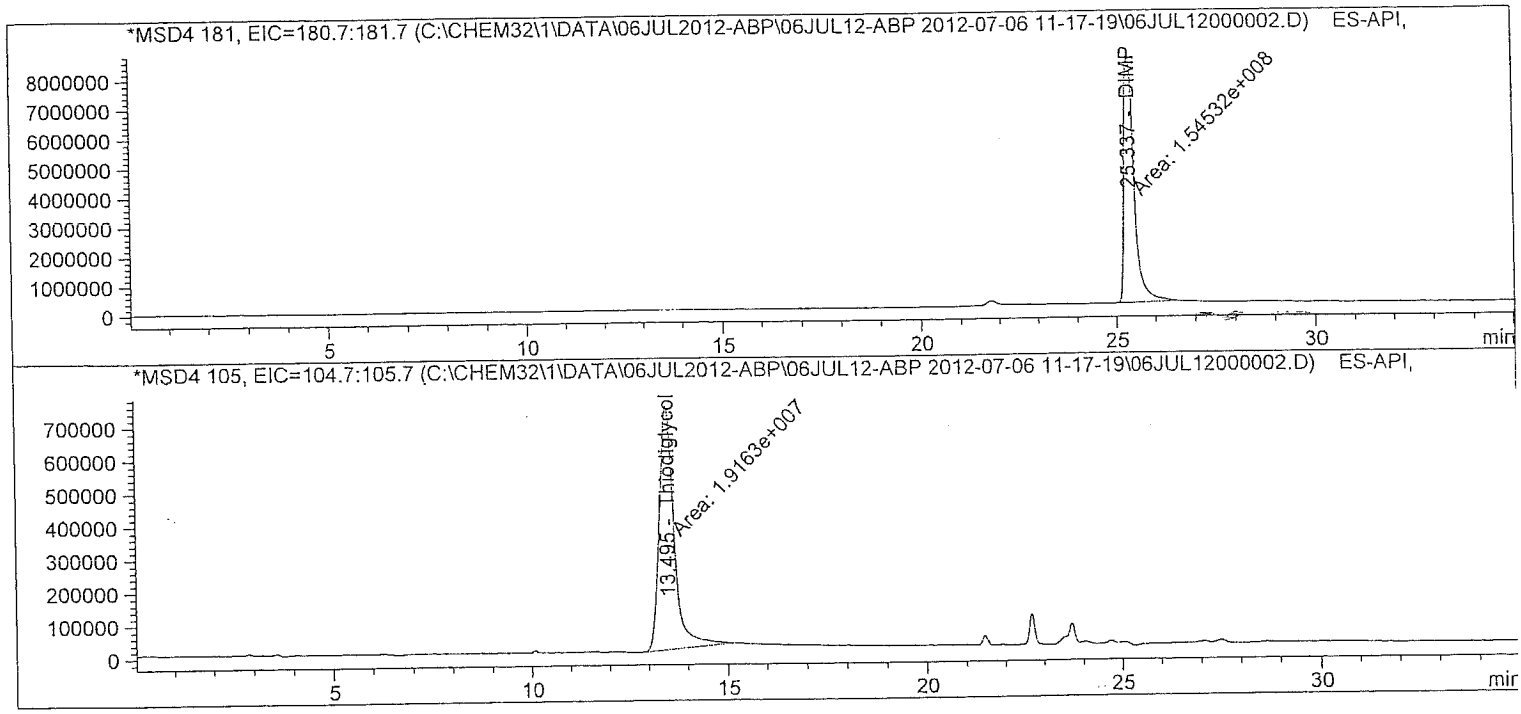
Batch Run # 2 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
Sample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

==========

Acq. Operator : TTM Seq. Line : 2
Acq. Instrument : LCMS3 Location : Vial 1
Injection Date : 7/6/2012 11:54:02 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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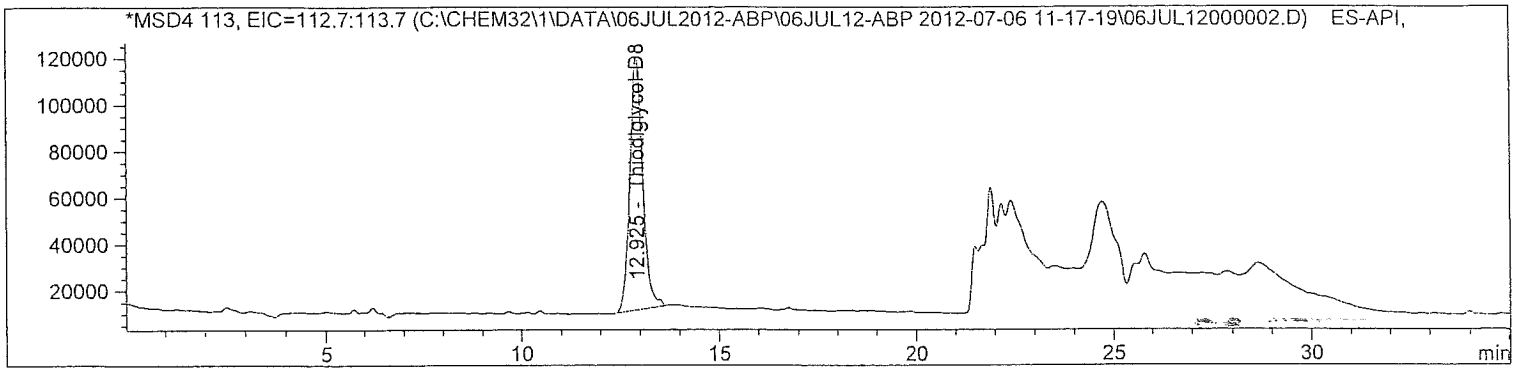

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Internal Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 10.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.754	MM	1	1.87009e7	1.29739e-1	9.93363		MPA
12.673	MM	1	5.54215e7	4.36500e-2	9.90458		IMPA

Totals without ISTD(s) : 19.83821

atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

```
==================================================================
Acq. Operator   : TTM                          Seq. Line :   2
Acq. Instrument : LCMS3                         Location : Vial 1
Injection Date  : 7/6/2012 11:54:02 AM                Inj :   1
                                              Inj Volume : 10 µl
Acq. Method     : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed    : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed    : 7/9/2012 11:13:23 AM by TTM
                  (Results are from a previously saved Batch)
Method Info     : Agent Breakdown Products

==================================================================
```

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.629	MM	1	3.03493e7	7.97357e-2	9.90775		EMPA

Totals without ISTD(s) : 9.90775

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.337	MM	1	1.54532e8	1.48417e-2	9.39024		DIMP

Totals without ISTD(s) : 9.39024

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.495	MM	1	1.91630e7	1.25317e-1	9.83212		Thiodiglycol

Totals without ISTD(s) : 9.83212

atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator	: TTM	Seq. Line :	2
Acq. Instrument	: LCMS3	Location :	Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj :	1
		Inj Volume :	10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

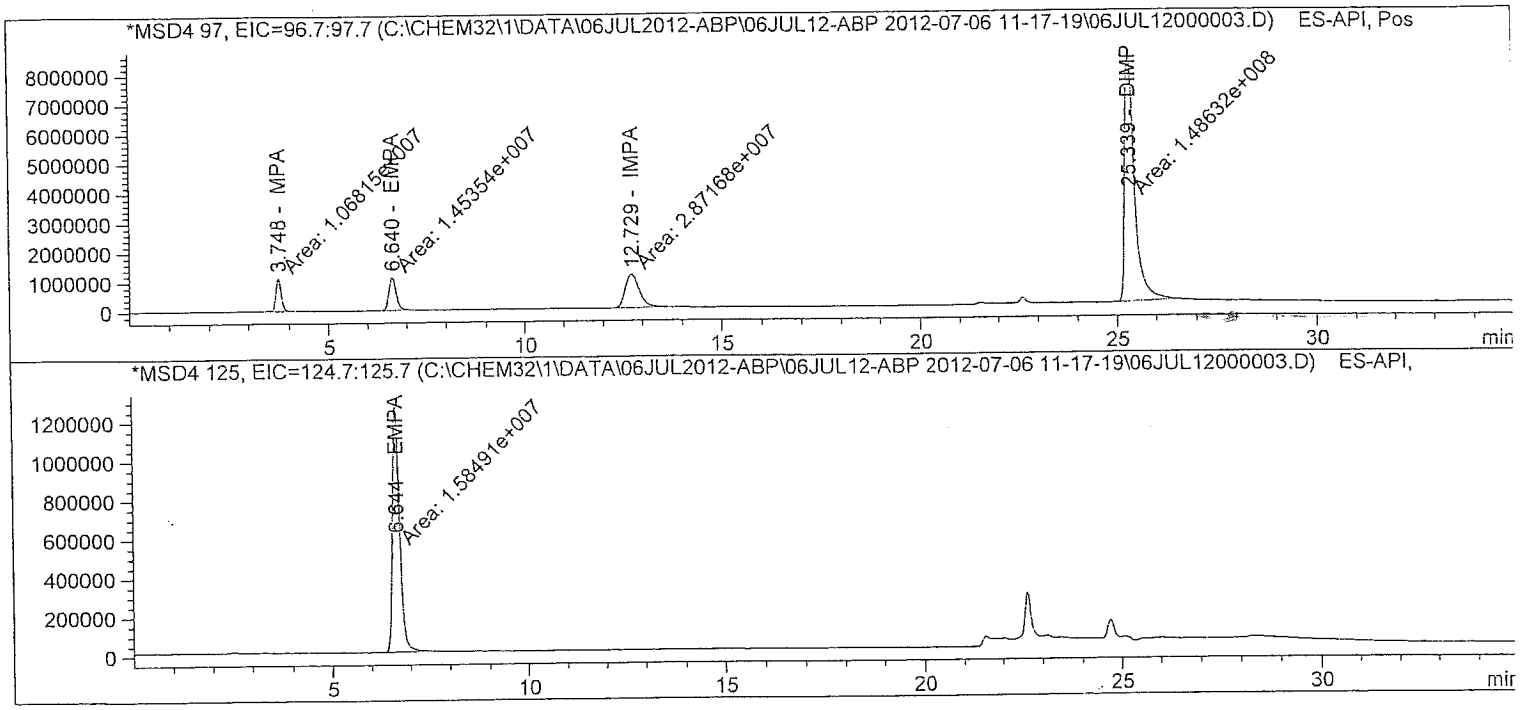
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.925	BB	I	1 2.44245e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

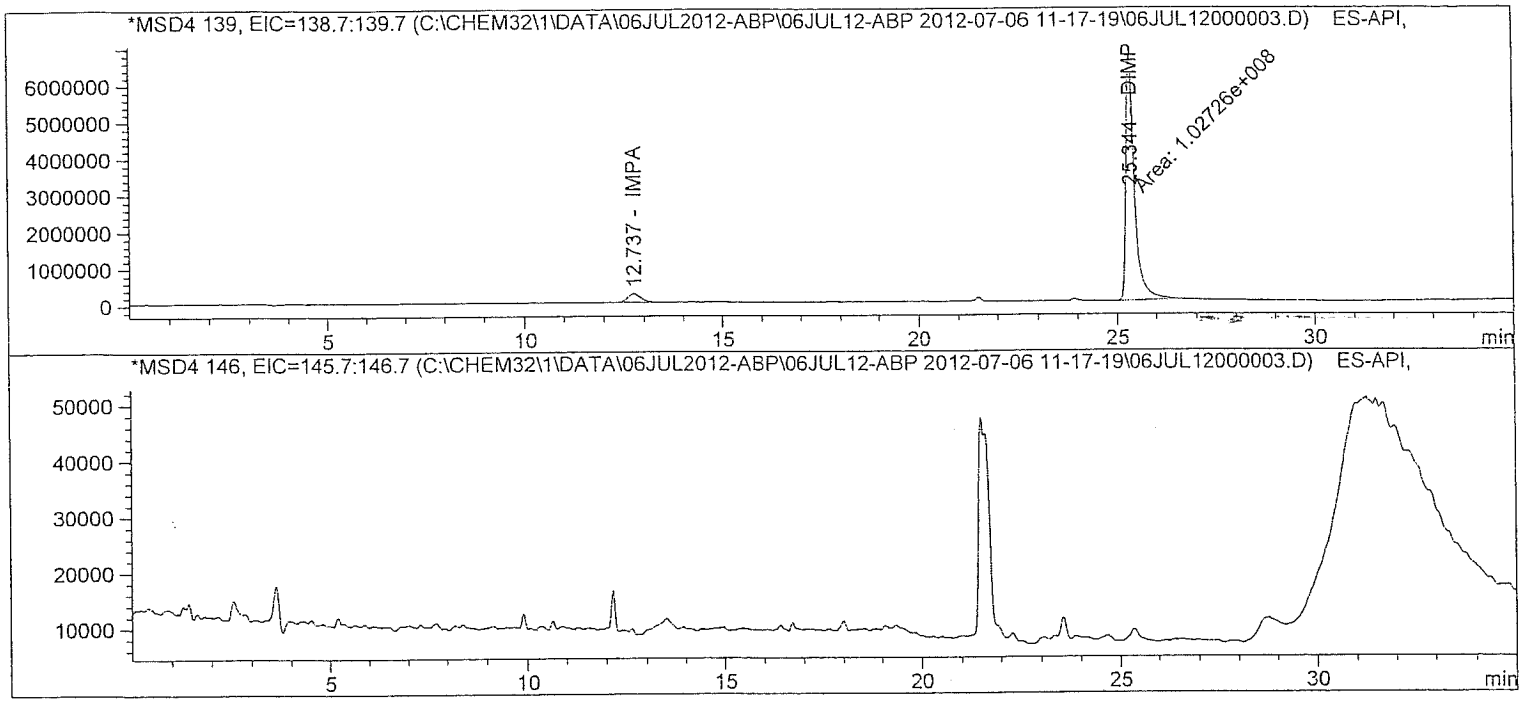
Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



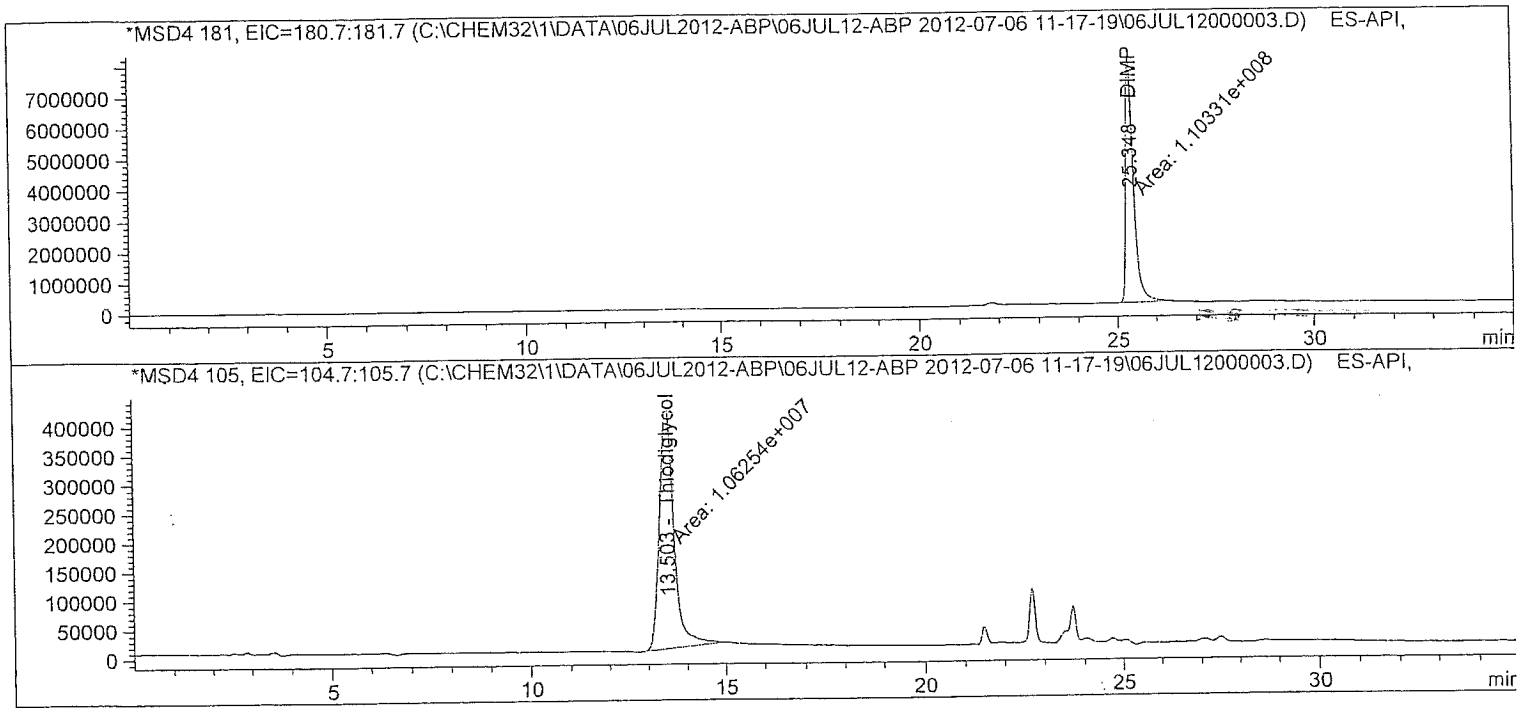
atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



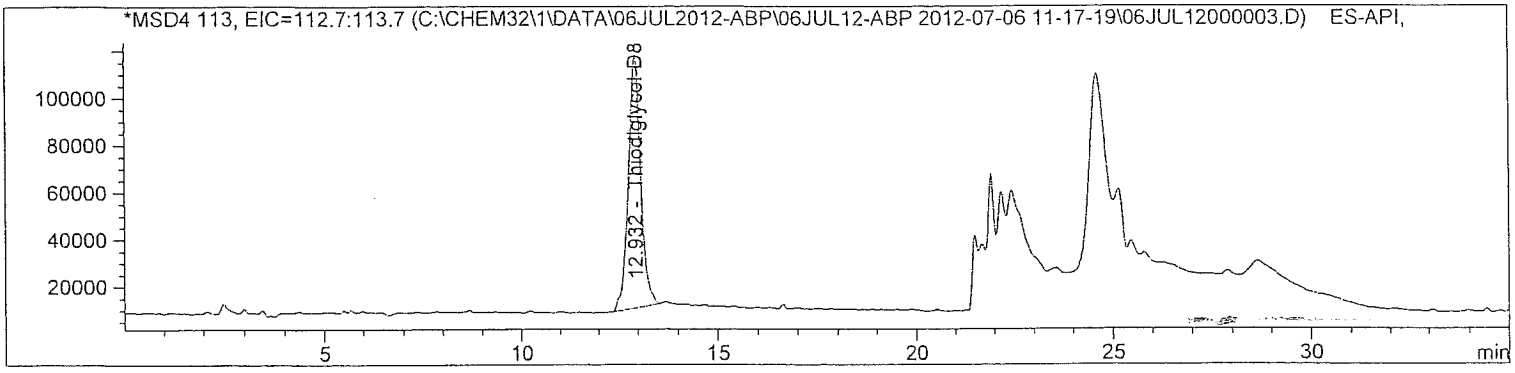
atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 5.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.748	MM	1	1.06815e7	1.13483e-1	5.10907		MPA
12.729	MM	1	2.87168e7	4.30231e-2	5.20733		IMPA

Totals without ISTD(s) : 10.31641

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==================================================================
Acq. Operator   : TTM                          Seq. Line :   3
Acq. Instrument : LCMS3                         Location : Vial 2
Injection Date  : 7/6/2012 12:30:22 PM                Inj :   1
                                              Inj Volume : 10 µl
Acq. Method     : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed    : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed    : 7/9/2012 11:13:23 AM by TTM
                  (Results are from a previously saved Batch)
Method Info     : Agent Breakdown Products

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```

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.644	MM	1	1.58491e7	7.77744e-2	5.19540		EMPA

Totals without ISTD(s) : 5.19540

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	MM	1	1.10331e8	1.18266e-2	5.49964		DIMP

Totals without ISTD(s) : 5.49964

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.503	MM	1	1.06254e7	1.19049e-1	5.33146		Thiodiglycol

Totals without ISTD(s) : 5.33146

atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

Acq. Operator : TTM Seq. Line : 3
Acq. Instrument : LCMS3 Location : Vial 2
Injection Date : 7/6/2012 12:30:22 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

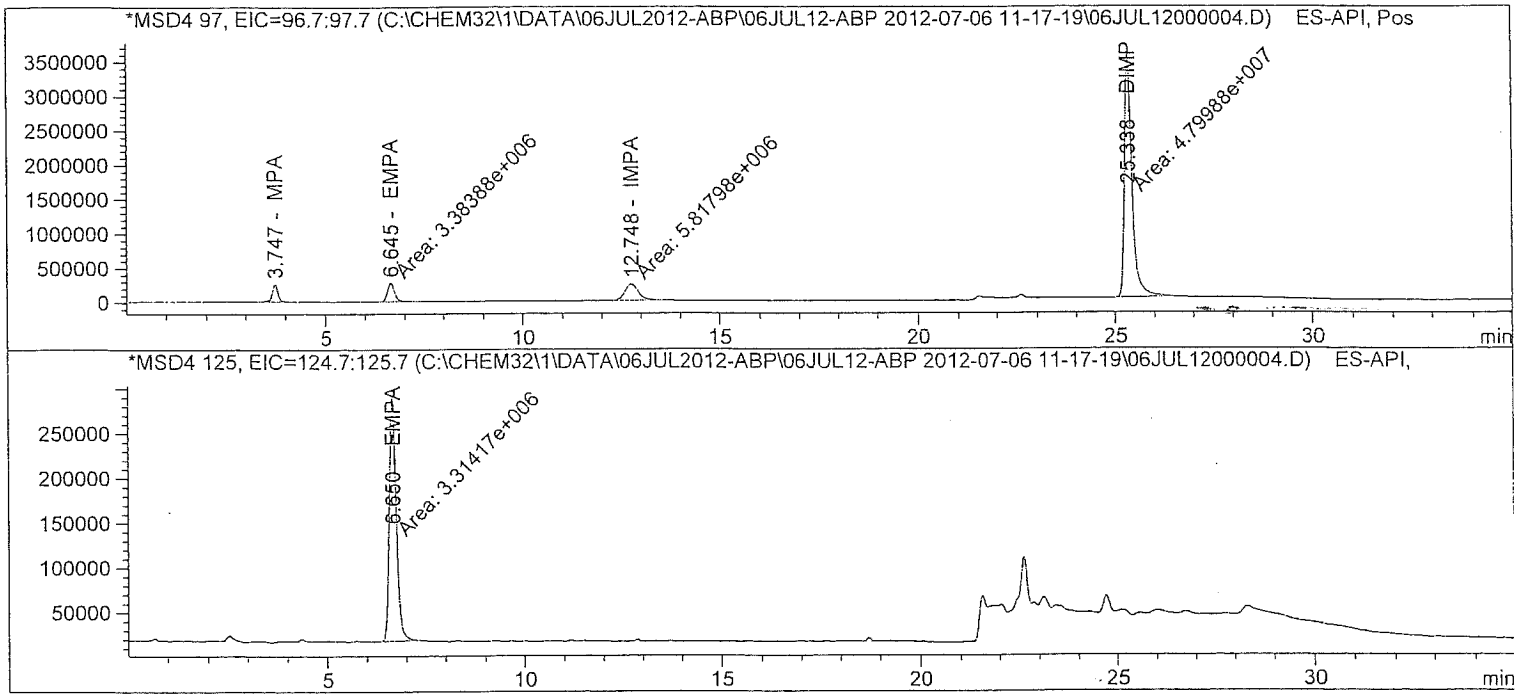
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.932	BB	I	1 2.37259e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

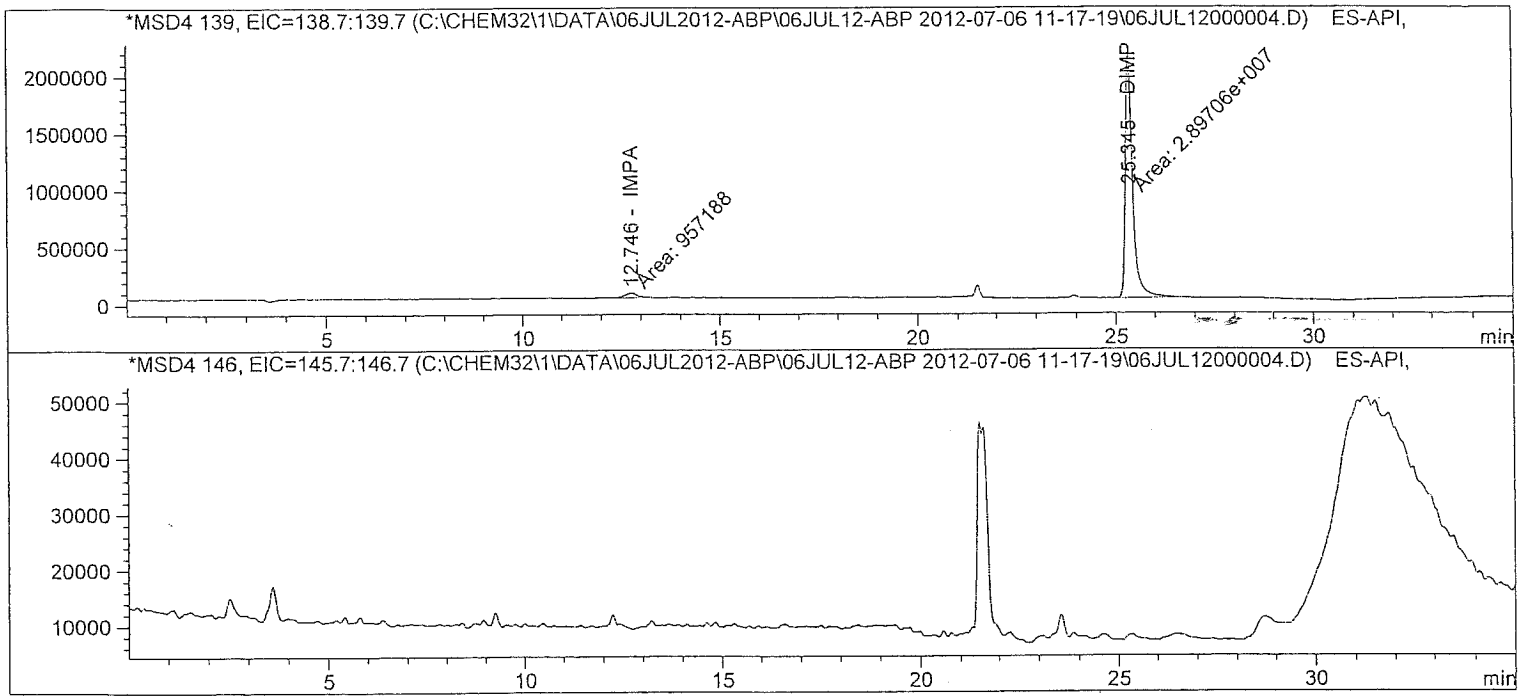
atch Run # 4 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
ample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



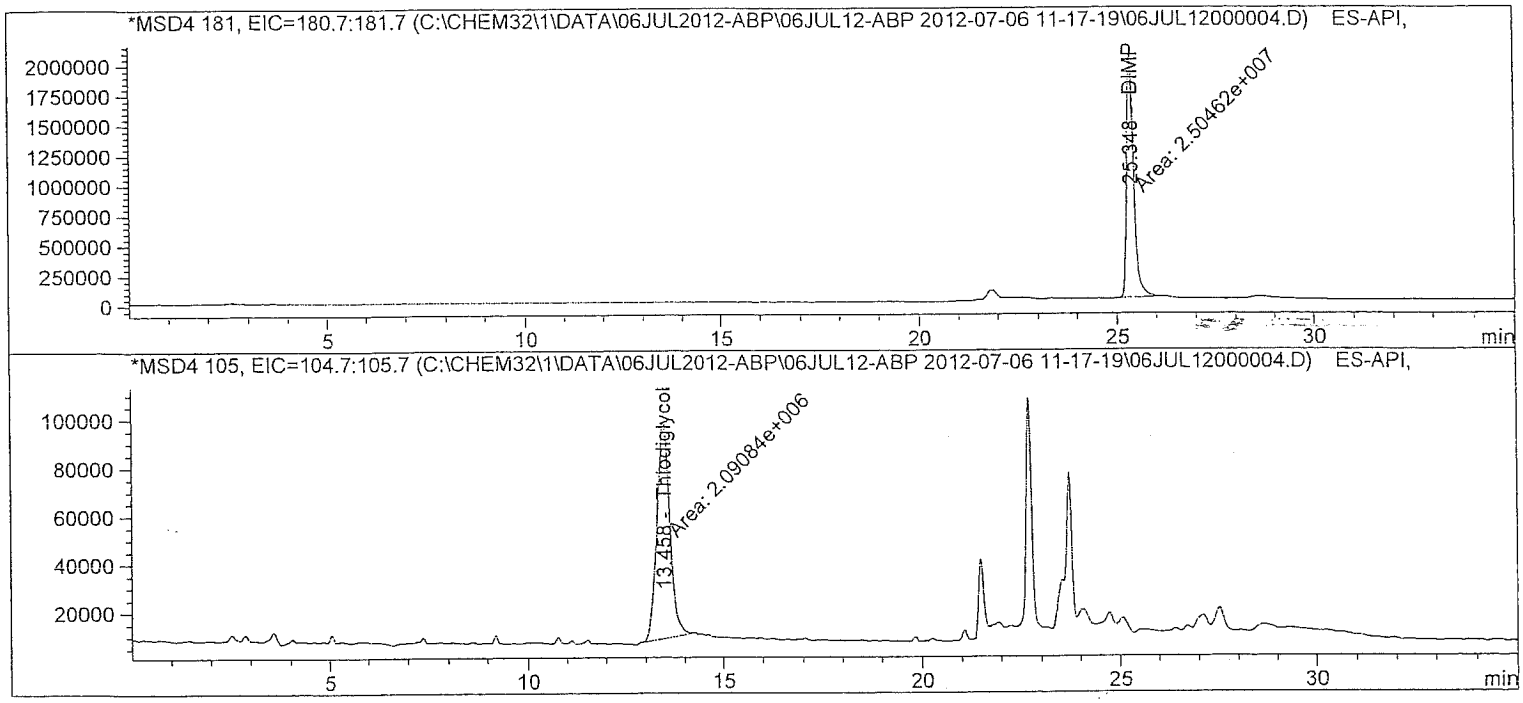
Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



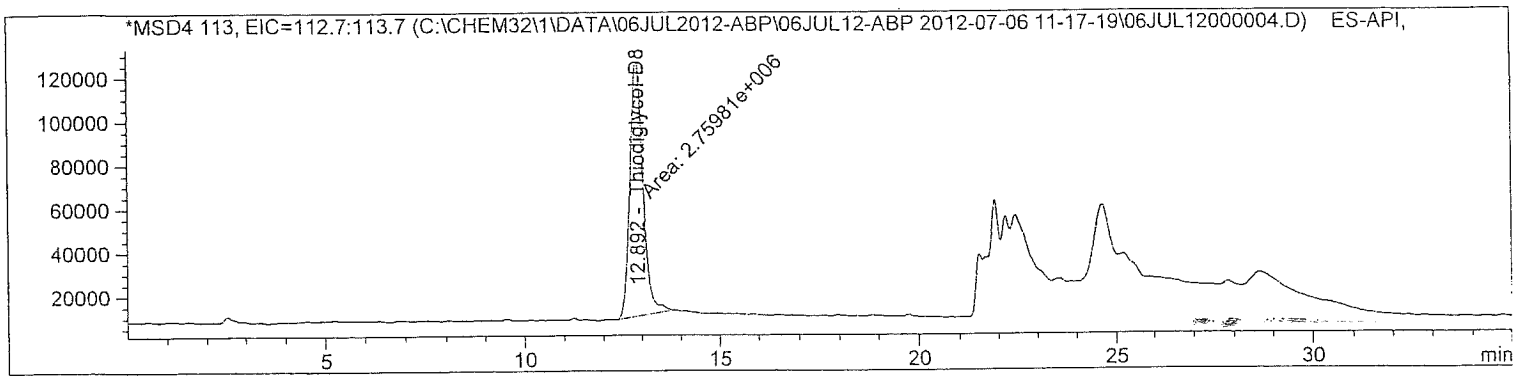
Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 1.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.747	BB	1	2.56450e6	1.00803e-1	9.36694e-1		MPA
12.748	MM	1	5.81798e6	4.26904e-2	8.99961e-1		IMPA

Totals without ISTD(s) : 1.83665

atch Run # 4 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
ample Name: $1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 1:06:42 PM
Seq. Line : 4
Location : Vial 3
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.650	MM	1	3.31417e6	7.60313e-2	9.13037e-1		EMPA

Totals without ISTD(s) : 9.13037e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	MM	1	2.50462e7	9.62641e-3	8.73631e-1		DIMP

Totals without ISTD(s) : 8.73631e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.458	MM	1	2.09084e6	1.14384e-1	8.66577e-1		Thiodiglycol

Totals without ISTD(s) : 8.66577e-1

atch Run # 4 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
ample Name: $1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 1:06:42 PM
Seq. Line : 4
Location : Vial 3
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.892	MM	I	1 2.75981e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 5 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: $05

==========

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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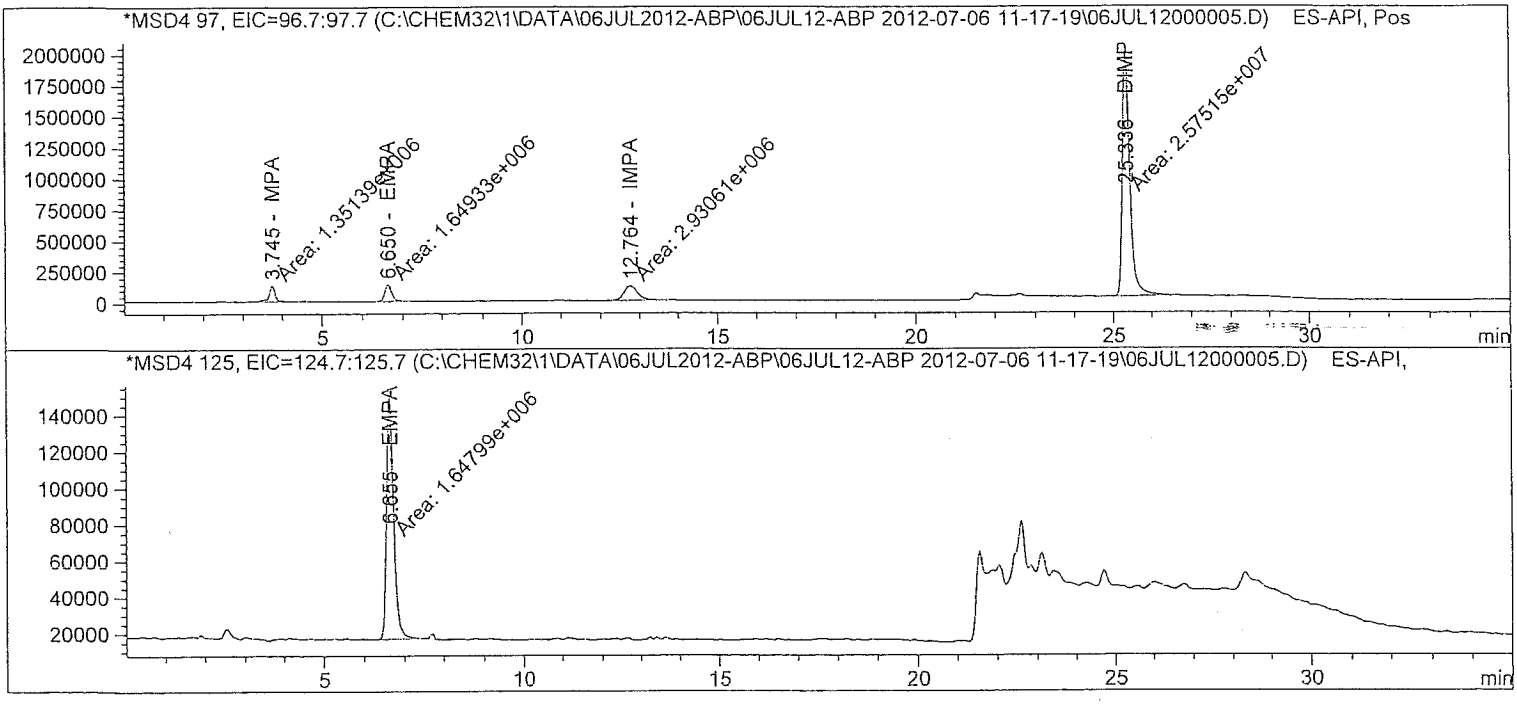

Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

==========

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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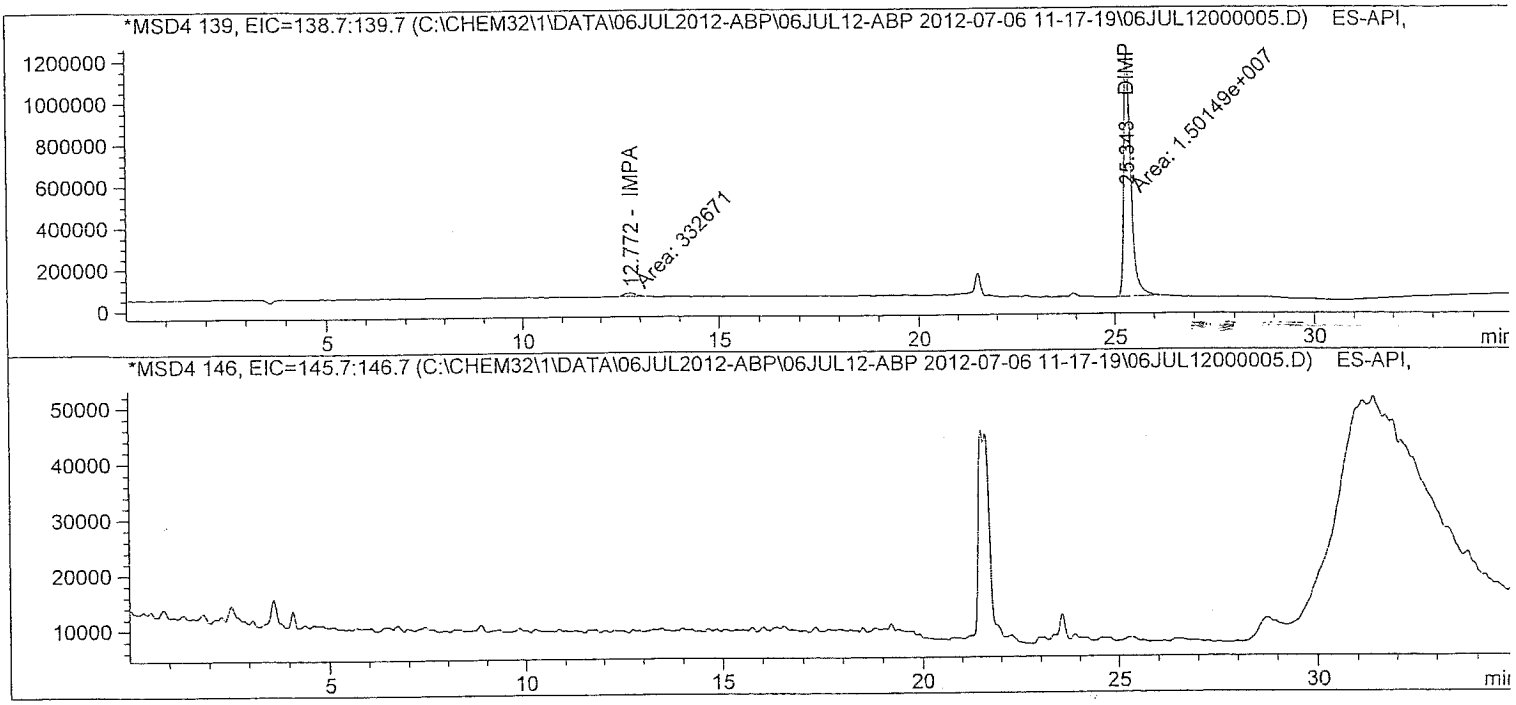
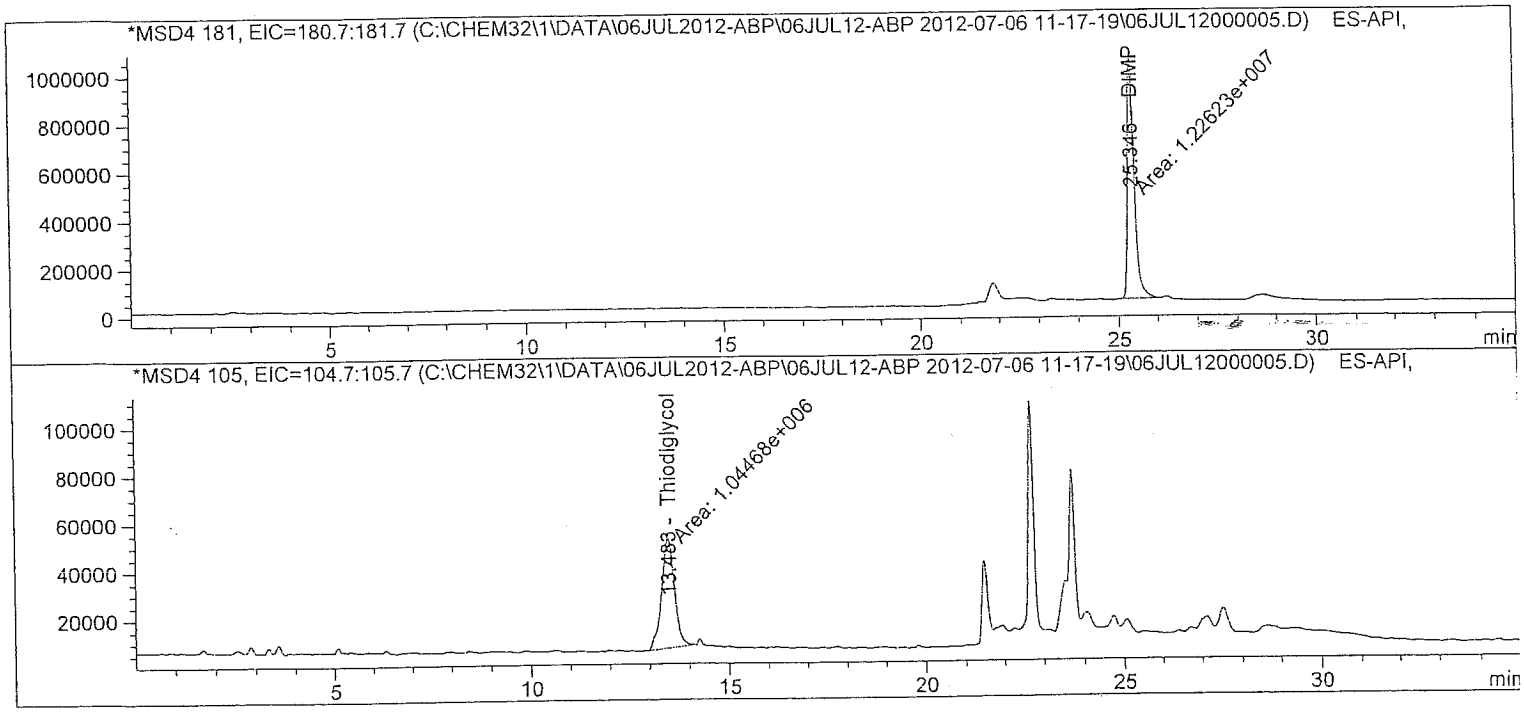


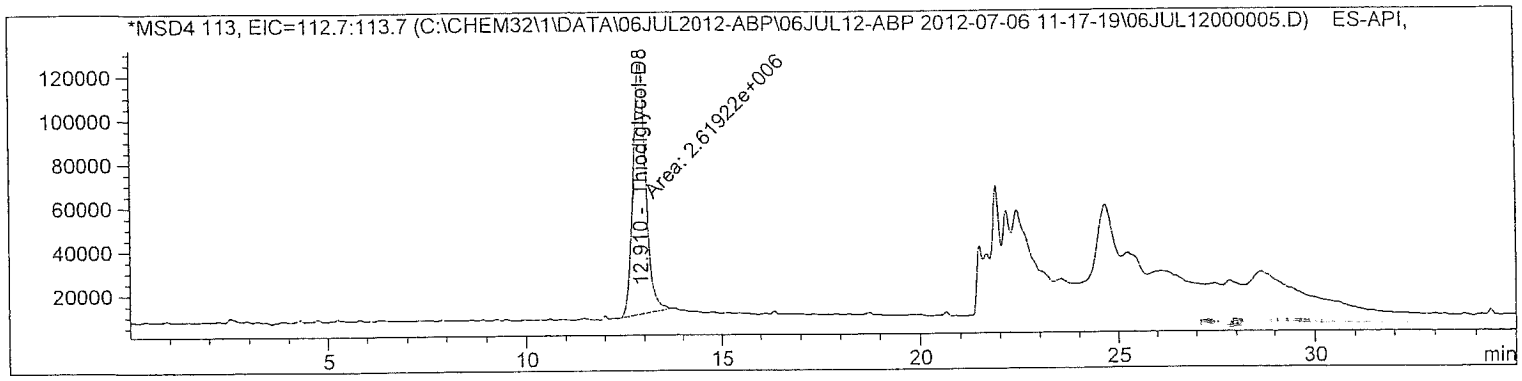
atch Run # 5 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: $05

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 5 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: $05

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 1:43:01 PM
Seq. Line : 5
Location : Vial 4
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000e-1 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.745	MM	1	1.35139e6	9.80980e-2	5.06138e-1		MPA
12.764	MM	1	2.93061e6	4.28998e-2	4.79999e-1		IMPA

Totals without ISTD(s) : 9.86138e-1

atch Run # 5 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: $05

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 1:43:01 PM
Seq. Line : 5
Location : Vial 4
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.655	MM	1	1.64799e6	7.58113e-2	4.76997e-1		EMPA

Totals without ISTD(s) : 4.76997e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.346	MM	1	1.22623e7	9.57834e-3	4.48425e-1		DIMP

Totals without ISTD(s) : 4.48425e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.483	MM	1	1.04468e6	1.15012e-1	4.58725e-1		Thiodiglycol

Totals without ISTD(s) : 4.58725e-1

atch Run # 5 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: $05

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.910	MM	I	1 2.61922e6	1.00000	10.00000		Thiodiglycol-D8

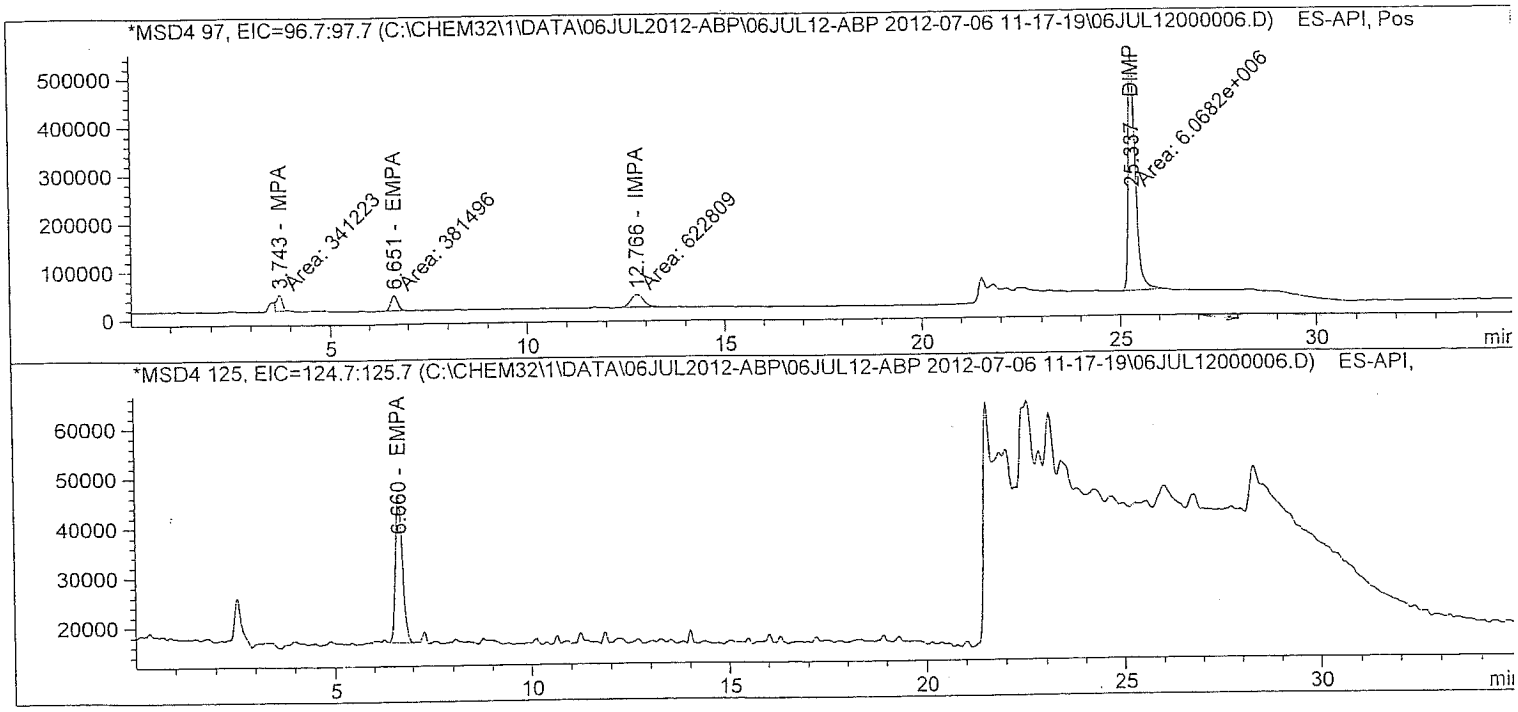
Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 6 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

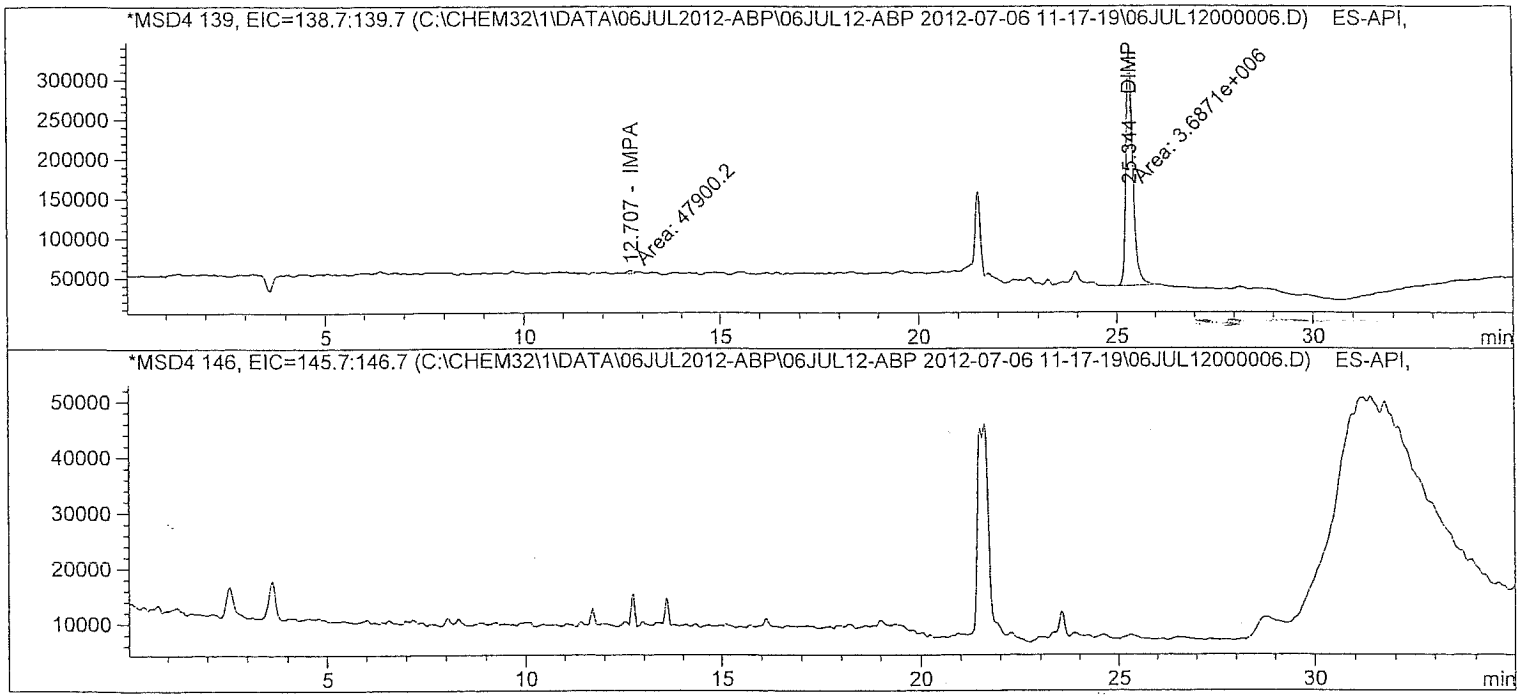
Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Batch Run # 6 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

==========

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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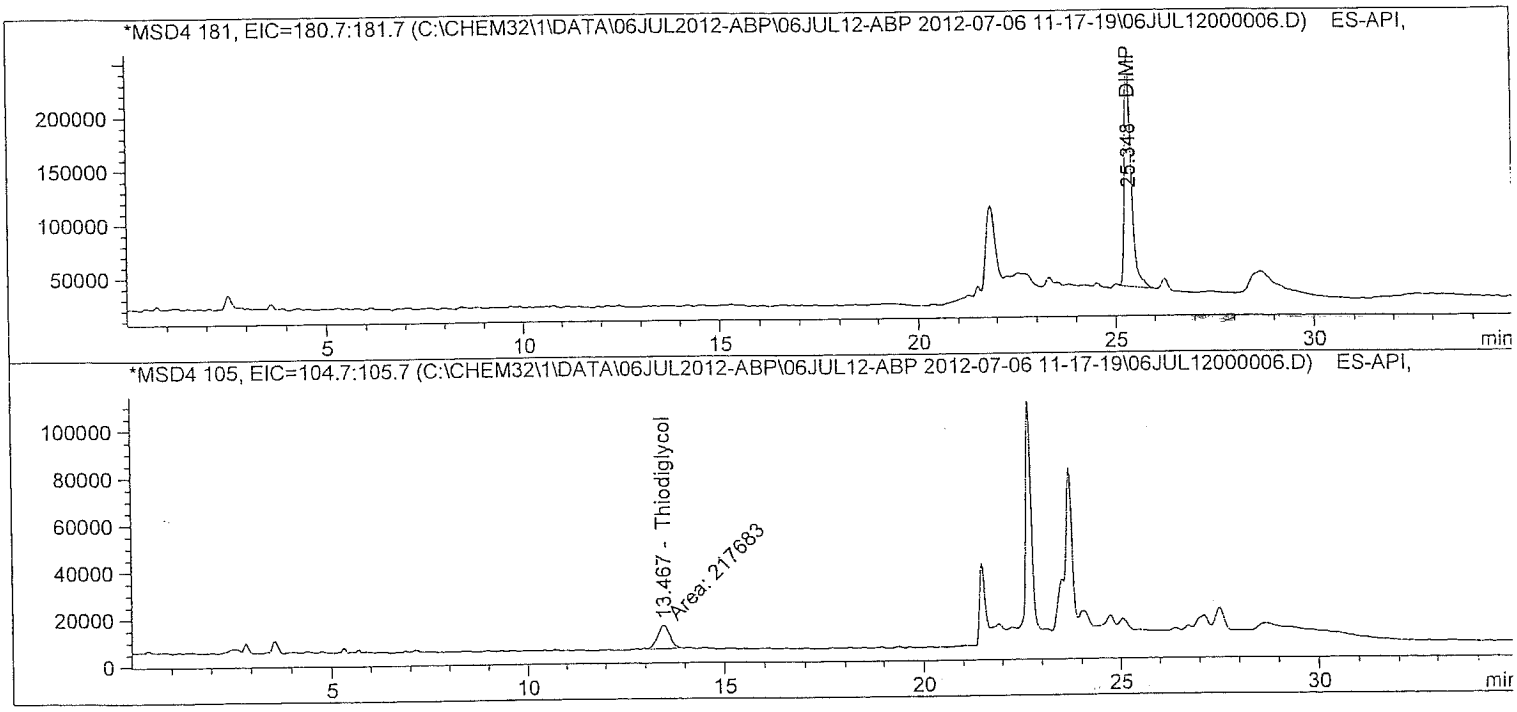
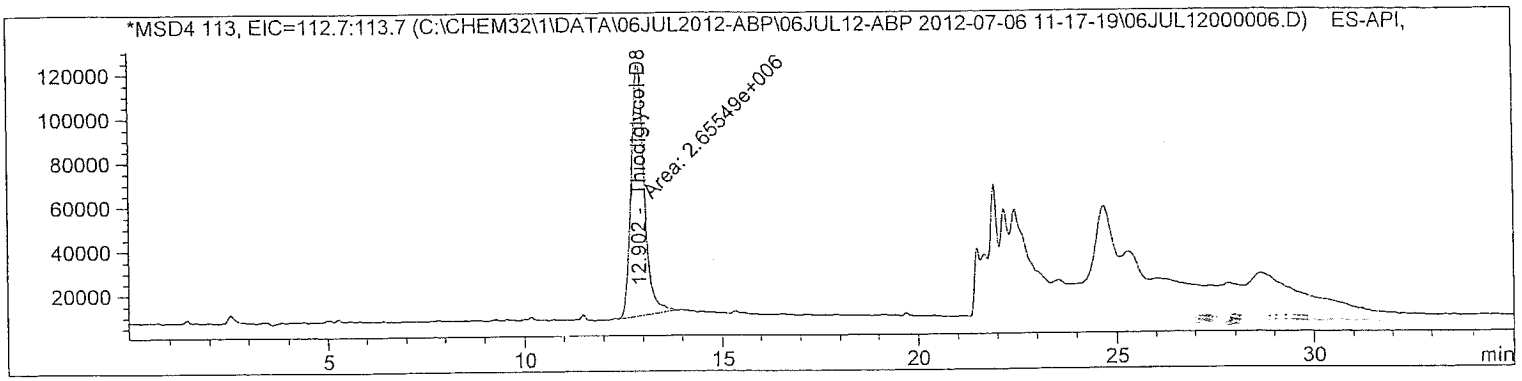


atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:19:21 PM
Seq. Line : 6
Location : Vial 5
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 1.00000e-1 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.743	FM	1	3.41223e5	8.57299e-2	1.10161e-1		MPA
12.766	MM	1	6.22808e5	4.49809e-2	1.05497e-1		IMPA

Totals without ISTD(s) : 2.15657e-1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:19:21 PM
Seq. Line : 6
Location : Vial 5
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.660	BB	1	3.63294e5	7.52785e-2	1.02988e-1		EMPA

Totals without ISTD(s) : 1.02988e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	BB	1	2.58087e6	1.03862e-2	1.00944e-1		DIMP

Totals without ISTD(s) : 1.00944e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.467	MM	1	2.17683e5	1.23740e-1	1.01436e-1		Thiodiglycol

Totals without ISTD(s) : 1.01436e-1

atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:19:21 PM
Seq. Line : 6
Location : Vial 5
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.902	MM	I	1 2.65549e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

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Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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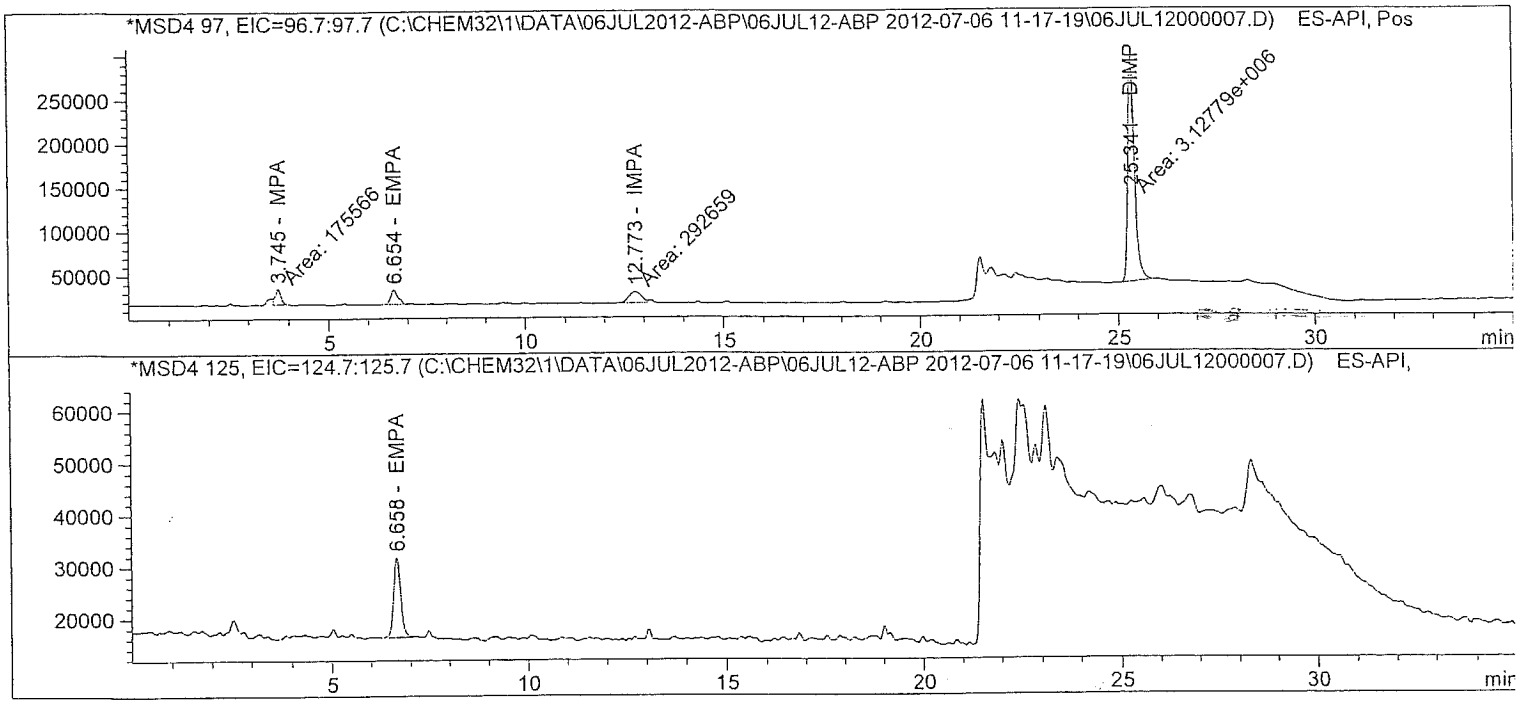
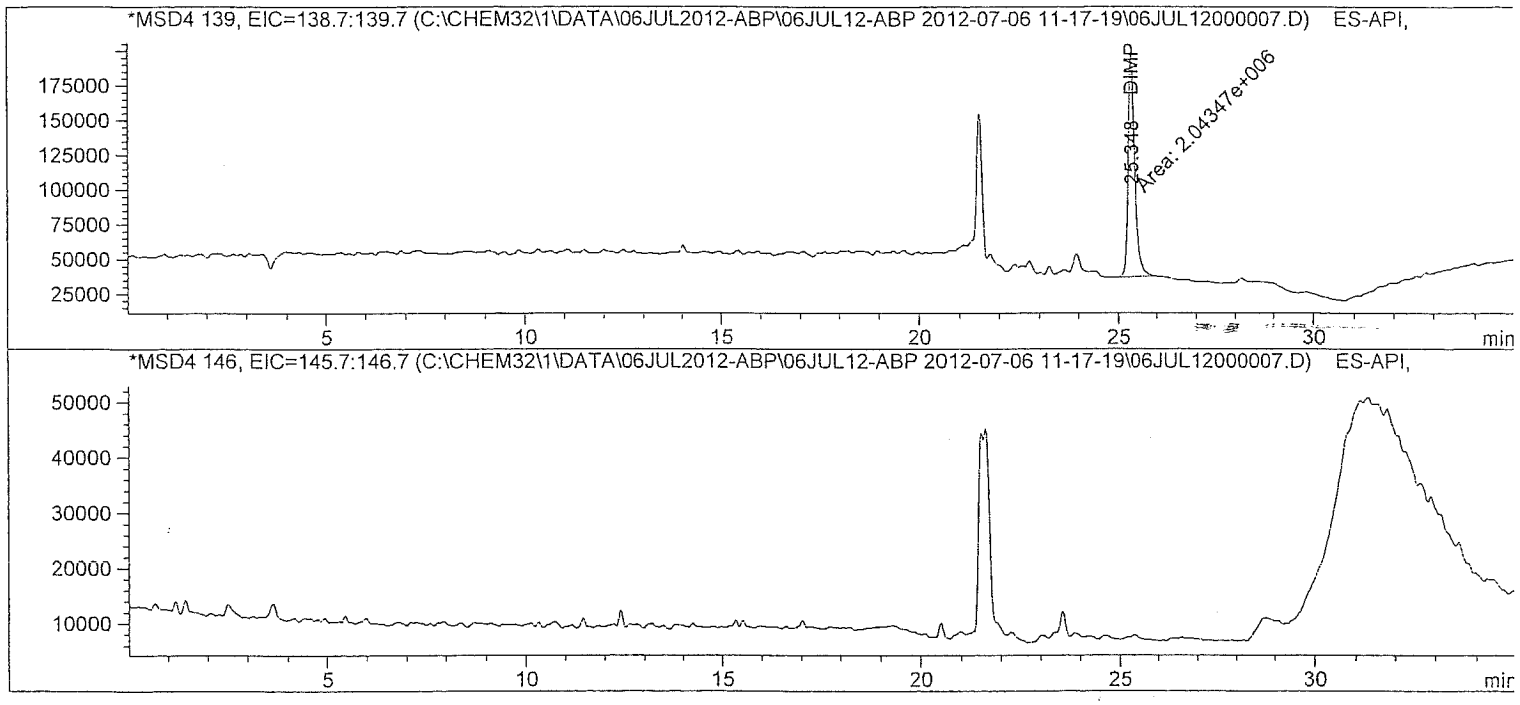


Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

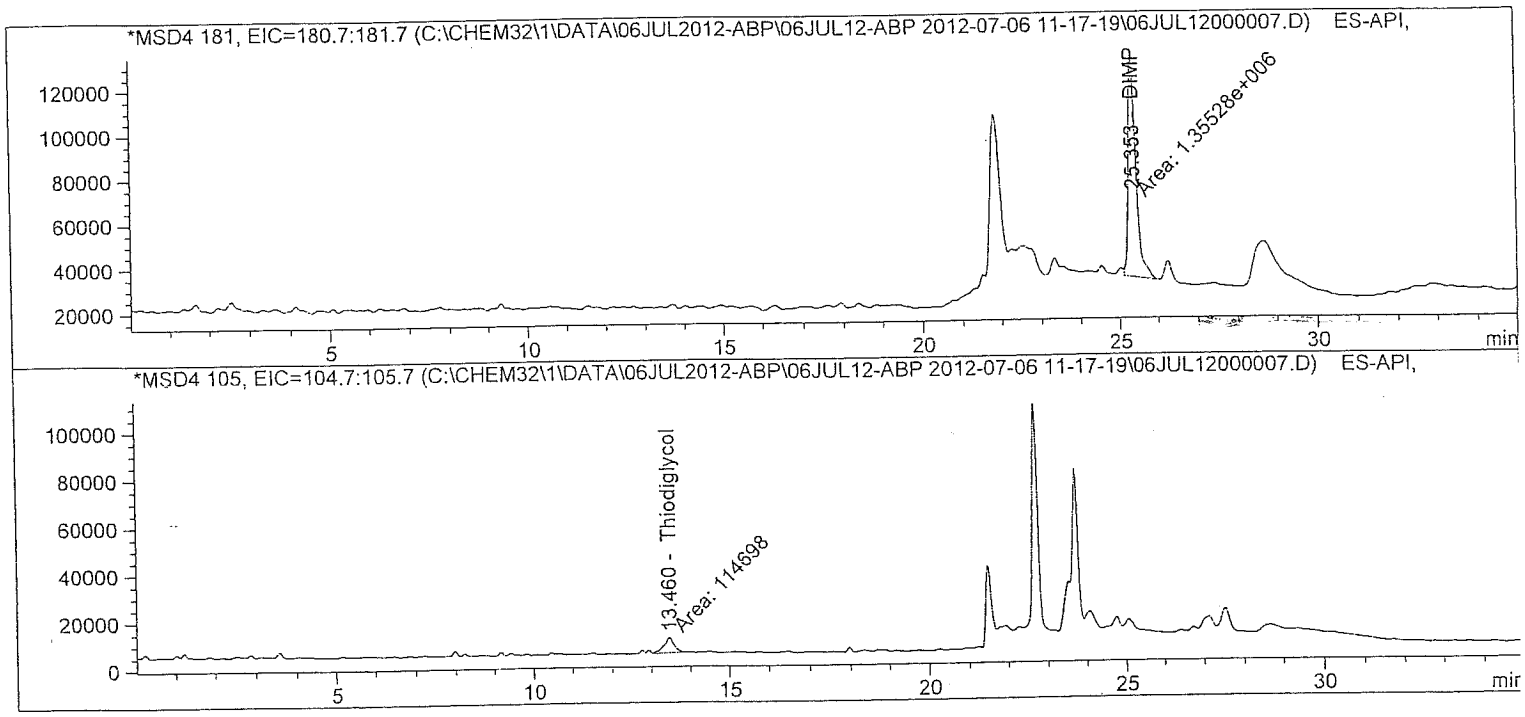
Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

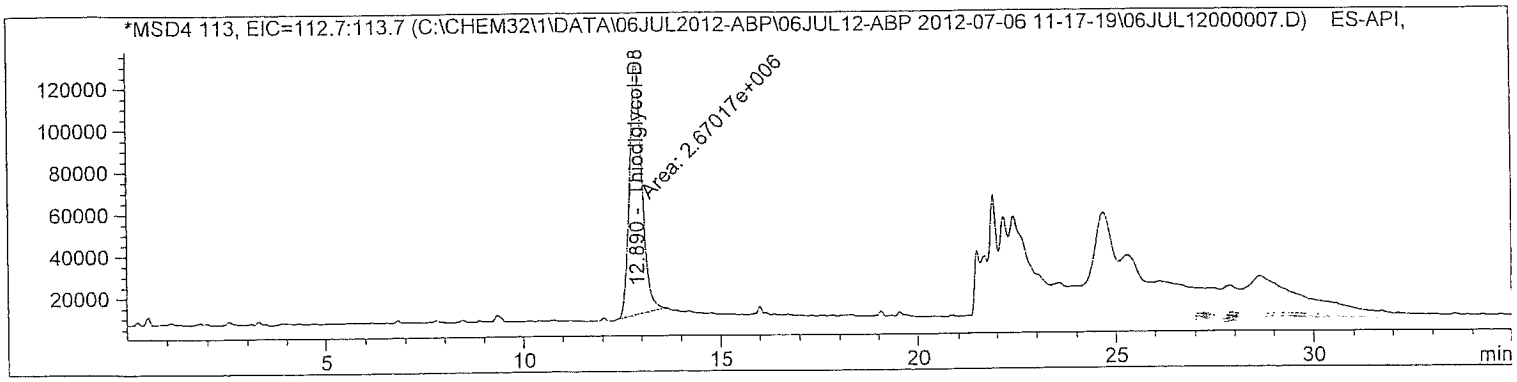
Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:55:42 PM
Seq. Line : 7
Location : Vial 6
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000e-2 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.745	FM	1	1.75566e5	7.10322e-2	4.67042e-2		MPA
12.773	MF	1	2.92659e5	4.80467e-2	5.26608e-2		IMPA

Totals without ISTD(s) : 9.93650e-2

atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:55:42 PM
Seq. Line : 7
Location : Vial 6
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.658	BB	1	1.91552e5	7.48089e-2	5.36662e-2		EMPA

Totals without ISTD(s) : 5.36662e-2

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.353	FM	1	1.35528e6	1.14558e-2	5.81454e-2		DIMP

Totals without ISTD(s) : 5.81454e-2

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460	MM	1	1.14698e5	1.34158e-1	5.76283e-2		Thiodiglycol

Totals without ISTD(s) : 5.76283e-2

Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

Acq. Operator : TTM
Seq. Line : 7
Acq. Instrument : LCMS3
Location : Vial 6
Injection Date : 7/6/2012 2:55:42 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

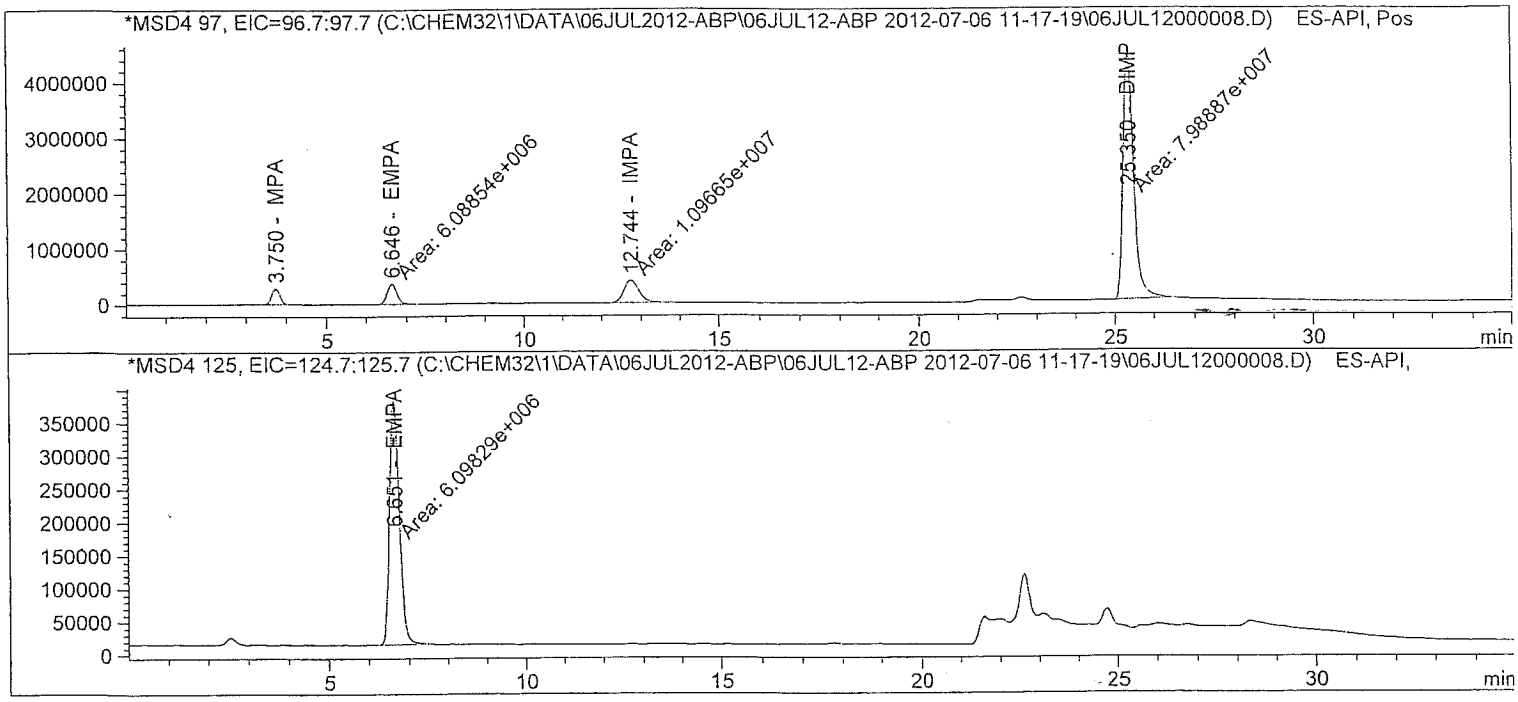
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.890	MM	I	1 2.67017e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

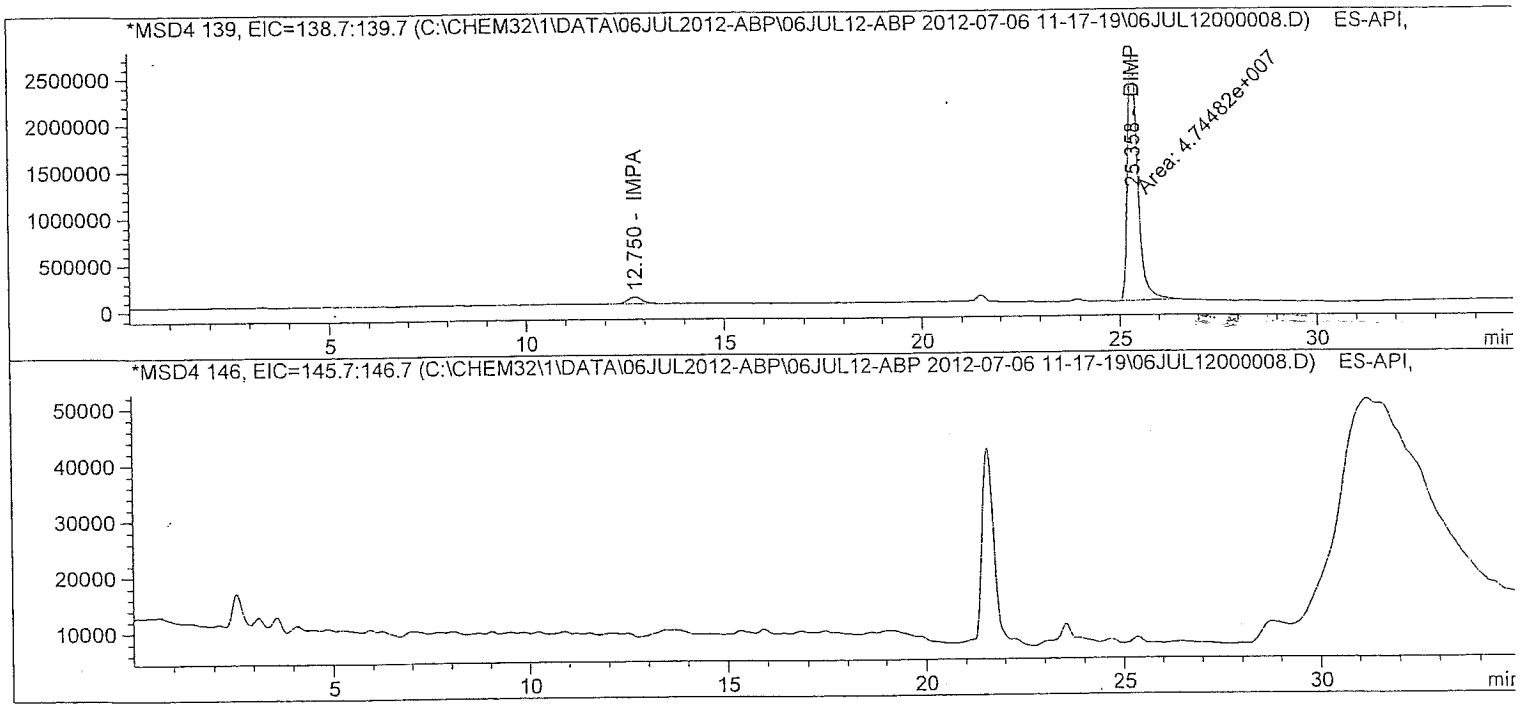
atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



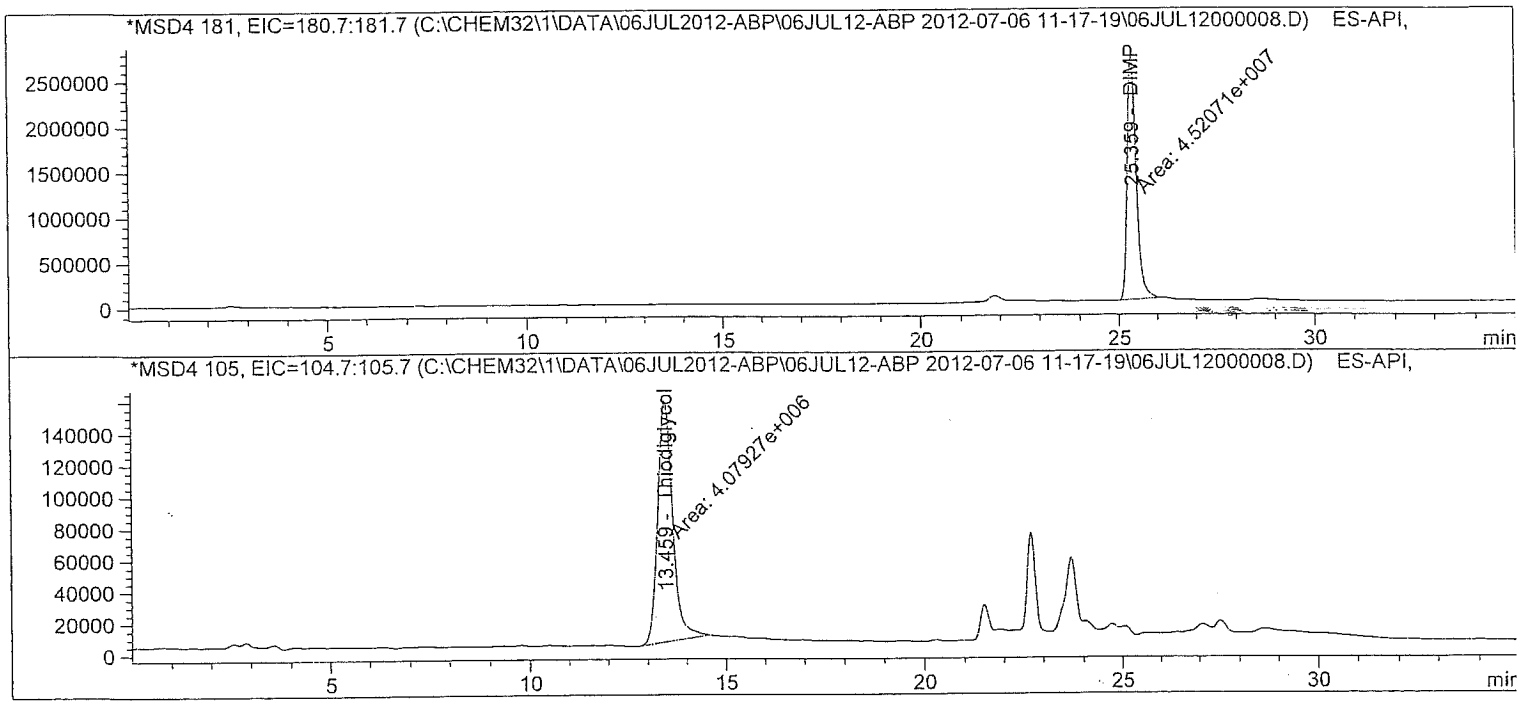
atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator	: TTM	Seq. Line :	8
Acq. Instrument	: LCMS3	Location :	Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj :	1
		Inj Volume :	10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



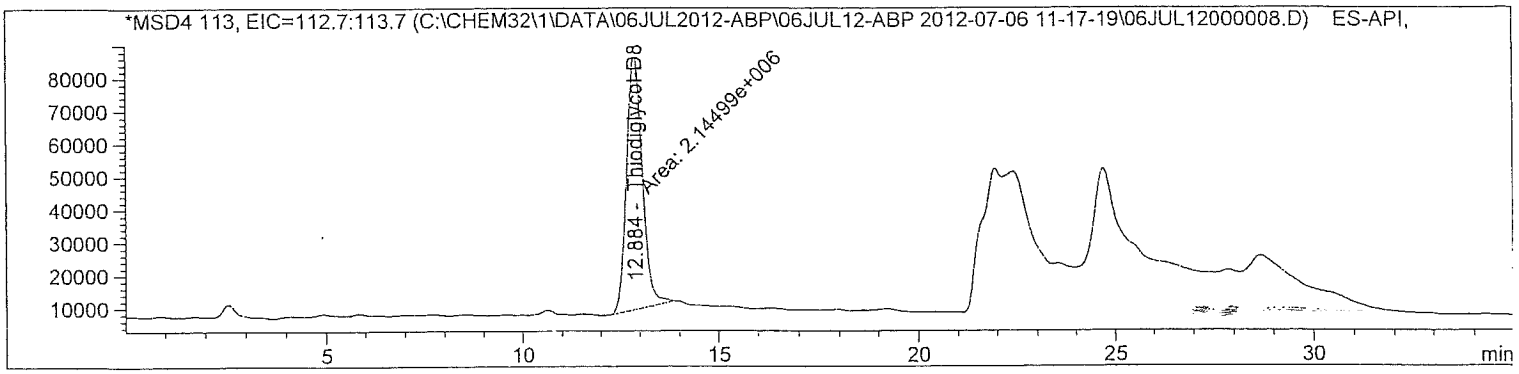
atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 2.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.750	BB	1	4.04355e6	1.04390e-1	1.96787		MPA
12.744	MM	1	1.09665e7	4.26853e-2	2.18233		IMPA

Totals without ISTD(s) : 4.15020

atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator : TTM
Seq. Line : 8
Acq. Instrument : LCMS3
Location : Vial 7
Injection Date : 7/6/2012 3:32:02 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.651	MM	1	6.09829e6	7.65569e-2	2.17655		EMPA

Totals without ISTD(s) : 2.17655

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.359	MM	1	4.52071e7	1.00834e-2	2.12514		DIMP

Totals without ISTD(s) : 2.12514

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.459	MM	1	4.07927e6	1.15268e-1	2.19214		Thiodiglycol

Totals without ISTD(s) : 2.19214

Batch Run # 8 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
Sample Name: ICV

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.884	MM	I	1 2.14499e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***



ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

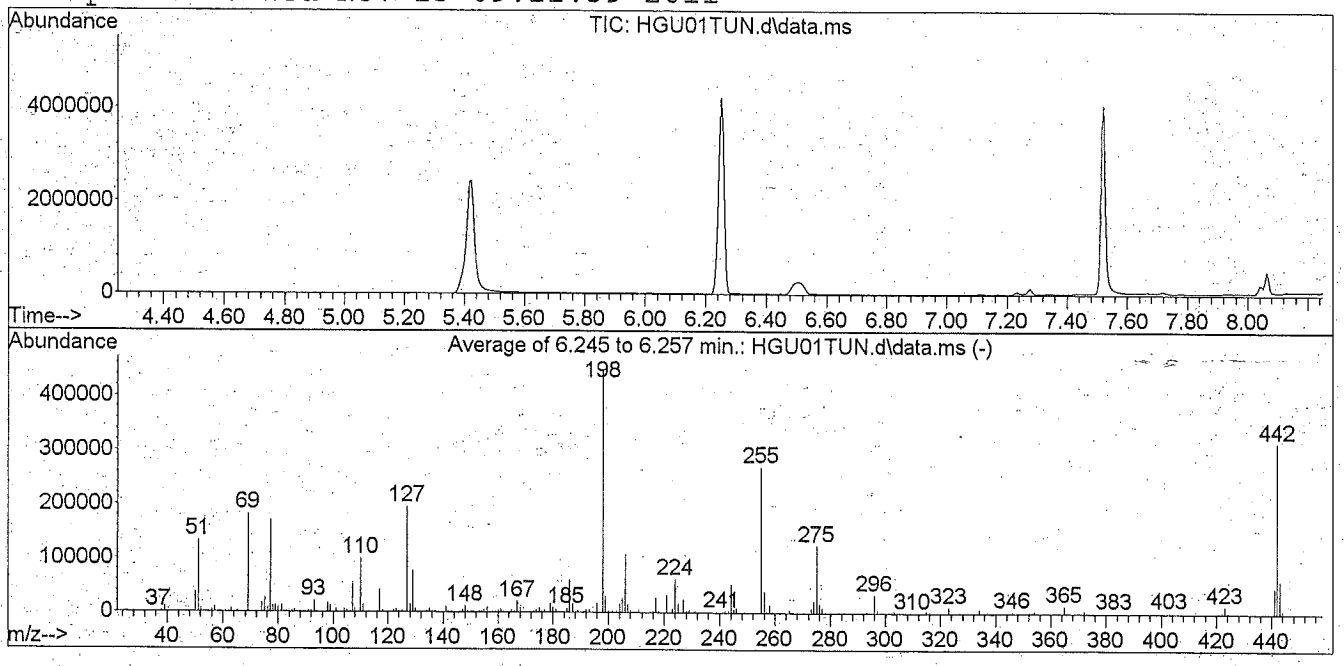
Semi-Volatiles

Analytical Documentation

Data Path : D:\1\DATA\2012\AUG12\08AUG12H\
Data File : HGU01TUN.d
Acq On : 08/08/2012 10:06
Operator : RAH
Sample : 8270 DFTPP 13808
Inst : 5975-H
Misc : X:1/11/13
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : D:\1\METHODS\8270DTUN.M
Title : EPA/CLP SOM01
Last Update : Wed Nov 23 09:22:39 2011



AutoFind: Scans 775, 776, 777; Background Corrected with Scan 767

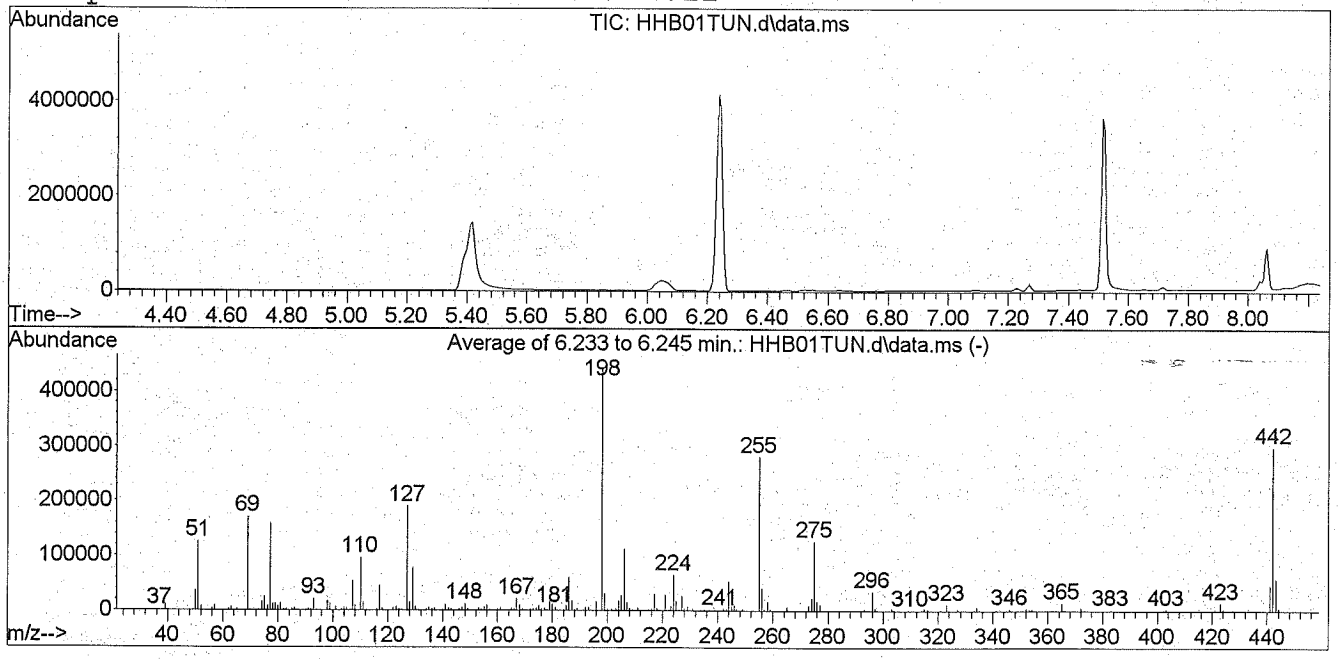
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.6	133016	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	40.5	182007	PASS
70	69	0.00	2	0.5	863	PASS
127	198	10	80	43.3	194795	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	449451	PASS
199	198	5	9	6.7	30245	PASS
275	198	10	60	27.8	124987	PASS
365	198	1	100	3.0	13675	PASS
441	443	0.01	100	78.8	47803	PASS
442	198	50	100	70.3	315904	PASS
443	442	15	24	19.2	60693	PASS

DFTPP

Data Path : D:\1\DATA\2012\AUG12\16AUG12H\
Data File : HHB01TUN.d
Acq On : 08/16/2012 11:45
Operator : RAH
Sample : 8270 DFTPP 13808
Inst : 5975-H
Misc : . X:1/11/13
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : D:\1\METHODS\8270DTUN.M
Title : EPA/CLP SOM01
Last Update : Wed Nov 23 09:22:39 2011



AutoFind: Scans 773, 774, 775; Background Corrected with Scan 765

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	28.3	125871	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	38.5	171159	PASS
70	69	0.00	2	0.6	945	PASS
127	198	10	80	42.7	189675	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	444224	PASS
199	198	5	9	6.9	30776	PASS
275	198	10	60	28.4	126069	PASS
365	198	1	100	2.9	12952	PASS
441	443	0.01	100	79.2	45587	PASS
442	198	50	100	67.4	299499	PASS
443	442	15	24	19.2	57525	PASS

Form 6 Equivalent

Initial Calibration Report

EPA Method 8270D

90 percent must meet criteria -- min RF and [RSD<15% or correllation coefficient > 0.990]

SSTD005 = HGU07S05.D
SSTD020 = HGU06S20.D
SSTD035 = HGU05S35.D
SSTD050 = HGU02S50.D
SSTD065 = HGU04S65.D
SSTD080 = HGU03S80.D

percent meeting criteria: **100.0**
PASSED

	RRF005	RRF020	RRF035	RRF050	RRF065	RRF080	RF-AVE	RSD	MIN RF	use quad regression?	correlation coefficient	meets criteria?
2) 2-Fluorophenol	1.161	1.359	1.371	1.386	1.399	1.387	1.344	**6.7**	0.001			ok
3) 1,4-Oxathiane	0.735	0.667	0.673	0.695	0.687	0.710	0.694	**3.6**	0.001			ok
4) Phenol-d5	1.548	1.771	1.805	1.792	1.838	1.821	1.762	**6.1**	0.001			ok
5) 1,4-Dithiane	1.194	1.078	1.092	1.125	1.117	1.144	1.125	**3.7**	0.001			ok
7) Nitrobenzene-d5	0.303	0.345	0.355	0.350	0.356	0.349	0.343	**5.7**	0.001			ok
9) 2-Fluorobiphenyl	1.357	1.493	1.522	1.504	1.512	1.514	1.484	**4.2**	0.001			ok
11) 2,4,6-Tribromophenol	0.109	0.132	0.140	0.141	0.143	0.143	0.135	**9.7**	0.001			ok
13) Terphenyl-d14	0.706	0.771	0.809	0.779	0.789	0.779	0.772	**4.5**	0.001			ok

Form 7 Equivalent

8270D Calibration Verification Report

Calibration Verification File: **HHB02S50.D** Initial Calibration: **HGU**

80 percent must meet criteria (%D<20 and min RF)
percent meeting criteria: **100.0** **PASSED**

	AVG RF	CCV RF	MIN RF	CCV conc	target conc	%difference *	%drift *	flag
2-Fluorophenol	1.343	1.274	0.001			**5.2**		ok
1,4-Oxathiane	0.694	0.641	0.001			**7.7**		ok
Phenol-d5	1.762	1.750	0.001			**0.7**		ok
1,4-Dithiane	1.125	1.097	0.001			**2.5**		ok
Nitrobenzene-d5	0.343	0.345	0.001			**0.8**		ok
2-Fluorobiphenyl	1.484	1.534	0.001			**3.4**		ok
2,4,6-Tribromophenol	0.135	0.133	0.001			**1.5**		ok
Terphenyl-d14	0.772	0.750	0.001			**2.9**		ok

* Percent difference is used for compounds quantitated by average response factor.
Percent drift is used for compounds quantitated by regression fits

INTERNAL STANDARD AREA SUMMARY

Form 8 equivalent

Continuing Standard Filename	HHB02S50.D	Area 1,4-dcb	Area nap-d8	Area ace-d10	Area phe-d10	Area chry-d12	Area per-d12	
8270 50 std 15952		506758	2249493	1366773	2647164	3357670	2439917	
	Upper Limit	1013516	4498986	2733546	5294328	6715340	4879834	
	Lower limit	253379	1124747	683387	1323582	1678835	1219959	
CLIENT Sample No.	**DCL Sample No.**	**Area 1,4-dcb**	**Area nap-d8**	**Area ace-d10**	**Area phe-d10**	**Area chry-d12**	**Area per-d12**	
BLANK	289984	502951	2310888	1401593	2712308	3105209	2509554	
LCS	289985	528274	2390317	1461030	2828548	3232246	2566742	
SO-44	1222167002	523033	2319022	1341696	2550849	2777706	1544027	
SO-45	1222167003	514537	2275200	1342659	2490340	2715168	1558965	
SO-46Dup	1222167005	531421	2375729	1398031	2620204	2702765	1464090	
SO-47	1222167006	706862	3148708	1826136	3497294	3721222	2222541	
SO-48	1222167007	570552	2573420	1532346	3012848	3036419	1649437	
SO-49	1222167008	522826	2334336	1383893	2687407	2620713	1448793	
SO-61(9.5)	1222302001	555707	2525225	1499298	2892299	2977840	1643447	
SO-62(10)	1222302002	528660	2430006	1477596	2927853	2977999	1615863	
SO-46	1222167004	483660	2130690	1247336	2427573	2576638	1280953	
SO-43	1222167001	504320	2239636	1327079	2538357	2462812	1126286	*
SO-43	289986	504388	2197574	1301197	2470453	2196807	945728	*
SO-43	289987	536484	2392585	1378040	2569049	2162322	924082	*

* MS and MSD confirm matrix effect, but this internal standard is not pertinent to the analysis because it does not reference the requested target analytes.

LIMITS: Areas should be within 50 to 200 percent of the corresponding area in the calibration standard.

INTERNAL STANDARD RETENTION-TIME SUMMARY

Form 8 equivalent

Continuing Standard Filename	HHB02S50.D	RT 1,4-dcb	RT nap-d8	RT ace-d10	RT phe-d10	RT chry-d12	RT per-d12
8270 50 std 15952		4.03	5.34	7.86	10.45	14.93	16.99
	Upper Limit	4.53	5.84	8.36	10.95	15.43	17.49
	Lower limit	3.53	4.84	7.36	9.95	14.43	16.49
CLIENT Sample No.	**DCL Sample No.**	**RT 1,4-dcb**	**RT nap-d8**	**RT ace-d10**	**RT phe-d10**	**RT chry-d12**	**RT per-d12**
BLANK	289984	4.03	5.34	7.86	10.45	14.92	16.99
LCS	289985	4.03	5.34	7.86	10.45	14.92	16.99
SO-44	1222167002	4.03	5.34	7.86	10.45	14.93	16.99
SO-45	1222167003	4.03	5.34	7.86	10.45	14.92	16.99
SO-46Dup	1222167005	4.04	5.34	7.86	10.44	14.93	16.99
SO-47	1222167006	4.04	5.34	7.86	10.45	14.93	16.99
SO-48	1222167007	4.04	5.34	7.86	10.45	14.93	16.99
SO-49	1222167008	4.03	5.34	7.86	10.45	14.93	16.99
SO-61(9.5)	1222302001	4.04	5.34	7.86	10.45	14.92	16.99
SO-62(10)	1222302002	4.04	5.34	7.86	10.45	14.92	16.99
SO-46	1222167004	4.04	5.34	7.86	10.45	14.93	16.99
SO-43	1222167001	4.04	5.34	7.86	10.45	14.93	16.99
SO-43	289986	4.04	5.34	7.86	10.45	14.92	16.99
SO-43	289987	4.04	5.34	7.86	10.45	14.93	17.00

LIMITS: Retention times should be within 30 seconds of the corresponding time in the calibration standard.

OTD

Batch Worklist

Batch: ENVX/ 15840 Created: 8/14/2012 14:41 Instrument:
Rule: EPA 3550, Sonic SVOA Soil Analyst: C. Ahlers Status: NA

HBN: 91685

Workorder: 1222167
Workorder: 1222302

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	289984	MB for HBN 91685 [ENVX/15840]			4	MB		E3550SV.4P	6169	8/28/2012	8/10/2012	
2	289985	LCS for HBN 91685 [ENVX/15840]			4	LCS		E3550SV.4P	6169	8/28/2012	8/10/2012	
3	289986 BJ	FTSW-HR-So-43(1222167001MS)			4	MS		E3550SV.4P	6169	8/15/2012	8/10/2012	
4	289987 BJ	FTSW-HR-So-43(1222167001MSD)			4	MSD		E3550SV.4P	6169	8/15/2012	8/10/2012	
5	289988	RLVS for HBN 91685 [ENVX/15840			4	RLVS		E3550SV.4P	6169	8/28/2012	8/10/2012	
6	1222167001 BJ	FTSW-HR-So-43			4	SAMPLE	1222167001-A	E3550SV.4P	5480	8/15/2012	8/10/2012	
7	1222167002	FTSW-HR-So-44			4	SAMPLE	1222167002-A	E3550SV.4P	5480	8/15/2012	8/10/2012	
8	1222167003	FTSW-HR-So-45			4	SAMPLE	1222167003-A	E3550SV.4P	5480	8/15/2012	8/10/2012	
9	1222167004	FTSW-HR-So-46			4	SAMPLE	1222167004-A	E3550SV.4P	5480	8/15/2012	8/10/2012	
10	1222167005	FTSW-HR-So-46Dup			4	DUP	1222167005-A	E3550SV.4P	5480	8/15/2012	8/10/2012	
11	1222167006	FTSW-HR-So-47			4	SAMPLE	1222167006-A	E3550SV.4P	5480	8/15/2012	8/10/2012	
12	1222167007	FTSW-HR-So-48			4	SAMPLE	1222167007-A	E3550SV.4P	5480	8/15/2012	8/10/2012	
13	1222167008	FTSW-HR-So-49			4	SAMPLE	1222167008-A	E3550SV.4P	5480	8/15/2012	8/10/2012	
14	1222302001	FTSW-HR-SO-61 (9.5)			4	SAMPLE	1222302001-A	E3550SV.4P	5480	8/21/2012	8/14/2012	
15	1222302002	FTSW-HR-SO-62 (10)			4	SAMPLE	1222302002-A	E3550SV.4P	5480	8/21/2012	8/14/2012	

8270 SV

Batch Worklist

Batch: ESVO/ 3827 **Created:** 8/20/2012 09:52 **Instrument:** **HBN:** 91984
Rule: SW 8270, Soil **Analyst:** R. Hendricks **Status:** WP

Ì %R91984(Î

Workorder: 1222167
Workorder: 1222302

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	289984	MB for HBN 91685 [ENVX/15840]	30 grams	1 mL	4	MB		S827050.4Q	6169		8/20/2012	
2	289985	LCS for HBN 91685 [ENVX/15840]	30 grams	1 mL	4	LCS		S827050.4Q	6169		8/20/2012	
3	289986	FTSW-HR-So-43(1222167001MS)	30.06 grams	1 mL	4	MS		S827050.4Q	6169		8/20/2012	
4	289987	FTSW-HR-So-43(1222167001MSD)	30.15 grams	1 mL	4	MSD		S827050.4Q	6169		8/20/2012	
5	289988	RLVS for HBN 91685 [ENVX/15840	30 grams	1 mL	4	RLVS		S827050.4Q	6169		8/20/2012	
6	1222167001	FTSW-HR-So-43	30.81 grams	1 mL	4	SAMPLE	1222167001-A	S8270D...4	5480	9/23/2012	8/20/2012	
7	1222167002	FTSW-HR-So-44	30.21 grams	1 mL	4	SAMPLE	1222167002-A	S8270D...4	5480	9/23/2012	8/20/2012	
8	1222167003	FTSW-HR-So-45	30.2 grams	1 mL	4	SAMPLE	1222167003-A	S8270D...4	5480	9/23/2012	8/20/2012	
9	1222167004	FTSW-HR-So-46	30.06 grams	1 mL	4	SAMPLE	1222167004-A	S8270D...4	5480	9/23/2012	8/20/2012	
10	1222167005	FTSW-HR-So-46Dup	30.52 grams	1 mL	4	DUP	1222167005-A	S8270D...4	5480	9/23/2012	8/20/2012	
11	1222167006	FTSW-HR-So-47	30.67 grams	1 mL	4	SAMPLE	1222167006-A	S8270D...4	5480	9/23/2012	8/20/2012	
12	1222167007	FTSW-HR-So-48	30.37 grams	1 mL	4	SAMPLE	1222167007-A	S8270D...4	5480	9/23/2012	8/20/2012	
13	1222167008	FTSW-HR-So-49	30.39 grams	1 mL	4	SAMPLE	1222167008-A	S8270D...4	5480	9/23/2012	8/20/2012	
14	1222302001	FTSW-HR-SO-61 (9.5)	30.67 grams	1 mL	4	SAMPLE	1222302001-A	S8270D...4	5480	9/23/2012	8/22/2012	
15	1222302002	FTSW-HR-SO-62 (10)	30.73 grams	1 mL	4	SAMPLE	1222302002-A	S8270D...4	5480	9/23/2012	8/22/2012	

DATACHEM LABORATORIES - GC\MS SEMIVOLATILE ANALYSIS
INJECTION LOGBOOK
INSTRUMENT 5975-H

File Name	Date and Time Injected	OP	Method	ALS BOT	Run Length	Dil Fac	Sample name	Misc info
HGU01TUN	08/08/2012 10:06	RAH	8270DTUN	1	11.53	1	8270 DFTPP 13808	1/11/13
HGU02S50	08/08/2012 10:26	RAH	8270D07	2	20.49	1	8270 50 std 15952	X:1/9/13
HGU03S80	08/08/2012 11:01	RAH	8270D07	3	20.49	1	8270 80 std 15970	X:1/9/13
HGU04S65	08/08/2012 11:30	RAH	8270D07	4	20.49	1	8270 65 std 15971	X:1/9/13
HGU05S35	08/08/2012 12:00	RAH	8270D07	5	20.49	1	8270 35 std 15972	X:1/9/13
HGU06S20	08/08/2012 12:29	RAH	8270D07	6	20.49	1	8270 20 std 15973	X:1/9/13
HGU07S05	08/08/2012 12:59	RAH	8270D07	7	20.49	1	8270 5 std 15974	X:1/9/13
HGU08ICV	08/08/2012 13:29	RAH	8270D07	8	20.49	1	8270 ICV 15975	X:1/9/13
HGV01TUN	08/08/2012 14:07	RAH	8270DTUN	1	11.53	1	8270 DFTPP 13808	1/11/13
HGV02S50	08/08/2012 14:28	RAH	8270DOND	2	20.49	1	8270 50 std 15952	X:1/9/13
HGV03LCS	08/08/2012 14:58	RAH	8270DOND	3	20.49	1	288219	WATER 8270
HGV04LCS	08/08/2012 15:28	RAH	8270DOND	4	20.49	1	288239	SOIL 8270
HGV05BLK	08/08/2012 15:58	RAH	8270DOND	5	20.49	1	288238	SOIL 8270
HGV06RLV	08/08/2012 16:29	RAH	8270DOND	6	20.49	1	288240	SOIL 8270
HGV07C01	08/08/2012 16:58	RAH	8270DOND	7	20.49	1	1221555001	SOIL 8270
HGV08M02	08/08/2012 17:28	RAH	8270DOND	8	20.49	1	1221555002	SOIL 8270
HGV09M03	08/08/2012 17:56	RAH	8270DOND	9	20.49	1	1221555003	SOIL 8270
HGV10C04	08/08/2012 18:26	RAH	8270DOND	10	20.49	1	1221555004	SOIL 8270
HGV11C05	08/08/2012 18:55	RAH	8270DOND	11	20.49	1	1221555005	SOIL 8270
HGV12C07	08/08/2012 19:24	RAH	8270DOND	12	20.49	1	1221555007	SOIL 8270
HGV13C08	08/08/2012 19:54	RAH	8270DOND	13	20.49	1	1221555008	SOIL 8270
HGV14C09	08/08/2012 20:24	RAH	8270DOND	14	20.49	1	1221555009	SOIL 8270
HGV15C10	08/08/2012 20:53	RAH	8270DOND	15	20.49	1	1221555010	SOIL 8270
HGV16C11	08/08/2012 21:23	RAH	8270DOND	16	20.49	1	1221555011	SOIL 8270
HGV17C12	08/08/2012 21:52	RAH	8270DOND	17	20.49	1	1221555012	SOIL 8270
HGV18C13	08/08/2012 22:22	RAH	8270DOND	18	20.49	1	1221555013	SOIL 8270
HGV19C14	08/08/2012 22:51	RAH	8270DOND	19	20.49	1	1221555014	SOIL 8270

DATACHEM LABORATORIES - GC\MS SEMIVOLATILE ANALYSIS
INJECTION LOGBOOK
INSTRUMENT 5975-H

File Name	Date and Time Injected	OP	Method	ALS BOT	Run Length	Dil Fac	Sample name	Misc info
HHB01TUN	08/16/2012 11:45	RAH	8270DTUN	1	11.53	1	8270 DFTPP 13808	X:1/11/13
HHB02S50	08/16/2012 12:05	RAH	8270D07	2	20.49	1	8270 50 std 15952	X:1/9/13
HHB03BLK	08/16/2012 12:44	RAH	8270DOND	3	20.49	1	289984	SOIL 8270
HHB04LCS	08/16/2012 13:12	RAH	8270DOND	4	20.49	1	289985	SOIL 8270
HHB05RLV	08/16/2012 13:42	RAH	8270DOND	5	20.49	1	289988	SOIL 8270
HHB06C02	08/16/2012 14:12	RAH	8270DOND	6	20.49	1	1222167002	SOIL 8270
HHB07C03	08/16/2012 14:42	RAH	8270DOND	7	20.49	1	1222167003	SOIL 8270
HHB08C05	08/16/2012 15:10	RAH	8270DOND	8	20.49	1	1222167005	SOIL 8270
HHB09C06	08/16/2012 15:39	RAH	8270DOND	9	20.49	1	1222167006	SOIL 8270
HHB10C07	08/16/2012 16:08	RAH	8270DOND	10	20.49	1	1222167007	SOIL 8270
HHB11C08	08/16/2012 16:37	RAH	8270DOND	11	20.49	1	1222167008	SOIL 8270
HHB12C01	08/16/2012 17:07	RAH	8270DOND	12	20.49	1	1222302001	SOIL 8270
HHB13C02	08/16/2012 17:36	RAH	8270DOND	13	20.49	1	1222302002	SOIL 8270
HHB14C04	08/16/2012 18:05	RAH	8270DOND	14	20.49	1	1222167004	SOIL 8270
HHB15C01	08/16/2012 18:34	RAH	8270DOND	15	20.49	1	1222167001	SOIL 8270
HHB16AMS	08/16/2012 19:03	RAH	8270DOND	16	20.49	1	289986	SOIL 8270
HHB17MSD	08/16/2012 19:32	RAH	8270DOND	17	20.49	1	289987	SOIL 8270



ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

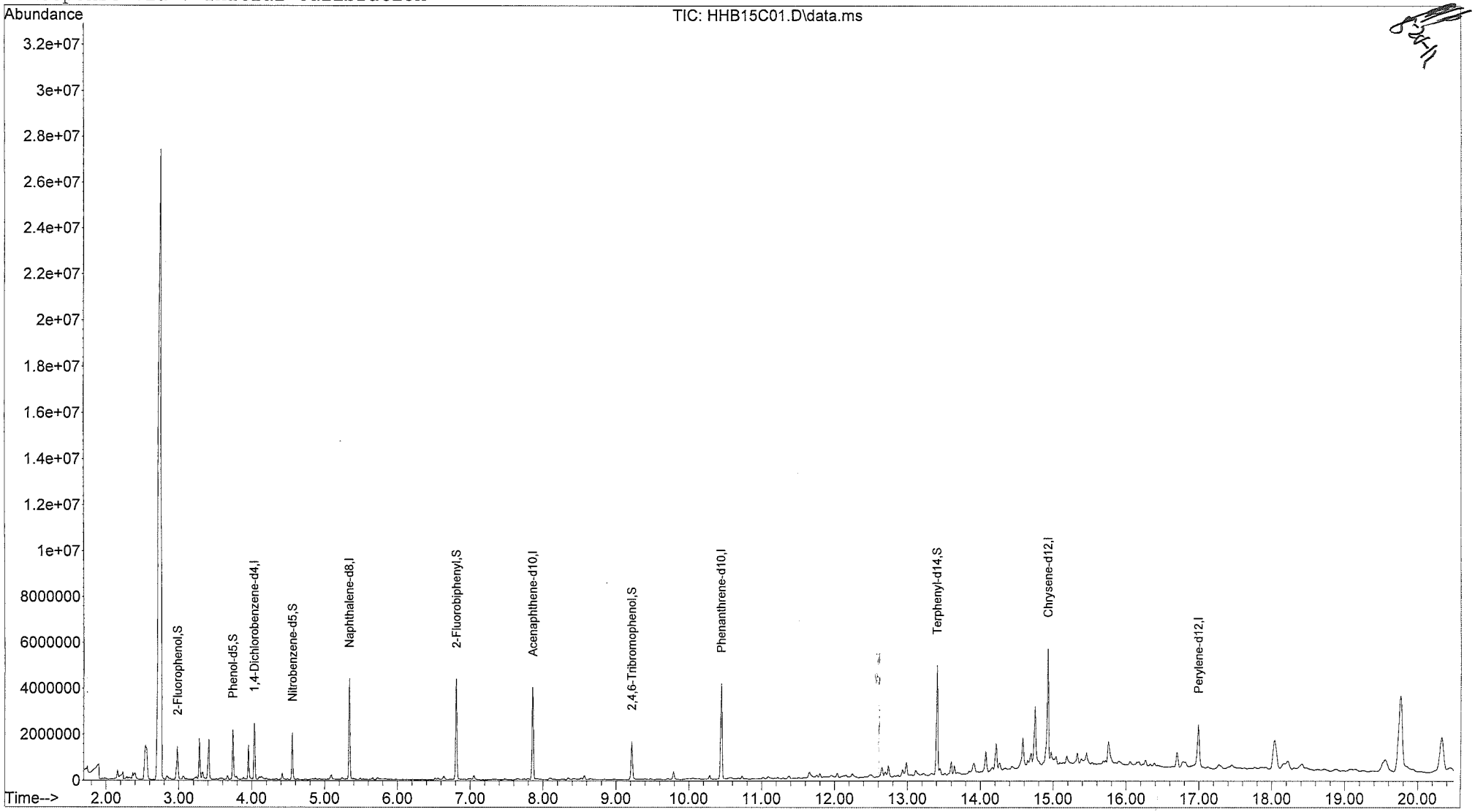
Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB15C01.D
Acq On : 08/16/2012 18:34
Sample : 1222167001
Misc : . SOIL 8270
MS Integration Params: rteint.p

Vial: 15
Operator: RAH
Inst : 5975-H
Injection volume : 1uL

Quant Time: Aug 17 10:46:35 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB15C01.D Vial: 15
Acq On : 08/16/2012 18:34 Operator: RAH
Sample : 1222167001 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:46:35 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	400	152	504320	40.00 ug/mL
6) Naphthalene-d8	5.34	621	136	2239636	40.00 ug/mL
8) Acenaphthene-d10	7.86	1049	164	1327079	40.00 ug/mL
10) Phenanthrene-d10	10.45	1489	188	2538357	40.00 ug/mL
12) Chrysene-d12	14.93	2251	240	2462812	40.00 ug/mL
14) Perylene-d12	16.99	2602	264	1126286	40.00 ug/mL
System Monitoring Compounds					
2) 2-Fluorophenol	2.98	220	112	508249	30.007ug/mL
4) Phenol-d5	3.74	349	99	862132	38.799ug/mL
7) Nitrobenzene-d5	4.56	488	82	658172	34.282ug/mL
9) 2-Fluorobiphenyl	6.81	871	172	1874225	38.078ug/mL
11) 2,4,6-Tribromophenol	9.22	1280	330	325628	38.105ug/mL
13) Terphenyl-d14	13.40	1992	244	2410029	50.687ug/mL
Target Compounds					Qvalue
3) 1,4-Oxathiane	0.00			Not Detected	
5) 1,4-Dithiane	0.00			Not Detected	

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

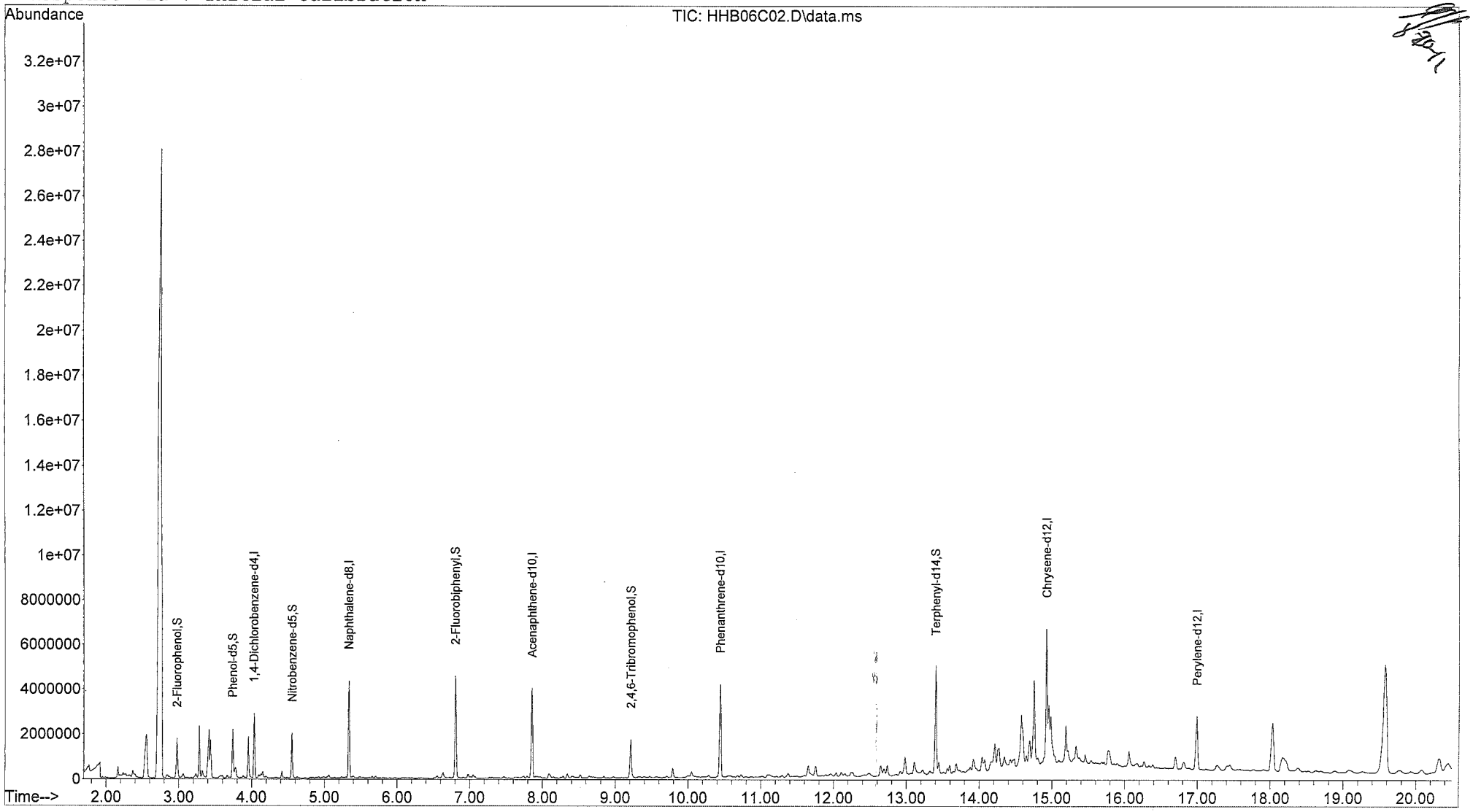
Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB06C02.D
Acq On : 08/16/2012 14:12
Sample : 1222167002
Misc : . SOIL 8270
MS Integration Params: rteint.p

Vial: 6
Operator: RAH
Inst : 5975-H
Injection volume : 1uL

Quant Time: Aug 17 10:40:44 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB06C02.D Vial: 6
Acq On : 08/16/2012 14:12 Operator: RAH
Sample : 1222167002 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:40:44 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	399	152	523033	40.00 ug/mL
6) Naphthalene-d8	5.34	621	136	2319022	40.00 ug/mL
8) Acenaphthene-d10	7.86	1049	164	1341696	40.00 ug/mL
10) Phenanthrene-d10	10.45	1489	188	2550849	40.00 ug/mL
12) Chrysene-d12	14.93	2251	240	2777706	40.00 ug/mL
14) Perylene-d12	16.99	2602	264	1544027	40.00 ug/mL
System Monitoring Compounds					
2) 2-Fluorophenol	2.97	219	112	549937	31.306ug/mL
4) Phenol-d5	3.74	349	99	911277	39.543ug/mL
7) Nitrobenzene-d5	4.56	488	82	706955	35.562ug/mL
9) 2-Fluorobiphenyl	6.80	870	172	1988999	39.969ug/mL
11) 2,4,6-Tribromophenol	9.22	1280	330	333405	38.824ug/mL
13) Terphenyl-d14	13.40	1992	244	2394609	44.654ug/mL
Target Compounds					Qvalue
3) 1,4-Oxathiane	0.00			Not Detected	
5) 1,4-Dithiane	0.00			Not Detected	

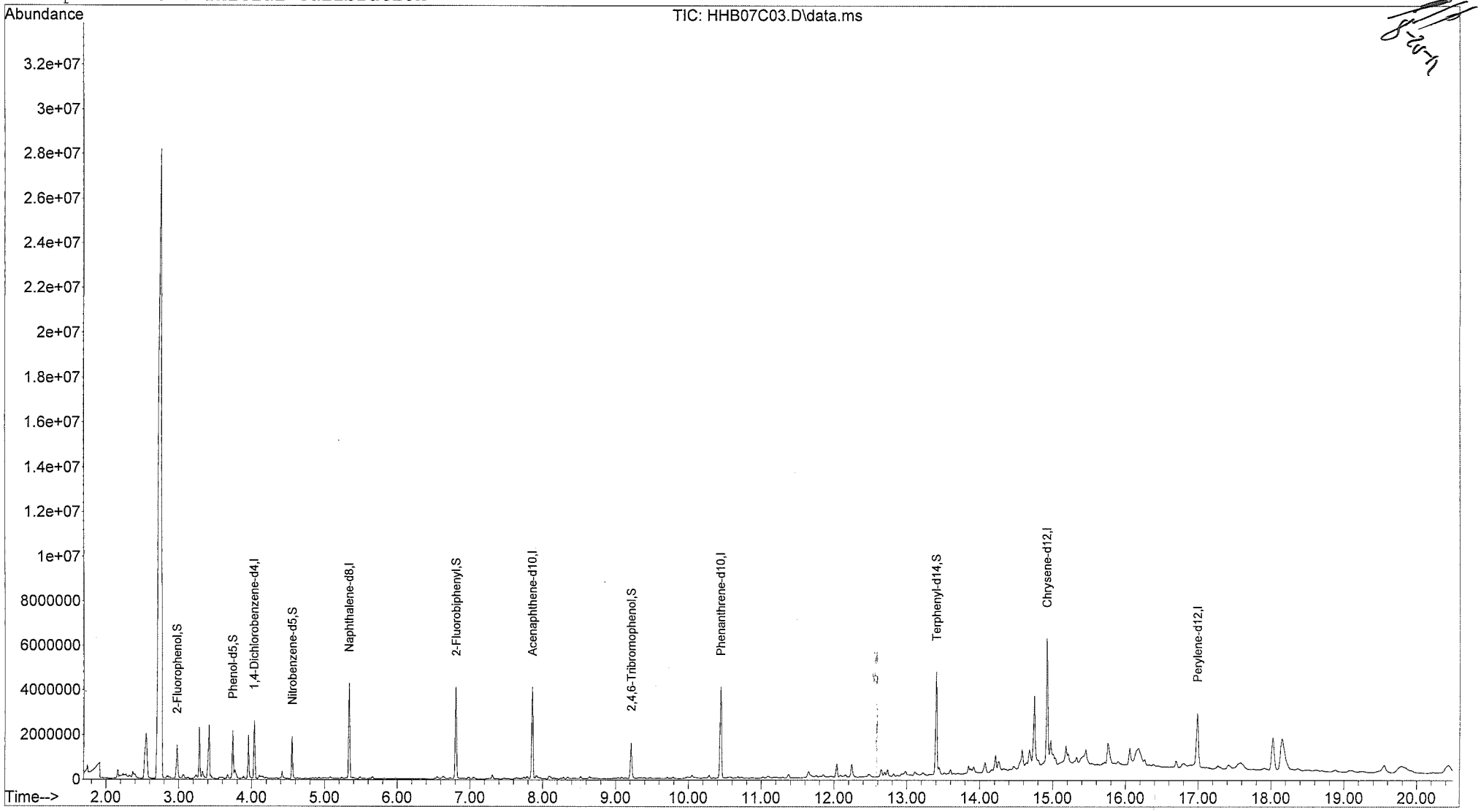
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB07C03.D Vial: 7
Acq On : 08/16/2012 14:42 Operator: RAH
Sample : 1222167003 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 17 10:42:06 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB07C03.D Vial: 7
Acq On : 08/16/2012 14:42 Operator: RAH
Sample : 1222167003 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:42:06 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	399	152	514537	40.00 ug/mL
6) Naphthalene-d8	5.34	621	136	2275200	40.00 ug/mL
8) Acenaphthene-d10	7.86	1049	164	1342659	40.00 ug/mL
10) Phenanthrene-d10	10.45	1489	188	2490340	40.00 ug/mL
12) Chrysene-d12	14.92	2250	240	2715168	40.00 ug/mL
14) Perylene-d12	16.99	2602	264	1558965	40.00 ug/mL
System Monitoring Compounds					
2) 2-Fluorophenol	2.98	219	112	489045	28.300ug/mL
4) Phenol-d5	3.74	349	99	814254	35.917ug/mL
7) Nitrobenzene-d5	4.56	488	82	632424	32.426ug/mL
9) 2-Fluorobiphenyl	6.81	871	172	1793351	36.012ug/mL
11) 2,4,6-Tribromophenol	9.22	1280	330	312280	37.248ug/mL
13) Terphenyl-d14	13.40	1992	244	2295388	43.789ug/mL
Target Compounds					Qvalue
3) 1,4-Oxathiane	0.00			Not Detected	
5) 1,4-Dithiane	0.00			Not Detected	

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

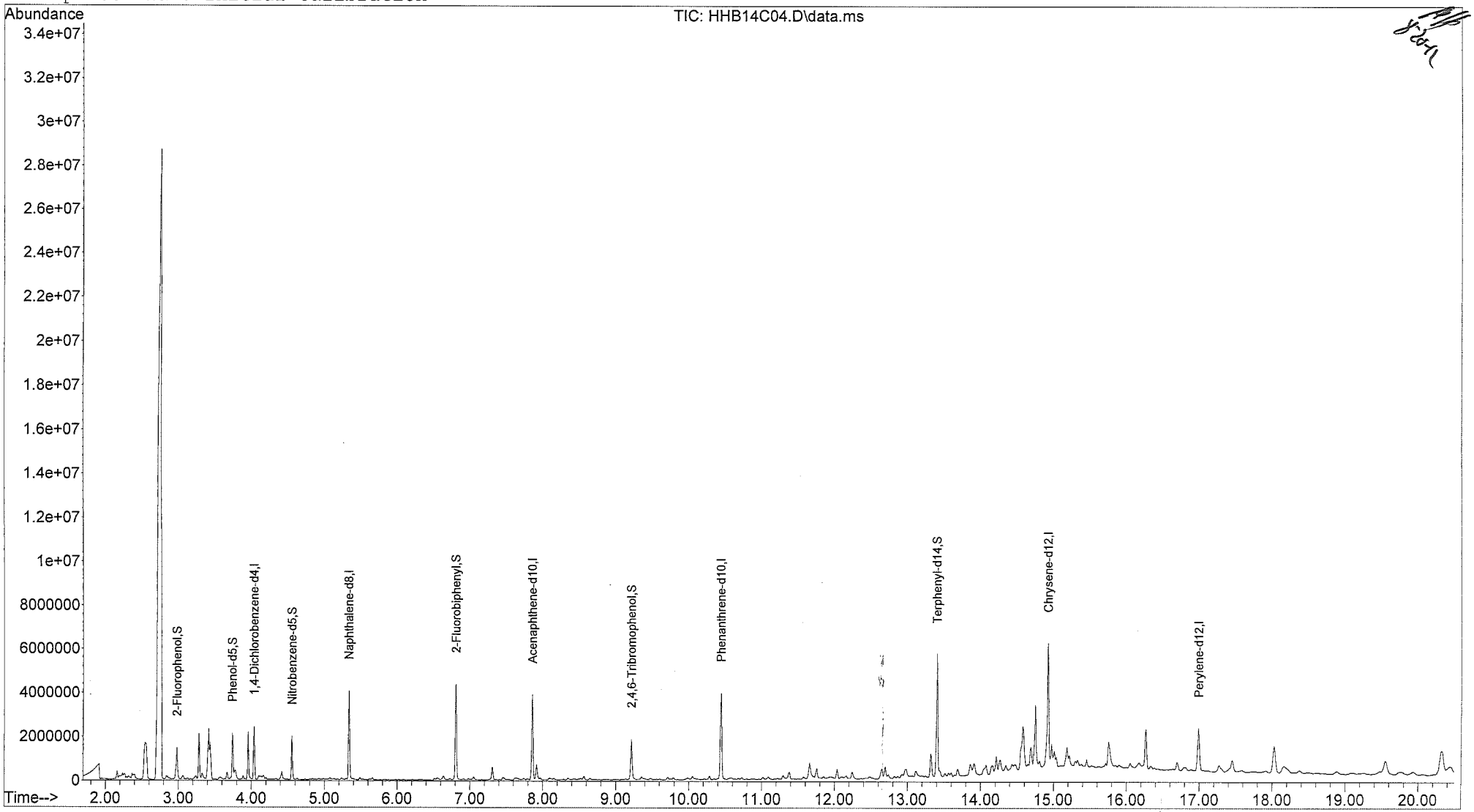
Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB14C04.D
Acq On : 08/16/2012 18:05
Sample : 1222167004
Misc : . SOIL 8270
MS Integration Params: rteint.p

Vial: 14
Operator: RAH
Inst : 5975-H
Injection volume : 1uL

Quant Time: Aug 17 10:46:02 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB14C04.D Vial: 14
Acq On : 08/16/2012 18:05 Operator: RAH
Sample : 1222167004 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:46:02 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	400	152	483660	40.00 ug/mL
6) Naphthalene-d8	5.34	621	136	2130690	40.00 ug/mL
8) Acenaphthene-d10	7.86	1049	164	1247336	40.00 ug/mL
10) Phenanthrene-d10	10.45	1489	188	2427573	40.00 ug/mL
12) Chrysene-d12	14.93	2251	240	2576638	40.00 ug/mL
14) Perylene-d12	16.99	2602	264	1280953	40.00 ug/mL
System Monitoring Compounds					
2) 2-Fluorophenol	2.98	220	112	502962	30.963ug/mL
4) Phenol-d5	3.74	349	99	861231	40.414ug/mL
7) Nitrobenzene-d5	4.56	488	82	649786	35.576ug/mL
9) 2-Fluorobiphenyl	6.81	871	172	1894740	40.955ug/mL
11) 2,4,6-Tribromophenol	9.22	1280	330	343588	42.042ug/mL
13) Terphenyl-d14	13.40	1992	244	2695064	54.178ug/mL
Target Compounds					Qvalue
3) 1,4-Oxathiane	0.00			Not Detected	
5) 1,4-Dithiane	0.00			Not Detected	

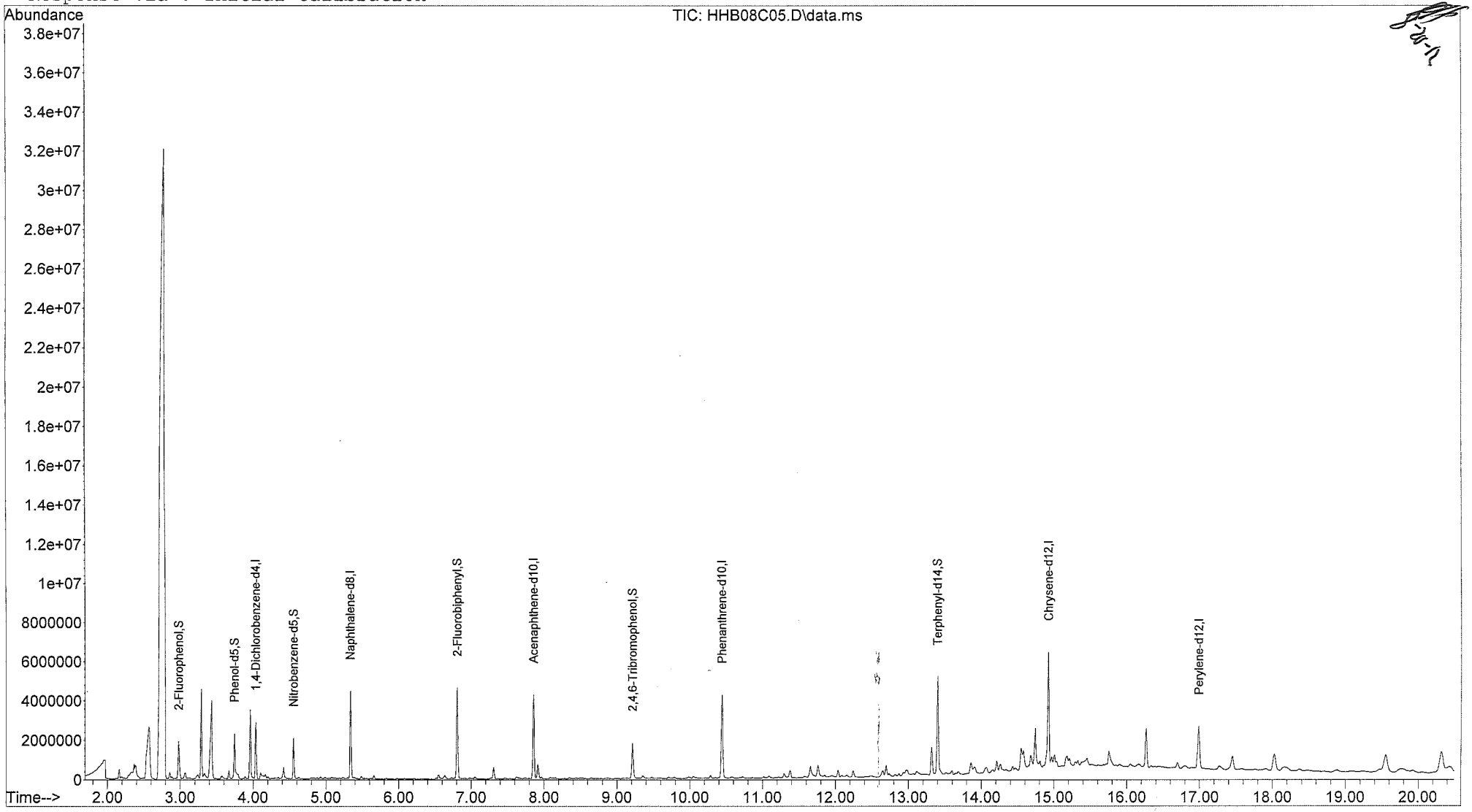
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB08C05.D Vial: 8
Acq On : 08/16/2012 15:10 Operator: RAH
Sample : 1222167005 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 17 10:42:44 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB08C05.D Vial: 8
Acq On : 08/16/2012 15:10 Operator: RAH
Sample : 1222167005 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:42:44 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	400	152	531421	40.00 ug/mL
6) Naphthalene-d8	5.34	621	136	2375729	40.00 ug/mL
8) Acenaphthene-d10	7.86	1049	164	1398031	40.00 ug/mL
10) Phenanthrene-d10	10.44	1489	188	2620204	40.00 ug/mL
12) Chrysene-d12	14.93	2251	240	2702765	40.00 ug/mL
14) Perylene-d12	16.99	2602	264	1464090	40.00 ug/mL
System Monitoring Compounds					
2) 2-Fluorophenol	2.98	220	112	531995	29.807ug/mL
4) Phenol-d5	3.75	350	99	888372	37.941ug/mL
7) Nitrobenzene-d5	4.56	488	82	678065	33.295ug/mL
9) 2-Fluorobiphenyl	6.81	871	172	1973183	38.054ug/mL
11) 2,4,6-Tribromophenol	9.22	1280	330	352372	39.947ug/mL
13) Terphenyl-d14	13.40	1992	244	2488612	47.693ug/mL
Target Compounds					Qvalue
3) 1,4-Oxathiane	0.00			Not Detected	
5) 1,4-Dithiane	0.00			Not Detected	

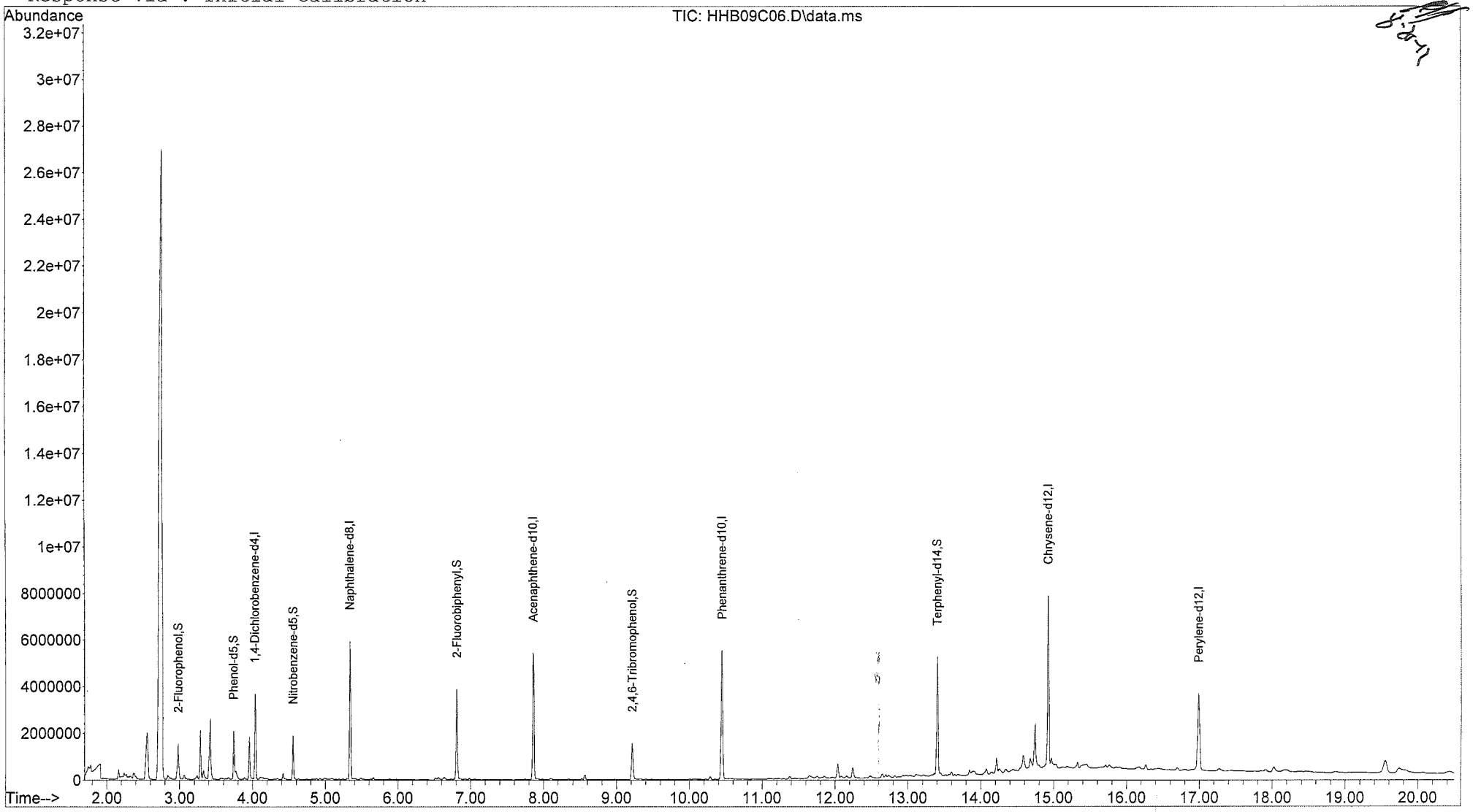
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB09C06.D Vial: 9
Acq On : 08/16/2012 15:39 Operator: RAH
Sample : 1222167006 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 17 10:43:17 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB09C06.D Vial: 9
Acq On : 08/16/2012 15:39 Operator: RAH
Sample : 1222167006 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:43:17 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	400	152	706862	40.00 ug/mL
6) Naphthalene-d8	5.34	621	136	3148708	40.00 ug/mL
8) Acenaphthene-d10	7.86	1049	164	1826136	40.00 ug/mL
10) Phenanthrene-d10	10.45	1490	188	3497294	40.00 ug/mL
12) Chrysene-d12	14.93	2251	240	3721222	40.00 ug/mL
14) Perylene-d12	16.99	2602	264	2222541	40.00 ug/mL
System Monitoring Compounds					
2) 2-Fluorophenol	2.98	220	112	495061	20.853ug/mL
4) Phenol-d5	3.74	349	99	848931	27.258ug/mL
7) Nitrobenzene-d5	4.56	488	82	620101	22.974ug/mL
9) 2-Fluorobiphenyl	6.81	871	172	1763614	26.038ug/mL
11) 2,4,6-Tribromophenol	9.22	1280	330	318301	27.035ug/mL
13) Terphenyl-d14	13.40	1992	244	2484742	34.586ug/mL
Target Compounds					Qvalue
3) 1,4-Oxathiane	0.00			Not Detected	
5) 1,4-Dithiane	0.00			Not Detected	

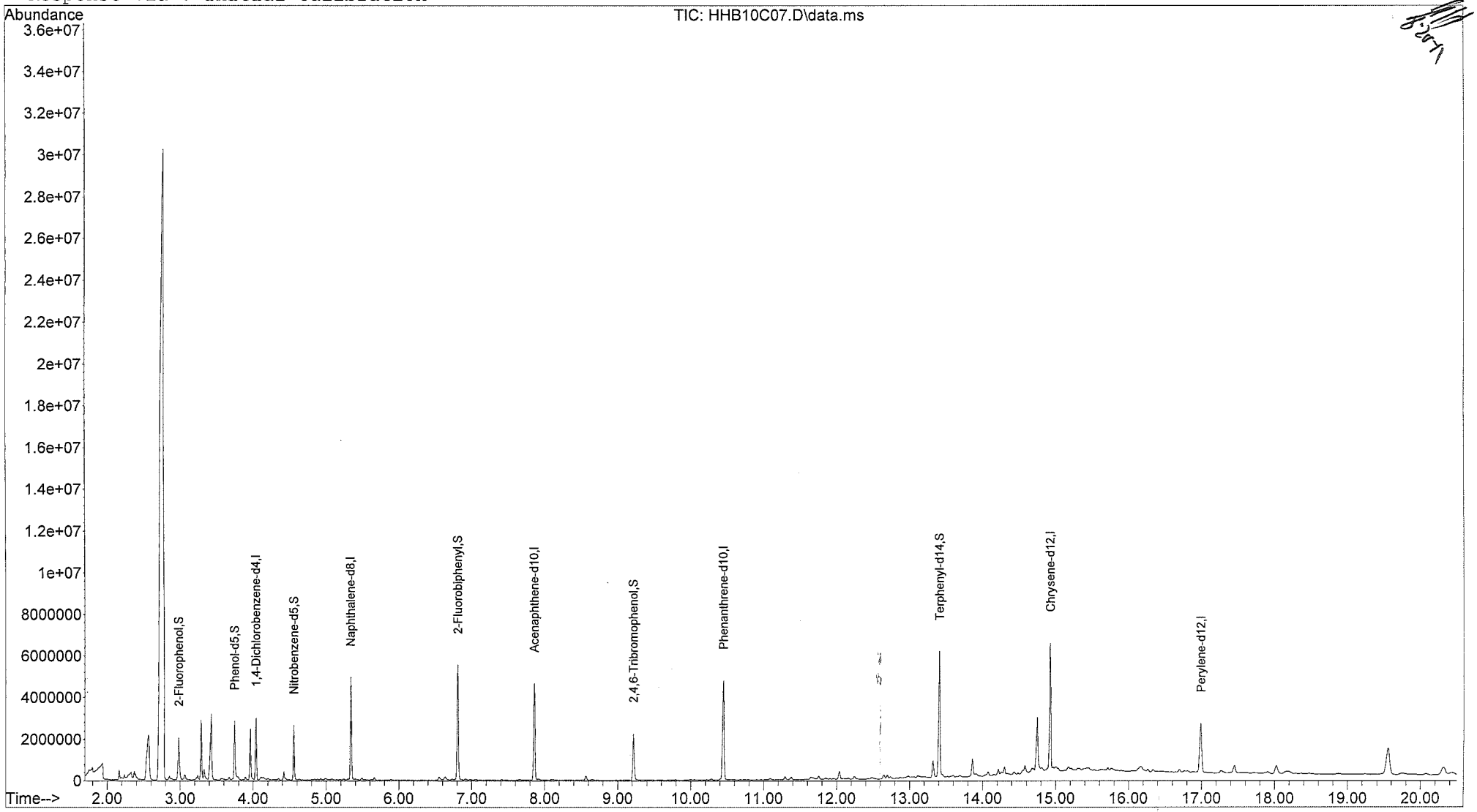
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB10C07.D Vial: 10
Acq On : 08/16/2012 16:08 Operator: RAH
Sample : 1222167007 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 17 10:43:48 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB10C07.D Vial: 10
Acq On : 08/16/2012 16:08 Operator: RAH
Sample : 1222167007 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:43:48 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	400	152	570552	40.00 ug/mL
6) Naphthalene-d8	5.34	621	136	2573420	40.00 ug/mL
8) Acenaphthene-d10	7.86	1049	164	1532346	40.00 ug/mL
10) Phenanthrene-d10	10.45	1490	188	3012848	40.00 ug/mL
12) Chrysene-d12	14.93	2251	240	3036419	40.00 ug/mL
14) Perylene-d12	16.99	2602	264	1649437	40.00 ug/mL
System Monitoring Compounds					
2) 2-Fluorophenol	2.98	220	112	657755	34.326ug/mL
4) Phenol-d5	3.75	350	99	1113450	44.292ug/mL
7) Nitrobenzene-d5	4.56	488	82	828236	37.545ug/mL
9) 2-Fluorobiphenyl	6.81	871	172	2387759	42.012ug/mL
11) 2,4,6-Tribromophenol	9.22	1280	330	427256	42.123ug/mL
13) Terphenyl-d14	13.40	1992	244	3202406	54.629ug/mL
Target Compounds					Qvalue
3) 1,4-Oxathiane	0.00			Not Detected	
5) 1,4-Dithiane	0.00			Not Detected	

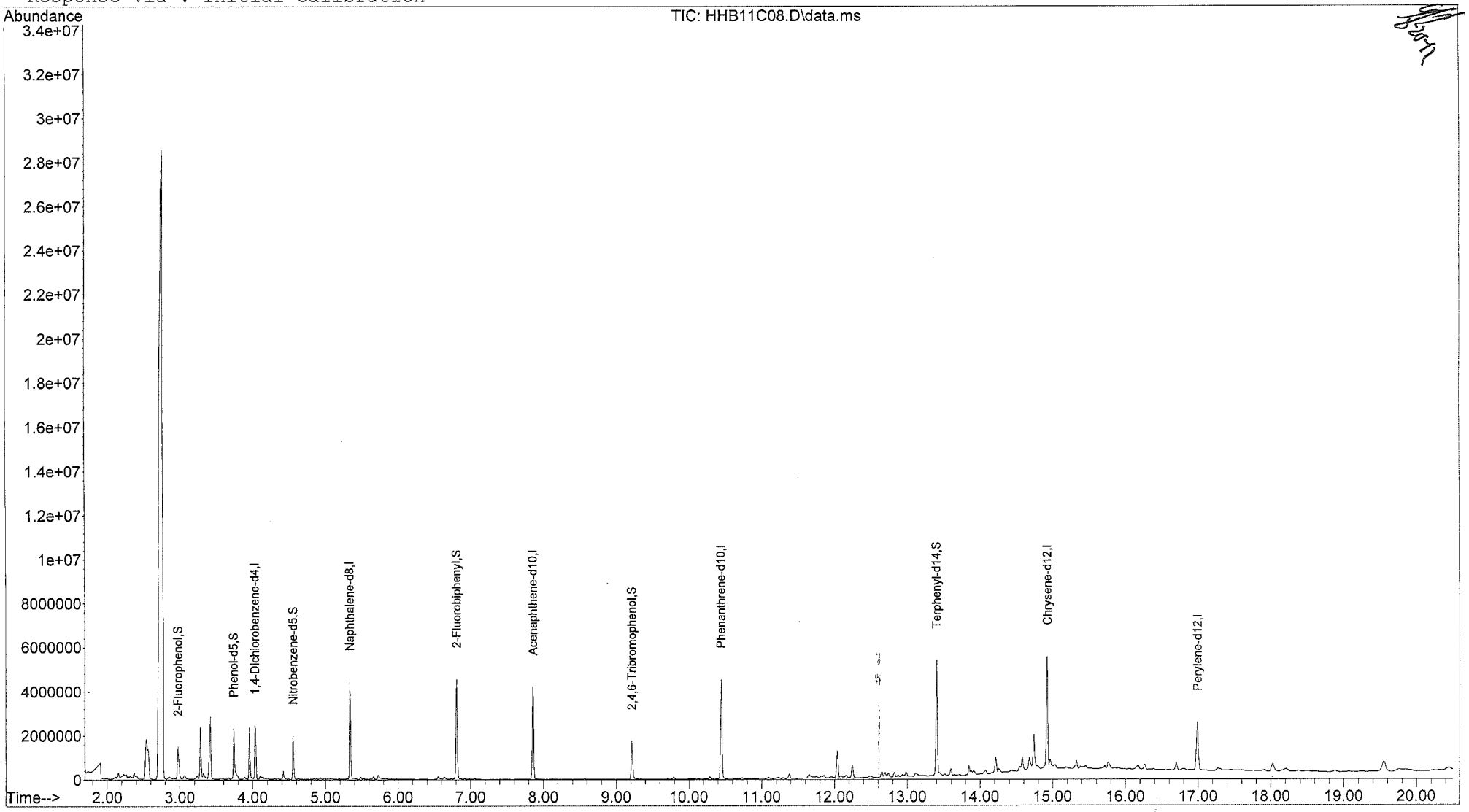
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB11C08.D Vial: 11
Acq On : 08/16/2012 16:37 Operator: RAH
Sample : 1222167008 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 17 10:44:23 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB11C08.D Vial: 11
Acq On : 08/16/2012 16:37 Operator: RAH
Sample : 1222167008 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:44:23 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc	Units
1) 1,4-Dichlorobenzene-d4	4.03	399	152	522826	40.00	ug/mL
6) Naphthalene-d8	5.34	621	136	2334336	40.00	ug/mL
8) Acenaphthene-d10	7.86	1049	164	1383893	40.00	ug/mL
10) Phenanthrene-d10	10.45	1489	188	2687407	40.00	ug/mL
12) Chrysene-d12	14.93	2251	240	2620713	40.00	ug/mL
14) Perylene-d12	16.99	2602	264	1448793	40.00	ug/mL
System Monitoring Compounds						
2) 2-Fluorophenol	2.97	219	112	538339	30.658	ug/mL
4) Phenol-d5	3.74	349	99	914249	39.688	ug/mL
7) Nitrobenzene-d5	4.56	488	82	675243	33.744	ug/mL
9) 2-Fluorobiphenyl	6.81	871	172	1980925	38.593	ug/mL
11) 2,4,6-Tribromophenol	9.22	1280	330	338806	37.448	ug/mL
13) Terphenyl-d14	13.40	1992	244	2565889	50.714	ug/mL
Target Compounds						Qvalue
3) 1,4-Oxathiane	0.00			Not Detected		
5) 1,4-Dithiane	0.00			Not Detected		

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

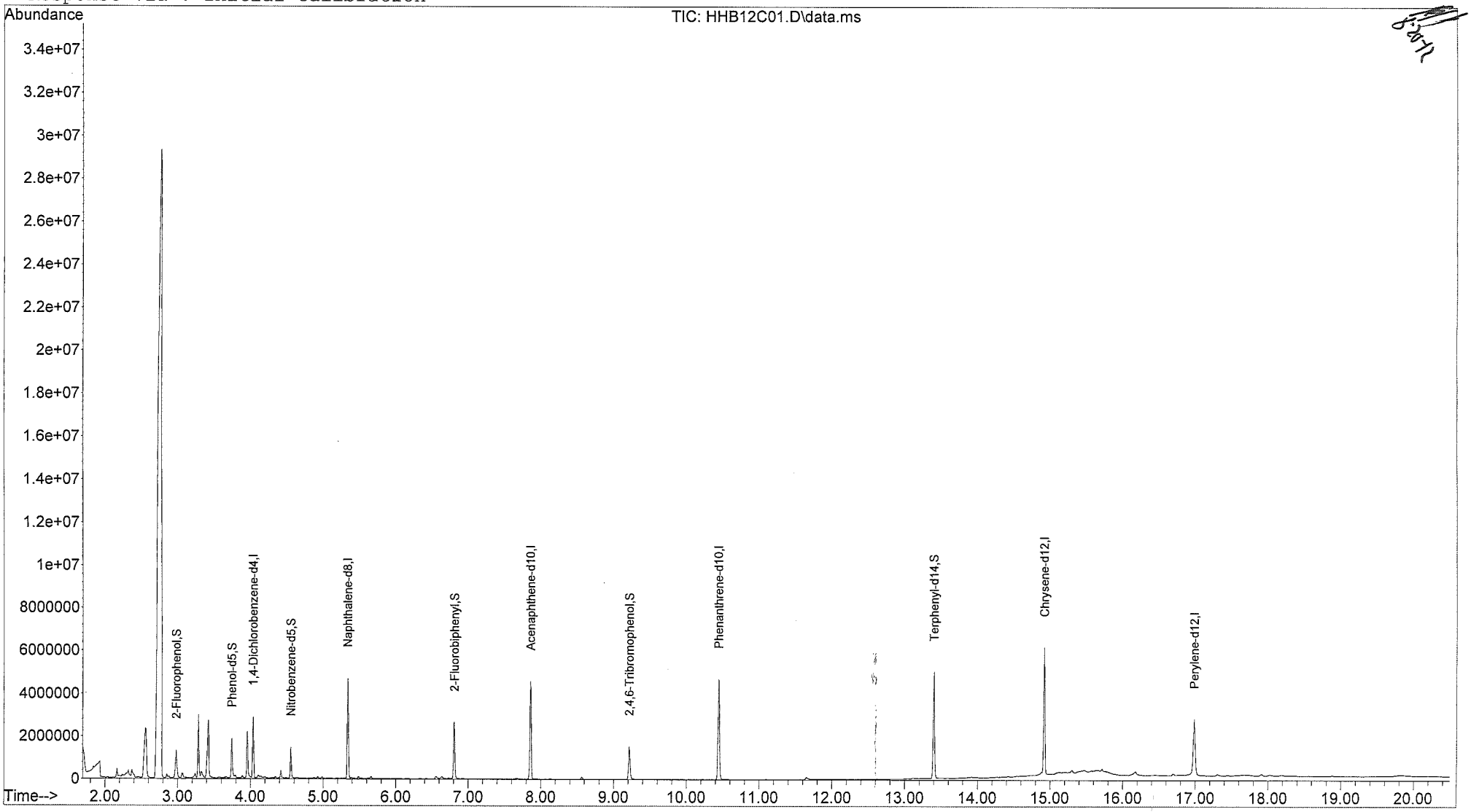
Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB12C01.D
Acq On : 08/16/2012 17:07
Sample : 1222302001
Misc : . SOIL 8270
MS Integration Params: rteint.p

Vial: 12
Operator: RAH
Inst : 5975-H
Injection volume : 1uL

Quant Time: Aug 17 10:44:55 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB12C01.D Vial: 12
Acq On : 08/16/2012 17:07 Operator: RAH
Sample : 1222302001 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:44:55 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	400	152	555707	40.00 ug/mL
6) Naphthalene-d8	5.34	621	136	2525225	40.00 ug/mL
8) Acenaphthene-d10	7.86	1049	164	1499298	40.00 ug/mL
10) Phenanthrene-d10	10.45	1489	188	2892299	40.00 ug/mL
12) Chrysene-d12	14.92	2250	240	2977840	40.00 ug/mL
14) Perylene-d12	16.99	2601	264	1643447	40.00 ug/mL
System Monitoring Compounds					
2) 2-Fluorophenol	2.98	220	112	439318	23.539ug/mL
4) Phenol-d5	3.75	350	99	776951	31.732ug/mL
7) Nitrobenzene-d5	4.56	488	82	487770	22.533ug/mL
9) 2-Fluorobiphenyl	6.81	871	172	1138469	20.473ug/mL
11) 2,4,6-Tribromophenol	9.22	1280	330	312658	32.110ug/mL
13) Terphenyl-d14	13.40	1992	244	2431725	42.298ug/mL
Target Compounds					Qvalue
3) 1,4-Oxathiane	0.00			Not Detected	
5) 1,4-Dithiane	0.00			Not Detected	

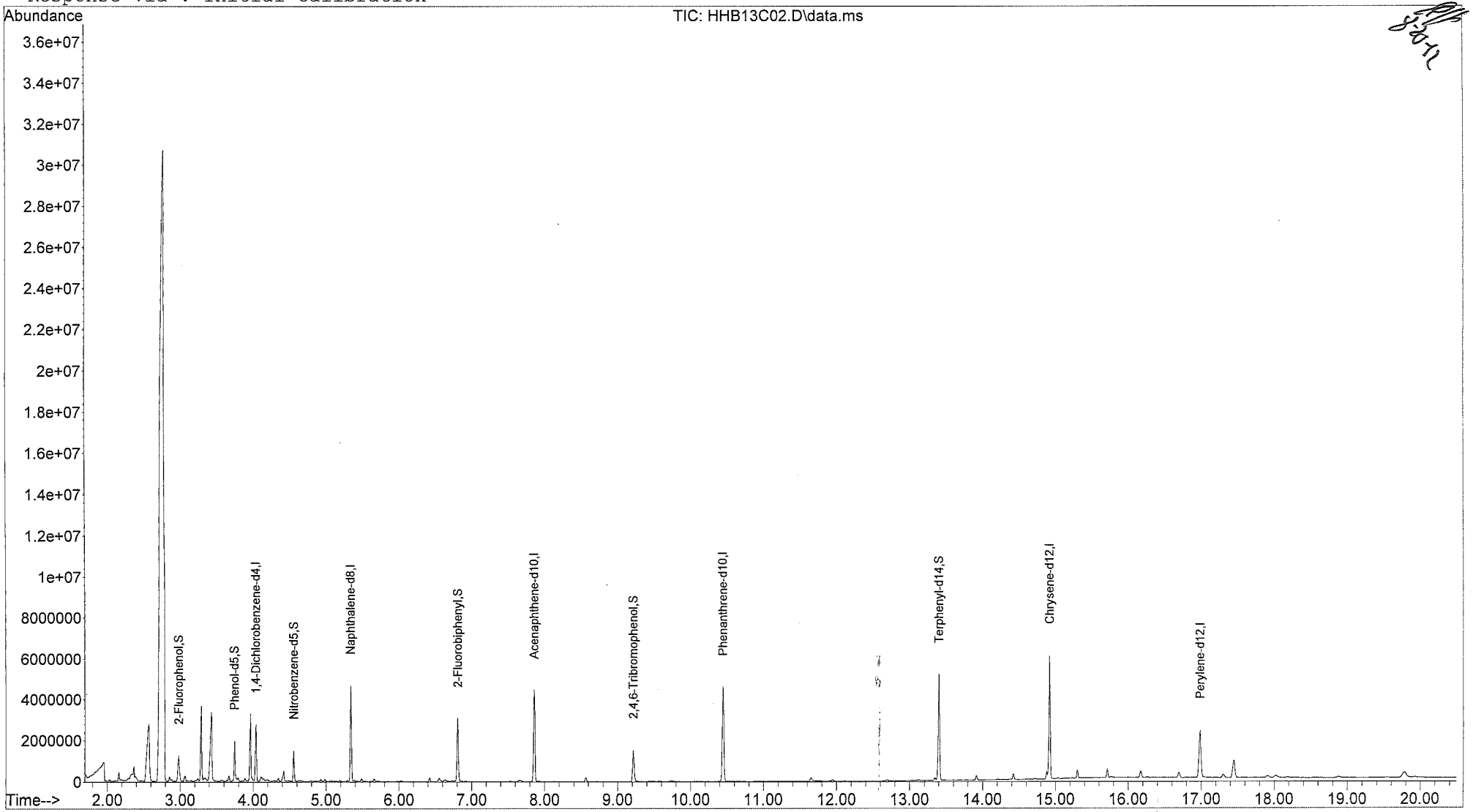
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB13C02.D Vial: 13
Acq On : 08/16/2012 17:36 Operator: RAH
Sample : 1222302002 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 17 10:45:28 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB13C02.D Vial: 13
Acq On : 08/16/2012 17:36 Operator: RAH
Sample : 1222302002 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:45:28 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	400	152	528660	40.00 ug/mL
6) Naphthalene-d8	5.34	621	136	2430006	40.00 ug/mL
8) Acenaphthene-d10	7.86	1049	164	1477596	40.00 ug/mL
10) Phenanthrene-d10	10.45	1489	188	2927853	40.00 ug/mL
12) Chrysene-d12	14.92	2250	240	2977999	40.00 ug/mL
14) Perylene-d12	16.99	2601	264	1615863	40.00 ug/mL
System Monitoring Compounds					
2) 2-Fluorophenol	2.98	220	112	393650	22.171ug/mL
4) Phenol-d5	3.75	350	99	745057	31.986ug/mL
7) Nitrobenzene-d5	4.56	488	82	479966	23.041ug/mL
9) 2-Fluorobiphenyl	6.81	871	172	1372159	25.038ug/mL
11) 2,4,6-Tribromophenol	9.22	1280	330	316431	32.103ug/mL
13) Terphenyl-d14	13.40	1992	244	2566085	44.633ug/mL
Target Compounds					Qvalue
3) 1,4-Oxathiane	0.00			Not Detected	
5) 1,4-Dithiane	0.00			Not Detected	

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

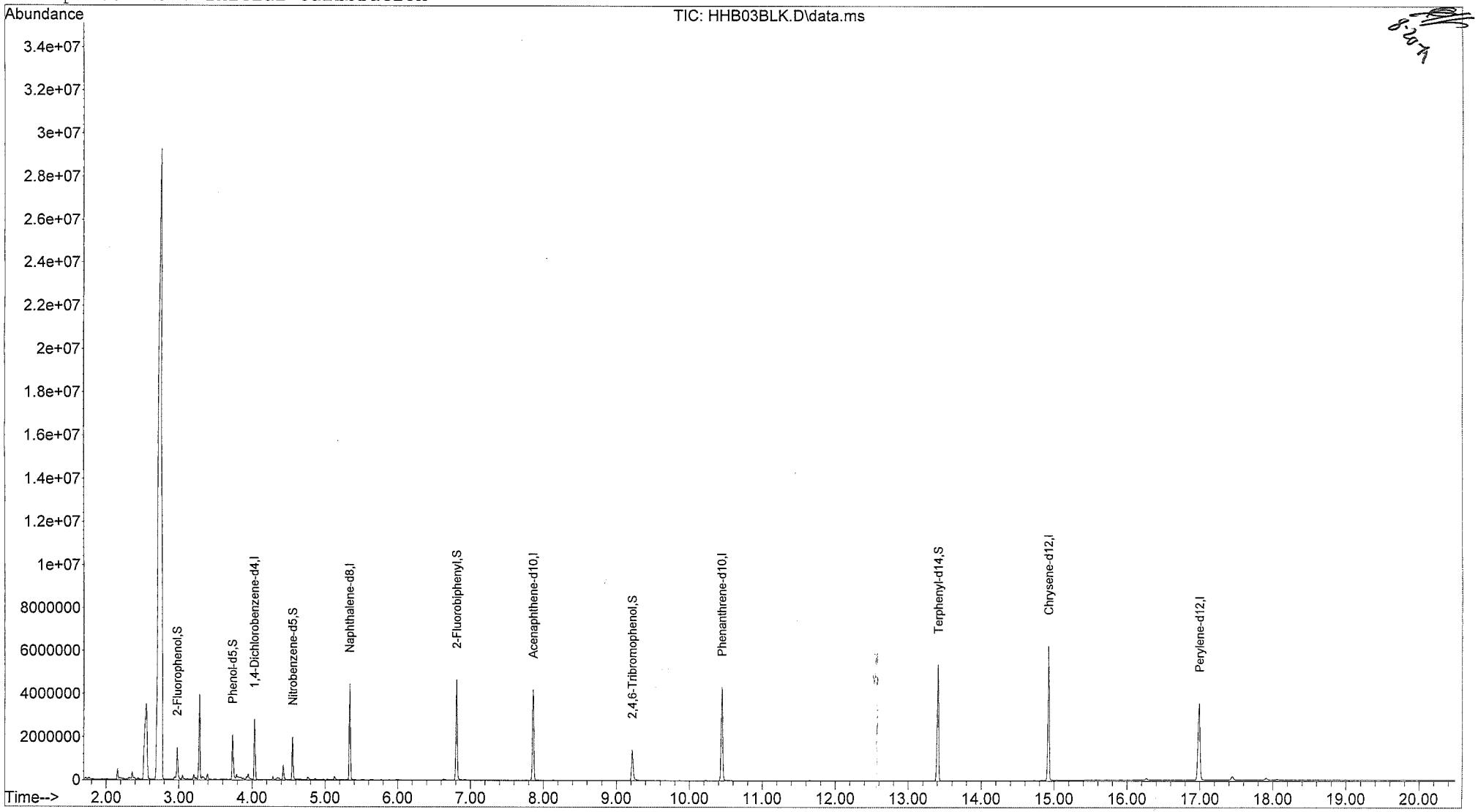
Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB03BLK.D
Acq On : 08/16/2012 12:44
Sample : 289984
Misc : . SOIL 8270
MS Integration Params: rteint.p

Vial: 3
Operator: RAH
Inst : 5975-H
Injection volume : 1uL

Quant Time: Aug 17 10:38:42 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB03BLK.D Vial: 3
Acq On : 08/16/2012 12:44 Operator: RAH
Sample : 289984 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:38:42 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	399	152	502951	40.00 ug/mL
6) Naphthalene-d8	5.34	621	136	2310888	40.00 ug/mL
8) Acenaphthene-d10	7.86	1049	164	1401593	40.00 ug/mL
10) Phenanthrene-d10	10.45	1489	188	2712308	40.00 ug/mL
12) Chrysene-d12	14.92	2250	240	3105209	40.00 ug/mL
14) Perylene-d12	16.99	2602	264	2509554	40.00 ug/mL
System Monitoring Compounds					
2) 2-Fluorophenol	2.98	220	112	539671	31.949ug/mL
4) Phenol-d5	3.73	348	99	889976	40.161ug/mL
7) Nitrobenzene-d5	4.56	488	82	709097	35.796ug/mL
9) 2-Fluorobiphenyl	6.81	871	172	2003360	38.537ug/mL
11) 2,4,6-Tribromophenol	9.22	1281	330	316703	34.684ug/mL
13) Terphenyl-d14	13.41	1993	244	2914949	48.624ug/mL
Target Compounds					Qvalue
3) 1,4-Oxathiane	0.00			Not Detected	
5) 1,4-Dithiane	0.00			Not Detected	

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

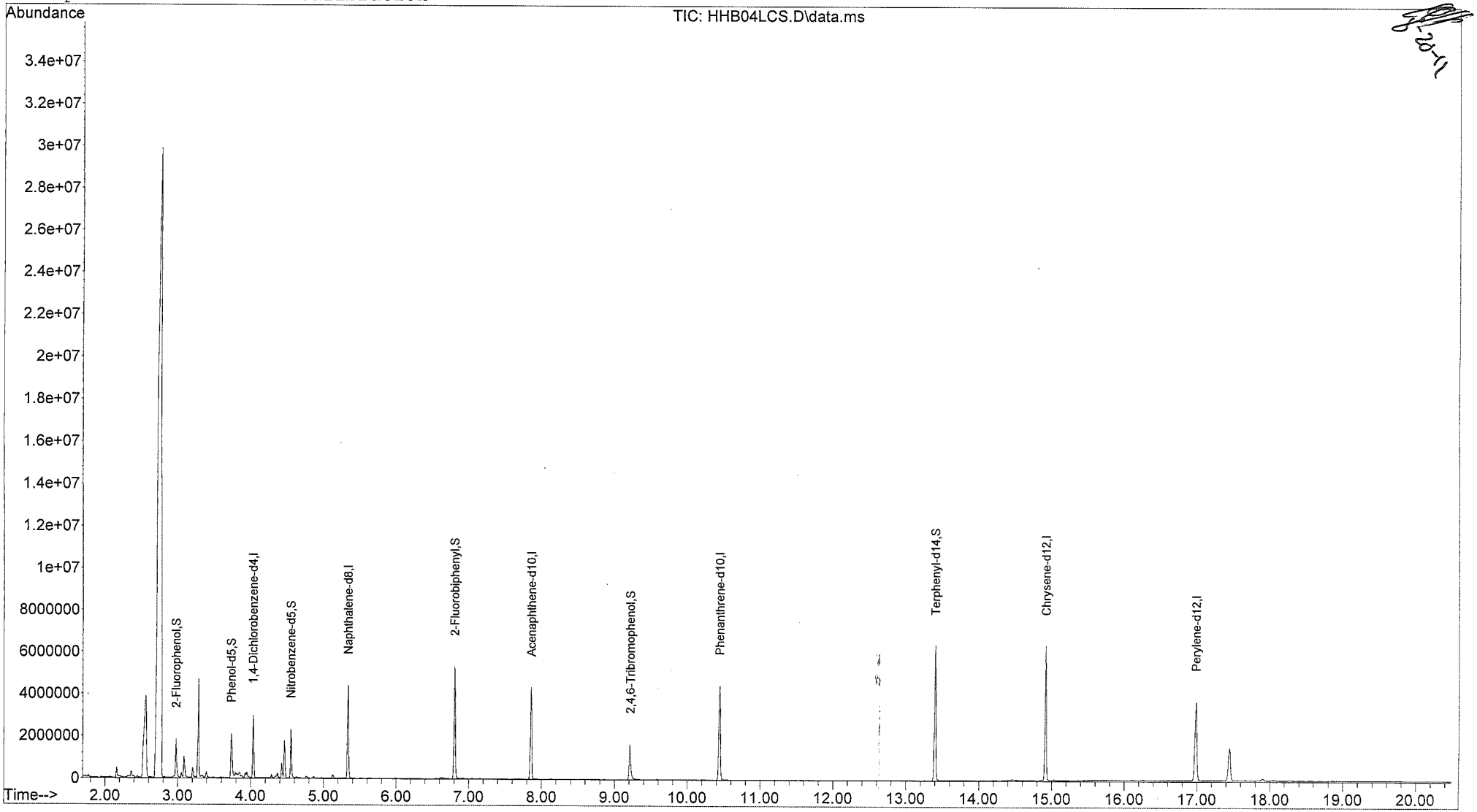
Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB04LCS.D
Acq On : 08/16/2012 13:12
Sample : 289985
Misc : . SOIL 8270
MS Integration Params: rteint.p

Vial: 4
Operator: RAH
Inst : 5975-H
Injection volume : 1uL

Quant Time: Aug 16 13:33:22 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB04LCS.D Vial: 4
Acq On : 08/16/2012 13:12 Operator: RAH
Sample : 289985 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 16 13:33:22 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc	Units
1) 1,4-Dichlorobenzene-d4	4.03	399	152	528274	40.00	ug/mL
6) Naphthalene-d8	5.34	621	136	2390317	40.00	ug/mL
8) Acenaphthene-d10	7.86	1049	164	1461030	40.00	ug/mL
10) Phenanthrene-d10	10.45	1489	188	2828548	40.00	ug/mL
12) Chrysene-d12	14.92	2250	240	3232246	40.00	ug/mL
14) Perylene-d12	16.99	2601	264	2566742	40.00	ug/mL
System Monitoring Compounds						
2) 2-Fluorophenol	2.97	219	112	640467	36.098	ug/mL
4) Phenol-d5	3.73	348	99	1031593	44.320	ug/mL
7) Nitrobenzene-d5	4.55	487	82	837446	40.870	ug/mL
9) 2-Fluorobiphenyl	6.80	870	172	2340460	43.190	ug/mL
11) 2,4,6-Tribromophenol	9.22	1280	330	369491	38.802	ug/mL
13) Terphenyl-d14	13.40	1992	244	3305214	52.967	ug/mL
Target Compounds						Qvalue
3) 1,4-Oxathiane	3.09	238	104	216071	23.564	ug/mL 96
5) 1,4-Dithiane	4.46	472	120	430843	28.996	ug/mL 94

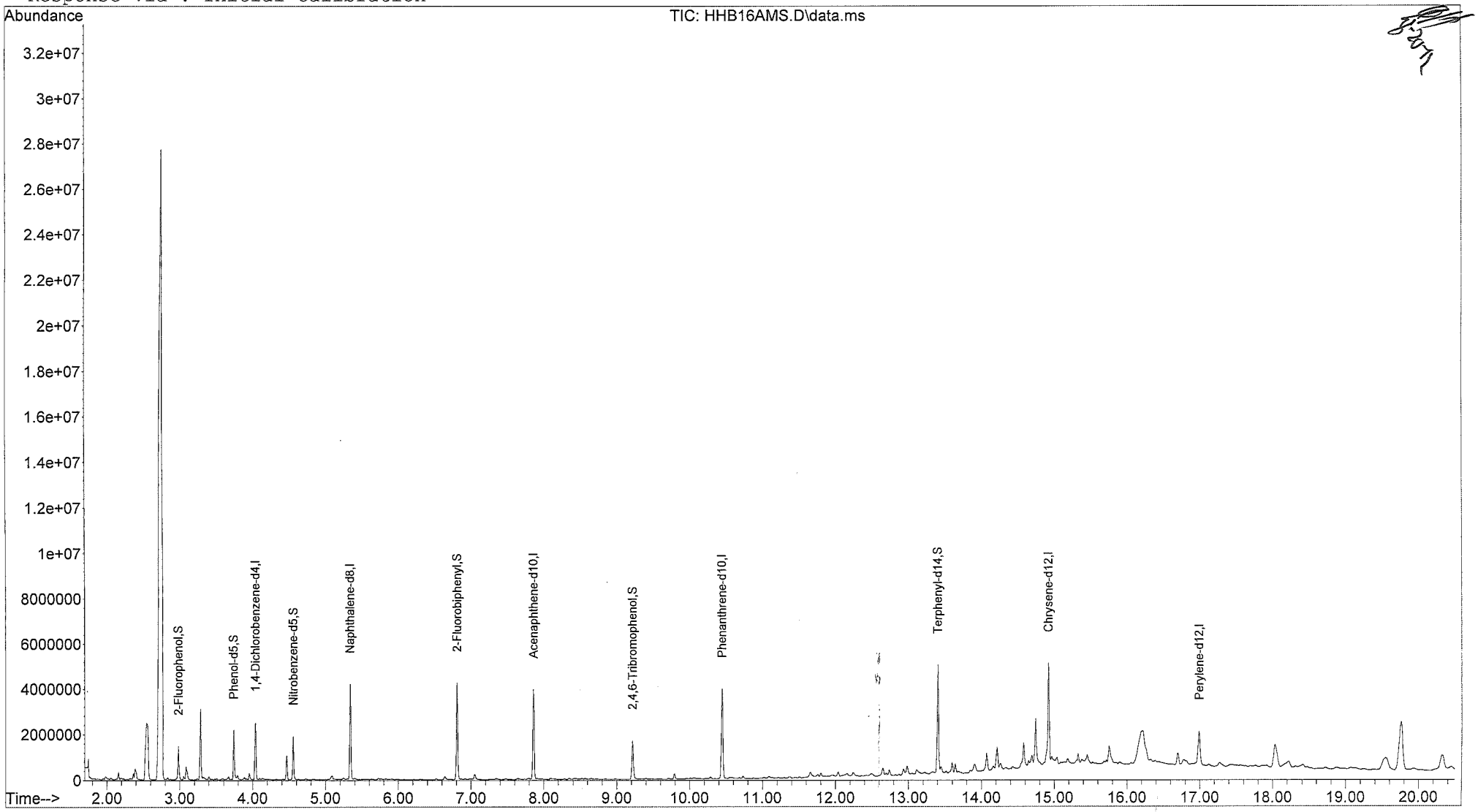
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB16AMS.D Vial: 16
Acq On : 08/16/2012 19:03 Operator: RAH
Sample : 289986 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 16 19:23:41 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB16AMS.D Vial: 16
Acq On : 08/16/2012 19:03 Operator: RAH
Sample : 289986 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 16 19:23:41 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc	Units	
1) 1,4-Dichlorobenzene-d4	4.04	400	152	504388	40.00	ug/mL	
6) Naphthalene-d8	5.34	621	136	2197574	40.00	ug/mL	
8) Acenaphthene-d10	7.86	1049	164	1301197	40.00	ug/mL	
10) Phenanthrene-d10	10.45	1489	188	2470453	40.00	ug/mL	
12) Chrysene-d12	14.92	2250	240	2196807	40.00	ug/mL	
14) Perylene-d12	16.99	2602	264	945728	40.00	ug/mL	
System Monitoring Compounds							
2) 2-Fluorophenol	2.98	220	112	481102	28.400	ug/mL	
4) Phenol-d5	3.74	349	99	829084	37.307	ug/mL	
7) Nitrobenzene-d5	4.56	488	82	629301	33.406	ug/mL	
9) 2-Fluorobiphenyl	6.81	871	172	1833920	38.000	ug/mL	
11) 2,4,6-Tribromophenol	9.22	1281	330	334586	40.229	ug/mL	
13) Terphenyl-d14	13.40	1992	244	2386306	56.265	ug/mL	
Target Compounds							Qvalue
3) 1,4-Oxathiane	3.09	238	104	149317	17.055	ug/mL	93
5) 1,4-Dithiane	4.47	473	120	266238	18.767	ug/mL	94

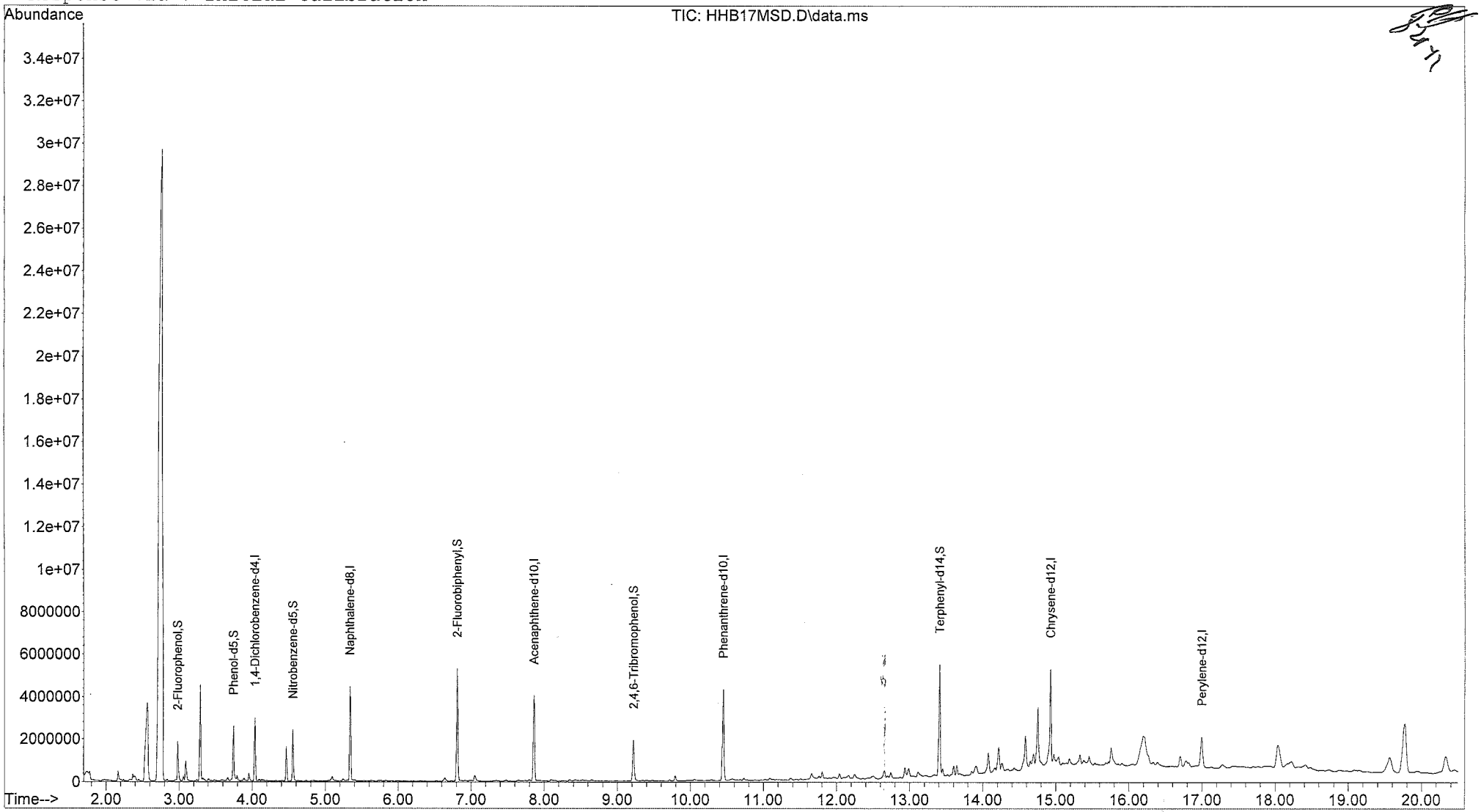
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB17MSD.D Vial: 17
Acq On : 08/16/2012 19:32 Operator: RAH
Sample : 289987 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 16 19:53:07 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB17MSD.D Vial: 17
Acq On : 08/16/2012 19:32 Operator: RAH
Sample : 289987 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 16 19:53:07 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc	Units	
1) 1,4-Dichlorobenzene-d4	4.04	400	152	536484	40.00	ug/mL	
6) Naphthalene-d8	5.34	621	136	2392585	40.00	ug/mL	
8) Acenaphthene-d10	7.86	1050	164	1378040	40.00	ug/mL	
10) Phenanthrene-d10	10.45	1490	188	2569049	40.00	ug/mL	
12) Chrysene-d12	14.93	2251	240	2162322	40.00	ug/mL	
14) Perylene-d12	17.00	2603	264	924082	40.00	ug/mL	
System Monitoring Compounds							
2) 2-Fluorophenol	2.98	220	112	604378	33.543	ug/mL	
4) Phenol-d5	3.75	350	99	1011279	42.783	ug/mL	
7) Nitrobenzene-d5	4.56	488	82	765779	37.337	ug/mL	
9) 2-Fluorobiphenyl	6.81	871	172	2205856	43.158	ug/mL	
11) 2,4,6-Tribromophenol	9.22	1281	330	382296	44.202	ug/mL	
13) Terphenyl-d14	13.41	1993	244	2631424	63.034	ug/mL	
Target Compounds							Qvalue
3) 1,4-Oxathiane	3.09	239	104	206796	22.207	ug/mL	94
5) 1,4-Dithiane	4.47	473	120	376686	24.964	ug/mL	94

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.90	210	47.95	110	60.00	204	73.00	1416
37.00	789	49.10	1366	61.00	2048	74.00	16658
38.00	2065	50.10	37069	62.00	2129	75.00	26072
39.05	11447	51.10	133016	63.05	5870	76.10	8806
40.00	553	52.05	6888	64.05	797	77.10	169557
41.00	409	53.00	317	65.10	2951	78.10	11912
41.95	8	55.00	774	66.00	245	79.00	12159
43.00	174	56.00	4604	67.00	41	80.00	9544
43.95	213	56.95	9649	69.00	182007	80.95	12627
44.95	498	57.95	474	69.95	863	82.05	2981
46.90	50	59.05	212	71.00	84	83.00	2757

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
83.95	505	96.00	1100	107.00	51061	119.05	580
85.00	2076	96.95	164	108.00	7952	119.95	624
86.00	3686	98.00	15285	110.00	99453	120.90	137
86.95	1503	99.00	11947	111.00	14899	121.10	236
88.00	668	100.00	1055	112.00	1808	122.00	3851
88.95	332	100.95	6366	113.00	564	123.00	5511
91.00	2779	101.95	411	113.95	125	124.00	2550
92.00	3243	102.95	2332	115.00	255	125.00	2380
93.00	20146	104.00	4550	116.05	3193	127.00	194795
93.95	1286	105.00	4189	117.00	41283	128.00	14880
95.00	369	106.10	1215	118.00	2979	129.00	77256

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
130.00	6368	139.95	881	150.95	941	160.00	3180
130.95	1208	141.00	9687	151.20	517	161.00	4674
132.05	708	142.00	3150	151.70	439	161.95	1330
132.80	252	143.00	2120	152.00	274	162.80	161
133.00	135	143.95	625	153.00	3192	163.05	274
134.00	2181	145.00	646	154.00	2288	164.00	668
134.95	5754	146.05	1877	155.00	5190	164.95	3521
136.00	2380	147.00	4767	156.05	8000	166.05	2851
137.05	2966	148.00	10934	157.05	1896	166.95	19745
137.95	736	148.95	2140	157.95	1883	168.00	8501
138.95	478	150.05	661	159.00	1302	169.05	1743

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
170.05	659	181.00	5020	192.00	5090	205.00	26323
170.95	942	182.00	946	193.00	5198	206.00	108360
171.95	1888	183.00	572	194.00	1397	207.00	14246
173.00	2312	184.00	1287	195.05	970	208.00	3479
174.00	4313	185.00	7511	196.00	16758	208.95	1198
175.00	7834	186.00	59352	198.00	449451	210.30	703
176.05	2966	187.00	15865	199.00	30245	210.95	4542
177.00	3955	188.05	1696	200.00	2429	212.95	335
178.00	859	189.00	3403	201.45	3070	215.00	1191
179.00	15556	189.95	600	202.95	2845	216.05	2349
180.00	10462	191.00	1758	204.00	15477	217.00	27032

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
218.00	3469	230.00	769	240.95	1460	252.00	534
218.95	280	231.00	2262	242.00	3478	253.05	1166
219.20	106	231.95	384	243.10	4047	255.00	269404
221.00	32173	232.95	580	244.00	51989	256.00	38803
223.00	6700	234.00	1735	245.05	7448	257.00	3231
224.00	61472	234.95	1711	246.00	9407	258.00	14382
225.00	15875	235.95	1100	246.95	2002	259.00	2277
226.05	1856	237.00	2076	248.05	411	259.95	452
227.00	24363	238.05	341	249.00	1736	260.95	518
228.00	3479	238.95	964	250.00	378	263.00	155
229.00	5244	240.00	804	251.05	421	263.80	387

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
264.10	160	276.00	16781	288.00	125	299.00	58
265.00	5592	277.00	9464	288.90	438	300.95	468
265.90	1371	278.00	1550	289.95	375	301.95	650
266.90	202	278.80	76	291.05	236	303.05	4040
267.85	19	278.95	278	291.90	98	304.05	968
269.90	381	281.00	201	292.10	306	305.00	88
270.95	583	282.05	293	293.05	2240	308.00	529
272.05	745	283.00	1149	293.95	535	308.95	363
273.00	8812	284.00	800	296.00	33656	309.95	517
274.00	21501	285.00	1731	297.00	4977	311.00	52
275.00	124987	285.95	376	297.90	387	312.20	67

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
312.95	387	326.05	153	341.00	1397	365.95	2022
314.00	1732	327.00	2246	342.00	324	366.90	53
315.00	3856	328.00	1118	346.00	2412	369.95	327
316.00	2135	329.10	116	347.00	412	371.10	748
317.00	363	331.95	909	351.00	86	372.05	5254
319.90	179	333.00	1200	352.05	3088	373.00	1217
321.05	1110	334.05	7150	353.05	2118	374.05	166
322.05	618	335.05	1830	354.05	3337	383.05	1223
323.05	11178	336.05	286	355.05	607	383.95	469
324.05	2118	339.00	115	358.95	270	384.90	58
325.05	158	340.00	124	365.00	13675	390.00	645

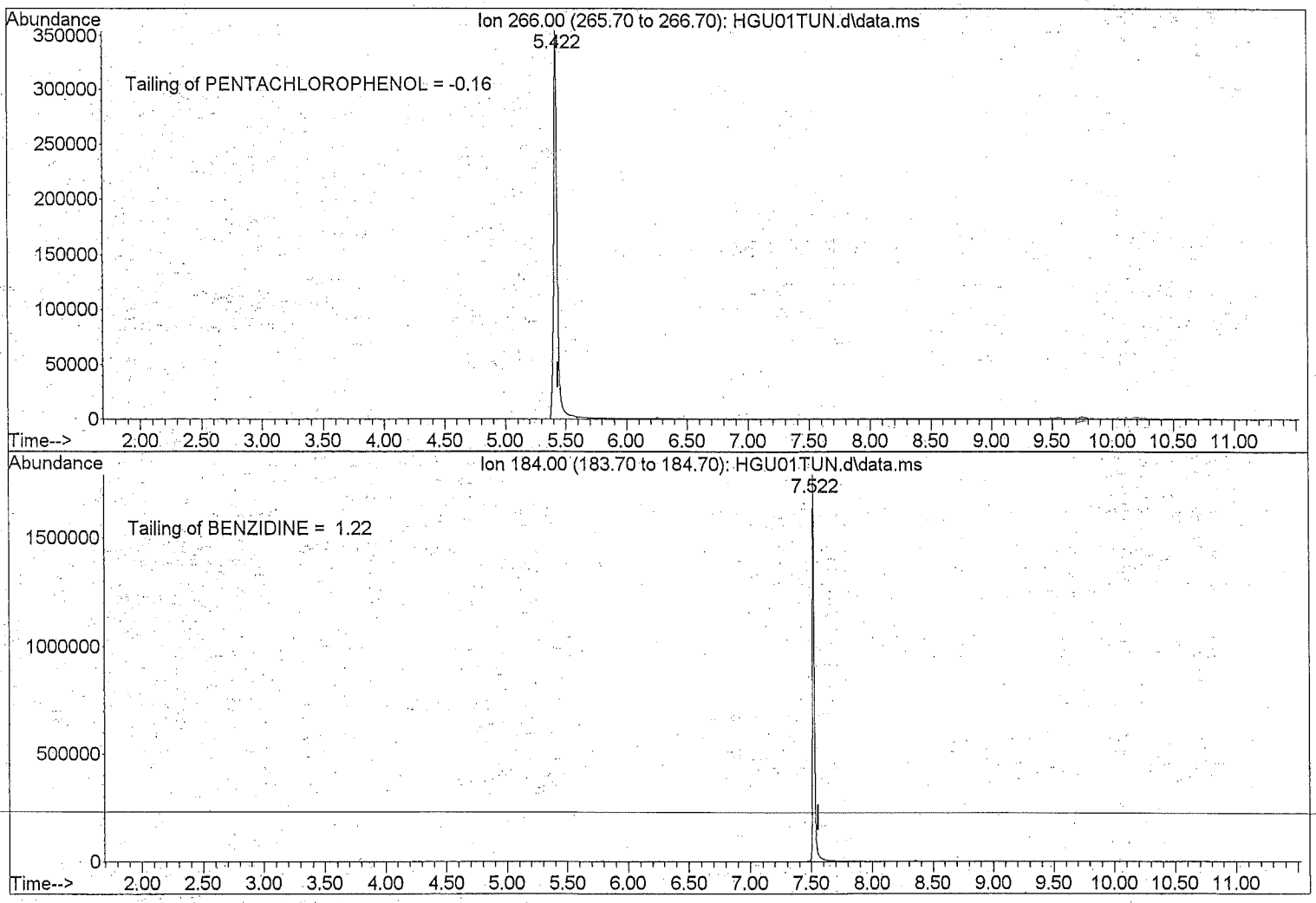
Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
391.05	452	425.05	302	444.10	5675		
392.05	336	435.45	112	445.00	368		
400.90	274	436.10	52				
402.00	1684	437.00	72				
403.00	2553	437.50	61				
404.00	801	437.70	106				
410.10	50	438.10	252				
421.00	1998	438.85	543				
422.05	1989	441.10	47803				
423.10	13843	442.10	315904				
424.05	2863	443.10	60693				

Data File: HGU01TUN.d
Date Acquired: 08/08/2012 10:06
Operator ID: RAH
Name: 8270 DFTPP 13808
Misc: X:1/11/13

Instrument: 5975-H
Acq Method: 8270DTUN.M
DA Method: 8270DTUN.M

Cal Title: EPA/CLP SOM01
Last Cal Update: Wed Nov 23 09:22:39 2011
X:1/11/13

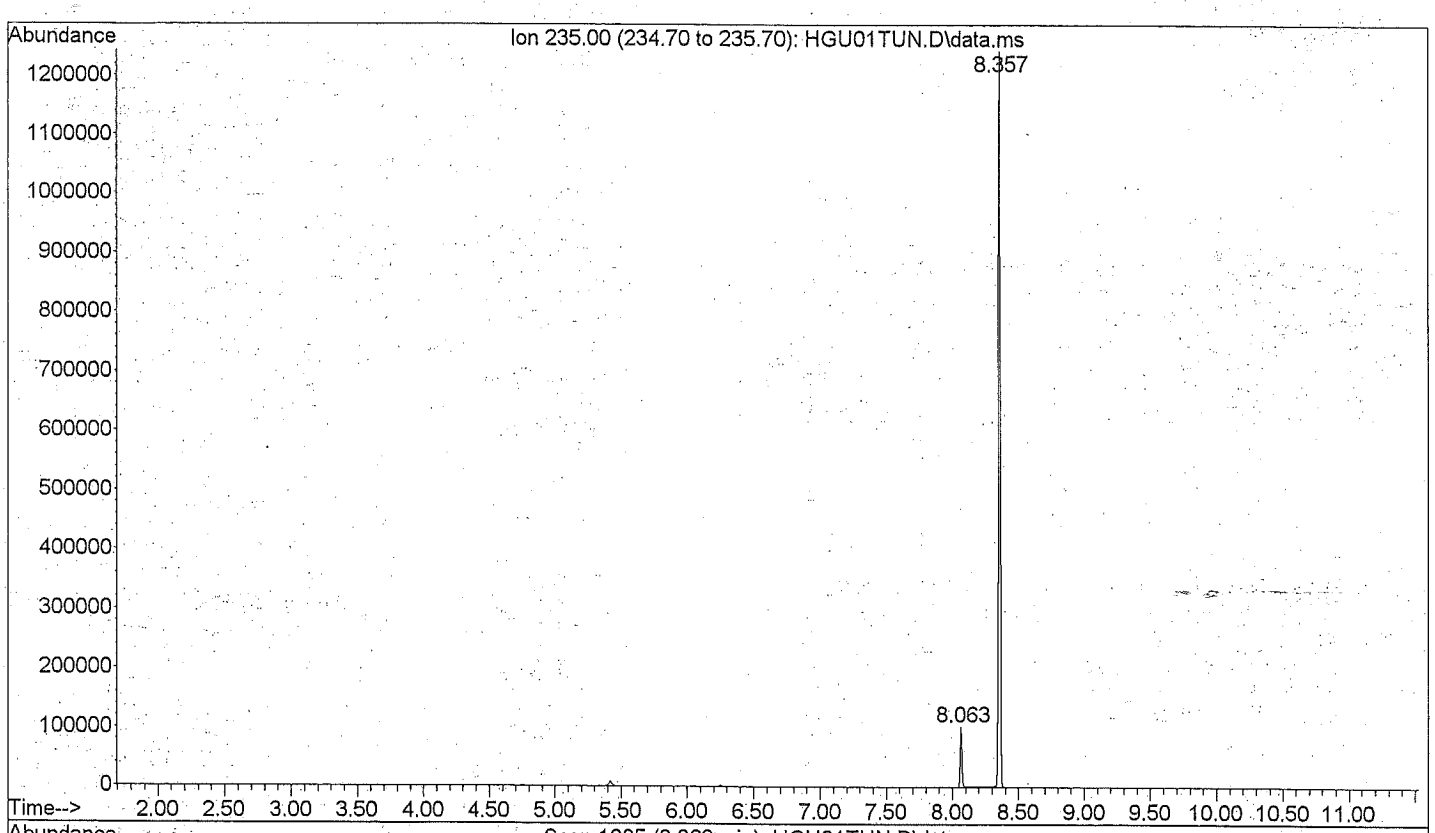


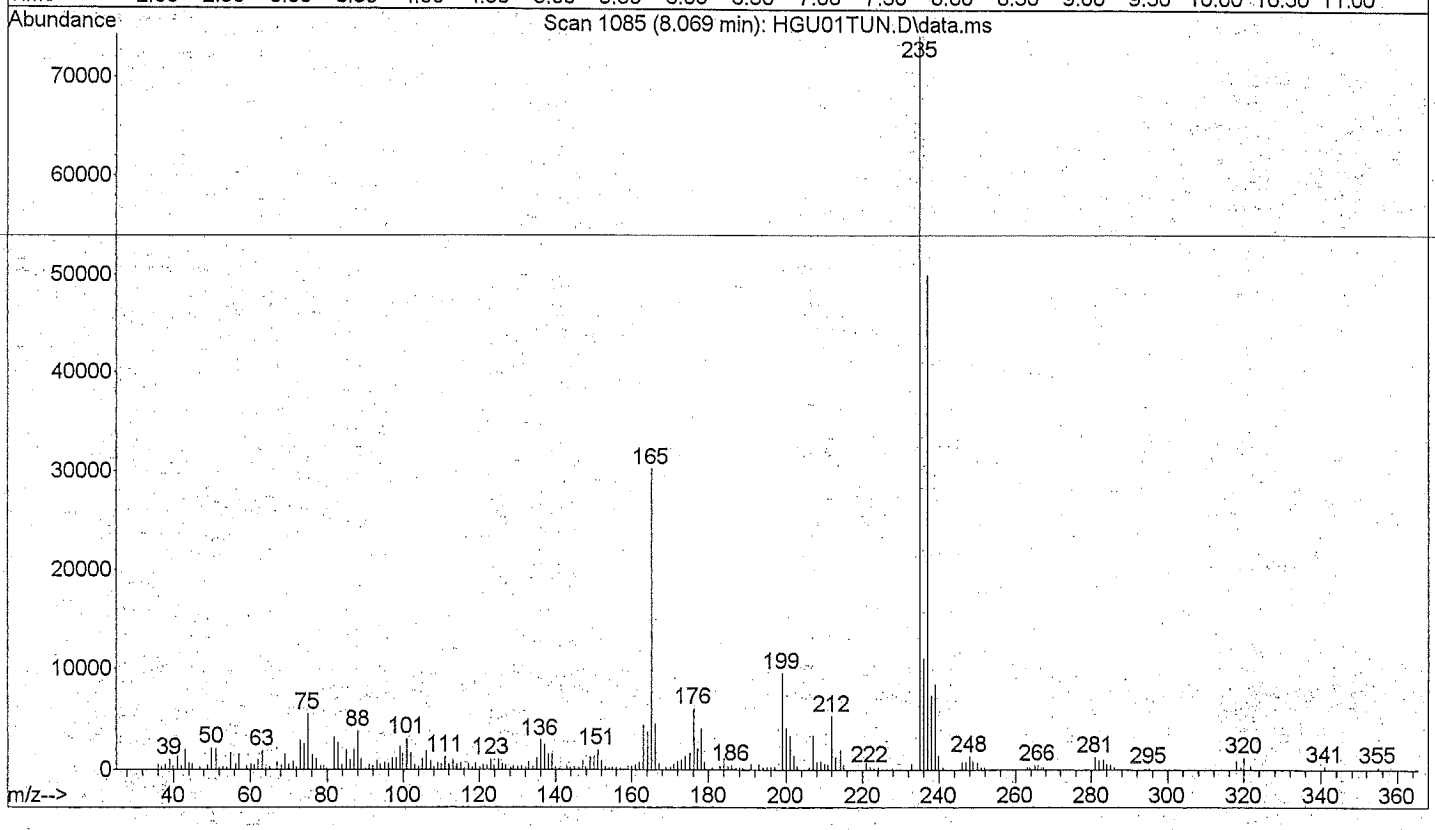
Ion 235.00 (234.70 to 235.70): HGU01TUN.D\data.ms
8270 DFTPP 13808

Peak #	Ret Time	Type	Width	Area	Start Time	End Time
1	8.063	rBV	0.082	94255	8.027	8.110
2	8.357	rVB	0.112	1143185	8.286	8.398

DDT degradation = $\frac{94255}{94255 + 1143185}$ = 7.6%

File :D:\1\DATA\2012\AUG12\08AUG12H\HGU01TUN.D
Operator : RAH
Acquired : 8 Aug 2012 10:06 am using AcqMethod 8270DTUN.M
Instrument : 5975-H
Sample Name: 8270 DFTPP 13808
Misc Info : X:1/11/13
Vial Number: 1



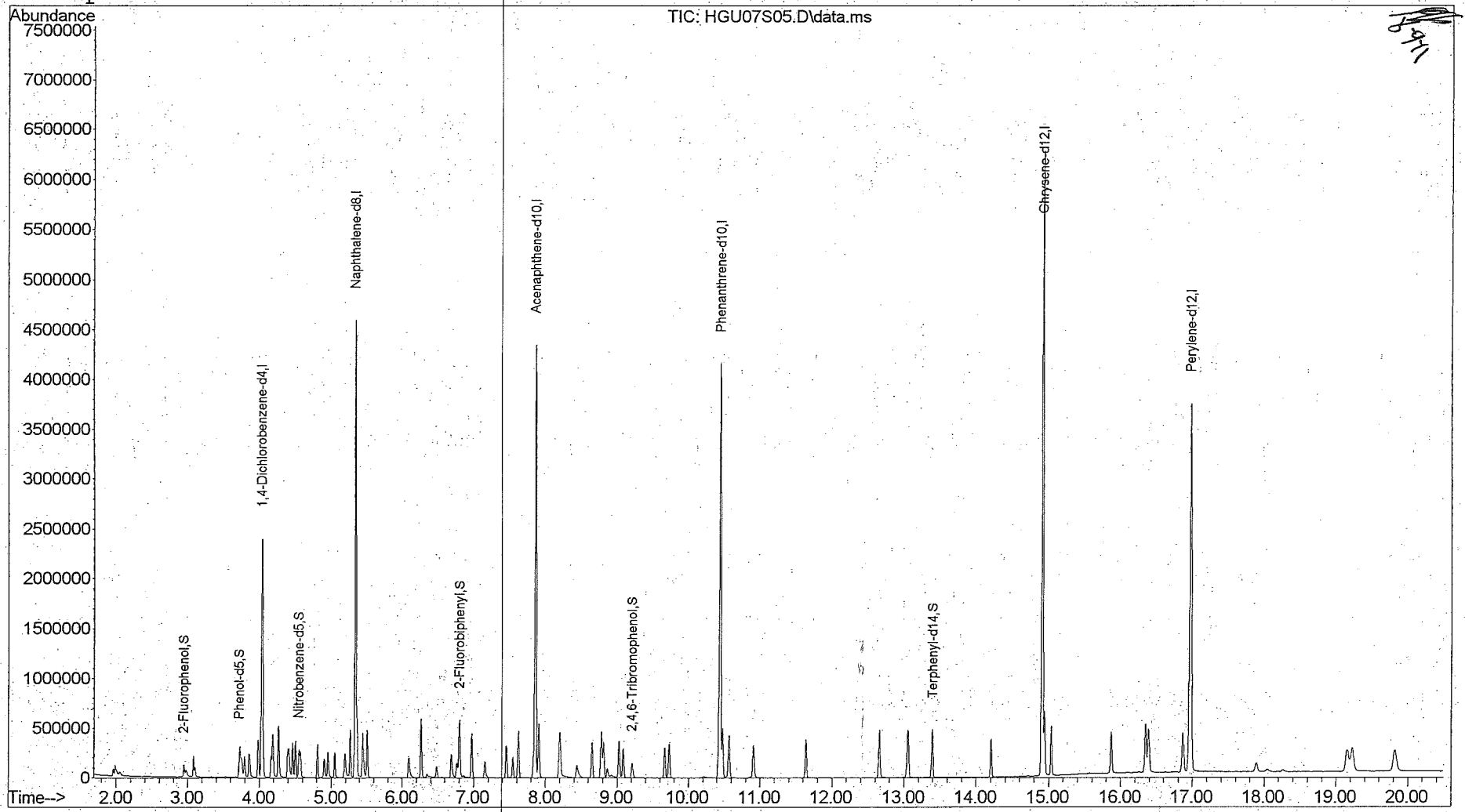


Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU07S05.D Vial: 7
Acq On : 08/08/2012 12:59 Operator: RAH
Sample : 8270 5 std 15974 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:23:28 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

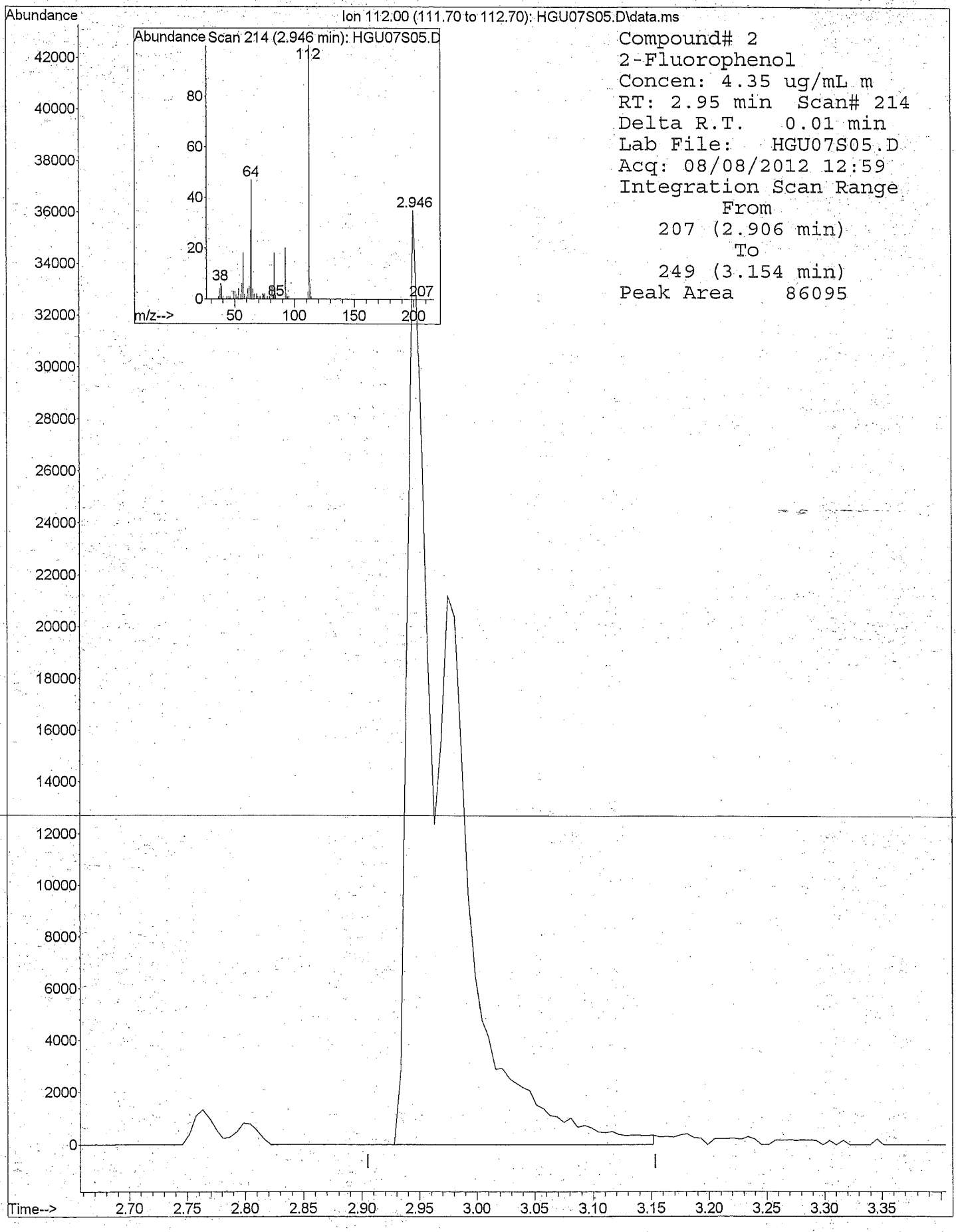
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU07S05.D Vial: 7
Acq On : 08/08/2012 12:59 Operator: RAH
Sample : 8270 5 std 15974 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:23:28 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	588867	40.00 ug/mL
6) Naphthalene-d8	5.33	136	2620860	40.00 ug/mL
8) Acenaphthene-d10	7.85	164	1436514	40.00 ug/mL
10) Phenanthrene-d10	10.43	188	2595047	40.00 ug/mL
12) Chrysene-d12	14.91	240	2776807	40.00 ug/mL
14) Perylene-d12	16.97	264	2442971	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	86095	4.352ug/mL m
4) Phenol-d5	3.72	99	113950	4.392ug/mL
7) Nitrobenzene-d5	4.55	82	99427	4.426ug/mL
9) 2-Fluorobiphenyl	6.80	172	243673	4.573ug/mL
11) 2,4,6-Tribromophenol	9.21	330	35477	4.061ug/mL
13) Terphenyl-d14	13.39	244	245085	4.572ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	54091	5.291ug/mL 99
5) 1,4-Dithiane	4.46	120	87903	5.307ug/mL 98

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



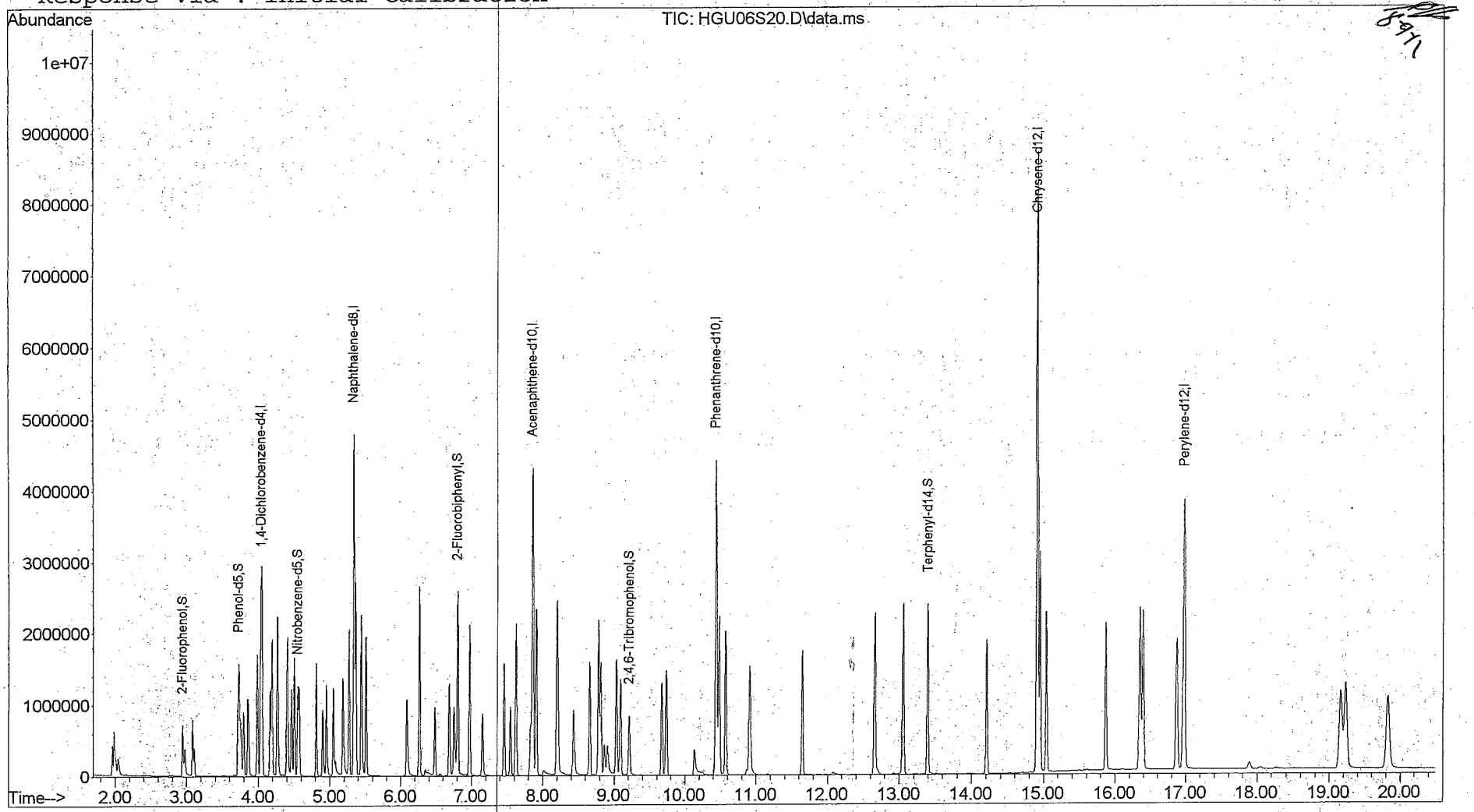
8270DOND.M 5975-H 8270DOND.M 8270 5 std 15974 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU06S20.D Vial: 6
Acq On : 08/08/2012 12:29 Operator: RAH
Sample : 8270 20 std 15973 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:23:14 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

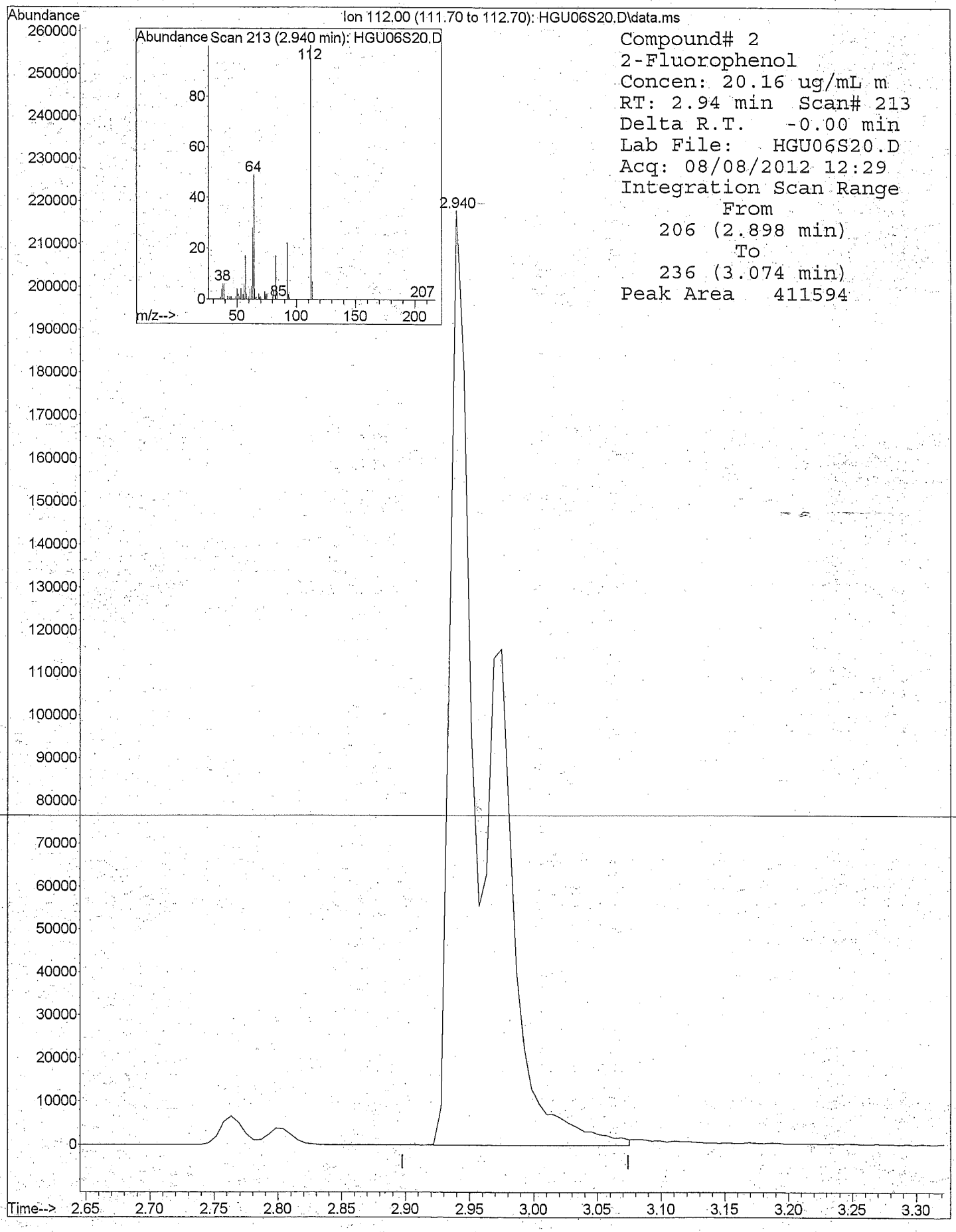
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU06S20.D Vial: 6
Acq On : 08/08/2012 12:29 Operator: RAH
Sample : 8270 20 std 15973 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:23:14 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	607773	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2617015	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1459213	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2715173	40.00 ug/mL
12) Chrysene-d12	14.92	240	3091127	40.00 ug/mL
14) Perylene-d12	16.97	264	2675827	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	411594	20.158ug/mL m
4) Phenol-d5	3.72	99	538093	20.094ug/mL
7) Nitrobenzene-d5	4.55	82	451447	20.124ug/mL
9) 2-Fluorobiphenyl	6.80	172	1088983	20.121ug/mL
11) 2,4,6-Tribromophenol	9.21	330	178946	19.577ug/mL
13) Terphenyl-d14	13.39	244	1191516	19.966ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	202599	19.200ug/mL m 99
5) 1,4-Dithiane	4.46	120	327670	19.168ug/mL 99

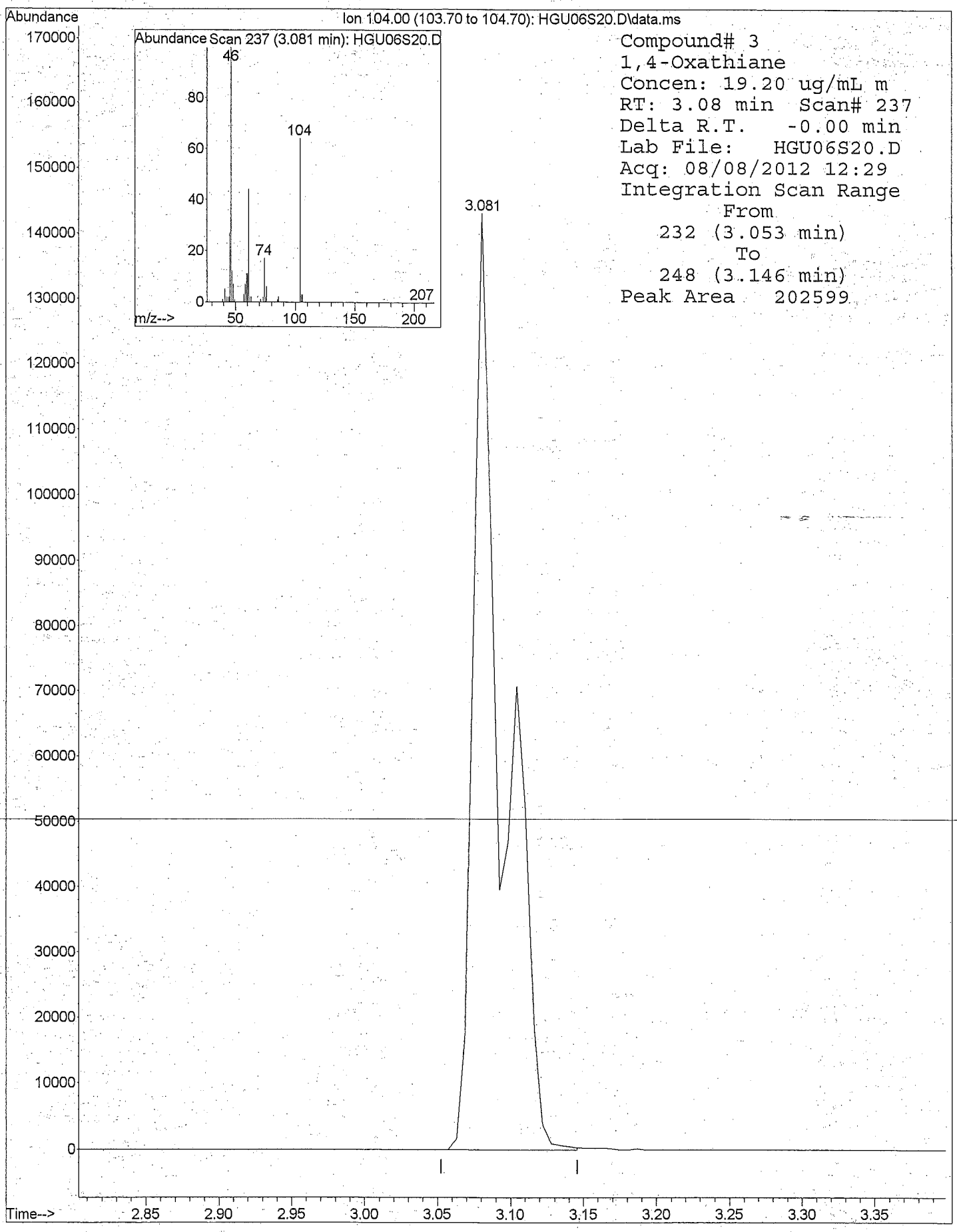
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 20 std 15973 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



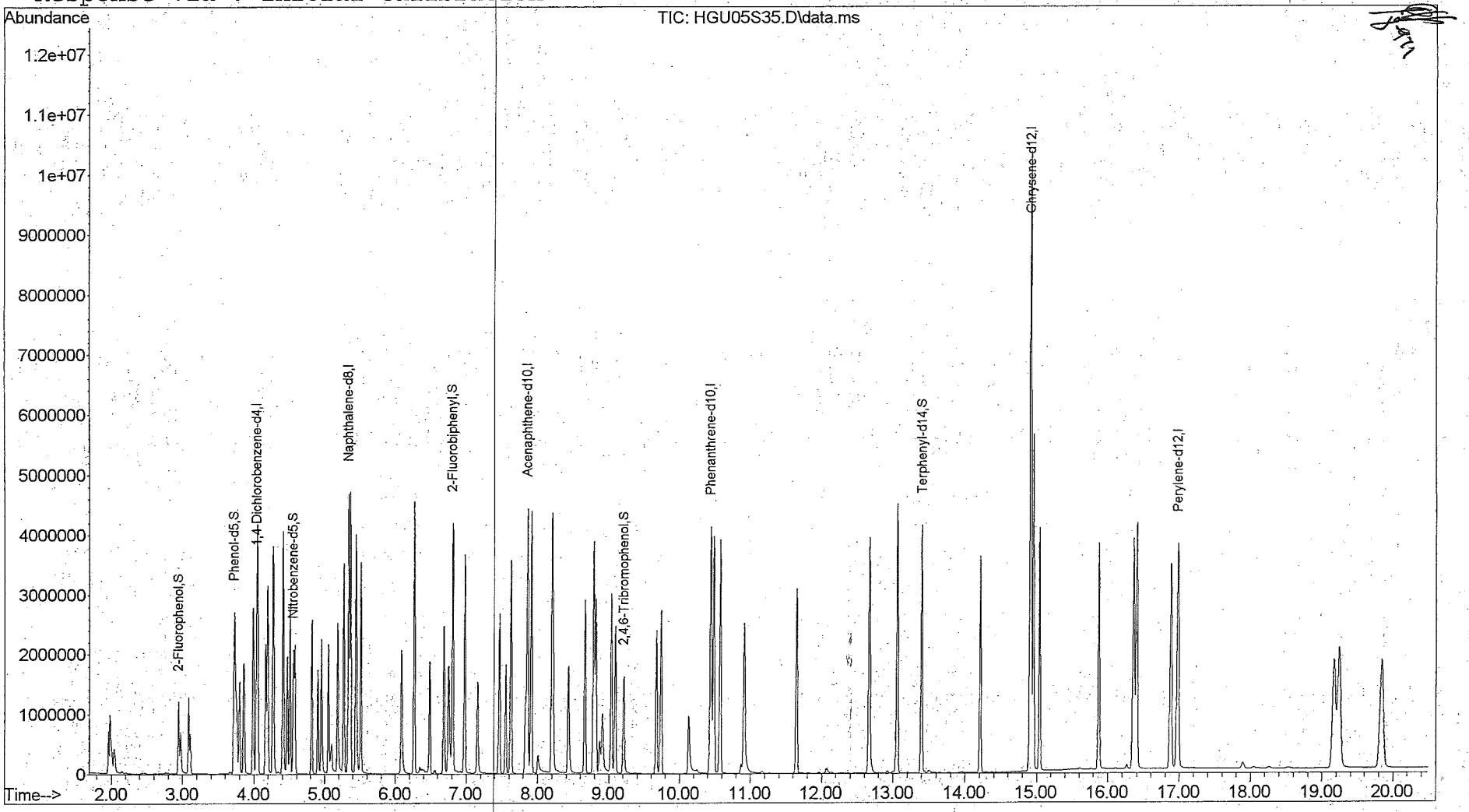
8270DOND.M 5975-H 8270DOND.M 8270 20 std 15973 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU05S35.D Vial: 5
Acq On : 08/08/2012 12:00 Operator: RAH
Sample : 8270 35 std 15972 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:57 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

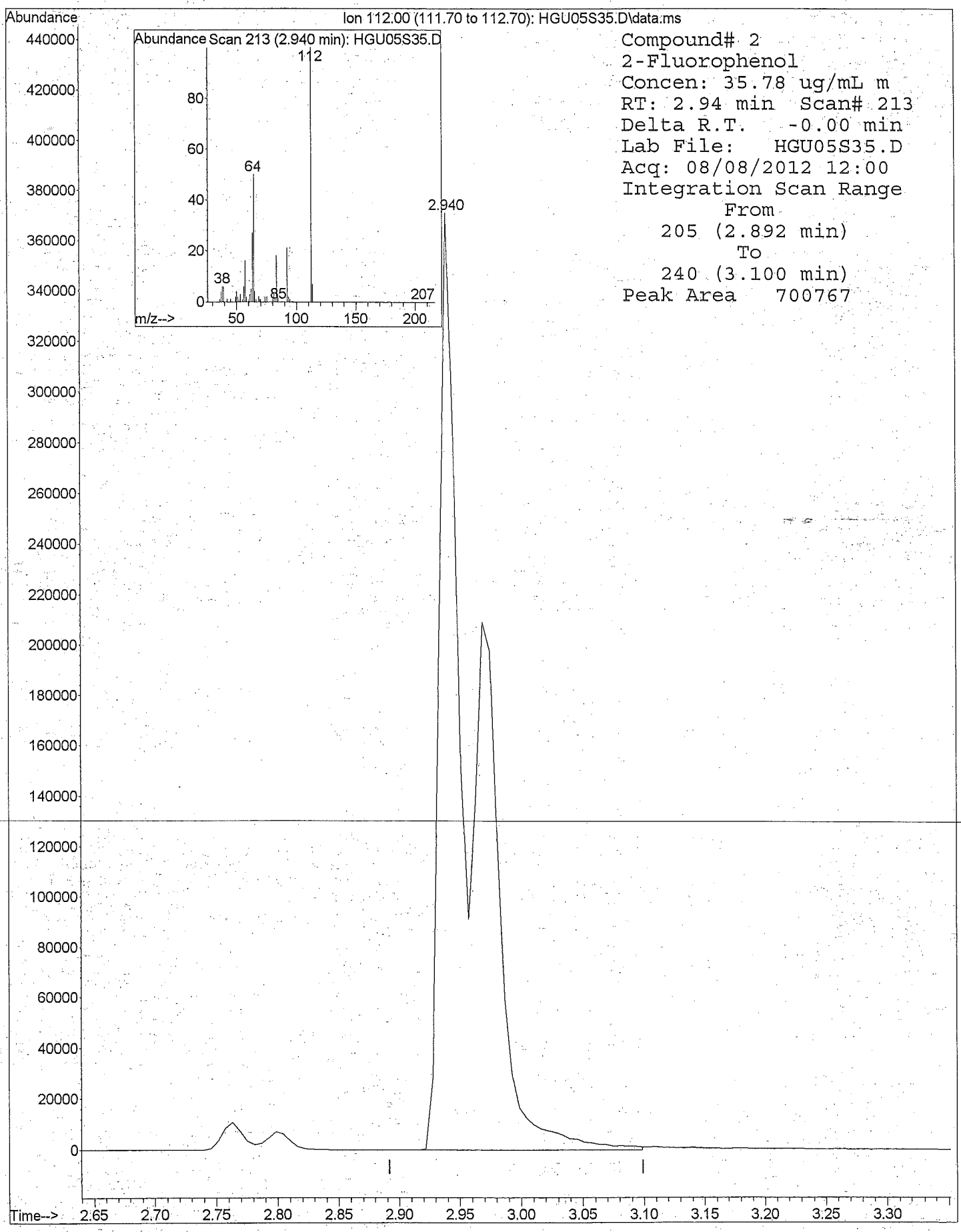
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU05S35.D Vial: 5
Acq On : 08/08/2012 12:00 Operator: RAH
Sample : 8270 35 std 15972 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:57 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	582911	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2556097	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1465004	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2738820	40.00 ug/mL
12) Chrysene-d12	14.92	240	3035266	40.00 ug/mL
14) Perylene-d12	16.97	264	2627498	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	700767	35.784ug/mL m
4) Phenol-d5	3.72	99	920516	35.841ug/mL
7) Nitrobenzene-d5	4.55	82	793614	36.219ug/mL
9) 2-Fluorobiphenyl	6.81	172	1951088	35.907ug/mL
11) 2,4,6-Tribromophenol	9.21	330	335739	36.413ug/mL
13) Terphenyl-d14	13.40	244	2149311	36.678ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	343846	33.975ug/mL m 99
5) 1,4-Dithiane	4.47	120	556869	33.965ug/mL 98

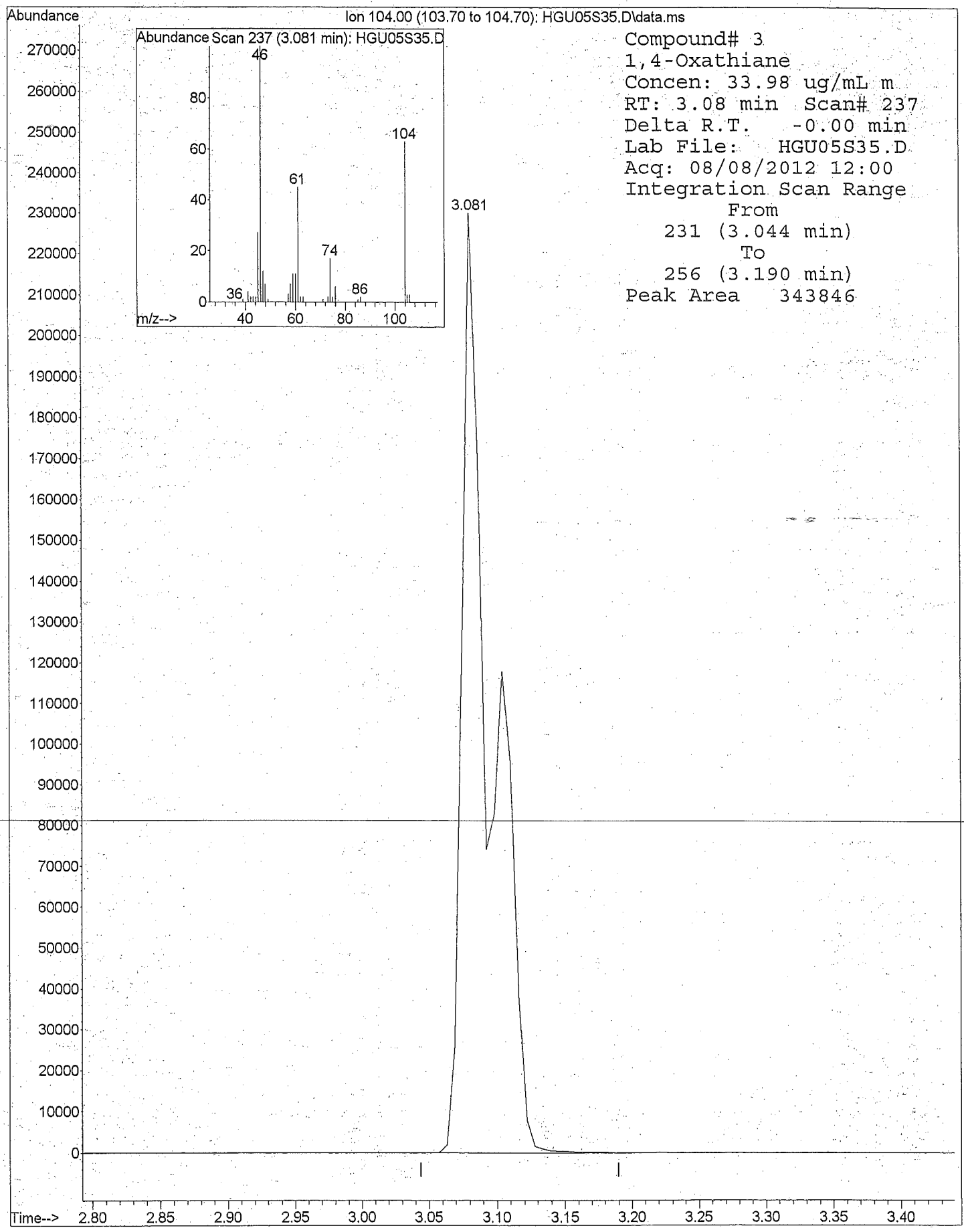
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 35 std 15972 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



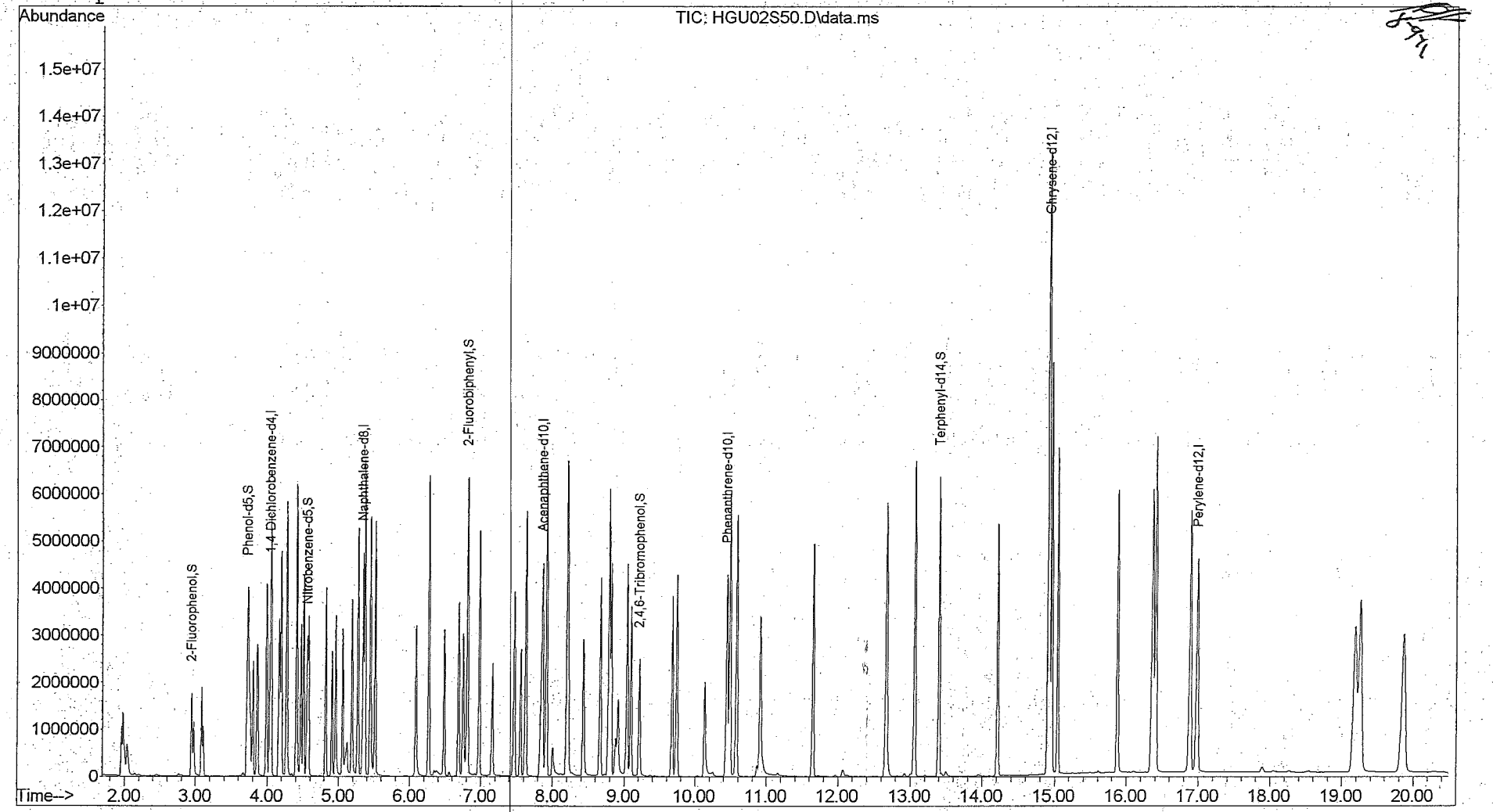
8270DOND.M 5975-H 8270DOND.M 8270 35 std 15972 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU02S50.D Vial: 2
Acq On : 08/08/2012 10:26 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:00 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

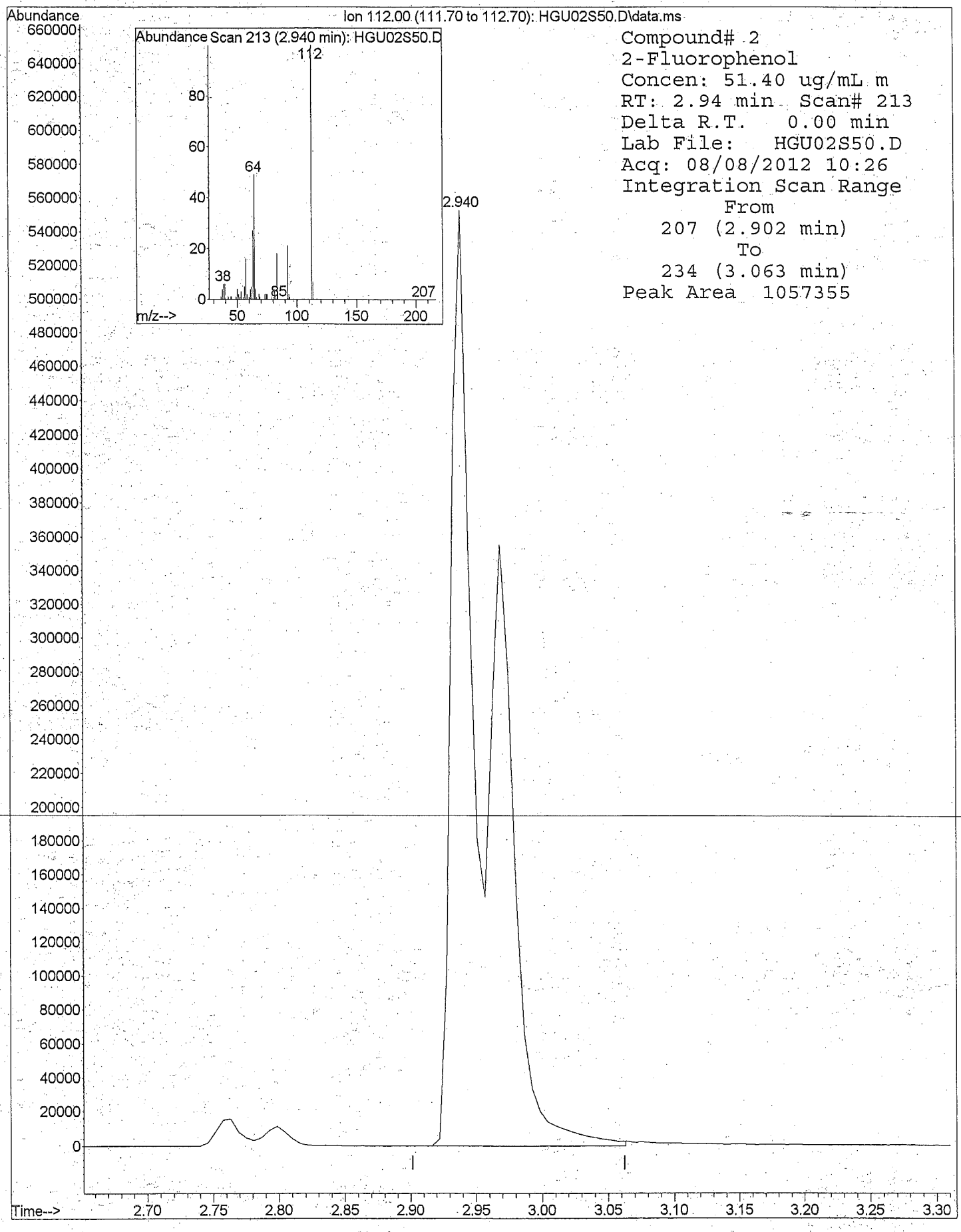
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU02S50.D Vial: 2
Acq On : 08/08/2012 10:26 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:00 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	612345	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2685634	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1537458	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2905275	40.00 ug/mL
12) Chrysene-d12	14.92	240	3449311	40.00 ug/mL
14) Perylene-d12	16.98	264	3127477	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	1057355	51.398ug/mL m
4) Phenol-d5	3.72	99	1371889	50.848ug/mL
7) Nitrobenzene-d5	4.56	82	1173697	50.982ug/mL
9) 2-Fluorobiphenyl	6.81	172	2890739	50.693ug/mL
11) 2,4,6-Tribromophenol	9.21	330	511120	52.257ug/mL
13) Terphenyl-d14	13.40	244	3359400	50.447ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	531164	49.961ug/mL m 98
5) 1,4-Dithiane	4.47	120	861261	50.006ug/mL 99

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

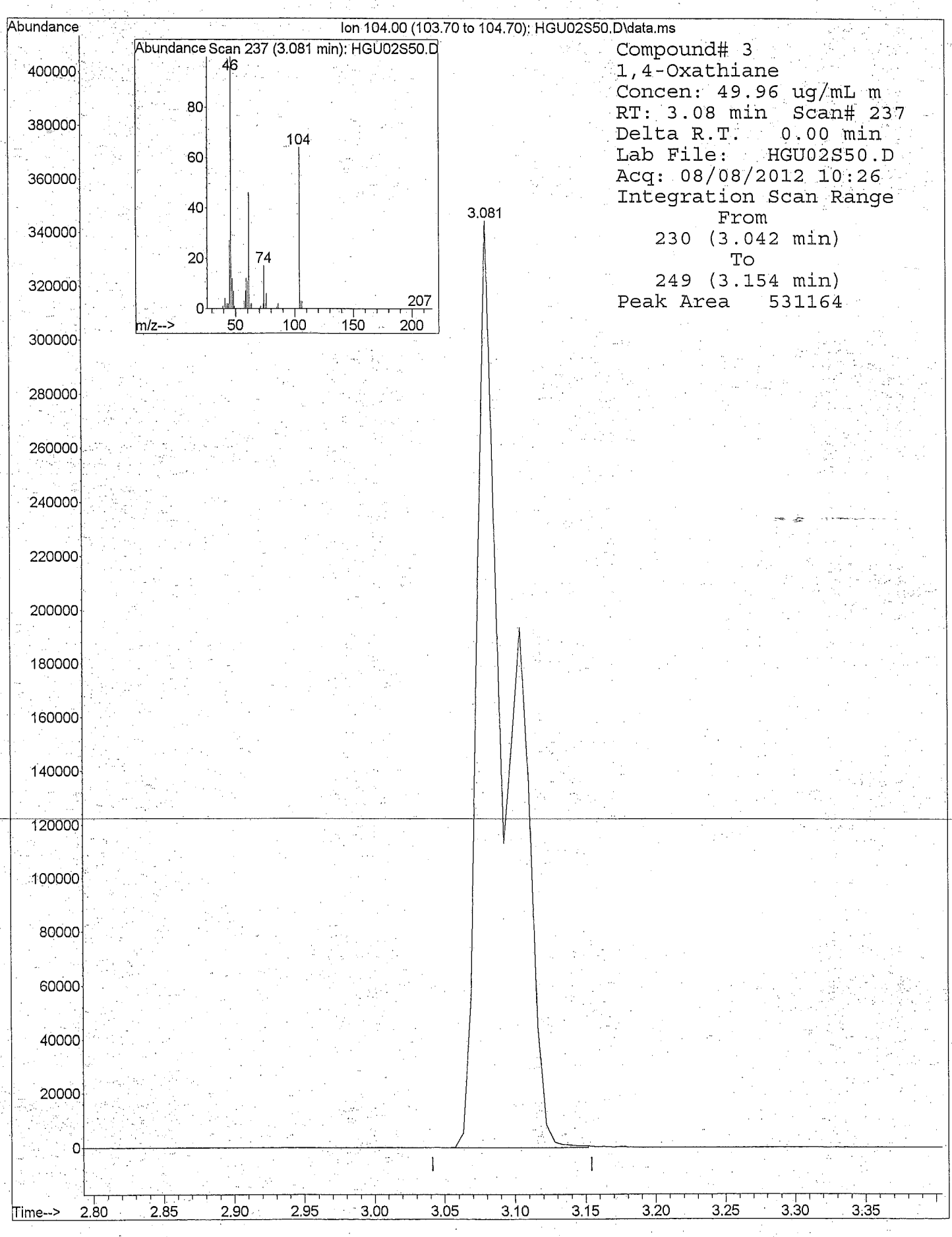
MANUAL INTEGRATION FOR 2-Fluorophenol



Compound# 2
2-Fluorophenol
Concen: 51.40 ug/mL m
RT: 2.94 min Scan# 213
Delta R.T. 0.00 min
Lab File: HGU02S50.D
Acq: 08/08/2012 10:26
Integration Scan Range
From
207 (2.902 min)
To
234 (3.063 min)
Peak Area 1057355

8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

MANUAL INTEGRATION FOR 1,4-Oxathiane



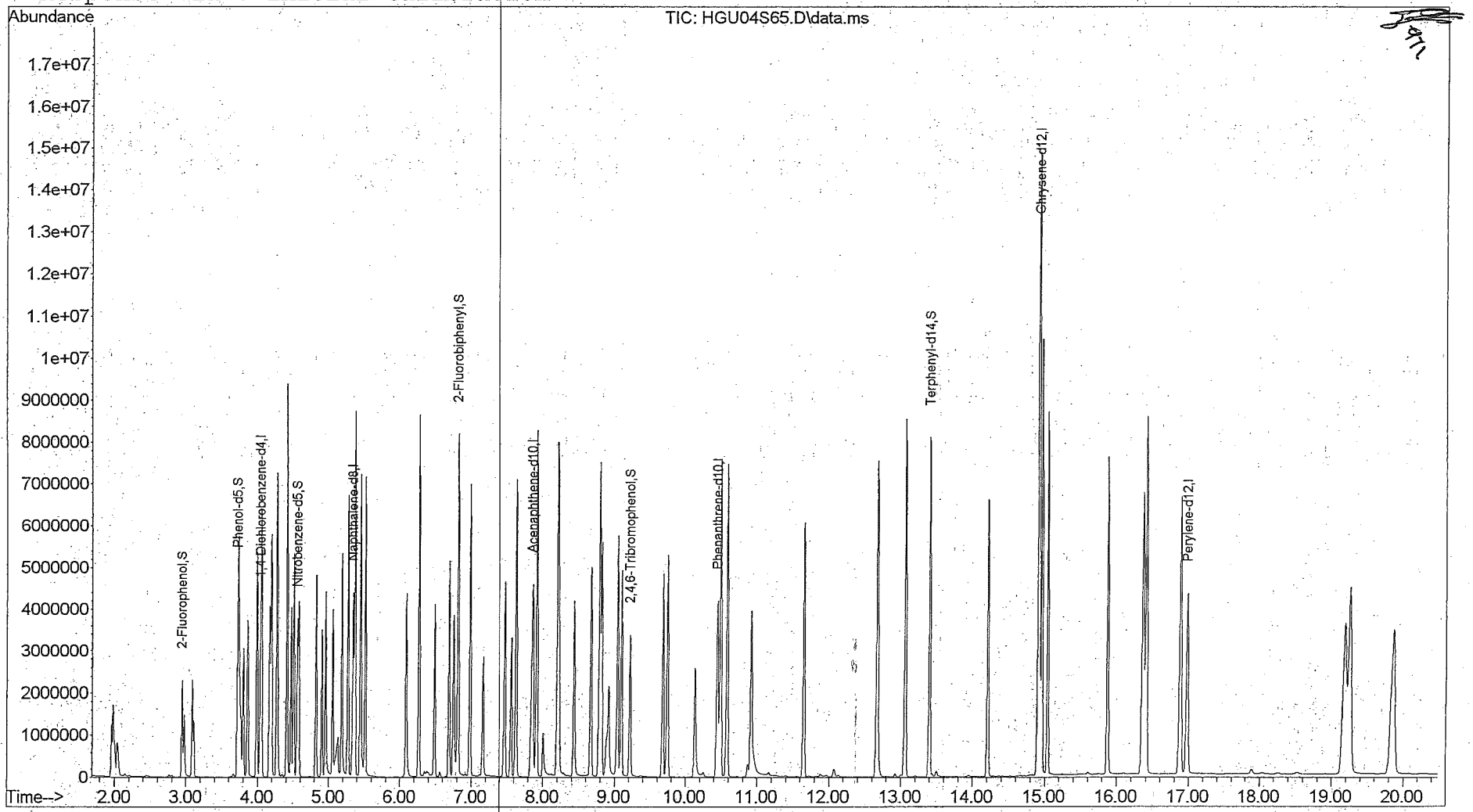
8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU04S65.D Vial: 4
Acq On : 08/08/2012 11:30 Operator: RAH
Sample : 8270 65 std 15971 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:39 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

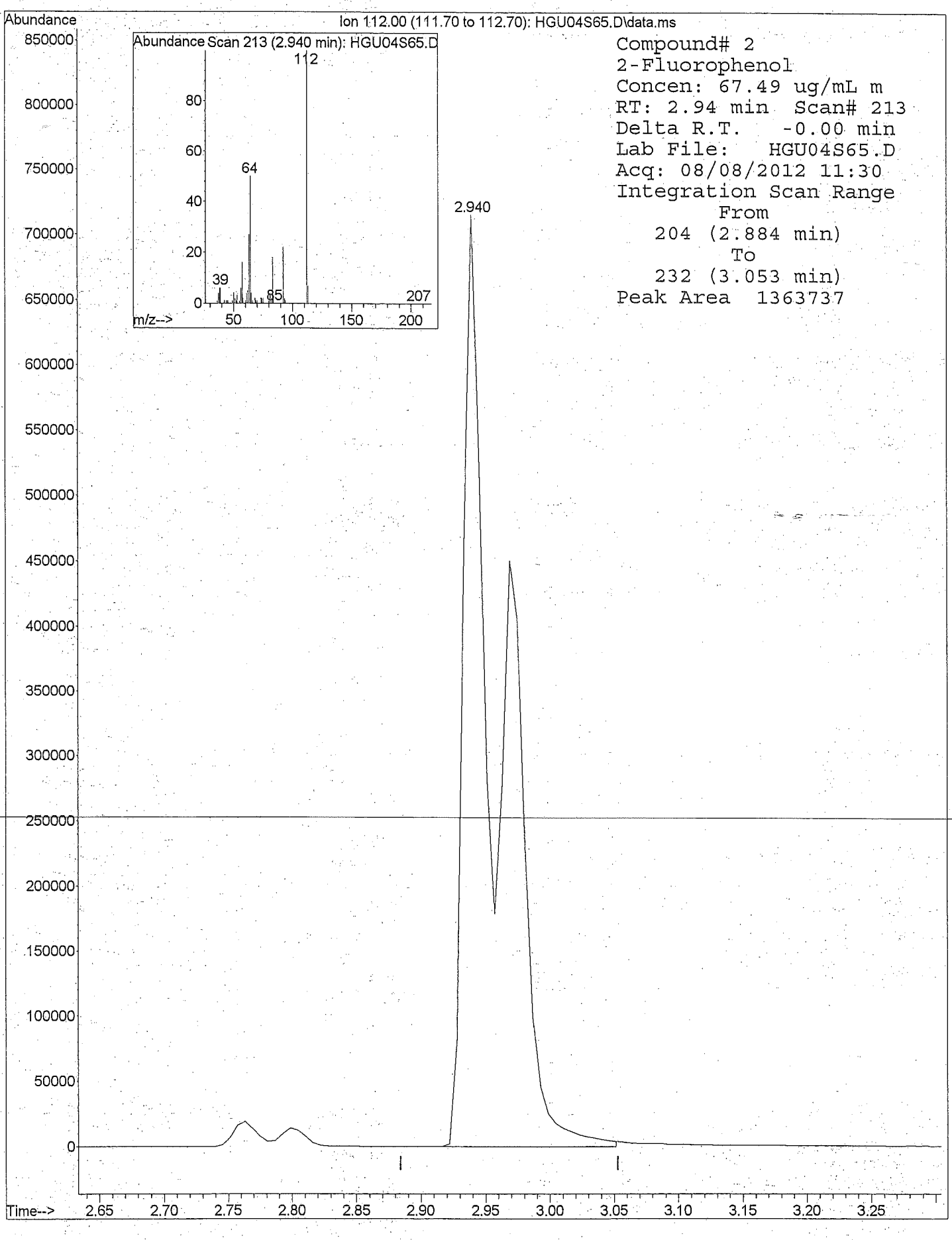
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU04S65.D Vial: 4
Acq On : 08/08/2012 11:30 Operator: RAH
Sample : 8270 65 std 15971 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:39 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	601456	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2621070	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1527619	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2869288	40.00 ug/mL
12) Chrysene-d12	14.92	240	3336798	40.00 ug/mL
14) Perylene-d12	16.98	264	2949965	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	1363737	67.491ug/mL m
4) Phenol-d5	3.72	99	1796093	67.776ug/mL
7) Nitrobenzene-d5	4.56	82	1514769	67.417ug/mL
9) 2-Fluorobiphenyl	6.81	172	3752969	66.238ug/mL
11) 2,4,6-Tribromophenol	9.22	330	665537	68.899ug/mL
13) Terphenyl-d14	13.40	244	4279647	66.433ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	671622	64.317ug/mL m 98
5) 1,4-Dithiane	4.47	120	1091903	64.545ug/mL 99

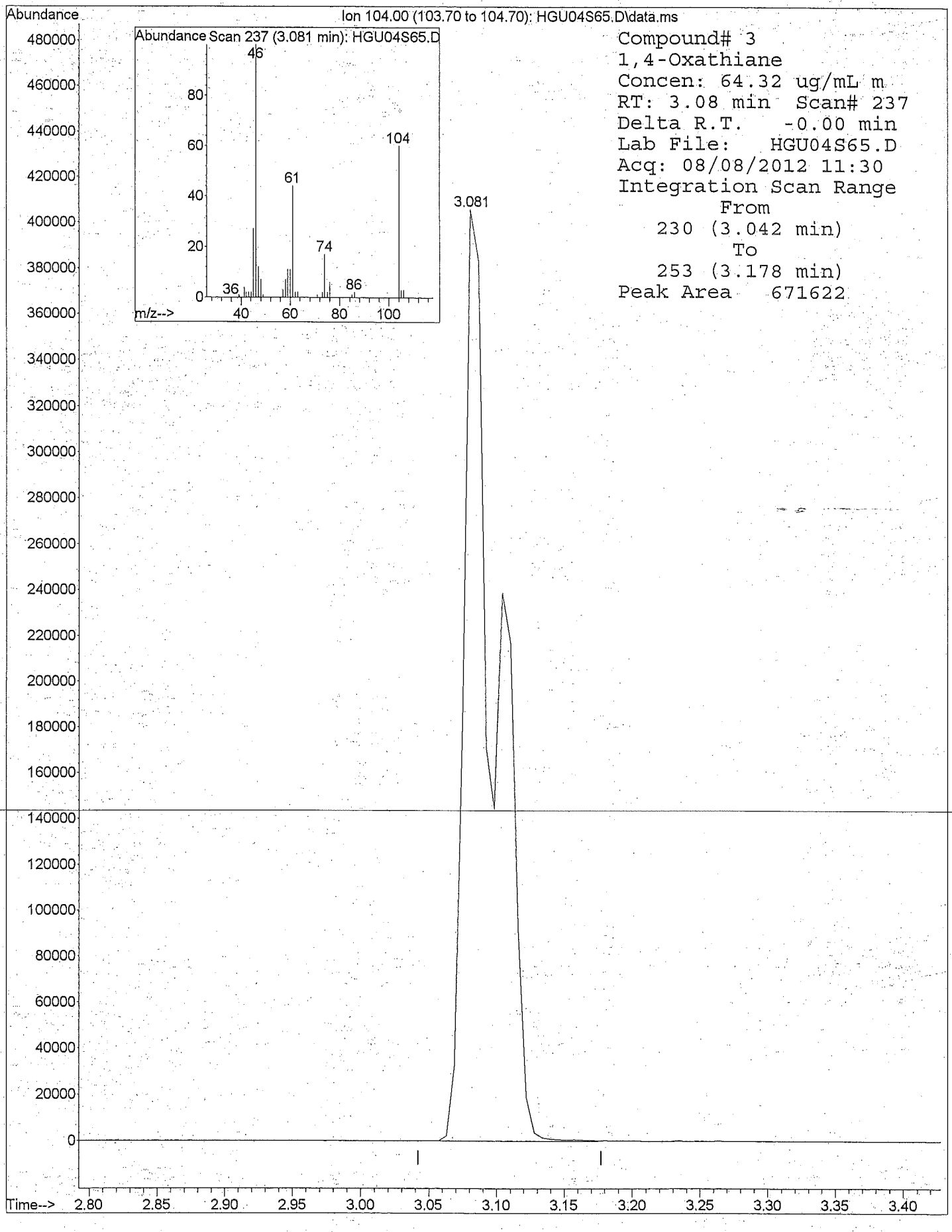
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

MANUAL INTEGRATION FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 65 std 15971 . X:1/9/13

MANUAL INTEGRATION FOR 1,4-Oxathiane



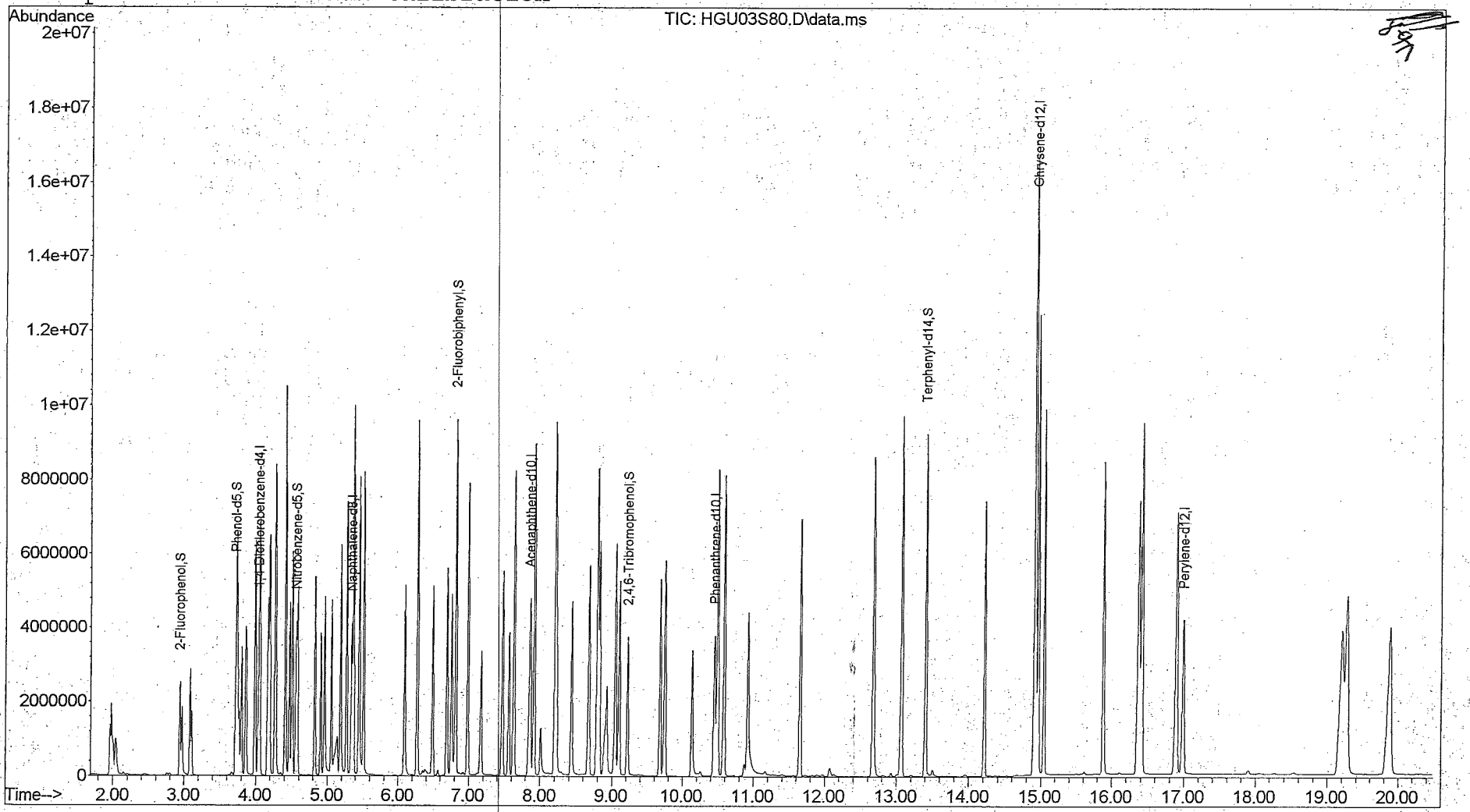
8270DOND.M 5975-H 8270DOND.M 8270 65 std 15971 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU03S80.D Vial: 3
Acq On : 08/08/2012 11:01 Operator: RAH
Sample : 8270 80 std 15970 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:20 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

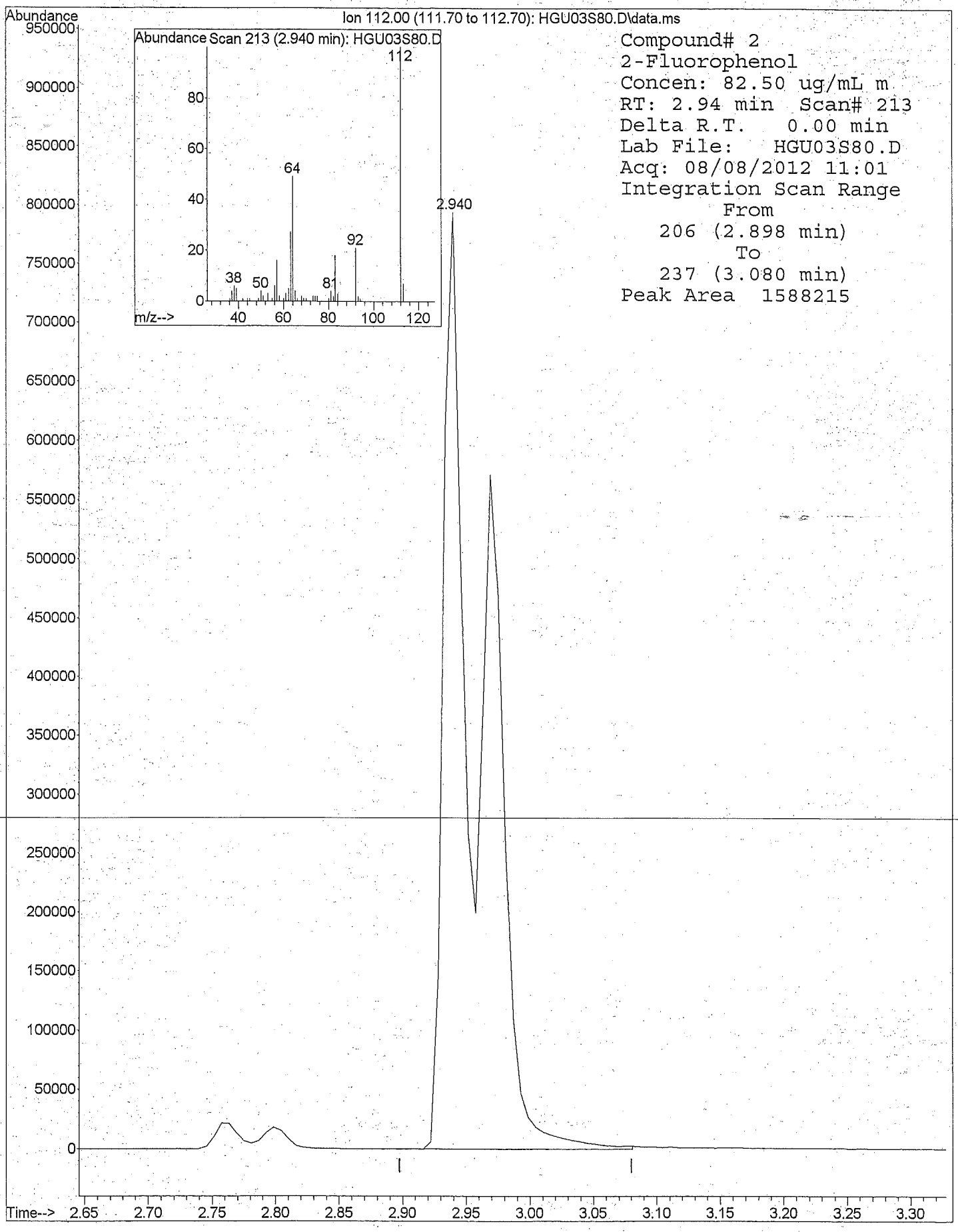
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU03S80.D Vial: 3
Acq On : 08/08/2012 11:01 Operator: RAH
Sample : 8270 80 std 15970 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:20 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	573029	40.00 ug/mL
6) Naphthalene-d8	5.35	136	2477577	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1435287	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2700617	40.00 ug/mL
12) Chrysene-d12	14.93	240	3115162	40.00 ug/mL
14) Perylene-d12	16.99	264	2729963	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	1588215	82.500ug/mL m
4) Phenol-d5	3.72	99	2086917	82.657ug/mL
7) Nitrobenzene-d5	4.56	82	1728073	81.365ug/mL
9) 2-Fluorobiphenyl	6.82	172	4345820	81.635ug/mL
11) 2,4,6-Tribromophenol	9.22	330	773542	85.081ug/mL
13) Terphenyl-d14	13.40	244	4851775	80.673ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	812617	81.679ug/mL m 92
5) 1,4-Dithiane	4.47	120	1310784	81.328ug/mL 99

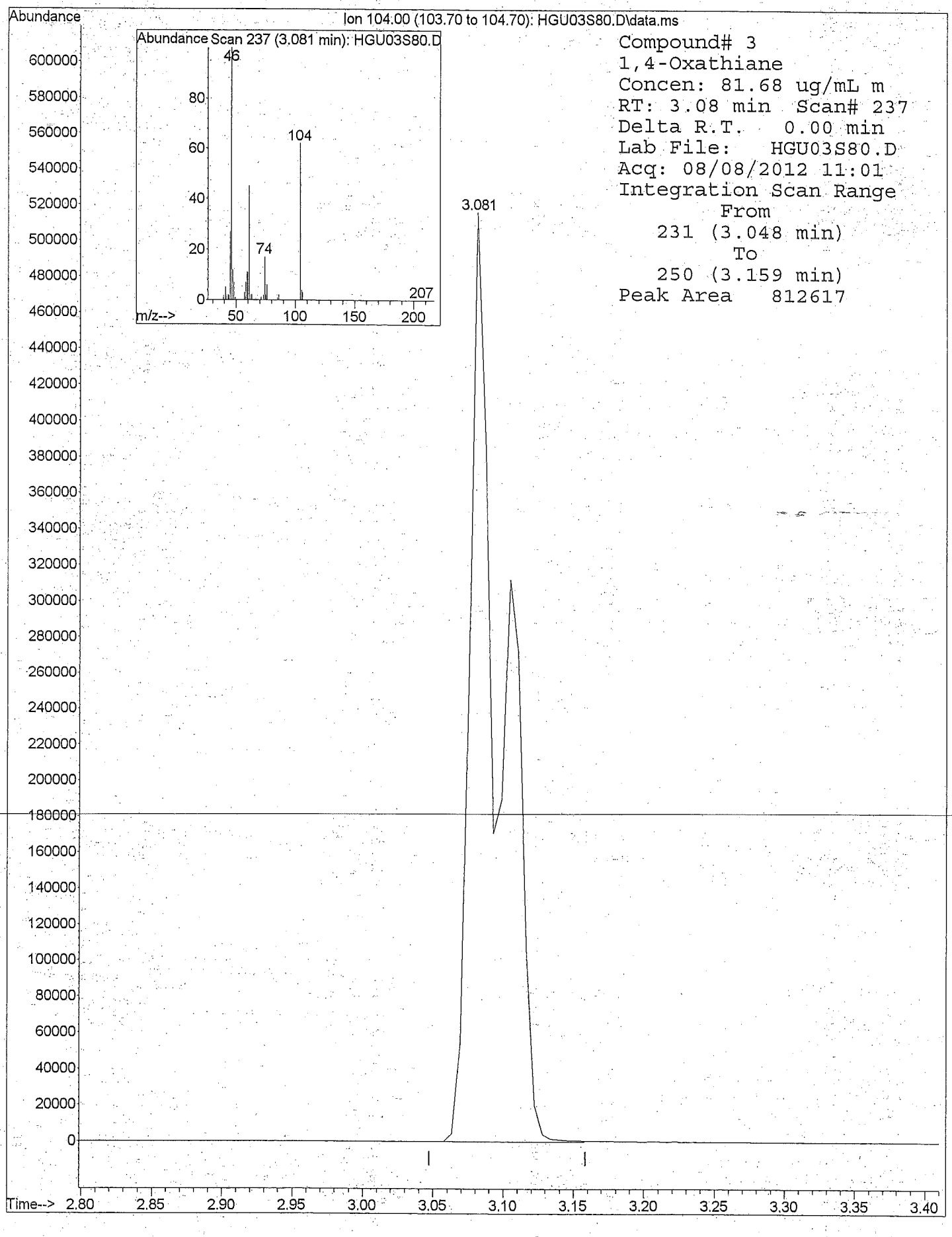
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 80 std 15970 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



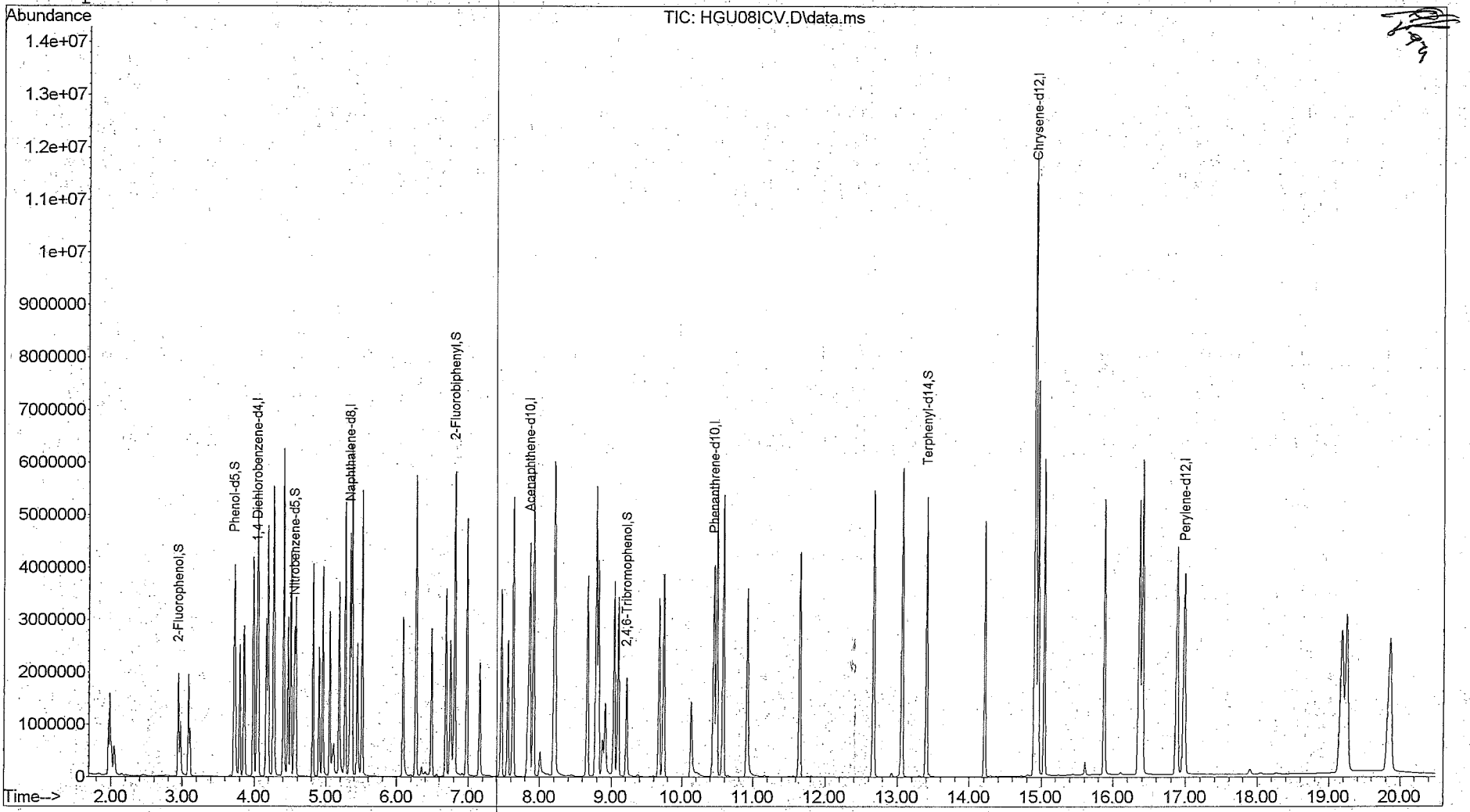
8270DOND.M 5975-H 8270DOND.M 8270 80 std 15970 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU08ICV.D Vial: 8
Acq On : 08/08/2012 13:29 Operator: RAH
Sample : 8270 ICV 15975 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 14:02:13 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

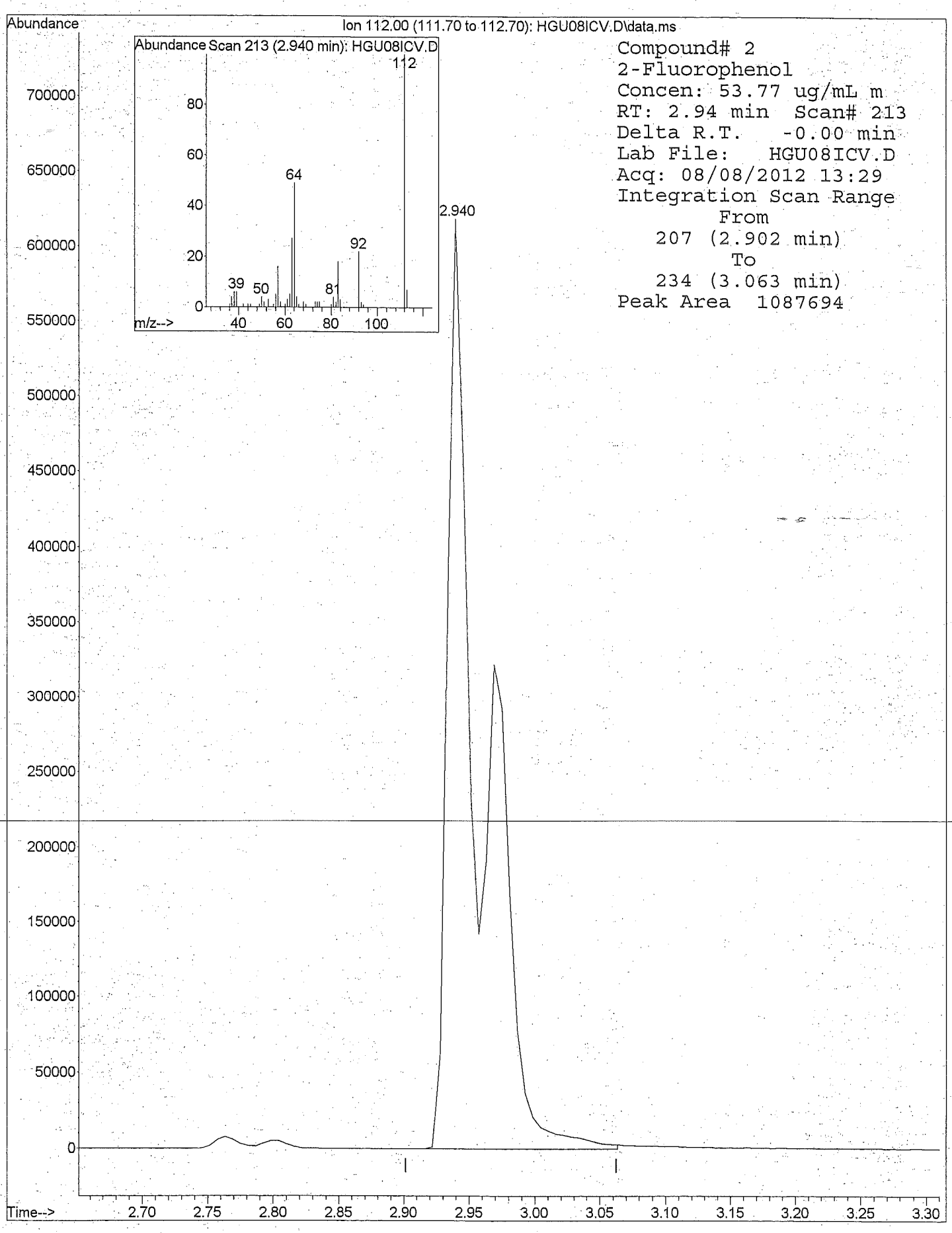
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU08ICV.D Vial: 8
Acq On : 08/08/2012 13:29 Operator: RAH
Sample : 8270 ICV 15975 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 14:02:13 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	602341	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2573963	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1459085	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2725972	40.00 ug/mL
12) Chrysene-d12	14.92	240	3150498	40.00 ug/mL
14) Perylene-d12	16.98	264	2694862	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	1087694	53.767ug/mL m
4) Phenol-d5	3.72	99	1280207	48.238ug/mL
7) Nitrobenzene-d5	4.56	82	1077669	48.841ug/mL
9) 2-Fluorobiphenyl	6.81	172	2644191	48.860ug/mL
11) 2,4,6-Tribromophenol	9.22	330	397803	43.347ug/mL
13) Terphenyl-d14	13.40	244	2731708	44.912ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	517926	49.537ug/mL m 99
5) 1,4-Dithiane	4.47	120	833107	49.175ug/mL 98

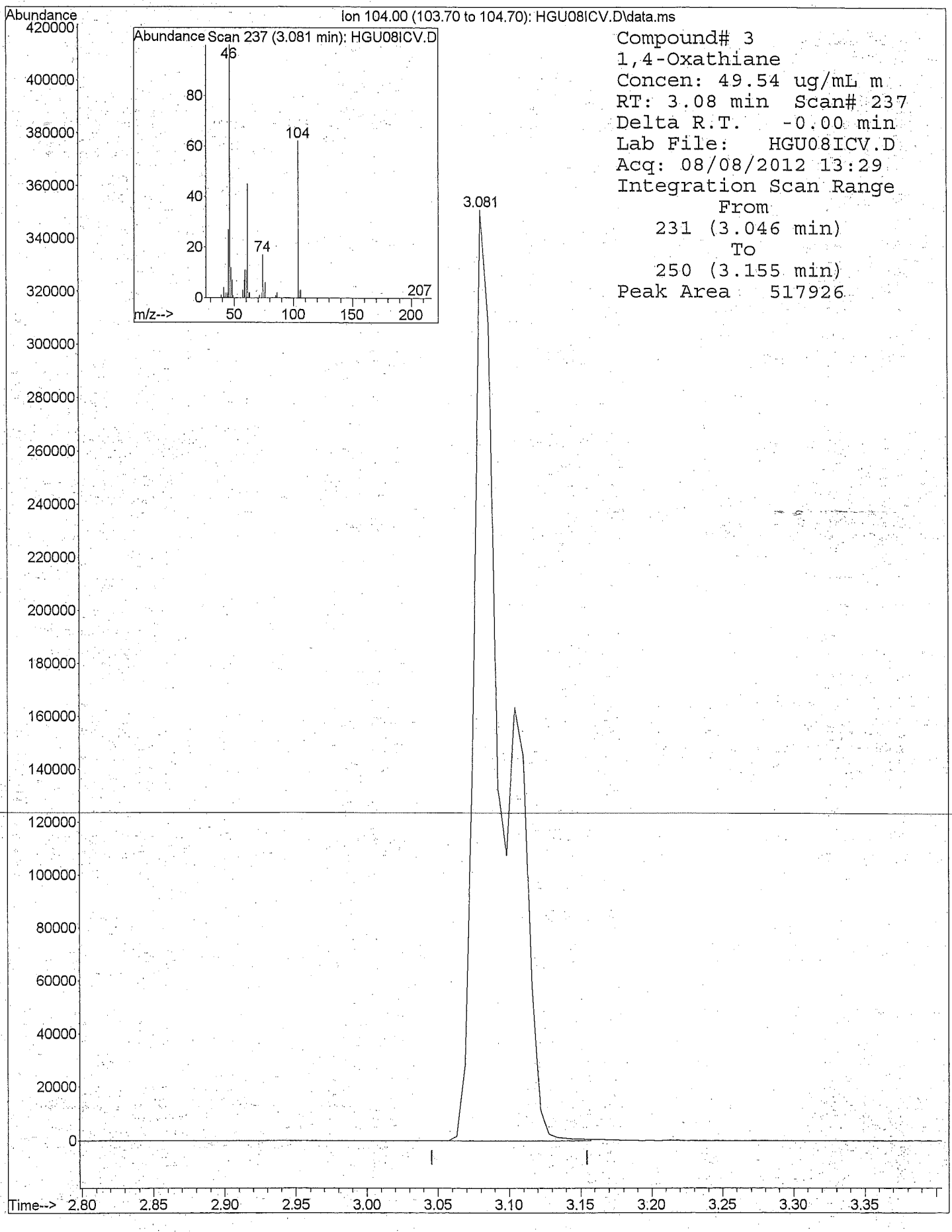
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 ICV 15975 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



8270DOND.M 5975-H 8270DOND.M 8270 ICV 15975 . X:1/9/13

Average of 6.233 to 6.245 min.: HHB01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.10	110	48.00	190	58.90	64	71.00	98
36.00	105	49.00	1422	59.95	217	71.80	79
37.00	697	50.00	36112	61.00	1789	72.10	61
38.05	2241	50.95	125871	62.00	2151	73.00	1470
39.00	10983	52.05	6537	63.00	5498	74.00	15849
40.00	594	53.05	449	64.00	894	75.00	24797
41.00	383	54.00	63	65.00	2445	76.10	8388
43.00	264	55.00	1005	65.95	237	77.05	159340
43.90	337	55.95	4295	66.95	233	78.05	11334
44.95	288	57.00	9038	68.95	171159	79.00	12037
46.90	145	57.95	537	69.95	945	80.00	9257

Average of 6.233 to 6.245 min.: HHB01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
80.95	12187	93.00	20665	103.00	2501	115.05	349
82.00	2803	94.00	1407	104.00	4522	116.00	3205
83.00	2953	94.95	367	105.00	4138	116.95	44888
83.90	269	96.00	830	106.05	1587	117.95	3160
85.00	2089	96.95	214	107.00	52208	118.95	388
85.95	3814	97.20	306	108.00	8270	119.95	808
87.00	1580	98.00	16324	110.00	96365	121.05	351
87.95	591	99.00	12108	111.00	14599	122.00	3616
88.95	428	99.95	1042	112.05	1929	123.00	5630
91.00	2748	100.95	6276	112.95	764	123.95	2667
92.05	3353	101.90	291	113.85	159	125.00	2249

Average of 6.233 to 6.245 min.: HHB01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
127.00	189675	137.95	455	149.00	2401	160.00	3224
128.00	14936	139.00	605	150.00	792	161.00	4752
129.00	77176	140.00	968	151.10	1402	162.00	1387
130.00	6508	141.00	9941	152.00	573	163.00	494
130.95	1186	142.00	3540	153.00	3340	164.05	632
132.00	586	143.00	2305	154.00	2397	164.95	3754
132.95	388	143.95	591	155.00	5689	166.00	3258
134.00	2304	145.00	665	156.00	7817	166.95	20800
135.00	5433	146.00	1965	157.05	2000	168.00	9393
136.00	2383	147.00	4976	158.00	1807	169.00	1938
137.00	3180	148.00	11560	159.00	1385	170.00	492

Average of 6.233 to 6.245 min.: HHB01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
170.20	270	181.00	5023	192.00	4978	205.00	27667
170.95	991	182.05	801	193.00	5754	206.00	112613
172.00	2008	183.00	537	193.95	1137	207.00	14299
173.00	2283	183.95	1350	195.05	934	208.00	3775
174.00	4411	185.00	7767	196.00	15518	209.00	1381
175.00	8124	186.00	59739	198.00	444224	211.05	4716
176.05	2595	187.00	16722	199.00	30776	212.95	400
177.00	3975	188.05	1740	200.00	2691	213.80	54
178.00	1499	189.00	3862	201.50	2959	214.00	58
179.00	16051	189.95	740	203.00	3342	214.95	1270
180.00	10839	191.05	1647	204.00	16030	216.00	2829

Average of 6.233 to 6.245 min.: HHB01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
217.00	29427	229.95	832	241.00	1656	251.95	510
218.00	3944	231.00	2227	242.05	3652	253.05	1077
218.95	444	231.95	473	243.10	4246	255.00	281024
221.00	28683	232.95	555	244.00	53261	256.00	41043
223.00	7425	233.95	1716	245.05	7291	257.00	3299
224.00	64304	235.00	1945	246.00	9723	258.00	15716
225.00	16636	235.95	1281	246.95	2010	258.95	2419
226.05	1816	237.00	1967	247.95	523	259.95	452
227.00	26360	237.90	301	249.00	1957	260.95	420
228.00	3812	239.00	1135	250.00	380	262.90	63
229.00	5635	240.00	880	250.90	440	263.10	64

Average of 6.233 to 6.245 min.: HHB01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
263.95	970	277.00	10696	288.80	128	301.05	487
264.95	6494	278.00	1538	288.95	373	302.00	712
265.85	875	278.95	358	289.95	433	303.00	4246
266.95	169	280.80	73	290.80	67	304.00	1012
269.95	508	281.05	137	291.00	189	305.00	116
270.95	541	282.00	380	292.05	546	307.95	519
272.05	884	283.00	1298	293.00	2178	308.95	322
273.00	8778	283.95	853	294.00	657	310.00	419
274.00	22451	285.05	1897	296.00	34701	311.00	57
275.00	126069	286.05	385	297.00	5214	312.00	56
276.00	17120	288.00	125	297.95	379	312.90	339

Average of 6.233 to 6.245 min.: HHB01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
314.00	1791	325.00	207	339.80	69	359.00	202
315.00	3875	326.05	285	341.05	1141	365.00	12952
316.00	2085	326.95	2352	341.95	262	366.00	2221
316.90	90	328.00	1056	345.10	74	366.70	76
317.05	345	328.85	147	346.00	2389	367.00	60
319.95	205	331.95	825	346.95	392	369.85	338
321.00	1190	332.95	1109	351.05	238	371.00	668
322.00	437	334.00	6651	352.00	3154	372.05	4935
322.20	253	334.95	1731	353.05	2349	373.00	1276
323.05	11248	336.05	187	354.00	3025	383.00	1257
324.00	2018	338.95	162	355.05	570	384.00	251

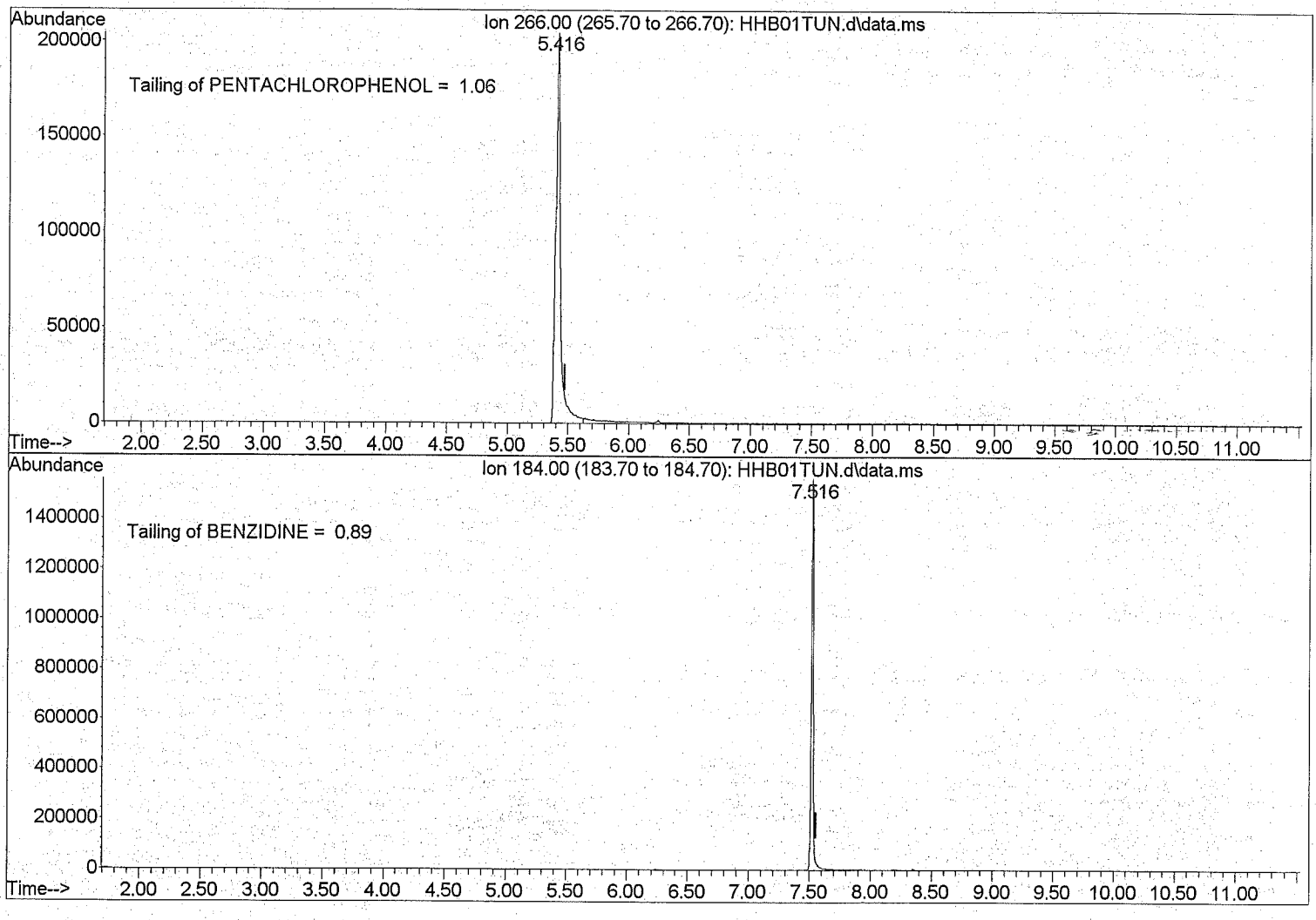
Average of 6.233 to 6.245 min.: HHB01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
390.00	555	421.00	1774	438.20	157		
390.70	52	422.10	1810	438.80	333		
391.05	368	423.05	13275	441.10	45587		
391.90	85	424.00	2601	442.10	299499		
392.05	213	425.00	289	443.10	57525		
400.90	90	436.30	126	444.05	5374		
401.15	136	436.70	78	445.05	345		
402.00	1581	437.10	83				
403.05	2011	437.30	109				
404.00	796	437.70	89				
404.90	69	438.00	121				

Data File: HHB01TUN.d
Date Acquired: 08/16/2012 11:45
Operator ID: RAH
Name: 8270 DFTPP 13808
Misc: . X:1/11/13

Instrument: 5975-H
Acq Method: 8270DTUN.M
DA Method: 8270DTUN.M

Cal Title: EPA/CLP SOM01
Last Cal Update: Wed Nov 23 09:22:39 2011
. X:1/11/13

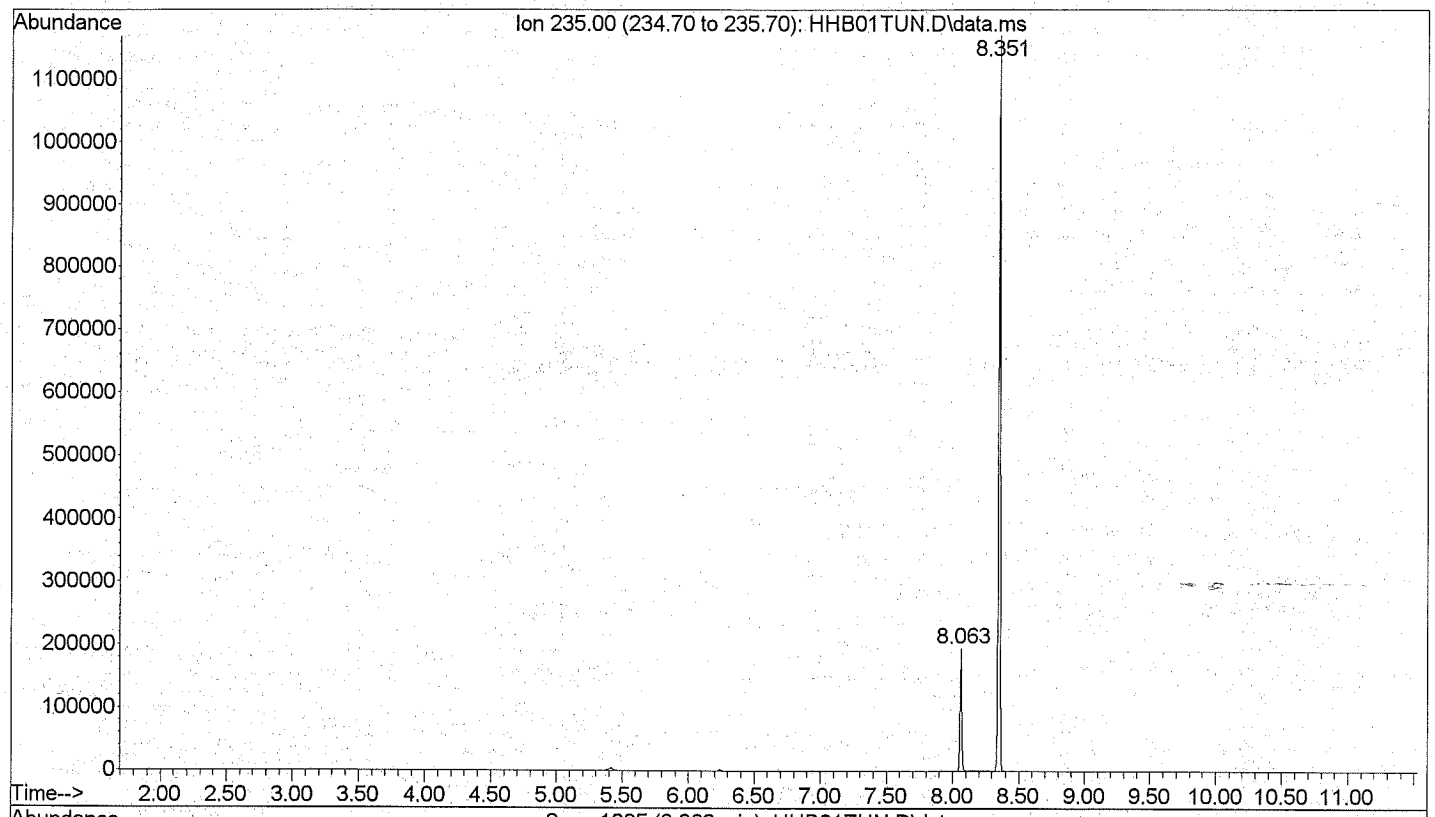


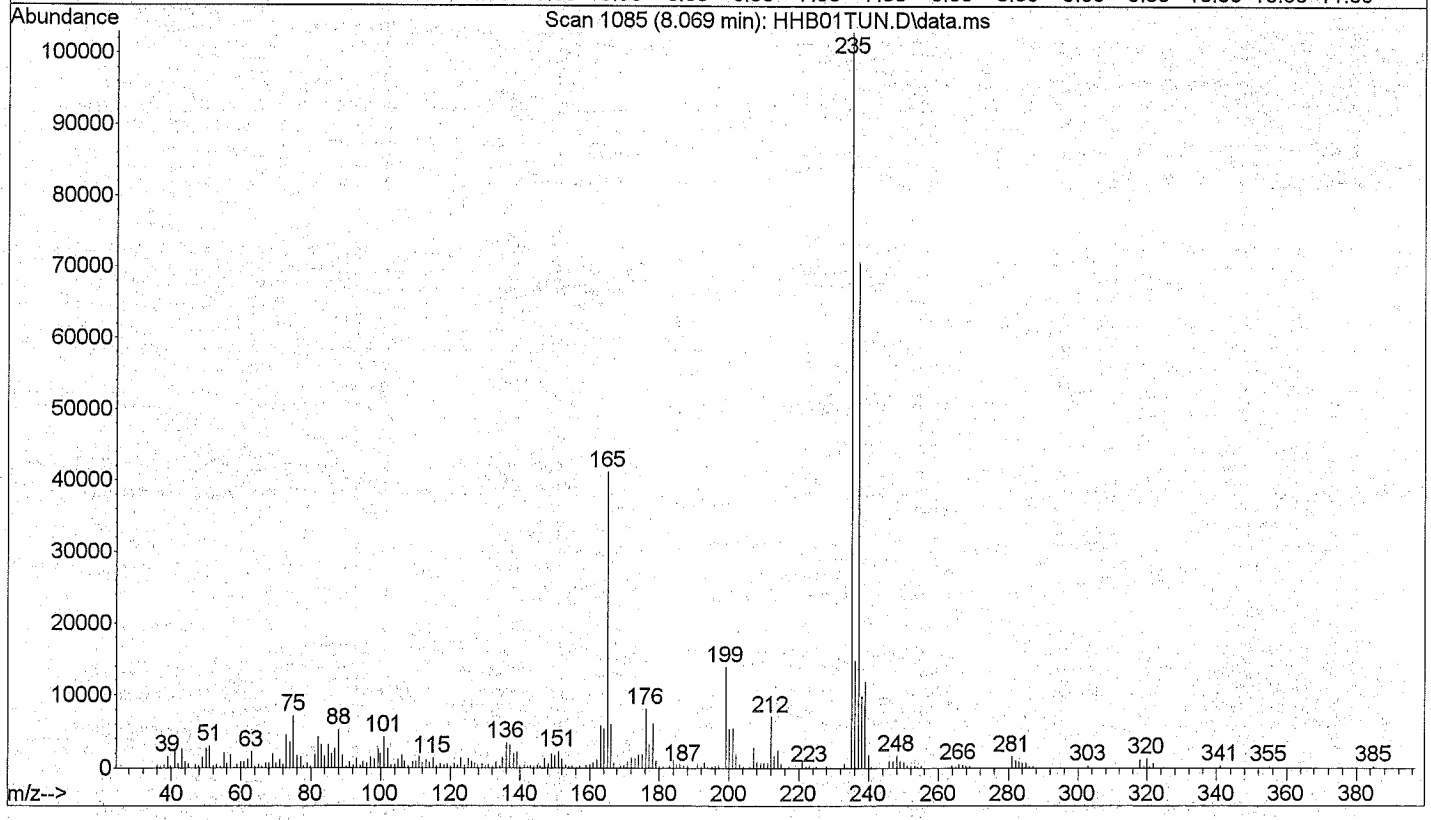
Ion 235.00 (234.70 to 235.70): HHB01TUN.D\data.ms
8270 DFTPP 13808

Peak #	Ret Time	Type	Width	Area	Start Time	End Time
1	8.063	rBV	0.088	180479	8.027	8.116
2	8.351	rVB	0.088	1011794	8.322	8.410

$$\text{DDT breakdown} = \frac{180479}{180479 + 1011794} = 15.1\%$$

File :D:\1\DATA\2012\AUG12\16AUG12H\HHB01TUN.D
Operator : RAH
Acquired : 16 Aug 2012 11:45 am using AcqMethod 8270DTUN.M
Instrument : 5975-H
Sample Name: 8270 DFTPP 13808
Misc Info : . X:1/11/13
Vial Number: 1



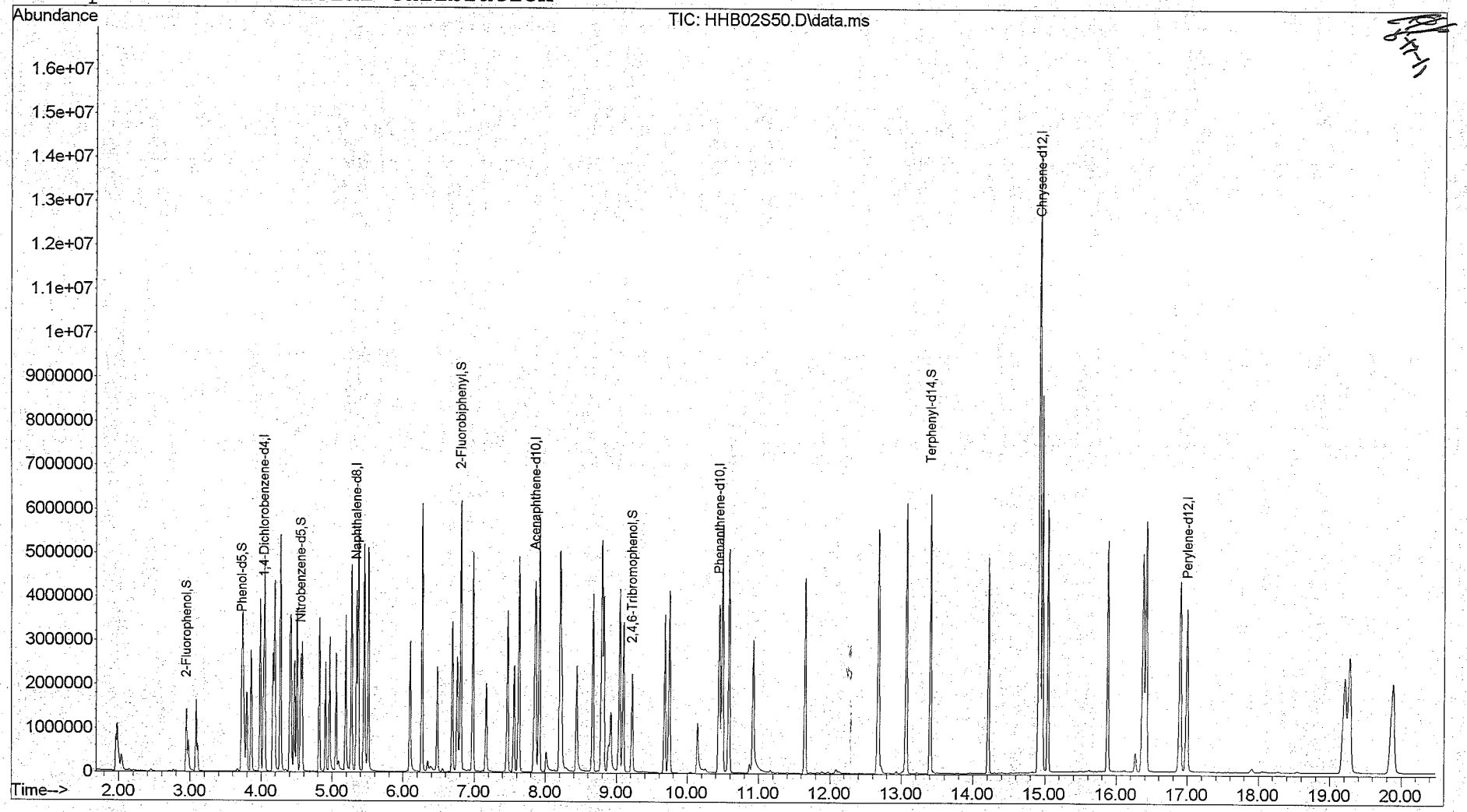


Quantitation Report

Data File : D:\1\DATA\2012\AUG12\16AUG12H\HHB02S50.D Vial: 2
Acq On : 08/16/2012 12:05 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 16 12:37:26 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

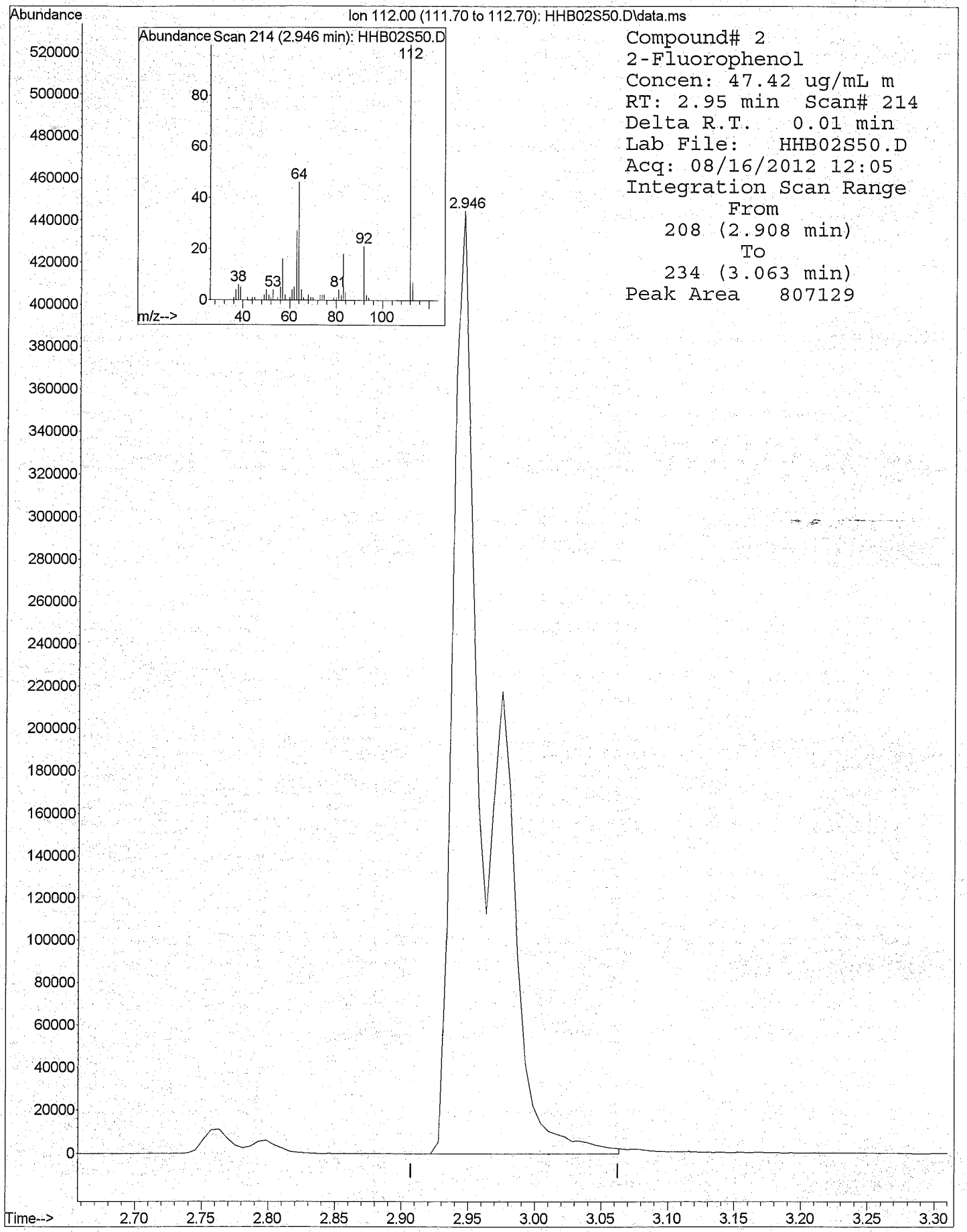
Data File : D:\1\DATA\2012\AUG12\16AUG12H\HHB02S50.D Vial: 2
Acq On : 08/16/2012 12:05 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 16 12:37:26 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	506758	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2249493	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1366773	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2647164	40.00 ug/mL
12) Chrysene-d12	14.93	240	3357670	40.00 ug/mL
14) Perylene-d12	16.99	264	2439917	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	807129	47.423ug/mL m
4) Phenol-d5	3.72	99	1108259	49.636ug/mL
7) Nitrobenzene-d5	4.56	82	971416	50.376ug/mL
9) 2-Fluorobiphenyl	6.81	172	2620843	51.700ug/mL
11) 2,4,6-Tribromophenol	9.22	330	439131	49.275ug/mL
13) Terphenyl-d14	13.40	244	3146675	48.542ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	406141	46.172ug/mL 97
5) 1,4-Dithiane	4.47	120	694991	48.760ug/mL 95

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

PROJECT TITLE:
Fort Stewart

Earth Resources Technology, Inc.
6100 Frost Place
Laurel, MD 20707

Data Deliverable Group ERT-008
ALS#9981774

DoD QSM V.4.2
DATA PACKAGE

SAMPLES COLLECTED
August 7, 2012

Total Number of Pages 116

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Case Narrative

Earth Resources Technology, Inc.
Fort Stewart

ALS-Middletown
Case Narrative
ERT-008

Sample Management

This report contains the results of the analysis of one (1) water sample and two (2) solid samples collected on August 7, 2012. Analytical results and quality control information are summarized in this data package.

Qualifier Symbol Definitions:

U = Qualifier indicates that the analyte was not detected above the LOD.
J = Qualifier indicates that the analyte value is between the DL and the LOQ.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds the calibration range.
P = Qualifier indicates that the RPD between the two analytical columns is greater than 40%.
NSC = Qualifier indicates that spike recoveries were not calculated based on the spiking concentration.

Result Symbol Definitions:

DL = The smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence.
LOD = The smallest analyte concentration that must be present in a sample in order to be detected at a high level of confidence.
LOQ = The lowest concentration that produces a quantitative result within specified limits of precision or bias.

Sample Receipt

Samples arrived at ALS via courier on August 8, 2012. Upon receipt, the samples were inspected and compared to the Chain of Custody. Sample temperature was documented on the enclosed Chain of Custody. Samples were received intact and properly preserved, unless noted on the enclosed Certificate of Analysis and/or Chain of Custody. Please note that sample FTSW-IDW-01 (9981774003) was cancelled per client request.

Subcontracting

Two (2) samples were subcontracted for Method 8270/8321 analysis. Results are provided at the end of this report.

Totals Metals by SW-846 Method 6020A

Sample handling. Two (2) solid samples were digested and analyzed for total metals on the Agilent 7700x using SW-846 Method 6020A. The samples were analyzed within the six-month holding time established for this method.

Calibration. All criteria associated with the calibration were within method control limits.

Blanks. Metals were not detected in the blanks.

Laboratory Control Samples. Recoveries were within method control limits.

Matrix Spike/Matrix Spike Duplicate. A matrix spike and matrix spike duplicate were performed on a sample not in this data deliverable. The MS and MSD recoveries and their RPDs were within method control limits.

Total Solids by SM 2540G

Sample handling. Two (2) solid samples were analyzed for total solids by Standard Method 2540G for dry weight reporting purposes. The samples were analyzed within the 14-day method recommended hold time for dry weight reporting.

Chain of Custody

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

CHAIN OF CUSTODY/
REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/SAMPLER. INSTRUCTIONS ON THE BACK

ALS Environmental
Ship to: 34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

Co. Name: ERT, Inc
Contact: Mike Gearhart
Address: 1400 Frost Place Suite A Laurel MD 20707
Phone:
Bill To (if different than Report to):
PO#:
Project Name/#: Ft. Stewart 353-004
ALS Quote #:
TAT: Normal-Standard TAT is 10 business days. Rush-Subject to ALS approval and surcharges.
Date Required:
Approved By:
Email? X Mike.Gearhard@ertcorp.com
Fax? No.

Page 1 of 1
Courier:
Tracking #:

Receipt Information: Custody Seal(s) Present / Not Present
Cooler Temp: 4c
Therm. ID: TH 209
No. of Coolers:
Notes:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	Matrix	°C or F	Container Type	Container Size	Preservative	#	Enter Number of Containers Per Analysis
1 FTSW-HR-SD-15 (15)	Description/Logged per Stanchfield	8/7/12	0916	G	50	G	8oz	-	1	SW-846 6020 12S8/Hg7470 SW-846
2 FTSW-HR-SD-16 (10)	Email of Field	8/7/12	0815	G	50	G	8oz	-	1	SW-846 6020 12S8/Hg7470 SW-846
3 FTSW-IDW-01		8/12	0905	G	4C	AG	250ml	-	1	SW-846 6020 12S8/Hg7470 SW-846
4										
5										
6										
7										
8										

Contact containers? Y N (1)
Correct sample volume? Y N (2)
Correct preservation? Y N (3)
Headspace/bubbles? Y N (4)
Circle appropriate Y or N.
Custody seals Present? Y N
(if present) Seals Intact? Y N
Received on Ice? Y N (1)
COC/Labels complete/accurate? Y N (2)
Container in good condition? Y N (3)

ANALYSIS/METHOD REQUESTED

ALS FIELD SERVICES: Pickup, Labor, Composite Sampling, Rabbit Equipment, Other

Data Deliverables: Standard, CLP-like, NJ-Reduced, NJ-Full, EDD (If yes, format type:)
Data Selected for: MD, NJ, NY, PA
STARS Form 1's: yes, yes, yes, yes
DOD Criteria Required? No
Turnaround: 5 DAY

SAMPLED BY (Please Print): LYNELLE BRODIE

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Lynelle Brodie	8/7/12	330	2		
3			4		
5			6		
7			8		
9			10		

LOGGED BY (signature):
REVIEWED BY (signature):

*Grab/C=Composite **Matrix: A=Air, DW=Drinking Water, GW=Groundwater, OW=Oil, OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG=Amber Glass; CG=Clear Glass, PL=Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, H2SO4, etc.

Copies: WHITE - ORIGINAL - CANARY - CUSTOMER COPY

Rev (02/11)

ALS Environmental

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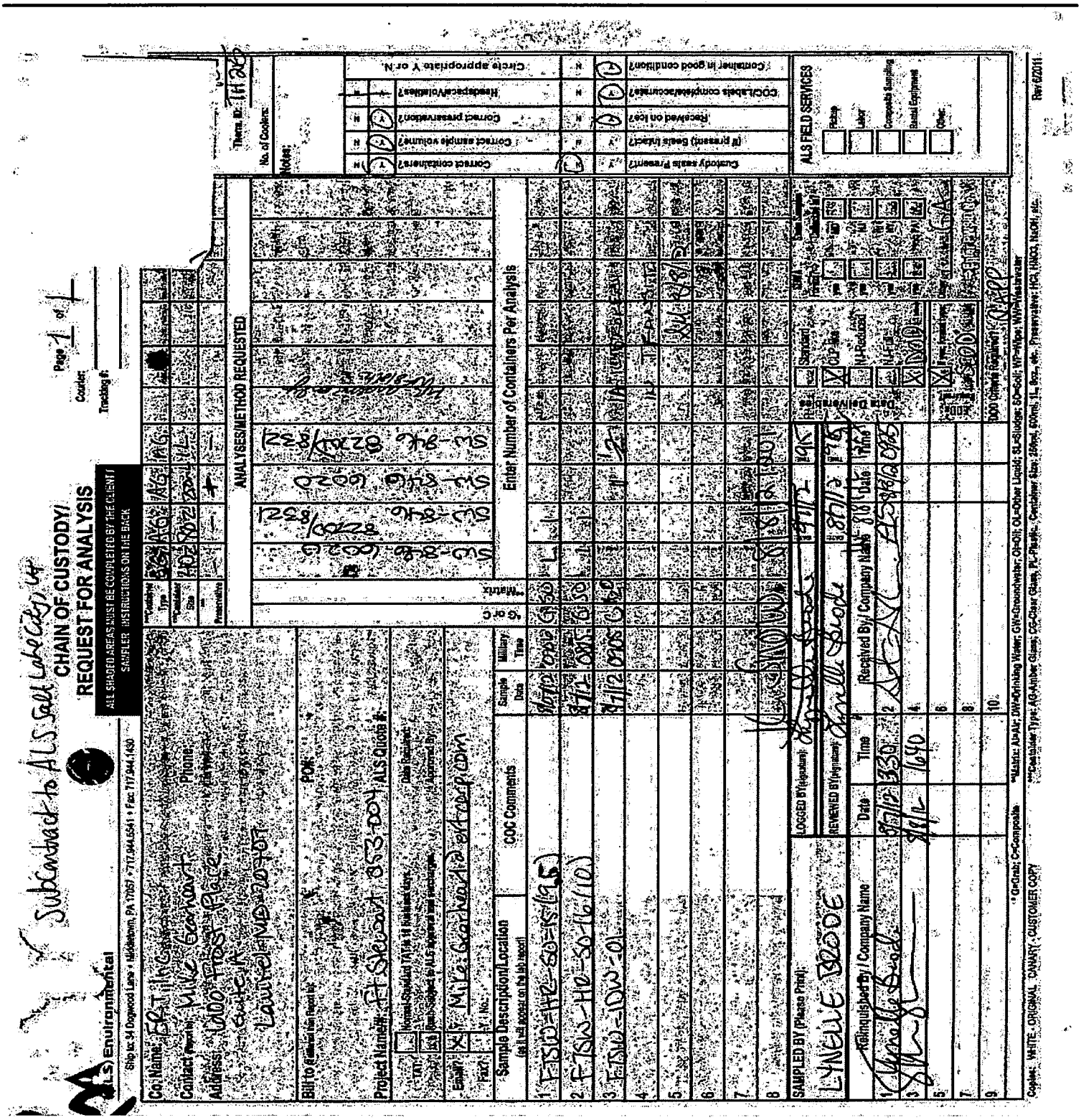
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



Fed Ex

Shipment Receipt

Address Information

Ship to:	**Ship from:**
ALS - UT	Steve Smith
ALS - UT	
960 LEVOY DR	34 DOGWOOD LANE
SALT LAKE CITY, UT	MIDDLETOWN, PA
84123-2502	17057
US	US
0000000000	7179445541

Shipment Information:
Tracking no.: 793882873690
Ship date: 08/08/2012
Estimated shipping charges: 62.77

Package Information
Service type: Priority Overnight
Package type: Your Packaging
Number of packages: 1
Total weight: 15 LBS
Declared Value: 0.00 USD
Special Services:
Pickup/Drop-off: Drop off package at FedEx location

Billing Information:
Bill transportation to: MyAccount-686
Your reference: Summa's
P.O. no.:
Invoice no.:
Department no.:

Thank you for shipping online with FedEx ShipManager at fedex.com.

Please Note

FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $500, e.g., jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits. Consult the applicable FedEx Service Guide for details.
The estimated shipping charge may be different than the actual charges for your shipment. Differences may occur based on actual weight, dimensions, and other factors. Consult the applicable FedEx Service Guide or the FedEx Rate Sheets for details on how shipping charges are calculated.

[illegible] 8/8/2012

Vicki Forney

From: Mike Gearheart <Mike.Gearheart@ertcorp.com>
Sent: Thursday, August 09, 2012 2:33 PM
To: Vicki Forney
Cc: Jennifer Harlan
Subject: RE: Letter of Receipt for Workorder 9981774: Received 8/8/2012

Follow Up Flag: Follow up
Flag Status: Flagged

Vicki,

Hi. We've encountered another issue. Our field crew got confused on the sample nomenclature during the last days of sampling (we switched crews mid-way through). As a result, we request the following sample ID changes, please.

ID number from Lab	What ID Should be
FTSW-HR-SO - 5 (10)	FTSW-HR-SO-50 (10)
FTSW-HR-SO - 6 (10)	FTSW-HR-SO-51 (10)
FTSW-HR-SO - 8 (10)	FTSW-HR-SO-52 (10)
FTSW-HR-SO - 03 (10)	FTSW-HR-SO-53 (10)
FTSW-HR-SO - 12 (10)	FTSW-HR-SO-54 (10)
FTSW-HR-SO - 04 (7.5)	FTSW-HR-SO-55 (07.5)
FTSW-HR-SO - 09 (10)	FTSW-HR-SO-56 (10)
FTSW-HR-SO - 10 (10)	FTSW-HR-SO-57 (10)
FTSW-HR-SO - 11 (10)	FTSW-HR-SO-58 (10)
FTSW-HR-SO - 13 (10)	FTSW-HR-SO-59 (10)
FTSW-HR-SO - 14 (7.5)	FTSW-HR-SO-60 (07.5)
FTSW-HR-SO - 14 ERB	FTSW-HR-SO-60 (07.5) ERB
FTSW-HR-SO-15 (9.5)	FTSW-HR-SO-61 (09.5)
FTSW-HR-SO-16 (10)	FTSW-HR-SO-62 (10)

Sorry for the inconveniences, and I really appreciate your responsiveness.

Thank you,

Michael Gearheart
ERT, Inc.

-----Original Message-----
From: Vicki Forney [mailto:Vicki.Forney@ALSGlobal.com]
Sent: Thursday, August 09, 2012 12:36 PM
To: Mike Gearheart
Subject: RE: Letter of Receipt for Workorder 9981774: Received 8/8/2012

Can you call me regarding this requested change? We really should have more volume to complete that testing and one of the containers broke in transit. Thanks.

Take our short online customer survey for a chance to win a FREE iPad!
Vicki Forney
Project Manager

NORTH AMERICA
ALS | Environmental
Address:
34 Dogwood Lane
Middletown, PA 17057

PHONE +1 717 944-5541x 3162
FAX +1 717 944-1430
www.alsglobal.com

-----Original Message-----
From: Mike Gearheart [mailto:Mike.Gearheart@ertcorp.com]
Sent: Thursday, August 09, 2012 10:04 AM
To: Vicki Forney
Cc: Jennifer Harlan; Rebekah Mccoy; Lynelle Brode
Subject: FW: Letter of Receipt for Workorder 9981774; Received 8/8/2012

Vicki,

The sample labeled as IDW (Lab ID 9981774003) should not be analyzed for what's listed on the sample login sheet (and what's on the COC). This sample should be analyzed for full TCLP parameters and RCRA Characteristics. This sample is for disposal characterization. Could you please make the change?

Thank you,

Michael Gearheart
ERT, Inc.

-----Original Message-----
From: ALMDT.LIMSAutoEmail@alsglobal.com [mailto:ALMDT.LIMSAutoEmail@alsglobal.com]
Sent: Thursday, August 09, 2012 9:50 AM
To: Mike Gearheart
Subject: Letter of Receipt for Workorder 9981774; Received 8/8/2012

The following reports are attached:

WO 9981774 , Work ID ERT008 | Ft. Stewart 3153-004 []

--- End Of List ---

****
The information contained in this email is confidential. If the reader is not the intended recipient then you must notify the sender immediately by return email and then delete all copies of this email. You must not copy, distribute, print or otherwise use the information. Email may be stored by the Company to support operational activities. All information will be held in accordance with the Company's Privacy Policy which can be found on the Company's website - www.campbell.com.au.
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Internal Chain of Custody

Work Order: 9981774

9981774001-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 12:08	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-08-12 12:01	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-08-12 09:25	*Sample Received At Lab*		

9981774001-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-20-12 06:13	META-LAB	6020 / 3051 ANALYSIS	Olley, Mr. Matthew W.
08-13-12 10:11	INORPREP-LAB	3015:6020 PREP	Kauffman, Mr. Kevin M

9981774001-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 12:01	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-08-12 09:25	*Sample Received At Lab*		

9981774001-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 12:08	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-08-12 12:01	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-08-12 09:25	*Sample Received At Lab*		

9981774002-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 12:08	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-08-12 12:01	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-08-12 09:25	*Sample Received At Lab*		

9981774002-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-20-12 06:13	META-LAB	6020 / 3051 ANALYSIS	Olley, Mr. Matthew W.
08-13-12 10:11	INORPREP-LAB	3015:6020 PREP	Kauffman, Mr. Kevin M

9981774002-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 12:01	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-08-12 09:25	*Sample Received At Lab*		

9981774002-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 12:08	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-08-12 12:01	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-08-12 09:25	*Sample Received At Lab*		

9981774003-A	P - PLASTIC		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 12:09	META-LAB	STORAGE	Snow, Ms. Kelli A.
08-08-12 12:01	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-08-12 09:25	*Sample Received At Lab*		

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Internal Chain of Custody

Work Order: 9981774

9981774003-B	A - AMBER GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 12:08	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-08-12 12:01	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-08-12 09:25	*Sample Received At Lab*		

9981774003-C	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 12:01	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-08-12 09:25	*Sample Received At Lab*		

Certificate of Analysis

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

September 6, 2012

Mr. Mike Gearhart
Earth Resources Technology, Inc.
6100 Frost Place
Suite A
Laurel, MD 20707

Certificate of Analysis

Project Name:	**Ft. Stewart GA project**	Workorder:	**9981774**
Purchase Order:		Workorder ID:	**ERT008|Ft. Stewart 3153-004**

Dear Mr. Gearhart,

Enclosed are the analytical results for samples received by the laboratory on Wednesday, August 08, 2012.

The ALS Environmental laboratory in Middletown, Pennsylvania (formerly Analytical Laboratory Services, Inc.) is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Vicki Forney (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

ALS Environmental

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

SAMPLE SUMMARY

Workorder: 9981774 ERT008|Ft. Stewart 3153-004 Discard Date: 09/20/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9981774001	FTSW-HR-SO-61 (09.5)	Solid	8/7/12 07:06	8/8/12 09:25	Customer
9981774002	FTSW-HR-SO-62 (10)	Solid	8/7/12 08:15	8/8/12 09:25	Customer
9981774003	FTSW-IDW-01	Water	8/7/12 09:05	8/8/12 09:25	Customer

Workorder Comments:

Original sample descriptions changed per client e-mail. VLF 8/10/12

Analytical results attached from ALS-Salt Lake City for 8270/8321 results. VLF

Sample 003 cancelled per client request. 8/21/12 VLF

These reports were modified on 8/31/12 to replace the subcontracting data with updated reports. VLF

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9981774 ERT008|Ft. Stewart 3153-004

Lab ID: **9981774001** Date Collected: 8/7/2012 07:06 Matrix: Solid

Sample ID: **FTSW-HR-SO-61 (09.5)** Date Received: 8/8/2012 09:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	17.4		%	0.1	SM20-2540 G			8/8/12 14:45	KED	A
Total Solids	82.6		%	0.1	SM20-2540 G			8/8/12 14:45	KED	A
METALS										
Arsenic, Total	1.0U		mg/kg	1.5	SW846 6020A	8/13/12	KMK	8/20/12 09:07	MW O	A1
SUBCONTRACTED ANALYSIS										
Subcontracted Analysis	See attached				Subcontract			8/18/12 11:02	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9981774 ERT008|Ft. Stewart 3153-004

Lab ID: **9981774002** Date Collected: 8/7/2012 08:15 Matrix: Solid

Sample ID: **FTSW-HR-SO-62 (10)** Date Received: 8/8/2012 09:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	17.8		%	0.1	SM20-2540 G			8/8/12 14:45	KED	A
Total Solids	82.2		%	0.1	SM20-2540 G			8/8/12 14:45	KED	A
METALS										
Arsenic, Total	1.1U		mg/kg	1.7	SW846 6020A	8/13/12	KMK	8/20/12 09:11	MW O	A1
SUBCONTRACTED ANALYSIS										
Subcontracted Analysis	See attached				Subcontract			8/18/12 11:39	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9981774 ERT008|Ft. Stewart 3153-004

Lab ID: **9981774003** Date Collected: 8/7/2012 09:05 Matrix: Water

Sample ID: **FTSW-IDW-01** Date Received: 8/8/2012 09:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
ADMINISTRATIVE										
Sample Cancelled	Sample cancelled							8/21/12 08:56	VAF	

Sample Comments:

Anna G Milliken
Technical Manager

Total Metals in Solid by 6020A Summary Forms

6020 3051
- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, Inc

SDG No.: ERT-008 **Method Type:** 6020 3051 **SOW No.:**

Contract: ERT008|Ft. Stewart 3 **Lab Code:** CAS **Case No.:** **SAS No.:**

Lab Sample ID	Client Sample ID	QC Description
9981496004S	FTSW-HR-SO-53 (10)S	Matrix Spike
9981496004SD	FTSW-HR-SO-53 (10)SD	Matrix Spike Duplicate
9981774001	FTSW-HR-SO-61 (09.5)	
9981774002	FTSW-HR-SO-62 (10)	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: **Lisa Miller**

Date: Title: **Metals Manager**

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-008 **Method Type:** 6020 3051

Sample ID: 9981774001 **Client ID:** FTSW-HR-SO-61 (09.5)

Matrix: SOIL **Date Received:** 8/8/2012 **Level:** LOW

% Solids: 82.6 **Sample Wt/Vol:** 0.59 **Final Vol:** 50.0

Prep Batch ID: 475719 **Prep Date:** 8/13/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.03	mg/Kg	U		M	1.5	1.03	0.51	5.00	8/20/2012	09:07:50

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-008 **Method Type:** 6020 3051

Sample ID: 9981774002 **Client ID:** FTSW-HR-SO-62 (10)

Matrix: SOIL **Date Received:** 8/8/2012 **Level:** LOW

% Solids: 82.2 **Sample Wt/Vol:** 0.55 **Final Vol:** 50.0

Prep Batch ID: 475719 **Prep Date:** 8/13/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.11	mg/Kg	U		M	1.7	1.11	0.55	5.00	8/20/2012	09:11:28

Comments:

6020 3051
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-008

Contract: ERT008|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
ICV	Arsenic	0.1031	0.1000	103		90 - 110	M	8/20/2012	03:05	A082012B
LLICV	Arsenic	0.0037	0.0030	123		70 - 130	M	8/20/2012	03:16	A082012B
CCV	Arsenic	0.1011	0.1000	101		90 - 110	M	8/20/2012	07:16	A082012B
LLCCV	Arsenic	0.0033	0.0030	110		70 - 130	M	8/20/2012	07:23	A082012B
CCV	Arsenic	0.0994	0.1000	99		90 - 110	M	8/20/2012	08:02	A082012B
LLCCV	Arsenic	0.0033	0.0030	110		70 - 130	M	8/20/2012	08:10	A082012B
CCV	Arsenic	0.0968	0.1000	97		90 - 110	M	8/20/2012	08:49	A082012B
LLCCV	Arsenic	0.0029	0.0030	97		70 - 130	M	8/20/2012	08:56	A082012B
CCV	Arsenic	0.0940	0.1000	94		90 - 110	M	8/20/2012	09:18	A082012B
LLCCV	Arsenic	0.0029	0.0030	97		70 - 130	M	8/20/2012	09:50	A082012B

6020 3051

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-008

Contract: ERT008|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Conc Qual	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
ICB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/20/2012	03:13	A082012B
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/20/2012	07:19	A082012B
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/20/2012	08:06	A082012B
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/20/2012	08:53	A082012B
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/20/2012	09:22	A082012B

6020 3051
- 3b -
PREPARATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-008

Contract: ERT008|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result (mg/Kg)	Conc Qual	Q	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
1021902			**QC-SOLID**								
	Arsenic	1.50000	U		0.75	0.50000	1.50000	M	8/20/2012	07:44	A082012B

6020 3051
- 4 -
INTERFERENCE CHECK SAMPLE

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-008

Contract: ERT008|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

ICS Source: Inorganic Ventures **Instrument ID:** AGILENT 7700 ICPMS

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	Analysis Date	Analysis Time	Run Number
ICSA									
	Arsenic	0.0003				-0.00300 - -0.00300	8/20/2012	03:23	A082012B
ICSAB									
	Arsenic	0.0205	0.02000	102		80 - 120%	8/20/2012	03:27	A082012B

6020 3051
- 5a -
MATRIX SPIKE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-008

Contract: ERT008|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: SOIL **Sample ID:** 9981496004 **Client ID:** FTSW-HR-SO-53 (10)S **LIMS ID:** 1021904

Percent Solids for Sample: 81.28 **Spiked ID:** 9981496004S **Percent Solids for Spike Sample:** 81.28

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/Kg	80 - 120	22.83		1.77	U	23.661	96		M

6020 3051

- 5a -

MATRIX SPIKE DUPLICATE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-008

Contract: ERT008|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: SOIL **Sample ID:** 9981496004 **Client ID:** FTSW-HR-SO-53 (10)SD **LIMS ID:** 1021905

Percent Solids for Sample: 81.28 **Spiked ID:** 9981496004SD **Percent Solids for Spike Sample:** 81.28

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/Kg	80 - 120	20.21		1.56	U	20.854	97		M

6020 3051
- 6 -
DUPLICATE SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-008

Contract: ERT008|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: SOIL **Sample ID:** 9981496004S **Client ID:** FTSW-HR-SO-53 (10)SD **LIMS ID:** 1021905

Percent Solids for Sample: 81.28 **Duplicate ID:** 9981496004SD **Percent Solids for Duplicate:** 81.28

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/Kg	0 - 20	22.83		20.21		12		M

6020 3051
- 7 -
LABORATORY CONTROL SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-008

Contract: ERT008|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Aqueous LCS Source: **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Q	QC Criteria	M
1021903									
	Arsenic	mg/Kg	20.0	19.6		98.0		80 - 120	M

6020 3051

- 12 -
LINEAR RANGES

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-008

Contract: ERT008|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Instrument ID: AGILENT 7700 ICPMS **Date:** 1/19/2012

Analyte	Integration Time (sec)	LDR mg/L
Arsenic	1.00	5

6020 3051
- 13 -
SAMPLE PREPARATION SUMMARY

Client: ERT Earth Resources Technology, Inc.

SDG No.: ERT-008

Contract: ERT008|Ft. Stewart 3153-004

Lab Code: CAS

Method: MS

Case No.:

SAS No.:

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	475719						
1021902	MB for HBN 475719 [MDIG/3747	MB	QC-SOLI	8/13/12	0.50	50.0	100.00
1021903	LCS for HBN 475719 [MDIG/3747	LCS	QC-SOLI	8/13/12	0.50	50.0	100.00
9981496004S	FTSW-HR-SO-53 (10)S	MS	SOIL	8/13/12	0.52	50.0	81.28
9981496004SD	FTSW-HR-SO-53 (10)SD	MSD	SOIL	8/13/12	0.59	50.0	81.28
9981774001	FTSW-HR-SO-61 (09.5)	SAM	SOIL	8/13/12	0.59	50.0	82.56
9981774002	FTSW-HR-SO-62 (10)	SAM	SOIL	8/13/12	0.55	50.0	82.19

6020 3051
14
ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT008|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-008

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A082012B

Start Date: 8/20/2012 End Date: 8/20/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	0240																								
BLK	1.00	0244				X																				
STANDARD 1	1.00	0247				X																				
STANDARD 2	1.00	0251				X																				
STANDARD 3	1.00	0255				X																				
STANDARD 4	1.00	0258				X																				
STANDARD 5	1.00	0302				X																				
ICV	1.00	0305				X																				
ZZZZZZ	1.00	0309																								
ICB2	1.00	0313				X																				
LLICV	1.00	0316				X																				
ZZZZZZ	1.00	0320																								
ICS-A2	1.00	0323				X																				
ICS-AB1	1.00	0327				X																				
ZZZZZZ	1.00	0331																								
ZZZZZZ	1.00	0335																								
ZZZZZZ	5.00	0339																								
ZZZZZZ	100.00	0342																								
ZZZZZZ	5.00	0346																								
ZZZZZZ	100.00	0349																								
ZZZZZZ	1.00	0353																								
ZZZZZZ	1.00	0357																								
ZZZZZZ	1.00	0400																								
ZZZZZZ	1.00	0404																								
ZZZZZZ	1.00	0408																								
ZZZZZZ	1.00	0411																								
ZZZZZZ	1.00	0415																								
ZZZZZZ	1.00	0418																								
ZZZZZZ	1.00	0422																								
ZZZZZZ	1.00	0426																								
ZZZZZZ	1.00	0431																								
ZZZZZZ	1.00	0450																								
ZZZZZZ	1.00	0454																								
ZZZZZZ	1.00	0500																								
ZZZZZZ	1.00	0504																								
ZZZZZZ	5.00	0508																								

6020 3051
14
ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT008|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-008

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A082012B

Start Date: 8/20/2012 End Date: 8/20/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	0516																								
ZZZZZZ	1.00	0520																								
ZZZZZZ	5.00	0523																								
ZZZZZZ	1.00	0527																								
ZZZZZZ	1.00	0531																								
ZZZZZZ	1.00	0536																								
ZZZZZZ	1.00	0540																								
ZZZZZZ	1.00	0602																								
ZZZZZZ	1.00	0606																								
ZZZZZZ	1.00	0609																								
ZZZZZZ	5.00	0640																								
ZZZZZZ	5.00	0643																								
ZZZZZZ	5.00	0647																								
ZZZZZZ	5.00	0651																								
ZZZZZZ	5.00	0654																								
ZZZZZZ	5.00	0658																								
ZZZZZZ	5.00	0701																								
ZZZZZZ	5.00	0705																								
ZZZZZZ	5.00	0708																								
ZZZZZZ	5.00	0712																								
CCV4	1.00	0716				X																				
CCB4	1.00	0719				X																				
LLCCV	1.00	0723				X																				
ZZZZZZ	5.00	0726																								
ZZZZZZ	5.00	0730																								
ZZZZZZ	5.00	0734																								
ZZZZZZ	5.00	0737																								
ZZZZZZ	25.00	0741																								
1021902	5.00	0744				X																				
1021903	5.00	0748				X																				
ZZZZZZ	5.00	0751																								
ZZZZZZ	5.00	0755																								
ZZZZZZ	5.00	0759																								
CCV5	1.00	0802				X																				
CCB5	1.00	0806				X																				
LLCCV	1.00	0810				X																				

6020 3051
14
ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT008|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-008

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A082012B

Start Date: 8/20/2012 End Date: 8/20/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	0813																								
9981496004S	5.00	0817				X																				
9981496004SD	5.00	0820				X																				
ZZZZZZ	5.00	0824																								
ZZZZZZ	5.00	0828																								
ZZZZZZ	5.00	0831																								
ZZZZZZ	5.00	0835																								
ZZZZZZ	5.00	0838																								
ZZZZZZ	5.00	0842																								
ZZZZZZ	5.00	0846																								
CCV6	1.00	0849				X																				
CCB6	1.00	0853				X																				
LLCCV	1.00	0856				X																				
ZZZZZZ	5.00	0900																								
ZZZZZZ	25.00	0904																								
9981774001	5.00	0907				X																				
9981774002	5.00	0911				X																				
9981774002L	25.00	0915				X																				
CCV7	1.00	0918				X																				
CCB7	1.00	0922				X																				
LLCCV	1.00	0950				X																				
ZZZZZZ	1.00	0953																								
ZZZZZZ	1.00	0957																								
ZZZZZZ	1.00	1000																								
ZZZZZZ	1.00	1004																								
ZZZZZZ	1.00	1008																								
ZZZZZZ	1.00	1011																								
ZZZZZZ	1.00	1015																								
ZZZZZZ	1.00	1018																								
ZZZZZZ	1.00	1022																								
ZZZZZZ	1.00	1026																								
ZZZZZZ	1.00	1029																								
ZZZZZZ	1.00	1033																								
ZZZZZZ	1.00	1036																								
ZZZZZZ	1.00	1040																								
ZZZZZZ	1.00	1044																								

6020 3051
14
ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT008|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-008

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A082012B

Start Date: 8/20/2012 End Date: 8/20/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1047																								
ZZZZZZ	1.00	1051																								
ZZZZZZ	1.00	1055																								
ZZZZZZ	1.00	1058																								
ZZZZZZ	1.00	1102																								
ZZZZZZ	1.00	1105																								
ZZZZZZ	1.00	1109																								
ZZZZZZ	1.00	1113																								
ZZZZZZ	1.00	1116																								
ZZZZZZ	1.00	1120																								
ZZZZZZ	1.00	1123																								
ZZZZZZ	1.00	1127																								
ZZZZZZ	1.00	1131																								
ZZZZZZ	1.00	1134																								
ZZZZZZ	1.00	1138																								
ZZZZZZ	1.00	1141																								
ZZZZZZ	1.00	1145																								
ZZZZZZ	1.00	1149																								
ZZZZZZ	1.00	1152																								
ZZZZZZ	1.00	1156																								
ZZZZZZ	1.00	1200																								
ZZZZZZ	1.00	1203																								
ZZZZZZ	1.00	1207																								
ZZZZZZ	1.00	1210																								
ZZZZZZ	1.00	1214																								
ZZZZZZ	1.00	1218																								
ZZZZZZ	1.00	1221																								
ZZZZZZ	1.00	1225																								
ZZZZZZ	1.00	1228																								
ZZZZZZ	1.00	1232																								
ZZZZZZ	1.00	1236																								
ZZZZZZ	1.00	1239																								
ZZZZZZ	1.00	1245																								
ZZZZZZ	1.00	1249																								
ZZZZZZ	1.00	1252																								
ZZZZZZ	1.00	1256																								

6020 3051
14
ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT008|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-008

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A082012B

Start Date: 8/20/2012 End Date: 8/20/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1259																								
ZZZZZZ	1.00	1303																								
ZZZZZZ	1.00	1307																								
ZZZZZZ	1.00	1310																								
ZZZZZZ	1.00	1314																								
ZZZZZZ	1.00	1317																								
ZZZZZZ	1.00	1321																								

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT008|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-008

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/20/2012 End Date: 08/20/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
BLK	ZZZZZZ	0240												
BLK	BLK	0244	100		100		100		100		100		100	
STANDARD 1	STANDARD 1	0247	107		106		103		102		102		100	
STANDARD 2	STANDARD 2	0251	104		106		101		102		101		98	
STANDARD 3	STANDARD 3	0255	105		103		104		102		104		105	
STANDARD 4	STANDARD 4	0258	106		102		104		104		98		102	
STANDARD 5	STANDARD 5	0302	108		103		103		104		104		102	
ICV	ICV	0305	107		103		100		102		102		99	
ICB1	ZZZZZZ	0309												
ICB2	ICB	0313	104		100		100		98		102		103	
LLICV	LLICV	0316	108		102		102		99		108		103	
ICS-A1	ZZZZZZ	0320												
ICS-A2	ICSA	0323	98		103		97		110		112		100	
ICS-AB1	ICSAB	0327	99		103		98		107		102		100	
CHECK	ZZZZZZ	0331												
CHECK	ZZZZZZ	0335												
9980964001	ZZZZZZ	0339												
9980964001	ZZZZZZ	0342												
9980964002	ZZZZZZ	0346												
9980964002	ZZZZZZ	0349												
9981898001	ZZZZZZ	0353												
9982138001	ZZZZZZ	0357												
9982138002	ZZZZZZ	0400												
9982239001	ZZZZZZ	0404												
9982404001	ZZZZZZ	0408												
9982563001	ZZZZZZ	0411												
CCV1	ZZZZZZ	0415												
CCB1	ZZZZZZ	0418												
LLCCV	ZZZZZZ	0422												
9981426002	ZZZZZZ	0426												
9981426003	ZZZZZZ	0431												
9977234004	ZZZZZZ	0450												
9977615004	ZZZZZZ	0454												
9977234005	ZZZZZZ	0500												
9977615005	ZZZZZZ	0504												
9977615005	ZZZZZZ	0508												
9977615040	ZZZZZZ	0516												
9977234045	ZZZZZZ	0520												
9977615005	ZZZZZZ	0523												
CCV2	ZZZZZZ	0527												
CCB2	ZZZZZZ	0531												
LLCCV	ZZZZZZ	0536												
9977615040	ZZZZZZ	0540												
CCV3	ZZZZZZ	0602												
CCB3	ZZZZZZ	0606												

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT008|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-008

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/20/2012 End Date: 08/20/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
LLCCV	ZZZZZZ	0609												
1024192	ZZZZZZ	0640												
1024193	ZZZZZZ	0643												
9983660004	ZZZZZZ	0647												
9983660005	ZZZZZZ	0651												
9983660006	ZZZZZZ	0654												
9983654001	ZZZZZZ	0658												
9983654002	ZZZZZZ	0701												
9983654003	ZZZZZZ	0705												
9983657001	ZZZZZZ	0708												
1024194	ZZZZZZ	0712												
CCV4	CCV	0716	110		100		102		98		99		100	
CCB4	CCB	0719	107		101		100		95		100		101	
LLCCV	LLCCV	0723	109		101		103		99		101		102	
1024195	ZZZZZZ	0726												
9983657001P	ZZZZZZ	0730												
9983657002	ZZZZZZ	0734												
9983657003	ZZZZZZ	0737												
9983657003L	ZZZZZZ	0741												
1021902	MB for HBN 47571	0744	104		99		99		97		102		102	
1021903	LCS for HBN 4757	0748	106		100		101		98		100		105	
9981496001	ZZZZZZ	0751												
9981496002	ZZZZZZ	0755												
9981496003	ZZZZZZ	0759												
CCV5	CCV	0802	109		105		107		100		103		103	
CCB5	CCB	0806	107		99		100		96		100		102	
LLCCV	LLCCV	0810	108		101		107		99		101		102	
9981496004	ZZZZZZ	0813												
9981496004S	FTSW-HR-SO-53 (1	0817	100		94		95		92		100		101	
9981496004S	FTSW-HR-SO-53 (1	0820	103		95		95		97		95		98	
9981496004P	ZZZZZZ	0824												
9981496005	ZZZZZZ	0828												
9981496006	ZZZZZZ	0831												
9981496007	ZZZZZZ	0835												
9981496008	ZZZZZZ	0838												
9981496009	ZZZZZZ	0842												
9981496010	ZZZZZZ	0846												
CCV6	CCV	0849	99		94		92		92		92		94	
CCB6	CCB	0853	98		91		90		89		93		93	
LLCCV	LLCCV	0856	100		90		89		89		93		95	
9981496011	ZZZZZZ	0900												
9981496011L	ZZZZZZ	0904												
9981774001	FTSW-HR-SO-61 (0	0907	97		88		88		90		91		89	
9981774002	FTSW-HR-SO-62 (1	0911	97		86		86		89		90		92	
9981774002L	FTSW-HR-SO-62 (1	0915	99		90		89		86		90		94	

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT008|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-008

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/20/2012 End Date: 08/20/2012

Sample No.	Client ID	Time	Internal Standards %RI For: Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
CCV7	CCV	0918	97		88		87		85		87		94	
CCB7	CCB	0922	98		87		86		84		85		90	
LLCCV	LLCCV	0950	95		82		81		77		90		90	
9981476027	ZZZZZZ	0953												
9981591001	ZZZZZZ	0957												
MS	ZZZZZZ	1000												
9981698001	ZZZZZZ	1004												
9981820002	ZZZZZZ	1008												
9981657001	ZZZZZZ	1011												
9981657002	ZZZZZZ	1015												
9981395001	ZZZZZZ	1018												
1020128	ZZZZZZ	1022												
9982071001	ZZZZZZ	1026												
CCV8	ZZZZZZ	1029												
CCB8	ZZZZZZ	1033												
9982072001	ZZZZZZ	1036												
9982073001	ZZZZZZ	1040												
9981781001	ZZZZZZ	1044												
9981954001	ZZZZZZ	1047												
9982004001	ZZZZZZ	1051												
9982176004	ZZZZZZ	1055												
1021149	ZZZZZZ	1058												
9982176005	ZZZZZZ	1102												
9982176006	ZZZZZZ	1105												
1024204	ZZZZZZ	1109												
CCV9	ZZZZZZ	1113												
CCB9	ZZZZZZ	1116												
CCV10	ZZZZZZ	1120												
1024205	ZZZZZZ	1123												
9983336001	ZZZZZZ	1127												
9983313001	ZZZZZZ	1131												
9983313003	ZZZZZZ	1134												
9983313004	ZZZZZZ	1138												
1024206	ZZZZZZ	1141												
1024207	ZZZZZZ	1145												
9983540001	ZZZZZZ	1149												
9983146001	ZZZZZZ	1152												
9983489001	ZZZZZZ	1156												
CCV11	ZZZZZZ	1200												
CCB10	ZZZZZZ	1203												
9983490001	ZZZZZZ	1207												
9983491001	ZZZZZZ	1210												
9983414001	ZZZZZZ	1214												
9983418001	ZZZZZZ	1218												
9983697001	ZZZZZZ	1221												

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT008|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-008

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/20/2012 End Date: 08/20/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
1024208	ZZZZZZ	1225												
9983698001	ZZZZZZ	1228												
9981961001	ZZZZZZ	1232												
9981961002	ZZZZZZ	1236												
CCV12	ZZZZZZ	1239												
CCB11	ZZZZZZ	1245												
CCV13	ZZZZZZ	1249												
9981961003	ZZZZZZ	1252												
1020749	ZZZZZZ	1256												
1020750	ZZZZZZ	1259												
982000002	ZZZZZZ	1303												
1021145	ZZZZZZ	1307												
1021146	ZZZZZZ	1310												
CCV14	ZZZZZZ	1314												
CCB12	ZZZZZZ	1317												
CCV15	ZZZZZZ	1321												

Total Metals in Solid by 6020A Raw Data

Dataset: A082012 B 2nd Review mw0

First Review: AM Approval: mw0

Internal Standards: **ICPMS9190**

200	60-125%	**6020Qc:**	70-130%	**6020A**	30-130%	**DOD:**	70-120%

Standards :
Tuning MS0361
Daily Standard: MS0361

Calibration Standards
MS0343
MS0344

PIPETTES:

03-028	10.0 mL
03-202	.200 mL
03-201	1.0 mL
03-031	1.0 mL

ICSA: MS0341
ICSAB:MS0340

Initial LLICV - Sb ↑ Se ↓

Initial ICV Sn ↑

GOLD: MS0346
DW LCS: MS0358
Second Source

MA1393	MA1388	MA1360
MA1342	MS0345	MA1381
MS0309	MA1359	

Internal Standards/ Target Analytes

Sc-Al,V,Cr,Mn,Co,Ni,Cu,Na, K, Ti, Mg, Ca, Fe, As, Zn, Se,
Y
In-Sr, Mo, Ag, Cd, Sn, Sb, Ba
Tb
Bi-Hg, Tl, Pb, U

Case Narrative:

*__D__: *D at the beginning of the Dataset Denotes that the samples were run on the Elan DRCe ICP-MS*

200.8 Tune Check Sample Report

Batch Folder C:\Agilent\ICPMH\1\DATA\A081912 TUNE.b
Report Comment
Instrument Name G3281A JP11040846

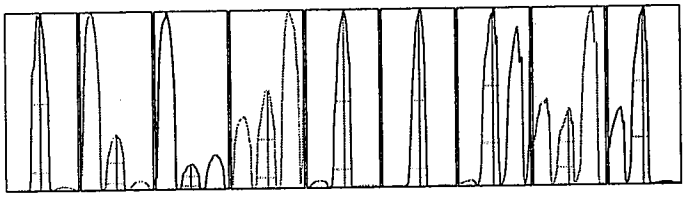
[no Gas]

Mass	Count (Actual)
9	9957
24	53705
25	7311
26	10026
59	104446
115	125523
206	19498
207	18236
208	38372

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	3.19	5.00	
24	3.29	5.00	
25	2.91	5.00	
26	2.29	5.00	
59	0.95	5.00	
115	1.36	5.00	
206	1.77	5.00	
207	1.41	5.00	
208	1.43	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	9487	9868	10045	10028	10358
24	52281	51895	53295	55103	55954
25	7008	7216	7305	7502	7521
26	9922	9813	9890	10124	10382
59	103144	103604	105078	105131	105271
115	124851	124011	124445	128240	126066
206	19442	19156	19213	19987	19692
207	17966	18417	17965	18519	18312
208	38046	37817	38193	39214	38589

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	1615	8.95	6.9 - 9.1		0.786	0.850	
24	8538	24.00	23.9 - 24.1		0.785	0.850	
25	1178	24.95	24.9 - 25.1		0.780	0.850	
26	1631	26.00	25.9 - 26.1		0.786	0.850	
59	17677	59.05	58.9 - 59.1		0.743	0.850	
115	22933	115.05	114.9 - 115.1		0.718	0.850	
206	3324	205.95	205.9 - 206.1		0.712	0.850	
207	2906	206.95	206.9 - 207.1		0.704	0.850	
208	6841	207.95	207.9 - 208.1		0.707	0.850	

X% = 10 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 235 **Y Axis =** Linear

Tune Parameters

Plasma Paramters

RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	12.2 V	Deflect	15.6 V
Extract 2	-185.0 V	Cell Entrance	-32 V	Plate Bias	-45 V
Omega Bias	-80 V	Cell Exit	-60 V		

Cell Parameters

OctP Bias	-8.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	160 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	001CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T02:40:35-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	3414	1.73
Cr	52	1	No Gas	8547	0.11
Mn	55	1	No Gas	14348	0.06
Co	59	1	No Gas	107	29.42
Ni	60	1	No Gas	177	24.89
Cu	63	1	No Gas	1407	0.85
Sr	88	1	No Gas	122	26.82
Ag	107	1	No Gas	33	299.96
Al	27	1	No Gas	4501	0.59
Sn	118	1	No Gas	3556	0.82
Ti	47	1	No Gas	133	17.27
Zn	66	1	No Gas	317	2.88
As	75	3	HeHe	7	1325.55
As	75	1	No Gas	13463	0.03
Sb	121	1	No Gas	670	3.43
Hg	201	1	No Gas	27	86.05
Be	9	1	No Gas	24	91.87
Pb	208	1	No Gas	7224	0.03
Mo	98	1	No Gas	976	0.62
Ba	137	1	No Gas	27	292.73
Tl	205	1	No Gas	67	90.14
U	238	1	No Gas	70	12.95
Na	23	2	he	56505	0.01
Mg	24	2	he	504	6.73
K	39	2	he	45960	0.00
Se	82	3	HeHe	15	105.51
Fe	57	3	HeHe	117	23.62
Cd	114	1	No Gas	127	23.60
Ca	44	1	No Gas	11346	0.16

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	1690544	1.49
Sc	45	2	he	214928	3.41
Ge	72	1	No Gas	238945	2.81
In	115	1	No Gas	1327323	0.87
Tb	159	1	No Gas	1611794	3.01
Bi	209	1	No Gas	782720	0.93

Calibration Blank Report

Sc	45	3	HeHe	30962	4.40

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	002CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T02:44:12-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Cr	52	1	No Gas	8154	0.11
Mn	55	1	No Gas	13736	0.05
Co	59	1	No Gas	141	26.51
Ni	60	1	No Gas	187	5.97
Cu	63	1	No Gas	1370	0.33
Sr	88	1	No Gas	130	21.26
Ag	107	1	No Gas	52	132.85
Al	27	1	No Gas	3697	0.44
Sn	118	1	No Gas	2671	0.99
Ti	47	1	No Gas	112	8.55
Zn	66	1	No Gas	310	7.28
As	75	3	HeHe	5	541.04
As	75	1	No Gas	12404	0.02
Sb	121	1	No Gas	537	6.21
Hg	201	1	No Gas	21	297.39
Be	9	1	No Gas	10	721.11
Pb	208	1	No Gas	7373	0.15
Se	82	1	No Gas	143	10.68
Mo	98	1	No Gas	723	1.91
Ba	137	1	No Gas	40	165.36
Tl	205	1	No Gas	44	194.88
U	238	1	No Gas	48	110.68
Na	23	2	he	54165	0.01
Mg	24	2	he	289	7.04
K	39	2	he	42867	0.00
Se	82	3	HeHe	14	232.10
Fe	57	3	HeHe	150	19.37
Cd	114	1	No Gas	133	42.96
Ca	44	1	No Gas	13218	0.15

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	1662313	9.90
Sc	45	2	he	207479	1.78
Ge	72	1	No Gas	222710	3.86
In	115	1	No Gas	1280558	7.02
Tb	159	1	No Gas	1515490	10.23
Bi	209	1	No Gas	722984	4.85

Calibration Blank Report

Sc	45	3	HeHe	30220	4.52

Calibration Standard Report

Sample Table

Sample Name	Standard 1
Data File Name	003CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T02:47:48-04:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	2538	4.06
Cr	52	1	No Gas	8751	0.05
Mn	55	1	No Gas	16030	0.03
Co	59	1	No Gas	1241	0.54
Ni	60	1	No Gas	423	4.65
Cu	63	1	No Gas	1952	0.15
Sr	88	1	No Gas	1796	0.82
Ag	107	1	No Gas	845	2.45
Al	27	1	No Gas	9077	0.04
Sn	118	1	No Gas	3841	0.58
Ti	47	1	No Gas	196	8.52
Zn	66	1	No Gas	747	2.16
As	75	3	HeHe	13	368.97
As	75	1	No Gas	12615	0.05
Sb	121	1	No Gas	1087	0.43
Hg	201	1	No Gas	24	159.12
Be	9	1	No Gas	101	10.73
Pb	208	1	No Gas	9273	0.02
Mo	98	1	No Gas	1073	1.13
Ba	137	1	No Gas	290	6.18
Tl	205	1	No Gas	841	2.41
U	238	1	No Gas	996	1.90
Na	23	2	he	55269	0.01
Mg	24	2	he	641	2.19
K	39	2	he	46056	0.00
Se	82	3	HeHe	21	283.30
Fe	57	3	HeHe	87	20.34
Cd	114	1	No Gas	467	5.32
Ca	44	1	No Gas	12717	0.04

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1700962	0.36	1662313	102.33	70	120	
Sc	45	2	he	212449	4.28	207479	102.40	70	120	
Ge	72	1	No Gas	235268	3.34	222710	105.64	70	120	
In	115	1	No Gas	1322403	2.95	1280558	103.27	70	120	

Calibration Standard Report

Tb	159	1	No Gas	1654575	0.89	1515490	109.18	70	120	
Bi	209	1	No Gas	770216	0.58	722984	106.53	70	120	
Sc	45	3	HeHe	30327	1.87	30220	100.35	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 2
Data File Name	004CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T02:51:24-04:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	15619	0.11
Cr	52	1	No Gas	18121	0.01
Mn	55	1	No Gas	26432	0.01
Co	59	1	No Gas	11519	0.05
Ni	60	1	No Gas	2660	0.47
Cu	63	1	No Gas	7538	0.03
Sr	88	1	No Gas	16453	0.03
Ag	107	1	No Gas	7680	0.02
Al	27	1	No Gas	15904	0.02
Sn	118	1	No Gas	7269	0.13
Ti	47	1	No Gas	897	0.52
Zn	66	1	No Gas	3657	0.04
As	75	3	HeHe	122	3.03
As	75	1	No Gas	14977	0.04
Sb	121	1	No Gas	6545	0.10
Hg	201	1	No Gas	33	21.64
Be	9	1	No Gas	905	0.20
Pb	208	1	No Gas	19856	0.01
Se	82	1	No Gas	140	27.22
Mo	98	1	No Gas	4840	0.05
Ba	137	1	No Gas	1957	0.29
Tl	205	1	No Gas	9285	0.08
U	238	1	No Gas	9496	0.04
Na	23	2	he	63016	0.00
Mg	24	2	he	3597	0.00
K	39	2	he	46565	0.01
Se	82	3	HeHe	19	249.14
Fe	57	3	HeHe	353	4.83
Cd	114	1	No Gas	4017	0.12
Ca	44	1	No Gas	16472	0.03

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1697533	1.11	1662313	102.12	70	120	
Sc	45	2	he	209577	1.72	207479	101.01	70	120	
Ge	72	1	No Gas	235724	2.43	222710	105.84	70	120	

Calibration Standard Report

In	115	1	No Gas	1293129	1.63	1280558	100.98	70	120	
Tb	159	1	No Gas	1585434	0.50	1515490	104.62	70	120	
Bi	209	1	No Gas	750021	0.69	722984	103.74	70	120	
Sc	45	3	HeHe	29489	2.45	30220	97.58	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 3
Data File Name	005CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T02:55:00-04:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	115210	0.00
Cr	52	1	No Gas	114101	0.00
Mn	55	1	No Gas	153756	0.00
Co	59	1	No Gas	115705	0.00
Ni	60	1	No Gas	25573	0.01
Cu	63	1	No Gas	65501	0.00
Sr	88	1	No Gas	169859	0.00
Ag	107	1	No Gas	77587	0.00
Al	27	1	No Gas	68078	0.00
Sn	118	1	No Gas	53544	0.01
Ti	47	1	No Gas	8507	0.02
Zn	66	1	No Gas	22333	0.01
As	75	3	HeHe	1163	0.40
As	75	1	No Gas	30793	0.01
Sb	121	1	No Gas	65295	0.00
Hg	201	1	No Gas	153	5.40
Be	9	1	No Gas	8678	0.02
Pb	208	1	No Gas	133338	0.00
Se	82	1	No Gas	946	0.60
Mo	98	1	No Gas	50807	0.00
Ba	137	1	No Gas	20367	0.01
Tl	205	1	No Gas	94714	0.00
U	238	1	No Gas	97950	0.00
Na	23	2	he	114639	0.00
Mg	24	2	he	34226	0.01
K	39	2	he	85764	0.00
Se	82	3	HeHe	80	12.16
Fe	57	3	HeHe	3234	0.24
Cd	114	1	No Gas	37994	0.01
Ca	44	1	No Gas	41685	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1695626	3.46	1662313	102.00	70	120	
Sc	45	2	he	215522	0.86	207479	103.88	70	120	
Ge	72	1	No Gas	229665	0.92	222710	103.12	70	120	

Calibration Standard Report

In	115	1	No Gas	1336392	0.19	1280558	104.36	70	120	
Tb	159	1	No Gas	1655320	1.68	1515490	109.23	70	120	
Bi	209	1	No Gas	761372	1.20	722984	105.31	70	120	
Sc	45	3	HeHe	31646	3.02	30220	104.72	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 4
Data File Name	006CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T02:58:37-04:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	1055413	0.00
Cr	52	1	No Gas	974567	0.00
Mn	55	1	No Gas	1308313	0.00
Co	59	1	No Gas	1046672	0.00
Ni	60	1	No Gas	227082	0.00
Cu	63	1	No Gas	579218	0.00
Sr	88	1	No Gas	1581909	0.00
Ag	107	1	No Gas	711646	0.00
Al	27	1	No Gas	493429	0.00
Sn	118	1	No Gas	455302	0.00
Ti	47	1	No Gas	76648	0.00
Zn	66	1	No Gas	175742	0.00
As	75	3	HeHe	10543	0.05
As	75	1	No Gas	173588	0.00
Sb	121	1	No Gas	585608	0.00
Hg	201	1	No Gas	1186	0.04
Be	9	1	No Gas	83644	0.00
Pb	208	1	No Gas	1156872	0.00
Se	82	1	No Gas	9279	0.00
Mo	98	1	No Gas	448344	0.00
Ba	137	1	No Gas	174963	0.00
Tl	205	1	No Gas	860481	0.00
U	238	1	No Gas	900923	0.00
Na	23	2	he	585341	0.00
Mg	24	2	he	297657	0.00
K	39	2	he	385079	0.00
Se	82	3	HeHe	510	1.52
Fe	57	3	HeHe	27095	0.02
Cd	114	1	No Gas	350120	0.00
Ca	44	1	No Gas	250386	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1735099	0.71	1662313	104.38	70	120	
Sc	45	2	he	203908	3.46	207479	98.28	70	120	
Ge	72	1	No Gas	226405	0.44	222710	101.66	70	120	

Calibration Standard Report

In	115	1	No Gas	1329355	0.83	1280558	103.81	70	120	
Tb	159	1	No Gas	1598675	0.18	1515490	105.49	70	120	
Bi	209	1	No Gas	764959	3.32	722984	105.81	70	120	
Sc	45	3	HeHe	30818	4.13	30220	101.98	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 5
Data File Name	007CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T03:02:14-04:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	2254728	0.00
Cr	52	1	No Gas	2083609	0.00
Mn	55	1	No Gas	2797226	0.00
Co	59	1	No Gas	2303019	0.00
Ni	60	1	No Gas	498589	0.00
Cu	63	1	No Gas	1243968	0.00
Sr	88	1	No Gas	3277798	0.00
Ag	107	1	No Gas	1575427	0.00
Al	27	1	No Gas	1069838	0.00
Sn	118	1	No Gas	981091	0.00
Ti	47	1	No Gas	165314	0.00
Zn	66	1	No Gas	364882	0.00
As	75	3	HeHe	23078	0.01
As	75	1	No Gas	367209	0.00
Sb	121	1	No Gas	1272897	0.00
Hg	201	1	No Gas	2446	0.15
Be	9	1	No Gas	176996	0.00
Pb	208	1	No Gas	2479274	0.00
Se	82	1	No Gas	20191	0.01
Mo	98	1	No Gas	956794	0.00
Ba	137	1	No Gas	379891	0.00
Tl	205	1	No Gas	1873439	0.00
U	238	1	No Gas	1994157	0.00
Na	23	2	he	1248799	0.00
Mg	24	2	he	642856	0.00
K	39	2	he	799020	0.00
Se	82	3	HeHe	1068	0.24
Fe	57	3	HeHe	58860	0.01
Cd	114	1	No Gas	751584	0.00
Ca	44	1	No Gas	520650	0.00

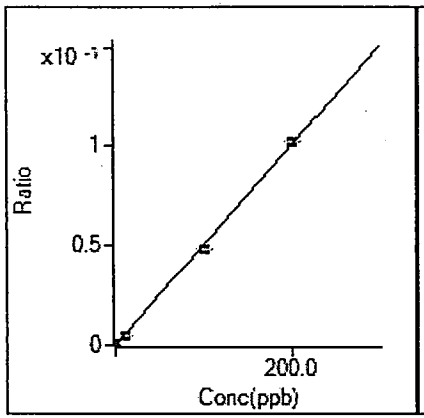
QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1729522	0.42	1662313	104.04	70	120	
Sc	45	2	he	215524	0.57	207479	103.88	70	120	
Ge	72	1	No Gas	228721	1.39	222710	102.70	70	120	

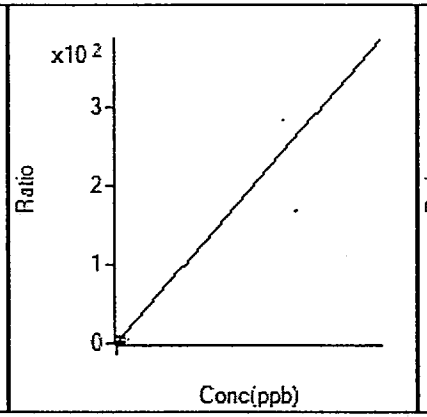
Calibration Standard Report

In	115	1	No Gas	1321508	3.22	1280558	103.20	70	120	
Tb	159	1	No Gas	1611589	0.73	1515490	106.34	70	120	
Bi	209	1	No Gas	781724	1.47	722984	108.12	70	120	
Sc	45	3	HeHe	30858	2.06	30220	102.11	70	120	

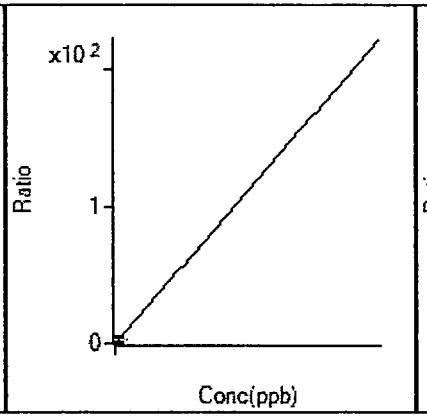
Calibration for C:\Agilent\ICPMH\1\DATA\A082012B.b\014ICSB.d



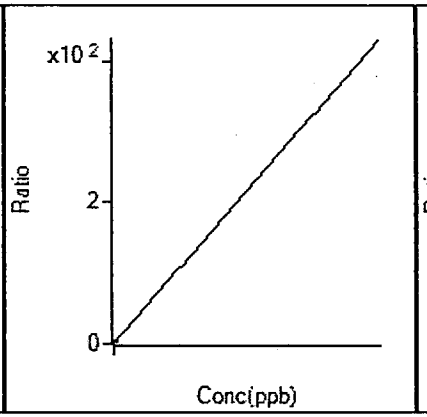
9 Be [No Gas] / ISTD: 45 Sc
y = 5.058E-4 x + 6.100E-6
R 0.9996
DL 0.02555
BEC 0.01206



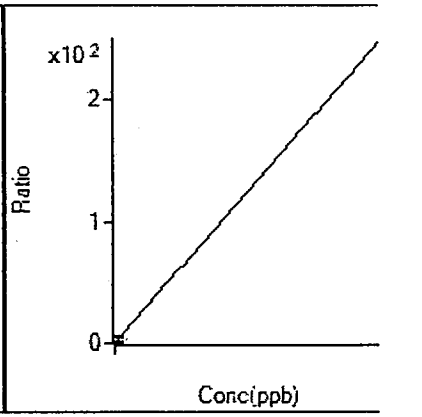
23 Na [he] / ISTD: 45 Sc
y = 2.735E-3 x + 2.611E-1
R 0.9996
DL 8.646
BEC 95.44



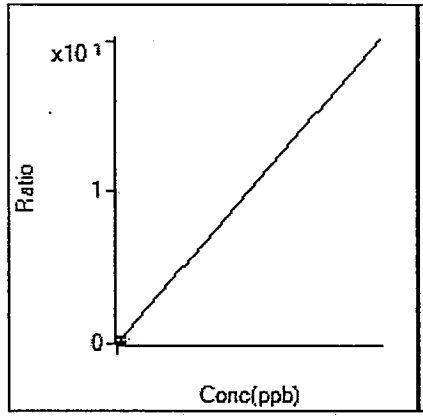
24 Mg [he] / ISTD: 45 Sc
y = 1.484E-3 x + 1.395E-3
R 0.9999
DL 0.6006
BEC 0.9395



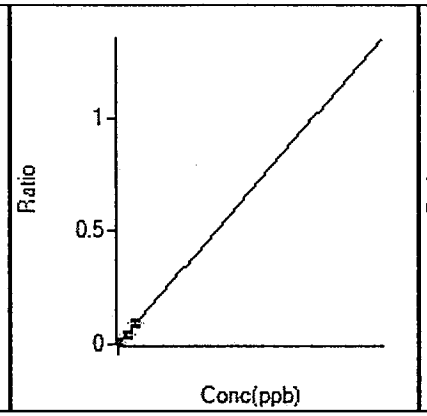
27 Al [No Gas] / ISTD: 45 Sc
y = 3.031E-3 x + 2.238E-3
R 0.9989
DL 0.397
BEC 0.7383



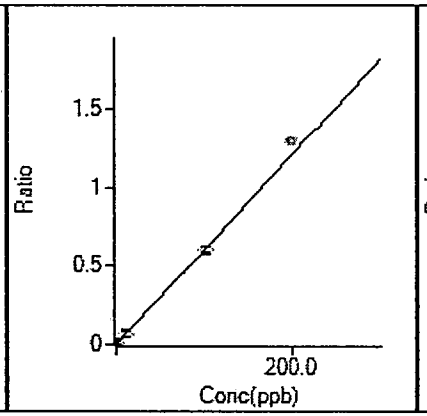
39 K [he] / ISTD: 45 Sc
y = 1.737E-3 x + 2.066E-1
R 0.9998
DL 3.148
BEC 118.9



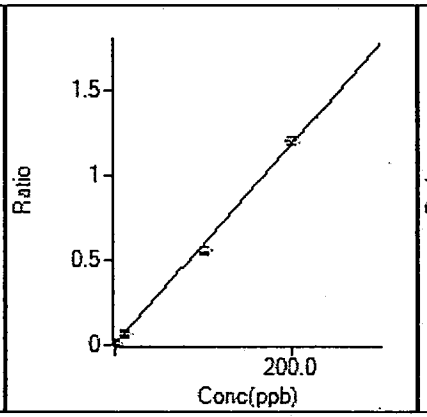
44 Ca [No Gas] / ISTD: 45 Sc
y = 1.445E-4 x + 8.112E-3
R 0.9993
DL 51.52
BEC 56.16



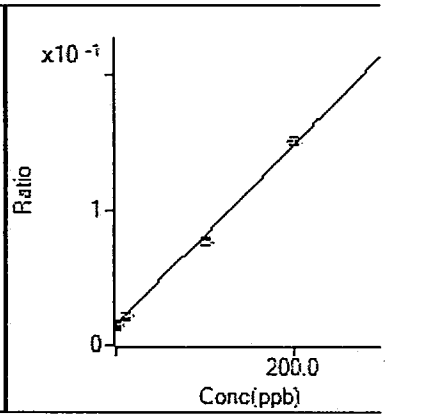
47 Ti [No Gas] / ISTD: 45 Sc
y = 4.703E-4 x + 6.765E-5
R 0.9993
DL 0.008514
BEC 0.1438



51 V [No Gas] / ISTD: 45 Sc
y = 6.094E-3 x - 3.625E-4
R 0.9999
DL 1.081
BEC -0.05948

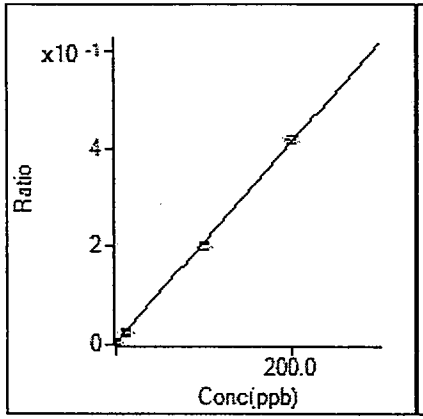


52 Cr [No Gas] / ISTD: 45 Sc
y = 5.914E-3 x + 4.909E-3
R 0.9994
DL 0.03382
BEC 0.8301

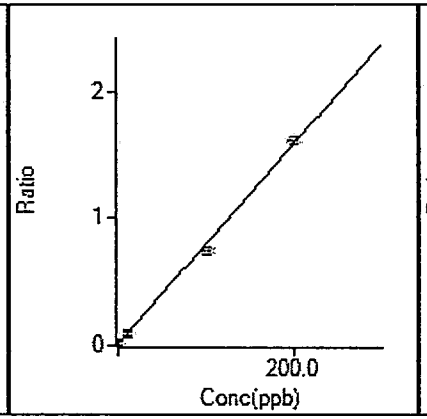


53 [V] [No Gas] / ISTD: 45 Sc
y = 6.659E-4 x + 1.514E-2
R 0.9989
DL 6.641
BEC 22.74

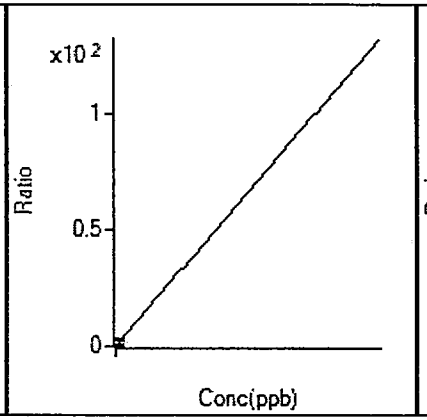
Calibration for C:\Agilent\ICPMH\1\DATA\A082012B.b\014ICSB.d



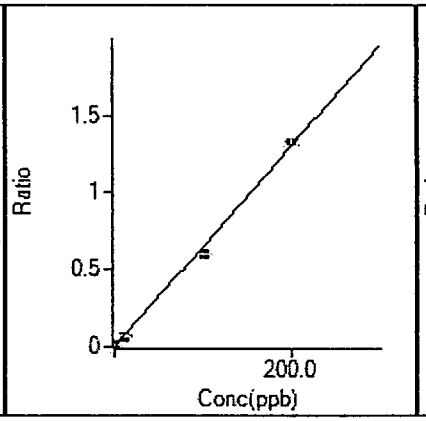
53 [V] [he] / ISTD: 45 Sc
y = 2.058E-3 x + 3.440E-3
R 0.9997
DL 0.999
BEC 1.672



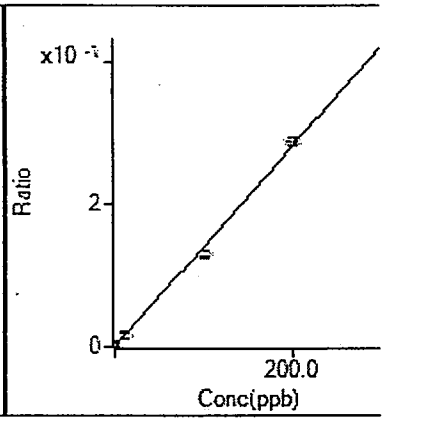
55 Mn [No Gas] / ISTD: 45 Sc
y = 7.929E-3 x + 8.300E-3
R 0.9994
DL 0.2715
BEC 1.047



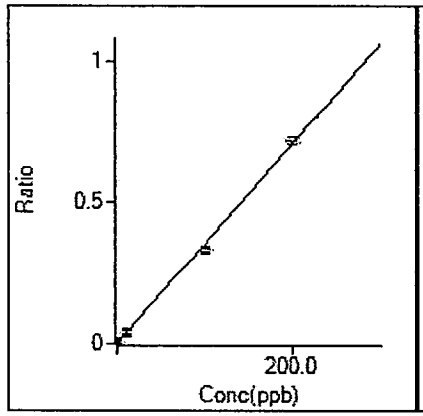
57 Fe [HeHe] / ISTD: 45 Sc
y = 9.518E-4 x + 4.970E-3
R 1.0000
DL 4.574
BEC 5.221



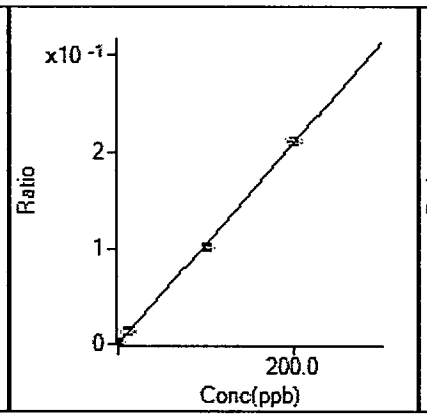
59 Co [No Gas] / ISTD: 45 Sc
y = 6.533E-3 x + 8.437E-5
R 0.9990
DL 0.01264
BEC 0.01291



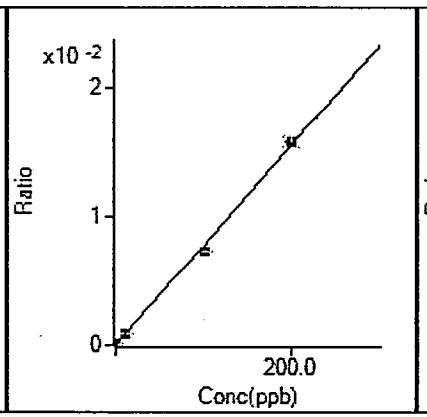
60 Ni [No Gas] / ISTD: 45 Sc
y = 1.414E-3 x + 1.128E-4
R 0.9990
DL 0.02762
BEC 0.07972



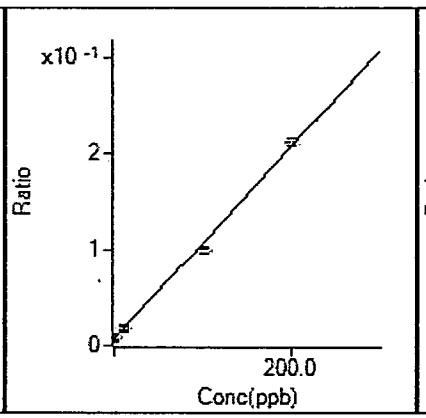
63 Cu [No Gas] / ISTD: 45 Sc
y = 3.540E-3 x + 8.285E-4
R 0.9994
DL 0.06071
BEC 0.234



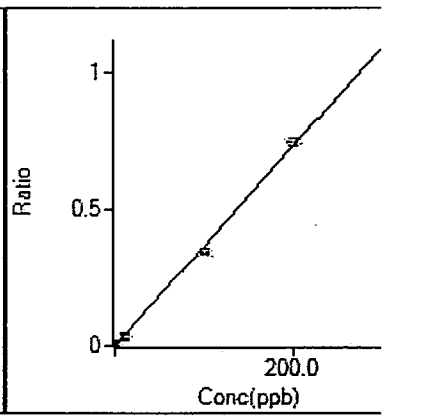
66 Zn [No Gas] / ISTD: 45 Sc
y = 1.046E-3 x + 1.875E-4
R 0.9997
DL 0.1226
BEC 0.1792



69 [Zn] [No Gas] / ISTD: 45 Sc
y = 7.785E-5 x + 2.104E-5
R 0.9993
DL 0.7389
BEC 0.2703

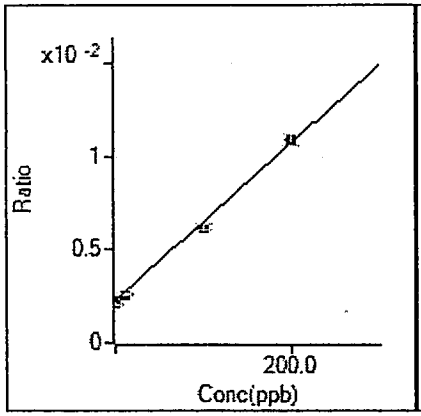


75 As [No Gas] / ISTD: 45 Sc
y = 1.004E-3 x + 7.507E-3
R 0.9989
DL 2.146
BEC 7.474

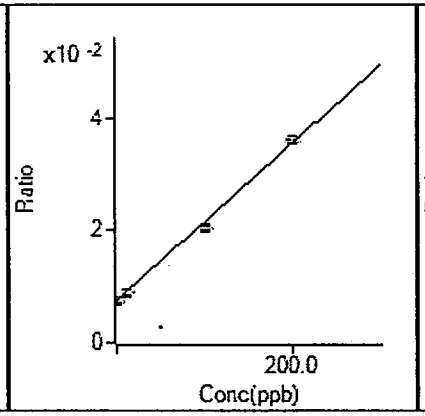


75 As [HeHe] / ISTD: 45 Sc
y = 3.676E-3 x + 1.514E-4
R 0.9992
DL 0.03038
BEC 0.04119

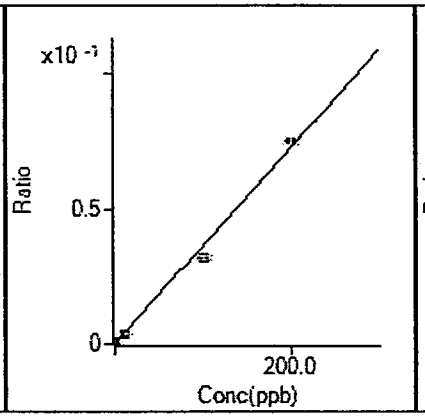
Calibration for C:\Agilent\ICPMH\1\DATA\A082012B.b\014ICSB.d



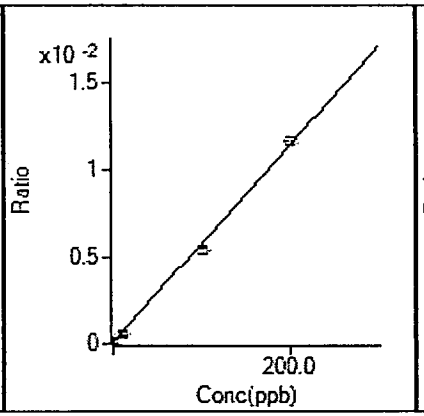
77 [As] [No Gas] / ISTD: 45 Sc
y = 4.228E-5 x + 2.271E-3
R 0.9991
DL 19.36
BEC 53.72



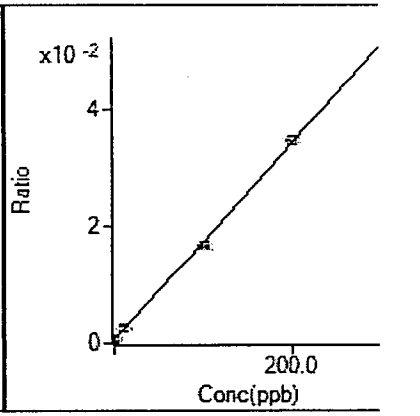
78 Se [No Gas] / ISTD: 45 Sc
y = 1.406E-4 x + 7.589E-3
R 0.9991
DL 17.35
BEC 53.98



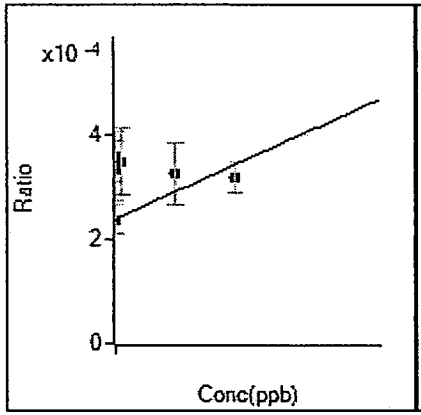
78 Se [HeHe] / ISTD: 45 Sc
y = 3.648E-4 x + 1.075E-4
R 0.9972
DL 0.7933
BEC 0.2947



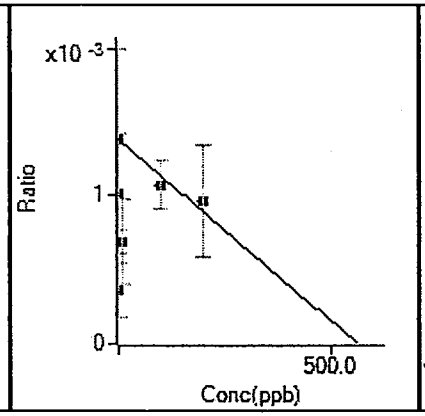
82 Se [No Gas] / ISTD: 45 Sc
y = 5.685E-5 x + 8.650E-5
R 0.9991
DL 0.8369
BEC 1.521



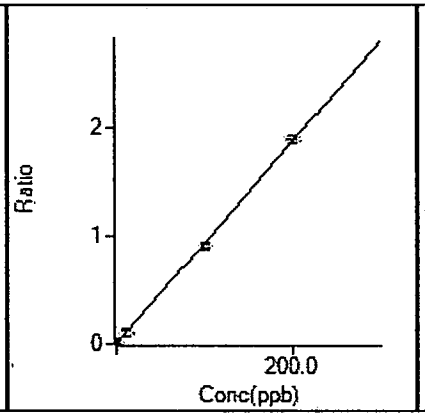
82 Se [HeHe] / ISTD: 45 Sc
y = 1.687E-4 x + 4.823E-4
R 0.9995
DL 3.086
BEC 2.859



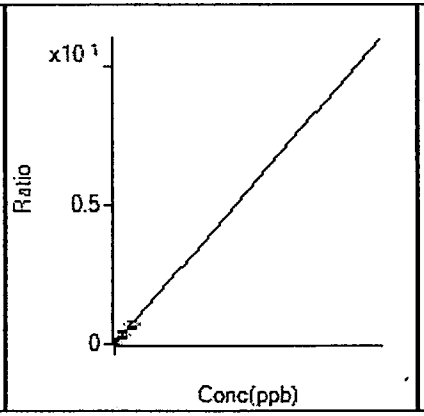
83 [Se] [No Gas] / ISTD: 115 In
y = 5.261E-7 x + 2.383E-4
R 0.0363
DL 303.2
BEC 453



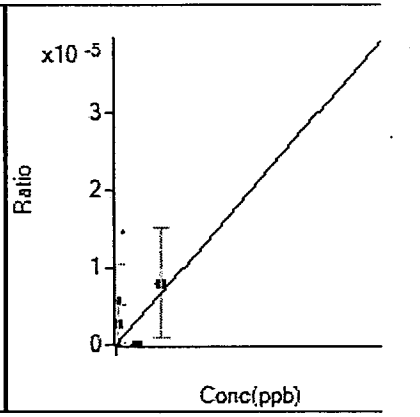
83 [Se] [HeHe] / ISTD: 45 Sc
y = - 2.447E-6 x + 1.382E-3
R 0.1587
DL -1497
BEC -565



88 Sr [No Gas] / ISTD: 45 Sc
y = 9.405E-3 x + 7.959E-5
R 0.9998
DL 0.00891
BEC 0.008462

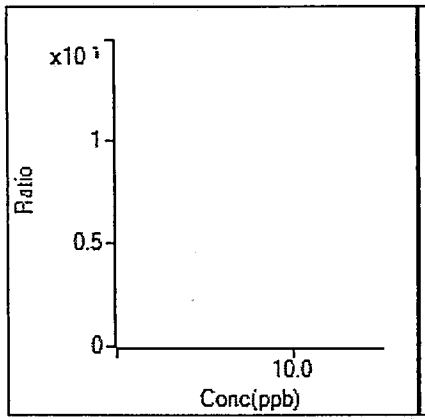


98 Mo [No Gas] / ISTD: 115 In
y = 3.569E-3 x + 5.631E-4
R 0.9994
DL 0.03345
BEC 0.1578

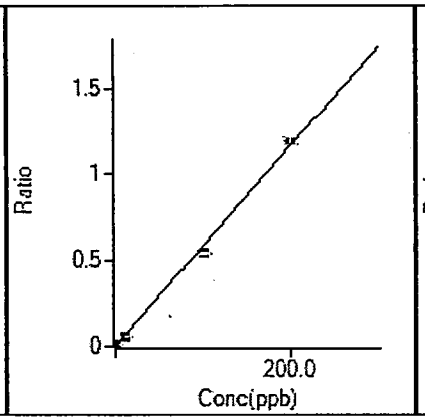


101 [Mo] [No Gas] / ISTD: 115 In
y = 3.304E-8 x
R 0.4998
DL 0
BEC 0

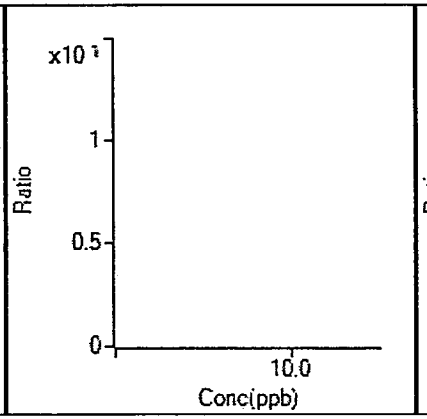
Calibration for C:\Agilent\ICPMH\1\DATA\A082012B.b\014ICSB.d



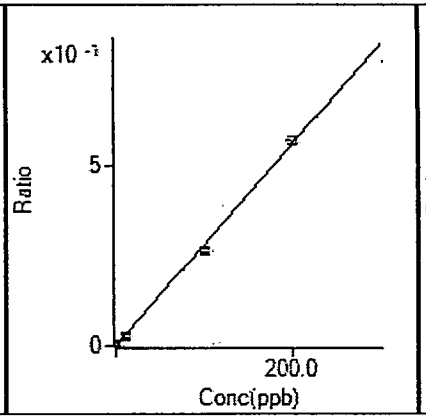
106 [Cd] [No Gas] / ISTD: 115 In
y =
R
DL
BEC



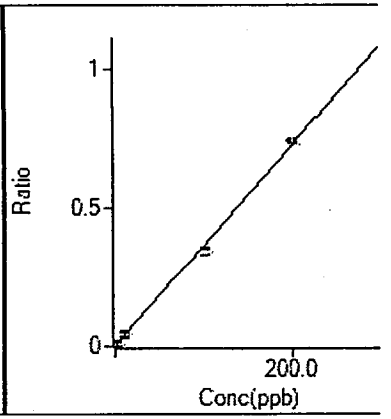
107 Ag [No Gas] / ISTD: 115 In
y = 5.844E-3 x + 4.144E-5
R 0.9988
DL 0.01481
BEC 0.007091



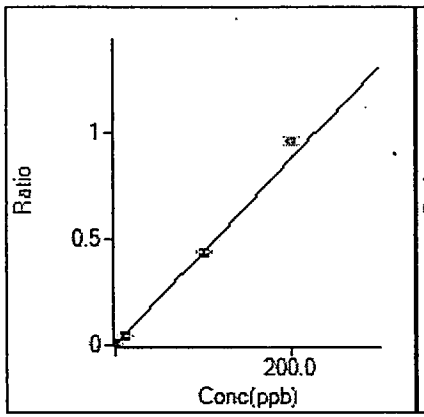
108 [Cd] [No Gas] / ISTD: 115 In
y =
R
DL
BEC



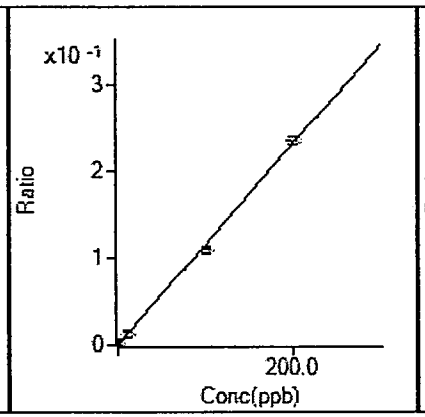
114 Cd [No Gas] / ISTD: 115 In
y = 2.802E-3 x + 1.042E-4
R 0.9994
DL 0.06203
BEC 0.0372



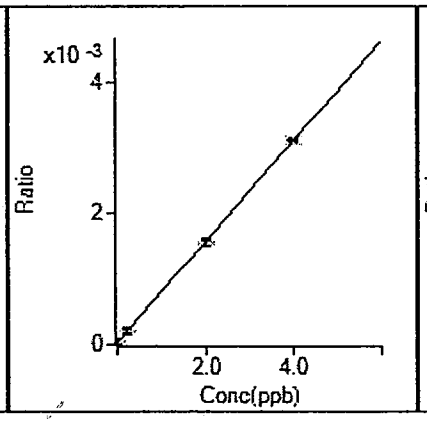
118 Sn [No Gas] / ISTD: 115 In
y = 3.644E-3 x + 2.111E-3
R 0.9992
DL 0.5649
BEC 0.5794



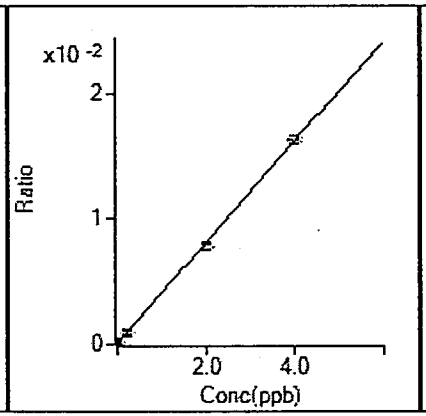
121 Sb [No Gas] / ISTD: 115 In
y = 4.394E-3 x + 1.515E-3
R 0.9999
DL 0.08
BEC 0.3447



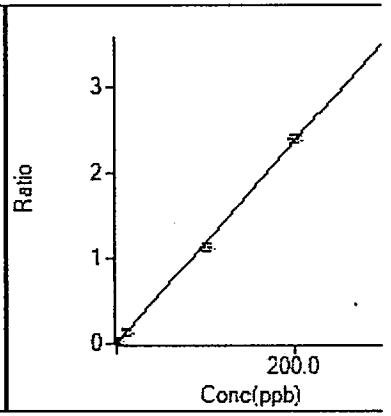
137 Ba [No Gas] / ISTD: 159 Tb
y = 1.162E-3 x + 2.614E-5
R 0.9994
DL 0.04082
BEC 0.0225



201 Hg [No Gas] / ISTD: 209 Bi
y = 7.724E-4 x + 2.906E-5
R 0.9999
DL 0.07116
BEC 0.03763

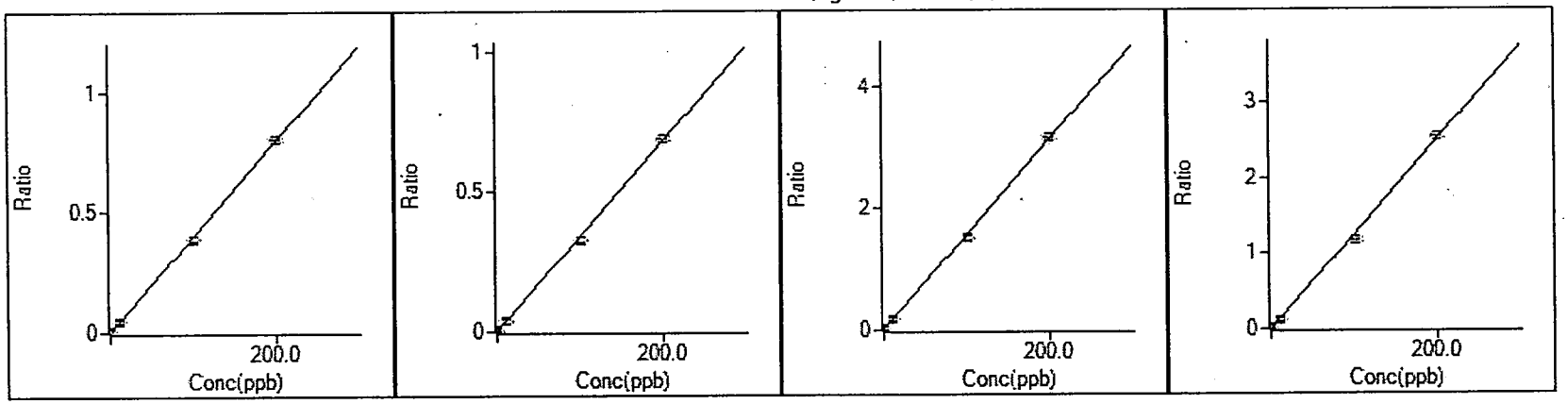


202 Hg [No Gas] / ISTD: 209 Bi
y = 4.034E-3 x + 3.501E-5
R 0.9997
DL 0.003912
BEC 0.008679



205 Tl [No Gas] / ISTD: 209 Bi
y = 1.184E-2 x + 6.122E-5
R 0.9996
DL 0.01329
BEC 0.00517

Calibration for C:\Agilent\ICPMH\1\DATA\A082012B.b\014ICSB.d



206 [Pb] [No Gas] / ISTD: 209 Bi
y = 3.983E-3 x + 5.601E-5
R 0.9999
DL 0.01159
BEC 0.01406

207 [Pb] [No Gas] / ISTD: 209 Bi
y = 3.402E-3 x + 4.127E-5
R 0.9997
DL 0.009106
BEC 0.01213

208 Pb [No Gas] / ISTD: 209 Bi
y = 1.565E-2 x + 1.018E-2
R 0.9997
DL 0.1274
BEC 0.6502

238 U [No Gas] / ISTD: 209 Bi
y = 1.256E-2 x + 6.647E-5
R 0.9993
DL 0.008302
BEC 0.005292

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	008_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T03:05:48-04:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

Sn ↑

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	105.367	1.464	1089128	0.80	100	105.4	90	110	
Cr	52	1	No Gas	99.571	1.385	1007663	0.71	100	99.6	90	110	
Mn	55	1	No Gas	101.765	2.468	1383441	1.80	100	101.8	90	110	
Co	59	1	No Gas	96.986	2.259	1075493	1.62	100	97.0	90	110	
Ni	60	1	No Gas	99.729	1.159	239588	0.54	100	99.7	90	110	
Cu	63	1	No Gas	99.748	0.654	600732	0.78	100	99.7	90	110	
Sr	88	1	No Gas	102.586	4.030	1637559	3.67	100	102.6	90	110	
Ag	107	1	No Gas	99.065	0.788	739265	1.74	100	99.1	90	110	
Al	27	1	No Gas	98.519	1.636	510608	0.98	100	98.5	90	110	
Sn	118	1	No Gas	110.598	0.837	517337	2.56	100	110.6	90	110	ICV Main CR1 Failed
Tl	47	1	No Gas	94.139	1.252	75260	0.90	100	94.1	90	110	
Zn	66	1	No Gas	99.542	0.898	177011	0.95	100	99.5	90	110	
As	75	3	HeHe	103.059	4.792	11331	1.84	100	103.1	90	110	
As	75	1	No Gas	98.850	1.142	181265	1.56	100	98.9	90	110	
Sb	121	1	No Gas	108.594	3.354	611346	4.55	100	108.6	90	110	
Hg	201	1	No Gas	2.029	15.410	1228	14.94	2	101.4	90	110	
Be	9	1	No Gas	102.398	1.789	87905	1.53	100	102.4	90	110	
Pb	208	1	No Gas	100.208	0.866	1215166	0.73	100	100.2	90	110	
Se	82	1	No Gas	97.539	1.824	9560	2.45	100	97.5	90	110	
Mo	98	1	No Gas	100.512	1.189	458837	1.97	100	100.5	90	110	
Ba	137	1	No Gas	98.468	1.819	181516	1.90	100	98.5	90	110	
Tl	205	1	No Gas	94.953	0.651	865326	0.50	100	95.0	90	110	
U	238	1	No Gas	104.508	1.118	1010404	0.97	100	104.5	90	110	
Na	23	2	he	1022.631	1.314	644415	1.21	1000	102.3	90	110	
Mg	24	2	he	1042.030	0.974	326242	2.05	1000	104.2	90	110	
K	39	2	he	1011.769	1.394	413899	1.78	1000	101.2	90	110	
Se	82	3	HeHe	113.372	3.077	587	5.92	100	113.4	90	110	ICV Main CR1 Failed
Fe	57	3	HeHe	1031.200	4.728	29489	2.02	1000	103.1	90	110	
Cd	114	1	No Gas	101.911	1.344	364666	0.75	100	101.9	90	110	
Ca	44	1	No Gas	996.306	0.550	258040	1.19	1000	99.6	90	110	

X

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1697262	0.69	1662313	102.10	70	120	
Sc	45	2	he	210742	2.30	207479	101.57	70	120	
Ge	72	1	No Gas	228790	1.06	222710	102.73	70	120	
In	115	1	No Gas	1276973	2.03	1280558	99.72	70	120	
Tb	159	1	No Gas	1586772	2.72	1515490	104.70	70	120	
Bi	209	1	No Gas	769648	0.18	722984	106.45	70	120	
Sc	45	3	HeHe	29923	3.27	30220	99.02	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	010_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T03:13:03-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.136	276.8	736	510.3	9	
Cr	52	1	No Gas	-0.004	-1052.5	7954	3.6	4	
Mn	55	1	No Gas	-0.011	-835.3	13376	7.1	25	
Co	59	1	No Gas	-0.006	-56.9	74	48.2	1	
Ni	60	1	No Gas	0.029	86.8	250	24.0	25	
Cu	63	1	No Gas	0.010	113.6	1409	3.3	25	
Sr	88	1	No Gas	-0.002	-170.8	100	48.4	25	
Ag	107	1	No Gas	0.006	37.9	100	19.2	9	
Al	27	1	No Gas	-0.088	-46.1	3210	4.5	1000000	
Sn	118	1	No Gas	0.093	78.6	3126	8.9	25	
Tl	47	1	No Gas	-0.018	-131.4	97	18.2	10000	
Zn	66	1	No Gas	0.075	49.6	433	16.4	25	
As	75	3	HeHe	0.021	198.8	7	68.6	9	
As	75	1	No Gas	0.151	278.8	12477	5.2	9	
Sb	121	1	No Gas	-0.060	-40.3	1597	8.1	4	
Hg	201	1	No Gas	0.005	348.8	25	40.0	0.04	
Be	9	1	No Gas	0.025	67.8	31	44.4	1	
Pb	208	1	No Gas	0.055	55.6	8299	3.4	4	
Se	82	1	No Gas	-0.645	-182.6	82	133.1	25	
Mo	98	1	No Gas	-0.017	-82.0	644	9.1	10000	
Ba	137	1	No Gas	-0.008	-139.3	27	78.1	25	
Tl	205	1	No Gas	-0.001	-124.4	41	15.8	1	
U	238	1	No Gas	0.011	2.2	156	0.0	25	
Na	23	2	he	0.383	540.0	55504	1.3	2500000	
Mg	24	2	he	0.108	144.2	330	15.9	2500000	
K	39	2	he	-2.772	-57.0	42741	1.8	5000000	
Se	82	3	HeHe	0.934	147.9	20	36.4	25	
Fe	57	3	HeHe	-1.181	-86.3	120	25.0	2500000	
Cd	114	1	No Gas	-0.014	-26.8	83	18.3	1	
Ca	44	1	No Gas	-2.985	-359.6	12488	18.5	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1629424	1.77	1662313	98.02	70	120	
Sc	45	2	he	211789	1.16	207479	102.08	70	120	
Ge	72	1	No Gas	223589	2.46	222710	100.39	70	120	

Initial Calibration Blank (ICB) Report

In	115	1	No Gas	1278349	2.14	1280558	99.83	70	120	
Tb	159	1	No Gas	1574771	2.79	1515490	103.91	70	120	
Bi	209	1	No Gas	752179	1.47	722984	104.04	70	120	
Sc	45	3	HeHe	31202	3.87	30220	103.25	70	120	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV
Data File Name	011LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T03:16:41-04:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

Set

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.557	8.664	25046	9.18	2	127.9	70	130	
Cr	52	1	No Gas	1.934	1.163	26895	0.89	2	96.7	70	130	
Mn	55	1	No Gas	4.976	1.330	78569	1.41	5	99.5	70	130	
Co	59	1	No Gas	5.065	3.323	54579	2.81	5	101.3	70	130	
Ni	60	1	No Gas	5.191	2.337	12265	2.12	5	103.8	70	130	
Cu	63	1	No Gas	5.136	1.564	31275	0.95	5	102.7	70	130	
Sr	88	1	No Gas	4.676	3.287	72481	2.89	5	93.5	70	130	
Ag	107	1	No Gas	1.980	4.757	15119	4.57	2	99.0	70	130	
Al	27	1	No Gas	78.826	2.877	396753	2.58	80	98.5	70	130	
Sn	118	1	No Gas	2.142	7.354	12917	6.42	2	107.1	70	130	
Ti	47	1	No Gas	4.921	1.452	3919	1.18	5	98.4	70	130	
Zn	66	1	No Gas	5.577	4.840	9904	4.19	5	111.5	70	130	
As	75	3	HeHe	3.708	15.549	428	14.80	3	123.6	70	130	
As	75	1	No Gas	2.971	7.780	17259	1.66	3	99.0	70	130	
Sb	121	1	No Gas	2.302	2.142	15147	2.70	2	115.1	70	130	
Hg	201	1	No Gas	0.188	12.741	135	9.39	0.2	94.0	70	130	
Be	9	1	No Gas	1.083	2.274	911	1.87	1	108.3	70	130	
Pb	208	1	No Gas	2.015	1.660	32444	2.13	2	100.7	70	130	
Se	82	1	No Gas	2.972	84.314	421	56.06	5	59.4	70	130	LLICV Main CR1 Failed
Mo	98	1	No Gas	1.927	5.455	9689	4.41	2	96.4	70	130	
Ba	137	1	No Gas	5.121	3.138	9433	3.39	5	102.4	70	130	
Tl	205	1	No Gas	0.976	7.111	9025	5.79	1	97.6	70	130	
U	238	1	No Gas	4.989	0.895	48784	2.17	5	99.8	70	130	
Na	23	2	he	90.284	8.678	113275	2.83	100	90.3	70	130	
Mg	24	2	he	96.651	4.050	32312	4.12	100	96.7	70	130	
K	39	2	he	99.525	5.097	84638	1.09	100	99.5	70	130	
Se	82	3	HeHe	5.970	27.437	46	18.64	5	119.4	70	130	
Fe	57	3	HeHe	55.501	9.024	1797	9.15	50	111.0	70	130	
Cd	114	1	No Gas	1.023	10.902	3864	9.74	1	102.3	70	130	
Ca	44	1	No Gas	105.709	9.391	38476	6.61	100	105.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1645205	0.62	1662313	98.97	70	120	
Sc	45	2	he	223065	1.65	207479	107.51	70	120	
Ge	72	1	No Gas	226436	3.17	222710	101.67	70	120	
In	115	1	No Gas	1302228	1.38	1280558	101.69	70	120	
Tb	159	1	No Gas	1578584	0.64	1515490	104.16	70	120	
Bi	209	1	No Gas	777738	2.82	722984	107.57	70	120	
Sc	45	3	HeHe	31075	1.44	30220	102.83	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	013ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T03:23:58-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.777	26.6	7984	29.3	9	
Cr	52	1	No Gas	1.036	3.8	20119	1.8	4	
Mn	55	1	No Gas	1.135	9.5	31537	4.4	25	
Co	59	1	No Gas	1.344	3.3	16160	2.7	1	ICSA Main CR1 Failed
Ni	60	1	No Gas	1.633	0.8	4417	0.9	5	
Cu	63	1	No Gas	0.886	3.0	7230	1.7	5	
Ag	107	1	No Gas	0.212	13.8	1589	14.0	9	
Al	27	1	No Gas	94022.019	1.3	519633876	0.7	110000	
Sn	118	1	No Gas	-0.144	-28.1	1967	10.4	25	
Ti	47	1	No Gas	1833.257	1.9	1572172	1.2	2200	
Zn	66	1	No Gas	2.314	4.1	4754	4.0	5	
As	75	3	HeHe	0.289	17.4	37	12.4	9	
As	75	1	No Gas	-0.099	-426.5	13504	5.1	9	
Sb	121	1	No Gas	0.209	15.5	3017	4.8	4	
Hg	201	1	No Gas	0.023	41.4	33	17.3	0.04	
Be	9	1	No Gas	0.018	32.3	28	18.9	1	
Pb	208	1	No Gas	0.503	10.6	12767	5.5	4	
Se	82	1	No Gas	-1.379	-66.3	15	651.1	25	
Mo	98	1	No Gas	2046.748	1.2	9060304	1.9	2200	
Ba	137	1	No Gas	0.136	27.3	293	27.6	25	
Tl	205	1	No Gas	0.012	48.4	144	33.5	1	
U	238	1	No Gas	0.009	64.7	126	40.8	25	
Na	23	2	he	84360.451	4.8	53517580	2.1	110000	
Mg	24	2	he	88173.830	5.4	30309104	0.2	110000	
K	39	2	he	85321.210	4.9	34386096	2.7	110000	
Se	82	3	HeHe	0.115	747.1	15	29.6	25	
Fe	57	3	HeHe	93882.224	2.5	2699874	2.4	110000	
Cd	114	1	No Gas	0.597	9.1	2204	8.5	1	
Ca	44	1	No Gas	92156.064	1.1	24286854	0.6	110000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1823397	0.69	1662313	109.69	70	120	
Sc	45	2	he	232032	5.54	207479	111.83	70	120	
Ge	72	1	No Gas	229562	3.45	222710	103.08	70	120	
In	115	1	No Gas	1240040	1.28	1280558	96.84	70	120	
Tb	159	1	No Gas	1587734	4.70	1515490	104.77	70	120	
Bi	209	1	No Gas	706872	1.43	722984	97.77	70	120	
Sc	45	3	HeHe	30224	3.16	30220	100.01	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	014ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T03:27:33-04:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	41.747	0.333	453315	0.50	40	104.4	80	120	
Cr	52	1	No Gas	19.743	0.424	217100	0.59	20	98.7	80	120	
Mn	55	1	No Gas	20.959	7.433	311338	7.04	20	104.8	80	120	
Co	59	1	No Gas	37.373	2.468	435850	2.53	40	93.4	80	120	
Ni	60	1	No Gas	37.011	2.540	93613	2.69	40	92.5	80	120	
Cu	63	1	No Gas	18.790	1.825	120175	1.79	20	94.0	80	120	
Ag	107	1	No Gas	19.340	2.862	141824	3.70	20	96.7	80	120	
Al	27	1	No Gas	95099.116	2.465	514383594	2.58	100000	95.1	90	110	
Tl	47	1	No Gas	1924.927	2.175	1615631	2.28	2000	96.2	90	110	
Zn	66	1	No Gas	21.306	1.748	40097	1.91	20	106.5	80	120	
As	75	3	HeHe	20.469	3.835	2273	2.73	20	102.3	80	120	
As	75	1	No Gas	19.279	4.597	47948	3.17	20	96.4	80	120	
Sb	121	1	No Gas	0.302	19.797	3564	9.82	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Hg	201	1	No Gas	0.011	158.832	27	34.64	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Be	9	1	No Gas	0.008	48.544	18	19.25	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Pb	208	1	No Gas	0.515	14.652	13053	6.20	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Se	82	1	No Gas	16.299	1.313	1808	1.03	20	81.5	80	120	
Mo	98	1	No Gas	2062.546	0.563	9234409	0.82	2000	103.1	90	110	
Ba	137	1	No Gas	0.205	5.603	430	4.65	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Tl	205	1	No Gas	0.021	19.449	219	16.35	0	#DIV/0!	0	0	ICSB Main CR1 Failed
U	238	1	No Gas	0.013	53.813	163	38.77	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Na	23	2	he	94590.417	0.505	54581155	0.41	100000	94.6	90	110	
Mg	24	2	he	100134.461	1.892	31321542	1.27	100000	100.1	90	110	
K	39	2	he	96091.335	1.369	35223508	1.98	100000	96.1	90	110	
Se	82	3	HeHe	19.441	23.663	114	22.08	20	97.2	80	120	
Fe	57	3	HeHe	93104.649	2.674	2672578	2.95	100000	93.1	90	110	
Cd	114	1	No Gas	10.202	0.710	35976	0.43	10	102.0	80	120	
Ca	44	1	No Gas	93160.954	2.478	24027852	2.60	100000	93.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1784394	0.19	1662313	107.34	70	120	
Sc	45	2	he	210738	0.62	207479	101.57	70	120	
Ge	72	1	No Gas	229782	1.52	222710	103.18	70	120	
In	115	1	No Gas	1254248	1.14	1280558	97.95	70	120	
Tb	159	1	No Gas	1627594	1.19	1515490	107.40	70	120	
Bi	209	1	No Gas	715952	0.89	722984	99.03	70	120	
Sc	45	3	HeHe	30160	2.00	30220	99.80	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	057_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T07:16:02-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	100.011	2.998	1049640	0.54	100	100.0	90	110	
Cr	52	1	No Gas	99.699	3.400	970153	1.02	100	99.7	90	110	
Mn	55	1	No Gas	106.183	0.361	1388152	2.13	100	106.2	90	110	
Co	59	1	No Gas	98.815	2.440	1053860	0.81	100	98.8	90	110	
Ni	60	1	No Gas	100.791	3.048	232836	0.63	100	100.8	90	110	
Cu	63	1	No Gas	101.831	1.812	589786	0.75	100	101.8	90	110	
Sr	88	1	No Gas	107.939	2.404	1657183	1.39	100	107.9	90	110	
Ag	107	1	No Gas	97.244	1.400	740299	0.56	100	97.2	90	110	
Al	27	1	No Gas	100.649	1.518	501763	2.61	100	100.6	90	110	
Sn	118	1	No Gas	107.155	0.513	511409	1.22	100	107.2	90	110	
Tl	47	1	No Gas	96.126	4.364	73878	1.94	100	96.1	90	110	
Zn	66	1	No Gas	103.452	3.583	176881	2.06	100	103.5	90	110	
As	75	3	HeHe	101.086	2.484	11187	0.97	100	101.1	90	110	
As	75	1	No Gas	100.146	3.355	176409	0.63	100	100.1	90	110	
Sb	121	1	No Gas	104.898	2.951	602519	3.84	100	104.9	90	110	
Hg	201	1	No Gas	2.129	4.332	1324	3.72	2	106.4	90	110	
Be	9	1	No Gas	104.420	1.182	86224	1.51	100	104.4	90	110	
Pb	208	1	No Gas	98.788	0.236	1232132	0.41	100	98.8	90	110	
Se	82	1	No Gas	101.678	3.261	9576	2.18	100	101.7	90	110	
Mo	98	1	No Gas	97.712	1.186	455076	0.60	100	97.7	90	110	
Ba	137	1	No Gas	97.308	1.892	182057	2.48	100	97.3	90	110	
Tl	205	1	No Gas	93.886	0.878	879927	0.85	100	93.9	90	110	
U	238	1	No Gas	103.447	0.523	1028581	0.35	100	103.4	90	110	
Na	23	2	he	1005.463	2.599	618110	3.06	1000	100.5	90	110	
Mg	24	2	he	1044.668	2.625	318557	3.00	1000	104.5	90	110	
K	39	2	he	1007.290	0.845	401543	1.34	1000	100.7	90	110	
Se	82	3	HeHe	101.881	7.214	531	5.81	100	101.9	90	110	
Fe	57	3	HeHe	1045.767	5.083	30093	3.87	1000	104.6	90	110	
Cd	114	1	No Gas	100.023	3.381	365111	2.23	100	100.0	90	110	
Ca	44	1	No Gas	1002.355	1.658	249596	0.98	1000	100.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1632792	2.46	1662313	98.22	70	120	
Sc	45	2	he	205255	1.89	207479	98.93	70	120	
Ge	72	1	No Gas	221581	1.17	222710	99.49	70	120	
In	115	1	No Gas	1302774	1.24	1280558	101.73	70	120	
Tb	159	1	No Gas	1610635	3.53	1515490	106.28	70	120	
Bi	209	1	No Gas	791534	0.54	722984	109.48	70	120	
Sc	45	3	HeHe	30097	1.51	30220	99.59	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	058_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T07:19:39-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.778	46.3	7275	48.2	9	
Cr	52	1	No Gas	-0.097	-70.9	6824	7.7	4	
Mn	55	1	No Gas	-0.083	-33.0	12035	2.0	25	
Co	59	1	No Gas	0.004	263.5	170	58.5	1	
Ni	60	1	No Gas	0.025	146.3	233	35.9	25	
Cu	63	1	No Gas	0.036	31.9	1507	2.6	25	
Sr	88	1	No Gas	0.005	39.9	200	14.7	25	
Ag	107	1	No Gas	0.020	23.8	200	14.7	9	
Al	27	1	No Gas	0.514	65.3	5962	25.1	1000000	
Sn	118	1	No Gas	-0.311	-9.6	1248	11.1	25	
Ti	47	1	No Gas	0.132	42.7	204	18.8	10000	
Zn	66	1	No Gas	0.031	205.2	347	30.6	25	
As	75	3	HeHe	0.046	3.4	10	0.0	9	
As	75	1	No Gas	-0.073	-664.4	11713	7.2	9	
Sb	121	1	No Gas	0.398	33.0	4161	15.2	4	
Hg	201	1	No Gas	0.046	39.3	50	20.8	0.04	CCB Main CR1 Failed
Be	9	1	No Gas	0.030	57.0	33	39.9	1	
Pb	208	1	No Gas	0.165	14.7	9885	3.1	4	
Se	82	1	No Gas	-0.716	-102.2	71	89.2	25	
Mo	98	1	No Gas	0.024	78.7	829	10.1	10000	
Ba	137	1	No Gas	0.047	21.5	130	15.4	25	
Tl	205	1	No Gas	0.006	98.0	104	52.9	1	
U	238	1	No Gas	0.014	29.2	193	21.8	25	
Na	23	2	he	1.949	156.3	55034	2.9	2500000	
Mg	24	2	he	0.193	79.8	348	16.1	2500000	
K	39	2	he	0.770	622.8	42945	1.6	5000000	
Se	82	3	HeHe	2.471	18.9	27	8.4	25	
Fe	57	3	HeHe	0.990	80.2	180	11.1	2500000	
Cd	114	1	No Gas	-0.003	-292.1	123	28.5	1	
Ca	44	1	No Gas	-6.504	-134.4	11291	17.1	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1575303	1.73	1662313	94.77	70	120	
Sc	45	2	he	206645	2.62	207479	99.60	70	120	
Ge	72	1	No Gas	224348	2.19	222710	100.74	70	120	
In	115	1	No Gas	1278609	3.34	1280558	99.85	70	120	
Tb	159	1	No Gas	1618838	1.31	1515490	106.82	70	120	
Bi	209	1	No Gas	774990	1.02	722984	107.19	70	120	

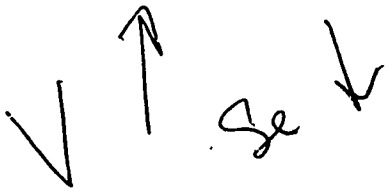
Continuing Calibration Blank (CCB) Report

Sc	45	3	HeHe	30494	1.81	30220	100.91	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	059LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T07:23:16-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass



QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.867	6.843	29874	7.31	2	143.4	70	130	LLCCV Main CR1 Failed
Cr	52	1	No Gas	1.869	1.268	26358	0.85	2	93.4	70	130	
Mn	55	1	No Gas	4.908	1.628	77973	1.60	5	98.2	70	130	
Co	59	1	No Gas	4.852	3.499	52488	3.47	5	97.0	70	130	
Ni	60	1	No Gas	4.978	2.075	11815	2.26	5	99.6	70	130	
Cu	63	1	No Gas	5.173	1.101	31608	0.69	5	103.5	70	130	
Sr	88	1	No Gas	4.884	1.952	75997	1.95	5	97.7	70	130	
Ag	107	1	No Gas	1.991	1.056	15408	0.26	2	99.6	70	130	
Al	27	1	No Gas	77.862	0.275	393451	0.59	80	97.3	70	130	
Sn	118	1	No Gas	1.627	4.028	10611	3.83	2	81.4	70	130	
Ti	47	1	No Gas	5.095	1.389	4069	1.00	5	101.9	70	130	
Zn	66	1	No Gas	5.595	0.859	9972	0.46	5	111.9	70	130	
As	75	3	HeHe	3.253	7.690	371	5.94	3	108.4	70	130	
As	75	1	No Gas	2.698	1.928	16872	0.80	3	89.9	70	130	
Sb	121	1	No Gas	2.292	1.889	15284	1.57	2	114.6	70	130	
Hg	201	1	No Gas	0.233	0.455	164	2.44	0.2	116.4	70	130	
Be	9	1	No Gas	1.042	3.261	880	2.84	1	104.2	70	130	
Pb	208	1	No Gas	2.138	1.519	34268	1.34	2	106.9	70	130	
Se	82	1	No Gas	3.430	14.283	465	9.90	5	68.6	70	130	LLCCV Main CR1 Failed
Mo	98	1	No Gas	1.902	2.051	9698	0.77	2	95.1	70	130	
Ba	137	1	No Gas	5.130	7.260	9733	4.12	5	102.6	70	130	
Tl	205	1	No Gas	0.953	2.806	8910	4.15	1	95.3	70	130	
U	238	1	No Gas	4.801	3.464	47394	3.32	5	96.0	70	130	
Na	23	2	he	99.249	3.885	111710	3.62	100	99.2	70	130	
Mg	24	2	he	100.518	0.117	31585	1.79	100	100.5	70	130	
K	39	2	he	94.906	2.786	77911	2.19	100	94.9	70	130	
Se	82	3	HeHe	6.484	44.425	49	32.58	5	129.7	70	130	
Fe	57	3	HeHe	55.846	1.327	1784	2.82	50	111.7	70	130	
Cd	114	1	No Gas	1.066	7.758	4077	6.72	1	106.6	70	130	
Ca	44	1	No Gas	97.748	7.442	36710	4.33	100	97.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1651414	0.38	1662313	99.34	70	120	
Sc	45	2	he	209722	1.79	207479	101.08	70	120	
Ge	72	1	No Gas	224441	1.04	222710	100.78	70	120	
In	115	1	No Gas	1319454	1.28	1280558	103.04	70	120	
Tb	159	1	No Gas	1628423	3.09	1515490	107.45	70	120	
Bi	209	1	No Gas	785257	2.49	722984	108.61	70	120	
Sc	45	3	HeHe	30681	1.70	30220	101.53	70	120	

Sample Report

Sample Table

Sample Name	1021902
Data File Name	065SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T07:44:45-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3204

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	0.737	0.737	58.35	7046	0.01	1000	
Cr	52	1	No Gas	0.243	0.243	29.51	10259	0.00	1000	
Mn	55	1	No Gas	0.042	0.042	213.52	13962	0.00	1000	
Co	59	1	No Gas	-0.005	-0.005	-75.12	89	-0.01	1000	
Ni	60	1	No Gas	0.161	0.161	16.72	550	0.03	1000	
Cu	63	1	No Gas	0.165	0.165	19.92	2287	0.01	1000	
Sr	88	1	No Gas	0.039	0.039	37.14	726	0.01	1000	
Ag	107	1	No Gas	0.004	0.004	81.47	85	0.01	1000	
Al	27	1	No Gas	5.561	5.561	16.36	30903	0.02	100000	
Sn	118	1	No Gas	-0.447	-0.447	-1.83	611	-0.07	100	
Ti	47	1	No Gas	0.223	0.223	27.29	278	0.08	2000	
Zn	66	1	No Gas	0.862	0.862	8.78	1760	0.05	1000	
As	75	3	HeHe	-0.002	-0.002	-4066.68	5	-0.04	1000	
As	75	1	No Gas	0.695	0.695	59.72	13271	0.01	1000	
Sb	121	1	No Gas	-0.255	-0.255	-1.34	497	-0.05	100	
Hg	201	1	No Gas	0.022	0.022	24.33	35	0.06	4	
Be	9	1	No Gas	-0.004	-0.004	-71.57	7	-0.06	1000	
Pb	208	1	No Gas	0.300	0.300	21.28	11167	0.00	1000	
Se	82	1	No Gas	-1.364	-1.364	-77.31	16	-8.66	1000	
Mo	98	1	No Gas	-0.076	-0.076	-25.45	370	-0.02	2000	
Ba	137	1	No Gas	0.147	0.147	15.30	320	0.05	1000	
Tl	205	1	No Gas	-0.005	-0.005	0.00	0	#DIV/0!	1000	
U	238	1	No Gas	0.001	0.001	184.17	59	0.00	1000	
Na	23	2	he	7.160	7.160	54.31	59449	0.01	100000	
Mg	24	2	he	2.484	2.484	37.72	1082	0.23	100000	
K	39	2	he	-0.453	-0.453	-548.67	43613	0.00	100000	
Se	82	3	HeHe	0.390	0.390	396.51	17	2.29	1000	
Fe	57	3	HeHe	13.733	13.733	24.96	557	2.47	100000	
Cd	114	1	No Gas	-0.015	-0.015	-16.76	80	-0.02	1000	
Ca	44	1	No Gas	6.253	6.253	174.69	14556	0.04	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1618477	2.25	1662313	97.36	70	120	
Sc	45	2	he	211952	2.44	207479	102.16	70	120	

Ge	72	1	No Gas	220316	1.90	222710	98.93	70	120	
In	115	1	No Gas	1261385	1.81	1280558	98.50	70	120	
Tb	159	1	No Gas	1626749	1.64	1515490	107.34	70	120	
Bi	209	1	No Gas	750825	1.12	722984	103.85	70	120	
Sc	45	3	HeHe	30918	1.73	30220	102.31	70	120	

Sample Report

Sample Table

Sample Name	1021903
Data File Name	066SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T07:48:22-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3205

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	40.409	40.409	0.65	420861	0.01	1000	
Cr	52	1	No Gas	40.557	40.557	0.90	396692	0.01	1000	
Mn	55	1	No Gas	40.697	40.697	0.64	536470	0.01	1000	
Co	59	1	No Gas	39.866	39.866	1.19	422297	0.01	1000	
Ni	60	1	No Gas	40.705	40.705	1.46	93505	0.04	1000	
Cu	63	1	No Gas	40.751	40.751	1.69	235115	0.02	1000	
Sr	88	1	No Gas	38.975	38.975	1.37	594265	0.01	1000	
Ag	107	1	No Gas	20.332	20.332	0.90	153424	0.01	1000	
Al	27	1	No Gas	406.016	406.016	2.64	1998170	0.02	100000	
Sn	118	1	No Gas	37.719	37.719	2.76	180180	0.02	100	
Ti	47	1	No Gas	38.505	38.505	0.71	29463	0.13	2000	
Zn	66	1	No Gas	400.377	400.377	1.19	678923	0.06	1000	
As	75	3	HeHe	39.283	39.283	3.44	4574	0.86	1000	
As	75	1	No Gas	40.311	40.311	2.37	77795	0.05	1000	
Sb	121	1	No Gas	47.085	47.085	1.49	269028	0.02	100	
Hg	201	1	No Gas	0.503	0.503	8.52	320	0.16	4	
Be	9	1	No Gas	39.176	39.176	1.26	32117	0.12	1000	
Pb	208	1	No Gas	41.180	41.180	2.35	501798	0.01	1000	
Se	82	1	No Gas	38.409	38.409	0.94	3680	1.04	1000	
Mo	98	1	No Gas	39.678	39.678	4.29	183602	0.02	2000	
Ba	137	1	No Gas	397.676	397.676	3.10	756165	0.05	1000	
Tl	205	1	No Gas	40.210	40.210	4.43	364738	0.01	1000	
U	238	1	No Gas	-0.001	-0.001	-194.30	44	0.00	1000	
Na	23	2	he	417.299	417.299	0.88	291679	0.14	100000	
Mg	24	2	he	421.056	421.056	1.71	130267	0.32	100000	
K	39	2	he	415.889	415.889	2.01	193206	0.22	100000	
Se	82	3	HeHe	44.895	44.895	14.03	254	17.64	1000	
Fe	57	3	HeHe	425.285	425.285	2.68	12969	3.28	100000	
Cd	114	1	No Gas	40.461	40.461	1.26	146472	0.03	1000	
Ca	44	1	No Gas	404.769	404.769	2.01	107934	0.38	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1620738	1.79	1662313	97.50	70	120	
Sc	45	2	he	207975	1.21	207479	100.24	70	120	

Ge	72	1	No Gas	221779	1.45	222710	99.58	70	120	
In	115	1	No Gas	1290880	1.10	1280558	100.81	70	120	
Tb	159	1	No Gas	1637080	2.48	1515490	108.02	70	120	
Bi	209	1	No Gas	766487	3.43	722984	106.02	70	120	
Sc	45	3	HeHe	31649	2.35	30220	104.73	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	070_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:02:49-04:00
Sample Type	CCV
Dilution	1.
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

SF ↑

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	100.568	0.620	1079747	2.18	100	100.6	90	110	
Cr	52	1	No Gas	99.227	1.482	987862	2.64	100	99.2	90	110	
Mn	55	1	No Gas	106.655	2.287	1425245	0.63	100	106.7	90	110	
Co	59	1	No Gas	99.900	2.910	1089376	1.18	100	99.9	90	110	
Ni	60	1	No Gas	102.115	1.414	241279	1.41	100	102.1	90	110	
Cu	63	1	No Gas	103.111	2.858	610529	0.31	100	103.1	90	110	
Sr	88	1	No Gas	111.347	4.703	1747213	2.09	100	111.3	90	110	CCV Main CR1 Failed
Ag	107	1	No Gas	96.447	2.410	768815	0.83	100	96.4	90	110	
Al	27	1	No Gas	98.977	2.013	504669	3.48	100	99.0	90	110	
Sn	118	1	No Gas	107.677	1.759	538110	1.47	100	107.7	90	110	
Tl	47	1	No Gas	95.263	2.176	74892	0.57	100	95.3	90	110	
Zn	66	1	No Gas	102.531	1.456	179309	1.32	100	102.5	90	110	
As	75	3	HeHe	99.434	1.197	11409	1.83	100	99.4	90	110	
As	75	1	No Gas	100.995	1.091	181877	1.78	100	101.0	90	110	
Sb	121	1	No Gas	104.867	5.882	630279	4.10	100	104.9	90	110	
Hg	201	1	No Gas	2.095	0.100	1292	0.86	2	104.7	90	110	
Be	9	1	No Gas	102.164	2.752	86239	0.57	100	102.2	90	110	
Pb	208	1	No Gas	100.644	2.081	1243758	1.27	100	100.6	90	110	
Se	82	1	No Gas	103.060	4.141	9921	1.59	100	103.1	90	110	
Mo	98	1	No Gas	97.223	3.832	474021	1.88	100	97.2	90	110	
Ba	137	1	No Gas	96.520	0.475	192079	0.96	100	96.5	90	110	
Tl	205	1	No Gas	97.400	2.647	904586	1.99	100	97.4	90	110	
U	238	1	No Gas	104.358	1.468	1028302	0.99	100	104.4	90	110	
Na	23	2	he	1004.638	3.131	645081	0.78	1000	100.5	90	110	
Mg	24	2	he	1020.085	4.272	324826	1.95	1000	102.0	90	110	
K	39	2	he	992.891	3.198	414058	1.06	1000	99.3	90	110	
Se	82	3	HeHe	104.549	3.196	565	2.62	100	104.5	90	110	
Fe	57	3	HeHe	1017.444	0.480	30364	0.58	1000	101.7	90	110	
Cd	114	1	No Gas	98.240	2.835	375527	0.92	100	98.2	90	110	
Ca	44	1	No Gas	1006.940	1.946	256326	1.32	1000	100.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1669666	2.74	1662313	100.44	70	120	
Sc	45	2	he	214500	3.19	207479	103.38	70	120	
Ge	72	1	No Gas	233932	1.17	222710	105.04	70	120	
In	115	1	No Gas	1364399	2.03	1280558	106.55	70	120	
Tb	159	1	No Gas	1712623	1.12	1515490	113.01	70	120	
Bi	209	1	No Gas	784447	0.80	722984	108.50	70	120	
Sc	45	3	HeHe	31195	0.79	30220	103.23	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	071_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:06:26-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.321	22.5	2717	26.6	9	
Cr	52	1	No Gas	0.046	96.8	8269	3.1	4	
Mn	55	1	No Gas	-0.076	-148.6	12276	8.6	25	
Co	59	1	No Gas	-0.003	-139.1	104	37.6	1	
Ni	60	1	No Gas	0.013	334.0	210	46.9	25	
Cu	63	1	No Gas	0.021	97.9	1441	8.7	25	
Sr	88	1	No Gas	0.005	88.7	200	33.8	25	
Ag	107	1	No Gas	0.012	1.4	144	0.0	9	
Al	27	1	No Gas	0.181	63.3	4442	9.8	1000000	
Sn	118	1	No Gas	-0.281	-19.4	1393	17.6	25	
Ti	47	1	No Gas	0.214	130.6	273	81.4	10000	
Zn	66	1	No Gas	0.042	26.0	370	4.7	25	
As	75	3	HeHe	0.045	134.7	10	72.1	9	
As	75	1	No Gas	0.320	252.4	12540	13.8	9	
Sb	121	1	No Gas	0.397	25.7	4177	13.4	4	
Hg	201	1	No Gas	0.014	118.8	31	32.8	0.04	
Be	9	1	No Gas	0.018	108.2	24	62.9	1	
Pb	208	1	No Gas	0.139	35.2	9537	3.6	4	
Se	82	1	No Gas	-1.536	-67.8	0	-40721.0	25	
Mo	98	1	No Gas	0.038	86.1	897	16.8	10000	
Ba	137	1	No Gas	0.020	54.2	80	25.0	25	
Tl	205	1	No Gas	0.009	42.4	126	27.0	1	
U	238	1	No Gas	0.020	27.4	244	23.6	25	
Na	23	2	he	4.419	104.4	56784	4.4	2500000	
Mg	24	2	he	0.093	156.0	319	14.1	2500000	
K	39	2	he	2.480	69.2	43855	1.7	5000000	
Se	82	3	HeHe	0.849	95.9	19	24.0	25	
Fe	57	3	HeHe	1.438	249.8	193	53.1	2500000	
Cd	114	1	No Gas	-0.006	-118.1	113	22.2	1	
Ca	44	1	No Gas	-10.741	-25.4	10481	5.7	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1598283	3.29	1662313	96.15	70	120	
Sc	45	2	he	207903	0.27	207479	100.20	70	120	
Ge	72	1	No Gas	221217	1.16	222710	99.33	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	1282457	0.86	1280558	100.15	70	120	
Tb	159	1	No Gas	1637367	1.56	1515490	108.04	70	120	
Bi	209	1	No Gas	772438	2.54	722984	106.84	70	120	
Sc	45	3	HeHe	30704	2.10	30220	101.60	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	072LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:10:03-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass



QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.727	11.140	28272	9.91	2	136.3	70	130	LLCCV Main CR1 Failed
Cr	52	1	No Gas	1.969	2.920	27263	0.45	2	98.4	70	130	
Mn	55	1	No Gas	4.978	2.981	78677	0.96	5	99.6	70	130	
Co	59	1	No Gas	5.016	3.624	54110	2.04	5	100.3	70	130	
Ni	60	1	No Gas	5.076	3.561	12011	3.47	5	101.5	70	130	
Cu	63	1	No Gas	5.142	3.503	31341	2.12	5	102.8	70	130	
Sr	88	1	No Gas	4.845	0.281	75201	1.95	5	96.9	70	130	
Ag	107	1	No Gas	1.955	6.480	15649	3.37	2	97.8	70	130	
Al	27	1	No Gas	75.962	2.123	382925	0.86	80	95.0	70	130	
Sn	118	1	No Gas	1.706	12.503	11401	12.19	2	85.3	70	130	
Ti	47	1	No Gas	5.014	3.178	3995	1.82	5	100.3	70	130	
Zn	66	1	No Gas	5.689	7.864	10104	6.17	5	113.8	70	130	
As	75	3	HeHe	3.319	7.723	382	9.55	3	110.6	70	130	
As	75	1	No Gas	2.862	12.643	17100	3.02	3	95.4	70	130	
Sb	121	1	No Gas	2.320	3.757	16002	4.26	2	116.0	70	130	
Hg	201	1	No Gas	0.198	12.418	142	12.03	0.2	99.0	70	130	
Be	9	1	No Gas	1.060	5.069	893	4.59	1	106.0	70	130	
Pb	208	1	No Gas	2.072	4.908	33182	1.24	2	103.6	70	130	
Se	82	1	No Gas	4.753	22.161	587	15.46	5	95.1	70	130	
Mo	98	1	No Gas	1.892	6.196	9986	2.56	2	94.6	70	130	
Ba	137	1	No Gas	4.973	2.822	9683	3.14	5	99.5	70	130	
Tl	205	1	No Gas	0.972	4.403	9022	6.99	1	97.2	70	130	
U	238	1	No Gas	4.801	4.355	47007	1.79	5	96.0	70	130	
Na	23	2	he	101.300	4.494	112216	1.87	100	101.3	70	130	
Mg	24	2	he	103.319	1.553	32271	1.07	100	103.3	70	130	
K	39	2	he	100.936	2.804	79655	1.65	100	100.9	70	130	
Se	82	3	HeHe	4.236	64.279	37	35.72	5	84.7	70	130	
Fe	57	3	HeHe	51.335	7.152	1663	9.12	50	102.7	70	130	
Cd	114	1	No Gas	1.099	6.295	4354	8.08	1	109.9	70	130	
Ca	44	1	No Gas	94.235	10.027	35779	5.76	100	94.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1647416	1.67	1662313	99.10	70	120	
Sc	45	2	he	208533	0.62	207479	100.51	70	120	
Ge	72	1	No Gas	225761	1.09	222710	101.37	70	120	
In	115	1	No Gas	1366661	3.40	1280558	106.72	70	120	
Tb	159	1	No Gas	1668554	1.04	1515490	110.10	70	120	
Bi	209	1	No Gas	779200	2.65	722984	107.78	70	120	
Sc	45	3	HeHe	30875	3.84	30220	102.17	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	083_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:49:44-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	98.636	1.940	968333	2.83	100	98.6	90	110	
Cr	52	1	No Gas	96.019	1.959	874546	3.98	100	96.0	90	110	
Mn	55	1	No Gas	100.001	3.705	1222448	1.51	100	100.0	90	110	
Co	59	1	No Gas	98.238	0.817	979884	2.03	100	98.2	90	110	
Ni	60	1	No Gas	98.844	0.168	213602	2.32	100	98.8	90	110	
Cu	63	1	No Gas	97.937	0.322	530568	2.49	100	97.9	90	110	
Sr	88	1	No Gas	101.433	2.002	1456676	3.53	100	101.4	90	110	
Ag	107	1	No Gas	95.828	0.879	660613	1.65	100	95.8	90	110	
Al	27	1	No Gas	98.647	2.041	459896	3.04	100	98.6	90	110	
Sn	118	1	No Gas	106.572	1.145	460540	1.54	100	106.6	90	110	
Tl	47	1	No Gas	94.530	1.078	67975	2.44	100	94.5	90	110	
Zn	66	1	No Gas	97.699	2.832	156206	0.47	100	97.7	90	110	
As	75	3	HeHe	96.805	2.807	10060	4.18	100	96.8	90	110	
As	75	1	No Gas	95.227	1.452	157479	2.64	100	95.2	90	110	
Sb	121	1	No Gas	102.726	2.924	534179	2.93	100	102.7	90	110	
Hg	201	1	No Gas	2.047	8.886	1153	9.74	2	102.3	90	110	
Be	9	1	No Gas	102.274	0.918	78975	2.49	100	102.3	90	110	
Pb	208	1	No Gas	96.797	2.266	1091421	1.62	100	96.8	90	110	
Se	82	1	No Gas	95.918	5.385	8450	3.11	100	95.9	90	110	
Mo	98	1	No Gas	96.555	1.163	407173	0.79	100	96.6	90	110	
Ba	137	1	No Gas	96.188	3.415	162408	0.92	100	96.2	90	110	
Tl	205	1	No Gas	93.328	0.756	790799	2.07	100	93.3	90	110	
U	238	1	No Gas	118.702	0.823	1067070	2.17	100	118.7	90	110	CCV Main CR1 Failed
Na	23	2	he	994.848	2.112	571764	5.01	1000	99.5	90	110	
Mg	24	2	he	1055.585	1.378	300483	2.31	1000	105.6	90	110	
K	39	2	he	999.954	1.978	372374	1.80	1000	100.0	90	110	
Se	82	3	HeHe	103.840	6.443	508	4.85	100	103.8	90	110	
Fe	57	3	HeHe	1007.559	3.029	27226	2.75	1000	100.8	90	110	
Cd	114	1	No Gas	98.376	0.549	325255	2.03	100	98.4	90	110	
Ca	44	1	No Gas	991.891	1.442	231082	1.57	1000	99.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1526662	2.48	1662313	91.84	70	120	
Sc	45	2	he	191652	3.44	207479	92.37	70	120	
Ge	72	1	No Gas	208522	1.26	222710	93.63	70	120	
In	115	1	No Gas	1179666	1.95	1280558	92.12	70	120	
Tb	159	1	No Gas	1454245	3.76	1515490	95.96	70	120	
Bi	209	1	No Gas	715657	2.42	722984	98.99	70	120	
Sc	45	3	HeHe	28247	1.40	30220	93.47	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	084_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:53:22-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.244	120.3	1827	153.5	9	
Cr	52	1	No Gas	0.011	710.0	7372	6.6	4	
Mn	55	1	No Gas	-0.149	-31.4	10567	4.0	25	
Co	59	1	No Gas	0.001	1139.1	130	42.3	1	
Ni	60	1	No Gas	0.139	68.5	457	41.6	25	
Cu	63	1	No Gas	-0.049	-20.1	971	5.3	25	
Sr	88	1	No Gas	0.009	35.0	241	16.2	25	
Ag	107	1	No Gas	0.022	30.4	193	20.3	9	
Al	27	1	No Gas	0.384	34.7	5045	9.7	1000000	
Sn	118	1	No Gas	-0.309	-23.1	1130	24.7	25	
Ti	47	1	No Gas	0.038	46.6	127	7.8	10000	
Zn	66	1	No Gas	0.067	102.4	383	28.7	25	
As	75	3	HeHe	-0.010	-302.2	3	91.7	9	
As	75	1	No Gas	0.616	80.2	12061	5.1	9	
Sb	121	1	No Gas	0.455	20.3	4037	9.6	4	
Hg	201	1	No Gas	0.013	222.6	27	52.9	0.04	
Be	9	1	No Gas	0.048	29.9	45	24.3	1	
Pb	208	1	No Gas	-0.456	-1.4	2159	0.6	4	
Se	82	1	No Gas	-1.130	-52.7	33	154.8	25	
Mo	98	1	No Gas	-0.008	-206.4	616	11.0	10000	
Ba	137	1	No Gas	0.037	31.1	100	20.0	25	
Tl	205	1	No Gas	0.004	110.9	74	43.3	1	
U	238	1	No Gas	0.047	16.9	467	12.6	25	
Na	23	2	he	-2.598	-160.0	49061	5.0	2500000	
Mg	24	2	he	0.107	50.2	300	3.7	2500000	
K	39	2	he	-11.656	-18.5	35996	1.3	5000000	
Se	82	3	HeHe	0.364	212.4	15	22.4	25	
Fe	57	3	HeHe	1.171	121.9	170	21.2	2500000	
Cd	114	1	No Gas	0.000	4107523.2	120	72.2	1	
Ca	44	1	No Gas	-3.926	-128.7	11193	8.5	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1484938	2.24	1662313	89.33	70	120	
Sc	45	2	he	193173	1.69	207479	93.10	70	120	
Ge	72	1	No Gas	202979	1.25	222710	91.14	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	1151524	2.70	1280558	89.92	70	120	
Tb	159	1	No Gas	1445332	4.34	1515490	95.37	70	120	
Bi	209	1	No Gas	711350	2.89	722984	98.39	70	120	
Sc	45	3	HeHe	28000	1.70	30220	92.65	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	085LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:56:58-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.567	9.531	24006	9.36	2	128.4	70	130	
Cr	52	1	No Gas	1.949	7.019	24414	3.51	2	97.4	70	130	
Mn	55	1	No Gas	4.875	1.943	69780	1.31	5	97.5	70	130	
Co	59	1	No Gas	4.858	2.745	47295	2.28	5	97.2	70	130	
Ni	60	1	No Gas	4.838	6.703	10330	5.04	5	96.8	70	130	
Cu	63	1	No Gas	4.946	0.444	27256	2.03	5	98.9	70	130	
Sr	88	1	No Gas	4.761	3.547	66644	2.01	5	95.2	70	130	
Ag	107	1	No Gas	1.855	3.334	12376	1.70	2	92.8	70	130	
Al	27	1	No Gas	77.857	3.320	353963	1.63	80	97.3	70	130	
Sn	118	1	No Gas	1.729	5.610	9574	5.81	2	86.5	70	130	
Ti	47	1	No Gas	5.174	3.765	3716	2.62	5	103.5	70	130	
Zn	66	1	No Gas	5.327	6.343	8559	6.10	5	106.5	70	130	
As	75	3	HeHe	2.946	8.467	313	7.73	3	98.2	70	130	
As	75	1	No Gas	3.848	8.292	16898	1.19	3	128.3	70	130	
Sb	121	1	No Gas	2.377	5.804	13596	3.45	2	118.9	70	130	
Hg	201	1	No Gas	0.224	9.359	146	8.98	0.2	112.2	70	130	
Be	9	1	No Gas	1.008	7.713	766	6.02	1	100.8	70	130	
Pb	208	1	No Gas	1.477	3.707	24024	4.94	2	73.8	70	130	
Se	82	1	No Gas	3.605	21.516	433	14.59	5	72.1	70	130	
Mo	98	1	No Gas	1.907	5.998	8382	5.07	2	95.4	70	130	
Ba	137	1	No Gas	4.921	2.609	8202	4.12	5	98.4	70	130	
Tl	205	1	No Gas	0.928	4.136	7965	3.60	1	92.8	70	130	
U	238	1	No Gas	5.673	1.019	51449	3.17	5	113.5	70	130	
Na	23	2	he	99.057	6.413	102709	2.48	100	99.1	70	130	
Mg	24	2	he	105.294	2.117	30449	2.50	100	105.3	70	130	
K	39	2	he	98.173	2.315	72822	0.43	100	98.2	70	130	
Se	82	3	HeHe	5.758	38.371	41	20.41	5	115.2	70	130	
Fe	57	3	HeHe	49.658	13.444	1493	14.55	50	99.3	70	130	
Cd	114	1	No Gas	1.018	5.069	3360	4.38	1	101.8	70	130	
Ca	44	1	No Gas	118.849	13.912	37558	8.80	100	118.8	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1486329	1.71	1662313	89.41	70	120	
Sc	45	2	he	193094	1.34	207479	93.07	70	120	
Ge	72	1	No Gas	199365	1.35	222710	89.52	70	120	
In	115	1	No Gas	1137530	1.65	1280558	88.83	70	120	
Tb	159	1	No Gas	1427982	1.54	1515490	94.23	70	120	
Bi	209	1	No Gas	721274	2.39	722984	99.76	70	120	
Sc	45	3	HeHe	28551	5.56	30220	94.48	70	120	

Sample Report

Sample Table

Sample Name	9981774001
Data File Name	088SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T09:07:50-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3309

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	13.047	13.047	2.56	125577	0.01	1000	
Cr	52	1	No Gas	8.366	8.366	4.00	81669	0.01	1000	
Mn	55	1	No Gas	9.795	9.795	3.00	129107	0.01	1000	
Co	59	1	No Gas	0.426	0.426	8.09	4304	0.01	1000	
Ni	60	1	No Gas	1.532	1.532	4.47	3424	0.04	1000	
Cu	63	1	No Gas	0.561	0.561	4.99	4228	0.01	1000	
Sr	88	1	No Gas	4.253	4.253	4.73	60238	0.01	1000	
Ag	107	1	No Gas	0.004	0.004	190.30	70	0.01	1000	
Al	27	1	No Gas	10192.021	10192.021	2.41	46442342	0.02	100000	
Sn	118	1	No Gas	-0.119	-0.119	-44.37	1885	-0.01	100	
Ti	47	1	No Gas	106.076	106.076	1.38	75083	0.14	2000	
Zn	66	1	No Gas	3.966	3.966	10.87	6512	0.06	1000	
As	75	3	HeHe	0.765	0.765	16.53	80	0.96	1000	
As	75	1	No Gas	-0.743	-0.743	-33.11	10152	-0.01	1000	
Sb	121	1	No Gas	-0.259	-0.259	-6.27	427	-0.06	100	
Hg	201	1	No Gas	0.066	0.066	47.96	56	0.12	4	
Be	9	1	No Gas	0.145	0.145	10.30	119	0.12	1000	
Pb	208	1	No Gas	7.741	7.741	3.65	91787	0.01	1000	
Se	82	1	No Gas	-0.878	-0.878	-82.56	56	-1.57	1000	
Mo	98	1	No Gas	-0.043	-0.043	-108.66	457	-0.01	2000	
Ba	137	1	No Gas	23.049	23.049	3.28	37103	0.06	1000	
Tl	205	1	No Gas	0.034	0.034	13.51	326	0.01	1000	
U	238	1	No Gas	1.395	1.395	5.24	12287	0.01	1000	
Na	23	2	he	155.955	155.955	6.82	129449	0.12	100000	
Mg	24	2	he	205.535	205.535	3.79	57735	0.36	100000	
K	39	2	he	152.652	152.652	2.76	88877	0.17	100000	
Se	82	3	HeHe	2.613	2.613	35.26	25	10.53	1000	
Fe	57	3	HeHe	1961.865	1961.865	3.91	50528	3.88	100000	
Cd	114	1	No Gas	-0.004	-0.004	-158.74	103	0.00	1000	
Ca	44	1	No Gas	28.186	28.186	42.88	18258	0.15	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1502532	2.83	1662313	90.39	70	120	
Sc	45	2	he	188450	4.24	207479	90.83	70	120	
Ge	72	1	No Gas	196595	3.30	222710	88.27	70	120	

In	115	1	No Gas	1126206	2.38	1280558	87.95	70	120	
Tb	159	1	No Gas	1385030	3.71	1515490	91.39	70	120	
Bi	209	1	No Gas	698496	1.43	722984	96.61	70	120	
Sc	45	3	HeHe	27022	5.38	30220	89.42	70	120	

Sample Report

Sample Table

Sample Name	9981774002
Data File Name	089SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T09:11:28-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3310

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	19.719	19.719	3.44	186537	0.01	1000	
Cr	52	1	No Gas	14.939	14.939	2.27	137432	0.01	1000	
Mn	55	1	No Gas	14.784	14.784	1.66	185040	0.01	1000	
Co	59	1	No Gas	0.696	0.696	1.20	6828	0.01	1000	
Ni	60	1	No Gas	3.831	3.831	3.33	8156	0.05	1000	
Cu	63	1	No Gas	1.138	1.138	3.65	7156	0.02	1000	
Sr	88	1	No Gas	9.974	9.974	2.30	138370	0.01	1000	
Ag	107	1	No Gas	0.027	0.027	3.20	219	0.01	1000	
Al	27	1	No Gas	15673.421	15673.421	1.01	70020710	0.02	100000	
Sn	118	1	No Gas	0.015	0.015	84.94	2389	0.00	100	
Ti	47	1	No Gas	70.754	70.754	1.13	49154	0.14	2000	
Zn	66	1	No Gas	10.213	10.213	2.87	16019	0.06	1000	
As	75	3	HeHe	0.753	0.753	15.11	82	0.92	1000	
As	75	1	No Gas	0.278	0.278	68.19	11475	0.00	1000	
Sb	121	1	No Gas	-0.264	-0.264	-7.02	390	-0.07	100	
Hg	201	1	No Gas	0.077	0.077	30.21	62	0.12	4	
Be	9	1	No Gas	0.364	0.364	7.31	280	0.13	1000	
Pb	208	1	No Gas	13.014	13.014	2.05	149479	0.01	1000	
Se	82	1	No Gas	-1.207	-1.207	-93.81	25	-4.74	1000	
Mo	98	1	No Gas	-0.041	-0.041	-58.82	462	-0.01	2000	
Ba	137	1	No Gas	50.072	50.072	1.01	80311	0.06	1000	
Tl	205	1	No Gas	0.042	0.042	19.59	389	0.01	1000	
U	238	1	No Gas	1.202	1.202	3.19	10604	0.01	1000	
Na	23	2	he	33.345	33.345	12.68	65806	0.05	100000	
Mg	24	2	he	400.811	400.811	0.33	111413	0.36	100000	
K	39	2	he	230.469	230.469	3.72	113383	0.20	100000	
Se	82	3	HeHe	3.035	3.035	12.36	28	10.93	1000	
Fe	57	3	HeHe	3361.195	3361.195	1.45	89488	3.76	100000	
Cd	114	1	No Gas	0.001	0.001	4922.85	117	0.00	1000	
Ca	44	1	No Gas	140.621	140.621	7.43	41874	0.34	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1473935	1.54	1662313	88.67	70	120	
Sc	45	2	he	186825	1.40	207479	90.05	70	120	
Ge	72	1	No Gas	192481	4.32	222710	86.43	70	120	

In	115	1	No Gas	1103832	0.45	1280558	86.20	70	120	
Tb	159	1	No Gas	1380051	2.51	1515490	91.06	70	120	
Bi	209	1	No Gas	698966	3.37	722984	96.68	70	120	
Sc	45	3	HeHe	27933	1.65	30220	92.43	70	120	

Sample Report

Sample Table

Sample Name	9981774002L
Data File Name	090SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T09:15:05-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF25
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3311

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	4.612	4.612	4.01	41876	0.01	1000	
Cr	52	1	No Gas	3.286	3.286	5.95	34713	0.01	1000	
Mn	55	1	No Gas	3.134	3.134	5.01	47280	0.01	1000	
Co	59	1	No Gas	0.159	0.159	11.66	1600	0.01	1000	
Ni	60	1	No Gas	1.028	1.028	4.63	2234	0.05	1000	
Cu	63	1	No Gas	0.161	0.161	14.59	1992	0.01	1000	
Sr	88	1	No Gas	2.154	2.154	5.49	28996	0.01	1000	
Ag	107	1	No Gas	0.000	0.000	10146.46	48	0.00	1000	
Al	27	1	No Gas	3371.714	3371.714	3.22	14584475	0.02	100000	
Sn	118	1	No Gas	-0.462	-0.462	-6.06	489	-0.09	100	
Ti	47	1	No Gas	15.000	15.000	2.24	10163	0.15	2000	
Zn	66	1	No Gas	2.386	2.386	1.84	3828	0.06	1000	
As	75	3	HeHe	0.136	0.136	43.87	18	0.74	1000	
As	75	1	No Gas	0.572	0.572	107.15	11525	0.00	1000	
Sb	121	1	No Gas	-0.303	-0.303	-3.06	207	-0.15	100	
Hg	201	1	No Gas	0.022	0.022	54.44	33	0.07	4	
Be	9	1	No Gas	0.085	0.085	28.25	70	0.12	1000	
Pb	208	1	No Gas	2.264	2.264	5.09	32537	0.01	1000	
Se	82	1	No Gas	-1.516	-1.516	-40.50	0	5683.16	1000	
Mo	98	1	No Gas	-0.125	-0.125	-8.78	133	-0.09	2000	
Ba	137	1	No Gas	10.304	10.304	3.19	16773	0.06	1000	
Tl	205	1	No Gas	0.011	0.011	51.83	133	0.01	1000	
U	238	1	No Gas	0.220	0.220	1.46	2022	0.01	1000	
Na	23	2	he	5.650	5.650	52.40	51579	0.01	100000	
Mg	24	2	he	84.729	84.729	1.57	23724	0.36	100000	
K	39	2	he	39.546	39.546	8.76	51356	0.08	100000	
Se	82	3	HeHe	0.081	0.081	201.46	14	0.57	1000	
Fe	57	3	HeHe	688.871	688.871	4.64	18714	3.68	100000	
Cd	114	1	No Gas	-0.017	-0.017	-145.87	63	-0.03	1000	
Ca	44	1	No Gas	26.049	26.049	21.50	16940	0.15	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1427336	3.41	1662313	85.86	70	120	
Sc	45	2	he	186558	1.25	207479	89.92	70	120	
Ge	72	1	No Gas	201348	1.81	222710	90.41	70	120	

In	115	1	No Gas	1135999	2.50	1280558	88.71	70	120	
Tb	159	1	No Gas	1397971	1.22	1515490	92.25	70	120	
Bi	209	1	No Gas	713471	1.41	722984	98.68	70	120	
Sc	45	3	HeHe	28344	3.83	30220	93.79	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	091_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T09:18:42-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

No U.

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	100.579	2.553	915570	1.85	100	100.6	90	110	
Cr	52	1	No Gas	99.476	2.690	839626	1.93	100	99.5	90	110	
Mn	55	1	No Gas	101.106	1.140	1146609	1.02	100	101.1	90	110	
Co	59	1	No Gas	97.015	3.180	897300	2.60	100	97.0	90	110	
Ni	60	1	No Gas	99.114	2.492	198592	1.74	100	99.1	90	110	
Cu	63	1	No Gas	99.215	1.228	498372	0.77	100	99.2	90	110	
Sr	88	1	No Gas	102.278	0.603	1361920	1.03	100	102.3	90	110	
Ag	107	1	No Gas	97.421	2.238	636698	1.17	100	97.4	90	110	
Al	27	1	No Gas	97.907	2.038	423260	1.36	100	97.9	90	110	
Sn	118	1	No Gas	107.096	3.522	438792	3.27	100	107.1	90	110	
Tl	47	1	No Gas	94.400	1.316	62949	1.42	100	94.4	90	110	
Zn	66	1	No Gas	99.631	2.548	147787	2.98	100	99.6	90	110	
As	75	3	HeHe	93.993	1.660	9823	1.59	100	94.0	90	110	
As	75	1	No Gas	96.893	2.233	148392	1.54	100	96.9	90	110	
Sb	121	1	No Gas	104.617	3.944	515680	2.83	100	104.6	90	110	
Hg	201	1	No Gas	2.142	4.494	1177	4.93	2	107.1	90	110	
Be	9	1	No Gas	102.475	1.292	73375	0.81	100	102.5	90	110	
Pb	208	1	No Gas	96.465	0.237	1062391	0.32	100	96.5	90	110	
Se	82	1	No Gas	95.191	1.170	7784	0.72	100	95.2	90	110	
Mo	98	1	No Gas	95.827	2.057	383156	1.24	100	95.8	90	110	
Ba	137	1	No Gas	94.119	1.578	155387	1.50	100	94.1	90	110	
Tl	205	1	No Gas	92.671	1.547	766766	1.02	100	92.7	90	110	
U	238	1	No Gas	120.831	1.746	1060687	1.64	100	120.8	90	110	CCV Main CR1 Failed
Na	23	2	he	1009.532	0.637	548281	2.18	1000	101.0	90	110	
Mg	24	2	he	1050.056	2.118	283019	3.40	1000	105.0	90	110	
K	39	2	he	1004.564	2.727	353992	2.53	1000	100.5	90	110	
Se	82	3	HeHe	93.904	3.287	464	1.23	100	93.9	90	110	
Fe	57	3	HeHe	975.295	3.091	26524	4.03	1000	97.5	90	110	
Cd	114	1	No Gas	98.847	2.377	309790	0.49	100	98.8	90	110	
Ca	44	1	No Gas	1018.418	2.027	219725	1.27	1000	101.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1415666	0.76	1662313	85.16	70	120	
Sc	45	2	he	181386	1.60	207479	87.42	70	120	
Ge	72	1	No Gas	195921	0.70	222710	87.97	70	120	
In	115	1	No Gas	1118618	2.21	1280558	87.35	70	120	
Tb	159	1	No Gas	1420871	1.25	1515490	93.76	70	120	
Bi	209	1	No Gas	698817	0.53	722984	96.66	70	120	
Sc	45	3	HeHe	28424	3.12	30220	94.06	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	092_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T09:22:20-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.429	66.1	3335	75.6	9	
Cr	52	1	No Gas	0.019	314.9	6980	6.3	4	
Mn	55	1	No Gas	-0.164	-34.0	9722	5.1	25	
Co	59	1	No Gas	0.006	151.6	174	48.7	1	
Ni	60	1	No Gas	0.153	17.5	457	10.3	25	
Cu	63	1	No Gas	-0.052	-6.8	897	2.8	25	
Sr	88	1	No Gas	0.007	47.3	204	22.7	25	
Ag	107	1	No Gas	0.005	120.8	78	49.5	9	
Al	27	1	No Gas	0.202	41.2	3964	8.6	1000000	
Sn	118	1	No Gas	-0.283	-13.8	1185	12.4	25	
Ti	47	1	No Gas	0.032	92.8	115	15.8	10000	
Zn	66	1	No Gas	0.029	182.4	303	25.6	25	
As	75	3	HeHe	0.031	196.1	7	83.4	9	
As	75	1	No Gas	0.613	62.7	11298	6.0	9	
Sb	121	1	No Gas	0.470	35.2	3934	20.1	4	
Hg	201	1	No Gas	0.022	93.0	33	33.7	0.04	
Be	9	1	No Gas	0.022	35.5	24	22.0	1	
Pb	208	1	No Gas	-0.531	-1.2	1322	3.7	4	
Se	82	1	No Gas	-2.490	-72.0	-76	-185.2	25	
Mo	98	1	No Gas	-0.003	-830.2	605	17.6	10000	
Ba	137	1	No Gas	0.046	32.1	110	18.2	25	
Tl	205	1	No Gas	0.016	26.9	178	18.8	1	
U	238	1	No Gas	0.043	28.1	433	23.1	25	
Na	23	2	he	8.618	24.7	50422	4.6	2500000	
Mg	24	2	he	-0.148	-99.3	207	16.4	2500000	
K	39	2	he	-4.244	-118.7	35262	2.5	5000000	
Se	82	3	HeHe	0.856	145.4	17	32.8	25	
Fe	57	3	HeHe	-0.464	-132.9	123	12.4	2500000	
Cd	114	1	No Gas	0.001	238.9	117	4.9	1	
Ca	44	1	No Gas	-3.719	-177.0	10539	13.2	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1390433	1.26	1662313	83.64	70	120	
Sc	45	2	he	177151	4.26	207479	85.38	70	120	
Ge	72	1	No Gas	193956	1.92	222710	87.09	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	1098959	0.81	1280558	85.82	70	120	
Tb	159	1	No Gas	1392515	3.78	1515490	91.89	70	120	
Bi	209	1	No Gas	709807	2.04	722984	98.18	70	120	
Sc	45	3	HeHe	27255	1.89	30220	90.19	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	093LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T09:50:00-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	3.181	7.665	25579	0.19	2	159.0	70	130	LLCCV Main CR1 Failed
Cr	52	1	No Gas	2.129	5.278	22315	4.57	2	106.5	70	130	
Mn	55	1	No Gas	5.168	13.142	62609	4.12	5	103.4	70	130	
Co	59	1	No Gas	5.284	6.581	44053	1.29	5	105.7	70	130	
Ni	60	1	No Gas	5.511	8.727	10063	5.23	5	110.2	70	130	
Cu	63	1	No Gas	5.344	10.683	25095	2.44	5	106.9	70	130	
Sr	88	1	No Gas	5.171	6.304	62029	2.36	5	103.4	70	130	
Ag	107	1	No Gas	2.049	7.931	12479	4.03	2	102.4	70	130	
Al	27	1	No Gas	84.586	7.483	329133	1.01	80	105.7	70	130	
Sn	118	1	No Gas	1.730	11.499	8736	1.77	2	86.5	70	130	
Ti	47	1	No Gas	5.281	8.913	3245	0.85	5	105.6	70	130	
Zn	66	1	No Gas	5.865	7.037	8046	1.20	5	117.3	70	130	
As	75	3	HeHe	2.855	8.606	289	8.83	3	95.2	70	130	
As	75	1	No Gas	3.782	26.132	14450	12.30	3	126.1	70	130	
Sb	121	1	No Gas	2.251	8.252	11875	8.98	2	112.5	70	130	
Hg	201	1	No Gas	0.141	15.413	94	9.75	0.2	70.6	70	130	
Be	9	1	No Gas	1.059	9.158	689	1.17	1	105.9	70	130	
Pb	208	1	No Gas	1.471	4.682	22656	3.32	2	73.6	70	130	
Se	82	1	No Gas	4.150	10.079	410	1.13	5	83.0	70	130	
Mo	98	1	No Gas	1.881	11.162	7548	3.79	2	94.0	70	130	
Ba	137	1	No Gas	4.988	9.800	7632	2.63	5	99.8	70	130	
Tl	205	1	No Gas	0.988	6.275	8017	4.08	1	98.8	70	130	
U	238	1	No Gas	5.967	4.006	51162	2.34	5	119.3	70	130	
Na	23	2	he	100.833	4.014	100164	1.33	100	100.8	70	130	
Mg	24	2	he	102.450	2.138	28635	2.16	100	102.4	70	130	
K	39	2	he	95.499	3.301	69503	0.86	100	95.5	70	130	
Se	82	3	HeHe	6.182	29.728	41	21.82	5	123.6	70	130	
Fe	57	3	HeHe	50.648	15.229	1443	14.31	50	101.3	70	130	
Cd	114	1	No Gas	1.042	10.006	3140	6.36	1	104.2	70	130	
Ca	44	1	No Gas	111.577	12.597	30836	4.56	100	111.6	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1277349	7.61	1662313	76.84	70	120	
Sc	45	2	he	186586	0.75	207479	89.93	70	120	
Ge	72	1	No Gas	183283	4.93	222710	82.30	70	120	
In	115	1	No Gas	1041939	6.55	1280558	81.37	70	120	
Tb	159	1	No Gas	1317150	7.13	1515490	86.91	70	120	
Bi	209	1	No Gas	682961	5.68	722984	94.46	70	120	
Sc	45	3	HeHe	27135	1.76	30220	89.79	70	120	

Digestion Logbook

Microwave 3051 Prep (Soil) (Version 1 - 6/1/2010)

Batch: 37475	Queue: MDIG	HBN: 475719	RULE: D3051/6020	ALSI SOP: 09-3051
File Name: 37475_120813-140403			METHOD: SW3051	Microwave ID: MARS

COMMENTS:	Comment Codes:	Reagents:		Pipettes:		Start	Finish
	1. Sample failed initial digestion due to a weight loss >5g	HNO3:	L02030 JT BAKER		Date:	08/13/2012	08/13/2012
	2. Sample reacts with reagent	HCl:	K25031 MALLINCKRODT		Time:	14:20:00	14:41:00
	3. Less sample used due to high metal conten	Boiling Stones:	D1069103		Tech:	KMK	KMK
	4. Less sample used to result in successful microwave digestion				Reviewed/Approved By:		N/A
	5. Sample does not digest by microwave, digest by method 3050				Date:		

Sample ID	Cont ID	Samp Type	Vessel Initial WT, grams	Vessel Final WT, grams	Difference grams	Spike Amt uL of Each	Spike Lot#	Sample Size, grams	Final Vol mL	Parent Sample ID	Comment Code
1021902		MB	106.67	105.23	1.44			0.50	50		
1021903		LCS	108.71	107.58	1.13	40/50/500/500	/MS0360/MS0359/	0.50	50		
9981496001	A	S	106.95	105.37	1.58			0.60	50		
9981496002	A	S	106.37	104.12	2.25			0.57	50		
9981496003	A	S	107.04	104.92	2.12			0.52	50		
9981496004	A	S	107.21	105.72	1.49			0.53	50		
1021904		MS	108.42	107.32	1.10	40/50/500/500	/MS0360/MS0359/	0.52	50	9981496004	
1021905		MSD	107.59	105.84	1.75	40/50/500/500	/MS0360/MS0359/	0.59	50	9981496004	
9981496005	A	S	106.98	104.86	2.12			0.55	50		
9981496006	A	S	106.15	103.48	2.67			0.56	50		
9981496007	A	S	106.60	104.65	1.95			0.53	50		
9981496008	A	S	107.34	106.08	1.26			0.54	50		
9981496009	A	S	106.61	105.02	1.59			0.59	50		
9981496010	A	S	106.75	105.24	1.51			0.52	50		
9981496011	A	S	107.97	106.45	1.52			0.56	50		
9981774001	A	S	107.30	104.76	2.54			0.59	50		
9981774002	A	S	106.68	104.66	2.02			0.55	50		

End

Analytical Logbook

Batch Log

#	Acquired Date and Time	Sample Type	Sample Name	File Name	Comment	Vial#	Dilution Result	Operator
1	8/20/2012 2:39	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A082012B.b\001CALB.d		1101	1	Matthew Olley
2	8/20/2012 2:42	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A082012B.b\002CALB.d		1101	1	Matthew Olley
3	8/20/2012 2:46	CalStd	Standard 1	C:\Agilent\ICPMH\1\DATA\A082012B.b\003CALS.d		2101	1	Matthew Olley
4	8/20/2012 2:50	CalStd	Standard 2	C:\Agilent\ICPMH\1\DATA\A082012B.b\004CALS.d		2102	1	Matthew Olley
5	8/20/2012 2:53	CalStd	Standard 3	C:\Agilent\ICPMH\1\DATA\A082012B.b\005CALS.d		2103	1	Matthew Olley
6	8/20/2012 2:57	CalStd	Standard 4	C:\Agilent\ICPMH\1\DATA\A082012B.b\006CALS.d		2104	1	Matthew Olley
7	8/20/2012 3:00	CalStd	Standard 5	C:\Agilent\ICPMH\1\DATA\A082012B.b\007CALS.d		2105	1	Matthew Olley
8	8/20/2012 3:04	ICV	ICV	C:\Agilent\ICPMH\1\DATA\A082012B.b\008_ICV.d		1307	1	Matthew Olley
9	8/20/2012 3:08	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A082012B.b\009_ICB.d		1101	1	Matthew Olley
10	8/20/2012 3:11	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A082012B.b\010_ICB.d		1101	1	Matthew Olley
11	8/20/2012 3:15	LLICV	LLICV	C:\Agilent\ICPMH\1\DATA\A082012B.b\011LICV.d		1305	1	Matthew Olley
12	8/20/2012 3:18	ICSA	ICSA	C:\Agilent\ICPMH\1\DATA\A082012B.b\012ICSA.d		2111	1	Matthew Olley
13	8/20/2012 3:22	ICSA	ICSA	C:\Agilent\ICPMH\1\DATA\A082012B.b\013ICSA.d		2111	1	Matthew Olley
14	8/20/2012 3:26	ICSB	ICSAB	C:\Agilent\ICPMH\1\DATA\A082012B.b\014ICSB.d		2112	1	Matthew Olley
15	8/20/2012 3:29	Sample	CHECK	C:\Agilent\ICPMH\1\DATA\A082012B.b\015SMPL.d		2501	1	Matthew Olley
16	8/20/2012 3:29							Matthew Olley
17	8/20/2012 3:34	Sample	CHECK	C:\Agilent\ICPMH\1\DATA\A082012B.b\016SMPL.d		2502	1	Matthew Olley
18	8/20/2012 3:37	Sample	9980964001	C:\Agilent\ICPMH\1\DAT 38059 MWODF5 A\A082012B.b\017SMPL.d		3101	1	Matthew Olley
19	8/20/2012 3:41	Sample	9980964001	C:\Agilent\ICPMH\1\DAT 38059 MWODF100 A\A082012B.b\018SMPL.d		3102	1	Matthew Olley
20	8/20/2012 3:44	Sample	9980964002	C:\Agilent\ICPMH\1\DAT 38059 MWODF5 A\A082012B.b\019SMPL.d		3103	1	Matthew Olley

Batch Log

21	8/20/2012 3:48	Sample	9980964002	C:\Agilent\ICPMH\1\DAT 38059 MWODF100 A\A082012B.b\020SMPL.d	3104	1	Matthew Olley
22	8/20/2012 3:52	Sample	9981898001	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\021SMPL.d	3105	1	Matthew Olley
23	8/20/2012 3:55	Sample	9982138001	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\022SMPL.d	3106	1	Matthew Olley
24	8/20/2012 3:59	Sample	9982138002	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\023SMPL.d	3107	1	Matthew Olley
25	8/20/2012 4:02	Sample	9982239001	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\024SMPL.d	3108	1	Matthew Olley
26	8/20/2012 4:06						Matthew Olley
27	8/20/2012 4:06	Sample	9982404001	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\025SMPL.d	3109	1	Matthew Olley
28	8/20/2012 4:10						Matthew Olley
29	8/20/2012 4:10	Sample	9982563001	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\026SMPL.d	3110	1	Matthew Olley
30	8/20/2012 4:13						Matthew Olley
31	8/20/2012 4:13	CCV	CCV	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\027_CCV.d	1307	1	Matthew Olley
32	8/20/2012 4:17	CCB	CCB	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\028_CCB.d	1101	1	Matthew Olley
33	8/20/2012 4:21	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\029LCCV.d	1305	1	Matthew Olley
34	8/20/2012 4:24	Sample	9981426002	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\030SMPL.d	3111	1	Matthew Olley
35	8/20/2012 4:24						Matthew Olley
36	8/20/2012 4:28						Matthew Olley
37	8/20/2012 4:30	Sample	9981426003	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\031SMPL.d	3112	1	Matthew Olley
38	8/20/2012 4:30						Matthew Olley
39	8/20/2012 4:34						Matthew Olley
40	8/20/2012 4:49	Sample	9977234004	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A082012B.b\032SMPL.d	3201	1	Matthew Olley
41	8/20/2012 4:52						Matthew Olley
42	8/20/2012 4:52	Sample	9977615004	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A082012B.b\033SMPL.d	3202	1	Matthew Olley
43	8/20/2012 4:52						Matthew Olley
44	8/20/2012 4:56						Matthew Olley

Batch Log

45	8/20/2012 4:59	Sample	9977234005	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A082012B.b\034SMPL.d	3203	1	Matthew Olley
46	8/20/2012 5:02						Matthew Olley
47	8/20/2012 5:02	Sample	9977615005	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A082012B.b\035SMPL.d	3204	1	Matthew Olley
48	8/20/2012 5:02						Matthew Olley
49	8/20/2012 5:06						Matthew Olley
50	8/20/2012 5:07	Sample	9977615005	C:\Agilent\ICPMH\1\DAT 99999 MWODF5 A\A082012B.b\036SMPL.d	3204	1	Matthew Olley
51	8/20/2012 5:07						Matthew Olley
52	8/20/2012 5:10						Matthew Olley
53	8/20/2012 5:15	Sample	9977615040	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A082012B.b\037SMPL.d	3206	1	Matthew Olley
54	8/20/2012 5:18						Matthew Olley
55	8/20/2012 5:18	Sample	9977234045	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A082012B.b\038SMPL.d	3207	1	Matthew Olley
56	8/20/2012 5:22						Matthew Olley
57	8/20/2012 5:22	Sample	9977615005	C:\Agilent\ICPMH\1\DAT 99999 MWODF5 A\A082012B.b\039SMPL.d	3208	1	Matthew Olley
58	8/20/2012 5:26						Matthew Olley
59	8/20/2012 5:26	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\040_CCV.d	1307	1	Matthew Olley
60	8/20/2012 5:29	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A082012B.b\041_CCB.d	1101	1	Matthew Olley
61	8/20/2012 5:35	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\042LCCV.d	1305	1	Matthew Olley
62	8/20/2012 5:38	Sample	9977615040	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A082012B.b\043SMPL.d	3209	1	Matthew Olley
63	8/20/2012 5:38						Matthew Olley
64	8/20/2012 5:42						Matthew Olley
65	8/20/2012 6:01	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\044_CCV.d	1307	1	Matthew Olley
66	8/20/2012 6:04	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A082012B.b\045_CCB.d	1101	1	Matthew Olley
67	8/20/2012 6:08	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\046LCCV.d	1305	1	Matthew Olley
68	8/20/2012 6:08						Matthew Olley

Batch Log

69	8/20/2012 6:38	Sample	1024192	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\047SMPL.d	3101	1	Matthew Olley
70	8/20/2012 6:42						Matthew Olley
71	8/20/2012 6:42	Sample	1024193	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\048SMPL.d	3102	1	Matthew Olley
72	8/20/2012 6:46						Matthew Olley
73	8/20/2012 6:46	Sample	9983660004	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\049SMPL.d	3103	1	Matthew Olley
74	8/20/2012 6:49						Matthew Olley
75	8/20/2012 6:49	Sample	9983660005	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\050SMPL.d	3104	1	Matthew Olley
76	8/20/2012 6:53						Matthew Olley
77	8/20/2012 6:53	Sample	9983660006	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\051SMPL.d	3105	1	Matthew Olley
78	8/20/2012 6:56						Matthew Olley
79	8/20/2012 6:56	Sample	9983654001	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\052SMPL.d	3106	1	Matthew Olley
80	8/20/2012 7:00						Matthew Olley
81	8/20/2012 7:00	Sample	9983654002	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\053SMPL.d	3107	1	Matthew Olley
82	8/20/2012 7:03						Matthew Olley
83	8/20/2012 7:03	Sample	9983654003	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\054SMPL.d	3108	1	Matthew Olley
84	8/20/2012 7:07						Matthew Olley
85	8/20/2012 7:07	Sample	9983657001	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\055SMPL.d	3109	1	Matthew Olley
86	8/20/2012 7:11						Matthew Olley
87	8/20/2012 7:11	Sample	1024194	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\056SMPL.d	3110	1	Matthew Olley
88	8/20/2012 7:14						Matthew Olley
89	8/20/2012 7:14	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\057_CCV.d	1307	1	Matthew Olley
90	8/20/2012 7:18	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A082012B.b\058_CCB.d	1101	1	Matthew Olley
91	8/20/2012 7:21	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\059LCCV.d	1305	1	Matthew Olley
92	8/20/2012 7:25	Sample	1024195	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\060SMPL.d	3111	1	Matthew Olley

Batch Log

93	8/20/2012 7:29						Matthew Olley
94	8/20/2012 7:29	Sample	9983657001PS	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\061SMPL.d	3112	1	Matthew Olley
95	8/20/2012 7:32						Matthew Olley
96	8/20/2012 7:32	Sample	9983657002	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\062SMPL.d	3201	1	Matthew Olley
97	8/20/2012 7:36						Matthew Olley
98	8/20/2012 7:36	Sample	9983657003	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\063SMPL.d	3202	1	Matthew Olley
99	8/20/2012 7:39						Matthew Olley
100	8/20/2012 7:39	Sample	9983657003L	C:\Agilent\ICPMH\1\DAT 38063 MWODF25 A\A082012B.b\064SMPL.d	3203	1	Matthew Olley
101	8/20/2012 7:43						Matthew Olley
102	8/20/2012 7:43	Sample	1021902	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\065SMPL.d	3204	1	Matthew Olley
103	8/20/2012 7:46						Matthew Olley
104	8/20/2012 7:47	Sample	1021903	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\066SMPL.d	3205	1	Matthew Olley
105	8/20/2012 7:50						Matthew Olley
106	8/20/2012 7:50	Sample	9981496001	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\067SMPL.d	3206	1	Matthew Olley
107	8/20/2012 7:54						Matthew Olley
108	8/20/2012 7:54	Sample	9981496002	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\068SMPL.d	3207	1	Matthew Olley
109	8/20/2012 7:57						Matthew Olley
110	8/20/2012 7:57	Sample	9981496003	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\069SMPL.d	3208	1	Matthew Olley
111	8/20/2012 8:01						Matthew Olley
112	8/20/2012 8:01	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\070_CCV.d	1307	1	Matthew Olley
113	8/20/2012 8:05	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A082012B.b\071_CCB.d	1101	1	Matthew Olley
114	8/20/2012 8:08	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\072LCCV.d	1305	1	Matthew Olley
115	8/20/2012 8:12	Sample	9981496004	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\073SMPL.d	3209	1	Matthew Olley
116	8/20/2012 8:15						Matthew Olley

Batch Log

117	8/20/2012 8:15	Sample	1021904	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\074SMPL.d	3210	1	Matthew Olley
118	8/20/2012 8:19						Matthew Olley
119	8/20/2012 8:19	Sample	1021905	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\075SMPL.d	3211	1	Matthew Olley
120	8/20/2012 8:23						Matthew Olley
121	8/20/2012 8:23	Sample	9981496004PS	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\076SMPL.d	3212	1	Matthew Olley
122	8/20/2012 8:26						Matthew Olley
123	8/20/2012 8:26	Sample	9981496005	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\077SMPL.d	3301	1	Matthew Olley
124	8/20/2012 8:30						Matthew Olley
125	8/20/2012 8:30	Sample	9981496006	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\078SMPL.d	3302	1	Matthew Olley
126	8/20/2012 8:33						Matthew Olley
127	8/20/2012 8:33	Sample	9981496007	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\079SMPL.d	3303	1	Matthew Olley
128	8/20/2012 8:37						Matthew Olley
129	8/20/2012 8:37	Sample	9981496008	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\080SMPL.d	3304	1	Matthew Olley
130	8/20/2012 8:41						Matthew Olley
131	8/20/2012 8:41	Sample	9981496009	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\081SMPL.d	3305	1	Matthew Olley
132	8/20/2012 8:44						Matthew Olley
133	8/20/2012 8:44	Sample	9981496010	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\082SMPL.d	3306	1	Matthew Olley
134	8/20/2012 8:48						Matthew Olley
135	8/20/2012 8:48	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\083_CCV.d	1307	1	Matthew Olley
136	8/20/2012 8:52	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A082012B.b\084_CCB.d	1101	1	Matthew Olley
137	8/20/2012 8:55	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\085LCCV.d	1305	1	Matthew Olley
138	8/20/2012 8:59	Sample	9981496011	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\086SMPL.d	3307	1	Matthew Olley
139	8/20/2012 9:02						Matthew Olley
140	8/20/2012 9:02	Sample	9981496011L	C:\Agilent\ICPMH\1\DAT 38062 MWODF25 A\A082012B.b\087SMPL.d	3308	1	Matthew Olley

Batch Log

141	8/20/2012 9:06						Matthew Olley
142	8/20/2012 9:06	Sample	9981774001	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\088SMPL.d	3309	1	Matthew Olley
143	8/20/2012 9:10						Matthew Olley
144	8/20/2012 9:10	Sample	9981774002	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\089SMPL.d	3310	1	Matthew Olley
145	8/20/2012 9:13						Matthew Olley
146	8/20/2012 9:13	Sample	9981774002L	C:\Agilent\ICPMH\1\DAT 38062 MWODF25 A\A082012B.b\090SMPL.d	3311	1	Matthew Olley
147	8/20/2012 9:17						Matthew Olley
148	8/20/2012 9:17	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\091_CCV.d	1307	1	Matthew Olley
149	8/20/2012 9:20	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A082012B.b\092_CCB.d	1101	1	Matthew Olley
150	8/20/2012 9:20						Matthew Olley
151	8/20/2012 9:48	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\093LCCV.d	1305	1	Matthew Olley
152	8/20/2012 9:52	Sample	9981476027	C:\Agilent\ICPMH\1\DAT A\A082012B.b\094SMPL.d	3401	1	Matthew Olley
153	8/20/2012 9:55						Matthew Olley
154	8/20/2012 9:55	Sample	9981591001	C:\Agilent\ICPMH\1\DAT A\A082012B.b\095SMPL.d	3402	1	Matthew Olley
155	8/20/2012 9:59						Matthew Olley
156	8/20/2012 9:59	Sample	MS	C:\Agilent\ICPMH\1\DAT A\A082012B.b\096SMPL.d	3403	1	Matthew Olley
157	8/20/2012 10:03						Matthew Olley
158	8/20/2012 10:03	Sample	9981698001	C:\Agilent\ICPMH\1\DAT A\A082012B.b\097SMPL.d	3404	1	Matthew Olley
159	8/20/2012 10:06						Matthew Olley
160	8/20/2012 10:06	Sample	9981820002	C:\Agilent\ICPMH\1\DAT A\A082012B.b\098SMPL.d	3405	1	Matthew Olley
161	8/20/2012 10:10						Matthew Olley
162	8/20/2012 10:10	Sample	9981657001	C:\Agilent\ICPMH\1\DAT A\A082012B.b\099SMPL.d	3406	1	Matthew Olley
163	8/20/2012 10:13						Matthew Olley
164	8/20/2012 10:13	Sample	9981657002	C:\Agilent\ICPMH\1\DAT A\A082012B.b\100SMPL.d	3407	1	Matthew Olley
165	8/20/2012 10:17						Matthew Olley

Batch Log

166	8/20/2012 10:17	Sample	9981395001	C:\Agilent\ICPMH\1\DATA\A082012B.b\101SMPL.d	3408	1	Matthew Olley
167	8/20/2012 10:21						Matthew Olley
168	8/20/2012 10:21	Sample	1020128	C:\Agilent\ICPMH\1\DATA\A082012B.b\102SMPL.d	3409	1	Matthew Olley
169	8/20/2012 10:24						Matthew Olley
170	8/20/2012 10:24	Sample	9982071001	C:\Agilent\ICPMH\1\DATA\A082012B.b\103SMPL.d	3410	1	Matthew Olley
171	8/20/2012 10:28						Matthew Olley
172	8/20/2012 10:28	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A082012B.b\104_CCV.d	1307	1	Matthew Olley
173	8/20/2012 10:31	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A082012B.b\105_CCB.d	1101	1	Matthew Olley
174	8/20/2012 10:35	Sample	9982072001	C:\Agilent\ICPMH\1\DATA\A082012B.b\106SMPL.d	3411	1	Matthew Olley
175	8/20/2012 10:39						Matthew Olley
176	8/20/2012 10:39	Sample	9982073001	C:\Agilent\ICPMH\1\DATA\A082012B.b\107SMPL.d	3412	1	Matthew Olley
177	8/20/2012 10:42						Matthew Olley
178	8/20/2012 10:42	Sample	9981781001	C:\Agilent\ICPMH\1\DATA\A082012B.b\108SMPL.d	3501	1	Matthew Olley
179	8/20/2012 10:46						Matthew Olley
180	8/20/2012 10:46	Sample	9981954001	C:\Agilent\ICPMH\1\DATA\A082012B.b\109SMPL.d	3502	1	Matthew Olley
181	8/20/2012 10:50						Matthew Olley
182	8/20/2012 10:50	Sample	9982004001	C:\Agilent\ICPMH\1\DATA\A082012B.b\110SMPL.d	3503	1	Matthew Olley
183	8/20/2012 10:53						Matthew Olley
184	8/20/2012 10:53	Sample	9982176004	C:\Agilent\ICPMH\1\DATA\A082012B.b\111SMPL.d	3504	1	Matthew Olley
185	8/20/2012 10:57						Matthew Olley
186	8/20/2012 10:57	Sample	1021149	C:\Agilent\ICPMH\1\DATA\A082012B.b\112SMPL.d	3505	1	Matthew Olley
187	8/20/2012 11:00						Matthew Olley
188	8/20/2012 11:00	Sample	9982176005	C:\Agilent\ICPMH\1\DATA\A082012B.b\113SMPL.d	3506	1	Matthew Olley
189	8/20/2012 11:04						Matthew Olley

Batch Log

190	8/20/2012 11:04	Sample	9982176006	C:\Agilent\ICPMH\1\DATA\A082012B.b\114SMPL.d	3507	1	Matthew Olley
191	8/20/2012 11:08						Matthew Olley
192	8/20/2012 11:08	Sample	1024204	C:\Agilent\ICPMH\1\DATA\A082012B.b\115SMPL.d	3508	1	Matthew Olley
193	8/20/2012 11:11						Matthew Olley
194	8/20/2012 11:11	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A082012B.b\116_CCV.d	1307	1	Matthew Olley
195	8/20/2012 11:15	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A082012B.b\117_CCB.d	1101	1	Matthew Olley
196	8/20/2012 11:18	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A082012B.b\118_CCV.d	1307	1	Matthew Olley
197	8/20/2012 11:22	Sample	1024205	C:\Agilent\ICPMH\1\DATA\A082012B.b\119SMPL.d	3509	1	Matthew Olley
198	8/20/2012 11:26						Matthew Olley
199	8/20/2012 11:26	Sample	9983336001	C:\Agilent\ICPMH\1\DATA\A082012B.b\120SMPL.d	3510	1	Matthew Olley
200	8/20/2012 11:29						Matthew Olley
201	8/20/2012 11:29	Sample	9983313001	C:\Agilent\ICPMH\1\DATA\A082012B.b\121SMPL.d	3511	1	Matthew Olley
202	8/20/2012 11:33						Matthew Olley
203	8/20/2012 11:33	Sample	9983313003	C:\Agilent\ICPMH\1\DATA\A082012B.b\122SMPL.d	3512	1	Matthew Olley
204	8/20/2012 11:36						Matthew Olley
205	8/20/2012 11:36	Sample	9983313004	C:\Agilent\ICPMH\1\DATA\A082012B.b\123SMPL.d	4101	1	Matthew Olley
206	8/20/2012 11:40						Matthew Olley
207	8/20/2012 11:40	Sample	1024206	C:\Agilent\ICPMH\1\DATA\A082012B.b\124SMPL.d	4102	1	Matthew Olley
208	8/20/2012 11:44						Matthew Olley
209	8/20/2012 11:44	Sample	1024207	C:\Agilent\ICPMH\1\DATA\A082012B.b\125SMPL.d	4103	1	Matthew Olley
210	8/20/2012 11:47						Matthew Olley
211	8/20/2012 11:47	Sample	9983540001	C:\Agilent\ICPMH\1\DATA\A082012B.b\126SMPL.d	4104	1	Matthew Olley
212	8/20/2012 11:51						Matthew Olley
213	8/20/2012 11:51	Sample	9983146001	C:\Agilent\ICPMH\1\DATA\A082012B.b\127SMPL.d	4105	1	Matthew Olley

Batch Log

214	8/20/2012 11:55						Matthew Olley
215	8/20/2012 11:55	Sample	9983489001	C:\Agilent\ICPMH\1\DATA\A082012B.b\128SMPL.d	4106	1	Matthew Olley
216	8/20/2012 11:58						Matthew Olley
217	8/20/2012 11:58	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A082012B.b\129_CCV.d	1307	1	Matthew Olley
218	8/20/2012 12:02	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A082012B.b\130_CCB.d	1101	1	Matthew Olley
219	8/20/2012 12:05	Sample	9983490001	C:\Agilent\ICPMH\1\DATA\A082012B.b\131SMPL.d	4107	1	Matthew Olley
220	8/20/2012 12:09						Matthew Olley
221	8/20/2012 12:09	Sample	9983491001	C:\Agilent\ICPMH\1\DATA\A082012B.b\132SMPL.d	4108	1	Matthew Olley
222	8/20/2012 12:13						Matthew Olley
223	8/20/2012 12:13	Sample	9983414001	C:\Agilent\ICPMH\1\DATA\A082012B.b\133SMPL.d	4109	1	Matthew Olley
224	8/20/2012 12:16						Matthew Olley
225	8/20/2012 12:16	Sample	9983418001	C:\Agilent\ICPMH\1\DATA\A082012B.b\134SMPL.d	4110	1	Matthew Olley
226	8/20/2012 12:20						Matthew Olley
227	8/20/2012 12:20	Sample	9983697001	C:\Agilent\ICPMH\1\DATA\A082012B.b\135SMPL.d	4111	1	Matthew Olley
228	8/20/2012 12:24						Matthew Olley
229	8/20/2012 12:24	Sample	1024208	C:\Agilent\ICPMH\1\DATA\A082012B.b\136SMPL.d	4112	1	Matthew Olley
230	8/20/2012 12:27						Matthew Olley
231	8/20/2012 12:27	Sample	9983698001	C:\Agilent\ICPMH\1\DATA\A082012B.b\137SMPL.d	4201	1	Matthew Olley
232	8/20/2012 12:31						Matthew Olley
233	8/20/2012 12:31	Sample	9981961001	C:\Agilent\ICPMH\1\DATA\A082012B.b\138SMPL.d	4202	1	Matthew Olley
234	8/20/2012 12:34						Matthew Olley
235	8/20/2012 12:34	Sample	9981961002	C:\Agilent\ICPMH\1\DATA\A082012B.b\139SMPL.d	4203	1	Matthew Olley
236	8/20/2012 12:38						Matthew Olley
237	8/20/2012 12:38	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A082012B.b\140_CCV.d	1307	1	Matthew Olley
238	8/20/2012 12:38						Matthew Olley

Batch Log

239	8/20/2012 12:44	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A082012B.b\141_CCB.d	1101	1	Matthew Olley
240	8/20/2012 12:47	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A082012B.b\142_CCV.d	1307	1	Matthew Olley
241	8/20/2012 12:51	Sample	9981961003	C:\Agilent\ICPMH\1\DATA\A082012B.b\143SMPL.d	4204	1	Matthew Olley
242	8/20/2012 12:54						Matthew Olley
243	8/20/2012 12:54	Sample	1020749	C:\Agilent\ICPMH\1\DATA\A082012B.b\144SMPL.d	4205	1	Matthew Olley
244	8/20/2012 12:58						Matthew Olley
245	8/20/2012 12:58	Sample	1020750	C:\Agilent\ICPMH\1\DATA\A082012B.b\145SMPL.d	4206	1	Matthew Olley
246	8/20/2012 13:02						Matthew Olley
247	8/20/2012 13:02	Sample	982000002	C:\Agilent\ICPMH\1\DATA\A082012B.b\146SMPL.d	4207	1	Matthew Olley
248	8/20/2012 13:05						Matthew Olley
249	8/20/2012 13:05	Sample	1021145	C:\Agilent\ICPMH\1\DATA\A082012B.b\147SMPL.d	4208	1	Matthew Olley
250	8/20/2012 13:09						Matthew Olley
251	8/20/2012 13:09	Sample	1021146	C:\Agilent\ICPMH\1\DATA\A082012B.b\148SMPL.d	4209	1	Matthew Olley
252	8/20/2012 13:12						Matthew Olley
253	8/20/2012 13:12	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A082012B.b\149_CCV.d	1307	1	Matthew Olley
254	8/20/2012 13:16	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A082012B.b\150_CCB.d	1101	1	Matthew Olley
255	8/20/2012 13:20	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A082012B.b\151_CCV.d	1307	1	Matthew Olley

Total Solids Raw Data

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Total Solids

Batch: 114160 Queue: WETC Analyst: KED

File Name: 114160_120808-134736 Date/Time: 08/08/12 14:45

Misc:		1st Time In	14:45	2nd Time In	3:45	3rd Time In	7:15	4th Time In	8:20
		1st Temp In °C	104	2nd Temp In °C	104	3rd Temp In °C	104	4th Temp In °C	104
		1st Time Out	3:15	2nd Time Out	7:00	3rd Time Out	8:15	4th Time Out	11:05
		1st Temp Out °C	104	2nd Temp Out °C	104	3rd Temp Out °C	104	4th Temp Out °C	104

Sample ID	Cont ID	Samp Type	TVS	Weight of dish and sample (g) or Volume of sample (ml)	Dish Wt. (g)	1st Dish + Sample Wt (g)	2nd Dish + Sample Wt (g)	3rd Dish + Sample Wt (g)	4th Dish + Sample Wt (g)	TS (%) or (mg/l)	Result1 TARE (g)	Result2 IWT (g)	Result3 FWT (g)
1020472	BALCHK			0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	#DIV/0!	0.1000	0.1000	0.1000
1020473	A	DUP	1e	19.2088	1.1784	15.8560	15.8632			81.4447	1.1784	19.2088	15.8632
9981633001	A	S		24.8206	1.1750	20.7270	20.7346			82.7198	1.1750	24.8206	20.7346
9981747001	A	S		17.0941	1.1620	14.5142	14.5335			83.9280	1.1620	17.0941	14.5335
9981747002	A	S		19.1345	1.1582	16.1481	16.1643			83.4771	1.1582	19.1345	16.1643
9981747003	A	S		21.9390	1.1675	18.7378	18.7542			84.6675	1.1675	21.9390	18.7542
9981747004	A	S		16.8500	1.1692	14.3776	14.3943			84.3394	1.1692	16.8500	14.3943
9981747005	A	S		19.4660	1.1636	16.7355	17.0540	17.0303		86.6919	1.1636	19.4660	17.0303
9981765001	A	S		15.7663	1.1532	14.0599	14.0738			88.4179	1.1532	15.7663	14.0738
9981766001	A	S		20.7559	1.1503	17.6689	16.3361	16.3192		77.3702	1.1503	20.7559	16.3192
9981768001	A	S		19.0591	1.1425	18.6913	18.4428	18.6812	18.6820	97.8952	1.1425	19.0591	18.6820
9981768002	A	S		18.7772	1.1681	18.4412	18.4428			98.1010	1.1681	18.7772	18.4428
1020474	A	DUP	50	37.5112	1.1459	30.4777	30.4875			80.6857	1.1459	37.5112	30.4875
9981773001	A	S		34.0958	1.1490	26.4169	26.4250			76.7176	1.1490	34.0958	26.4250
9981774001	A	S		46.0708	1.1623	38.2309	38.2381			82.5585	1.1623	46.0708	38.2381
9981774002	A	S		40.3161	1.1812	33.3391	33.3446			82.1860	1.1812	40.3161	33.3446
1020475	BALCHK			0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	#DIV/0!	0.1000	0.1000	0.1000

End

ANALYST Kristie Darrah
ENTER REVIEW Autopost
SECOND REVIEW 8-9-12
APPROVED 8-9-12

ALMDT.NOUSER

Subcontracting Data

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL REPORT

Report Date: August 20, 2012

Vicki Forney
ALS Environmental-Middletown
34 Dogwood Lane
Middletown, PA 17057

Phone: (717) 944-5541 x 3162
Fax: (717) 944-1430
E-mail: vicki.forney@ALSglobal.com

Workorder: 34-1222302
Project ID: ALS Middletown 080912
Purchase Order: NA

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
FTSW-HR-SO-61 (9.5)	1222302001	08/07/12	08/09/12	ERT, Inc.
FTSW-HR-SO-62 (10)	1222302002	08/07/12	08/09/12	ERT, Inc.

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL REPORT

Workorder: 34-1222302
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-61 (9.5) 9981774 001 Sampling Site: ERT, Inc Collected: 08/07/2012
Lab ID: 1222302001 Media: 8 oz Glass Jar Wide Mouth Received: 08/09/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep
Batch: ELMS/1296 (HBN: 91939)
Prepared: 08/14/2012
Weight/Volume
Initial: 1.13 grams
Final: 10 mL
Analysis: Chemical Agent Breakdown, Soil
Batch: ELMS/1297 (HBN: 92002)
Analyzed: 08/18/2012 11:02
Instrument ID: LCMS03
Percent Solid: 82.8
Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.53	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil
Batch: ENVX/15840 (HBN: 91685)
Prepared: 08/15/2012
Weight/Volume
Initial: 30.67 grams
Final: 1 mL
Analysis: SW 8270D, Soil
Batch: ESVO/3827 (HBN: 91984)
Analyzed: 08/16/2012 17:07
Instrument ID: 5975-H
Percent Solid: 82.8
Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.4	7.4	200	1	U
1,4-Dithiane	5.6	5.6	200	1	U

Sample ID: FTSW-HR-SO-62 (10) 9981774 002 Sampling Site: ERT, Inc Collected: 08/07/2012
Lab ID: 1222302002 Media: 8 oz Glass Jar Wide Mouth Received: 08/09/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep
Batch: ELMS/1296 (HBN: 91939)
Prepared: 08/14/2012
Weight/Volume
Initial: 1.55 grams
Final: 10 mL
Analysis: Chemical Agent Breakdown, Soil
Batch: ELMS/1297 (HBN: 92002)
Analyzed: 08/18/2012 11:39
Instrument ID: LCMS03
Percent Solid: 82.5
Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.020	0.020	0.39	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil
Batch: ENVX/15840 (HBN: 91685)
Prepared: 08/15/2012
Weight/Volume
Initial: 30.73 grams
Final: 1 mL
Analysis: SW 8270D, Soil
Batch: ESVO/3827 (HBN: 91984)
Analyzed: 08/16/2012 17:36
Instrument ID: 5975-H
Percent Solid: 82.5
Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.5	7.5	200	1	U
1,4-Dithiane	5.6	5.6	200	1	U

Report Authorization

Method	Analyst	Peer Review
Chemical Agent Breakdown	Thomas T. McKay	Thomas J. Masoian
SW 8270	Reed A. Hendricks	Matt Garvin
Solids/Moisture Determination	Ilse J. Ovalle	Ashley Waganheim

Laboratory Contact Information

ALS Environmental
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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL REPORT

Workorder: 34-1222302
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/insideDNR/RegulatoryWater.aspx
	Florida (TNI)	E671067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint, Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.
RL = Reporting Limit, a verified value of method/media/instrument sensitivity.
CRDL = Contract Required Detection Limit
Reg. Limit = Regulatory Limit.
ND = Not Detected, testing result not detected above the MDL or RL.
< This testing result is less than the numerical value.
** No result could be reported, see sample comments for details.

Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.
J = Qualifier indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds calibration range.
P = Qualifier indicates that the RPD between the two columns is greater than 40%.

Case Narrative

Method: ALS-LC/MS
Analysis: Agent Breakdown Products
ALS WO ID(s): 1222142

Client: ALS Laboratory Group
Account: 08001
Matrix: Soil
HBN #: 92002

General Set Information: There were 11 field samples in this workorder. The samples were analyzed for thiodiglycol (TDG).

Method Summary: Each sample was prepared as noted below and analyzed using an Agilent 1200 LC/MSD system in select ion monitoring (SIM) mode at m/z 97, 125, 139, 146, 181, 105 and 113. ChemStation software was used for instrument control and data analysis.

Sample Preparation: Approximately 1.00g of each sample was weighed into a 15-mL centrifuge tube, and 9.9mL of ASTM Type II water was added to each tube. 100µL of internal standard solution was then added to each sample, bringing the total extract volume to 10mL. The samples were capped, vortexed, rotated for at least 30 minutes, and filtered with Phenomenex Phenex 0.45µm PES syringe filters.

Holding Times: Holding times were met for all samples.

Dilutions: No dilutions were necessary.

Method QC data: The method blank criteria were met. The method blanks (LMB 290920 & 290925) were less than 1/2 the RL of 0.5ug/g for all analytes. The recoveries for LCS 290921 & 290926 were within acceptable parameters.

MS/MSD Analysis: The matrix spikes and matrix spike duplicates were performed on parent samples 1222142001 & 1222167001. Recoveries and RPDs were within acceptable limits for all analytes.

Instrument QC: Instrument initial and continuing calibrations were performed in accordance with established procedures.

NC/CAR(s): None.

Sample Calculation: Samples were reported in µg/g. Results were calculated in µg/g by the equation (A)x(B)x(C)/(D),

where: A = Analyte concentration from the standard curve (µg/mL)
B = Dilution performed at time of analysis
C = Volume of extract (10mL)
D = Actual weight of sample aliquot (g)

Miscellaneous Comments: None.

Thomas T. McKay — August 20, 2012
Date

Case Narrative

Method: ALS-LC/MS
Analysis: Agent Breakdown Products
ALS WO ID(s): 1222142

Client: ALS Laboratory Group
Account: 08001
Matrix: Water
HBN #: 91545

General Set Information: There was one field sample in this workorder. The sample was analyzed for thiodiglycol (TDG).

Method Summary: Each sample was prepared as noted below and analyzed using an Agilent 1200 LC/MSD system in select ion monitoring (SIM) mode at m/z 97, 125, 139, 146, 181, 105 and 113. ChemStation software was used for instrument control and data analysis.

Sample Preparation: 9.9mL of each sample was transferred into a 15-mL centrifuge tube. 100µL of an internal standard solution was then added to each sample. The samples were capped, vortexed, and filtered with Phenomenex Phenex 0.45µm PES syringe filters.

Holding Times: All samples were analyzed within holding times.

Dilutions: No dilutions were necessary.

Method QC data: The method blank criteria were met. The method blank (LMB 289537) was less than 1/2 the RL of 50ug/L for all analytes. The recovery for LCS 289538 was within acceptable limits.

MS/MSD Analysis: A matrix spike and matrix spike duplicate were performed on parent sample 1221555006, which was in the same analytical batch. The recovery and RPD were within acceptable parameters.

Instrument QC: Instrument initial and continuing calibrations were performed in accordance with established procedures.

NC/CAR(s): None were required for this set.

Sample Calculation: Samples were reported in µg/L. Results were calculated in µg/L by the equation (A)x(B)x(C),

where: A = Analyte concentration from the standard curve (µg/mL)
B = Dilution performed at time of analysis
C = Conversion factor from µg/mL to µg/L (1000)

Miscellaneous Comments: None.

Thomas T. McKay — August 15, 2012
Date

Case Narrative

Method: 8270D
Analysis: Semivolatiles by GC/MS
SOP ref: OE-SW-3550, OE-SW-3510, OS-SW-8270D

Set ID: 1222142
Client: ALS Laboratory Group
Matrix: Soil and Water

General Set Information: There are twelve field samples plus MS/MSD in this reporting group.

Method Summary: This is a GC/MS method for determination of semivolatile organic compounds in soil and water according to the SW-846 Guidelines. Thirty grams of soil were extracted by sonication and then concentrated to final volume of 1.0 mL. One liter of water is extracted by separatory funnel and then concentrated to a final volume of 1.0 mL. The resulting extract is analyzed using an Agilent model 5975 GC/MS system with an electron impact ionization source and a quadrapole mass-filter detector.

Sample Preparation: All samples were prepared in accordance with method 3550 or 3510.

Holding Times: All preparation and analysis holding times were met for all samples.

Dilutions: None.

Method and Sample QC data: All target compounds were within recovery limits for the laboratory control sample. The method blank met the acceptance criteria with no target compounds detected above the reporting limit. All samples met pertinent internal standard area criteria. In some instances the latter-eluting internal standard areas were low due to a likely matrix effect, but the requested target analytes do not reference those internal standards. Most surrogate recoveries were within QC limits, but there were some low recoveries in the soil samples. With the large number of analytes reported by Method 8270, it is to be expected that occasional outliers will occur. Based on the rule of marginal exceedences, the ALS SOP makes allowances for the data to be considered acceptable with one base/neutral surrogate and one acid surrogate outside control limits; however, there were two samples having more than two base-neutral fractions outside control limits (1222142004 and 1222142005). Unfortunately, it was not possible to initiate a potential matrix-effect-confirming re-extraction within holding times. Of the six surrogates used in Method 8270, the two eluting closest to oxathiane and dithiane are 2-fluorophenol and phenol-d6, both of which were within limits in all samples. Based on acceptable recoveries of these two surrogates, it was determined that the data shall be reported without the need to perform an out-of-hold re-extraction for the non-pertinent surrogates.

MS/MSD Analysis: Matrix spiking was performed on Sample 1222142007 (FTSW-HR-SO-56(10)). There was not enough sample to perform matrix spiking on the water batch. All recoveries were within expected ranges.

Instrument QC: The instrument was tuned with 50 ng DFTPP. A six-point initial calibration curve was analyzed prior to sample analysis. The concentrations of the standards were: 5, 20, 35, 50, 65 and 80 µg/mL. A calibration verification standard at a concentration of 50 ug/mL was analyzed to verify instrument response against the initial calibration. The initial calibration and continuing calibration verification passed all method criteria.

Miscellaneous Comments: None.

8-21-12

Reed A. Hendricks August 21, 2012

ANALYTICAL REPORT

Report Date: August 21, 2012

Vicki Forney
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34 Dogwood Lane
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Workorder: **34-1222142**
Project ID: ALS Middletown 080812
Purchase Order: NA

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
FTSW-HR-SO-50 (10)	1222142001	08/03/12	08/08/12	ERT. Inc
FTSW-HR-SO-51 (10)	1222142002	08/03/12	08/08/12	ERT. Inc
FTSW-HR-SO-52 (10)	1222142003	08/03/12	08/08/12	ERT. Inc
FTSW-HR-SO-53 (10)	1222142004	08/03/12	08/08/12	ERT. Inc
FTSW-HR-SO-54 (10)	1222142005	08/06/12	08/08/12	ERT. Inc
FTSW-HR-SO-55 (7.5)	1222142006	08/06/12	08/08/12	ERT. Inc
FTSW-HR-SO-56 (10)	1222142007	08/06/12	08/08/12	ERT. Inc
FTSW-HR-SO-57 (10)	1222142008	08/06/12	08/08/12	ERT. Inc
FTSW-HR-SO-58 (10)	1222142009	08/06/12	08/08/12	ERT. Inc
FTSW-HR-SO-59 (10)	1222142010	08/06/12	08/08/12	ERT. Inc
FTSW-HR-SO-60 (7.5)	1222142011	08/06/12	08/08/12	ERT. Inc
FTSW-HR-SO-60 (7.5) ERB	1222142012	08/06/12	08/08/12	

ANALYTICAL REPORT

Workorder: 34-1222142
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-50 (10)** | Sampling Site: ERT. Inc | Collected: 08/03/2012
Lab ID: 1222142001 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1296 (HBN: 91939)	**Initial:** 1.51 grams	**Batch:**	ELMS/1297 (HBN: 92002)	**Percent Solid:** 81.4
Prepared:	08/14/2012	**Final:** 10 mL	**Analyzed:**	08/17/2012 18:40	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.021	0.021	0.41	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15839 (HBN: 91681)	**Initial:** 30.04 grams	**Batch:**	ESVO/3831 (HBN: 92093)	**Percent Solid:** 81.4
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/17/2012 17:16	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.7	7.7	200	1	U
1,4-Dithiane	5.9	5.9	200	1	U

Sample ID: **FTSW-HR-SO-51 (10)** | Sampling Site: ERT. Inc | Collected: 08/03/2012
Lab ID: 1222142002 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1296 (HBN: 91939)	**Initial:** 1.22 grams	**Batch:**	ELMS/1297 (HBN: 92002)	**Percent Solid:** 88.5
Prepared:	08/14/2012	**Final:** 10 mL	**Analyzed:**	08/17/2012 20:29	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.024	0.024	0.46	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15839 (HBN: 91681)	**Initial:** 30.95 grams	**Batch:**	ESVO/3831 (HBN: 92093)	**Percent Solid:** 88.5
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/17/2012 17:45	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: **FTSW-HR-SO-52 (10)** | Sampling Site: ERT. Inc | Collected: 08/03/2012
Lab ID: 1222142003 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1296 (HBN: 91939)	**Initial:** 1.65 grams	**Batch:**	ELMS/1297 (HBN: 92002)	**Percent Solid:** 86
Prepared:	08/14/2012	**Final:** 10 mL	**Analyzed:**	08/17/2012 21:06	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.018	0.018	0.35	1	U

Results Continued on Next Page

ANALYTICAL REPORT

Workorder: 34-1222142
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-52 (10)** | Sampling Site: ERT. Inc | Collected: 08/03/2012
Lab ID: 1222142003 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15839 (HBN: 91681)	**Initial:** 30.07 grams	**Batch:**	ESVO/3831 (HBN: 92093)	**Percent Solid:** 86
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/17/2012 18:14	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.3	7.3	190	1	U
1,4-Dithiane	5.5	5.5	190	1	U

Sample ID: **FTSW-HR-SO-53 (10)** | Sampling Site: ERT. Inc | Collected: 08/03/2012
Lab ID: 1222142004 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1296 (HBN: 91939)	**Initial:** 1.25 grams	**Batch:**	ELMS/1297 (HBN: 92002)	**Percent Solid:** 83.7
Prepared:	08/14/2012	**Final:** 10 mL	**Analyzed:**	08/17/2012 21:42	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.025	0.025	0.48	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15839 (HBN: 91681)	**Initial:** 30.1 grams	**Batch:**	ESVO/3831 (HBN: 92093)	**Percent Solid:** 83.7
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/17/2012 13:52	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.5	7.5	200	1	U
1,4-Dithiane	5.7	5.7	200	1	U

Sample ID: **FTSW-HR-SO-54 (10)** | Sampling Site: ERT. Inc | Collected: 08/06/2012
Lab ID: 1222142005 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1296 (HBN: 91939)	**Initial:** 1.62 grams	**Batch:**	ELMS/1297 (HBN: 92002)	**Percent Solid:** 93
Prepared:	08/14/2012	**Final:** 10 mL	**Analyzed:**	08/17/2012 22:18	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.017	0.017	0.33	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15839 (HBN: 91681)	**Initial:** 30.61 grams	**Batch:**	ESVO/3831 (HBN: 92093)	**Percent Solid:** 93
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/17/2012 14:21	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.6	6.6	180	1	U

Results Continued on Next Page

ANALYTICAL REPORT

Workorder: 34-1222142
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-54 (10)** | Sampling Site: ERT. Inc | Collected: 08/06/2012
Lab ID: 1222142005 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15839 (HBN: 91681)	**Initial:** 30.61 grams	**Batch:**	ESVO/3831 (HBN: 92093)	**Percent Solid:** 93
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/17/2012 14:21	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Dithiane	5.0	5.0	180	1	U

Sample ID: **FTSW-HR-SO-55 (7.5)** | Sampling Site: ERT. Inc | Collected: 08/06/2012
Lab ID: 1222142006 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1296 (HBN: 91939)	**Initial:** 1.38 grams	**Batch:**	ELMS/1297 (HBN: 92002)	**Percent Solid:** 78.6
Prepared:	08/14/2012	**Final:** 10 mL	**Analyzed:**	08/17/2012 23:31	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.024	0.024	0.46	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15839 (HBN: 91681)	**Initial:** 30.57 grams	**Batch:**	ESVO/3831 (HBN: 92093)	**Percent Solid:** 78.6
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/17/2012 14:50	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.9	7.9	210	1	U
1,4-Dithiane	6.0	6.0	210	1	U

Sample ID: **FTSW-HR-SO-56 (10)** | Sampling Site: ERT. Inc | Collected: 08/06/2012
Lab ID: 1222142007 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1296 (HBN: 91939)	**Initial:** 1.11 grams	**Batch:**	ELMS/1297 (HBN: 92002)	**Percent Solid:** 87.2
Prepared:	08/14/2012	**Final:** 10 mL	**Analyzed:**	08/18/2012 00:07	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.027	0.027	0.52	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15839 (HBN: 91681)	**Initial:** 30.38 grams	**Batch:**	ESVO/3831 (HBN: 92093)	**Percent Solid:** 87.2
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/17/2012 15:20	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.1	7.1	190	1	U
1,4-Dithiane	5.4	5.4	190	1	U

ANALYTICAL REPORT

Workorder: 34-1222142
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-57 (10)** | Sampling Site: ERT. Inc | Collected: 08/06/2012
Lab ID: 1222142008 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1296 (HBN: 91939)	**Initial:** 1.2 grams	**Batch:**	ELMS/1297 (HBN: 92002)	**Percent Solid:** 92.2
Prepared:	08/14/2012	**Final:** 10 mL	**Analyzed:**	08/18/2012 00:44	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.024	0.024	0.45	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15839 (HBN: 91681)	**Initial:** 30.49 grams	**Batch:**	ESVO/3831 (HBN: 92093)	**Percent Solid:** 92.2
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/17/2012 18:43	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.7	6.7	180	1	U
1,4-Dithiane	5.1	5.1	180	1	U

Sample ID: **FTSW-HR-SO-58 (10)** | Sampling Site: ERT. Inc | Collected: 08/06/2012
Lab ID: 1222142009 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1296 (HBN: 91939)	**Initial:** 1.38 grams	**Batch:**	ELMS/1297 (HBN: 92002)	**Percent Solid:** 81
Prepared:	08/14/2012	**Final:** 10 mL	**Analyzed:**	08/18/2012 01:20	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.023	0.023	0.45	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15839 (HBN: 91681)	**Initial:** 30.38 grams	**Batch:**	ESVO/3831 (HBN: 92093)	**Percent Solid:** 81
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/17/2012 19:12	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.7	7.7	200	1	U
1,4-Dithiane	5.8	5.8	200	1	U

Sample ID: **FTSW-HR-SO-59 (10)** | Sampling Site: ERT. Inc | Collected: 08/06/2012
Lab ID: 1222142010 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1296 (HBN: 91939)	**Initial:** 1.28 grams	**Batch:**	ELMS/1297 (HBN: 92002)	**Percent Solid:** 92.7
Prepared:	08/14/2012	**Final:** 10 mL	**Analyzed:**	08/18/2012 01:57	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.022	0.022	0.42	1	U

Results Continued on Next Page

ANALYTICAL REPORT

Workorder: 34-1222142
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-59 (10)** | Sampling Site: ERT. Inc | Collected: 08/06/2012
Lab ID: 1222142010 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15839 (HBN: 91681)	**Initial:** 30.31 grams	**Batch:**	ESVO/3831 (HBN: 92093)	**Percent Solid:** 92.7
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/17/2012 19:41	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.7	6.7	180	1	U
1,4-Dithiane	5.1	5.1	180	1	U

Sample ID: **FTSW-HR-SO-60 (7.5)** | Sampling Site: ERT. Inc | Collected: 08/06/2012
Lab ID: 1222142011 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1296 (HBN: 91939)	**Initial:** 1.16 grams	**Batch:**	ELMS/1297 (HBN: 92002)	**Percent Solid:** 78.2
Prepared:	08/14/2012	**Final:** 10 mL	**Analyzed:**	08/18/2012 02:33	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.029	0.029	0.55	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15839 (HBN: 91681)	**Initial:** 30.85 grams	**Batch:**	ESVO/3831 (HBN: 92093)	**Percent Solid:** 78.2
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/17/2012 16:47	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.8	7.8	210	1	U
1,4-Dithiane	5.9	5.9	210	1	U

Sample ID: **FTSW-HR-SO-60 (7.5) ERB** | Sampling Site: NA | Collected: 08/06/2012
Lab ID: 1222142012 | Media: 1000 mL Amber Glass | Received: 08/08/2012
Matrix: Water | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Not Applicable	**Analysis:**	Chemical Agent Breakdown, Water	**Instrument ID:** LCMS03
		Batch:	ELMS/1288 (HBN: 91545)	**Percent Solid:** NA
		Analyzed:	08/13/2012 16:32	**Report Basis:** Wet

Analyte	ug/L	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual.
Thiodiglycol	2.6	2.6	50	1	U

Analysis Method - SW 8270

Preparation:	EPA 3510, Sep Funnel SVOA	**Weight/Volume**	**Analysis:**	SW 8270D, Water	**Instrument ID:** 5975-H
Batch:	ENVX/15815 (HBN: 91554)	**Initial:** 1000 mL	**Batch:**	ESVO/3830 (HBN: 92092)	**Percent Solid:** NA
Prepared:	08/13/2012	**Final:** 1 mL	**Analyzed:**	08/14/2012 12:36	**Report Basis:** Wet

Analyte	ug/L	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual.
1,4-Oxathiane	1.5	1.5	5.0	1	U

Results Continued on Next Page

ANALYTICAL REPORT

Workorder: 34-1222142
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-60 (7.5) ERB**	Sampling Site: NA	Collected: 08/06/2012
Lab ID: 1222142012	Media: 1000 mL Amber Glass	Received: 08/08/2012
Matrix: Water	Sampling Parameter: NA	

Analysis Method - SW 8270

Preparation: EPA 3510, Sep Funnel SVOA	**Weight/Volume**		**Analysis:** SW 8270D, Water	**Instrument ID:** 5975-H	
Batch: ENVX/15815 (HBN: 91554)	**Initial:** 1000 mL		**Batch:** ESVO/3830 (HBN: 92092)	**Percent Solid:** NA	
Prepared: 08/13/2012	**Final:** 1 mL		**Analyzed:** 08/14/2012 12:36	**Report Basis:** Wet	

Analyte	ug/L	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual.
1,4-Dithiane	1.5	1.5	5.0	1	U

Comments

Quality Control: SW 8270 - (HBN: 92093)

There were some surrogate recoveries below the QC limit. It was not possible to perform a potential matrix-effect-confirming re-extraction with holding times. Of the six surrogates specified in Method 8270, the two which are truly pertinent to the analtyes of interest (due to nearness in elution time) are 2-fluorophenol and phenol-d6. Recovery of these surrogates where within limits in all samples.

Report Authorization

Method	Analyst	Peer Review
Chemical Agent Breakdown	Thomas T. McKay	Thomas J. Masoian
SW 8270	Reed A. Hendricks	Matt Garvin
Solids/Moisture Determination	Ilse J. Ovalle	Ashley Waganheim

Laboratory Contact Information

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ANALYTICAL REPORT

Workorder: 34-1222142
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint ,Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.
RL = Reporting Limit, a verified value of method/media/instrument sensitivity.
CRDL = Contract Required Detection Limit
Reg. Limit = Regulatory Limit.
ND = Not Detected, testing result not detected above the MDL or RL.
< This testing result is less than the numerical value.
** No result could be reported, see sample comments for details.

Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.
J = Qualifier Indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds calibration range.
P = Qualifier indicates that the RPD between the two columns is greater than 40%.

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1222142**

Limits:	Historical/Performance	**Preparation:**	NA
Basis:	ALS Laboratory Group	**Batch:**	NA
		Prepared By:	NA
Analysis:	Chemical Agent Breakdown		
Batch:	ELMS/1288 (HBN: 91545)		
Analyzed By:	Thomas T. McKay		

Blank

LMB: 289537
Analyzed: 08/13/2012 12:17
Units: ug/L

Analyte	Result	RL
Thiodiglycol	ND	50

Laboratory Control Sample

LCS: 289538
Analyzed: 08/13/2012 12:54
Units: ug/L

Analyte	Result	Target	% Recovery	QC Limits	
Thiodiglycol	2270	2000	113	73	131.2

Matrix Spike - Matrix Spike Duplicate

Sample: 1221555006
Analyzed: 08/13/2012 14:07
Units: ug/L

MS: 289539
Analyzed: 08/13/2012 14:43

MSD: 289540
Analyzed: 08/13/2012 15:19

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
Thiodiglycol	ND	5260	5000	105	80	120	5850	117	10.5	0	20

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1222142**

Limits: Historical/Performance	**Preparation:** NA	**Analysis:** Chemical Agent Breakdown
Basis: ALS Laboratory Group	**Batch:** NA	**Batch:** ELMS/1288 (HBN: 91545)
	Prepared By: NA	**Analyzed By:** Thomas T. McKay

QC Data Approved and Reviewed by

Thomas T. McKay	Thomas J. Masoian	8/15/2012
Analyst	**Peer Review**	**Date**

Symbols and Definitions

* - Analyte above reporting limit or outside of control limits
▲ - Sample result is greater than 4 times the spike added
◓ - Sample and Matrix Duplicate less than 5 times the reporting limit

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1222142**

Limits: Historical/Performance	**Preparation:** Chemical Agent Breakdown, Soil Prep	**Analysis:** Chemical Agent Breakdown
Basis: ALS Laboratory Group	**Batch:** ELMS/1296 (HBN: 91939)	**Batch:** ELMS/1297 (HBN: 92002)
	Prepared By: Thomas T. McKay	**Analyzed By:** Thomas T. McKay

Blank

LMB: 290920
Analyzed: 08/17/2012 16:51
Units: ug/g

Analyte	Result	RL
Thiodiglycol	ND	0.5

LMB: 290925
Analyzed: 08/18/2012 03:09
Units: ug/g

Analyte	Result	RL
Thiodiglycol	ND	0.5

Laboratory Control Sample

LCS: 290921
Analyzed: 08/17/2012 17:27
Units: ug/g

Analyte	Result	Target	% Recovery	QC Limits	
Thiodiglycol	20.1	20	101	80	120

LCS: 290926
Analyzed: 08/18/2012 03:46
Units: ug/g

Analyte	Result	Target	% Recovery	QC Limits	
Thiodiglycol	21.2	20	106	80	120

Matrix Spike - Matrix Spike Duplicate

Sample: 1222167001
Analyzed: 08/18/2012 04:22
MS: 290927
Analyzed: 08/18/2012 04:58
MSD: 290928
Analyzed: 08/18/2012 06:11
Units: ug/g

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
Thiodiglycol	ND	37	36.5	101	80	120	37.6	94.9	1.62	0	20

Sample: 1222142001
Analyzed: 08/17/2012 18:40
MS: 290922
Analyzed: 08/17/2012 19:16
MSD: 290923
Analyzed: 08/17/2012 19:53
Units: ug/g

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
Thiodiglycol	ND	36.3	37.9	95.8	80	120	40.7	103	11.5	0	20

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1222142**

Limits: Historical/Performance	**Preparation:** Chemical Agent Breakdown, Soil Prep	**Analysis:** Chemical Agent Breakdown
Basis: ALS Laboratory Group	**Batch:** ELMS/1296 (HBN: 91939)	**Batch:** ELMS/1297 (HBN: 92002)
	Prepared By: Thomas T. McKay	**Analyzed By:** Thomas T. McKay

QC Data Approved and Reviewed by

Thomas T. McKay	Thomas J. Masoian	8/20/2012
Analyst	**Peer Review**	**Date**

Symbols and Definitions

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RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable

Quality Control Sample
Batch Report

Analysis Information

Workorder: 1222142

Limits: Historical/Performance	**Preparation:** EPA 3510, Sep Funnel SVOA	**Analysis:** SW 8270
Basis: ALS Laboratory Group	**Batch:** ENVX/15815 (HBN: 91554)	**Batch:** ESVO/3830 (HBN: 92092)
	Prepared By: Xiao Y Chiang	**Analyzed By:** Reed A. Hendricks

Blank

MB: 289579
Analyzed: 08/14/2012 10:39
Units: ug/L

Analyte	Result	RL
1,4-Oxathiane	ND	5
1,4-Dithiane	ND	5

Laboratory Control Sample - Laboratory Control Sample Duplicate

LCS: 289580
Analyzed: 08/14/2012 11:09
Units: ug/L

LCSD: 289581
Analyzed: 08/14/2012 11:38

Analyte	Result	Target	% Recovery	QC Limits		Result	RPD	QC Limits	
1,4-Oxathiane	25.4	40	63.5	36.2	101.4	23.6	7.17	0	50
1,4-Dithiane	28.9	40	72.2	50.7	98.8	26.9	7.22	0	50

Surrogate Recoveries

Surrogate	2-Fluorophenol		Nitrobenzene-d5		Phenol-d5	
QC Limits	0	121	22	130.3	0	145
Units	ug/L		ug/L		ug/L	

Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
289579-MB	18.9	50	37.9	38.2	50	76.3	15.6	50	31.2
289580-LCS	19.5	50	38.9	37.3	50	74.6	15.2	50	30.5
289581-LCSD	16.5	50	33	32.1	50	64.2	13.8	50	27.6
1222142012	15	50	30	31.2	50	62.4	12.4	50	24.8

Surrogate	2,4,6-Tribromophenol		Terphenyl-d14		2-Fluorobiphenyl	
QC Limits	12.1	139.9	16.2	143.5	35.1	113.6
Units	ug/L		ug/L		ug/L	

Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
289579-MB	38.5	50	77	45.2	50	90.4	40.3	50	80.7
289580-LCS	37.7	50	75.3	45.8	50	91.6	40	50	79.9
289581-LCSD	37.2	50	74.4	46.1	50	92.1	34.9	50	69.8
1222142012	30.7	50	61.4	36.7	50	73.4	33.8	50	67.7

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1222142**

Limits: Historical/Performance	**Preparation:** EPA 3510, Sep Funnel SVOA	**Analysis:** SW 8270
Basis: ALS Laboratory Group	**Batch:** ENVX/15815 (HBN: 91554)	**Batch:** ESVO/3830 (HBN: 92092)
	Prepared By: Xiao Y Chiang	**Analyzed By:** Reed A. Hendricks

QC Data Approved and Reviewed by

Reed A. Hendricks	Matt Garvin	8/21/2012
Analyst	**Peer Review**	**Date**

Symbols and Definitions

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▲ - Sample result is greater than 4 times the spike added
◓ - Sample and Matrix Duplicate less than 5 times the reporting limit

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable

Quality Control Sample
Batch Report

Analysis Information

Workorder: 1222142

Limits:	Historical/Performance	**Preparation:**	EPA 3550, Sonic Ext, SVOA Soil	**Analysis:**	SW 8270
Basis:	ALS Laboratory Group	**Batch:**	ENVX/15839 (HBN: 91681)	**Batch:**	ESVO/3831 (HBN: 92093)
		Prepared By:	Bannet Asingura	**Analyzed By:**	Reed A. Hendricks

Blank

MB: 289973
Analyzed: 08/17/2012 11:56
Units: ug/Kg

Analyte	Result	RL
1,4-Oxathiane	ND	167
1,4-Dithiane	ND	167

Laboratory Control Sample

LCS: 289974
Analyzed: 08/17/2012 12:25
Units: ug/Kg

Analyte	Result	Target	% Recovery	QC Limits	
1,4-Oxathiane	457	1330	34.2	30	170
1,4-Dithiane	609	1330	45.6	30	170

Matrix Spike - Matrix Spike Duplicate

Sample: 1222142007
Analyzed: 08/17/2012 15:20
Units: ug/Kg

MS: 290338
Analyzed: 08/17/2012 15:49

MSD: 290339
Analyzed: 08/17/2012 16:18

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
1,4-Oxathiane	ND	459	1330	34.4	30	170	503	37.7	9.18	0	50
1,4-Dithiane	ND	518	1330	38.8	30	170	595	44.7	13.9	0	50

Surrogate Recoveries

Surrogate	2-Fluorobiphenyl			2-Fluorophenol			Phenol-d5		
QC Limits	38.1	125.1		15.3	128.2		14.5	131.9	
Units	ug/Kg			ug/Kg			ug/Kg		
Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
289973-MB	442	1670	*26.5	453	1670	27.2	679	1670	40.7
289974-LCS	865	1670	51.9	831	1670	49.9	1140	1670	68.3
1222142001	777	1660	46.7	705	1660	42.4	923	1660	55.5
1222142002	673	1620	41.6	367	1620	22.7	369	1620	22.9
1222142003	603	1660	*36.3	460	1660	27.7	628	1660	37.8
1222142004	219	1660	*13.2	387	1660	23.3	614	1660	36.9
1222142005	54.2	1630	*3.32	355	1630	21.7	788	1630	48.2
1222142006	954	1640	58.3	891	1640	54.5	1160	1640	71.1
1222142007	778	1650	47.2	731	1650	44.4	1040	1650	63.4
290338-MS	926	1670	55.6	849	1670	50.9	1100	1670	65.8
290339-MSD	966	1670	58	842	1670	50.6	1090	1670	65.7
1222142008	889	1640	54.2	346	1640	21.1	245	1640	14.9
1222142009	866	1650	52.6	758	1650	46	784	1650	47.7
1222142010	955	1650	57.9	525	1650	31.8	342	1650	20.7

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1222142**

Limits: Historical/Performance
Basis: ALS Laboratory Group

Preparation: EPA 3550, Sonic Ext, SVOA Soil
Batch: ENVX/15839 (HBN: 91681)
Prepared By: Bannet Asingura

Analysis: SW 8270
Batch: ESVO/3831 (HBN: 92093)
Analyzed By: Reed A. Hendricks

Surrogate Recoveries

Surrogate	2-Fluorobiphenyl			2-Fluorophenol			Phenol-d5		
QC Limits	38.1	125.1		15.3	128.2		14.5	131.9	
Units	ug/Kg			ug/Kg			ug/Kg		
Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
1222142011	751	1620	46.3	745	1620	46	1050	1620	64.7

Surrogate	Terphenyl-d14			Nitrobenzene-d5			2,4,6-Tribromophenol		
QC Limits	17.7	171.2		17.4	135.5		22.1	146.8	
Units	ug/Kg			ug/Kg			ug/Kg		
Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
289973-MB	1360	1670	81.3	379	1670	22.7	822	1670	49.3
289974-LCS	1420	1670	85.4	741	1670	44.5	1090	1670	65.1
1222142001	1380	1660	83	696	1660	41.8	731	1660	43.9
1222142002	944	1620	58.4	578	1620	35.8	130	1620	*8.05
1222142003	1150	1660	69.1	407	1660	24.5	486	1660	29.3
1222142004	896	1660	53.9	264	1660	*15.9	401	1660	24.2
1222142005	1250	1630	76.4	116	1630	*7.13	839	1630	51.3
1222142006	1350	1640	82.8	895	1640	54.7	980	1640	59.9
1222142007	1310	1650	79.8	686	1650	41.7	883	1650	53.7
290338-MS	1390	1670	83.2	817	1670	49	835	1670	50.1
290339-MSD	1320	1670	79	879	1670	52.7	936	1670	56.2
1222142008	1770	1640	108	717	1640	43.7	54.8	1640	*3.34
1222142009	1390	1650	84.6	781	1650	47.5	433	1650	26.3
1222142010	3200	1650	*194	614	1650	37.2	112	1650	*6.81
1222142011	1280	1620	79.1	722	1620	44.6	959	1620	59.2

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1222142**

Limits:	Historical/Performance	**Preparation:**	EPA 3550, Sonic Ext, SVOA Soil	**Analysis:**	SW 8270
Basis:	ALS Laboratory Group	**Batch:**	ENVX/15839 (HBN: 91681)	**Batch:**	ESVO/3831 (HBN: 92093)
		Prepared By:	Bannet Asingura	**Analyzed By:**	Reed A. Hendricks

Comments

There were some surrogate recoveries below the QC limit. It was not possible to perform a potential matrix-effect-confirming re-extraction with holding times. Of the six surrogates specified in Method 8270, the two which are truly pertinent to the analtyes of interest (due to nearness in elution time) are 2-fluorophenol and phenol-d6. Recovery of these surrogates where within limits in all samples.

QC Data Approved and Reviewed by

Reed A. Hendricks	Matt Garvin	8/21/2012
Analyst	**Peer Review**	**Date**

Symbols and Definitions

* - Analyte above reporting limit or outside of control limits
▲ - Sample result is greater than 4 times the spike added
◓ - Sample and Matrix Duplicate less than 5 times the reporting limit

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable

W 1222142

ALS Environmental

Ship to: 34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

9855/1-2 + 5-4

Page 1 of 2

Courier:

Tracking #: 7987 0170 2234

9981496

Co. Name: ERT, inc

Contact (Report to): Mike Gearheart

Phone: 301-323-1403

Address: 6100 Frost PL Suite A Laurel MD 20707

Bill to (if different than Report to):

PO#:

Project Name/#: Ft. Stewart 3153-004

ALS Quote #:

TAT: [ ] Normal-Standard TAT is 10 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? [X] -Y Mike.Gearheart@ertcorp.com

Fax? [ ] -Y No.:

***Container Type	GG	AG													
***Container Size	4oz	8oz													
*** Preservative	–	–													

ANALYSES/METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	SW-846 6020	SW-846 8270D/8321								
1	FTSW-HR-SO-5(10)		8/3/12	1524	G	SO	1	1								
2	FTSW-HR-SO-6(10)		8/3/12	1602	G	SO	1	1								
3	FTSW-HR-SO-8(10)		8/3/12	1630	G	SO	1	1								
4	FTSW-HR-SO-03(10)		8/3/12	1735	G	SO	1	1								
5	FTSW-HR-SO-12(10)		8/6/12	0747	G	SO	1	1								
6	FTSW-HR-SO-04(7.5)		8/6/12	0808	G	SO	1	1								
7	FTSW-HR-SO-09(10)		8/6/12	1120	G	SO	1	1	K Snow							
8	FTSW-HR-SO-10(10)		8/6/12	1157	G	SO	1	1								

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)

Performed by: AM (INITIAL HERE)

Cooler Temp: 5°C

Therm. ID: TH215

No. of Coolers:

Notes:

Sample	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
1	Y	Y	Y	N	
2	N	N	N	N	
3	Y	N	Y	Y	Y
4	Y	N	Y	Y	Y
5	Y	N	Y	Y	Y
6	Y	N	Y	Y	Y
7	Y	N	Y	Y	Y
8	Y	N	Y	Y	Y

Custody seals Present? (if present) Seals intact? Received on ice? COC/Labels complete/accurate? Container in good condition?

SAMPLED BY (Please Print): LYNELLE BRODE

LOGGED BY(signature): [signature] DATE: 8/6/12 TIME: 1434

REVIEWED BY(signature): [signature] DATE: 8/6/12 TIME: 1434

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Lynette Brode, ERT	8/6/12	1500	2 [signature] ALS	8/7/12	0905
3 [signature]	8/7/12	1745	4 [signature]	08/08/12	0948
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [X] CLP-like [ ] NJ-Reduced [ ] NJ-Full [X] DOD (other)

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

EDDs Required? [✓] If yes, format type: SEDD per app

Other GA

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 6/2011

ALS Environmental

Ship to: 34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 2 of 2

Courier:

Tracking #: 7987 0170 2234

9981496

Co. Name: ERT, inc

Contact (Report to): Mike Gearheart

Phone: 301-323-1405

Address: 6100 Frost PL
Suite A
Laurel MD 20707

Bill to (if different than Report to):

PO#:

Project Name/#: Ft. Stewart 3133-004

ALS Quote #:

TAT: [ ] Normal-Standard TAT is 10 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? [X] -Y Mike.Gearheart@ertcorp.com

Fax? [ ] -Y No.:

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	SW-846 6020	SW-846 8270D/8321	SW-846 8270D/8321	SW-846 6020							Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
						***Container Type	CG	AG	AG	PO											
						***Container Size	4oz	8oz	1L	250mL											
						*** Preservative	–	–	–	–											
9	1 FTSW-HR-SO-11(10)		8/06/12	1038	G	SO	1	1										DH	8/7/12		
10	2 FTSW-HR-SO-13(10)		8/06/12	1239	G	SO	1	1									N	N	N	N	N
11	3 FTSW-HR-SO-14 (7.5)		8/06/12	1335	G	SO	1	1									Y	Y	Y	Y	Y
12	4 FTSW-HR-SO-14-ERB		8/06/12	1351	G	W SO			x 2	1											
	8/7/12									DH	8/7/12										
	6																				
	7																				
	8																				

K. Snow 8/7/12 1119

Receipt Information (completed by Sample Receiving)

Performed by: [signature] Initial & Date

Cooler Temp: 5°C

Therm. ID: TH 215

No. of Coolers:

Notes:

Custody seals Present? (if present) Seals intact? Received on ice? COC/Labels complete/accurate? Container in good condition?

SAMPLED BY (Please Print): LYNELLE BRODE

LOGGED BY (signature): [signature] DATE: 8/6/12 TIME: 1454

REVIEWED BY (signature): [signature] DATE: 8/6/12 TIME: 1434

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] ERT	8/6/12	1500	2 [signature] ALS	8/7/12	0905
3 [signature]	8/7/12	1745	4 [signature]	08/08/12	0940
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [X] CLP-like [ ] NJ-Reduced [ ] NJ-Full [X] DOD (other)

EDDs Required? [X] If yes, format type: SEDD PER QAPP

DOD Criteria Required?

SDWA Forms?⇒ yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

Other GA

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

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Temp Blank Included

ALS Environmental

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 2

Courier:

Tracking #: 7987 0170 2234

9981496

Co. Name: ERT, inc

Contact (Report to): Mike Gearheart

Phone: 301-323-1403

Address: 6100 Frost PL Suite A Laurel MD 20707

Bill to (if different than Report to):

PO#:

Project Name/#: Ft. Stewart 3153-004

ALS Quote #:

TAT: [ ] Normal-Standard TAT is 10 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? [X] -Y Mike.Gearheart@ertcorp.com

Fax? [ ] -Y No.:

***Container Type	GG	AG
***Container Size	4oz	8oz
*** Preservative	–	–

ANALYSES/METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	SW-846 6020	SW-846 8270D/8321								
1	FTSW-HR-SO-~~5~~ 50 (10)		8/3/12	1524	G	SO	1	1								
2	FTSW-HR-SO-~~10~~ 51 (10)	KJ 8-10-12 See Attached Email	8/3/12	1602	G	SO	1	1								
3	FTSW-HR-SO-~~8~~ 52 (10)		8/3/12	1630	G	SO	1	1								
4	FTSW-HR-SO-~~03~~ 53 (10)		8/3/12	1735	G	SO	1	1								
5	FTSW-HR-SO-~~12~~ 54 (10)		8/6/12	0747	G	SO	1	1								
6	FTSW-HR-SO-~~04~~ 55 (7.5)		8/6/12	0808	G	SO	1	1								
7	FTSW-HR-SO-~~09~~ 56 (10)		8/6/12	1120	G	SO	1	1								
8	FTSW-HR-SO-~~10~~ 57 (10)		8/6/12	1157	G	SO	1	1								

Enter Number of Containers Per Analysis

K. Snow 8/7/12 1119

SAMPLED BY (Please Print): LYNELLE BRODE

LOGGED BY(signature): [signature] DATE: 8/6/12 TIME: 1434

REVIEWED BY(signature): [signature] DATE: 8/6/12 TIME: 1434

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	Lynelle Brode, ERT	8/6/12	1500	2	[signature] ALS	8/7/12	0905
3	[signature]	8/7/12	1745	4	[signature]		
5	[signature]	8-9-12	1925	6	[signature]	08/10/12	0950
7				8			
9				10			

Data Deliverables: [ ] Standard [X] CLP-like [ ] NJ-Reduced [ ] NJ-Full [X] DOD (other)

EDDs Required? [✓] If yes, format type: 5000 per app

DOD Criteria Required?

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

Other: GA

Enter PWSID No.

Receipt Information (completed by Sample Receiving)

Performed by: [initials] INITIAL HERE

Cooler Temp: 5°C

Therm. ID: TH215

No. of Coolers:

Notes:

Sample	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
1	Y	Y	Y	Y	
2	N	N	N	N	
3	Y	N	Y	Y	Y
4	Y	N	Y	Y	Y
5	Y	N	Y	Y	Y
6	Y	N	Y	Y	Y
7	Y	N	Y	Y	Y
8	Y	N	Y	Y	Y

Custody seals Present? (If present) Seals intact? Received on ice? COC/Labels complete/accurate? Container in good condition?

SM 8/7/12

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 6/2011

ALS Environmental

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier:

Tracking #: 7987 0170 2234

9981496

Co. Name: ERT, inc

Contact (Report to): Mike Gearheart

Phone: 301-323-1403

Address: 6100 Frost PL
Suite A
Laurel MD 20707

Bill to (if different than Report to):

PO#:

Project Name/#: Ft. Stewart 3153-004

ALS Quote #:

TAT: [ ] Normal-Standard TAT is 10 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? [X] -Y Mike.Gearheart@ertcorp.com

Fax? [ ] -Y No.:

	***Container Type	CG	AG	AG	PO										
	***Container Size	4oz	8oz	1L	250mL										
	*** Preservative	–	–	–	–										

ANALYSES/METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	SW-846 6020	SW-846 8270D/8321	SW-846 8270D/8321	SW-846 6020						
9	1 FTSW-HR-SO-~~11~~ 58 (10)		8/06/12	1038	G	SO	1	1								
10	2 FTSW-HR-SO-~~13~~ 57 (10)		8/06/12	1239	G	SO	1	1								
11	3 FTSW-HR-SO-~~14~~ 60 (7.5)		8/06/12	1335	G	SO	1	1								
12	4 FTSW-HR-SO-~~14~~-ERB		8/06/12	1351	G	SO			2	1						
	5 ~~60-ERB~~ 60 (0.75) ERB									SM	8/7/12					
	6															
	7															
	8															

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)	
Performed by:	INITIAL HERE
Cooler Temp:	5°C
Therm. ID:	TH 215
No. of Coolers:	
Notes:	

Circle appropriate Y or N.	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?
	Y	Y	Y	Y
	SM	8/7/12		
	N	N	N	N
	Y	Y	Y	Y

Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
Y	Y	Y	Y	Y

SAMPLED BY (Please Print): LYNELLE BRODE

LOGGED BY(signature): Lynelle Brode DATE: 8/6/12 TIME: 1434

REVIEWED BY(signature): Lynelle Brode DATE: 8/6/12 TIME: 1434

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	Lynelle Brode ERT	8/6/12	1500	2	[signature] ALS	8/7/12	0905
3	[signature]	8/7/12	1745	4			
5	[signature]	8/9/12	1925	6	[signature]	08/10/12	1960
7				8			
9				10			

Data Deliverables: [ ] Standard [X] CLP-like [ ] NJ-Reduced [ ] NJ-Full [X] DOD (other)

EDDs Required? [X] If yes, format type: SEDD PQ QAPP

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

Other: GA

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

*G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 6/2011

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task:	Split:	Workorder ID: 1222142
Client: ALS Laboratory Group		Account: 8001
Comments:		

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	Type: 8ozGWM Preservatives COOL	Containers ID(s)	Containers Count	Requested Analysis: Chemical Agent Breakdown	Requested Analysis: SW8270
1	08/03/2012 15:24	FTSW-HR-SO-50 (10)	1222142001		Soil/Solid/Sediment		A	1	A	A
2	08/03/2012 16:02	FTSW-HR-SO-51 (10)	1222142002		Soil/Solid/Sediment		A	1	A	A
3	08/03/2012 16:30	FTSW-HR-SO-52 (10)	1222142003		Soil/Solid/Sediment		A	1	A	A
4	08/03/2012 17:35	FTSW-HR-SO-53 (10)	1222142004		Soil/Solid/Sediment		A	1	A	A
5	08/06/2012 07:47	FTSW-HR-SO-54 (10)	1222142005		Soil/Solid/Sediment		A	1	A	A
6	08/06/2012 08:08	FTSW-HR-SO-55 (7.5)	1222142006		Soil/Solid/Sediment		A	1	A	A
7	08/06/2012 11:20	FTSW-HR-SO-56 (10)	1222142007		Soil/Solid/Sediment		A	1	A	A
8	08/06/2012 11:57	FTSW-HR-SO-57 (10)	1222142008		Soil/Solid/Sediment		A	1	A	A
9	08/06/2012 10:38	FTSW-HR-SO-58 (10)	1222142009		Soil/Solid/Sediment		A	1	A	A
10	08/06/2012 12:39	FTSW-HR-SO-59 (10)	1222142010		Soil/Solid/Sediment		A	1	A	A

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Edwards, Meredith D.	08/08/2012 09:48	ALS Sample Receiving	Sample Login
Meredith Edwards	8/10/12 16:16	ICE	Storage
R.33 16C	8/14/12 15:00	Bannet Asingura	Ext
B. Asingura	8/14/12 17:00	R-319-1	Storage

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: SV Lab Notebook No.: _____

Prepared / Analyzed by: _____ Date / Time: _____

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Bannet Asingura	8/15/12 13:00		ICE
	8/15/12, 16:00		Storage

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task:	Split:	Workorder ID: 1222142	Requested Analysis
Client: ALS Laboratory Group		Account: 8001	Type: 8ozGWM
Comments:			Preservatives: COOL

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	Containers ID(s)	Containers Count	Chemical Agent Breakdown	SW8270
11	08/06/2012 13:35	FTSW-HR-SO-60 (7.5)	1222142011		Soil/Solid/Sediment	A	1	A	A
12									
13									
14									
15									
16									
17									
18									
19									
20									

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Edwards, Meredith D.	08/08/2012 09:48	ALS Sample Receiving	Sample Login
Meredith Edwards	8/10/12 10:16	14C	Storage
R-33-16C	8/14/12 15:00	Bamet Asingura	ext
B. Asingura	8/14/12 17:00	R-319	Storage

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: SV Lab Notebook No.:

Prepared / Analyzed by: Date / Time:

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
B. A	8/15/12 13:00	[illegible]	cont
[illegible]	8/15/12 16:00	[illegible]	STOR

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task:	Split:	Workorder ID: 1222142		
Client: ALS Laboratory Group		Account: 8001	Type: 1000AG	
Comments:			Preservatives: COOL	

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	Containers ID(s)	Containers Count	Requested Analysis: Chemical Agent Breakdown	Requested Analysis: SW8270
1	08/06/2012 13:51	FTSW-HR-SO-60 (7.5) ERB	1222142012		Water	A,B	2	A	A
2									
3									
4									
5									
6									
7									
8									
9									
10									

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Edwards, Meredith D.	08/08/2012 09:48	ALS Sample Receiving	Sample Login
Meredith Edwards	8/10/12 1615	160	Storage
R-33-1 [illegible]	08/13/12 1100	[illegible]	TDG
[illegible]	8/13/12 12:00	Challis [illegible]	Ext
Challis [illegible]	8/13/12 14:30	R-33-1 CP	Storage

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: SL

Lab Notebook No.:

Prepared / Analyzed by:

Date / Time:

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Challis [illegible]	08/13/12 14:30	[illegible]	Lone
[illegible]	08/13/12 15:30	R-7-8	STOR

Fri, 08/10/12 3:29 PM

ALSCOCV2.4

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task:	Split:	Workorder ID: 1222142	Requested Analysis
Client: ALS Laboratory Group		Account: 8001	Type: 1000AG
Comments:			Preservatives: COOL

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	Containers ID(s)	Containers Count	Chemical Agent Breakdown	SW8270
1	08/06/2012 13:51	FTSW-HR-SO-60 (7.5) ERB	1222142012		Water	A,B	2	A	A
2									
3									
4									
5									
6									
7									
8									
9									
10									

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Edwards, Meredith D.	08/08/2012 09:48	ALS Sample Receiving	Sample Login
Meredith Edwards	8/10/12 1615	ALS	Storage
R-33 (on	08/13/12 11:00		TDG

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: _____ Lab Notebook No.: _____

Prepared / Analyzed by: _____ Date / Time: _____

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location

Kevin Griffiths

From: Vicki Forney
Sent: Friday, August 10, 2012 5:57 AM
To: Kevin Griffiths
Subject: FW: Letter of Receipt for Workorder 9981774: Received 8/8/2012

Here are the sample description changes for the samples we re-submitted to you yesterday for your receipt today. Thanks.

Take our short online customer survey for a chance to win a FREE iPad!
Vicki Forney
Project Manager
NORTH AMERICA
ALS | Environmental
Address
34 Dogwood Lane
Middletown, PA 17057

PHONE +1 717 944-5541x 3162
FAX +1 717 944-1430
www.alsglobal.com

-----Original Message-----
From: Mike Gearheart [mailto:Mike.Gearheart@ertcorp.com]
Sent: Thursday, August 09, 2012 2:33 PM
To: Vicki Forney
Cc: Jennifer Harlan
Subject: RE: Letter of Receipt for Workorder 9981774: Received 8/8/2012

Vicki,

Hi. We've encountered another issue. Our field crew got confused on the sample nomenclature during the last days of sampling (we switched crews mid-way through). As a result, we request the following sample ID changes, please.

ID number from Lab	What ID Should be
FTSW-HR-SO - 5 (10)	FTSW-HR-SO-50 (10)
FTSW-HR-SO - 6 (10)	FTSW-HR-SO-51 (10)
FTSW-HR-SO - 8 (10)	FTSW-HR-SO-52 (10)
FTSW-HR-SO - 03 (10)	FTSW-HR-SO-53 (10)
FTSW-HR-SO - 12 (10)	FTSW-HR-SO-54 (10)
FTSW-HR-SO - 04 (7.5)	FTSW-HR-SO-55 (07.5)
FTSW-HR-SO - 09 (10)	FTSW-HR-SO-56 (10)
FTSW-HR-SO - 10 (10)	FTSW-HR-SO-57 (10)
FTSW-HR-SO - 11 (10)	FTSW-HR-SO-58 (10)
FTSW-HR-SO - 13 (10)	FTSW-HR-SO-59 (10)
FTSW-HR-SO - 14 (7.5)	FTSW-HR-SO-60 (07.5)
FTSW-HR-SO - 14 ERB	FTSW-HR-SO-60 (07.5) ERB
FTSW-HR-SO-15 (9.5)	FTSW-HR-SO-61 (09.5)
FTSW-HR-SO-16 (10)	FTSW-HR-SO-62 (10)

1222142

1222302

Sorry for the inconveniences, and I really appreciate your responsiveness.

Thank you,

Michael Gearheart
ERT, Inc.

-----Original Message-----
From: Vicki Forney [mailto:Vicki.Forney@ALSGlobal.com]
Sent: Thursday, August 09, 2012 12:36 PM
To: Mike Gearheart
Subject: RE: Letter of Receipt for Workorder 9981774: Received 8/8/2012

Can you call me regarding this requested change? We really should have more volume to complete that testing and one of the containers broke in transit. Thanks.

Take our short online customer survey for a chance to win a FREE iPad!
Vicki Forney
Project Manager
NORTH AMERICA
ALS | Environmental
Address
34 Dogwood Lane
Middletown, PA 17057

PHONE +1 717 944-5541x 3162
FAX +1 717 944-1430
www.alsglobal.com

-----Original Message-----
From: Mike Gearheart [mailto:Mike.Gearheart@ertcorp.com]
Sent: Thursday, August 09, 2012 10:04 AM
To: Vicki Forney
Cc: Jennifer Harlan; Rebekah Mccoy; Lynelle Brode
Subject: FW: Letter of Receipt for Workorder 9981774: Received 8/8/2012

Vicki,

The sample labeled as IDW (Lab ID 9981774003) should not be analyzed for what's listed on the sample login sheet (and what's on the COC). This sample should be analyzed for full TCLP parameters and RCRA Characteristics. This sample is for disposal characterization. Could you please make the change?

Thank you,

Michael Gearheart
ERT, Inc.

-----Original Message-----
From: ALMDT.LIMSAutoEmail@alsglobal.com [mailto:ALMDT.LIMSAutoEmail@alsglobal.com]
Sent: Thursday, August 09, 2012 9:50 AM
To: Mike Gearheart
Subject: Letter of Receipt for Workorder 9981774: Received 8/8/2012

The following reports are attached:

WO 9981774 , Work ID ERT008|Ft. Stewart 3153-004 []

--- End Of List ---

****
The information contained in this email is confidential. If the reader is not the intended recipient then you must notify the sender immediately by return email and then delete all copies of this email. You must not copy, distribute, print or otherwise use the information. Email may be stored by the Company to support operational activities. All information will be held in accordance with the Company's Privacy Policy which can be found on the Company's website - www.campbell.com.au.
****

Scanned By Websense

Kevin Griffiths

From: Vicki Forney
Sent: Friday, August 10, 2012 5:56 AM
To: Kevin Griffiths
Subject: Changes to samples you are receiving today from Ft. Stewart project

Today you should be receiving the resubmission of the soils that you received at 8 degrees C last week and this week. Can you please send me the receipt notification as soon as possible so I can verify that these were okay? We shipped a temperature blank in these coolers as well. Sample FTSW-HR-SO-14-ERB was not reshipped since it was a water. We shipped all the containers we had to you in the original shipment. Please proceed with analysis of that sample and note that it was received in the original batch and a 8 degrees C.

Also I am going to forward you an e-mail from my client (Mike Gearheart) since all the sample descriptions from the chains we resubmitted last night have now changed. Hopefully I can catch these before you log the new set into your computer system. Let me know if you have any questions. Thanks.

Take our short online customer survey for a chance to win a FREE iPad!

Vicki Forney
Project Manager
NORTH AMERICA

ALS Environmental

Address
34 Dogwood Lane
Middletown, PA 17057

PHONE +1 717 944-5541x 3162

FAX +1 717 944-1430

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ALS LABORATORY GROUP SALT LAKE CITY-RELATED INFORMATION REPORT (CRIR)

COOLER OR CONTAINER INFORMATION CHECKLIST (Fill In or Circle)

Client Name: EFT INC Project/Task/Site: 122142

Date/Time of Receipt: 08/08/12 0948 Number of Coolers Received: 1

Condition of Coolers:	Acceptable/Unacceptable	Temperature Control:	Present/Not Included
Custody Seals:	Present/Absent/NA	Location Temp Taken:	Control/Between Samples
	Intact/Broken/NA	Are all temperatures within	
Tamper Evident:	Yes/No/NA	project specific guidelines?	Yes/No/NA
Ice Present:	Yes/No/NA	Are all applicable pHs within	
	Frozen/Melted/NA	specific guidelines?	Yes/No/NA

pH Check Performed:	Metals	Yes/No/NA	Total Phenolics	Yes/No/NA	NO3/NO2	Yes/No/NA
	Cyanide	Yes/No/NA	TPH – 418.1	Yes/No/NA	Oil & Grease	Yes/No/NA
	Sulfide	Yes/No/NA	COD	Yes/No/NA	Total Phosphorous	Yes/No/NA
	Ammonia	Yes/No/NA	TKN	Yes/No/NA	Gross A.B, Gamma Spec	Yes/No/NA
Residual Chlorine Check Performed:	8270	Yes/No/NA	8310	Yes/No/NA	8330	Yes/No/NA
	8081	Yes/No/NA	8151	Yes/No/NA		

Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.
1	C12- 8991	8 °C	4	C12-	°C	7	C12-	°C
2	C12-	°C	5	C12-	°C	8	C12-	°C
3	C12-	°C	6	C12-	°C	9	C12-	°C

Taken By: [signature] Signature [signature] Printed Name 08/08/12 Date

CLIENT-RELATED INFORMATION

☐ Missing Cooler	☐ Missing Samples/Bottles	☐ Incorrect Preservation	☐ Insufficient Sample Volume
☐ Cooler Conditions	☐ Broken/Leaking Samples	☐ pH Criteria Not Met	☐ Chain of Custody Problems
☐ Missing Paperwork	☐ Incorrect Bottle Type	☐ Residual Chlorine Present	☐ Other:
☐ Missing/Incorrect Bottle Labels	☐ Cooler Temperatures Out of Range	☐ Head Space in Bottles	EPA Custody Seal:

BRIEFLY DESCRIBE THE PROBLEM AND THE ACTION TAKEN:

Faxed to Client? YES ☐ NO ☐ (if yes, attach Fax Cover Sheet)

Response Required Within 24 Hours

PROJECT MANAGEMENT

PROJECT MANAGER COMMENTS:

ALS Project Manager: _____ Printed Name Returned to Sample Receipt by: _____ Signature Date: _____

ALS Laboratory Group Salt Lake City-Related Information Report (CRIR)

Cooler or Container Information Checklist (Fill In or Circle)

Client Name: ALS | Middletown

Project/Task/Site: _____

Date/Time of Receipt: 08/10/12 0950

Number of Coolers Received: 1

Condition of Coolers:	Acceptable/Unacceptable	Temperature Control:	Present/Not Included
Custody Seals:	Present/Absent/NA	Location Temp Taken:	Cooler/Between Samples
	Intact/Broken/NA	Are all temperatures within	
Tamper Evident:	Yes/No/NA	project specific guidelines?	Yes/No/NA
Ice Present:	Yes/No/NA	Are all applicable pHs within	
	Frozen/Melted/NA	specific guidelines?	Yes/No/NA

pH Check Performed:	Metals	Yes/No/NA	Total Phenolics	Yes/No/NA	NO3/NO2	Yes/No/NA
	Cyanide	Yes/No/NA	TPH – 418.1	Yes/No/NA	Oil & Grease	Yes/No/NA
	Sulfide	Yes/No/NA	COD	Yes/No/NA	Total Phosphorous	Yes/No/NA
	Ammonia	Yes/No/NA	TKN	Yes/No/NA	Gross A.B, Gamma Spec	Yes/No/NA
Residual Chlorine Check Performed:	8270	Yes/No/NA	8310	Yes/No/NA	8330	Yes/No/NA
	8081	Yes/No/NA	8151	Yes/No/NA		

Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.
1	C12- 0501	5 °C	4	C12-	°C	7	C12-	°C
2	C12-	°C	5	C12-	°C	8	C12-	°C
3	C12-	°C	6	C12-	°C	9	C12-	°C

Taken By: _____ (Signature) _____ (Printed Name) 08/10/12 (Date)

Client-Related Information

☐ Missing Cooler	☐ Missing Samples/Bottles	☐ Incorrect Preservation	☐ Insufficient Sample Volume
☐ Cooler Conditions	☐ Broken/Leaking Samples	☐ pH Criteria Not Met	☐ Chain of Custody Problems
☐ Missing Paperwork	☐ Incorrect Bottle Type	☐ Residual Chlorine Present	☐ Other:
☐ Missing/Incorrect Bottle Labels	☐ Cooler Temperatures Out of Range	☐ Head Space in Bottles	EPA Custody Seal:

Briefly Describe the Problem and the Action Taken:

Faxed to Client? Yes ☐ No ☐ (if yes, attach Fax Cover Sheet)

Response Required Within 24 Hours

Project Management

Project Manager Comments:

ALS Project Manager: _____ (Printed Name) Returned to Sample Receipt by: _____ (Signature) Date: _____

From: (717) 944-5541
Steve Smith

34 DOGWOOD LANE

MIDDLETOWN, PA 17057

Origin ID: MDTA

FedEx Express

J12201207160325

Ship Date: 07AUG12
ActWgt: 52.0 LB
CAD: 7121996/INET3300

Delivery Address Bar Code

SHIP TO: (000) 000-0000

BILL SENDER

ALS - UT
ALS - UT
960 LEVOY DR

SALT LAKE CITY, UT 84123

Ref # Summa's
Invoice #
PO #
Dept #

WED - 08 AUG A1
PRIORITY OVERNIGHT

TRK# 0201 7938 7833 7424

84123
UT-US
SLC

XH NPHA

515G2/0C34/AA44

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From: (717) 944-5541
Steve Smith

34 DOGWOOD LANE

MIDDLETOWN, PA 17057

Origin ID: MDTA

FedEx Express

J122012071603251

Ship Date: 09AUG12
ActWgt: 61.0 LB
CAD: 7121996/INET3300

Delivery Address Bar Code

Ref # Summa's
Invoice #
PO #
Dept #

SHIP TO: (000) 000-0000

BILL SENDER

ALS - UT
ALS - UT
960 LEVOY DR

SALT LAKE CITY, UT 84123

FRI - 10 AUG A1
PRIORITY OVERNIGHT

TRK# 7938 8859 8190
0201

84123
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ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Chemical Breakdown
Soil
Analytical Documentation

ALS WO ID #(S):1222142; 1222167; 1222302
ALS Sample #(S):1222142001-011; 1222167001-008; 1222302001-002
ALS Account #(s): 8001 Method: ALS LC/MS Matrix: Soil
Sequence: \\CHEM32\1\SEQUENCE\17AUG12-ABP-S.S
Prep Date: 08/14/2012 Analysis Date: 08/17/12 - 08/18/12
Prep/Analysis HBN #s: 91939/92002 Instrument LOD: 0.050µg/mL
Analyte: **Thiodiglycol (TDG)**
Reported MDL: See Report Reported LOD: See Report

SAMPLE PREPARATION: All ALS sample #'s agreed with field ID #'s. Approximately 1.00g of each sample was weighed into a 15-mL centrifuge tube, and 9.9mL of ASTM Type II water was added to each tube. 100µL of internal standard solution was then added to each sample, bringing the total extraction volume to 10.0mL. The samples were capped, vortexed, rotated for at least 30 minutes, and filtered with Pall 0.45µm Ion Chromatography Acrodiscs prior to analysis.

REAGENTS: Eluent A: 100% ASTM Type II water/0.1% glacial acetic acid.
Eluent B: 95% ACN/ 5% ASTM Type II water/0.1% glacial acetic acid.

HORIZON STANDARD(S): TDG (14169); MPA (14170); IMPA (14172); EMPA (14174); DIMP (14179)
All standards are at 1000µg/mL. Standards used to create calibration standards and those used for CCVs (target = 5.00µg/mL) and RLVS (target = 0.050µg/mL).
Internal Standard Solution: TDG-D8 (14177) at 100ug/mL.

CALIBRATION CURVE: Run 05/01/2012.
Raw data can be found in \\Alsltws013\DataReview\85766.

INSTRUMENT CONDITIONS: Samples were analyzed with an Agilent 1200 LC/MSD system, in positive SIM mode, monitoring m/z 97, 125, 139, 146, 181, 105 and 113.
Instrument ID: LCMS03 Run Time: 35.00 min. Flow Rate: 0.8mL/min Temp: 30°C
Output Gain: 3 Injection Volume: 10µL Fragmentor Voltage: 75 & 125
Column: Phenomenex Synergi Hydro-RP 4 micron (4.6 x 250mm) s/n: 245485-24

GRADIENT:

Time(min)	%Eluent A	%Eluent B
0.00	100.0	0.0
15.00	100.0	0.0
17.00	50.0	50.0
25.00	50.0	50.0
25.01	100.0	0.0

QC DATA: LMB/LCS **290920/21** & **290925/26** were run with the batch. 1.00g of washed sand (EMD Lot# 36211706) was prepared in the same manner as the samples. 20µl of Horizon QC standard 13383 was added to 10.0mL of sample preparation for the LCSs. Target = 20.0ug/g. ASTM Type II water was used for LMB extractions.

MS/MSD: MS/MSDs were performed on samples 1222142001 & 1222167001. 50µl of Horizon standard 14169 was added to 10.0mL of sample preparation. Spike target = 50.0µg/g.

COMMENTS: 1) Quantitation was done using m/z 105 for TDG. No confirmation ions were available for TDG. Results are reported in ug/g.
2) All CCV, LMB, LCS and MS/MSD results were within acceptable limits.

Batch Worklist

Batch: ELMS/ 1296
Rule: Chemical Agent BD, Soil Prep

Created: 8/17/2012 15:09
Analyst: T. McKay

Instrument: NONE
Status: NA

HBN: 91939

Workorder: 1222142
Workorder: 1222167
Workorder: 1222302

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	290920	LMB for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LMB		DCAB....4P	5948	8/31/2012	8/10/2012	8/14/2012
2	290921	LCS for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LCS		DCAB....4P	5948	8/31/2012	8/10/2012	8/14/2012
3	290922	FTSW-HR-SO-50...(1222142001MS)	1.32 grams	10 mL	4	MS		DCAB....4P	5948	8/17/2012	8/10/2012	8/14/2012
4	290923	FTSW-HR-SO-5...(1222142001MSD)	1.27 grams	10 mL	4	MSD		DCAB....4P	5948	8/17/2012	8/10/2012	8/14/2012
5	290924	RLVS for HBN 91939 [ELMS/1296]	1 grams	10 mL	3	RLVS		DCAB....4P	5948	8/31/2012	8/10/2012	8/14/2012
6	1222142001	FTSW-HR-SO-50 (10)	1.51 grams	10 mL	4	SAMPLE	1222142001-A	DCAB....4P	5480	8/17/2012	8/13/2012	8/14/2012
7	1222142002	FTSW-HR-SO-51 (10)	1.22 grams	10 mL	4	SAMPLE	1222142002-A	DCAB....4P	5480	8/17/2012	8/13/2012	8/14/2012
8	1222142003	FTSW-HR-SO-52 (10)	1.65 grams	10 mL	4	SAMPLE	1222142003-A	DCAB....4P	5480	8/17/2012	8/13/2012	8/14/2012
9	1222142004	FTSW-HR-SO-53 (10)	1.25 grams	10 mL	4	SAMPLE	1222142004-A	DCAB....4P	5480	8/17/2012	8/13/2012	8/14/2012
10	1222142005	FTSW-HR-SO-54 (10)	1.62 grams	10 mL	4	SAMPLE	1222142005-A	DCAB....4P	5480	8/20/2012	8/13/2012	8/14/2012
11	1222142006	FTSW-HR-SO-55 (7.5)	1.38 grams	10 mL	4	SAMPLE	1222142006-A	DCAB....4P	5480	8/20/2012	8/13/2012	8/14/2012
12	1222142007	FTSW-HR-SO-56 (10)	1.11 grams	10 mL	4	SAMPLE	1222142007-A	DCAB....4P	5480	8/20/2012	8/13/2012	8/14/2012
13	1222142008	FTSW-HR-SO-57 (10)	1.2 grams	10 mL	4	SAMPLE	1222142008-A	DCAB....4P	5480	8/20/2012	8/13/2012	8/14/2012
14	1222142009	FTSW-HR-SO-58 (10)	1.38 grams	10 mL	4	SAMPLE	1222142009-A	DCAB....4P	5480	8/20/2012	8/13/2012	8/14/2012
15	1222142010	FTSW-HR-SO-59 (10)	1.28 grams	10 mL	4	SAMPLE	1222142010-A	DCAB....4P	5480	8/20/2012	8/13/2012	8/14/2012
16	1222142011	FTSW-HR-SO-60 (7.5)	1.16 grams	10 mL	4	SAMPLE	1222142011-A	DCAB....4P	5480	8/20/2012	8/13/2012	8/14/2012
17	290925	LMB for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LMB		DCAB....4P	5948	8/31/2012	8/10/2012	8/14/2012
18	290926	LCS for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LCS		DCAB....4P	5948	8/31/2012	8/10/2012	8/14/2012
19	1222167001	FTSW-HR-So-43	1.42 grams	10 mL	4	SAMPLE	1222167001-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012
20	290927	FTSW-HR-So-43(1222167001MS)	1.37 grams	10 mL	4	MS		DCAB....4P	5948	8/15/2012	8/10/2012	8/14/2012
21	290928	FTSW-HR-So-43(1222167001MSD)	1.26 grams	10 mL	4	MSD		DCAB....4P	5948	8/15/2012	8/10/2012	8/14/2012
22	1222167002	FTSW-HR-So-44	1.26 grams	10 mL	4	SAMPLE	1222167002-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012
23	1222167003	FTSW-HR-So-45	1.32 grams	10 mL	4	SAMPLE	1222167003-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012
24	1222167004	FTSW-HR-So-46	1.27 grams	10 mL	4	SAMPLE	1222167004-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012
25	1222167005	FTSW-HR-So-46Dup	1.1 grams	10 mL	4	DUP	1222167005-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012
26	1222167006	FTSW-HR-So-47	1.24 grams	10 mL	4	SAMPLE	1222167006-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012
27	1222167007	FTSW-HR-So-48	1.05 grams	10 mL	4	SAMPLE	1222167007-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012

Batch Worklist

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
28	1222167008	FTSW-HR-So-49	1.2 grams	10 mL	4	SAMPLE	1222167008-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012
29	1222302001	FTSW-HR-SO-61 (9.5)	1.13 grams	10 mL	4	SAMPLE	1222302001-A	DCAB....4P	5480	8/21/2012	8/14/2012	8/14/2012
30	1222302002	FTSW-HR-SO-62 (10)	1.55 grams	10 mL	4	SAMPLE	1222302002-A	DCAB....4P	5480	8/21/2012	8/14/2012	8/14/2012

Batch Worklist

Batch: ELMS/ 1297
Rule: Chemical Agent BD, Soil

Created: 8/20/2012 12:36
Analyst: T. McKay

Instrument: LCMS03
Status: WP

HBN: 92002

Workorder: 1222142
Workorder: 1222167
Workorder: 1222302

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	290920	LMB for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LMB		DCAB....4Q	5948	9/22/2012	8/20/2012	8/17/2012
2	290921	LCS for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LCS		DCAB....4Q	5948	9/22/2012	8/20/2012	8/17/2012
3	290924	RLVS for HBN 91939 [ELMS/1296]	1 grams	10 mL	3	RLVS		DCAB...C4Q	5948		8/20/2012	8/17/2012
4	1222167001	FTSW-HR-So-43	1.42 grams	10 mL	4	SAMPLE	1222167001-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
5	290927	FTSW-HR-So-43(1222167001MS)	1.37 grams	10 mL	4	MS		DCAB....4Q	5948	9/22/2012	8/20/2012	8/18/2012
6	290928	FTSW-HR-So-43(1222167001MSD)	1.26 grams	10 mL	4	MSD		DCAB....4Q	5948	9/22/2012	8/20/2012	8/18/2012
7	1222167002	FTSW-HR-So-44	1.26 grams	10 mL	4	SAMPLE	1222167002-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
8	1222167003	FTSW-HR-So-45	1.32 grams	10 mL	4	SAMPLE	1222167003-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
9	1222167004	FTSW-HR-So-46	1.27 grams	10 mL	4	SAMPLE	1222167004-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
10	1222167005	FTSW-HR-So-46Dup	1.1 grams	10 mL	4	DUP	1222167005-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
11	1222167006	FTSW-HR-So-47	1.24 grams	10 mL	4	SAMPLE	1222167006-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
12	1222167007	FTSW-HR-So-48	1.05 grams	10 mL	4	SAMPLE	1222167007-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
13	1222167008	FTSW-HR-So-49	1.2 grams	10 mL	4	SAMPLE	1222167008-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
14	290925	LMB for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LMB		DCAB....4Q	5948	9/22/2012	8/20/2012	8/18/2012
15	290926	LCS for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LCS		DCAB....4Q	5948	9/22/2012	8/20/2012	8/18/2012
16	1222142001	FTSW-HR-SO-50 (10)	1.51 grams	10 mL	4	SAMPLE	1222142001-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/17/2012
17	290922	FTSW-HR-SO-50...(1222142001MS)	1.32 grams	10 mL	4	MS		DCAB....4Q	5948	9/22/2012	8/20/2012	8/17/2012
18	290923	FTSW-HR-SO-5...(1222142001MSD)	1.27 grams	10 mL	4	MSD		DCAB....4Q	5948	9/22/2012	8/20/2012	8/17/2012
19	1222142002	FTSW-HR-SO-51 (10)	1.22 grams	10 mL	4	SAMPLE	1222142002-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/17/2012
20	1222142003	FTSW-HR-SO-52 (10)	1.65 grams	10 mL	4	SAMPLE	1222142003-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/17/2012
21	1222142004	FTSW-HR-SO-53 (10)	1.25 grams	10 mL	4	SAMPLE	1222142004-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/17/2012
22	1222142005	FTSW-HR-SO-54 (10)	1.62 grams	10 mL	4	SAMPLE	1222142005-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/17/2012
23	1222142006	FTSW-HR-SO-55 (7.5)	1.38 grams	10 mL	4	SAMPLE	1222142006-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/17/2012
24	1222142007	FTSW-HR-SO-56 (10)	1.11 grams	10 mL	4	SAMPLE	1222142007-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/18/2012
25	1222142008	FTSW-HR-SO-57 (10)	1.2 grams	10 mL	4	SAMPLE	1222142008-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/18/2012
26	1222142009	FTSW-HR-SO-58 (10)	1.38 grams	10 mL	4	SAMPLE	1222142009-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/18/2012
27	1222142010	FTSW-HR-SO-59 (10)	1.28 grams	10 mL	4	SAMPLE	1222142010-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/18/2012

Batch Worklist

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
28	1222142011	FTSW-HR-SO-60 (7.5)	1.16 grams	10 mL	4	SAMPLE	1222142011-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/18/2012
29	1222302001	FTSW-HR-SO-61 (9.5)	1.13 grams	10 mL	4	SAMPLE	1222302001-A	DCAB.....4	5480	9/22/2012	8/22/2012	8/18/2012
30	1222302002	FTSW-HR-SO-62 (10)	1.55 grams	10 mL	4	SAMPLE	1222302002-A	DCAB.....4	5480	9/22/2012	8/22/2012	8/18/2012

STANDARD REPORT

Working Standard - TDG WRK

TDG WRK — Description - Thiodiglycol Working Std.

Standard:	14169	Expires:	01/31/2013	Usable:	Yes
Lab Lot:	TDG WRK	Created By:	T. McKay	Amount:	12.15 mL
Part ID:		Create Date:	01/31/2012	Validated By:	
MFG:		MFG Lot:		Validated Date:	

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume Added	Expires
3824	TDG STOCK		TDG STK	12.15 mg	1/1/2025

STANDARD REPORT

Constituent

Stock Standard - TDG STOCK

TDG STOCK					Description - (Thiodiglycol Stock Std.)
Standard:	3824	Expires:	1/1/2025	Usable:	Yes
Lab Lot:	TDG STK	Created By:	T. McKay	Amount:	100 grams
Part ID:	166782	Create Date:	4/1/2009	Validated By:	T. Bosch
MFG:	Aldrich	MFG Lot:	11613AR	Validated Date:	4/19/2009

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 mg/g

3824

Certificate of Analysis

SIGMA-ALDRICH

Product Name	2,2'-Thiodiethanol, ≥99%
Product Number	166782
Product Brand	Aldrich
CAS Number	111-48-8
Molecular Formula	$S(CH_2CH_2OH)_2$
Molecular Weight	122.19

TEST	SPECIFICATION	LOT 11613AR RESULTS
APPEARANCE	COLORLESS LIQUID	COLORLESS LIQUID
INFRARED SPECTRUM	CONFORMS TO STRUCTURE.	CONFORMS TO STRUCTURE AND STANDARD AS ILLUSTRATED ON PAGE 276B OF EDITION I, VOLUME 1 OF "THE ALDRICH LIBRARY OF FT-IR SPECTRA".
GAS LIQUID CHROMATOGRAPHY	99.0% (MINIMUM)	99.6 %
QUALITY CONTROL ACCEPTANCE DATE		JANUARY 1997

Barbara Rajzer, Supervisor
Quality Control
Milwaukee, Wisconsin USA

STANDARD REPORT

Working Standard - TDG QC WRK

TDG QC WRK					Description - Thiodiglycol QC Wrk
Standard:	13383	Expires:	11/21/2012	Usable:	Yes
Lab Lot:	TDG QC WRK	Created By:	T. McKay	Amount:	8.44 mL
Part ID:		Create Date:	11/21/2011	Validated By:	
MFG:		MFG Lot:		Validated Date:	

Pos	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume Added	Expires
5844	TDG QC STK	Thiodiglycol QC Stock	TDG QC STK	8.44 mg	1/1/2025

STANDARD REPORT

Constituent

Stock Standard - TDG QC STK

TDG QC STK					Description - Thiodiglycol QC Stock
Standard:	5944	Expires:	1/1/2025	Usable:	Yes
Lab Lot:	TDG QC STK	Created By:	T. McKay	Amount:	50 grams
Part ID:	88559	Create Date:	10/7/2009	Validated By:	T. Bosch
MFG:	Fluka	MFG Lot:	1410377	Validated Date:	10/7/2009

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 mg/g

5844

SIGMA-ALDRICH

Fluka

Sigma-Aldrich Production GmbH
CH-9471 Buchs/Schweiz
www.sigma-aldrich.com

Telefon +41 81 755 2511
Telefax +41 81 755 2272
Email fluka@sial.com

Certificate of Analysis

Product Brand	Fluka
PRODUCT-NO	88559
PRODUCT	2,2'-THIODIETHANOL *BioChemika*
FORMULA	$C_4H_{10}O_2S$
MOLECULAR MASS	122.19
CAS NUMBER	111-48-8
LOT	1410377

Test	Specification	Result
APPEARANCE (COLOR)	COLORLESS	COLORLESS
APPEARANCE (FORM)	CLEAR TO CLEAR VISCOUS LIQUID	CLEAR VISCOUS LIQUID
PURITY (GC AREA %)	≥ 99.0 % REL	99.9 % REL
GC (METHOD)	--	100% POLYETHYLENEGLYCOL (30 M X 0.32 MM X 0.25 UM), IN DICHLORMETHANE
REFRACTIVE INDEX N20/D	1.520 - 1.522	1.522
RESIDUE ON IGNITION	≤ 0.1 %	< 0.05 %
CARBON CONTENT	39.32 % (THEORY)	38.90 %
HYDROGEN CONTENT	8.25 % (THEORY)	8.49 %
INFRARED SPECTRUM	CONFORMS TO STRUCTURE	CONFORMS
QC RELEASE DATE	28/OCT/08	

E. Schwärzler

Edeltraud Schwärzler, Manager
Quality Control
Buchs, Switzerland

Sigma-Aldrich guarantees the 'Sales-Specification' values only, additional lot specific tests may be included for further information. The current 'Sales-Specifications' sheet is available on request. For further inquiries, please contact our Technical Service.Sigma-Aldrich warrants, that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice for additional terms and conditions of sale. The values given on the 'Certificate of Analysis' are the results determined at the time of analysis.

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

atch Report: C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG12-ABP.B

Batch Review Method: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M

['#' ==> Run has not been reprocessed with Batch Review Method
'*' ==> Run has been saved with batch file]

#	Sample	Location	Inj	Dilution	Thiodiglycol-D8 RT	Thiodiglycol-D8 Area	Thiodiglycol-D8 Amount
*	PRIME	Vial 51	1	1	12.991	2.28450e6	10.00000
*	CCV1	Vial 51	1	1	13.037	2.36740e6	10.00000
*	290920 LMB	Vial 52	1	1	13.021	2.17404e6	100.00000
*	290921 LCS	Vial 53	1	1	12.996	2.22191e6	100.00000
*	290924 RLVS	Vial 54	1	1	12.985	1.95173e6	10.00000
*	1222142001	Vial 55	1	1	13.007	1.76561e6	100.00000
*	290922 MS	Vial 56	1	1	12.996	1.77332e6	100.00000
*	290923 MSD	Vial 57	1	1	12.984	1.70778e6	100.00000
*	1222142002	Vial 58	1	1	12.990	1.89639e6	100.00000
*	1222142003	Vial 59	1	1	12.998	1.90070e6	100.00000
*	1222142004	Vial 60	1	1	13.007	1.83797e6	100.00000
*	1222142005	Vial 61	1	1	13.040	1.77543e6	100.00000
*	CCV2	Vial 51	1	1	13.000	2.26015e6	10.00000
*	1222142006	Vial 62	1	1	12.987	1.85223e6	100.00000
*	1222142007	Vial 63	1	1	12.993	1.80946e6	100.00000
*	1222142008	Vial 64	1	1	13.001	1.82786e6	100.00000
*	1222142009	Vial 65	1	1	13.006	1.84889e6	100.00000
*	1222142010	Vial 66	1	1	12.995	1.92324e6	100.00000
*	1222142011	Vial 67	1	1	12.994	1.71416e6	100.00000
*	290925 LMB	Vial 68	1	1	12.999	1.49852e6	100.00000
*	290926 LCS	Vial 69	1	1	12.995	1.59193e6	100.00000
*	1222167001	Vial 70	1	1	13.013	1.52356e6	100.00000
*	290927 MS	Vial 71	1	1	13.009	1.64084e6	100.00000
*	CCV3	Vial 51	1	1	13.035	2.16551e6	10.00000
*	290928 MSD	Vial 72	1	1	13.034	1.73775e6	100.00000
*	1222167002	Vial 73	1	1	13.051	1.61201e6	100.00000
*	1222167003	Vial 74	1	1	13.057	1.54112e6	100.00000
*	1222167004	Vial 75	1	1	13.045	1.48944e6	100.00000
*	1222167005	Vial 76	1	1	13.055	1.59211e6	100.00000
*	1222167006	Vial 77	1	1	13.072	1.62917e6	100.00000
*	1222167007	Vial 78	1	1	13.032	1.71610e6	100.00000
*	1222167008	Vial 79	1	1	13.034	1.59766e6	100.00000
*	1222302001	Vial 80	1	1	13.043	1.66377e6	100.00000
*	1222302002	Vial 81	1	1	13.038	1.60788e6	100.00000
*	CCV4	Vial 51	1	1	13.009	2.13155e6	10.00000

#	Sample	Location	Inj	Dilution	Thiodiglycol RT	Thiodiglycol Area	Thiodiglycol Amount
*	PRIME	Vial 51	1	1	13.591	9.52971e6	4.94520
*	CCV1	Vial 51	1	1	13.627	1.00182e7	5.02078
*	290920 LMB	Vial 52	1	1	0.000	0.00000	0.00000
*	290921 LCS	Vial 53	1	1	13.583	3.88291e6	20.11193

#	*	Sample	Location	Inj	Dilution	Thiodiglycol RT	Thiodiglycol Area	Thiodiglycol Amount
	*	290924 RLVS	Vial 54	1	1	13.555	6.89958e4	4.90956e-2
	*	1222142001	Vial 55	1	1	0.000	0.00000	0.00000
	*	290922 MS	Vial 56	1	1	13.583	7.17668e6	47.89601
	*	290923 MSD	Vial 57	1	1	13.577	7.42725e6	51.68282
	*	1222142002	Vial 58	1	1	0.000	0.00000	0.00000
	*	1222142003	Vial 59	1	1	0.000	0.00000	0.00000
	*	1222142004	Vial 60	1	1	0.000	0.00000	0.00000
	*	1222142005	Vial 61	1	1	0.000	0.00000	0.00000
	*	CCV2	Vial 51	1	1	13.591	9.15080e6	4.79177
	*	1222142006	Vial 62	1	1	0.000	0.00000	0.00000
	*	1222142007	Vial 63	1	1	0.000	0.00000	0.00000
	*	1222142008	Vial 64	1	1	0.000	0.00000	0.00000
	*	1222142009	Vial 65	1	1	0.000	0.00000	0.00000
	*	1222142010	Vial 66	1	1	0.000	0.00000	0.00000
	*	1222142011	Vial 67	1	1	0.000	0.00000	0.00000
	*	290925 LMB	Vial 68	1	1	0.000	0.00000	0.00000
	*	290926 LCS	Vial 69	1	1	13.581	2.92822e6	21.18889
	*	1222167001	Vial 70	1	1	0.000	0.00000	0.00000
	*	290927 MS	Vial 71	1	1	13.603	7.01301e6	50.73884
	*	CCV3	Vial 51	1	1	13.627	8.96610e6	4.90631
	*	290928 MSD	Vial 72	1	1	13.625	6.96716e6	47.42531
	*	1222167002	Vial 73	1	1	0.000	0.00000	0.00000
	*	1222167003	Vial 74	1	1	0.000	0.00000	0.00000
	*	1222167004	Vial 75	1	1	0.000	0.00000	0.00000
	*	1222167005	Vial 76	1	1	0.000	0.00000	0.00000
	*	1222167006	Vial 77	1	1	0.000	0.00000	0.00000
	*	1222167007	Vial 78	1	1	0.000	0.00000	0.00000
	*	1222167008	Vial 79	1	1	0.000	0.00000	0.00000
	*	1222302001	Vial 80	1	1	0.000	0.00000	0.00000
	*	1222302002	Vial 81	1	1	0.000	0.00000	0.00000
	*	CCV4	Vial 51	1	1	13.602	8.61050e6	4.78026

*** End of Report ***

Sequence Table:

Method and Injection Info Part:

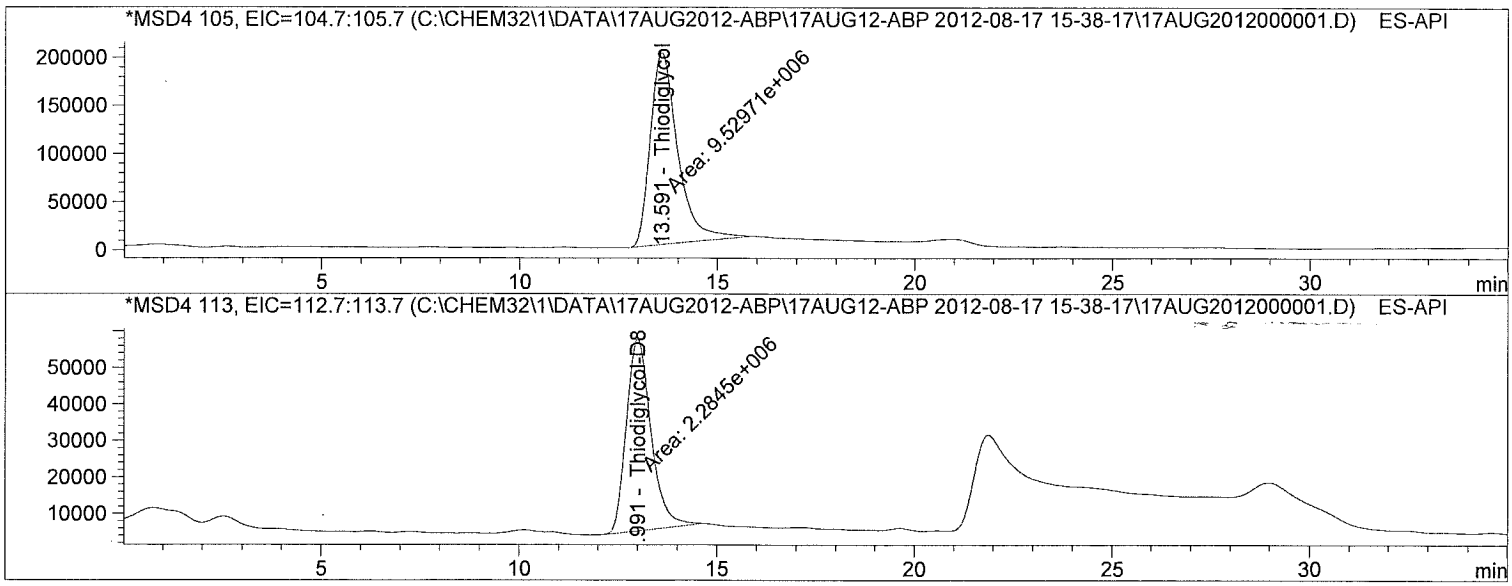
Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 51	PRIME	ABP-ON	1	Ctrl Samp	
2	Vial 51	CCV1	ABP-ON	1	Ctrl Samp	
3	Vial 52	290920 LMB	ABP-ON	1	Ctrl Samp	
4	Vial 53	290921 LCS	ABP-ON	1	Ctrl Samp	
5	Vial 54	290924 RLVS	ABP-ON	1	Ctrl Samp	
6	Vial 55	1222142001	ABP-ON	1	Sample	
7	Vial 56	290922 MS	ABP-ON	1	Ctrl Samp	
8	Vial 57	290923 MSD	ABP-ON	1	Ctrl Samp	
9	Vial 58	1222142002	ABP-ON	1	Sample	
10	Vial 59	1222142003	ABP-ON	1	Sample	
11	Vial 60	1222142004	ABP-ON	1	Sample	
12	Vial 61	1222142005	ABP-ON	1	Sample	
13	Vial 51	CCV2	ABP-ON	1	Ctrl Samp	
14	Vial 62	1222142006	ABP-ON	1	Sample	
15	Vial 63	1222142007	ABP-ON	1	Sample	
16	Vial 64	1222142008	ABP-ON	1	Sample	
17	Vial 65	1222142009	ABP-ON	1	Sample	
18	Vial 66	1222142010	ABP-ON	1	Sample	
19	Vial 67	1222142011	ABP-ON	1	Sample	
20	Vial 68	290925 LMB	ABP-ON	1	Ctrl Samp	
21	Vial 69	290926 LCS	ABP-ON	1	Ctrl Samp	

Sequence: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG12-ABP.S

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
22	Vial 70	1222167001	ABP-ON	1	Sample	
23	Vial 71	290927 MS	ABP-ON	1	Ctrl Samp	
24	Vial 51	CCV3	ABP-ON	1	Ctrl Samp	
25	Vial 72	290928 MSD	ABP-ON	1	Ctrl Samp	
26	Vial 73	1222167002	ABP-ON	1	Sample	
27	Vial 74	1222167003	ABP-ON	1	Sample	
28	Vial 75	1222167004	ABP-ON	1	Sample	
29	Vial 76	1222167005	ABP-ON	1	Sample	
30	Vial 77	1222167006	ABP-ON	1	Sample	
31	Vial 78	1222167007	ABP-ON	1	Sample	
32	Vial 79	1222167008	ABP-ON	1	Sample	
33	Vial 80	1222302001	ABP-ON	1	Sample	
34	Vial 81	1222302002	ABP-ON	1	Sample	
35	Vial 51	CCV4	ABP-ON	1	Ctrl Samp	

Batch Run # 1 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000001.D
Sample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/17/2012 3:38:44 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.591	MM	1	9.52971e6	1.18548e-1	4.94520		Thiodiglycol

Batch Run # 1 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000001.D
Sample Name: PRIME

Acq. Operator : TTM Seq. Line : 1
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/17/2012 3:38:44 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 4.94520

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

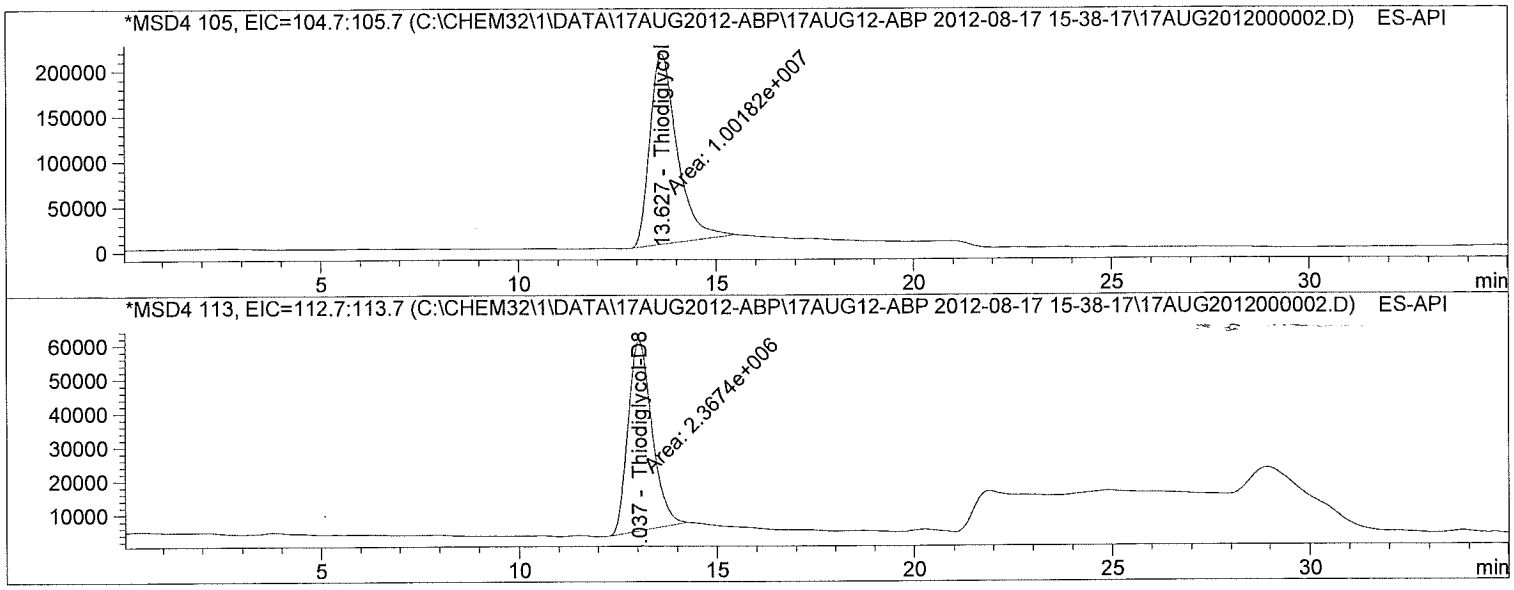
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.991	MM	I	1 2.28450e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 2 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000002.D
Sample Name: CCV1

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/17/2012 4:15:07 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.627	MM	1	1.00182e7	1.18646e-1	5.02078		Thiodiglycol

Batch Run # 2 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000002.D
Sample Name: CCV1

Acq. Operator : TTM Seq. Line : 2
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/17/2012 4:15:07 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 5.02078

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

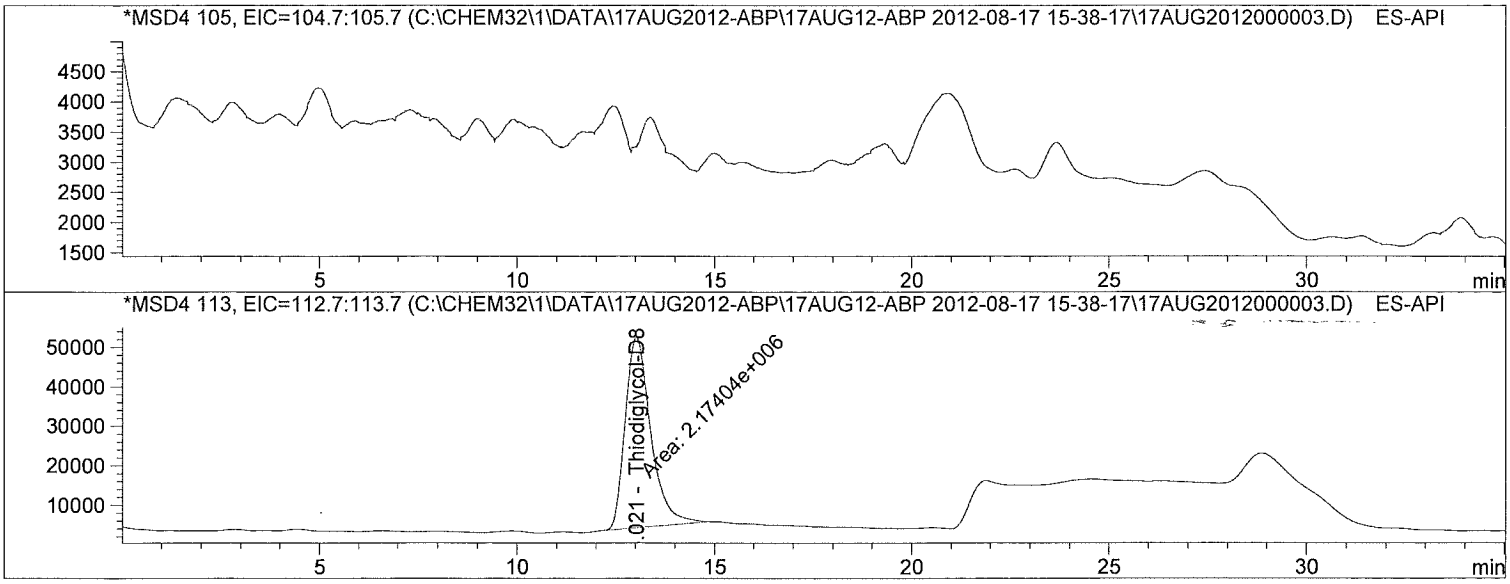
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.037	MM	I	1 2.36740e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 3 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000003.D
Sample Name: 290920 LMB

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 52
Injection Date	: 8/17/2012 4:51:28 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 3 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000003.D
Sample Name: 290920 LMB

Acq. Operator : TTM Seq. Line : 3
Acq. Instrument : LCMS3 Location : Vial 52
Injection Date : 8/17/2012 4:51:28 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.021	MM	I	1 2.17404e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

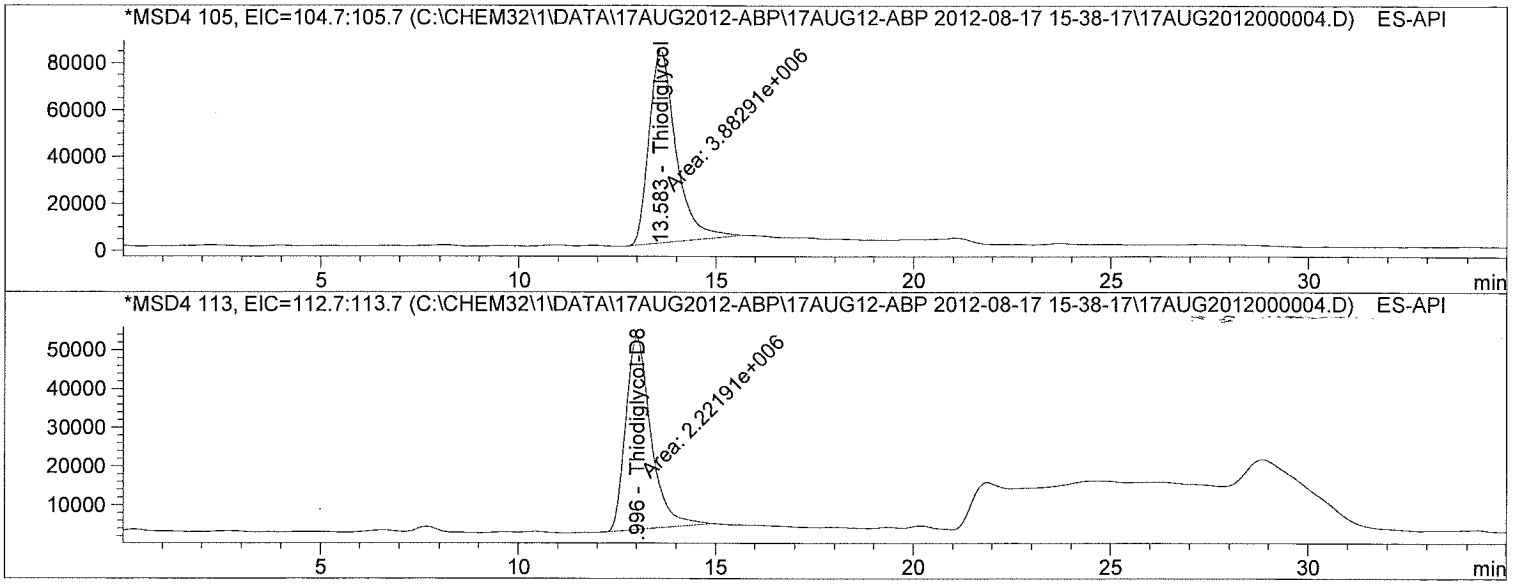
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 4 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000004.D
Sample Name: 290921 LCS

```
Acq. Operator    : TTM                                  Seq. Line :   4
Acq. Instrument  : LCMS3                                 Location : Vial 53
Injection Date   : 8/17/2012 5:27:52 PM                      Inj :   1
                                                       Inj Volume : 10 µl
Acq. Method      : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed     : 8/14/2012 7:45:11 AM by TTM
Analysis Method  : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed     : 8/13/2012 12:58:03 PM by TTM
                   (Results are from a previously saved Batch)
Method Info      : Agent Breakdown Products
```



Internal Standard Report

```
Sorted By              :      Signal
Calib. Data Modified   :      7/9/2012 11:13:05 AM
Multiplier             :     10.0000
Dilution               :      1.0000
Sample Amount          :     20.00000  []   (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:
ISTD  ISTD Amount   Name
  #
----|-------------|-------------------------
  2     10.00000   Thiodiglycol-D8


Signal 1: MSD4 105, EIC=104.7:105.7
 Signal has been modified after loading from rawdata file!

RetTime  Type  ISTD    Area      Amt/Area    Amount   Grp   Name
 [min]         used               ratio
-------|------|----|----------|----------|----------|--|-----------------
 13.583 MM        1 3.88291e6  1.15086e-1   20.11193    Thiodiglycol
```

Batch Run # 4 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000004.D
Sample Name: 290921 LCS

Acq. Operator : TTM Seq. Line : 4
Acq. Instrument : LCMS3 Location : Vial 53
Injection Date : 8/17/2012 5:27:52 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 20.11193

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

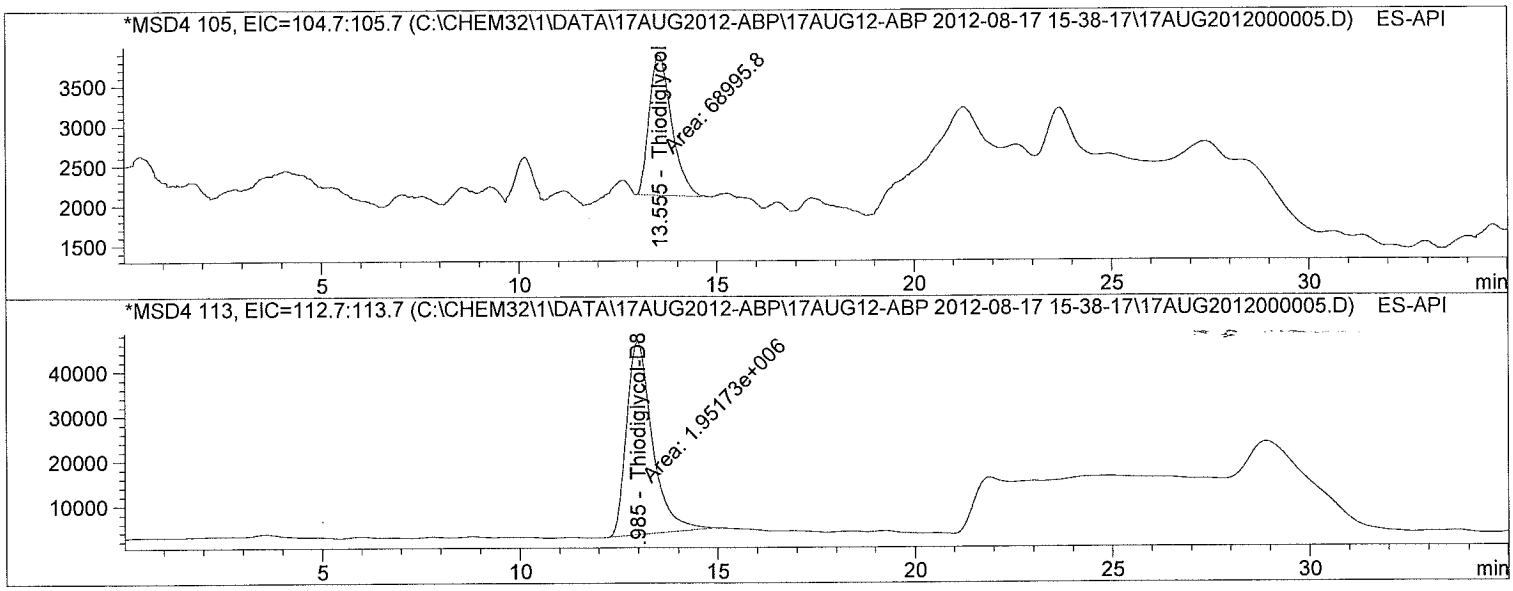
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.996	MM	I	1 2.22191e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 5 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000005.D
Sample Name: 290924 RLVS

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 54
Injection Date	: 8/17/2012 6:04:13 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 5.00000e-1 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.555	MM	1	6.89958e4	1.38880e-1	4.90956e-2		Thiodiglycol

Batch Run # 5 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000005.D
Sample Name: 290924 RLVS

Acq. Operator : TTM Seq. Line : 5
Acq. Instrument : LCMS3 Location : Vial 54
Injection Date : 8/17/2012 6:04:13 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 4.90956e-2

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

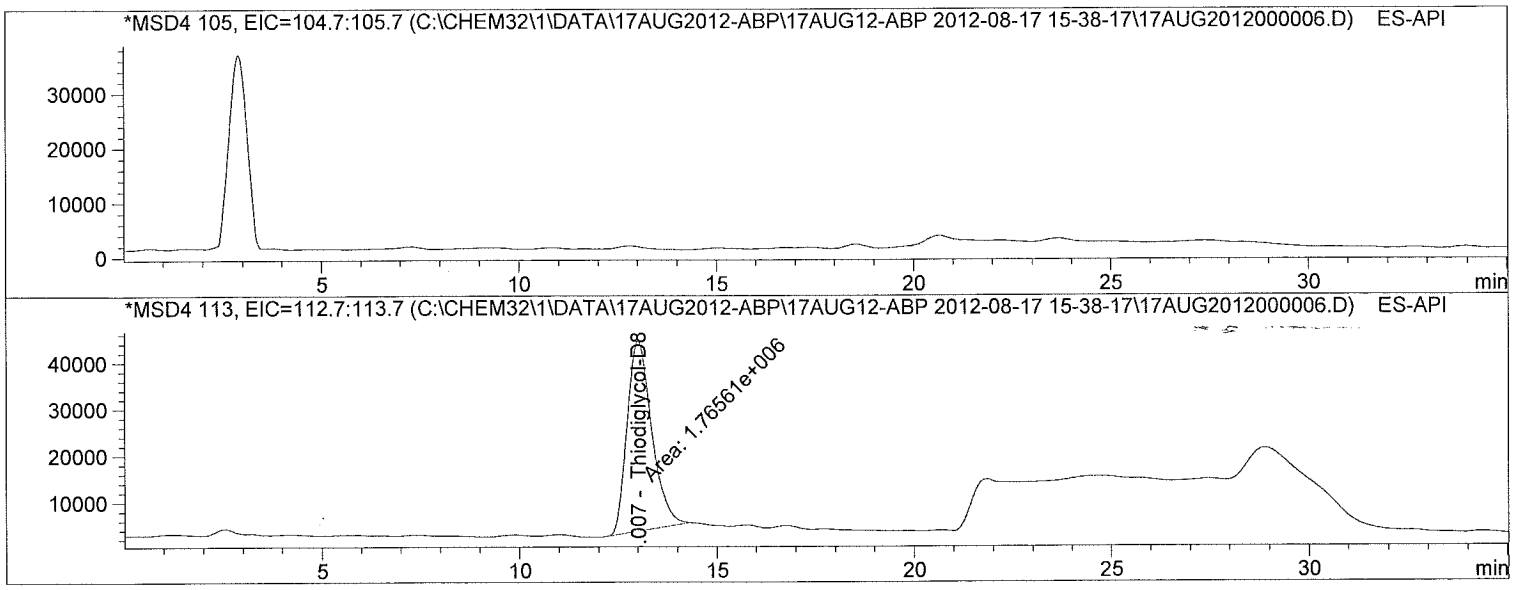
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.985	MM	I	1 1.95173e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 6 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000006.D
Sample Name: 1222142001

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 55
Injection Date	: 8/17/2012 6:40:36 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 6 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000006.D
Sample Name: 1222142001

Acq. Operator : TTM Seq. Line : 6
Acq. Instrument : LCMS3 Location : Vial 55
Injection Date : 8/17/2012 6:40:36 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.007	MM	I	1 1.76561e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

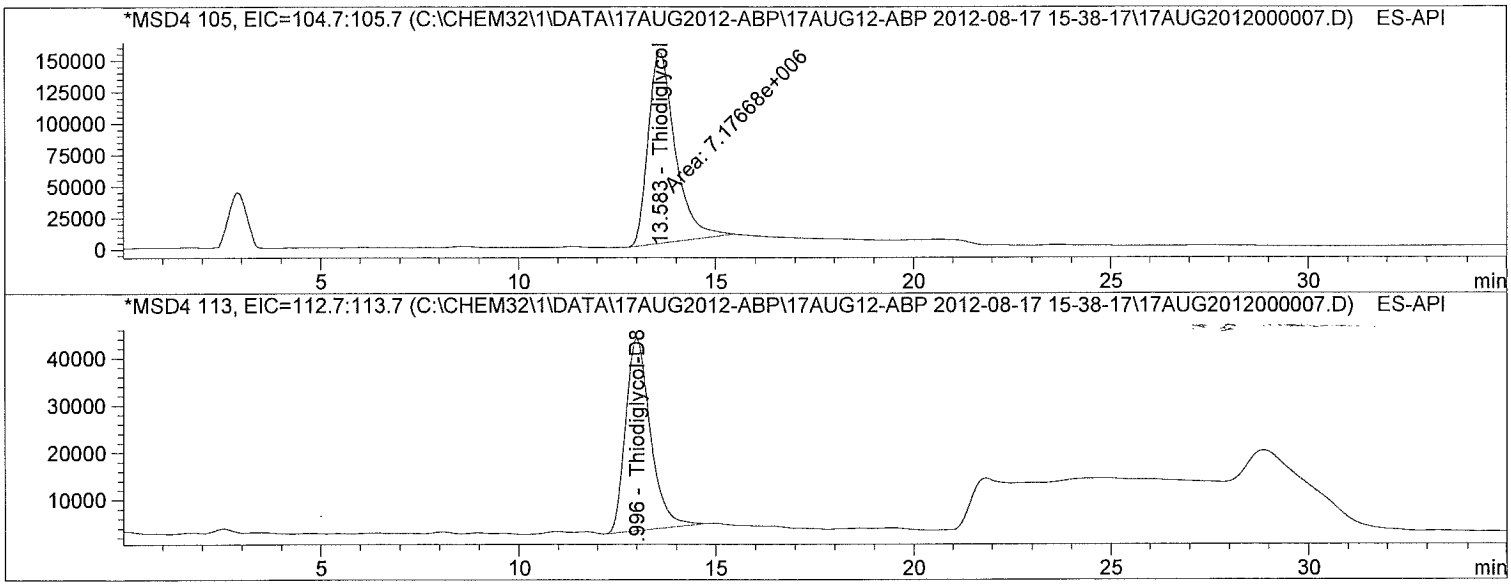
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 7 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000007.D
Sample Name: 290922 MS

Acq. Operator : TTM Seq. Line : 7
Acq. Instrument : LCMS3 Location : Vial 56
Injection Date : 8/17/2012 7:16:58 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.583	MM	1	7.17668e6	1.18349e-1	47.89601		Thiodiglycol

Totals without ISTD(s) : 47.89601

Batch Run # 7 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000007.D
Sample Name: 290922 MS

Acq. Operator : TTM Seq. Line : 7
Acq. Instrument : LCMS3 Location : Vial 56
Injection Date : 8/17/2012 7:16:58 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

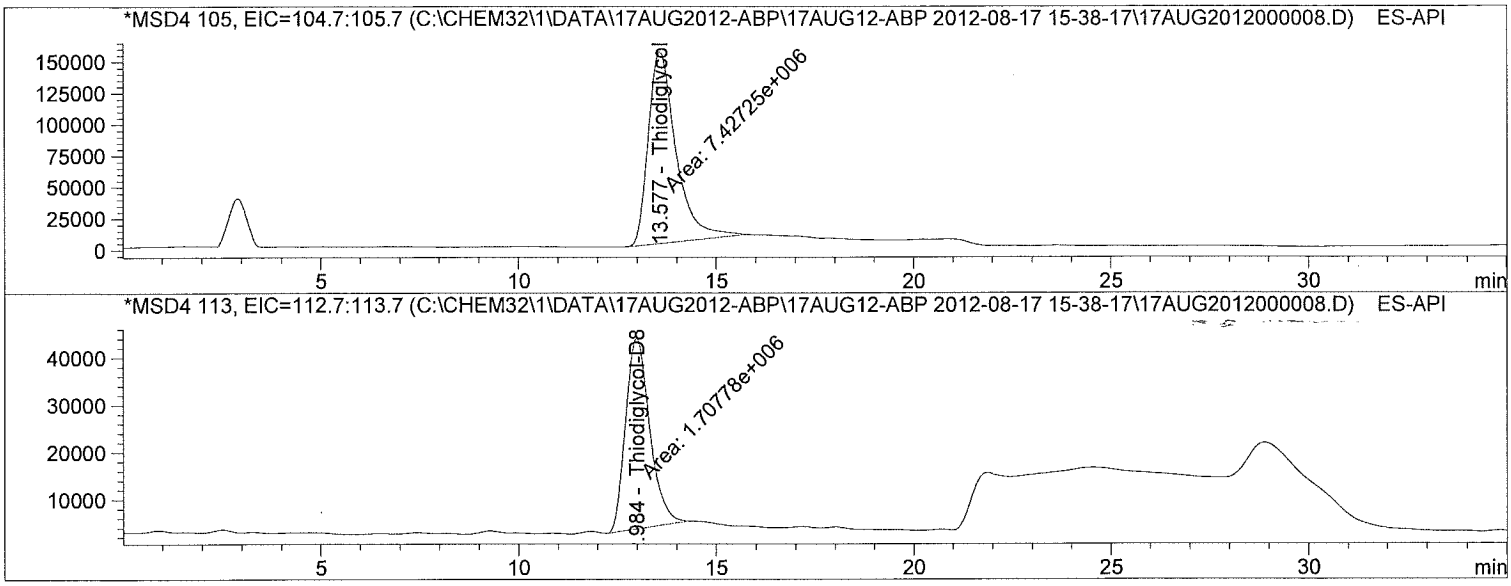
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.996	BB	I	1 1.77332e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 8 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000008.D
Sample Name: 290923 MSD

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 57
Injection Date	: 8/17/2012 7:53:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.577	MM	1	7.42725e6	1.18836e-1	51.68282		Thiodiglycol

Totals without ISTD(s) : 51.68282

Batch Run # 8 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000008.D
Sample Name: 290923 MSD

Acq. Operator : TTM Seq. Line : 8
Acq. Instrument : LCMS3 Location : Vial 57
Injection Date : 8/17/2012 7:53:21 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

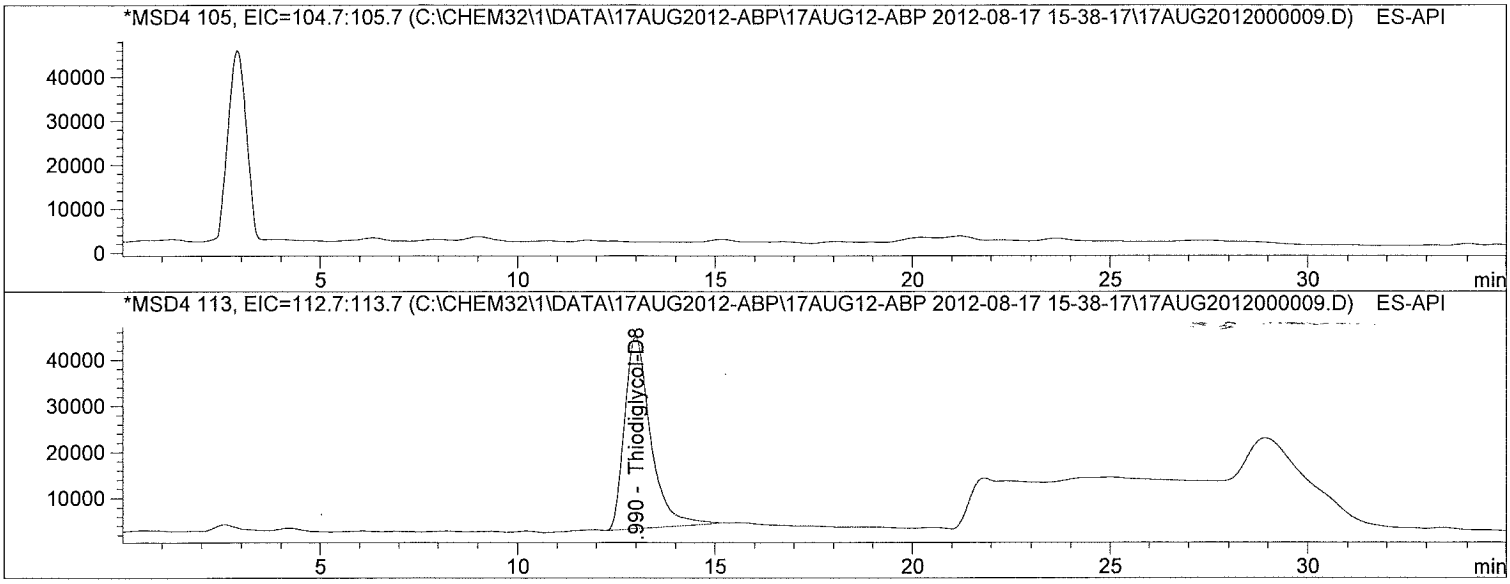
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.984	MM	I	1 1.70778e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 9 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000009.D
Sample Name: 1222142002

Acq. Operator : TTM Seq. Line : 9
Acq. Instrument : LCMS3 Location : Vial 58
Injection Date : 8/17/2012 8:29:43 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 9 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000009.D
Sample Name: 1222142002

Acq. Operator : TTM Seq. Line : 9
Acq. Instrument : LCMS3 Location : Vial 58
Injection Date : 8/17/2012 8:29:43 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.990	BB	I	1 1.89639e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

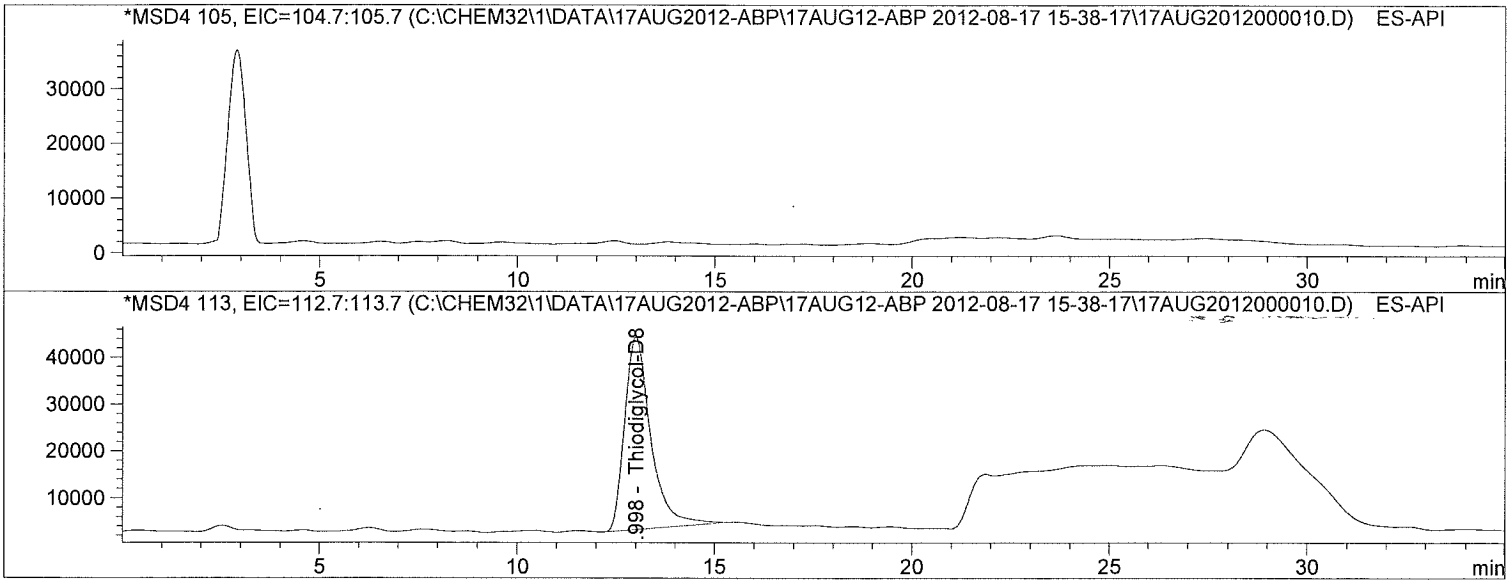
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 10 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000010.D
Sample Name: 1222142003

```
Acq. Operator    : TTM                                  Seq. Line :  10
Acq. Instrument  : LCMS3                                 Location : Vial 59
Injection Date   : 8/17/2012 9:06:04 PM                      Inj :   1
                                                       Inj Volume : 10 µl
Acq. Method      : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed     : 8/14/2012 7:45:11 AM by TTM
Analysis Method  : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed     : 8/13/2012 12:58:03 PM by TTM
                   (Results are from a previously saved Batch)
Method Info      : Agent Breakdown Products
```



Internal Standard Report

```
Sorted By             :      Signal
Calib. Data Modified  :      7/9/2012 11:13:05 AM
Multiplier            :     10.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:
```

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 10 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000010.D
Sample Name: 1222142003

Acq. Operator : TTM
Seq. Line : 10
Acq. Instrument : LCMS3
Location : Vial 59
Injection Date : 8/17/2012 9:06:04 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.998	BB	I	1 1.90070e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

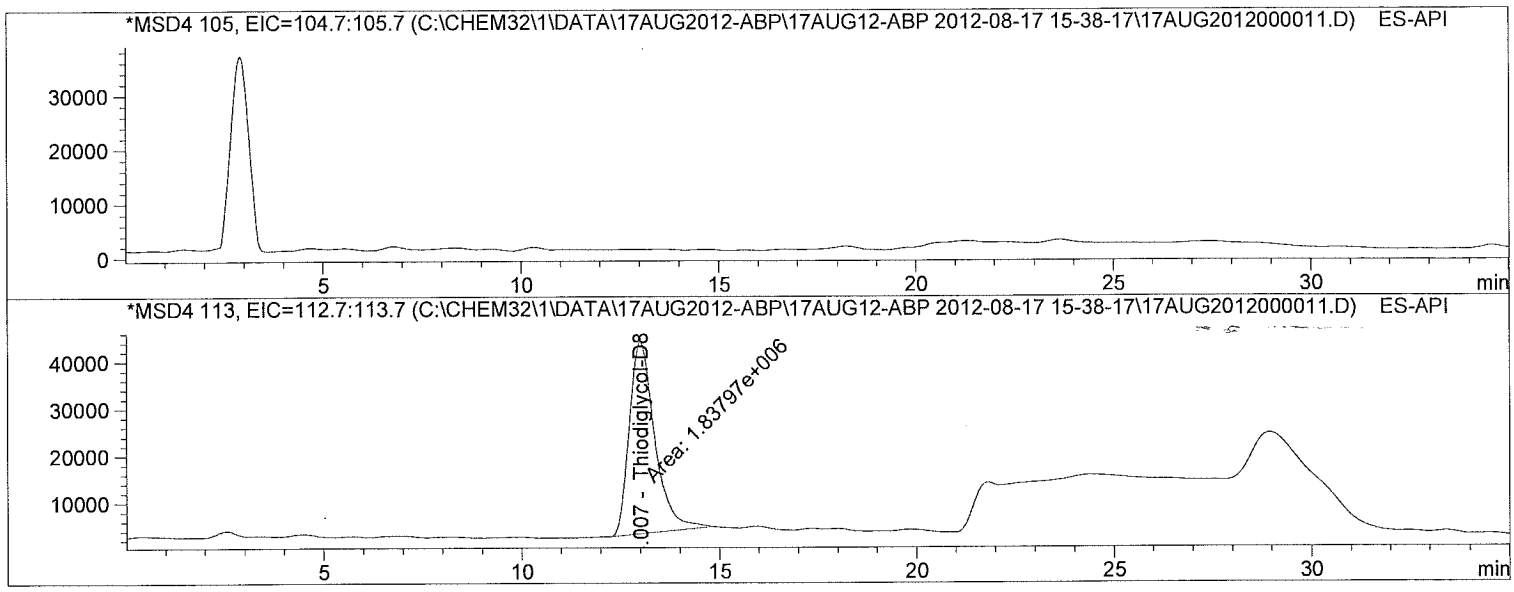
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 11 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000011.D
Sample Name: 1222142004

Acq. Operator	: TTM	Seq. Line	: 11
Acq. Instrument	: LCMS3	Location	: Vial 60
Injection Date	: 8/17/2012 9:42:25 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 11 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000011.D
Sample Name: 1222142004

Acq. Operator : TTM
Seq. Line : 11
Acq. Instrument : LCMS3
Location : Vial 60
Injection Date : 8/17/2012 9:42:25 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.007	MM	I	1 1.83797e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

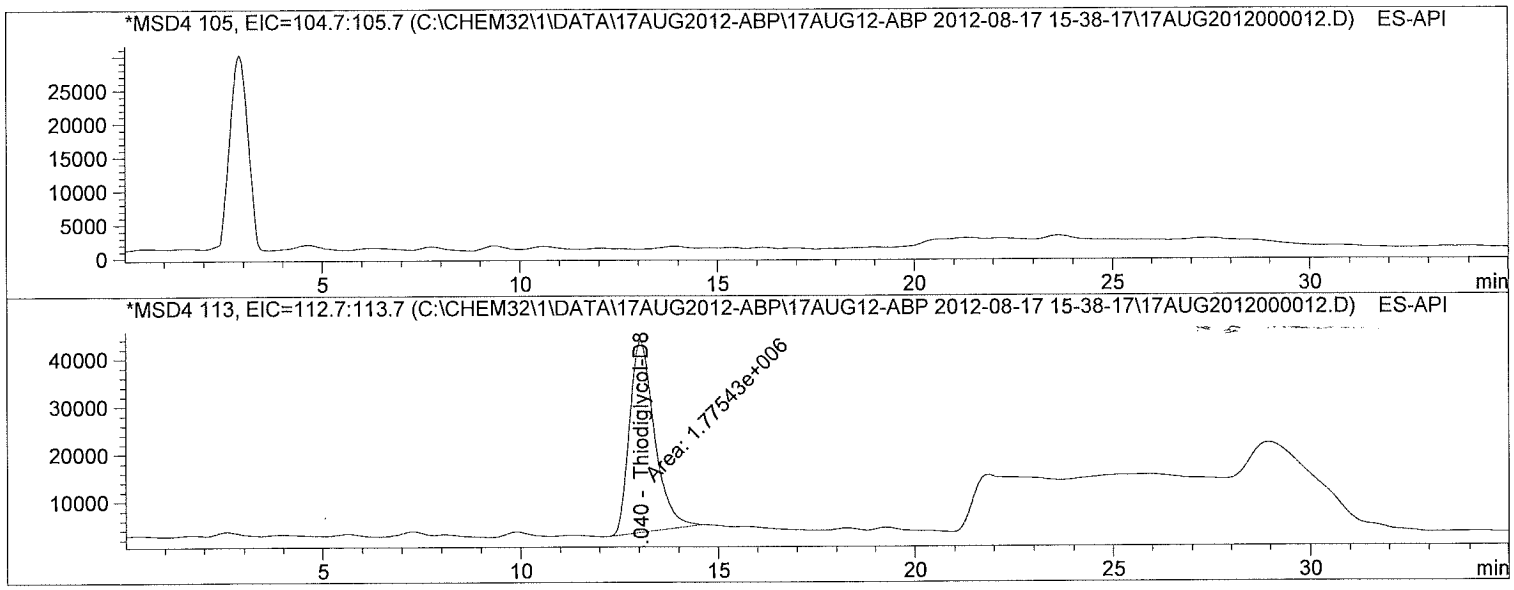
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 12 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000012.D
Sample Name: 1222142005

Acq. Operator	: TTM	Seq. Line	: 12
Acq. Instrument	: LCMS3	Location	: Vial 61
Injection Date	: 8/17/2012 10:18:50 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 12 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000012.D
Sample Name: 1222142005

Acq. Operator : TTM Seq. Line : 12
Acq. Instrument : LCMS3 Location : Vial 61
Injection Date : 8/17/2012 10:18:50 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.040	MM	I	1 1.77543e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

1 Warnings or Errors :

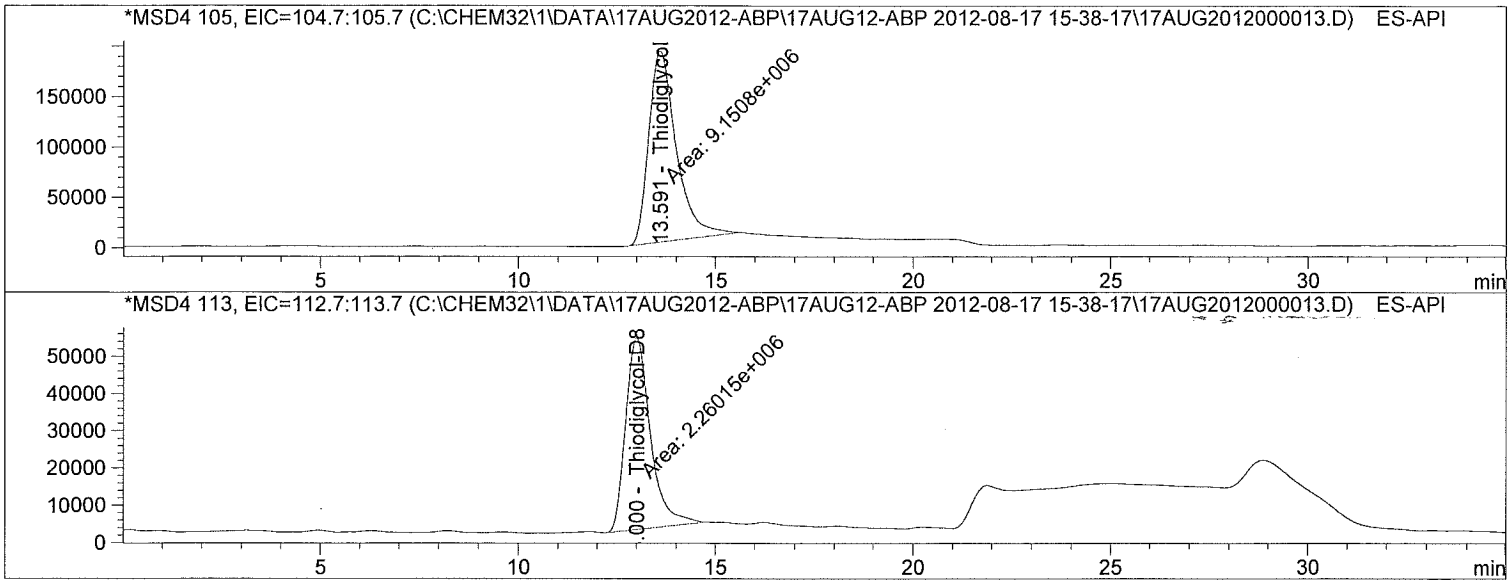
Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 13 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000013.D
Sample Name: CCV2

```
==========================================================================
Acq. Operator    : TTM                              Seq. Line :  13
Acq. Instrument  : LCMS3                             Location : Vial 51
Injection Date   : 8/17/2012 10:55:12 PM                  Inj :   1
                                                    Inj Volume : 10 µl
Acq. Method      : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed     : 8/14/2012 7:45:11 AM by TTM
Analysis Method  : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed     : 8/13/2012 12:58:03 PM by TTM
                   (Results are from a previously saved Batch)
Method Info      : Agent Breakdown Products

==========================================================================
```




```
==========================================================================
                        Internal Standard Report
==========================================================================

Sorted By              :      Signal
Calib. Data Modified   :      7/9/2012 11:13:05 AM
Multiplier             :      1.0000
Dilution               :      1.0000
Sample Amount          :      5.00000  []   (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:
ISTD  ISTD Amount   Name
  #
----|-------------|-------------------------
  2     10.00000   Thiodiglycol-D8


Signal 1: MSD4 105, EIC=104.7:105.7
 Signal has been modified after loading from rawdata file!

RetTime  Type  ISTD    Area     Amt/Area    Amount   Grp   Name
 [min]         used              ratio
-------|------|----|----------|----------|----------|--|------------------
 13.591 MM        1 9.15080e6  1.18351e-1    4.79177    Thiodiglycol
```

Batch Run # 13 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000013.D
Sample Name: CCV2

Acq. Operator : TTM Seq. Line : 13
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/17/2012 10:55:12 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 4.79177

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

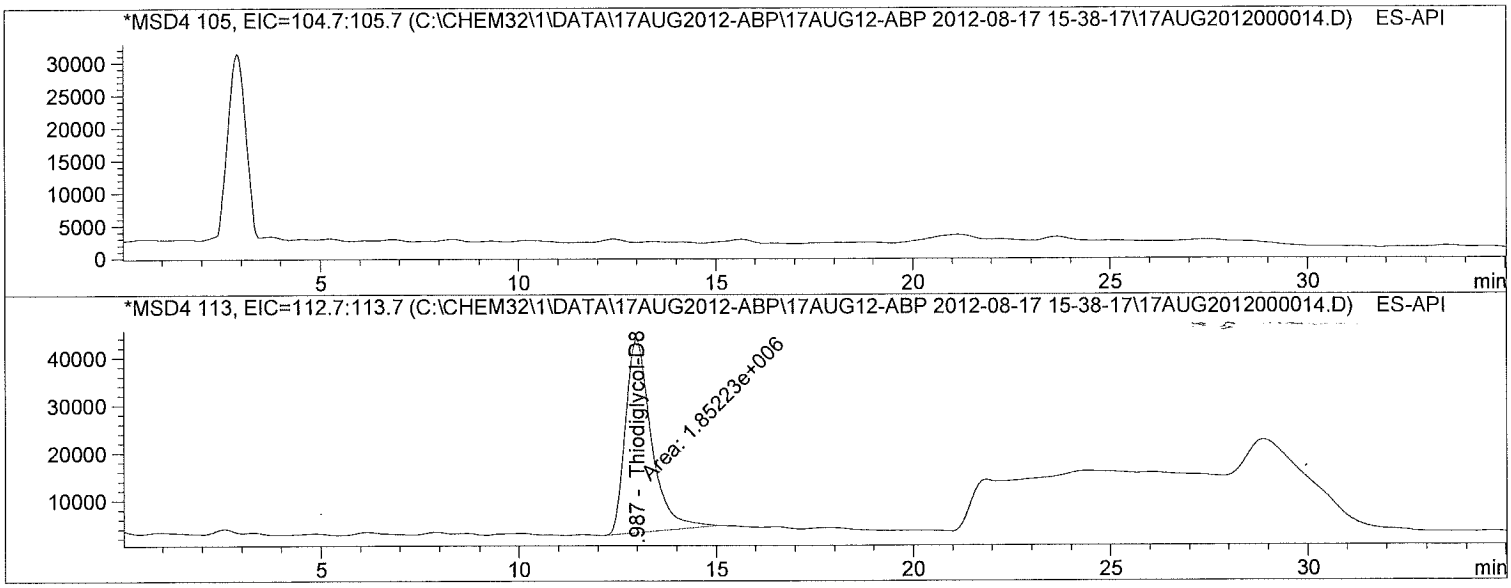
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.000	MM	I	1 2.26015e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 14 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000014.D
Sample Name: 1222142006

Acq. Operator	: TTM	Seq. Line	: 14
Acq. Instrument	: LCMS3	Location	: Vial 62
Injection Date	: 8/17/2012 11:31:36 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	7/9/2012 11:13:05 AM	
Multiplier	:	10.0000	
Dilution	:	1.0000	

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 14 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000014.D
Sample Name: 1222142006

Acq. Operator : TTM
Seq. Line : 14
Acq. Instrument : LCMS3
Location : Vial 62
Injection Date : 8/17/2012 11:31:36 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.987	MM	I	1 1.85223e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

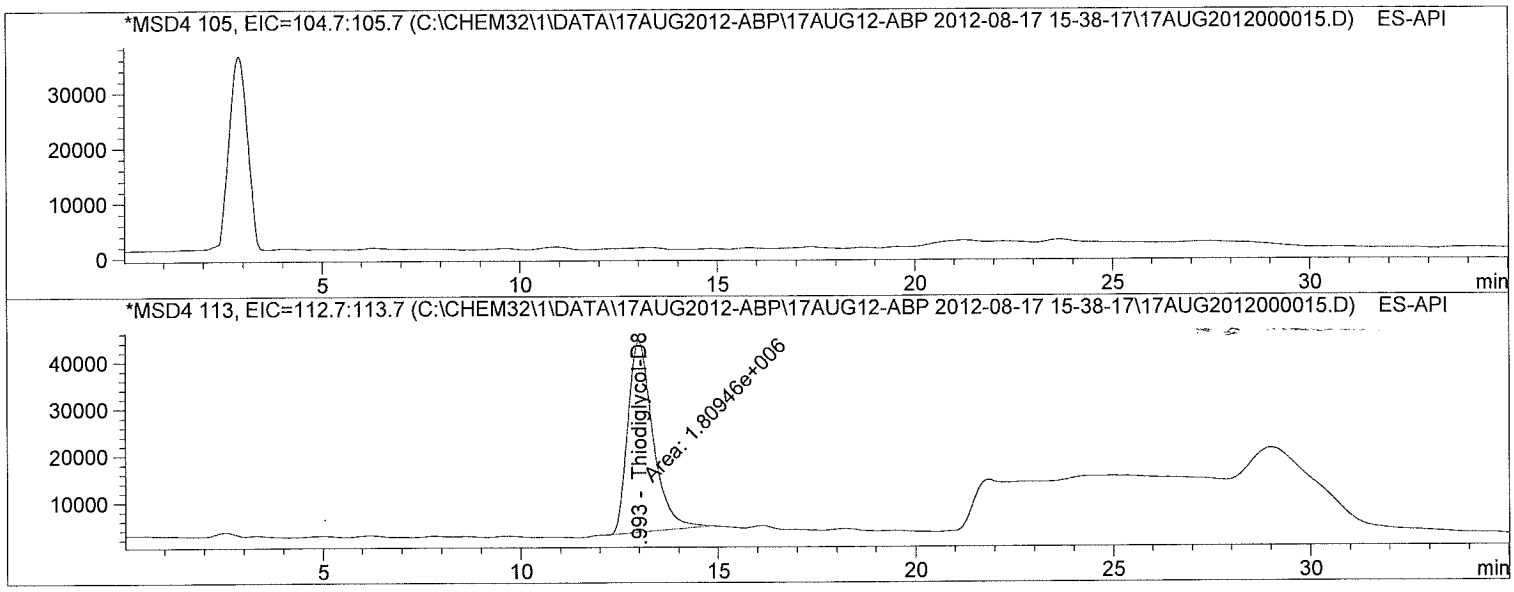
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 15 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000015.D
Sample Name: 1222142007

Acq. Operator	: TTM	Seq. Line	: 15
Acq. Instrument	: LCMS3	Location	: Vial 63
Injection Date	: 8/18/2012 12:07:59 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 15 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000015.D
Sample Name: 1222142007

Acq. Operator : TTM Seq. Line : 15
Acq. Instrument : LCMS3 Location : Vial 63
Injection Date : 8/18/2012 12:07:59 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.993	MM	I	1 1.80946e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

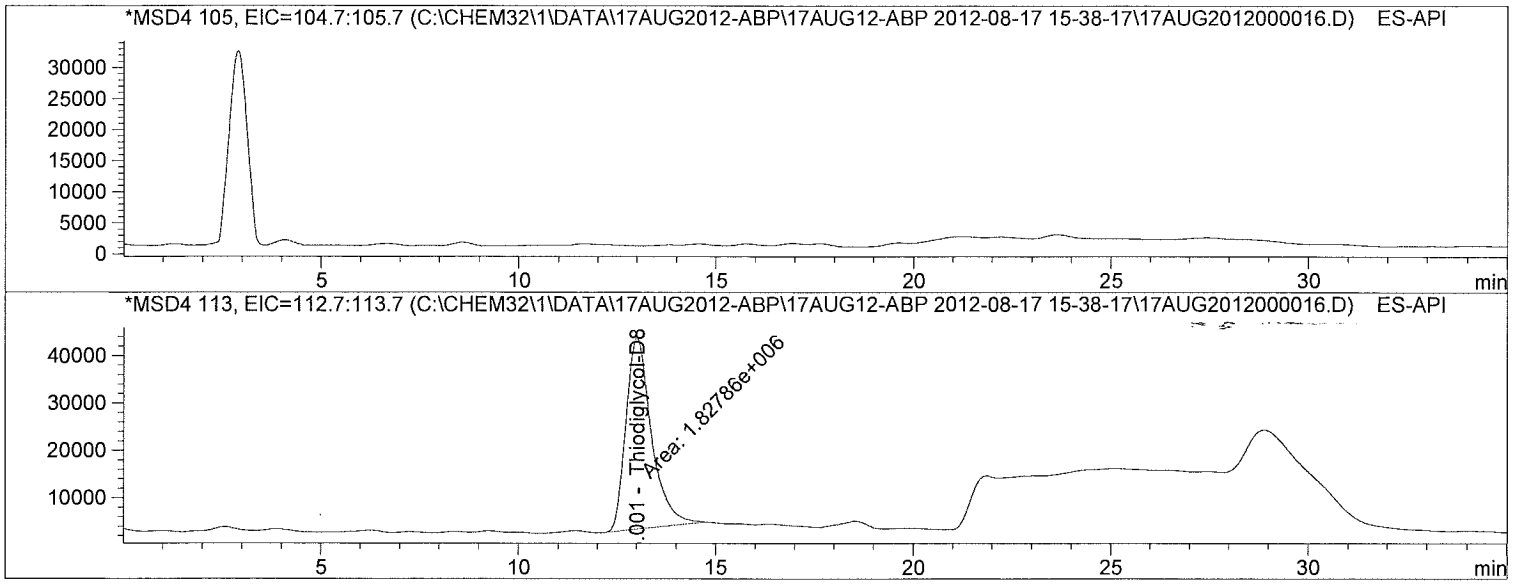
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 16 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000016.D
Sample Name: 1222142008

Acq. Operator : TTM Seq. Line : 16
Acq. Instrument : LCMS3 Location : Vial 64
Injection Date : 8/18/2012 12:44:21 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 16 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000016.D
Sample Name: 1222142008

Acq. Operator : TTM Seq. Line : 16
Acq. Instrument : LCMS3 Location : Vial 64
Injection Date : 8/18/2012 12:44:21 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.001	MM	I	1 1.82786e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

1 Warnings or Errors :

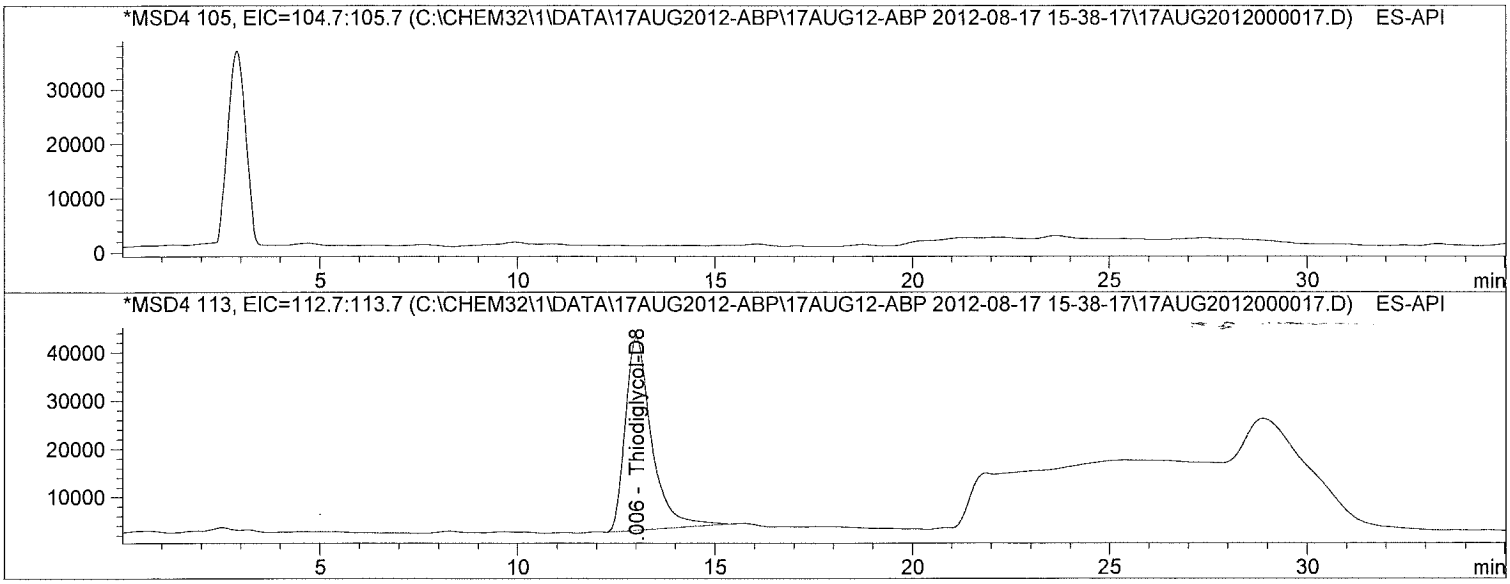
Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 17 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000017.D
Sample Name: 1222142009

```
==========================================================================
Acq. Operator    : TTM                              Seq. Line :  17
Acq. Instrument  : LCMS3                             Location : Vial 65
Injection Date   : 8/18/2012 1:20:42 AM                   Inj :   1
                                                   Inj Volume : 10 µl
Acq. Method      : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed     : 8/14/2012 7:45:11 AM by TTM
Analysis Method  : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed     : 8/13/2012 12:58:03 PM by TTM
                   (Results are from a previously saved Batch)
Method Info      : Agent Breakdown Products

==========================================================================
```




```
==========================================================================
                        Internal Standard Report
==========================================================================

Sorted By              :      Signal
Calib. Data Modified   :      7/9/2012 11:13:05 AM
Multiplier             :     10.0000
Dilution               :      1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:
ISTD  ISTD Amount   Name
  #
----|-------------|-------------------------
  2     10.00000   Thiodiglycol-D8


Signal 1: MSD4 105, EIC=104.7:105.7
 Signal has been modified after loading from rawdata file!

RetTime  Type  ISTD    Area     Amt/Area    Amount   Grp   Name
 [min]         used              ratio
-------|------|----|----------|----------|----------|--|------------------
 13.460          1     -          -          -         Thiodiglycol

Totals without ISTD(s) :                 0.00000
```

Batch Run # 17 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000017.D
Sample Name: 1222142009

Acq. Operator : TTM Seq. Line : 17
Acq. Instrument : LCMS3 Location : Vial 65
Injection Date : 8/18/2012 1:20:42 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.006	BB	I	1 1.84889e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

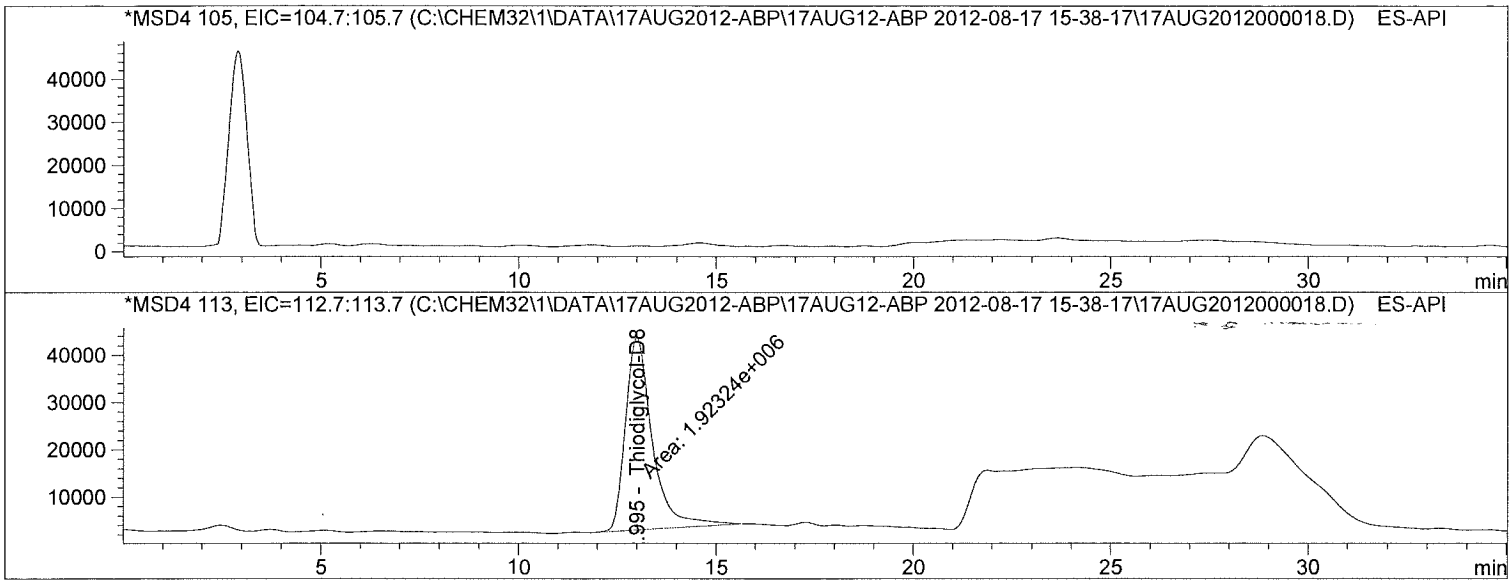
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 18 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000018.D
Sample Name: 1222142010

Acq. Operator	: TTM	Seq. Line	: 18
Acq. Instrument	: LCMS3	Location	: Vial 66
Injection Date	: 8/18/2012 1:57:05 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 18 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000018.D
Sample Name: 1222142010

Acq. Operator : TTM Seq. Line : 18
Acq. Instrument : LCMS3 Location : Vial 66
Injection Date : 8/18/2012 1:57:05 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.995	MM	I	1 1.92324e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

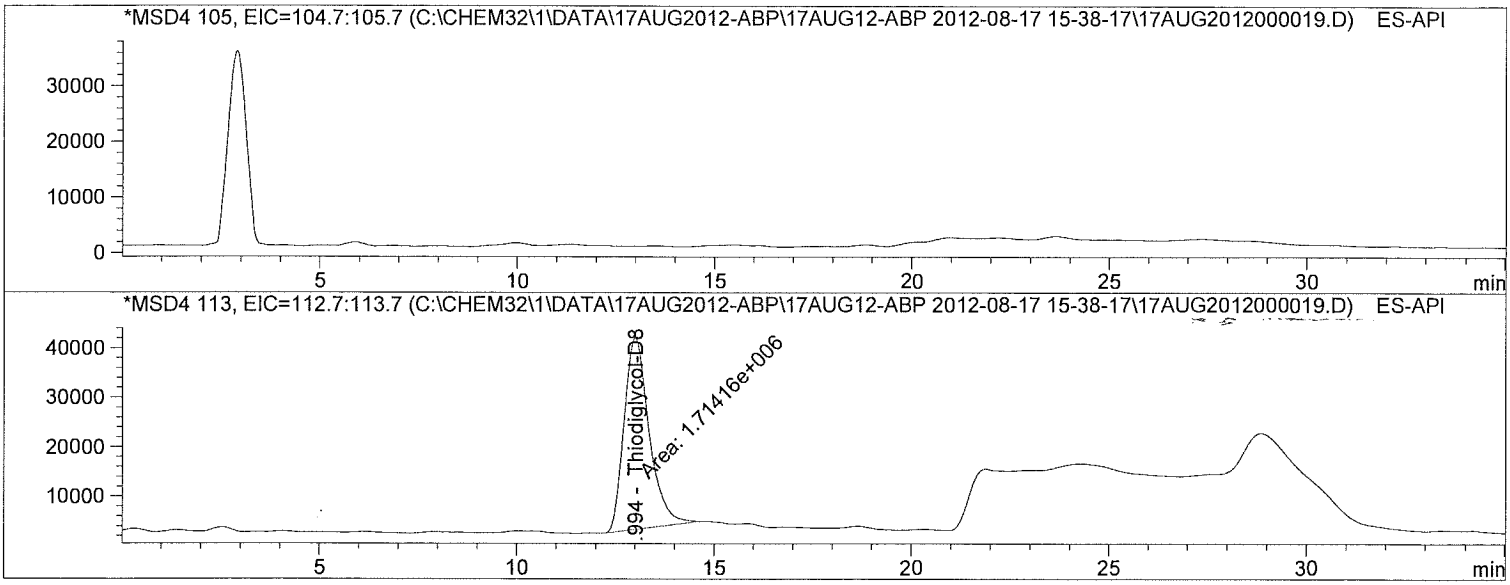
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 19 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000019.D
Sample Name: 1222142011

Acq. Operator	: TTM	Seq. Line	: 19
Acq. Instrument	: LCMS3	Location	: Vial 67
Injection Date	: 8/18/2012 2:33:28 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 19 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000019.D
Sample Name: 1222142011

```
================================================================================
Acq. Operator   : TTM                                  Seq. Line :  19
Acq. Instrument : LCMS3                                 Location : Vial 67
Injection Date  : 8/18/2012 2:33:28 AM                       Inj :   1
                                                      Inj Volume : 10 µl
Acq. Method     : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed    : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed    : 8/13/2012 12:58:03 PM by TTM
                  (Results are from a previously saved Batch)
Method Info     : Agent Breakdown Products

================================================================================


Signal 2: MSD4 113, EIC=112.7:113.7
 Signal has been modified after loading from rawdata file!

RetTime  Type  ISTD    Area     Amt/Area    Amount   Grp   Name
 [min]         used             ratio
-------|------|----|----------|----------|----------|--|-----------------
 12.994 MM    I    1 1.71416e6     1.00000  100.00000    Thiodiglycol-D8

Totals without ISTD(s) :                0.00000

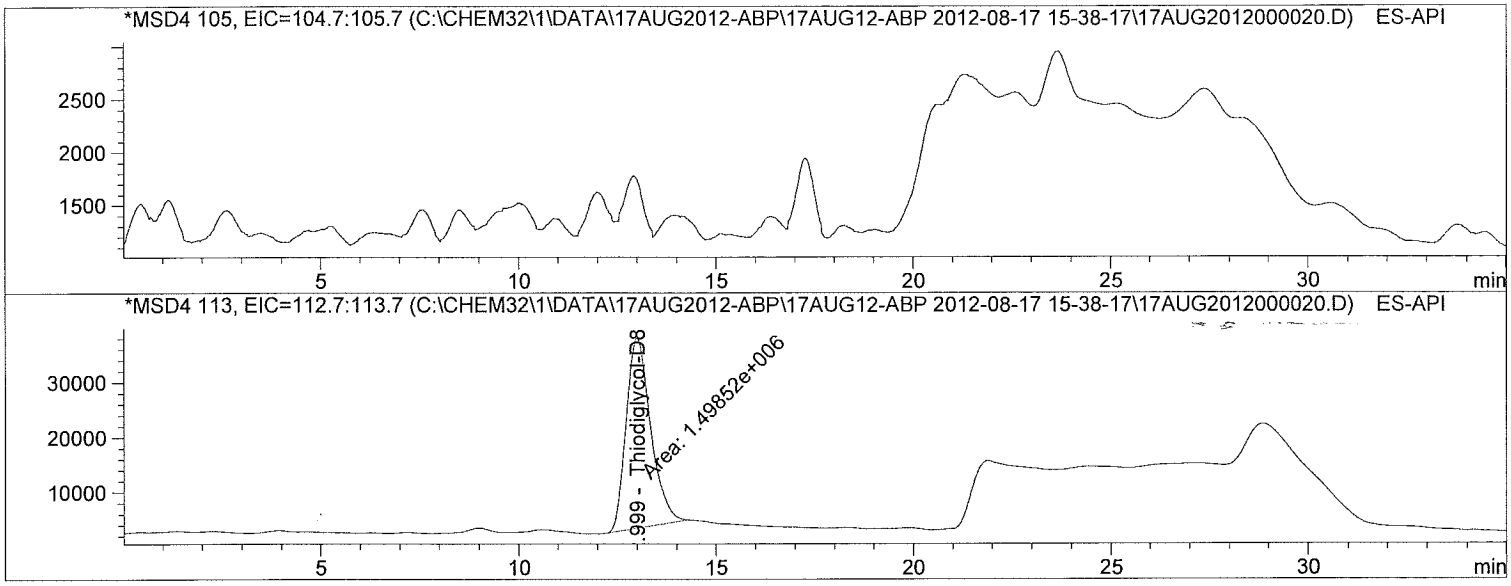

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

================================================================================
                          *** End of Report ***
```

Batch Run # 20 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000020.D
Sample Name: 290925 LMB

Acq. Operator	: TTM	Seq. Line	: 20
Acq. Instrument	: LCMS3	Location	: Vial 68
Injection Date	: 8/18/2012 3:09:50 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 20 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000020.D
Sample Name: 290925 LMB

Acq. Operator : TTM
Seq. Line : 20
Acq. Instrument : LCMS3
Location : Vial 68
Injection Date : 8/18/2012 3:09:50 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.999	MM	I	1 1.49852e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

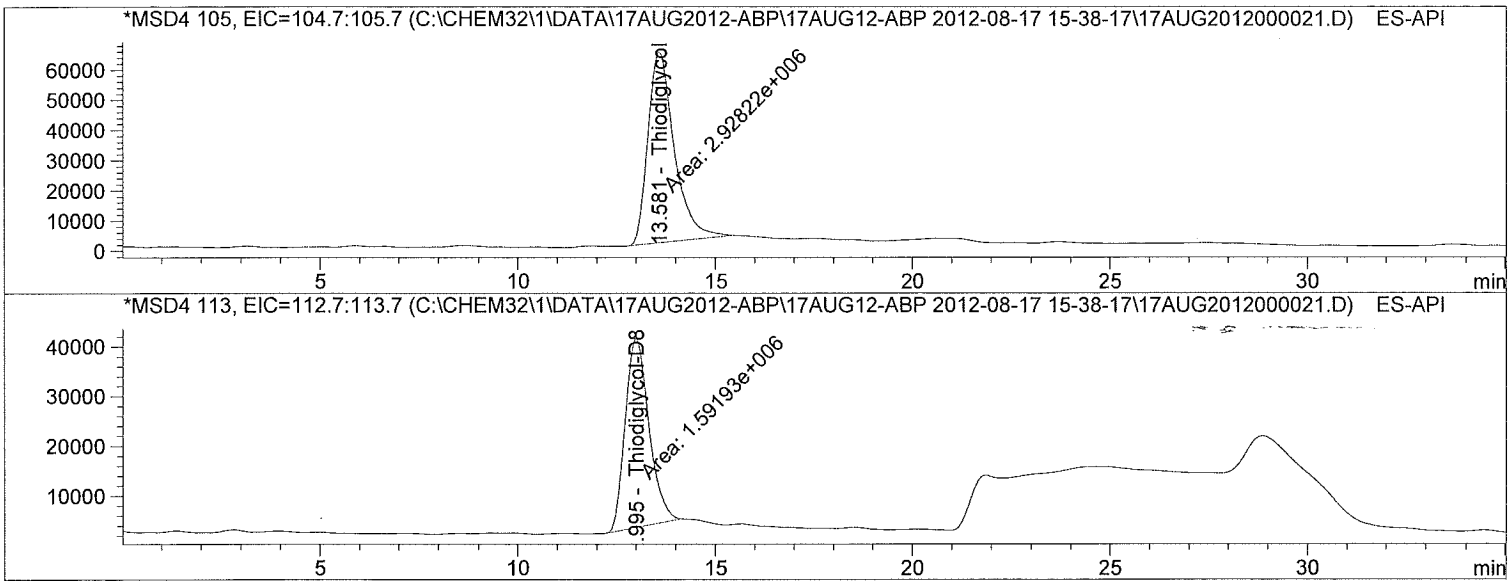
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 21 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000021.D
Sample Name: 290926 LCS

Acq. Operator : TTM Seq. Line : 21
Acq. Instrument : LCMS3 Location : Vial 69
Injection Date : 8/18/2012 3:46:13 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Sample Amount : 20.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.581	MM	1	2.92822e6	1.15193e-1	21.18889		Thiodiglycol

Batch Run # 21 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000021.D
Sample Name: 290926 LCS

Acq. Operator : TTM Seq. Line : 21
Acq. Instrument : LCMS3 Location : Vial 69
Injection Date : 8/18/2012 3:46:13 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 21.18889

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

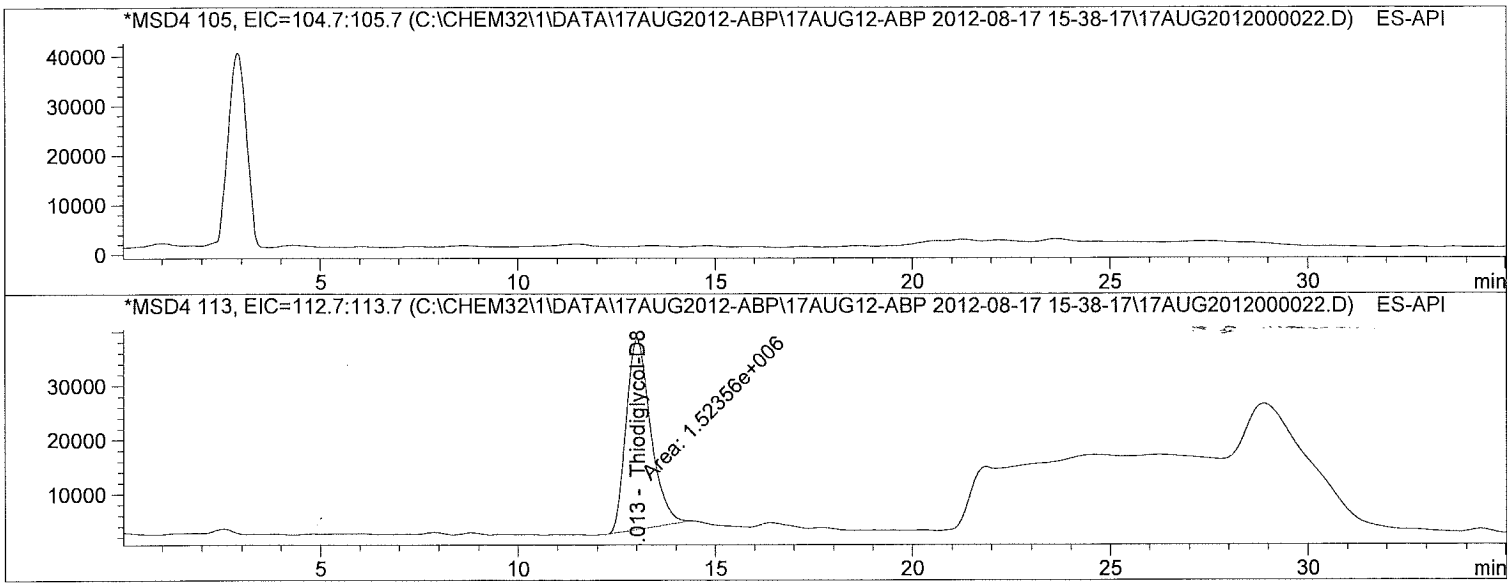
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.995	MM	I	1 1.59193e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 22 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000022.D
Sample Name: 1222167001

Acq. Operator : TTM
Seq. Line : 22
Acq. Instrument : LCMS3
Location : Vial 70
Injection Date : 8/18/2012 4:22:35 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 22 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000022.D
Sample Name: 1222167001

Acq. Operator : TTM
Seq. Line : 22
Acq. Instrument : LCMS3
Location : Vial 70
Injection Date : 8/18/2012 4:22:35 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.013	MM	I	1 1.52356e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

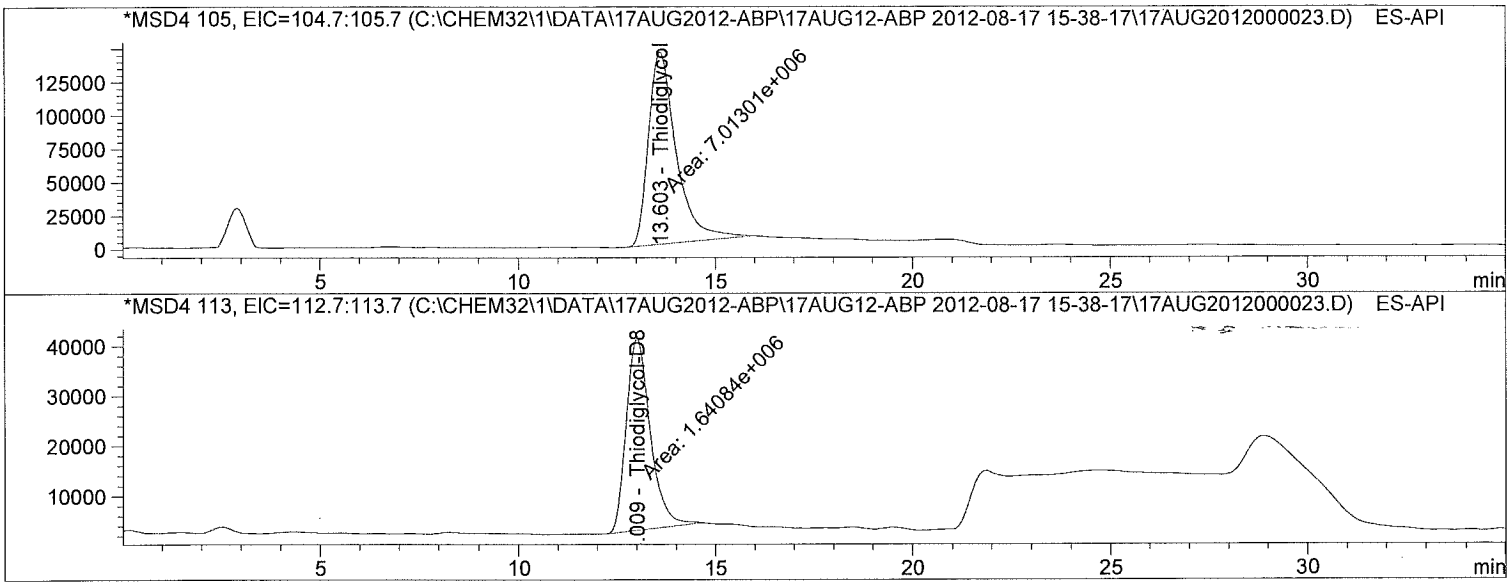
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 23 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000023.D
Sample Name: 290927 MS

Acq. Operator : TTM Seq. Line : 23
Acq. Instrument : LCMS3 Location : Vial 71
Injection Date : 8/18/2012 4:58:59 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.603	MM	1	7.01301e6	1.18714e-1	50.73884		Thiodiglycol

Totals without ISTD(s) : 50.73884

Batch Run # 23 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000023.D
Sample Name: 290927 MS

Acq. Operator : TTM Seq. Line : 23
Acq. Instrument : LCMS3 Location : Vial 71
Injection Date : 8/18/2012 4:58:59 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

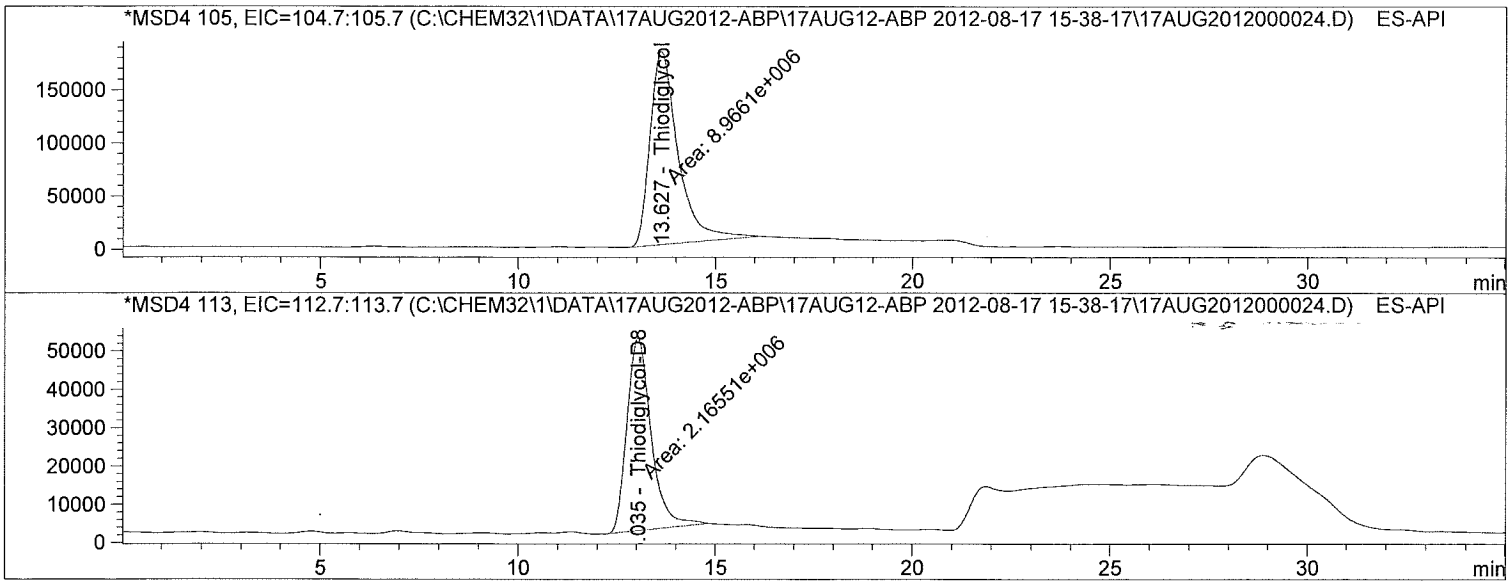
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.009	MM	I	1 1.64084e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 24 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000024.D
Sample Name: CCV3

```
Acq. Operator    : TTM                                  Seq. Line :  24
Acq. Instrument  : LCMS3                                 Location : Vial 51
Injection Date   : 8/18/2012 5:35:21 AM                      Inj :   1
                                                       Inj Volume : 10 µl
Acq. Method      : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed     : 8/14/2012 7:45:11 AM by TTM
Analysis Method  : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed     : 8/13/2012 12:58:03 PM by TTM
                   (Results are from a previously saved Batch)
Method Info      : Agent Breakdown Products
```




```
                        Internal Standard Report

Sorted By             :      Signal
Calib. Data Modified  :      7/9/2012 11:13:05 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      5.00000  []   (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:
ISTD  ISTD Amount   Name
  #
----|-------------|-------------------------
  2     10.00000   Thiodiglycol-D8


Signal 1: MSD4 105, EIC=104.7:105.7
 Signal has been modified after loading from rawdata file!

RetTime  Type  ISTD    Area      Amt/Area    Amount   Grp   Name
 [min]         used               ratio
-------|------|----|----------|----------|----------|--|------------------
 13.627 MM        1 8.96610e6  1.18498e-1    4.90631    Thiodiglycol
```

Batch Run # 24 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000024.D
Sample Name: CCV3

Acq. Operator : TTM Seq. Line : 24
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/18/2012 5:35:21 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 4.90631

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

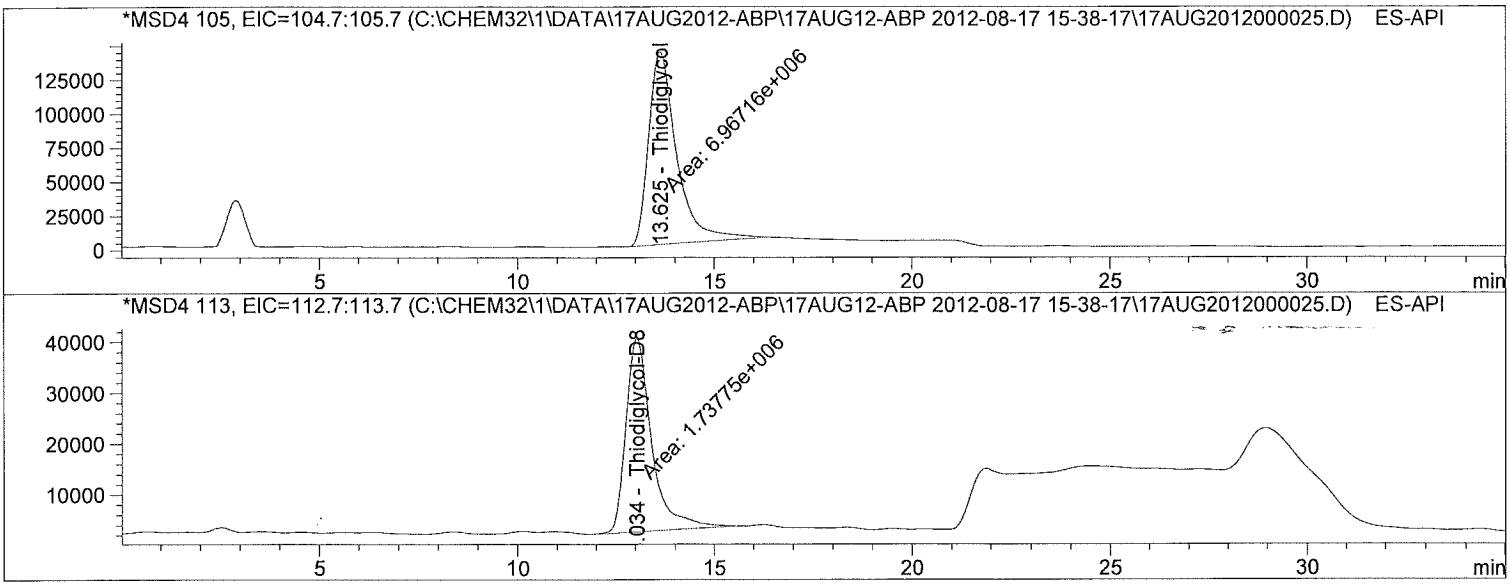
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.035	MM	I	1 2.16551e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 25 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000025.D
Sample Name: 290928 MSD

Acq. Operator	: TTM	Seq. Line	: 25
Acq. Instrument	: LCMS3	Location	: Vial 72
Injection Date	: 8/18/2012 6:11:45 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.625	MM	1	6.96716e6	1.18289e-1	47.42531		Thiodiglycol

Totals without ISTD(s) : 47.42531

Batch Run # 25 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000025.D
Sample Name: 290928 MSD

Acq. Operator : TTM Seq. Line : 25
Acq. Instrument : LCMS3 Location : Vial 72
Injection Date : 8/18/2012 6:11:45 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

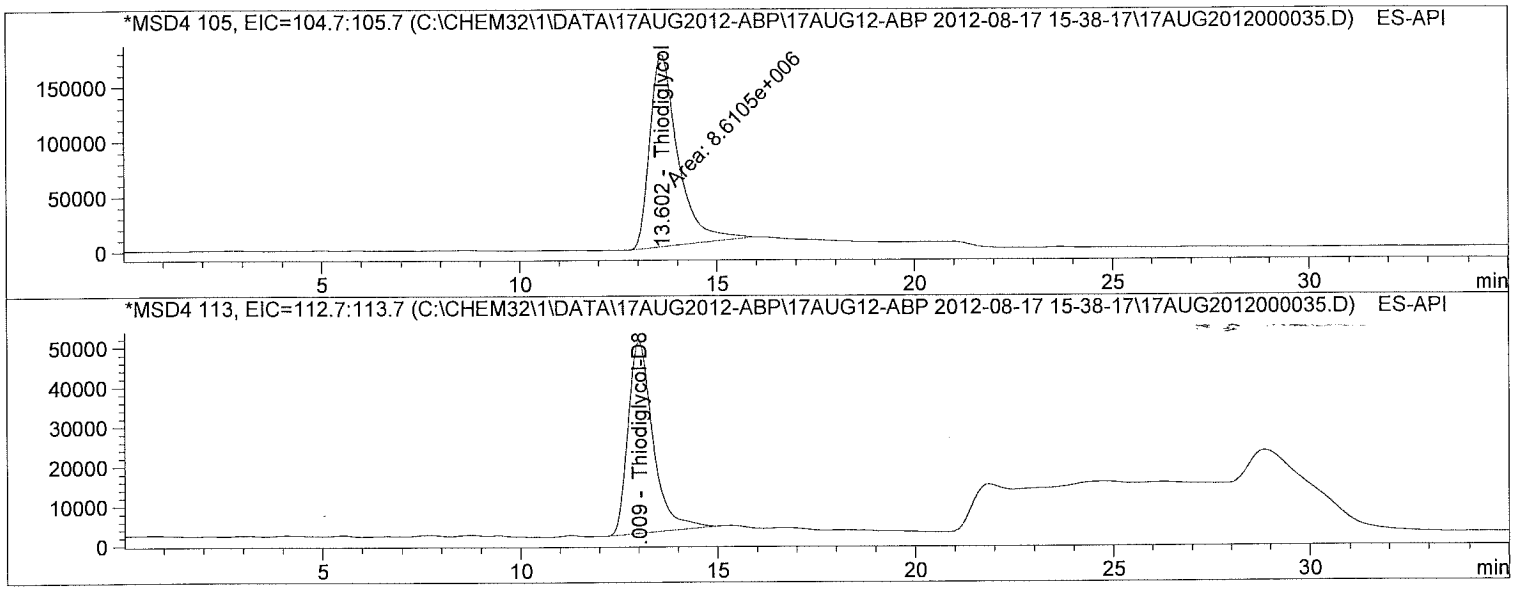
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.034	MM	I	1 1.73775e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 35 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000035.D
Sample Name: CCV4

Acq. Operator	: TTM	Seq. Line	: 35
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/18/2012 12:15:30 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	7/9/2012 11:13:05 AM	
Multiplier	:	1.0000	
Dilution	:	1.0000	
Sample Amount	:	5.00000 []	(not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.602	MM	1	8.61050e6	1.18337e-1	4.78026		Thiodiglycol

Batch Run # 35 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000035.D
Sample Name: CCV4

Acq. Operator : TTM Seq. Line : 35
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/18/2012 12:15:30 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 4.78026

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.009	BB	I	1 2.13155e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Calibration

Raw Data

ethod C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M

Calibration Table

Agent Breakdown Products

Calib. Data Modified : 7/9/2012 11:13:05 AM

Calculate : Internal Standard
Based on : Peak Area

Rel. Reference Window : 10.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 10.000 %
Abs. Non-ref. Window : 0.000 min
Use Multiplier & Dilution Factor with ISTDs
Uncalibrated Peaks : not reported
Partial Calibration : No recalibration if peaks missing

Curve Type : Quadratic (some peaks differ, see below)
Origin : Ignored (some peaks differ, see below)
Weight : Linear (Amnt) (some peaks differ, see below)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Default Sample ISTD Information (if not set in sample table):

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal 2: MSD4 113, EIC=112.7:113.7

RetTime [min]	Sig	Lvl	Amount	Area	Amt/Area	Ref	Grp	Name
12.890	2	1	10.00000	2.44245e6	4.09425e-6	I2		Thiodiglycol-D8
		2	10.00000	2.37259e6	4.21481e-6			
		3	10.00000	2.75981e6	3.62344e-6			
		4	10.00000	2.61922e6	3.81792e-6			
		5	10.00000	2.65549e6	3.76579e-6			
		6	10.00000	2.67017e6	3.74508e-6			
13.460	1	6	5.00000e-2	1.14698e5	4.35926e-7	2		Thiodiglycol
		5	1.00000e-1	2.17683e5	4.59383e-7			
		4	5.00000e-1	1.04468e6	4.78617e-7			
		3	1.00000	2.09084e6	4.78276e-7			
		2	5.00000	1.06254e7	4.70571e-7			
		1	10.00000	1.91630e7	5.21840e-7			

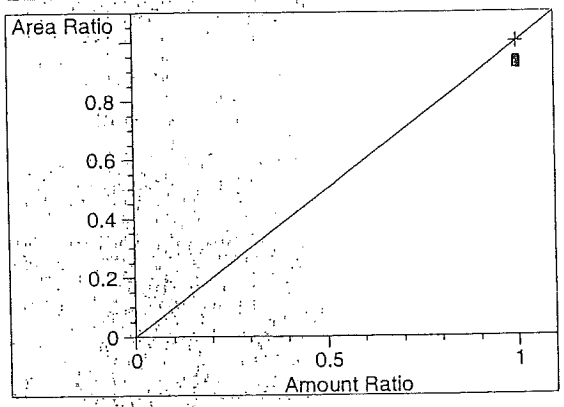
More compound-specific settings:

Compound: Thiodiglycol-D8
  Curve Type : Linear
  Origin : Included
  Calibration Level Weights:/
    Level 1 : 1
    Level 2 : 1
    Level 3 : 1
    Level 4 : 1
    Level 5 : 1
    Level 6 : 1

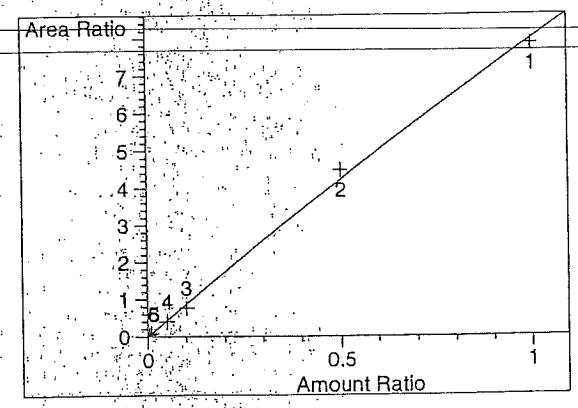
Peak Sum Table

No Entries in table

Calibration Curves



Thiodiglycol-D8 at exp. RT: 12.890
MSD4 113, EIC=112.7:113.7
Correlation: 1.00000
Residual Std. Dev.: 0.00000
Formula: y = mx + b
  m: 1.00000
  b: 0.00000
  x: Amount
  y: Area
Calibration Level Weights:
  Level 1 : 1
  Level 2 : 1
  Level 3 : 1
  Level 4 : 1
  Level 5 : 1
  Level 6 : 1



Thiodiglycol at exp. RT: 13.460
MSD4 105, EIC=104.7:105.7
Correlation: 0.99844
Residual Std. Dev.: 0.15671
Formula: y = ax² + bx + c
  a: -9.49682e-1
  b: 8.92207
  c: -8.42930e-3
  x: Amount
  y: Area
Calibration Level Weights:
  Level 6 : 1
  Level 5 : 0.5
  Level 4 : 0.1
  Level 3 : 0.05
  Level 2 : 0.01
  Level 1 : 0.005

Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 1	PRIME	ABP-ON	1	Ctrl Samp	
2	Vial 1	$10	ABP-ON	1	Ctrl Samp	
3	Vial 2	$5	ABP-ON	1	Ctrl Samp	
4	Vial 3	$1	ABP-ON	1	Ctrl Samp	
5	Vial 4	$05	ABP-ON	1	Ctrl Samp	
6	Vial 5	$0.1	ABP-ON	1	Ctrl Samp	
7	Vial 6	$0.05	ABP-ON	1	Ctrl Samp	
8	Vial 7	ICV	ABP-ON	1	Ctrl Samp	
9	Vial 8	283055 LMB	ABP-ON	1	Ctrl Samp	
10	Vial 9	283056 LCS	ABP-ON	1	Ctrl Samp	
11	Vial 10	283057 RLVS	ABP-ON	1	Ctrl Samp	
12	Vial 11	1217861001	ABP-ON	1	Sample	
13	Vial 12	1217861002 MS	ABP-ON	1	Ctrl Samp	
14	Vial 13	1217861003 MSD	ABP-ON	1	Ctrl Samp	
15	Vial 2	CCV	ABP-ON	1	Ctrl Samp	

atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

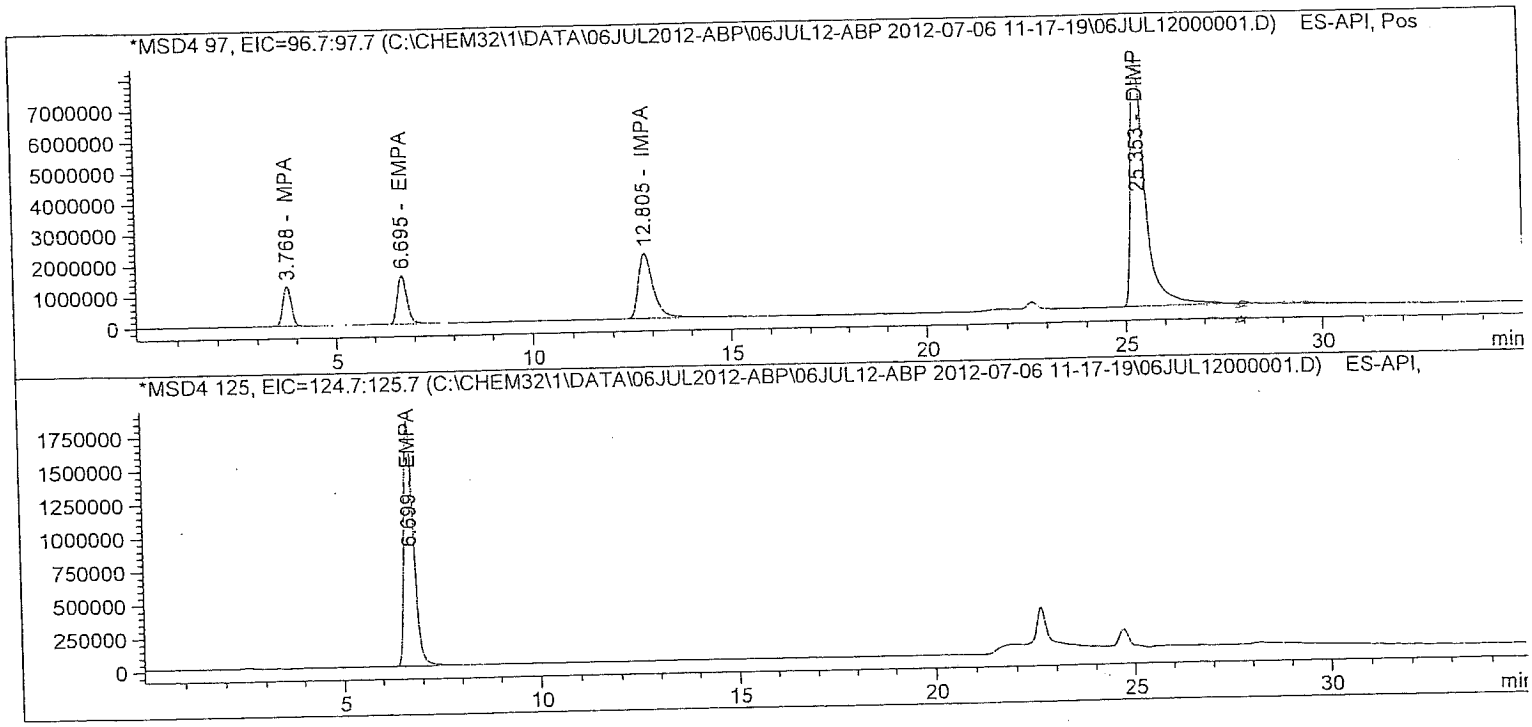
==========

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 11:17:43 AM

Seq. Line : 1
Location : Vial 1
Inj : 1
Inj Volume : 10 µl

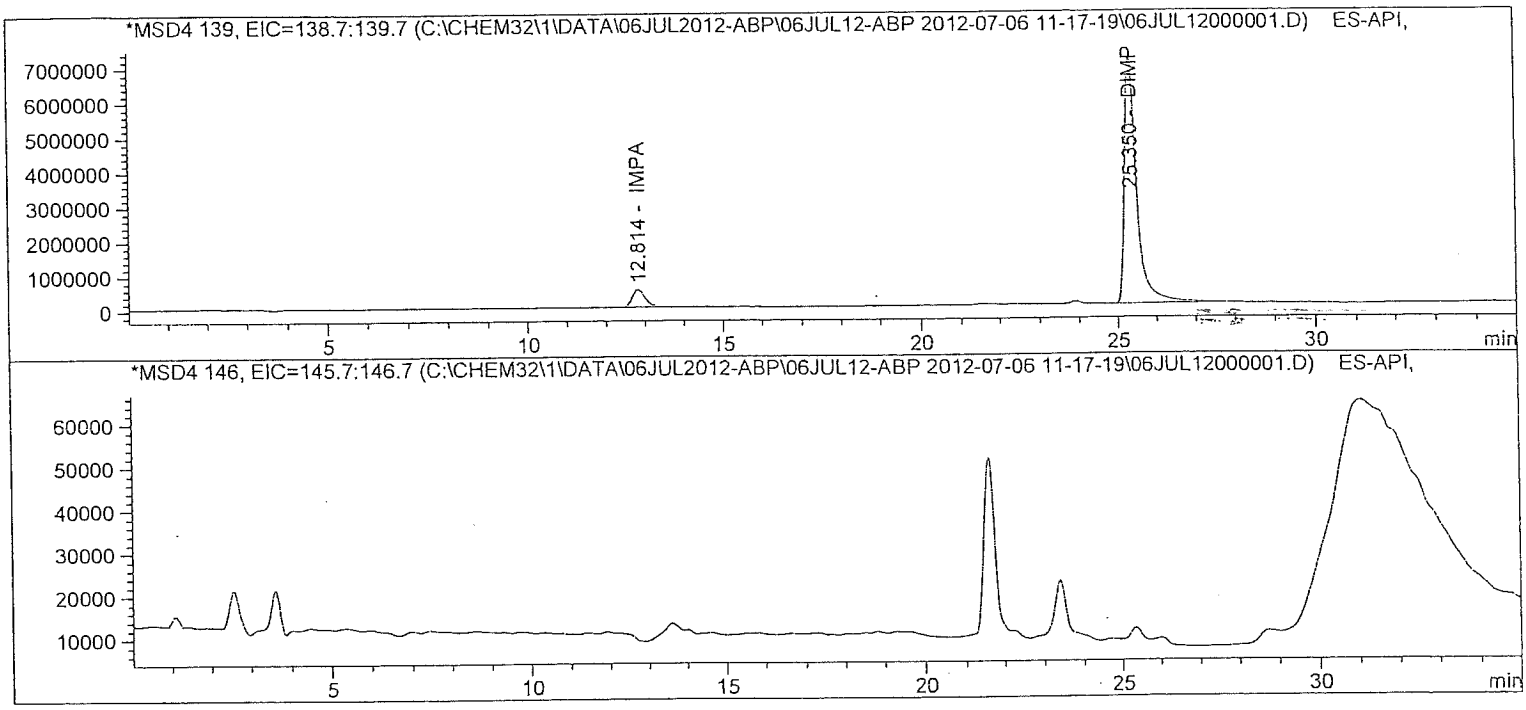
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

==========



atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

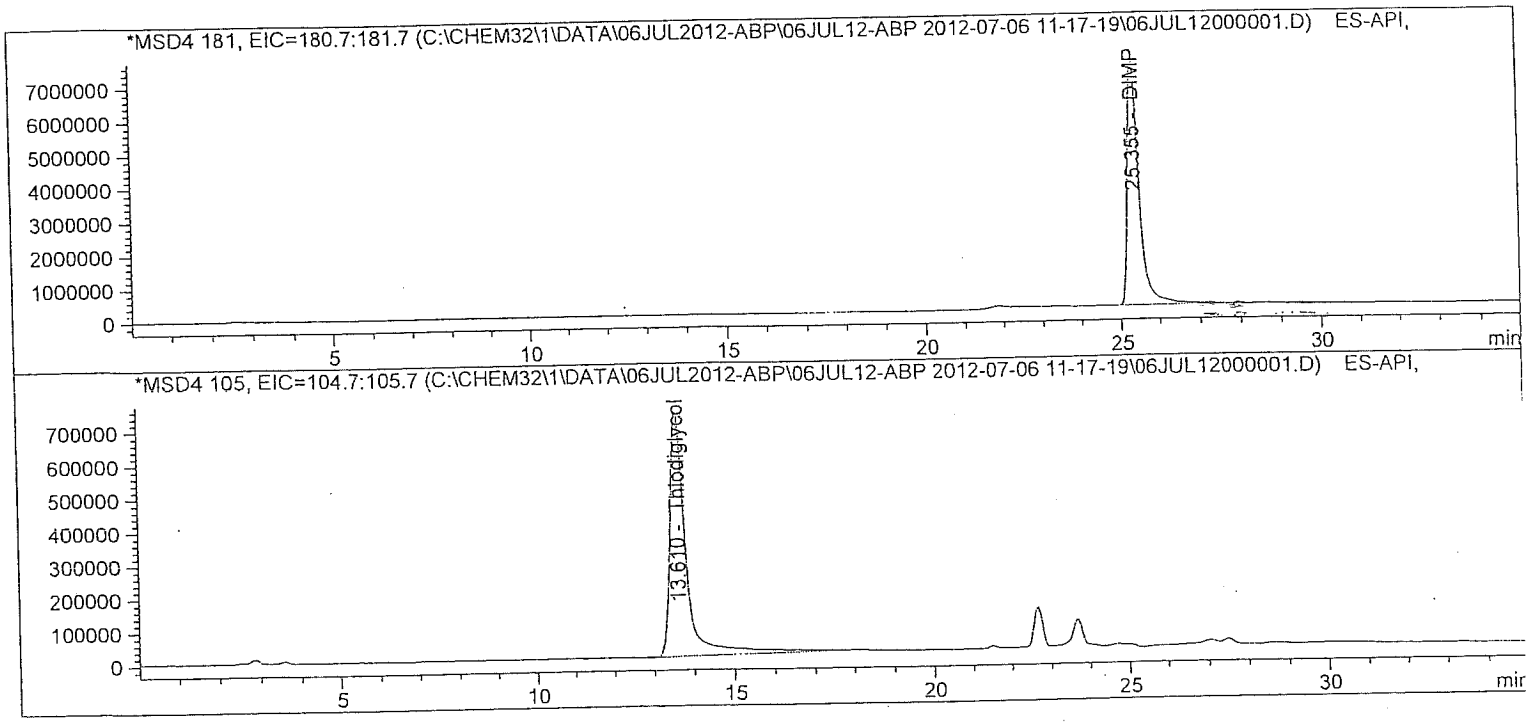


atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 11:17:43 AM

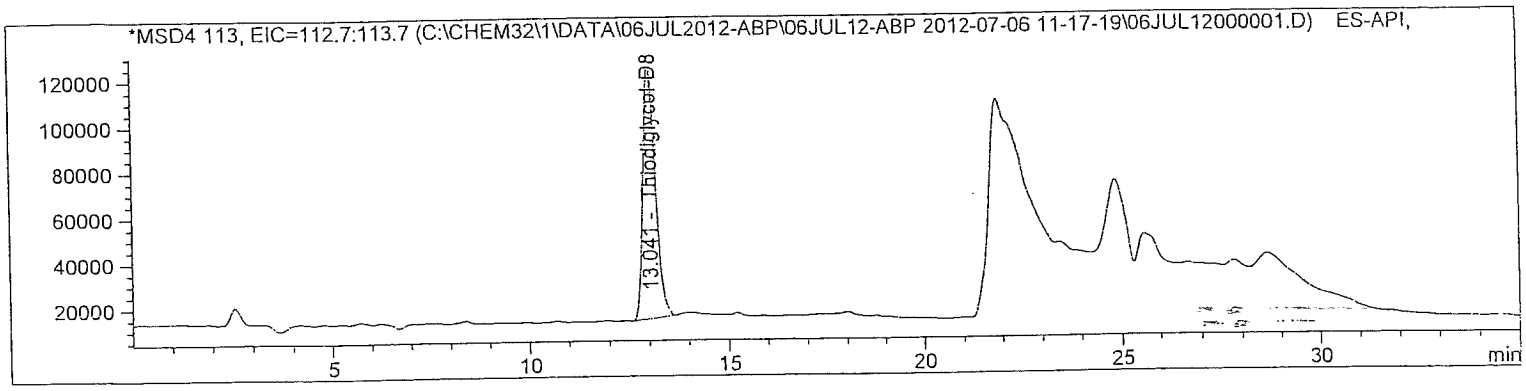
Seq. Line : 1
Location : Vial 1
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 10.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs

Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.768	BB	1	1.91978e7	1.32528e-1	10.64848		MPA
12.805	BBA	1	5.64639e7	4.37087e-2	10.32924		IMPA

Totals without ISTD(s) : 20.97773

atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 11:17:43 AM
Seq. Line : 1
Location : Vial 1
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.699	BB	1	3.05963e7	7.98724e-2	10.22810		EMPA

Totals without ISTD(s) : 10.22810

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.355	BBA	1	1.54432e8	1.54383e-2	9.97853		DIMP

Totals without ISTD(s) : 9.97853

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.610	BBA	1	2.03461e7	1.26756e-1	10.79391		Thiodiglycol

Totals without ISTD(s) : 10.79391

etch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator : TTM
Seq. Line : 1
Acq. Instrument : LCMS3
Location : Vial 1
Injection Date : 7/6/2012 11:17:43 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.041	BB	I	1 2.38930e6	1.00000	10.00000		Thiodiglycol-D8

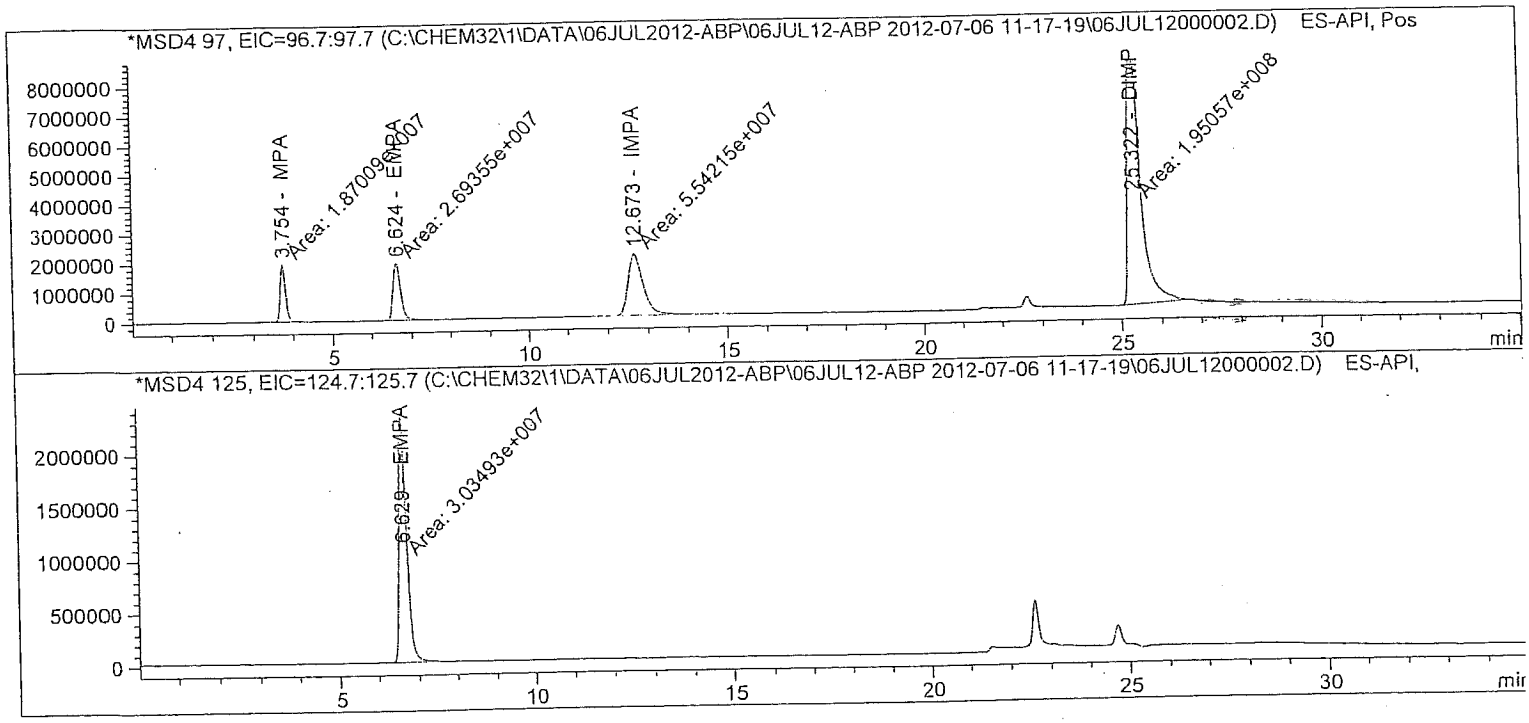
Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 2 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
Sample Name: S10

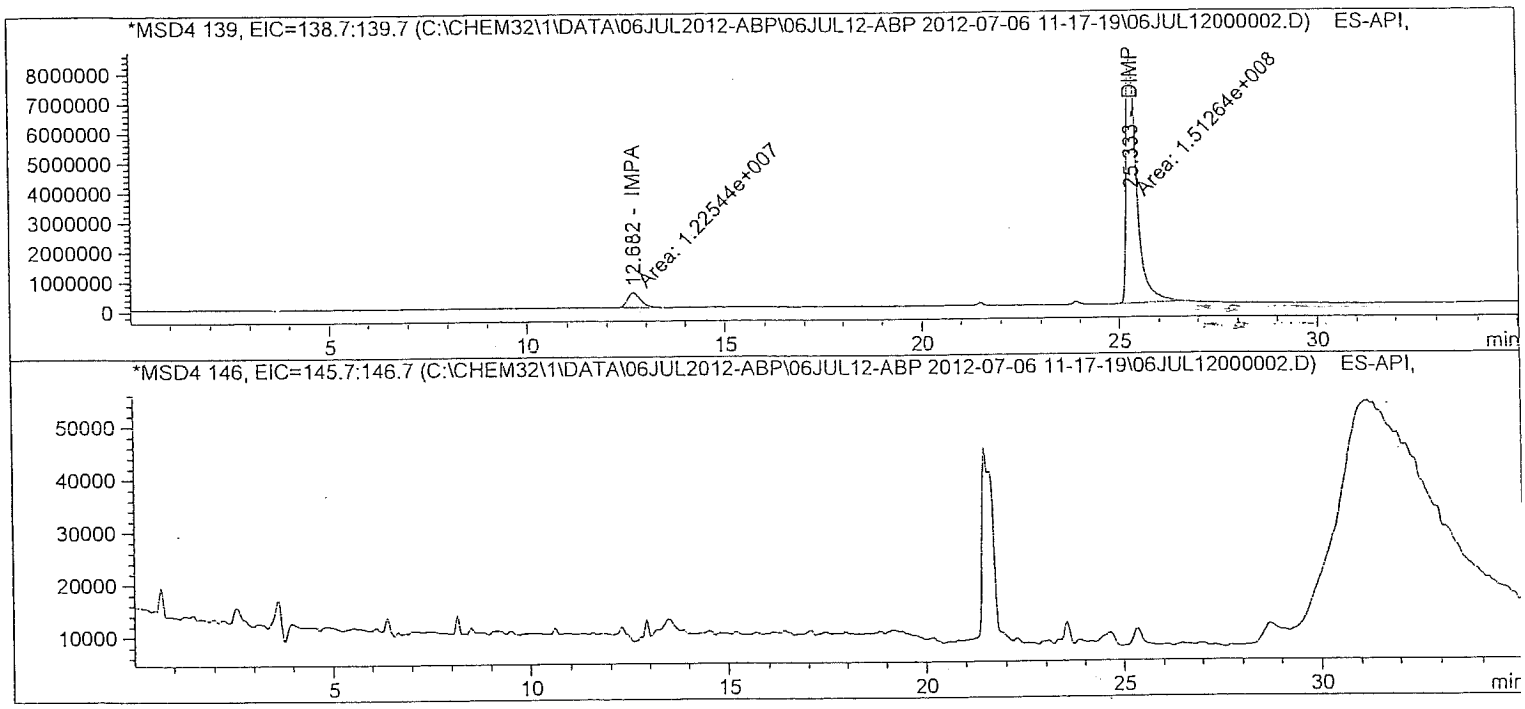
Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



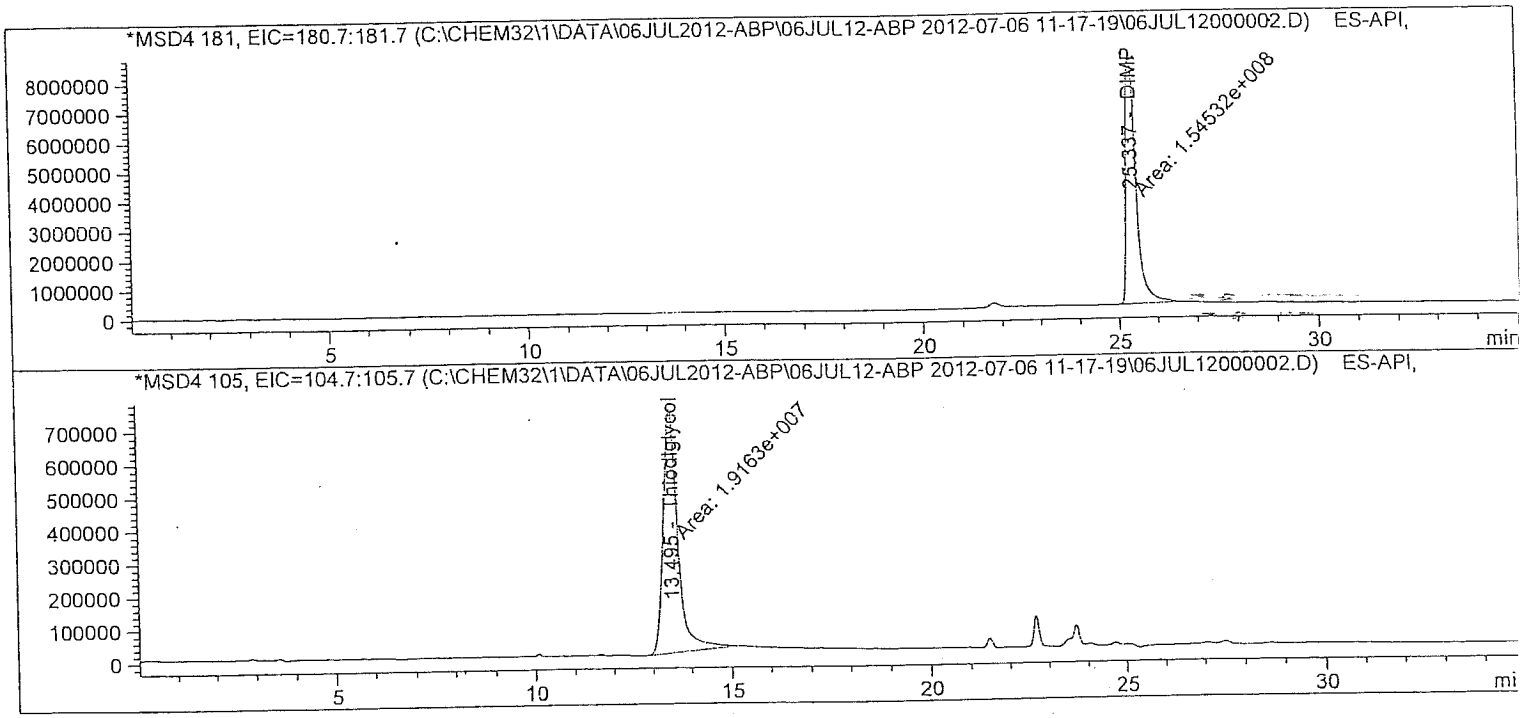
atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

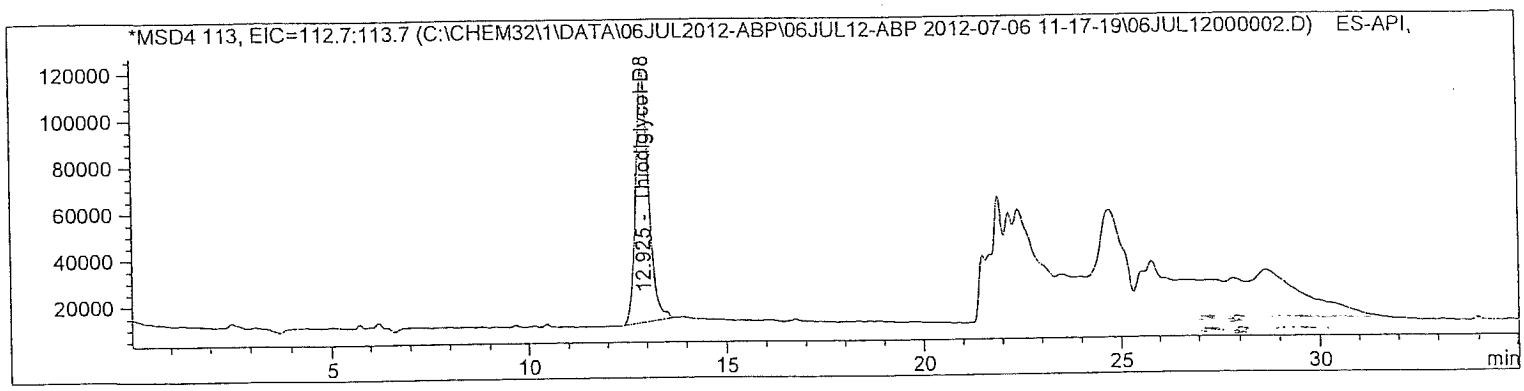
Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products .		



Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 11:54:02 AM

Seq. Line : 2
Location : Vial 1
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 10.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.754	MM	1	1.87009e7	1.29739e-1	9.93363		MPA
12.673	MM	1	5.54215e7	4.36500e-2	9.90458		IMPA

Totals without ISTD(s) : 19.83821

atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
mple Name: $10

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 11:54:02 AM
Seq. Line : 2
Location : Vial 1
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.629	MM	1	3.03493e7	7.97357e-2	9.90775		EMPA

Totals without ISTD(s) : 9.90775

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.337	MM	1	1.54532e8	1.48417e-2	9.39024		DIMP

Totals without ISTD(s) : 9.39024

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.495	MM	1	1.91630e7	1.25317e-1	9.83212		Thiodiglycol

Totals without ISTD(s) : 9.83212

ta File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
mple Name: $10

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 11:54:02 AM
Seq. Line : 2
Location : Vial 1
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

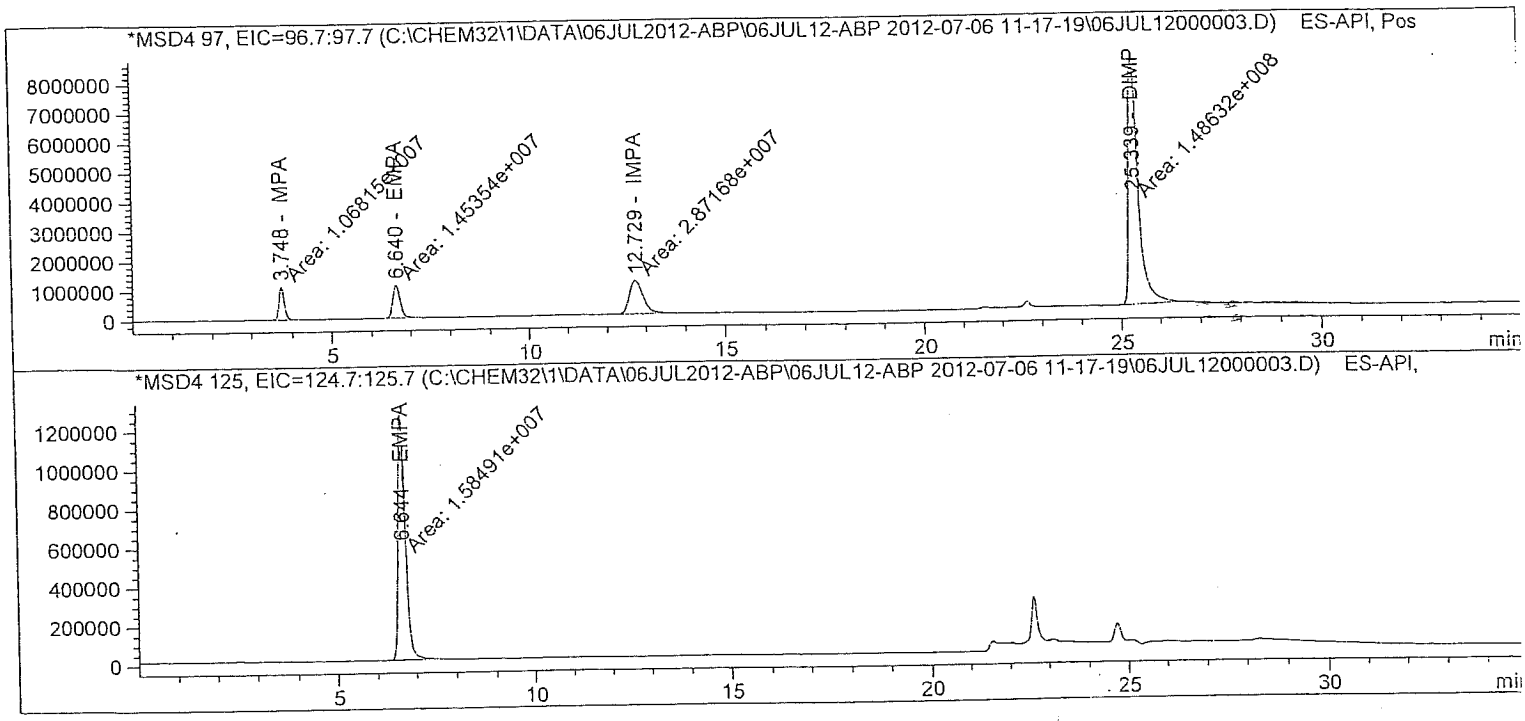
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.925	BB	I	1 2.44245e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

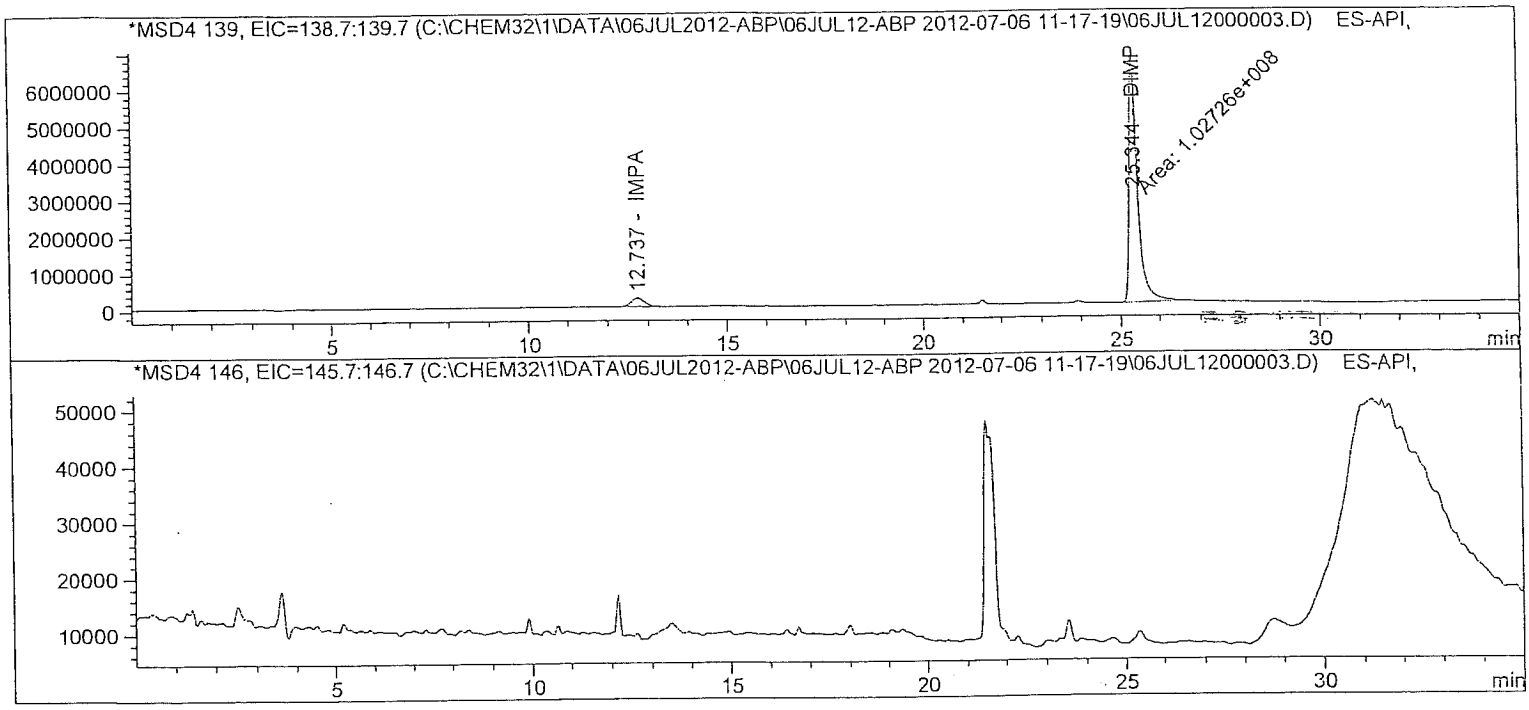
Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



:tch Run # 3 of 15
:ta File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
:mple Name: $5

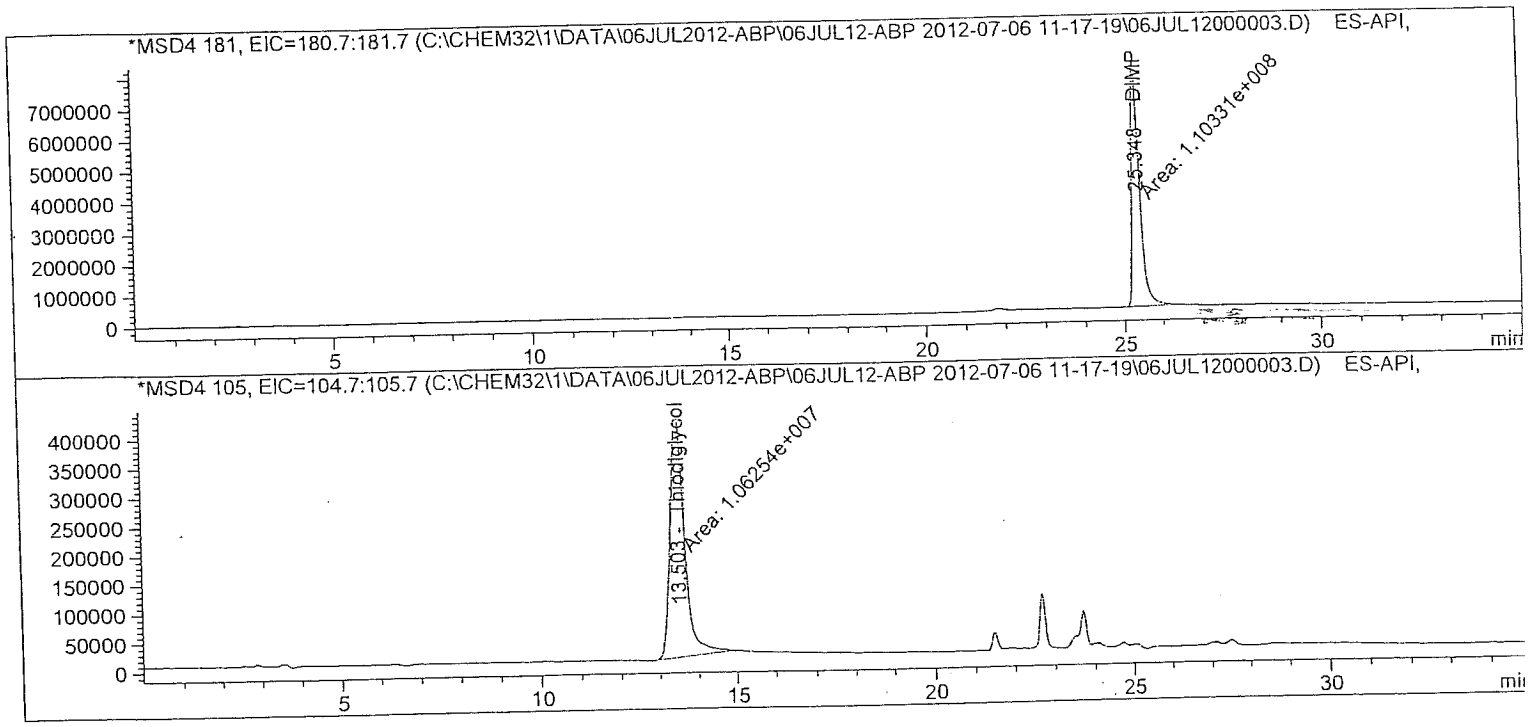
Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



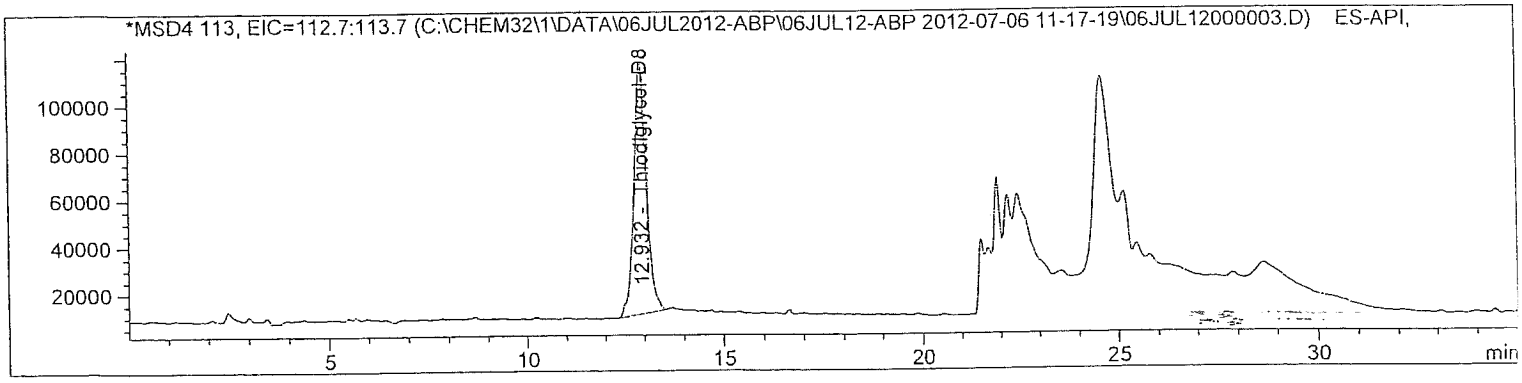
tch Run # 3 of 15
ta File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
mple Name: $5

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

Acq. Operator : TTM
Seq. Line : 3
Acq. Instrument : LCMS3
Location : Vial 2
Injection Date : 7/6/2012 12:30:22 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.748	MM	1	1.06815e7	1.13483e-1	5.10907		MPA
12.729	MM	1	2.87168e7	4.30231e-2	5.20733		IMPA

Totals without ISTD(s) : 10.31641

atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

```
==================================================================
Acq. Operator    : TTM                          Seq. Line :   3
Acq. Instrument  : LCMS3                         Location : Vial 2
Injection Date   : 7/6/2012 12:30:22 PM                Inj :   1
                                               Inj Volume : 10 µl
Acq. Method      : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed     : 7/3/2012 3:32:22 PM by TTM
Analysis Method  : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed     : 7/9/2012 11:13:23 AM by TTM
                   (Results are from a previously saved Batch)
Method Info      : Agent Breakdown Products

==================================================================
```

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.644	MM	1	1.58491e7	7.77744e-2	5.19540		EMPA

Totals without ISTD(s) : 5.19540

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	MM	1	1.10331e8	1.18266e-2	5.49964		DIMP

Totals without ISTD(s) : 5.49964

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.503	MM	1	1.06254e7	1.19049e-1	5.33146		Thiodiglycol

Totals without ISTD(s) : 5.33146

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 12:30:22 PM
Seq. Line : 3
Location : Vial 2
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.932	BB	I	1 2.37259e6	1.00000	10.00000		Thiodiglycol-D8

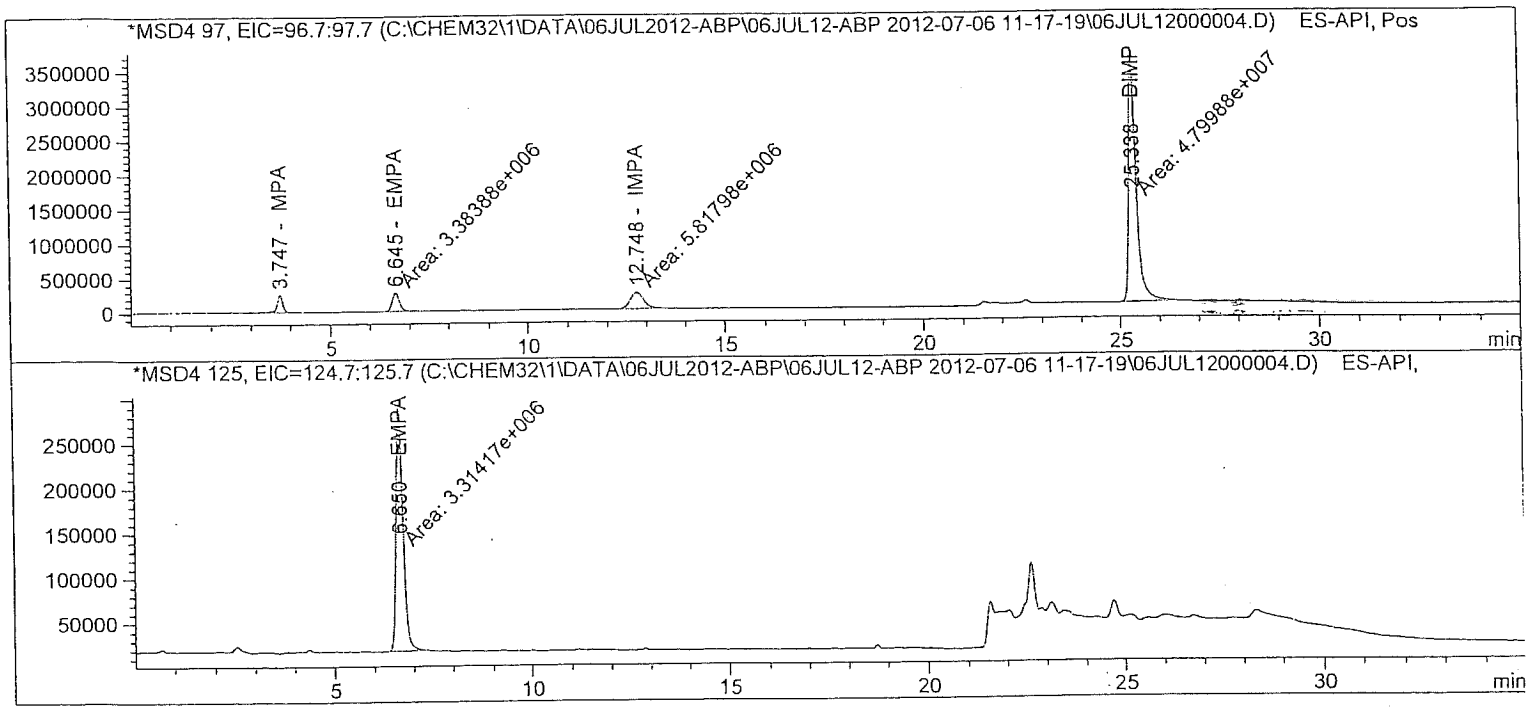
Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl

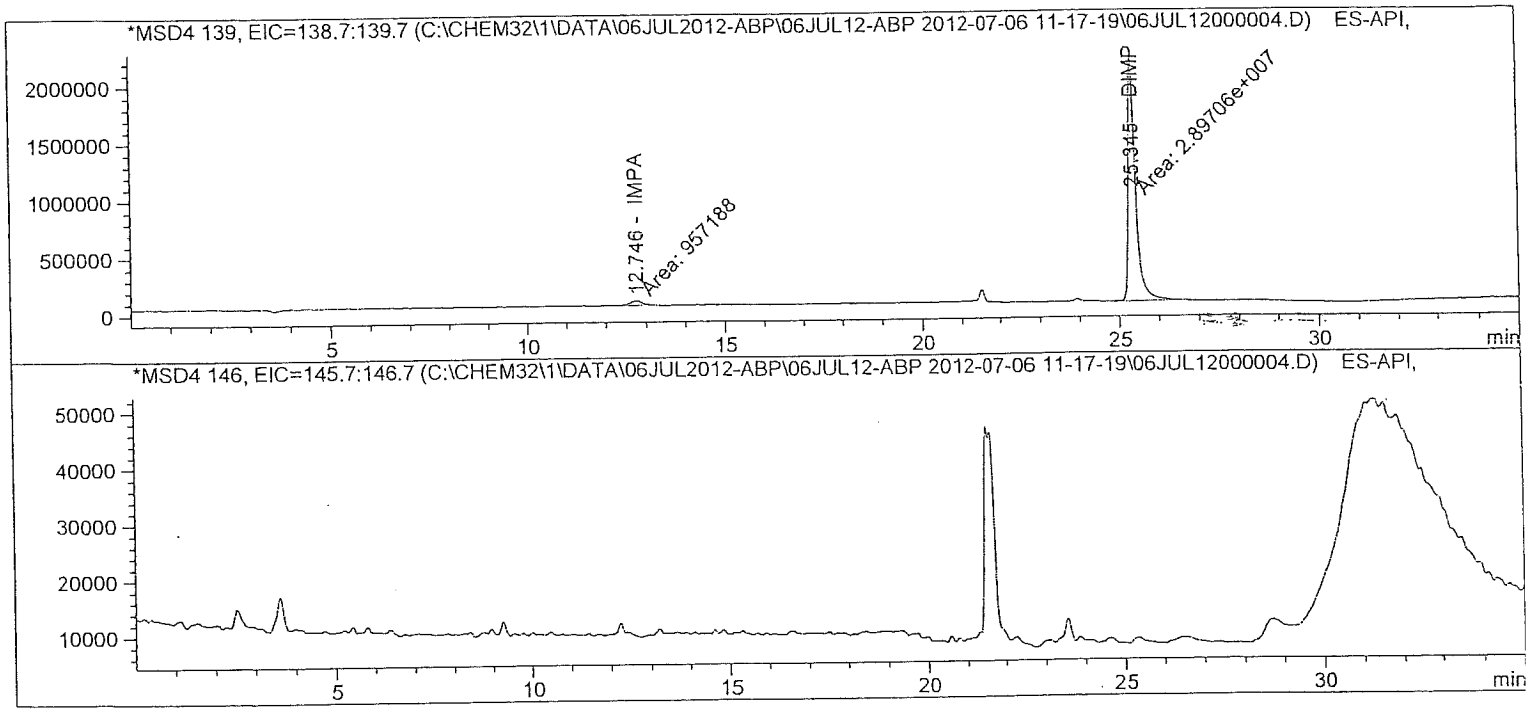
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



atch Run # 4 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
ample Name: $1

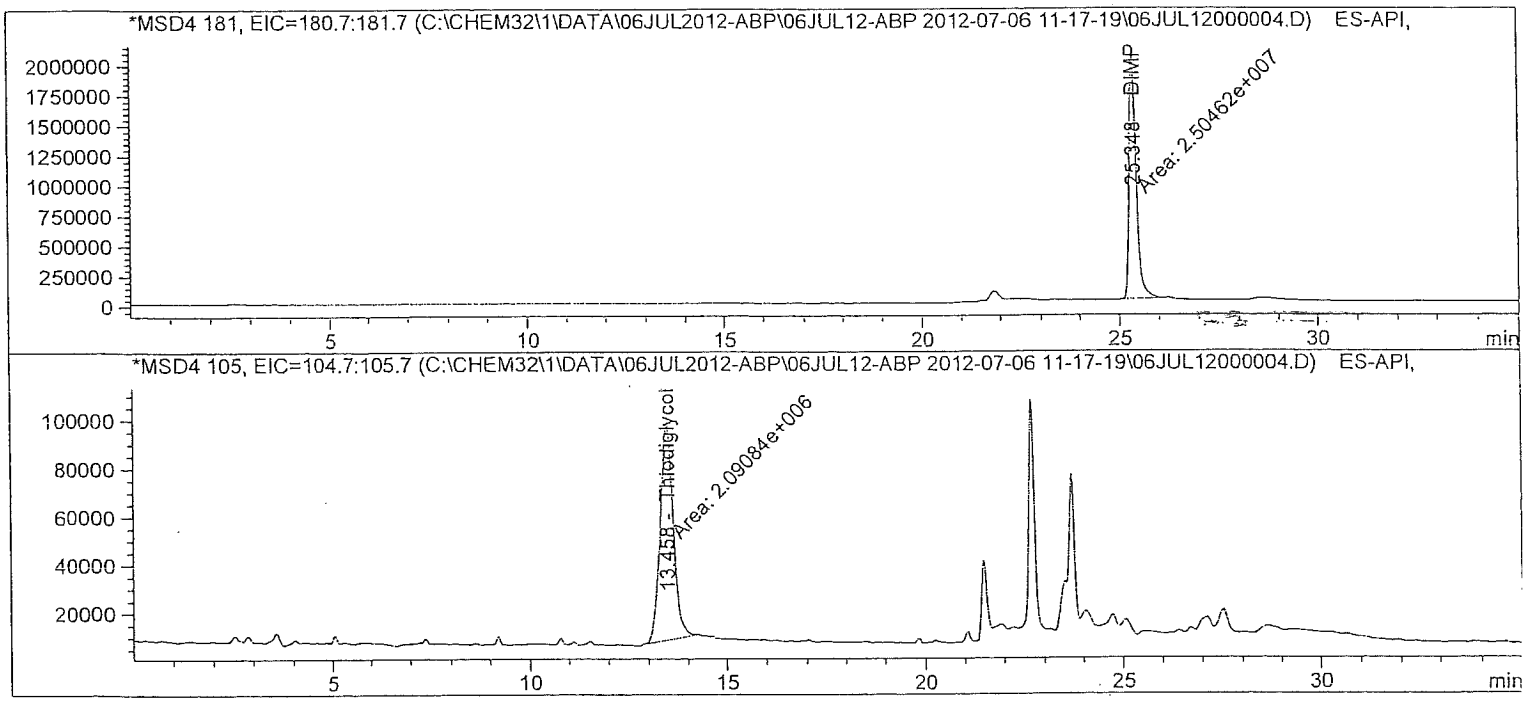
Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



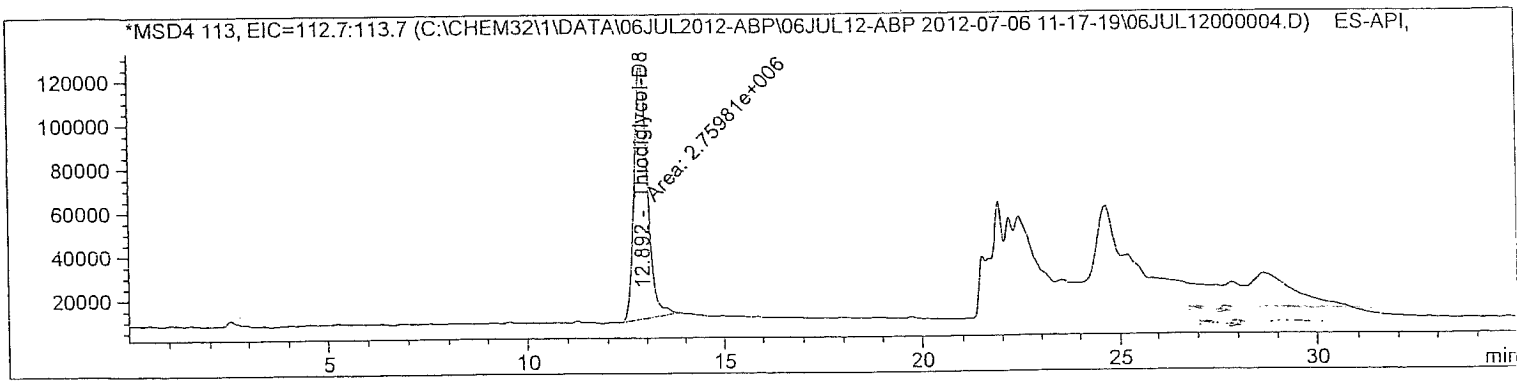
atch Run # 4 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
ample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 4 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
ample Name: $1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 1:06:42 PM
Seq. Line : 4
Location : Vial 3
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 1.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.747	BB	1	2.56450e6	1.00803e-1	9.36694e-1		MPA
12.748	MM	1	5.81798e6	4.26904e-2	8.99961e-1		IMPA

Totals without ISTD(s) : 1.83665

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 1:06:42 PM

Seq. Line : 4
Location : Vial 3
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.650	MM	1	3.31417e6	7.60313e-2	9.13037e-1		EMPA

Totals without ISTD(s) : 9.13037e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	MM	1	2.50462e7	9.62641e-3	8.73631e-1		DIMP

Totals without ISTD(s) : 8.73631e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.458	MM	1	2.09084e6	1.14384e-1	8.66577e-1		Thiodiglycol

Totals without ISTD(s) : 8.66577e-1

atch Run # 4 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
ample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

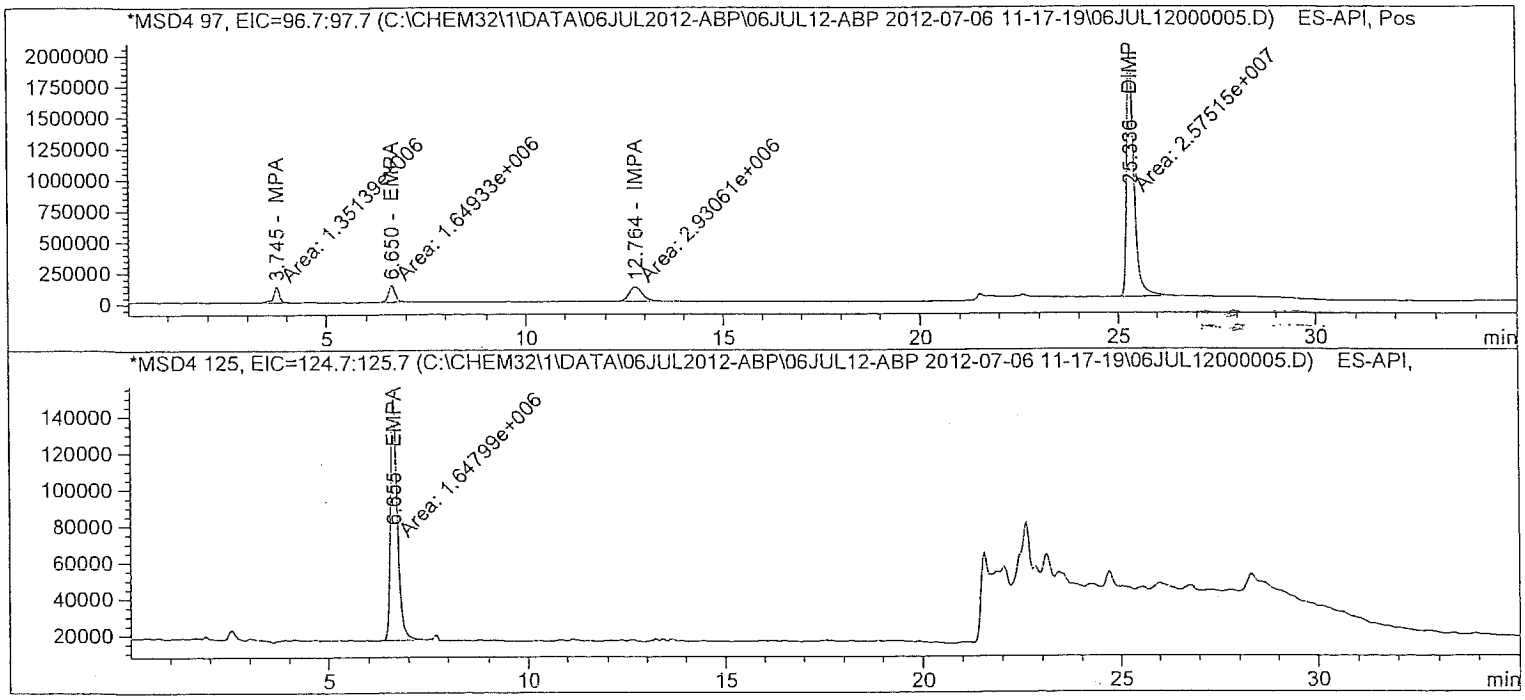
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.892	MM	I	1 2.75981e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

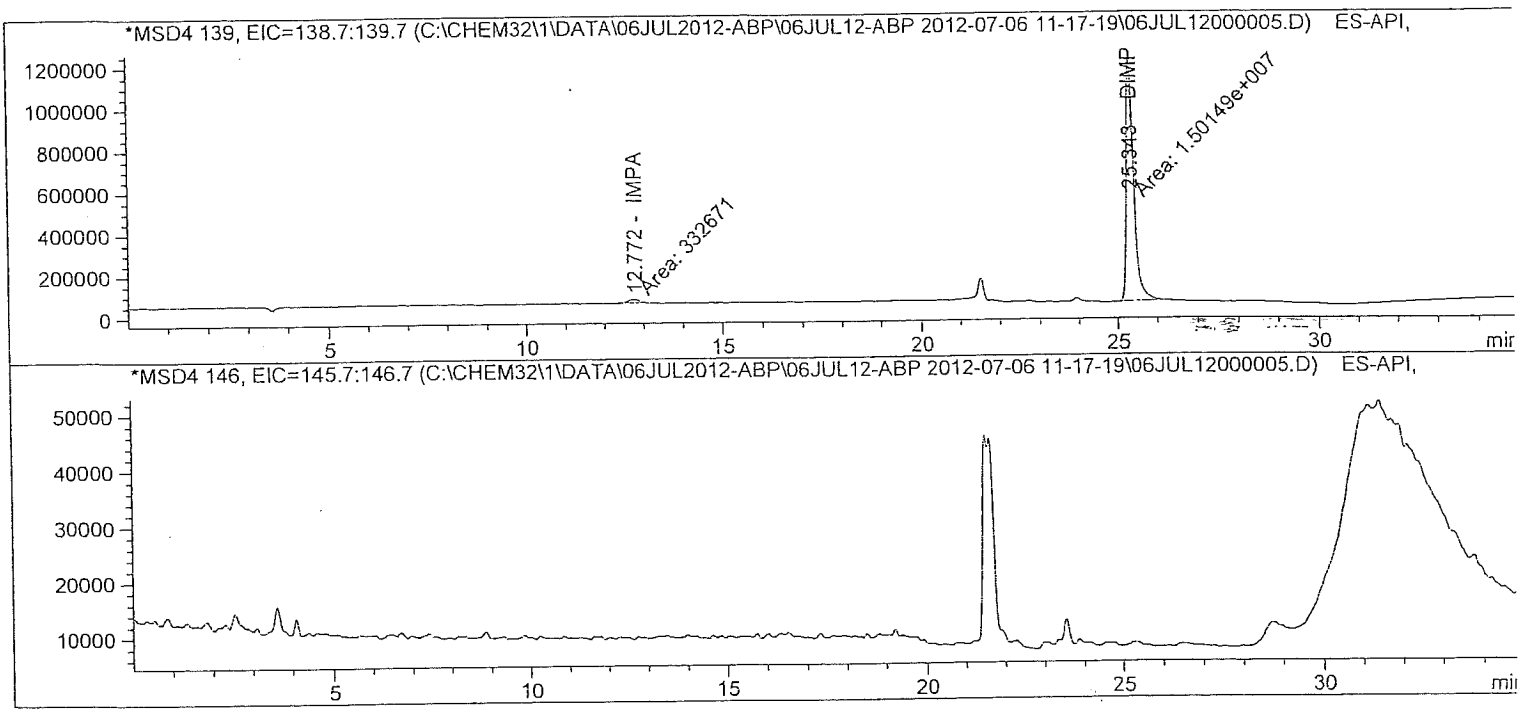
atch Run # 5 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: $05

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 5 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: $05

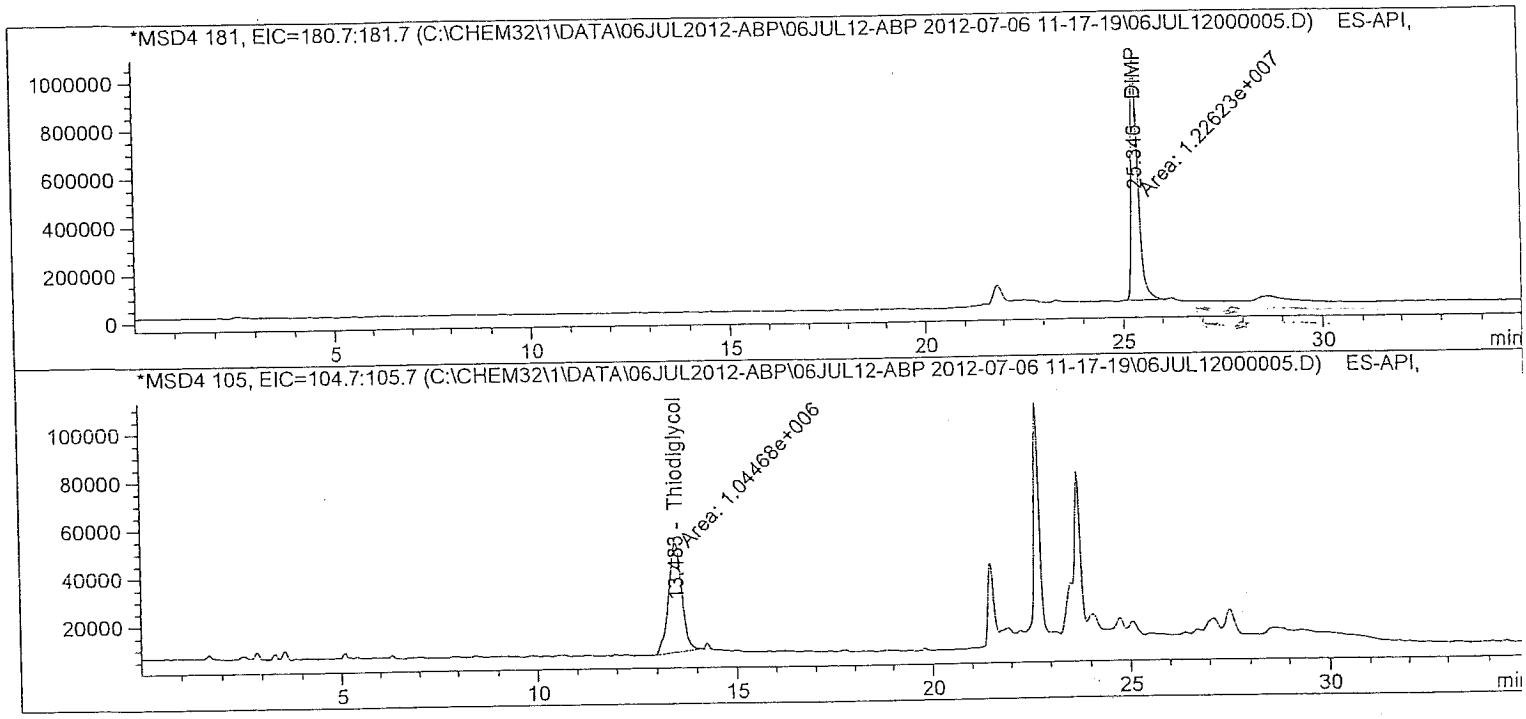
Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: $05

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

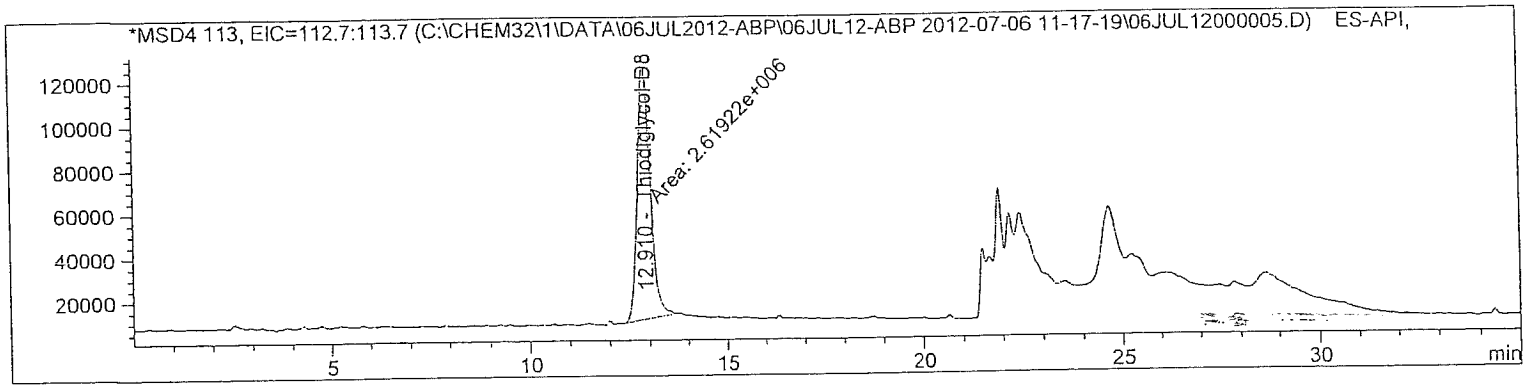


ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: $05

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 1:43:01 PM

Seq. Line : 5
Location : Vial 4
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000e-1 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.745	MM	1	1.35139e6	9.80980e-2	5.06138e-1		MPA
12.764	MM	1	2.93061e6	4.28998e-2	4.79999e-1		IMPA

Totals without ISTD(s) : 9.86138e-1

atch Run # 5 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: S05

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 1:43:01 PM
Seq. Line : 5
Location : Vial 4
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.655	MM	1	1.64799e6	7.58113e-2	4.76997e-1		EMPA

Totals without ISTD(s) : 4.76997e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.346	MM	1	1.22623e7	9.57834e-3	4.48425e-1		DIMP

Totals without ISTD(s) : 4.48425e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.483	MM	1	1.04468e6	1.15012e-1	4.58725e-1		Thiodiglycol

Totals without ISTD(s) : 4.58725e-1

atch Run # 5 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: $05

Acq. Operator : TTM
Seq. Line : 5
Acq. Instrument : LCMS3
Location : Vial 4
Injection Date : 7/6/2012 1:43:01 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

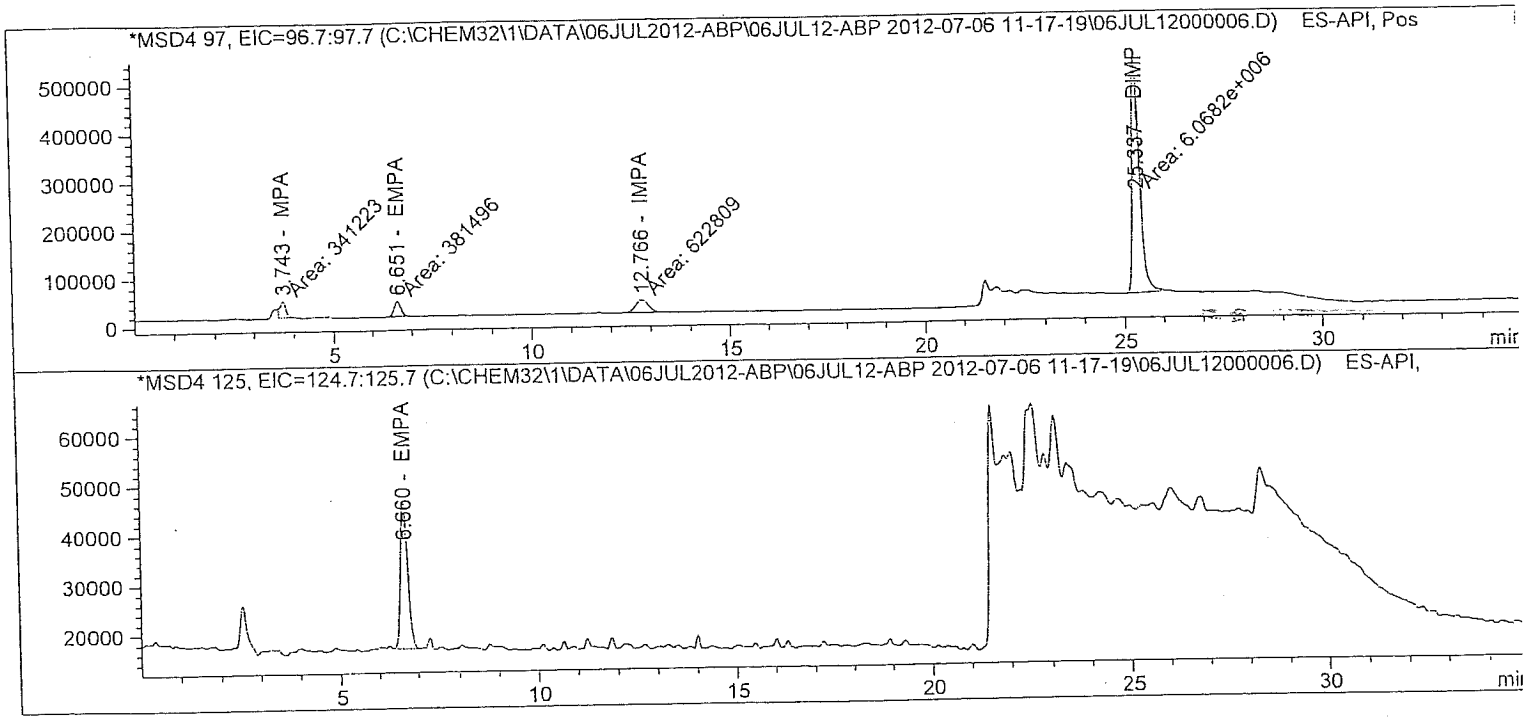
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.910	MM	I	1 2.61922e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

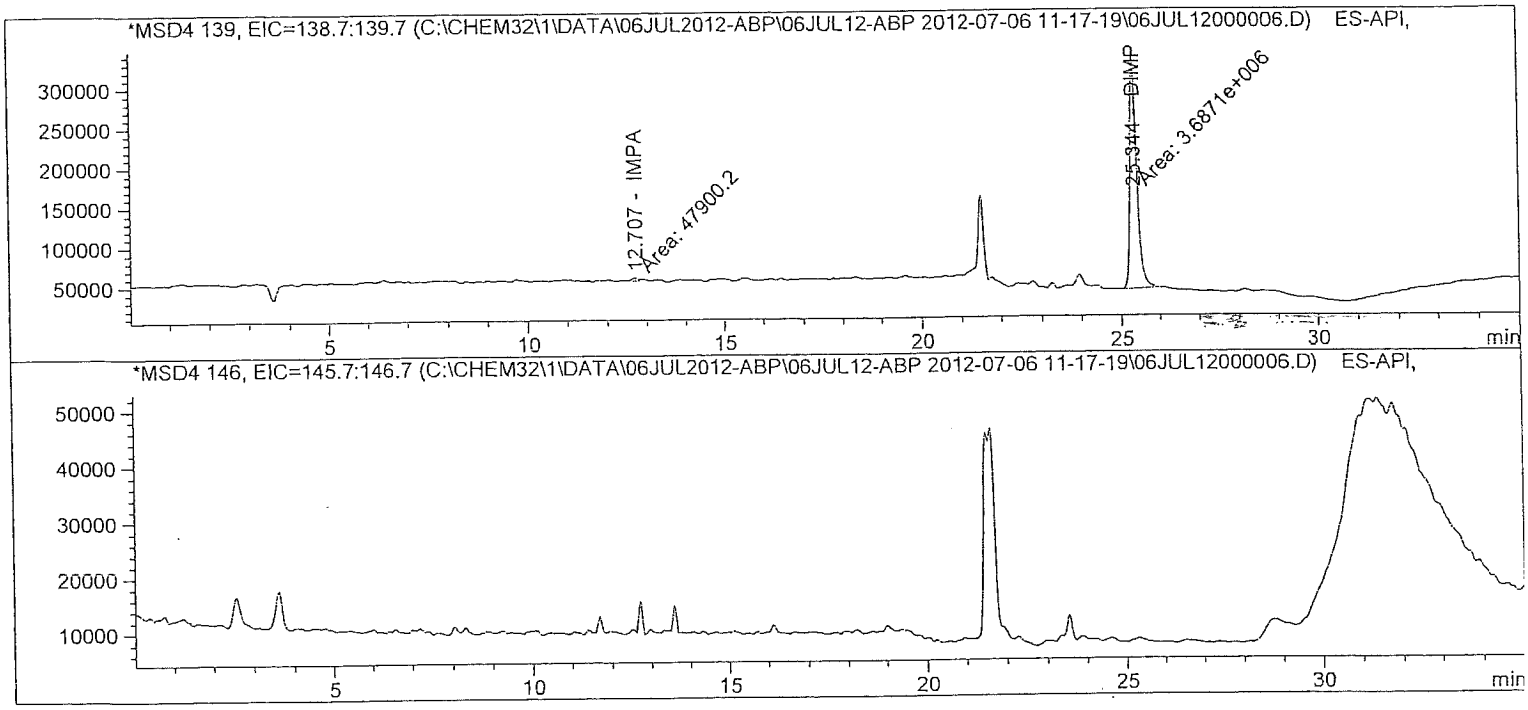
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

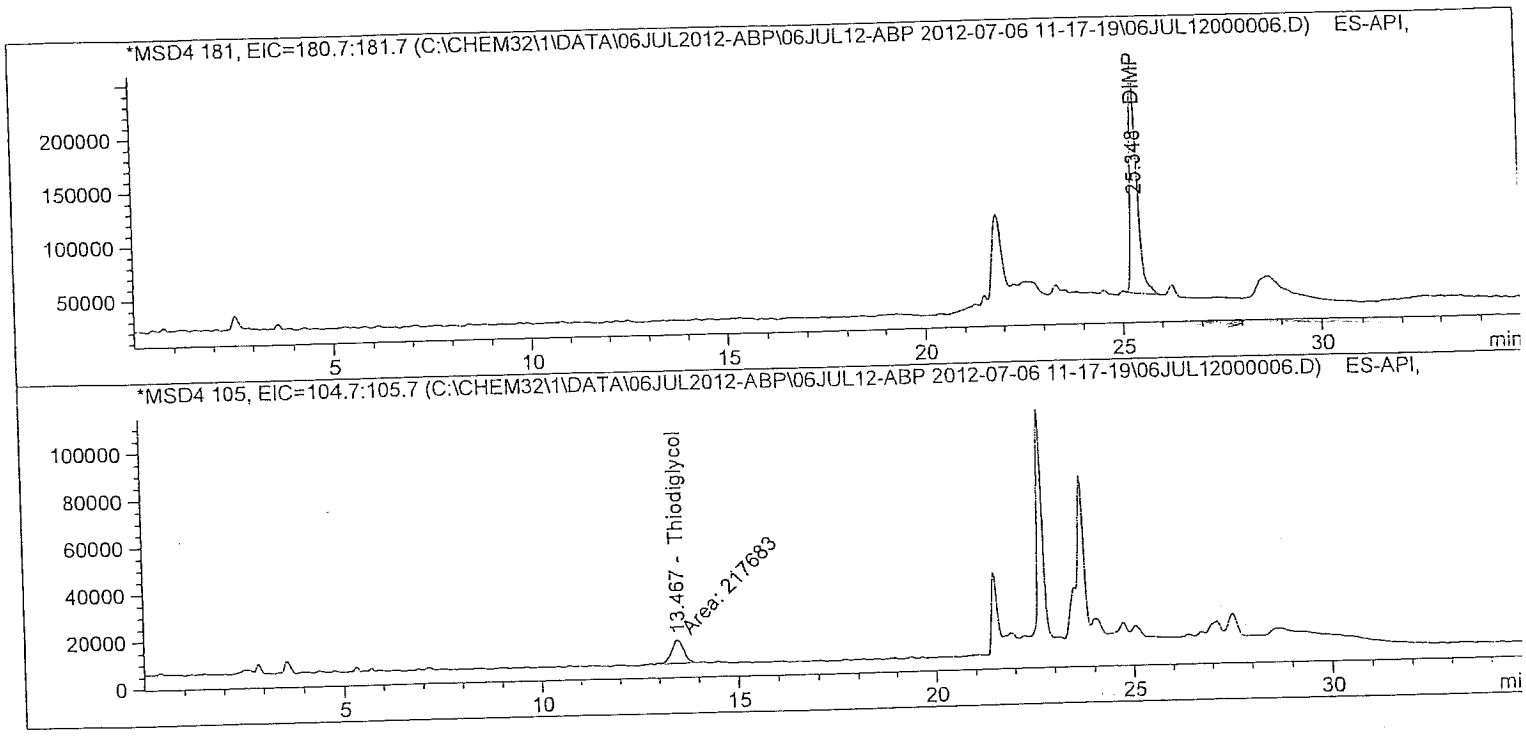
Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 6 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

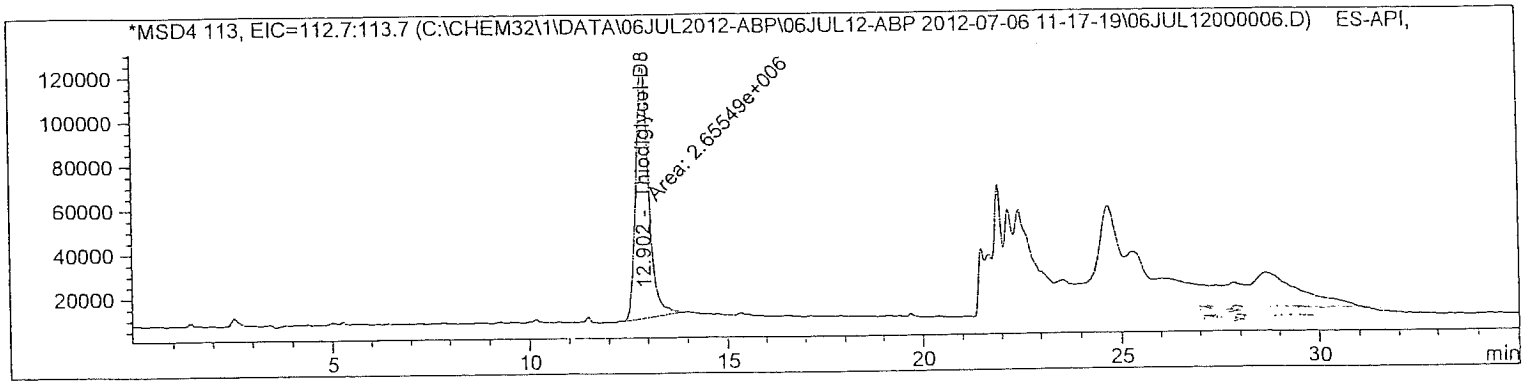
Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



:tch Run # 6 of 15
:ta File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
:mple Name: $0.1

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 1.00000e-1 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.743	FM	1	3.41223e5	8.57299e-2	1.10161e-1		MPA
12.766	MM	1	6.22808e5	4.49809e-2	1.05497e-1		IMPA

Totals without ISTD(s) : 2.15657e-1

atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:19:21 PM
Seq. Line : 6
Location : Vial 5
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.660	BB	1	3.63294e5	7.52785e-2	1.02988e-1		EMPA

Totals without ISTD(s) : 1.02988e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	BB	1	2.58087e6	1.03862e-2	1.00944e-1		DIMP

Totals without ISTD(s) : 1.00944e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.467	MM	1	2.17683e5	1.23740e-1	1.01436e-1		Thiodiglycol

Totals without ISTD(s) : 1.01436e-1

atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:19:21 PM
Seq. Line : 6
Location : Vial 5
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.902	MM	I	1 2.65549e6	1.00000	10.00000		Thiodiglycol-D8

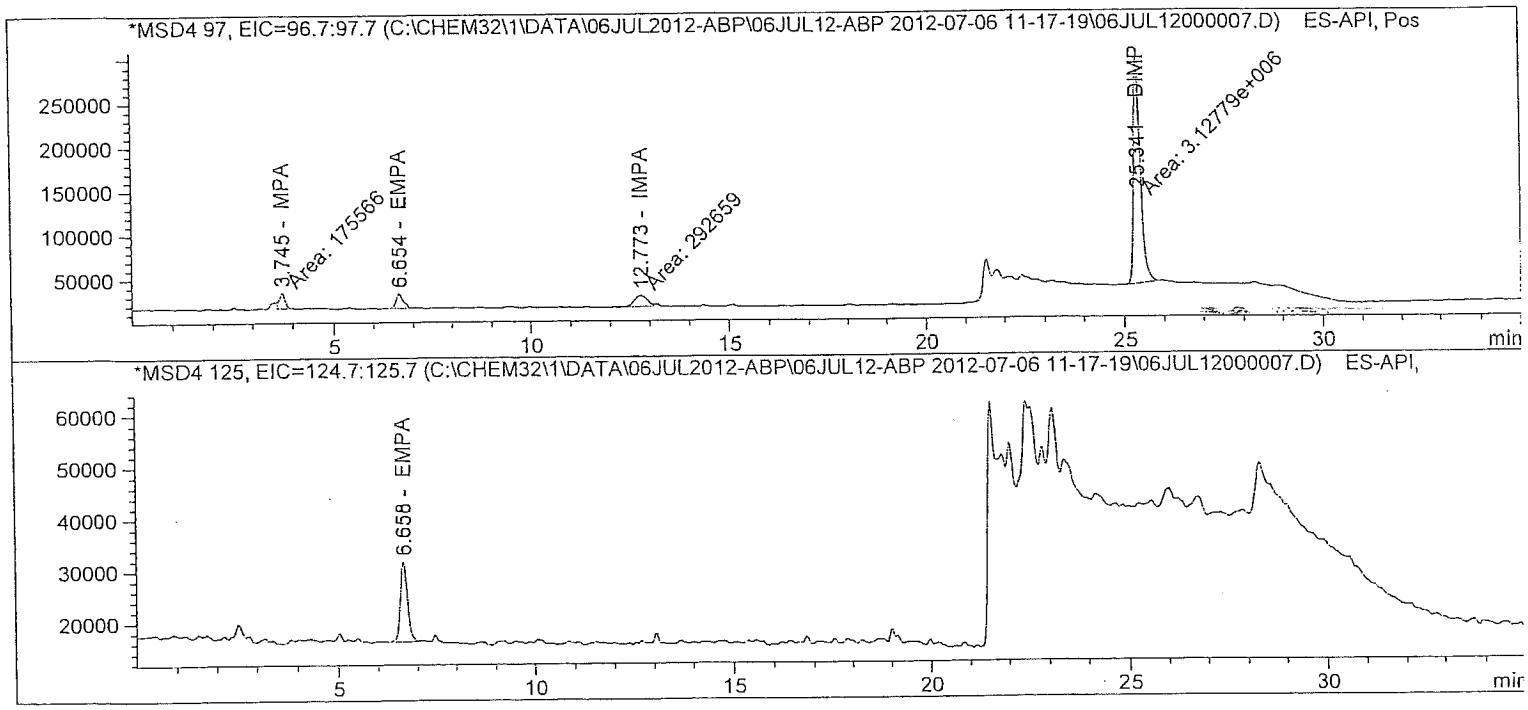
Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

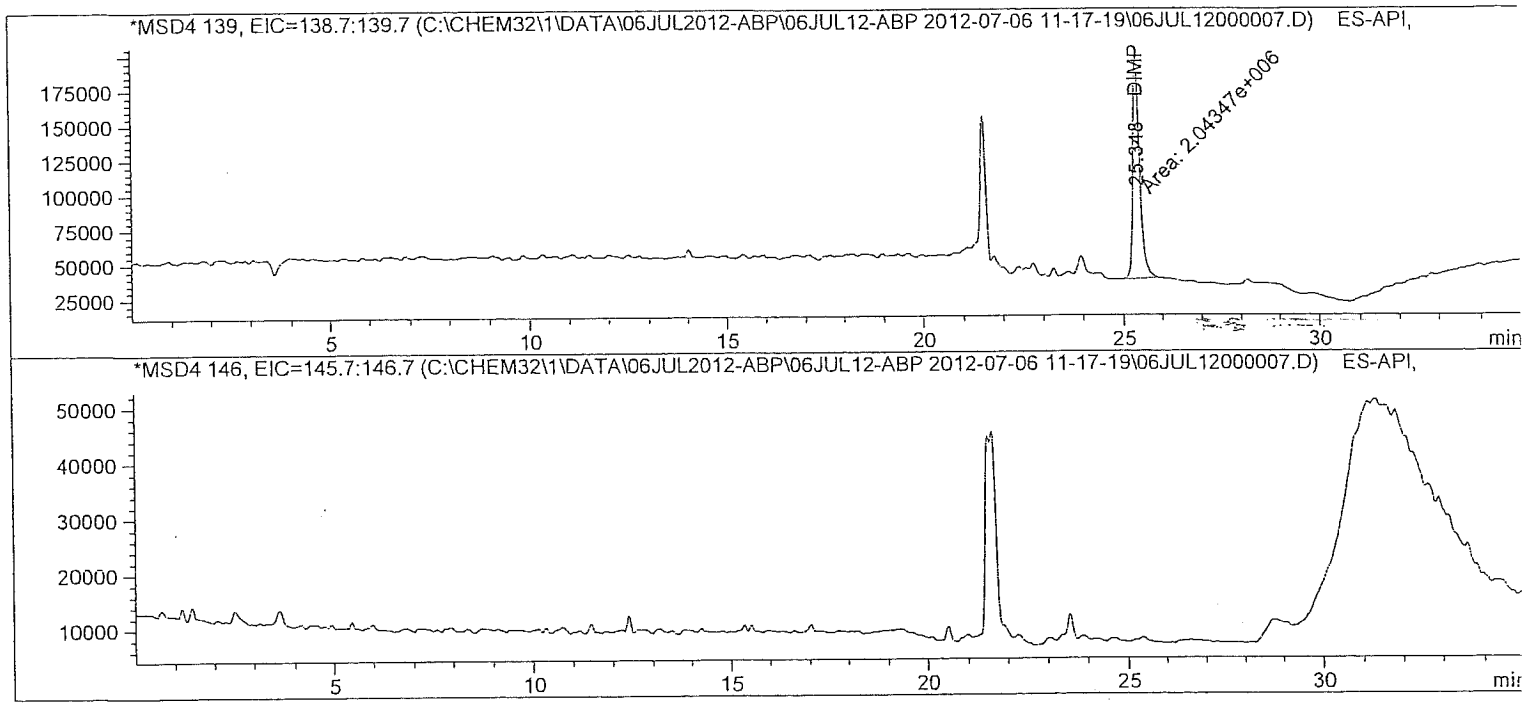
Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



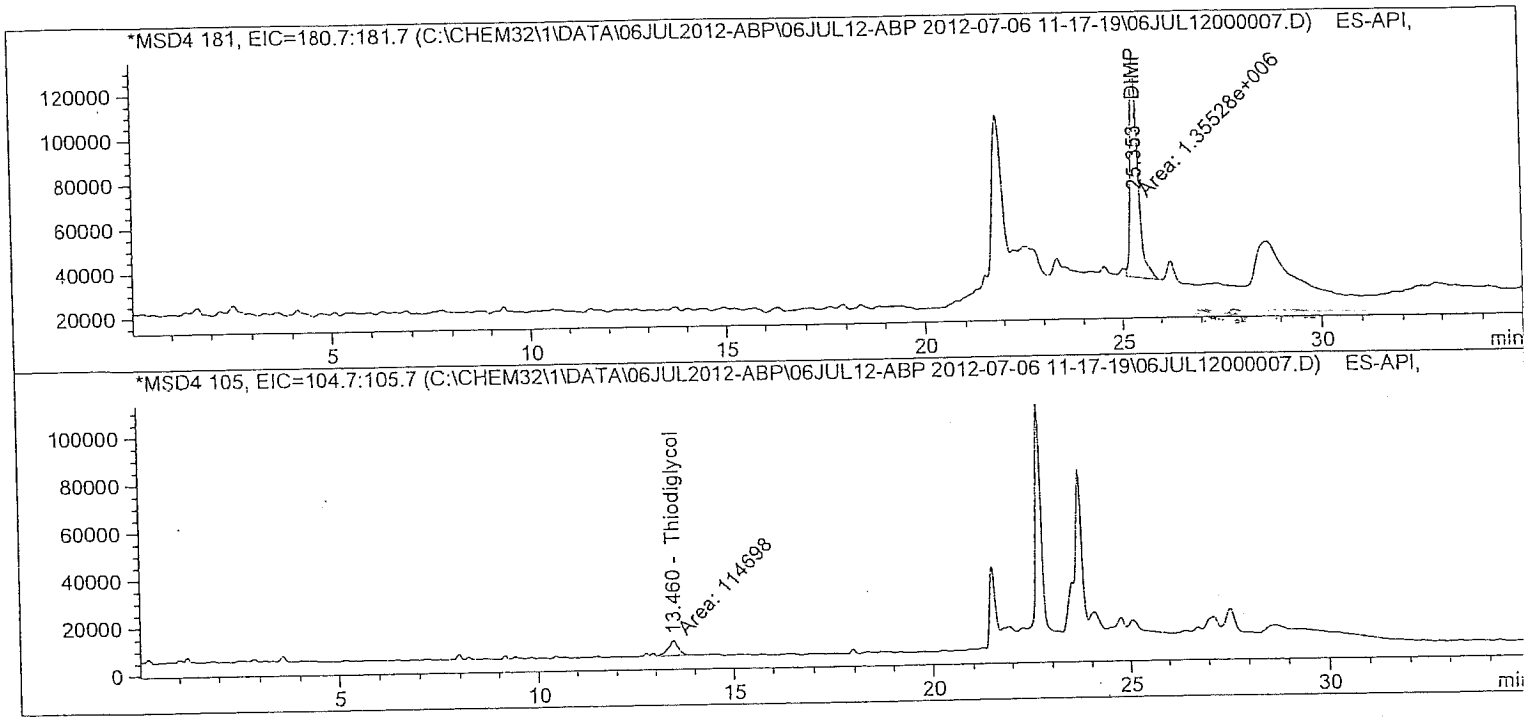
atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



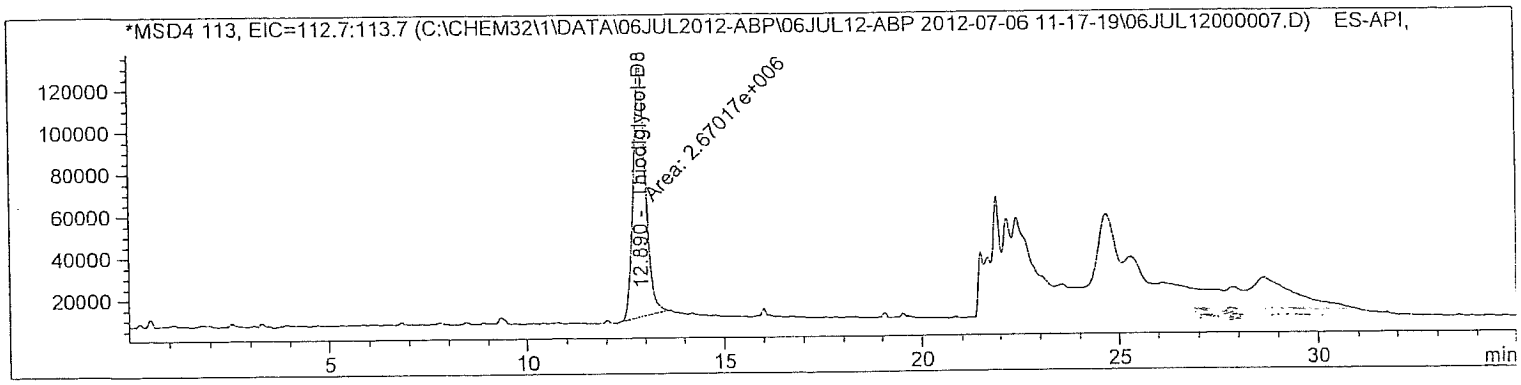
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:55:42 PM
Seq. Line : 7
Location : Vial 6
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000e-2 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.745	FM	1	1.75566e5	7.10322e-2	4.67042e-2		MPA
12.773	MF	1	2.92659e5	4.80467e-2	5.26608e-2		IMPA

Totals without ISTD(s) : 9.93650e-2

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:55:42 PM
Seq. Line : 7
Location : Vial 6
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.658	BB	1	1.91552e5	7.48089e-2	5.36662e-2		EMPA

Totals without ISTD(s) : 5.36662e-2

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.353	FM	1	1.35528e6	1.14558e-2	5.81454e-2		DIMP

Totals without ISTD(s) : 5.81454e-2

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460	MM	1	1.14698e5	1.34158e-1	5.76283e-2		Thiodiglycol

Totals without ISTD(s) : 5.76283e-2

atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:55:42 PM
Seq. Line : 7
Location : Vial 6
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

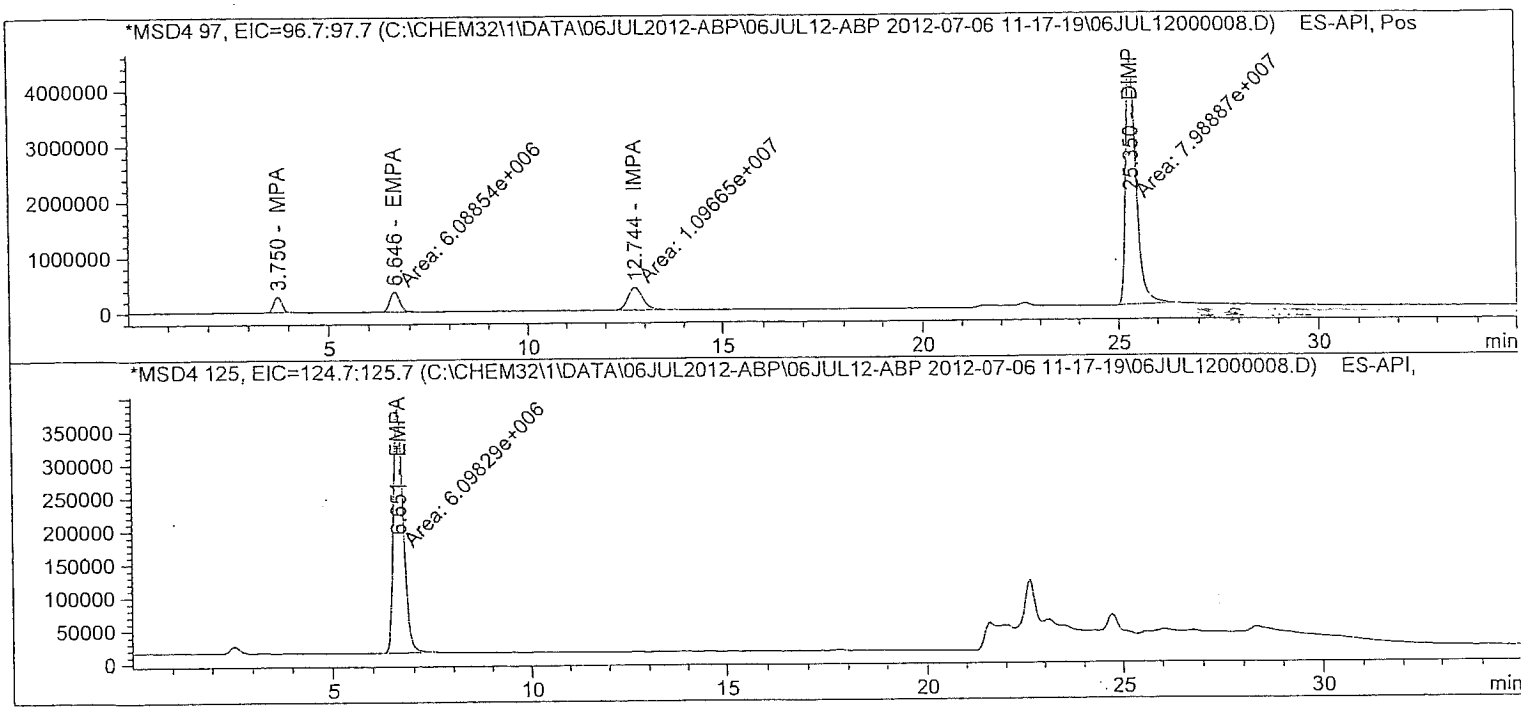
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.890	MM	I	1 2.67017e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

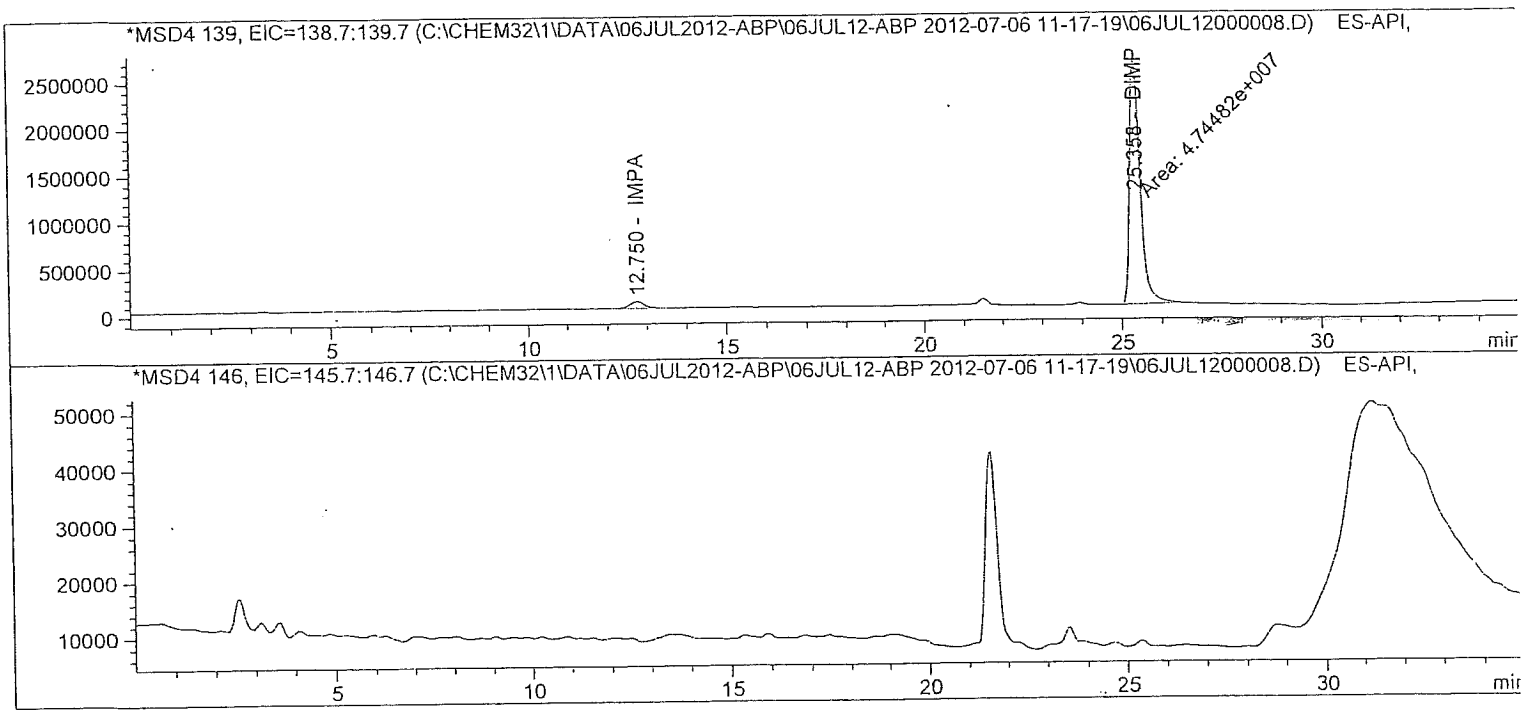
Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 8 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
Sample Name: ICV

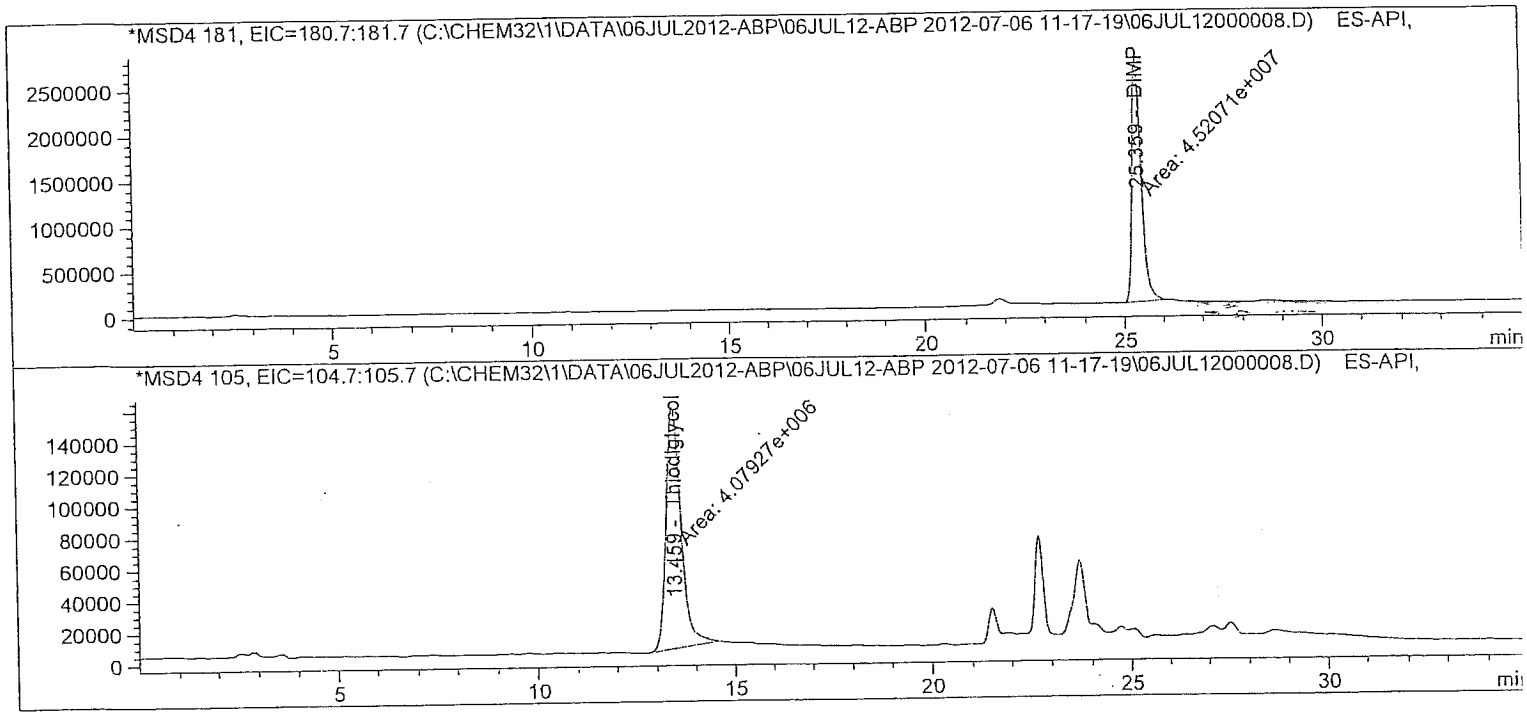
Acq. Operator	: TTM	Seq. Line :	8
Acq. Instrument	: LCMS3	Location :	Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj :	1
		Inj Volume :	10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

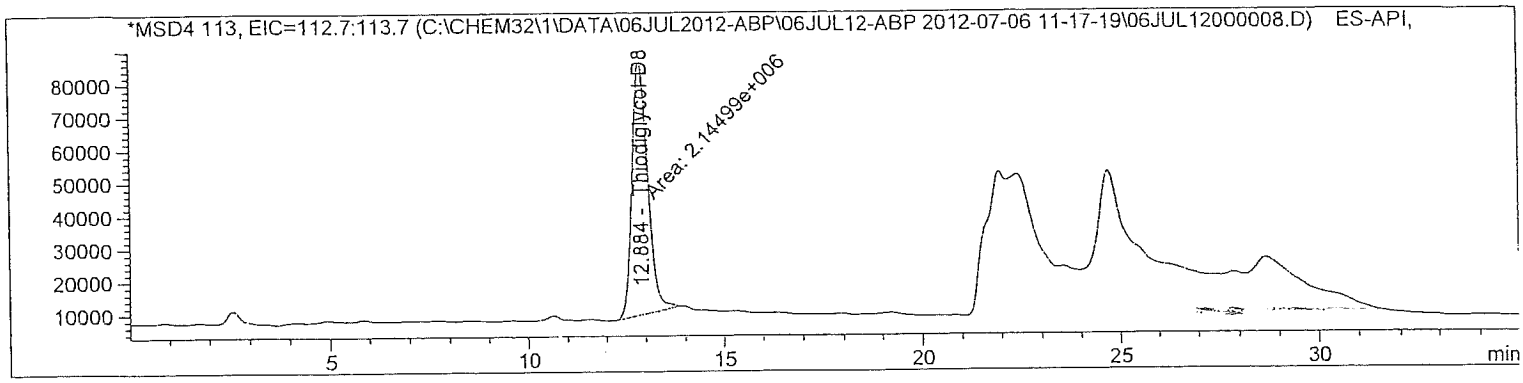
Acq. Operator	: TTM	Seq. Line :	8
Acq. Instrument	: LCMS3	Location :	Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj :	1
		Inj Volume :	10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator : TTM
Seq. Line : 8
Acq. Instrument : LCMS3
Location : Vial 7
Injection Date : 7/6/2012 3:32:02 PM
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 2.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.750	BB	1	4.04355e6	1.04390e-1	1.96787		MPA
12.744	MM	1	1.09665e7	4.26853e-2	2.18233		IMPA

Totals without ISTD(s) : 4.15020

atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 3:32:02 PM
Seq. Line : 8
Location : Vial 7
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.651	MM	1	6.09829e6	7.65569e-2	2.17655		EMPA

Totals without ISTD(s) : 2.17655

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.359	MM	1	4.52071e7	1.00834e-2	2.12514		DIMP

Totals without ISTD(s) : 2.12514

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.459	MM	1	4.07927e6	1.15268e-1	2.19214		Thiodiglycol

Totals without ISTD(s) : 2.19214

Batch Run # 8 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
Sample Name: ICV

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 3:32:02 PM
Seq. Line : 8
Location : Vial 7
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.884	MM	I	1 2.14499e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Chemical Breakdown
Water
Analytical Documentation

ALS WO ID #(S):1221555; 1221656; 1222142
ALS Sample #(S):1221555006; 1221656017; 1222142012
ALS Account #(s): 8001 Method: ALS LC/MS Matrix: Water
Sequence: \\CHEM32\1\SEQUENCE\13AUG12-ABP.S
Prep Date: 08/13/2012 Analysis Date: 08/13/2012
HBN #: 91545 Instrument LOD: 0.050µg/mL
Analyte: **Thiodiglycol (TDG)**
Reported MDL: See Report Reported LOD: 50µg/L

SAMPLE PREPARATION: All ALS sample #'s agreed with field ID #'s. Samples were prepared by TTM. 9.9mL of each sample was transferred into a 15-mL centrifuge tube. 100µL of an internal standard solution was then added to each sample. The samples were capped, vortexed, and filtered with Phenex 0.45µm PES filters prior to analysis.

REAGENTS: Eluent A: 100% ASTM Type II water/0.1% glacial acetic acid.
Eluent B: 95% ACN/ 5% ASTM Type II water/0.1% glacial acetic acid.

HORIZON STANDARD(S): TDG (14169); MPA (14170); IMPA (14172); EMPA (14174); DIMP (14179)
All standards are at 1000µg/mL. Standards used to create calibration standards and those used for CCVs (target = 5.00µg/mL) and RLVS (target = 0.050µg/mL).
Internal Standard Solution: TDG-D8 (14177) at 100ug/mL.

CALIBRATION CURVE: Run 03/05/2012.
Raw data can be found in \\Alsltws013\DataReview\82050

INSTRUMENT CONDITIONS: Samples were analyzed with an Agilent 1200 LC/MSD system, in positive SIM mode, monitoring m/z 97, 125, 139, 146, 181, 105 and 113.
Instrument ID: LCMS03 Run Time: 35.00 min. Flow Rate: 0.8mL/min Temp: 30°C
Output Gain: 3 Injection Volume: 10µL Fragmentor Voltage: 75 & 125
Column: Phenomenex Synergi Hydro-RP 4 micron (4.6 x 250mm) s/n: 245485-24

GRADIENT:

Time(min)	%Eluent A	%Eluent B
0.00	100.0	0.0
15.00	100.0	0.0
17.00	50.0	50.0
25.00	50.0	50.0
25.01	100.0	0.0

QC DATA: 20µl of Horizon QC standard 13383 were used to spike LCS 289538; target = 2000µg/L. ASTM type II water was used for LMB 289537.

MS/MSD: MS/MSD was performed on sample 1221555006. 50µl of Horizon standard 14169 was added to 10.0mL of sample preparation. Spike target = 5000µg/L.

COMMENTS: 1) Quantitation was done using m/z 105 for TDG. No confirmation ions were available for TDG. Results are reported in ug/L.
2) All CCV, Blank, LCS and MS/MSD results were within acceptable limits.

Batch Worklist

Batch: ELMS/ 1288
Rule: Chemical Agent BD, Water

Created: 8/13/2012 10:16
Analyst: T. McKay

Instrument:
Status: WP

HBN: 91545

Workorder: 1221555
Workorder: 1221656
Workorder: 1222142

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	289537	LMB for HBN 91545 [ELMS/1288]			3	LMB		DCAB....3Q	5948	8/27/2012	8/13/2012	
2	289538	LCS for HBN 91545 [ELMS/1288]			3	LCS		DCAB...3Q	5948	8/27/2012	8/13/2012	
3	289539	FTSW-HR-SO-02...(1221555006MS)			3	MS		DCAB....3Q	5948	8/13/2012	8/13/2012	
4	289540	FTSW-HR-SO-0...(1221555006MSD)			3	MSD		DCAB...3Q	5948	8/13/2012	8/13/2012	
5	289541	RLVS for HBN 91545 [ELMS/1288]			3	RLVS		DCAB...C3Q	5948		8/13/2012	
6	1221555006	FTSW-HR-SO-02(01.5)ERB			3	SAMPLE	1221555006-A	DCAB....3	5480	8/13/2012	8/13/2012	
7	1221656017	FTSW-HR-SO-37(09.5)ERB			3	SAMPLE	1221656017-A	DCAB.....3	5480	8/15/2012	8/15/2012	
8	1222142012	FTSW-HR-SO-60 (7.5) ERB			3	SAMPLE	1222142012-A	DCAB....3	5480	8/20/2012	8/20/2012	

STANDARD REPORT

Working Standard - TDG WRK

TDG WRK — Description - Thiodiglycol Working Std.

Standard:	14169	Expires:	01/31/2013	Usable:	Yes
Lab Lot:	TDG WRK	Created By:	T. McKay	Amount:	12.15 mL
Part ID:		Create Date:	01/31/2012	Validated By:	
MFG:		MFG Lot:		Validated Date:	

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume Added	Expires
3824	TDG STOCK		TDG STK	12.15 mg	1/1/2025

Stock Standard - TDG STOCK

TDG STOCK				Description - (Thiodiglycol Stock Std.)	
Standard:	3824	Expires:	1/1/2025	Usable:	Yes
Lab Lot:	TDG STK	Created By:	T. McKay	Amount:	100 grams
Part ID:	166782	Create Date:	4/1/2009	Validated By:	T. Bosch
MFG:	Aldrich	MFG Lot:	11613AR	Validated Date:	4/19/2009

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 mg/g

3824

Certificate of Analysis

SIGMA-ALDRICH

Product Name	2,2'-Thiodiethanol, ≥99%
Product Number	166782
Product Brand	Aldrich
CAS Number	111-48-8
Molecular Formula	$S(CH_2CH_2OH)_2$
Molecular Weight	122.19

TEST	SPECIFICATION	LOT 11613AR RESULTS
APPEARANCE	COLORLESS LIQUID	COLORLESS LIQUID
INFRARED SPECTRUM	CONFORMS TO STRUCTURE.	CONFORMS TO STRUCTURE AND STANDARD AS ILLUSTRATED ON PAGE 276B OF EDITION I, VOLUME 1 OF "THE ALDRICH LIBRARY OF FT-IR SPECTRA".
GAS LIQUID CHROMATOGRAPHY	99.0% (MINIMUM)	99.6 %
QUALITY CONTROL ACCEPTANCE DATE		JANUARY 1997

Barbara Rajzer

Barbara Rajzer, Supervisor
Quality Control
Milwaukee, Wisconsin USA

STANDARD REPORT

Working Standard - TDG QC WRK

TDG QC WRK					Description - Thiodiglycol QC Wrk
Standard:	13383	Expires:	11/21/2012	Usable:	Yes
Lab Lot:	TDG QC WRK	Created By:	T. McKay	Amount:	8.44 mL
Part ID:		Create Date:	11/21/2011	Validated By:	
MFG:		MFG Lot:		Validated Date:	

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume Added	Expires
5844	TDG QC STK	Thiodiglycol QC Stock	TDG QC STK	8.44 mg	1/1/2025

STANDARD REPORT

Constituent

Stock Standard - TDG QC STK

TDG QC STK					Description - Thiodiglycol QC Stock
Standard:	5944	Expires:	1/1/2025	Usable:	Yes
Lab Lot:	TDG QC STK	Created By:	T. McKay	Amount:	50 grams
Part ID:	88559	Create Date:	10/7/2009	Validated By:	T. Bosch
MFG:	Fluka	MFG Lot:	1410377	Validated Date:	10/7/2009

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 mg/g

5844

SIGMA-ALDRICH

Fluka

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CH-9471 Buchs/Schweiz
www.sigma-aldrich.com

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Telefax +41 81 755 2272
Email fluka@sial.com

Certificate of Analysis

Product Brand	Fluka
PRODUCT-NO	88559
PRODUCT	2,2'-THIODIETHANOL *BioChemika*
FORMULA	$C_4H_{10}O_2S$
MOLECULAR MASS	122.19
CAS NUMBER	111-48-8
LOT	1410377

Test	Specification	Result
APPEARANCE (COLOR)	COLORLESS	COLORLESS
APPEARANCE (FORM)	CLEAR TO CLEAR VISCOUS LIQUID	CLEAR VISCOUS LIQUID
PURITY (GC AREA %)	≥ 99.0 % REL	99.9 % REL
GC (METHOD)	--	100% POLYETHYLENEGLYCOL (30 M X 0.32 MM X 0.25 UM), IN DICHLORMETHANE
REFRACTIVE INDEX N20/D	1.520 - 1.522	1.522
RESIDUE ON IGNITION	≤ 0.1 %	< 0.05 %
CARBON CONTENT	39.32 % (THEORY)	38.90 %
HYDROGEN CONTENT	8.25 % (THEORY)	8.49 %
INFRARED SPECTRUM	CONFORMS TO STRUCTURE	CONFORMS
QC RELEASE DATE	28/OCT/08	

Edeltraud Schwärzler, Manager
Quality Control
Buchs, Switzerland

Sigma-Aldrich guarantees the 'Sales-Specification' values only, additional lot specific tests may be included for further information. The current 'Sales-Specifications' sheet is available on request. For further inquiries, please contact our Technical Service.Sigma-Aldrich warrants, that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice for additional terms and conditions of sale. The values given on the 'Certificate of Analysis' are the results determined at the time of analysis.



ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

Batch Report: C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG12-ABP.B

Batch Review Method: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M

['#' ==> Run has not been reprocessed with Batch Review Method
'*' ==> Run has been saved with batch file]

	Sample	Location	Inj	Dilution	Thiodiglycol-D8 RT	Thiodiglycol-D8 Area	Thiodiglycol-D8 Amount
#*	CCV1	Vial 51	1	1	12.443	2.66277e6	10.00000
#*	289537 LMB	Vial 52	1	1	12.469	2.27023e6	10.00000
#*	289538 LCS	Vial 53	1	1	12.548	2.32108e6	10.00000
#*	289541 RLVS	Vial 54	1	1	12.594	2.31433e6	10.00000
#*	1221555006	Vial 55	1	1	12.666	2.59930e6	10.00000
#*	289539 MS	Vial 56	1	1	12.719	2.27916e6	10.00000
#*	289540 MSD	Vial 57	1	1	12.773	2.12715e6	10.00000
#*	1221656017	Vial 58	1	1	12.827	2.49470e6	10.00000
#*	1222142012	Vial 59	1	1	12.866	3.07357e6	10.00000
#*	CCV2	Vial 51	1	1	12.939	2.85012e6	10.00000

	Sample	Location	Inj	Dilution	Thiodiglycol RT	Thiodiglycol Area	Thiodiglycol Amount (mg/mL)
#*	CCV1	Vial 51	1	1	12.990	1.14519e7	5.10747
#*	289537 LMB	Vial 52	1	1	0.000	0.00000	0.00000
#*	289538 LCS	Vial 53	1	1	13.102	4.56238e6	2.26727
#*	289541 RLVS	Vial 54	1	1	13.189	1.10307e5	6.29108e-2
#*	1221555006	Vial 55	1	1	0.000	0.00000	0.00000
#*	289539 MS	Vial 56	1	1	13.286	1.00825e7	5.26247
#*	289540 MSD	Vial 57	1	1	13.343	1.03868e7	5.84614
#*	1221656017	Vial 58	1	1	0.000	0.00000	0.00000
#*	1222142012	Vial 59	1	1	0.000	0.00000	0.00000
#*	CCV2	Vial 51	1	1	13.524	1.29505e7	5.41429

*** End of Report ***

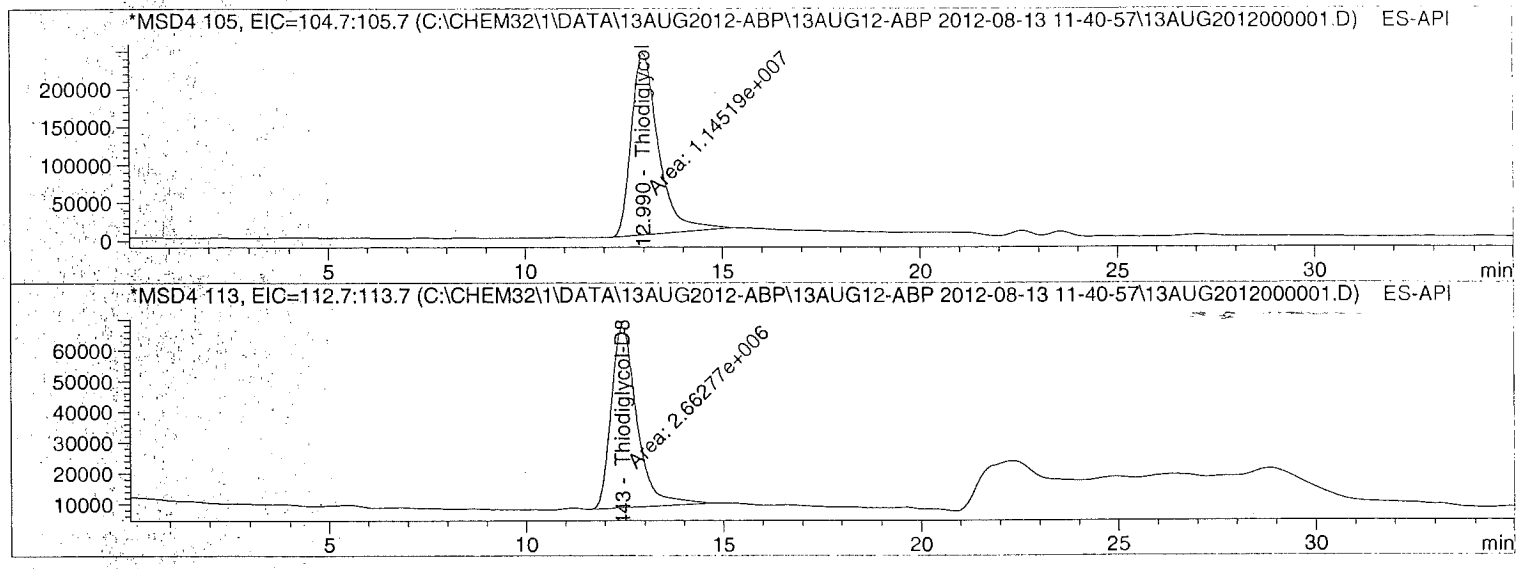
Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 51	CCV1	ABP-ON	1	Ctrl Samp	
2	Vial 52	289537 LMB	ABP-ON	1	Ctrl Samp	
3	Vial 53	289538 LCS	ABP-ON	1	Ctrl Samp	
4	Vial 54	289541 RLVS	ABP-ON	1	Ctrl Samp	
5	Vial 55	1221555006	ABP-ON	1	Sample	
6	Vial 56	289539 MS	ABP-ON	1	Ctrl Samp	
7	Vial 57	289540 MSD	ABP-ON	1	Ctrl Samp	
8	Vial 58	1221656017	ABP-ON	1	Sample	
9	Vial 59	1222142012	ABP-ON	1	Sample	
10	Vial 51	CCV2	ABP-ON	1	Ctrl Samp	

Batch Run # 1 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000001.D
Sample Name: CCV1

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/13/2012 11:41:25 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M		
Last changed	: 8/13/2012 11:42:34 AM by TTM (modified after loading)		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/15/2012 1:40:59 PM by TTM (modified after loading) (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 5.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs

Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

Batch Run # 1 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000001.D
Sample Name: CCV1

Acq. Operator : TTM Seq. Line : 1
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/13/2012 11:41:25 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 11:42:34 AM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.990	MM	1	1.14519e7	1.18758e-1	5.10747		Thiodiglycol

Totals without ISTD(s) : 5.10747

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

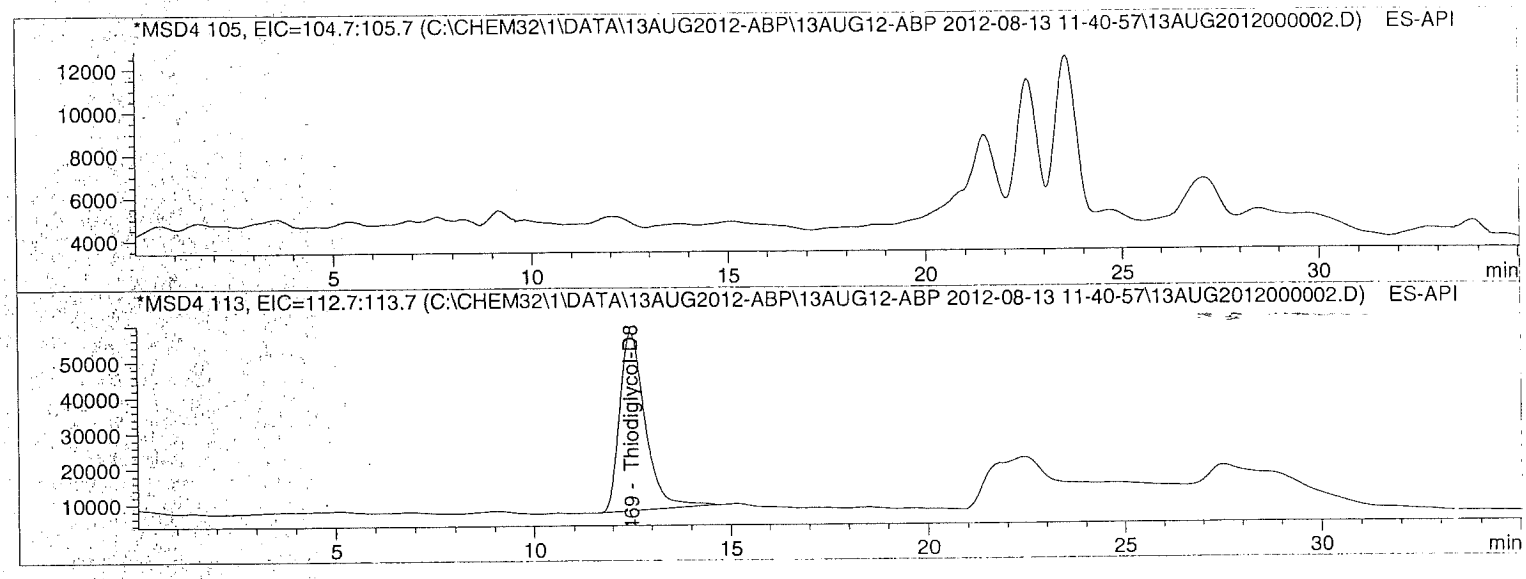
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.443	MM I	1	2.66277e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 2 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000002.D
Sample Name: 289537 LMB

Acq. Operator : TTM
Seq. Line : 2
Acq. Instrument : LCMS3
Location : Vial 52
Injection Date : 8/13/2012 12:17:54 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 12:17:34 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Batch Run # 2 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000002.D
Sample Name: 289537 LMB

Acq. Operator : TTM Seq. Line : 2
Acq. Instrument : LCMS3 Location : Vial 52
Injection Date : 8/13/2012 12:17:54 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 12:17:34 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 0.00000

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.469	BB	I	1 2.27023e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

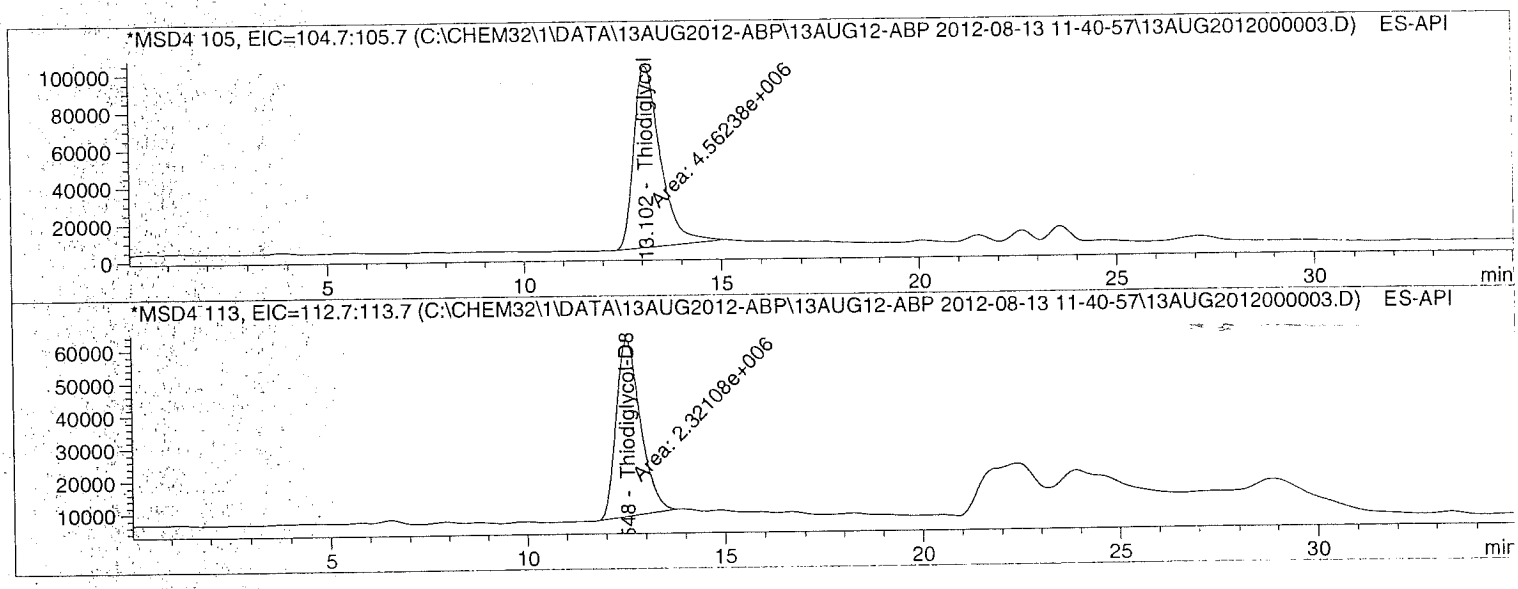
*** End of Report ***

Batch Run: # 3 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000003.D
Sample Name: 289538 LCS

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 8/13/2012 12:54:19 PM

Seq. Line : 3
Location : Vial 53
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 12:54:07 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 2.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

Batch Run # 3 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\12AUG2012000003.D
Sample Name: 289538 LCS

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 8/13/2012 12:54:19 PM

Seq. Line : 3
Location : Vial 53
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 12:54:07 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.102	MM	1	4.56238e6	1.15346e-1	2.26727		Thiodiglycol

Totals without ISTD(s) : 2.26727

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.548	MM I	1	2.32108e6	1.00000	10.00000		Thiodiglycol-D8

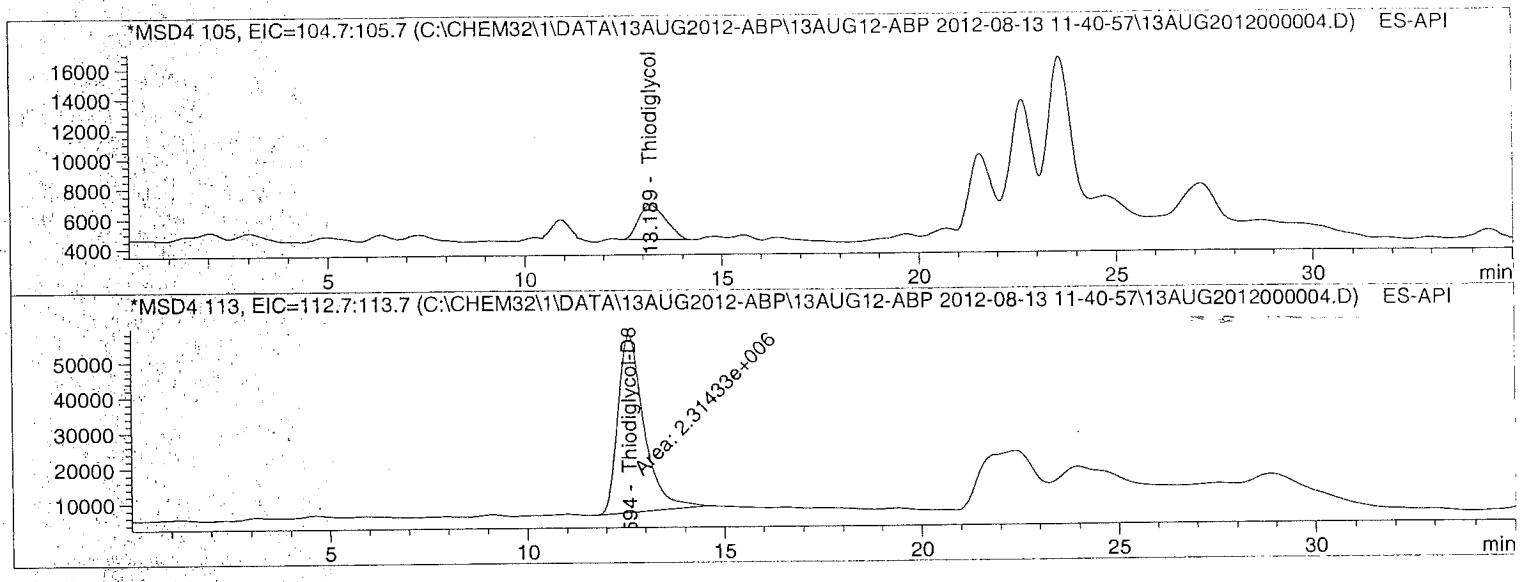
Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 4 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000004.D
Sample Name: 289541 RLVS

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 54
Injection Date	: 8/13/2012 1:30:40 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 1:30:28 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000e-2 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

Batch Run # 4 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000004.D
Sample Name: 289541 RLVS

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 8/13/2012 1:30:40 PM
Seq. Line : 4
Location : Vial 54
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 1:30:28 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.189	BB	1	1.10307e5	1.31992e-1	6.29108e-2		Thiodiglycol

Totals without ISTD(s) : 6.29108e-2

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

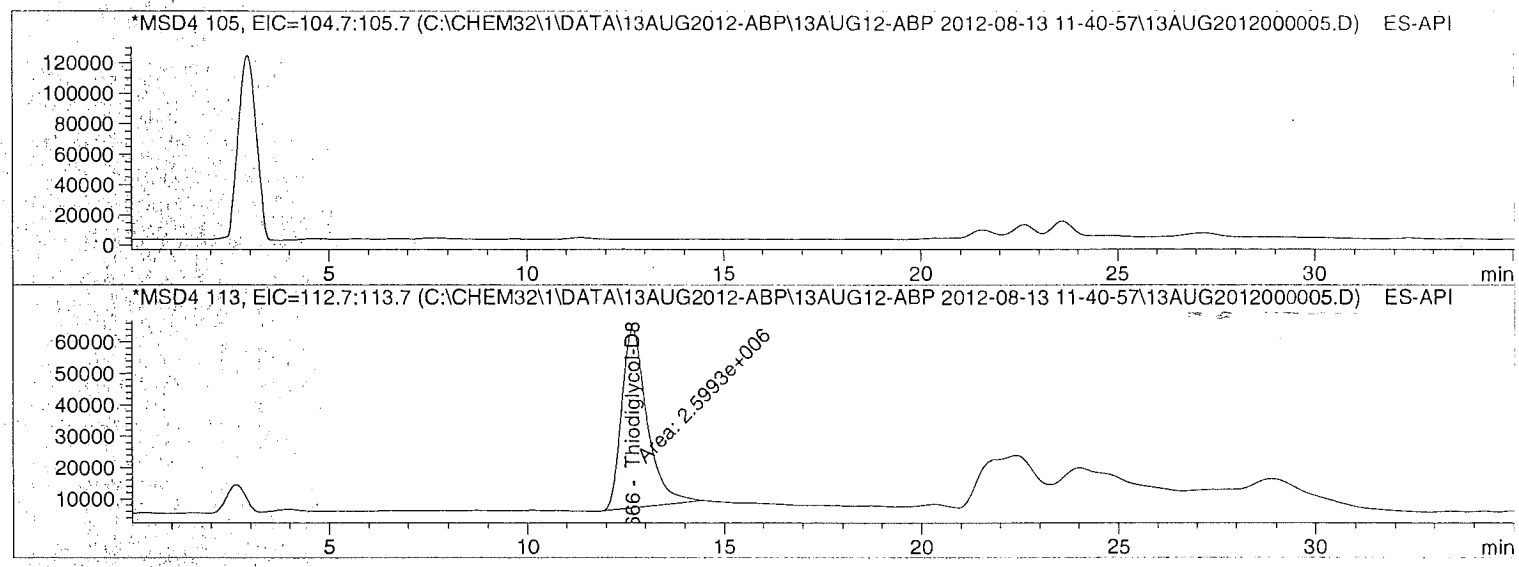
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.594	MM I	1	2.31433e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 5 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000005.D
Sample Name: 1221555006

Acq. Operator : TTM Seq. Line : 5
Acq. Instrument : LCMS3 Location : Vial 55
Injection Date : 8/13/2012 2:07:02 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 2:06:49 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Batch Run # 5 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000005.D
Sample Name: 1431555006

Acq. Operator : TTM Seq. Line : 5
Acq. Instrument : LCMS3 Location : Vial 55
Injection Date : 8/13/2012 2:07:02 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 2:06:49 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 0.00000

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.666	MM	I	1 2.59930e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

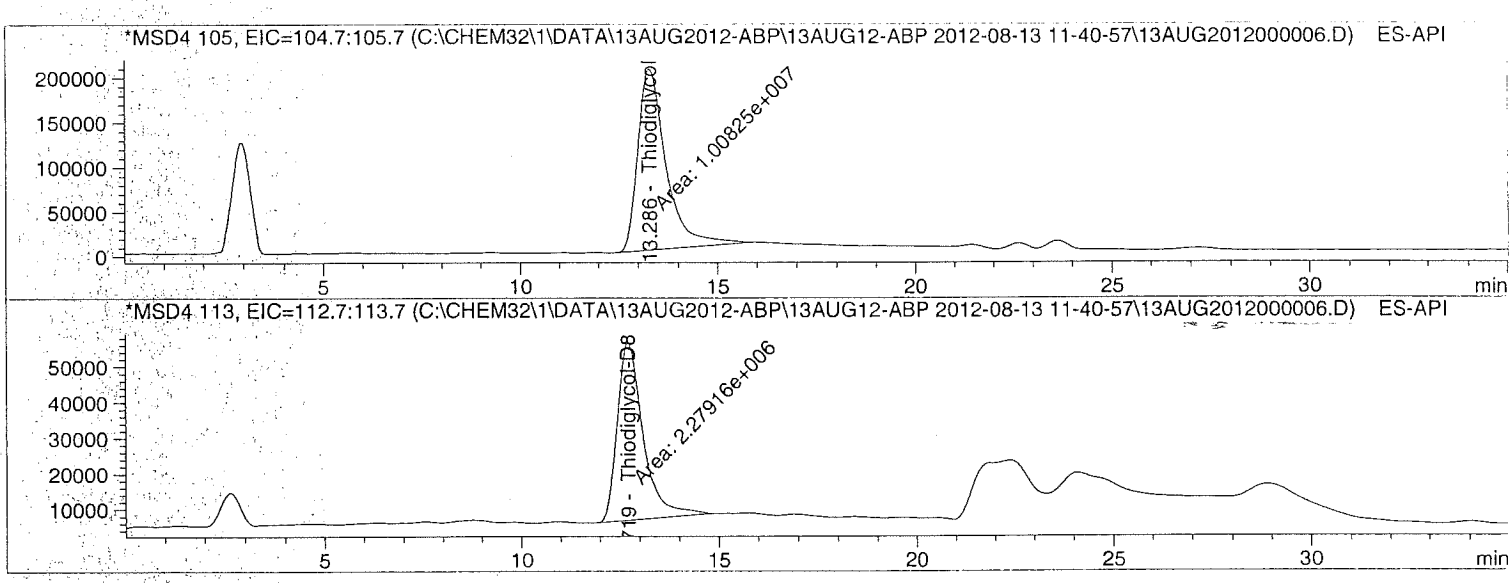
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 6 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000006.D
Sample Name: 289539 MS

Acq. Operator : TTM Seq. Line : 6
Acq. Instrument : LCMS3 Location : Vial 56
Injection Date : 8/13/2012 2:43:24 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 2:43:11 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.286	MM	1	1.00825e7	1.18959e-1	5.26247		Thiodiglycol

Batch Run # 6 of 10.
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000006.D
Sample Name: 289539 MS

Acq. Operator : TTM Seq. Line : 6
Acq. Instrument : LCMS3 Location : Vial 56
Injection Date : 8/13/2012 2:43:24 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 2:43:11 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 5.26247

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.719	MM	I	1 2.27916e6	1.00000	10.00000		Thiodiglycol-D8

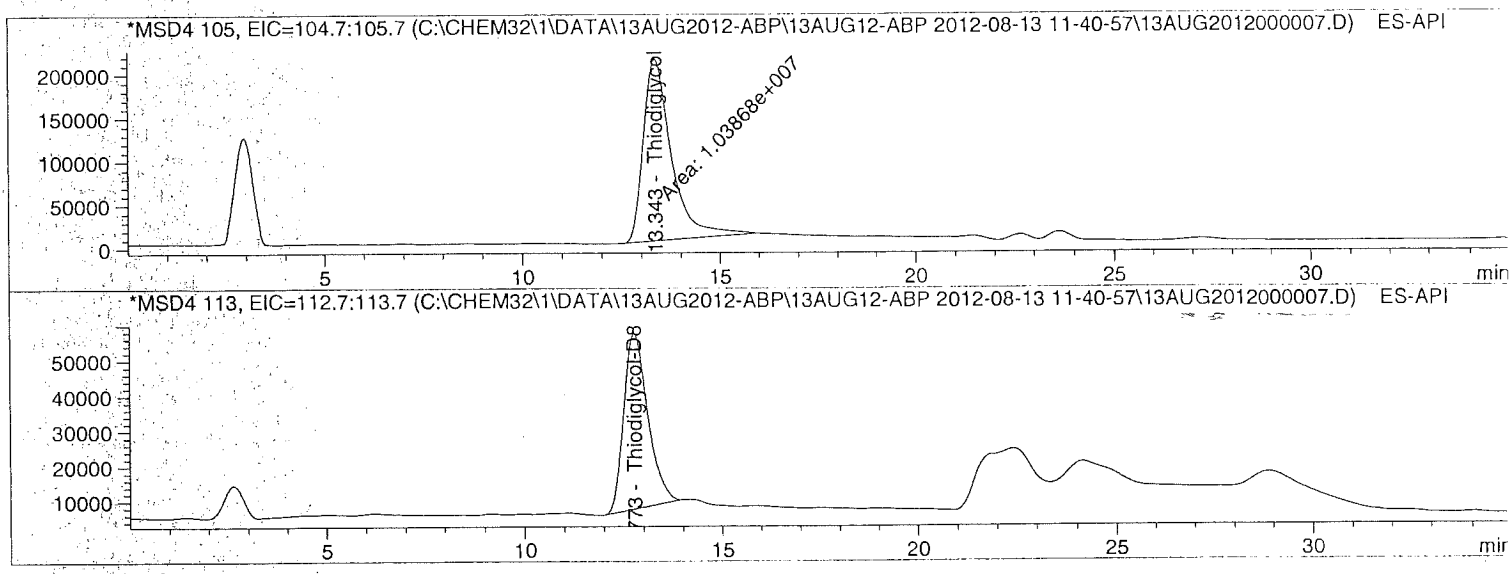
Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 7 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000007.D
Sample Name: 289540 MSD

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 57
Injection Date	: 8/13/2012 3:19:49 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 3:19:36 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.343	MM	1	1.03868e7	1.19725e-1	5.84614		Thiodiglycol

Batch Run # 7 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000007.D
Sample Name: 289540.MSD

Acq. Operator : TTM Seq. Line : 7
Acq. Instrument : LCMS3 Location : Vial 57
Injection Date : 8/13/2012 3:19:49 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 3:19:36 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 5.84614

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

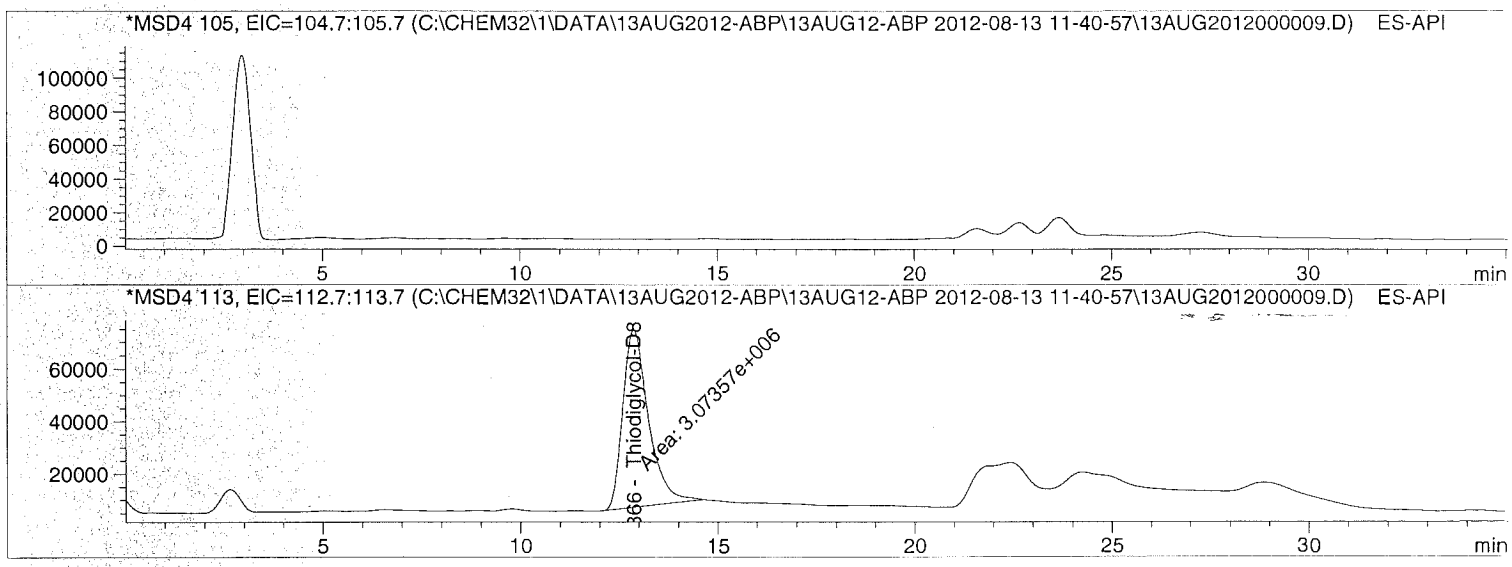
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.773	BB	I	1 2.12715e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 9 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000009.D
Sample Name: 1222142012

Acq. Operator : TTM Seq. Line : 9
Acq. Instrument : LCMS3 Location : Vial 59
Injection Date : 8/13/2012 4:32:32 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 4:32:18 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Batch Run # 9 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000009.D
Sample Name: 1222142012

==========

Acq. Operator : TTM Seq. Line : 9
Acq. Instrument : LCMS3 Location : Vial 59
Injection Date : 8/13/2012 4:32:32 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 4:32:18 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

==========

Totals without ISTD(s) : 0.00000

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.866	MM	I	1 3.07357e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

1 Warnings or Errors :

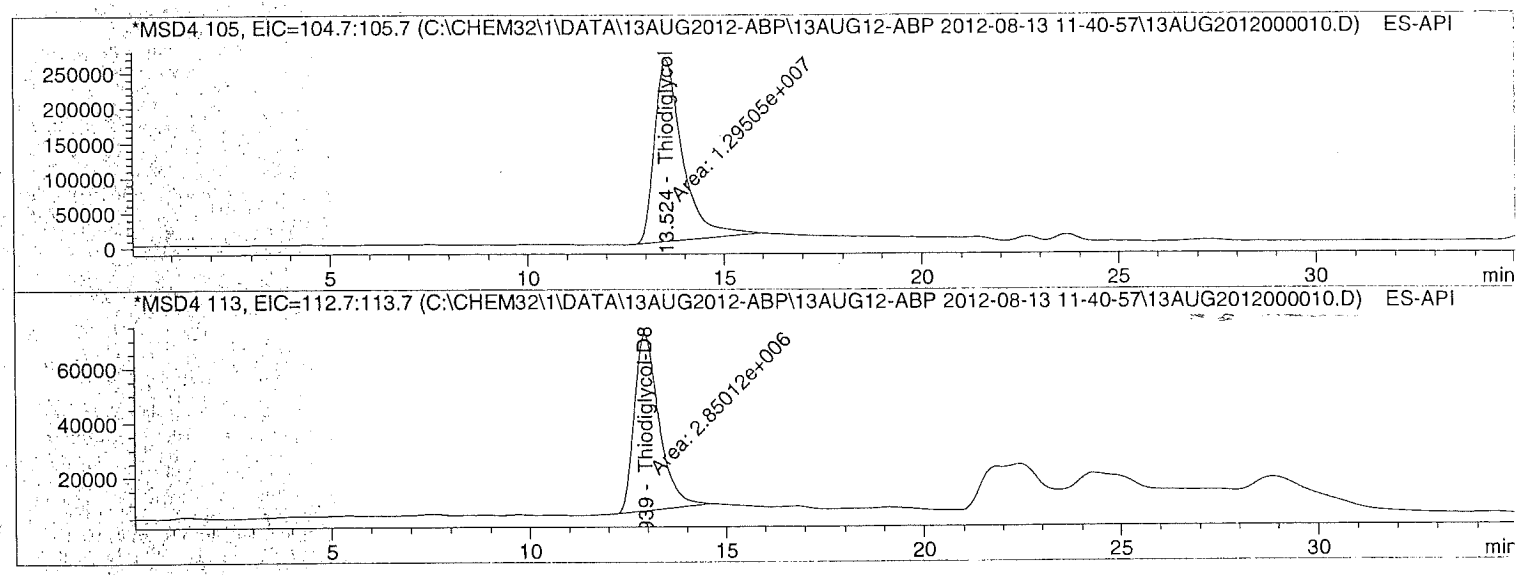
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Batch Run # 10 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000010.D
Sample Name: CCV2

Acq. Operator : TTM Seq. Line : 10
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/13/2012 5:08:54 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 5:08:41 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

Sequence Run # 10 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000010.D
Sample Name: CCV2

Acq. Operator : TTM Seq. Line : 10
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/13/2012 5:08:54 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 5:08:41 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.524	MM	1	1.29505e7	1.19157e-1	5.41429		Thiodiglycol

Totals without ISTD(s) : 5.41429

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.939	MM I	1	2.85012e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Calibration

Raw Data

Calibration Table

Agent Breakdown Products

Calib. Data Modified : 7/9/2012 11:13:05 AM

Calculate : Internal Standard
Based on : Peak Area

Rel. Reference Window : 10.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 10.000 %
Abs. Non-ref. Window : 0.000 min
Use Multiplier & Dilution Factor with ISTDs
Uncalibrated Peaks : not reported
Partial Calibration : No recalibration if peaks missing

Curve Type : Quadratic (some peaks differ, see below)
Origin : Ignored (some peaks differ, see below)
Weight : Linear (Amnt) (some peaks differ, see below)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Default Sample ISTD Information (if not set in sample table):

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal 2: MSD4 113, EIC=112.7:113.7

RetTime [min]	Sig	Lvl	Amount	Area	Amt/Area	Ref	Grp	Name
12.890	2	1	10.00000	2.44245e6	4.09425e-6	I2		Thiodiglycol-D8
		2	10.00000	2.37259e6	4.21481e-6			
		3	10.00000	2.75981e6	3.62344e-6			
		4	10.00000	2.61922e6	3.81792e-6			
		5	10.00000	2.65549e6	3.76579e-6			
		6	10.00000	2.67017e6	3.74508e-6			
13.460	1	6	5.00000e-2	1.14698e5	4.35926e-7	2		Thiodiglycol
		5	1.00000e-1	2.17683e5	4.59383e-7			
		4	5.00000e-1	1.04468e6	4.78617e-7			
		3	1.00000	2.09084e6	4.78276e-7			
		2	5.00000	1.06254e7	4.70571e-7			
		1	10.00000	1.91630e7	5.21840e-7			

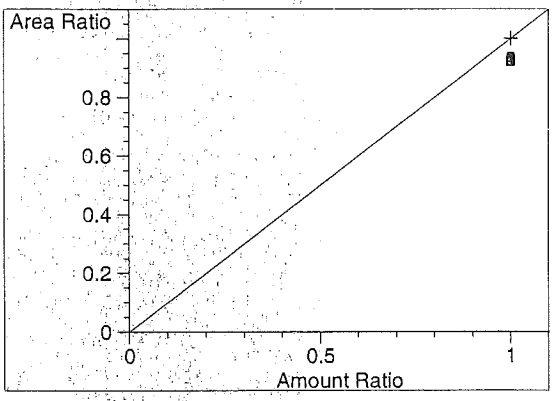
More compound-specific settings:

Compound: Thiodiglycol-D8
  Curve Type : Linear
  Origin : Included
  Calibration Level Weights:/
    Level 1 : 1
    Level 2 : 1
    Level 3 : 1
    Level 4 : 1
    Level 5 : 1
    Level 6 : 1

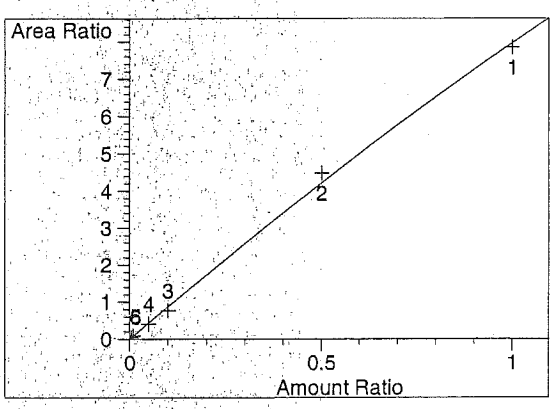
Peak Sum Table

No Entries in table

Calibration Curves



Thiodiglycol-D8 at exp. RT: 12.890
MSD4 113, EIC=112.7:113.7
Correlation: 1.00000
Residual Std. Dev.: 0.00000
Formula: y = mx + b
  m: 1.00000
  b: 0.00000
  x: Amount
  y: Area
Calibration Level Weights:
  Level 1 : 1
  Level 2 : 1
  Level 3 : 1
  Level 4 : 1
  Level 5 : 1
  Level 6 : 1



Thiodiglycol at exp. RT: 13.460
MSD4 105, EIC=104.7:105.7
Correlation: 0.99844
Residual Std. Dev.: 0.15671
Formula: y = ax² + bx + c
  a: -9.49682e-1
  b: 8.92207
  c: -8.42930e-3
  x: Amount
  y: Area
Calibration Level Weights:
  Level 6 : 1
  Level 5 : 0.5
  Level 4 : 0.1
  Level 3 : 0.05
  Level 2 : 0.01
  Level 1 : 0.005

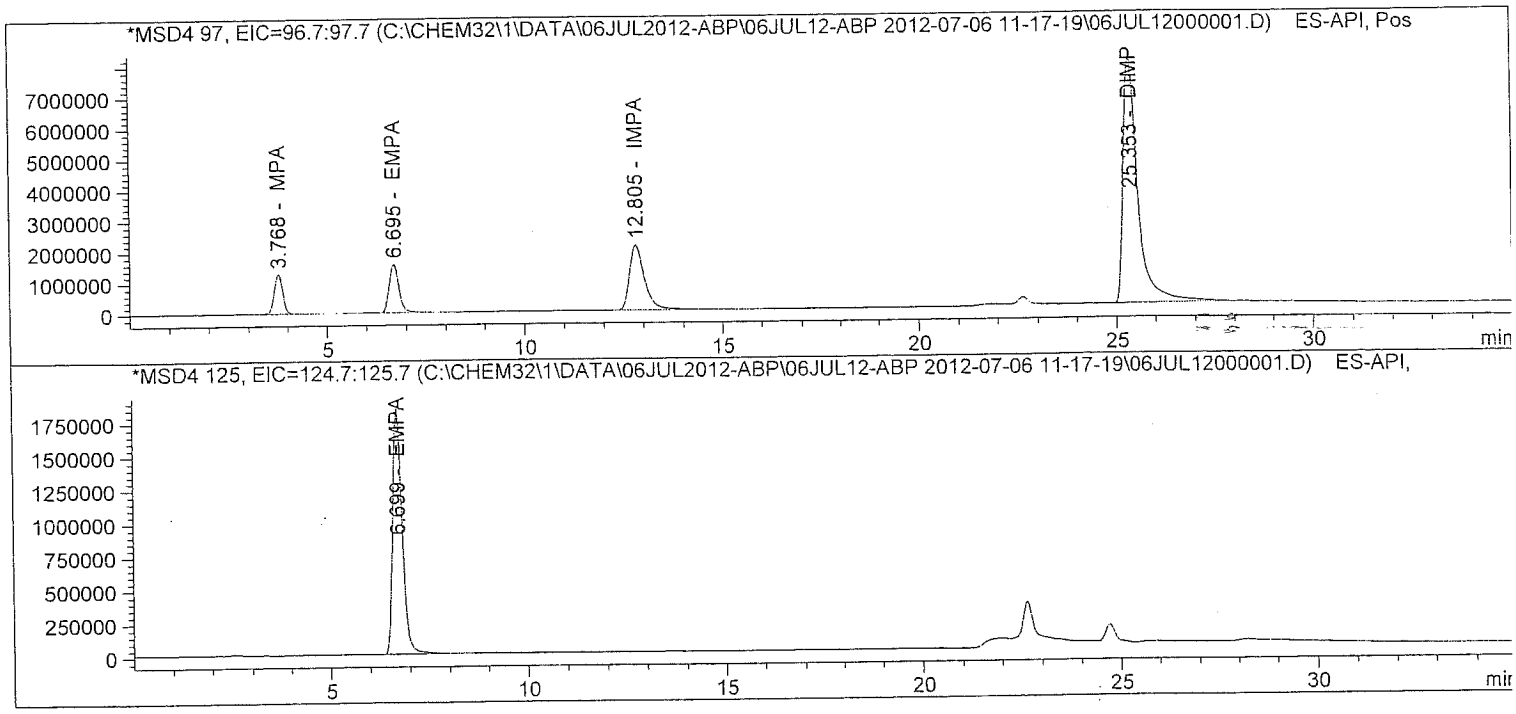
Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 1	PRIME	ABP-ON	1	Ctrl Samp	
2	Vial 1	$10	ABP-ON	1	Ctrl Samp	
3	Vial 2	$5	ABP-ON	1	Ctrl Samp	
4	Vial 3	$1	ABP-ON	1	Ctrl Samp	
5	Vial 4	$05	ABP-ON	1	Ctrl Samp	
6	Vial 5	$0.1	ABP-ON	1	Ctrl Samp	
7	Vial 6	$0.05	ABP-ON	1	Ctrl Samp	
8	Vial 7	ICV	ABP-ON	1	Ctrl Samp	
9	Vial 8	283055 LMB	ABP-ON	1	Ctrl Samp	
10	Vial 9	283056 LCS	ABP-ON	1	Ctrl Samp	
11	Vial 10	283057 RLVS	ABP-ON	1	Ctrl Samp	
12	Vial 11	1217861001	ABP-ON	1	Sample	
13	Vial 12	1217861002 MS	ABP-ON	1	Ctrl Samp	
14	Vial 13	1217861003 MSD	ABP-ON	1	Ctrl Samp	
15	Vial 2	CCV	ABP-ON	1	Ctrl Samp	

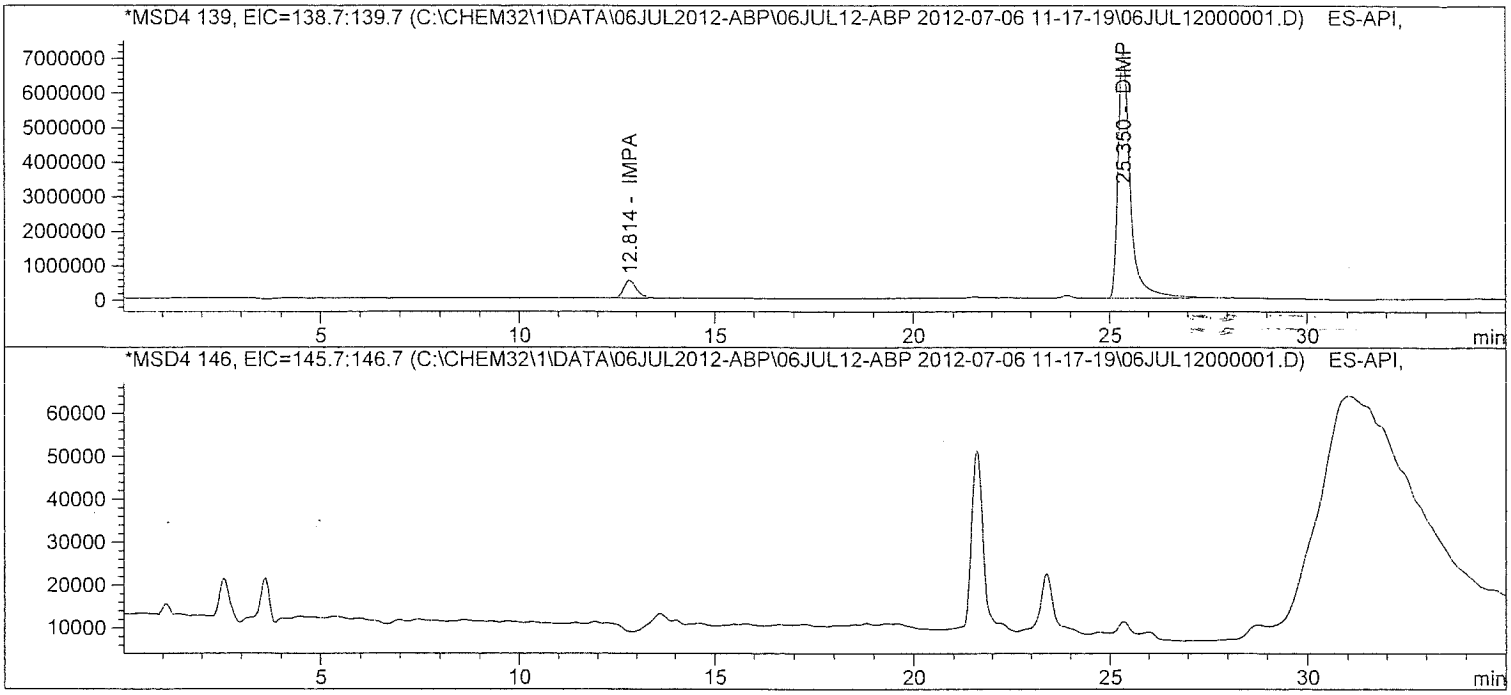
atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator	: TTM	Seq. Line :	1
Acq. Instrument	: LCMS3	Location :	Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj :	1
		Inj Volume :	10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

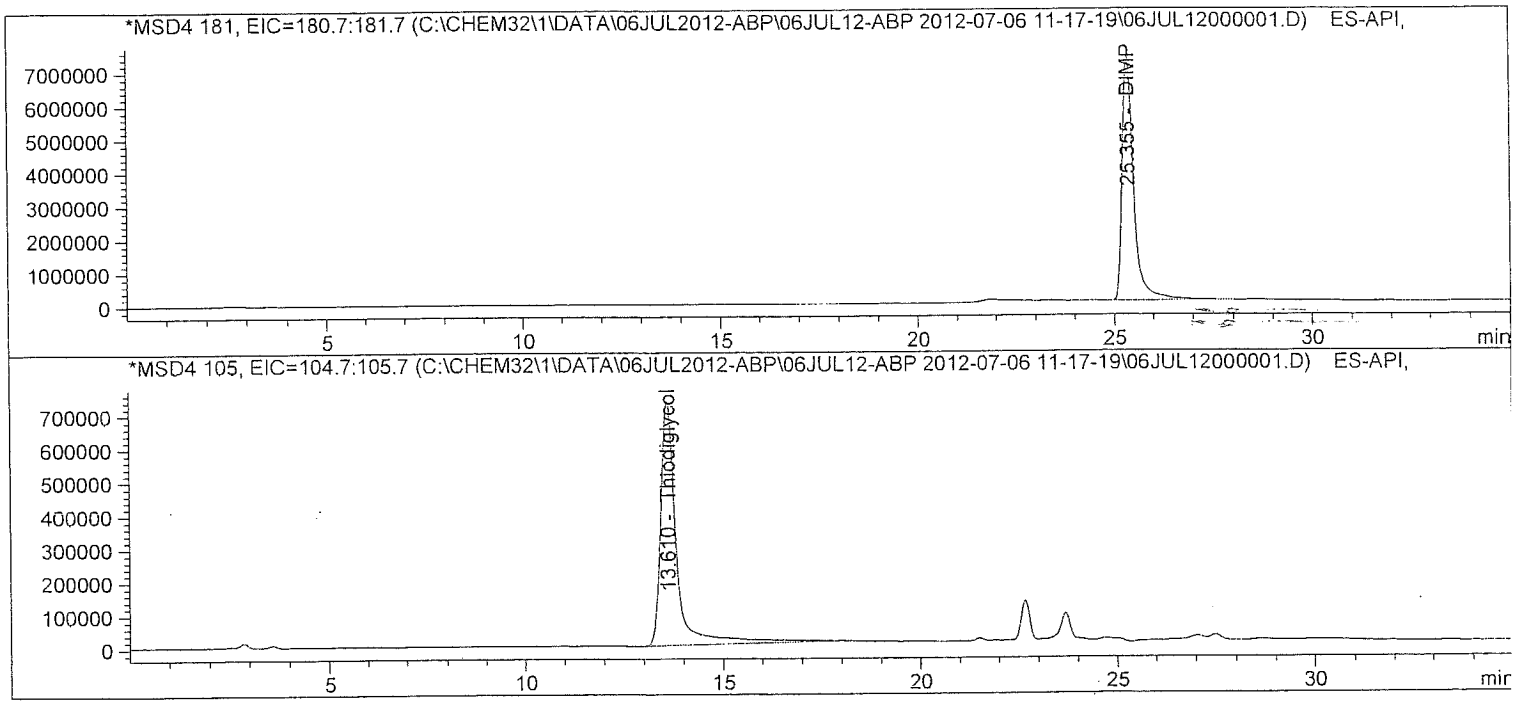
Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

==========

Acq. Operator : TTM Seq. Line : 1
Acq. Instrument : LCMS3 Location : Vial 1
Injection Date : 7/6/2012 11:17:43 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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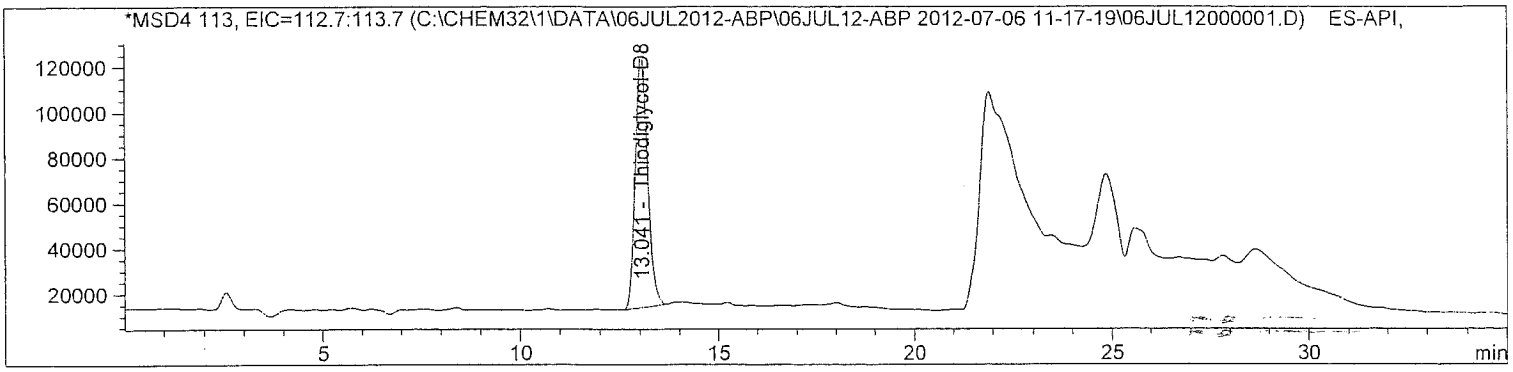

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Internal Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 10.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.768	BB	1	1.91978e7	1.32528e-1	10.64848		MPA
12.805	BBA	1	5.64639e7	4.37087e-2	10.32924		IMPA

Totals without ISTD(s) : 20.97773

atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 11:17:43 AM
Seq. Line : 1
Location : Vial 1
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.699	BB	1	3.05963e7	7.98724e-2	10.22810		EMPA

Totals without ISTD(s) : 10.22810

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.355	BBA	1	1.54432e8	1.54383e-2	9.97853		DIMP

Totals without ISTD(s) : 9.97853

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.610	BBA	1	2.03461e7	1.26756e-1	10.79391		Thiodiglycol

Totals without ISTD(s) : 10.79391

Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

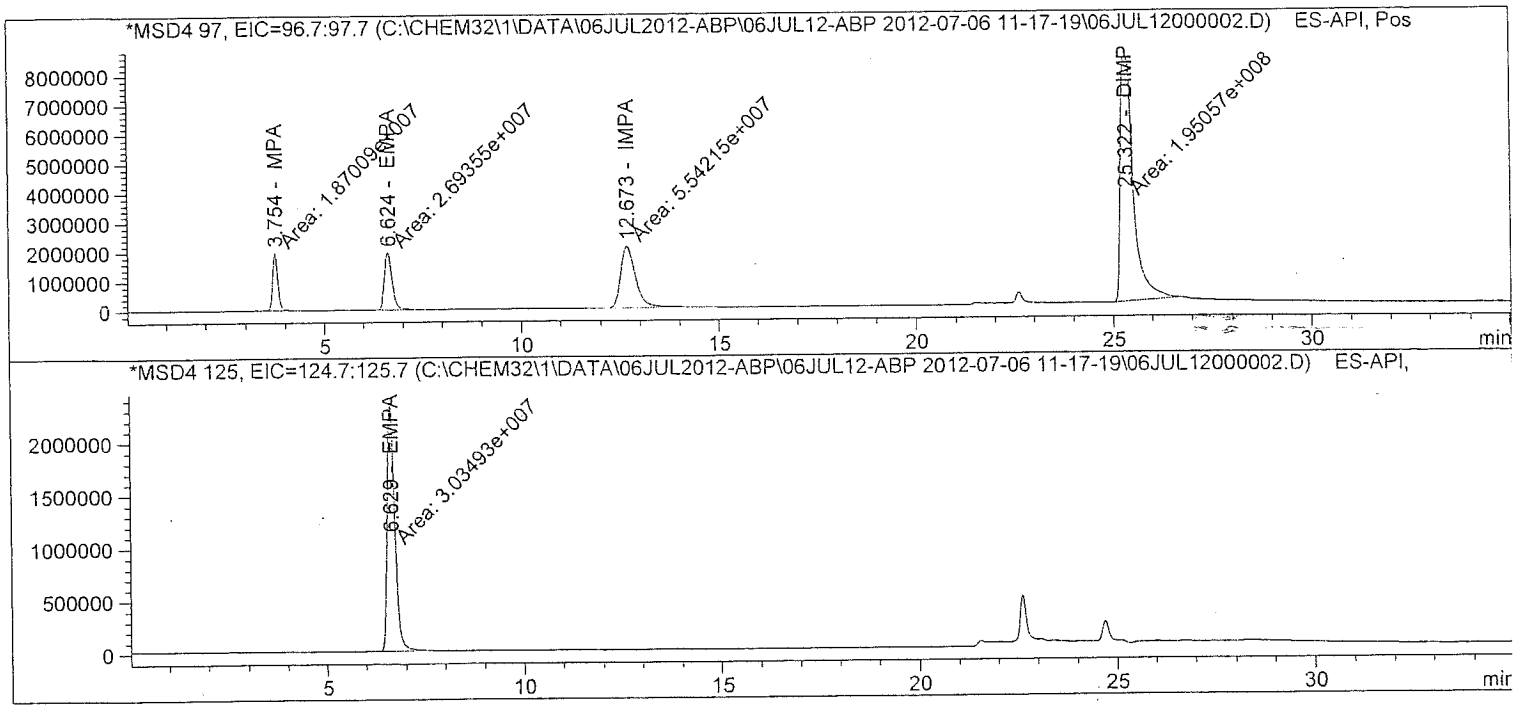
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.041	BB	I	1 2.38930e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

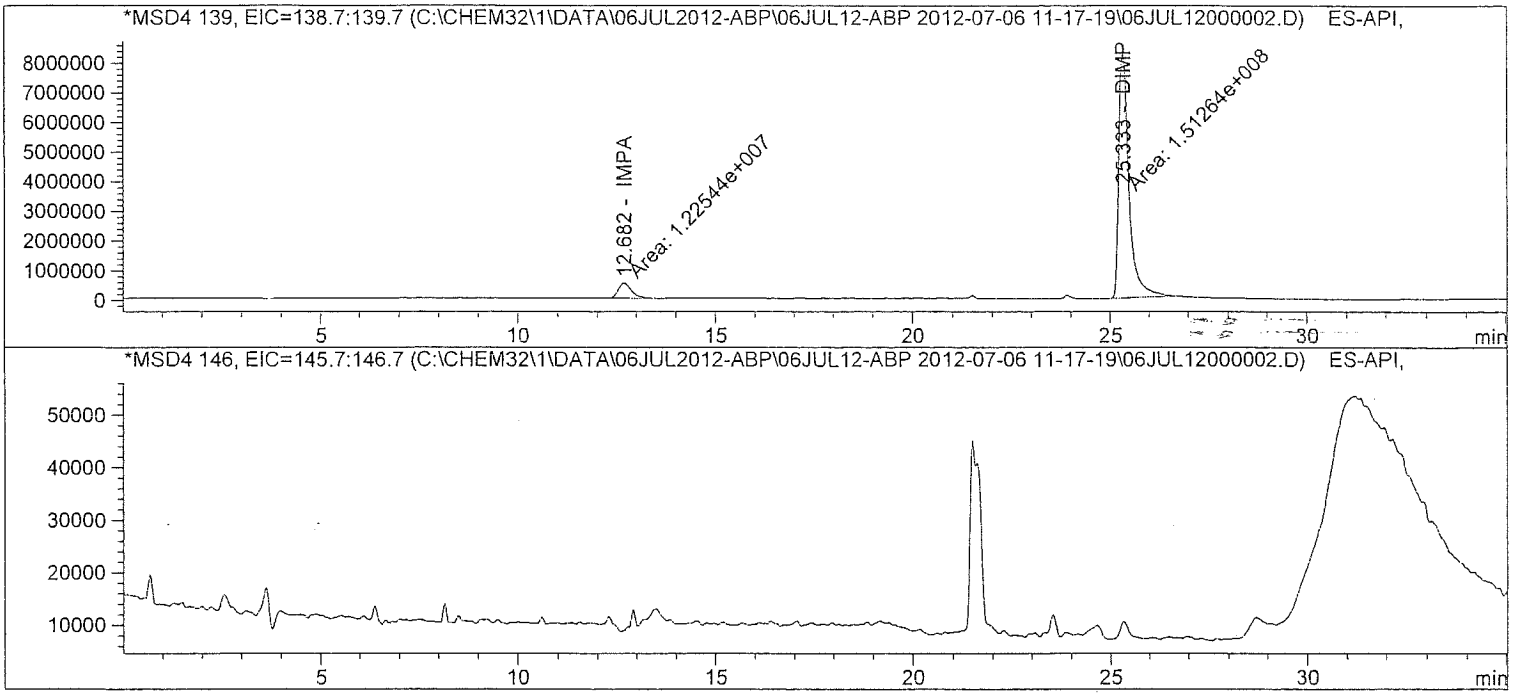
Batch Run # 2 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
Sample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



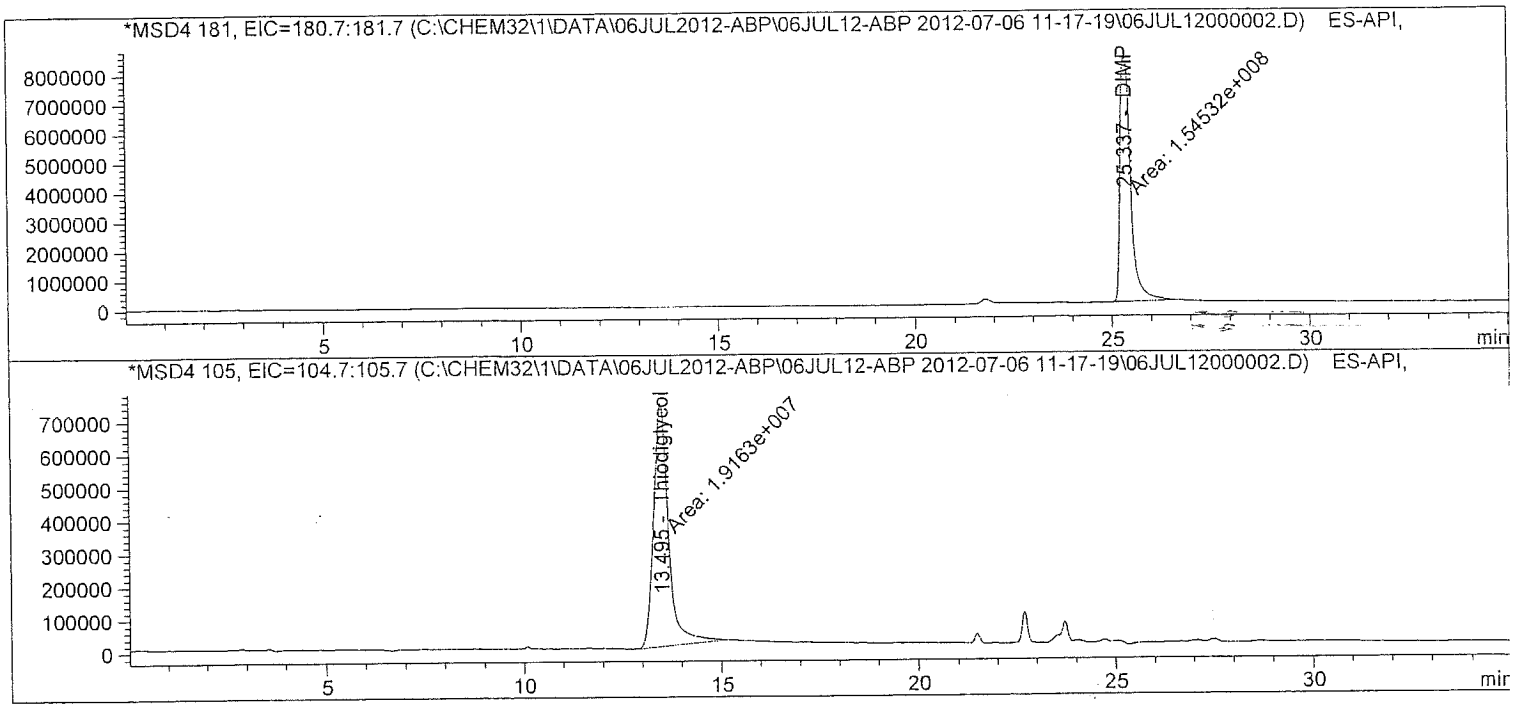
Batch Run # 2 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
Sample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 2 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
Sample Name: $10

==========

Acq. Operator : TTM Seq. Line : 2
Acq. Instrument : LCMS3 Location : Vial 1
Injection Date : 7/6/2012 11:54:02 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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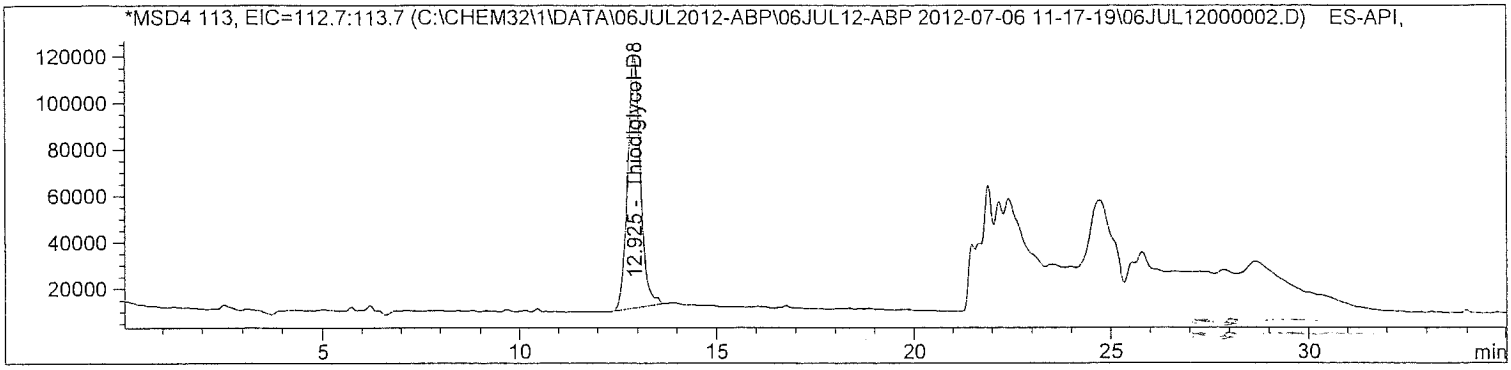

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Internal Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 10.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.754	MM	1	1.87009e7	1.29739e-1	9.93363		MPA
12.673	MM	1	5.54215e7	4.36500e-2	9.90458		IMPA

Totals without ISTD(s) : 19.83821

atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator : TTM
Seq. Line : 2
Acq. Instrument : LCMS3
Location : Vial 1
Injection Date : 7/6/2012 11:54:02 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.629	MM	1	3.03493e7	7.97357e-2	9.90775		EMPA

Totals without ISTD(s) : 9.90775

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.337	MM	1	1.54532e8	1.48417e-2	9.39024		DIMP

Totals without ISTD(s) : 9.39024

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.495	MM	1	1.91630e7	1.25317e-1	9.83212		Thiodiglycol

Totals without ISTD(s) : 9.83212

atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator : TTM
Seq. Line : 2
Acq. Instrument : LCMS3
Location : Vial 1
Injection Date : 7/6/2012 11:54:02 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.925	BB	I	1 2.44245e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

==========

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

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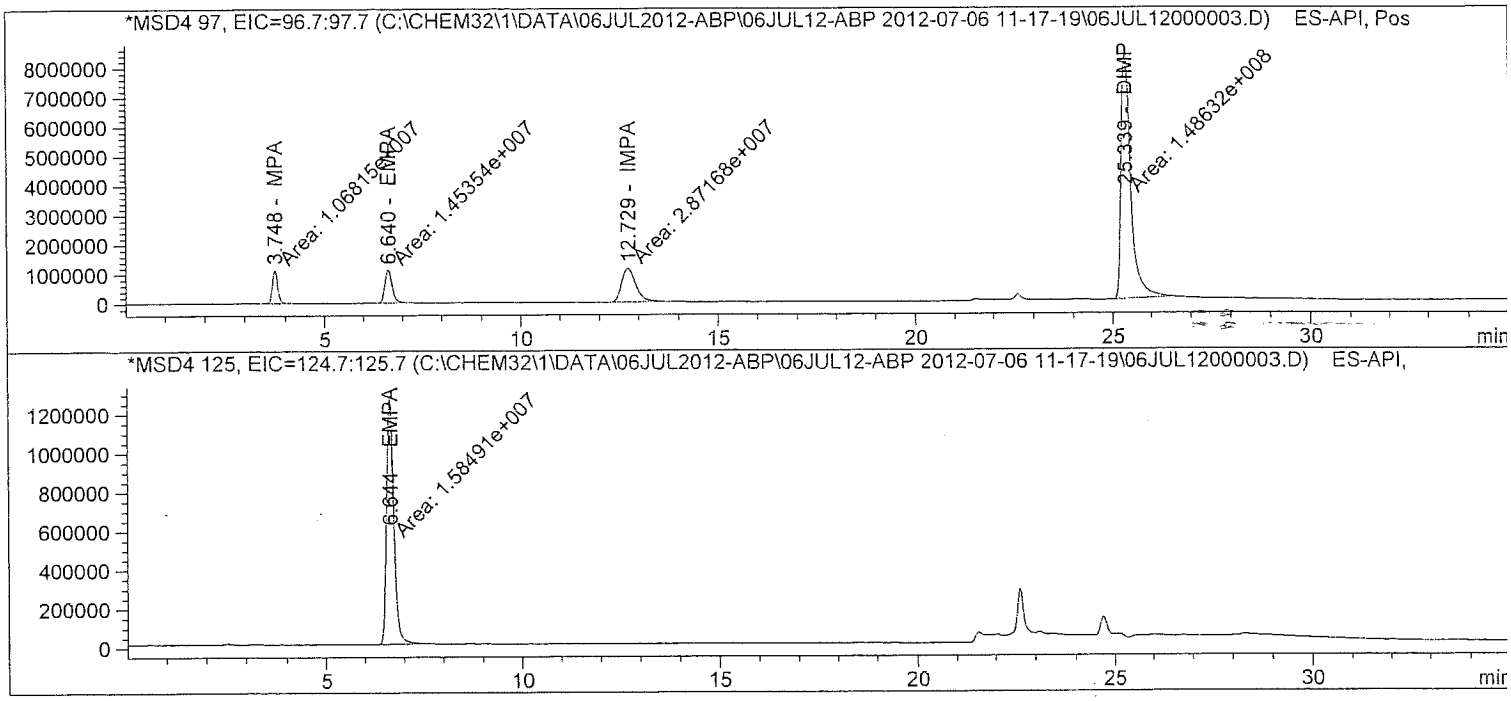

Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

==========

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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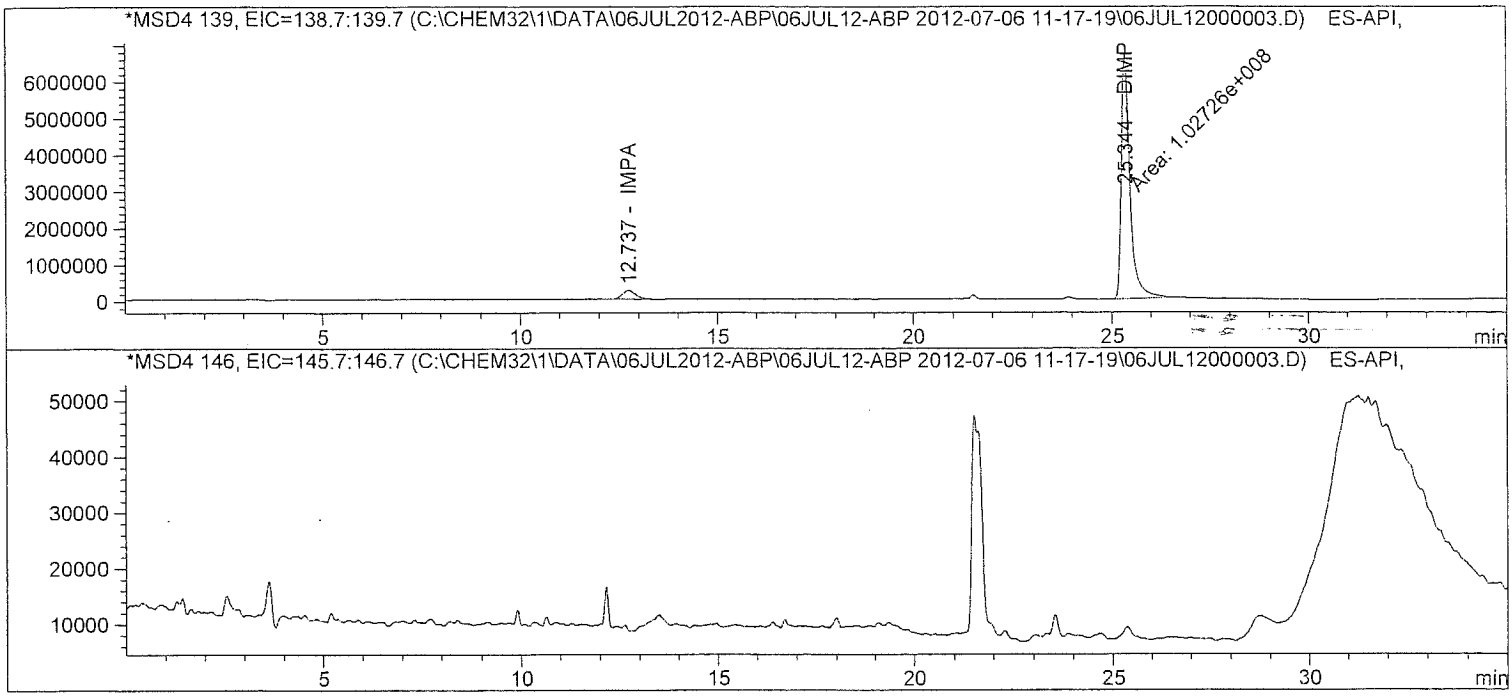
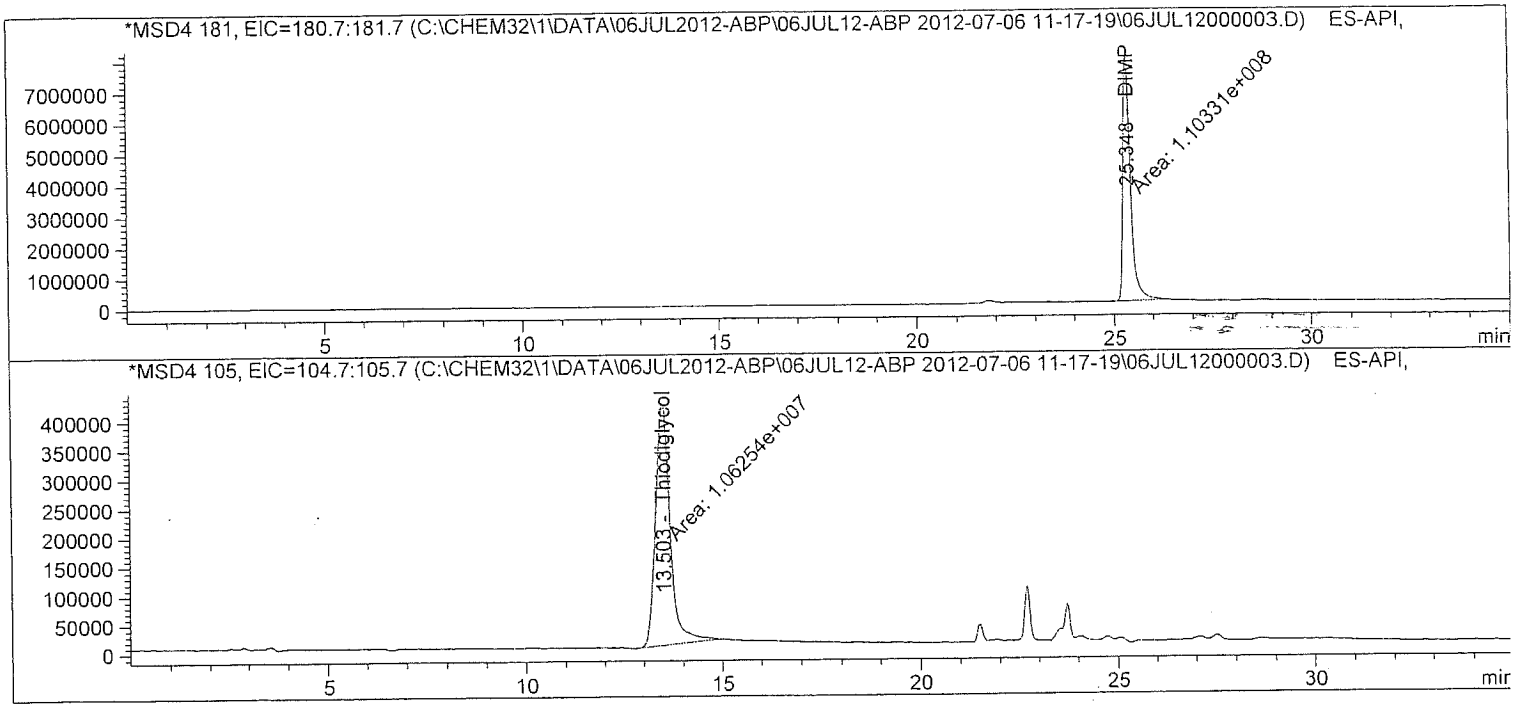


atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

```
==========================================================================
Acq. Operator    : TTM                              Seq. Line :   3
Acq. Instrument : LCMS3                              Location : Vial 2
Injection Date  : 7/6/2012 12:30:22 PM                   Inj :   1
                                                   Inj Volume : 10 µl
Acq. Method     : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed    : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed    : 7/9/2012 11:13:23 AM by TTM
                  (Results are from a previously saved Batch)
Method Info     : Agent Breakdown Products

==========================================================================
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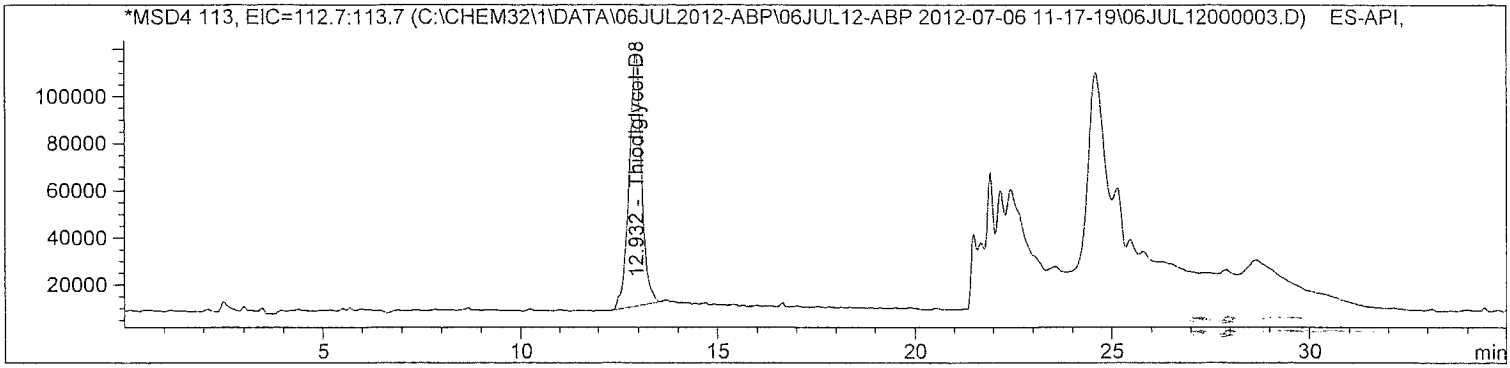


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==========================================================================
                      Internal Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      7/9/2012 11:13:05 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      5.00000  []   (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:
ISTD  ISTD Amount   Name
  #
----|-------------|-------------------------
  2     10.00000   Thiodiglycol-D8


Signal 1: MSD4 97, EIC=96.7:97.7
 Signal has been modified after loading from rawdata file!

RetTime  Type  ISTD    Area     Amt/Area    Amount   Grp   Name
 [min]         used             ratio
-------|------|----|----------|----------|----------|--|------------------
  3.748 MM        1 1.06815e7  1.13483e-1    5.10907    MPA
 12.729 MM        1 2.87168e7  4.30231e-2    5.20733    IMPA

Totals without ISTD(s) :              10.31641
```

atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 12:30:22 PM
Seq. Line : 3
Location : Vial 2
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.644	MM	1	1.58491e7	7.77744e-2	5.19540		EMPA

Totals without ISTD(s) : 5.19540

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	MM	1	1.10331e8	1.18266e-2	5.49964		DIMP

Totals without ISTD(s) : 5.49964

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.503	MM	1	1.06254e7	1.19049e-1	5.33146		Thiodiglycol

Totals without ISTD(s) : 5.33146

atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

Acq. Operator : TTM
Seq. Line : 3
Acq. Instrument : LCMS3
Location : Vial 2
Injection Date : 7/6/2012 12:30:22 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

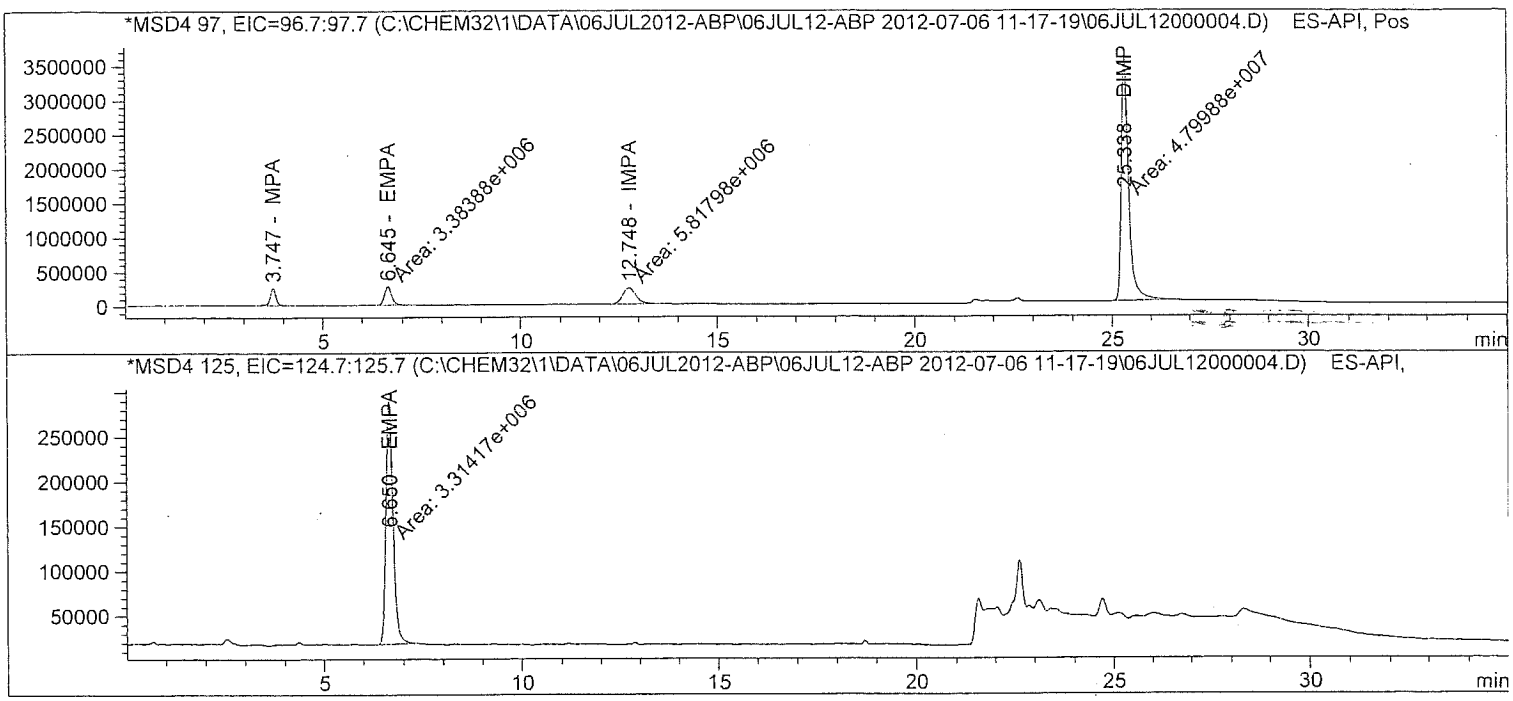
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.932	BB	I	1 2.37259e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 4 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
ample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

==========

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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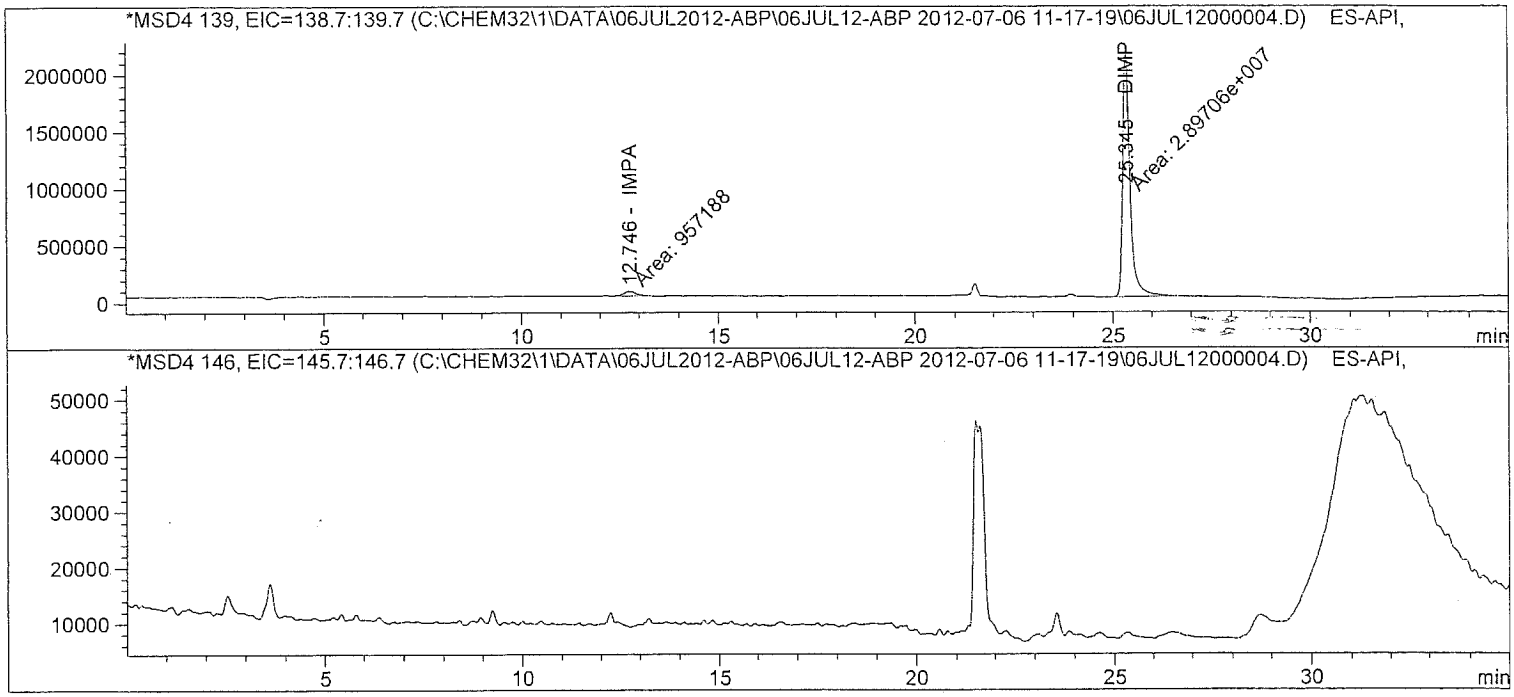
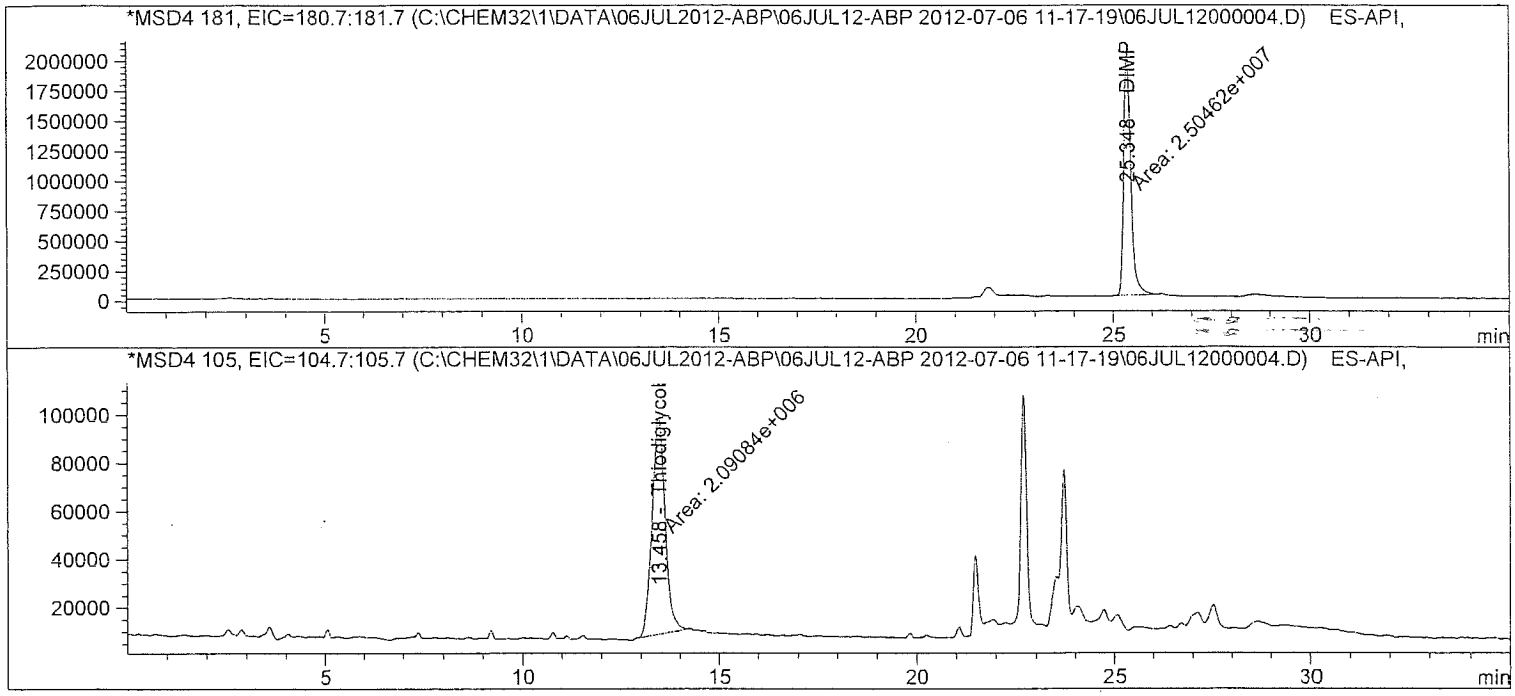


Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

==========

Acq. Operator : TTM
Seq. Line : 4
Acq. Instrument : LCMS3
Location : Vial 3
Injection Date : 7/6/2012 1:06:42 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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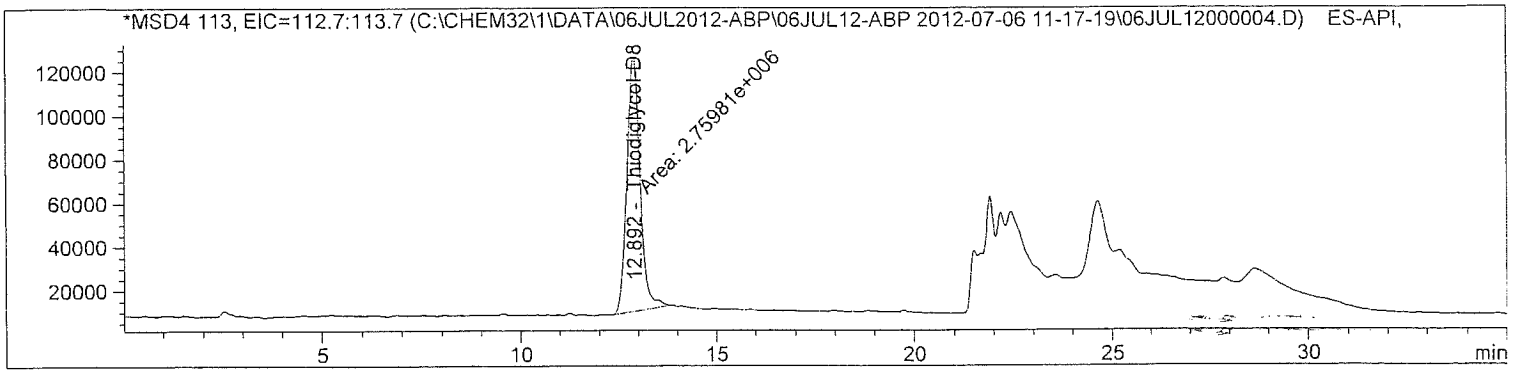

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Internal Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 1.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.747	BB	1	2.56450e6	1.00803e-1	9.36694e-1		MPA
12.748	MM	1	5.81798e6	4.26904e-2	8.99961e-1		IMPA

Totals without ISTD(s) : 1.83665

atch Run # 4 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
ample Name: $1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 1:06:42 PM
Seq. Line : 4
Location : Vial 3
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.650	MM	1	3.31417e6	7.60313e-2	9.13037e-1		EMPA

Totals without ISTD(s) : 9.13037e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	MM	1	2.50462e7	9.6264le-3	8.73631e-1		DIMP

Totals without ISTD(s) : 8.73631e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.458	MM	1	2.09084e6	1.14384e-1	8.66577e-1		Thiodiglycol

Totals without ISTD(s) : 8.66577e-1

Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

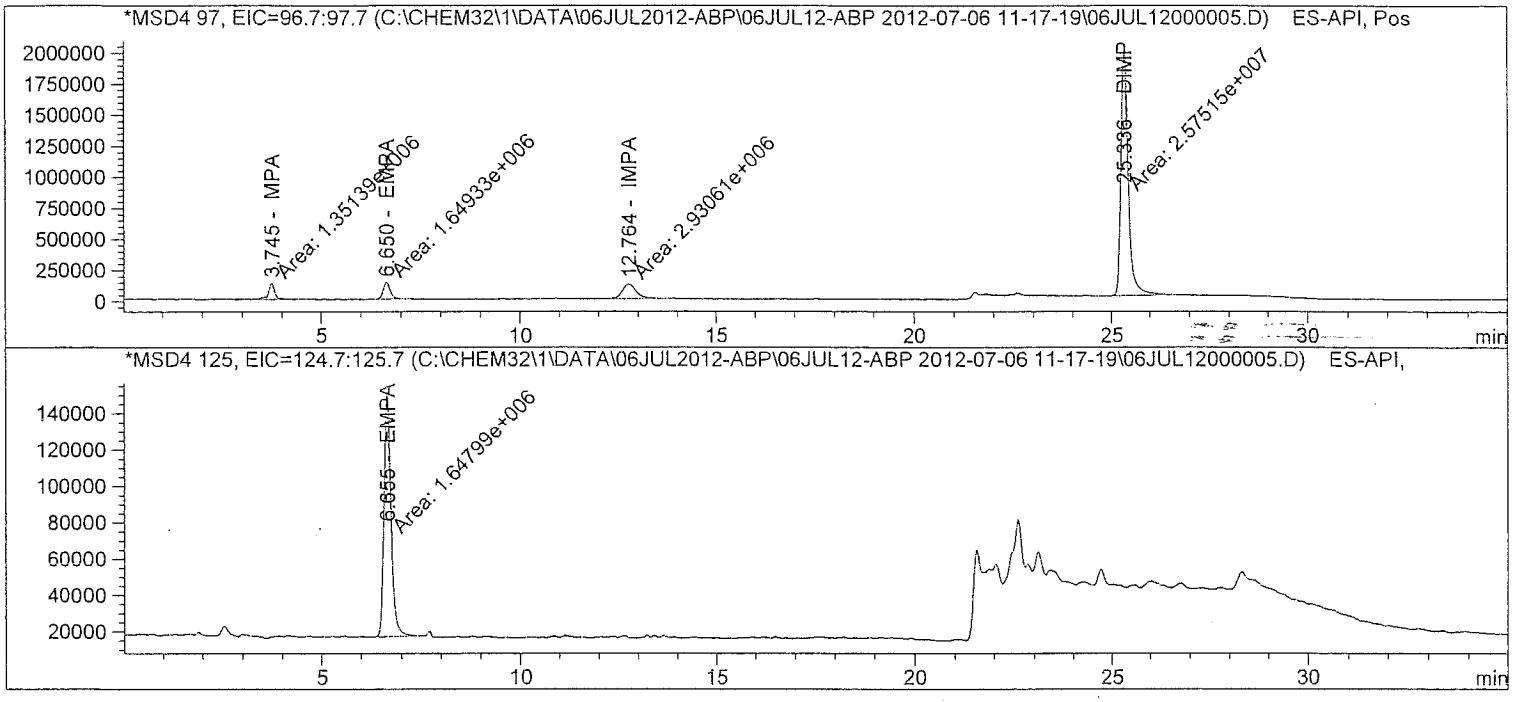
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.892	MM	I	1 2.75981e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

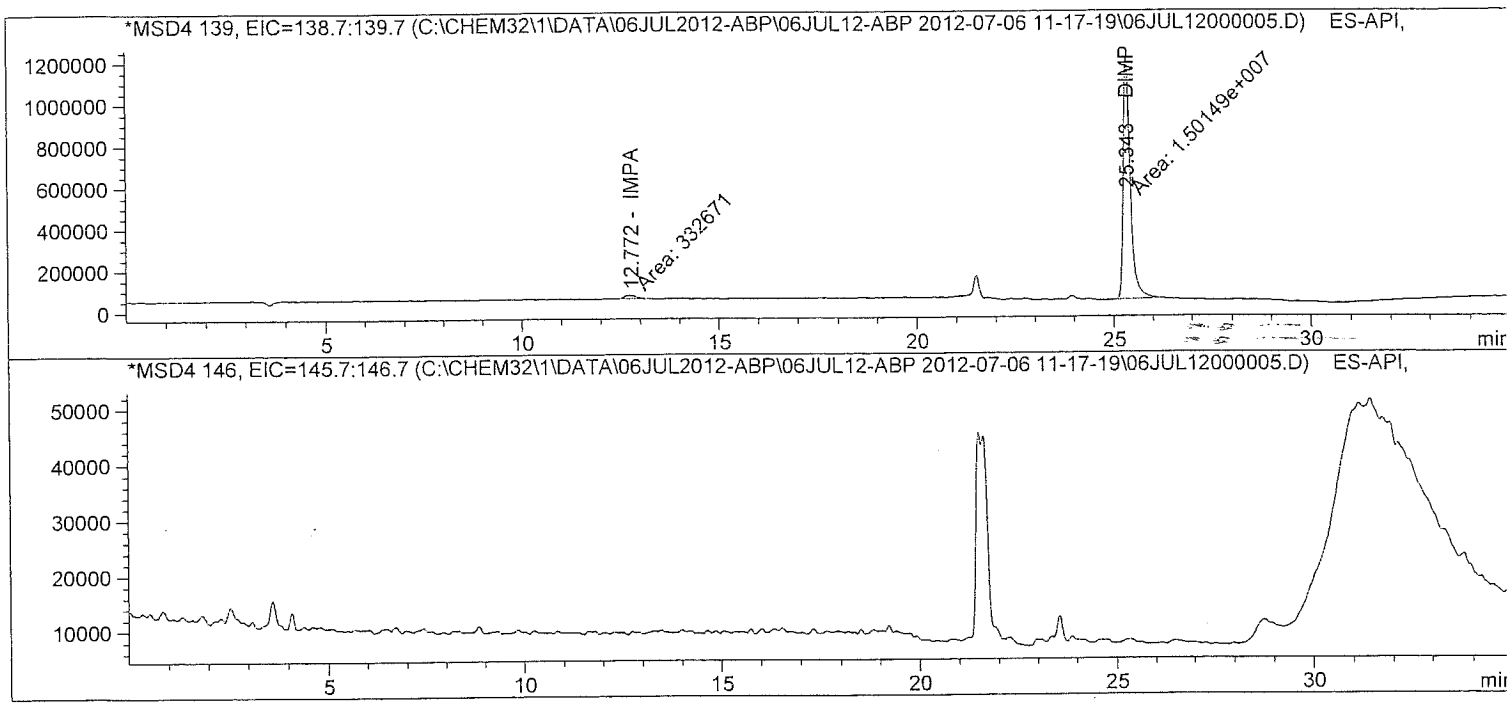
Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

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Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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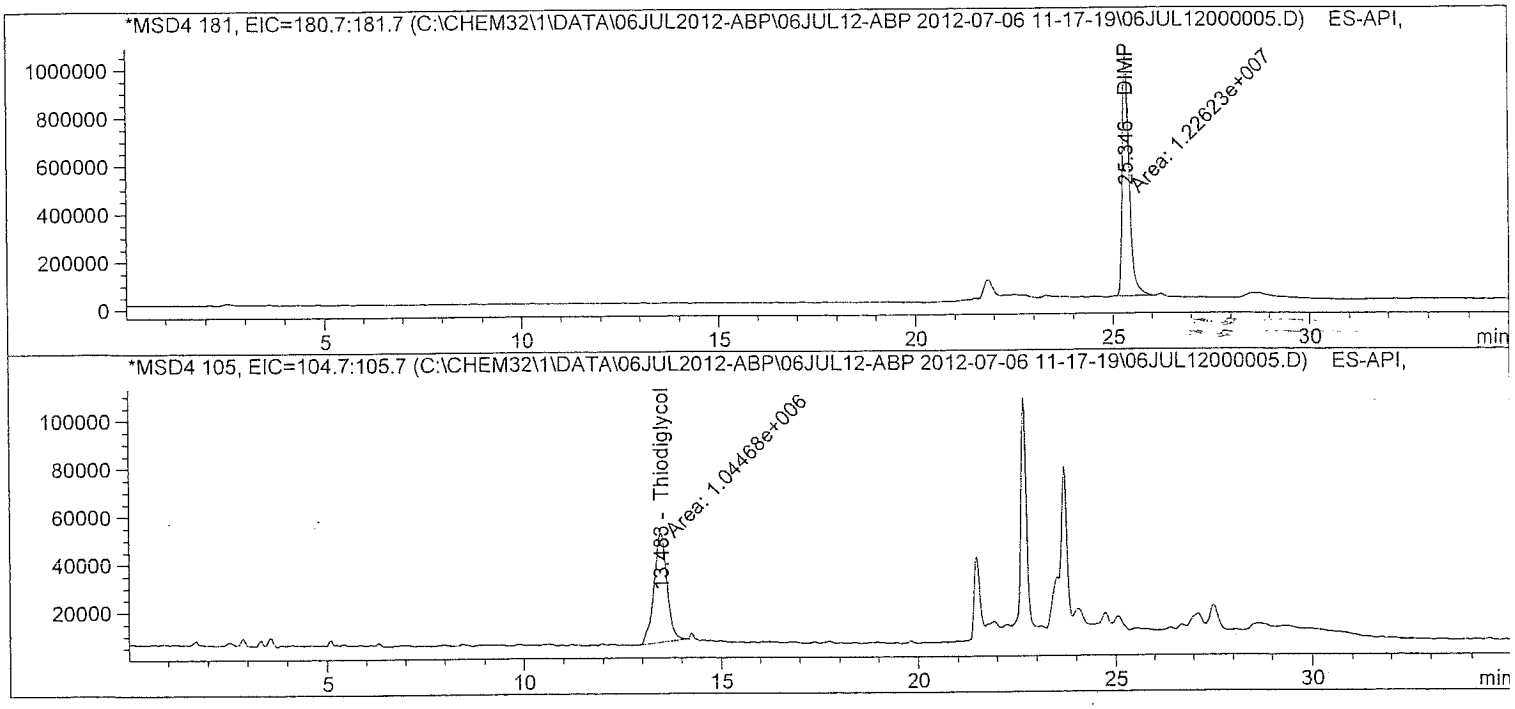
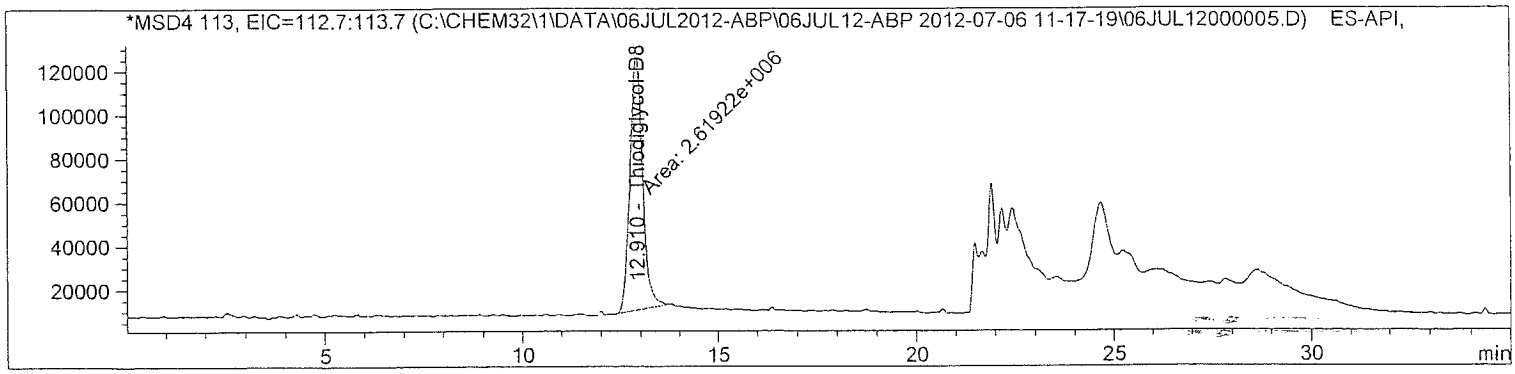


Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 5.00000e-1 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs

Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.745	MM	1	1.35139e6	9.80980e-2	5.06138e-1		MPA
12.764	MM	1	2.93061e6	4.28998e-2	4.79999e-1		IMPA

Totals without ISTD(s) : 9.86138e-1

atch Run # 5 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: $05

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 1:43:01 PM
Seq. Line : 5
Location : Vial 4
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.655	MM	1	1.64799e6	7.58113e-2	4.76997e-1		EMPA

Totals without ISTD(s) : 4.76997e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.346	MM	1	1.22623e7	9.57834e-3	4.48425e-1		DIMP

Totals without ISTD(s) : 4.48425e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.483	MM	1	1.04468e6	1.15012e-1	4.58725e-1		Thiodiglycol

Totals without ISTD(s) : 4.58725e-1

Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

==========

Acq. Operator : TTM Seq. Line : 5
Acq. Instrument : LCMS3 Location : Vial 4
Injection Date : 7/6/2012 1:43:01 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.910	MM	I	1 2.61922e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

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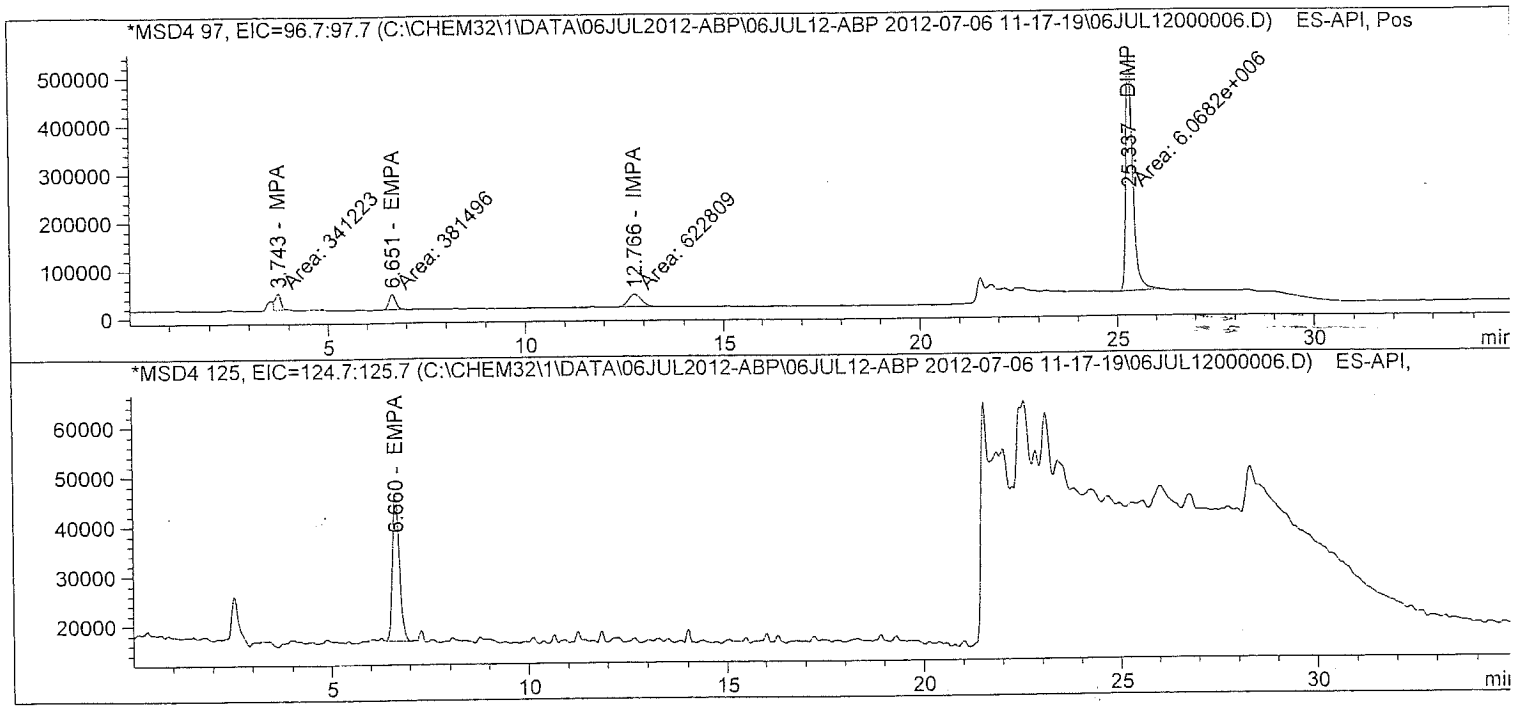
*** End of Report ***

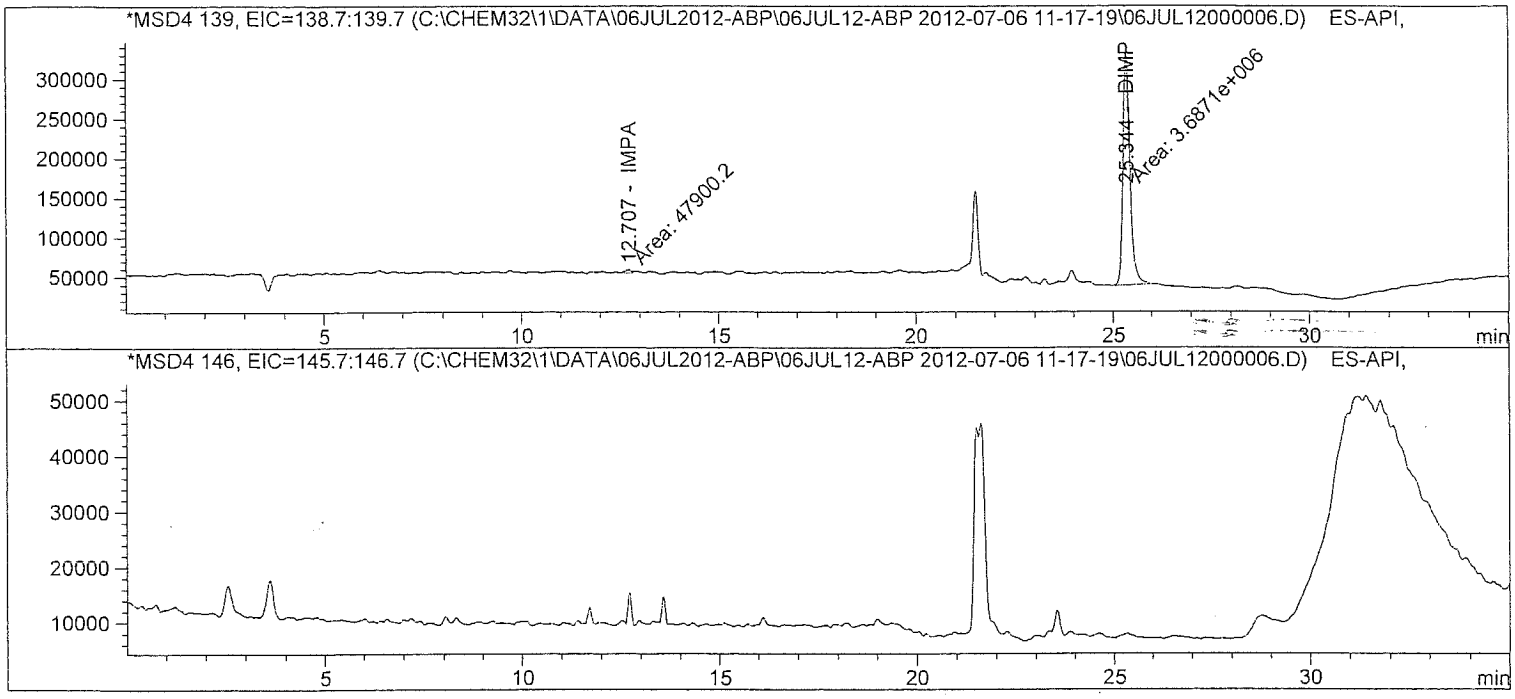
Batch Run # 6 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



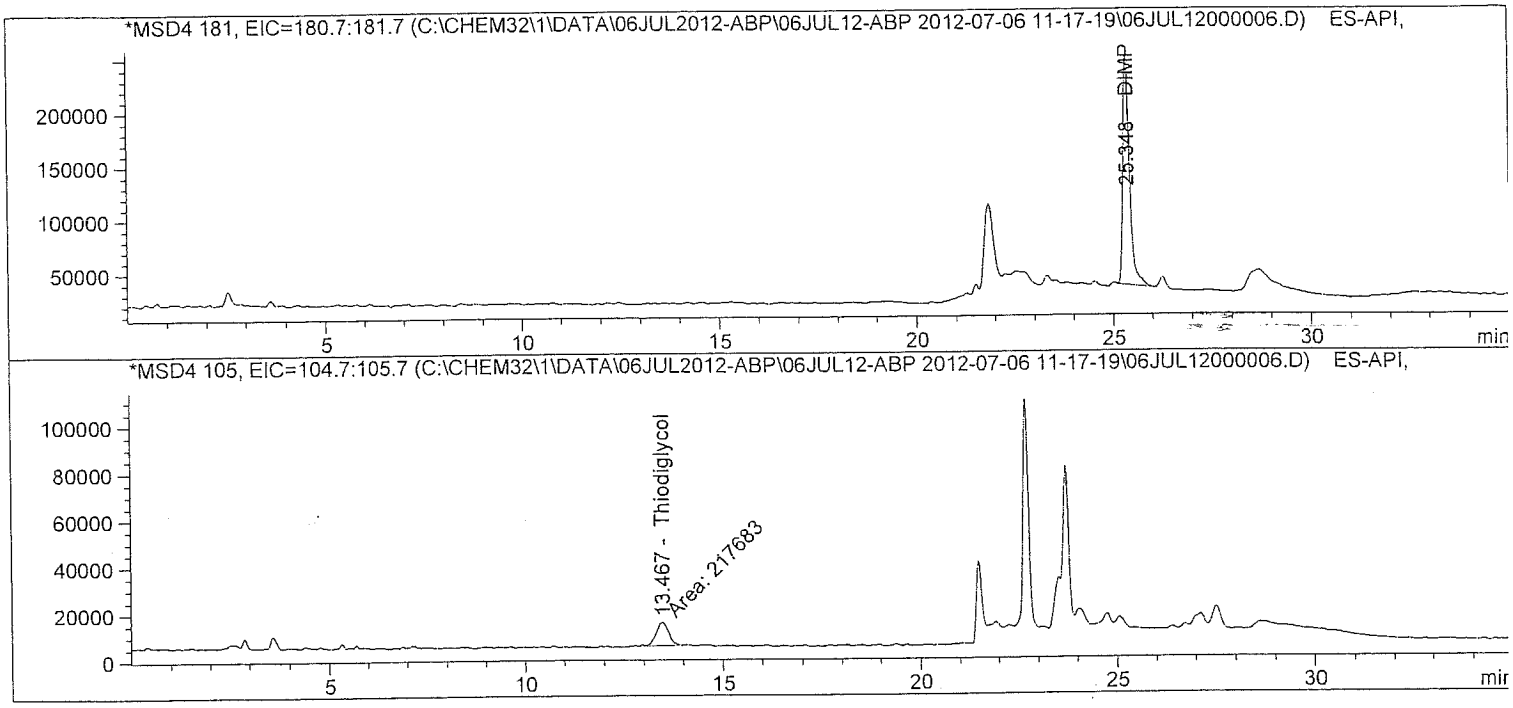
Batch Run # 6 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



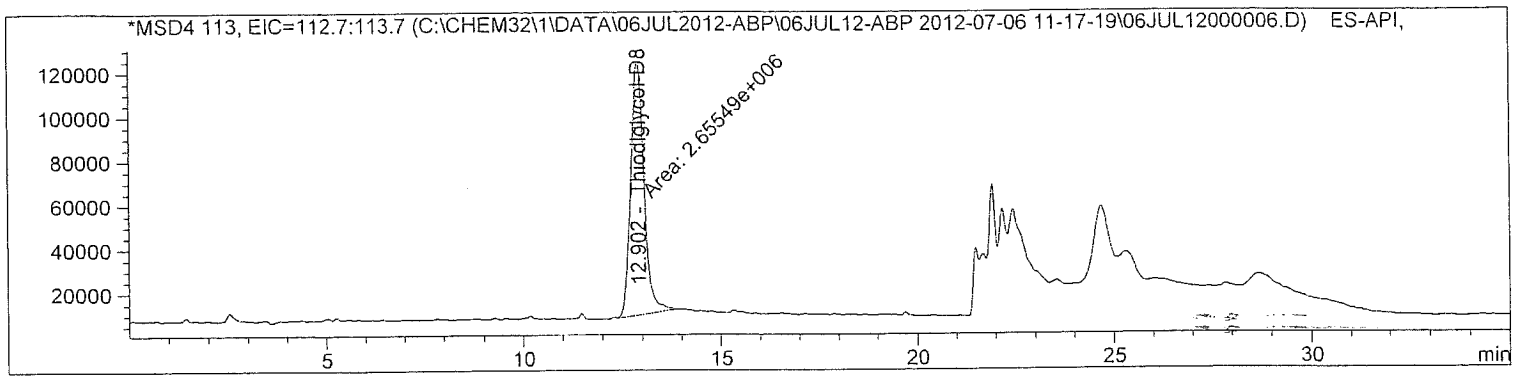
atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:19:21 PM
Seq. Line : 6
Location : Vial 5
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 1.00000e-1 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.743	FM	1	3.41223e5	8.57299e-2	1.10161e-1		MPA
12.766	MM	1	6.22808e5	4.49809e-2	1.05497e-1		IMPA

Totals without ISTD(s) : 2.15657e-1

Batch Run # 6 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:19:21 PM
Seq. Line : 6
Location : Vial 5
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.660	BB	1	3.63294e5	7.52785e-2	1.02988e-1		EMPA

Totals without ISTD(s) : 1.02988e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	BB	1	2.58087e6	1.03862e-2	1.00944e-1		DIMP

Totals without ISTD(s) : 1.00944e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.467	MM	1	2.17683e5	1.23740e-1	1.01436e-1		Thiodiglycol

Totals without ISTD(s) : 1.01436e-1

atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator	: TTM	Seq. Line :	6
Acq. Instrument	: LCMS3	Location :	Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj :	1
		Inj Volume :	10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

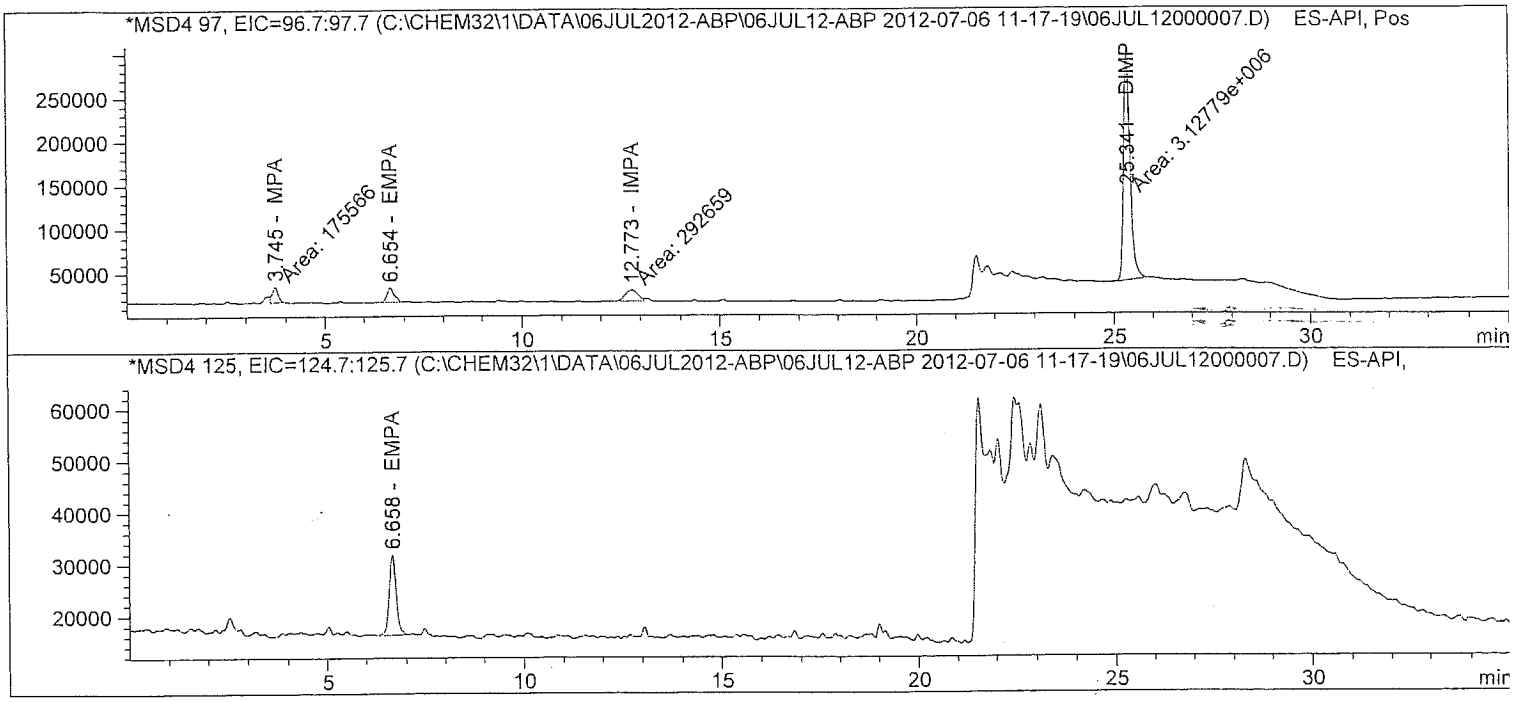
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.902	MM	I	1 2.65549e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

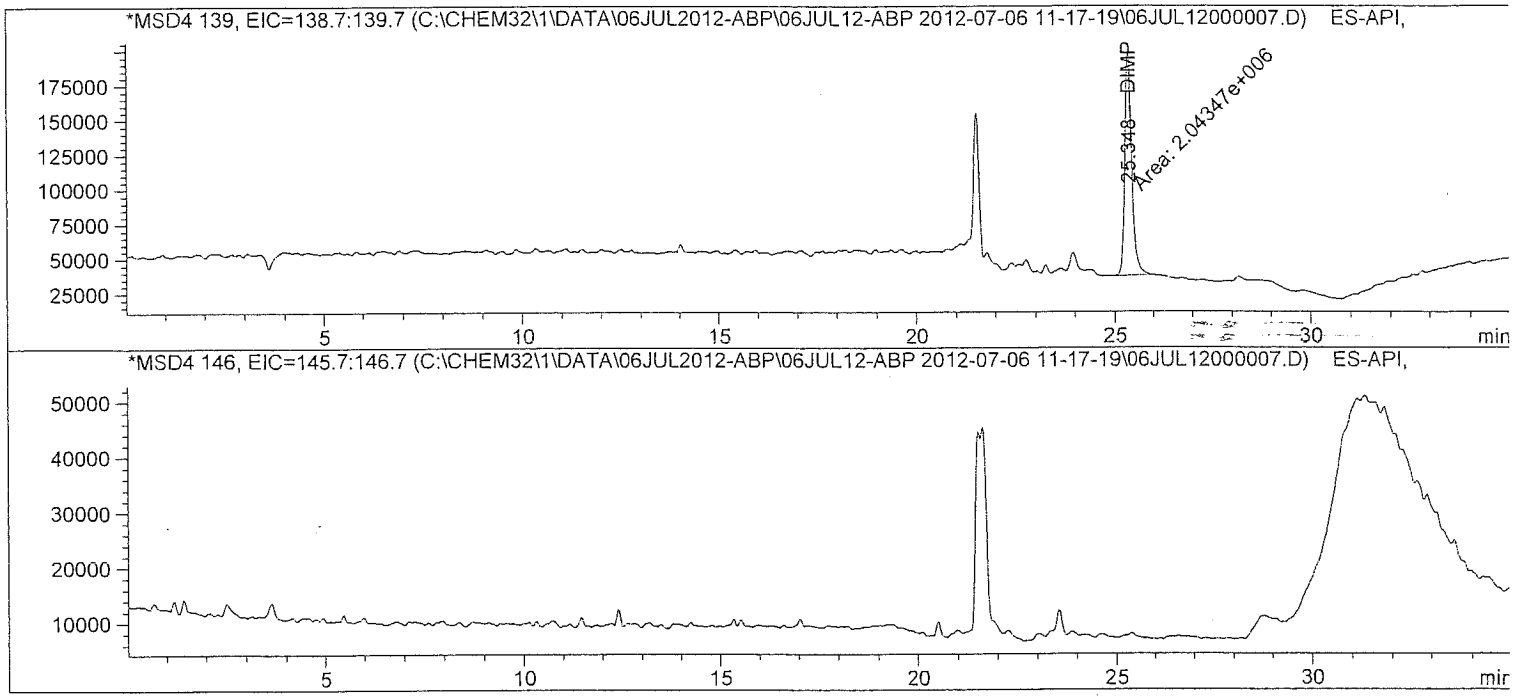
Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



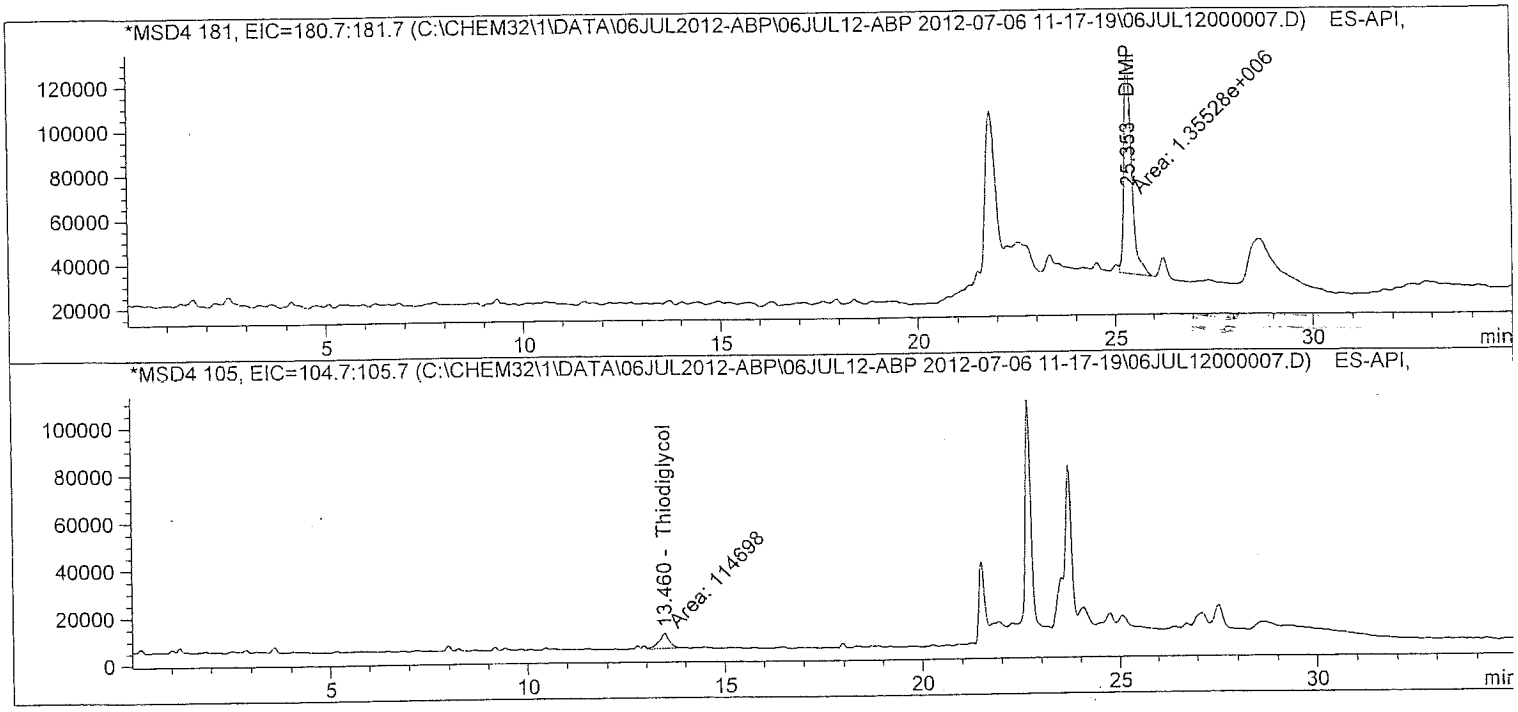
Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



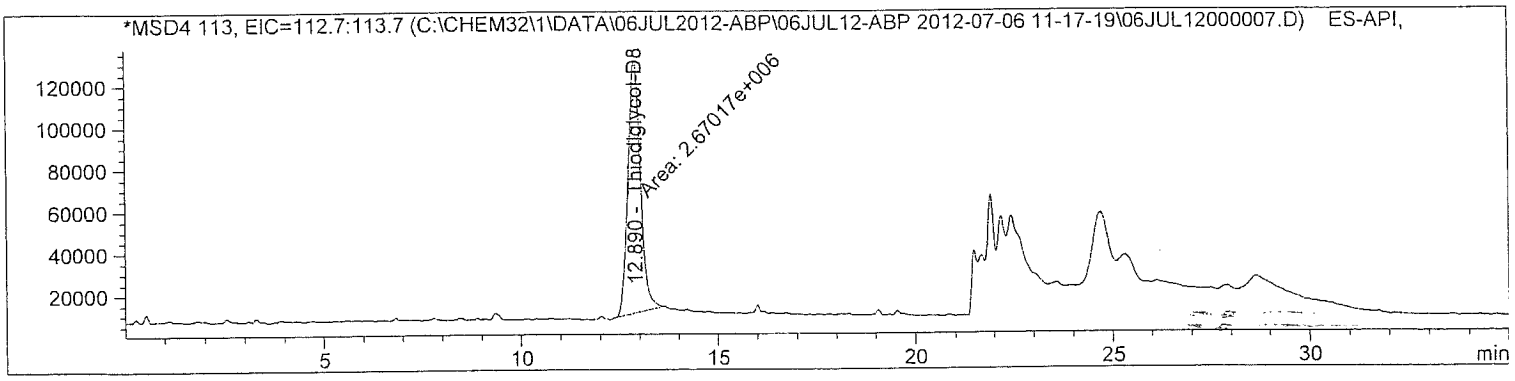
atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:55:42 PM
Seq. Line : 7
Location : Vial 6
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000e-2 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.745	FM	1	1.75566e5	7.10322e-2	4.67042e-2		MPA
12.773	MF	1	2.92659e5	4.80467e-2	5.26608e-2		IMPA

Totals without ISTD(s) : 9.93650e-2

atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

```
==================================================================
Acq. Operator    : TTM                          Seq. Line :   7
Acq. Instrument  : LCMS3                         Location : Vial 6
Injection Date   : 7/6/2012 2:55:42 PM               Inj :   1
                                                Inj Volume : 10 µl
Acq. Method      : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed     : 7/3/2012 3:32:22 PM by TTM
Analysis Method  : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed     : 7/9/2012 11:13:23 AM by TTM
                   (Results are from a previously saved Batch)
Method Info      : Agent Breakdown Products

==================================================================
```

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.658	BB	1	1.91552e5	7.48089e-2	5.36662e-2		EMPA

Totals without ISTD(s) : 5.36662e-2

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.353	FM	1	1.35528e6	1.14558e-2	5.81454e-2		DIMP

Totals without ISTD(s) : 5.81454e-2

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460	MM	1	1.14698e5	1.34158e-1	5.76283e-2		Thiodiglycol

Totals without ISTD(s) : 5.76283e-2

Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

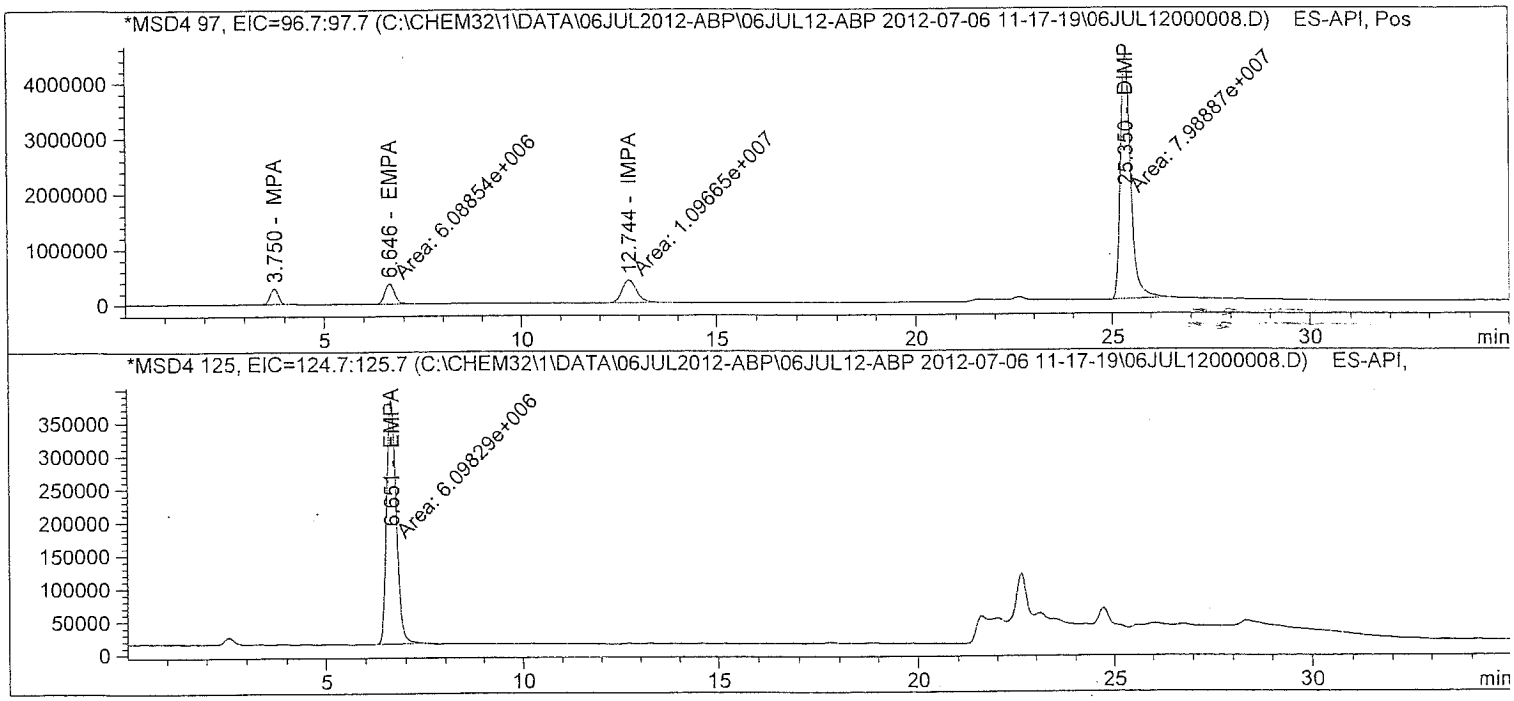
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.890	MM	I	1 2.67017e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

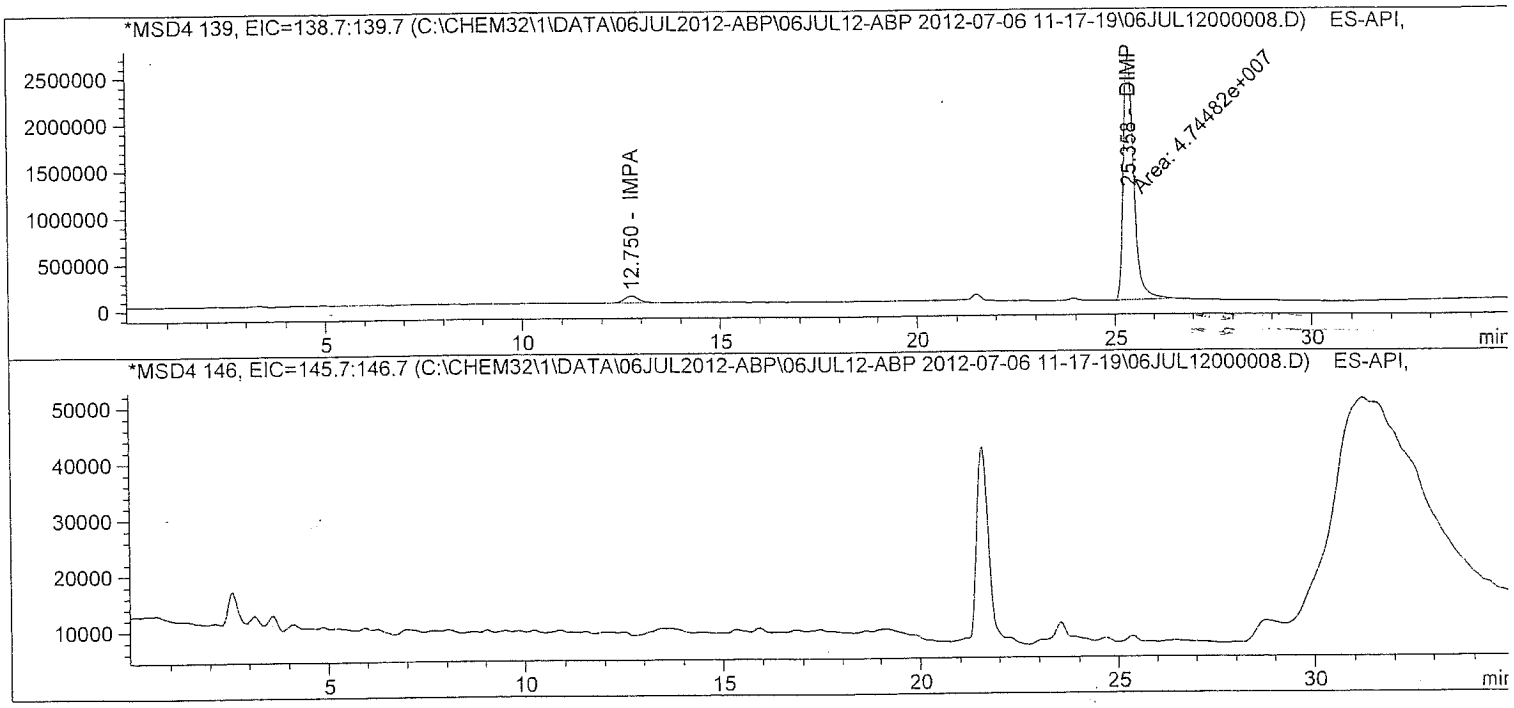
Batch Run # 8 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
Sample Name: ICV

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



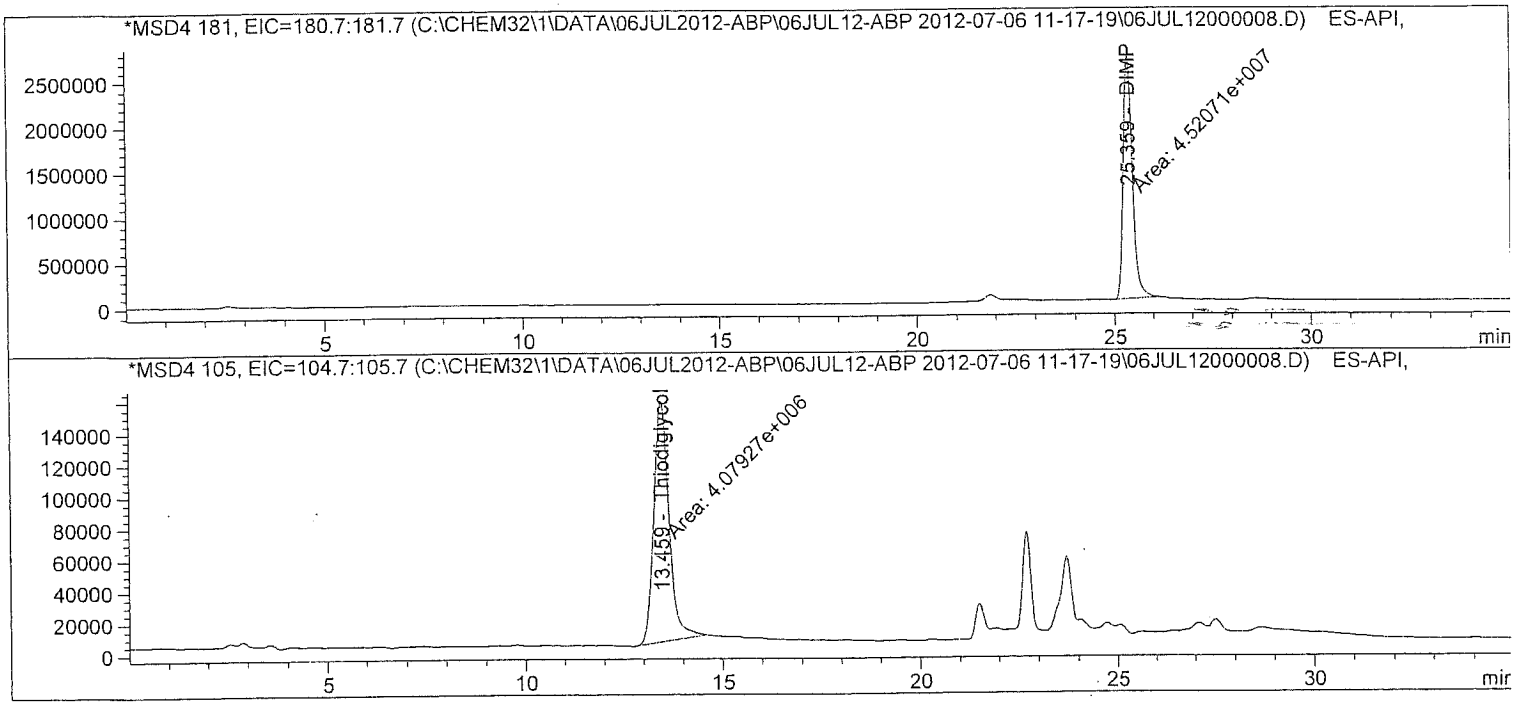
atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



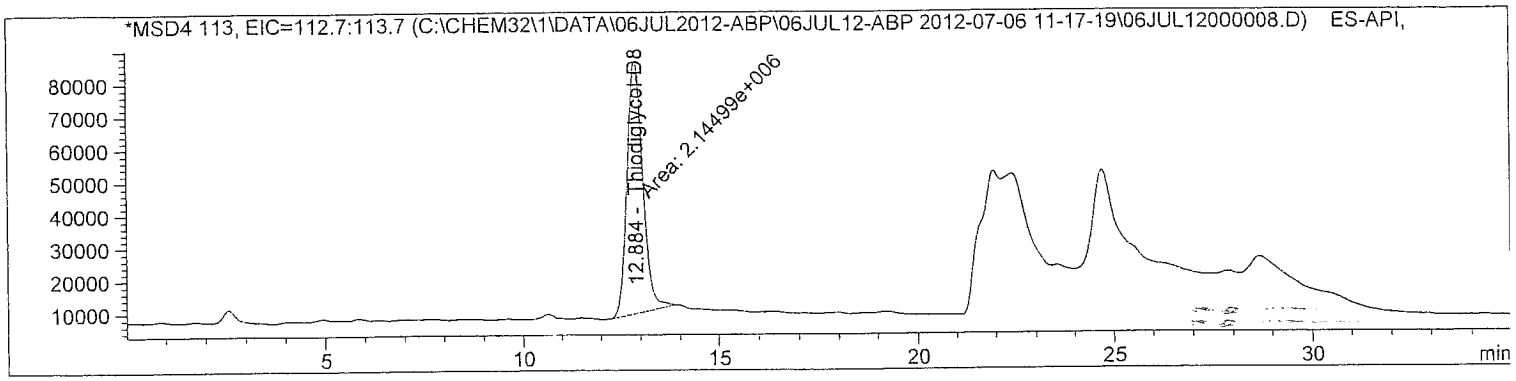
atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 3:32:02 PM
Seq. Line : 8
Location : Vial 7
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 2.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.750	BB	1	4.04355e6	1.04390e-1	1.96787		MPA
12.744	MM	1	1.09665e7	4.26853e-2	2.18233		IMPA

Totals without ISTD(s) : 4.15020

atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 3:32:02 PM
Seq. Line : 8
Location : Vial 7
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.651	MM	1	6.09829e6	7.65569e-2	2.17655		EMPA

Totals without ISTD(s) : 2.17655

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.359	MM	1	4.52071e7	1.00834e-2	2.12514		DIMP

Totals without ISTD(s) : 2.12514

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.459	MM	1	4.07927e6	1.15268e-1	2.19214		Thiodiglycol

Totals without ISTD(s) : 2.19214

Batch Run # 8 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
Sample Name: ICV

Acq. Operator	: TTM	Seq. Line :	8
Acq. Instrument	: LCMS3	Location :	Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj :	1
		Inj Volume :	10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.884	MM	I	1 2.14499e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***



ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

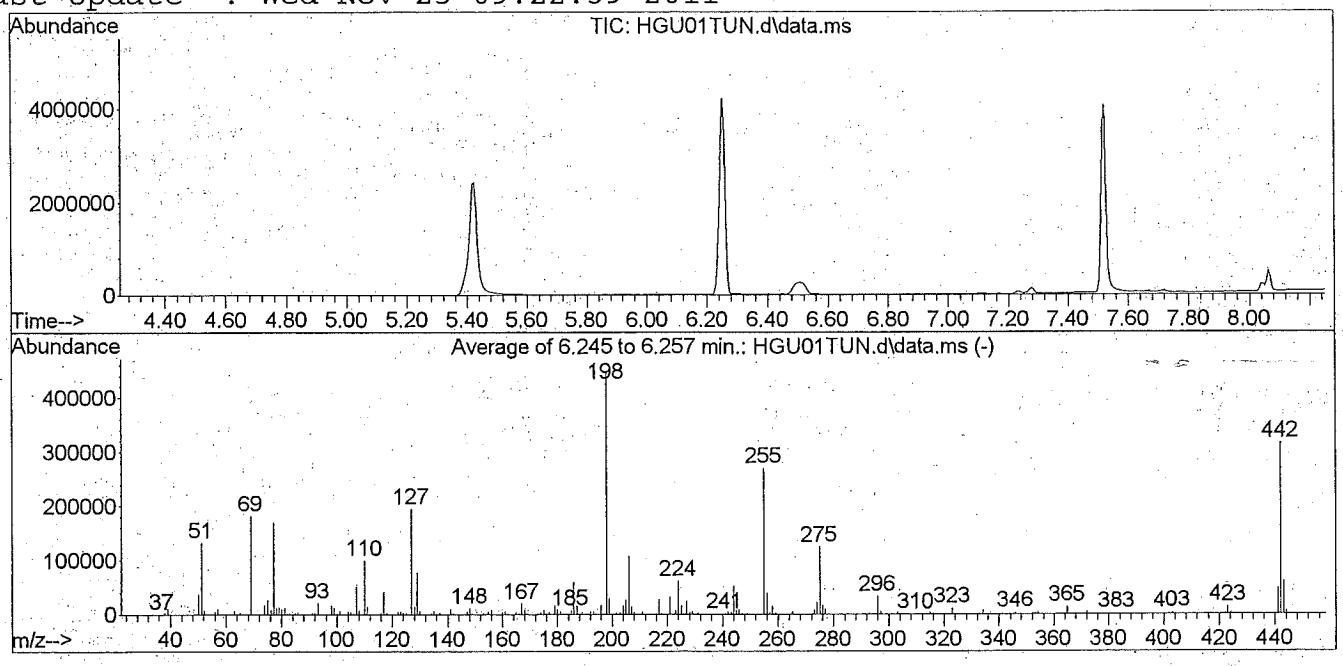
SemiVolatiles

Analytical Documentation

Data Path : D:\1\DATA\2012\AUG12\08AUG12H\
Data File : HGU01TUN.d
Acq On : 08/08/2012 10:06
Operator : RAH
Sample : 8270 DFTPP 13808
Inst : 5975-H
Misc : X:1/11/13
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : D:\1\METHODS\8270DTUN.M
Title : EPA/CLP SOM01
Last Update : Wed Nov 23 09:22:39 2011



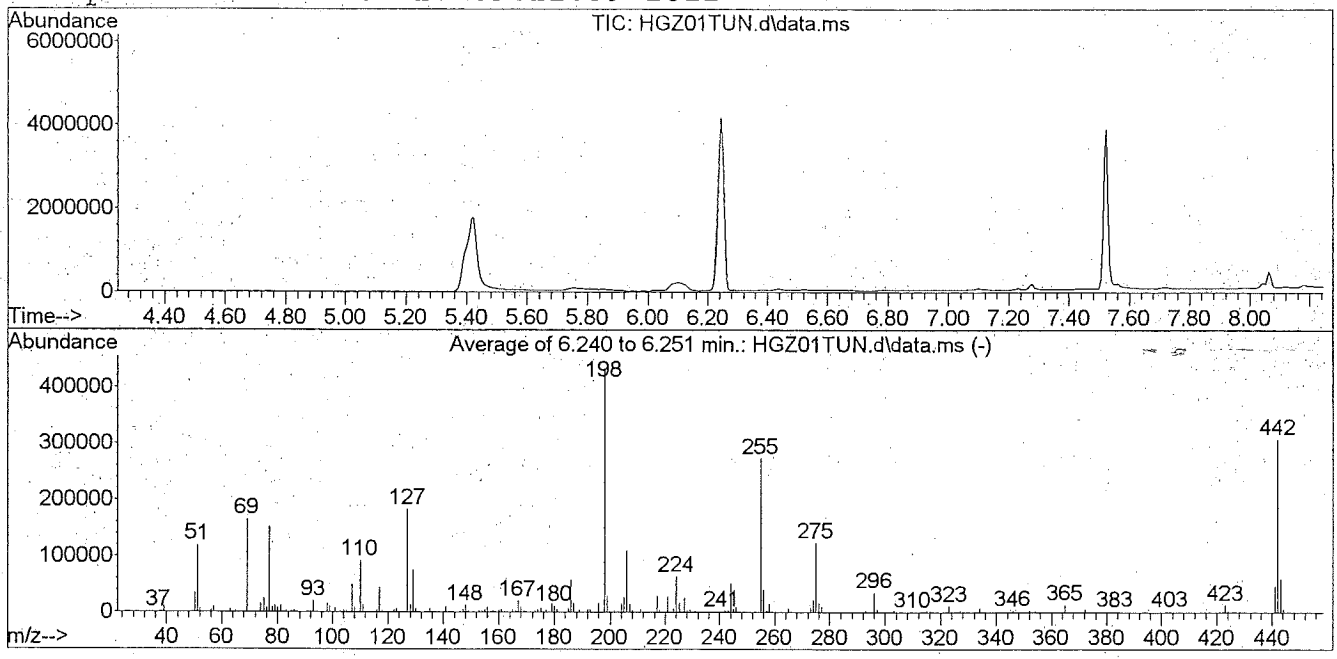
AutoFind: Scans 775, 776, 777; Background Corrected with Scan 767

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.6	133016	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	40.5	182007	PASS
70	69	0.00	2	0.5	863	PASS
127	198	10	80	43.3	194795	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	449451	PASS
199	198	5	9	6.7	30245	PASS
275	198	10	60	27.8	124987	PASS
365	198	1	100	3.0	13675	PASS
441	443	0.01	100	78.8	47803	PASS
442	198	50	100	70.3	315904	PASS
443	442	15	24	19.2	60693	PASS

Data Path : D:\1\DATA\2012\AUG12\13AUG12H\
Data File : HGZ01TUN.d
Acq On : 08/14/2012 09:47
Operator : RAH
Sample : 8270 DFTPP 13808
Inst : 5975-H
Misc : . X:1/11/13
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : D:\1\METHODS\8270DTUN.M
Title : EPA/CLP SOM01
Last Update : Wed Nov 23 09:22:39 2011



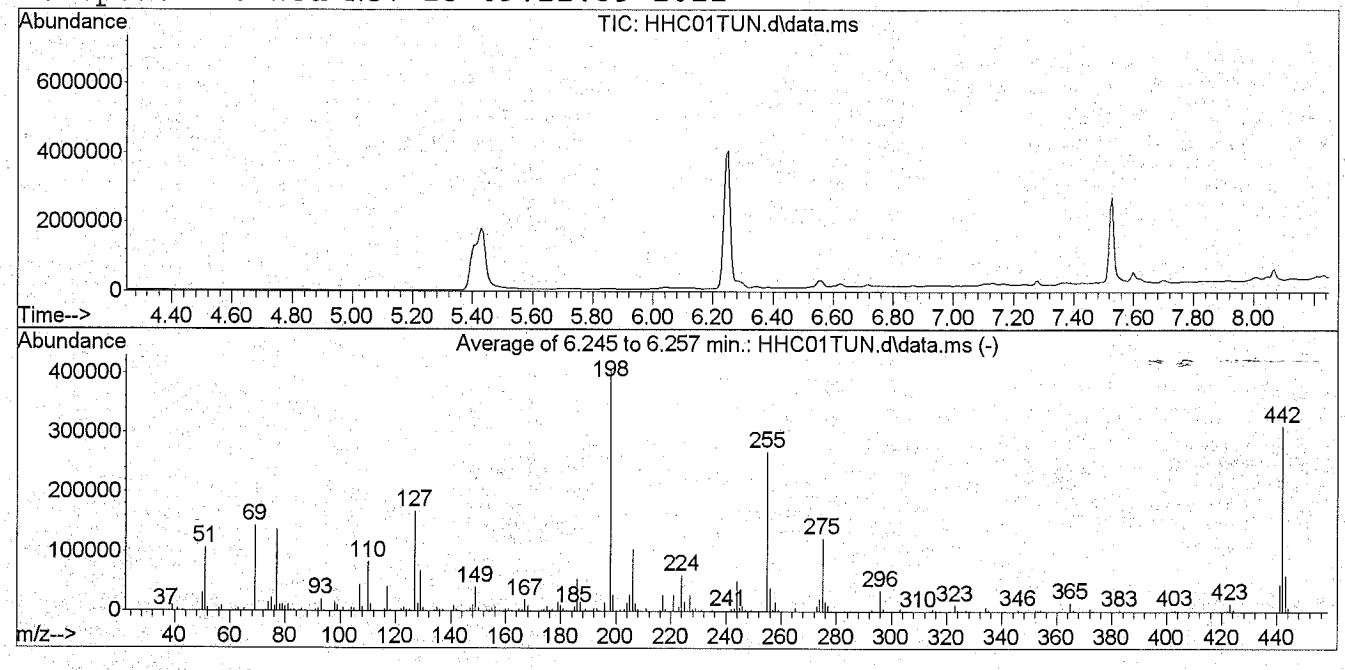
AutoFind: Scans 774, 775, 776; Background Corrected with Scan 766

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	27.4	118769	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	37.9	163930	PASS
70	69	0.00	2	0.6	978	PASS
127	198	10	80	42.0	181936	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	432747	PASS
199	198	5	9	6.7	28901	PASS
275	198	10	60	28.4	123019	PASS
365	198	1	100	3.1	13322	PASS
441	443	0.01	100	78.1	46560	PASS
442	198	50	100	71.0	307200	PASS
443	442	15	24	19.4	59611	PASS

Data Path : D:\1\DATA\2012\AUG12\17AUG12H\
Data File : HHC01TUN.d
Acq On : 08/17/2012 11:07
Operator : RAH
Sample : 8270 DFTPP 13808
Inst : 5975-H
Misc : . X:1/11/13
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : D:\1\METHODS\8270DTUN.M
Title : EPA/CLP SOM01
Last Update : Wed Nov 23 09:22:39 2011



AutoFind: Scans 775, 776, 777; Background Corrected with Scan 766

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	26.1	106416	PASS
68	69	0.00	2	0.2	290	PASS
69	198	0.00	100	35.1	143193	PASS
70	69	0.00	2	0.6	803	PASS
127	198	10	80	41.1	167804	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	408384	PASS
199	198	5	9	6.7	27396	PASS
275	198	10	60	30.1	122760	PASS
365	198	1	100	3.5	14134	PASS
441	443	0.01	100	77.7	46845	PASS
442	198	50	100	76.3	311595	PASS
443	442	15	24	19.3	60256	PASS

Form 6 Equivalent

Initial Calibration Report

EPA Method 8270D

90 percent must meet criteria -- min RF and [RSD<15% or correllation coefficient > 0.990]

SSTD005 = HGU07S05.D
SSTD020 = HGU06S20.D
SSTD035 = HGU05S35.D
SSTD050 = HGU02S50.D
SSTD065 = HGU04S65.D
SSTD080 = HGU03S80.D

percent meeting criteria: **100.0**
PASSED

	RRF005	RRF020	RRF035	RRF050	RRF065	RRF080	RF-AVE	RSD	MIN RF	use quad regression?	correlation coefficient	meets criteria?
2) 2-Fluorophenol	1.161	1.359	1.371	1.386	1.399	1.387	1.344	**6.7**	0.001			ok
3) 1,4-Oxathiane	0.735	0.667	0.673	0.695	0.687	0.710	0.694	**3.6**	0.001			ok
4) Phenol-d5	1.548	1.771	1.805	1.792	1.838	1.821	1.762	**6.1**	0.001			ok
5) 1,4-Dithiane	1.194	1.078	1.092	1.125	1.117	1.144	1.125	**3.7**	0.001			ok
7) Nitrobenzene-d5	0.303	0.345	0.355	0.350	0.356	0.349	0.343	**5.7**	0.001			ok
9) 2-Fluorobiphenyl	1.357	1.493	1.522	1.504	1.512	1.514	1.484	**4.2**	0.001			ok
11) 2,4,6-Tribromophenol	0.109	0.132	0.140	0.141	0.143	0.143	0.135	**9.7**	0.001			ok
13) Terphenyl-d14	0.706	0.771	0.809	0.779	0.789	0.779	0.772	**4.5**	0.001			ok

Form 7 Equivalent

8270D Calibration Verification Report

Calibration Verification File: **HGZ02S50.D** Initial Calibration: **HGU**

80 percent must meet criteria (%D<20 and min RF)
percent meeting criteria: **100.0** **PASSED**

	AVG RF	CCV RF	MIN RF	CCV conc	target conc	%difference *	%drift *	flag
2-Fluorophenol	1.343	1.296	0.001			**3.5**		ok
1,4-Oxathiane	0.694	0.639	0.001			**8.0**		ok
Phenol-d5	1.762	1.766	0.001			**0.2**		ok
1,4-Dithiane	1.125	1.078	0.001			**4.2**		ok
Nitrobenzene-d5	0.343	0.346	0.001			**1.0**		ok
2-Fluorobiphenyl	1.484	1.545	0.001			**4.2**		ok
2,4,6-Tribromophenol	0.135	0.135	0.001			**0.4**		ok
Terphenyl-d14	0.772	0.738	0.001			**4.5**		ok

* Percent difference is used for compounds quantitated by average response factor.
Percent drift is used for compounds quantitated by regression fits

Form 7 Equivalent

8270D Calibration Verification Report

Calibration Verification File: **HHC02S50.D** Initial Calibration: **HGU**

80 percent must meet criteria (%D<20 and min RF)
percent meeting criteria: **100.0** **PASSED**

	AVG RF	CCV RF	MIN RF	CCV conc	target conc	%difference *	%drift *	flag
2-Fluorophenol	1.343	1.293	0.001			**3.7**		ok
1,4-Oxathiane	0.694	0.630	0.001			**9.3**		ok
Phenol-d5	1.762	1.775	0.001			**0.7**		ok
1,4-Dithiane	1.125	1.076	0.001			**4.4**		ok
Nitrobenzene-d5	0.343	0.350	0.001			**2.1**		ok
2-Fluorobiphenyl	1.484	1.532	0.001			**3.3**		ok
2,4,6-Tribromophenol	0.135	0.137	0.001			**1.4**		ok
Terphenyl-d14	0.772	0.739	0.001			**4.3**		ok

* Percent difference is used for compounds quantitated by average response factor.
Percent drift is used for compounds quantitated by regression fits

INTERNAL STANDARD AREA SUMMARY

Form 8 equivalent

Continuing Standard Filename	HGZ02S50.D	Area 1,4-dcb	Area nap-d8	Area ace-d10	Area phe-d10	Area chry-d12	Area per-d12
8270 50 std 15952		486967	2122270	1238566	2351447	2952760	2316883
	Upper Limit	973934	4244540	2477132	4702894	5905520	4633766
	Lower limit	243484	1061135	619283	1175724	1476380	1158442

CLIENT Sample No.	DCL Sample No.	Area 1,4-dcb	Area nap-d8	Area ace-d10	Area phe-d10	Area chry-d12	Area per-d12
BLANK	289579	555703	2533234	1462576	2787665	3340430	2826602
LCS	289580	579658	2622745	1495523	2820004	3222819	2758080
LCS (DUP)	289581	560550	2585817	1487437	2812098	3131459	2572769
SO-60(7.5)ERB	1222142012	577155	2632964	1522827	2971171	3393597	2800695

LIMITS: Areas should be within 50 to 200 percent of the corresponding area in the calibration standard.

INTERNAL STANDARD RETENTION-TIME SUMMARY

Form 8 equivalent

Continuing Standard Filename	HGZ02S50.D	RT 1,4-dcb	RT nap-d8	RT ace-d10	RT phe-d10	RT chry-d12	RT per-d12
8270 50 std 15952		4.03	5.34	7.86	10.45	14.93	17.00
	Upper Limit	4.53	5.84	8.36	10.95	15.43	17.50
	Lower limit	3.53	4.84	7.36	9.95	14.43	16.50
CLIENT Sample No.	**DCL Sample No.**	**RT 1,4-dcb**	**RT nap-d8**	**RT ace-d10**	**RT phe-d10**	**RT chry-d12**	**RT per-d12**
BLANK	289579	4.03	5.34	7.86	10.45	14.93	16.99
LCS	289580	4.03	5.34	7.86	10.45	14.92	16.99
LCS (DUP)	289581	4.03	5.34	7.86	10.44	14.92	16.99
SO-60(7.5)ERB	1222142012	4.03	5.34	7.86	10.45	14.92	16.99

LIMITS: Retention times should be within 30 seconds of the corresponding time in the calibration standard.

INTERNAL STANDARD AREA SUMMARY

Form 8 equivalent

Continuing Standard Filename	HHC02S50.D	Area 1,4-dcb	Area nap-d8	Area ace-d10	Area phe-d10	Area chry-d12	Area per-d12
8270 50 std 15952		462752	2032082	1231413	2366335	3083495	2330254
	Upper Limit	925504	4064164	2462826	4732670	6166990	4660508
	Lower limit	231376	1016041	615707	1183168	1541748	1165127
CLIENT Sample No.	**DCL Sample No.**	**Area 1,4-dcb**	**Area nap-d8**	**Area ace-d10**	**Area phe-d10**	**Area chry-d12**	**Area per-d12**
BLANK	289973	550019	2512904	1507257	2916914	3237120	2577625
LCS	289974	547084	2544485	1531357	2954277	3458957	2803396
SO-53(10)	1222142004	512485	2306610	1367328	2530582	2709704	1602251
SO-54(10)	1222142005	531344	2420602	1441421	2718248	3014877	2357452
SO-55(7.5)	1222142006	524289	2416965	1454440	2841398	3274900	2504645
SO-56(10)	1222142007	524262	2411629	1449234	2775084	3118031	2404341
SO-56(10)	290338	513602	2366081	1442410	2773215	3099979	2464699
SO-56(10)	290339	548146	2499515	1496581	2867577	3212025	2498783
SO-60(7.5)	1222142011	555620	2544360	1523612	2907813	3136331	2385724
SO-50(10)	1222142001	531771	2437969	1454399	2769382	2561116	560828 *
SO-51(10)	1222142002	557682	2526592	1494626	2660884	2140053	963594 *
SO-52(10)	1222142003	508015	2278686	1334963	2505429	2340446	1294321
SO-57(10)	1222142008	559130	2488145	1391698	2351348	1331490 *	321075 *
SO-58(10)	1222142009	589478	2628202	1589291	2849334	2603367	1414383
SO-59(10)	1222142010	563328	2561870	1260823	2118101	693881 *	52571 *

* This internal standard is not pertinent to the analysis. It does not reference the requested target analtyes.

LIMITS: Areas should be within 50 to 200 percent of the corresponding area in the calibration standard.

INTERNAL STANDARD RETENTION-TIME SUMMARY

Form 8 equivalent

Continuing Standard Filename	HHC02S50.D	RT 1,4-dcb	RT nap-d8	RT ace-d10	RT phe-d10	RT chry-d12	RT per-d12
8270 50 std 15952		4.03	5.35	7.86	10.45	14.93	17.00
	Upper Limit	4.53	5.85	8.36	10.95	15.43	17.50
	Lower limit	3.53	4.85	7.36	9.95	14.43	16.50
CLIENT Sample No.	**DCL Sample No.**	**RT 1,4-dcb**	**RT nap-d8**	**RT ace-d10**	**RT phe-d10**	**RT chry-d12**	**RT per-d12**
BLANK	289973	4.04	5.34	7.86	10.45	14.93	17.00
LCS	289974	4.04	5.34	7.86	10.45	14.93	17.00
SO-53(10)	1222142004	4.03	5.34	7.86	10.44	14.92	16.99
SO-54(10)	1222142005	4.03	5.34	7.86	10.45	14.92	16.99
SO-55(7.5)	1222142006	4.03	5.34	7.86	10.45	14.92	16.99
SO-56(10)	1222142007	4.03	5.34	7.86	10.45	14.92	16.99
SO-56(10)	290338	4.03	5.34	7.86	10.45	14.92	16.99
SO-56(10)	290339	4.03	5.34	7.86	10.44	14.92	16.99
SO-60(7.5)	1222142011	4.03	5.34	7.86	10.44	14.92	16.99
SO-50(10)	1222142001	4.03	5.34	7.86	10.44	14.92	16.99
SO-51(10)	1222142002	4.03	5.34	7.86	10.45	14.92	16.99
SO-52(10)	1222142003	4.03	5.34	7.86	10.45	14.92	16.99
SO-57(10)	1222142008	4.03	5.34	7.86	10.44	14.92	16.98
SO-58(10)	1222142009	4.03	5.34	7.86	10.44	14.92	16.99
SO-59(10)	1222142010	4.03	5.34	7.86	10.44	14.92	16.99

LIMITS: Retention times should be within 30 seconds of the corresponding time in the calibration standard.

OND

Batch Worklist

Batch: ENVX/ 15815 Created: 8/13/2012 10:59 Instrument: HBN: 91554

Rule: EPA 3510, Sep Funnel SVOA Analyst: C. Pickering Status: NA

Workorder: 1222142

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	289578	RLVS for HBN 91554 [ENVX/15815			3	RLVS		E3510SV.3P	6089	8/20/2012	8/13/2012	
2	289579	MB for HBN 91554 [ENVX/15815]			3	MB		E3510SV.3P	6089	8/20/2012	8/13/2012	
3	289580	LCS for HBN 91554 [ENVX/15815]			3	LCS		E3510SV.3P	6089	8/20/2012	8/13/2012	
4	289581	LCSD for HBN 91554 [ENVX/15815			3	LCSD		E3510SV.3P	6089	8/20/2012	8/13/2012	
5	1222142012	FTSW-HR-SO-60 (7.5) ERB			3	SAMPLE	1222142012-A	E3510SV.3P	5480	8/13/2012	8/13/2012	

8270 SV

ONP

Batch Worklist

Batch: ENVX/ 15839 Created: 8/14/2012 14:37 Instrument:

Rule: EPA 3550, Sonic SVOA Soil Analyst: C. Ahlers Status: NA

HBN: 91681

Workorder: 1222142

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	289973	MB for HBN 91681 [ENVX/15839]			4	MB		E3550SV.4P	6169	8/28/2012	8/13/2012	
2	289974	LCS for HBN 91681 [ENVX/15839]			4	LCS		E3550SV.4P	6169	8/28/2012	8/13/2012	
3	289977	RLVS for HBN 91681 [ENVX/15839			4	RLVS		E3550SV.4P	6169	8/28/2012	8/13/2012	
4	1222142001	FTSW-HR-SO-50 (10)			4	SAMPLE	1222142001-A	E3550SV.4P	5480	8/17/2012	8/13/2012	
5	1222142002	FTSW-HR-SO-51 (10)			4	SAMPLE	1222142002-A	E3550SV.4P	5480	8/17/2012	8/13/2012	
6	1222142003	FTSW-HR-SO-52 (10)			4	SAMPLE	1222142003-A	E3550SV.4P	5480	8/17/2012	8/13/2012	
7	1222142004	FTSW-HR-SO-53 (10)			4	SAMPLE	1222142004-A	E3550SV.4P	5480	8/17/2012	8/13/2012	
8	1222142005	FTSW-HR-SO-54 (10)			4	SAMPLE	1222142005-A	E3550SV.4P	5480	8/20/2012	8/13/2012	
9	1222142006	FTSW-HR-SO-55 (7.5)			4	SAMPLE	1222142006-A	E3550SV.4P	5480	8/20/2012	8/13/2012	
10	1222142007	FTSW-HR-SO-56 (10)			4	SAMPLE	1222142007-A	E3550SV.4P	5480	8/20/2012	8/13/2012	
11	290338	FTSW-HR-SO-56...(1222142007MS)			4	MS		E3550SV.4P	6169	8/20/2012	8/13/2012	
12	290339	FTSW-HR-SO-5...(1222142007MSD)			4	MSD		E3550SV.4P	6169	8/20/2012	8/13/2012	
13	1222142008	FTSW-HR-SO-57 (10)			4	SAMPLE	1222142008-A	E3550SV.4P	5480	8/20/2012	8/13/2012	
14	1222142009	FTSW-HR-SO-58 (10)			4	SAMPLE	1222142009-A	E3550SV.4P	5480	8/20/2012	8/13/2012	
15	1222142010	FTSW-HR-SO-59 (10)			4	SAMPLE	1222142010-A	E3550SV.4P	5480	8/20/2012	8/13/2012	
16	1222142011	FTSW-HR-SO-60 (7.5)			4	SAMPLE	1222142011-A	E3550SV.4P	5480	8/20/2012	8/13/2012	

LDOH= 8/17

8/20

8270 SV

Batch Worklist

Batch: ESVO/ 3830 **Created:** 8/21/2012 14:48 **Instrument:** HBN: 92092
Rule: SW 8270, Water **Analyst:** R. Hendricks **Status:** WP

Ì %R92092^ Î

Workorder: 1222142

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	289578	RLVS for HBN 91554 [ENVX/15815	1000 mL	1 mL	3	RLVS		S8270...3Q	6089		8/20/2012	
2	289579	MB for HBN 91554 [ENVX/15815]	1000 mL	1 mL	3	MB		S8270...3Q	6089		8/20/2012	
3	289580	LCS for HBN 91554 [ENVX/15815]	1000 mL	1 mL	3	LCS		S8270...3Q	6089		8/20/2012	
4	289581	LCSD for HBN 91554 [ENVX/15815	1000 mL	1 mL	3	LCSD		S8270...3Q	6089		8/20/2012	
5	1222142012	FTSW-HR-SO-60 (7.5) ERB	1000 mL	1 mL	3	SAMPLE	1222142012-A	S8270D...3	5480	9/22/2012	8/21/2012	

Batch Worklist

Batch: ESVO/ 3831 | Created: 8/21/2012 15:14 | Instrument: | HBN: 92093

Rule: SW 8270, Soil | Analyst: R. Hendricks | Status: WP

Workorder: 1222142

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	289973	MB for HBN 91681 [ENVX/15839]	30 grams	1 mL	4	MB		S827050.4Q	6169		8/21/2012	
2	289974	LCS for HBN 91681 [ENVX/15839]	30 grams	1 mL	4	LCS		S827050.4Q	6169		8/21/2012	
3	289977	RLVS for HBN 91681 [ENVX/15839	30 grams	1 mL	4	RLVS		S827050.4Q	6169		8/21/2012	
4	1222142001	FTSW-HR-SO-50 (10)	30.04 grams	1 mL	4	SAMPLE	1222142001-A	S8270D...4	5480	9/23/2012	8/21/2012	
5	1222142002	FTSW-HR-SO-51 (10)	30.95 grams	1 mL	4	SAMPLE	1222142002-A	S8270D...4	5480	9/23/2012	8/21/2012	
6	1222142003	FTSW-HR-SO-52 (10)	30.07 grams	1 mL	4	SAMPLE	1222142003-A	S8270D...4	5480	9/23/2012	8/21/2012	
7	1222142004	FTSW-HR-SO-53 (10)	30.1 grams	1 mL	4	SAMPLE	1222142004-A	S8270D...4	5480	9/23/2012	8/21/2012	
8	1222142005	FTSW-HR-SO-54 (10)	30.61 grams	1 mL	4	SAMPLE	1222142005-A	S8270D...4	5480	9/23/2012	8/21/2012	
9	1222142006	FTSW-HR-SO-55 (7.5)	30.57 grams	1 mL	4	SAMPLE	1222142006-A	S8270D...4	5480	9/23/2012	8/21/2012	
10	1222142007	FTSW-HR-SO-56 (10)	30.38 grams	1 mL	4	SAMPLE	1222142007-A	S8270D...4	5480	9/23/2012	8/21/2012	
11	290338	FTSW-HR-SO-56...(1222142007MS)	30 grams	1 mL	4	MS		S827050.4Q	6169		8/21/2012	
12	290339	FTSW-HR-SO-5...(1222142007MSD)	30.02 grams	1 mL	4	MSD		S827050.4Q	6169		8/21/2012	
13	1222142008	FTSW-HR-SO-57 (10)	30.49 grams	1 mL	4	SAMPLE	1222142008-A	S8270D...4	5480	9/23/2012	8/21/2012	
14	1222142009	FTSW-HR-SO-58 (10)	30.38 grams	1 mL	4	SAMPLE	1222142009-A	S8270D...4	5480	9/23/2012	8/21/2012	
15	1222142010	FTSW-HR-SO-59 (10)	30.31 grams	1 mL	4	SAMPLE	1222142010-A	S8270D...4	5480	9/23/2012	8/21/2012	
16	1222142011	FTSW-HR-SO-60 (7.5)	30.85 grams	1 mL	4	SAMPLE	1222142011-A	S8270D...4	5480	9/23/2012	8/21/2012	

DATACHEM LABORATORIES - GC\MS SEMIVOLATILE ANALYSIS
INJECTION LOGBOOK
INSTRUMENT 5975-H

File Name	Date and Time Injected	OP	Method	ALS BOT	Run Length	Dil Fac	Sample name	Misc info
HGU01TUN	08/08/2012 10:06	RAH	8270DTUN	1	11.53	1	8270 DFTPP 13808	1/11/13
HGU02S50	08/08/2012 10:26	RAH	8270D07	2	20.49	1	8270 50 std 15952	X:1/9/13
HGU03S80	08/08/2012 11:01	RAH	8270D07	3	20.49	1	8270 80 std 15970	X:1/9/13
HGU04S65	08/08/2012 11:30	RAH	8270D07	4	20.49	1	8270 65 std 15971	X:1/9/13
HGU05S35	08/08/2012 12:00	RAH	8270D07	5	20.49	1	8270 35 std 15972	X:1/9/13
HGU06S20	08/08/2012 12:29	RAH	8270D07	6	20.49	1	8270 20 std 15973	X:1/9/13
HGU07S05	08/08/2012 12:59	RAH	8270D07	7	20.49	1	8270 5 std 15974	X:1/9/13
HGU08ICV	08/08/2012 13:29	RAH	8270D07	8	20.49	1	8270 ICV 15975	X:1/9/13
HGV01TUN	08/08/2012 14:07	RAH	8270DTUN	1	11.53	1	8270 DFTPP 13808	1/11/13
HGV02S50	08/08/2012 14:28	RAH	8270DOND	2	20.49	1	8270 50 std 15952	X:1/9/13
HGV03LCS	08/08/2012 14:58	RAH	8270DOND	3	20.49	1	288219	WATER 8270
HGV04LCS	08/08/2012 15:28	RAH	8270DOND	4	20.49	1	288239	SOIL 8270
HGV05BLK	08/08/2012 15:58	RAH	8270DOND	5	20.49	1	288238	SOIL 8270
HGV06RLV	08/08/2012 16:29	RAH	8270DOND	6	20.49	1	288240	SOIL 8270
HGV07C01	08/08/2012 16:58	RAH	8270DOND	7	20.49	1	1221555001	SOIL 8270
HGV08M02	08/08/2012 17:28	RAH	8270DOND	8	20.49	1	1221555002	SOIL 8270
HGV09M03	08/08/2012 17:56	RAH	8270DOND	9	20.49	1	1221555003	SOIL 8270
HGV10C04	08/08/2012 18:26	RAH	8270DOND	10	20.49	1	1221555004	SOIL 8270
HGV11C05	08/08/2012 18:55	RAH	8270DOND	11	20.49	1	1221555005	SOIL 8270
HGV12C07	08/08/2012 19:24	RAH	8270DOND	12	20.49	1	1221555007	SOIL 8270
HGV13C08	08/08/2012 19:54	RAH	8270DOND	13	20.49	1	1221555008	SOIL 8270
HGV14C09	08/08/2012 20:24	RAH	8270DOND	14	20.49	1	1221555009	SOIL 8270
HGV15C10	08/08/2012 20:53	RAH	8270DOND	15	20.49	1	1221555010	SOIL 8270
HGV16C11	08/08/2012 21:23	RAH	8270DOND	16	20.49	1	1221555011	SOIL 8270
HGV17C12	08/08/2012 21:52	RAH	8270DOND	17	20.49	1	1221555012	SOIL 8270
HGV18C13	08/08/2012 22:22	RAH	8270DOND	18	20.49	1	1221555013	SOIL 8270
HGV19C14	08/08/2012 22:51	RAH	8270DOND	19	20.49	1	1221555014	SOIL 8270

DATACHEM LABORATORIES - GC\MS SEMIVOLATILE ANALYSIS
INJECTION LOGBOOK
INSTRUMENT 5975-H

File Name	Date and Time Injected	OP	Method	ALS BOT	Run Length	Dil Fac	Sample name	Misc info
HGZ01TUN	08/14/2012 09:47	RAH	8270DOND	1	11.53	1	8270 DFTPP 13808	X:1/11/13
HGZ02S50	08/14/2012 10:07	RAH	8270D07	2	20.49	1	8270 50 std 15952	X:1/9/13
HGZ03BLK	08/14/2012 10:39	RAH	8270DOND	3	20.49	1	289579	WATER 8270
HGZ04LCS	08/14/2012 11:09	RAH	8270DOND	4	20.49	1	289580	WATER 8270
HGZ05LCS	08/14/2012 11:38	RAH	8270DOND	5	20.49	1	289581	WATER 8270
HGZ06RLV	08/14/2012 12:07	RAH	8270DOND	6	20.49	1	289578	WATER 8270
HGZ07C12	08/14/2012 12:36	RAH	8270DOND	7	20.49	1	1222142012	WATER 8270
HGZ08BLK	08/14/2012 13:06	RAH	8270D07	8	20.49	1	289411	WATER 8270
HGZ09LCS	08/14/2012 13:35	RAH	8270D07	9	20.49	1	289412	WATER 8270
bad injection.								
HGZ10LCS	08/14/2012 14:04	RAH	8270D07	10	20.49	1	289413	WATER 8270
HGZ11LCS	08/14/2012 14:33	RAH	8270D07	9	20.49	1	289412	WATER 8270
HGZ12C03	08/14/2012 15:03	RAH	8270D07	11	20.49	1	1222073003	WATER 8270
HGZ13C04	08/14/2012 15:32	RAH	8270D07	12	20.49	1	1222073004	WATER 8270
HGZ14C03	08/14/2012 16:01	RAH	8270D07	13	20.49	1	1222408003	WATER 8270
HGZ15C04	08/14/2012 16:31	RAH	8270D07	14	20.49	1	1222408004	WATER 8270

DATACHEM LABORATORIES - GC\MS SEMIVOLATILE ANALYSIS
INJECTION LOGBOOK
INSTRUMENT 5975-H

File Name	Date and Time Injected	OP	Method	ALS BOT	Run Length	Dil Fac	Sample name	Misc info
HHC01TUN	08/17/2012 11:07	RAH	8270DTUN	1	11.53	1	8270 DFTPP 13808	X:1/11/13
HHC02S50	08/17/2012 11:27	RAH	8270DOND	2	20.49	1	8270 50 std 15952	X:1/9/13
HHC03BLK	08/17/2012 11:56	RAH	8270DOND	3	20.49	1	289973	SOIL 8270
HHC04LCS	08/17/2012 12:25	RAH	8270DOND	4	20.49	1	289974	SOIL 8270
HHC05RLV	08/17/2012 12:54	RAH	8270DOND	5	20.49	1	289977	SOIL 8270
HHC05ZST	08/17/2012 13:23	RAH	8270DOND	25	20.49	1	PUF TEST BLANK	SOIL 8270
HHC06C04	08/17/2012 13:52	RAH	8270DOND	6	20.49	1	1222142004	SOIL 8270
HHC07C05	08/17/2012 14:21	RAH	8270DOND	7	20.49	1	1222142005	SOIL 8270
HHC08C06	08/17/2012 14:50	RAH	8270DOND	8	20.49	1	1222142006	SOIL 8270
HHC09C07	08/17/2012 15:20	RAH	8270DOND	9	20.49	1	1222142007	SOIL 8270
HHC10AMS	08/17/2012 15:49	RAH	8270DOND	10	20.49	1	290338	SOIL 8270
HHC11MSD	08/17/2012 16:18	RAH	8270DOND	11	20.49	1	290339	SOIL 8270
HHC12C11	08/17/2012 16:47	RAH	8270DOND	12	20.49	1	1222142011	SOIL 8270
HHC13C01	08/17/2012 17:16	RAH	8270DOND	13	20.49	1	1222142001	SOIL 8270
HHC14C02	08/17/2012 17:45	RAH	8270DOND	14	20.49	1	1222142002	SOIL 8270
HHC15C03	08/17/2012 18:14	RAH	8270DOND	15	20.49	1	1222142003	SOIL 8270
HHC16C08	08/17/2012 18:43	RAH	8270DOND	16	20.49	1	1222142008	SOIL 8270
HHC17C09	08/17/2012 19:12	RAH	8270DOND	17	20.49	1	1222142009	SOIL 8270
HHC18C10	08/17/2012 19:41	RAH	8270DOND	18	20.49	1	1222142010	SOIL 8270



ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

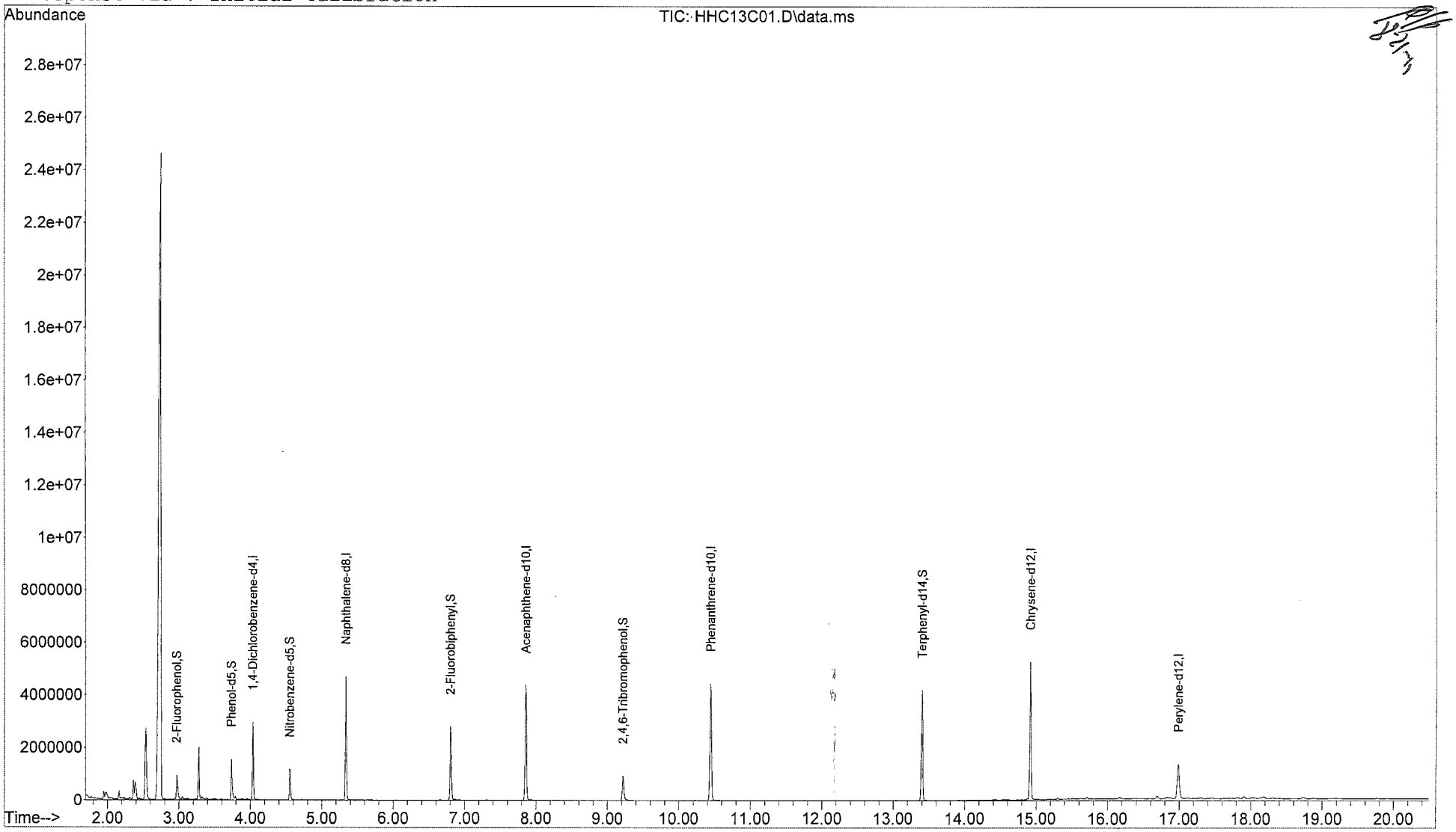
Raw Data

Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC13C01.D Vial: 13
Acq On : 08/17/2012 17:16 Operator: RAH
Sample : 1222142001 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 21 15:11:23 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC13C01.D Vial: 13
Acq On : 08/17/2012 17:16 Operator: RAH
Sample : 1222142001 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 21 15:11:23 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	531771	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2437969	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1454399	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2769382	40.00 ug/mL
12) Chrysene-d12	14.92	240	2561116	40.00 ug/mL
14) Perylene-d12	16.99	264	560828	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	378394	21.187ug/mL
4) Phenol-d5	3.73	99	649976	27.741ug/mL
7) Nitrobenzene-d5	4.55	82	436974	20.909ug/mL
9) 2-Fluorobiphenyl	6.81	172	1259639	23.351ug/mL
11) 2,4,6-Tribromophenol	9.22	330	204850	21.972ug/mL
13) Terphenyl-d14	13.40	244	2050999	41.480ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

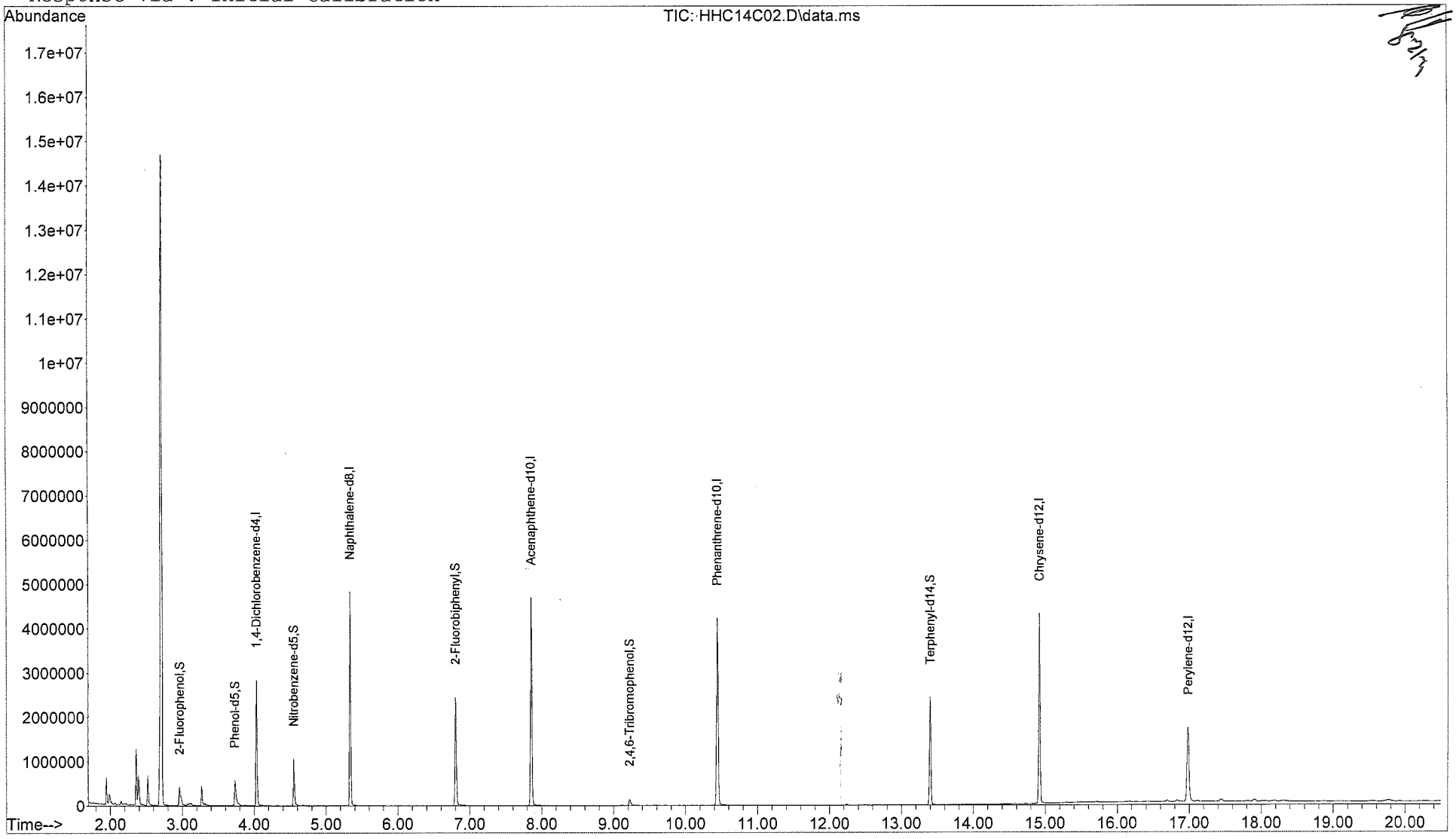
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC14C02.D Vial: 14
Acq On : 08/17/2012 17:45 Operator: RAH
Sample : 1222142002 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 21 15:11:14 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC14C02.D Vial: 14
Acq On : 08/17/2012 17:45 Operator: RAH
Sample : 1222142002 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 21 15:11:14 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	557682	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2526592	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1494626	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2660884	40.00 ug/mL
12) Chrysene-d12	14.92	240	2140053	40.00 ug/mL
14) Perylene-d12	16.99	264	963594	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.96	112	212539	11.348ug/mL
4) Phenol-d5	3.73	99	280933	11.433ug/mL
7) Nitrobenzene-d5	4.55	82	387245	17.879ug/mL
9) 2-Fluorobiphenyl	6.80	172	1154302	20.822ug/mL
11) 2,4,6-Tribromophenol	9.23	330	36062	4.026ug/mL
13) Terphenyl-d14	13.40	244	1207322	29.222ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104	Not Detected	
5) 1,4-Dithiane	0.00	120	Not Detected	

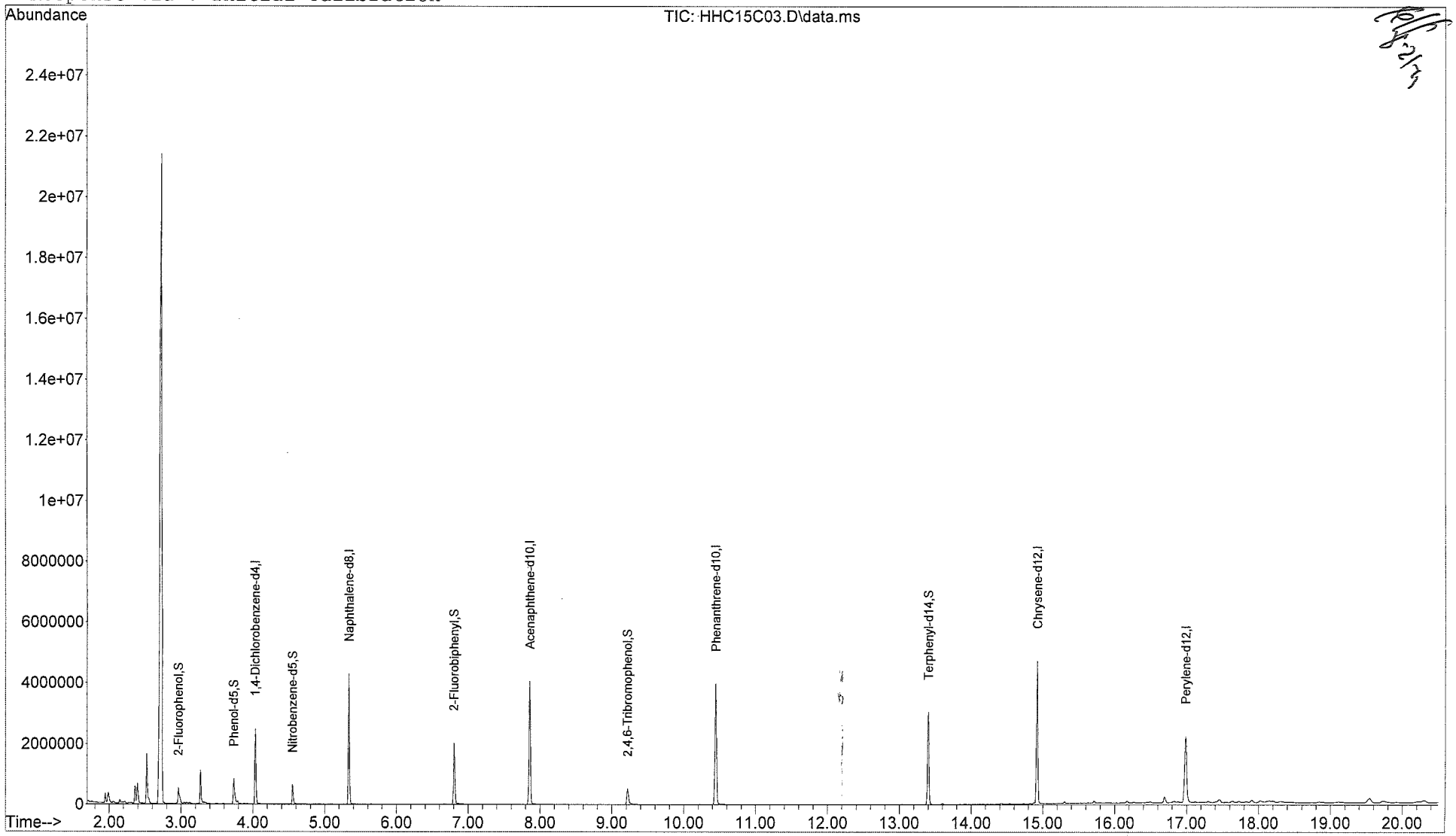
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC15C03.D Vial: 15
Acq On : 08/17/2012 18:14 Operator: RAH
Sample : 1222142003 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 21 15:11:04 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC15C03.D Vial: 15
Acq On : 08/17/2012 18:14 Operator: RAH
Sample : 1222142003 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 21 15:11:04 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	508015	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2278686	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1334963	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2505429	40.00 ug/mL
12) Chrysene-d12	14.92	240	2340446	40.00 ug/mL
14) Perylene-d12	16.99	264	1294321	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.96	112	235986	13.831ug/mL
4) Phenol-d5	3.73	99	422625	18.881ug/mL
7) Nitrobenzene-d5	4.55	82	239100	12.241ug/mL
9) 2-Fluorobiphenyl	6.80	172	898313	18.143ug/mL
11) 2,4,6-Tribromophenol	9.22	330	123387	14.629ug/mL
13) Terphenyl-d14	13.40	244	1561381	34.556ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104	Not Detected	
5) 1,4-Dithiane	0.00	120	Not Detected	

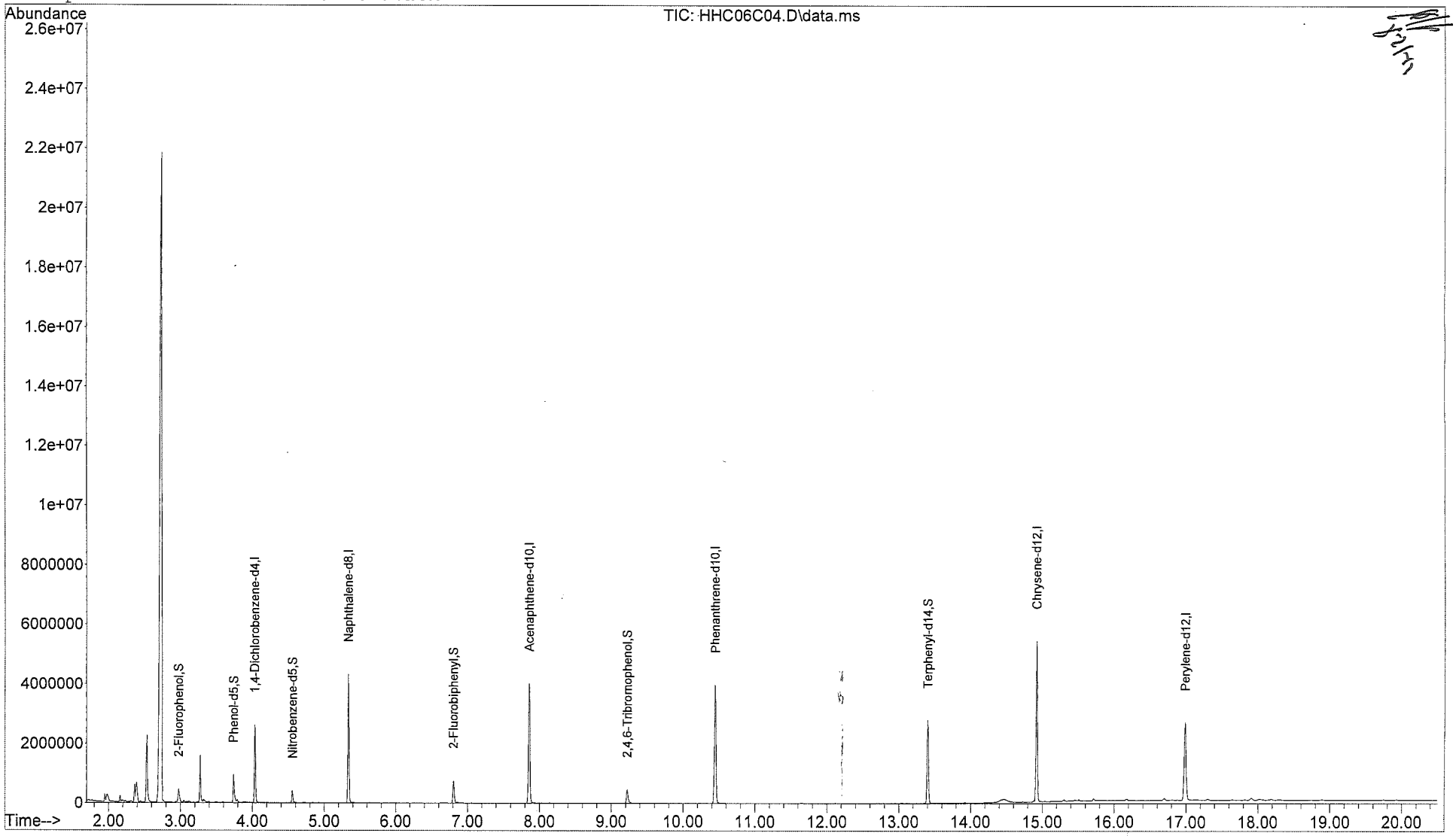
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC06C04.D Vial: 6
Acq On : 08/17/2012 13:52 Operator: RAH
Sample : 1222142004 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 21 15:12:42 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC06C04.D Vial: 6
Acq On : 08/17/2012 13:52 Operator: RAH
Sample : 1222142004 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 21 15:12:42 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	512485	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2306610	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1367328	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2530582	40.00 ug/mL
12) Chrysene-d12	14.92	240	2709704	40.00 ug/mL
14) Perylene-d12	16.99	264	1602251	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	200537	11.651ug/mL
4) Phenol-d5	3.74	99	417131	18.473ug/mL
7) Nitrobenzene-d5	4.56	82	157202	7.950ug/mL
9) 2-Fluorobiphenyl	6.80	172	334684	6.599ug/mL
11) 2,4,6-Tribromophenol	9.22	330	102883	12.076ug/mL
13) Terphenyl-d14	13.40	244	1410156	26.956ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104	Not Detected	
5) 1,4-Dithiane	0.00	120	Not Detected	

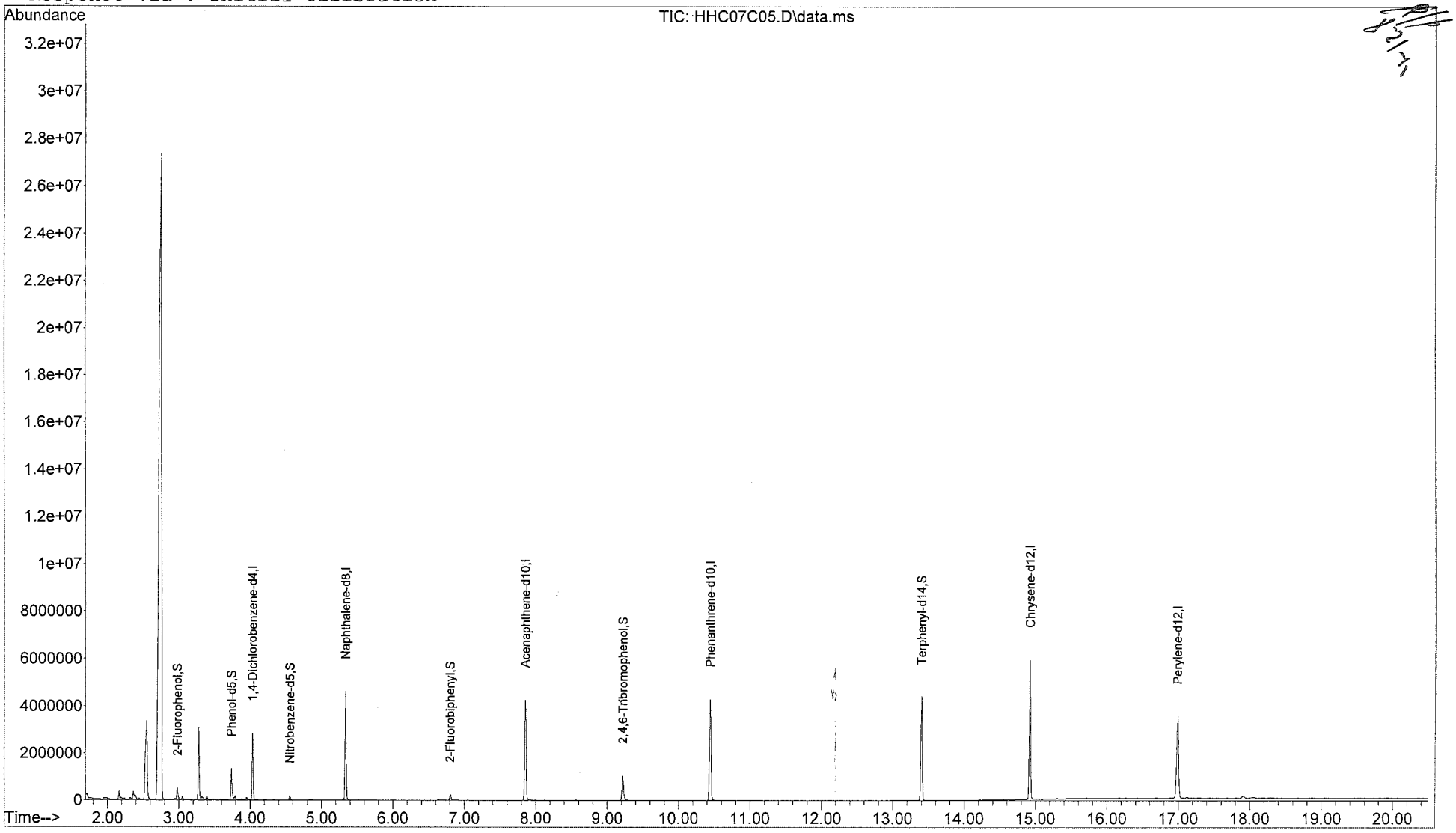
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC07C05.D Vial: 7
Acq On : 08/17/2012 14:21 Operator: RAH
Sample : 1222142005 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 21 15:12:28 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC07C05.D Vial: 7
Acq On : 08/17/2012 14:21 Operator: RAH
Sample : 1222142005 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 21 15:12:28 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	531344	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2420602	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1441421	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2718248	40.00 ug/mL
12) Chrysene-d12	14.92	240	3014877	40.00 ug/mL
14) Perylene-d12	16.99	264	2357452	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	193875	10.864ug/mL
4) Phenol-d5	3.74	99	564641	24.118ug/mL
7) Nitrobenzene-d5	4.56	82	73934	3.563ug/mL
9) 2-Fluorobiphenyl	6.80	172	88707	1.659ug/mL
11) 2,4,6-Tribromophenol	9.22	330	234939	25.673ug/mL
13) Terphenyl-d14	13.40	244	2224435	38.217ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

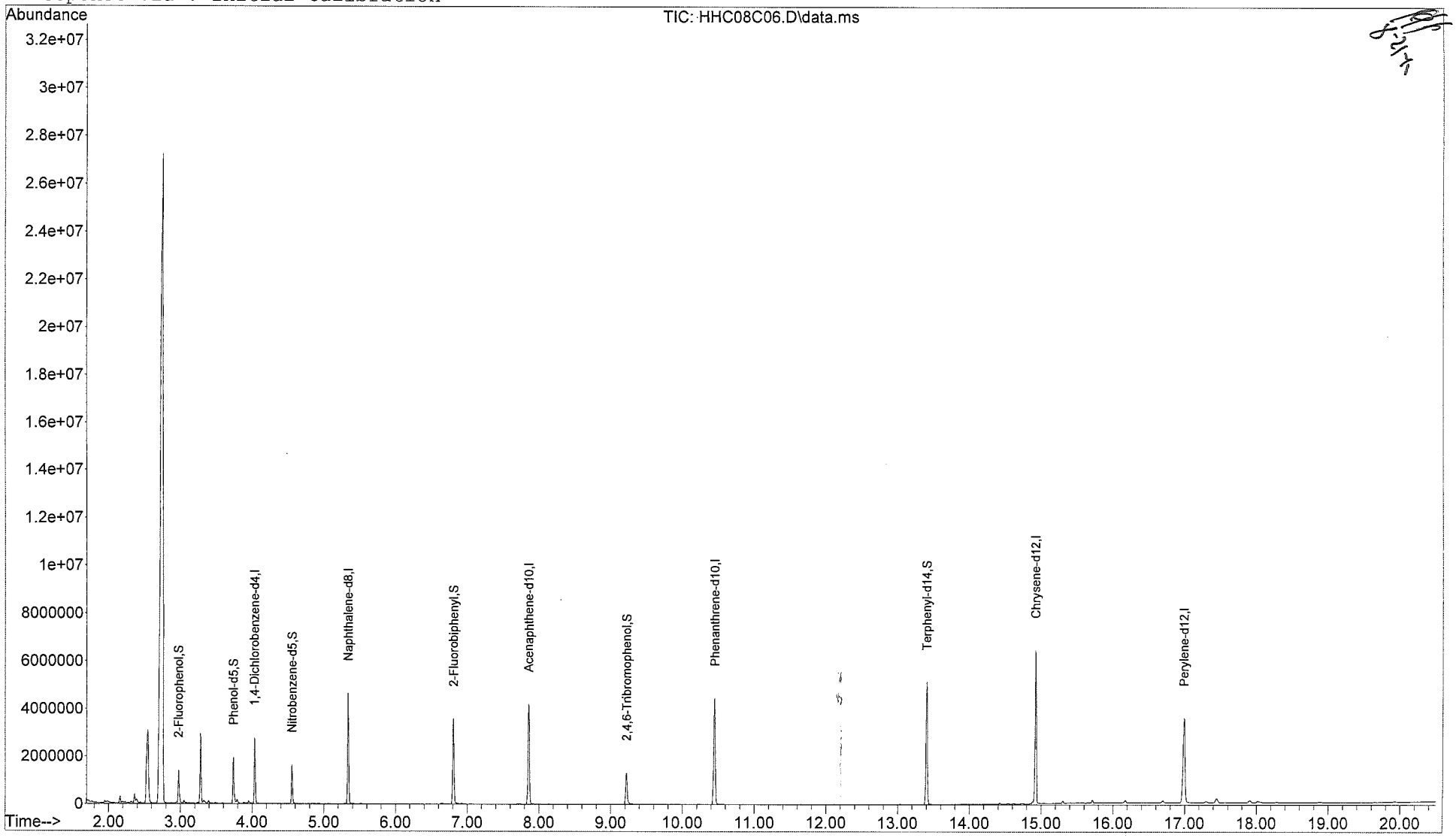
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC08C06.D Vial: 8
Acq On : 08/17/2012 14:50 Operator: RAH
Sample : 1222142006 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 21 15:12:19 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC08C06.D Vial: 8
Acq On : 08/17/2012 14:50 Operator: RAH
Sample : 1222142006 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 21 15:12:19 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	524289	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2416965	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1454440	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2841398	40.00 ug/mL
12) Chrysene-d12	14.92	240	3274900	40.00 ug/mL
14) Perylene-d12	16.99	264	2504645	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	479732	27.244ug/mL
4) Phenol-d5	3.74	99	821685	35.570ug/mL
7) Nitrobenzene-d5	4.56	82	567141	27.373ug/mL
9) 2-Fluorobiphenyl	6.81	172	1573677	29.172ug/mL
11) 2,4,6-Tribromophenol	9.22	330	286566	29.957ug/mL
13) Terphenyl-d14	13.40	244	2618101	41.409ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104	Not Detected	
5) 1,4-Dithiane	0.00	120	Not Detected	

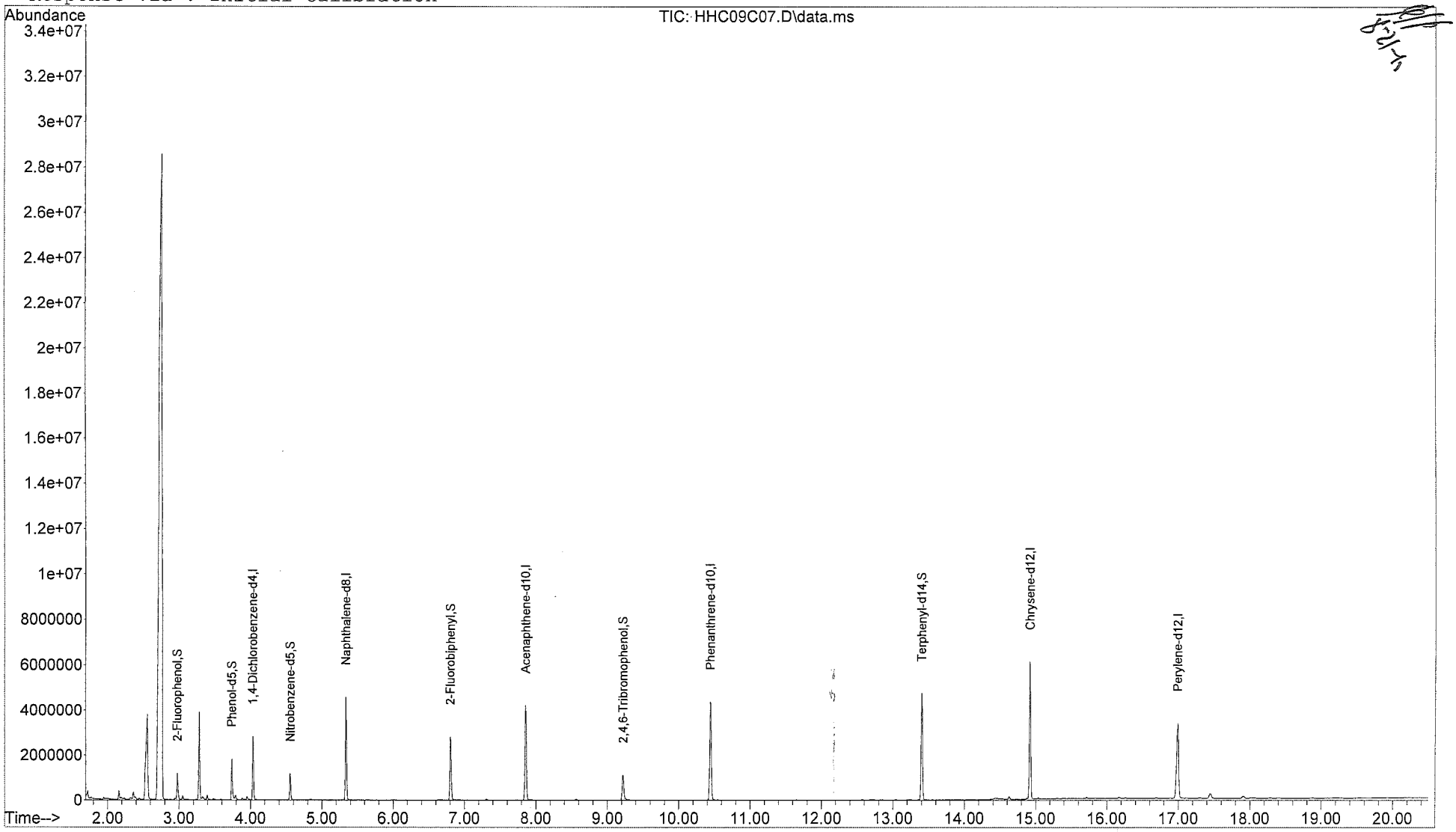
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC09C07.D Vial: 9
Acq On : 08/17/2012 15:20 Operator: RAH
Sample : 1222142007 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 21 15:12:06 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC09C07.D Vial: 9
Acq On : 08/17/2012 15:20 Operator: RAH
Sample : 1222142007 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 21 15:12:06 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	524262	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2411629	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1449234	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2775084	40.00 ug/mL
12) Chrysene-d12	14.92	240	3118031	40.00 ug/mL
14) Perylene-d12	16.99	264	2404341	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	391284	22.222ug/mL
4) Phenol-d5	3.74	99	731713	31.677ug/mL
7) Nitrobenzene-d5	4.56	82	430762	20.837ug/mL
9) 2-Fluorobiphenyl	6.80	172	1269721	23.622ug/mL
11) 2,4,6-Tribromophenol	9.22	330	250624	26.826ug/mL
13) Terphenyl-d14	13.40	244	2401266	39.890ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104	Not Detected	
5) 1,4-Dithiane	0.00	120	Not Detected	

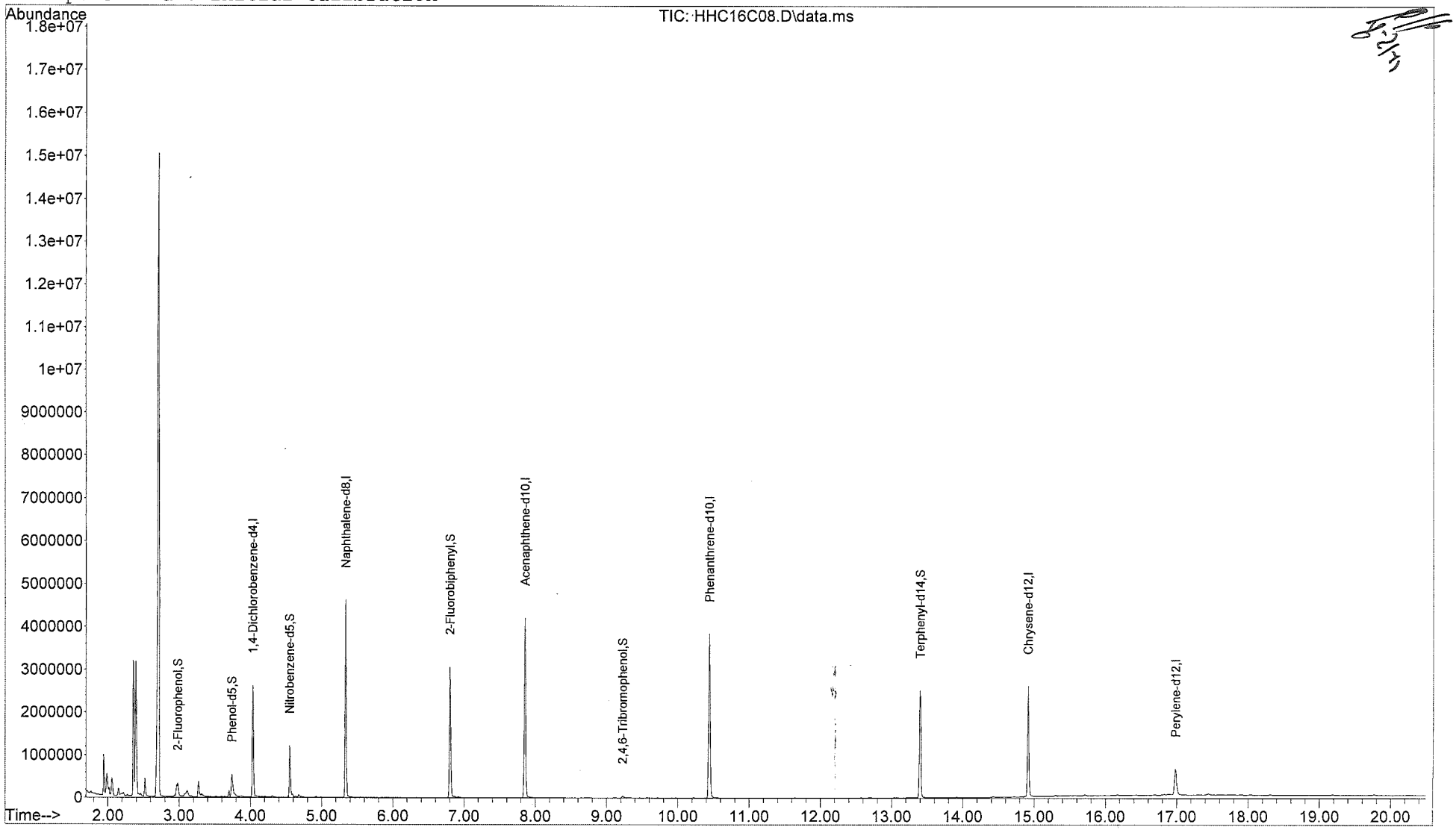
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC16C08.D Vial: 16
Acq On : 08/17/2012 18:43 Operator: RAH
Sample : 1222142008 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 21 15:10:55 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

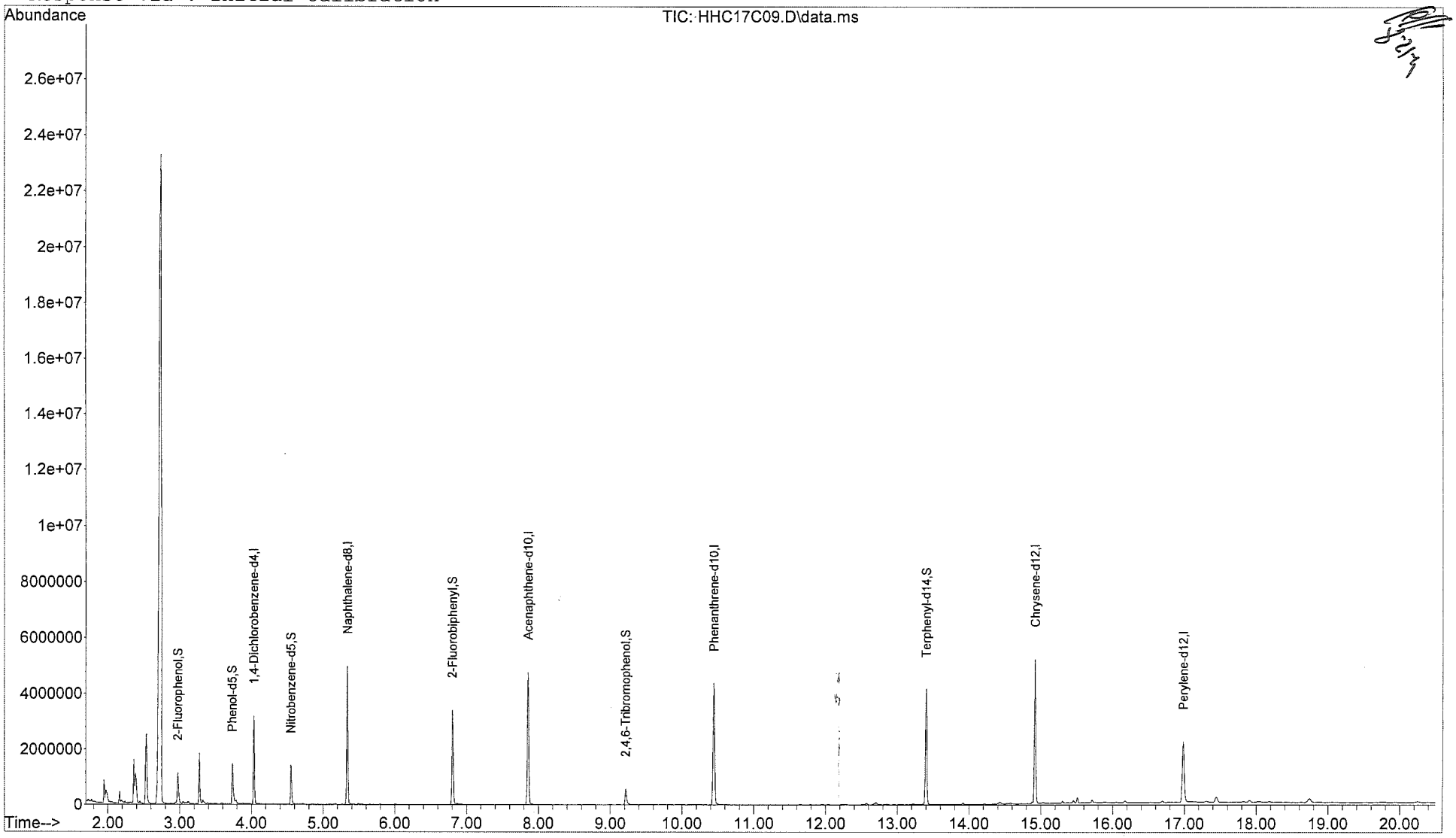


Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC17C09.D Vial: 17
Acq On : 08/17/2012 19:12 Operator: RAH
Sample : 1222142009 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 21 15:10:45 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC17C09.D Vial: 17
Acq On : 08/17/2012 19:12 Operator: RAH
Sample : 1222142009 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 21 15:10:45 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	589478	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2628202	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1589291	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2849334	40.00 ug/mL
12) Chrysene-d12	14.92	240	2603367	40.00 ug/mL
14) Perylene-d12	16.99	264	1414383	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	455739	23.020ug/mL
4) Phenol-d5	3.73	99	618902	23.829ug/mL
7) Nitrobenzene-d5	4.55	82	534758	23.736ug/mL
9) 2-Fluorobiphenyl	6.80	172	1551679	26.323ug/mL
11) 2,4,6-Tribromophenol	9.22	330	126168	13.153ug/mL
13) Terphenyl-d14	13.40	244	2126015	42.300ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104	Not Detected	
5) 1,4-Dithiane	0.00	120	Not Detected	

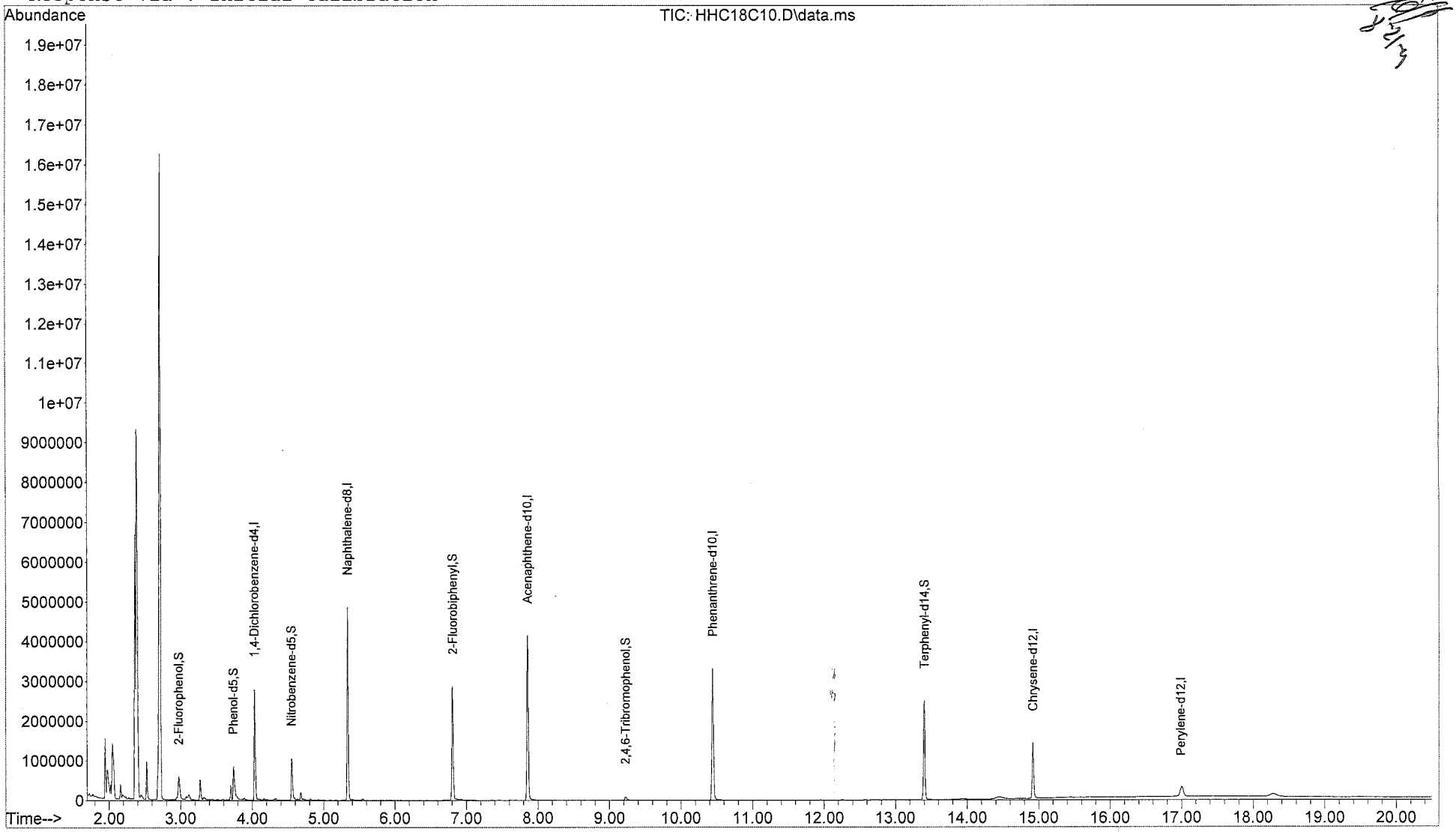
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC18C10.D Vial: 18
Acq On : 08/17/2012 19:41 Operator: RAH
Sample : 1222142010 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 21 15:10:23 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC18C10.D Vial: 18
Acq On : 08/17/2012 19:41 Operator: RAH
Sample : 1222142010 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 21 15:10:23 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	563328	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2561870	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1260823	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2118101	40.00 ug/mL
12) Chrysene-d12	14.92	240	693881	40.00 ug/mL
14) Perylene-d12	16.99	264	52571	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	301156	15.918ug/mL
4) Phenol-d5	3.74	99	257088	10.358ug/mL
7) Nitrobenzene-d5	4.55	82	408977	18.623ug/mL
9) 2-Fluorobiphenyl	6.81	172	1353610	28.946ug/mL
11) 2,4,6-Tribromophenol	9.23	330	24263	3.403ug/mL
13) Terphenyl-d14	13.40	244	1298203	96.909ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC16C08.D Vial: 16
Acq On : 08/17/2012 18:43 Operator: RAH
Sample : 1222142008 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : luL
MS Integration Params: rteint.p
Quant Time: Aug 21 15:10:55 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	559130	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2488145	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1391698	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2351348	40.00 ug/mL
12) Chrysene-d12	14.92	240	1331490	40.00 ug/mL
14) Perylene-d12	16.98	264	321075	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	197886	10.538ug/mL
4) Phenol-d5	3.73	99	183708	7.457ug/mL
7) Nitrobenzene-d5	4.55	82	466116	21.854ug/mL
9) 2-Fluorobiphenyl	6.80	172	1399829	27.119ug/mL
11) 2,4,6-Tribromophenol	9.23	330	13238	1.672ug/mL
13) Terphenyl-d14	13.40	244	1383984	53.839ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

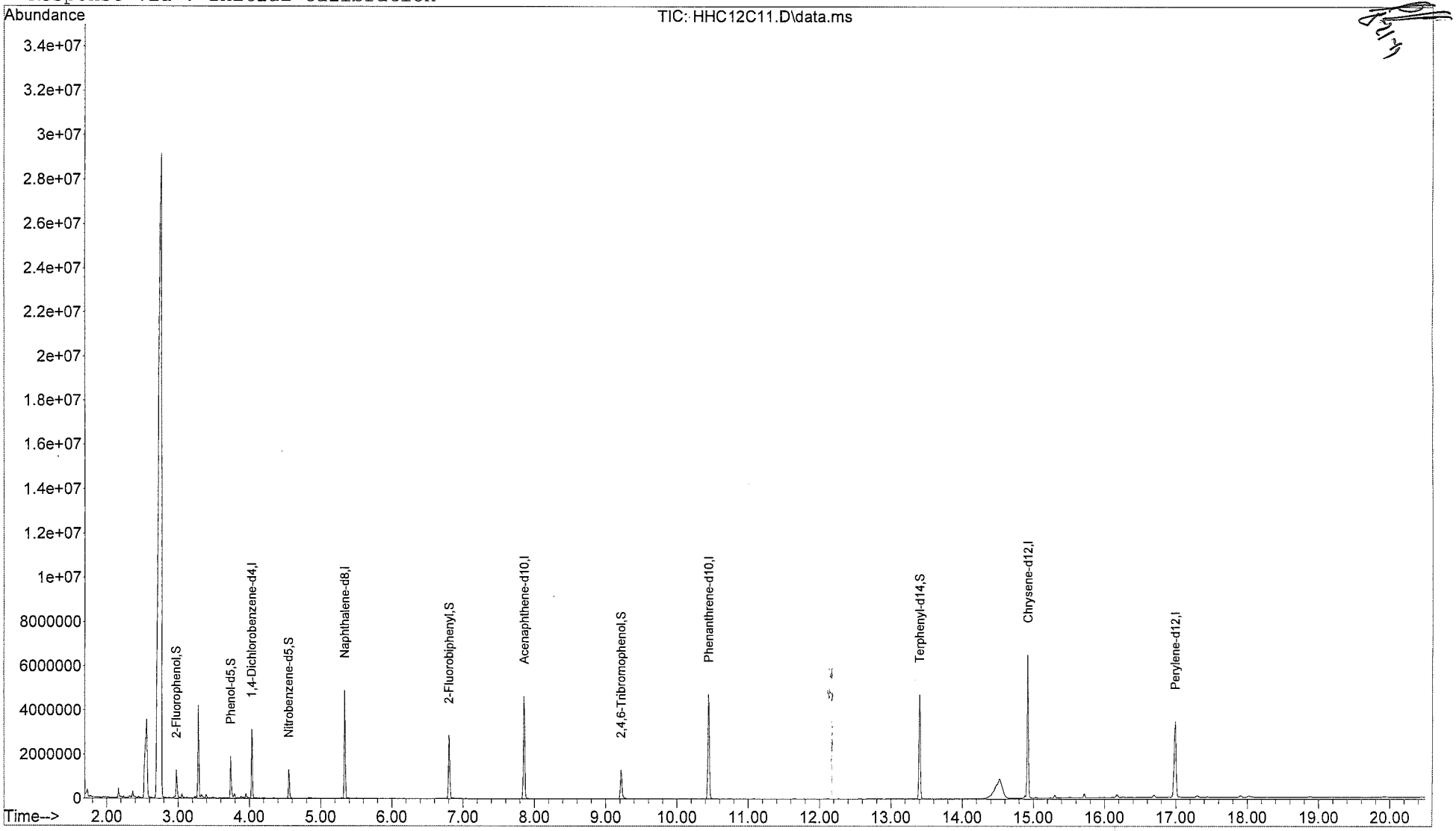
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC12C11.D Vial: 12
Acq On : 08/17/2012 16:47 Operator: RAH
Sample : 1222142011 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 21 15:11:33 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC12C11.D Vial: 12
Acq On : 08/17/2012 16:47 Operator: RAH
Sample : 1222142011 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 21 15:11:33 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	555620	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2544360	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1523612	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2907813	40.00 ug/mL
12) Chrysene-d12	14.92	240	3136331	40.00 ug/mL
14) Perylene-d12	16.99	264	2385724	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	428821	22.980ug/mL
4) Phenol-d5	3.74	99	792160	32.358ug/mL
7) Nitrobenzene-d5	4.55	82	485925	22.279ug/mL
9) 2-Fluorobiphenyl	6.80	172	1309530	23.173ug/mL
11) 2,4,6-Tribromophenol	9.22	330	289736	29.597ug/mL
13) Terphenyl-d14	13.40	244	2393317	39.526ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

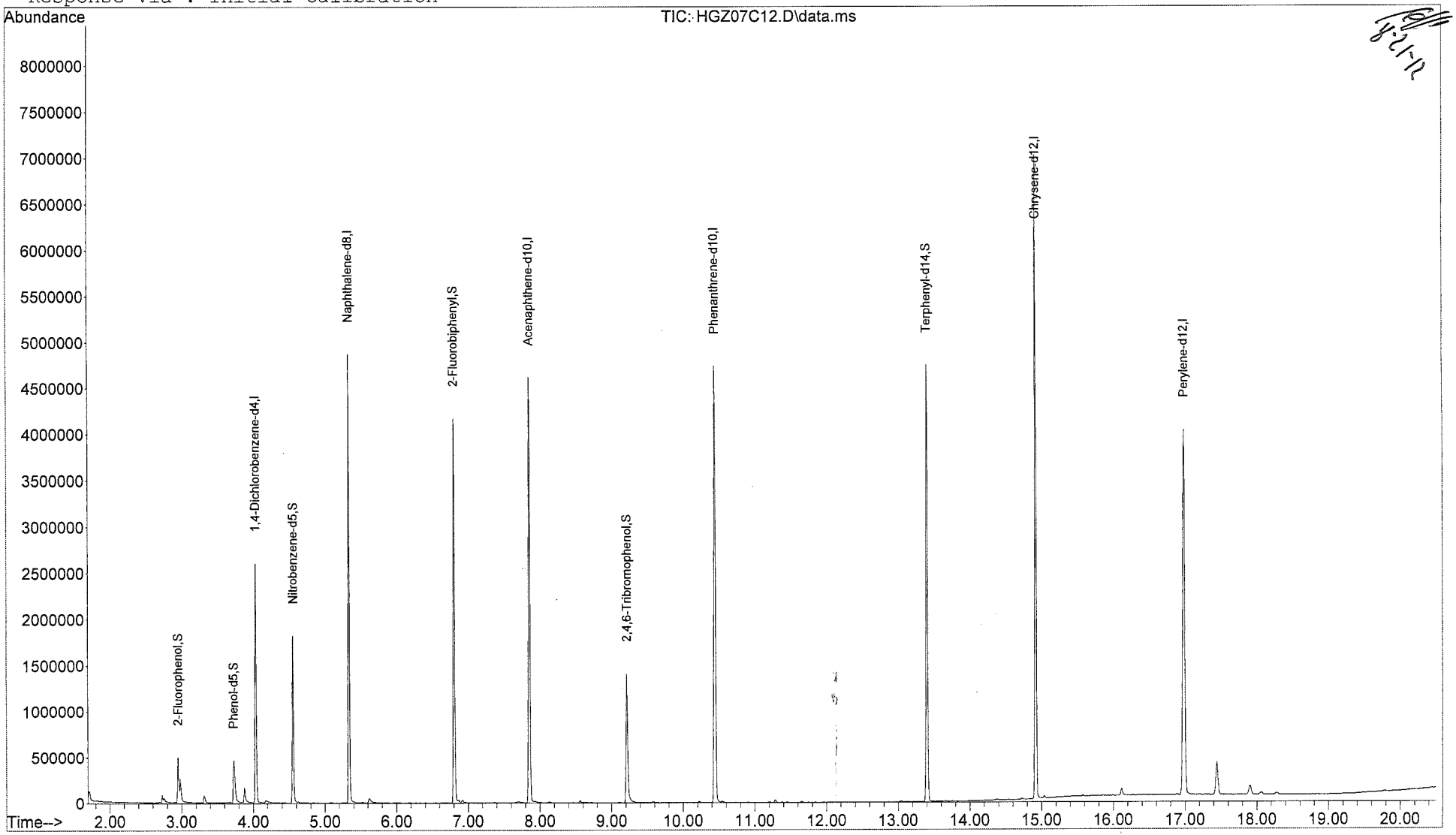
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222142wa\HGZ07C12.D Vial: 7
Acq On : 08/14/2012 12:36 Operator: RAH
Sample : 1222142012 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 14 13:11:29 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

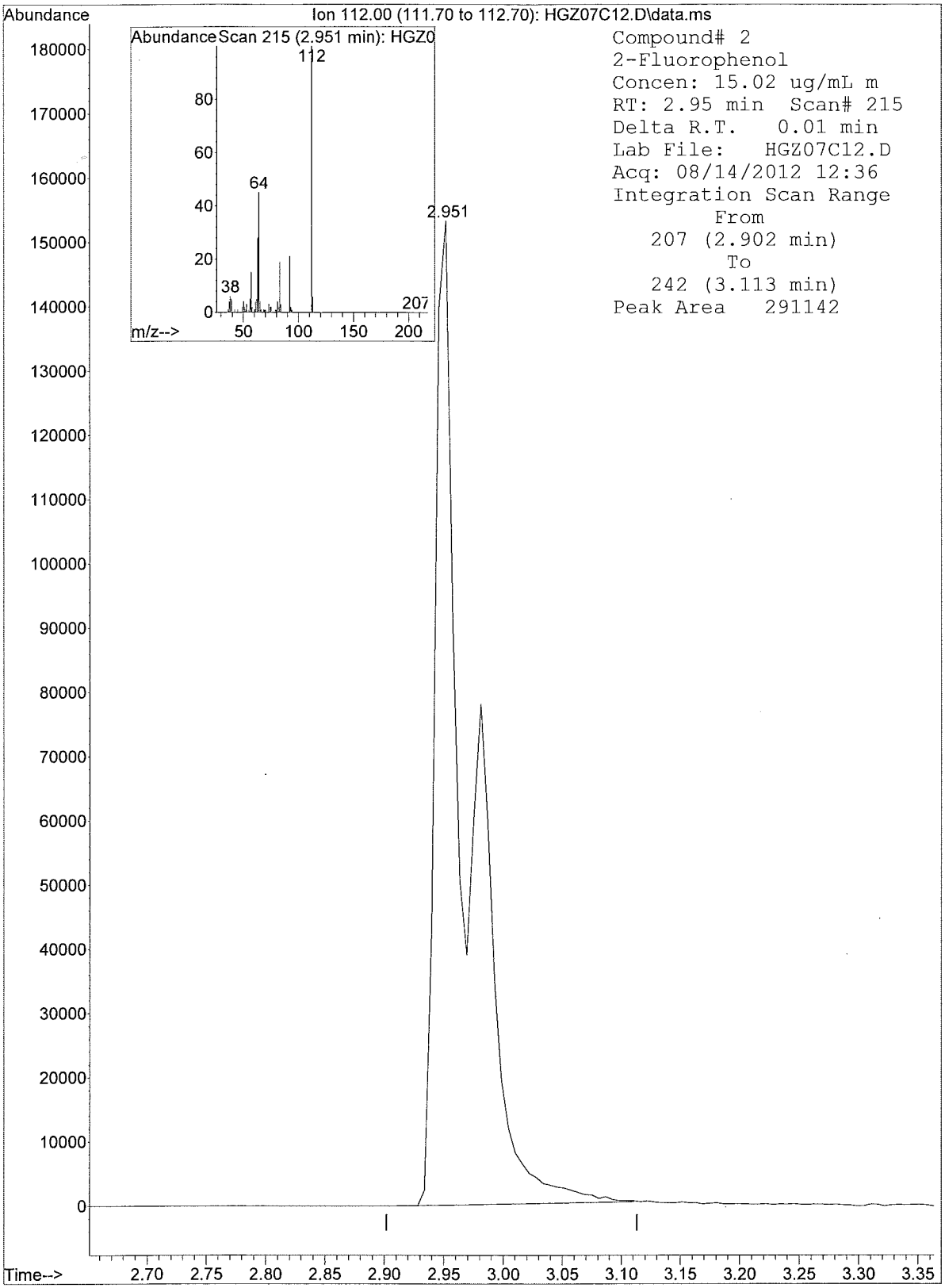
Data File : C:\msdchem\1\data\1222142wa\HGZ07C12.D Vial: 7
Acq On : 08/14/2012 12:36 Operator: RAH
Sample : 1222142012 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 14 13:11:29 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	577155	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2632964	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1522827	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2971171	40.00 ug/mL
12) Chrysene-d12	14.92	240	3393597	40.00 ug/mL
14) Perylene-d12	16.99	264	2800695	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	291142	15.020ug/mL m
4) Phenol-d5	3.73	99	315847	12.420ug/mL
7) Nitrobenzene-d5	4.56	82	703691	31.178ug/mL
9) 2-Fluorobiphenyl	6.80	172	1911695	33.846ug/mL
11) 2,4,6-Tribromophenol	9.22	330	307279	30.720ug/mL
13) Terphenyl-d14	13.40	244	2405177	36.711ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol

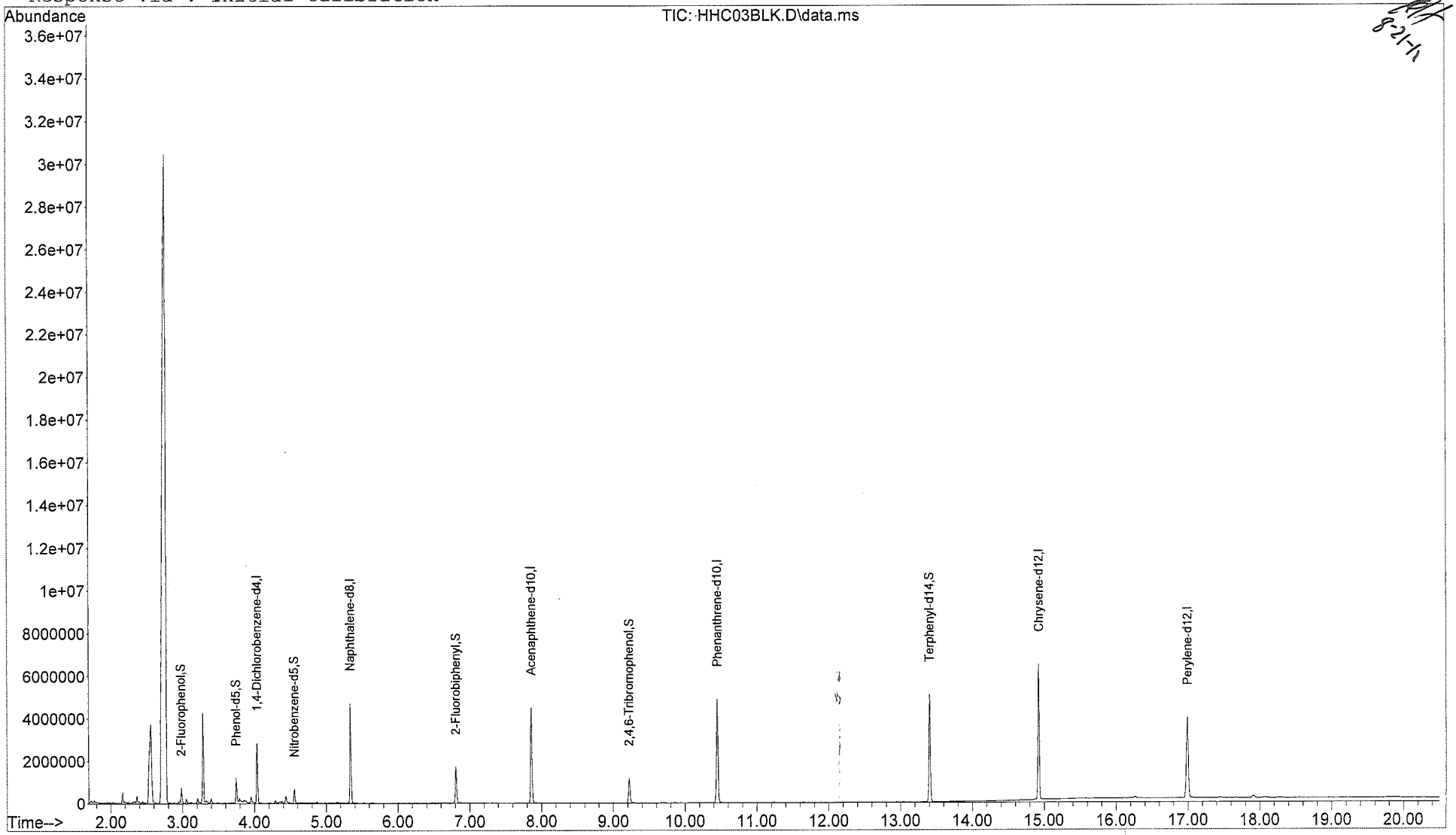


Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC03BLK.D Vial: 3
Acq On : 08/17/2012 11:56 Operator: RAH
Sample : 289973 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 17 12:18:40 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC03BLK.D Vial: 3
Acq On : 08/17/2012 11:56 Operator: RAH
Sample : 289973 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 17 12:18:40 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	550019	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2512904	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1507257	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2916914	40.00 ug/mL
12) Chrysene-d12	14.93	240	3237120	40.00 ug/mL
14) Perylene-d12	17.00	264	2577625	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	251008	13.588ug/mL
4) Phenol-d5	3.75	99	493307	20.356ug/mL
7) Nitrobenzene-d5	4.56	82	244901	11.369ug/mL
9) 2-Fluorobiphenyl	6.81	172	741035	13.256ug/mL
11) 2,4,6-Tribromophenol	9.22	330	242300	24.674ug/mL
13) Terphenyl-d14	13.40	244	2540547	40.651ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104	Not Detected	
5) 1,4-Dithiane	0.00	120	Not Detected	

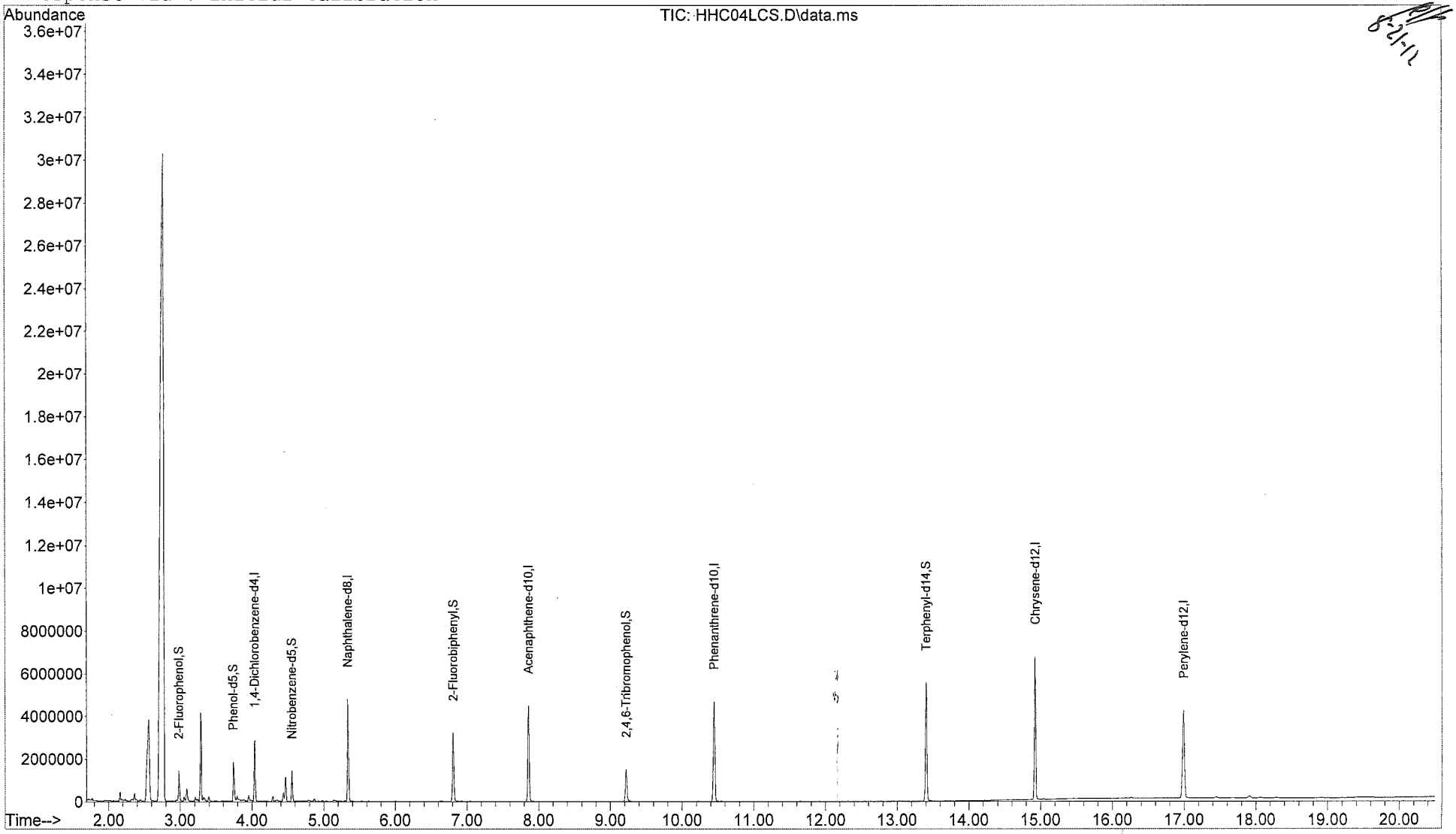
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC04LCS.D Vial: 4
Acq On : 08/17/2012 12:25 Operator: RAH
Sample : 289974 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 17 12:47:20 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC04LCS.D Vial: 4
Acq On : 08/17/2012 12:25 Operator: RAH
Sample : 289974 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 17 12:47:20 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	547084	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2544485	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1531357	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2954277	40.00 ug/mL
12) Chrysene-d12	14.93	240	3458957	40.00 ug/mL
14) Perylene-d12	17.00	264	2803396	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	458152	24.935ug/mL
4) Phenol-d5	3.74	99	823498	34.163ug/mL
7) Nitrobenzene-d5	4.56	82	484863	22.229ug/mL
9) 2-Fluorobiphenyl	6.81	172	1473518	25.943ug/mL
11) 2,4,6-Tribromophenol	9.22	330	323959	32.573ug/mL
13) Terphenyl-d14	13.40	244	2849804	42.675ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.09	104	130051	13.695ug/mL 95
5) 1,4-Dithiane	4.47	120	280915	18.256ug/mL 93

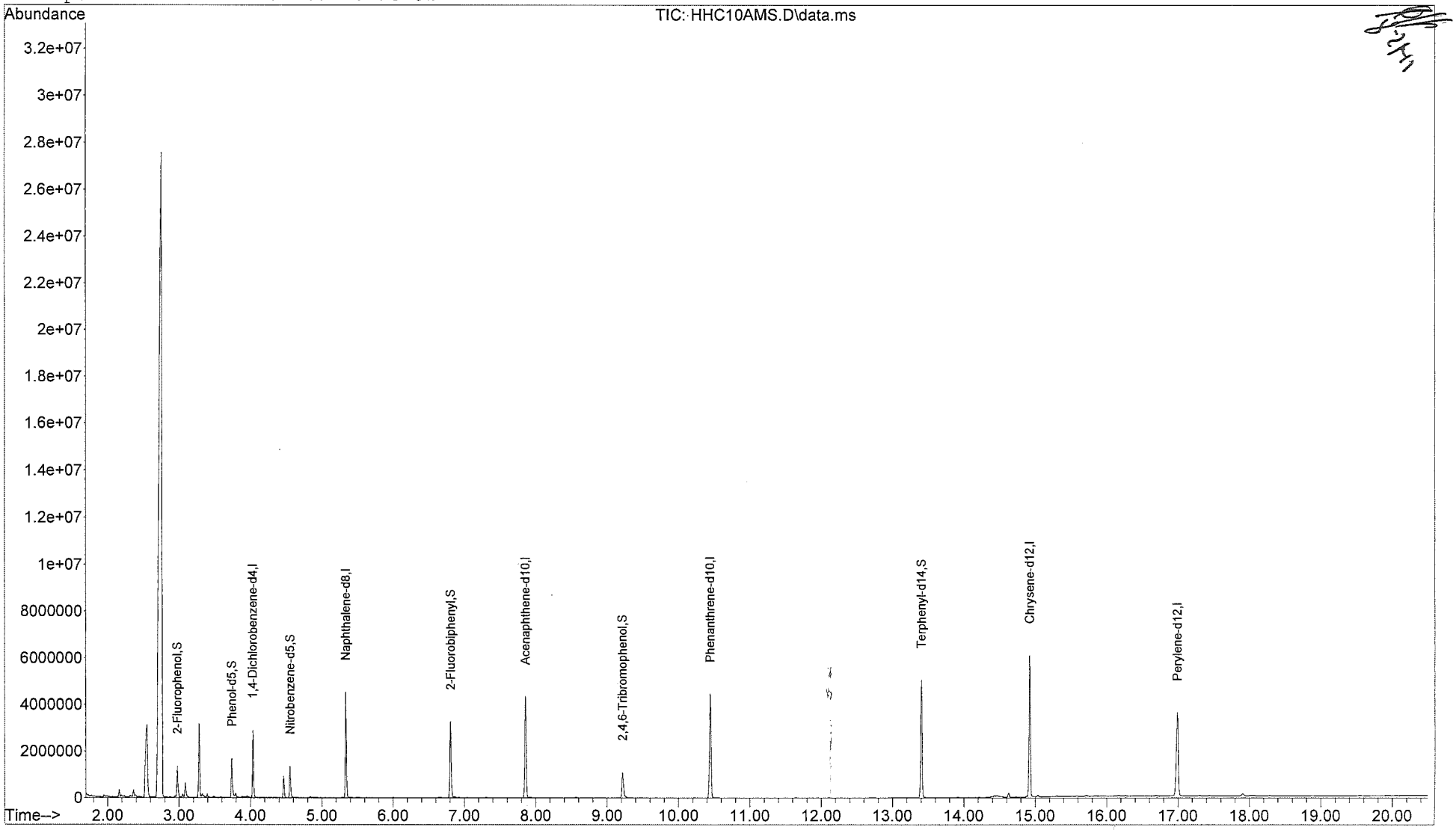
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC10AMS.D Vial: 10
Acq On : 08/17/2012 15:49 Operator: RAH
Sample : 290338 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 17 16:10:17 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC10AMS.D Vial: 10
Acq On : 08/17/2012 15:49 Operator: RAH
Sample : 290338 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 17 16:10:17 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	513602	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2366081	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1442410	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2773215	40.00 ug/mL
12) Chrysene-d12	14.92	240	3099979	40.00 ug/mL
14) Perylene-d12	16.99	264	2464699	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	439139	25.458ug/mL
4) Phenol-d5	3.74	99	744891	32.917ug/mL
7) Nitrobenzene-d5	4.56	82	497189	24.513ug/mL
9) 2-Fluorobiphenyl	6.81	172	1486037	27.777ug/mL
11) 2,4,6-Tribromophenol	9.22	330	233933	25.057ug/mL
13) Terphenyl-d14	13.40	244	2489695	41.600ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.09	104	122671	13.760ug/mL 94
5) 1,4-Dithiane	4.46	120	224458	15.538ug/mL 93

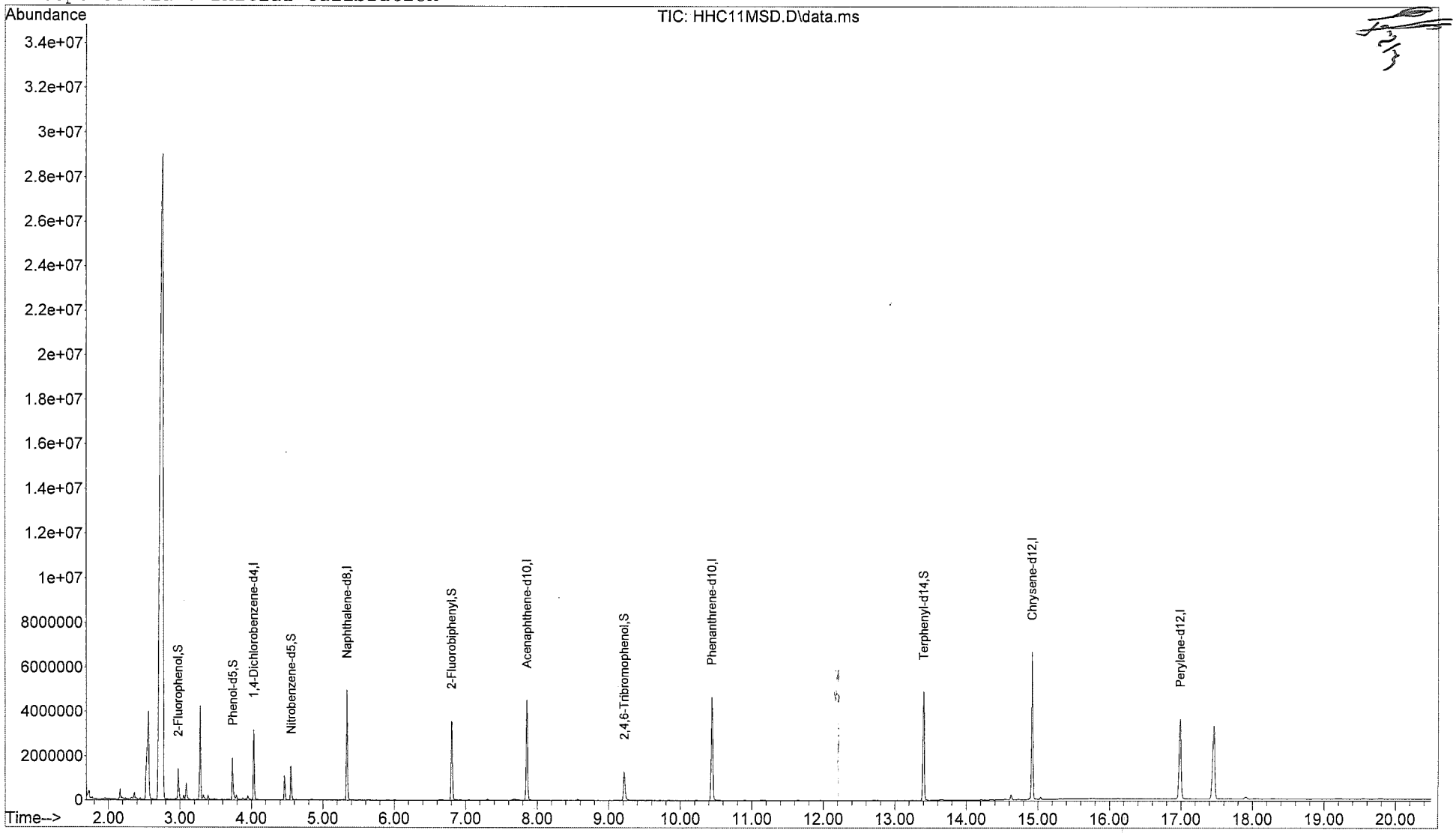
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC11MSD.D Vial: 11
Acq On : 08/17/2012 16:18 Operator: RAH
Sample : 290339 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 17 16:39:24 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222142\HHC11MSD.D Vial: 11
Acq On : 08/17/2012 16:18 Operator: RAH
Sample : 290339 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 17 16:39:24 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	
1) 1,4-Dichlorobenzene-d4	4.03	152	548146	40.00 ug/mL	
6) Naphthalene-d8	5.34	136	2499515	40.00 ug/mL	
8) Acenaphthene-d10	7.86	164	1496581	40.00 ug/mL	
10) Phenanthrene-d10	10.44	188	2867577	40.00 ug/mL	
12) Chrysene-d12	14.92	240	3212025	40.00 ug/mL	
14) Perylene-d12	16.99	264	2498783	40.00 ug/mL	
System Monitoring Compounds					
2) 2-Fluorophenol	2.97	112	465310	25.275ug/mL	
4) Phenol-d5	3.74	99	793858	32.870ug/mL	
7) Nitrobenzene-d5	4.56	82	565074	26.373ug/mL	
9) 2-Fluorobiphenyl	6.81	172	1608881	28.985ug/mL	
11) 2,4,6-Tribromophenol	9.22	330	271270	28.100ug/mL	
13) Terphenyl-d14	13.40	244	2447986	39.476ug/mL	
Target Compounds					Qvalue
3) 1,4-Oxathiane	3.09	104	143611	15.094ug/mL	94
5) 1,4-Dithiane	4.46	120	275445	17.866ug/mL	93

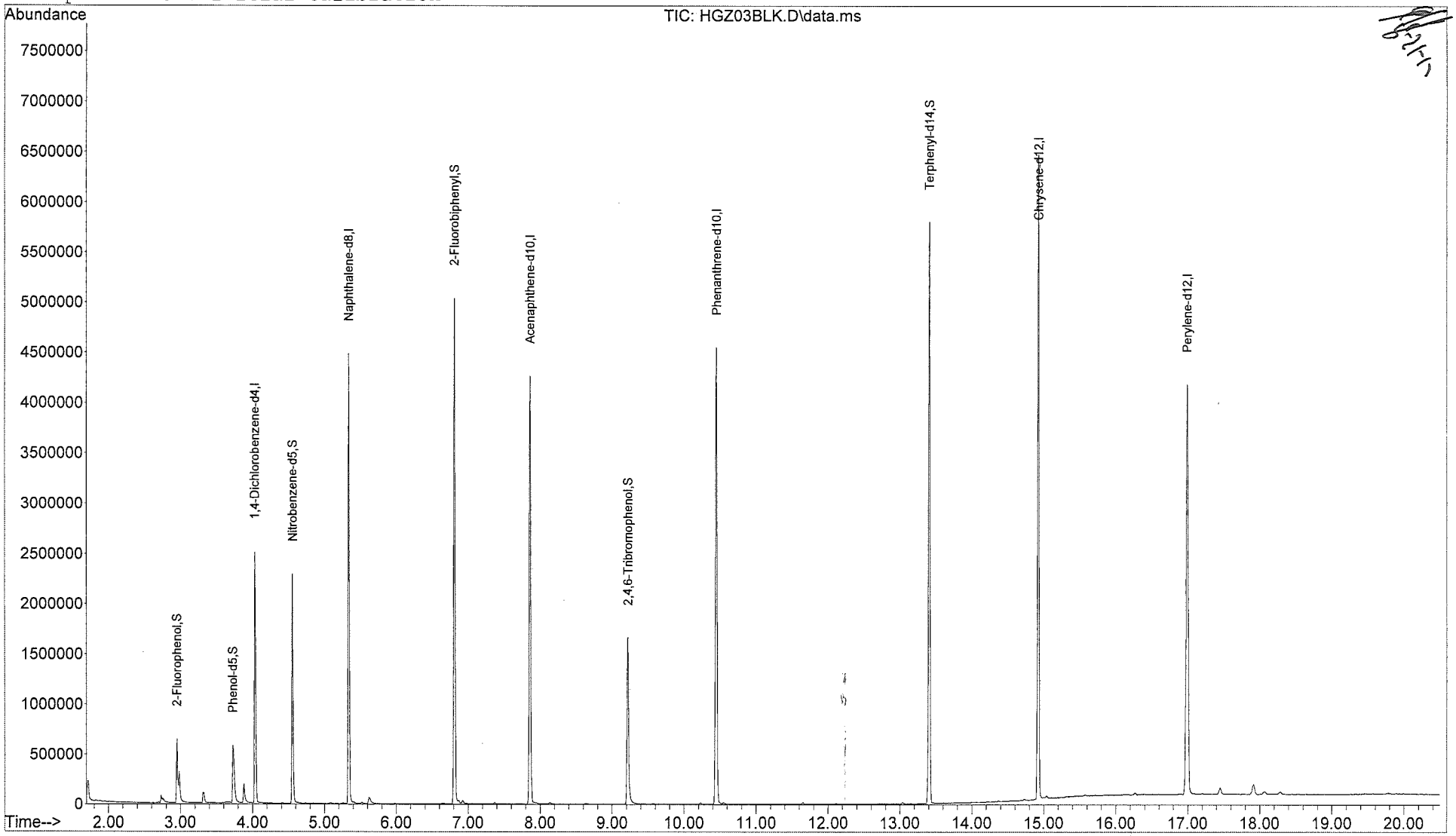
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222142wa\HGZ03BLK.D Vial: 3
Acq On : 08/14/2012 10:39 Operator: RAH
Sample : 289579 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 14 13:09:10 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222142wa\HGZ03BLK.D Vial: 3
Acq On : 08/14/2012 10:39 Operator: RAH
Sample : 289579 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 14 13:09:10 2012 Results File: 8270DOND.RES

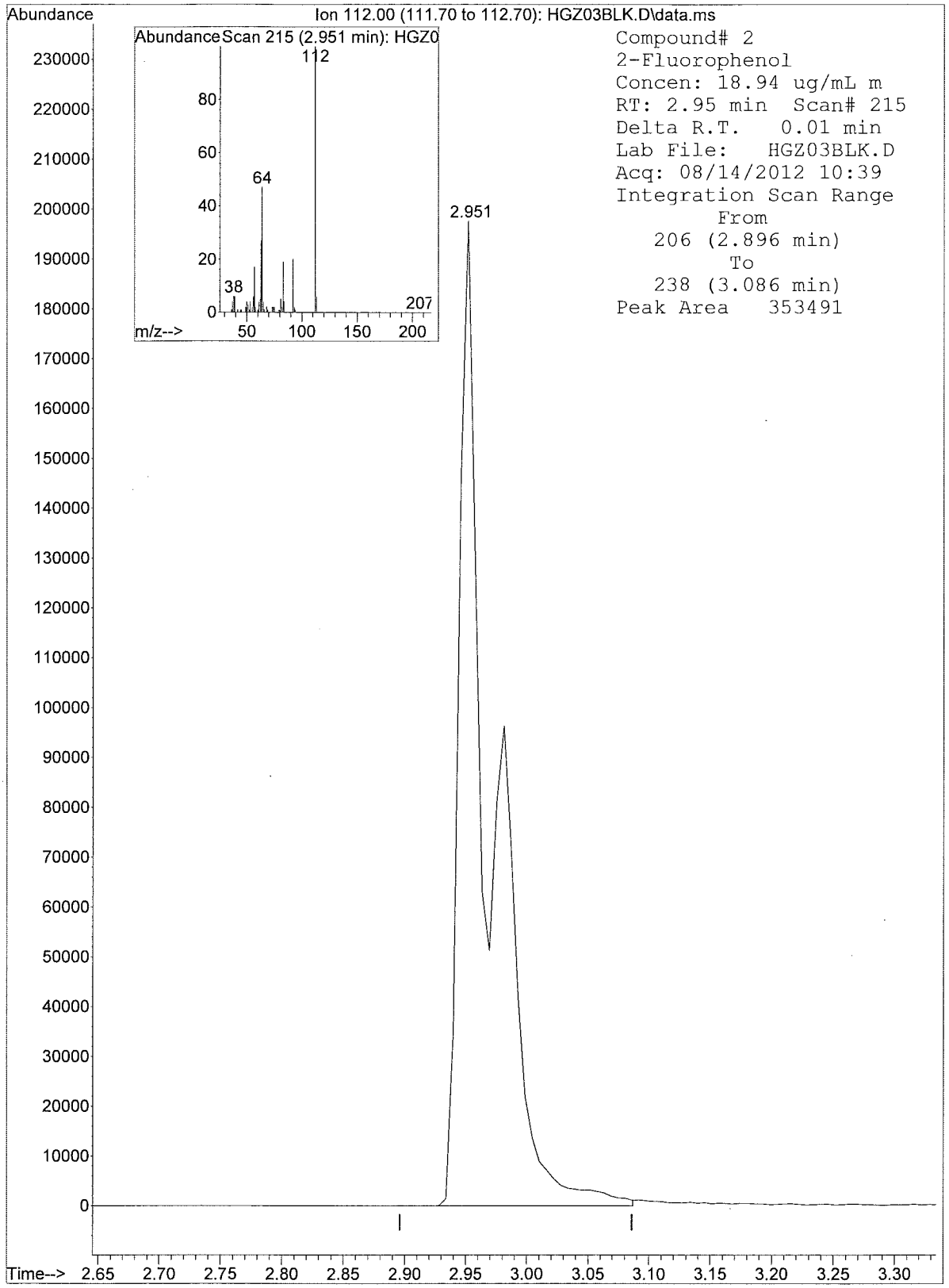
Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	555703	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2533234	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1462576	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2787665	40.00 ug/mL
12) Chrysene-d12	14.93	240	3340430	40.00 ug/mL
14) Perylene-d12	16.99	264	2826602	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	353491	18.940ug/mL m
4) Phenol-d5	3.73	99	382106	15.606ug/mL
7) Nitrobenzene-d5	4.56	82	828772	38.165ug/mL
9) 2-Fluorobiphenyl	6.81	172	2188037	40.335ug/mL
11) 2,4,6-Tribromophenol	9.22	330	361311	38.499ug/mL
13) Terphenyl-d14	13.41	244	2914785	45.197ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104	Not Detected	
5) 1,4-Dithiane	0.00	120	Not Detected	

8-21-12

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



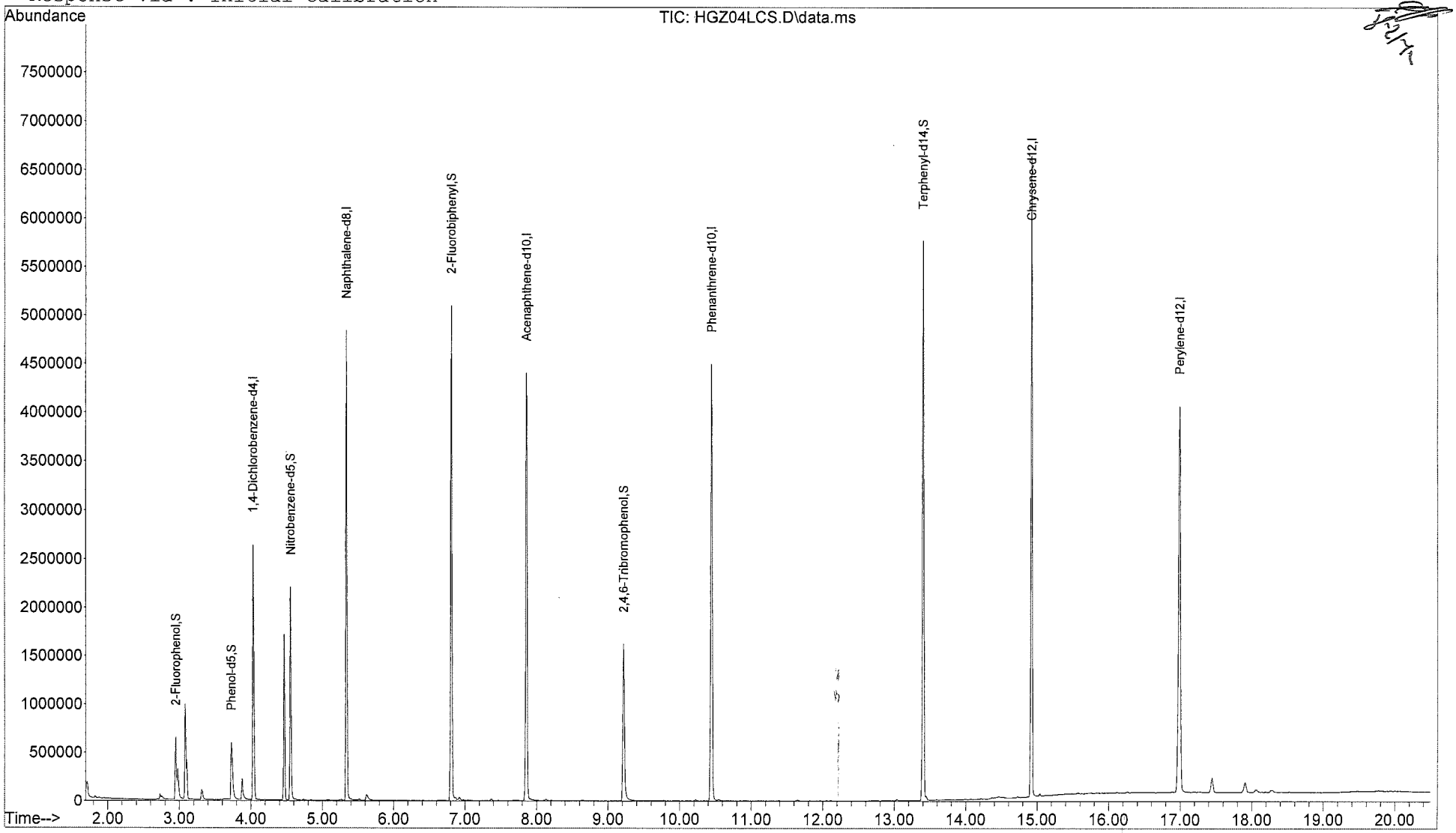
8270DOND.M 5975-H 8270DOND.M 289579 . WATER 8270

Quantitation Report

Data File : C:\msdchem\1\data\1222142wa\HGZ04LCS.D Vial: 4
Acq On : 08/14/2012 11:09 Operator: RAH
Sample : 289580 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 14 13:09:26 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222142wa\HGZ04LCS.D Vial: 4
Acq On : 08/14/2012 11:09 Operator: RAH
Sample : 289580 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 14 13:09:26 2012 Results File: 8270DOND.RES

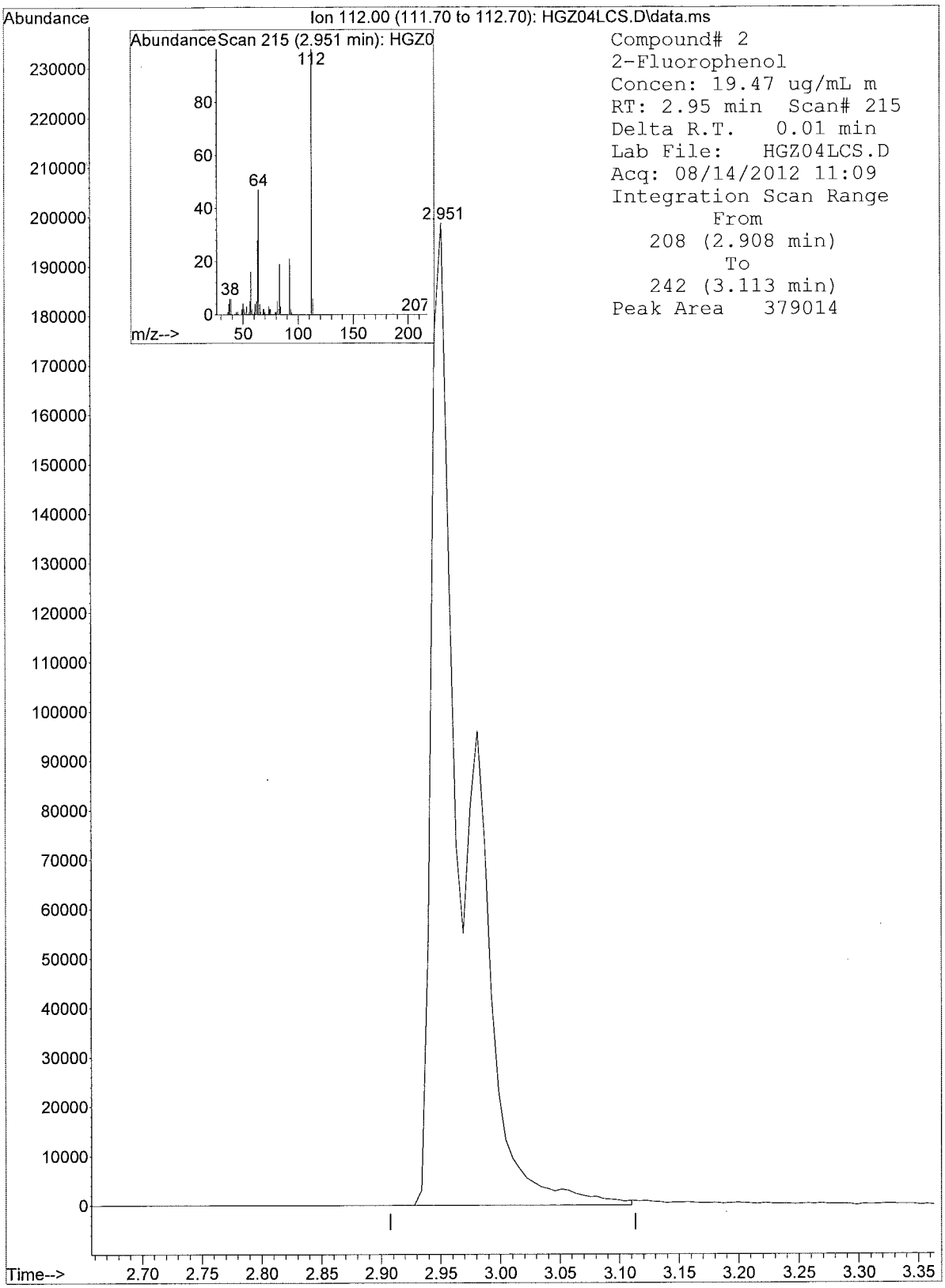
Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	579658	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2622745	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1495523	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2820004	40.00 ug/mL
12) Chrysene-d12	14.92	240	3222819	40.00 ug/mL
14) Perylene-d12	16.99	264	2758080	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	379014	19.468ug/mL m
4) Phenol-d5	3.73	99	388914	15.228ug/mL
7) Nitrobenzene-d5	4.56	82	838689	37.303ug/mL
9) 2-Fluorobiphenyl	6.81	172	2216041	39.951ug/mL
11) 2,4,6-Tribromophenol	9.22	330	357599	37.667ug/mL
13) Terphenyl-d14	13.40	244	2849202	45.793ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	255541	25.398ug/mL 97
5) 1,4-Dithiane	4.47	120	470770	28.875ug/mL 95

8-14-12

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



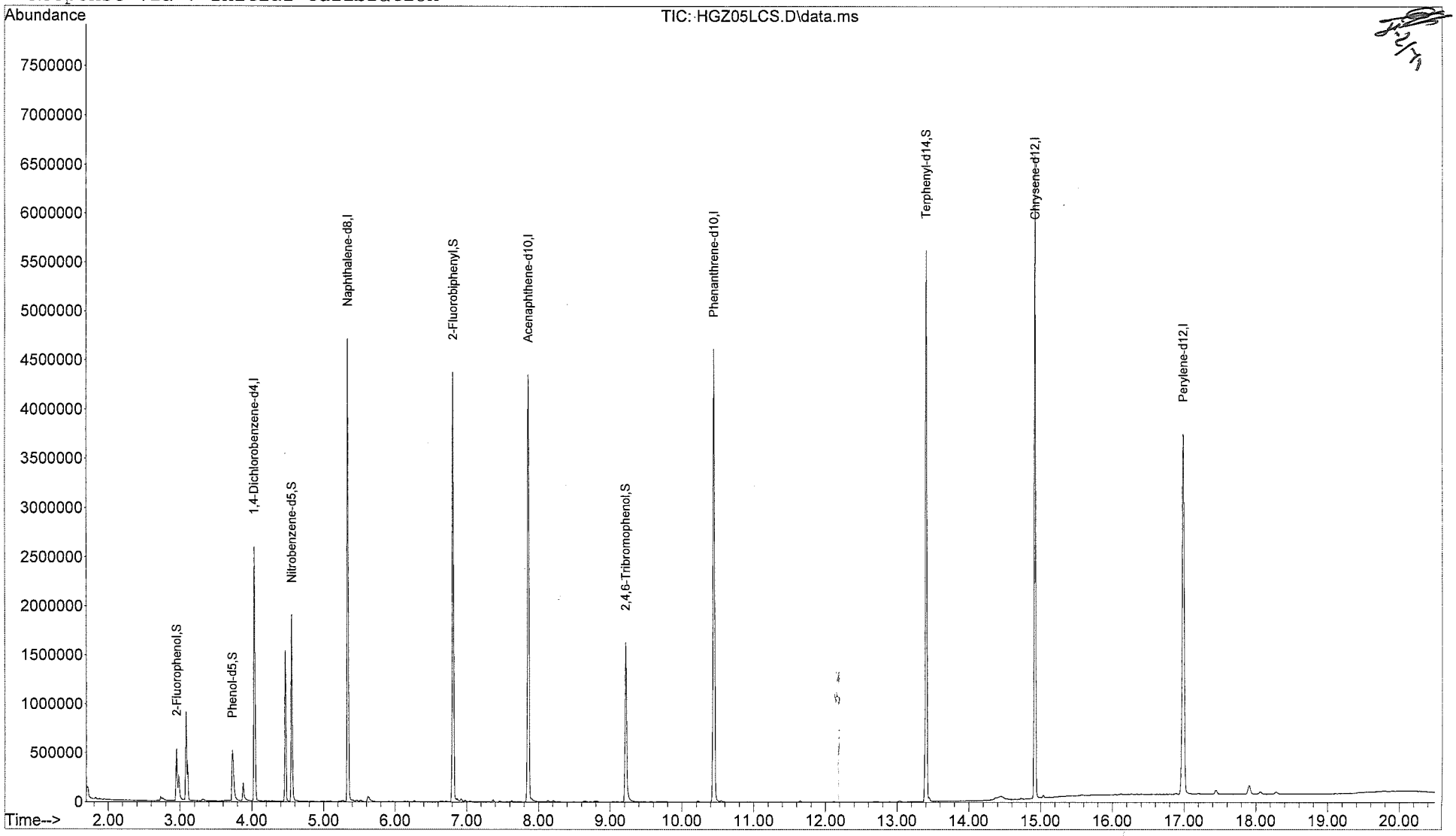
8270DOND.M 5975-H 8270DOND.M 289580 . WATER 8270

Quantitation Report

Data File : C:\msdchem\1\data\1222142wa\HGZ05LCS.D Vial: 5
Acq On : 08/14/2012 11:38 Operator: RAH
Sample : 289581 Inst : 5975-H
Misc : . WATER 8270 Injection volume : luL
MS Integration Params: rteint.p

Quant Time: Aug 14 13:10:42 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

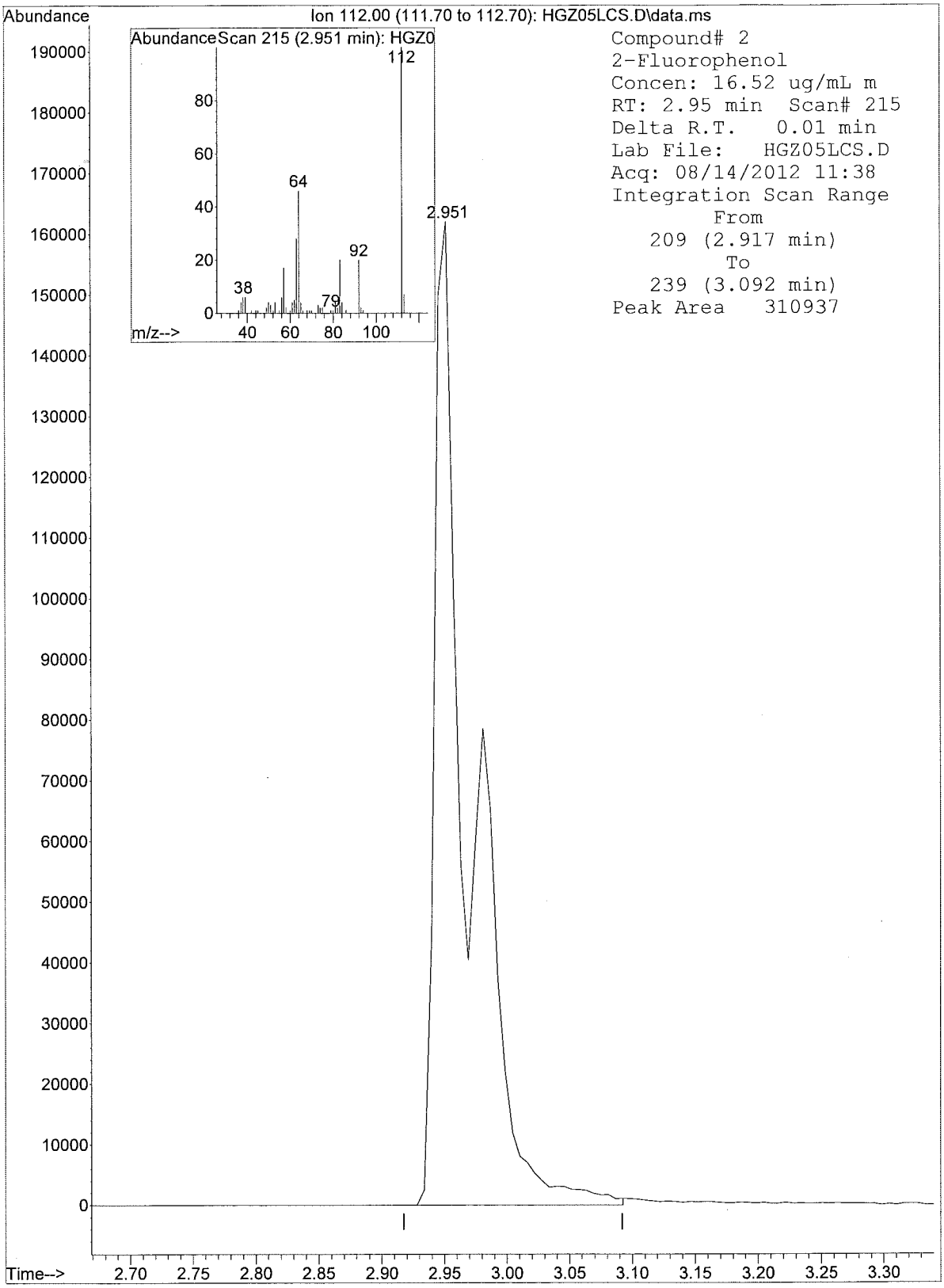
Data File : C:\msdchem\1\data\1222142wa\HGZ05LCS.D Vial: 5
Acq On : 08/14/2012 11:38 Operator: RAH
Sample : 289581 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 14 13:10:42 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	560550	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2585817	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1487437	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2812098	40.00 ug/mL
12) Chrysene-d12	14.92	240	3131459	40.00 ug/mL
14) Perylene-d12	16.99	264	2572769	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	310937	16.516ug/mL m
4) Phenol-d5	3.73	99	340564	13.789ug/mL
7) Nitrobenzene-d5	4.56	82	711405	32.094ug/mL
9) 2-Fluorobiphenyl	6.81	172	1925407	34.900ug/mL
11) 2,4,6-Tribromophenol	9.22	330	352067	37.188ug/mL
13) Terphenyl-d14	13.40	244	2784192	46.053ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	230024	23.641ug/mL 96
5) 1,4-Dithiane	4.47	120	423541	26.864ug/mL 95

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 289581 . WATER 8270

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.90	210	47.95	110	60.00	204	73.00	1416
37.00	789	49.10	1366	61.00	2048	74.00	16658
38.00	2065	50.10	37069	62.00	2129	75.00	26072
39.05	11447	51.10	133016	63.05	5870	76.10	8806
40.00	553	52.05	6888	64.05	797	77.10	169557
41.00	409	53.00	317	65.10	2951	78.10	11912
41.95	8	55.00	774	66.00	245	79.00	12159
43.00	174	56.00	4604	67.00	41	80.00	9544
43.95	213	56.95	9649	69.00	182007	80.95	12627
44.95	498	57.95	474	69.95	863	82.05	2981
46.90	50	59.05	212	71.00	84	83.00	2757

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
83.95	505	96.00	1100	107.00	51061	119.05	580
85.00	2076	96.95	164	108.00	7952	119.95	624
86.00	3686	98.00	15285	110.00	99453	120.90	137
86.95	1503	99.00	11947	111.00	14899	121.10	236
88.00	668	100.00	1055	112.00	1808	122.00	3851
88.95	332	100.95	6366	113.00	564	123.00	5511
91.00	2779	101.95	411	113.95	125	124.00	2550
92.00	3243	102.95	2332	115.00	255	125.00	2380
93.00	20146	104.00	4550	116.05	3193	127.00	194795
93.95	1286	105.00	4189	117.00	41283	128.00	14880
95.00	369	106.10	1215	118.00	2979	129.00	77256

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
130.00	6368	139.95	881	150.95	941	160.00	3180
130.95	1208	141.00	9687	151.20	517	161.00	4674
132.05	708	142.00	3150	151.70	439	161.95	1330
132.80	252	143.00	2120	152.00	274	162.80	161
133.00	135	143.95	625	153.00	3192	163.05	274
134.00	2181	145.00	646	154.00	2288	164.00	668
134.95	5754	146.05	1877	155.00	5190	164.95	3521
136.00	2380	147.00	4767	156.05	8000	166.05	2851
137.05	2966	148.00	10934	157.05	1896	166.95	19745
137.95	736	148.95	2140	157.95	1883	168.00	8501
138.95	478	150.05	661	159.00	1302	169.05	1743

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
170.05	659	181.00	5020	192.00	5090	205.00	26323
170.95	942	182.00	946	193.00	5198	206.00	108360
171.95	1888	183.00	572	194.00	1397	207.00	14246
173.00	2312	184.00	1287	195.05	970	208.00	3479
174.00	4313	185.00	7511	196.00	16758	208.95	1198
175.00	7834	186.00	59352	198.00	449451	210.30	703
176.05	2966	187.00	15865	199.00	30245	210.95	4542
177.00	3955	188.05	1696	200.00	2429	212.95	335
178.00	859	189.00	3403	201.45	3070	215.00	1191
179.00	15556	189.95	600	202.95	2845	216.05	2349
180.00	10462	191.00	1758	204.00	15477	217.00	27032

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
218.00	3469	230.00	769	240.95	1460	252.00	534
218.95	280	231.00	2262	242.00	3478	253.05	1166
219.20	106	231.95	384	243.10	4047	255.00	269404
221.00	32173	232.95	580	244.00	51989	256.00	38803
223.00	6700	234.00	1735	245.05	7448	257.00	3231
224.00	61472	234.95	1711	246.00	9407	258.00	14382
225.00	15875	235.95	1100	246.95	2002	259.00	2277
226.05	1856	237.00	2076	248.05	411	259.95	452
227.00	24363	238.05	341	249.00	1736	260.95	518
228.00	3479	238.95	964	250.00	378	263.00	155
229.00	5244	240.00	804	251.05	421	263.80	387

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
264.10	160	276.00	16781	288.00	125	299.00	58
265.00	5592	277.00	9464	288.90	438	300.95	468
265.90	1371	278.00	1550	289.95	375	301.95	650
266.90	202	278.80	76	291.05	236	303.05	4040
267.85	19	278.95	278	291.90	98	304.05	968
269.90	381	281.00	201	292.10	306	305.00	88
270.95	583	282.05	293	293.05	2240	308.00	529
272.05	745	283.00	1149	293.95	535	308.95	363
273.00	8812	284.00	800	296.00	33656	309.95	517
274.00	21501	285.00	1731	297.00	4977	311.00	52
275.00	124987	285.95	376	297.90	387	312.20	67

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
312.95	387	326.05	153	341.00	1397	365.95	2022
314.00	1732	327.00	2246	342.00	324	366.90	53
315.00	3856	328.00	1118	346.00	2412	369.95	327
316.00	2135	329.10	116	347.00	412	371.10	748
317.00	363	331.95	909	351.00	86	372.05	5254
319.90	179	333.00	1200	352.05	3088	373.00	1217
321.05	1110	334.05	7150	353.05	2118	374.05	166
322.05	618	335.05	1830	354.05	3337	383.05	1223
323.05	11178	336.05	286	355.05	607	383.95	469
324.05	2118	339.00	115	358.95	270	384.90	58
325.05	158	340.00	124	365.00	13675	390.00	645

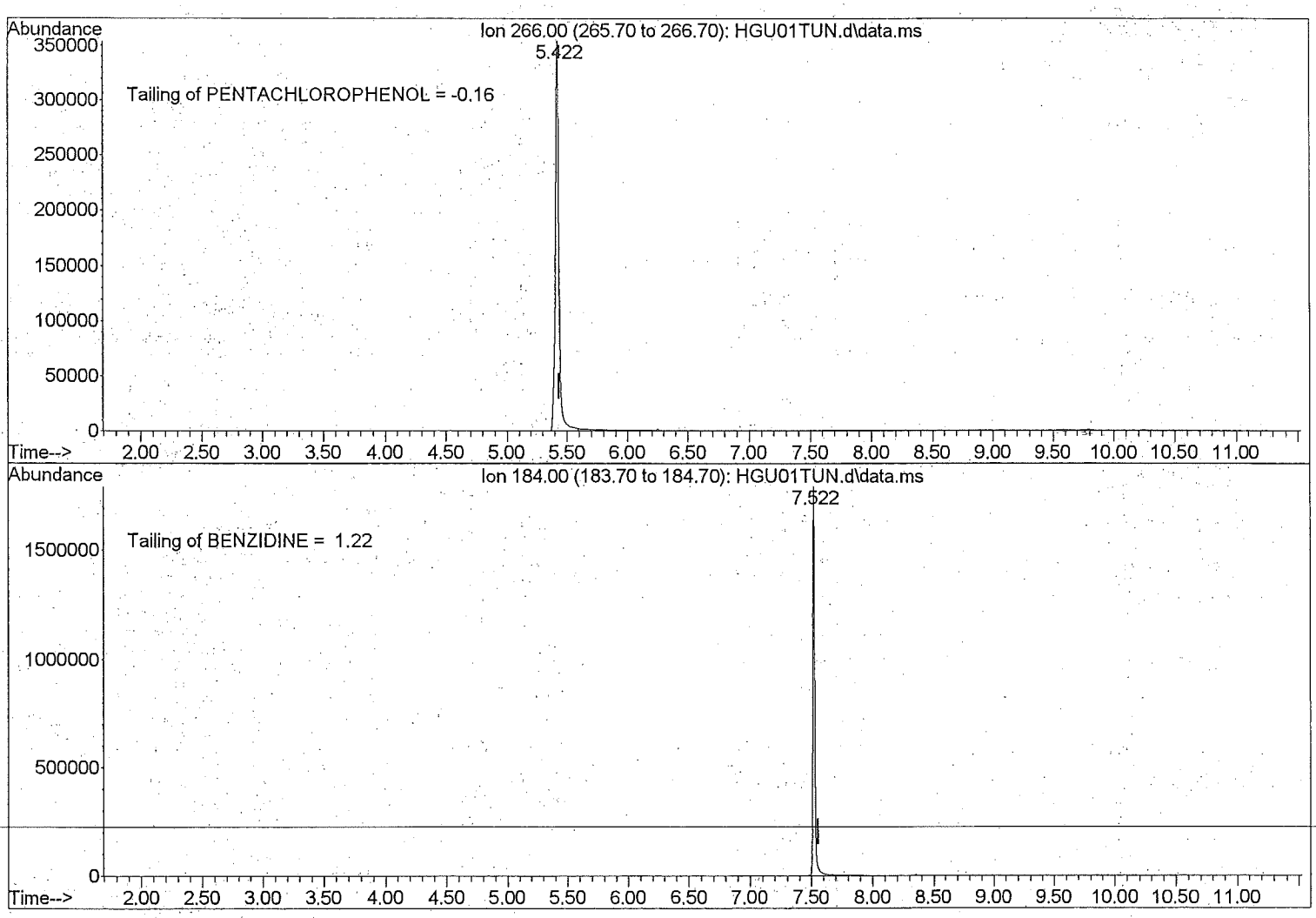
Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
391.05	452	425.05	302	444.10	5675		
392.05	336	435.45	112	445.00	368		
400.90	274	436.10	52				
402.00	1684	437.00	72				
403.00	2553	437.50	61				
404.00	801	437.70	106				
410.10	50	438.10	252				
421.00	1998	438.85	543				
422.05	1989	441.10	47803				
423.10	13843	442.10	315904				
424.05	2863	443.10	60693				

Data File: HGU01TUN.d
Date Acquired: 08/08/2012 10:06
Operator ID: RAH
Name: 8270 DFTPP 13808
Misc: X:1/11/13

Instrument: 5975-H
Acq Method: 8270DTUN.M
DA Method: 8270DTUN.M

Cal Title: EPA/CLP SOM01
Last Cal Update: Wed Nov 23 09:22:39 2011
X:1/11/13

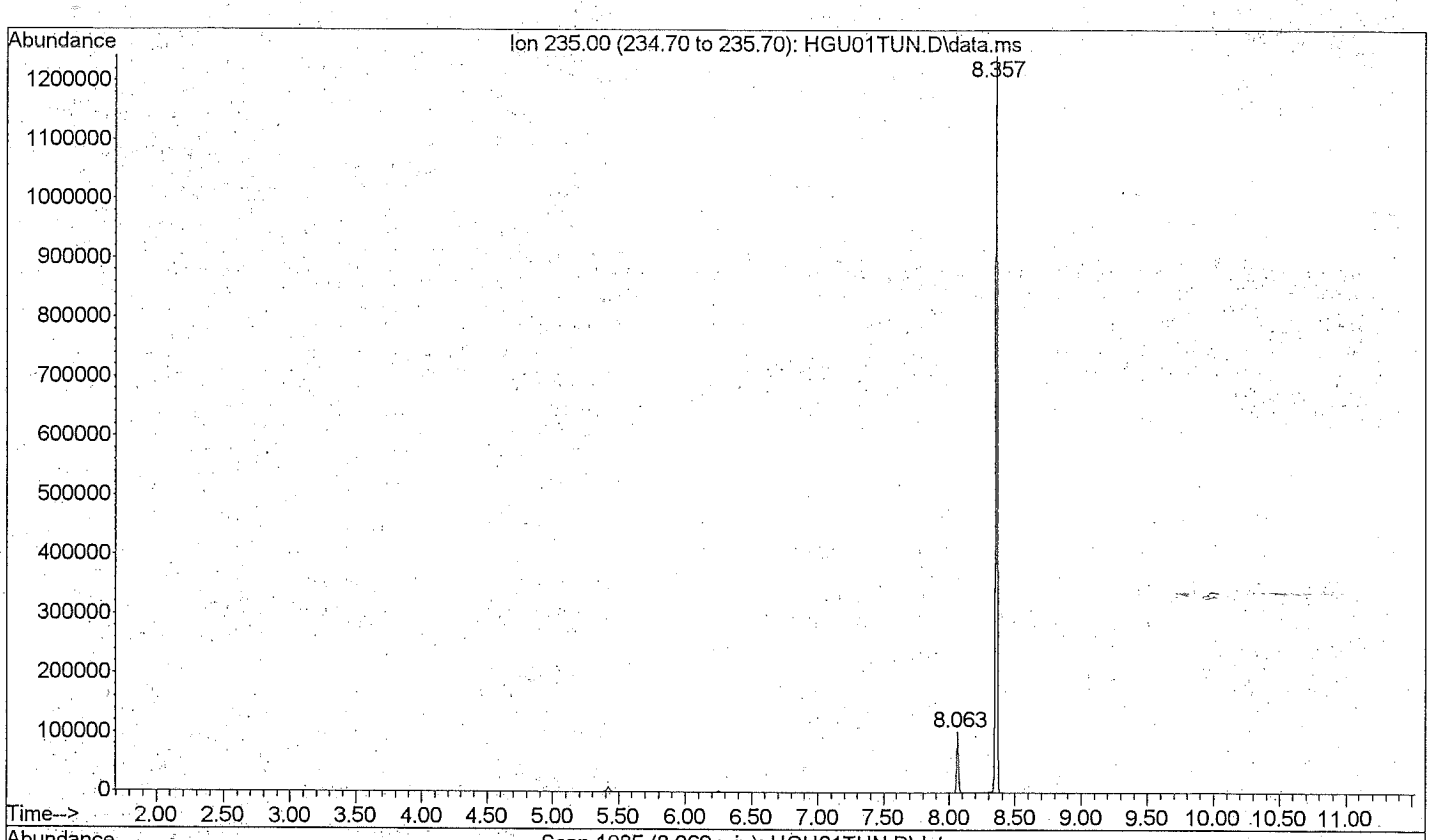


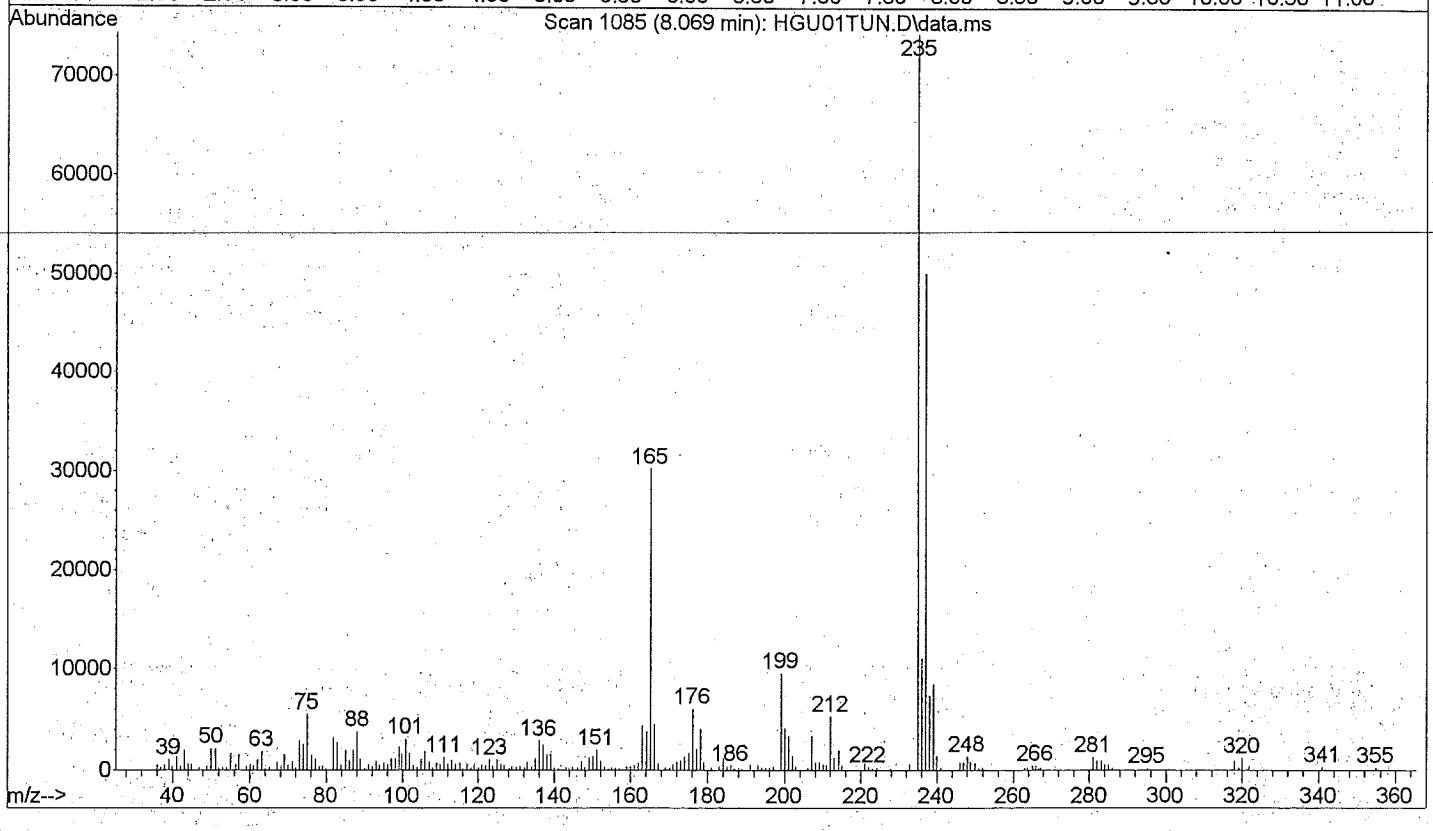
Ion 235.00 (234.70 to 235.70): HGU01TUN.D\data.ms
8270 DFTPP 13808

Peak #	Ret Time	Type	Width	Area	Start Time	End Time
1	8.063	rBV	0.082	94255	8.027	8.110
2	8.357	rVB	0.112	1143185	8.286	8.398

$$\text{DDT degradation} = \frac{94255}{94255 + 1143185} = 7.6\%$$

File :D:\1\DATA\2012\AUG12\08AUG12H\HGU01TUN.D
Operator : RAH
Acquired : 8 Aug 2012 10:06 am using AcqMethod 8270DTUN.M
Instrument : 5975-H
Sample Name: 8270 DFTPP 13808
Misc Info : X:1/11/13
Vial Number: 1



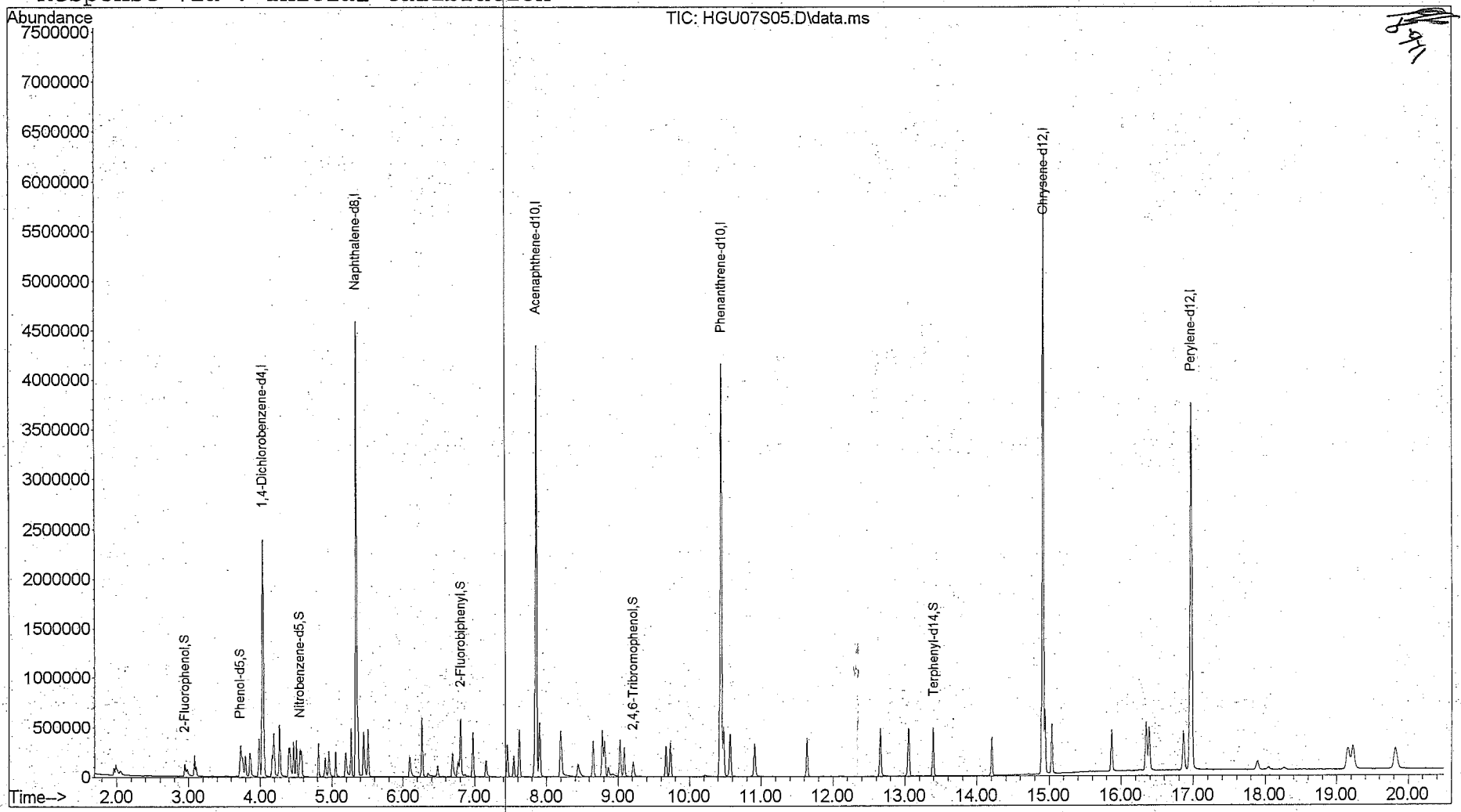


Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU07S05.D Vial: 7
Acq On : 08/08/2012 12:59 Operator: RAH
Sample : 8270 5 std 15974 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:23:28 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

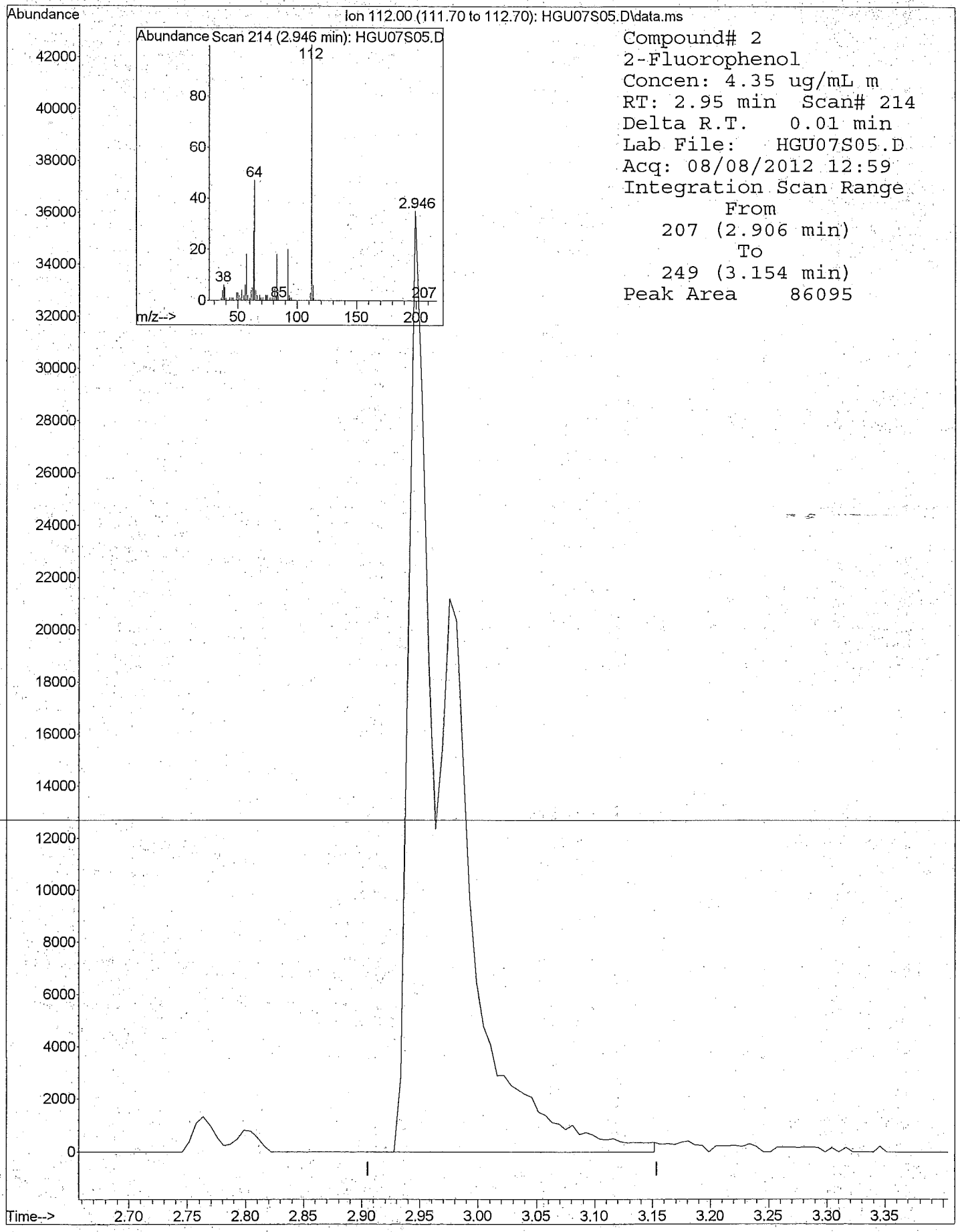
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU07S05.D Vial: 7
Acq On : 08/08/2012 12:59 Operator: RAH
Sample : 8270 5 std 15974 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:23:28 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	588867	40.00 ug/mL
6) Naphthalene-d8	5.33	136	2620860	40.00 ug/mL
8) Acenaphthene-d10	7.85	164	1436514	40.00 ug/mL
10) Phenanthrene-d10	10.43	188	2595047	40.00 ug/mL
12) Chrysene-d12	14.91	240	2776807	40.00 ug/mL
14) Perylene-d12	16.97	264	2442971	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	86095	4.352ug/mL m
4) Phenol-d5	3.72	99	113950	4.392ug/mL
7) Nitrobenzene-d5	4.55	82	99427	4.426ug/mL
9) 2-Fluorobiphenyl	6.80	172	243673	4.573ug/mL
11) 2,4,6-Tribromophenol	9.21	330	35477	4.061ug/mL
13) Terphenyl-d14	13.39	244	245085	4.572ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	54091	5.291ug/mL 99
5) 1,4-Dithiane	4.46	120	87903	5.307ug/mL 98

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

MANUAL INTEGRATION FOR 2-Fluorophenol



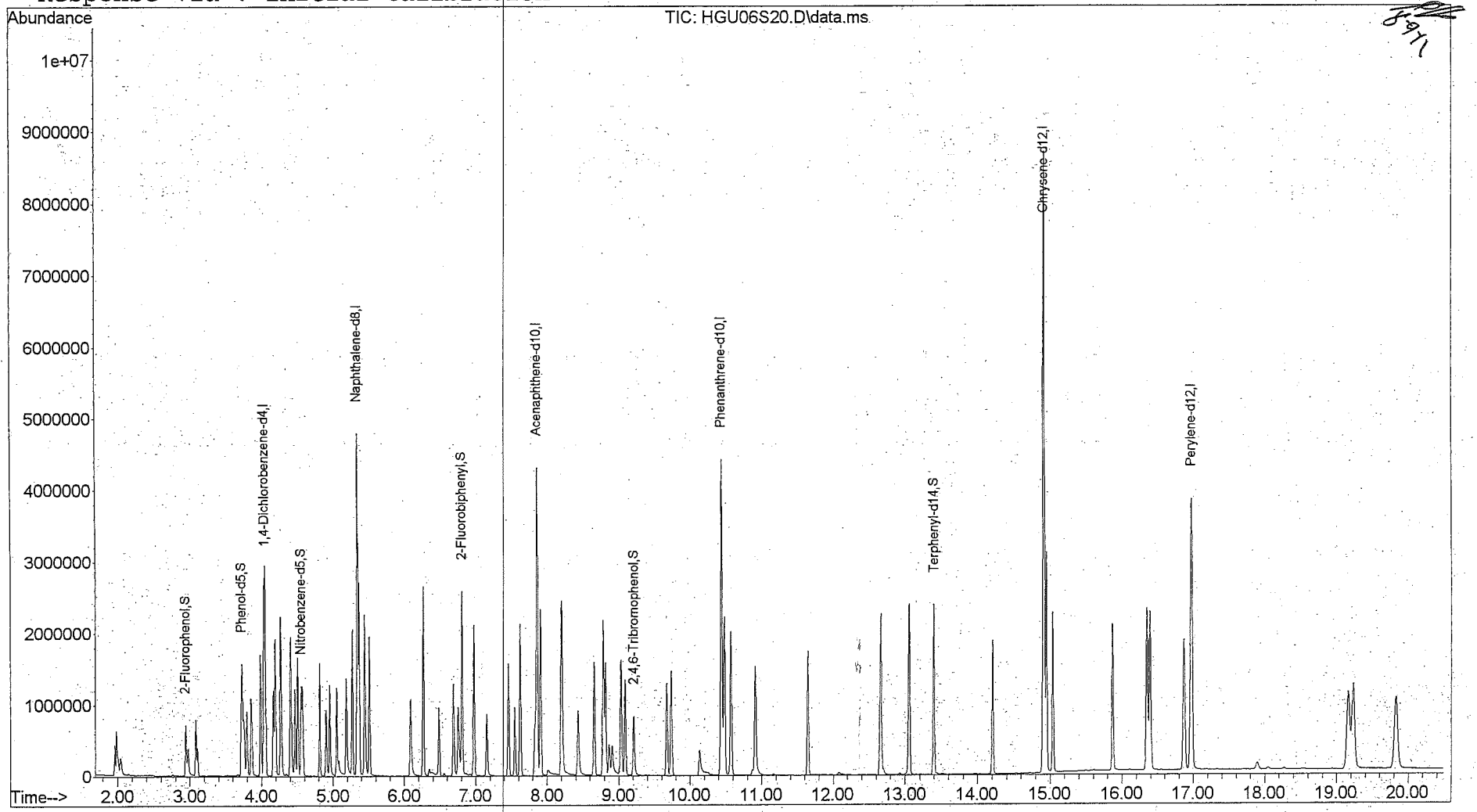
8270DOND.M 5975-H 8270DOND.M 8270 5 std 15974 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU06S20.D Vial: 6
Acq On : 08/08/2012 12:29 Operator: RAH
Sample : 8270 20 std 15973 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:23:14 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

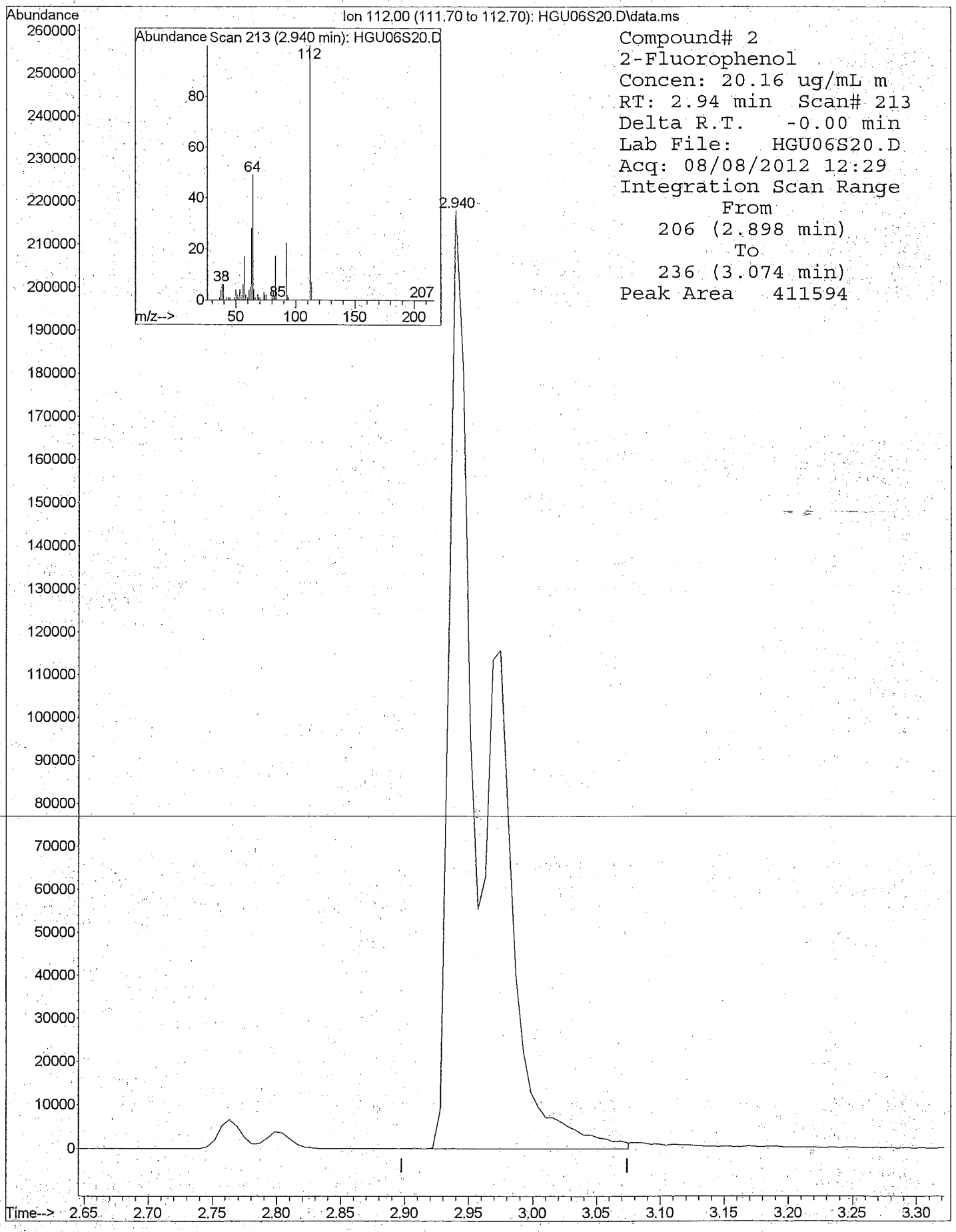
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU06S20.D Vial: 6
Acq On : 08/08/2012 12:29 Operator: RAH
Sample : 8270 20 std 15973 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:23:14 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	
1) 1,4-Dichlorobenzene-d4	4.03	152	607773	40.00	ug/mL	
6) Naphthalene-d8	5.34	136	2617015	40.00	ug/mL	
8) Acenaphthene-d10	7.86	164	1459213	40.00	ug/mL	
10) Phenanthrene-d10	10.44	188	2715173	40.00	ug/mL	
12) Chrysene-d12	14.92	240	3091127	40.00	ug/mL	
14) Perylene-d12	16.97	264	2675827	40.00	ug/mL	
System Monitoring Compounds						
2) 2-Fluorophenol	2.94	112	411594	20.158	ug/mL	m
4) Phenol-d5	3.72	99	538093	20.094	ug/mL	
7) Nitrobenzene-d5	4.55	82	451447	20.124	ug/mL	
9) 2-Fluorobiphenyl	6.80	172	1088983	20.121	ug/mL	
11) 2,4,6-Tribromophenol	9.21	330	178946	19.577	ug/mL	
13) Terphenyl-d14	13.39	244	1191516	19.966	ug/mL	
Target Compounds						Qvalue
3) 1,4-Oxathiane	3.08	104	202599	19.200	ug/mL	m 99
5) 1,4-Dithiane	4.46	120	327670	19.168	ug/mL	99

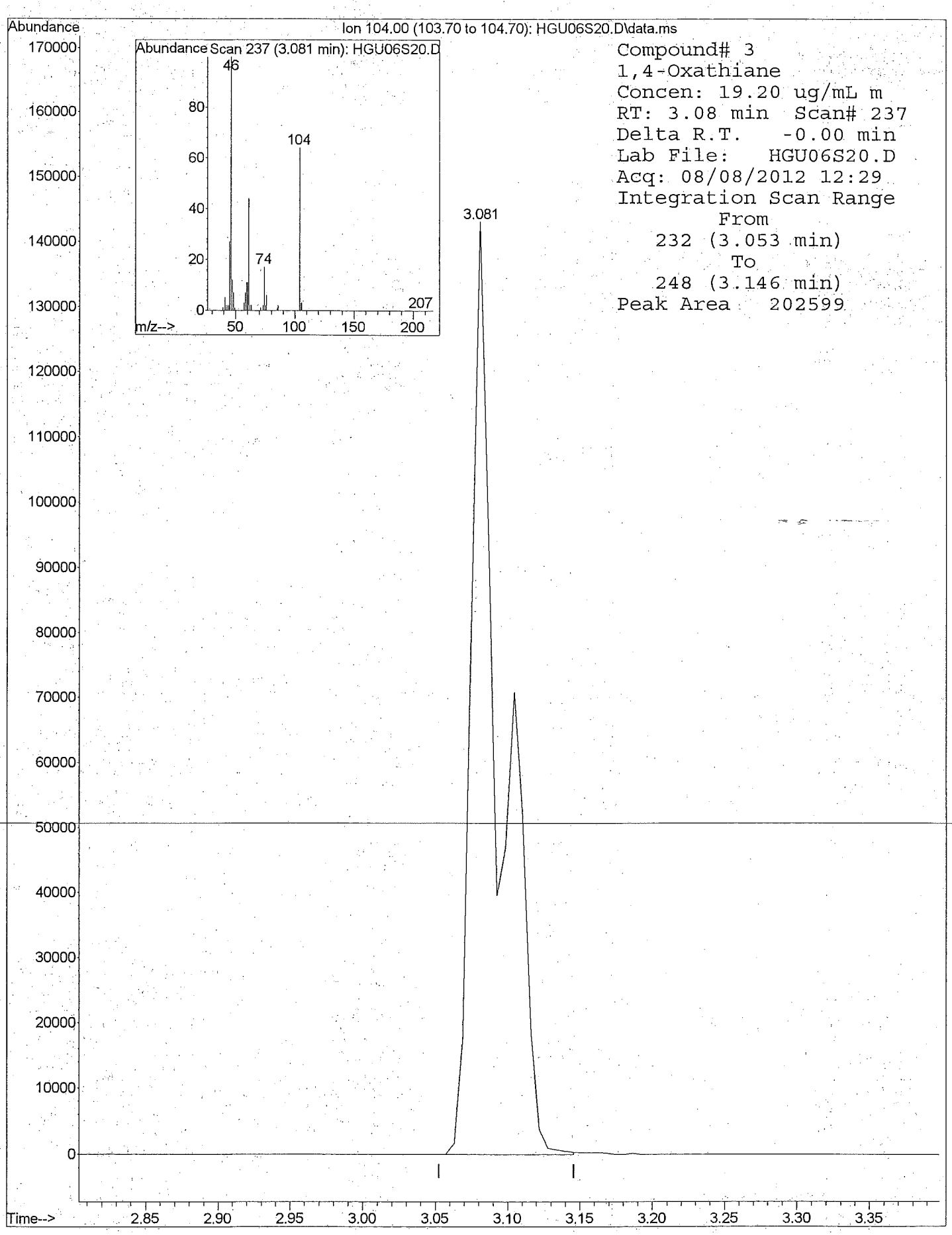
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

MANUAL INTEGRATION FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 20 std 15973 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



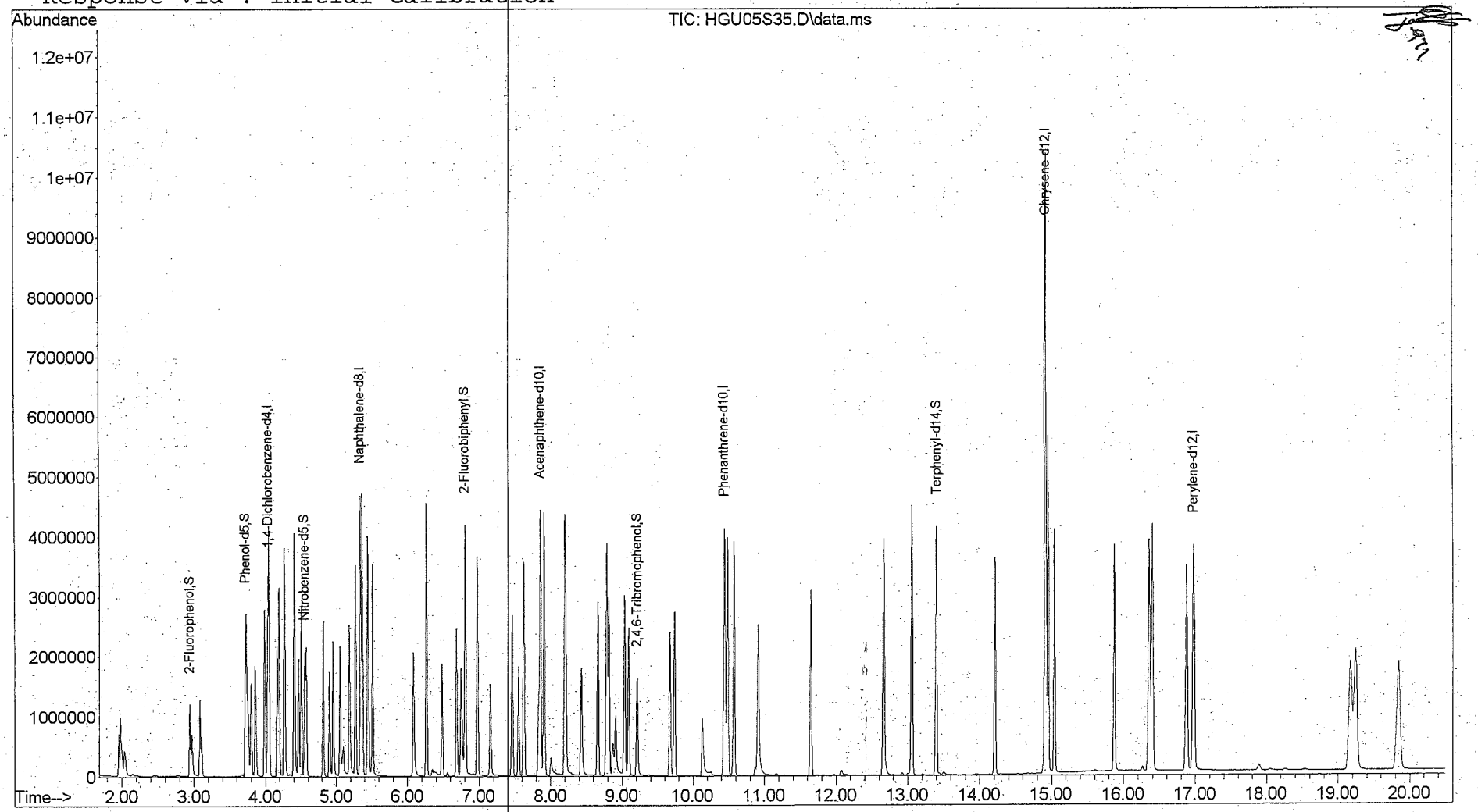
8270DOND.M 5975-H 8270DOND.M 8270 20 std 15973 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU05S35.D Vial: 5
Acq On : 08/08/2012 12:00 Operator: RAH
Sample : 8270 35 std 15972 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:57 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

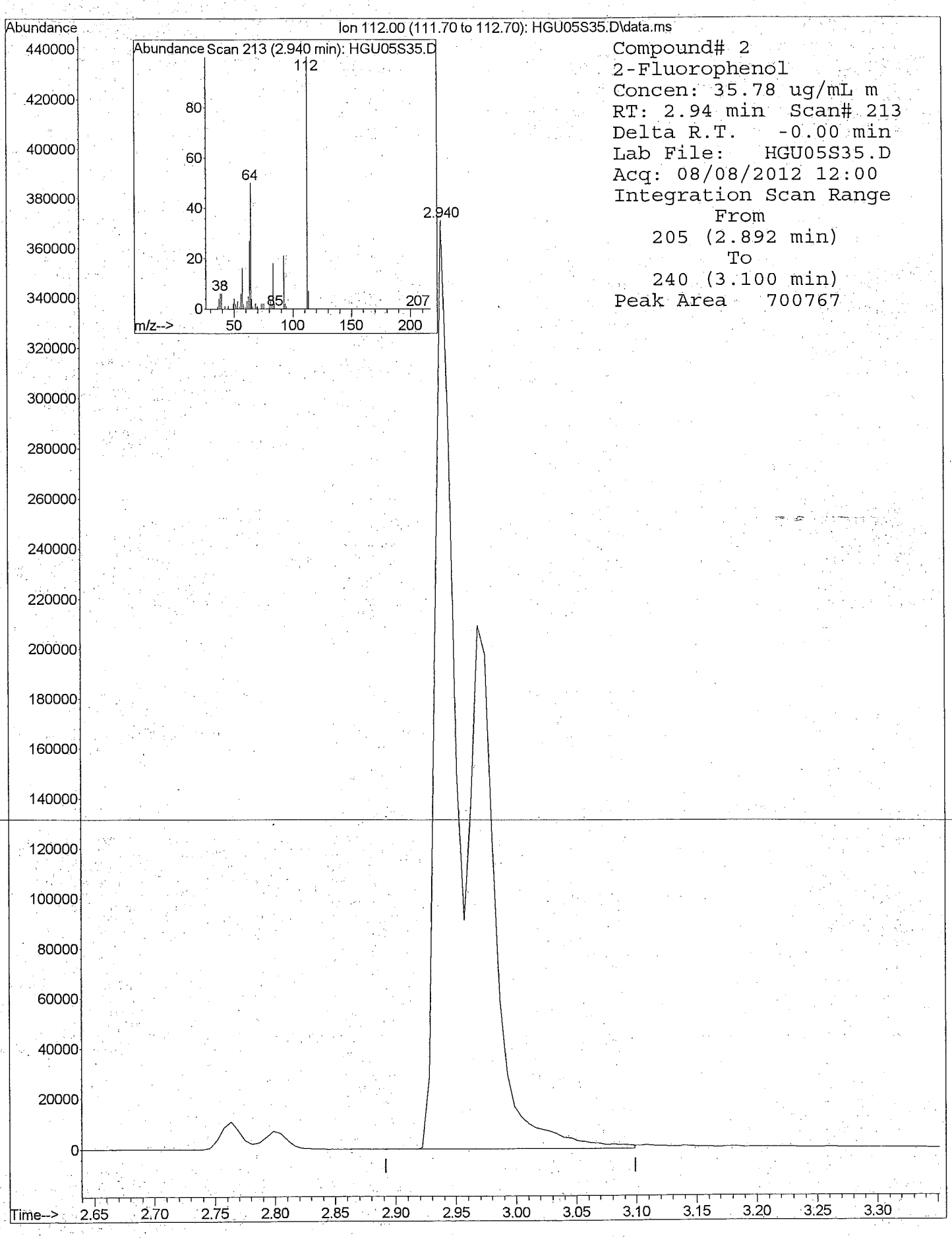
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU05S35.D Vial: 5
Acq On : 08/08/2012 12:00 Operator: RAH
Sample : 8270 35 std 15972 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:57 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	582911	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2556097	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1465004	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2738820	40.00 ug/mL
12) Chrysene-d12	14.92	240	3035266	40.00 ug/mL
14) Perylene-d12	16.97	264	2627498	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	700767	35.784ug/mL m
4) Phenol-d5	3.72	99	920516	35.841ug/mL
7) Nitrobenzene-d5	4.55	82	793614	36.219ug/mL
9) 2-Fluorobiphenyl	6.81	172	1951088	35.907ug/mL
11) 2,4,6-Tribromophenol	9.21	330	335739	36.413ug/mL
13) Terphenyl-d14	13.40	244	2149311	36.678ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	343846	33.975ug/mL m 99
5) 1,4-Dithiane	4.47	120	556869	33.965ug/mL 98

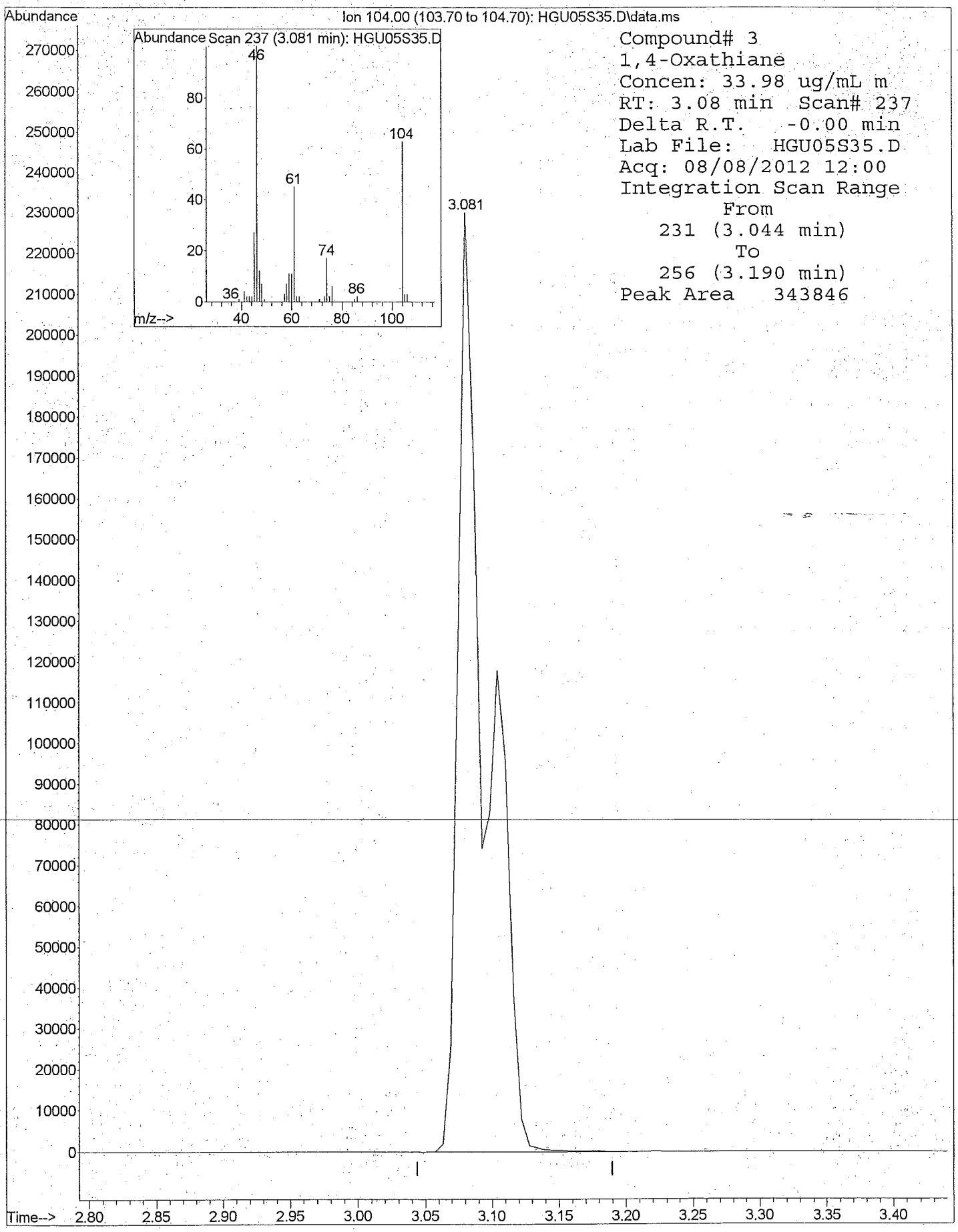
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 35 std 15972 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



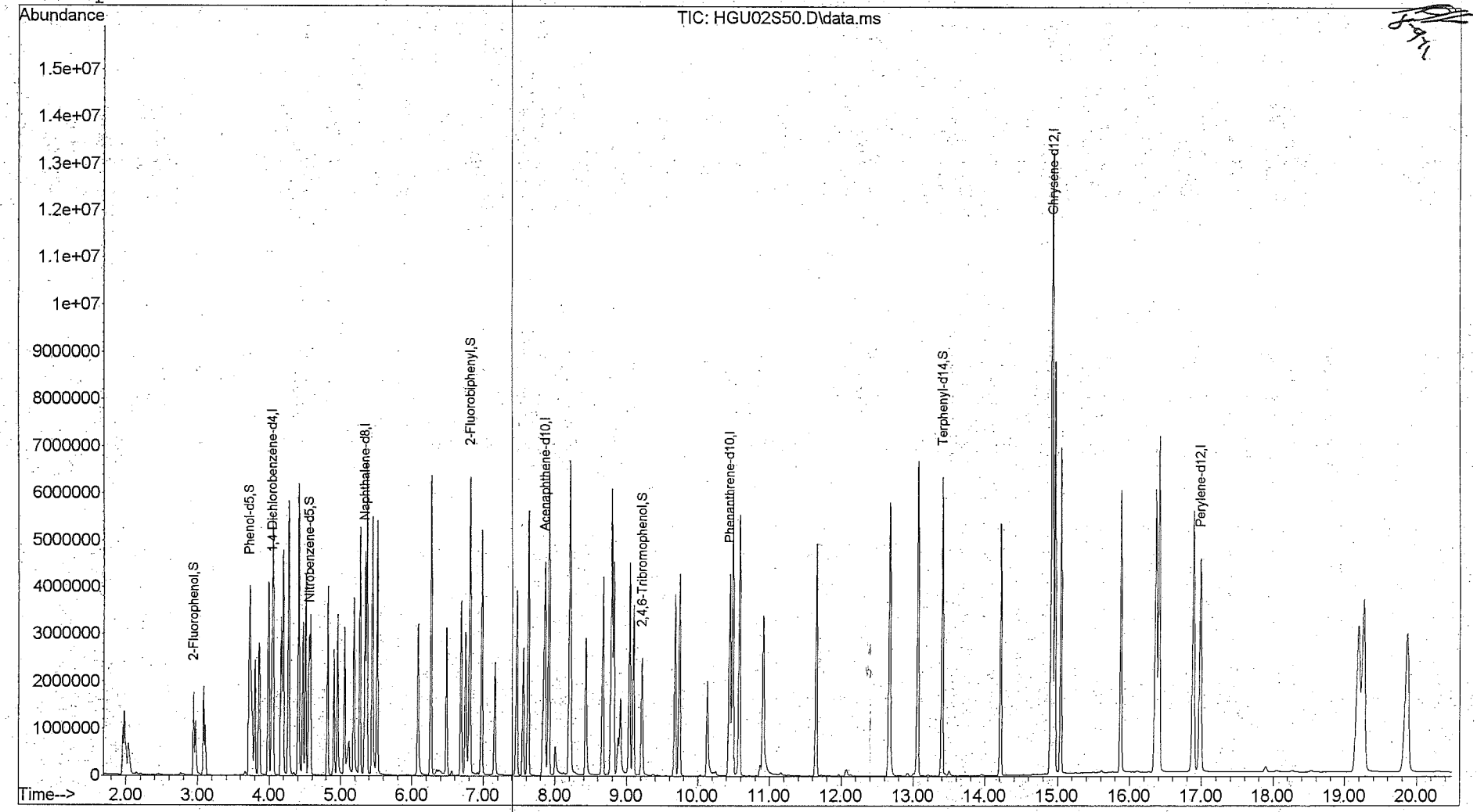
8270DOND.M 5975-H 8270DOND.M 8270 35 std 15972 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU02S50.D Vial: 2
Acq On : 08/08/2012 10:26 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:00 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

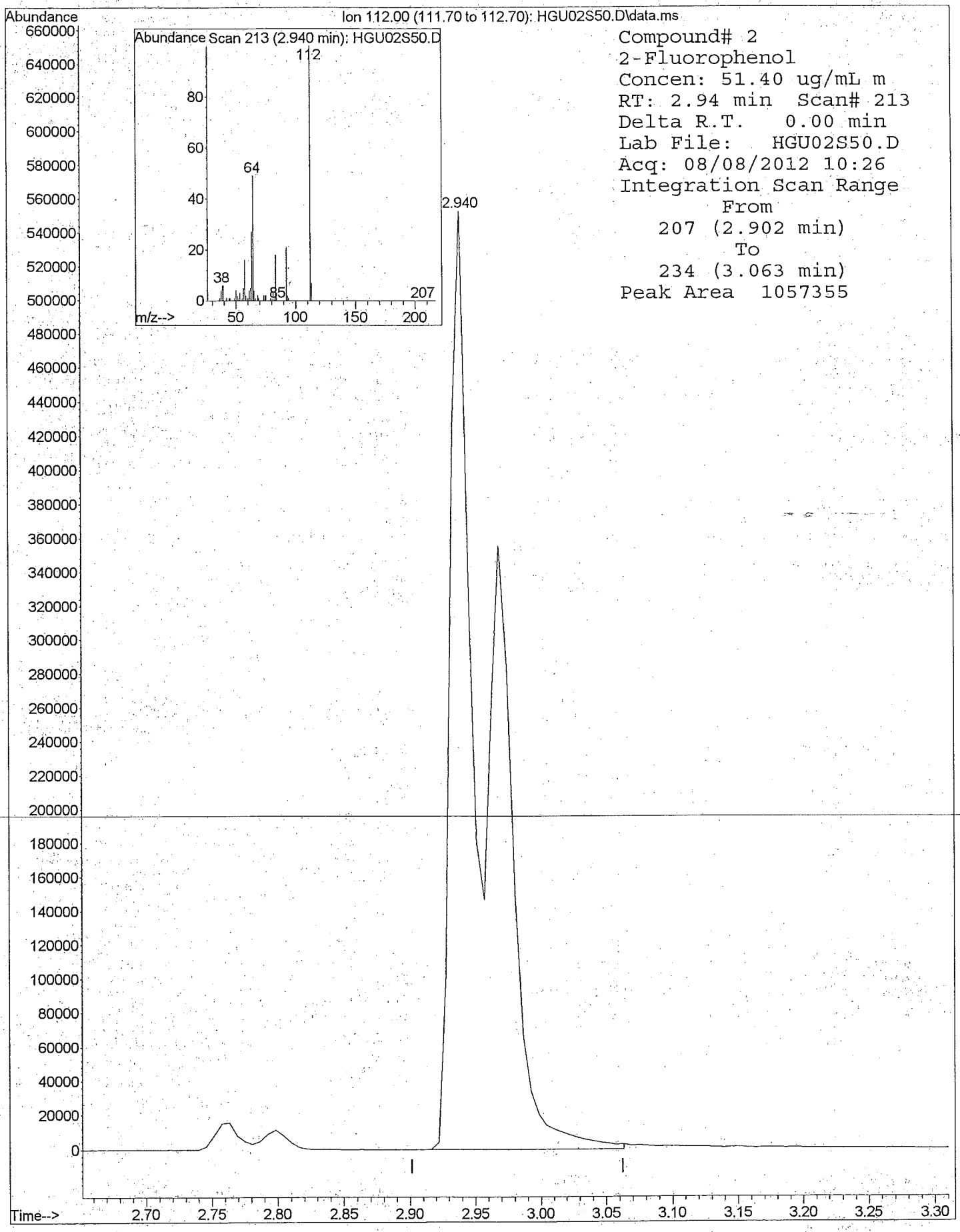
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU02S50.D Vial: 2
Acq On : 08/08/2012 10:26 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:00 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	612345	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2685634	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1537458	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2905275	40.00 ug/mL
12) Chrysene-d12	14.92	240	3449311	40.00 ug/mL
14) Perylene-d12	16.98	264	3127477	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	1057355	51.398ug/mL m
4) Phenol-d5	3.72	99	1371889	50.848ug/mL
7) Nitrobenzene-d5	4.56	82	1173697	50.982ug/mL
9) 2-Fluorobiphenyl	6.81	172	2890739	50.693ug/mL
11) 2,4,6-Tribromophenol	9.21	330	511120	52.257ug/mL
13) Terphenyl-d14	13.40	244	3359400	50.447ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	531164	49.961ug/mL m 98
5) 1,4-Dithiane	4.47	120	861261	50.006ug/mL 99

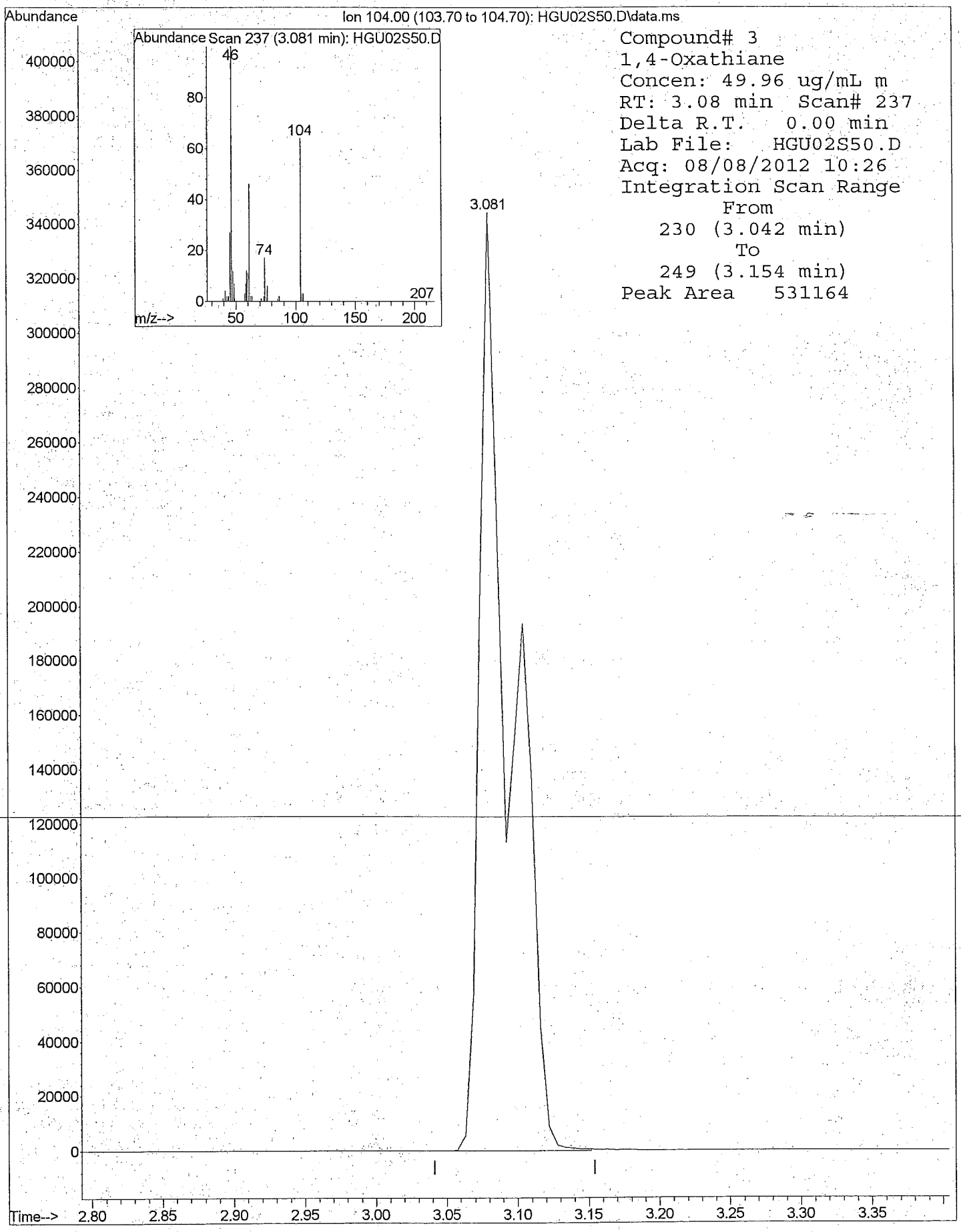
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

MANUAL INTEGRATION FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



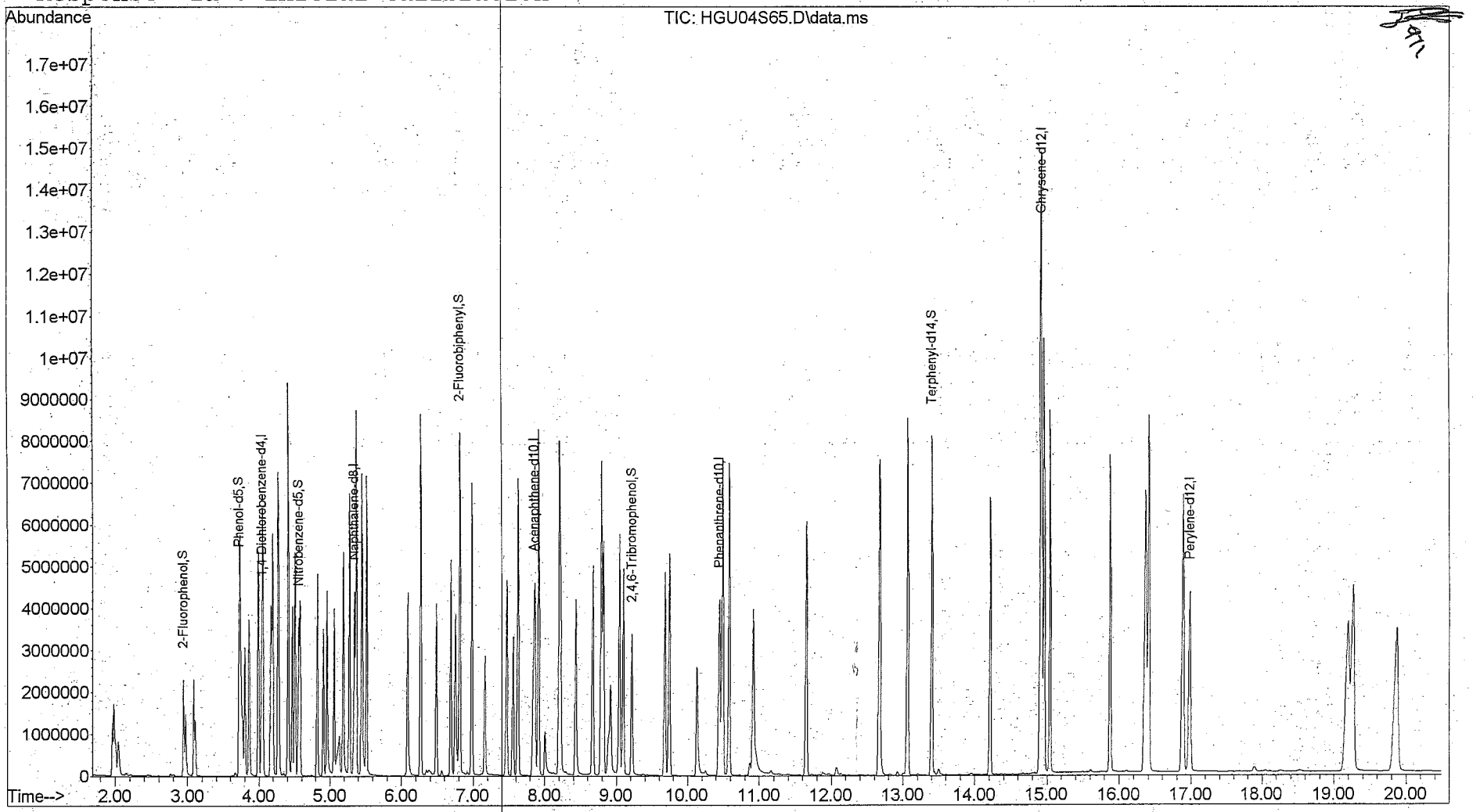
8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU04S65.D Vial: 4
Acq On : 08/08/2012 11:30 Operator: RAH
Sample : 8270 65 std 15971 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:39 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

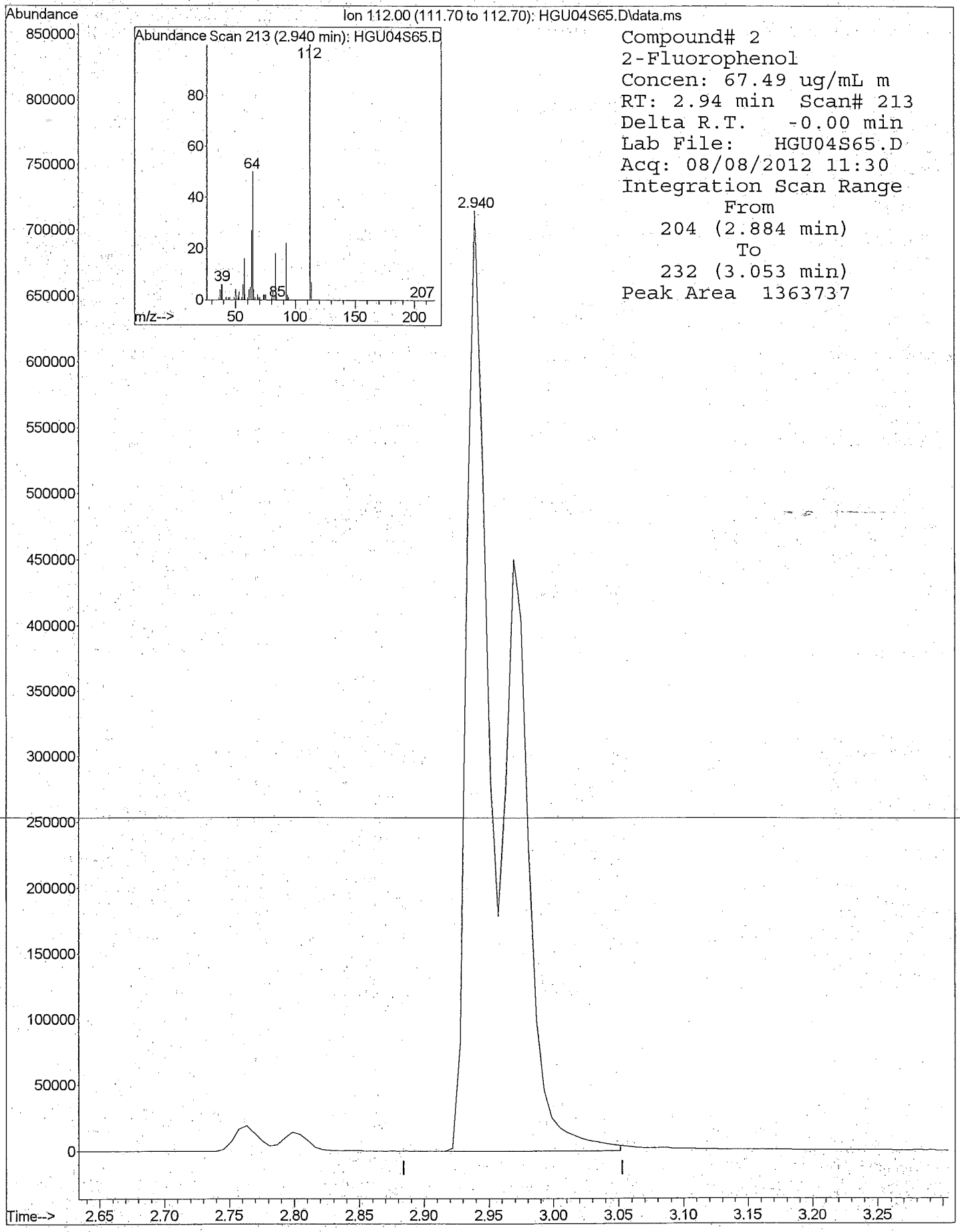
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU04S65.D Vial: 4
Acq On : 08/08/2012 11:30 Operator: RAH
Sample : 8270 65 std 15971 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:39 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	
1) 1,4-Dichlorobenzene-d4	4.03	152	601456	40.00 ug/mL	
6) Naphthalene-d8	5.34	136	2621070	40.00 ug/mL	
8) Acenaphthene-d10	7.86	164	1527619	40.00 ug/mL	
10) Phenanthrene-d10	10.45	188	2869288	40.00 ug/mL	
12) Chrysene-d12	14.92	240	3336798	40.00 ug/mL	
14) Perylene-d12	16.98	264	2949965	40.00 ug/mL	
System Monitoring Compounds					
2) 2-Fluorophenol	2.94	112	1363737	67.491ug/mL	m
4) Phenol-d5	3.72	99	1796093	67.776ug/mL	
7) Nitrobenzene-d5	4.56	82	1514769	67.417ug/mL	
9) 2-Fluorobiphenyl	6.81	172	3752969	66.238ug/mL	
11) 2,4,6-Tribromophenol	9.22	330	665537	68.899ug/mL	
13) Terphenyl-d14	13.40	244	4279647	66.433ug/mL	
Target Compounds					Qvalue
3) 1,4-Oxathiane	3.08	104	671622	64.317ug/mL	m 98
5) 1,4-Dithiane	4.47	120	1091903	64.545ug/mL	99

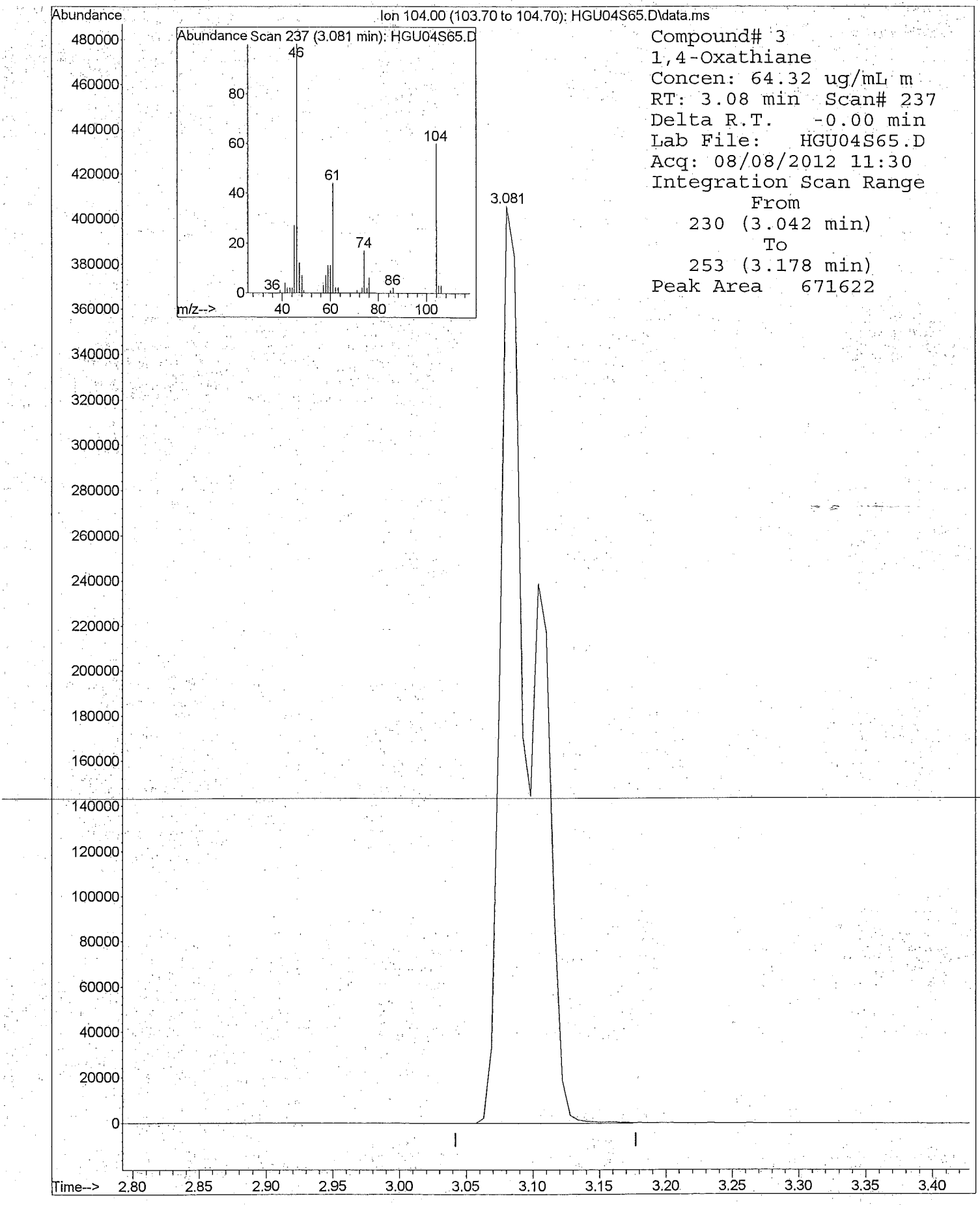
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

MANUAL INTEGRATION FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 65 std 15971 . X:1/9/13

MANUAL INTEGRATION FOR 1,4-Oxathiane



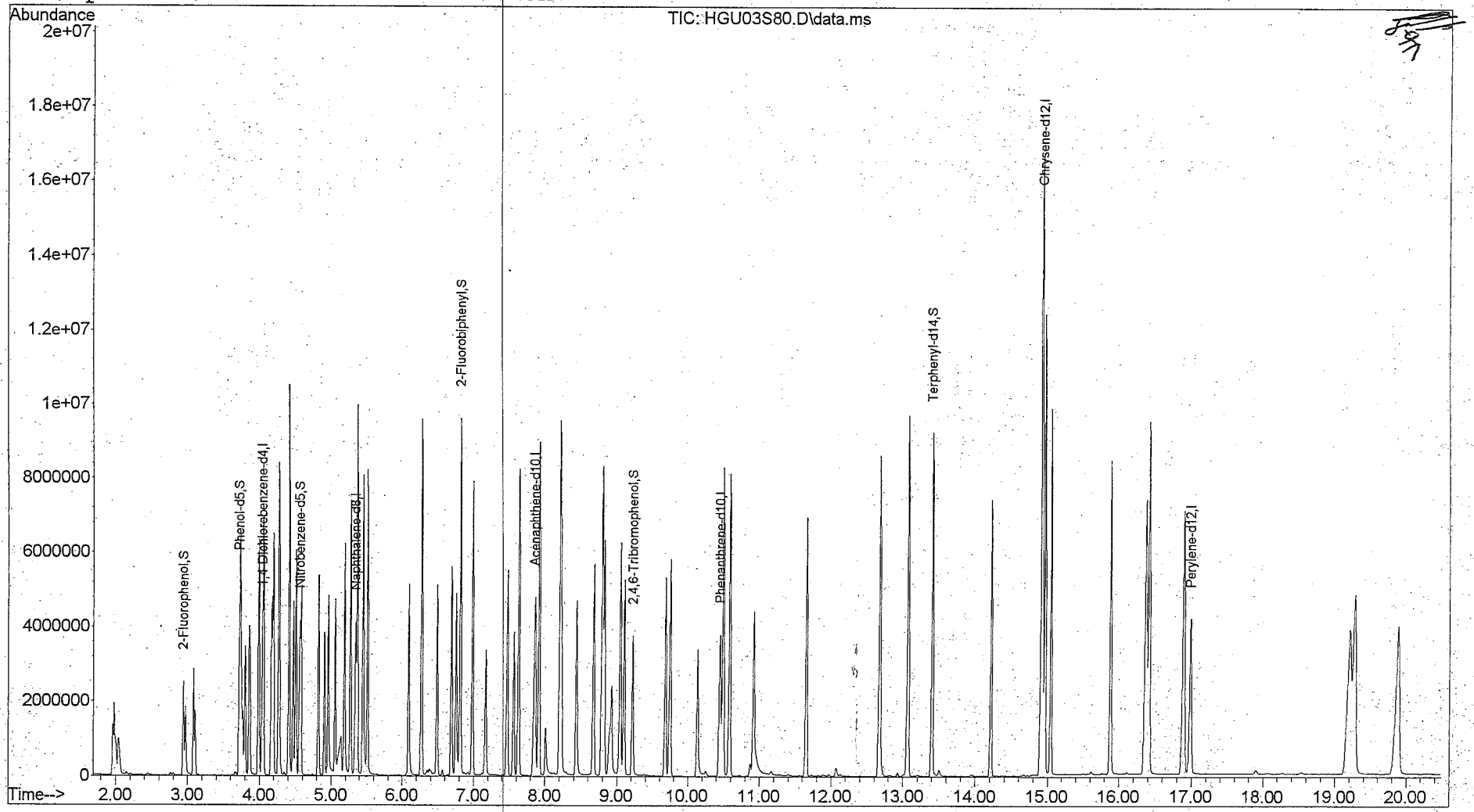
8270DOND.M 5975-H 8270DOND.M 8270 65 std 15971 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU03S80.D Vial: 3
Acq On : 08/08/2012 11:01 Operator: RAH
Sample : 8270 80 std 15970 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:20 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

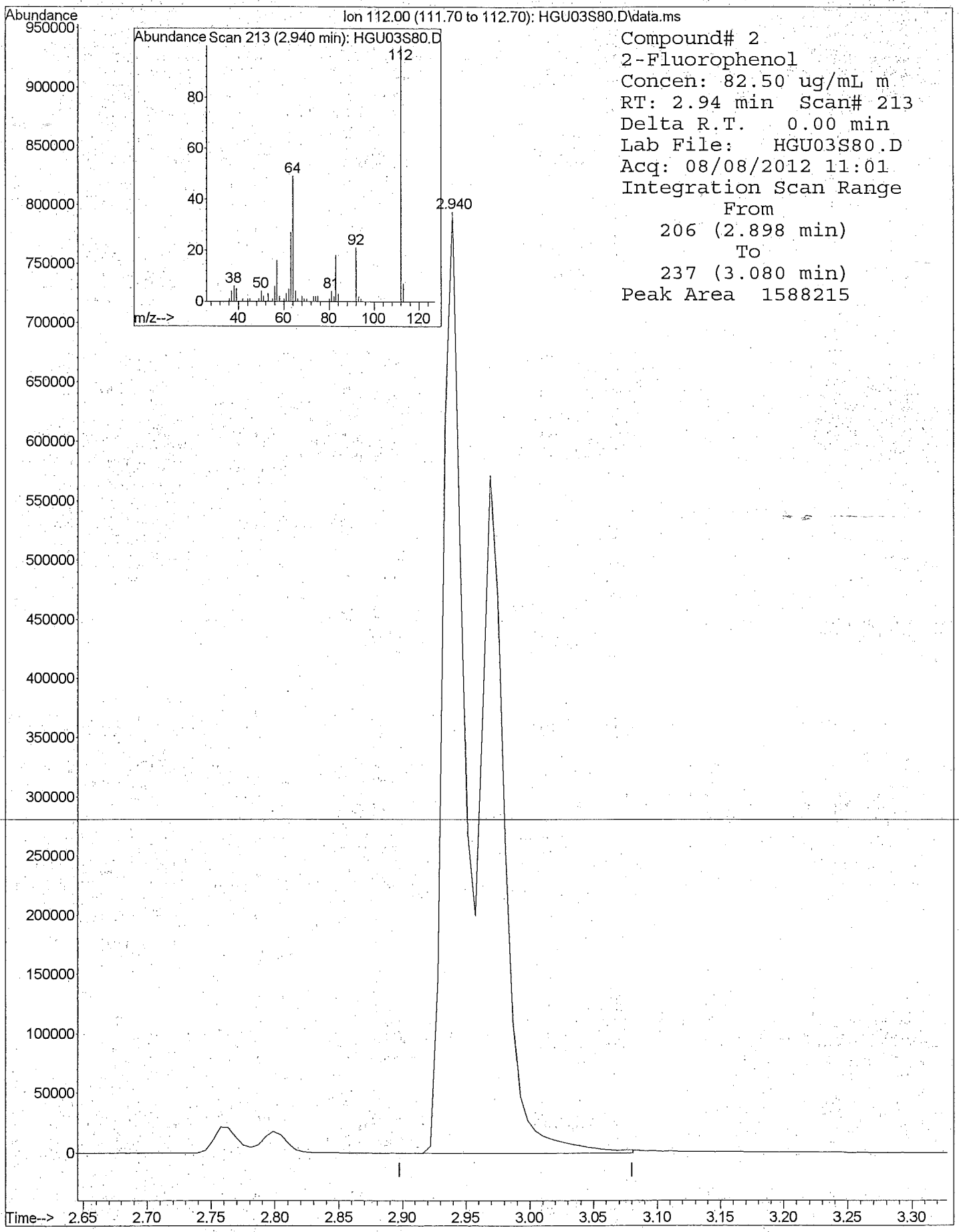
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU03S80.D Vial: 3
Acq On : 08/08/2012 11:01 Operator: RAH
Sample : 8270 80 std 15970 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:20 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	
1) 1,4-Dichlorobenzene-d4	4.03	152	573029	40.00 ug/mL	
6) Naphthalene-d8	5.35	136	2477577	40.00 ug/mL	
8) Acenaphthene-d10	7.86	164	1435287	40.00 ug/mL	
10) Phenanthrene-d10	10.45	188	2700617	40.00 ug/mL	
12) Chrysene-d12	14.93	240	3115162	40.00 ug/mL	
14) Perylene-d12	16.99	264	2729963	40.00 ug/mL	
System Monitoring Compounds					
2) 2-Fluorophenol	2.94	112	1588215	82.500ug/mL	m
4) Phenol-d5	3.72	99	2086917	82.657ug/mL	
7) Nitrobenzene-d5	4.56	82	1728073	81.365ug/mL	
9) 2-Fluorobiphenyl	6.82	172	4345820	81.635ug/mL	
11) 2,4,6-Tribromophenol	9.22	330	773542	85.081ug/mL	
13) Terphenyl-d14	13.40	244	4851775	80.673ug/mL	
Target Compounds					Qvalue
3) 1,4-Oxathiane	3.08	104	812617	81.679ug/mL	m 92
5) 1,4-Dithiane	4.47	120	1310784	81.328ug/mL	99

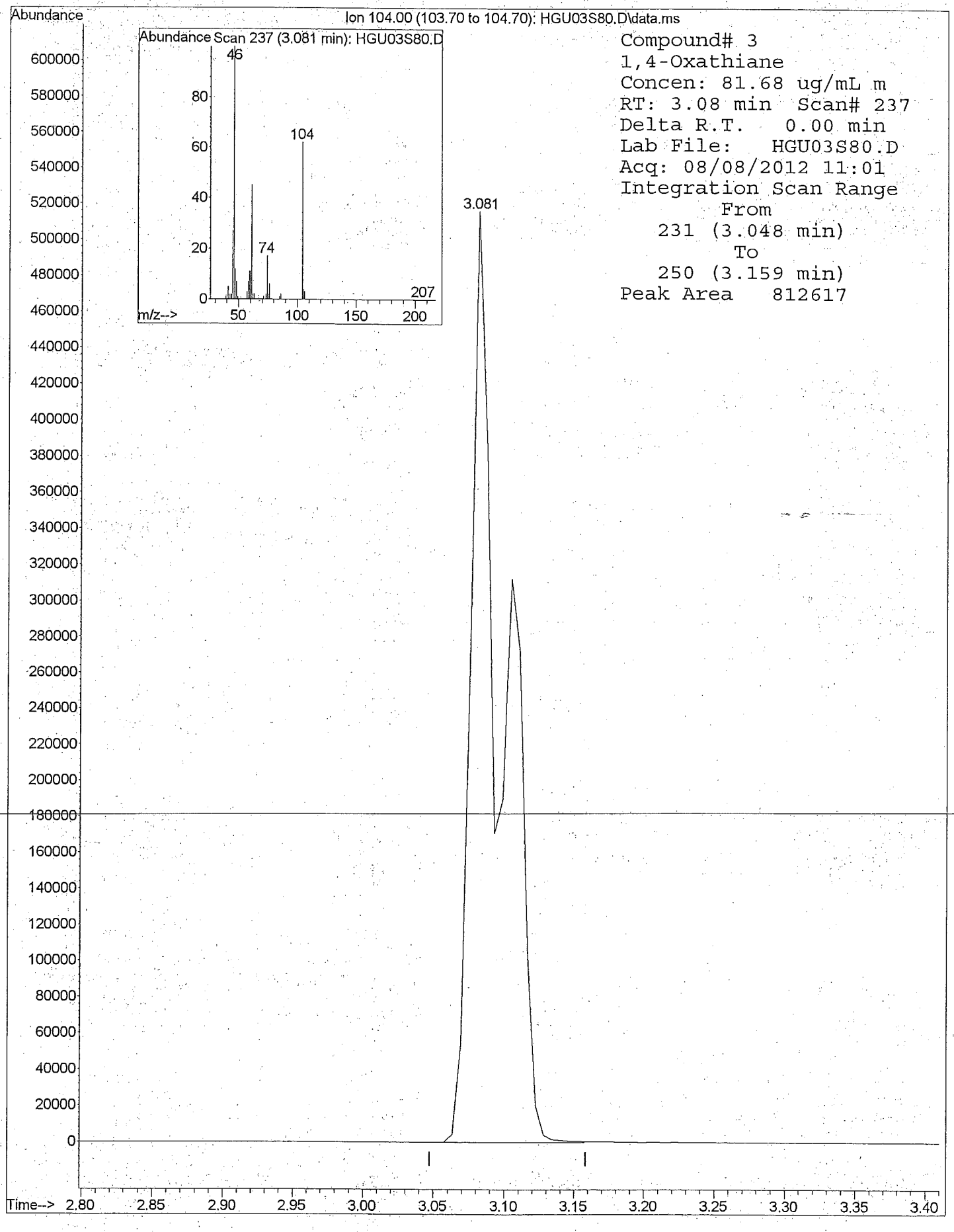
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

MANUAL INTEGRATION FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 80 std 15970 . X:1/9/13

MANUAL INTEGRATION FOR 1,4-Oxathiane



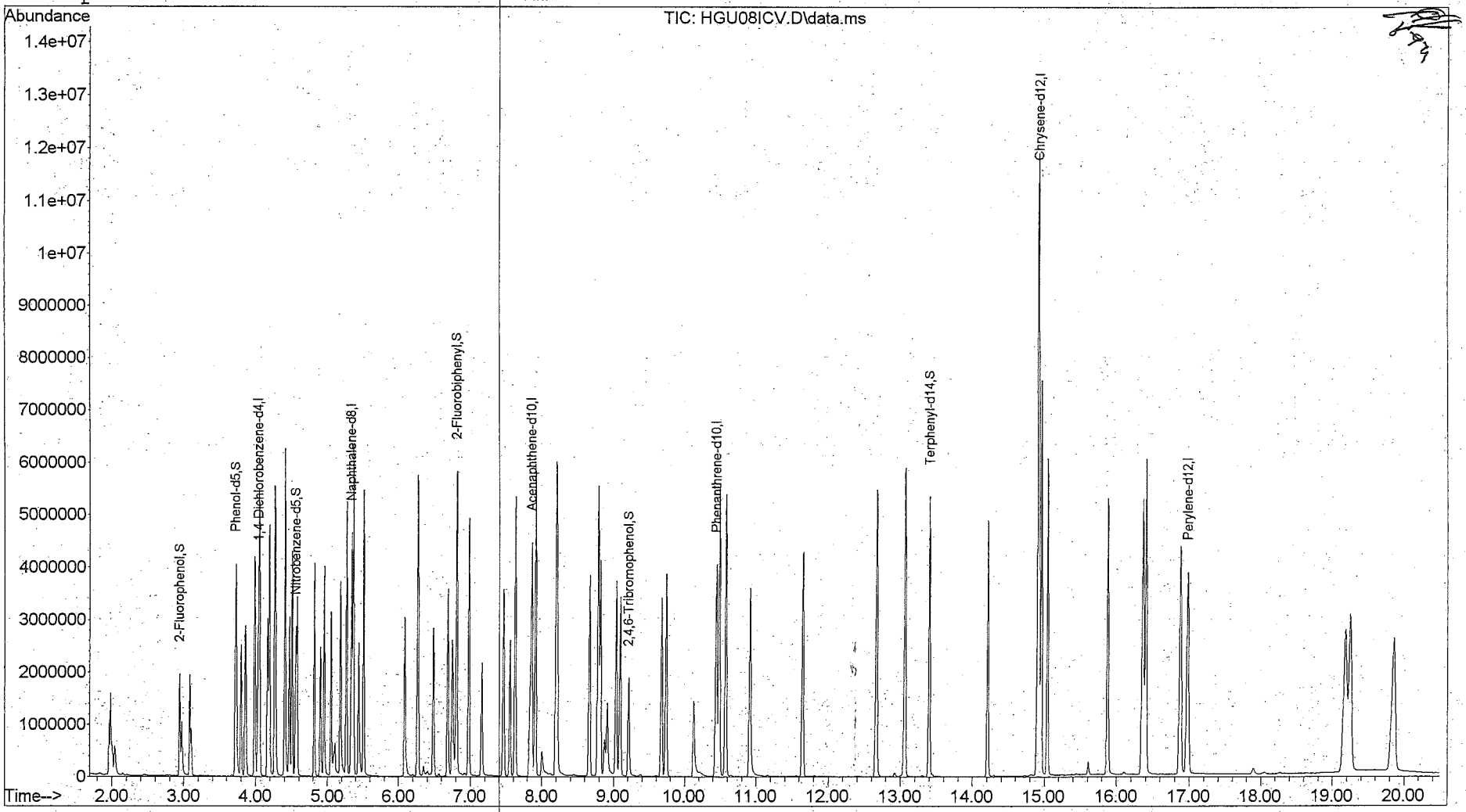
8270DOND.M 5975-H 8270DOND.M 8270 80 std 15970 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU08ICV.D Vial: 8
Acq On : 08/08/2012 13:29 Operator: RAH
Sample : 8270 ICV 15975 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 14:02:13 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

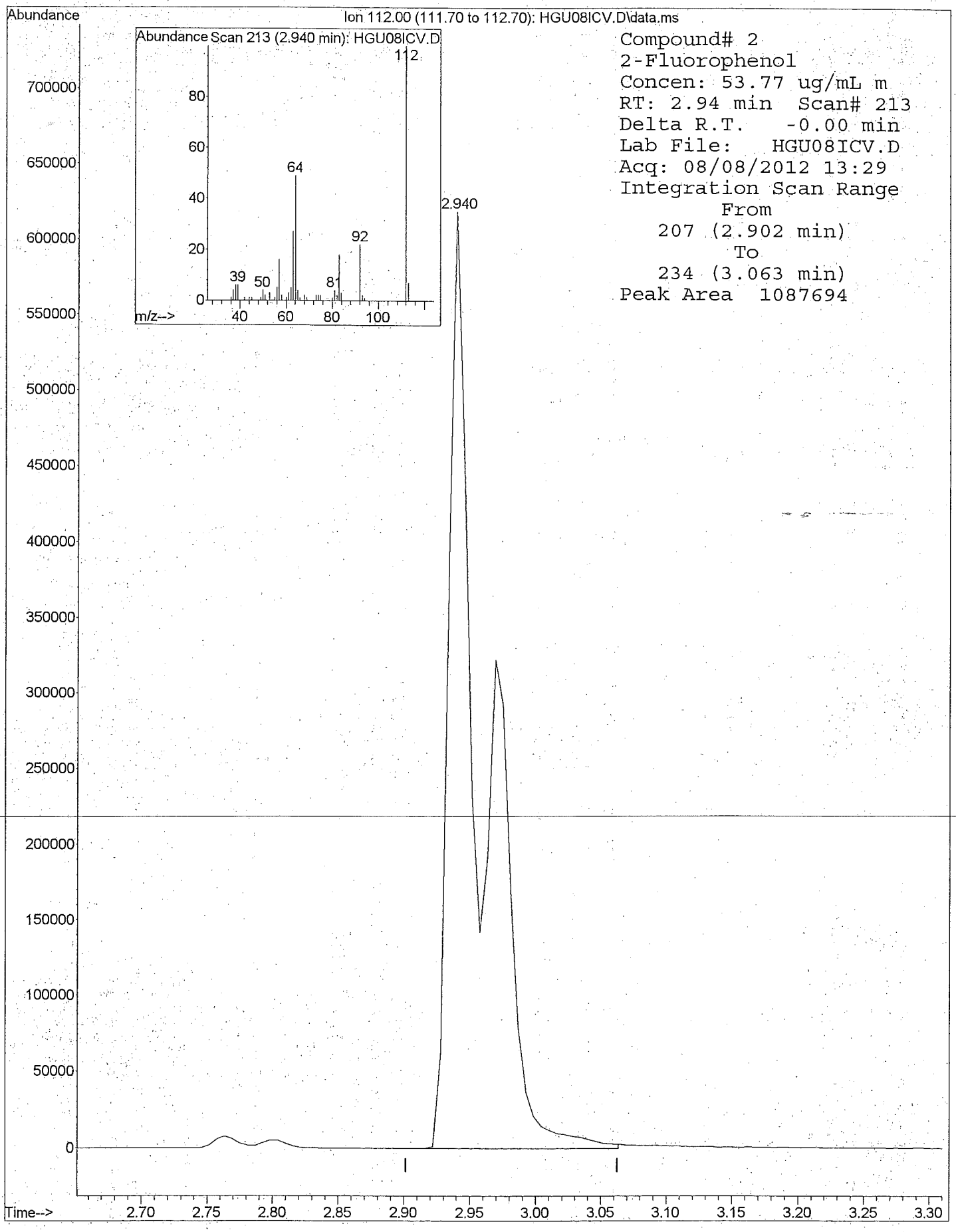
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU08ICV.D Vial: 8
Acq On : 08/08/2012 13:29 Operator: RAH
Sample : 8270 ICV 15975 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 14:02:13 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	602341	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2573963	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1459085	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2725972	40.00 ug/mL
12) Chrysene-d12	14.92	240	3150498	40.00 ug/mL
14) Perylene-d12	16.98	264	2694862	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	1087694	53.767ug/mL m
4) Phenol-d5	3.72	99	1280207	48.238ug/mL
7) Nitrobenzene-d5	4.56	82	1077669	48.841ug/mL
9) 2-Fluorobiphenyl	6.81	172	2644191	48.860ug/mL
11) 2,4,6-Tribromophenol	9.22	330	397803	43.347ug/mL
13) Terphenyl-d14	13.40	244	2731708	44.912ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	517926	49.537ug/mL m 99
5) 1,4-Dithiane	4.47	120	833107	49.175ug/mL 98

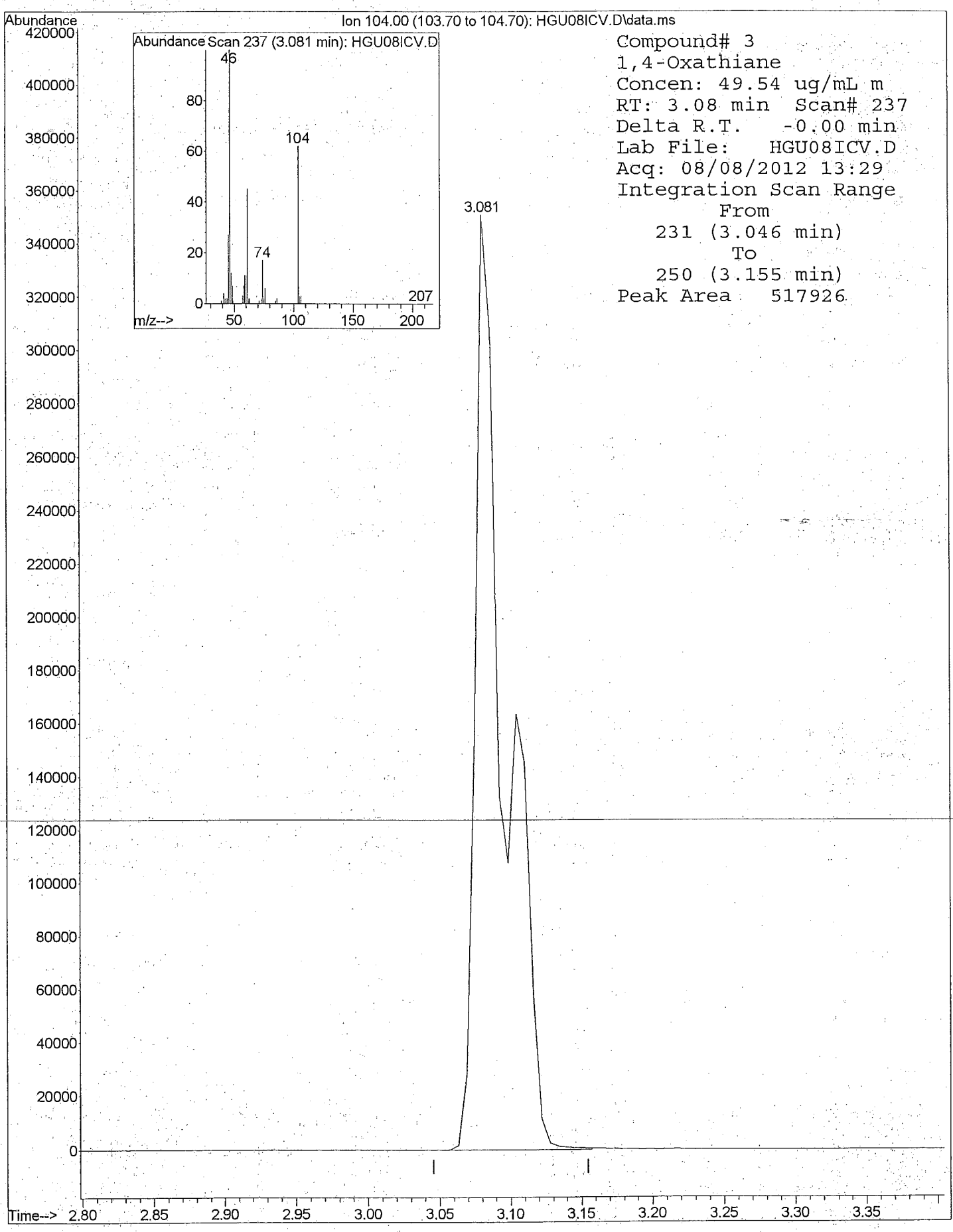
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

MANUAL INTEGRATION FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 ICV 15975 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



8270DOND.M 5975-H 8270DOND.M 8270 ICV 15975 . X:1/9/13

Average of 6.240 to 6.251 min.: HGZ01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.95	216	47.90	91	59.05	284	69.95	978
36.95	716	49.00	1373	60.00	12	71.00	45
38.05	2121	50.00	34012	61.05	1827	71.95	193
39.00	10248	51.05	118769	62.05	1974	73.00	1180
40.00	554	52.05	6317	63.00	5216	74.00	15185
41.05	311	53.00	256	64.05	729	75.00	23780
42.00	122	54.00	52	65.00	2504	76.10	7871
43.00	128	55.00	1025	65.90	199	77.00	151461
43.95	229	56.00	4092	66.10	84	78.00	10168
45.00	229	57.00	8742	67.00	440	79.00	11203
46.90	138	57.95	522	69.00	163930	80.00	8742

Average of 6.240 to 6.251 min.: HGZ01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
81.00	11691	92.95	19855	104.00	4066	114.95	188
82.00	2727	94.00	1464	104.95	3819	116.05	3202
83.00	2524	95.00	411	106.05	1590	116.95	42904
84.00	503	96.05	736	107.00	49223	118.00	3097
85.00	2061	97.10	307	108.00	7809	118.95	336
85.95	3490	97.95	14856	110.00	91677	119.95	644
87.00	1478	99.00	10956	111.00	13178	121.10	448
87.95	650	100.05	1004	112.00	1976	122.00	3741
88.90	335	101.00	6488	112.95	492	123.00	5339
91.00	2564	102.00	401	114.00	148	124.00	2535
92.05	3026	102.95	2240	114.20	104	124.95	2380

Average of 6.240 to 6.251 min.: HGZ01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
127.00	181936	137.95	677	149.00	2319	160.00	3194
128.00	14356	139.00	600	150.00	768	161.00	4256
129.00	75133	140.05	990	151.05	1434	162.00	1367
130.00	6088	140.95	9329	151.80	703	163.05	461
131.00	1195	141.95	2912	152.95	3115	164.00	684
131.95	554	143.00	2116	154.00	2688	165.00	3710
132.90	293	144.00	477	155.00	5287	166.05	2833
133.95	2064	144.95	570	156.00	8147	166.95	20272
135.00	5733	146.05	1955	157.00	1717	168.00	9123
135.95	2186	147.00	4919	158.00	2002	169.00	2158
137.00	2894	148.00	11457	159.00	1533	170.05	1007

Average of 6.240 to 6.251 min.: HGZ01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
171.00	861	182.05	893	193.00	5228	206.00	109117
171.95	2000	182.90	618	194.00	1030	207.00	14392
173.00	2305	183.95	1288	195.05	983	208.00	3762
174.00	4500	185.00	7494	196.00	15734	209.00	1261
175.00	7527	186.00	57451	198.00	432747	210.20	1428
176.00	2581	187.00	16398	199.00	28901	211.05	4495
177.05	3828	188.00	1617	199.95	2286	213.05	243
178.00	1320	189.00	3479	201.50	2842	214.05	208
179.00	15237	189.95	685	203.00	2911	214.95	1410
180.00	10274	191.00	1705	204.00	15455	216.00	2564
181.00	5058	192.00	4721	205.00	26432	217.00	28291

Average of 6.240 to 6.251 min.: HGZ01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
218.00	3890	231.00	2497	242.00	3690	251.95	423
219.05	389	232.00	492	243.10	4006	253.00	1152
220.95	27731	233.00	500	244.05	51869	254.95	272461
223.00	7311	234.00	1654	245.10	6784	256.00	40040
224.00	63432	235.00	1932	246.00	9642	257.00	3251
225.00	16547	236.00	1375	246.95	1950	258.00	14898
226.10	1271	237.00	2154	248.05	429	258.95	2335
227.00	25256	237.95	428	249.00	1878	260.00	384
228.00	3720	239.00	903	249.95	385	261.00	528
229.00	5295	240.00	971	250.95	445	262.80	75
229.95	872	241.00	1607	251.80	160	263.85	481

Average of 6.240 to 6.251 min.: HGZ01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
265.00	5792	276.00	16131	288.95	461	303.05	3909
265.90	1039	277.00	9528	289.90	437	304.00	1037
266.85	253	277.95	1512	290.95	148	305.05	112
267.85	185	278.95	351	292.05	514	308.00	529
269.90	291	280.90	86	293.00	2260	309.00	340
271.00	642	281.95	353	293.95	654	309.95	508
271.90	481	283.05	1322	296.00	34267	311.95	132
272.10	328	283.95	921	297.00	4867	312.95	407
273.00	8477	285.00	1810	297.95	365	314.05	1798
274.00	21784	286.10	456	301.00	468	315.00	3730
275.00	123019	288.10	55	302.00	687	316.00	2237

Average of 6.240 to 6.251 min.: HGZ01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
317.05	441	332.05	853	350.00	59	367.10	62
320.00	80	333.05	1189	351.10	221	370.00	244
321.05	1123	334.00	6836	352.00	2781	370.80	162
322.00	261	335.00	1720	353.05	2119	371.05	703
323.05	11107	336.00	126	354.00	3038	372.05	4734
324.00	1928	338.95	232	355.00	619	373.00	1239
324.95	243	340.00	148	358.70	53	374.10	197
326.05	236	341.00	1115	358.90	68	376.90	64
327.00	2158	341.95	348	359.20	85	383.00	1219
327.95	1022	346.00	2417	365.00	13322	383.95	402
328.95	225	346.95	458	366.00	1835	390.00	594

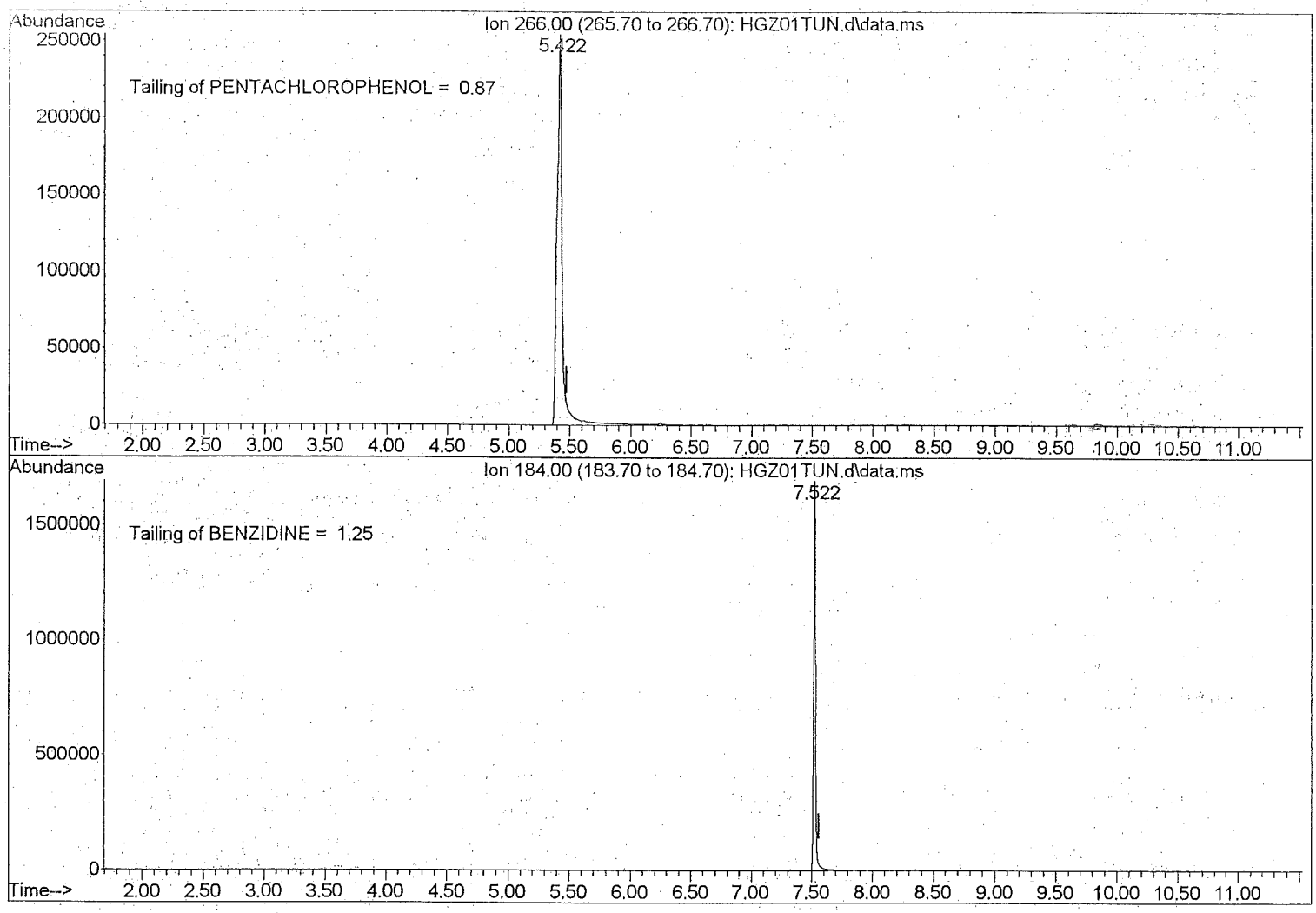
Average of 6.240 to 6.251 min.: HGZ01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
391.00	445	424.95	280	442.10	307200		
391.95	293	436.20	93	443.10	59611		
401.05	361	436.90	59	444.05	5511		
402.00	1513	437.70	125	445.05	281		
403.05	2242	438.05	265				
404.05	765	438.30	129				
405.00	53	438.70	192				
421.05	1864	439.00	209				
422.05	2022	439.20	199				
423.10	13019	439.60	342				
424.00	2687	441.10	46560				

Data File: HGZ01TUN.d
Date Acquired: 08/14/2012 09:47
Operator ID: RAH
Name: 8270 DFTPP 13808
Misc: . X:1/11/13

Instrument: 5975-H
Acq Method: 8270DTUN.M
DA Method: 8270DTUN.M

Cal Title: EPA/CLP SOM01
Last Cal Update: Wed Nov 23 09:22:39 2011
. X:1/11/13



Trn 235.00 (234.70 to 235.70): HGZ01TUN.D\data.ms
8.170 CFTPP 13808

Peak #	Ret Time	Type	Width	Area	Start Time	End Time
1	8.063	PBV	0.112	81781	8.030	8.122
2	8.357	PVB	0.094	1286134	8.322	8.416

DDT Degradation = $\frac{81781}{1286134 + 81781}$ = 6.0%

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File        :D:\1\DATA\2012\AUG12\14AUG12H\HGZ01TUN.D
Operator    : RAH
Acquired    : 08/14/2012 09:47 using AcqMethod 8270DTUN.M
Instrument  :    5975-H
Sample Name: 8270 DFTPP 13808
Misc Info   : . X:1/11/13
Vial Number: 1
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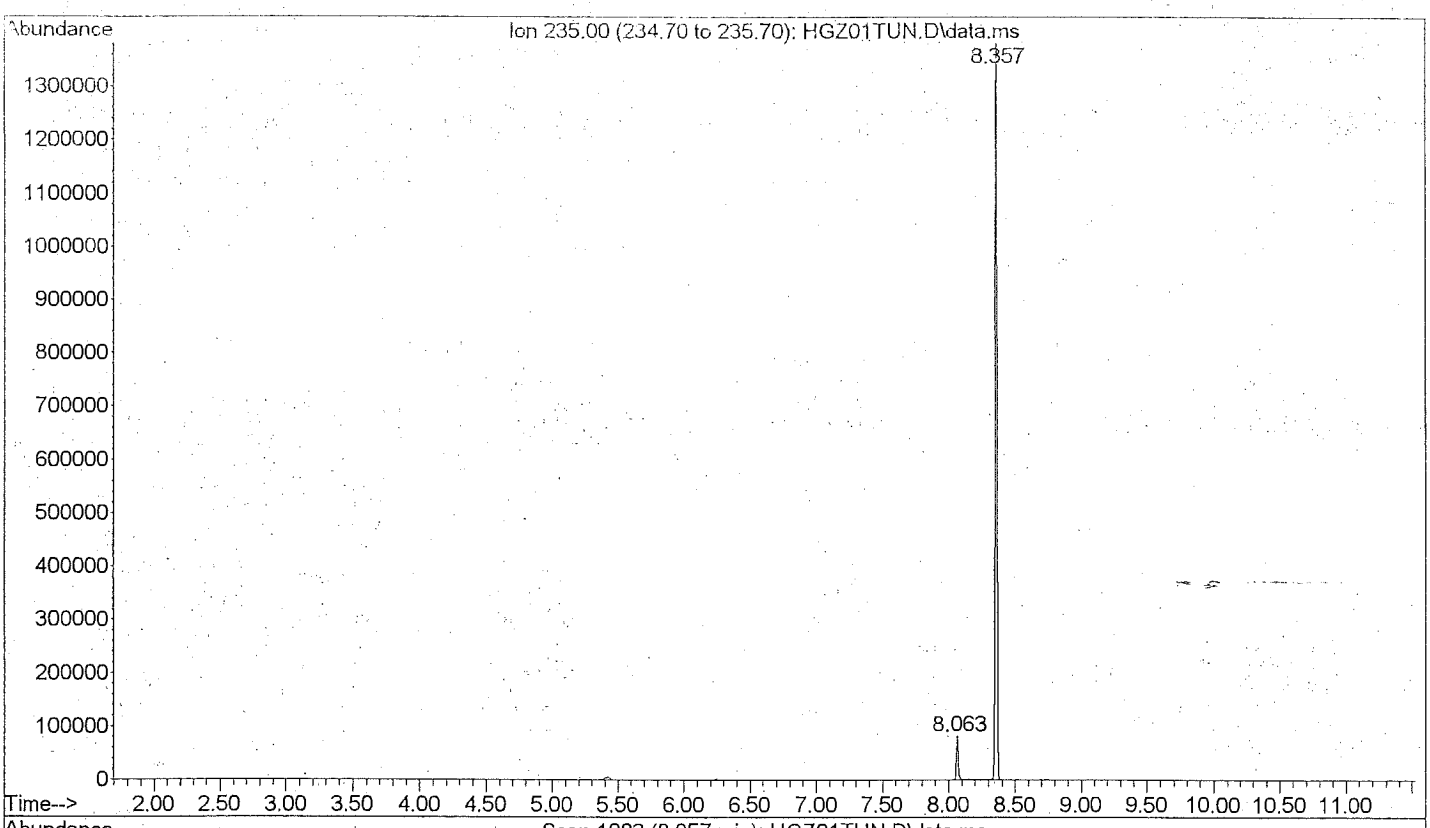
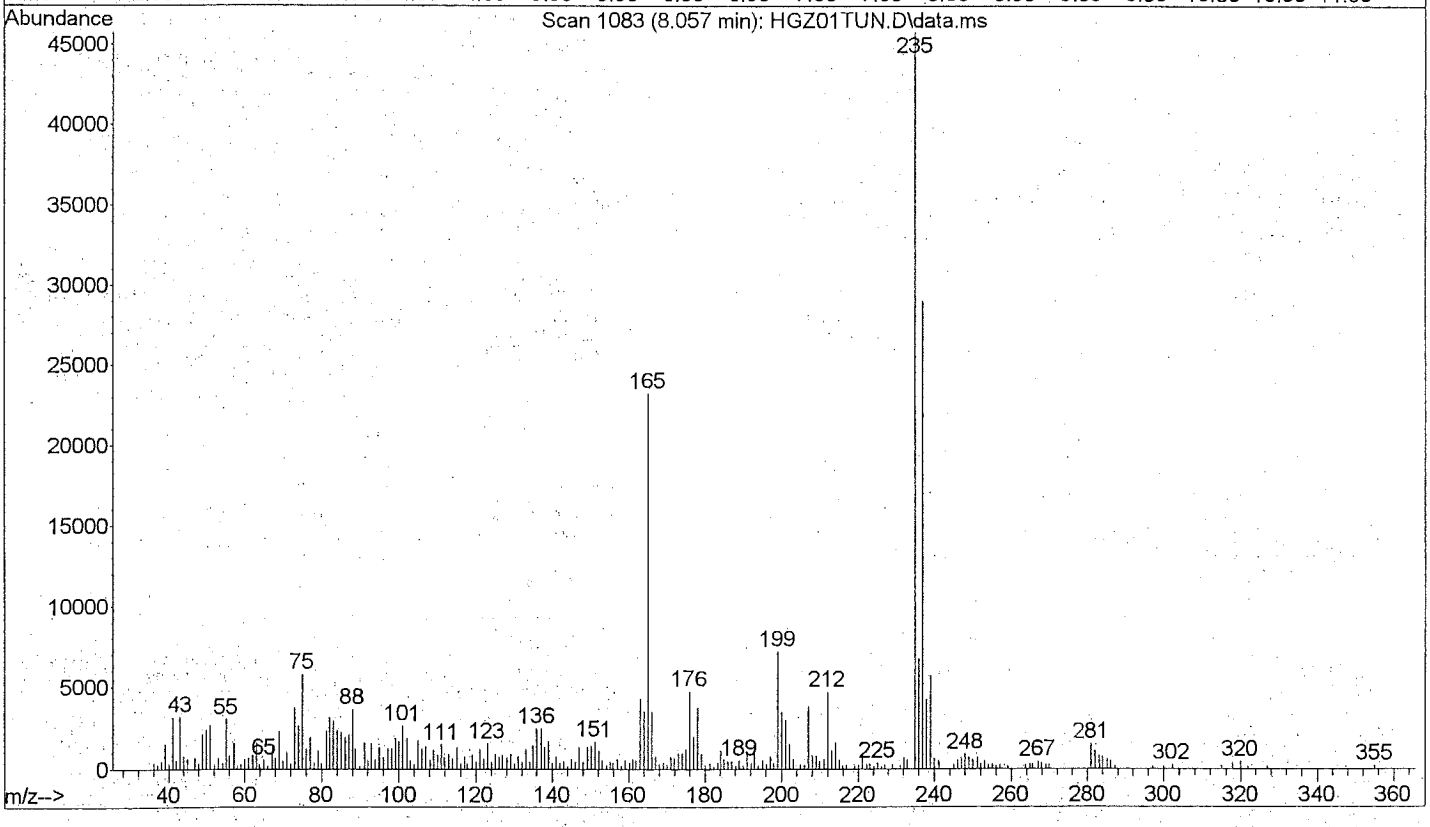


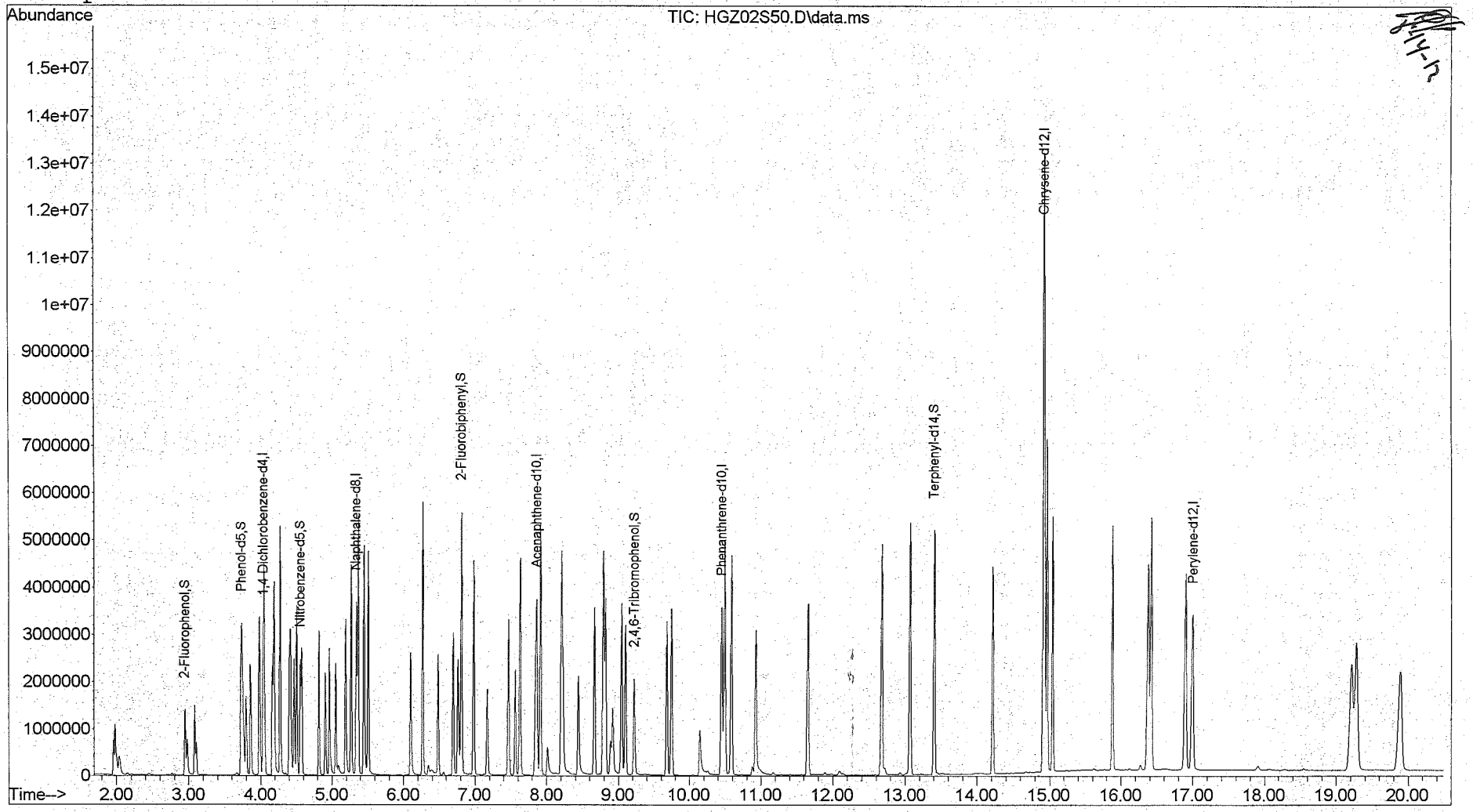


Quantitation Report

Data File : D:\1\DATA\2012\AUG12\14AUG12H\HGZ02S50.D Vial: 2
Acq On : 08/14/2012 10:07 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 14 10:31:47 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

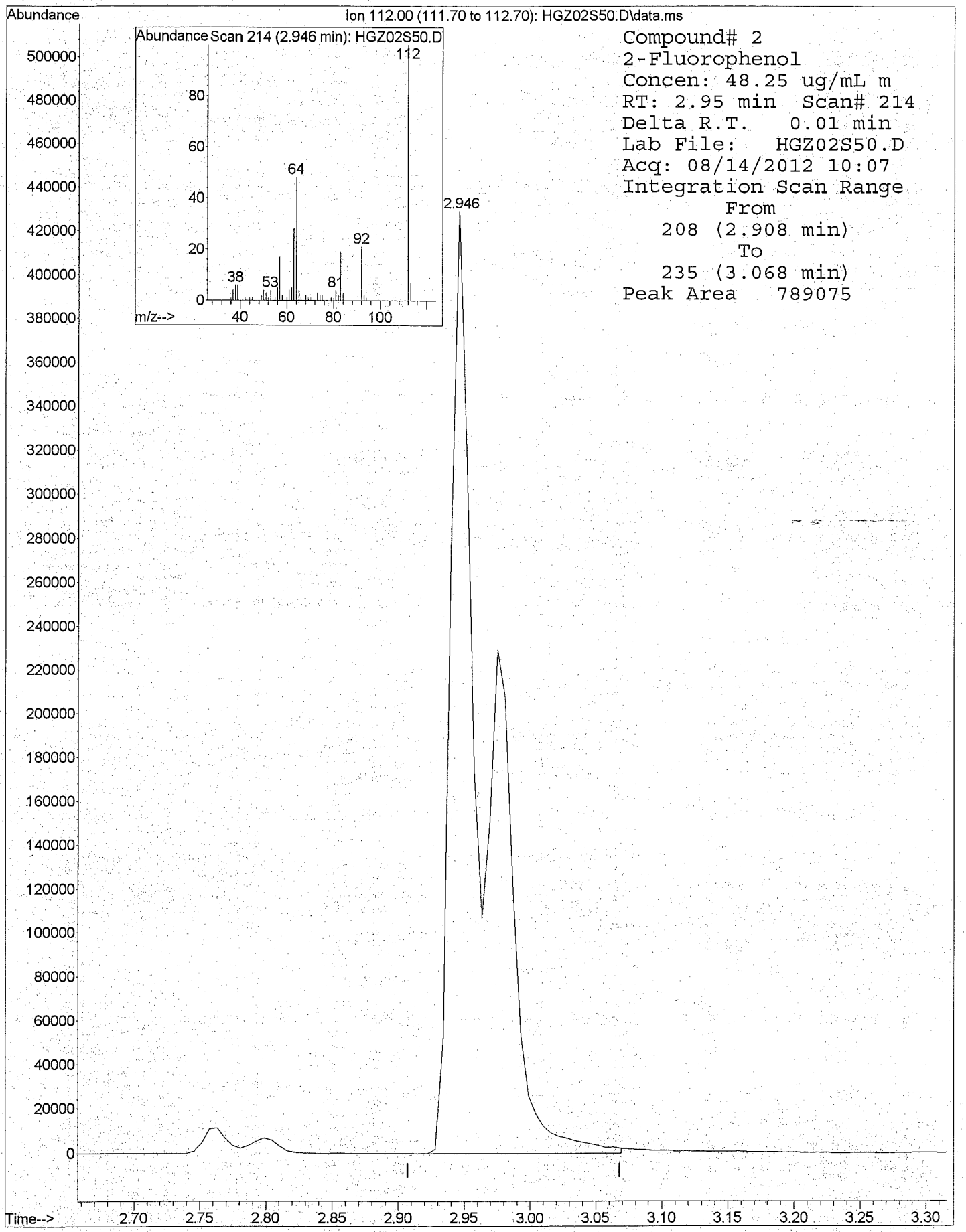
Data File : D:\1\DATA\2012\AUG12\14AUG12H\HGZ02S50.D Vial: 2
Acq On : 08/14/2012 10:07 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 14 10:31:47 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	486967	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2122270	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1238566	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2351447	40.00 ug/mL
12) Chrysene-d12	14.93	240	2952760	40.00 ug/mL
14) Perylene-d12	17.00	264	2316883	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	789075	48.247ug/mL m
4) Phenol-d5	3.73	99	1075259	50.115ug/mL
7) Nitrobenzene-d5	4.56	82	918367	50.480ug/mL
9) 2-Fluorobiphenyl	6.81	172	2392367	52.078ug/mL
11) 2,4,6-Tribromophenol	9.22	330	397510	50.214ug/mL
13) Terphenyl-d14	13.41	244	2723256	47.771ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	388991	46.020ug/mL 97
5) 1,4-Dithiane	4.47	120	656402	47.924ug/mL 95

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

MANUAL INTEGRATION FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

Average of 6.245 to 6.257 min.: HHC01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.90	111	50.05	30619	62.10	1915	73.00	1511
37.00	784	51.00	106416	63.00	4713	73.95	14729
38.05	1664	52.00	5445	63.95	681	75.00	21111
39.05	9849	53.00	472	65.00	3128	76.10	9196
40.00	383	55.05	1713	65.95	240	77.00	137144
41.00	3300	56.00	4607	67.00	431	78.00	9426
42.00	291	57.00	9200	68.05	290	79.00	10945
43.00	1061	57.95	624	69.00	143193	79.95	7790
43.95	267	58.90	165	70.00	803	81.00	10738
45.00	248	59.90	189	71.05	49	82.00	2650
48.95	1487	61.00	1618	71.90	224	83.05	2401

Average of 6.245 to 6.257 min.: HHC01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
84.00	570	96.00	953	107.00	44191	118.00	2839
84.95	1132	97.00	567	108.00	6723	119.00	438
85.95	3055	98.00	13854	110.00	82219	120.05	626
87.00	1018	99.00	10247	111.00	12293	121.00	1107
87.90	565	100.00	1072	111.95	1598	122.00	3815
88.95	223	100.95	5223	112.95	480	123.00	5481
91.00	2583	101.95	343	113.90	121	124.00	2420
92.00	3094	102.95	2041	114.10	94	125.00	2181
93.00	19720	104.00	5593	115.10	308	127.00	167804
94.00	1243	105.00	4752	116.00	2826	128.00	12653
95.00	653	106.10	769	117.00	40762	129.00	67656

Average of 6.245 to 6.257 min.: HHC01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
130.00	5756	140.00	1007	151.00	1371	162.00	1258
131.00	987	141.00	9115	152.05	731	163.00	318
131.90	393	141.95	2943	153.00	2766	163.95	658
132.05	442	143.00	1991	154.00	1930	164.95	3701
133.05	353	144.05	507	154.95	4966	166.00	2690
134.00	2021	145.00	621	156.00	7239	167.00	19217
135.00	5293	146.00	1671	157.00	1579	168.00	8898
136.00	2052	147.00	4519	158.00	1779	169.00	1421
137.00	2807	148.00	10324	159.00	1106	170.00	600
137.90	657	149.00	40220	160.00	3195	171.00	721
139.00	463	150.00	4068	161.00	4028	171.95	1757

Average of 6.245 to 6.257 min.: HHC01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
173.00	2187	183.95	1305	195.05	847	208.00	3489
174.00	3945	185.00	7098	196.00	14472	209.00	998
175.00	7400	186.00	53984	198.00	408384	210.30	821
176.00	2546	187.00	15237	199.00	27396	211.00	4180
177.00	3657	188.00	1608	199.95	2085	213.05	214
178.10	1094	188.95	3315	201.50	2728	214.05	210
179.00	14998	190.05	690	203.00	3061	215.00	999
180.00	9609	191.00	1710	203.95	14434	216.00	2591
180.95	4560	192.00	4635	205.00	26792	217.00	27178
182.00	693	193.00	5159	206.00	104037	218.00	3760
183.05	427	193.90	1165	207.00	13161	218.90	321

Average of 6.245 to 6.257 min.: HHC01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
220.95	26817	232.95	568	243.10	3885	255.00	267152
223.00	7702	234.00	1749	244.00	50781	256.00	39430
224.00	60861	235.00	1913	245.05	6737	257.00	3007
225.00	15750	236.00	1349	246.00	9543	258.00	15310
226.05	1923	237.00	2002	247.00	2024	259.00	2343
227.00	25827	238.00	325	247.95	498	260.05	517
227.95	3595	238.20	119	249.05	2069	261.05	528
229.00	5593	239.00	975	250.00	421	262.85	136
229.95	755	240.00	720	250.95	643	263.10	74
231.00	2518	241.00	1574	252.00	581	263.85	494
232.00	479	242.00	3462	253.00	1026	265.00	6337

Average of 6.245 to 6.257 min.: HHC01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
265.85	633	277.00	9639	288.15	127	298.05	448
266.90	210	278.00	1841	288.95	428	299.05	127
267.80	100	278.95	403	289.95	385	300.10	155
269.05	236	279.90	51	290.80	59	301.00	463
269.85	305	280.95	107	291.05	211	301.90	297
270.95	556	281.95	235	292.05	486	302.05	442
272.00	868	283.05	1270	293.00	2296	303.00	4250
273.00	8389	284.00	886	294.00	609	304.00	1081
274.00	21279	285.10	1712	295.00	329	305.00	135
275.00	122760	286.05	443	296.00	34464	307.85	546
276.00	16414	287.40	56	297.00	4871	308.80	92

Average of 6.245 to 6.257 min.: HHC01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
308.95	211	322.05	584	333.05	1031	346.90	383
310.00	456	323.05	10709	334.05	6923	351.00	197
312.00	129	324.00	2073	335.00	1846	352.05	3112
312.90	232	324.80	75	335.80	57	353.00	2054
313.10	187	325.05	225	336.10	76	354.05	2940
314.00	1648	325.95	340	338.95	132	354.95	659
315.00	3748	327.00	2208	339.90	109	356.00	51
316.00	2093	328.00	1193	341.00	1424	358.95	275
317.00	471	329.00	140	341.95	359	365.00	14134
319.90	68	330.90	59	343.00	85	366.00	2161
321.00	1151	331.95	927	346.00	2267	367.00	53

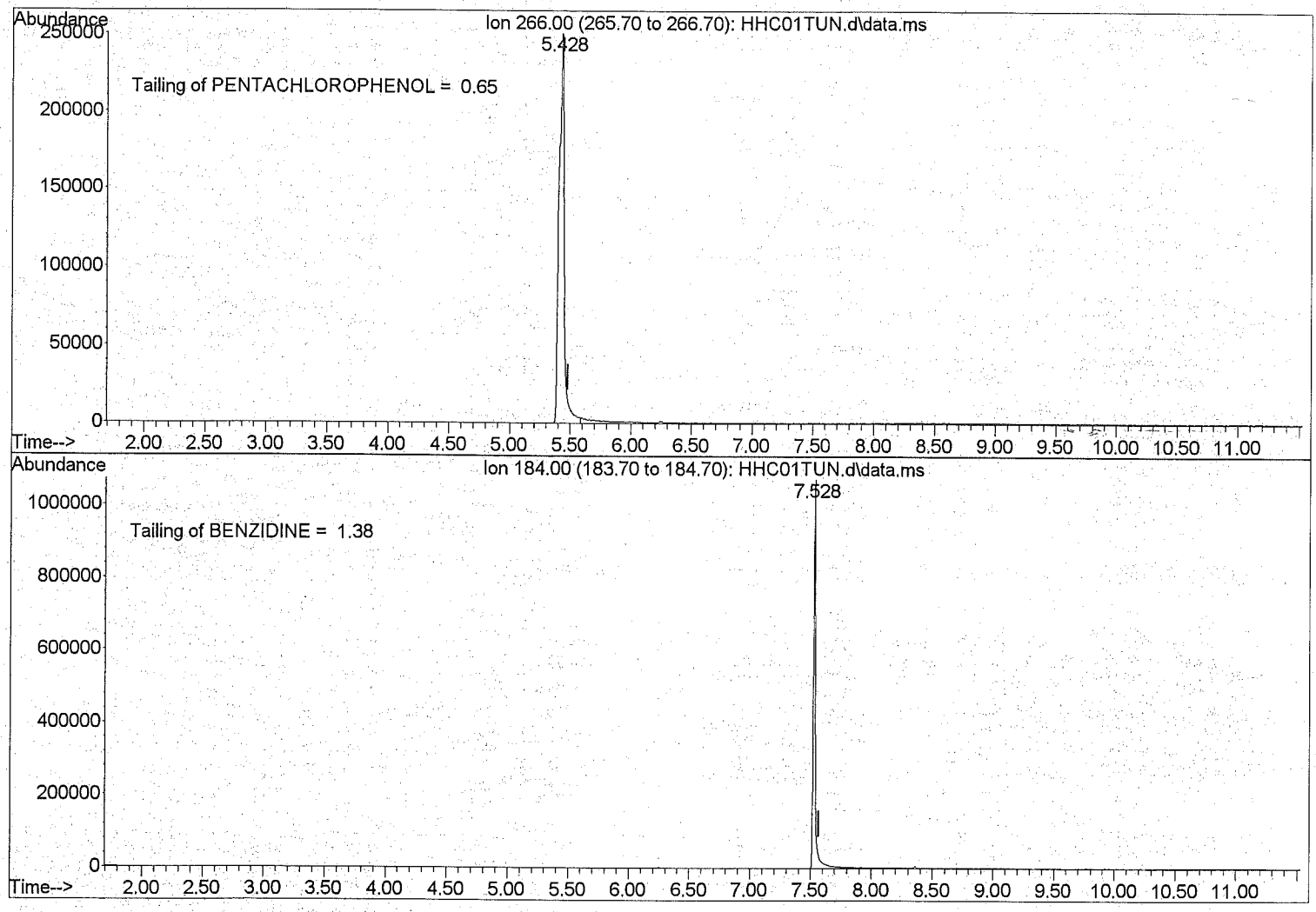
Average of 6.245 to 6.257 min.: HHC01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
369.95	240	401.05	322	434.20	54	442.10	311595
371.00	855	402.05	1457	435.50	55	443.10	60256
372.05	4870	403.05	2277	435.80	57	444.05	6006
373.05	1206	404.00	749	436.50	79	445.00	352
376.95	117	405.10	77	436.90	61		
383.00	1223	420.00	58	437.10	99		
383.95	311	421.05	1969	437.40	195		
385.10	52	422.10	1893	438.25	465		
390.00	513	423.05	13536	438.70	152		
391.05	409	424.10	2578	439.10	283		
392.05	282	425.00	286	441.10	46845		

Data File: HHC01TUN.d
Date Acquired: 08/17/2012 11:07
Operator ID: RAH
Name: 8270 DFTPP 13808
Misc: . X:1/11/13

Instrument: 5975-H
Acq Method: 8270DTUN.M
DA Method: 8270DTUN.M

Cal Title: EPA/CLP SOM01
Last Cal Update: Wed Nov 23 09:22:39 2011
. X:1/11/13

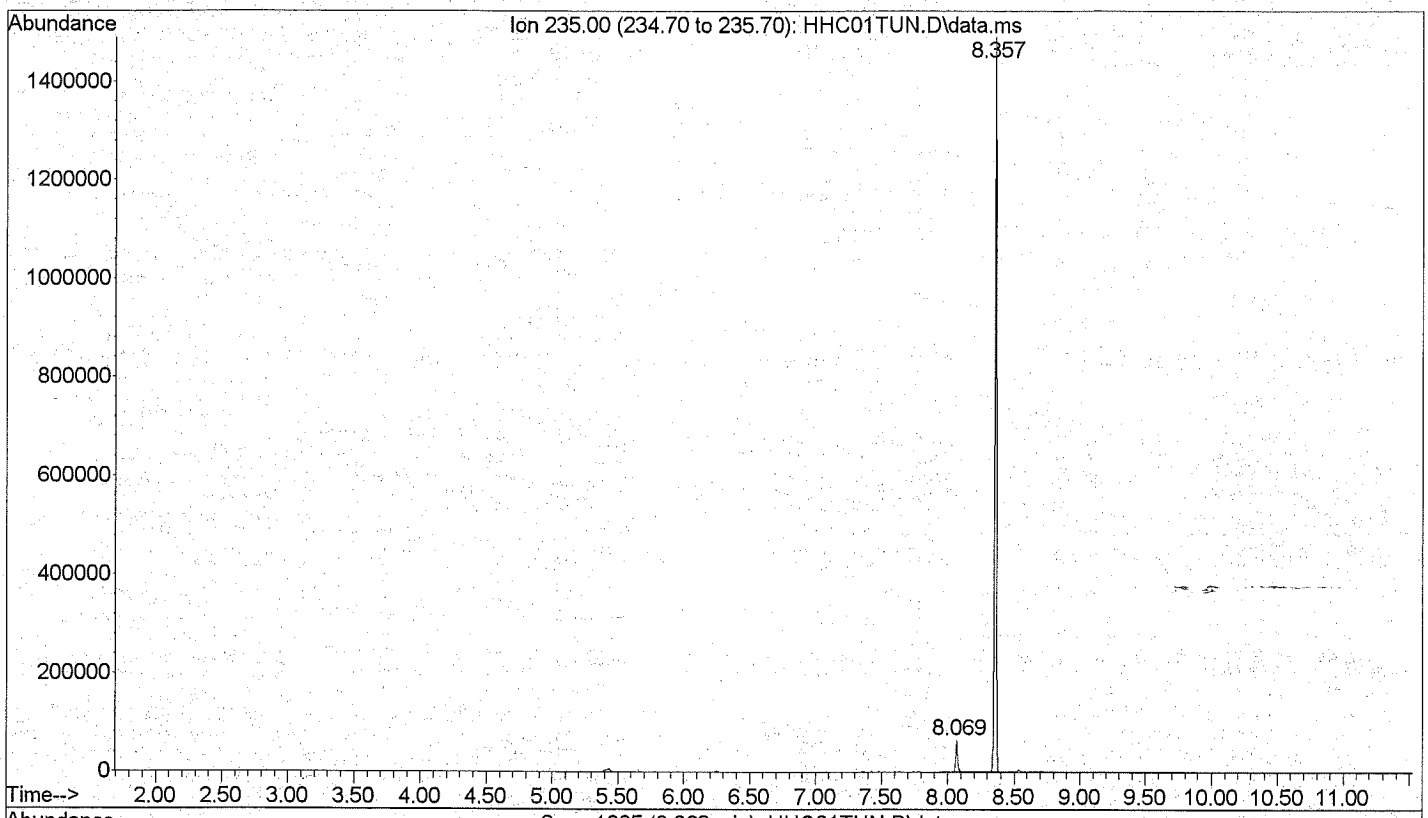


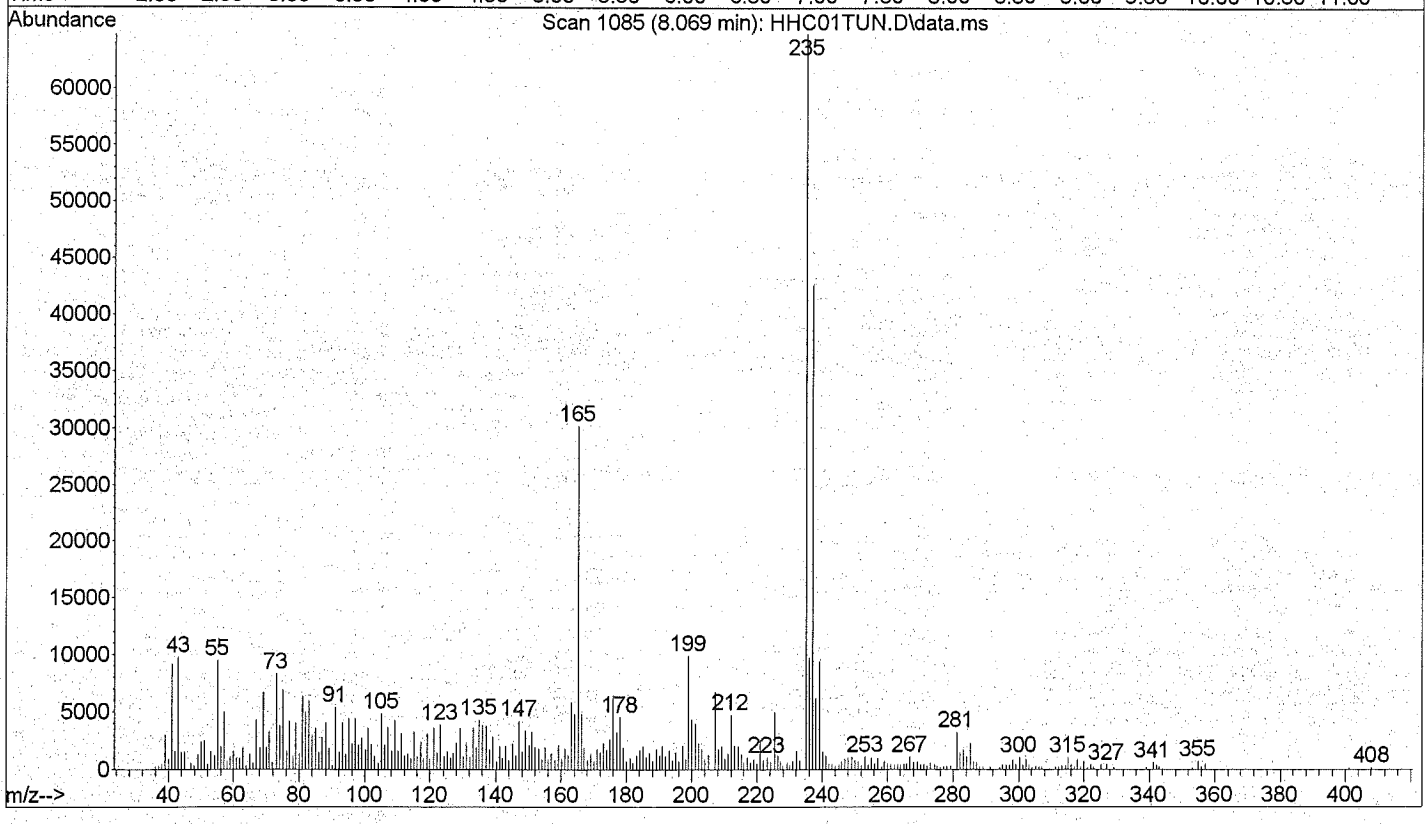
Ion 235.00 (234.70 to 235.70): HHC01TUN.D\data.ms
8270 DFTPP 13808

Peak #	Ret Time	Type	Width	Area	Start Time	End Time
1	8.069	rBV	0.112	66018	8.028	8.139
2	8.357	rVB	0.088	1323835	8.322	8.410

$$\text{DDT degradation} = \frac{66018}{66018 + 1323835} \approx 4.7\%$$

File :D:\1\DATA\2012\AUG12\17AUG12H\HHC01TUN.D
Operator : RAH
Acquired : 17 Aug 2012 11:07 am using AcqMethod 8270DTUN.M
Instrument : 5975-H
Sample Name: 8270 DFTPP 13808
Misc Info : . X:1/11/13
Vial Number: 1



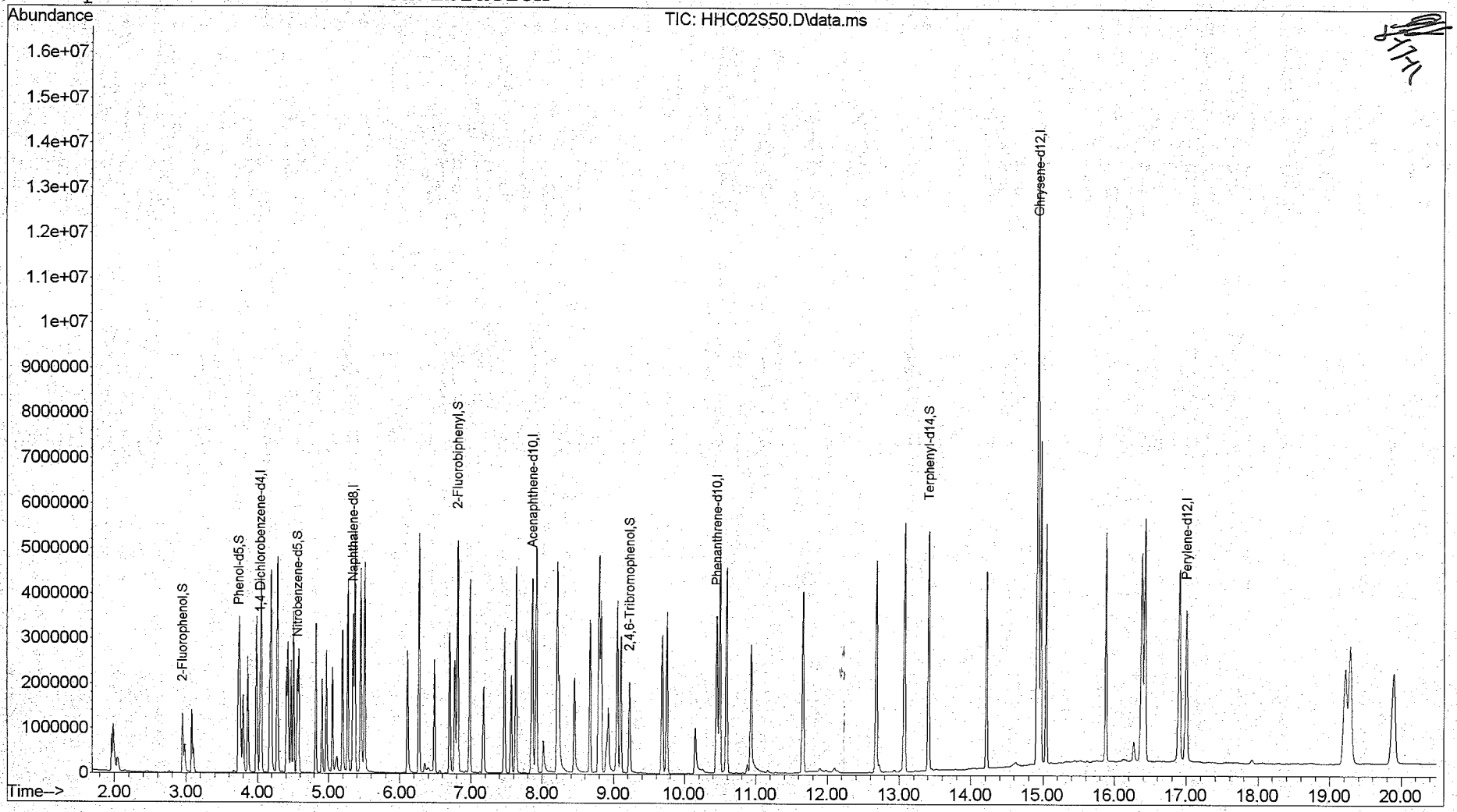


Quantitation Report

Data File : D:\1\DATA\2012\AUG12\17AUG12H\HHC02S50.D Vial: 2
Acq On : 08/17/2012 11:27 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 17 11:51:16 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

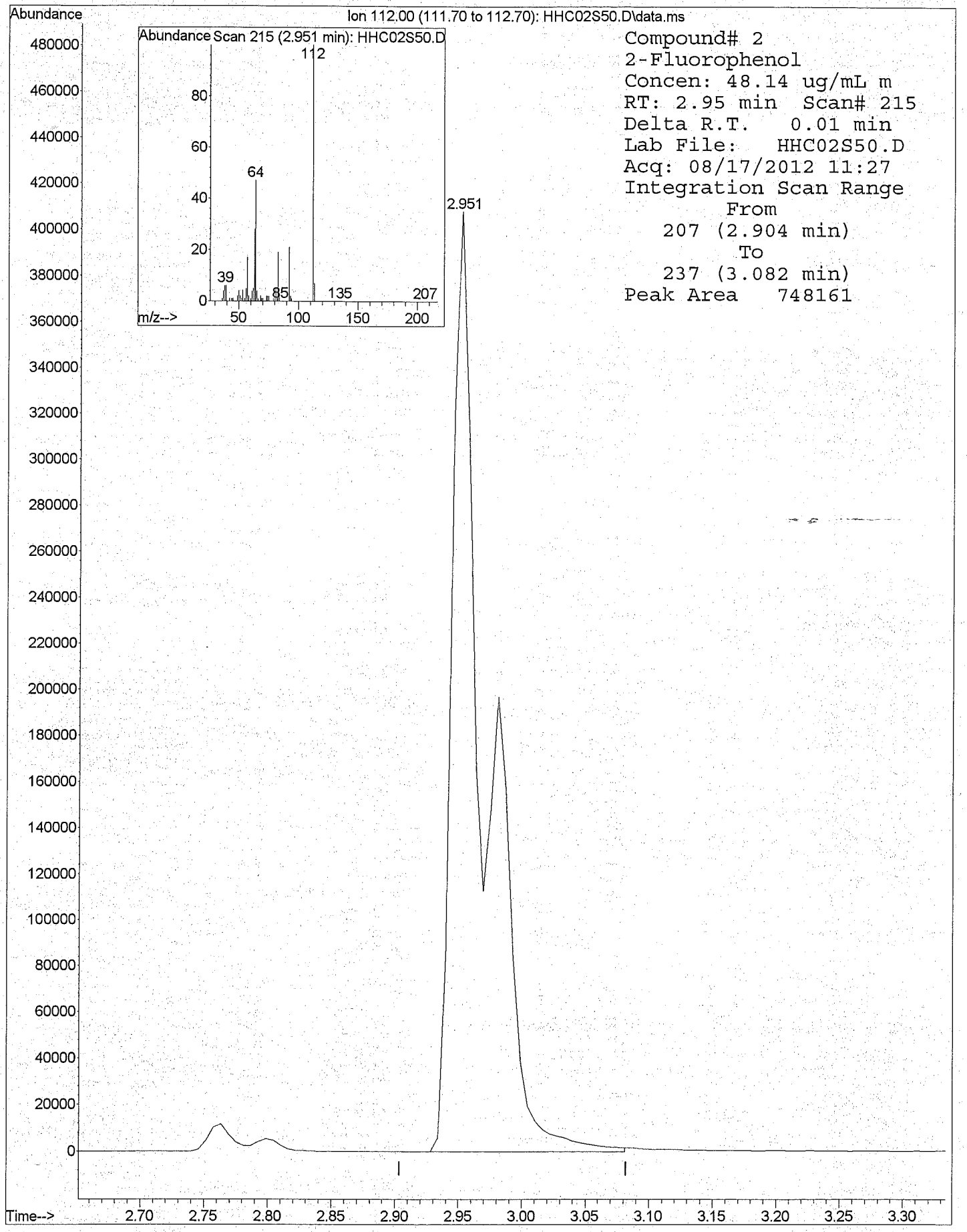
Data File : D:\1\DATA\2012\AUG12\17AUG12H\HHC02S50.D Vial: 2
Acq On : 08/17/2012 11:27 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 17 11:51:16 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	462752	40.00 ug/mL
6) Naphthalene-d8	5.35	136	2032082	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1231413	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2366335	40.00 ug/mL
12) Chrysene-d12	14.93	240	3083495	40.00 ug/mL
14) Perylene-d12	17.00	264	2330254	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	748161	48.139ug/mL m
4) Phenol-d5	3.73	99	1026537	50.348ug/mL
7) Nitrobenzene-d5	4.56	82	888855	51.026ug/mL
9) 2-Fluorobiphenyl	6.82	172	2358359	51.636ug/mL
11) 2,4,6-Tribromophenol	9.23	330	404072	50.722ug/mL
13) Terphenyl-d14	13.41	244	2849474	47.866ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	364296	45.354ug/mL 96
5) 1,4-Dithiane	4.47	120	622314	47.813ug/mL 94

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

MANUAL INTEGRATION FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

PROJECT TITLE:
Fort Stewart

Earth Resources Technology, Inc.
6100 Frost Place
Laurel, MD 20707

Data Deliverable Group ERT-007
ALS#9981496

DoD QSM V.4.2
DATA PACKAGE

SAMPLES COLLECTED
August 3 and 6, 2012

Total Number of Pages 244

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Case Narrative

Earth Resources Technology, Inc.
Fort Stewart

ALS-Middletown
Case Narrative
ERT-007

Sample Management

This report contains the results of the analysis of one (1) water sample and eleven (11) solid samples collected on August 3 and 6, 2012. Analytical results and quality control information are summarized in this data package.

Qualifier Symbol Definitions:

U = Qualifier indicates that the analyte was not detected above the LOD.
J = Qualifier indicates that the analyte value is between the DL and the LOQ.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds the calibration range.
P = Qualifier indicates that the RPD between the two analytical columns is greater than 40%.
NSC = Qualifier indicates that spike recoveries were not calculated based on the spiking concentration.

Result Symbol Definitions:

DL = The smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence.
LOD = The smallest analyte concentration that must be present in a sample in order to be detected at a high level of confidence.
LOQ = The lowest concentration that produces a quantitative result within specified limits of precision or bias.

Sample Receipt

Samples arrived at ALS via courier on August 7, 2012. Upon receipt, the samples were inspected and compared to the Chain of Custody. Sample temperature was documented on the enclosed Chain of Custody. Samples were received intact and properly preserved, unless noted on the enclosed Certificate of Analysis and/or Chain of Custody.

Subcontracting

Twelve (12) samples were subcontracted for Method 8270/8321 analysis. Results are provided at the end of this report.

Totals Metals by SW-846 Method 6020A

Sample handling. One (1) water sample was analyzed for total metals on the Agilent 7700x using SW-846 Method 6020A. The sample was analyzed within the six-month holding time established for this method.

Calibration. All criteria associated with the calibration were within method control limits.

Blanks. Metals were not detected in the blanks.

Laboratory Control Samples. Recoveries were within method control limits.

Matrix Spike/Matrix Spike Duplicate. A matrix spike and matrix spike were performed on sample FTSW-HR-SO-60 (07.5) ER (9981496012) in this data deliverable. The MS and MSD recoveries and their RPDs were within method control limits.

Totals Metals by SW-846 Method 6020A

Sample handling. Eleven (11) solid samples were digested and analyzed for total metals on the Agilent 7700x using SW-846 Method 6020A. The samples were analyzed within the six-month holding time established for this method.

Calibration. All criteria associated with the calibration were within method control limits.

Blanks. Metals were not detected in the blanks.

Laboratory Control Samples. Recoveries were within method control limits.

Matrix Spike/Matrix Spike Duplicate. A matrix spike and matrix spike duplicate were performed on sample FTSW-HR-SO-53 (10) (9981496004) in this data deliverable. The MS and MSD recoveries and their RPDs were within method control limits.

Total Solids by SM 2540G

Sample handling. Eleven (11) solid samples were analyzed for total solids by Standard Method 2540G for dry weight reporting purposes. The samples were analyzed within the 14-day method recommended hold time for dry weight reporting.

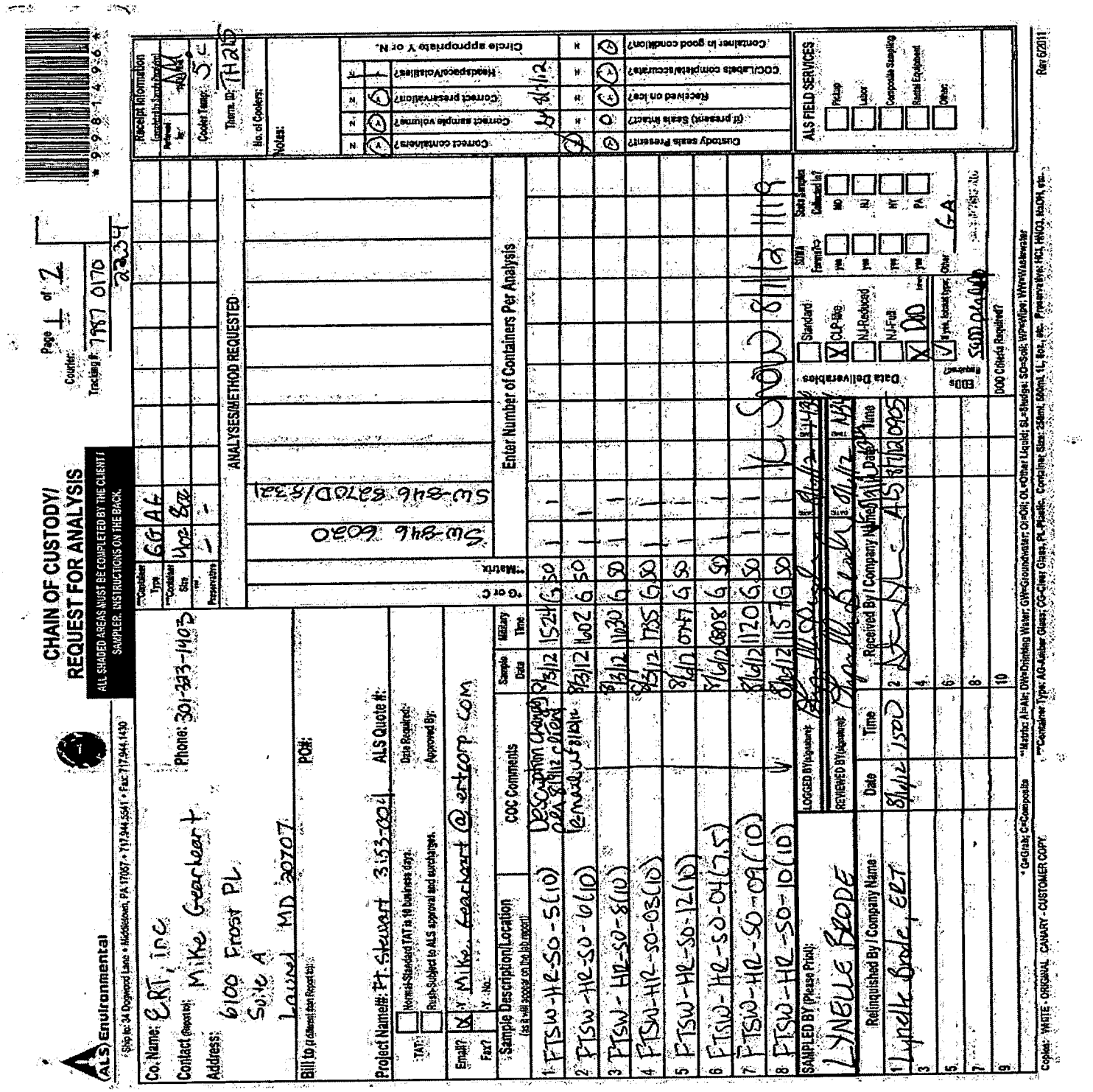
Duplicate. A duplicate analysis, identified as 1019896, was performed on sample 9981496006 (FTSW-HR-SO-55 (07.5)). The relative percent difference between the results was within the QC limit of 5%.

Chain of Custody

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK

ALS Environmental — Ship to: 34 Dogwood Lane ▪ Middletown, PA 17057 ▪ 717.944.5541 ▪ Fax: 717.944.1430

Page 2 of 4 — Courier: — Tracking #: 7787 0170 2234

Co. Name: ERT, Inc — Phone: 301-323-1103
Contact (report to): Mike Greenhart
Address: 6100 Frost Pl. Site A, Laurel MD 20707
Bill to (if different than Report to):
Project Name/#: Ft. Stewart 3153-004 — PO#: — ALS Quote #:
TAT: Normal-Standard TAT is 10 business days. Rush-Subject to ALS approval and surcharges. Date Required: Approved By:
Email? X Mike.greenhart@ertcorp.com Fax? No.

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	Matrix	# Containers	Container Type	Container Size	Preservative	ANALYSES/METHOD REQUESTED	Enter Number of Containers Per Analysis
9 FTSW-HE-SO-11 (10)	Description Used on Chain of Custody	8/6/12	1058	G	SO	1	6oz	NP	SW-846 6020	1
10 FTSW-HE-B-13 (10)	Matrix	8/6/12	1237	G	SO	1	6oz	NP	SW-846 8270D/3541	1
11 FTSW-HE-SO-14 (7.5)	We sampled	8/6/12	1335	G	SO	1	6oz	NP	SW-846 8270D/3541	1
12 FTSW-HE-SO-14-FD	U	8/6/12	1351	G	SO	1	6oz	NP	SW-846 6020	1
13										
14										
15										
16										
17										
18										

Custody seals Present? N
(If present) Seals Intact? N
Received on Ice? N
COC Labels complete/accurate? N
Container in good condition? N
Contact container? N
Correct sample volume? N
Correct preservative? N
Headspace/Volatiles? N
Circle appropriate Y or N.
No. of Coolers:
Notes:
Therm. ID: TH215
Cooler Temp: 5°C
Receipt Information (Verified by Bench Technician) Preserved Y/N: N/A

ALS FIELD SERVICES: Pickup, Labor, Composite Sampling, Rental Equipment, Other

Data Deliverables: Standard, QLP-Like, NJ-Reduced, NJ-Full, Other: QAO
SDWA Format? yes
State Samples Collected In? MD, NJ, NY, PA
If yes, format type: Other: SEMI PA QAP
EDD Required? yes
DOD Criteria Required?

SAMPLED BY (Please Print): LUNELLE REDDE
LOGGED BY (Signature): — Date: 8/7/12 — Time: 1130
RELINQUISHED BY (Signature): — Date: 8/7/12 — Time: 1145
Received By / Company Name: ALS
Date: 8/7/12 — Time: 0905

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	8/6/12	1500	2		
3			4		
5			6		
7			8		
9			10		

* G=Grab; C=Composite — **Matrix: A=Air; DW=Drinking Water; GW=Groundwater; OW=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater — ***Container Type: AG=Amber Glass; CG=Clear Glass; PL=Plastic... Container Size: 250ml, 500ml, 1L, 8oz., etc... Preservative: HCl, HNO3, NaOH, etc...

Copies: WHITE - ORIGINAL; CANARY - CUSTOMER COPY — Rev 6/2011

ALS Environmental

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ALSI Corrective Action Report (CAR)

To be Completed by Laboratory and Submitted to Customer Service:

Date: 8/31/12 CAR Submitted By: LW
Dept: SR Supervisor:

Chain of Custody No.(s): 9981496012-A

Problem/Reason for Corrective Action:

- ___ Login Error (2nd reviewed by: _____)
- X Incorrect Preservative
- ___ Missed Holding Time
- ___ Calibration failure
- ___ QC failure due to sample matrix
- ___ QC failure NOT due to sample matrix
- ___ Sample Lost in process
- ___ Reporting Error
- ___ Other _____

Method:

Explanation of Problem: Sample NOT preserved.

Signature(s) where Applicable:
Analyst: LW
1st Review: _____
2nd Review: _____
Result Entered By: _____
Result Approved By: _____
Supervisor: _____

Immediate Corrective Action Taken: LW By: 8/31/12 Date: 12R
Preserved w/ 2ml HNO3.
C138606

Are there policies/procedures in place to prevent this from occurring? Yes ___ No ___ Not Applicable ___
If Yes, What is the procedure, and why didn't it work?

If No, What procedure is needed to prevent this from occurring?
Target Date for Implementation: _____
Person Responsible for Implementation: _____

Customer Service Rep. Notified: _____ Date: _____

To be Completed by Customer Service and submitted to QA:

Date: _____ Customer Service Rep.: _____
Client Contacted? Yes ___ No ___:
Date: _____ Person: _____
Project(s) / Client(s) involved:

Action Taken (if no action taken, explain why):

Laboratory Notified of Client Response? Yes: ___ No ___ Not Applicable ___

To be Completed by QA and filed:

Was action taken appropriate? Yes ___ No ___
Is further action necessary? Yes ___ No ___
If Yes, What action is needed?

Date: _____
QA Initials: _____

Modification of SOP needed? Yes ___ No ___
If Yes, What is the procedure?
Has it been instituted? Yes: ___ No ___

Rev. 3/00

FedEx

Shipment Receipt

Address Information

Ship to:	**Ship from:**
ALS - UT	Steve Smith
ALS - UT	
960 LEVOY DR.	34 DOGWOOD LANE
SALT LAKE CITY, UT	MIDDLETOWN, PA
84123-2502	17057
US	US
0000000000	7179445541

Shipment Information:
Tracking no.: 793878337424
Ship date: 08/07/2012
Estimated shipping charges: 136.66

Package Information
Service type: Priority Overnight
Package type: Your Packaging
Number of packages: 1
Total weight: 52 LBS
Declared Value: 0.00 USD
Special Services:
Pickup/Drop-off: Drop off package at FedEx location

Billing Information:
Bill transportation to: MyAccount-686
Your reference: Summa's
P.O. no.:
Invoice no.:
Department no.:

Thank you for shipping online with FedEx ShipManager at fedex.com.

Please Note
FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $500, e.g., jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits. Consult the applicable FedEx Service Guide for details.
The estimated shipping charge may be different than the actual charges for your shipment. Differences may occur based on actual weight, dimensions, and other factors. Consult the applicable FedEx Service Guide or the FedEx Rate Sheets for details on how shipping charges are calculated.

https://www.fedex.com/shipping/html/en//PrintIFrame.html 8/7/2012

Shipment Receipt

Fed

Address Information

Ship to:	**Ship from:**
ALS - UT	Steve Smith
ALS - UT	
960 LEVOY DR	34 DOGWOOD LANE
SALT LAKE CITY, UT	MIDDLETOWN, PA
84123-2502	17057
US	US
0000000000	7179445541

Shipment Information:
Tracking no.: 793888598190
Ship date: 08/09/2012
Estimated shipping charges: 155.73

Package Information
Service type: Priority Overnight
Package type: Your Packaging
Number of packages: 1
Total weight: 61 LBS
Declared Value: 0.00 USD
Special Services:
Pickup/Drop-off: Drop off package at FedEx location

Billing Information:
Bill transportation to: MyAccount-686
Your reference: Summa's
P.O. no.:
Invoice no.:
Department no.:

Thank you for shipping online with FedEx ShipManager at fedex.com.

Please Note
FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $500, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits. Consult the applicable FedEx Service Guide for details.
The estimated shipping charge may be different than the actual charges for your shipment. Differences may occur based on actual weight, dimensions, and other factors. Consult the applicable FedEx Service Guide or the FedEx Rate Sheets for details on how shipping charges are calculated.

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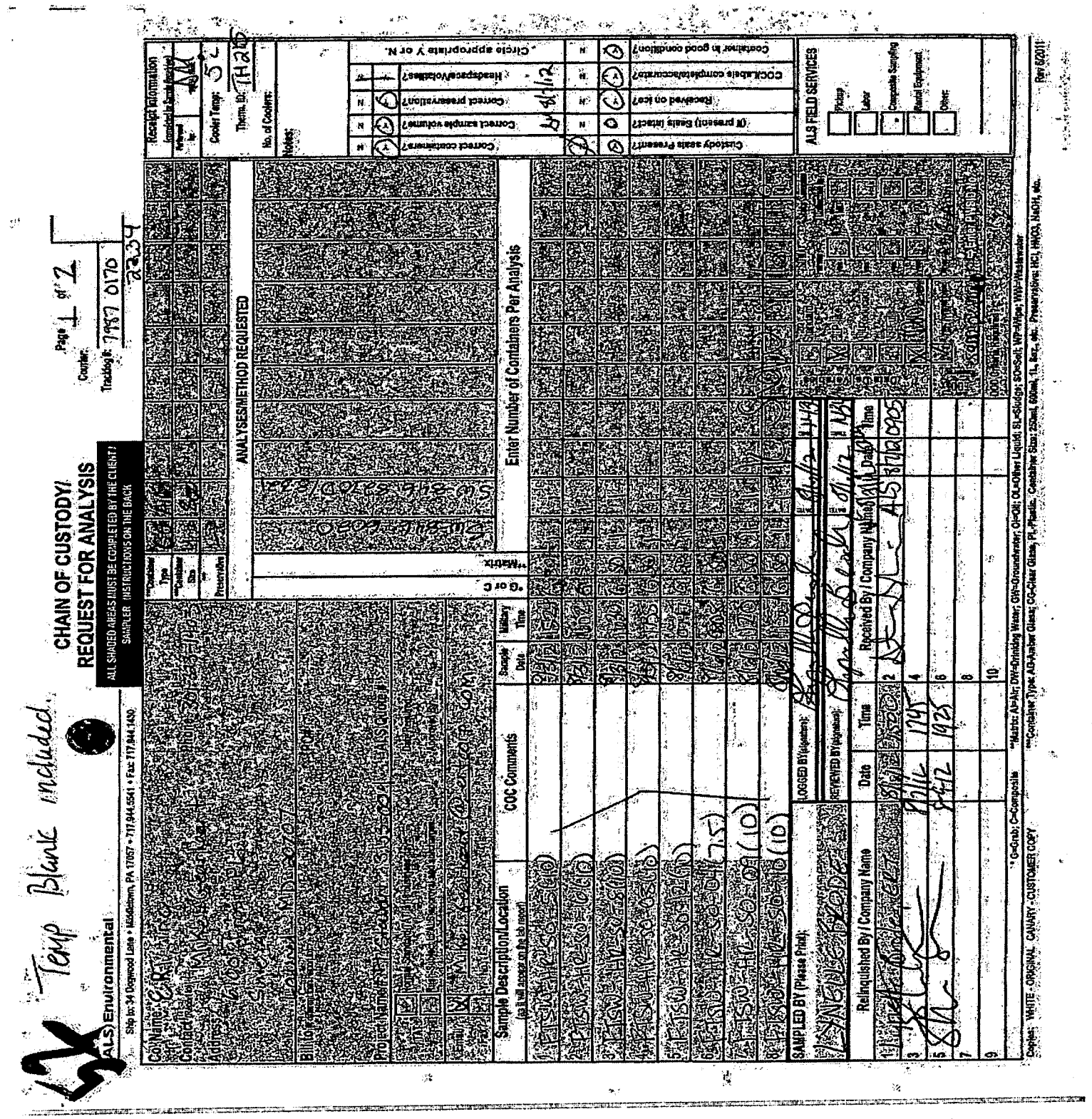

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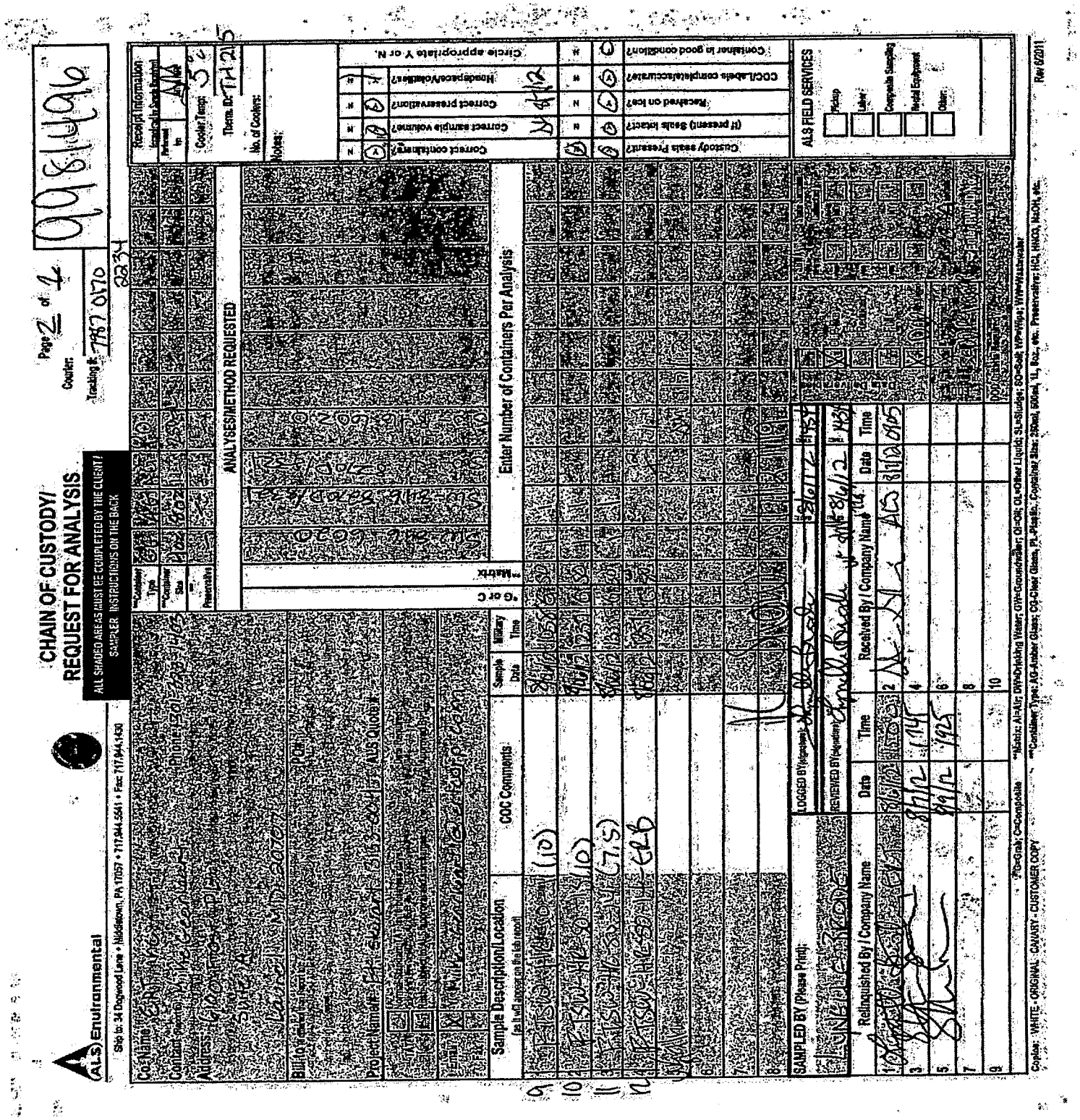

Vicki Forney

From: Mike Gearheart <Mike.Gearheart@ertcorp.com>
Sent: Thursday, August 09, 2012 2:33 PM
To: Vicki Forney
Cc: Jennifer Harlan
Subject: RE: Letter of Receipt for Workorder 9981774: Received 8/8/2012

Follow Up Flag: Follow up
Flag Status: Flagged

Vicki,

Hi. We've encountered another issue. Our field crew got confused on the sample nomenclature during the last days of sampling (we switched crews mid-way through). As a result, we request the following sample ID changes, please.

ID number from Lab	What ID Should be
FTSW-HR-SO - 5 (10)	FTSW-HR-SO-50 (10)
FTSW-HR-SO - 6 (10)	FTSW-HR-SO-51 (10)
FTSW-HR-SO - 8 (10)	FTSW-HR-SO-52 (10)
FTSW-HR-SO - 03 (10)	FTSW-HR-SO-53 (10)
FTSW-HR-SO - 12 (10)	FTSW-HR-SO-54 (10)
FTSW-HR-SO - 04 (7.5)	FTSW-HR-SO-55 (07.5)
FTSW-HR-SO - 09 (10)	FTSW-HR-SO-56 (10)
FTSW-HR-SO - 10 (10)	FTSW-HR-SO-57 (10)
FTSW-HR-SO - 11 (10)	FTSW-HR-SO-58 (10)
FTSW-HR-SO - 13 (10)	FTSW-HR-SO-59 (10)
FTSW-HR-SO - 14 (7.5)	FTSW-HR-SO-60 (07.5)
FTSW-HR-SO - 14 ERB	FTSW-HR-SO-60 (07.5) ERB
FTSW-HR-SO-15 (9.5)	FTSW-HR-SO-61 (09.5)
FTSW-HR-SO-16 (10)	FTSW-HR-SO-62 (10)

Sorry for the inconveniences, and I really appreciate your responsiveness.

Thank you,

Michael Gearheart
ERT, Inc.

-----Original Message-----
From: Vicki Forney [mailto:Vicki.Forney@ALSGlobal.com]
Sent: Thursday, August 09, 2012 12:36 PM
To: Mike Gearheart
Subject: RE: Letter of Receipt for Workorder 9981774: Received 8/8/2012

Can you call me regarding this requested change? We really should have more volume to complete that testing and one of the containers broke in transit. Thanks.

Take our short online customer survey for a chance to win a FREE iPad!
Vicki Forney
Project Manager

NORTH AMERICA
ALS | Environmental
Address
34 Dogwood Lane
Middletown, PA 17057

PHONE +1 717 944-5541x 3162
FAX +1 717 944-1430
www.alsglobal.com

-----Original Message-----
From: Mike.Gearheart [mailto:Mike.Gearheart@ertcorp.com]
Sent: Thursday, August 09, 2012 10:04 AM
To: Vicki Forney
Cc: Jennifer Harlan; Rebekah Mccoy; Lynelle Brode
Subject: FW: Letter of Receipt for Workorder 9981774: Received 8/8/2012

Vicki,

The sample labeled as IDW (Lab ID 9981774003) should not be analyzed for what's listed on the sample login sheet (and what's on the COC). This sample should be analyzed for full TCLP parameters and RCRA Characteristics. This sample is for disposal characterization. Could you please make the change?

Thank you,

Michael Gearheart
ERT, Inc.

-----Original Message-----
From: ALMDT.LIMSAutoEmail@alsglobal.com [mailto:ALMDT.LIMSAutoEmail@alsglobal.com]
Sent: Thursday, August 09, 2012 9:50 AM
To: Mike.Gearheart
Subject: Letter of Receipt for Workorder 9981774: Received 8/8/2012

The following reports are attached:

WO 9981774 , Work ID ERT008 | Ft. Stewart 3153-004 []

--- End Of List ---

****
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ALS Environmental

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Internal Chain of Custody

Work Order: 9981496

9981496001-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496001-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-20-12 06:13	META-LAB	6020 / 3051 ANALYSIS	Olley, Mr. Matthew W.
08-13-12 10:11	INORPREP-LAB	3015:6020 PREP	Kauffman, Mr. Kevin M

9981496001-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496001-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496001-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:50	RECEIVING	LOGIN	Smith, Mr. Steven L
08-07-12 09:05	*Sample Received At Lab*		

9981496002-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496002-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-20-12 06:13	META-LAB	6020 / 3051 ANALYSIS	Olley, Mr. Matthew W.
08-13-12 10:11	INORPREP-LAB	3015:6020 PREP	Kauffman, Mr. Kevin M

9981496002-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496002-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

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Internal Chain of Custody

Work Order: 9981496

9981496002-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:50	RECEIVING	LOGIN	Smith, Mr. Steven L
08-07-12 09:05	*Sample Received At Lab*		

9981496003-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496003-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-20-12 06:13	META-LAB	6020 / 3051 ANALYSIS	Olley, Mr. Matthew W.
08-13-12 10:11	INORPREP-LAB	3015:6020 PREP	Kauffman, Mr. Kevin M

9981496003-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496003-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496003-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:50	RECEIVING	LOGIN	Smith, Mr. Steven L
08-07-12 09:05	*Sample Received At Lab*		

9981496004-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496004-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-20-12 06:13	META-LAB	6020 / 3051 ANALYSIS	Olley, Mr. Matthew W.
08-13-12 10:11	INORPREP-LAB	3015:6020 PREP	Kauffman, Mr. Kevin M

9981496004-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496004-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**

Internal Chain of Custody

Work Order: 9981496

9981496004-C (cont)	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496004-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:50	RECEIVING	LOGIN	Smith, Mr. Steven L
08-07-12 09:05	*Sample Received At Lab*		

9981496005-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496005-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-20-12 06:13	META-LAB	6020 / 3051 ANALYSIS	Olley, Mr. Matthew W.
08-13-12 10:11	INORPREP-LAB	3015:6020 PREP	Kauffman, Mr. Kevin M

9981496005-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496005-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496005-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:50	RECEIVING	LOGIN	Smith, Mr. Steven L
08-07-12 09:05	*Sample Received At Lab*		

9981496006-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496006-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-20-12 06:13	META-LAB	6020 / 3051 ANALYSIS	Olley, Mr. Matthew W.
08-13-12 10:11	INORPREP-LAB	3015:6020 PREP	Kauffman, Mr. Kevin M

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Internal Chain of Custody
Work Order: 9981496

9981496006-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496006-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496006-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:50	RECEIVING	LOGIN	Smith, Mr. Steven L
08-07-12 09:05	*Sample Received At Lab*		

9981496007-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496007-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-20-12 06:13	META-LAB	6020 / 3051 ANALYSIS	Olley, Mr. Matthew W.
08-13-12 10:11	INORPREP-LAB	3015:6020 PREP	Kauffman, Mr. Kevin M

9981496007-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496007-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496007-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:50	RECEIVING	LOGIN	Smith, Mr. Steven L
08-07-12 09:05	*Sample Received At Lab*		

9981496008-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

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Internal Chain of Custody

Work Order: 9981496

9981496008-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-20-12 06:13	META-LAB	6020 / 3051 ANALYSIS	Olley, Mr. Matthew W.
08-13-12 10:11	INORPREP-LAB	3015:6020 PREP	Kauffman, Mr. Kevin M

9981496008-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496008-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496008-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:50	RECEIVING	LOGIN	Smith, Mr. Steven L
08-07-12 09:05	*Sample Received At Lab*		

9981496009-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496009-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-20-12 06:13	META-LAB	6020 / 3051 ANALYSIS	Olley, Mr. Matthew W.
08-13-12 10:11	INORPREP-LAB	3015:6020 PREP	Kauffman, Mr. Kevin M

9981496009-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496009-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496009-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:50	RECEIVING	LOGIN	Smith, Mr. Steven L
08-07-12 09:05	*Sample Received At Lab*		

9981496010-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**

Internal Chain of Custody

Work Order: 9981496

9981496010-A (cont)	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496010-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-20-12 06:13	META-LAB	6020 / 3051 ANALYSIS	Olley, Mr. Matthew W.
08-13-12 10:11	INORPREP-LAB	3015:6020 PREP	Kauffman, Mr. Kevin M

9981496010-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496010-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496010-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:50	RECEIVING	LOGIN	Smith, Mr. Steven L
08-07-12 09:05	*Sample Received At Lab*		

9981496011-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496011-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-20-12 06:13	META-LAB	6020 / 3051 ANALYSIS	Olley, Mr. Matthew W.
08-13-12 10:11	INORPREP-LAB	3015:6020 PREP	Kauffman, Mr. Kevin M

9981496011-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496011-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

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Internal Chain of Custody

Work Order: 9981496

9981496011-D	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-09-12 16:50	RECEIVING	LOGIN	Smith, Mr. Steven L
08-07-12 09:05	*Sample Received At Lab*		

9981496012-A	P - PLASTIC		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-13-12 10:09	INORPREP-LAB	3015:6020 PREP	Kauffman, Mr. Kevin M
08-07-12 11:31	META-LAB	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496012-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-13-12 10:09	INORPREP-LAB	3015:6020 PREP	Kauffman, Mr. Kevin M

9981496012-B	A - AMBER GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496012-C	A - AMBER GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:29	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

9981496012-D	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 11:19	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-07-12 09:05	*Sample Received At Lab*		

Certificate of Analysis

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

August 31, 2012

Mr. Mike Gearhart
Earth Resources Technology, Inc.
6100 Frost Place
Suite A
Laurel, MD 20707

Certificate of Analysis

Project Name:	**Ft. Stewart GA project**	Workorder:	**9981496**
Purchase Order:		Workorder ID:	**ERT007|Ft. Stewart 3153-004**

Dear Mr. Gearhart,

Enclosed are the analytical results for samples received by the laboratory on Tuesday, August 07, 2012.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Vicki Forney (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

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This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

SAMPLE SUMMARY

Workorder: 9981496 ERT007|Ft. Stewart 3153-004 Discard Date: 09/14/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9981496001	FTSW-HR-SO-50 (10)	Solid	8/3/12 15:24	8/7/12 09:05	Customer
9981496002	FTSW-HR-SO-51 (10)	Solid	8/3/12 16:02	8/7/12 09:05	Customer
9981496003	FTSW-HR-SO-52 (10)	Solid	8/3/12 16:30	8/7/12 09:05	Customer
9981496004	FTSW-HR-SO-53 (10)	Solid	8/3/12 17:35	8/7/12 09:05	Customer
9981496005	FTSW-HR-SO-54 (10)	Solid	8/6/12 07:47	8/7/12 09:05	Customer
9981496006	FTSW-HR-SO-55 (07.5)	Solid	8/6/12 08:08	8/7/12 09:05	Customer
9981496007	FTSW-HR-SO-56 (10)	Solid	8/6/12 11:20	8/7/12 09:05	Customer
9981496008	FTSW-HR-SO-57 (10)	Solid	8/6/12 11:57	8/7/12 09:05	Customer
9981496009	FTSW-HR-SO-58 (10)	Solid	8/6/12 10:38	8/7/12 09:05	Customer
9981496010	FTSW-HR-SO-59 (10)	Solid	8/6/12 12:39	8/7/12 09:05	Customer
9981496011	FTSW-HR-SO-60 (07.5)	Solid	8/6/12 13:35	8/7/12 09:05	Customer
9981496012	FTSW-HR-SO-60 (07.5) ERB	Water	8/6/12 13:51	8/7/12 09:05	Customer

Workorder Comments:

Original sample descriptions changed per client e-mail. VLF 8/10/12

Analytical results attached from ALS-Salt Lake City for 8270/8321 results. VLF

These reports were modified on 8/31/12 to replace the subcontracting data with updated reports. VLF

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

SAMPLE SUMMARY

Workorder: 9981496 ERT007|Ft. Stewart 3153-004 Discard Date: 09/14/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

ALS Environmental

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9981496 ERT007|Ft. Stewart 3153-004

Lab ID: **9981496001** Date Collected: 8/3/2012 15:24 Matrix: Solid

Sample ID: **FTSW-HR-SO-50 (10)** Date Received: 8/7/2012 09:05

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	20.0	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
Total Solids	80.0	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
METALS											
Arsenic, Total	1.0U	mg/kg		1.6	1.0	0.52	SW846 6020A	8/13/12	8/20/12 07:51	MWO	A1
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/17/12 18:40	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9981496 ERT007|Ft. Stewart 3153-004

Lab ID: **9981496002** Date Collected: 8/3/2012 16:02 Matrix: Solid

Sample ID: **FTSW-HR-SO-51 (10)** Date Received: 8/7/2012 09:05

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	12.8	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
Total Solids	87.2	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
METALS											
Arsenic, Total	1.0U	mg/kg		1.5	1.0	0.50	SW846 6020A	8/13/12	8/20/12 07:55	MWO	A1
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/17/12 20:29	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9981496 ERT007|Ft. Stewart 3153-004

Lab ID: **9981496003** Date Collected: 8/3/2012 16:30 Matrix: Solid

Sample ID: **FTSW-HR-SO-52 (10)** Date Received: 8/7/2012 09:05

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	14.6	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
Total Solids	85.4	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
METALS											
Arsenic, Total	1.1U	mg/kg		1.7	1.1	0.56	SW846 6020A	8/13/12	8/20/12 07:59	MWO	A1
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/17/12 21:06	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9981496 ERT007|Ft. Stewart 3153-004

Lab ID: **9981496004** Date Collected: 8/3/2012 17:35 Matrix: Solid

Sample ID: **FTSW-HR-SO-53 (10)** Date Received: 8/7/2012 09:05

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	18.7	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
Total Solids	81.3	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
METALS											
Arsenic, Total	1.2U	mg/kg		1.7	1.2	0.58	SW846 6020A	8/13/12	8/20/12 08:13	MWO	A1
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/17/12 21:42	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9981496 ERT007|Ft. Stewart 3153-004

Lab ID: **9981496005** Date Collected: 8/6/2012 07:47 Matrix: Solid

Sample ID: **FTSW-HR-SO-54 (10)** Date Received: 8/7/2012 09:05

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	9.3	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
Total Solids	90.7	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
METALS											
Arsenic, Total	1.0U	mg/kg		1.5	1.0	0.50	SW846 6020A	8/13/12	8/20/12 08:28	MWO	A1
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/17/12 22:18	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9981496 ERT007|Ft. Stewart 3153-004

Lab ID: **9981496006** Date Collected: 8/6/2012 08:08 Matrix: Solid

Sample ID: **FTSW-HR-SO-55 (07.5)** Date Received: 8/7/2012 09:05

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	21.6	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
Total Solids	78.4	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
METALS											
Arsenic, Total	1.1U	mg/kg		1.7	1.1	0.57	SW846 6020A	8/13/12	8/20/12 08:31	MWO	A1
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/17/12 23:31	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9981496 ERT007|Ft. Stewart 3153-004

Lab ID: **9981496007** Date Collected: 8/6/2012 11:20 Matrix: Solid

Sample ID: **FTSW-HR-SO-56 (10)** Date Received: 8/7/2012 09:05

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	10.4	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
Total Solids	89.6	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
METALS											
Arsenic, Total	1.1U	mg/kg		1.6	1.1	0.53	SW846 6020A	8/13/12	8/20/12 08:35	MWO	A1
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/18/12 00:07	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9981496 ERT007|Ft. Stewart 3153-004

Lab ID: **9981496008** Date Collected: 8/6/2012 11:57 Matrix: Solid

Sample ID: **FTSW-HR-SO-57 (10)** Date Received: 8/7/2012 09:05

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	9.3	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
Total Solids	90.7	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
METALS											
Arsenic, Total	1.0U	mg/kg		1.5	1.0	0.51	SW846 6020A	8/13/12	8/20/12 08:38	MWO	A1
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/18/12 00:44	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9981496 ERT007|Ft. Stewart 3153-004

Lab ID: **9981496009** Date Collected: 8/6/2012 10:38 Matrix: Solid

Sample ID: **FTSW-HR-SO-58 (10)** Date Received: 8/7/2012 09:05

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	20.7	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
Total Solids	79.3	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
METALS											
Arsenic, Total	1.1U	mg/kg		1.6	1.1	0.53	SW846 6020A	8/13/12	8/20/12 08:42	MWO	A1
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/18/12 01:20	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 9981496 ERT007|Ft. Stewart 3153-004

Lab ID: **9981496010** Date Collected: 8/6/2012 12:39 Matrix: Solid

Sample ID: **FTSW-HR-SO-59 (10)** Date Received: 8/7/2012 09:05

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	7.9	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
Total Solids	92.1	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
METALS											
Arsenic, Total	1.0U	mg/kg		1.6	1.0	0.52	SW846 6020A	8/13/12	8/20/12 08:46	MWO	A1
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/18/12 01:57	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 9981496 ERT007|Ft. Stewart 3153-004

Lab ID: **9981496011** Date Collected: 8/6/2012 13:35 Matrix: Solid

Sample ID: **FTSW-HR-SO-60 (07.5)** Date Received: 8/7/2012 09:05

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	21.5	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
Total Solids	78.5	%		0.1	0.1	0.01	SM20-2540 G		8/7/12 13:25	KED	A
METALS											
Arsenic, Total	1.1U	mg/kg		1.7	1.1	0.57	SW846 6020A	8/13/12	8/20/12 09:00	MWO	A1
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/18/12 02:33	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 9981496 ERT007|Ft. Stewart 3153-004

Lab ID: **9981496012** Date Collected: 8/6/2012 13:51 Matrix: Water

Sample ID: **FTSW-HR-SO-60 (07.5) ERB** Date Received: 8/7/2012 09:05

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
METALS											
Arsenic, Total	0.0020 U	mg/L		0.0030	0.0020	0.0010	SW846 6020A	8/13/12	8/21/12 02:59	MW O	A1
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/14/12 12:36	CLT	B

Sample Comments:

The pH of the total metals bottle was adjusted to pH < 2 by the addition of nitric acid upon receipt at the laboratory.

Anna G Milliken
Technical Manager

Total Metals in Water by 6020A Summary Forms

6020 3015
- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, Inc

SDG No.: ERT-007 **Method Type:** 6020 3015 **SOW No.:**

Contract: ERT007|Ft. Stewart 3 **Lab Code:** CAS **Case No.:** **SAS No.:**

Lab Sample ID	Client Sample ID	QC Description
9981496012	FTSW-HR-SO-60 (07.5) ER	
9981496012S	FTSW-HR-SO-60 (07.5) ER	Matrix Spike
9981496012SD	FTSW-HR-SO-60 (07.5) ER	Matrix Spike Duplicate

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: **Lisa Miller**

Date: Title: **Metals Manager**

6020 3015

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-007 **Method Type:** 6020 3015

Sample ID: 9981496012 **Client ID:** FTSW-HR-SO-60 (07.5) ERB

Matrix: WATER **Date Received:** 8/7/2012 **Level:** LOW

% Solids: **Sample Wt/Vol:** 45.00 **Final Vol:** 50.0

Prep Batch ID: 475717 **Prep Date:** 8/13/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.0020	mg/L	U		M	0.0030	0.0020	0.0010	1.00	8/21/2012	02:59:11

Comments:

6020 3015

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-007

Contract: ERT007|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
ICV										
	Arsenic	0.1086	0.1000	109		90 - 110	M	8/21/2012	02:14	A082112B
LLICV										
	Arsenic	0.0036	0.0030	120		70 - 130	M	8/21/2012	02:25	A082112B
LLCCV										
	Arsenic	0.0036	0.0030	120		70 - 130	M	8/21/2012	03:21	A082112B
CCV										
	Arsenic	0.1087	0.1000	109		90 - 110	M	8/21/2012	03:24	A082112B

6020 3015

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-007

Contract: ERT007|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Conc Qual	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
ICB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/21/2012	02:21	A082112B
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/21/2012	03:17	A082112B

6020 3015
- 3b -
PREPARATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-007

Contract: ERT007|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result (mg/L)	Conc Qual	Q	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
1021898			**QC-WATER**								
	Arsenic	0.00300	U		0.0015	0.00100	0.00300	M	8/21/2012	02:45	A082112B

6020 3015
- 4 -
INTERFERENCE CHECK SAMPLE

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-007

Contract: ERT007|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

ICS Source: Inorganic Ventures **Instrument ID:** AGILENT 7700 ICPMS

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	Analysis Date	Analysis Time	Run Number
ICSA									
	Arsenic	0.0003				-0.00300 - -0.00300	8/21/2012	02:29	A082112B
ICSAB									
	Arsenic	0.0218	0.02000	109		80 - 120%	8/21/2012	02:32	A082112B

6020 3015
- 5a -
MATRIX SPIKE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-007

Contract: ERT007|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: WATER **Sample ID:** 9981496012 **Client ID:** FTSW-HR-SO-60 (07.5) ERBS **LIMS ID:** 1021900

Percent Solids for Sample: 0.00 **Spiked ID:** 9981496012S **Percent Solids for Spike Sample:** 0.00

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/L	80 - 120	0.229		0.001		0.222	103		M

6020 3015
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-007

Contract: ERT007|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: WATER **Sample ID:** 9981496012 **Client ID:** FTSW-HR-SO-60 (07.5) **LIMS ID:** 1021901

Percent Solids for Sample: 0.00 **Spiked ID:** 9981496012SD FRBSD **Percent Solids for Spike Sample:** 0.00

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/L	80 - 120	0.242		0.001		0.222	109		M

6020 3015
- 6 -
DUPLICATE SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-007

Contract: ERT007|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: WATER **Sample ID:** 9981496012S **Client ID:** FTSW-HR-SO-60 (07.5) ERBSD **LIMS ID:** 1021901

Percent Solids for Sample: 0.00 **Duplicate ID:** 9981496012SD **Percent Solids for Duplicate:** 0.00

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/L	0 - 20	0.229		0.242		6		M

6020 3015
- 7 -
LABORATORY CONTROL SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-007

Contract: ERT007|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Q	QC Criteria	M
1021899									
	Arsenic	mg/L	0.2220	0.2291		103		80 - 120	M

6020 3015

- 12 -
LINEAR RANGES

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-007

Contract: ERT007|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Instrument ID: AGILENT 7700 ICPMS **Date:** 1/19/2012

Analyte	Integration Time (sec)	LDR mg/L
Arsenic	1.00	5

6020 3015
- 13 -
SAMPLE PREPARATION SUMMARY

Client: ERT Earth Resources Technology, Inc.

SDG No.: ERT-007

Contract: ERT007|Ft. Stewart 3153-004 **Lab Code:** CAS

Method: MS

Case No.: _____ **SAS No.:** _____

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	475717						
1021898	MB for HBN 475717 [MDIG/3747	MB	QC-WAT	8/13/12	45.0	50.0	
1021899	LCS for HBN 475717 [MDIG/3747	LCS	QC-WAT	8/13/12	45.0	50.0	
9981496012	FTSW-HR-SO-60 (07.5) ERB	SAM	WATER	8/13/12	45.0	50.0	
9981496012S	FTSW-HR-SO-60 (07.5) ERBS	MS	WATER	8/13/12	45.0	50.0	
9981496012SD	FTSW-HR-SO-60 (07.5) ERBSD	MSD	WATER	8/13/12	45.0	50.0	

6020 3015
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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT007|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-007

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A082112B

Start Date: 8/21/2012 End Date: 8/21/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	0149																												
BLK	1.00	0152				X																								
STANDARD 1	1.00	0156				X					.																			
STANDARD 2	1.00	0200				X																								
STANDARD 3	1.00	0203				X																								
STANDARD 4	1.00	0207				X																								
STANDARD 5	1.00	0211				X																								
ICV	1.00	0214				X																								
ZZZZZZ	1.00	0218																												
ICB2	1.00	0221				X																								
LLICV	1.00	0225				X																								
ICS-A1	1.00	0229				X																								
ICS-AB1	1.00	0232				X																								
ZZZZZZ	1.00	0236																												
ZZZZZZ	1.00	0239																												
1021898	1.00	0245				X																								
1021899	1.00	0249				X																								
9981496012	1.00	0259				X																								
9981496012S	1.00	0302				X																								
9981496012SD	1.00	0306				X																								
ZZZZZZ	5.00	0310																												
ZZZZZZ	1.00	0313																												
CCB1	1.00	0317				X																								
LLCCV	1.00	0321				X																								
CCV2	1.00	0324				X																								
ZZZZZZ	5.00	0336																												
ZZZZZZ	5.00	0340																												
ZZZZZZ	1.00	0343																												
ZZZZZZ	1.00	0347																												
ZZZZZZ	1.00	0351																												
ZZZZZZ	1.00	0354																												
ZZZZZZ	1.00	0358																												
ZZZZZZ	1.00	0401																												
ZZZZZZ	1.00	0405																												
ZZZZZZ	1.00	0409																												
ZZZZZZ	1.00	0412																												

6020 3015
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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT007|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-007

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A082112B

Start Date: 8/21/2012 End Date: 8/21/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	0417																										
ZZZZZZ	5.00	0421																										
ZZZZZZ	5.00	0424																										
ZZZZZZ	5.00	0428																										
ZZZZZZ	1.00	0431																										
ZZZZZZ	1.00	0435																										
ZZZZZZ	1.00	0439																										
ZZZZZZ	1.00	0448																										

6020 3015

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT007|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-007

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/21/2012 End Date: 08/21/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
BLK	ZZZZZZ	0149												
BLK	BLK	0152	100		100		100		100		100		100	
STANDARD 1	STANDARD 1	0156	94		92		92		89		91		93	
STANDARD 2	STANDARD 2	0200	91		86		87		87		85		87	
STANDARD 3	STANDARD 3	0203	88		82		81		82		82		85	
STANDARD 4	STANDARD 4	0207	86		81		77		79		79		91	
STANDARD 5	STANDARD 5	0211	83		78		75		77		80		93	
ICV	ICV	0214	82		80		77		79		81		92	
ICB1	ZZZZZZ	0218												
ICB2	ICB	0221	90		90		84		89		91		97	
LLICV	LLICV	0225	89		86		84		87		82		91	
ICS-A1	ICSA	0229	82		87		79		93		87		92	
ICS-AB1	ICSAB	0232	81		84		78		91		86		96	
CHECK	ZZZZZZ	0236												
CHECK	ZZZZZZ	0239												
1021898	MB for HBN 47571	0245	84		84		80		79		78		93	
1021899	LCS for HBN 4757	0249	86		89		81		83		79		95	
9981496012	FTSW-HR-SO-60 (0	0259	84		83		79		80		77		91	
9981496012S	FTSW-HR-SO-60 (0	0302	80		81		75		79		75		91	
9981496012S	FTSW-HR-SO-60 (0	0306	79		80		74		79		74		86	
9981496012L	ZZZZZZ	0310												
CCV1	ZZZZZZ	0313												
CCB1	CCB	0317	81		84		76		81		79		91	
LLCCV	LLCCV	0321	82		82		75		79		80		90	
CCV2	CCV	0324	81		78		76		74		79		92	
9980964001	ZZZZZZ	0336												
9980964002	ZZZZZZ	0340												
9981898001	ZZZZZZ	0343												
9982138001	ZZZZZZ	0347												
9982138002	ZZZZZZ	0351												
9982239001	ZZZZZZ	0354												
9982404001	ZZZZZZ	0358												
CHECK	ZZZZZZ	0401												
CCV3	ZZZZZZ	0405												
CCB2	ZZZZZZ	0409												
LLCCV	ZZZZZZ	0412												
9983654002	ZZZZZZ	0417												
9983657001	ZZZZZZ	0421												
1024194	ZZZZZZ	0424												
1024195	ZZZZZZ	0428												
CCV4	ZZZZZZ	0431												
CCB3	ZZZZZZ	0435												
LLCCV	ZZZZZZ	0439												
LLCCV	ZZZZZZ	0448												

Total Metals in Water by 6020A Raw Data

Dataset: A082112B 2nd Review Am

First Review: MWO Approval: Am 8-21-12

Internal Standards: **ICPMS9190**

200	60-125%	**6020Qc:**	70-130%	**6020A**	30-130%	**DOD:**	70-120%

Standards :
Tuning MS0361
Daily Standard: MS0361

Calibration Standards
MS0343
MS0344

PIPETTES:

03-028	10.0 mL
03-202	.200 mL
03-201	1.0 mL
03-031	1.0 mL

ICSA: MS0341
ICSAB:MS0340

GOLD: MS0346
DW LCS: MS0358
Second Source

MA1393	MA1388	MA1360
MA1342	MS0345	MA1381
MS0309	MA1359	

Internal Standards/ Target Analytes

Sc-Al,V,Cr,Mn,Co,Ni,Cu,Na, K, Ti, Mg, Ca, Fe, As, Zn, Se,
Y
In-Sr, Mo, Ag, Cd, Sn, Sb, Ba
Tb
Bi-Hg, Tl, Pb, U

Case Narrative:

***D**: *D at the beginning of the Dataset Denotes that the samples were run on the Elan DRCe ICP-MS*

200.8 Tune Check Sample Report

Batch Folder C:\Agilent\ICPMH\1\DATA\A082112 TUNE.b
Report Comment
Instrument Name G3281A JP11040846

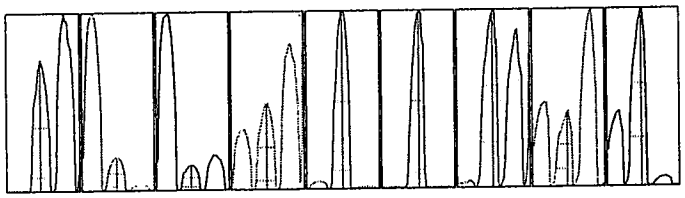
[no Gas]

Mass	Count (Actual)
9	9296
24	48190
25	6499
26	9244
59	80242
115	107119
206	17323
207	16220
208	34083

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	2.83	5.00	
24	3.58	5.00	
25	2.41	5.00	
26	1.29	5.00	
59	0.36	5.00	
115	1.82	5.00	
206	2.51	5.00	
207	1.29	5.00	
208	1.27	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	8946	9096	9542	9514	9382
24	49462	49850	48580	47488	45569
25	6500	6501	6698	6536	6259
26	9307	9373	9299	9085	9155
59	80204	80231	80078	80728	79970
115	105106	108945	109047	107402	105094
206	17345	17549	17690	17450	16581
207	16140	16556	16073	16286	16046
208	33905	34371	34532	34173	33432

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	1496	8.90	6.9 - 9.1		0.809	0.850	
24	7661	23.95	23.9 - 24.1		0.808	0.850	
25	1041	24.95	24.9 - 25.1		0.785	0.850	
26	1478	25.95	25.9 - 26.1		0.808	0.850	
59	13535	59.00	58.9 - 59.1		0.768	0.850	
115	19894	115.05	114.9 - 115.1		0.693	0.850	
206	3010	205.95	205.9 - 206.1		0.707	0.850	
207	2592	206.95	206.9 - 207.1		0.704	0.850	
208	6208	207.95	207.9 - 208.1		0.697	0.850	

X% = 10 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 235 **Y Axis =** Linear

Tune Parameters

Plasma Paramters

RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	12.2 V	Deflect	15.6 V
Extract 2	-185.0 V	Cell Entrance	-32 V	Plate Bias	-45 V
Omega Bias	-80 V	Cell Exit	-60 V		

Cell Parameters

OctP Bias	-8.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	160 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	001CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-21T01:49:24-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	6389	0.68
Cr	52	1	No Gas	6609	0.19
Mn	55	1	No Gas	16383	0.02
Co	59	1	No Gas	104	23.86
Ni	60	1	No Gas	1097	2.08
Cu	63	1	No Gas	13773	0.03
Sr	88	1	No Gas	100	40.06
Ag	107	1	No Gas	33	264.55
Al	27	1	No Gas	6501	0.79
Sn	118	1	No Gas	256	10.21
Ti	47	1	No Gas	154	9.93
Zn	66	1	No Gas	307	4.80
As	75	3	HeHe	4	2209.25
As	75	1	No Gas	16165	0.02
Sb	121	1	No Gas	100	10.00
Hg	201	1	No Gas	7	1306.07
Be	9	1	No Gas	12	367.47
Pb	208	1	No Gas	7851	0.09
Se	82	1	No Gas	32	703.76
Mo	98	1	No Gas	145	9.72
Ba	137	1	No Gas	43	81.35
Tl	205	1	No Gas	7	2338.50
U	238	1	No Gas	11	900.09
Na	23	2	he	44829	0.01
Mg	24	2	he	878	3.33
K	39	2	he	56104	0.00
Se	82	3	HeHe	18	246.10
Fe	57	3	HeHe	107	44.24
Cd	114	1	No Gas	30	293.97
Ca	44	1	No Gas	31175	0.03

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	1826560	6.90
Sc	45	2	he	287309	3.70
Ge	72	1	No Gas	241178	1.86
In	115	1	No Gas	1514567	1.88
Tb	159	1	No Gas	1915341	4.18

Bi	209	1	No Gas	917937	3.33
Sc	45	3	HeHe	29536	2.48

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	002CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-21T01:52:59-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	7126	0.39
Cr	52	1	No Gas	6861	0.06
Mn	55	1	No Gas	16149	0.02
Co	59	1	No Gas	63	85.61
Ni	60	1	No Gas	883	1.09
Cu	63	1	No Gas	11742	0.02
Sr	88	1	No Gas	85	35.36
Ag	107	1	No Gas	41	102.27
Al	27	1	No Gas	3445	0.22
Sn	118	1	No Gas	130	13.76
Tl	47	1	No Gas	142	10.98
Zn	66	1	No Gas	380	3.02
As	75	3	HeHe	4	2551.02
As	75	1	No Gas	15988	0.01
Sb	121	1	No Gas	57	95.14
Hg	201	1	No Gas	21	154.33
Be	9	1	No Gas	10	200.00
Pb	208	1	No Gas	9722	0.04
Mo	98	1	No Gas	103	10.82
Ba	137	1	No Gas	17	549.91
Tl	205	1	No Gas	26	95.51
U	238	1	No Gas	11	900.09
Na	23	2	he	45953	0.01
Mg	24	2	he	837	3.45
K	39	2	he	52188	0.01
Se	82	3	HeHe	14	53.45
Fe	57	3	HeHe	67	25.98
Cd	114	1	No Gas	27	532.40
Ca	44	1	No Gas	28317	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	1989693	2.51
Sc	45	2	he	250304	4.63
Ge	72	1	No Gas	251464	1.50
In	115	1	No Gas	1535232	1.46
Tb	159	1	No Gas	1928675	1.18
Bi	209	1	No Gas	919422	2.55

Sc	45	3	HeHe	30424	3.06

Calibration Standard Report

Sample Table

Sample Name	Standard 1
Data File Name	003CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-21T01:56:36-04:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	12007	0.14
Cr	52	1	No Gas	8499	0.06
Mn	55	1	No Gas	14848	0.00
Co	59	1	No Gas	1208	0.45
Ni	60	1	No Gas	1040	0.79
Cu	63	1	No Gas	20748	0.01
Sr	88	1	No Gas	12676	0.03
Ag	107	1	No Gas	711	1.74
Al	27	1	No Gas	11286	0.02
Sn	118	1	No Gas	607	0.46
Ti	47	1	No Gas	248	1.44
Zn	66	1	No Gas	663	3.89
As	75	3	HeHe	8	318.88
As	75	1	No Gas	15743	0.02
Sb	121	1	No Gas	717	2.42
Hg	201	1	No Gas	19	172.00
Be	9	1	No Gas	105	18.38
Pb	208	1	No Gas	11289	0.02
Se	82	1	No Gas	10	5004.67
Mo	98	1	No Gas	637	4.25
Ba	137	1	No Gas	720	2.61
Tl	205	1	No Gas	948	1.63
U	238	1	No Gas	1167	1.57
Na	23	2	he	46933	0.01
Mg	24	2	he	1137	0.73
K	39	2	he	47627	0.00
Se	82	3	HeHe	14	159.87
Fe	57	3	HeHe	77	87.30
Cd	114	1	No Gas	377	6.77
Ca	44	1	No Gas	25756	0.06

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1777975	1.63	1989693	89.36	70	120	
Sc	45	2	he	228580	1.47	250304	91.32	70	120	
Ge	72	1	No Gas	232052	0.53	251464	92.28	70	120	

Calibration Standard Report

In	115	1	No Gas	1407200	1.78	1535232	91.66	70	120	
Tb	159	1	No Gas	1803798	3.68	1928675	93.53	70	120	
Bi	209	1	No Gas	862663	0.76	919422	93.83	70	120	
Sc	45	3	HeHe	28217	0.75	30424	92.75	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 2
Data File Name	004CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-21T02:00:12-04:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	20213	0.05
Cr	52	1	No Gas	16835	0.01
Mn	55	1	No Gas	26165	0.00
Co	59	1	No Gas	10400	0.01
Ni	60	1	No Gas	3177	0.03
Cu	63	1	No Gas	21910	0.01
Sr	88	1	No Gas	15237	0.03
Ag	107	1	No Gas	7232	0.09
Al	27	1	No Gas	16245	0.03
Sn	118	1	No Gas	5123	0.05
Ti	47	1	No Gas	935	0.33
Zn	66	1	No Gas	2737	0.29
As	75	3	HeHe	92	17.43
As	75	1	No Gas	16443	0.03
Sb	121	1	No Gas	6148	0.07
Hg	201	1	No Gas	29	35.51
Be	9	1	No Gas	961	0.69
Pb	208	1	No Gas	21283	0.02
Se	82	1	No Gas	166	14.87
Mo	98	1	No Gas	4283	0.22
Ba	137	1	No Gas	1997	0.36
Tl	205	1	No Gas	9618	0.05
U	238	1	No Gas	11075	0.02
Na	23	2	he	49150	0.00
Mg	24	2	he	4260	0.17
K	39	2	he	49614	0.00
Se	82	3	HeHe	19	134.95
Fe	57	3	HeHe	337	6.38
Cd	114	1	No Gas	3607	0.20
Ca	44	1	No Gas	32617	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1727716	0.98	1989693	86.83	70	120	
Sc	45	2	he	211605	1.10	250304	84.54	70	120	
Ge	72	1	No Gas	217266	0.72	251464	86.40	70	120	

Calibration Standard Report

In	115	1	No Gas	1327901	6.64	1535232	86.50	70	120	
Tb	159	1	No Gas	1730069	2.52	1928675	89.70	70	120	
Bi	209	1	No Gas	835518	1.12	919422	90.87	70	120	
Sc	45	3	HeHe	26574	5.65	30424	87.35	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 3
Data File Name	005CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-21T02:03:48-04:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	113408	0.00
Cr	52	1	No Gas	101161	0.00
Mn	55	1	No Gas	138146	0.00
Co	59	1	No Gas	99550	0.00
Ni	60	1	No Gas	22582	0.01
Cu	63	1	No Gas	66880	0.00
Sr	88	1	No Gas	148589	0.00
Ag	107	1	No Gas	66937	0.00
Al	27	1	No Gas	62991	0.00
Sn	118	1	No Gas	44213	0.01
Ti	47	1	No Gas	7639	0.05
Zn	66	1	No Gas	16894	0.00
As	75	3	HeHe	960	1.31
As	75	1	No Gas	29579	0.00
Sb	121	1	No Gas	58010	0.00
Hg	201	1	No Gas	128	12.86
Be	9	1	No Gas	8868	0.00
Pb	208	1	No Gas	129205	0.00
Se	82	1	No Gas	966	0.66
Mo	98	1	No Gas	42280	0.01
Ba	137	1	No Gas	17500	0.02
Tl	205	1	No Gas	89953	0.00
U	238	1	No Gas	106821	0.00
Na	23	2	he	94204	0.00
Mg	24	2	he	30587	0.02
K	39	2	he	79503	0.00
Se	82	3	HeHe	61	53.56
Fe	57	3	HeHe	2514	0.54
Cd	114	1	No Gas	33334	0.01
Ca	44	1	No Gas	49521	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1630088	1.75	1989693	81.93	70	120	
Sc	45	2	he	205184	1.56	250304	81.97	70	120	
Ge	72	1	No Gas	206936	2.61	251464	82.29	70	120	

Calibration Standard Report

In	115	1	No Gas	1242553	0.95	1535232	80.94	70	120	
Tb	159	1	No Gas	1635643	1.61	1928675	84.81	70	120	
Bi	209	1	No Gas	804479	1.19	919422	87.50	70	120	
Sc	45	3	HeHe	25957	1.27	30424	85.32	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 4
Data File Name	006CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-21T02:07:25-04:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	993069	0.00
Cr	52	1	No Gas	898830	0.00
Mn	55	1	No Gas	1247541	0.00
Co	59	1	No Gas	944970	0.00
Ni	60	1	No Gas	205598	0.00
Cu	63	1	No Gas	527288	0.00
Sr	88	1	No Gas	1473220	0.00
Ag	107	1	No Gas	642677	0.00
Al	27	1	No Gas	506275	0.00
Sn	118	1	No Gas	433645	0.00
Ti	47	1	No Gas	73406	0.00
Zn	66	1	No Gas	153477	0.00
As	75	3	HeHe	8985	0.01
As	75	1	No Gas	158424	0.00
Sb	121	1	No Gas	579441	0.00
Hg	201	1	No Gas	1173	0.19
Be	9	1	No Gas	87600	0.00
Pb	208	1	No Gas	1196866	0.00
Se	82	1	No Gas	8359	0.03
Mo	98	1	No Gas	405896	0.00
Ba	137	1	No Gas	172806	0.00
Tl	205	1	No Gas	895845	0.00
U	238	1	No Gas	1105402	0.00
Na	23	2	he	552525	0.00
Mg	24	2	he	289305	0.00
K	39	2	he	394596	0.00
Se	82	3	HeHe	458	0.98
Fe	57	3	HeHe	25139	0.02
Cd	114	1	No Gas	318606	0.00
Ca	44	1	No Gas	249232	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1569155	2.67	1989693	78.86	70	120	
Sc	45	2	he	197279	5.84	250304	78.82	70	120	
Ge	72	1	No Gas	203255	0.97	251464	80.83	70	120	

Calibration Standard Report

In	115	1	No Gas	1188986	1.31	1535232	77.45	70	120	
Tb	159	1	No Gas	1583738	2.76	1928675	82.12	70	120	
Bi	209	1	No Gas	786897	1.55	919422	85.59	70	120	
Sc	45	3	HeHe	27539	4.03	30424	90.52	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 5
Data File Name	007CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-21T02:11:02-04:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	1946461	0.00
Cr	52	1	No Gas	1775353	0.00
Mn	55	1	No Gas	2367770	0.00
Co	59	1	No Gas	1921160	0.00
Ni	60	1	No Gas	398027	0.00
Cu	63	1	No Gas	1006475	0.00
Sr	88	1	No Gas	2834288	0.00
Ag	107	1	No Gas	1219226	0.00
Al	27	1	No Gas	956767	0.00
Sn	118	1	No Gas	822399	0.00
Ti	47	1	No Gas	141724	0.00
Zn	66	1	No Gas	299264	0.00
As	75	3	HeHe	17594	0.00
As	75	1	No Gas	293761	0.00
Sb	121	1	No Gas	1123746	0.00
Hg	201	1	No Gas	2298	0.05
Be	9	1	No Gas	173110	0.00
Pb	208	1	No Gas	2311583	0.00
Se	82	1	No Gas	16315	0.02
Mo	98	1	No Gas	783906	0.00
Ba	137	1	No Gas	324622	0.00
Tl	205	1	No Gas	1788348	0.00
U	238	1	No Gas	2308218	0.00
Na	23	2	he	1092996	0.00
Mg	24	2	he	568454	0.00
K	39	2	he	725612	0.00
Se	82	3	HeHe	953	0.51
Fe	57	3	HeHe	48298	0.00
Cd	114	1	No Gas	618455	0.00
Ca	44	1	No Gas	459461	0.00

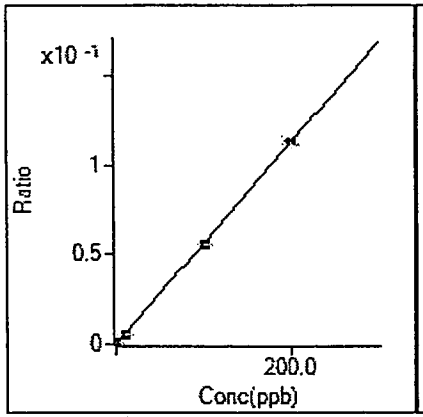
QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1527433	3.78	1989693	76.77	70	120	
Sc	45	2	he	200110	2.19	250304	79.95	70	120	
Ge	72	1	No Gas	196486	1.89	251464	78.14	70	120	

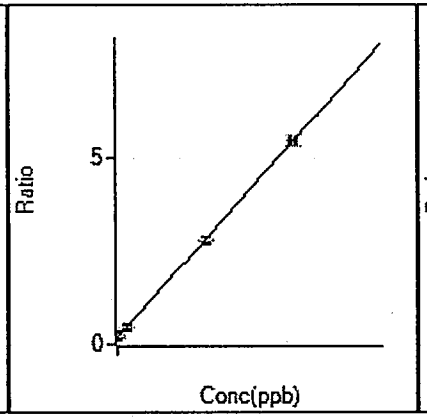
Calibration Standard Report

In	115	1	No Gas	1155986	1.37	1535232	75.30	70	120	
Tb	159	1	No Gas	1544938	1.21	1928675	80.10	70	120	
Bi	209	1	No Gas	764391	0.38	919422	83.14	70	120	
Sc	45	3	HeHe	28194	3.91	30424	92.67	70	120	

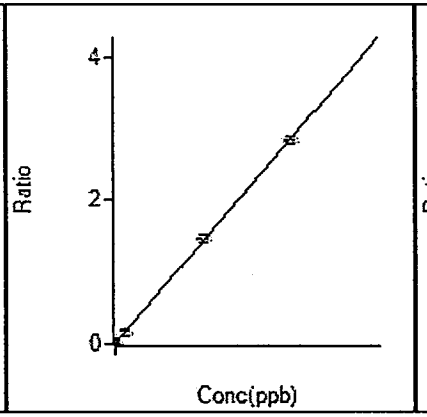
Calibration for C:\Agilent\ICPMH\1\DATA\A082112B.b\044LCCV.d



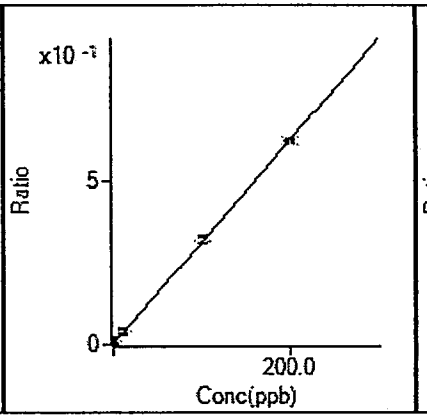
9 Be [No Gas] / ISTD: 45 Sc
y = 5.654E-4 x + 5.045E-6
R 1.0000
DL 0.005988
BEC 0.008922



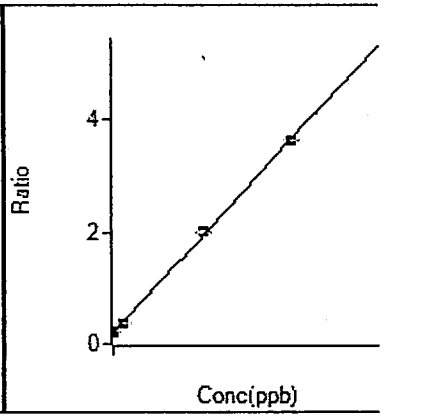
23 Na [he] / ISTD: 45 Sc
y = 2.634E-3 x + 1.840E-1
R 1.0000
DL 15.76
BEC 69.86



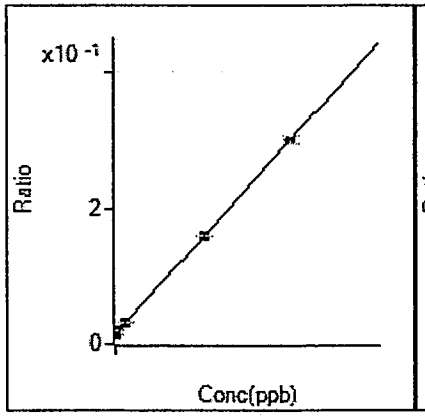
24 Mg [he] / ISTD: 45 Sc
y = 1.428E-3 x + 3.325E-3
R 0.9999
DL 1.728
BEC 2.329



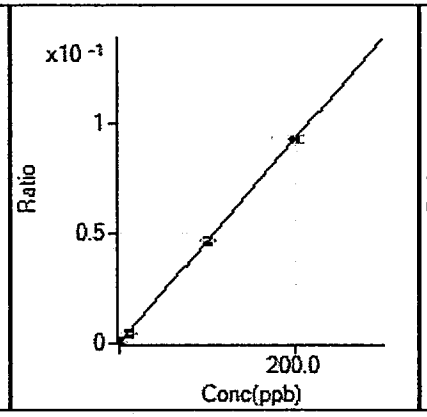
27 Al [No Gas] / ISTD: 45 Sc
y = 3.144E-3 x + 1.731E-3
R 0.9999
DL 0.1147
BEC 0.5507



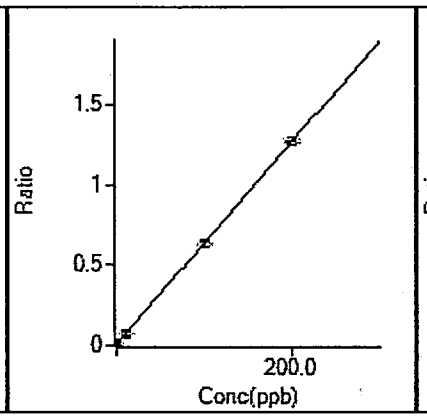
39 K [he] / ISTD: 45 Sc
y = 1.726E-3 x + 2.088E-1
R 0.9997
DL 20.14
BEC 121



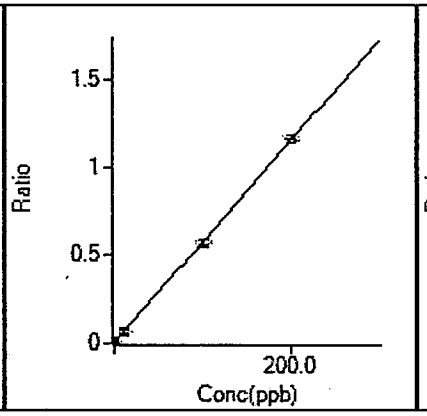
44 Ca [No Gas] / ISTD: 45 Sc
y = 1.437E-4 x + 1.423E-2
R 1.0000
DL 7.44
BEC 99.05



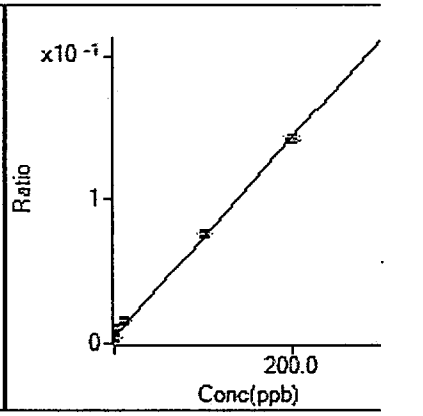
47 Ti [No Gas] / ISTD: 45 Sc
y = 4.646E-4 x + 7.147E-5
R 1.0000
DL 0.06227
BEC 0.1538



51 V [No Gas] / ISTD: 45 Sc
y = 6.342E-3 x + 3.584E-3
R 1.0000
DL 0.485
BEC 0.5651

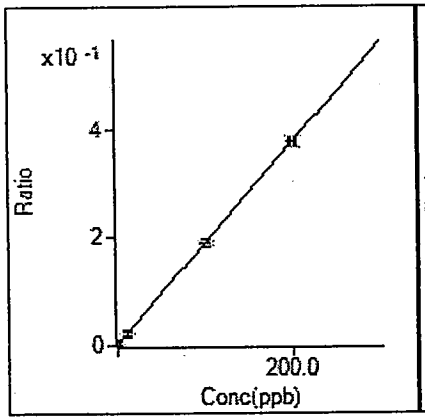


52 Cr [No Gas] / ISTD: 45 Sc
y = 5.776E-3 x + 3.452E-3
R 1.0000
DL 0.1213
BEC 0.5977

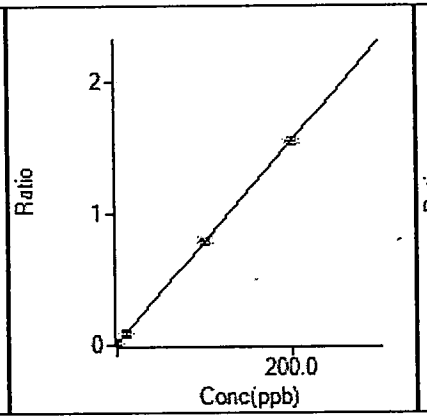


53 [V] [No Gas] / ISTD: 45 Sc
y = 6.952E-4 x + 4.606E-3
R 0.9994
DL 0.6988
BEC 6.626

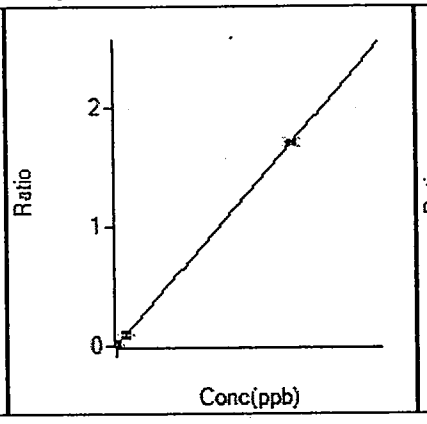
Calibration for C:\Agilent\ICPMH\1\DATA\A082112B.b\044LCCV.d



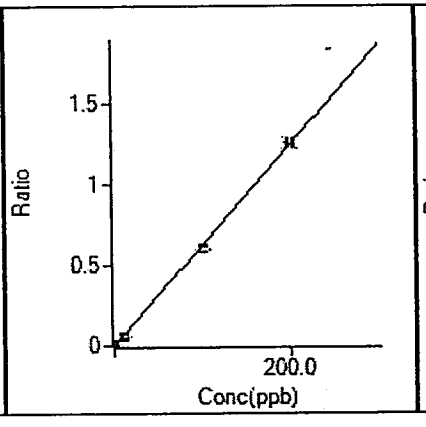
53 [V] [he] / ISTD: 45 Sc
y = 1.895E-3 x + 1.063E-3
R 1.0000
DL 0.197
BEC 0.5612



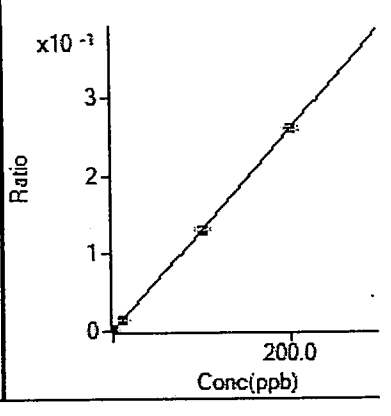
55 Mn [No Gas] / ISTD: 45 Sc
y = 7.746E-3 x + 8.122E-3
R 1.0000
DL 0.1522
BEC 1.049



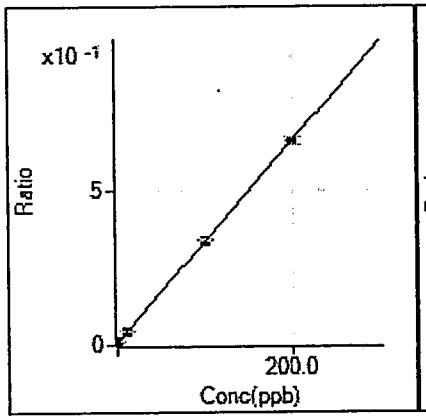
57 Fe [HeHe] / ISTD: 45 Sc
y = 8.563E-4 x + 2.200E-3
R 1.0000
DL 1.564
BEC 2.569



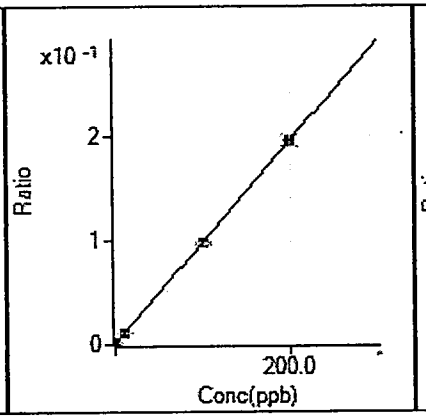
59 Co [No Gas] / ISTD: 45 Sc
y = 6.242E-3 x + 3.160E-5
R 0.9998
DL 0.008212
BEC 0.005063



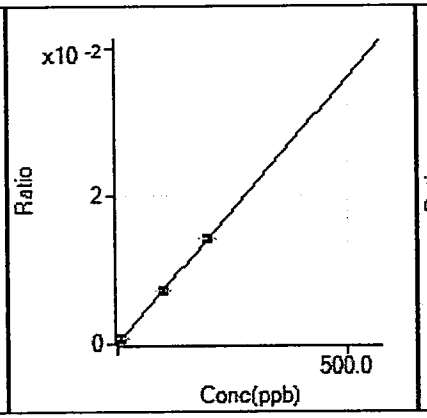
60 Ni [No Gas] / ISTD: 45 Sc
y = 1.302E-3 x + 4.435E-4
R 1.0000
DL 0.07287
BEC 0.3405



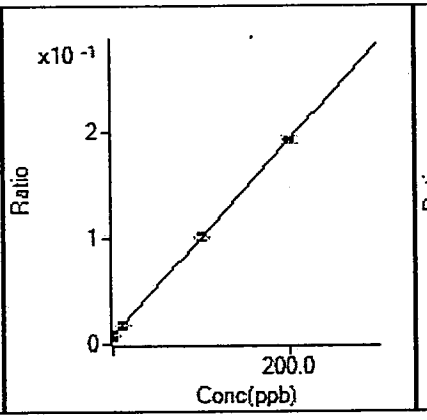
63 Cu [No Gas] / ISTD: 45 Sc
y = 3.276E-3 x + 5.905E-3
R 1.0000
DL 0.2165
BEC 1.803



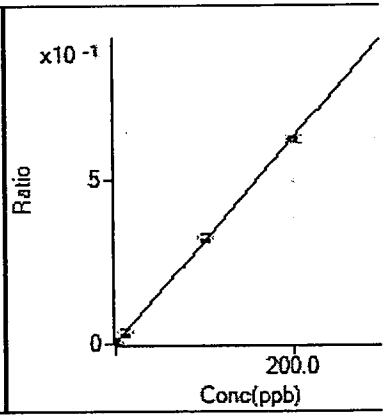
66 Zn [No Gas] / ISTD: 45 Sc
y = 9.793E-4 x + 1.910E-4
R 1.0000
DL 0.06541
BEC 0.195



69 [Zn] [No Gas] / ISTD: 45 Sc
y = 7.164E-5 x + 3.810E-6
R 1.0000
DL 0.2764
BEC 0.05319

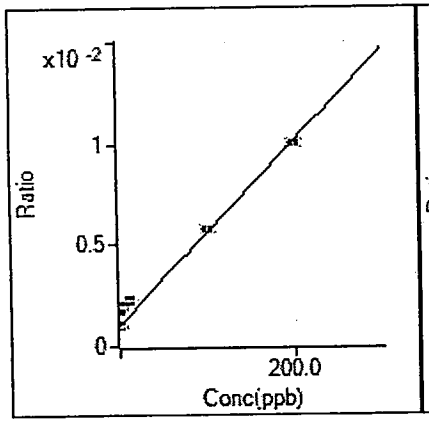


75 As [No Gas] / ISTD: 45 Sc
y = 9.239E-4 x + 8.039E-3
R 1.0000
DL 0.8388
BEC 8.701



75 As [HeHe] / ISTD: 45 Sc
y = 3.152E-3 x + 1.316E-4
R 0.9998
DL 0.1266
BEC 0.04174

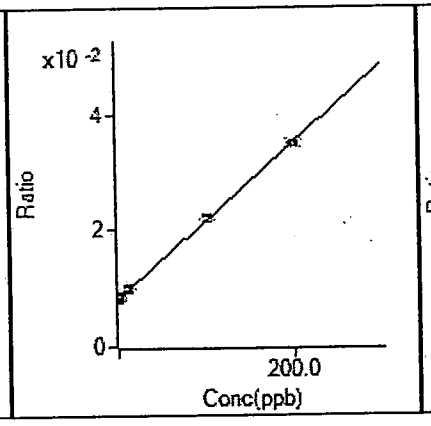
Calibration for C:\Agilent\ICPMH\1\DATA\A082112B.b\044LCCV.d



77 [As] [No Gas] / ISTD: 45 Sc

y = 4.582E-5 x + 1.035E-3

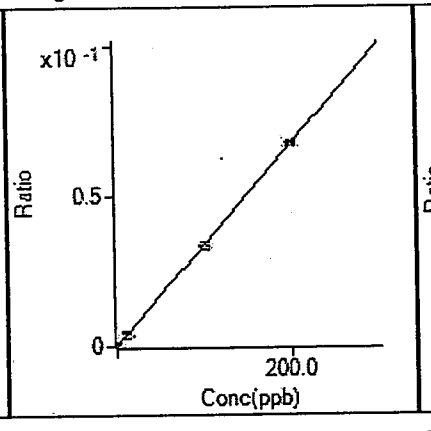
R	0.9956
DL	5.474
BEC	22.6



78 Se [No Gas] / ISTD: 45 Sc

y = 1.358E-4 x + 8.101E-3

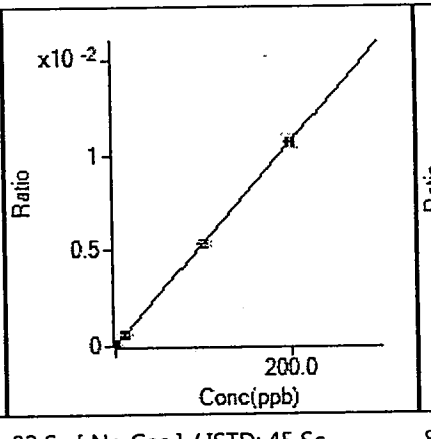
R	0.9998
DL	3.622
BEC	59.67



78 Se [HeHe] / ISTD: 45 Sc

y = 3.396E-4 x

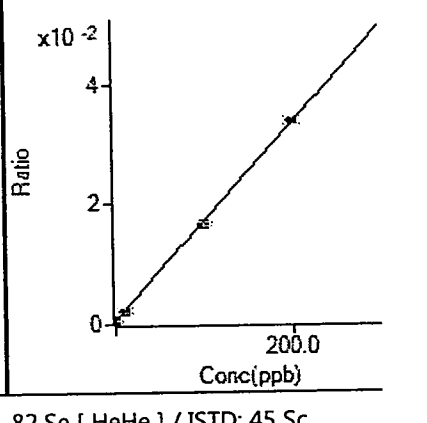
R	1.0000
DL	0
BEC	0



82 Se [No Gas] / ISTD: 45 Sc

y = 5.370E-5 x - 3.806E-5

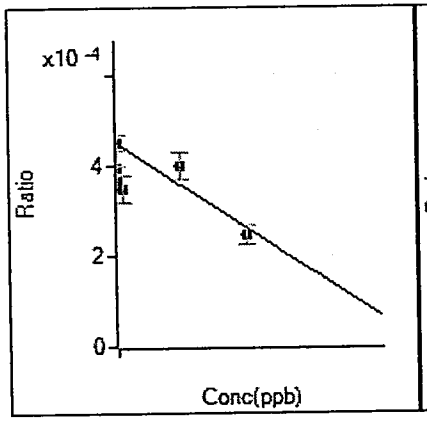
R	1.0000
DL	1.134
BEC	-0.7087



82 Se [HeHe] / ISTD: 45 Sc

y = 1.657E-4 x + 4.743E-4

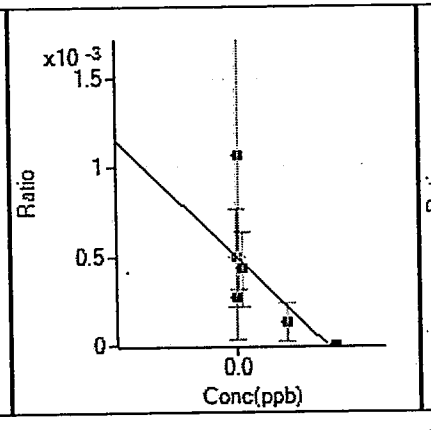
R	0.9999
DL	0.4008
BEC	2.863



83 [Se] [No Gas] / ISTD: 115 In

y = - 9.428E-7 x + 4.511E-4

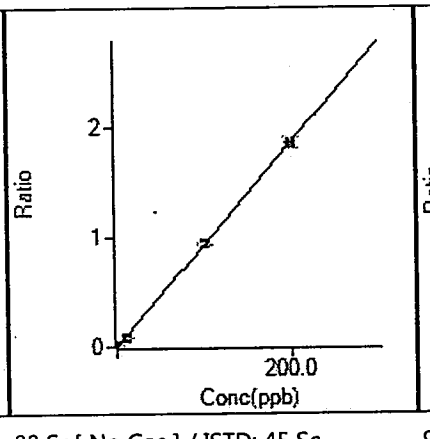
R	-0.7580
DL	-101.8
BEC	-478.5



83 [Se] [HeHe] / ISTD: 45 Sc

y = - 2.682E-6 x + 4.905E-4

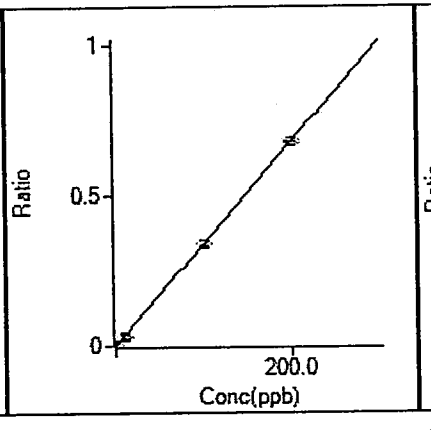
R	-0.6788
DL	-622
BEC	-182.9



88 Sr [No Gas] / ISTD: 45 Sc

y = 9.310E-3 x + 4.303E-5

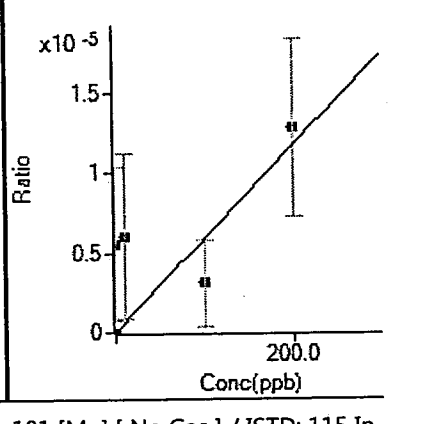
R	1.0000
DL	0.004423
BEC	0.004622



98 Mo [No Gas] / ISTD: 115 In

y = 3.395E-3 x + 6.727E-5

R	1.0000
DL	0.006167
BEC	0.01981

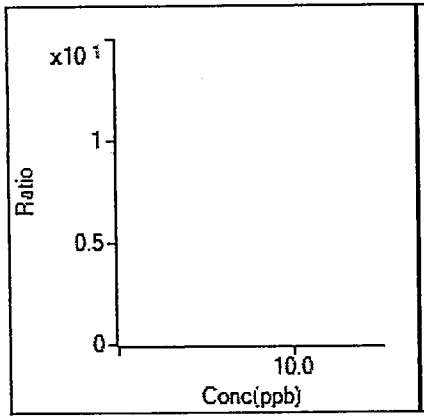


101 [Mo] [No Gas] / ISTD: 115 In

y = 5.868E-8 x

R	0.7642
DL	0
BEC	0

Calibration for C:\Agilent\ICPMH\1\DATA\A082112B.b\044LCCV.d



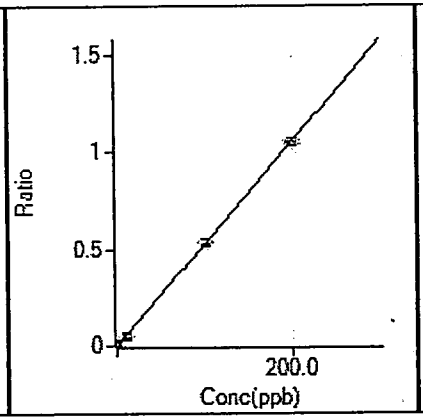
106 [Cd] [No Gas] / ISTD: 115 In

y =

R

DL

BEC



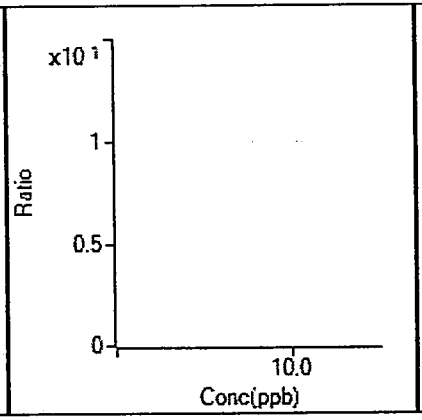
107 Ag [No Gas] / ISTD: 115 In

y = 5.299E-3 x + 2.664E-5

R 0.9999

DL 0.006405

BEC 0.005026



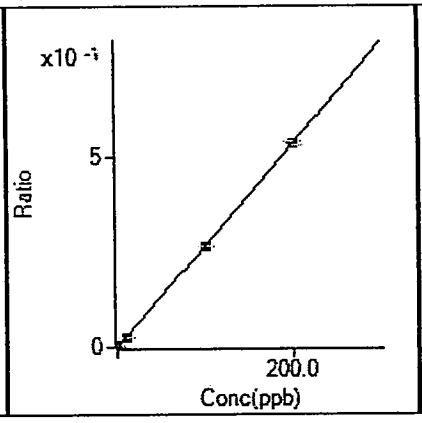
108 [Cd] [No Gas] / ISTD: 115 In

y =

R

DL

BEC



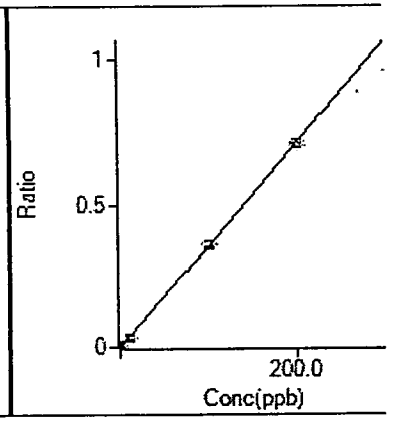
114 Cd [No Gas] / ISTD: 115 In

y = 2.676E-3 x + 1.750E-5

R 1.0000

DL 0.02799

BEC 0.00654



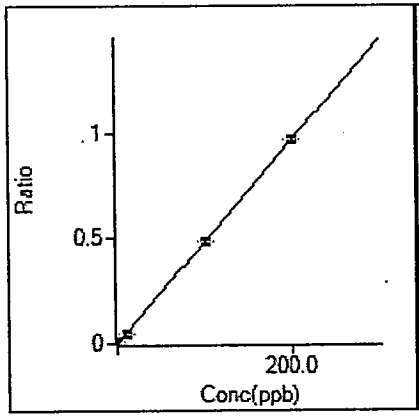
118 Sn [No Gas] / ISTD: 115 In

y = 3.575E-3 x + 8.457E-5

R 0.9999

DL 0.01351

BEC 0.02366



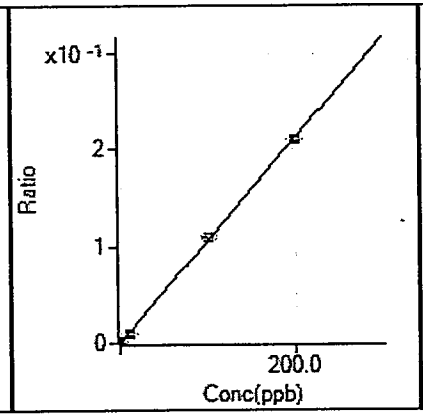
121 Sb [No Gas] / ISTD: 115 In

y = 4.865E-3 x - 3.613E-4

R 1.0000

DL 0.01245

BEC -0.07427



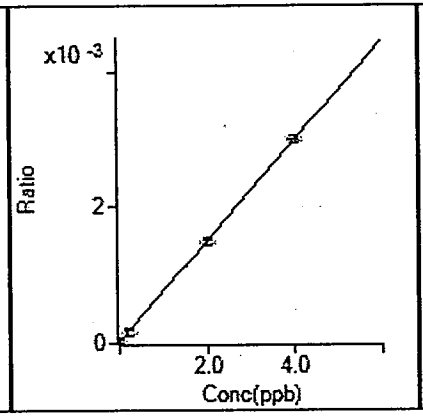
137 Ba [No Gas] / ISTD: 159 Tb

y = 1.059E-3 x + 8.619E-6

R 0.9998

DL 0.02249

BEC 0.008141



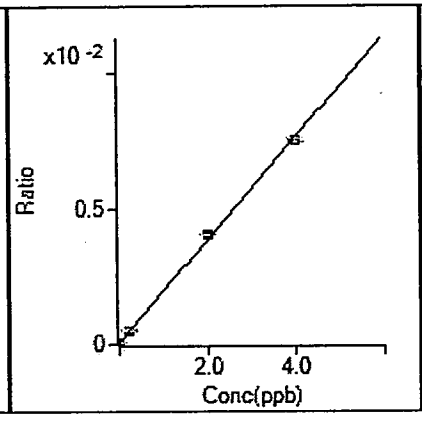
201 Hg [No Gas] / ISTD: 209 Bi

y = 7.431E-4 x + 2.317E-5

R 1.0000

DL 0.03068

BEC 0.03119



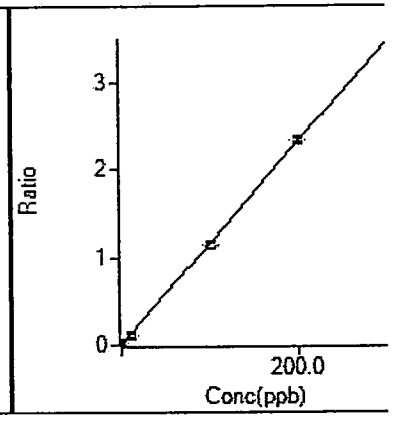
202 Hg [No Gas] / ISTD: 209 Bi

y = 1.901E-3 x + 4.473E-5

R 0.9994

DL 0.02086

BEC 0.02353



205 Tl [No Gas] / ISTD: 209 Bi

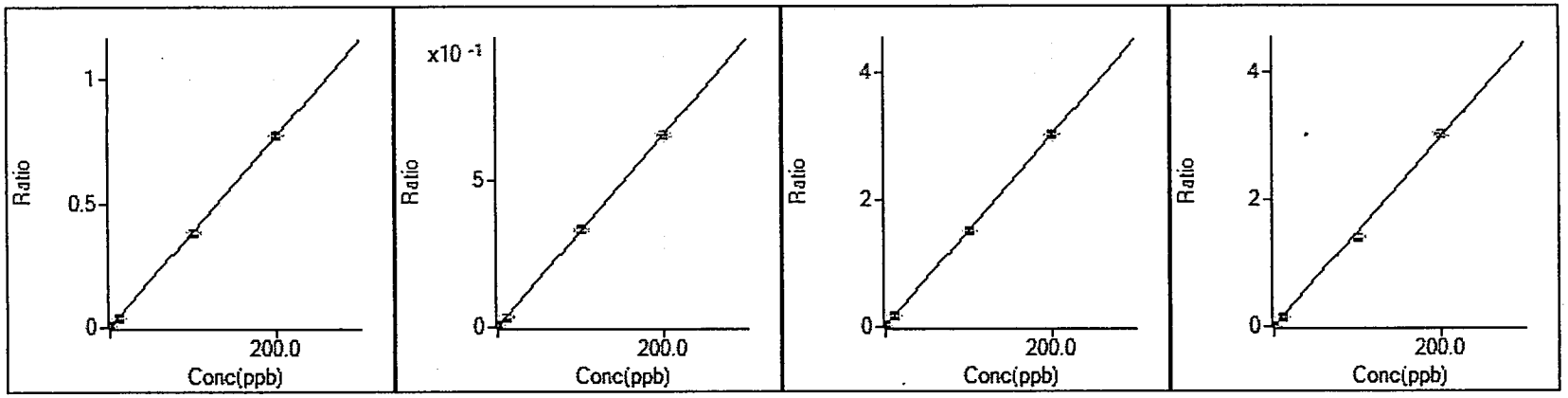
y = 1.163E-2 x + 2.825E-5

R 0.9999

DL 0.00187

BEC 0.002428

Calibration for C:\Agilent\ICPMH\1\DATA\A082112B.b\044LCCV.d



206 [Pb] [No Gas] / ISTD: 209 Bi		207 [Pb] [No Gas] / ISTD: 209 Bi		208 Pb [No Gas] / ISTD: 209 Bi		238 U [No Gas] / ISTD: 209 Bi	
y = 3.874E-3 x + 2.829E-5		y = 3.298E-3 x + 3.915E-6		y = 1.507E-2 x + 1.057E-2		y = 1.489E-2 x + 1.224E-5	
R	1.0000	R	1.0000	R	1.0000	R	0.9995
DL	0.005846	DL	0.006168	DL	0.03462	DL	0.002458
BEC	0.007303	BEC	0.001187	BEC	0.7013	BEC	0.0008222

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	008_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-21T02:14:37-04:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	96.217	2.461	966892	3.00	100	96.2	90	110	
Cr	52	1	No Gas	95.908	4.157	877825	3.53	100	95.9	90	110	
Mn	55	1	No Gas	100.915	2.434	1244060	2.73	100	100.9	90	110	
Co	59	1	No Gas	94.154	3.735	925389	1.83	100	94.2	90	110	
Ni	60	1	No Gas	97.595	2.913	200913	3.19	100	97.6	90	110	
Cu	63	1	No Gas	96.616	3.019	507709	1.84	100	96.6	90	110	
Sr	88	1	No Gas	98.790	1.266	1449023	2.48	100	98.8	90	110	
Ag	107	1	No Gas	101.936	1.870	635659	0.20	100	101.9	90	110	
Al	27	1	No Gas	97.104	2.204	483510	1.96	100	97.1	90	110	
Sn	118	1	No Gas	109.827	2.331	462041	0.94	100	109.8	90	110	
Tl	47	1	No Gas	91.782	3.918	67267	3.13	100	91.8	90	110	
Zn	66	1	No Gas	96.066	0.942	148502	2.46	100	96.1	90	110	
As	75	3	HeHe	108.557	3.259	9570	1.43	100	108.6	90	110	
As	75	1	No Gas	98.241	4.577	155591	3.22	100	98.2	90	110	
Sb	121	1	No Gas	98.172	2.007	561611	1.45	100	98.2	90	110	
Hg	201	1	No Gas	2.042	6.746	1165	4.25	2	102.1	90	110	
Be	9	1	No Gas	99.411	4.916	88502	3.34	100	99.4	90	110	
Pb	208	1	No Gas	100.541	1.785	1155613	2.33	100	100.5	90	110	
Se	82	1	No Gas	96.210	2.062	8079	2.17	100	96.2	90	110	
Mo	98	1	No Gas	98.559	1.064	393868	1.17	100	98.6	90	110	
Ba	137	1	No Gas	98.556	2.241	166312	1.67	100	98.6	90	110	
Tl	205	1	No Gas	93.290	2.806	821720	2.32	100	93.3	90	110	
U	238	1	No Gas	102.657	0.688	1157207	2.59	100	102.7	90	110	
Na	23	2	he	982.420	2.407	562140	1.14	1000	98.2	90	110	
Mg	24	2	he	1039.703	4.670	301574	1.59	1000	104.0	90	110	
K	39	2	he	994.919	2.127	390638	2.78	1000	99.5	90	110	
Se	82	3	HeHe	105.889	8.242	504	9.98	100	105.9	90	110	
Fe	57	3	HeHe	1064.664	3.827	25546	0.44	1000	106.5	90	110	
Cd	114	1	No Gas	101.355	0.399	319240	1.60	100	101.4	90	110	
Ca	44	1	No Gas	977.068	0.488	243618	2.60	1000	97.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1575567	3.02	1989693	79.19	70	120	
Sc	45	2	he	202904	3.23	250304	81.06	70	120	
Ge	72	1	No Gas	200409	3.32	251464	79.70	70	120	
In	115	1	No Gas	1176891	1.72	1535232	76.66	70	120	
Tb	159	1	No Gas	1594383	3.35	1928675	82.67	70	120	
Bi	209	1	No Gas	757327	2.78	919422	82.37	70	120	
Sc	45	3	HeHe	27983	4.15	30424	91.98	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	010_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-21T02:21:49-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	-0.003	-1148.7	6331	5.2	9	
Cr	52	1	No Gas	-0.017	-273.9	5950	7.8	4	
Mn	55	1	No Gas	0.038	211.0	14930	7.0	25	
Co	59	1	No Gas	0.005	97.7	115	49.7	1	
Ni	60	1	No Gas	-0.104	-49.6	547	22.0	25	
Cu	63	1	No Gas	-1.115	-1.5	4000	2.5	25	
Sr	88	1	No Gas	0.003	134.3	122	50.6	25	
Ag	107	1	No Gas	0.004	82.8	63	36.7	9	
Al	27	1	No Gas	0.018	120.7	3171	3.4	1000000	
Sn	118	1	No Gas	0.144	11.4	778	10.0	25	
Ti	47	1	No Gas	0.032	176.6	153	30.1	10000	
Zn	66	1	No Gas	0.029	103.8	390	13.3	25	
As	75	3	HeHe	0.029	90.8	7	34.6	9	
As	75	1	No Gas	0.470	41.5	15040	2.4	9	
Sb	121	1	No Gas	0.194	14.5	757	22.8	4	
Hg	201	1	No Gas	0.040	58.5	43	33.4	0.04	
Be	9	1	No Gas	0.015	13.0	24	8.3	1	
Pb	208	1	No Gas	-0.231	-18.5	5846	9.2	4	
Se	82	1	No Gas	-1.079	-108.6	-170	-65.2	25	
Mo	98	1	No Gas	0.084	18.0	457	14.9	10000	
Ba	137	1	No Gas	-0.004	-148.2	7	173.2	25	
Tl	205	1	No Gas	0.008	52.6	104	40.6	1	
U	238	1	No Gas	0.012	25.3	159	22.4	25	
Na	23	2	he	-6.140	-56.1	37979	3.9	2500000	
Mg	24	2	he	1.949	99.8	1378	44.1	2500000	
K	39	2	he	-1.062	-233.1	46848	0.6	5000000	
Se	82	3	HeHe	1.629	30.3	22	7.8	25	
Fe	57	3	HeHe	-0.846	-55.9	43	26.6	2500000	
Cd	114	1	No Gas	0.011	97.1	60	60.1	1	
Ca	44	1	No Gas	-31.408	-11.9	17252	5.5	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1774868	0.38	1989693	89.20	70	120	
Sc	45	2	he	226412	1.60	250304	90.45	70	120	
Ge	72	1	No Gas	226456	0.90	251464	90.05	70	120	

Initial Calibration Blank (ICB) Report

In	115	1	No Gas	1295234	1.42	1535232	84.37	70	120	
Tb	159	1	No Gas	1701553	1.40	1928675	88.22	70	120	
Bi	209	1	No Gas	823767	1.18	919422	89.60	70	120	
Sc	45	3	HeHe	29446	4.67	30424	96.79	70	120	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV
Data File Name	011LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-21T02:25:26-04:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.181	11.291	29945	5.57	2	109.1	70	130	
Cr	52	1	No Gas	2.004	9.102	25846	2.98	2	100.2	70	130	
Mn	55	1	No Gas	4.693	4.289	76560	1.06	5	93.9	70	130	
Co	59	1	No Gas	4.683	4.274	50366	1.99	5	93.7	70	130	
Ni	60	1	No Gas	4.907	2.973	11768	1.77	5	98.1	70	130	
Cu	63	1	No Gas	4.292	5.289	34365	0.98	5	85.8	70	130	
Sr	88	1	No Gas	4.318	7.566	69206	3.54	5	86.4	70	130	
Ag	107	1	No Gas	2.047	4.309	14081	2.78	2	102.3	70	130	
Al	27	1	No Gas	78.144	5.071	425678	1.64	80	97.7	70	130	
Sn	118	1	No Gas	2.368	7.710	11071	6.98	2	118.4	70	130	
Ti	47	1	No Gas	4.862	8.302	4008	4.79	5	97.2	70	130	
Zn	66	1	No Gas	5.207	7.298	9099	3.62	5	104.1	70	130	
As	75	3	HeHe	3.569	6.260	316	8.15	3	119.0	70	130	
As	75	1	No Gas	3.131	17.294	18813	0.97	3	104.4	70	130	
Sb	121	1	No Gas	2.304	5.102	14043	1.11	2	115.2	70	130	
Hg	201	1	No Gas	0.193	7.681	137	6.76	0.2	96.3	70	130	
Be	9	1	No Gas	0.986	6.796	968	3.99	1	98.6	70	130	
Pb	208	1	No Gas	1.935	0.977	32663	1.56	2	96.8	70	130	
Se	82	1	No Gas	6.410	12.561	526	11.28	5	128.2	70	130	
Mo	98	1	No Gas	2.007	4.360	8912	3.04	2	100.3	70	130	
Ba	137	1	No Gas	5.101	7.082	8983	6.38	5	102.0	70	130	
Tl	205	1	No Gas	0.942	5.333	9029	4.29	1	94.2	70	130	
U	238	1	No Gas	4.347	3.131	53174	1.91	5	86.9	70	130	
Na	23	2	he	113.345	1.706	98435	4.12	100	113.3	70	130	
Mg	24	2	he	103.723	1.243	30880	3.39	100	103.7	70	130	
K	39	2	he	109.865	5.459	81204	1.12	100	109.9	70	130	
Se	82	3	HeHe	8.755	11.531	53	8.33	5	175.1	70	130	LLICV Main CR1 Failed
Fe	57	3	HeHe	56.480	9.341	1400	7.25	50	113.0	70	130	
Cd	114	1	No Gas	1.078	4.290	3757	1.08	1	107.8	70	130	
Ca	44	1	No Gas	83.160	18.520	45017	4.68	100	83.2	70	130	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1722948	3.96	1989693	86.59	70	120	
Sc	45	2	he	203939	3.07	250304	81.48	70	120	
Ge	72	1	No Gas	216444	2.83	251464	86.07	70	120	
In	115	1	No Gas	1296381	4.57	1535232	84.44	70	120	
Tb	159	1	No Gas	1661016	1.30	1928675	86.12	70	120	
Bi	209	1	No Gas	821762	1.24	919422	89.38	70	120	
Sc	45	3	HeHe	27719	2.13	30424	91.11	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	012ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-21T02:29:03-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.349	5.4	10702	1.7	9	
Cr	52	1	No Gas	1.072	3.8	17799	1.2	4	
Mn	55	1	No Gas	1.163	2.3	31622	2.4	25	
Co	59	1	No Gas	1.220	4.7	14114	4.0	1	ICSA Main CR1 Failed
Ni	60	1	No Gas	1.532	10.0	4504	9.0	5	
Cu	63	1	No Gas	-0.184	-23.7	9787	1.9	5	
Ag	107	1	No Gas	0.212	5.5	1393	7.6	9	
Al	27	1	No Gas	89169.270	3.1	517252661	2.1	110000	
Sn	118	1	No Gas	0.150	3.7	752	0.9	25	
Tl	47	1	No Gas	1770.706	4.2	1518299	3.8	2200	
Zn	66	1	No Gas	2.321	1.7	4547	1.2	5	
As	75	3	HeHe	0.338	34.5	33	31.1	9	
As	75	1	No Gas	-0.109	-695.4	14644	8.1	9	
Sb	121	1	No Gas	0.499	8.8	2497	7.9	4	
Hg	201	1	No Gas	0.048	68.2	44	39.6	0.04	ICSA Main CR1 Failed
Be	9	1	No Gas	0.014	13.1	24	8.3	1	
Pb	208	1	No Gas	0.229	11.6	10552	2.6	4	
Se	82	1	No Gas	0.585	217.7	-12	-1051.7	25	
Mo	98	1	No Gas	2061.207	3.3	8460948	1.6	2200	
Ba	137	1	No Gas	0.153	36.0	280	35.7	25	
Tl	205	1	No Gas	0.021	19.2	207	18.8	1	
U	238	1	No Gas	0.016	23.8	185	24.3	25	
Na	23	2	he	91022.659	2.1	52098055	1.8	110000	
Mg	24	2	he	95866.249	0.8	29720204	0.5	110000	
K	39	2	he	92051.970	1.8	34535061	1.4	110000	
Se	82	3	HeHe	3.639	36.9	30	20.6	25	
Fe	57	3	HeHe	103619.213	4.2	2471179	3.4	110000	
Cd	114	1	No Gas	0.702	10.0	2300	13.3	1	
Ca	44	1	No Gas	86315.622	4.3	22912240	3.3	110000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1845688	1.23	1989693	92.76	70	120	
Sc	45	2	he	217136	0.38	250304	86.75	70	120	
Ge	72	1	No Gas	218460	1.37	251464	86.88	70	120	
In	115	1	No Gas	1209796	3.41	1535232	78.80	70	120	
Tb	159	1	No Gas	1634717	2.30	1928675	84.76	70	120	
Bi	209	1	No Gas	752438	1.65	919422	81.84	70	120	
Sc	45	3	HeHe	27856	0.94	30424	91.56	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	013ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-21T02:32:37-04:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	36.404	2.886	423069	1.09	40	91.0	80	120	
Cr	52	1	No Gas	18.298	2.725	196938	0.85	20	91.5	80	120	
Mn	55	1	No Gas	18.275	2.702	270084	0.26	20	91.4	80	120	
Co	59	1	No Gas	33.598	4.415	378459	3.40	40	84.0	80	120	
Ni	60	1	No Gas	35.511	2.357	84264	1.63	40	88.8	80	120	
Cu	63	1	No Gas	16.434	2.362	107801	0.24	20	82.2	80	120	
Ag	107	1	No Gas	19.482	1.185	123046	2.54	20	97.4	80	120	
Al	27	1	No Gas	92190.511	3.297	522897253	1.05	100000	92.2	90	110	
Tl	47	1	No Gas	1834.759	2.335	1538408	0.05	2000	91.7	90	110	
Zn	66	1	No Gas	19.950	3.791	35594	2.08	20	99.7	80	120	
As	75	3	HeHe	21.762	4.828	1998	2.61	20	108.8	80	120	
As	75	1	No Gas	17.927	3.053	44397	0.40	20	89.6	80	120	
Sb	121	1	No Gas	0.586	11.099	2964	11.62	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Hg	201	1	No Gas	0.021	89.766	29	35.12	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Be	9	1	No Gas	0.008	131.614	17	63.55	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Pb	208	1	No Gas	0.418	7.506	12582	2.29	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Se	82	1	No Gas	17.956	13.626	1669	12.72	20	89.8	80	120	
Mo	98	1	No Gas	2048.391	3.266	8284868	3.08	2000	102.4	90	110	
Ba	137	1	No Gas	0.217	15.322	390	14.27	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Tl	205	1	No Gas	0.020	29.962	193	27.27	0	#DIV/0!	0	0	ICSB Main CR1 Failed
U	238	1	No Gas	0.011	8.658	133	8.33	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Na	23	2	he	93963.374	3.804	52998154	2.33	100000	94.0	90	110	
Mg	24	2	he	99262.403	2.940	30334900	3.11	100000	99.3	90	110	
K	39	2	he	93420.013	2.303	34545321	1.66	100000	93.4	90	110	
Se	82	3	HeHe	21.956	11.023	120	10.36	20	109.8	80	120	
Fe	57	3	HeHe	99268.475	1.116	2472696	2.62	100000	99.3	90	110	
Cd	114	1	No Gas	9.791	0.634	31237	1.84	10	97.9	80	120	
Ca	44	1	No Gas	90547.614	1.632	23508509	1.15	100000	90.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1805193	2.33	1989693	90.73	70	120	
Sc	45	2	he	214052	1.63	250304	85.52	70	120	
Ge	72	1	No Gas	210824	2.64	251464	83.84	70	120	
In	115	1	No Gas	1191401	1.77	1535232	77.60	70	120	
Tb	159	1	No Gas	1638546	1.32	1928675	84.96	70	120	
Bi	209	1	No Gas	745957	1.49	919422	81.13	70	120	
Sc	45	3	HeHe	29088	2.31	30424	95.61	70	120	

Sample Report

Sample Table

Sample Name	1021898
Data File Name	016SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-21T02:45:26-04:00
Sample Type	Sample
Dilution	1
Comment	38074 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3101

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	0.501	0.501	30.14	10634	0.00	1000	
Cr	52	1	No Gas	0.357	0.357	31.72	8673	0.00	1000	
Mn	55	1	No Gas	0.061	0.061	41.05	13536	0.00	1000	
Co	59	1	No Gas	0.043	0.043	22.51	467	0.01	1000	
Ni	60	1	No Gas	0.217	0.217	40.86	1147	0.02	1000	
Cu	63	1	No Gas	1.254	1.254	5.28	15777	0.01	1000	
Sr	88	1	No Gas	0.566	0.566	3.03	8369	0.01	1000	
Ag	107	1	No Gas	0.001	0.001	769.96	41	0.00	1000	
Al	27	1	No Gas	10.960	10.960	1.19	57025	0.02	100000	
Sn	118	1	No Gas	0.256	0.256	5.20	1219	0.02	100	
Ti	47	1	No Gas	0.247	0.247	22.76	293	0.08	2000	
Zn	66	1	No Gas	2.282	2.282	6.38	3820	0.06	1000	
As	75	3	HeHe	0.026	0.026	309.62	6	0.44	1000	
As	75	1	No Gas	0.680	0.680	140.37	13651	0.00	1000	
Sb	121	1	No Gas	0.144	0.144	16.69	417	0.03	100	
Hg	201	1	No Gas	0.002	0.002	188.70	19	0.01	4	
Be	9	1	No Gas	0.021	0.021	61.93	27	0.08	1000	
Pb	208	1	No Gas	0.265	0.265	13.41	11282	0.00	1000	
Se	82	1	No Gas	0.392	0.392	49.73	-27	-1.48	1000	
Mo	98	1	No Gas	0.365	0.365	9.34	1595	0.02	2000	
Ba	137	1	No Gas	0.609	0.609	11.28	1043	0.06	1000	
Tl	205	1	No Gas	0.002	0.002	183.62	37	0.00	1000	
U	238	1	No Gas	0.005	0.005	23.73	63	0.01	1000	
Na	23	2	he	41.356	41.356	14.61	57208	0.07	100000	
Mg	24	2	he	2.782	2.782	21.80	1426	0.20	100000	
K	39	2	he	4.719	4.719	56.57	42373	0.01	100000	
Se	82	3	HeHe	2.862	2.862	40.10	27	10.74	1000	
Fe	57	3	HeHe	8.543	8.543	22.61	267	3.20	100000	
Cd	114	1	No Gas	0.034	0.034	63.17	133	0.03	1000	
Ca	44	1	No Gas	-10.759	-10.759	-14.92	19994	-0.05	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1576157	2.43	1989693	79.22	70	120	
Sc	45	2	he	195378	1.75	250304	78.06	70	120	

Ge	72	1	No Gas	210372	1.72	251464	83.66	70	120	
In	115	1	No Gas	1220736	1.02	1535232	79.51	70	120	
Tb	159	1	No Gas	1596883	1.82	1928675	82.80	70	120	
Bi	209	1	No Gas	774024	2.00	919422	84.19	70	120	
Sc	45	3	HeHe	28234	6.72	30424	92.80	70	120	

Sample Report

Sample Table

Sample Name	1021899
Data File Name	017SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-21T02:49:03-04:00
Sample Type	Sample
Dilution	1
Comment	38074 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass
Vial	3102

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	185.797	185.797	1.43	1949638	0.01	1000	
Cr	52	1	No Gas	185.741	185.741	0.83	1775398	0.01	1000	
Mn	55	1	No Gas	189.862	189.862	0.79	2439360	0.01	1000	
Co	59	1	No Gas	191.357	191.357	2.04	1971087	0.01	1000	
Ni	60	1	No Gas	189.470	189.470	1.61	407808	0.05	1000	
Cu	63	1	No Gas	186.271	186.271	1.68	1016163	0.02	1000	
Sr	88	1	No Gas	189.507	189.507	0.37	2910813	0.01	1000	
Ag	107	1	No Gas	102.172	102.172	1.46	671916	0.02	1000	
Al	27	1	No Gas	1771.400	1771.400	2.26	9188529	0.02	100000	
Sn	118	1	No Gas	185.482	185.482	1.45	822901	0.02	100	>LDR
Ti	47	1	No Gas	173.805	173.805	0.44	133334	0.13	2000	
Zn	66	1	No Gas	188.159	188.159	3.39	304156	0.06	1000	
As	75	3	HeHe	206.183	206.183	3.44	18755	1.10	1000	
As	75	1	No Gas	189.993	189.993	0.77	302839	0.06	1000	
Sb	121	1	No Gas	194.641	194.641	1.31	1174700	0.02	100	>LDR
Hg	201	1	No Gas	2.038	2.038	1.93	1219	0.17	4	
Be	9	1	No Gas	174.249	174.249	2.03	162501	0.11	1000	
Pb	208	1	No Gas	201.612	201.612	0.62	2418610	0.01	1000	
Se	82	1	No Gas	190.153	190.153	1.04	16783	1.13	1000	
Mo	98	1	No Gas	200.067	200.067	1.35	842997	0.02	2000	
Ba	137	1	No Gas	2008.941	2008.941	2.95	3553045	0.06	1000	>LDR
Tl	205	1	No Gas	204.684	204.684	2.04	1888667	0.01	1000	
U	238	1	No Gas	0.018	0.018	14.92	226	0.01	1000	
Na	23	2	he	2198.737	2198.737	2.12	1187818	0.19	100000	
Mg	24	2	he	2064.244	2064.244	1.45	586404	0.35	100000	
K	39	2	he	1965.717	1965.717	0.71	715825	0.27	100000	
Se	82	3	HeHe	191.639	191.639	3.71	930	20.61	1000	
Fe	57	3	HeHe	2104.998	2104.998	3.85	52066	4.04	100000	
Cd	114	1	No Gas	196.042	196.042	0.94	651056	0.03	1000	
Ca	44	1	No Gas	1877.357	1877.357	0.46	468524	0.40	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1649791	2.15	1989693	82.92	70	120	
Sc	45	2	he	198789	2.51	250304	79.42	70	120	

Ge	72	1	No Gas	224318	0.43	251464	89.20	70	120	
In	115	1	No Gas	1240905	0.29	1535232	80.83	70	120	
Tb	159	1	No Gas	1670890	1.57	1928675	86.63	70	120	
Bi	209	1	No Gas	792986	2.37	919422	86.25	70	120	
Sc	45	3	HeHe	28871	2.97	30424	94.90	70	120	

Sample Report

Sample Table

Sample Name	9981496012
Data File Name	018SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-21T02:59:11-04:00
Sample Type	Sample
Dilution	1
Comment	38074 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3103

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	4.971	4.971	5.64	55453	0.01	1000	
Cr	52	1	No Gas	1.738	1.738	10.82	21284	0.01	1000	
Mn	55	1	No Gas	0.813	0.813	21.79	22734	0.00	1000	
Co	59	1	No Gas	0.094	0.094	1.45	982	0.01	1000	
Ni	60	1	No Gas	0.901	0.901	13.73	2550	0.04	1000	
Cu	63	1	No Gas	-0.182	-0.182	-54.47	8378	0.00	1000	
Sr	88	1	No Gas	215.157	215.157	6.15	3163827	0.01	1000	
Ag	107	1	No Gas	0.004	0.004	247.84	56	0.01	1000	
Al	27	1	No Gas	13.693	13.693	6.59	70682	0.02	100000	
Sn	118	1	No Gas	0.365	0.365	6.16	1682	0.02	100	
Ti	47	1	No Gas	0.263	0.263	8.19	306	0.09	2000	
Zn	66	1	No Gas	2.503	2.503	11.51	4166	0.06	1000	
As	75	3	HeHe	0.890	0.890	16.97	82	1.09	1000	
As	75	1	No Gas	0.485	0.485	217.05	13374	0.00	1000	
Sb	121	1	No Gas	0.186	0.186	2.98	660	0.03	100	
Hg	201	1	No Gas	0.040	0.040	76.44	41	0.10	4	
Be	9	1	No Gas	0.024	0.024	50.34	29	0.08	1000	
Pb	208	1	No Gas	0.027	0.027	142.95	8428	0.00	1000	
Se	82	1	No Gas	1.077	1.077	20.55	32	3.38	1000	
Mo	98	1	No Gas	7.882	7.882	1.94	32463	0.02	2000	
Ba	137	1	No Gas	5.161	5.161	2.34	8603	0.06	1000	
Tl	205	1	No Gas	0.032	0.032	24.24	311	0.01	1000	
U	238	1	No Gas	0.633	0.633	6.22	7235	0.01	1000	
Na	23	2	he	6864.275	6864.275	0.41	3540353	0.19	100000	
Mg	24	2	he	4186.886	4186.886	1.81	1159226	0.36	100000	
K	39	2	he	392.583	392.583	1.61	171772	0.23	100000	
Se	82	3	HeHe	1.558	1.558	57.77	20	7.65	1000	
Fe	57	3	HeHe	11.141	11.141	6.86	327	3.41	100000	
Cd	114	1	No Gas	0.044	0.044	36.62	163	0.03	1000	
Ca	44	1	No Gas	54913.171	54913.171	3.60	12488974	0.44	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1581660	4.90	1989693	79.49	70	120	
Sc	45	2	he	193838	1.06	250304	77.44	70	120	
Ge	72	1	No Gas	207931	1.03	251464	82.69	70	120	

In	115	1	No Gas	1209732	1.64	1535232	78.80	70	120	
Tb	159	1	No Gas	1571660	1.83	1928675	81.49	70	120	
Bi	209	1	No Gas	768064	2.84	919422	83.54	70	120	
Sc	45	3	HeHe	27806	2.20	30424	91.40	70	120	

Sample Report

Sample Table

Sample Name	1021900
Data File Name	019SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-21T03:02:45-04:00
Sample Type	Sample
Dilution	1
Comment	38074 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass
Vial	3104

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	192.171	192.171	3.94	1913499	0.01	1000	
Cr	52	1	No Gas	186.337	186.337	3.85	1690224	0.01	1000	
Mn	55	1	No Gas	191.555	191.555	1.65	2336596	0.01	1000	
Co	59	1	No Gas	184.828	184.828	4.19	1806739	0.01	1000	
Ni	60	1	No Gas	181.925	181.925	1.06	371880	0.05	1000	
Cu	63	1	No Gas	179.928	179.928	2.78	932135	0.02	1000	
Sr	88	1	No Gas	379.915	379.915	1.82	5539783	0.01	1000	
Ag	107	1	No Gas	98.547	98.547	1.80	599442	0.02	1000	
Al	27	1	No Gas	1801.283	1801.283	4.42	8867505	0.02	100000	
Sn	118	1	No Gas	184.559	184.559	1.57	757347	0.02	100	>LDR
Ti	47	1	No Gas	173.968	173.968	3.15	126676	0.14	2000	
Zn	66	1	No Gas	181.054	181.054	4.17	277970	0.07	1000	
As	75	3	HeHe	206.529	206.529	2.26	17911	1.15	1000	
As	75	1	No Gas	187.617	187.617	2.63	284021	0.07	1000	
Sb	121	1	No Gas	198.083	198.083	1.57	1105751	0.02	100	>LDR
Hg	201	1	No Gas	2.110	2.110	4.56	1165	0.18	4	
Be	9	1	No Gas	181.510	181.510	1.98	160728	0.11	1000	
Pb	208	1	No Gas	200.354	200.354	1.65	2219650	0.01	1000	
Se	82	1	No Gas	183.671	183.671	1.05	15394	1.19	1000	
Mo	98	1	No Gas	202.572	202.572	2.39	789466	0.03	2000	
Ba	137	1	No Gas	2036.597	2036.597	2.64	3192313	0.06	1000	>LDR
Tl	205	1	No Gas	199.182	199.182	0.56	1697349	0.01	1000	
U	238	1	No Gas	0.637	0.637	2.16	6957	0.01	1000	
Na	23	2	he	9054.664	9054.664	0.93	4535778	0.20	100000	
Mg	24	2	he	6448.499	6448.499	0.97	1737909	0.37	100000	
K	39	2	he	2297.696	2297.696	0.24	787532	0.29	100000	
Se	82	3	HeHe	186.322	186.322	5.16	862	21.62	1000	
Fe	57	3	HeHe	2015.937	2015.937	1.94	47550	4.24	100000	
Cd	114	1	No Gas	193.300	193.300	1.68	593768	0.03	1000	
Ca	44	1	No Gas	57134.968	57134.968	4.93	12872562	0.44	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1566656	2.99	1989693	78.74	70	120	
Sc	45	2	he	188694	2.17	250304	75.39	70	120	
Ge	72	1	No Gas	204273	0.24	251464	81.23	70	120	

In	115	1	No Gas	1147848	0.62	1535232	74.77	70	120	
Tb	159	1	No Gas	1481496	4.03	1928675	76.81	70	120	
Bi	209	1	No Gas	732428	0.90	919422	79.66	70	120	
Sc	45	3	HeHe	27519	2.51	30424	90.45	70	120	

Sample Report

Sample Table

Sample Name	1021901
Data File Name	020SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-21T03:06:18-04:00
Sample Type	Sample
Dilution	1
Comment	38074 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass
Vial	3105

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	192.702	192.702	1.51	1913351	0.01	1000	
Cr	52	1	No Gas	183.332	183.332	0.68	1658381	0.01	1000	
Mn	55	1	No Gas	184.058	184.058	0.58	2238199	0.01	1000	
Co	59	1	No Gas	181.816	181.816	2.33	1771835	0.01	1000	
Ni	60	1	No Gas	179.740	179.740	2.67	366140	0.05	1000	
Cu	63	1	No Gas	177.498	177.498	1.41	916969	0.02	1000	
Sr	88	1	No Gas	381.096	381.096	4.04	5538062	0.01	1000	
Ag	107	1	No Gas	100.648	100.648	1.78	605752	0.02	1000	
Al	27	1	No Gas	1795.017	1795.017	0.88	8811280	0.02	100000	
Sn	118	1	No Gas	186.150	186.150	3.18	755753	0.02	100	>LDR
Ti	47	1	No Gas	173.627	173.627	1.36	126049	0.14	2000	
Zn	66	1	No Gas	179.990	179.990	0.88	275448	0.07	1000	
As	75	3	HeHe	217.998	217.998	4.11	17990	1.21	1000	
As	75	1	No Gas	185.290	185.290	0.60	279794	0.07	1000	
Sb	121	1	No Gas	197.781	197.781	1.59	1092382	0.02	100	>LDR
Hg	201	1	No Gas	2.024	2.024	3.69	1111	0.18	4	
Be	9	1	No Gas	181.634	181.634	0.56	160320	0.11	1000	
Pb	208	1	No Gas	200.167	200.167	0.81	2202158	0.01	1000	
Se	82	1	No Gas	179.785	179.785	1.35	15012	1.20	1000	
Mo	98	1	No Gas	206.186	206.186	2.56	795097	0.03	2000	
Ba	137	1	No Gas	2009.978	2009.978	2.48	3228297	0.06	1000	>LDR
Tl	205	1	No Gas	201.300	201.300	0.70	1703258	0.01	1000	
U	238	1	No Gas	0.672	0.672	8.35	7284	0.01	1000	
Na	23	2	he	8992.057	8992.057	2.81	4433544	0.20	100000	
Mg	24	2	he	6383.122	6383.122	2.25	1693688	0.38	100000	
K	39	2	he	2322.185	2322.185	2.25	783219	0.30	100000	
Se	82	3	HeHe	195.589	195.589	4.43	861	22.72	1000	
Fe	57	3	HeHe	2190.586	2190.586	1.47	49198	4.45	100000	
Cd	114	1	No Gas	192.239	192.239	1.07	584242	0.03	1000	
Ca	44	1	No Gas	55212.066	55212.066	0.39	12407428	0.44	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1561089	1.00	1989693	78.46	70	120	
Sc	45	2	he	185855	3.77	250304	74.25	70	120	
Ge	72	1	No Gas	200891	1.05	251464	79.89	70	120	

In	115	1	No Gas	1135627	0.55	1535232	73.97	70	120	
Tb	159	1	No Gas	1517505	2.21	1928675	78.68	70	120	
Bi	209	1	No Gas	727281	0.53	919422	79.10	70	120	
Sc	45	3	HeHe	26191	2.54	30424	86.09	70	120	

Sample Report

Sample Table

Sample Name	9981496012L
Data File Name	021SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-21T03:10:21-04:00
Sample Type	Sample
Dilution	1
Comment	38074 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3106

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	0.993	0.993	13.66	15873	0.01	1000	
Cr	52	1	No Gas	0.385	0.385	12.75	9125	0.00	1000	
Mn	55	1	No Gas	0.090	0.090	42.00	14181	0.00	1000	
Co	59	1	No Gas	0.054	0.054	25.82	596	0.01	1000	
Ni	60	1	No Gas	-0.021	-0.021	-145.25	670	0.00	1000	
Cu	63	1	No Gas	-1.024	-1.024	-1.62	4104	-0.02	1000	
Sr	88	1	No Gas	41.144	41.144	0.51	616467	0.01	1000	
Ag	107	1	No Gas	0.018	0.018	82.81	148	0.01	1000	
Al	27	1	No Gas	27.395	27.395	3.34	141291	0.02	100000	
Sn	118	1	No Gas	0.163	0.163	5.17	807	0.02	100	
Ti	47	1	No Gas	0.089	0.089	19.32	182	0.05	2000	
Zn	66	1	No Gas	0.716	0.716	16.51	1433	0.05	1000	
As	75	3	HeHe	0.099	0.099	85.43	12	0.80	1000	
As	75	1	No Gas	0.543	0.543	40.51	13747	0.00	1000	
Sb	121	1	No Gas	0.131	0.131	15.85	337	0.04	100	
Hg	201	1	No Gas	0.013	0.013	105.66	25	0.05	4	
Be	9	1	No Gas	0.041	0.041	15.72	45	0.09	1000	
Pb	208	1	No Gas	0.012	0.012	209.87	8269	0.00	1000	
Se	82	1	No Gas	0.144	0.144	689.69	-49	-0.29	1000	
Mo	98	1	No Gas	1.637	1.637	5.26	6825	0.02	2000	
Ba	137	1	No Gas	1.209	1.209	9.26	2027	0.06	1000	
Tl	205	1	No Gas	0.046	0.046	20.83	437	0.01	1000	
U	238	1	No Gas	0.121	0.121	2.47	1393	0.01	1000	
Na	23	2	he	1390.864	1390.864	2.60	731643	0.19	100000	
Mg	24	2	he	852.860	852.860	0.81	232249	0.37	100000	
K	39	2	he	79.710	79.710	2.70	65878	0.12	100000	
Se	82	3	HeHe	-0.216	-0.216	-361.37	12	-1.77	1000	
Fe	57	3	HeHe	2.050	2.050	126.69	113	1.81	100000	
Cd	114	1	No Gas	0.014	0.014	99.40	67	0.02	1000	
Ca	44	1	No Gas	11479.412	11479.412	0.82	2677253	0.43	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1609251	2.97	1989693	80.88	70	120	
Sc	45	2	he	190219	2.12	250304	76.00	70	120	

Ge	72	1	No Gas	205947	0.93	251464	81.90	70	120	
In	115	1	No Gas	1213422	0.58	1535232	79.04	70	120	
Tb	159	1	No Gas	1575142	2.55	1928675	81.67	70	120	
Bi	209	1	No Gas	769603	0.76	919422	83.71	70	120	
Sc	45	3	HeHe	28150	4.94	30424	92.53	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	023_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-21T03:17:35-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	-0.148	-24.7	4239	6.7	9	
Cr	52	1	No Gas	-0.047	-39.7	5105	4.1	4	
Mn	55	1	No Gas	-0.114	-13.2	11616	3.8	25	
Co	59	1	No Gas	0.022	9.9	270	8.6	1	
Ni	60	1	No Gas	-0.204	-11.4	287	19.2	25	
Cu	63	1	No Gas	-1.385	-2.1	2194	7.6	25	
Sr	88	1	No Gas	0.020	18.8	370	15.4	25	
Ag	107	1	No Gas	0.027	28.9	200	25.5	9	
Al	27	1	No Gas	0.175	30.1	3656	5.3	1000000	
Sn	118	1	No Gas	0.205	19.0	959	17.7	25	
Ti	47	1	No Gas	0.034	147.8	140	26.5	10000	
Zn	66	1	No Gas	0.060	82.3	400	17.5	25	
As	75	3	HeHe	0.018	183.3	5	57.3	9	
As	75	1	No Gas	0.524	40.2	13664	1.2	9	
Sb	121	1	No Gas	0.293	12.3	1247	15.9	4	
Hg	201	1	No Gas	0.040	14.0	39	7.8	0.04	CCB Main CR1 Failed
Be	9	1	No Gas	0.033	48.3	38	38.0	1	
Pb	208	1	No Gas	-0.350	-2.9	3934	5.1	4	
Se	82	1	No Gas	0.993	171.0	26	561.7	25	
Mo	98	1	No Gas	0.157	11.2	703	9.5	10000	
Ba	137	1	No Gas	0.031	21.4	63	18.2	25	
Tl	205	1	No Gas	0.022	47.5	211	42.1	1	
U	238	1	No Gas	0.046	34.7	515	34.4	25	
Na	23	2	he	4.295	48.8	38736	4.3	2500000	
Mg	24	2	he	-0.770	-33.8	441	15.2	2500000	
K	39	2	he	-7.476	-31.5	38847	3.7	5000000	
Se	82	3	HeHe	1.937	32.1	22	10.6	25	
Fe	57	3	HeHe	-0.072	-2380.9	60	72.7	2500000	
Cd	114	1	No Gas	0.044	70.7	160	62.5	1	
Ca	44	1	No Gas	-31.537	-36.2	15520	14.7	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1603685	2.27	1989693	80.60	70	120	
Sc	45	2	he	198295	2.57	250304	79.22	70	120	
Ge	72	1	No Gas	209879	3.45	251464	83.46	70	120	
In	115	1	No Gas	1173488	1.11	1535232	76.44	70	120	
Tb	159	1	No Gas	1515468	1.66	1928675	78.58	70	120	
Bi	209	1	No Gas	743139	2.19	919422	80.83	70	120	

Sc	45	3	HeHe	27539	4.17	30424	90.52	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	024LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-21T03:21:11-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.164	9.514	27183	6.03	2	108.2	70	130	
Cr	52	1	No Gas	2.009	2.299	23661	1.80	2	100.5	70	130	
Mn	55	1	No Gas	4.887	1.895	72238	0.26	5	97.7	70	130	
Co	59	1	No Gas	4.737	2.895	46504	2.05	5	94.7	70	130	
Ni	60	1	No Gas	4.685	5.351	10290	6.20	5	93.7	70	130	
Cu	63	1	No Gas	3.901	1.474	29364	2.29	5	78.0	70	130	
Sr	88	1	No Gas	4.388	2.621	64269	3.25	5	87.8	70	130	
Ag	107	1	No Gas	2.094	1.958	12757	5.85	2	104.7	70	130	
Al	27	1	No Gas	75.553	1.049	375914	0.69	80	94.4	70	130	
Sn	118	1	No Gas	2.562	3.942	10611	8.61	2	128.1	70	130	
Tl	47	1	No Gas	5.081	6.260	3822	6.27	5	101.6	70	130	
Zn	66	1	No Gas	5.352	3.152	8539	4.27	5	107.0	70	130	
As	75	3	HeHe	3.647	10.161	318	9.88	3	121.6	70	130	
As	75	1	No Gas	3.627	14.209	17898	4.27	3	120.9	70	130	
Sb	121	1	No Gas	2.384	8.310	12886	9.37	2	119.2	70	130	
Hg	201	1	No Gas	0.208	8.938	135	8.18	0.2	104.1	70	130	
Be	9	1	No Gas	0.959	10.473	859	9.46	1	95.9	70	130	
Pb	208	1	No Gas	1.690	5.876	27290	5.65	2	84.5	70	130	
Se	82	1	No Gas	6.375	8.720	478	9.31	5	127.5	70	130	
Mo	98	1	No Gas	2.142	7.733	8401	4.59	2	107.1	70	130	
Ba	137	1	No Gas	5.080	5.113	8202	6.70	5	101.6	70	130	
Tl	205	1	No Gas	0.969	4.226	8551	2.31	1	96.9	70	130	
U	238	1	No Gas	4.529	2.130	51020	1.40	5	90.6	70	130	
Na	23	2	he	111.894	1.341	95373	1.68	100	111.9	70	130	
Mg	24	2	he	104.429	2.609	30357	0.53	100	104.4	70	130	
K	39	2	he	105.459	3.379	77878	4.05	100	105.5	70	130	
Se	82	3	HeHe	8.650	10.431	52	7.67	5	173.0	70	130	LLCCV Main CR1 Failed
Fe	57	3	HeHe	62.708	8.938	1530	8.19	50	125.4	70	130	
Cd	114	1	No Gas	1.109	4.864	3424	7.29	1	110.9	70	130	
Ca	44	1	No Gas	74.020	8.090	39080	3.49	100	74.0	70	130	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1571477	1.59	1989693	78.98	70	120	
Sc	45	2	he	199243	2.50	250304	79.60	70	120	
Ge	72	1	No Gas	205136	2.33	251464	81.58	70	120	
In	115	1	No Gas	1146725	4.88	1535232	74.69	70	120	
Tb	159	1	No Gas	1521726	1.66	1928675	78.90	70	120	
Bi	209	1	No Gas	756759	2.04	919422	82.31	70	120	
Sc	45	3	HeHe	27399	4.14	30424	90.06	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	025_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-21T03:24:50-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

Sr, Sn ↑

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	105.745	11.235	982971	1.47	100	105.7	90	110	
Cr	52	1	No Gas	104.138	12.988	880846	2.06	100	104.1	90	110	
Mn	55	1	No Gas	109.707	12.846	1249389	1.80	100	109.7	90	110	
Co	59	1	No Gas	103.216	12.730	938371	2.13	100	103.2	90	110	
Ni	60	1	No Gas	108.676	9.847	207195	1.15	100	108.7	90	110	
Cu	63	1	No Gas	105.437	12.159	511888	1.23	100	105.4	90	110	
Sr	88	1	No Gas	111.357	9.749	1513385	2.31	100	111.4	90	110	CCV Main CR1 Failed
Ag	107	1	No Gas	107.504	7.711	658660	0.78	100	107.5	90	110	
Al	27	1	No Gas	103.979	11.265	479083	0.99	100	104.0	90	110	
Sn	118	1	No Gas	119.303	8.332	493067	2.46	100	119.3	90	110	CCV Main CR1 Failed
Tl	47	1	No Gas	103.117	10.172	70001	0.94	100	103.1	90	110	
Zn	66	1	No Gas	106.144	12.635	151664	1.79	100	106.1	90	110	
As	75	3	HeHe	108.723	1.829	9548	0.94	100	108.7	90	110	
As	75	1	No Gas	109.755	9.625	159811	1.91	100	109.8	90	110	
Sb	121	1	No Gas	104.932	5.340	590487	2.50	100	104.9	90	110	
Hg	201	1	No Gas	2.060	6.510	1160	11.80	2	103.0	90	110	
Be	9	1	No Gas	107.097	13.405	88147	2.64	100	107.1	90	110	
Pb	208	1	No Gas	104.001	5.854	1172730	1.42	100	104.0	90	110	
Se	82	1	No Gas	107.720	6.976	8403	3.89	100	107.7	90	110	
Mo	98	1	No Gas	104.008	7.155	408430	0.69	100	104.0	90	110	
Ba	137	1	No Gas	106.543	9.055	169291	1.57	100	106.5	90	110	
Tl	205	1	No Gas	96.482	6.359	833889	1.64	100	96.5	90	110	
U	238	1	No Gas	96.431	6.291	1066277	0.71	100	96.4	90	110	
Na	23	2	he	1025.981	1.535	571291	1.06	1000	102.6	90	110	
Mg	24	2	he	1063.997	3.707	301249	2.44	1000	106.4	90	110	
K	39	2	he	981.658	0.699	376616	1.35	1000	98.2	90	110	
Se	82	3	HeHe	104.325	5.997	495	6.54	100	104.3	90	110	
Fe	57	3	HeHe	1071.583	4.391	25616	3.66	1000	107.2	90	110	
Cd	114	1	No Gas	106.114	7.855	328311	1.37	100	106.1	90	110	
Ca	44	1	No Gas	1093.002	12.061	249753	0.18	1000	109.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1469383	10.50	1989693	73.85	70	120	
Sc	45	2	he	197939	1.53	250304	79.08	70	120	
Ge	72	1	No Gas	196888	7.68	251464	78.30	70	120	
In	115	1	No Gas	1160501	7.46	1535232	75.59	70	120	
Tb	159	1	No Gas	1509849	10.13	1928675	78.28	70	120	
Bi	209	1	No Gas	744851	6.47	919422	81.01	70	120	
Sc	45	3	HeHe	27857	0.99	30424	91.56	70	120	

Digestion Logbook

Microwave 3015 Prep (Water) (Version 1- 6/1/2010)

Note: All TCLP matrix spikes are spiked prior to preservation as noted in the TCLP logbook.

Batch: 37474	Queue: MDIG	HBN: 475717	RULE: D3015/6020	ALSI SOP: 09-3015
File Name: 37474_120813-111333			METHOD: 3015	Microwave ID: MARS

Batch Type:	Comment Codes:	Reagents:		Pipettes:		Start	Finish
T: TCLP	1. Sample failed initial digestion due to a weight loss >5g	HNO3	L12065 JT BAKER		Date:	08/13/2012	08/13/2012
S: SPLP	2. Sample reacts with reagent				Time:	13:09:00	13:40:00
M: 6020	3. Less sample used due to high metal content				Tech:	KMK	KMK
W: 6010	4. Less sample used to result in successful microwave digestion				Reviewed/Approved By:		N/A
A: ASTM	5. Sample does not digest by microwave, digest by method 3050				Date:		

Sample ID	Cont ID	Samp Type	Vessel Initial WT, grams	Vessel Final WT, grams	Difference grams	Spike Amt uL of Each	Spike Lot#	Sample Size, mL	Final Vol mL	Batch Type	Parent Sample ID	Comment Code
1021898		MB	208.01	207.88	0.13			45	50	M		
1021899		LCS	210.20	210.08	0.12	40/50/50/50	/MR2788/MA1346/	45	50	M		
9981496012	A	S	210.66	210.47	0.19			45	50	M		
1021900		MS	210.76	210.65	0.11	40/50/50/50	/MR2788/MA1346/	45	50	M	9981496012	
1021901		MSD	208.74	208.65	0.09	40/50/50/50	/MR2788/MA1346/	45	50	M	9981496012	

End

Analytical Logbook

Batch Log

#	Acquired Date and Time	Sample Type	Sample Name	File Name	Comment	Vial#	Dilution Result	Operator
1	8/21/2012 1:48	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A082112B.b\001CALB.d		1101	1	Matthew Olley
2	8/21/2012 1:51	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A082112B.b\002CALB.d		1101	1	Matthew Olley
3	8/21/2012 1:55	CalStd	Standard 1	C:\Agilent\ICPMH\1\DATA\A082112B.b\003CALS.d		2101	1	Matthew Olley
4	8/21/2012 1:58	CalStd	Standard 2	C:\Agilent\ICPMH\1\DATA\A082112B.b\004CALS.d		2102	1	Matthew Olley
5	8/21/2012 2:02	CalStd	Standard 3	C:\Agilent\ICPMH\1\DATA\A082112B.b\005CALS.d		2103	1	Matthew Olley
6	8/21/2012 2:06	CalStd	Standard 4	C:\Agilent\ICPMH\1\DATA\A082112B.b\006CALS.d		2104	1	Matthew Olley
7	8/21/2012 2:09	CalStd	Standard 5	C:\Agilent\ICPMH\1\DATA\A082112B.b\007CALS.d		2105	1	Matthew Olley
8	8/21/2012 2:13	ICV	ICV	C:\Agilent\ICPMH\1\DATA\A082112B.b\008_ICV.d		1307	1	Matthew Olley
9	8/21/2012 2:16	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A082112B.b\009_ICB.d		1101	1	Matthew Olley
10	8/21/2012 2:20	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A082112B.b\010_ICB.d		1101	1	Matthew Olley
11	8/21/2012 2:24	LLICV	LLICV	C:\Agilent\ICPMH\1\DATA\A082112B.b\011LICV.d		1305	1	Matthew Olley
12	8/21/2012 2:27	ICSA	ICSA	C:\Agilent\ICPMH\1\DATA\A082112B.b\012ICSA.d		2111	1	Matthew Olley
13	8/21/2012 2:31	ICSB	ICSAB	C:\Agilent\ICPMH\1\DATA\A082112B.b\013ICSB.d		2112	1	Matthew Olley
14	8/21/2012 2:34	Sample	CHECK	C:\Agilent\ICPMH\1\DATA\A082112B.b\014SMPL.d		2501	1	Matthew Olley
15	8/21/2012 2:38	Sample	CHECK	C:\Agilent\ICPMH\1\DATA\A082112B.b\015SMPL.d		2502	1	Matthew Olley
16	8/21/2012 2:38							Matthew Olley
17	8/21/2012 2:38	Sample	1024192		38072 LAMDF5	3101		Matthew Olley
18	8/21/2012 2:38	Sample	1024193		38072 LAMDF5	3102		Matthew Olley
19	8/21/2012 2:38	Sample	9983660004		38072 LAMDF5	3103		Matthew Olley
20	8/21/2012 2:38	Sample	9983660005		38072 LAMDF5	3104		Matthew Olley
21	8/21/2012 2:38	Sample	9983660006		38072 LAMDF5	3105		Matthew Olley
22	8/21/2012 2:38	Sample	9983654001		38072 LAMDF5	3106		Matthew Olley
23	8/21/2012 2:38	Sample	9983654002		38072 LAMDF5	3107		Matthew Olley

Batch Log

24	8/21/2012 2:38	Sample	9983654003		38072 LAMDF5	3108		Matthew Olley
25	8/21/2012 2:38	Sample	9983657001		38072 LAMDF5	3109		Matthew Olley
26	8/21/2012 2:38	Sample	1024194		38072 LAMDF5	3110		Matthew Olley
27	8/21/2012 2:38	CCV	CCV			1307		Matthew Olley
28	8/21/2012 2:38	CCB	CCB			1101		Matthew Olley
29	8/21/2012 2:38	LLCCV	LLCCV			1305		Matthew Olley
30	8/21/2012 2:38	Sample	1024195		38072 LAMDF5	3111		Matthew Olley
31	8/21/2012 2:38	Sample	9983657001PS		38072 LAMDF5	3112		Matthew Olley
32	8/21/2012 2:38	Sample	9983657002		38072 LAMDF5	3201		Matthew Olley
33	8/21/2012 2:38	Sample	9983657003		38072 LAMDF5	3202		Matthew Olley
34	8/21/2012 2:38	Sample	9983657003L		38072 LAMDF25	3203		Matthew Olley
35	8/21/2012 2:38	CCV	CCV			1307		Matthew Olley
36	8/21/2012 2:38	CCB	CCB			1101		Matthew Olley
37	8/21/2012 2:38	LLCCV	LLCCV			1305		Matthew Olley
38	8/21/2012 2:44	Sample	1021898	C:\Agilent\ICPMH\1\DAT A\A082112B.b\016SMPL.d	38074 MWO	3101	1	Matthew Olley
39	8/21/2012 2:47	Sample	1021899	C:\Agilent\ICPMH\1\DAT A\A082112B.b\017SMPL.d	38074 MWO	3102	1	Matthew Olley
40	8/21/2012 2:47							Matthew Olley
41	8/21/2012 2:57	Sample	9981496012	C:\Agilent\ICPMH\1\DAT A\A082112B.b\018SMPL.d	38074 MWO	3103	1	Matthew Olley
42	8/21/2012 3:01	Sample	1021900	C:\Agilent\ICPMH\1\DAT A\A082112B.b\019SMPL.d	38074 MWO	3104	1	Matthew Olley
43	8/21/2012 3:04	Sample	1021901	C:\Agilent\ICPMH\1\DAT A\A082112B.b\020SMPL.d	38074 MWO	3105	1	Matthew Olley
44	8/21/2012 3:04							Matthew Olley
45	8/21/2012 3:09	Sample	9981496012L	C:\Agilent\ICPMH\1\DAT A\A082112B.b\021SMPL.d	38074 MWODF5	3106	1	Matthew Olley
46	8/21/2012 3:12	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A082112B.b\022_CCV.d		1307	1	Matthew Olley
47	8/21/2012 3:16	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A082112B.b\023_CCB.d		1101	1	Matthew Olley
48	8/21/2012 3:19	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A082112B.b\024LCCV.d		1305	1	Matthew Olley
49	8/21/2012 3:23	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A082112B.b\025_CCV.d		1307	1	Matthew Olley

Batch Log

50	8/21/2012 3:35	CalBlk	blk		1101	Matthew Olley
51	8/21/2012 3:35	CalBlk	blk		1101	Matthew Olley
52	8/21/2012 3:35	CalStd	Standard 1		2101	Matthew Olley
53	8/21/2012 3:35	CalStd	Standard 2		2102	Matthew Olley
54	8/21/2012 3:35	CalStd	Standard 3		2103	Matthew Olley
55	8/21/2012 3:35	CalStd	Standard 4		2104	Matthew Olley
56	8/21/2012 3:35	CalStd	Standard 5		2105	Matthew Olley
57	8/21/2012 3:35	ICV	ICV		1307	Matthew Olley
58	8/21/2012 3:35	ICB	ICB		1101	Matthew Olley
59	8/21/2012 3:35	ICB	ICB		1101	Matthew Olley
60	8/21/2012 3:35	LLICV	LLICV		1305	Matthew Olley
61	8/21/2012 3:35	ICSA	ICSA		2111	Matthew Olley
62	8/21/2012 3:35	ICSB	ICSAB		2112	Matthew Olley
63	8/21/2012 3:35	Sample	CHECK		2501	Matthew Olley
64	8/21/2012 3:35	Sample	CHECK		2502	Matthew Olley
65	8/21/2012 3:35	Sample	1024192	38072 LAMDF5	3101	Matthew Olley
66	8/21/2012 3:35	Sample	1024193	38072 LAMDF5	3102	Matthew Olley
67	8/21/2012 3:35	Sample	9983660004	38072 LAMDF5	3103	Matthew Olley
68	8/21/2012 3:35	Sample	9983660005	38072 LAMDF5	3104	Matthew Olley
69	8/21/2012 3:35	Sample	9983660006	38072 LAMDF5	3105	Matthew Olley
70	8/21/2012 3:35	Sample	9983654001	38072 LAMDF5	3106	Matthew Olley
71	8/21/2012 3:35	Sample	9983654002	38072 LAMDF5	3107	Matthew Olley
72	8/21/2012 3:35	Sample	9983654003	38072 LAMDF5	3108	Matthew Olley
73	8/21/2012 3:35	Sample	9983657001	38072 LAMDF5	3109	Matthew Olley
74	8/21/2012 3:35	Sample	1024194	38072 LAMDF5	3110	Matthew Olley
75	8/21/2012 3:35	CCV	CCV		1307	Matthew Olley
76	8/21/2012 3:35	CCB	CCB		1101	Matthew Olley
77	8/21/2012 3:35	LLCCV	LLCCV		1305	Matthew Olley
78	8/21/2012 3:35	Sample	1024195	38072 LAMDF5	3111	Matthew Olley
79	8/21/2012 3:35	Sample	9983657001PS	38072 LAMDF5	3112	Matthew Olley
80	8/21/2012 3:35	Sample	9983657002	38072 LAMDF5	3201	Matthew Olley

Batch Log

81	8/21/2012 3:35	Sample	9983657003		38072 LAMDF5	3202	Matthew Olley
82	8/21/2012 3:35	Sample	9983657003L		38072 LAMDF25	3203	Matthew Olley
83	8/21/2012 3:35	CCV	CCV			1307	Matthew Olley
84	8/21/2012 3:35	CCB	CCB			1101	Matthew Olley
85	8/21/2012 3:35	LLCCV	LLCCV			1305	Matthew Olley
86	8/21/2012 3:35	Sample	9980964001	C:\Agilent\ICPMH\1\DAT 38075 MWODF5 A\A082112B.b\026SMPL.d		3107	1 Matthew Olley
87	8/21/2012 3:38	Sample	9980964002	C:\Agilent\ICPMH\1\DAT 38075 MWODF5 A\A082112B.b\027SMPL.d		3108	1 Matthew Olley
88	8/21/2012 3:42	Sample	9981898001	C:\Agilent\ICPMH\1\DAT 38075 MWO A\A082112B.b\028SMPL.d		3109	1 Matthew Olley
89	8/21/2012 3:46	Sample	9982138001	C:\Agilent\ICPMH\1\DAT 38075 MWO A\A082112B.b\029SMPL.d		3110	1 Matthew Olley
90	8/21/2012 3:49	Sample	9982138002	C:\Agilent\ICPMH\1\DAT 38075 MWO A\A082112B.b\030SMPL.d		3111	1 Matthew Olley
91	8/21/2012 3:53	Sample	9982239001	C:\Agilent\ICPMH\1\DAT 38075 MWO A\A082112B.b\031SMPL.d		3112	1 Matthew Olley
92	8/21/2012 3:57	Sample	9982404001	C:\Agilent\ICPMH\1\DAT 38075 MWO A\A082112B.b\032SMPL.d		3201	1 Matthew Olley
93	8/21/2012 4:00	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A082112B.b\033SMPL.d		2501	1 Matthew Olley
94	8/21/2012 4:04	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A082112B.b\034_CCV.d		1307	1 Matthew Olley
95	8/21/2012 4:07	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A082112B.b\035_CCB.d		1101	1 Matthew Olley
96	8/21/2012 4:11	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A082112B.b\036LCCV.d		1305	1 Matthew Olley
97	8/21/2012 4:11						Matthew Olley
98	8/21/2012 4:16	Sample	9983654002	C:\Agilent\ICPMH\1\DAT 38076 MWODF5 A\A082112B.b\037SMPL.d		3202	1 Matthew Olley
99	8/21/2012 4:19	Sample	9983657001	C:\Agilent\ICPMH\1\DAT 38076 MWODF5 A\A082112B.b\038SMPL.d		3203	1 Matthew Olley
100	8/21/2012 4:23	Sample	1024194	C:\Agilent\ICPMH\1\DAT 38076 MWODF5 A\A082112B.b\039SMPL.d		3204	1 Matthew Olley
101	8/21/2012 4:26	Sample	1024195	C:\Agilent\ICPMH\1\DAT 38076 MWODF5 A\A082112B.b\040SMPL.d		3205	1 Matthew Olley
102	8/21/2012 4:30	CCV	CCV	C:\Agilent\ICPMH\1\DAT 38076 MWO A\A082112B.b\041_CCV.d		1307	1 Matthew Olley
103	8/21/2012 4:34	CCB	CCB	C:\Agilent\ICPMH\1\DAT 38076 MWO A\A082112B.b\042_CCB.d		1101	1 Matthew Olley

Batch Log

104	8/21/2012 4:37	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 38076 MWO A\A082112B.b\043LCCV.d	1305	1	Matthew Olley
105	8/21/2012 4:46	CalBlk	blk		1101		Matthew Olley
106	8/21/2012 4:46	CalBlk	blk		1101		Matthew Olley
107	8/21/2012 4:46	CalStd	Standard 1		2101		Matthew Olley
108	8/21/2012 4:46	CalStd	Standard 2		2102		Matthew Olley
109	8/21/2012 4:46	CalStd	Standard 3		2103		Matthew Olley
110	8/21/2012 4:46	CalStd	Standard 4		2104		Matthew Olley
111	8/21/2012 4:46	CalStd	Standard 5		2105		Matthew Olley
112	8/21/2012 4:46	ICV	ICV		1307		Matthew Olley
113	8/21/2012 4:46	ICB	ICB		1101		Matthew Olley
114	8/21/2012 4:46	ICB	ICB		1101		Matthew Olley
115	8/21/2012 4:46	LLICV	LLICV		1305		Matthew Olley
116	8/21/2012 4:46	ICSA	ICSA		2111		Matthew Olley
117	8/21/2012 4:46	ICSB	ICSAB		2112		Matthew Olley
118	8/21/2012 4:46	Sample	CHECK		2501		Matthew Olley
119	8/21/2012 4:46	Sample	CHECK		2502		Matthew Olley
120	8/21/2012 4:46	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A082112B.b\044LCCV.d	1305	1	Matthew Olley
121	8/21/2012 4:46						Matthew Olley
122	8/21/2012 5:02	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A082112B.b\045SMPL.d	2502	1	Matthew Olley

Total Metals in Solid by 6020A Summary Forms

6020 3051
- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, Inc

SDG No.: ERT-007 Method Type: 6020 3051 SOW No.:

Contract: ERT007|Ft. Stewart 3 Lab Code: CAS Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
9981496001	FTSW-HR-SO-50 (10)	
9981496002	FTSW-HR-SO-51 (10)	
9981496003	FTSW-HR-SO-52 (10)	
9981496004	FTSW-HR-SO-53 (10)	
9981496004S	FTSW-HR-SO-53 (10)S	Matrix Spike
9981496004SD	FTSW-HR-SO-53 (10)SD	Matrix Spike Duplicate
9981496005	FTSW-HR-SO-54 (10)	
9981496006	FTSW-HR-SO-55 (07.5)	
9981496007	FTSW-HR-SO-56 (10)	
9981496008	FTSW-HR-SO-57 (10)	
9981496009	FTSW-HR-SO-58 (10)	
9981496010	FTSW-HR-SO-59 (10)	
9981496011	FTSW-HR-SO-60 (07.5)	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: Lisa Miller

Date: Title: Metals Manager

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-007 **Method Type:** 6020 3051

Sample ID: 9981496001 **Client ID:** FTSW-HR-SO-50 (10)

Matrix: SOIL **Date Received:** 8/7/2012 **Level:** LOW

% Solids: 80.0 **Sample Wt/Vol:** 0.60 **Final Vol:** 50.0

Prep Batch ID: 475719 **Prep Date:** 8/13/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.04	mg/Kg	U		M	1.6	1.04	0.52	5.00	8/20/2012	07:51:59

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-007 **Method Type:** 6020 3051

Sample ID: 9981496002 **Client ID:** FTSW-HR-SO-51 (10)

Matrix: SOIL **Date Received:** 8/7/2012 **Level:** LOW

% Solids: 87.2 **Sample Wt/Vol:** 0.57 **Final Vol:** 50.0

Prep Batch ID: 475719 **Prep Date:** 8/13/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.01	mg/Kg	U		M	1.5	1.01	0.50	5.00	8/20/2012	07:55:37

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-007 **Method Type:** 6020 3051

Sample ID: 9981496003 **Client ID:** FTSW-HR-SO-52 (10)

Matrix: SOIL **Date Received:** 8/7/2012 **Level:** LOW

% Solids: 85.4 **Sample Wt/Vol:** 0.52 **Final Vol:** 50.0

Prep Batch ID: 475719 **Prep Date:** 8/13/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.13	mg/Kg	U		M	1.7	1.13	0.56	5.00	8/20/2012	07:59:13

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-007 **Method Type:** 6020 3051

Sample ID: 9981496004 **Client ID:** FTSW-HR-SO-53 (10)

Matrix: SOIL **Date Received:** 8/7/2012 **Level:** LOW

% Solids: 81.3 **Sample Wt/Vol:** 0.53 **Final Vol:** 50.0

Prep Batch ID: 475719 **Prep Date:** 8/13/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.16	mg/Kg	U		M	1.7	1.16	0.58	5.00	8/20/2012	08:13:39

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-007 **Method Type:** 6020 3051

Sample ID: 9981496005 **Client ID:** FTSW-HR-SO-54 (10)

Matrix: SOIL **Date Received:** 8/7/2012 **Level:** LOW

% Solids: 90.7 **Sample Wt/Vol:** 0.55 **Final Vol:** 50.0

Prep Batch ID: 475719 **Prep Date:** 8/13/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.00	mg/Kg	U		M	1.5	1.00	0.50	5.00	8/20/2012	08:28:04

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-007 **Method Type:** 6020 3051

Sample ID: 9981496006 **Client ID:** FTSW-HR-SO-55 (07.5)

Matrix: SOIL **Date Received:** 8/7/2012 **Level:** LOW

% Solids: 78.4 **Sample Wt/Vol:** 0.56 **Final Vol:** 50.0

Prep Batch ID: 475719 **Prep Date:** 8/13/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.14	mg/Kg	U		M	1.7	1.14	0.57	5.00	8/20/2012	08:31:41

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-007 **Method Type:** 6020 3051

Sample ID: 9981496007 **Client ID:** FTSW-HR-SO-56 (10)

Matrix: SOIL **Date Received:** 8/7/2012 **Level:** LOW

% Solids: 89.6 **Sample Wt/Vol:** 0.53 **Final Vol:** 50.0

Prep Batch ID: 475719 **Prep Date:** 8/13/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.05	mg/Kg	U		M	1.6	1.05	0.53	5.00	8/20/2012	08:35:19

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-007 **Method Type:** 6020 3051

Sample ID: 9981496008 **Client ID:** FTSW-HR-SO-57 (10)

Matrix: SOIL **Date Received:** 8/7/2012 **Level:** LOW

% Solids: 90.7 **Sample Wt/Vol:** 0.54 **Final Vol:** 50.0

Prep Batch ID: 475719 **Prep Date:** 8/13/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.02	mg/Kg	U		M	1.5	1.02	0.51	5.00	8/20/2012	08:38:55

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-007 **Method Type:** 6020 3051

Sample ID: 9981496009 **Client ID:** FTSW-HR-SO-58 (10)

Matrix: SOIL **Date Received:** 8/7/2012 **Level:** LOW

% Solids: 79.3 **Sample Wt/Vol:** 0.59 **Final Vol:** 50.0

Prep Batch ID: 475719 **Prep Date:** 8/13/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.07	mg/Kg	U		M	1.6	1.07	0.53	5.00	8/20/2012	08:42:31

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-007 **Method Type:** 6020 3051

Sample ID: 9981496010 **Client ID:** FTSW-HR-SO-59 (10)

Matrix: SOIL **Date Received:** 8/7/2012 **Level:** LOW

% Solids: 92.1 **Sample Wt/Vol:** 0.52 **Final Vol:** 50.0

Prep Batch ID: 475719 **Prep Date:** 8/13/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.04	mg/Kg	U		M	1.6	1.04	0.52	5.00	8/20/2012	08:46:07

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-007 **Method Type:** 6020 3051

Sample ID: 9981496011 **Client ID:** FTSW-HR-SO-60 (07.5)

Matrix: SOIL **Date Received:** 8/7/2012 **Level:** LOW

% Solids: 78.5 **Sample Wt/Vol:** 0.56 **Final Vol:** 50.0

Prep Batch ID: 475719 **Prep Date:** 8/13/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.14	mg/Kg	U		M	1.7	1.14	0.57	5.00	8/20/2012	09:00:36

Comments:

6020 3051

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-007

Contract: ERT007|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
ICV	Arsenic	0.1031	0.1000	103		90 - 110	M	8/20/2012	03:05	A082012B
LLICV	Arsenic	0.0037	0.0030	123		70 - 130	M	8/20/2012	03:16	A082012B
CCV	Arsenic	0.1011	0.1000	101		90 - 110	M	8/20/2012	07:16	A082012B
LLCCV	Arsenic	0.0033	0.0030	110		70 - 130	M	8/20/2012	07:23	A082012B
CCV	Arsenic	0.0994	0.1000	99		90 - 110	M	8/20/2012	08:02	A082012B
LLCCV	Arsenic	0.0033	0.0030	110		70 - 130	M	8/20/2012	08:10	A082012B
CCV	Arsenic	0.0968	0.1000	97		90 - 110	M	8/20/2012	08:49	A082012B
LLCCV	Arsenic	0.0029	0.0030	97		70 - 130	M	8/20/2012	08:56	A082012B
CCV	Arsenic	0.0940	0.1000	94		90 - 110	M	8/20/2012	09:18	A082012B
LLCCV	Arsenic	0.0029	0.0030	97		70 - 130	M	8/20/2012	09:50	A082012B

6020 3051
- 3a -
INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-007

Contract: ERT007|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Conc Qual	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
ICB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/20/2012	03:13	A082012B
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/20/2012	07:19	A082012B
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/20/2012	08:06	A082012B
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/20/2012	08:53	A082012B
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/20/2012	09:22	A082012B

6020 3051
- 3b -
PREPARATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-007

Contract: ERT007|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result (mg/Kg)	Conc Qual	Q	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
1021902			**QC-SOLID**								
	Arsenic	1.50000	U		0.75	0.50000	1.50000	M	8/20/2012	07:44	A082012B

6020 3051
- 4 -
INTERFERENCE CHECK SAMPLE

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-007

Contract: ERT007|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

ICS Source: Inorganic Ventures **Instrument ID:** AGILENT 7700 ICPMS

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	Analysis Date	Analysis Time	Run Number
ICSA									
	Arsenic	0.0003				-0.00300 - -0.00300	8/20/2012	03:23	A082012B
ICSAB									
	Arsenic	0.0205	0.02000	102		80 - 120%	8/20/2012	03:27	A082012B

6020 3051
- 5a -
MATRIX SPIKE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-007

Contract: ERT007|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: SOIL **Sample ID:** 9981496004 **Client ID:** FTSW-HR-SO-53 (10)S **LIMS ID:** 1021904

Percent Solids for Sample: 81.28 **Spiked ID:** 9981496004S **Percent Solids for Spike Sample:** 81.28

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/Kg	80 - 120	22.83		1.77	U	23.661	96		M

6020 3051
- 5a -

MATRIX SPIKE DUPLICATE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-007

Contract: ERT007|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: SOIL **Sample ID:** 9981496004 **Client ID:** FTSW-HR-SO-53 (10)SD **LIMS ID:** 1021905

Percent Solids for Sample: 81.28 **Spiked ID:** 9981496004SD **Percent Solids for Spike Sample:** 81.28

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/Kg	80 - 120	20.21		1.56	U	20.854	97		M

6020 3051
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DUPLICATE SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-007

Contract: ERT007|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: SOIL **Sample ID:** 9981496004S **Client ID:** FTSW-HR-SO-53 (10)SD **LIMS ID:** 1021905

Percent Solids for Sample: 81.28 **Duplicate ID:** 9981496004SD **Percent Solids for Duplicate:** 81.28

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/Kg	0 - 20	22.83		20.21		12		M

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- 7 -
LABORATORY CONTROL SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-007

Contract: ERT007|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Aqueous LCS Source: **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Q	QC Criteria	M
1021903	Arsenic	mg/Kg	20.0	19.6		98.0		80 - 120	M

6020 3051

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LINEAR RANGES

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-007

Contract: ERT007|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Instrument ID: AGILENT 7700 ICPMS **Date:** 1/19/2012

Analyte	Integration Time (sec)	LDR mg/L
Arsenic	1.00	5

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SAMPLE PREPARATION SUMMARY

Client: ERT Earth Resources Technology, Inc.

SDG No.: ERT-007

Contract: ERT007|Ft. Stewart 3153-004 **Lab Code:** CAS

Method: MS

Case No.: _____ **SAS No.:** _____

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	475719						
1021902	MB for HBN 475719 [MDIG/3747	MB	QC-SOLI	8/13/12	0.50	50.0	100.00
1021903	LCS for HBN 475719 [MDIG/3747	LCS	QC-SOLI	8/13/12	0.50	50.0	100.00
9981496001	FTSW-HR-SO-50 (10)	SAM	SOIL	8/13/12	0.60	50.0	80.01
9981496002	FTSW-HR-SO-51 (10)	SAM	SOIL	8/13/12	0.57	50.0	87.18
9981496003	FTSW-HR-SO-52 (10)	SAM	SOIL	8/13/12	0.52	50.0	85.40
9981496004	FTSW-HR-SO-53 (10)	SAM	SOIL	8/13/12	0.53	50.0	81.28
9981496004S	FTSW-HR-SO-53 (10)S	MS	SOIL	8/13/12	0.52	50.0	81.28
9981496004SD	FTSW-HR-SO-53 (10)SD	MSD	SOIL	8/13/12	0.59	50.0	81.28
9981496005	FTSW-HR-SO-54 (10)	SAM	SOIL	8/13/12	0.55	50.0	90.72
9981496006	FTSW-HR-SO-55 (07.5)	SAM	SOIL	8/13/12	0.56	50.0	78.38
9981496007	FTSW-HR-SO-56 (10)	SAM	SOIL	8/13/12	0.53	50.0	89.60
9981496008	FTSW-HR-SO-57 (10)	SAM	SOIL	8/13/12	0.54	50.0	90.68
9981496009	FTSW-HR-SO-58 (10)	SAM	SOIL	8/13/12	0.59	50.0	79.32
9981496010	FTSW-HR-SO-59 (10)	SAM	SOIL	8/13/12	0.52	50.0	92.05
9981496011	FTSW-HR-SO-60 (07.5)	SAM	SOIL	8/13/12	0.56	50.0	78.50

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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT007|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-007

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A082012B

Start Date: 8/20/2012 End Date: 8/20/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1.00	0240																												
BLK	1.00	0244				X																								
STANDARD 1	1.00	0247				X																								
STANDARD 2	1.00	0251				X																								
STANDARD 3	1.00	0255				X																								
STANDARD 4	1.00	0258				X																								
STANDARD 5	1.00	0302				X																								
ICV	1.00	0305				X																								
ZZZZZZ	1.00	0309																												
ICB2	1.00	0313				X																								
LLICV	1.00	0316				X																								
ZZZZZZ	1.00	0320																												
ICS-A2	1.00	0323				X																								
ICS-AB1	1.00	0327				X																								
ZZZZZZ	1.00	0331																												
ZZZZZZ	1.00	0335																												
ZZZZZZ	5.00	0339																												
ZZZZZZ	100.00	0342																												
ZZZZZZ	5.00	0346																												
ZZZZZZ	100.00	0349																												
ZZZZZZ	1.00	0353																												
ZZZZZZ	1.00	0357																												
ZZZZZZ	1.00	0400																												
ZZZZZZ	1.00	0404																												
ZZZZZZ	1.00	0408																												
ZZZZZZ	1.00	0411																												
ZZZZZZ	1.00	0415																												
ZZZZZZ	1.00	0418																												
ZZZZZZ	1.00	0422																												
ZZZZZZ	1.00	0426																												
ZZZZZZ	1.00	0431																												
ZZZZZZ	1.00	0450																												
ZZZZZZ	1.00	0454																												
ZZZZZZ	1.00	0500																												
ZZZZZZ	1.00	0504																												
ZZZZZZ	5.00	0508																												

6020 3051
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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT007|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-007

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A082012B

Start Date: 8/20/2012 End Date: 8/20/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	0516																								
ZZZZZZ	1.00	0520																								
ZZZZZZ	5.00	0523																								
ZZZZZZ	1.00	0527																								
ZZZZZZ	1.00	0531																								
ZZZZZZ	1.00	0536																								
ZZZZZZ	1.00	0540																								
ZZZZZZ	1.00	0602																								
ZZZZZZ	1.00	0606																								
ZZZZZZ	1.00	0609																								
ZZZZZZ	5.00	0640																								
ZZZZZZ	5.00	0643																								
ZZZZZZ	5.00	0647																								
ZZZZZZ	5.00	0651																								
ZZZZZZ	5.00	0654																								
ZZZZZZ	5.00	0658																								
ZZZZZZ	5.00	0701																								
ZZZZZZ	5.00	0705																								
ZZZZZZ	5.00	0708																								
ZZZZZZ	5.00	0712																								
CCV4	1.00	0716				X																				
CCB4	1.00	0719				X																				
LLCCV	1.00	0723				X																				
ZZZZZZ	5.00	0726																								
ZZZZZZ	5.00	0730																								
ZZZZZZ	5.00	0734																								
ZZZZZZ	5.00	0737																								
ZZZZZZ	25.00	0741																								
1021902	5.00	0744				X																				
1021903	5.00	0748				X																				
9981496001	5.00	0751				X																				
9981496002	5.00	0755				X																				
9981496003	5.00	0759				X																				
CCV5	1.00	0802				X																				
CCB5	1.00	0806				X																				
LLCCV	1.00	0810				X																				

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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT007|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-007

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A082012B

Start Date: 8/20/2012 End Date: 8/20/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
9981496004	5.00	0813				X																								
9981496004S	5.00	0817				X																								
9981496004SD	5.00	0820				X																								
ZZZZZZ	5.00	0824																												
9981496005	5.00	0828				X																								
9981496006	5.00	0831				X																								
9981496007	5.00	0835				X																								
9981496008	5.00	0838				X																								
9981496009	5.00	0842				X																								
9981496010	5.00	0846				X																								
CCV6	1.00	0849				X																								
CCB6	1.00	0853				X																								
LLCCV	1.00	0856				X																								
9981496011	5.00	0900				X																								
ZZZZZZ	25.00	0904																												
ZZZZZZ	5.00	0907																												
ZZZZZZ	5.00	0911																												
ZZZZZZ	25.00	0915																												
CCV7	1.00	0918				X																								
CCB7	1.00	0922				X																								
LLCCV	1.00	0950				X																								
ZZZZZZ	1.00	0953																												
ZZZZZZ	1.00	0957																												
ZZZZZZ	1.00	1000																												
ZZZZZZ	1.00	1004																												
ZZZZZZ	1.00	1008																												
ZZZZZZ	1.00	1011																												
ZZZZZZ	1.00	1015																												
ZZZZZZ	1.00	1018																												
ZZZZZZ	1.00	1022																												
ZZZZZZ	1.00	1026																												
ZZZZZZ	1.00	1029																												
ZZZZZZ	1.00	1033																												
ZZZZZZ	1.00	1036																												
ZZZZZZ	1.00	1040																												
ZZZZZZ	1.00	1044																												

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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT007|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-007

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A082012B

Start Date: 8/20/2012 End Date: 8/20/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1047																								
ZZZZZZ	1.00	1051																								
ZZZZZZ	1.00	1055																								
ZZZZZZ	1.00	1058																								
ZZZZZZ	1.00	1102																								
ZZZZZZ	1.00	1105																								
ZZZZZZ	1.00	1109																								
ZZZZZZ	1.00	1113																								
ZZZZZZ	1.00	1116																								
ZZZZZZ	1.00	1120																								
ZZZZZZ	1.00	1123																								
ZZZZZZ	1.00	1127																								
ZZZZZZ	1.00	1131																								
ZZZZZZ	1.00	1134																								
ZZZZZZ	1.00	1138																								
ZZZZZZ	1.00	1141																								
ZZZZZZ	1.00	1145																								
ZZZZZZ	1.00	1149																								
ZZZZZZ	1.00	1152																								
ZZZZZZ	1.00	1156																								
ZZZZZZ	1.00	1200																								
ZZZZZZ	1.00	1203																								
ZZZZZZ	1.00	1207																								
ZZZZZZ	1.00	1210																								
ZZZZZZ	1.00	1214																								
ZZZZZZ	1.00	1218																								
ZZZZZZ	1.00	1221																								
ZZZZZZ	1.00	1225																								
ZZZZZZ	1.00	1228																								
ZZZZZZ	1.00	1232																								
ZZZZZZ	1.00	1236																								
ZZZZZZ	1.00	1239																								
ZZZZZZ	1.00	1245																								
ZZZZZZ	1.00	1249																								
ZZZZZZ	1.00	1252																								
ZZZZZZ	1.00	1256																								

6020 3051
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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT007|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-007

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A082012B

Start Date: 8/20/2012 End Date: 8/20/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1259																								
ZZZZZZ	1.00	1303																								
ZZZZZZ	1.00	1307																								
ZZZZZZ	1.00	1310																								
ZZZZZZ	1.00	1314																								
ZZZZZZ	1.00	1317																								
ZZZZZZ	1.00	1321																								

6020 3051

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT007|Ft. Stewart 3153-004

Lab Code: CAS Case No.: _____ NRAS No.: _____ SDG NO.: ERT-007

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/20/2012 End Date: 08/20/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
BLK	ZZZZZZ	0240												
BLK	BLK	0244	100		100		100		100		100		100	
STANDARD 1	STANDARD 1	0247	107		106		103		102		102		100	
STANDARD 2	STANDARD 2	0251	104		106		101		102		101		98	
STANDARD 3	STANDARD 3	0255	105		103		104		102		104		105	
STANDARD 4	STANDARD 4	0258	106		102		104		104		98		102	
STANDARD 5	STANDARD 5	0302	108		103		103		104		104		102	
ICV	ICV	0305	107		103		100		102		102		99	
ICB1	ZZZZZZ	0309												
ICB2	ICB	0313	104		100		100		98		102		103	
LLICV	LLICV	0316	108		102		102		99		108		103	
ICS-A1	ZZZZZZ	0320												
ICS-A2	ICSA	0323	98		103		97		110		112		100	
ICS-AB1	ICSAB	0327	99		103		98		107		102		100	
CHECK	ZZZZZZ	0331												
CHECK	ZZZZZZ	0335												
9980964001	ZZZZZZ	0339												
9980964001	ZZZZZZ	0342												
9980964002	ZZZZZZ	0346												
9980964002	ZZZZZZ	0349												
9981898001	ZZZZZZ	0353												
9982138001	ZZZZZZ	0357												
9982138002	ZZZZZZ	0400												
9982239001	ZZZZZZ	0404												
9982404001	ZZZZZZ	0408												
9982563001	ZZZZZZ	0411												
CCV1	ZZZZZZ	0415												
CCB1	ZZZZZZ	0418												
LLCCV	ZZZZZZ	0422												
9981426002	ZZZZZZ	0426												
9981426003	ZZZZZZ	0431												
9977234004	ZZZZZZ	0450												
9977615004	ZZZZZZ	0454												
9977234005	ZZZZZZ	0500												
9977615005	ZZZZZZ	0504												
9977615005	ZZZZZZ	0508												
9977615040	ZZZZZZ	0516												
9977234045	ZZZZZZ	0520												
9977615005	ZZZZZZ	0523												
CCV2	ZZZZZZ	0527												
CCB2	ZZZZZZ	0531												
LLCCV	ZZZZZZ	0536												
9977615040	ZZZZZZ	0540												
CCV3	ZZZZZZ	0602												
CCB3	ZZZZZZ	0606												

6020 3051

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT007|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-007

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/20/2012 End Date: 08/20/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
LLCCV	ZZZZZZ	0609												
1024192	ZZZZZZ	0640												
1024193	ZZZZZZ	0643												
9983660004	ZZZZZZ	0647												
9983660005	ZZZZZZ	0651												
9983660006	ZZZZZZ	0654												
9983654001	ZZZZZZ	0658												
9983654002	ZZZZZZ	0701												
9983654003	ZZZZZZ	0705												
9983657001	ZZZZZZ	0708												
1024194	ZZZZZZ	0712												
CCV4	CCV	0716	110		100		102		98		99		100	
CCB4	CCB	0719	107		101		100		95		100		101	
LLCCV	LLCCV	0723	109		101		103		99		101		102	
1024195	ZZZZZZ	0726												
9983657001P	ZZZZZZ	0730												
9983657002	ZZZZZZ	0734												
9983657003	ZZZZZZ	0737												
9983657003L	ZZZZZZ	0741												
1021902	MB for HBN 47571	0744	104		99		99		97		102		102	
1021903	LCS for HBN 4757	0748	106		100		101		98		100		105	
9981496001	FTSW-HR-SO-50 (1	0751	109		101		102		98		105		105	
9981496002	FTSW-HR-SO-51 (1	0755	108		102		106		103		104		104	
9981496003	FTSW-HR-SO-52 (1	0759	107		100		103		100		101		106	
CCV5	CCV	0802	109		105		107		100		103		103	
CCB5	CCB	0806	107		99		100		96		100		102	
LLCCV	LLCCV	0810	108		101		107		99		101		102	
9981496004	FTSW-HR-SO-53 (1	0813	105		99		101		97		100		98	
9981496004S	FTSW-HR-SO-53 (1	0817	100		94		95		92		100		101	
9981496004S	FTSW-HR-SO-53 (1	0820	103		95		95		97		95		98	
9981496004P	ZZZZZZ	0824												
9981496005	FTSW-HR-SO-54 (1	0828	102		92		92		94		92		95	
9981496006	FTSW-HR-SO-55 (0	0831	99		90		90		94		95		97	
9981496007	FTSW-HR-SO-56 (1	0835	97		90		89		93		96		98	
9981496008	FTSW-HR-SO-57 (1	0838	104		95		96		94		97		102	
9981496009	FTSW-HR-SO-58 (1	0842	101		93		95		94		97		97	
9981496010	FTSW-HR-SO-59 (1	0846	104		93		94		97		99		100	
CCV6	CCV	0849	99		94		92		92		92		94	
CCB6	CCB	0853	98		91		90		89		93		93	
LLCCV	LLCCV	0856	100		90		89		89		93		95	
9981496011	FTSW-HR-SO-60 (0	0900	95		88		87		87		89		94	
9981496011L	ZZZZZZ	0904												
9981774001	ZZZZZZ	0907												
9981774002	ZZZZZZ	0911												
9981774002L	ZZZZZZ	0915												

6020 3051

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT007|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-007

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/20/2012 End Date: 08/20/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
CCV7	CCV	0918	97		88		87		85		87		94	
CCB7	CCB	0922	98		87		86		84		85		90	
LLCCV	LLCCV	0950	95		82		81		77		90		90	
9981476027	ZZZZZZ	0953												
9981591001	ZZZZZZ	0957												
MS	ZZZZZZ	1000												
9981698001	ZZZZZZ	1004												
9981820002	ZZZZZZ	1008												
9981657001	ZZZZZZ	1011												
9981657002	ZZZZZZ	1015												
9981395001	ZZZZZZ	1018												
1020128	ZZZZZZ	1022												
9982071001	ZZZZZZ	1026												
CCV8	ZZZZZZ	1029												
CCB8	ZZZZZZ	1033												
9982072001	ZZZZZZ	1036												
9982073001	ZZZZZZ	1040												
9981781001	ZZZZZZ	1044												
9981954001	ZZZZZZ	1047												
9982004001	ZZZZZZ	1051												
9982176004	ZZZZZZ	1055												
1021149	ZZZZZZ	1058												
9982176005	ZZZZZZ	1102												
9982176006	ZZZZZZ	1105												
1024204	ZZZZZZ	1109												
CCV9	ZZZZZZ	1113												
CCB9	ZZZZZZ	1116												
CCV10	ZZZZZZ	1120												
1024205	ZZZZZZ	1123												
9983336001	ZZZZZZ	1127												
9983313001	ZZZZZZ	1131												
9983313003	ZZZZZZ	1134												
9983313004	ZZZZZZ	1138												
1024206	ZZZZZZ	1141												
1024207	ZZZZZZ	1145												
9983540001	ZZZZZZ	1149												
9983146001	ZZZZZZ	1152												
9983489001	ZZZZZZ	1156												
CCV11	ZZZZZZ	1200												
CCB10	ZZZZZZ	1203												
9983490001	ZZZZZZ	1207												
9983491001	ZZZZZZ	1210												
9983414001	ZZZZZZ	1214												
9983418001	ZZZZZZ	1218												
9983697001	ZZZZZZ	1221												

6020 3051

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT007|Ft. Stewart 3153-004

Lab Code: CAS Case No.: _____ NRAS No.: _____ SDG NO.: ERT-007

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/20/2012 End Date: 08/20/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
1024208	ZZZZZZ	1225												
9983698001	ZZZZZZ	1228												
9981961001	ZZZZZZ	1232												
9981961002	ZZZZZZ	1236												
CCV12	ZZZZZZ	1239												
CCB11	ZZZZZZ	1245												
CCV13	ZZZZZZ	1249												
9981961003	ZZZZZZ	1252												
1020749	ZZZZZZ	1256												
1020750	ZZZZZZ	1259												
982000002	ZZZZZZ	1303												
1021145	ZZZZZZ	1307												
1021146	ZZZZZZ	1310												
CCV14	ZZZZZZ	1314												
CCB12	ZZZZZZ	1317												
CCV15	ZZZZZZ	1321												

Total Metals in Solid by 6020A Raw Data

Dataset: A082012B 2nd Review mwo

First Review: AM Approval: mwo

Internal Standards: **ICPMS9190**

200	60-125%	**6020Qc:**	70-130%	**6020A**	30-130%	**DOD:**	70-120%

Standards :
Tuning MS0361
Daily Standard: MS0361

Calibration Standards
MS0343
MS0344

PIPETTES:

03-028	10.0 mL
03-202	.200 mL
03-201	1.0 mL
03-031	1.0 mL

ICSA: MS0341
ICSAB:MS0340

Initial LLICV - S67 Se

Initial ICV Sn

GOLD: MS0346
DW LCS: MS0358
Second Source

MA1393	MA1388	MA1360
MA1342	MS0345	MA1381
MS0309	MA1359	

Internal Standards/ Target Analytes

Sc-Al,V,Cr,Mn,Co,Ni,Cu,Na, K, Ti, Mg, Ca, Fe, As, Zn, Se,
Y
In-Sr, Mo, Ag, Cd, Sn, Sb, Ba
Tb
Bi-Hg, Tl, Pb, U

Case Narrative:

*__D__: *D at the beginning of the Dataset Denotes that the samples were run on the Elan DRCe ICP-MS*

200.8 Tune Check Sample Report

Batch Folder C:\Agilent\ICPMH\1\DATA\A081912 TUNE.b
Report Comment
Instrument Name G3281A JP11040846

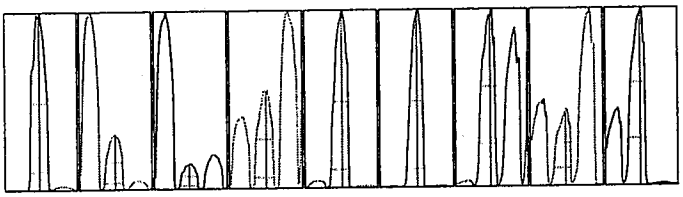
[no Gas]

Mass	Count (Actual)
9	9957
24	53705
25	7311
26	10026
59	104446
115	125523
206	19498
207	18236
208	38372

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	3.19	5.00	
24	3.29	5.00	
25	2.91	5.00	
26	2.29	5.00	
59	0.95	5.00	
115	1.36	5.00	
206	1.77	5.00	
207	1.41	5.00	
208	1.43	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	9487	9868	10045	10028	10358
24	52281	51895	53295	55103	55954
25	7008	7216	7305	7502	7521
26	9922	9813	9890	10124	10382
59	103144	103604	105078	105131	105271
115	124851	124011	124445	128240	126066
206	19442	19156	19213	19987	19692
207	17966	18417	17965	18519	18312
208	38046	37817	38193	39214	38589

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	1615	8.95	6.9 - 9.1		0.786	0.850	
24	8538	24.00	23.9 - 24.1		0.785	0.850	
25	1178	24.95	24.9 - 25.1		0.780	0.850	
26	1631	26.00	25.9 - 26.1		0.786	0.850	
59	17677	59.05	58.9 - 59.1		0.743	0.850	
115	22933	115.05	114.9 - 115.1		0.718	0.850	
206	3324	205.95	205.9 - 206.1		0.712	0.850	
207	2906	206.95	206.9 - 207.1		0.704	0.850	
208	6841	207.95	207.9 - 208.1		0.707	0.850	

X% = 10 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 235 **Y Axis =** Linear

Tune Parameters

Plasma Paramters

RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	12.2 V	Deflect	15.6 V
Extract 2	-185.0 V	Cell Entrance	-32 V	Plate Bias	-45 V
Omega Bias	-80 V	Cell Exit	-60 V		

Cell Parameters

OctP Bias	-8.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	160 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	001CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T02:40:35-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	3414	1.73
Cr	52	1	No Gas	8547	0.11
Mn	55	1	No Gas	14348	0.06
Co	59	1	No Gas	107	29.42
Ni	60	1	No Gas	177	24.89
Cu	63	1	No Gas	1407	0.85
Sr	88	1	No Gas	122	26.82
Ag	107	1	No Gas	33	299.96
Al	27	1	No Gas	4501	0.59
Sn	118	1	No Gas	3556	0.82
Ti	47	1	No Gas	133	17.27
Zn	66	1	No Gas	317	2.88
As	75	3	HeHe	7	1325.55
As	75	1	No Gas	13463	0.03
Sb	121	1	No Gas	670	3.43
Hg	201	1	No Gas	27	86.05
Be	9	1	No Gas	24	91.87
Pb	208	1	No Gas	7224	0.03
Mo	98	1	No Gas	976	0.62
Ba	137	1	No Gas	27	292.73
Tl	205	1	No Gas	67	90.14
U	238	1	No Gas	70	12.95
Na	23	2	he	56505	0.01
Mg	24	2	he	504	6.73
K	39	2	he	45960	0.00
Se	82	3	HeHe	15	105.51
Fe	57	3	HeHe	117	23.62
Cd	114	1	No Gas	127	23.60
Ca	44	1	No Gas	11346	0.16

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	1690544	1.49
Sc	45	2	he	214928	3.41
Ge	72	1	No Gas	238945	2.81
In	115	1	No Gas	1327323	0.87
Tb	159	1	No Gas	1611794	3.01
Bi	209	1	No Gas	782720	0.93

Calibration Blank Report

Sc	45	3	HeHe	30962	4.40

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	002CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T02:44:12-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Cr	52	1	No Gas	8154	0.11
Mn	55	1	No Gas	13736	0.05
Co	59	1	No Gas	141	26.51
Ni	60	1	No Gas	187	5.97
Cu	63	1	No Gas	1370	0.33
Sr	88	1	No Gas	130	21.26
Ag	107	1	No Gas	52	132.85
Al	27	1	No Gas	3697	0.44
Sn	118	1	No Gas	2671	0.99
Ti	47	1	No Gas	112	8.55
Zn	66	1	No Gas	310	7.28
As	75	3	HeHe	5	541.04
As	75	1	No Gas	12404	0.02
Sb	121	1	No Gas	537	6.21
Hg	201	1	No Gas	21	297.39
Be	9	1	No Gas	10	721.11
Pb	208	1	No Gas	7373	0.15
Se	82	1	No Gas	143	10.68
Mo	98	1	No Gas	723	1.91
Ba	137	1	No Gas	40	165.36
Tl	205	1	No Gas	44	194.88
U	238	1	No Gas	48	110.68
Na	23	2	he	54165	0.01
Mg	24	2	he	289	7.04
K	39	2	he	42867	0.00
Se	82	3	HeHe	14	232.10
Fe	57	3	HeHe	150	19.37
Cd	114	1	No Gas	133	42.96
Ca	44	1	No Gas	13218	0.15

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	1662313	9.90
Sc	45	2	he	207479	1.78
Ge	72	1	No Gas	222710	3.86
In	115	1	No Gas	1280558	7.02
Tb	159	1	No Gas	1515490	10.23
Bi	209	1	No Gas	722984	4.85

Sc	45	3	HeHe	30220	4.52

Calibration Standard Report

Sample Table

Sample Name	Standard 1
Data File Name	003CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T02:47:48-04:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	2538	4.06
Cr	52	1	No Gas	8751	0.05
Mn	55	1	No Gas	16030	0.03
Co	59	1	No Gas	1241	0.54
Ni	60	1	No Gas	423	4.65
Cu	63	1	No Gas	1952	0.15
Sr	88	1	No Gas	1796	0.82
Ag	107	1	No Gas	845	2.45
Al	27	1	No Gas	9077	0.04
Sn	118	1	No Gas	3841	0.58
Tl	47	1	No Gas	196	8.52
Zn	66	1	No Gas	747	2.16
As	75	3	HeHe	13	368.97
As	75	1	No Gas	12615	0.05
Sb	121	1	No Gas	1087	0.43
Hg	201	1	No Gas	24	159.12
Be	9	1	No Gas	101	10.73
Pb	208	1	No Gas	9273	0.02
Mo	98	1	No Gas	1073	1.13
Ba	137	1	No Gas	290	6.18
Tl	205	1	No Gas	841	2.41
U	238	1	No Gas	996	1.90
Na	23	2	he	55269	0.01
Mg	24	2	he	641	2.19
K	39	2	he	46056	0.00
Se	82	3	HeHe	21	283.30
Fe	57	3	HeHe	87	20.34
Cd	114	1	No Gas	467	5.32
Ca	44	1	No Gas	12717	0.04

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1700962	0.36	1662313	102.33	70	120	
Sc	45	2	he	212449	4.28	207479	102.40	70	120	
Ge	72	1	No Gas	235268	3.34	222710	105.64	70	120	
In	115	1	No Gas	1322403	2.95	1280558	103.27	70	120	

Tb	159	1	No Gas	1654575	0.89	1515490	109.18	70	120	
Bi	209	1	No Gas	770216	0.58	722984	106.53	70	120	
Sc	45	3	HeHe	30327	1.87	30220	100.35	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 2
Data File Name	004CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T02:51:24-04:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	15619	0.11
Cr	52	1	No Gas	18121	0.01
Mn	55	1	No Gas	26432	0.01
Co	59	1	No Gas	11519	0.05
Ni	60	1	No Gas	2660	0.47
Cu	63	1	No Gas	7538	0.03
Sr	88	1	No Gas	16453	0.03
Ag	107	1	No Gas	7680	0.02
Al	27	1	No Gas	15904	0.02
Sn	118	1	No Gas	7269	0.13
Tl	47	1	No Gas	897	0.52
Zn	66	1	No Gas	3657	0.04
As	75	3	HeHe	122	3.03
As	75	1	No Gas	14977	0.04
Sb	121	1	No Gas	6545	0.10
Hg	201	1	No Gas	33	21.64
Be	9	1	No Gas	905	0.20
Pb	208	1	No Gas	19856	0.01
Se	82	1	No Gas	140	27.22
Mo	98	1	No Gas	4840	0.05
Ba	137	1	No Gas	1957	0.29
Tl	205	1	No Gas	9285	0.08
U	238	1	No Gas	9496	0.04
Na	23	2	he	63016	0.00
Mg	24	2	he	3597	0.00
K	39	2	he	46565	0.01
Se	82	3	HeHe	19	249.14
Fe	57	3	HeHe	353	4.83
Cd	114	1	No Gas	4017	0.12
Ca	44	1	No Gas	16472	0.03

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1697533	1.11	1662313	102.12	70	120	
Sc	45	2	he	209577	1.72	207479	101.01	70	120	
Ge	72	1	No Gas	235724	2.43	222710	105.84	70	120	

Calibration Standard Report

In	115	1	No Gas	1293129	1.63	1280558	100.98	70	120	
Tb	159	1	No Gas	1585434	0.50	1515490	104.62	70	120	
Bi	209	1	No Gas	750021	0.69	722984	103.74	70	120	
Sc	45	3	HeHe	29489	2.45	30220	97.58	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 3
Data File Name	005CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T02:55:00-04:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	115210	0.00
Cr	52	1	No Gas	114101	0.00
Mn	55	1	No Gas	153756	0.00
Co	59	1	No Gas	115705	0.00
Ni	60	1	No Gas	25573	0.01
Cu	63	1	No Gas	65501	0.00
Sr	88	1	No Gas	169859	0.00
Ag	107	1	No Gas	77587	0.00
Al	27	1	No Gas	68078	0.00
Sn	118	1	No Gas	53544	0.01
Ti	47	1	No Gas	8507	0.02
Zn	66	1	No Gas	22333	0.01
As	75	3	HeHe	1163	0.40
As	75	1	No Gas	30793	0.01
Sb	121	1	No Gas	65295	0.00
Hg	201	1	No Gas	153	5.40
Be	9	1	No Gas	8678	0.02
Pb	208	1	No Gas	133338	0.00
Se	82	1	No Gas	946	0.60
Mo	98	1	No Gas	50807	0.00
Ba	137	1	No Gas	20367	0.01
Tl	205	1	No Gas	94714	0.00
U	238	1	No Gas	97950	0.00
Na	23	2	he	114639	0.00
Mg	24	2	he	34226	0.01
K	39	2	he	85764	0.00
Se	82	3	HeHe	80	12.16
Fe	57	3	HeHe	3234	0.24
Cd	114	1	No Gas	37994	0.01
Ca	44	1	No Gas	41685	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1695626	3.46	1662313	102.00	70	120	
Sc	45	2	he	215522	0.86	207479	103.88	70	120	
Ge	72	1	No Gas	229665	0.92	222710	103.12	70	120	

Calibration Standard Report

In	115	1	No Gas	1336392	0.19	1280558	104.36	70	120	
Tb	159	1	No Gas	1655320	1.68	1515490	109.23	70	120	
Bi	209	1	No Gas	761372	1.20	722984	105.31	70	120	
Sc	45	3	HeHe	31646	3.02	30220	104.72	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 4
Data File Name	006CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T02:58:37-04:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	1055413	0.00
Cr	52	1	No Gas	974567	0.00
Mn	55	1	No Gas	1308313	0.00
Co	59	1	No Gas	1046672	0.00
Ni	60	1	No Gas	227082	0.00
Cu	63	1	No Gas	579218	0.00
Sr	88	1	No Gas	1581909	0.00
Ag	107	1	No Gas	711646	0.00
Al	27	1	No Gas	493429	0.00
Sn	118	1	No Gas	455302	0.00
Ti	47	1	No Gas	76648	0.00
Zn	66	1	No Gas	175742	0.00
As	75	3	HeHe	10543	0.05
As	75	1	No Gas	173588	0.00
Sb	121	1	No Gas	585608	0.00
Hg	201	1	No Gas	1186	0.04
Be	9	1	No Gas	83644	0.00
Pb	208	1	No Gas	1156872	0.00
Se	82	1	No Gas	9279	0.00
Mo	98	1	No Gas	448344	0.00
Ba	137	1	No Gas	174963	0.00
Tl	205	1	No Gas	860481	0.00
U	238	1	No Gas	900923	0.00
Na	23	2	he	585341	0.00
Mg	24	2	he	297657	0.00
K	39	2	he	385079	0.00
Se	82	3	HeHe	510	1.52
Fe	57	3	HeHe	27095	0.02
Cd	114	1	No Gas	350120	0.00
Ca	44	1	No Gas	250386	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1735099	0.71	1662313	104.38	70	120	
Sc	45	2	he	203908	3.46	207479	98.28	70	120	
Ge	72	1	No Gas	226405	0.44	222710	101.66	70	120	

Calibration Standard Report

In	115	1	No Gas	1329355	0.83	1280558	103.81	70	120	
Tb	159	1	No Gas	1598675	0.18	1515490	105.49	70	120	
Bi	209	1	No Gas	764959	3.32	722984	105.81	70	120	
Sc	45	3	HeHe	30818	4.13	30220	101.98	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 5
Data File Name	007CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T03:02:14-04:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	2254728	0.00
Cr	52	1	No Gas	2083609	0.00
Mn	55	1	No Gas	2797226	0.00
Co	59	1	No Gas	2303019	0.00
Ni	60	1	No Gas	498589	0.00
Cu	63	1	No Gas	1243968	0.00
Sr	88	1	No Gas	3277798	0.00
Ag	107	1	No Gas	1575427	0.00
Al	27	1	No Gas	1069838	0.00
Sn	118	1	No Gas	981091	0.00
Ti	47	1	No Gas	165314	0.00
Zn	66	1	No Gas	364882	0.00
As	75	3	HeHe	23078	0.01
As	75	1	No Gas	367209	0.00
Sb	121	1	No Gas	1272897	0.00
Hg	201	1	No Gas	2446	0.15
Be	9	1	No Gas	176996	0.00
Pb	208	1	No Gas	2479274	0.00
Se	82	1	No Gas	20191	0.01
Mo	98	1	No Gas	956794	0.00
Ba	137	1	No Gas	379891	0.00
Tl	205	1	No Gas	1873439	0.00
U	238	1	No Gas	1994157	0.00
Na	23	2	he	1248799	0.00
Mg	24	2	he	642856	0.00
K	39	2	he	799020	0.00
Se	82	3	HeHe	1068	0.24
Fe	57	3	HeHe	58860	0.01
Cd	114	1	No Gas	751584	0.00
Ca	44	1	No Gas	520650	0.00

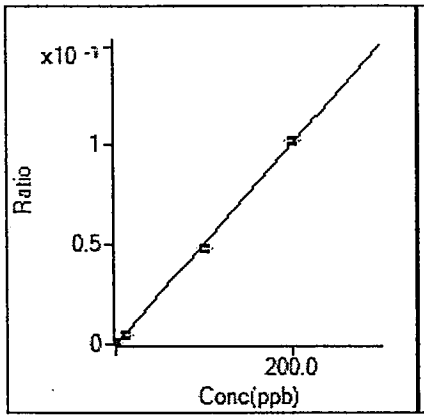
QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1729522	0.42	1662313	104.04	70	120	
Sc	45	2	he	215524	0.57	207479	103.88	70	120	
Ge	72	1	No Gas	228721	1.39	222710	102.70	70	120	

Calibration Standard Report

In	115	1	No Gas	1321508	3.22	1280558	103.20	70	120	
Tb	159	1	No Gas	1611589	0.73	1515490	106.34	70	120	
Bi	209	1	No Gas	781724	1.47	722984	108.12	70	120	
Sc	45	3	HeHe	30858	2.06	30220	102.11	70	120	

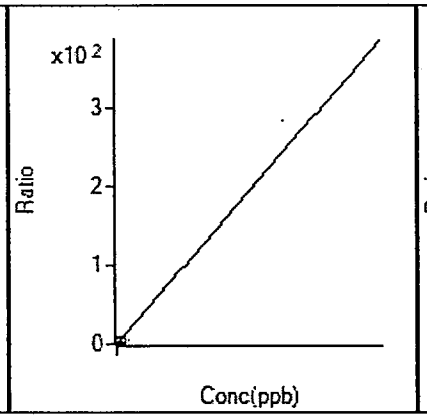
Calibration for C:\Agilent\ICPMH\1\DATA\A082012B.b\014ICSB.d



9 Be [No Gas] / ISTD: 45 Sc

y = 5.058E-4 x + 6.100E-6

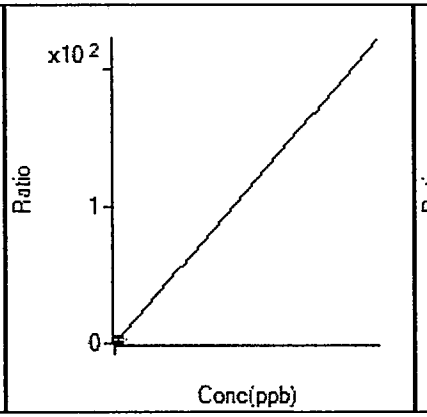
R	0.9996
DL	0.02555
BEC	0.01206



23 Na [he] / ISTD: 45 Sc

y = 2.735E-3 x + 2.611E-1

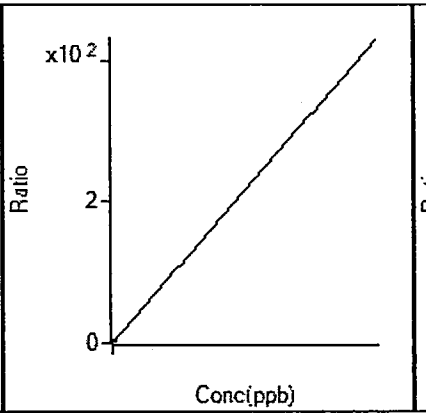
R	0.9996
DL	8.646
BEC	95.44



24 Mg [he] / ISTD: 45 Sc

y = 1.484E-3 x + 1.395E-3

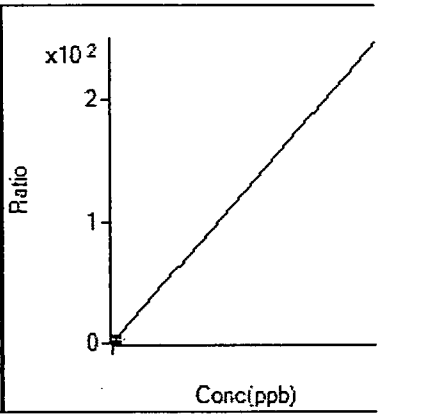
R	0.9999
DL	0.6006
BEC	0.9395



27 Al [No Gas] / ISTD: 45 Sc

y = 3.031E-3 x + 2.238E-3

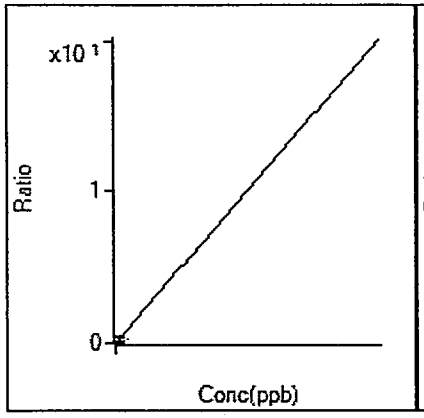
R	0.9989
DL	0.397
BEC	0.7383



39 K [he] / ISTD: 45 Sc

y = 1.737E-3 x + 2.066E-1

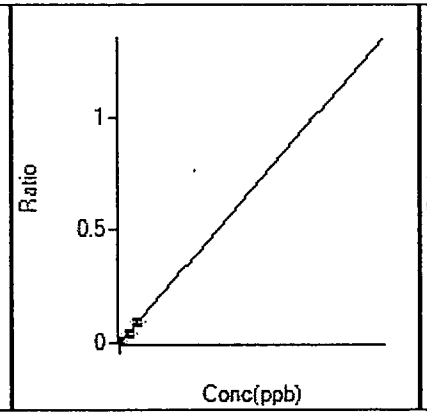
R	0.9998
DL	3.148
BEC	118.9



44 Ca [No Gas] / ISTD: 45 Sc

y = 1.445E-4 x + 8.112E-3

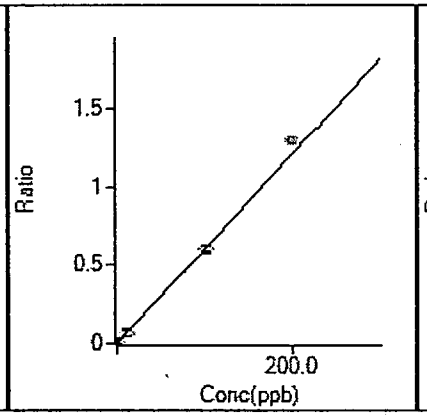
R	0.9993
DL	51.52
BEC	56.16



47 Ti [No Gas] / ISTD: 45 Sc

y = 4.703E-4 x + 6.765E-5

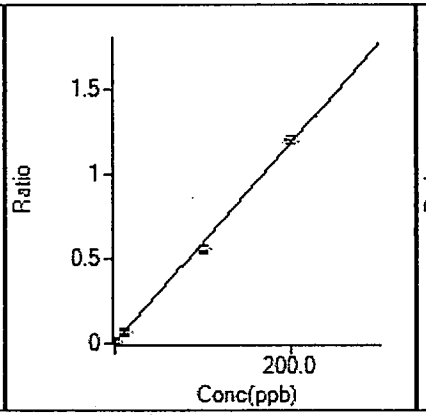
R	0.9993
DL	0.008514
BEC	0.1438



51 V [No Gas] / ISTD: 45 Sc

y = 6.094E-3 x - 3.625E-4

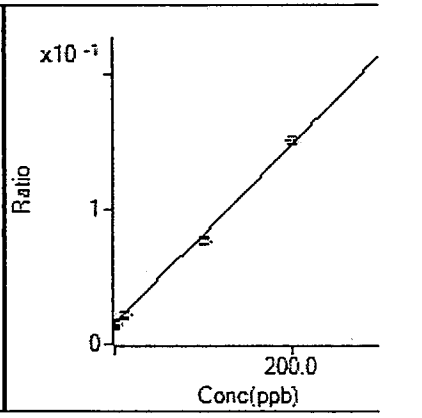
R	0.9999
DL	1.081
BEC	-0.05948



52 Cr [No Gas] / ISTD: 45 Sc

y = 5.914E-3 x + 4.909E-3

R	0.9994
DL	0.03382
BEC	0.8301

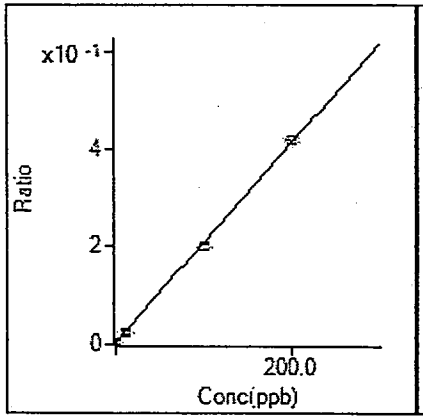


53 [V] [No Gas] / ISTD: 45 Sc

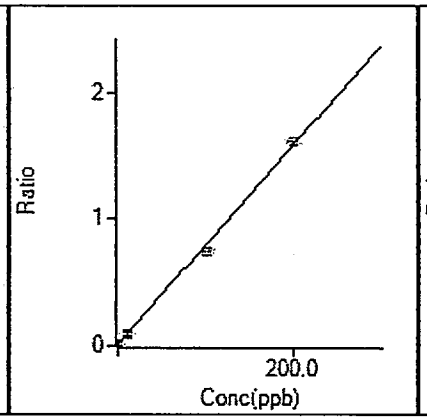
y = 6.659E-4 x + 1.514E-2

R	0.9989
DL	6.641
BEC	22.74

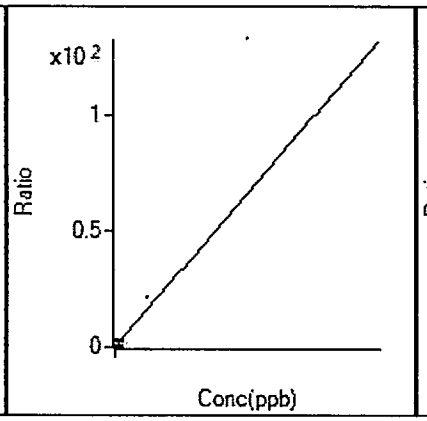
Calibration for C:\Agilent\ICPMH\1\DATA\A082012B.b\014ICSB.d



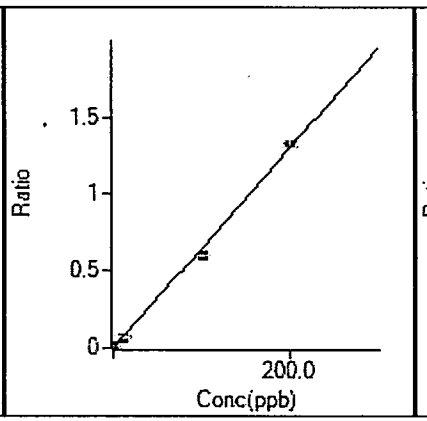
53 [V] [he] / ISTD: 45 Sc
y = 2.058E-3 x + 3.440E-3
R 0.9997
DL 0.999
BEC 1.672



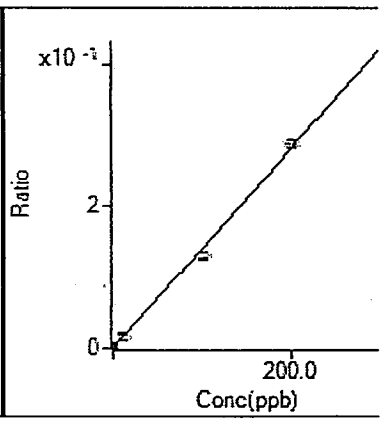
55 Mn [No Gas] / ISTD: 45 Sc
y = 7.929E-3 x + 8.300E-3
R 0.9994
DL 0.2715
BEC 1.047



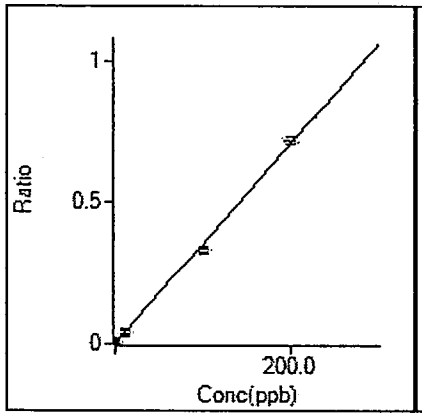
57 Fe [HeHe] / ISTD: 45 Sc
y = 9.518E-4 x + 4.970E-3
R 1.0000
DL 4.574
BEC 5.221



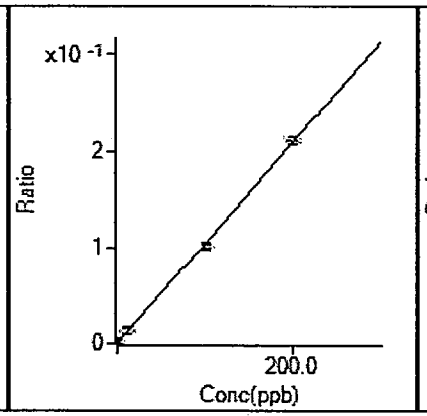
59 Co [No Gas] / ISTD: 45 Sc
y = 6.533E-3 x + 8.437E-5
R 0.9990
DL 0.01264
BEC 0.01291



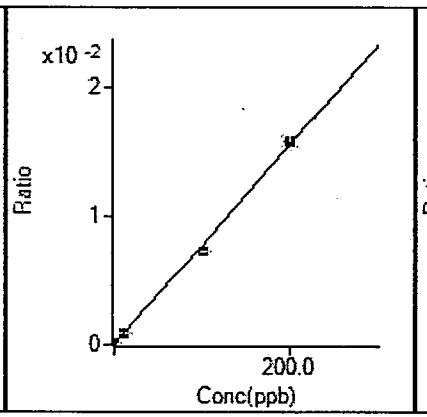
60 Ni [No Gas] / ISTD: 45 Sc
y = 1.414E-3 x + 1.128E-4
R 0.9990
DL 0.02762
BEC 0.07972



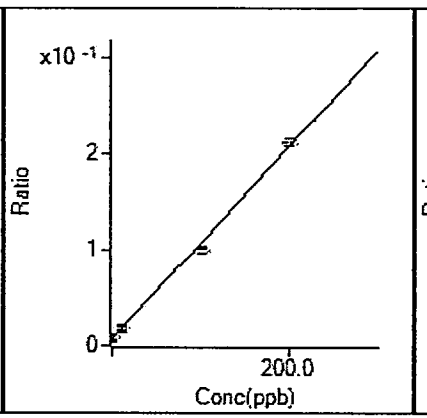
63 Cu [No Gas] / ISTD: 45 Sc
y = 3.540E-3 x + 8.285E-4
R 0.9994
DL 0.06071
BEC 0.234



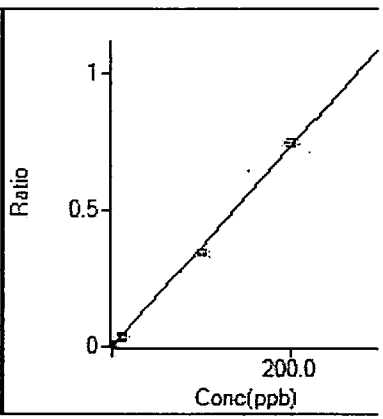
66 Zn [No Gas] / ISTD: 45 Sc
y = 1.046E-3 x + 1.875E-4
R 0.9997
DL 0.1226
BEC 0.1792



69 [Zn] [No Gas] / ISTD: 45 Sc
y = 7.785E-5 x + 2.104E-5
R 0.9993
DL 0.7389
BEC 0.2703

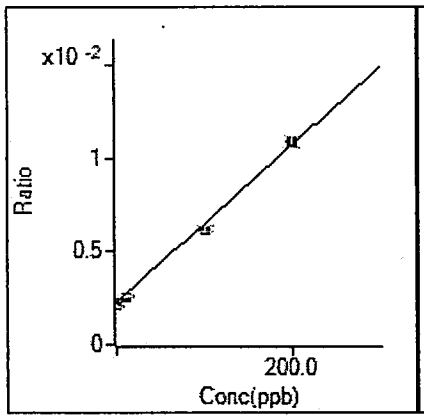


75 As [No Gas] / ISTD: 45 Sc
y = 1.004E-3 x + 7.507E-3
R 0.9989
DL 2.146
BEC 7.474

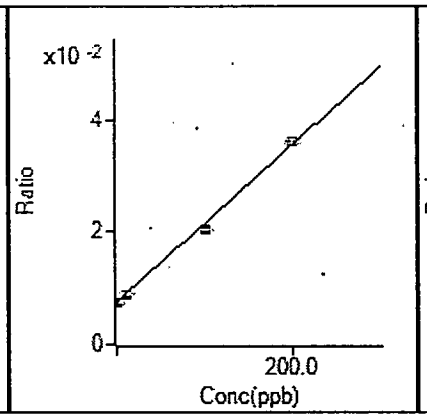


75 As [HeHe] / ISTD: 45 Sc
y = 3.676E-3 x + 1.514E-4
R 0.9992
DL 0.03038
BEC 0.04119

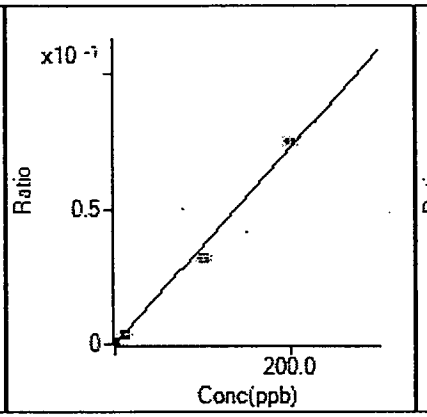
Calibration for C:\Agilent\ICPMH\1\DATA\A082012B.b\014ICSB.d



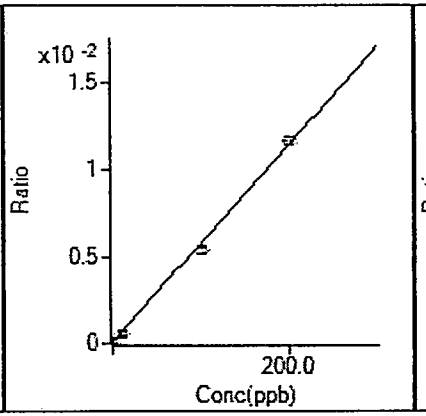
77 [As] [No Gas] / ISTD: 45 Sc
y = 4.228E-5 x + 2.271E-3
R 0.9991
DL 19.36
BEC 53.72



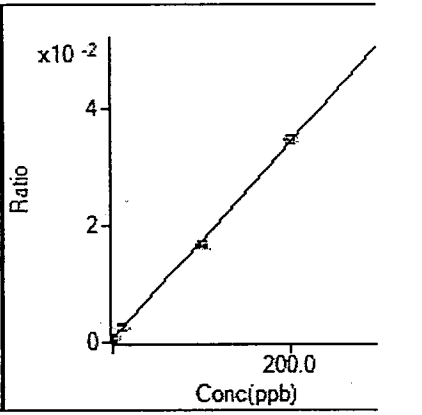
78 Se [No Gas] / ISTD: 45 Sc
y = 1.406E-4 x + 7.589E-3
R 0.9991
DL 17.35
BEC 53.98



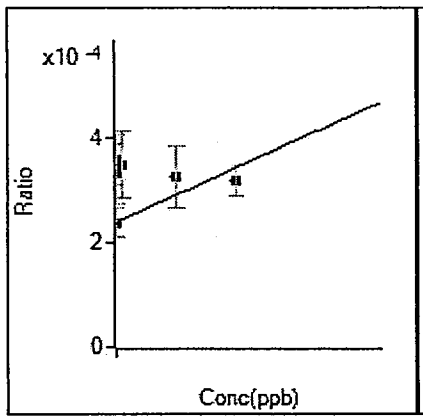
78 Se [HeHe] / ISTD: 45 Sc
y = 3.648E-4 x + 1.075E-4
R 0.9972
DL 0.7933
BEC 0.2947



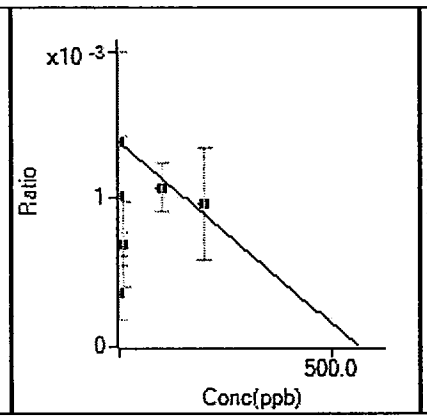
82 Se [No Gas] / ISTD: 45 Sc
y = 5.685E-5 x + 8.650E-5
R 0.9991
DL 0.8369
BEC 1.521



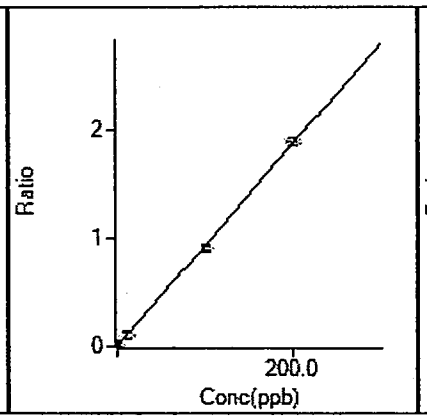
82 Se [HeHe] / ISTD: 45 Sc
y = 1.687E-4 x + 4.823E-4
R 0.9995
DL 3.086
BEC 2.859



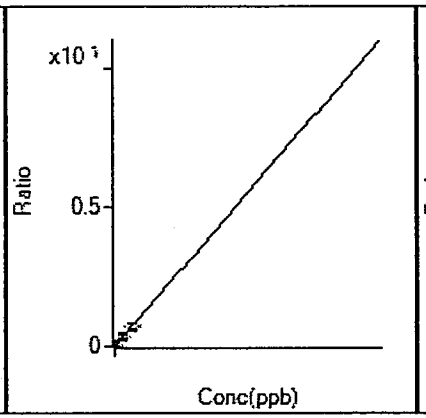
83 [Se] [No Gas] / ISTD: 115 In
y = 5.261E-7 x + 2.383E-4
R 0.0363
DL 303.2
BEC 453



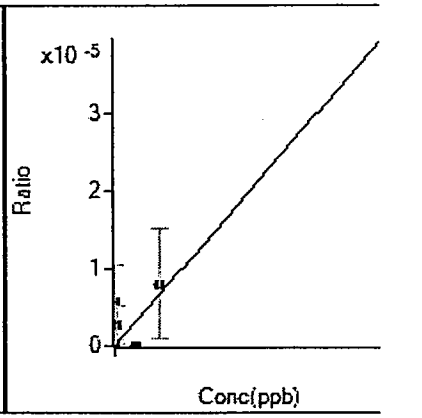
83 [Se] [HeHe] / ISTD: 45 Sc
y = - 2.447E-6 x + 1.382E-3
R 0.1587
DL -1497
BEC -565



88 Sr [No Gas] / ISTD: 45 Sc
y = 9.405E-3 x + 7.959E-5
R 0.9998
DL 0.00891
BEC 0.008462

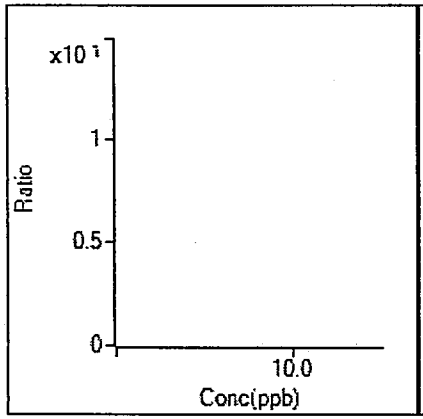


98 Mo [No Gas] / ISTD: 115 In
y = 3.569E-3 x + 5.631E-4
R 0.9994
DL 0.03345
BEC 0.1578

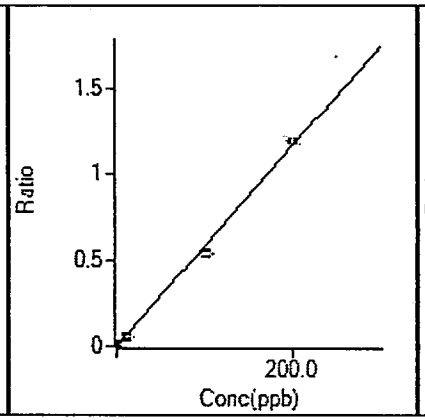


101 [Mo] [No Gas] / ISTD: 115 In
y = 3.304E-8 x
R 0.4998
DL 0
BEC 0

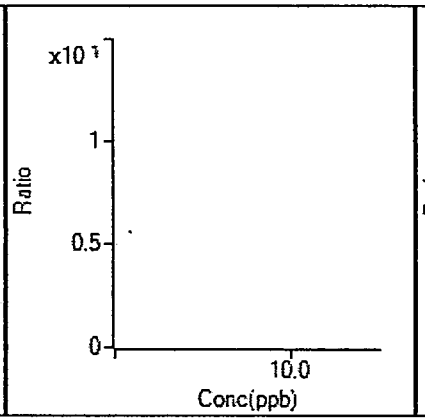
Calibration for C:\Agilent\ICPMH\1\DATA\A082012B.b\014ICSB.d



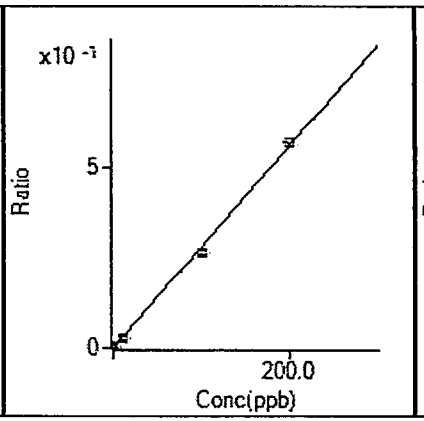
106 [Cd] [No Gas] / ISTD: 115 In
y =
R
DL
BEC



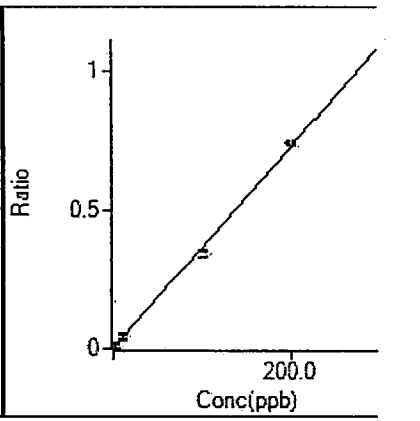
107 Ag [No Gas] / ISTD: 115 In
y = 5.844E-3 x + 4.144E-5
R 0.9988
DL 0.01481
BEC 0.007091



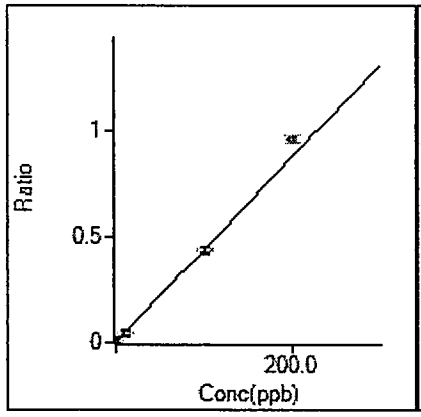
108 [Cd] [No Gas] / ISTD: 115 In
y =
R
DL
BEC



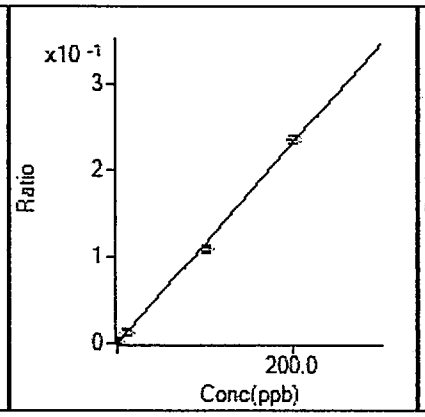
114 Cd [No Gas] / ISTD: 115 In
y = 2.802E-3 x + 1.042E-4
R 0.9994
DL 0.06203
BEC 0.0372



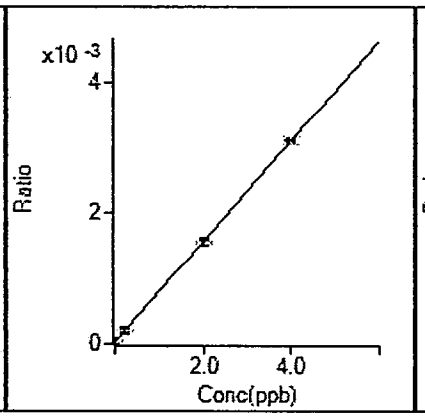
118 Sn [No Gas] / ISTD: 115 In
y = 3.644E-3 x + 2.111E-3
R 0.9992
DL 0.5649
BEC 0.5794



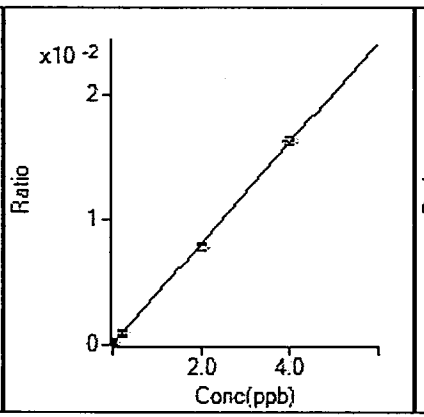
121 Sb [No Gas] / ISTD: 115 In
y = 4.394E-3 x + 1.515E-3
R 0.9999
DL 0.08
BEC 0.3447



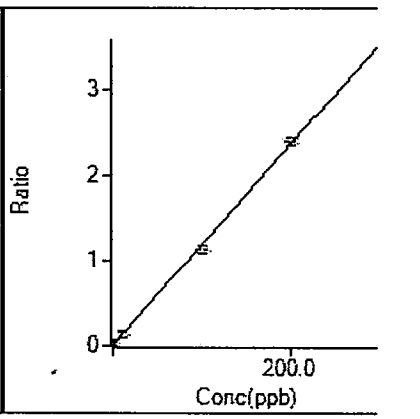
137 Ba [No Gas] / ISTD: 159 Tb
y = 1.162E-3 x + 2.614E-5
R 0.9994
DL 0.04082
BEC 0.0225



201 Hg [No Gas] / ISTD: 209 Bi
y = 7.724E-4 x + 2.906E-5
R 0.9999
DL 0.07116
BEC 0.03763

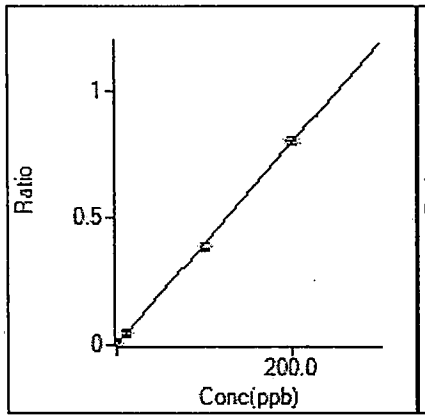


202 Hg [No Gas] / ISTD: 209 Bi
y = 4.034E-3 x + 3.501E-5
R 0.9997
DL 0.003912
BEC 0.008679



205 Tl [No Gas] / ISTD: 209 Bi
y = 1.184E-2 x + 6.122E-5
R 0.9996
DL 0.01329
BEC 0.00517

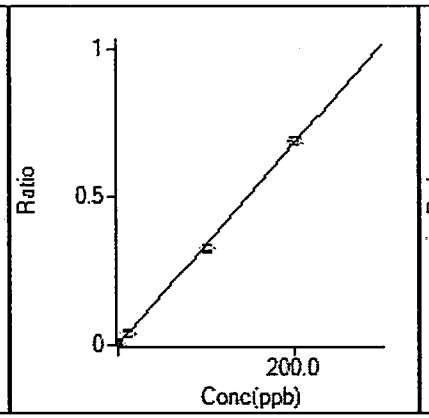
Calibration for C:\Agilent\ICPMH\1\DATA\A082012B.b\014ICSB.d



206 [Pb] [No Gas] / ISTD: 209 Bi

y = 3.983E-3 x + 5.601E-5

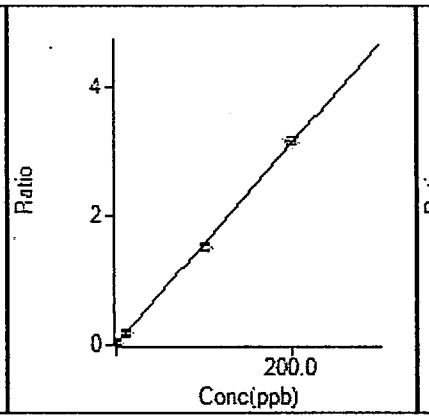
R	0.9999
DL	0.01159
BEC	0.01406



207 [Pb] [No Gas] / ISTD: 209 Bi

y = 3.402E-3 x + 4.127E-5

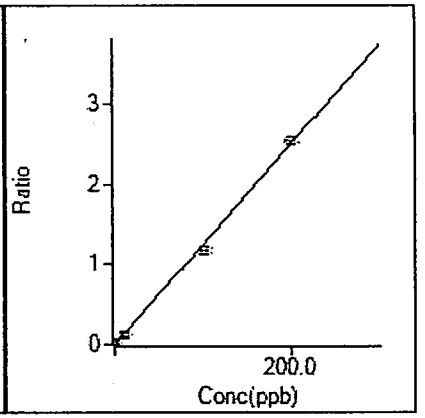
R	0.9997
DL	0.009106
BEC	0.01213



208 Pb [No Gas] / ISTD: 209 Bi

y = 1.565E-2 x + 1.018E-2

R	0.9997
DL	0.1274
BEC	0.6502



238 U [No Gas] / ISTD: 209 Bi

y = 1.256E-2 x + 6.647E-5

R	0.9993
DL	0.008302
BEC	0.005292

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	008_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T03:05:48-04:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

Sn ↑

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	105.367	1.464	1089128	0.80	100	105.4	90	110	
Cr	52	1	No Gas	99.571	1.385	1007663	0.71	100	99.6	90	110	
Mn	55	1	No Gas	101.765	2.468	1383441	1.80	100	101.8	90	110	
Co	59	1	No Gas	96.986	2.259	1075493	1.62	100	97.0	90	110	
Ni	60	1	No Gas	99.729	1.159	239588	0.54	100	99.7	90	110	
Cu	63	1	No Gas	99.748	0.654	600732	0.78	100	99.7	90	110	
Sr	88	1	No Gas	102.586	4.030	1637559	3.67	100	102.6	90	110	
Ag	107	1	No Gas	99.065	0.788	739265	1.74	100	99.1	90	110	
Al	27	1	No Gas	98.519	1.636	510608	0.98	100	98.5	90	110	
Sn	118	1	No Gas	110.598	0.837	517337	2.56	100	110.6	90	110	ICV Main CR1 Failed
Ti	47	1	No Gas	94.139	1.252	75260	0.90	100	94.1	90	110	
Zn	66	1	No Gas	99.542	0.898	177011	0.95	100	99.5	90	110	
As	75	3	HeHe	103.059	4.792	11331	1.84	100	103.1	90	110	
As	75	1	No Gas	98.850	1.142	181265	1.56	100	98.9	90	110	
Sb	121	1	No Gas	108.594	3.354	611346	4.55	100	108.6	90	110	
Hg	201	1	No Gas	2.029	15.410	1228	14.94	2	101.4	90	110	
Be	9	1	No Gas	102.398	1.789	87905	1.53	100	102.4	90	110	
Pb	208	1	No Gas	100.208	0.866	1215166	0.73	100	100.2	90	110	
Se	82	1	No Gas	97.539	1.824	9560	2.45	100	97.5	90	110	
Mo	98	1	No Gas	100.512	1.189	458837	1.97	100	100.5	90	110	
Ba	137	1	No Gas	98.468	1.819	181516	1.90	100	98.5	90	110	
Tl	205	1	No Gas	94.953	0.651	865326	0.50	100	95.0	90	110	
U	238	1	No Gas	104.508	1.118	1010404	0.97	100	104.5	90	110	
Na	23	2	he	1022.631	1.314	644415	1.21	1000	102.3	90	110	
Mg	24	2	he	1042.030	0.974	326242	2.05	1000	104.2	90	110	
K	39	2	he	1011.769	1.394	413899	1.78	1000	101.2	90	110	
Se	82	3	HeHe	113.372	3.077	587	5.92	100	113.4	90	110	ICV Main CR1 Failed
Fe	57	3	HeHe	1031.200	4.728	29489	2.02	1000	103.1	90	110	
Cd	114	1	No Gas	101.911	1.344	364666	0.75	100	101.9	90	110	
Ca	44	1	No Gas	996.306	0.550	258040	1.19	1000	99.6	90	110	

X

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1697262	0.69	1662313	102.10	70	120	
Sc	45	2	he	210742	2.30	207479	101.57	70	120	
Ge	72	1	No Gas	228790	1.06	222710	102.73	70	120	
In	115	1	No Gas	1276973	2.03	1280558	99.72	70	120	
Tb	159	1	No Gas	1586772	2.72	1515490	104.70	70	120	
Bi	209	1	No Gas	769648	0.18	722984	106.45	70	120	
Sc	45	3	HeHe	29923	3.27	30220	99.02	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	010_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T03:13:03-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.136	276.8	736	510.3	9	
Cr	52	1	No Gas	-0.004	-1052.5	7954	3.6	4	
Mn	55	1	No Gas	-0.011	-835.3	13376	7.1	25	
Co	59	1	No Gas	-0.006	-56.9	74	48.2	1	
Ni	60	1	No Gas	0.029	86.8	250	24.0	25	
Cu	63	1	No Gas	0.010	113.6	1409	3.3	25	
Sr	88	1	No Gas	-0.002	-170.8	100	48.4	25	
Ag	107	1	No Gas	0.006	37.9	100	19.2	9	
Al	27	1	No Gas	-0.088	-46.1	3210	4.5	1000000	
Sn	118	1	No Gas	0.093	78.6	3126	8.9	25	
Ti	47	1	No Gas	-0.018	-131.4	97	18.2	10000	
Zn	66	1	No Gas	0.075	49.6	433	16.4	25	
As	75	3	HeHe	0.021	198.8	7	68.6	9	
As	75	1	No Gas	0.151	278.8	12477	5.2	9	
Sb	121	1	No Gas	-0.060	-40.3	1597	8.1	4	
Hg	201	1	No Gas	0.005	348.8	25	40.0	0.04	
Be	9	1	No Gas	0.025	67.8	31	44.4	1	
Pb	208	1	No Gas	0.055	55.6	8299	3.4	4	
Se	82	1	No Gas	-0.645	-182.6	82	133.1	25	
Mo	98	1	No Gas	-0.017	-82.0	644	9.1	10000	
Ba	137	1	No Gas	-0.008	-139.3	27	78.1	25	
Tl	205	1	No Gas	-0.001	-124.4	41	15.8	1	
U	238	1	No Gas	0.011	2.2	156	0.0	25	
Na	23	2	he	0.383	540.0	55504	1.3	2500000	
Mg	24	2	he	0.108	144.2	330	15.9	2500000	
K	39	2	he	-2.772	-57.0	42741	1.8	5000000	
Se	82	3	HeHe	0.934	147.9	20	36.4	25	
Fe	57	3	HeHe	-1.181	-86.3	120	25.0	2500000	
Cd	114	1	No Gas	-0.014	-26.8	83	18.3	1	
Ca	44	1	No Gas	-2.985	-359.6	12488	18.5	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1629424	1.77	1662313	98.02	70	120	
Sc	45	2	he	211789	1.16	207479	102.08	70	120	
Ge	72	1	No Gas	223589	2.46	222710	100.39	70	120	

Initial Calibration Blank (ICB) Report

In	115	1	No Gas	1278349	2.14	1280558	99.83	70	120	
Tb	159	1	No Gas	1574771	2.79	1515490	103.91	70	120	
Bi	209	1	No Gas	752179	1.47	722984	104.04	70	120	
Sc	45	3	HeHe	31202	3.87	30220	103.25	70	120	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV
Data File Name	011LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T03:16:41-04:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

Se ↓

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.557	8.664	25046	9.18	2	127.9	70	130	
Cr	52	1	No Gas	1.934	1.163	26895	0.89	2	96.7	70	130	
Mn	55	1	No Gas	4.976	1.330	78569	1.41	5	99.5	70	130	
Co	59	1	No Gas	5.065	3.323	54579	2.81	5	101.3	70	130	
Ni	60	1	No Gas	5.191	2.337	12265	2.12	5	103.8	70	130	
Cu	63	1	No Gas	5.136	1.564	31275	0.95	5	102.7	70	130	
Sr	88	1	No Gas	4.676	3.287	72481	2.89	5	93.5	70	130	
Ag	107	1	No Gas	1.980	4.757	15119	4.57	2	99.0	70	130	
Al	27	1	No Gas	78.826	2.877	396753	2.58	80	98.5	70	130	
Sn	118	1	No Gas	2.142	7.354	12917	6.42	2	107.1	70	130	
Ti	47	1	No Gas	4.921	1.452	3919	1.18	5	98.4	70	130	
Zn	66	1	No Gas	5.577	4.840	9904	4.19	5	111.5	70	130	
As	75	3	HeHe	3.708	15.549	428	14.80	3	123.6	70	130	
As	75	1	No Gas	2.971	7.780	17259	1.66	3	99.0	70	130	
Sb	121	1	No Gas	2.302	2.142	15147	2.70	2	115.1	70	130	
Hg	201	1	No Gas	0.188	12.741	135	9.39	0.2	94.0	70	130	
Be	9	1	No Gas	1.083	2.274	911	1.87	1	108.3	70	130	
Pb	208	1	No Gas	2.015	1.660	32444	2.13	2	100.7	70	130	
Se	82	1	No Gas	2.972	84.314	421	56.06	5	59.4	70	130	LLICV Main CR1 Failed
Mo	98	1	No Gas	1.927	5.455	9689	4.41	2	96.4	70	130	
Ba	137	1	No Gas	5.121	3.138	9433	3.39	5	102.4	70	130	
Tl	205	1	No Gas	0.976	7.111	9025	5.79	1	97.6	70	130	
U	238	1	No Gas	4.989	0.895	48784	2.17	5	99.8	70	130	
Na	23	2	he	90.284	8.678	113275	2.83	100	90.3	70	130	
Mg	24	2	he	96.651	4.050	32312	4.12	100	96.7	70	130	
K	39	2	he	99.525	5.097	84638	1.09	100	99.5	70	130	
Se	82	3	HeHe	5.970	27.437	46	18.64	5	119.4	70	130	
Fe	57	3	HeHe	55.501	9.024	1797	9.15	50	111.0	70	130	
Cd	114	1	No Gas	1.023	10.902	3864	9.74	1	102.3	70	130	
Ca	44	1	No Gas	105.709	9.391	38476	6.61	100	105.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1645205	0.62	1662313	98.97	70	120	
Sc	45	2	he	223065	1.65	207479	107.51	70	120	
Ge	72	1	No Gas	226436	3.17	222710	101.67	70	120	
In	115	1	No Gas	1302228	1.38	1280558	101.69	70	120	
Tb	159	1	No Gas	1578584	0.64	1515490	104.16	70	120	
Bi	209	1	No Gas	777738	2.82	722984	107.57	70	120	
Sc	45	3	HeHe	31075	1.44	30220	102.83	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	013ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T03:23:58-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.777	26.6	7984	29.3	9	
Cr	52	1	No Gas	1.036	3.8	20119	1.8	4	
Mn	55	1	No Gas	1.135	9.5	31537	4.4	25	
Co	59	1	No Gas	1.344	3.3	16160	2.7	1	ICSA Main CR1 Failed
Ni	60	1	No Gas	1.633	0.8	4417	0.9	5	
Cu	63	1	No Gas	0.886	3.0	7230	1.7	5	
Ag	107	1	No Gas	0.212	13.8	1589	14.0	9	
Al	27	1	No Gas	94022.019	1.3	519633876	0.7	110000	
Sn	118	1	No Gas	-0.144	-28.1	1967	10.4	25	
Tl	47	1	No Gas	1833.257	1.9	1572172	1.2	2200	
Zn	66	1	No Gas	2.314	4.1	4754	4.0	5	
As	75	3	HeHe	0.289	17.4	37	12.4	9	
As	75	1	No Gas	-0.099	-426.5	13504	5.1	9	
Sb	121	1	No Gas	0.209	15.5	3017	4.8	4	
Hg	201	1	No Gas	0.023	41.4	33	17.3	0.04	
Be	9	1	No Gas	0.018	32.3	28	18.9	1	
Pb	208	1	No Gas	0.503	10.6	12767	5.5	4	
Se	82	1	No Gas	-1.379	-66.3	15	651.1	25	
Mo	98	1	No Gas	2046.748	1.2	9060304	1.9	2200	
Ba	137	1	No Gas	0.136	27.3	293	27.6	25	
Tl	205	1	No Gas	0.012	48.4	144	33.5	1	
U	238	1	No Gas	0.009	64.7	126	40.8	25	
Na	23	2	he	84360.451	4.8	53517580	2.1	110000	
Mg	24	2	he	88173.830	5.4	30309104	0.2	110000	
K	39	2	he	85321.210	4.9	34386096	2.7	110000	
Se	82	3	HeHe	0.115	747.1	15	29.6	25	
Fe	57	3	HeHe	93882.224	2.5	2699874	2.4	110000	
Cd	114	1	No Gas	0.597	9.1	2204	8.5	1	
Ca	44	1	No Gas	92156.064	1.1	24286854	0.6	110000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1823397	0.69	1662313	109.69	70	120	
Sc	45	2	he	232032	5.54	207479	111.83	70	120	
Ge	72	1	No Gas	229562	3.45	222710	103.08	70	120	
In	115	1	No Gas	1240040	1.28	1280558	96.84	70	120	
Tb	159	1	No Gas	1587734	4.70	1515490	104.77	70	120	
Bi	209	1	No Gas	706872	1.43	722984	97.77	70	120	
Sc	45	3	HeHe	30224	3.16	30220	100.01	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	014ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082012B.b
Acq Date Time	2012-08-20T03:27:33-04:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	41.747	0.333	453315	0.50	40	104.4	80	120	
Cr	52	1	No Gas	19.743	0.424	217100	0.59	20	98.7	80	120	
Mn	55	1	No Gas	20.959	7.433	311338	7.04	20	104.8	80	120	
Co	59	1	No Gas	37.373	2.468	435850	2.53	40	93.4	80	120	
Ni	60	1	No Gas	37.011	2.540	93613	2.69	40	92.5	80	120	
Cu	63	1	No Gas	18.790	1.825	120175	1.79	20	94.0	80	120	
Ag	107	1	No Gas	19.340	2.862	141824	3.70	20	96.7	80	120	
Al	27	1	No Gas	95099.116	2.465	514383594	2.58	100000	95.1	90	110	
Tl	47	1	No Gas	1924.927	2.175	1615631	2.28	2000	96.2	90	110	
Zn	66	1	No Gas	21.306	1.748	40097	1.91	20	106.5	80	120	
As	75	3	HeHe	20.469	3.835	2273	2.73	20	102.3	80	120	
As	75	1	No Gas	19.279	4.597	47948	3.17	20	96.4	80	120	
Sb	121	1	No Gas	0.302	19.797	3564	9.82	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Hg	201	1	No Gas	0.011	158.832	27	34.64	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Be	9	1	No Gas	0.008	48.544	18	19.25	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Pb	208	1	No Gas	0.515	14.652	13053	6.20	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Se	82	1	No Gas	16.299	1.313	1808	1.03	20	81.5	80	120	
Mo	98	1	No Gas	2062.546	0.563	9234409	0.82	2000	103.1	90	110	
Ba	137	1	No Gas	0.205	5.603	430	4.65	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Tl	205	1	No Gas	0.021	19.449	219	16.35	0	#DIV/0!	0	0	ICSB Main CR1 Failed
U	238	1	No Gas	0.013	53.813	163	38.77	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Na	23	2	he	94590.417	0.505	54581155	0.41	100000	94.6	90	110	
Mg	24	2	he	100134.461	1.892	31321542	1.27	100000	100.1	90	110	
K	39	2	he	96091.335	1.369	35223508	1.98	100000	96.1	90	110	
Se	82	3	HeHe	19.441	23.663	114	22.08	20	97.2	80	120	
Fe	57	3	HeHe	93104.649	2.674	2672578	2.95	100000	93.1	90	110	
Cd	114	1	No Gas	10.202	0.710	35976	0.43	10	102.0	80	120	
Ca	44	1	No Gas	93160.954	2.478	24027852	2.60	100000	93.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1784394	0.19	1662313	107.34	70	120	
Sc	45	2	he	210738	0.62	207479	101.57	70	120	
Ge	72	1	No Gas	229782	1.52	222710	103.18	70	120	
In	115	1	No Gas	1254248	1.14	1280558	97.95	70	120	
Tb	159	1	No Gas	1627594	1.19	1515490	107.40	70	120	
Bi	209	1	No Gas	715952	0.89	722984	99.03	70	120	
Sc	45	3	HeHe	30160	2.00	30220	99.80	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	057_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T07:16:02-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	100.011	2.998	1049640	0.54	100	100.0	90	110	
Cr	52	1	No Gas	99.699	3.400	970153	1.02	100	99.7	90	110	
Mn	55	1	No Gas	106.183	0.361	1388152	2.13	100	106.2	90	110	
Co	59	1	No Gas	98.815	2.440	1053860	0.81	100	98.8	90	110	
Ni	60	1	No Gas	100.791	3.048	232836	0.63	100	100.8	90	110	
Cu	63	1	No Gas	101.831	1.812	589786	0.75	100	101.8	90	110	
Sr	88	1	No Gas	107.939	2.404	1657183	1.39	100	107.9	90	110	
Ag	107	1	No Gas	97.244	1.400	740299	0.56	100	97.2	90	110	
Al	27	1	No Gas	100.649	1.518	501763	2.61	100	100.6	90	110	
Sn	118	1	No Gas	107.155	0.513	511409	1.22	100	107.2	90	110	
Tl	47	1	No Gas	96.126	4.364	73878	1.94	100	96.1	90	110	
Zn	66	1	No Gas	103.452	3.583	176881	2.06	100	103.5	90	110	
As	75	3	HeHe	101.086	2.484	11187	0.97	100	101.1	90	110	
As	75	1	No Gas	100.146	3.355	176409	0.63	100	100.1	90	110	
Sb	121	1	No Gas	104.898	2.951	602519	3.84	100	104.9	90	110	
Hg	201	1	No Gas	2.129	4.332	1324	3.72	2	106.4	90	110	
Be	9	1	No Gas	104.420	1.182	86224	1.51	100	104.4	90	110	
Pb	208	1	No Gas	98.788	0.236	1232132	0.41	100	98.8	90	110	
Se	82	1	No Gas	101.678	3.261	9576	2.18	100	101.7	90	110	
Mo	98	1	No Gas	97.712	1.186	455076	0.60	100	97.7	90	110	
Ba	137	1	No Gas	97.308	1.892	182057	2.48	100	97.3	90	110	
Tl	205	1	No Gas	93.886	0.878	879927	0.85	100	93.9	90	110	
U	238	1	No Gas	103.447	0.523	1028581	0.35	100	103.4	90	110	
Na	23	2	he	1005.463	2.599	618110	3.06	1000	100.5	90	110	
Mg	24	2	he	1044.668	2.625	318557	3.00	1000	104.5	90	110	
K	39	2	he	1007.290	0.845	401543	1.34	1000	100.7	90	110	
Se	82	3	HeHe	101.881	7.214	531	5.81	100	101.9	90	110	
Fe	57	3	HeHe	1045.767	5.083	30093	3.87	1000	104.6	90	110	
Cd	114	1	No Gas	100.023	3.381	365111	2.23	100	100.0	90	110	
Ca	44	1	No Gas	1002.355	1.658	249596	0.98	1000	100.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1632792	2.46	1662313	98.22	70	120	
Sc	45	2	he	205255	1.89	207479	98.93	70	120	
Ge	72	1	No Gas	221581	1.17	222710	99.49	70	120	
In	115	1	No Gas	1302774	1.24	1280558	101.73	70	120	
Tb	159	1	No Gas	1610635	3.53	1515490	106.28	70	120	
Bi	209	1	No Gas	791534	0.54	722984	109.48	70	120	
Sc	45	3	HeHe	30097	1.51	30220	99.59	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	058_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T07:19:39-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.778	46.3	7275	48.2	9	
Cr	52	1	No Gas	-0.097	-70.9	6824	7.7	4	
Mn	55	1	No Gas	-0.083	-33.0	12035	2.0	25	
Co	59	1	No Gas	0.004	263.5	170	58.5	1	
Ni	60	1	No Gas	0.025	146.3	233	35.9	25	
Cu	63	1	No Gas	0.036	31.9	1507	2.6	25	
Sr	88	1	No Gas	0.005	39.9	200	14.7	25	
Ag	107	1	No Gas	0.020	23.8	200	14.7	9	
Al	27	1	No Gas	0.514	65.3	5962	25.1	1000000	
Sn	118	1	No Gas	-0.311	-9.6	1248	11.1	25	
Ti	47	1	No Gas	0.132	42.7	204	18.8	10000	
Zn	66	1	No Gas	0.031	205.2	347	30.6	25	
As	75	3	HeHe	0.046	3.4	10	0.0	9	
As	75	1	No Gas	-0.073	-664.4	11713	7.2	9	
Sb	121	1	No Gas	0.398	33.0	4161	15.2	4	
Hg	201	1	No Gas	0.046	39.3	50	20.8	0.04	CCB Main CR1 Failed
Be	9	1	No Gas	0.030	57.0	33	39.9	1	
Pb	208	1	No Gas	0.165	14.7	9885	3.1	4	
Se	82	1	No Gas	-0.716	-102.2	71	89.2	25	
Mo	98	1	No Gas	0.024	78.7	829	10.1	10000	
Ba	137	1	No Gas	0.047	21.5	130	15.4	25	
Tl	205	1	No Gas	0.006	98.0	104	52.9	1	
U	238	1	No Gas	0.014	29.2	193	21.8	25	
Na	23	2	he	1.949	156.3	55034	2.9	2500000	
Mg	24	2	he	0.193	79.8	348	16.1	2500000	
K	39	2	he	0.770	622.8	42945	1.6	5000000	
Se	82	3	HeHe	2.471	18.9	27	8.4	25	
Fe	57	3	HeHe	0.990	80.2	180	11.1	2500000	
Cd	114	1	No Gas	-0.003	-292.1	123	28.5	1	
Ca	44	1	No Gas	-6.504	-134.4	11291	17.1	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1575303	1.73	1662313	94.77	70	120	
Sc	45	2	he	206645	2.62	207479	99.60	70	120	
Ge	72	1	No Gas	224348	2.19	222710	100.74	70	120	
In	115	1	No Gas	1278609	3.34	1280558	99.85	70	120	
Tb	159	1	No Gas	1618838	1.31	1515490	106.82	70	120	
Bi	209	1	No Gas	774990	1.02	722984	107.19	70	120	

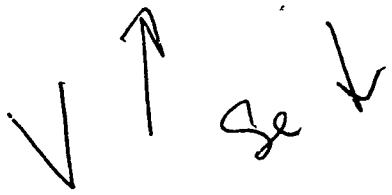
Continuing Calibration Blank (CCB) Report

Sc	45	3	HeHe	30494	1.81	30220	100.91	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	059LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T07:23:16-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass



QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.867	6.843	29874	7.31	2	143.4	70	130	LLCCV Main CR1 Failed
Cr	52	1	No Gas	1.869	1.268	26358	0.85	2	93.4	70	130	
Mn	55	1	No Gas	4.908	1.628	77973	1.60	5	98.2	70	130	
Co	59	1	No Gas	4.852	3.499	52488	3.47	5	97.0	70	130	
Ni	60	1	No Gas	4.978	2.075	11815	2.26	5	99.6	70	130	
Cu	63	1	No Gas	5.173	1.101	31608	0.69	5	103.5	70	130	
Sr	88	1	No Gas	4.884	1.952	75997	1.95	5	97.7	70	130	
Ag	107	1	No Gas	1.991	1.056	15408	0.26	2	99.6	70	130	
Al	27	1	No Gas	77.862	0.275	393451	0.59	80	97.3	70	130	
Sn	118	1	No Gas	1.627	4.028	10611	3.83	2	81.4	70	130	
Tl	47	1	No Gas	5.095	1.389	4069	1.00	5	101.9	70	130	
Zn	66	1	No Gas	5.595	0.859	9972	0.46	5	111.9	70	130	
As	75	3	HeHe	3.253	7.690	371	5.94	3	108.4	70	130	
As	75	1	No Gas	2.698	1.928	16872	0.80	3	89.9	70	130	
Sb	121	1	No Gas	2.292	1.889	15284	1.57	2	114.6	70	130	
Hg	201	1	No Gas	0.233	0.455	164	2.44	0.2	116.4	70	130	
Be	9	1	No Gas	1.042	3.261	880	2.84	1	104.2	70	130	
Pb	208	1	No Gas	2.138	1.519	34268	1.34	2	106.9	70	130	
Se	82	1	No Gas	3.430	14.283	465	9.90	5	68.6	70	130	LLCCV Main CR1 Failed
Mo	98	1	No Gas	1.902	2.051	9698	0.77	2	95.1	70	130	
Ba	137	1	No Gas	5.130	7.260	9733	4.12	5	102.6	70	130	
Tl	205	1	No Gas	0.953	2.806	8910	4.15	1	95.3	70	130	
U	238	1	No Gas	4.801	3.464	47394	3.32	5	96.0	70	130	
Na	23	2	he	99.249	3.885	111710	3.62	100	99.2	70	130	
Mg	24	2	he	100.518	0.117	31585	1.79	100	100.5	70	130	
K	39	2	he	94.906	2.786	77911	2.19	100	94.9	70	130	
Se	82	3	HeHe	6.484	44.425	49	32.58	5	129.7	70	130	
Fe	57	3	HeHe	55.846	1.327	1784	2.82	50	111.7	70	130	
Cd	114	1	No Gas	1.066	7.758	4077	6.72	1	106.6	70	130	
Ca	44	1	No Gas	97.748	7.442	36710	4.33	100	97.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1651414	0.38	1662313	99.34	70	120	
Sc	45	2	he	209722	1.79	207479	101.08	70	120	
Ge	72	1	No Gas	224441	1.04	222710	100.78	70	120	
In	115	1	No Gas	1319454	1.28	1280558	103.04	70	120	
Tb	159	1	No Gas	1628423	3.09	1515490	107.45	70	120	
Bi	209	1	No Gas	785257	2.49	722984	108.61	70	120	
Sc	45	3	HeHe	30681	1.70	30220	101.53	70	120	

Sample Report

Sample Table

Sample Name	1021902
Data File Name	065SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T07:44:45-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3204

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	0.737	0.737	58.35	7046	0.01	1000	
Cr	52	1	No Gas	0.243	0.243	29.51	10259	0.00	1000	
Mn	55	1	No Gas	0.042	0.042	213.52	13962	0.00	1000	
Co	59	1	No Gas	-0.005	-0.005	-75.12	89	-0.01	1000	
Ni	60	1	No Gas	0.161	0.161	16.72	550	0.03	1000	
Cu	63	1	No Gas	0.165	0.165	19.92	2287	0.01	1000	
Sr	88	1	No Gas	0.039	0.039	37.14	726	0.01	1000	
Ag	107	1	No Gas	0.004	0.004	81.47	85	0.01	1000	
Al	27	1	No Gas	5.561	5.561	16.36	30903	0.02	100000	
Sn	118	1	No Gas	-0.447	-0.447	-1.83	611	-0.07	100	
Ti	47	1	No Gas	0.223	0.223	27.29	278	0.08	2000	
Zn	66	1	No Gas	0.862	0.862	8.78	1760	0.05	1000	
As	75	3	HeHe	-0.002	-0.002	-4066.68	5	-0.04	1000	
As	75	1	No Gas	0.695	0.695	59.72	13271	0.01	1000	
Sb	121	1	No Gas	-0.255	-0.255	-1.34	497	-0.05	100	
Hg	201	1	No Gas	0.022	0.022	24.33	35	0.06	4	
Be	9	1	No Gas	-0.004	-0.004	-71.57	7	-0.06	1000	
Pb	208	1	No Gas	0.300	0.300	21.28	11167	0.00	1000	
Se	82	1	No Gas	-1.364	-1.364	-77.31	16	-8.66	1000	
Mo	98	1	No Gas	-0.076	-0.076	-25.45	370	-0.02	2000	
Ba	137	1	No Gas	0.147	0.147	15.30	320	0.05	1000	
Tl	205	1	No Gas	-0.005	-0.005	0.00	0	#DIV/0!	1000	
U	238	1	No Gas	0.001	0.001	184.17	59	0.00	1000	
Na	23	2	he	7.160	7.160	54.31	59449	0.01	100000	
Mg	24	2	he	2.484	2.484	37.72	1082	0.23	100000	
K	39	2	he	-0.453	-0.453	-548.67	43613	0.00	100000	
Se	82	3	HeHe	0.390	0.390	396.51	17	2.29	1000	
Fe	57	3	HeHe	13.733	13.733	24.96	557	2.47	100000	
Cd	114	1	No Gas	-0.015	-0.015	-16.76	80	-0.02	1000	
Ca	44	1	No Gas	6.253	6.253	174.69	14556	0.04	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1618477	2.25	1662313	97.36	70	120	
Sc	45	2	he	211952	2.44	207479	102.16	70	120	

Ge	72	1	No Gas	220316	1.90	222710	98.93	70	120	
In	115	1	No Gas	1261385	1.81	1280558	98.50	70	120	
Tb	159	1	No Gas	1626749	1.64	1515490	107.34	70	120	
Bi	209	1	No Gas	750825	1.12	722984	103.85	70	120	
Sc	45	3	HeHe	30918	1.73	30220	102.31	70	120	

Sample Report

Sample Table

Sample Name	1021903
Data File Name	066SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T07:48:22-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3205

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	40.409	40.409	0.65	420861	0.01	1000	
Cr	52	1	No Gas	40.557	40.557	0.90	396692	0.01	1000	
Mn	55	1	No Gas	40.697	40.697	0.64	536470	0.01	1000	
Co	59	1	No Gas	39.866	39.866	1.19	422297	0.01	1000	
Ni	60	1	No Gas	40.705	40.705	1.46	93505	0.04	1000	
Cu	63	1	No Gas	40.751	40.751	1.69	235115	0.02	1000	
Sr	88	1	No Gas	38.975	38.975	1.37	594265	0.01	1000	
Ag	107	1	No Gas	20.332	20.332	0.90	153424	0.01	1000	
Al	27	1	No Gas	406.016	406.016	2.64	1998170	0.02	100000	
Sn	118	1	No Gas	37.719	37.719	2.76	180180	0.02	100	
Ti	47	1	No Gas	38.505	38.505	0.71	29463	0.13	2000	
Zn	66	1	No Gas	400.377	400.377	1.19	678923	0.06	1000	
As	75	3	HeHe	39.283	39.283	3.44	4574	0.86	1000	
As	75	1	No Gas	40.311	40.311	2.37	77795	0.05	1000	
Sb	121	1	No Gas	47.085	47.085	1.49	269028	0.02	100	
Hg	201	1	No Gas	0.503	0.503	8.52	320	0.16	4	
Be	9	1	No Gas	39.176	39.176	1.26	32117	0.12	1000	
Pb	208	1	No Gas	41.180	41.180	2.35	501798	0.01	1000	
Se	82	1	No Gas	38.409	38.409	0.94	3680	1.04	1000	
Mo	98	1	No Gas	39.678	39.678	4.29	183602	0.02	2000	
Ba	137	1	No Gas	397.676	397.676	3.10	756165	0.05	1000	
Tl	205	1	No Gas	40.210	40.210	4.43	364738	0.01	1000	
U	238	1	No Gas	-0.001	-0.001	-194.30	44	0.00	1000	
Na	23	2	he	417.299	417.299	0.88	291679	0.14	100000	
Mg	24	2	he	421.056	421.056	1.71	130267	0.32	100000	
K	39	2	he	415.889	415.889	2.01	193206	0.22	100000	
Se	82	3	HeHe	44.895	44.895	14.03	254	17.64	1000	
Fe	57	3	HeHe	425.285	425.285	2.68	12969	3.28	100000	
Cd	114	1	No Gas	40.461	40.461	1.26	146472	0.03	1000	
Ca	44	1	No Gas	404.769	404.769	2.01	107934	0.38	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1620738	1.79	1662313	97.50	70	120	
Sc	45	2	he	207975	1.21	207479	100.24	70	120	

Ge	72	1	No Gas	221779	1.45	222710	99.58	70	120	
In	115	1	No Gas	1290880	1.10	1280558	100.81	70	120	
Tb	159	1	No Gas	1637080	2.48	1515490	108.02	70	120	
Bi	209	1	No Gas	766487	3.43	722984	106.02	70	120	
Sc	45	3	HeHe	31649	2.35	30220	104.73	70	120	

Sample Report

Sample Table

Sample Name	9981496001
Data File Name	067SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T07:51:59-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3206

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	29.697	29.697	4.18	309781	0.01	1000	
Cr	52	1	No Gas	16.541	16.541	6.63	166768	0.01	1000	
Mn	55	1	No Gas	4.716	4.716	4.65	74209	0.01	1000	
Co	59	1	No Gas	0.422	0.422	4.93	4616	0.01	1000	
Ni	60	1	No Gas	4.121	4.121	5.34	9650	0.04	1000	
Cu	63	1	No Gas	0.961	0.961	8.41	6865	0.01	1000	
Sr	88	1	No Gas	6.424	6.424	4.12	98248	0.01	1000	
Ag	107	1	No Gas	0.022	0.022	29.91	222	0.01	1000	
Al	27	1	No Gas	22500.647	22500.647	6.09	110731347	0.02	100000	
Sn	118	1	No Gas	-0.171	-0.171	-25.63	1952	-0.01	100	
Ti	47	1	No Gas	38.116	38.116	3.44	29231	0.13	2000	
Zn	66	1	No Gas	7.557	7.557	7.71	13141	0.06	1000	
As	75	3	HeHe	0.413	0.413	16.02	53	0.78	1000	
As	75	1	No Gas	-0.072	-0.072	-1025.48	12100	0.00	1000	
Sb	121	1	No Gas	-0.155	-0.155	-10.84	1093	-0.01	100	
Hg	201	1	No Gas	0.100	0.100	42.64	84	0.12	4	
Be	9	1	No Gas	0.156	0.156	14.15	138	0.11	1000	
Pb	208	1	No Gas	17.638	17.638	1.96	225868	0.01	1000	
Se	82	1	No Gas	2.047	2.047	13.32	329	0.62	1000	
Mo	98	1	No Gas	0.895	0.895	6.17	4924	0.02	2000	
Ba	137	1	No Gas	21.868	21.868	3.20	41260	0.05	1000	
Tl	205	1	No Gas	0.153	0.153	17.18	1471	0.01	1000	
U	238	1	No Gas	1.836	1.836	4.59	18241	0.01	1000	
Na	23	2	he	11.509	11.509	33.26	63384	0.02	100000	
Mg	24	2	he	237.743	237.743	0.96	76802	0.31	100000	
K	39	2	he	392.717	392.717	1.82	192653	0.20	100000	
Se	82	3	HeHe	2.612	2.612	17.80	29	8.93	1000	
Fe	57	3	HeHe	1414.078	1414.078	4.14	42823	3.30	100000	
Cd	114	1	No Gas	-0.004	-0.004	-476.53	123	0.00	1000	
Ca	44	1	No Gas	84.503	84.503	5.76	33028	0.26	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1625245	2.79	1662313	97.77	70	120	
Sc	45	2	he	216739	2.50	207479	104.46	70	120	
Ge	72	1	No Gas	224661	1.22	222710	100.88	70	120	

In	115	1	No Gas	1310334	0.98	1280558	102.33	70	120	
Tb	159	1	No Gas	1623282	2.35	1515490	107.11	70	120	
Bi	209	1	No Gas	789110	1.89	722984	109.15	70	120	
Sc	45	3	HeHe	31713	1.44	30220	104.94	70	120	

Sample Report

Sample Table

Sample Name	9981496002
Data File Name	068SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T07:55:37-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3207

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	15.268	15.268	3.00	167433	0.01	1000	
Cr	52	1	No Gas	19.229	19.229	1.05	202906	0.01	1000	
Mn	55	1	No Gas	16.518	16.518	1.36	238199	0.01	1000	
Co	59	1	No Gas	0.271	0.271	11.25	3175	0.01	1000	
Ni	60	1	No Gas	5.966	5.966	3.36	14630	0.04	1000	
Cu	63	1	No Gas	1.227	1.227	2.31	8847	0.01	1000	
Sr	88	1	No Gas	12.188	12.188	1.50	196189	0.01	1000	
Ag	107	1	No Gas	0.005	0.005	224.19	96	0.01	1000	
Al	27	1	No Gas	9941.823	9941.823	0.74	51552244	0.02	100000	
Sn	118	1	No Gas	0.115	0.115	43.03	3434	0.00	100	
Tl	47	1	No Gas	273.353	273.353	1.12	220039	0.12	2000	
Zn	66	1	No Gas	3.868	3.868	5.51	7238	0.05	1000	
As	75	3	HeHe	0.503	0.503	22.91	63	0.80	1000	
As	75	1	No Gas	-0.161	-0.161	-147.59	12563	0.00	1000	
Sb	121	1	No Gas	-0.243	-0.243	-4.89	607	-0.04	100	
Hg	201	1	No Gas	0.166	0.166	16.19	123	0.14	4	
Be	9	1	No Gas	0.157	0.157	14.49	146	0.11	1000	
Pb	208	1	No Gas	8.417	8.417	2.96	110935	0.01	1000	
Se	82	1	No Gas	1.154	1.154	75.01	260	0.44	1000	
Mo	98	1	No Gas	0.303	0.303	10.61	2233	0.01	2000	
Ba	137	1	No Gas	17.968	17.968	3.85	34955	0.05	1000	
Tl	205	1	No Gas	0.150	0.150	8.75	1433	0.01	1000	
U	238	1	No Gas	1.160	1.160	7.84	11431	0.01	1000	
Na	23	2	he	36.296	36.296	16.36	77777	0.05	100000	
Mg	24	2	he	239.066	239.066	1.05	76917	0.31	100000	
K	39	2	he	559.560	559.560	4.23	254325	0.22	100000	
Se	82	3	HeHe	4.803	4.803	21.84	41	11.79	1000	
Fe	57	3	HeHe	1080.134	1080.134	1.23	32481	3.33	100000	
Cd	114	1	No Gas	0.016	0.016	152.20	200	0.01	1000	
Ca	44	1	No Gas	544.103	544.103	0.14	148313	0.37	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1710464	1.23	1662313	102.90	70	120	
Sc	45	2	he	215888	2.51	207479	104.05	70	120	
Ge	72	1	No Gas	226424	1.28	222710	101.67	70	120	

In	115	1	No Gas	1358117	1.13	1280558	106.06	70	120	
Tb	159	1	No Gas	1672397	3.67	1515490	110.35	70	120	
Bi	209	1	No Gas	781575	1.80	722984	108.10	70	120	
Sc	45	3	HeHe	31446	2.52	30220	104.06	70	120	

Sample Report

Sample Table

Sample Name	9981496003
Data File Name	069SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T07:59:13-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3208

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	5.243	5.243	2.37	55619	0.01	1000	
Cr	52	1	No Gas	4.691	4.691	2.21	54408	0.01	1000	
Mn	55	1	No Gas	5.272	5.272	1.85	83502	0.01	1000	
Co	59	1	No Gas	0.087	0.087	6.02	1093	0.01	1000	
Ni	60	1	No Gas	0.809	0.809	8.43	2097	0.04	1000	
Cu	63	1	No Gas	0.646	0.646	2.38	5189	0.01	1000	
Sr	88	1	No Gas	2.102	2.102	2.60	33082	0.01	1000	
Ag	107	1	No Gas	0.006	0.006	105.31	104	0.01	1000	
Al	27	1	No Gas	3949.860	3949.860	1.08	19951586	0.02	100000	
Sn	118	1	No Gas	-0.262	-0.262	-21.03	1533	-0.02	100	
Ti	47	1	No Gas	116.368	116.368	2.33	91296	0.13	2000	
Zn	66	1	No Gas	1.153	1.153	8.11	2322	0.05	1000	
As	75	3	HeHe	0.505	0.505	28.25	63	0.80	1000	
As	75	1	No Gas	0.815	0.815	49.40	13867	0.01	1000	
Sb	121	1	No Gas	-0.293	-0.293	-5.38	300	-0.10	100	
Hg	201	1	No Gas	0.090	0.090	20.82	76	0.12	4	
Be	9	1	No Gas	0.100	0.100	10.72	95	0.11	1000	
Pb	208	1	No Gas	4.179	4.179	1.58	58424	0.01	1000	
Se	82	1	No Gas	-1.598	-1.598	-75.57	-8	18.90	1000	
Mo	98	1	No Gas	0.013	0.013	242.81	807	0.00	2000	
Ba	137	1	No Gas	6.282	6.282	4.23	12035	0.05	1000	
Tl	205	1	No Gas	0.043	0.043	25.18	441	0.01	1000	
U	238	1	No Gas	0.879	0.879	7.91	8584	0.01	1000	
Na	23	2	he	14.393	14.393	37.74	62849	0.02	100000	
Mg	24	2	he	63.499	63.499	0.77	20023	0.32	100000	
K	39	2	he	86.325	86.325	5.79	74623	0.12	100000	
Se	82	3	HeHe	3.564	3.564	20.06	34	10.35	1000	
Fe	57	3	HeHe	316.917	316.917	5.08	9757	3.25	100000	
Cd	114	1	No Gas	0.000	0.000	-1470.26	137	0.00	1000	
Ca	44	1	No Gas	37.708	37.708	39.42	22619	0.17	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1666370	2.22	1662313	100.24	70	120	
Sc	45	2	he	209317	1.78	207479	100.89	70	120	
Ge	72	1	No Gas	223526	1.76	222710	100.37	70	120	

In	115	1	No Gas	1324048	0.63	1280558	103.40	70	120	
Tb	159	1	No Gas	1642777	1.34	1515490	108.40	70	120	
Bi	209	1	No Gas	772678	1.50	722984	106.87	70	120	
Sc	45	3	HeHe	31873	4.96	30220	105.47	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	070_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:02:49-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

Sr ↑

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	100.568	0.620	1079747	2.18	100	100.6	90	110	
Cr	52	1	No Gas	99.227	1.482	987862	2.64	100	99.2	90	110	
Mn	55	1	No Gas	106.655	2.287	1425245	0.63	100	106.7	90	110	
Co	59	1	No Gas	99.900	2.910	1089376	1.18	100	99.9	90	110	
Ni	60	1	No Gas	102.115	1.414	241279	1.41	100	102.1	90	110	
Cu	63	1	No Gas	103.111	2.858	610529	0.31	100	103.1	90	110	
Sr	88	1	No Gas	111.347	4.703	1747213	2.09	100	111.3	90	110	CCV Main CR1 Failed
Ag	107	1	No Gas	96.447	2.410	768815	0.83	100	96.4	90	110	
Al	27	1	No Gas	98.977	2.013	504669	3.48	100	99.0	90	110	
Sn	118	1	No Gas	107.677	1.759	538110	1.47	100	107.7	90	110	
Tl	47	1	No Gas	95.263	2.176	74892	0.57	100	95.3	90	110	
Zn	66	1	No Gas	102.531	1.456	179309	1.32	100	102.5	90	110	
As	75	3	HeHe	99.434	1.197	11409	1.83	100	99.4	90	110	
As	75	1	No Gas	100.995	1.091	181877	1.78	100	101.0	90	110	
Sb	121	1	No Gas	104.867	5.882	630279	4.10	100	104.9	90	110	
Hg	201	1	No Gas	2.095	0.100	1292	0.86	2	104.7	90	110	
Be	9	1	No Gas	102.164	2.752	86239	0.57	100	102.2	90	110	
Pb	208	1	No Gas	100.644	2.081	1243758	1.27	100	100.6	90	110	
Se	82	1	No Gas	103.060	4.141	9921	1.59	100	103.1	90	110	
Mo	98	1	No Gas	97.223	3.832	474021	1.88	100	97.2	90	110	
Ba	137	1	No Gas	96.520	0.475	192079	0.96	100	96.5	90	110	
Tl	205	1	No Gas	97.400	2.647	904586	1.99	100	97.4	90	110	
U	238	1	No Gas	104.358	1.468	1028302	0.99	100	104.4	90	110	
Na	23	2	he	1004.638	3.131	645081	0.78	1000	100.5	90	110	
Mg	24	2	he	1020.085	4.272	324826	1.95	1000	102.0	90	110	
K	39	2	he	992.891	3.198	414058	1.06	1000	99.3	90	110	
Se	82	3	HeHe	104.549	3.196	565	2.62	100	104.5	90	110	
Fe	57	3	HeHe	1017.444	0.480	30364	0.58	1000	101.7	90	110	
Cd	114	1	No Gas	98.240	2.835	375527	0.92	100	98.2	90	110	
Ca	44 .	1	No Gas	1006.940	1.946	256326	1.32	1000	100.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1669666	2.74	1662313	100.44	70	120	
Sc	45	2	he	214500	3.19	207479	103.38	70	120	
Ge	72	1	No Gas	233932	1.17	222710	105.04	70	120	
In	115	1	No Gas	1364399	2.03	1280558	106.55	70	120	
Tb	159	1	No Gas	1712623	1.12	1515490	113.01	70	120	
Bi	209	1	No Gas	784447	0.80	722984	108.50	70	120	
Sc	45	3	HeHe	31195	0.79	30220	103.23	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	071_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:06:26-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	.Upper Limit	QC Flag
V	51	1	No Gas	0.321	22.5	2717	26.6	9	
Cr	52	1	No Gas	0.046	96.8	8269	3.1	4	
Mn	55	1	No Gas	-0.076	-148.6	12276	8.6	25	
Co	59	1	No Gas	-0.003	-139.1	104	37.6	1	
Ni	60	1	No Gas	0.013	334.0	210	46.9	25	
Cu	63	1	No Gas	0.021	97.9	1441	8.7	25	
Sr	88	1	No Gas	0.005	88.7	200	33.8	25	
Ag	107	1	No Gas	0.012	1.4	144	0.0	9	
Al	27	1	No Gas	0.181	63.3	4442	9.8	1000000	
Sn	118	1	No Gas	-0.281	-19.4	1393	17.6	25	
Ti	47	1	No Gas	0.214	130.6	273	81.4	10000	
Zn	66	1	No Gas	0.042	26.0	370	4.7	25	
As	75	3	HeHe	0.045	134.7	10	72.1	9	
As	75	1	No Gas	0.320	252.4	12540	13.8	9	
Sb	121	1	No Gas	0.397	25.7	4177	13.4	4	
Hg	201	1	No Gas	0.014	118.8	31	32.8	0.04	
Be	9	1	No Gas	0.018	108.2	24	62.9	1	
Pb	208	1	No Gas	0.139	35.2	9537	3.6	4	
Se	82	1	No Gas	-1.536	-67.8	0	-40721.0	25	
Mo	98	1	No Gas	0.038	86.1	897	16.8	10000	
Ba	137	1	No Gas	0.020	54.2	80	25.0	25	
Tl	205	1	No Gas	0.009	42.4	126	27.0	1	
U	238	1	No Gas	0.020	27.4	244	23.6	25	
Na	23	2	he	4.419	104.4	56784	4.4	2500000	
Mg	24	2	he	0.093	156.0	319	14.1	2500000	
K	39	2	he	2.480	69.2	43855	1.7	5000000	
Se	82	3	HeHe	0.849	95.9	19	24.0	25	
Fe	57	3	HeHe	1.438	249.8	193	53.1	2500000	
Cd	114	1	No Gas	-0.006	-118.1	113	22.2	1	
Ca	44	1	No Gas	-10.741	-25.4	10481	5.7	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1598283	3.29	1662313	96.15	70	120	
Sc	45	2	he	207903	0.27	207479	100.20	70	120	
Ge	72	1	No Gas	221217	1.16	222710	99.33	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	1282457	0.86	1280558	100.15	70	120	
Tb	159	1	No Gas	1637367	1.56	1515490	108.04	70	120	
Bi	209	1	No Gas	772438	2.54	722984	106.84	70	120	
Sc	45	3	HeHe	30704	2.10	30220	101.60	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	072LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:10:03-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass



QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.727	11.140	28272	9.91	2	136.3	70	130	LLCCV Main CR1 Failed
Cr	52	1	No Gas	1.969	2.920	27263	0.45	2	98.4	70	130	
Mn	55	1	No Gas	4.978	2.981	78677	0.96	5	99.6	70	130	
Co	59	1	No Gas	5.016	3.624	54110	2.04	5	100.3	70	130	
Ni	60	1	No Gas	5.076	3.561	12011	3.47	5	101.5	70	130	
Cu	63	1	No Gas	5.142	3.503	31341	2.12	5	102.8	70	130	
Sr	88	1	No Gas	4.845	0.281	75201	1.95	5	96.9	70	130	
Ag	107	1	No Gas	1.955	6.480	15649	3.37	2	97.8	70	130	
Al	27	1	No Gas	75.962	2.123	382925	0.86	80	95.0	70	130	
Sn	118	1	No Gas	1.706	12.503	11401	12.19	2	85.3	70	130	
Ti	47	1	No Gas	5.014	3.178	3995	1.82	5	100.3	70	130	
Zn	66	1	No Gas	5.689	7.864	10104	6.17	5	113.8	70	130	
As	75	3	HeHe	3.319	7.723	382	9.55	3	110.6	70	130	
As	75	1	No Gas	2.862	12.643	17100	3.02	3	95.4	70	130	
Sb	121	1	No Gas	2.320	3.757	16002	4.26	2	116.0	70	130	
Hg	201	1	No Gas	0.198	12.418	142	12.03	0.2	99.0	70	130	
Be	9	1	No Gas	1.060	5.069	893	4.59	1	106.0	70	130	
Pb	208	1	No Gas	2.072	4.908	33182	1.24	2	103.6	70	130	
Se	82	1	No Gas	4.753	22.161	587	15.46	5	95.1	70	130	
Mo	98	1	No Gas	1.892	6.196	9986	2.56	2	94.6	70	130	
Ba	137	1	No Gas	4.973	2.822	9683	3.14	5	99.5	70	130	
Tl	205	1	No Gas	0.972	4.403	9022	6.99	1	97.2	70	130	
U	238	1	No Gas	4.801	4.355	47007	1.79	5	96.0	70	130	
Na	23	2	he	101.300	4.494	112216	1.87	100	101.3	70	130	
Mg	24	2	he	103.319	1.553	32271	1.07	100	103.3	70	130	
K	39	2	he	100.936	2.804	79655	1.65	100	100.9	70	130	
Se	82	3	HeHe	4.236	64.279	37	35.72	5	84.7	70	130	
Fe	57	3	HeHe	51.335	7.152	1663	9.12	50	102.7	70	130	
Cd	114	1	No Gas	1.099	6.295	4354	8.08	1	109.9	70	130	
Ca	44	1	No Gas	94.235	10.027	35779	5.76	100	94.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1647416	1.67	1662313	99.10	70	120	
Sc	45	2	he	208533	0.62	207479	100.51	70	120	
Ge	72	1	No Gas	225761	1.09	222710	101.37	70	120	
In	115	1	No Gas	1366661	3.40	1280558	106.72	70	120	
Tb	159	1	No Gas	1668554	1.04	1515490	110.10	70	120	
Bi	209	1	No Gas	779200	2.65	722984	107.78	70	120	
Sc	45	3	HeHe	30875	3.84	30220	102.17	70	120	

Sample Report

Sample Table

Sample Name	9981496004
Data File Name	073SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:13:39-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3209

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	31.445	31.445	2.28	325002	0.01	1000	
Cr	52	1	No Gas	17.762	17.762	5.29	176833	0.01	1000	
Mn	55	1	No Gas	5.281	5.281	3.24	80705	0.01	1000	
Co	59	1	No Gas	0.535	0.535	3.31	5760	0.01	1000	
Ni	60	1	No Gas	6.228	6.228	5.91	14357	0.04	1000	
Cu	63	1	No Gas	1.259	1.259	6.32	8501	0.01	1000	
Sr	88	1	No Gas	3.109	3.109	4.38	47160	0.01	1000	
Ag	107	1	No Gas	0.013	0.013	65.72	148	0.01	1000	
Al	27	1	No Gas	15123.009	15123.009	2.42	73760349	0.02	100000	
Sn	118	1	No Gas	-0.235	-0.235	-5.49	1630	-0.01	100	
Ti	47	1	No Gas	111.582	111.582	2.65	84535	0.13	2000	
Zn	66	1	No Gas	3.603	3.603	5.60	6362	0.06	1000	
As	75	3	HeHe	0.263	0.263	39.84	33	0.79	1000	
As	75	1	No Gas	0.771	0.771	130.68	13303	0.01	1000	
Sb	121	1	No Gas	0.035	0.035	84.90	2170	0.00	100	
Hg	201	1	No Gas	0.049	0.049	63.01	51	0.10	4	
Be	9	1	No Gas	0.160	0.160	8.05	140	0.11	1000	
Pb	208	1	No Gas	7.938	7.938	2.93	101820	0.01	1000	
Se	82	1	No Gas	0.926	0.926	62.18	224	0.41	1000	
Mo	98	1	No Gas	0.942	0.942	0.76	5101	0.02	2000	
Ba	137	1	No Gas	8.540	8.540	2.40	15995	0.05	1000	
Tl	205	1	No Gas	0.080	0.080	15.11	767	0.01	1000	
U	238	1	No Gas	0.789	0.789	6.01	7562	0.01	1000	
Na	23	2	he	16.324	16.324	33.50	63462	0.03	100000	
Mg	24	2	he	245.635	245.635	1.83	76011	0.32	100000	
K	39	2	he	355.489	355.489	1.79	171173	0.21	100000	
Se	82	3	HeHe	3.324	3.324	44.85	31	10.69	1000	
Fe	57	3	HeHe	1381.515	1381.515	3.52	39165	3.53	100000	
Cd	114	1	No Gas	-0.002	-0.002	-120.92	127	0.00	1000	
Ca	44	1	No Gas	52.671	52.671	9.63	25280	0.21	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1609314	2.46	1662313	96.81	70	120	
Sc	45	2	he	207734	2.36	207479	100.12	70	120	
Ge	72	1	No Gas	220268	3.75	222710	98.90	70	120	

In	115	1	No Gas	1299025	3.83	1280558	101.44	70	120	
Tb	159	1	No Gas	1608128	2.95	1515490	106.11	70	120	
Bi	209	1	No Gas	757489	1.65	722984	104.77	70	120	
Sc	45	3	HeHe	29696	4.04	30220	98.27	70	120	

Sample Report

Sample Table

Sample Name	1021904
Data File Name	074SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:17:16-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3210

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	70.096	70.096	0.96	685917	0.01	1000	
Cr	52	1	No Gas	58.830	58.830	1.01	537014	0.01	1000	
Mn	55	1	No Gas	45.357	45.357	3.03	559996	0.01	1000	
Co	59	1	No Gas	41.181	41.181	2.80	409637	0.01	1000	
Ni	60	1	No Gas	48.055	48.055	1.51	103633	0.05	1000	
Cu	63	1	No Gas	42.961	42.961	2.43	232713	0.02	1000	
Sr	88	1	No Gas	41.932	41.932	1.79	600376	0.01	1000	
Ag	107	1	No Gas	20.541	20.541	2.89	145271	0.01	1000	
Al	27	1	No Gas	13949.488	13949.488	2.47	64348759	0.02	100000	
Sn	118	1	No Gas	37.931	37.931	1.84	169755	0.02	100	
Ti	47	1	No Gas	92.931	92.931	3.15	66619	0.14	2000	
Zn	66	1	No Gas	418.900	418.900	1.25	667110	0.06	1000	
As	75	3	HeHe	38.590	38.590	0.87	4321	0.89	1000	
As	75	1	No Gas	41.165	41.165	4.18	74345	0.06	1000	
Sb	121	1	No Gas	45.876	45.876	3.83	245698	0.02	100	
Hg	201	1	No Gas	0.493	0.493	5.25	297	0.17	4	
Be	9	1	No Gas	39.897	39.897	1.91	30720	0.13	1000	
Pb	208	1	No Gas	49.398	49.398	0.89	567275	0.01	1000	
Se	82	1	No Gas	42.015	42.015	2.59	3768	1.12	1000	
Mo	98	1	No Gas	40.425	40.425	2.21	175228	0.02	2000	
Ba	137	1	No Gas	395.176	395.176	2.34	716876	0.06	1000	
Tl	205	1	No Gas	39.758	39.758	0.93	340883	0.01	1000	
U	238	1	No Gas	0.822	0.822	1.87	7528	0.01	1000	
Na	23	2	he	437.917	437.917	1.71	301887	0.15	100000	
Mg	24	2	he	578.344	578.344	1.69	177932	0.33	100000	
K	39	2	he	620.286	620.286	0.88	265731	0.23	100000	
Se	82	3	HeHe	42.490	42.490	9.22	233	18.24	1000	
Fe	57	3	HeHe	1339.312	1339.312	1.28	38932	3.44	100000	
Cd	114	1	No Gas	40.943	40.943	1.35	138921	0.03	1000	
Ca	44	1	No Gas	466.336	466.336	4.43	114842	0.41	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1522089	1.27	1662313	91.56	70	120	
Sc	45	2	he	206930	0.45	207479	99.74	70	120	
Ge	72	1	No Gas	210132	0.41	222710	94.35	70	120	

In	115	1	No Gas	1209923	1.62	1280558	94.48	70	120	
Tb	159	1	No Gas	1562117	3.54	1515490	103.08	70	120	
Bi	209	1	No Gas	724083	1.12	722984	100.15	70	120	
Sc	45	3	HeHe	30431	3.74	30220	100.70	70	120	

Sample Report

Sample Table

Sample Name	1021905
Data File Name	075SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:20:54-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3211

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	73.904	73.904	1.89	763861	0.01	1000	
Cr	52	1	No Gas	63.086	63.086	1.54	607656	0.01	1000	
Mn	55	1	No Gas	44.547	44.547	3.82	581029	0.01	1000	
Co	59	1	No Gas	38.180	38.180	2.43	401097	0.01	1000	
Ni	60	1	No Gas	47.198	47.198	2.46	107499	0.04	1000	
Cu	63	1	No Gas	40.224	40.224	1.74	230232	0.02	1000	
Sr	88	1	No Gas	40.309	40.309	4.07	609493	0.01	1000	
Ag	107	1	No Gas	19.155	19.155	2.30	135989	0.01	1000	
Al	27	1	No Gas	17678.378	17678.378	4.50	86139282	0.02	100000	
Sn	118	1	No Gas	37.462	37.462	4.07	168339	0.02	100	
Ti	47	1	No Gas	148.979	148.979	2.74	112753	0.13	2000	
Zn	66	1	No Gas	383.841	383.841	0.57	645679	0.06	1000	
As	75	3	HeHe	38.756	38.756	4.13	4209	0.92	1000	
As	75	1	No Gas	36.796	36.796	2.51	71478	0.05	1000	
Sb	121	1	No Gas	38.056	38.056	4.29	204861	0.02	100	
Hg	201	1	No Gas	0.458	0.458	4.75	285	0.16	4	
Be	9	1	No Gas	39.973	39.973	1.94	32511	0.12	1000	
Pb	208	1	No Gas	48.391	48.391	3.20	570860	0.01	1000	
Se	82	1	No Gas	37.741	37.741	2.94	3588	1.05	1000	
Mo	98	1	No Gas	39.129	39.129	4.99	170235	0.02	2000	
Ba	137	1	No Gas	390.717	390.717	3.34	710475	0.05	1000	
Tl	205	1	No Gas	38.108	38.108	2.55	335611	0.01	1000	
U	238	1	No Gas	0.869	0.869	6.97	8169	0.01	1000	
Na	23	2	he	440.494	440.494	2.76	289312	0.15	100000	
Mg	24	2	he	703.946	703.946	0.74	206467	0.34	100000	
K	39	2	he	808.267	808.267	0.96	317884	0.25	100000	
Se	82	3	HeHe	44.168	44.168	5.56	234	18.87	1000	
Fe	57	3	HeHe	1924.068	1924.068	4.24	54189	3.55	100000	
Cd	114	1	No Gas	38.675	38.675	2.76	131704	0.03	1000	
Ca	44	1	No Gas	440.478	440.478	0.33	115337	0.38	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1607699	1.40	1662313	96.71	70	120	
Sc	45	2	he	197353	2.76	207479	95.12	70	120	
Ge	72	1	No Gas	210936	1.51	222710	94.71	70	120	

In	115	1	No Gas	1214866	2.43	1280558	94.87	70	120	
Tb	159	1	No Gas	1565406	1.53	1515490	103.29	70	120	
Bi	209	1	No Gas	743623	1.53	722984	102.85	70	120	
Sc	45	3	HeHe	29532	2.93	30220	97.72	70	120	

Sample Report

Sample Table

Sample Name	9981496004PS
Data File Name	076SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:24:30-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass
Vial	3212

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QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	239.925	239.925	3.75	2402897	0.01	1000	
Cr	52	1	No Gas	221.191	221.191	4.07	2043885	0.01	1000	
Mn	55	1	No Gas	215.516	215.516	1.13	2674458	0.01	1000	
Co	59	1	No Gas	210.247	210.247	1.31	2139790	0.01	1000	
Ni	60	1	No Gas	213.283	213.283	1.17	470153	0.05	1000	
Cu	63	1	No Gas	208.972	208.972	2.47	1153565	0.02	1000	
Sr	88	1	No Gas	2.952	2.952	0.45	43386	0.01	1000	
Ag	107	1	No Gas	214.695	214.695	3.57	1442817	0.01	1000	
Al	27	1	No Gas	15000.128	15000.128	1.13	70840708	0.02	100000	
Sn	118	1	No Gas	-0.197	-0.197	-7.71	1604	-0.01	100	
Tl	47	1	No Gas	108.105	108.105	2.74	79298	0.14	2000	
Zn	66	1	No Gas	207.897	207.897	1.98	338898	0.06	1000	
As	75	3	HeHe	209.314	209.314	2.51	21657	0.97	1000	
As	75	1	No Gas	206.158	206.158	1.87	334173	0.06	1000	
Sb	121	1	No Gas	234.491	234.491	1.51	1187206	0.02	100	>LDR
Hg	201	1	No Gas	0.050	0.050	26.50	50	0.10	4	
Be	9	1	No Gas	217.365	217.365	1.59	171251	0.13	1000	
Pb	208	1	No Gas	222.357	222.357	1.32	2562273	0.01	1000	
Se	82	1	No Gas	203.838	203.838	4.68	18175	1.12	1000	
Mo	98	1	No Gas	219.207	219.207	2.74	900702	0.02	2000	
Ba	137	1	No Gas	216.566	216.566	1.71	379996	0.06	1000	
Tl	205	1	No Gas	209.014	209.014	1.53	1816394	0.01	1000	
U	238	1	No Gas	233.474	233.474	2.70	2153048	0.01	1000	
Na	23	2	he	2148.736	2148.736	0.59	1246011	0.17	100000	
Mg	24	2	he	2394.622	2394.622	2.90	721708	0.33	100000	
K	39	2	he	2473.213	2473.213	1.76	913968	0.27	100000	
Se	82	3	HeHe	225.434	225.434	4.91	1084	20.80	1000	
Fe	57	3	HeHe	3402.864	3402.864	6.09	91242	3.73	100000	
Cd	114	1	No Gas	204.825	204.825	2.46	660281	0.03	1000	
Ca	44	1	No Gas	2147.862	2147.862	1.97	495846	0.43	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1557857	2.89	1662313	93.72	70	120	
Sc	45	2	he	202980	0.69	207479	97.83	70	120	
Ge	72	1	No Gas	205647	4.41	222710	92.34	70	120	

In	115	1	No Gas	1151066	4.21	1280558	89.89	70	120	
Tb	159	1	No Gas	1510513	2.89	1515490	99.67	70	120	
Bi	209	1	No Gas	733790	2.56	722984	101.49	70	120	
Sc	45	3	HeHe	28140	1.05	30220	93.12	70	120	

Sample Report

Sample Table

Sample Name	9981496005
Data File Name	077SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:28:04-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3301

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	4.003	4.003	5.39	39704	0.01	1000	
Cr	52	1	No Gas	5.966	5.966	3.52	62780	0.01	1000	
Mn	55	1	No Gas	4.200	4.200	1.21	65006	0.01	1000	
Co	59	1	No Gas	0.382	0.382	3.32	4034	0.01	1000	
Ni	60	1	No Gas	2.342	2.342	7.73	5348	0.04	1000	
Cu	63	1	No Gas	1.463	1.463	0.89	9387	0.02	1000	
Sr	88	1	No Gas	1.742	1.742	3.84	25743	0.01	1000	
Ag	107	1	No Gas	0.074	0.074	36.57	559	0.01	1000	
Al	27	1	No Gas	7942.394	7942.394	1.61	37636969	0.02	100000	
Sn	118	1	No Gas	-0.396	-0.396	-7.22	793	-0.05	100	
Ti	47	1	No Gas	70.644	70.644	1.47	52036	0.14	2000	
Zn	66	1	No Gas	2.935	2.935	4.07	5086	0.06	1000	
As	75	3	HeHe	0.428	0.428	19.68	49	0.87	1000	
As	75	1	No Gas	0.314	0.314	166.05	12215	0.00	1000	
Sb	121	1	No Gas	0.559	0.559	14.19	4701	0.01	100	
Hg	201	1	No Gas	0.050	0.050	50.15	50	0.10	4	
Be	9	1	No Gas	0.183	0.183	28.60	154	0.12	1000	
Pb	208	1	No Gas	5.056	5.056	1.76	66037	0.01	1000	
Se	82	1	No Gas	-0.842	-0.842	-239.51	62	-1.35	1000	
Mo	98	1	No Gas	0.152	0.152	64.84	1313	0.01	2000	
Ba	137	1	No Gas	4.852	4.852	5.90	8416	0.06	1000	
Tl	205	1	No Gas	0.081	0.081	16.94	748	0.01	1000	
U	238	1	No Gas	0.536	0.536	5.50	5027	0.01	1000	
Na	23	2	he	11.124	11.124	53.64	55358	0.02	100000	
Mg	24	2	he	200.458	200.458	2.54	56810	0.35	100000	
K	39	2	he	230.357	230.357	6.07	115295	0.20	100000	
Se	82	3	HeHe	2.178	2.178	50.25	24	8.91	1000	
Fe	57	3	HeHe	812.915	812.915	7.33	22168	3.67	100000	
Cd	114	1	No Gas	0.017	0.017	125.94	180	0.01	1000	
Ca	44	1	No Gas	32.928	32.928	27.40	20080	0.16	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1562799	2.49	1662313	94.01	70	120	
Sc	45	2	he	190144	3.48	207479	91.65	70	120	
Ge	72	1	No Gas	205788	1.43	222710	92.40	70	120	

In	115	1	No Gas	1183711	1.27	1280558	92.44	70	120	
Tb	159	1	No Gas	1485583	1.78	1515490	98.03	70	120	
Bi	209	1	No Gas	739383	2.93	722984	102.27	70	120	
Sc	45	3	HeHe	28544	5.63	30220	94.45	70	120	

Sample Report

Sample Table

Sample Name	9981496006
Data File Name	078SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:31:41-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3302

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	18.446	18.446	2.59	184010	0.01	1000	
Cr	52	1	No Gas	16.110	16.110	2.34	155688	0.01	1000	
Mn	55	1	No Gas	3.068	3.068	3.24	50700	0.01	1000	
Co	59	1	No Gas	0.333	0.333	3.24	3515	0.01	1000	
Ni	60	1	No Gas	4.311	4.311	6.80	9646	0.04	1000	
Cu	63	1	No Gas	3.621	3.621	3.47	21204	0.02	1000	
Sr	88	1	No Gas	2.149	2.149	2.91	31542	0.01	1000	
Ag	107	1	No Gas	0.015	0.015	23.33	148	0.01	1000	
Al	27	1	No Gas	14588.257	14588.257	2.19	68763060	0.02	100000	
Sn	118	1	No Gas	-0.325	-0.325	-9.69	1070	-0.03	100	
Ti	47	1	No Gas	107.263	107.263	2.88	78547	0.14	2000	
Zn	66	1	No Gas	3.630	3.630	10.54	6188	0.06	1000	
As	75	3	HeHe	0.543	0.543	24.23	63	0.86	1000	
As	75	1	No Gas	0.173	0.173	413.58	11923	0.00	1000	
Sb	121	1	No Gas	0.075	0.075	83.93	2127	0.00	100	
Hg	201	1	No Gas	0.056	0.056	13.34	52	0.11	4	
Be	9	1	No Gas	0.180	0.180	14.18	151	0.12	1000	
Pb	208	1	No Gas	13.715	13.715	0.90	161586	0.01	1000	
Se	82	1	No Gas	1.639	1.639	37.35	279	0.59	1000	
Mo	98	1	No Gas	0.541	0.541	4.09	2873	0.02	2000	
Ba	137	1	No Gas	7.673	7.673	4.34	13009	0.06	1000	
Tl	205	1	No Gas	0.034	0.034	0.97	330	0.01	1000	
U	238	1	No Gas	0.990	0.990	3.69	8988	0.01	1000	
Na	23	2	he	1.577	1.577	256.66	52472	0.00	100000	
Mg	24	2	he	125.014	125.014	3.51	36954	0.34	100000	
K	39	2	he	183.578	183.578	4.07	103860	0.18	100000	
Se	82	3	HeHe	4.303	4.303	15.61	36	12.10	1000	
Fe	57	3	HeHe	626.695	626.695	2.56	17706	3.54	100000	
Cd	114	1	No Gas	0.000	0.000	14532.18	120	0.00	1000	
Ca	44	1	No Gas	61.063	61.063	36.68	26293	0.23	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1554584	2.60	1662313	93.52	70	120	
Sc	45	2	he	197663	1.71	207479	95.27	70	120	
Ge	72	1	No Gas	200361	1.54	222710	89.97	70	120	

In	115	1	No Gas	1152923	1.55	1280558	90.03	70	120	
Tb	159	1	No Gas	1454458	1.80	1515490	95.97	70	120	
Bi	209	1	No Gas	718592	1.18	722984	99.39	70	120	
Sc	45	3	HeHe	29446	1.35	30220	97.44	70	120	

Sample Report

Sample Table

Sample Name	9981496007
Data File Name	079SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:35:19-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3303

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	11.175	11.175	1.51	110317	0.01	1000	
Cr	52	1	No Gas	113.253	113.253	1.74	1040017	0.01	1000	
Mn	55	1	No Gas	17.226	17.226	1.27	223371	0.01	1000	
Co	59	1	No Gas	2.975	2.975	4.96	30109	0.01	1000	
Ni	60	1	No Gas	62.370	62.370	1.09	136194	0.05	1000	
Cu	63	1	No Gas	9.627	9.627	0.83	53825	0.02	1000	
Sr	88	1	No Gas	4.853	4.853	1.56	70489	0.01	1000	
Ag	107	1	No Gas	0.026	0.026	21.87	219	0.01	1000	
Al	27	1	No Gas	29986.701	29986.701	0.34	140139717	0.02	100000	
Sn	118	1	No Gas	-0.134	-0.134	-42.84	1848	-0.01	100	
Ti	47	1	No Gas	127.470	127.470	1.29	92543	0.14	2000	
Zn	66	1	No Gas	14.119	14.119	2.14	23059	0.06	1000	
As	75	3	HeHe	0.543	0.543	13.53	63	0.86	1000	
As	75	1	No Gas	0.417	0.417	162.32	12212	0.00	1000	
Sb	121	1	No Gas	-0.117	-0.117	-14.41	1143	-0.01	100	
Hg	201	1	No Gas	0.086	0.086	50.64	67	0.13	4	
Be	9	1	No Gas	0.263	0.263	8.47	215	0.12	1000	
Pb	208	1	No Gas	13.157	13.157	3.24	151536	0.01	1000	
Se	82	1	No Gas	-1.037	-1.037	-75.94	43	-2.43	1000	
Mo	98	1	No Gas	2.005	2.005	11.07	8786	0.02	2000	
Ba	137	1	No Gas	18.966	18.966	1.56	31572	0.06	1000	
Tl	205	1	No Gas	0.076	0.076	22.98	670	0.01	1000	
U	238	1	No Gas	1.301	1.301	0.56	11509	0.01	1000	
Na	23	2	he	19.729	19.729	30.76	62794	0.03	100000	
Mg	24	2	he	574.755	574.755	3.12	170449	0.34	100000	
K	39	2	he	724.399	724.399	3.08	292197	0.25	100000	
Se	82	3	HeHe	2.871	2.871	65.08	29	10.07	1000	
Fe	57	3	HeHe	3182.978	3182.978	1.02	89530	3.56	100000	
Cd	114	1	No Gas	0.008	0.008	199.87	143	0.01	1000	
Ca	44	1	No Gas	78.054	78.054	8.49	29895	0.26	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1541776	1.25	1662313	92.75	70	120	
Sc	45	2	he	199559	3.43	207479	96.18	70	120	
Ge	72	1	No Gas	201408	2.74	222710	90.44	70	120	

In	115	1	No Gas	1139602	2.28	1280558	88.99	70	120	
Tb	159	1	No Gas	1431569	2.92	1515490	94.46	70	120	
Bi	209	1	No Gas	701297	1.42	722984	97.00	70	120	
Sc	45	3	HeHe	29503	2.24	30220	97.63	70	120	

Sample Report

Sample Table

Sample Name	9981496008
Data File Name	080SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:38:55-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3304

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	8.940	8.940	6.89	88725	0.01	1000	
Cr	52	1	No Gas	13.652	13.652	1.90	133065	0.01	1000	
Mn	55	1	No Gas	1.712	1.712	10.90	33945	0.01	1000	
Co	59	1	No Gas	0.063	0.063	27.57	770	0.01	1000	
Ni	60	1	No Gas	3.967	3.967	1.05	8893	0.04	1000	
Cu	63	1	No Gas	1.222	1.222	4.38	8006	0.02	1000	
Sr	88	1	No Gas	1.227	1.227	4.32	18044	0.01	1000	
Ag	107	1	No Gas	0.007	0.007	45.34	104	0.01	1000	
Al	27	1	No Gas	6888.300	6888.300	1.16	32436885	0.02	100000	
Sn	118	1	No Gas	-0.300	-0.300	-7.42	1248	-0.02	100	
Ti	47	1	No Gas	72.764	72.764	2.80	53249	0.14	2000	
Zn	66	1	No Gas	1.324	1.324	17.36	2439	0.05	1000	
As	75	3	HeHe	0.258	0.258	41.22	34	0.76	1000	
As	75	1	No Gas	0.443	0.443	27.61	12357	0.00	1000	
Sb	121	1	No Gas	-0.131	-0.131	-12.33	1150	-0.01	100	
Hg	201	1	No Gas	0.067	0.067	42.75	61	0.11	4	
Be	9	1	No Gas	0.163	0.163	22.37	137	0.12	1000	
Pb	208	1	No Gas	6.682	6.682	0.91	86246	0.01	1000	
Se	82	1	No Gas	0.665	0.665	190.00	191	0.35	1000	
Mo	98	1	No Gas	0.386	0.386	19.01	2387	0.02	2000	
Ba	137	1	No Gas	4.926	4.926	2.80	8656	0.06	1000	
Tl	205	1	No Gas	0.016	0.016	5.03	189	0.01	1000	
U	238	1	No Gas	0.586	0.586	6.88	5575	0.01	1000	
Na	23	2	he	0.207	0.207	1854.98	52427	0.00	100000	
Mg	24	2	he	21.119	21.119	7.17	6557	0.32	100000	
K	39	2	he	37.031	37.031	8.24	54283	0.07	100000	
Se	82	3	HeHe	2.071	2.071	107.80	26	8.10	1000	
Fe	57	3	HeHe	70.215	70.215	13.43	2200	3.19	100000	
Cd	114	1	No Gas	-0.007	-0.007	-232.56	103	-0.01	1000	
Ca	44	1	No Gas	56.263	56.263	17.75	25192	0.22	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1553574	2.57	1662313	93.46	70	120	
Sc	45	2	he	200327	1.42	207479	96.55	70	120	
Ge	72	1	No Gas	211569	2.56	222710	95.00	70	120	

In	115	1	No Gas	1227368	1.37	1280558	95.85	70	120	
Tb	159	1	No Gas	1505730	2.81	1515490	99.36	70	120	
Bi	209	1	No Gas	751447	2.57	722984	103.94	70	120	
Sc	45	3	HeHe	30731	3.50	30220	101.69	70	120	

Sample Report

Sample Table

Sample Name	9981496009
Data File Name	081SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:42:31-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3305

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	24.745	24.745	1.37	249354	0.01	1000	
Cr	52	1	No Gas	26.542	26.542	2.89	254057	0.01	1000	
Mn	55	1	No Gas	4.615	4.615	3.67	70464	0.01	1000	
Co	59	1	No Gas	0.436	0.436	3.83	4601	0.01	1000	
Ni	60	1	No Gas	10.253	10.253	3.29	22939	0.04	1000	
Cu	63	1	No Gas	1.115	1.115	1.82	7496	0.01	1000	
Sr	88	1	No Gas	3.244	3.244	3.69	48003	0.01	1000	
Ag	107	1	No Gas	0.010	0.010	65.86	119	0.01	1000	
Al	27	1	No Gas	14295.319	14295.319	1.93	68016653	0.02	100000	
Sn	118	1	No Gas	-0.395	-0.395	-6.15	815	-0.05	100	
Ti	47	1	No Gas	41.523	41.523	1.06	30763	0.13	2000	
Zn	66	1	No Gas	3.190	3.190	2.55	5530	0.06	1000	
As	75	3	HeHe	0.315	0.315	32.23	39	0.82	1000	
As	75	1	No Gas	0.240	0.240	167.81	12165	0.00	1000	
Sb	121	1	No Gas	-0.054	-0.054	-66.57	1547	0.00	100	
Hg	201	1	No Gas	0.018	0.018	32.68	31	0.06	4	
Be	9	1	No Gas	0.165	0.165	15.87	141	0.12	1000	
Pb	208	1	No Gas	8.133	8.133	2.40	100771	0.01	1000	
Se	82	1	No Gas	0.646	0.646	111.27	193	0.33	1000	
Mo	98	1	No Gas	0.961	0.961	8.32	4844	0.02	2000	
Ba	137	1	No Gas	13.161	13.161	2.90	23037	0.06	1000	
Tl	205	1	No Gas	0.021	0.021	46.59	230	0.01	1000	
U	238	1	No Gas	0.506	0.506	10.91	4708	0.01	1000	
Na	23	2	he	2.423	2.423	86.63	53743	0.00	100000	
Mg	24	2	he	97.962	97.962	3.53	29463	0.33	100000	
K	39	2	he	183.387	183.387	1.10	105437	0.17	100000	
Se	82	3	HeHe	2.654	2.654	54.21	27	9.69	1000	
Fe	57	3	HeHe	712.426	712.426	3.41	20086	3.55	100000	
Cd	114	1	No Gas	-0.011	-0.011	-145.99	90	-0.01	1000	
Ca	44	1	No Gas	21.603	21.603	41.18	17643	0.12	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1569782	0.89	1662313	94.43	70	120	
Sc	45	2	he	200793	4.17	207479	96.78	70	120	
Ge	72	1	No Gas	208111	1.98	222710	93.44	70	120	

In	115	1	No Gas	1212944	0.20	1280558	94.72	70	120	
Tb	159	1	No Gas	1504890	2.97	1515490	99.30	70	120	
Bi	209	1	No Gas	732931	0.81	722984	101.38	70	120	
Sc	45	3	HeHe	29409	1.10	30220	97.32	70	120	

Sample Report

Sample Table

Sample Name	9981496010
Data File Name	082SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:46:07-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3306

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	11.152	11.152	3.12	114580	0.01	1000	
Cr	52	1	No Gas	9.351	9.351	1.38	96636	0.01	1000	
Mn	55	1	No Gas	2.751	2.751	6.00	48312	0.01	1000	
Co	59	1	No Gas	0.170	0.170	13.79	1911	0.01	1000	
Ni	60	1	No Gas	1.792	1.792	3.70	4247	0.04	1000	
Cu	63	1	No Gas	2.014	2.014	1.65	12774	0.02	1000	
Sr	88	1	No Gas	3.647	3.647	3.60	55166	0.01	1000	
Ag	107	1	No Gas	0.023	0.023	19.61	215	0.01	1000	
Al	27	1	No Gas	8763.201	8763.201	1.43	42635532	0.02	100000	
Sn	118	1	No Gas	-0.252	-0.252	-11.49	1437	-0.02	100	
Ti	47	1	No Gas	135.915	135.915	6.30	102642	0.13	2000	
Zn	66	1	No Gas	2.683	2.683	8.70	4804	0.06	1000	
As	75	3	HeHe	0.305	0.305	31.75	39	0.79	1000	
As	75	1	No Gas	-0.169	-0.169	-235.47	11771	0.00	1000	
Sb	121	1	No Gas	-0.168	-0.168	-20.04	930	-0.02	100	
Hg	201	1	No Gas	0.112	0.112	11.63	87	0.13	4	
Be	9	1	No Gas	0.131	0.131	28.65	116	0.11	1000	
Pb	208	1	No Gas	10.102	10.102	1.09	126538	0.01	1000	
Se	82	1	No Gas	0.872	0.872	36.44	218	0.40	1000	
Mo	98	1	No Gas	0.622	0.622	5.23	3347	0.02	2000	
Ba	137	1	No Gas	8.097	8.097	1.18	14404	0.06	1000	
Tl	205	1	No Gas	0.058	0.058	14.48	563	0.01	1000	
U	238	1	No Gas	0.949	0.949	4.50	9018	0.01	1000	
Na	23	2	he	8.890	8.890	35.79	58547	0.02	100000	
Mg	24	2	he	144.849	144.849	3.82	44382	0.33	100000	
K	39	2	he	150.515	150.515	2.98	95995	0.16	100000	
Se	82	3	HeHe	2.602	2.602	38.86	28	9.37	1000	
Fe	57	3	HeHe	516.448	516.448	0.51	14990	3.45	100000	
Cd	114	1	No Gas	0.005	0.005	265.22	143	0.00	1000	
Ca	44	1	No Gas	68.384	68.384	8.26	28864	0.24	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1605193	1.83	1662313	96.56	70	120	
Sc	45	2	he	205097	1.40	207479	98.85	70	120	
Ge	72	1	No Gas	207843	0.16	222710	93.32	70	120	

In	115	1	No Gas	1202600	1.48	1280558	93.91	70	120	
Tb	159	1	No Gas	1526784	1.54	1515490	100.75	70	120	
Bi	209	1	No Gas	751812	1.80	722984	103.99	70	120	
Sc	45	3	HeHe	30193	2.84	30220	99.91	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	083_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:49:44-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	98.636	1.940	968333	2.83	100	98.6	90	110	
Cr	52	1	No Gas	96.019	1.959	874546	3.98	100	96.0	90	110	
Mn	55	1	No Gas	100.001	3.705	1222448	1.51	100	100.0	90	110	
Co	59	1	No Gas	98.238	0.817	979884	2.03	100	98.2	90	110	
Ni	60	1	No Gas	98.844	0.168	213602	2.32	100	98.8	90	110	
Cu	63	1	No Gas	97.937	0.322	530568	2.49	100	97.9	90	110	
Sr	88	1	No Gas	101.433	2.002	1456676	3.53	100	101.4	90	110	
Ag	107	1	No Gas	95.828	0.879	660613	1.65	100	95.8	90	110	
Al	27	1	No Gas	98.647	2.041	459896	3.04	100	98.6	90	110	
Sn	118	1	No Gas	106.572	1.145	460540	1.54	100	106.6	90	110	
Tl	47	1	No Gas	94.530	1.078	67975	2.44	100	94.5	90	110	
Zn	66	1	No Gas	97.699	2.832	156206	0.47	100	97.7	90	110	
As	75	3	HeHe	96.805	2.807	10060	4.18	100	96.8	90	110	
As	75	1	No Gas	95.227	1.452	157479	2.64	100	95.2	90	110	
Sb	121	1	No Gas	102.726	2.924	534179	2.93	100	102.7	90	110	
Hg	201	1	No Gas	2.047	8.886	1153	9.74	2	102.3	90	110	
Be	9	1	No Gas	102.274	0.918	78975	2.49	100	102.3	90	110	
Pb	208	1	No Gas	96.797	2.266	1091421	1.62	100	96.8	90	110	
Se	82	1	No Gas	95.918	5.385	8450	3.11	100	95.9	90	110	
Mo	98	1	No Gas	96.555	1.163	407173	0.79	100	96.6	90	110	
Ba	137	1	No Gas	96.188	3.415	162408	0.92	100	96.2	90	110	
Tl	205	1	No Gas	93.328	0.756	790799	2.07	100	93.3	90	110	
U	238	1	No Gas	118.702	0.823	1067070	2.17	100	118.7	90	110	CCV Main CR1 Failed
Na	23	2	he	994.848	2.112	571764	5.01	1000	99.5	90	110	
Mg	24	2	he	1055.585	1.378	300483	2.31	1000	105.6	90	110	
K	39	2	he	999.954	1.978	372374	1.80	1000	100.0	90	110	
Se	82	3	HeHe	103.840	6.443	508	4.85	100	103.8	90	110	
Fe	57	3	HeHe	1007.559	3.029	27226	2.75	1000	100.8	90	110	
Cd	114	1	No Gas	98.376	0.549	325255	2.03	100	98.4	90	110	
Ca	44	1	No Gas	991.891	1.442	231082	1.57	1000	99.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1526662	2.48	1662313	91.84	70	120	
Sc	45	2	he	191652	3.44	207479	92.37	70	120	
Ge	72	1	No Gas	208522	1.26	222710	93.63	70	120	
In	115	1	No Gas	1179666	1.95	1280558	92.12	70	120	
Tb	159	1	No Gas	1454245	3.76	1515490	95.96	70	120	
Bi	209	1	No Gas	715657	2.42	722984	98.99	70	120	
Sc	45	3	HeHe	28247	1.40	30220	93.47	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	084_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:53:22-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.244	120.3	1827	153.5	9	
Cr	52	1	No Gas	0.011	710.0	7372	6.6	4	
Mn	55	1	No Gas	-0.149	-31.4	10567	4.0	25	
Co	59	1	No Gas	0.001	1139.1	130	42.3	1	
Ni	60	1	No Gas	0.139	68.5	457	41.6	25	
Cu	63	1	No Gas	-0.049	-20.1	971	5.3	25	
Sr	88	1	No Gas	0.009	35.0	241	16.2	25	
Ag	107	1	No Gas	0.022	30.4	193	20.3	9	
Al	27	1	No Gas	0.384	34.7	5045	9.7	1000000	
Sn	118	1	No Gas	-0.309	-23.1	1130	24.7	25	
Ti	47	1	No Gas	0.038	46.6	127	7.8	10000	
Zn	66	1	No Gas	0.067	102.4	383	28.7	25	
As	75	3	HeHe	-0.010	-302.2	3	91.7	9	
As	75	1	No Gas	0.616	80.2	12061	5.1	9	
Sb	121	1	No Gas	0.455	20.3	4037	9.6	4	
Hg	201	1	No Gas	0.013	222.6	27	52.9	0.04	
Be	9	1	No Gas	0.048	29.9	45	24.3	1	
Pb	208	1	No Gas	-0.456	-1.4	2159	0.6	4	
Se	82	1	No Gas	-1.130	-52.7	33	154.8	25	
Mo	98	1	No Gas	-0.008	-206.4	616	11.0	10000	
Ba	137	1	No Gas	0.037	31.1	100	20.0	25	
Tl	205	1	No Gas	0.004	110.9	74	43.3	1	
U	238	1	No Gas	0.047	16.9	467	12.6	25	
Na	23	2	he	-2.598	-160.0	49061	5.0	2500000	
Mg	24	2	he	0.107	50.2	300	3.7	2500000	
K	39	2	he	-11.656	-18.5	35996	1.3	5000000	
Se	82	3	HeHe	0.364	212.4	15	22.4	25	
Fe	57	3	HeHe	1.171	121.9	170	21.2	2500000	
Cd	114	1	No Gas	0.000	4107523.2	120	72.2	1	
Ca	44	1	No Gas	-3.926	-128.7	11193	8.5	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1484938	2.24	1662313	89.33	70	120	
Sc	45	2	he	193173	1.69	207479	93.10	70	120	
Ge	72	1	No Gas	202979	1.25	222710	91.14	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	1151524	2.70	1280558	89.92	70	120	
Tb	159	1	No Gas	1445332	4.34	1515490	95.37	70	120	
Bi	209	1	No Gas	711350	2.89	722984	98.39	70	120	
Sc	45	3	HeHe	28000	1.70	30220	92.65	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	085LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T08:56:58-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.567	9.531	24006	9.36	2	128.4	70	130	
Cr	52	1	No Gas	1.949	7.019	24414	3.51	2	97.4	70	130	
Mn	55	1	No Gas	4.875	1.943	69780	1.31	5	97.5	70	130	
Co	59	1	No Gas	4.858	2.745	47295	2.28	5	97.2	70	130	
Ni	60	1	No Gas	4.838	6.703	10330	5.04	5	96.8	70	130	
Cu	63	1	No Gas	4.946	0.444	27256	2.03	5	98.9	70	130	
Sr	88	1	No Gas	4.761	3.547	66644	2.01	5	95.2	70	130	
Ag	107	1	No Gas	1.855	3.334	12376	1.70	2	92.8	70	130	
Al	27	1	No Gas	77.857	3.320	353963	1.63	80	97.3	70	130	
Sn	118	1	No Gas	1.729	5.610	9574	5.81	2	86.5	70	130	
Tl	47	1	No Gas	5.174	3.765	3716	2.62	5	103.5	70	130	
Zn	66	1	No Gas	5.327	6.343	8559	6.10	5	106.5	70	130	
As	75	3	HeHe	2.946	8.467	313	7.73	3	98.2	70	130	
As	75	1	No Gas	3.848	8.292	16898	1.19	3	128.3	70	130	
Sb	121	1	No Gas	2.377	5.804	13596	3.45	2	118.9	70	130	
Hg	201	1	No Gas	0.224	9.359	146	8.98	0.2	112.2	70	130	
Be	9	1	No Gas	1.008	7.713	766	6.02	1	100.8	70	130	
Pb	208	1	No Gas	1.477	3.707	24024	4.94	2	73.8	70	130	
Se	82	1	No Gas	3.605	21.516	433	14.59	5	72.1	70	130	
Mo	98	1	No Gas	1.907	5.998	8382	5.07	2	95.4	70	130	
Ba	137	1	No Gas	4.921	2.609	8202	4.12	5	98.4	70	130	
Tl	205	1	No Gas	0.928	4.136	7965	3.60	1	92.8	70	130	
U	238	1	No Gas	5.673	1.019	51449	3.17	5	113.5	70	130	
Na	23	2	he	99.057	6.413	102709	2.48	100	99.1	70	130	
Mg	24	2	he	105.294	2.117	30449	2.50	100	105.3	70	130	
K	39	2	he	98.173	2.315	72822	0.43	100	98.2	70	130	
Se	82	3	HeHe	5.758	38.371	41	20.41	5	115.2	70	130	
Fe	57	3	HeHe	49.658	13.444	1493	14.55	50	99.3	70	130	
Cd	114	1	No Gas	1.018	5.069	3360	4.38	1	101.8	70	130	
Ca	44	1	No Gas	118.849	13.912	37558	8.80	100	118.8	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1486329	1.71	1662313	89.41	70	120	
Sc	45	2	he	193094	1.34	207479	93.07	70	120	
Ge	72	1	No Gas	199365	1.35	222710	89.52	70	120	
In	115	1	No Gas	1137530	1.65	1280558	88.83	70	120	
Tb	159	1	No Gas	1427982	1.54	1515490	94.23	70	120	
Bi	209	1	No Gas	721274	2.39	722984	99.76	70	120	
Sc	45	3	HeHe	28551	5.56	30220	94.48	70	120	

Sample Report

Sample Table

Sample Name	9981496011
Data File Name	086SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T09:00:36-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3307

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	14.557	14.557	0.56	134879	0.01	1000	
Cr	52	1	No Gas	19.313	19.313	3.06	172157	0.01	1000	
Mn	55	1	No Gas	3.888	3.888	1.87	56552	0.01	1000	
Co	59	1	No Gas	0.365	0.365	11.35	3575	0.01	1000	
Ni	60	1	No Gas	7.288	7.288	4.03	15057	0.05	1000	
Cu	63	1	No Gas	2.965	2.965	1.54	16370	0.02	1000	
Sr	88	1	No Gas	2.037	2.037	2.97	27798	0.01	1000	
Ag	107	1	No Gas	0.016	0.016	51.01	148	0.01	1000	
Al	27	1	No Gas	9683.494	9683.494	1.85	42427597	0.02	100000	
Sn	118	1	No Gas	-0.214	-0.214	-2.96	1482	-0.01	100	
Ti	47	1	No Gas	82.326	82.326	3.22	56052	0.15	2000	
Zn	66	1	No Gas	5.283	5.283	4.35	8261	0.06	1000	
As	75	3	HeHe	0.346	0.346	50.03	41	0.85	1000	
As	75	1	No Gas	0.309	0.309	229.08	11296	0.00	1000	
Sb	121	1	No Gas	0.008	0.008	461.80	1724	0.00	100	
Hg	201	1	No Gas	0.098	0.098	12.73	72	0.14	4	
Be	9	1	No Gas	0.122	0.122	23.55	98	0.12	1000	
Pb	208	1	No Gas	11.080	11.080	3.40	125994	0.01	1000	
Se	82	1	No Gas	1.132	1.132	77.93	217	0.52	1000	
Mo	98	1	No Gas	0.393	0.393	17.10	2187	0.02	2000	
Ba	137	1	No Gas	5.840	5.840	2.68	9763	0.06	1000	
Tl	205	1	No Gas	0.104	0.104	2.55	889	0.01	1000	
U	238	1	No Gas	0.606	0.606	4.36	5272	0.01	1000	
Na	23	2	he	9.063	9.063	48.52	52685	0.02	100000	
Mg	24	2	he	149.666	149.666	2.67	41193	0.36	100000	
K	39	2	he	160.541	160.541	4.31	89463	0.18	100000	
Se	82	3	HeHe	4.819	4.819	38.04	37	13.14	1000	
Fe	57	3	HeHe	624.023	624.023	6.75	16982	3.67	100000	
Cd	114	1	No Gas	0.026	0.026	25.81	197	0.01	1000	
Ca	44	1	No Gas	63.652	63.652	40.83	25078	0.25	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1445595	1.73	1662313	86.96	70	120	
Sc	45	2	he	184263	0.94	207479	88.81	70	120	
Ge	72	1	No Gas	195256	1.19	222710	87.67	70	120	

In	115	1	No Gas	1112945	0.97	1280558	86.91	70	120	
Tb	159	1	No Gas	1433804	2.22	1515490	94.61	70	120	
Bi	209	1	No Gas	686624	3.25	722984	94.97	70	120	
Sc	45	3	HeHe	28394	4.14	30220	93.96	70	120	

Sample Report

Sample Table

Sample Name	9981496011L
Data File Name	087SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T09:04:12-04:00
Sample Type	Sample
Dilution	1
Comment	38062 MWODF25
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3308

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	2.918	2.918	16.57	26734	0.01	1000	
Cr	52	1	No Gas	3.694	3.694	6.35	38874	0.01	1000	
Mn	55	1	No Gas	0.629	0.629	3.37	19312	0.00	1000	
Co	59	1	No Gas	0.053	0.053	8.05	626	0.01	1000	
Ni	60	1	No Gas	1.433	1.433	7.71	3110	0.05	1000	
Cu	63	1	No Gas	0.513	0.513	6.00	3842	0.01	1000	
Sr	88	1	No Gas	0.403	0.403	2.85	5627	0.01	1000	
Ag	107	1	No Gas	0.003	0.003	55.03	67	0.00	1000	
Al	27	1	No Gas	1944.624	1944.624	1.62	8568764	0.02	100000	
Sn	118	1	No Gas	-0.450	-0.450	-5.23	533	-0.08	100	
Ti	47	1	No Gas	15.790	15.790	1.21	10893	0.14	2000	
Zn	66	1	No Gas	1.138	1.138	8.69	2001	0.06	1000	
As	75	3	HeHe	0.014	0.014	395.89	6	0.25	1000	
As	75	1	No Gas	0.422	0.422	70.31	11524	0.00	1000	
Sb	121	1	No Gas	-0.237	-0.237	-11.84	537	-0.04	100	
Hg	201	1	No Gas	0.002	0.002	598.85	22	0.01	4	
Be	9	1	No Gas	0.036	0.036	29.44	35	0.10	1000	
Pb	208	1	No Gas	1.724	1.724	2.27	26599	0.01	1000	
Se	82	1	No Gas	-1.354	-1.354	-40.29	14	-9.76	1000	
Mo	98	1	No Gas	-0.063	-0.063	-31.51	383	-0.02	2000	
Ba	137	1	No Gas	1.087	1.087	7.69	1840	0.06	1000	
Tl	205	1	No Gas	0.018	0.018	31.23	200	0.01	1000	
U	238	1	No Gas	0.131	0.131	1.63	1222	0.01	1000	
Na	23	2	he	-4.147	-4.147	-126.36	47401	-0.01	100000	
Mg	24	2	he	31.322	31.322	5.11	9099	0.34	100000	
K	39	2	he	20.292	20.292	12.05	45968	0.04	100000	
Se	82	3	HeHe	1.425	1.425	31.24	21	6.75	1000	
Fe	57	3	HeHe	131.395	131.395	14.05	3794	3.46	100000	
Cd	114	1	No Gas	-0.017	-0.017	-81.79	63	-0.03	1000	
Ca	44	1	No Gas	16.322	16.322	56.06	15217	0.11	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1453346	1.76	1662313	87.43	70	120	
Sc	45	2	he	190088	3.73	207479	91.62	70	120	

Ge	72	1	No Gas	196407	2.20	222710	88.19	70	120	
In	115	1	No Gas	1133146	0.59	1280558	88.49	70	120	
Tb	159	1	No Gas	1429035	1.49	1515490	94.30	70	120	
Bi	209	1	No Gas	715827	1.32	722984	99.01	70	120	
Sc	45	3	HeHe	29135	4.28	30220	96.41	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	091_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T09:18:42-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

No U.

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	100.579	2.553	915570	1.85	100	100.6	90	110	
Cr	52	1	No Gas	99.476	2.690	839626	1.93	100	99.5	90	110	
Mn	55	1	No Gas	101.106	1.140	1146609	1.02	100	101.1	90	110	
Co	59	1	No Gas	97.015	3.180	897300	2.60	100	97.0	90	110	
Ni	60	1	No Gas	99.114	2.492	198592	1.74	100	99.1	90	110	
Cu	63	1	No Gas	99.215	1.228	498372	0.77	100	99.2	90	110	
Sr	88	1	No Gas	102.278	0.603	1361920	1.03	100	102.3	90	110	
Ag	107	1	No Gas	97.421	2.238	636698	1.17	100	97.4	90	110	
Al	27	1	No Gas	97.907	2.038	423260	1.36	100	97.9	90	110	
Sn	118	1	No Gas	107.096	3.522	438792	3.27	100	107.1	90	110	
Tl	47	1	No Gas	94.400	1.316	62949	1.42	100	94.4	90	110	
Zn	66	1	No Gas	99.631	2.548	147787	2.98	100	99.6	90	110	
As	75	3	HeHe	93.993	1.660	9823	1.59	100	94.0	90	110	
As	75	1	No Gas	96.893	2.233	148392	1.54	100	96.9	90	110	
Sb	121	1	No Gas	104.617	3.944	515680	2.83	100	104.6	90	110	
Hg	201	1	No Gas	2.142	4.494	1177	4.93	2	107.1	90	110	
Be	9	1	No Gas	102.475	1.292	73375	0.81	100	102.5	90	110	
Pb	208	1	No Gas	96.465	0.237	1062391	0.32	100	96.5	90	110	
Se	82	1	No Gas	95.191	1.170	7784	0.72	100	95.2	90	110	
Mo	98	1	No Gas	95.827	2.057	383156	1.24	100	95.8	90	110	
Ba	137	1	No Gas	94.119	1.578	155387	1.50	100	94.1	90	110	
Tl	205	1	No Gas	92.671	1.547	766766	1.02	100	92.7	90	110	
U	238	1	No Gas	120.831	1.746	1060687	1.64	100	120.8	90	110	CCV Main CR1 Failed
Na	23	2	he	1009.532	0.637	548281	2.18	1000	101.0	90	110	
Mg	24	2	he	1050.056	2.118	283019	3.40	1000	105.0	90	110	
K	39	2	he	1004.564	2.727	353992	2.53	1000	100.5	90	110	
Se	82	3	HeHe	93.904	3.287	464	1.23	100	93.9	90	110	
Fe	57	3	HeHe	975.295	3.091	26524	4.03	1000	97.5	90	110	
Cd	114	1	No Gas	98.847	2.377	309790	0.49	100	98.8	90	110	
Ca	44	1	No Gas	1018.418	2.027	219725	1.27	1000	101.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1415666	0.76	1662313	85.16	70	120	
Sc	45	2	he	181386	1.60	207479	87.42	70	120	
Ge	72	1	No Gas	195921	0.70	222710	87.97	70	120	
In	115	1	No Gas	1118618	2.21	1280558	87.35	70	120	
Tb	159	1	No Gas	1420871	1.25	1515490	93.76	70	120	
Bi	209	1	No Gas	698817	0.53	722984	96.66	70	120	
Sc	45	3	HeHe	28424	3.12	30220	94.06	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	092_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T09:22:20-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.429	66.1	3335	75.6	9	
Cr	52	1	No Gas	0.019	314.9	6980	6.3	4	
Mn	55	1	No Gas	-0.164	-34.0	9722	5.1	25	
Co	59	1	No Gas	0.006	151.6	174	48.7	1	
Ni	60	1	No Gas	0.153	17.5	457	10.3	25	
Cu	63	1	No Gas	-0.052	-6.8	897	2.8	25	
Sr	88	1	No Gas	0.007	47.3	204	22.7	25	
Ag	107	1	No Gas	0.005	120.8	78	49.5	9	
Al	27	1	No Gas	0.202	41.2	3964	8.6	1000000	
Sn	118	1	No Gas	-0.283	-13.8	1185	12.4	25	
Ti	47	1	No Gas	0.032	92.8	115	15.8	10000	
Zn	66	1	No Gas	0.029	182.4	303	25.6	25	
As	75	3	HeHe	0.031	196.1	7	83.4	9	
As	75	1	No Gas	0.613	62.7	11298	6.0	9	
Sb	121	1	No Gas	0.470	35.2	3934	20.1	4	
Hg	201	1	No Gas	0.022	93.0	33	33.7	0.04	
Be	9	1	No Gas	0.022	35.5	24	22.0	1	
Pb	208	1	No Gas	-0.531	-1.2	1322	3.7	4	
Se	82	1	No Gas	-2.490	-72.0	-76	-185.2	25	
Mo	98	1	No Gas	-0.003	-830.2	605	17.6	10000	
Ba	137	1	No Gas	0.046	32.1	110	18.2	25	
Tl	205	1	No Gas	0.016	26.9	178	18.8	1	
U	238	1	No Gas	0.043	28.1	433	23.1	25	
Na	23	2	he	8.618	24.7	50422	4.6	2500000	
Mg	24	2	he	-0.148	-99.3	207	16.4	2500000	
K	39	2	he	-4.244	-118.7	35262	2.5	5000000	
Se	82	3	HeHe	0.856	145.4	17	32.8	25	
Fe	57	3	HeHe	-0.464	-132.9	123	12.4	2500000	
Cd	114	1	No Gas	0.001	238.9	117	4.9	1	
Ca	44	1	No Gas	-3.719	-177.0	10539	13.2	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1390433	1.26	1662313	83.64	70	120	
Sc	45	2	he	177151	4.26	207479	85.38	70	120	
Ge	72	1	No Gas	193956	1.92	222710	87.09	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	1098959	0.81	1280558	85.82	70	120	
Tb	159	1	No Gas	1392515	3.78	1515490	91.89	70	120	
Bi	209	1	No Gas	709807	2.04	722984	98.18	70	120	
Sc	45	3	HeHe	27255	1.89	30220	90.19	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	093LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A082
Acq Date Time	2012-08-20T09:50:00-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	3.181	7.665	25579	0.19	2	159.0	70	130	LLCCV Main CR1 Failed
Cr	52	1	No Gas	2.129	5.278	22315	4.57	2	106.5	70	130	
Mn	55	1	No Gas	5.168	13.142	62609	4.12	5	103.4	70	130	
Co	59	1	No Gas	5.284	6.581	44053	1.29	5	105.7	70	130	
Ni	60	1	No Gas	5.511	8.727	10063	5.23	5	110.2	70	130	
Cu	63	1	No Gas	5.344	10.683	25095	2.44	5	106.9	70	130	
Sr	88	1	No Gas	5.171	6.304	62029	2.36	5	103.4	70	130	
Ag	107	1	No Gas	2.049	7.931	12479	4.03	2	102.4	70	130	
Al	27	1	No Gas	84.586	7.483	329133	1.01	80	105.7	70	130	
Sn	118	1	No Gas	1.730	11.499	8736	1.77	2	86.5	70	130	
Ti	47	1	No Gas	5.281	8.913	3245	0.85	5	105.6	70	130	
Zn	66	1	No Gas	5.865	7.037	8046	1.20	5	117.3	70	130	
As	75	3	HeHe	2.855	8.606	289	8.83	3	95.2	70	130	
As	75	1	No Gas	3.782	26.132	14450	12.30	3	126.1	70	130	
Sb	121	1	No Gas	2.251	8.252	11875	8.98	2	112.5	70	130	
Hg	201	1	No Gas	0.141	15.413	94	9.75	0.2	70.6	70	130	
Be	9	1	No Gas	1.059	9.158	689	1.17	1	105.9	70	130	
Pb	208	1	No Gas	1.471	4.682	22656	3.32	2	73.6	70	130	
Se	82	1	No Gas	4.150	10.079	410	1.13	5	83.0	70	130	
Mo	98	1	No Gas	1.881	11.162	7548	3.79	2	94.0	70	130	
Ba	137	1	No Gas	4.988	9.800	7632	2.63	5	99.8	70	130	
Tl	205	1	No Gas	0.988	6.275	8017	4.08	1	98.8	70	130	
U	238	1	No Gas	5.967	4.006	51162	2.34	5	119.3	70	130	
Na	23	2	he	100.833	4.014	100164	1.33	100	100.8	70	130	
Mg	24	2	he	102.450	2.138	28635	2.16	100	102.4	70	130	
K	39	2	he	95.499	3.301	69503	0.86	100	95.5	70	130	
Se	82	3	HeHe	6.182	29.728	41	21.82	5	123.6	70	130	
Fe	57	3	HeHe	50.648	15.229	1443	14.31	50	101.3	70	130	
Cd	114	1	No Gas	1.042	10.006	3140	6.36	1	104.2	70	130	
Ca	44	1	No Gas	111.577	12.597	30836	4.56	100	111.6	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	1277349	7.61	1662313	76.84	70	120	
Sc	45	2	he	186586	0.75	207479	89.93	70	120	
Ge	72	1	No Gas	183283	4.93	222710	82.30	70	120	
In	115	1	No Gas	1041939	6.55	1280558	81.37	70	120	
Tb	159	1	No Gas	1317150	7.13	1515490	86.91	70	120	
Bi	209	1	No Gas	682961	5.68	722984	94.46	70	120	
Sc	45	3	HeHe	27135	1.76	30220	89.79	70	120	

Digestion Logbook

Microwave 3051 Prep (Soil) (Version 1 - 6/1/2010)

Batch: 37475	Queue: MDIG	HBN: 475719	RULE: D3051/6020	ALSI SOP: 09-3051
File Name: 37475_120813-140403			METHOD: SW3051	Microwave ID: MARS

COMMENTS:	Comment Codes:	Reagents:		Pipettes:		Start	Finish
	1. Sample failed initial digestion due to a weight loss >5g	HNO3:	L02030 JT BAKER		Date:	08/13/2012	08/13/2012
	2. Sample reacts with reagent	HCl:	K25031 MALLINCKRODT		Time:	14:20:00	14:41:00
	3. Less sample used due to high metal conten	Boiling Stones:	D1069103		Tech:	KMK	KMK
	4. Less sample used to result in successful microwave digestion				Reviewed/Approved By:		N/A
	5. Sample does not digest by microwave, digest by method 3050				Date:		

Sample ID	Cont ID	Samp Type	Vessel Initial WT, grams	Vessel Final WT, grams	Difference grams	Spike Amt uL of Each	Spike Lot#	Sample Size, grams	Final Vol mL	Parent Sample ID	Comment Code
1021902		MB	106.67	105.23	1.44			0.50	50		
1021903		LCS	108.71	107.58	1.13	40/50/500/500	/MS0360/MS0359/	0.50	50		
9981496001	A	S	106.95	105.37	1.58			0.60	50		
9981496002	A	S	106.37	104.12	2.25			0.57	50		
9981496003	A	S	107.04	104.92	2.12			0.52	50		
9981496004	A	S	107.21	105.72	1.49			0.53	50		
1021904		MS	108.42	107.32	1.10	40/50/500/500	/MS0360/MS0359/	0.52	50	9981496004	
1021905		MSD	107.59	105.84	1.75	40/50/500/500	/MS0360/MS0359/	0.59	50	9981496004	
9981496005	A	S	106.98	104.86	2.12			0.55	50		
9981496006	A	S	106.15	103.48	2.67			0.56	50		
9981496007	A	S	106.60	104.65	1.95			0.53	50		
9981496008	A	S	107.34	106.08	1.26			0.54	50		
9981496009	A	S	106.61	105.02	1.59			0.59	50		
9981496010	A	S	106.75	105.24	1.51			0.52	50		
9981496011	A	S	107.97	106.45	1.52			0.56	50		
9981774001	A	S	107.30	104.76	2.54			0.59	50		
9981774002	A	S	106.68	104.66	2.02			0.55	50		

End

Analytical Logbook

Batch Log

#	Acquired Date and Time	Sample Type	Sample Name	File Name	Comment	Vial#	Dilution Result	Operator
1	8/20/2012 2:39	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A082012B.b\001CALB.d		1101	1	Matthew Olley
2	8/20/2012 2:42	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A082012B.b\002CALB.d		1101	1	Matthew Olley
3	8/20/2012 2:46	CalStd	Standard 1	C:\Agilent\ICPMH\1\DATA\A082012B.b\003CALS.d		2101	1	Matthew Olley
4	8/20/2012 2:50	CalStd	Standard 2	C:\Agilent\ICPMH\1\DATA\A082012B.b\004CALS.d		2102	1	Matthew Olley
5	8/20/2012 2:53	CalStd	Standard 3	C:\Agilent\ICPMH\1\DATA\A082012B.b\005CALS.d		2103	1	Matthew Olley
6	8/20/2012 2:57	CalStd	Standard 4	C:\Agilent\ICPMH\1\DATA\A082012B.b\006CALS.d		2104	1	Matthew Olley
7	8/20/2012 3:00	CalStd	Standard 5	C:\Agilent\ICPMH\1\DATA\A082012B.b\007CALS.d		2105	1	Matthew Olley
8	8/20/2012 3:04	ICV	ICV	C:\Agilent\ICPMH\1\DATA\A082012B.b\008_ICV.d		1307	1	Matthew Olley
9	8/20/2012 3:08	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A082012B.b\009_ICB.d		1101	1	Matthew Olley
10	8/20/2012 3:11	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A082012B.b\010_ICB.d		1101	1	Matthew Olley
11	8/20/2012 3:15	LLICV	LLICV	C:\Agilent\ICPMH\1\DATA\A082012B.b\011LICV.d		1305	1	Matthew Olley
12	8/20/2012 3:18	ICSA	ICSA	C:\Agilent\ICPMH\1\DATA\A082012B.b\012ICSA.d		2111	1	Matthew Olley
13	8/20/2012 3:22	ICSA	ICSA	C:\Agilent\ICPMH\1\DATA\A082012B.b\013ICSA.d		2111	1	Matthew Olley
14	8/20/2012 3:26	ICSB	ICSAB	C:\Agilent\ICPMH\1\DATA\A082012B.b\014ICSB.d		2112	1	Matthew Olley
15	8/20/2012 3:29	Sample	CHECK	C:\Agilent\ICPMH\1\DATA\A082012B.b\015SMPL.d		2501	1	Matthew Olley
16	8/20/2012 3:29							Matthew Olley
17	8/20/2012 3:34	Sample	CHECK	C:\Agilent\ICPMH\1\DATA\A082012B.b\016SMPL.d		2502	1	Matthew Olley
18	8/20/2012 3:37	Sample	9980964001	C:\Agilent\ICPMH\1\DATA\A082012B.b\017SMPL.d	38059 MWODF5	3101	1	Matthew Olley
19	8/20/2012 3:41	Sample	9980964001	C:\Agilent\ICPMH\1\DATA\A082012B.b\018SMPL.d	38059 MWODF100	3102	1	Matthew Olley
20	8/20/2012 3:44	Sample	9980964002	C:\Agilent\ICPMH\1\DATA\A082012B.b\019SMPL.d	38059 MWODF5	3103	1	Matthew Olley

Batch Log

21	8/20/2012 3:48	Sample	9980964002	C:\Agilent\ICPMH\1\DAT 38059 MWODF100 A\A082012B.b\020SMPL.d	3104	1	Matthew Olley
22	8/20/2012 3:52	Sample	9981898001	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\021SMPL.d	3105	1	Matthew Olley
23	8/20/2012 3:55	Sample	9982138001	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\022SMPL.d	3106	1	Matthew Olley
24	8/20/2012 3:59	Sample	9982138002	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\023SMPL.d	3107	1	Matthew Olley
25	8/20/2012 4:02	Sample	9982239001	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\024SMPL.d	3108	1	Matthew Olley
26	8/20/2012 4:06						Matthew Olley
27	8/20/2012 4:06	Sample	9982404001	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\025SMPL.d	3109	1	Matthew Olley
28	8/20/2012 4:10						Matthew Olley
29	8/20/2012 4:10	Sample	9982563001	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\026SMPL.d	3110	1	Matthew Olley
30	8/20/2012 4:13						Matthew Olley
31	8/20/2012 4:13	CCV	CCV	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\027_CCV.d	1307	1	Matthew Olley
32	8/20/2012 4:17	CCB	CCB	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\028_CCB.d	1101	1	Matthew Olley
33	8/20/2012 4:21	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\029LCCV.d	1305	1	Matthew Olley
34	8/20/2012 4:24	Sample	9981426002	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\030SMPL.d	3111	1	Matthew Olley
35	8/20/2012 4:24						Matthew Olley
36	8/20/2012 4:28						Matthew Olley
37	8/20/2012 4:30	Sample	9981426003	C:\Agilent\ICPMH\1\DAT 38059 MWO A\A082012B.b\031SMPL.d	3112	1	Matthew Olley
38	8/20/2012 4:30						Matthew Olley
39	8/20/2012 4:34						Matthew Olley
40	8/20/2012 4:49	Sample	9977234004	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A082012B.b\032SMPL.d	3201	1	Matthew Olley
41	8/20/2012 4:52						Matthew Olley
42	8/20/2012 4:52	Sample	9977615004	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A082012B.b\033SMPL.d	3202	1	Matthew Olley
43	8/20/2012 4:52						Matthew Olley
44	8/20/2012 4:56						Matthew Olley

Batch Log

45	8/20/2012 4:59	Sample	9977234005	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A082012B.b\034SMPL.d	3203	1	Matthew Olley
46	8/20/2012 5:02						Matthew Olley
47	8/20/2012 5:02	Sample	9977615005	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A082012B.b\035SMPL.d	3204	1	Matthew Olley
48	8/20/2012 5:02						Matthew Olley
49	8/20/2012 5:06						Matthew Olley
50	8/20/2012 5:07	Sample	9977615005	C:\Agilent\ICPMH\1\DAT 99999 MWODF5 A\A082012B.b\036SMPL.d	3204	1	Matthew Olley
51	8/20/2012 5:07						Matthew Olley
52	8/20/2012 5:10						Matthew Olley
53	8/20/2012 5:15	Sample	9977615040	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A082012B.b\037SMPL.d	3206	1	Matthew Olley
54	8/20/2012 5:18						Matthew Olley
55	8/20/2012 5:18	Sample	9977234045	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A082012B.b\038SMPL.d	3207	1	Matthew Olley
56	8/20/2012 5:22						Matthew Olley
57	8/20/2012 5:22	Sample	9977615005	C:\Agilent\ICPMH\1\DAT 99999 MWODF5 A\A082012B.b\039SMPL.d	3208	1	Matthew Olley
58	8/20/2012 5:26						Matthew Olley
59	8/20/2012 5:26	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\040_CCV.d	1307	1	Matthew Olley
60	8/20/2012 5:29	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A082012B.b\041_CCB.d	1101	1	Matthew Olley
61	8/20/2012 5:35	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\042LCCV.d	1305	1	Matthew Olley
62	8/20/2012 5:38	Sample	9977615040	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A082012B.b\043SMPL.d	3209	1	Matthew Olley
63	8/20/2012 5:38						Matthew Olley
64	8/20/2012 5:42						Matthew Olley
65	8/20/2012 6:01	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\044_CCV.d	1307	1	Matthew Olley
66	8/20/2012 6:04	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A082012B.b\045_CCB.d	1101	1	Matthew Olley
67	8/20/2012 6:08	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\046LCCV.d	1305	1	Matthew Olley
68	8/20/2012 6:08						Matthew Olley

Batch Log

69	8/20/2012 6:38	Sample	1024192	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\047SMPL.d	3101	1	Matthew Olley
70	8/20/2012 6:42						Matthew Olley
71	8/20/2012 6:42	Sample	1024193	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\048SMPL.d	3102	1	Matthew Olley
72	8/20/2012 6:46						Matthew Olley
73	8/20/2012 6:46	Sample	9983660004	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\049SMPL.d	3103	1	Matthew Olley
74	8/20/2012 6:49						Matthew Olley
75	8/20/2012 6:49	Sample	9983660005	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\050SMPL.d	3104	1	Matthew Olley
76	8/20/2012 6:53						Matthew Olley
77	8/20/2012 6:53	Sample	9983660006	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\051SMPL.d	3105	1	Matthew Olley
78	8/20/2012 6:56						Matthew Olley
79	8/20/2012 6:56	Sample	9983654001	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\052SMPL.d	3106	1	Matthew Olley
80	8/20/2012 7:00						Matthew Olley
81	8/20/2012 7:00	Sample	9983654002	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\053SMPL.d	3107	1	Matthew Olley
82	8/20/2012 7:03						Matthew Olley
83	8/20/2012 7:03	Sample	9983654003	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\054SMPL.d	3108	1	Matthew Olley
84	8/20/2012 7:07						Matthew Olley
85	8/20/2012 7:07	Sample	9983657001	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\055SMPL.d	3109	1	Matthew Olley
86	8/20/2012 7:11						Matthew Olley
87	8/20/2012 7:11	Sample	1024194	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\056SMPL.d	3110	1	Matthew Olley
88	8/20/2012 7:14						Matthew Olley
89	8/20/2012 7:14	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\057_CCV.d	1307	1	Matthew Olley
90	8/20/2012 7:18	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A082012B.b\058_CCB.d	1101	1	Matthew Olley
91	8/20/2012 7:21	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\059LCCV.d	1305	1	Matthew Olley
92	8/20/2012 7:25	Sample	1024195	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\060SMPL.d	3111	1	Matthew Olley

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93	8/20/2012 7:29						Matthew Olley
94	8/20/2012 7:29	Sample	9983657001PS	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\061SMPL.d	3112	1	Matthew Olley
95	8/20/2012 7:32						Matthew Olley
96	8/20/2012 7:32	Sample	9983657002	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\062SMPL.d	3201	1	Matthew Olley
97	8/20/2012 7:36						Matthew Olley
98	8/20/2012 7:36	Sample	9983657003	C:\Agilent\ICPMH\1\DAT 38063 MWODF5 A\A082012B.b\063SMPL.d	3202	1	Matthew Olley
99	8/20/2012 7:39						Matthew Olley
100	8/20/2012 7:39	Sample	9983657003L	C:\Agilent\ICPMH\1\DAT 38063 MWODF25 A\A082012B.b\064SMPL.d	3203	1	Matthew Olley
101	8/20/2012 7:43						Matthew Olley
102	8/20/2012 7:43	Sample	1021902	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\065SMPL.d	3204	1	Matthew Olley
103	8/20/2012 7:46						Matthew Olley
104	8/20/2012 7:47	Sample	1021903	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\066SMPL.d	3205	1	Matthew Olley
105	8/20/2012 7:50						Matthew Olley
106	8/20/2012 7:50	Sample	9981496001	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\067SMPL.d	3206	1	Matthew Olley
107	8/20/2012 7:54						Matthew Olley
108	8/20/2012 7:54	Sample	9981496002	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\068SMPL.d	3207	1	Matthew Olley
109	8/20/2012 7:57						Matthew Olley
110	8/20/2012 7:57	Sample	9981496003	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\069SMPL.d	3208	1	Matthew Olley
111	8/20/2012 8:01						Matthew Olley
112	8/20/2012 8:01	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\070_CCV.d	1307	1	Matthew Olley
113	8/20/2012 8:05	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A082012B.b\071_CCB.d	1101	1	Matthew Olley
114	8/20/2012 8:08	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\072LCCV.d	1305	1	Matthew Olley
115	8/20/2012 8:12	Sample	9981496004	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\073SMPL.d	3209	1	Matthew Olley
116	8/20/2012 8:15						Matthew Olley

Batch Log

117	8/20/2012 8:15	Sample	1021904	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\074SMPL.d	3210	1	Matthew Olley
118	8/20/2012 8:19						Matthew Olley
119	8/20/2012 8:19	Sample	1021905	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\075SMPL.d	3211	1	Matthew Olley
120	8/20/2012 8:23						Matthew Olley
121	8/20/2012 8:23	Sample	9981496004PS	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\076SMPL.d	3212	1	Matthew Olley
122	8/20/2012 8:26						Matthew Olley
123	8/20/2012 8:26	Sample	9981496005	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\077SMPL.d	3301	1	Matthew Olley
124	8/20/2012 8:30						Matthew Olley
125	8/20/2012 8:30	Sample	9981496006	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\078SMPL.d	3302	1	Matthew Olley
126	8/20/2012 8:33						Matthew Olley
127	8/20/2012 8:33	Sample	9981496007	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\079SMPL.d	3303	1	Matthew Olley
128	8/20/2012 8:37						Matthew Olley
129	8/20/2012 8:37	Sample	9981496008	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\080SMPL.d	3304	1	Matthew Olley
130	8/20/2012 8:41						Matthew Olley
131	8/20/2012 8:41	Sample	9981496009	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\081SMPL.d	3305	1	Matthew Olley
132	8/20/2012 8:44						Matthew Olley
133	8/20/2012 8:44	Sample	9981496010	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\082SMPL.d	3306	1	Matthew Olley
134	8/20/2012 8:48						Matthew Olley
135	8/20/2012 8:48	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\083_CCV.d	1307	1	Matthew Olley
136	8/20/2012 8:52	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A082012B.b\084_CCB.d	1101	1	Matthew Olley
137	8/20/2012 8:55	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\085LCCV.d	1305	1	Matthew Olley
138	8/20/2012 8:59	Sample	9981496011	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\086SMPL.d	3307	1	Matthew Olley
139	8/20/2012 9:02						Matthew Olley
140	8/20/2012 9:02	Sample	9981496011L	C:\Agilent\ICPMH\1\DAT 38062 MWODF25 A\A082012B.b\087SMPL.d	3308	1	Matthew Olley

Batch Log

141	8/20/2012 9:06						Matthew Olley
142	8/20/2012 9:06	Sample	9981774001	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\088SMPL.d	3309	1	Matthew Olley
143	8/20/2012 9:10						Matthew Olley
144	8/20/2012 9:10	Sample	9981774002	C:\Agilent\ICPMH\1\DAT 38062 MWODF5 A\A082012B.b\089SMPL.d	3310	1	Matthew Olley
145	8/20/2012 9:13						Matthew Olley
146	8/20/2012 9:13	Sample	9981774002L	C:\Agilent\ICPMH\1\DAT 38062 MWODF25 A\A082012B.b\090SMPL.d	3311	1	Matthew Olley
147	8/20/2012 9:17						Matthew Olley
148	8/20/2012 9:17	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\091_CCV.d	1307	1	Matthew Olley
149	8/20/2012 9:20	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A082012B.b\092_CCB.d	1101	1	Matthew Olley
150	8/20/2012 9:20						Matthew Olley
151	8/20/2012 9:48	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A082012B.b\093LCCV.d	1305	1	Matthew Olley
152	8/20/2012 9:52	Sample	9981476027	C:\Agilent\ICPMH\1\DAT A\A082012B.b\094SMPL.d	3401	1	Matthew Olley
153	8/20/2012 9:55						Matthew Olley
154	8/20/2012 9:55	Sample	9981591001	C:\Agilent\ICPMH\1\DAT A\A082012B.b\095SMPL.d	3402	1	Matthew Olley
155	8/20/2012 9:59						Matthew Olley
156	8/20/2012 9:59	Sample	MS	C:\Agilent\ICPMH\1\DAT A\A082012B.b\096SMPL.d	3403	1	Matthew Olley
157	8/20/2012 10:03						Matthew Olley
158	8/20/2012 10:03	Sample	9981698001	C:\Agilent\ICPMH\1\DAT A\A082012B.b\097SMPL.d	3404	1	Matthew Olley
159	8/20/2012 10:06						Matthew Olley
160	8/20/2012 10:06	Sample	9981820002	C:\Agilent\ICPMH\1\DAT A\A082012B.b\098SMPL.d	3405	1	Matthew Olley
161	8/20/2012 10:10						Matthew Olley
162	8/20/2012 10:10	Sample	9981657001	C:\Agilent\ICPMH\1\DAT A\A082012B.b\099SMPL.d	3406	1	Matthew Olley
163	8/20/2012 10:13						Matthew Olley
164	8/20/2012 10:13	Sample	9981657002	C:\Agilent\ICPMH\1\DAT A\A082012B.b\100SMPL.d	3407	1	Matthew Olley
165	8/20/2012 10:17						Matthew Olley

Batch Log

166	8/20/2012 10:17	Sample	9981395001	C:\Agilent\ICPMH\1\DATA\A082012B.b\101SMPL.d	3408	1	Matthew Olley
167	8/20/2012 10:21						Matthew Olley
168	8/20/2012 10:21	Sample	1020128	C:\Agilent\ICPMH\1\DATA\A082012B.b\102SMPL.d	3409	1	Matthew Olley
169	8/20/2012 10:24						Matthew Olley
170	8/20/2012 10:24	Sample	9982071001	C:\Agilent\ICPMH\1\DATA\A082012B.b\103SMPL.d	3410	1	Matthew Olley
171	8/20/2012 10:28						Matthew Olley
172	8/20/2012 10:28	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A082012B.b\104_CCV.d	1307	1	Matthew Olley
173	8/20/2012 10:31	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A082012B.b\105_CCB.d	1101	1	Matthew Olley
174	8/20/2012 10:35	Sample	9982072001	C:\Agilent\ICPMH\1\DATA\A082012B.b\106SMPL.d	3411	1	Matthew Olley
175	8/20/2012 10:39						Matthew Olley
176	8/20/2012 10:39	Sample	9982073001	C:\Agilent\ICPMH\1\DATA\A082012B.b\107SMPL.d	3412	1	Matthew Olley
177	8/20/2012 10:42						Matthew Olley
178	8/20/2012 10:42	Sample	9981781001	C:\Agilent\ICPMH\1\DATA\A082012B.b\108SMPL.d	3501	1	Matthew Olley
179	8/20/2012 10:46						Matthew Olley
180	8/20/2012 10:46	Sample	9981954001	C:\Agilent\ICPMH\1\DATA\A082012B.b\109SMPL.d	3502	1	Matthew Olley
181	8/20/2012 10:50						Matthew Olley
182	8/20/2012 10:50	Sample	9982004001	C:\Agilent\ICPMH\1\DATA\A082012B.b\110SMPL.d	3503	1	Matthew Olley
183	8/20/2012 10:53						Matthew Olley
184	8/20/2012 10:53	Sample	9982176004	C:\Agilent\ICPMH\1\DATA\A082012B.b\111SMPL.d	3504	1	Matthew Olley
185	8/20/2012 10:57						Matthew Olley
186	8/20/2012 10:57	Sample	1021149	C:\Agilent\ICPMH\1\DATA\A082012B.b\112SMPL.d	3505	1	Matthew Olley
187	8/20/2012 11:00						Matthew Olley
188	8/20/2012 11:00	Sample	9982176005	C:\Agilent\ICPMH\1\DATA\A082012B.b\113SMPL.d	3506	1	Matthew Olley
189	8/20/2012 11:04						Matthew Olley

Batch Log

190	8/20/2012 11:04	Sample	9982176006	C:\Agilent\ICPMH\1\DATA\A082012B.b\114SMPL.d	3507	1	Matthew Olley
191	8/20/2012 11:08						Matthew Olley
192	8/20/2012 11:08	Sample	1024204	C:\Agilent\ICPMH\1\DATA\A082012B.b\115SMPL.d	3508	1	Matthew Olley
193	8/20/2012 11:11						Matthew Olley
194	8/20/2012 11:11	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A082012B.b\116_CCV.d	1307	1	Matthew Olley
195	8/20/2012 11:15	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A082012B.b\117_CCB.d	1101	1	Matthew Olley
196	8/20/2012 11:18	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A082012B.b\118_CCV.d	1307	1	Matthew Olley
197	8/20/2012 11:22	Sample	1024205	C:\Agilent\ICPMH\1\DATA\A082012B.b\119SMPL.d	3509	1	Matthew Olley
198	8/20/2012 11:26						Matthew Olley
199	8/20/2012 11:26	Sample	9983336001	C:\Agilent\ICPMH\1\DATA\A082012B.b\120SMPL.d	3510	1	Matthew Olley
200	8/20/2012 11:29						Matthew Olley
201	8/20/2012 11:29	Sample	9983313001	C:\Agilent\ICPMH\1\DATA\A082012B.b\121SMPL.d	3511	1	Matthew Olley
202	8/20/2012 11:33						Matthew Olley
203	8/20/2012 11:33	Sample	9983313003	C:\Agilent\ICPMH\1\DATA\A082012B.b\122SMPL.d	3512	1	Matthew Olley
204	8/20/2012 11:36						Matthew Olley
205	8/20/2012 11:36	Sample	9983313004	C:\Agilent\ICPMH\1\DATA\A082012B.b\123SMPL.d	4101	1	Matthew Olley
206	8/20/2012 11:40						Matthew Olley
207	8/20/2012 11:40	Sample	1024206	C:\Agilent\ICPMH\1\DATA\A082012B.b\124SMPL.d	4102	1	Matthew Olley
208	8/20/2012 11:44						Matthew Olley
209	8/20/2012 11:44	Sample	1024207	C:\Agilent\ICPMH\1\DATA\A082012B.b\125SMPL.d	4103	1	Matthew Olley
210	8/20/2012 11:47						Matthew Olley
211	8/20/2012 11:47	Sample	9983540001	C:\Agilent\ICPMH\1\DATA\A082012B.b\126SMPL.d	4104	1	Matthew Olley
212	8/20/2012 11:51						Matthew Olley
213	8/20/2012 11:51	Sample	9983146001	C:\Agilent\ICPMH\1\DATA\A082012B.b\127SMPL.d	4105	1	Matthew Olley

Batch Log

214	8/20/2012 11:55						Matthew Olley
215	8/20/2012 11:55	Sample	9983489001	C:\Agilent\ICPMH\1\DATA\A082012B.b\128SMPL.d	4106	1	Matthew Olley
216	8/20/2012 11:58						Matthew Olley
217	8/20/2012 11:58	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A082012B.b\129_CCV.d	1307	1	Matthew Olley
218	8/20/2012 12:02	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A082012B.b\130_CCB.d	1101	1	Matthew Olley
219	8/20/2012 12:05	Sample	9983490001	C:\Agilent\ICPMH\1\DATA\A082012B.b\131SMPL.d	4107	1	Matthew Olley
220	8/20/2012 12:09						Matthew Olley
221	8/20/2012 12:09	Sample	9983491001	C:\Agilent\ICPMH\1\DATA\A082012B.b\132SMPL.d	4108	1	Matthew Olley
222	8/20/2012 12:13						Matthew Olley
223	8/20/2012 12:13	Sample	9983414001	C:\Agilent\ICPMH\1\DATA\A082012B.b\133SMPL.d	4109	1	Matthew Olley
224	8/20/2012 12:16						Matthew Olley
225	8/20/2012 12:16	Sample	9983418001	C:\Agilent\ICPMH\1\DATA\A082012B.b\134SMPL.d	4110	1	Matthew Olley
226	8/20/2012 12:20						Matthew Olley
227	8/20/2012 12:20	Sample	9983697001	C:\Agilent\ICPMH\1\DATA\A082012B.b\135SMPL.d	4111	1	Matthew Olley
228	8/20/2012 12:24						Matthew Olley
229	8/20/2012 12:24	Sample	1024208	C:\Agilent\ICPMH\1\DATA\A082012B.b\136SMPL.d	4112	1	Matthew Olley
230	8/20/2012 12:27						Matthew Olley
231	8/20/2012 12:27	Sample	9983698001	C:\Agilent\ICPMH\1\DATA\A082012B.b\137SMPL.d	4201	1	Matthew Olley
232	8/20/2012 12:31						Matthew Olley
233	8/20/2012 12:31	Sample	9981961001	C:\Agilent\ICPMH\1\DATA\A082012B.b\138SMPL.d	4202	1	Matthew Olley
234	8/20/2012 12:34						Matthew Olley
235	8/20/2012 12:34	Sample	9981961002	C:\Agilent\ICPMH\1\DATA\A082012B.b\139SMPL.d	4203	1	Matthew Olley
236	8/20/2012 12:38						Matthew Olley
237	8/20/2012 12:38	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A082012B.b\140_CCV.d	1307	1	Matthew Olley
238	8/20/2012 12:38						Matthew Olley

Batch Log

239	8/20/2012 12:44	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A082012B.b\141_CCB.d	1101	1	Matthew Olley
240	8/20/2012 12:47	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A082012B.b\142_CCV.d	1307	1	Matthew Olley
241	8/20/2012 12:51	Sample	9981961003	C:\Agilent\ICPMH\1\DATA\A082012B.b\143SMPL.d	4204	1	Matthew Olley
242	8/20/2012 12:54						Matthew Olley
243	8/20/2012 12:54	Sample	1020749	C:\Agilent\ICPMH\1\DATA\A082012B.b\144SMPL.d	4205	1	Matthew Olley
244	8/20/2012 12:58						Matthew Olley
245	8/20/2012 12:58	Sample	1020750	C:\Agilent\ICPMH\1\DATA\A082012B.b\145SMPL.d	4206	1	Matthew Olley
246	8/20/2012 13:02						Matthew Olley
247	8/20/2012 13:02	Sample	982000002	C:\Agilent\ICPMH\1\DATA\A082012B.b\146SMPL.d	4207	1	Matthew Olley
248	8/20/2012 13:05						Matthew Olley
249	8/20/2012 13:05	Sample	1021145	C:\Agilent\ICPMH\1\DATA\A082012B.b\147SMPL.d	4208	1	Matthew Olley
250	8/20/2012 13:09						Matthew Olley
251	8/20/2012 13:09	Sample	1021146	C:\Agilent\ICPMH\1\DATA\A082012B.b\148SMPL.d	4209	1	Matthew Olley
252	8/20/2012 13:12						Matthew Olley
253	8/20/2012 13:12	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A082012B.b\149_CCV.d	1307	1	Matthew Olley
254	8/20/2012 13:16	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A082012B.b\150_CCB.d	1101	1	Matthew Olley
255	8/20/2012 13:20	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A082012B.b\151_CCV.d	1307	1	Matthew Olley

Total Solids Summary Forms

Sample Description
FTSW-HR-SO-55 (07.5)

Form 7
Duplicate Summary

Analysis Method: 2540G
SDG No.: ERT-007

Matrix (soil/water): soil
Units: %
Instrument ID: N/A
GC Column: N/A
Sample % Moisture: N/A

Lab Sample ID: 9981496006
Lab File ID: N/A
Lab Sample Dup. ID: 1019896
Dup. Lab File ID: N/A
Dup. % Moisture: N/A

Analyte	Sample Concentration	Duplicate Concentration	Relative Percent Difference (RPD)	(1)	Acceptable Limit
Total Solids	78.4	77.0	1.8		5%

(1) The following qualifiers are used:
* : Values outside of acceptable limits

Comments:

Total Solids by SM 2540G

Sample handling. Eleven (11) solid samples were analyzed for total solids by Standard Method 2540G for dry weight reporting purposes. The samples were analyzed within the 14-day method recommended hold time for dry weight reporting.

Duplicate. A duplicate analysis, identified as 1019896, was performed on sample 9981496006 (FTSW-HR-SO-55 (07.5)). The relative percent difference between the results was within the QC limit of 5%.

Total Solids Raw Data

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Total Solids

Batch: 114096 Queue: WETC Analyst: KED

File Name: 114096_120807-130436 Date/Time: 08/07/12 13:25

Misc:		1st Time In	13:25	2nd Time In	8:40	3rd Time In	10:30	4th Time In	
		1st Temp In °C	104	2nd Temp In °C	104	3rd Temp In °C	104	4th Temp In °C	
		1st Time Out	8:35	2nd Time Out	10:25	3rd Time Out	11:30	4th Time Out	
		1st Temp Out °C	104	2nd Temp Out °C	104	3rd Temp Out °C	104	4th Temp Out °C	

Sample ID	Cont ID	Samp Type	TVS	Weight of dish and sample (g) or Volume of sample (ml)	Dish Wt. (g)	1st Dish + Sample Wt (g)	2nd Dish + Sample Wt (g)	3rd Dish + Sample Wt (g)	4th Dish + Sample Wt (g)	TS (%) or (mg/l)	Result1 TARE (g)	Result2 IWT (g)	Result3 FWT (g)
1019894	BALCHK			0.1000	0.1000	0.1000	0.1000	0.1000		#DIV/0!	0.1000	0.1000	0.1000
1019895	A	DUP		8.7659	1.1521	3.7491	3.7357			33.9331	1.1521	8.7659	3.7357
9981095001	A	S		11.5532	1.1882	5.0846	5.0666			37.4182	1.1882	11.5532	5.0666
9981256003	A	S		12.9613	1.1805	10.5387	10.5272			79.3384	1.1805	12.9613	10.5272
9981256004	A	S		23.6236	1.1620	13.7300	13.7173			55.8967	1.1620	23.6236	13.7173
9981262017	A	S		12.2724	1.1433	6.6378	6.6247			49.2529	1.1433	12.2724	6.6247
9981496001	A	S		22.3322	1.1663	18.1163	18.1017			80.0127	1.1663	22.3322	18.1017
9981496002	A	S		20.8773	1.1390	18.3582	18.3477			87.1843	1.1390	20.8773	18.3477
9981496003	A	S		28.3561	1.1502	24.4552	24.3950	24.3831		85.3966	1.1502	28.3561	24.3831
9981496004	A	S		20.0501	1.1485	16.5203	16.5109			81.2757	1.1485	20.0501	16.5109
9981496005	A	S		21.2626	1.1428	19.4013	19.3959			90.7221	1.1428	21.2626	19.3959
1019896	A	DUP		37.3166	1.1523	29.0350	29.0121			77.0367	1.1523	37.3166	29.0121
9981496006	A	S		31.4362	1.1650	24.9038	24.8903			78.3758	1.1650	31.4362	24.8903
9981496007	A	S		16.4440	1.1879	14.8686	14.8574			89.6002	1.1879	16.4440	14.8574
9981496008	A	S		19.6529	1.1409	17.9384	17.9284			90.6844	1.1409	19.6529	17.9284
9981496009	A	S		19.8051	1.1405	15.9517	15.9453			79.3202	1.1405	19.8051	15.9453
9981496010	A	S		17.2345	1.1384	15.9655	15.9551			92.0515	1.1384	17.2345	15.9551
9981496011	A	S		22.2539	1.1639	17.7294	17.7192			78.4983	1.1639	22.2539	17.7192
1019897	BALCHK			0.1000	0.1000	0.1000	0.1000	0.1000		#DIV/0!	0.1000	0.1000	0.1000

End

ANALYST kristie Darrah
ENTER REVIEW Autopost
SECOND REVIEW mm 8/8/12
APPROVED mm 8/8/12

ALMDT.NOUSER

Subcontracting Data

ALS Environmental

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL REPORT

Report Date: August 21, 2012

Vicki Forney
ALS Environmental-Middletown
34 Dogwood Lane
Middletown, PA 17057

Phone: (717) 944-5541 x 3162
Fax: (717) 944-1430
E-mail: vicki.forney@ALSglobal.com

Workorder: 34-1222142
Project ID: ALS Middletown 080812
Purchase Order: NA

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
FTSW-HR-SO-50 (10)	1222142001	08/03/12	08/08/12	ERT, Inc
FTSW-HR-SO-51 (10)	1222142002	08/03/12	08/08/12	ERT, Inc
FTSW-HR-SO-52 (10)	1222142003	08/03/12	08/08/12	ERT, Inc
FTSW-HR-SO-53 (10)	1222142004	08/03/12	08/08/12	ERT, Inc
FTSW-HR-SO-54 (10)	1222142005	08/06/12	08/08/12	ERT, Inc
FTSW-HR-SO-55 (7.5)	1222142006	08/06/12	08/08/12	ERT, Inc
FTSW-HR-SO-56 (10)	1222142007	08/06/12	08/08/12	ERT, Inc
FTSW-HR-SO-57 (10)	1222142008	08/06/12	08/08/12	ERT, Inc
FTSW-HR-SO-58 (10)	1222142009	08/06/12	08/08/12	ERT, Inc
FTSW-HR-SO-59 (10)	1222142010	08/06/12	08/08/12	ERT, Inc
FTSW-HR-SO-60 (7.5)	1222142011	08/06/12	08/08/12	ERT, Inc
FTSW-HR-SO-60 (7.5) ERB	1222142012	08/06/12	08/08/12	

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL REPORT

Workorder: 34-1222142
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-50 (10) 9981496001 Sampling Site: ERT, Inc Collected: 08/03/2012
Lab ID: 1222142001 Media: 8 oz Glass Jar Wide Mouth Received: 08/08/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1296 (HBN: 91939)	Initial: 1.51 grams	Batch: ELMS/1297 (HBN: 92002)	Percent Solid: 81.4
Prepared: 08/14/2012	Final: 10 mL	Analyzed: 08/17/2012 18:40	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.021	0.021	0.41	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15839 (HBN: 91681)	Initial: 30.04 grams	Batch: ESVO/3831 (HBN: 92093)	Percent Solid: 81.4
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/17/2012 17:16	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.7	7.7	200	1	U
1,4-Dithiane	5.9	5.9	200	1	U

Sample ID: FTSW-HR-SO-51 (10) 9981496002 Sampling Site: ERT, Inc Collected: 08/03/2012
Lab ID: 1222142002 Media: 8 oz Glass Jar Wide Mouth Received: 08/08/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1296 (HBN: 91939)	Initial: 1.22 grams	Batch: ELMS/1297 (HBN: 92002)	Percent Solid: 88.5
Prepared: 08/14/2012	Final: 10 mL	Analyzed: 08/17/2012 20:29	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.024	0.024	0.46	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15839 (HBN: 91681)	Initial: 30.95 grams	Batch: ESVO/3831 (HBN: 92093)	Percent Solid: 88.5
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/17/2012 17:45	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: FTSW-HR-SO-52 (10) 9981496003 Sampling Site: ERT, Inc Collected: 08/03/2012
Lab ID: 1222142003 Media: 8 oz Glass Jar Wide Mouth Received: 08/08/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1296 (HBN: 91939)	Initial: 1.65 grams	Batch: ELMS/1297 (HBN: 92002)	Percent Solid: 86
Prepared: 08/14/2012	Final: 10 mL	Analyzed: 08/17/2012 21:06	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.018	0.018	0.35	1	U

Results Continued on Next Page

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL REPORT

Workorder: 34-1222142
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-52 (10) Sampling Site: ERT, Inc Collected: 08/03/2012
Lab ID: 1222142003 Media: 8 oz Glass Jar Wide Mouth Received: 08/08/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15839 (HBN: 91681)	Initial: 30.07 grams	Batch: ESVO/3831 (HBN: 92093)	Percent Solid: 88
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/17/2012 18:14	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.3	7.3	190	1	U
1,4-Dithiane	5.5	5.5	190	1	U

Sample ID: FTSW-HR-SO-53 (10) 9981496 004 Sampling Site: ERT, Inc Collected: 08/03/2012
Lab ID: 1222142004 Media: 8 oz Glass Jar Wide Mouth Received: 08/08/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1296 (HBN: 91939)	Initial: 1.25 grams	Batch: ELMS/1297 (HBN: 92002)	Percent Solid: 83.7
Prepared: 08/14/2012	Final: 10 mL	Analyzed: 08/17/2012 21:42	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.025	0.025	0.48	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15839 (HBN: 91681)	Initial: 30.1 grams	Batch: ESVO/3831 (HBN: 92093)	Percent Solid: 83.7
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/17/2012 13:52	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.5	7.5	200	1	U
1,4-Dithiane	5.7	5.7	200	1	U

Sample ID: FTSW-HR-SO-54 (10) 9981496 005 Sampling Site: ERT, Inc Collected: 08/06/2012
Lab ID: 1222142005 Media: 8 oz Glass Jar Wide Mouth Received: 08/08/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1296 (HBN: 91939)	Initial: 1.62 grams	Batch: ELMS/1297 (HBN: 92002)	Percent Solid: 93
Prepared: 08/14/2012	Final: 10 mL	Analyzed: 08/17/2012 22:18	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.017	0.017	0.33	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15839 (HBN: 91681)	Initial: 30.61 grams	Batch: ESVO/3831 (HBN: 92093)	Percent Solid: 93
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/17/2012 14:21	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.6	6.6	180	1	U

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ANALYTICAL REPORT

Workorder: 34-1222142
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-54 (10) | Sampling Site: ERT, Inc | Collected: 08/06/2012
Lab ID: 1222142005 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15839 (HBN: 91681)	Initial: 30.61 grams	Batch: ESVO/3831 (HBN: 92093)	Percent Solid: 93
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/17/2012 14:21	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Dithiane	5.0	5.0	180	1	U

Sample ID: FTSW-HR-SO-55 (7.5) 9981496 006 | Sampling Site: ERT, Inc | Collected: 08/06/2012
Lab ID: 1222142006 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1296 (HBN: 91939)	Initial: 1.38 grams	Batch: ELMS/1297 (HBN: 92002)	Percent Solid: 78.6
Prepared: 08/14/2012	Final: 10 mL	Analyzed: 08/17/2012 23:31	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.024	0.024	0.46	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15839 (HBN: 91681)	Initial: 30.57 grams	Batch: ESVO/3831 (HBN: 92093)	Percent Solid: 78.6
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/17/2012 14:50	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.9	7.9	210	1	U
1,4-Dithiane	6.0	6.0	210	1	U

Sample ID: FTSW-HR-SO-56 (10) 9981496 007 | Sampling Site: ERT, Inc | Collected: 08/06/2012
Lab ID: 1222142007 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1296 (HBN: 91939)	Initial: 1.11 grams	Batch: ELMS/1297 (HBN: 92002)	Percent Solid: 87.2
Prepared: 08/14/2012	Final: 10 mL	Analyzed: 08/18/2012 00:07	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.027	0.027	0.52	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15839 (HBN: 91681)	Initial: 30.38 grams	Batch: ESVO/3831 (HBN: 92093)	Percent Solid: 87.2
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/17/2012 15:20	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.1	7.1	190	1	U
1,4-Dithiane	5.4	5.4	190	1	U

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ANALYTICAL REPORT

Workorder: 34-1222142
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-57 (10) 9981496 008 | Sampling Site: ERT, Inc | Collected: 08/06/2012
Lab ID: 1222142008 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1296 (HBN: 91939)	Initial: 1.2 grams	Batch: ELMS/1297 (HBN: 92002)	Percent Solid: 92.2
Prepared: 08/14/2012	Final: 10 mL	Analyzed: 08/18/2012 00:44	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.024	0.024	0.45	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15839 (HBN: 91681)	Initial: 30.49 grams	Batch: ESVO/3831 (HBN: 92093)	Percent Solid: 92.2
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/17/2012 18:43	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.7	6.7	180	1	U
1,4-Dithiane	5.1	5.1	180	1	U

Sample ID: FTSW-HR-SO-58 (10) 9981496 009 | Sampling Site: ERT, Inc | Collected: 08/06/2012
Lab ID: 1222142009 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1296 (HBN: 91939)	Initial: 1.38 grams	Batch: ELMS/1297 (HBN: 92002)	Percent Solid: 81
Prepared: 08/14/2012	Final: 10 mL	Analyzed: 08/18/2012 01:20	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.023	0.023	0.45	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15839 (HBN: 91681)	Initial: 30.38 grams	Batch: ESVO/3831 (HBN: 92093)	Percent Solid: 81
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/17/2012 19:12	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.7	7.7	200	1	U
1,4-Dithiane	5.8	5.8	200	1	U

Sample ID: FTSW-HR-SO-59 (10) 9981496 010 | Sampling Site: ERT, Inc | Collected: 08/06/2012
Lab ID: 1222142010 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1296 (HBN: 91939)	Initial: 1.28 grams	Batch: ELMS/1297 (HBN: 92002)	Percent Solid: 92.7
Prepared: 08/14/2012	Final: 10 mL	Analyzed: 08/18/2012 01:57	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.022	0.022	0.42	1	U

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ANALYTICAL REPORT

Workorder: 34-1222142
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-59 (10) | Sampling Site: ERT, Inc | Collected: 08/06/2012
Lab ID: 1222142010 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15839 (HBN: 91681)	Initial: 30.31 grams	Batch: ESVO/3831 (HBN: 92093)	Percent Solid: 92.7
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/17/2012 19:41	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.7	6.7	180	1	U
1,4-Dithiane	5.1	5.1	180	1	U

Sample ID: FTSW-HR-SO-60 (7.5) 9981496 011 | Sampling Site: ERT, Inc | Collected: 08/06/2012
Lab ID: 1222142011 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/08/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1296 (HBN: 91939)	Initial: 1.16 grams	Batch: ELMS/1297 (HBN: 92002)	Percent Solid: 78.2
Prepared: 08/14/2012	Final: 10 mL	Analyzed: 08/18/2012 02:33	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.029	0.029	0.55	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15839 (HBN: 91681)	Initial: 30.85 grams	Batch: ESVO/3831 (HBN: 92093)	Percent Solid: 78.2
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/17/2012 16:47	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.8	7.8	210	1	U
1,4-Dithiane	5.9	5.9	210	1	U

Sample ID: FTSW-HR-SO-60 (7.5) ERB 9981496 012 | Sampling Site: NA | Collected: 08/06/2012
Lab ID: 1222142012 | Media: 1000 mL Amber Glass | Received: 08/08/2012
Matrix: Water | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Not Applicable		Analysis: Chemical Agent Breakdown, Water	Instrument ID: LCMS03
		Batch: ELMS/1288 (HBN: 91545)	Percent Solid: NA
		Analyzed: 08/13/2012 16:32	Report Basis: Wet

Analyte	ug/L	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual.
Thiodiglycol	2.6	2.6	50	1	U

Analysis Method - SW 8270

Preparation: EPA 3510, Sep Funnel SVOA	Weight/Volume	Analysis: SW 8270D, Water	Instrument ID: 5975-H
Batch: ENVX/15815 (HBN: 91554)	Initial: 1000 mL	Batch: ESVO/3830 (HBN: 92092)	Percent Solid: NA
Prepared: 08/13/2012	Final: 1 mL	Analyzed: 08/14/2012 12:36	Report Basis: Wet

Analyte	ug/L	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual.
1,4-Oxathiane	1.5	1.5	5.0	1	U

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ANALYTICAL REPORT

Workorder: 34-1222142
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-60 (7.5) ERB	Sampling Site: NA	Collected: 08/06/2012
Lab ID: 1222142012	Media: 1000 mL Amber Glass	Received: 08/08/2012
Matrix: Water	Sampling Parameter: NA	

Analysis Method: SW/8270

Preparation: EPA 3510, Sep Funnel SVOA	Weight/Volume	Analysis: SW 8270D, Water	Instrument ID: 5975-H
Batch: ENVX/15815 (HBN: 91554)	Initial: 1000 mL	Batch: ESVO/3830 (HBN: 92092)	Percent Solid: NA
Prepared: 08/13/2012	Final: 1 mL	Analyzed: 08/14/2012 12:36	Report Basis: Wet

Analyte	ug/L	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual
1,4-Dithiane	1.5	1.5	5.0	1	U

Comments

Quality Control: SW 8270 - (HBN: 92093)

There were some surrogate recoveries below the QC limit. It was not possible to perform a potential matrix-effect-confirming re-extraction with holding times. Of the six surrogates specified in Method 8270, the two which are truly pertinent to the analytes of interest (due to nearness in elution time) are 2-fluorophenol and phenol-d6. Recovery of these surrogates where within limits in all samples.

Report Authorization

Method	Analyst	Peer Review
Chemical Agent Breakdown	Thomas T. McKay	Thomas J. Masolan
SW 8270	Reed A. Hendricks	Matt Garvin
Solids/Moisture Determination	Ilse J. Ovalle	Ashley Waganheim

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ANALYTICAL REPORT

Workorder: 34-1222142
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/eas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint, Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.
RL = Reporting Limit, a verified value of method/media/instrument sensitivity.
CRDL = Contract Required Detection Limit
Reg. Limit = Regulatory Limit.
ND = Not Detected, testing result not detected above the MDL or RL.
< This testing result is less than the numerical value.
** No result could be reported, see sample comments for details.

Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.
J = Qualifier indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds calibration range.
P = Qualifier indicates that the RPD between the two columns is greater than 40%.

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Case Narrative

Method: ALS-LC/MS
Analysis: Agent Breakdown Products
ALS WO ID(s): 1222167

Client: ALS Laboratory Group
Account: 08001
Matrix: Soil
HBN #: 92002

General Set Information: There were eight field samples in this workorder. The samples were analyzed for thiodiglycol (TDG).

Method Summary: Each sample was prepared as noted below and analyzed using an Agilent 1200 LC/MSD system in select ion monitoring (SIM) mode at m/z 97, 125, 139, 146, 181, 105 and 113. ChemStation software was used for instrument control and data analysis.

Sample Preparation: Approximately 1.00g of each sample was weighed into a 15-mL centrifuge tube, and 9.9mL of ASTM Type II water was added to each tube. 100µL of internal standard solution was then added to each sample, bringing the total extract volume to 10mL. The samples were capped, vortexed, rotated for at least 30 minutes, and filtered with Phenomenex Phenex 0.45µm PES syringe filters.

Holding Times: Holding times were met for all samples.

Dilutions: No dilutions were necessary.

Method QC data: The method blank criteria were met. The method blanks (LMB 290920 & 290925) were less than 1/2 the RL of 0.5ug/g for all analytes. The recoveries for LCS 290921 & 290926 were within acceptable parameters.

MS/MSD Analysis: The matrix spikes and matrix spike duplicates were performed on parent samples 1222142001 & 1222167001. Recoveries and RPDs were within acceptable limits for all analytes.

Instrument QC: Instrument initial and continuing calibrations were performed in accordance with established procedures.

NC/CAR(s): None.

Sample Calculation: Samples were reported in µg/g. Results were calculated in µg/g by the equation (A)x(B)x(C)/(D),

where: A = Analyte concentration from the standard curve (µg/mL)
B = Dilution performed at time of analysis
C = Volume of extract (10mL)
D = Actual weight of sample aliquot (g)

Miscellaneous Comments: None.

August 20, 2012

Thomas T. McKay Date

Case Narrative

Method: 8270D
Analysis: Semivolatiles by GC/MS
SOP ref: OE-SW-3550, OS-SW-8270D

Set ID: 1222167
Client: ALS Laboratory Group
Matrix: Soil

General Set Information: There are ten field samples plus MS/MSD in this reporting group.

Method Summary: This is a GC/MS method for determination of semivolatile organic compounds in soil according to the SW-846 Guidelines. Thirty grams of soil were extracted by sonication and then concentrated to final volume of 1.0 mL. The resulting extract is analyzed using an Agilent model 5975 GC/MS system with an electron impact ionization source and a quadrapole mass-filter detector.

Sample Preparation: All samples were prepared in accordance with method 3550.

Holding Times: All preparation and analysis holding times were met for all samples.

Dilutions: None.

Method and Sample QC data: All target compounds were within recovery limits for the laboratory control sample. The method blank met the acceptance criteria with no target compounds detected above the reporting limit. All samples met pertinent internal standard area criteria. Sample 1222167001 (FTSW-HR-SO-43) had low area of the last internal standard. The MS and MSD had the same result and therefore confirmed that this is a matrix effect. This last internal standard is not pertinent to that analysis because the requested target analytes do not reference that internal standard. All surrogate recoveries were within QC limits.

MS/MSD Analysis: Matrix spiking was performed on Sample 1222167001. All recoveries were within expected ranges.

Instrument QC: The instrument was tuned with 50 ng DFTPP. A six-point initial calibration curve was analyzed prior to sample analysis. The concentrations of the standards were: 5, 20, 35, 50, 65 and 80 µg/mL. A calibration verification standard at a concentration of 50 ug/mL was analyzed to verify instrument response against the initial calibration. The initial calibration and continuing calibration verification passed all method criteria.

Miscellaneous Comments: None.

8-20-12

Reed A. Hendricks August 20, 2012

ANALYTICAL REPORT

Report Date: August 20, 2012

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Workorder: **34-1222167**
Project ID: Ft. Stewart 3153-004
Purchase Order: 3153-004

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
FTSW-HR-So-43	1222167001	08/01/12	08/07/12	Ft. Stewart
FTSW-HR-So-44	1222167002	08/01/12	08/07/12	Ft. Stewart
FTSW-HR-So-45	1222167003	08/01/12	08/07/12	Ft. Stewart
FTSW-HR-So-46	1222167004	08/01/12	08/07/12	Ft. Stewart
FTSW-HR-So-46Dup	1222167005	08/01/12	08/07/12	Ft. Stewart
FTSW-HR-So-47	1222167006	08/01/12	08/07/12	Ft. Stewart
FTSW-HR-So-48	1222167007	08/01/12	08/07/12	Ft. Stewart
FTSW-HR-So-49	1222167008	08/01/12	08/07/12	Ft. Stewart

ANALYTICAL REPORT

Workorder: 34-1222167
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-So-43** | Sampling Site: Ft. Stewart | Collected: 08/01/2012
Lab ID: 1222167001 | Media: 8 oz Amber Glass Jar | Received: 08/07/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1296 (HBN: 91939)	**Initial:** 1.42 grams	**Batch:**	ELMS/1297 (HBN: 92002)	**Percent Solid:** 81.7
Prepared:	08/14/2012	**Final:** 10 mL	**Analyzed:**	08/18/2012 04:22	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.022	0.022	0.43	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15840 (HBN: 91685)	**Initial:** 30.81 grams	**Batch:**	ESVO/3827 (HBN: 91984)	**Percent Solid:** 81.7
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/16/2012 18:34	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.5	7.5	200	1	U
1,4-Dithiane	5.7	5.7	200	1	U

Sample ID: **FTSW-HR-So-44** | Sampling Site: Ft. Stewart | Collected: 08/01/2012
Lab ID: 1222167002 | Media: 8 oz Amber Glass Jar | Received: 08/07/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1296 (HBN: 91939)	**Initial:** 1.26 grams	**Batch:**	ELMS/1297 (HBN: 92002)	**Percent Solid:** 88.1
Prepared:	08/14/2012	**Final:** 10 mL	**Analyzed:**	08/18/2012 06:48	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.023	0.023	0.45	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15840 (HBN: 91685)	**Initial:** 30.21 grams	**Batch:**	ESVO/3827 (HBN: 91984)	**Percent Solid:** 88.1
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/16/2012 14:12	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.1	7.1	190	1	U
1,4-Dithiane	5.4	5.4	190	1	U

Sample ID: **FTSW-HR-So-45** | Sampling Site: Ft. Stewart | Collected: 08/01/2012
Lab ID: 1222167003 | Media: 8 oz Amber Glass Jar | Received: 08/07/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1296 (HBN: 91939)	**Initial:** 1.32 grams	**Batch:**	ELMS/1297 (HBN: 92002)	**Percent Solid:** 89.4
Prepared:	08/14/2012	**Final:** 10 mL	**Analyzed:**	08/18/2012 07:24	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.022	0.022	0.42	1	U

Results Continued on Next Page

ANALYTICAL REPORT

Workorder: 34-1222167
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-So-45** | Sampling Site: Ft. Stewart | Collected: 08/01/2012
Lab ID: 1222167003 | Media: 8 oz Amber Glass Jar | Received: 08/07/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15840 (HBN: 91685)	**Initial:** 30.2 grams	**Batch:**	ESVO/3827 (HBN: 91984)	**Percent Solid:** 89.4
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/16/2012 14:42	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.0	7.0	190	1	U
1,4-Dithiane	5.3	5.3	190	1	U

Sample ID: **FTSW-HR-So-46** | Sampling Site: Ft. Stewart | Collected: 08/01/2012
Lab ID: 1222167004 | Media: 8 oz Amber Glass Jar | Received: 08/07/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1296 (HBN: 91939)	**Initial:** 1.27 grams	**Batch:**	ELMS/1297 (HBN: 92002)	**Percent Solid:** 80.6
Prepared:	08/14/2012	**Final:** 10 mL	**Analyzed:**	08/18/2012 08:00	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.025	0.025	0.49	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15840 (HBN: 91685)	**Initial:** 30.06 grams	**Batch:**	ESVO/3827 (HBN: 91984)	**Percent Solid:** 80.6
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/16/2012 18:05	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.8	7.8	210	1	U
1,4-Dithiane	5.9	5.9	210	1	U

Sample ID: **FTSW-HR-So-46Dup** | Sampling Site: Ft. Stewart | Collected: 08/01/2012
Lab ID: 1222167005 | Media: 8 oz Amber Glass Jar | Received: 08/07/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1296 (HBN: 91939)	**Initial:** 1.1 grams	**Batch:**	ELMS/1297 (HBN: 92002)	**Percent Solid:** 87
Prepared:	08/14/2012	**Final:** 10 mL	**Analyzed:**	08/18/2012 08:37	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.027	0.027	0.52	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15840 (HBN: 91685)	**Initial:** 30.52 grams	**Batch:**	ESVO/3827 (HBN: 91984)	**Percent Solid:** 87
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/16/2012 15:10	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.1	7.1	190	1	U

Results Continued on Next Page

ANALYTICAL REPORT

Workorder: 34-1222167
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-So-46Dup** | Sampling Site: Ft. Stewart | Collected: 08/01/2012
Lab ID: 1222167005 | Media: 8 oz Amber Glass Jar | Received: 08/07/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15840 (HBN: 91685)	**Initial:** 30.52 grams	**Batch:**	ESVO/3827 (HBN: 91984)	**Percent Solid:** 87
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/16/2012 15:10	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Dithiane	5.4	5.4	190	1	U

Sample ID: **FTSW-HR-So-47** | Sampling Site: Ft. Stewart | Collected: 08/01/2012
Lab ID: 1222167006 | Media: 8 oz Amber Glass Jar | Received: 08/07/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1296 (HBN: 91939)	**Initial:** 1.24 grams	**Batch:**	ELMS/1297 (HBN: 92002)	**Percent Solid:** 76.4
Prepared:	08/14/2012	**Final:** 10 mL	**Analyzed:**	08/18/2012 09:13	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.027	0.027	0.53	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15840 (HBN: 91685)	**Initial:** 30.67 grams	**Batch:**	ESVO/3827 (HBN: 91984)	**Percent Solid:** 76.4
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/16/2012 15:39	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	8.1	8.1	210	1	U
1,4-Dithiane	6.1	6.1	210	1	U

Sample ID: **FTSW-HR-So-48** | Sampling Site: Ft. Stewart | Collected: 08/01/2012
Lab ID: 1222167007 | Media: 8 oz Amber Glass Jar | Received: 08/07/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1296 (HBN: 91939)	**Initial:** 1.05 grams	**Batch:**	ELMS/1297 (HBN: 92002)	**Percent Solid:** 82.4
Prepared:	08/14/2012	**Final:** 10 mL	**Analyzed:**	08/18/2012 09:50	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.030	0.030	0.58	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15840 (HBN: 91685)	**Initial:** 30.37 grams	**Batch:**	ESVO/3827 (HBN: 91984)	**Percent Solid:** 82.4
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/16/2012 16:08	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.6	7.6	200	1	U
1,4-Dithiane	5.7	5.7	200	1	U

ANALYTICAL REPORT

Workorder: 34-1222167
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-So-49 | Sampling Site: Ft. Stewart | Collected: 08/01/2012
Lab ID: 1222167008 | Media: 8 oz Amber Glass Jar | Received: 08/07/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1296 (HBN: 91939)	**Initial:** 1.2 grams	**Batch:**	ELMS/1297 (HBN: 92002)	**Percent Solid:** 89
Prepared:	08/14/2012	**Final:** 10 mL	**Analyzed:**	08/18/2012 10:26	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.024	0.024	0.47	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15840 (HBN: 91685)	**Initial:** 30.39 grams	**Batch:**	ESVO/3827 (HBN: 91984)	**Percent Solid:** 89
Prepared:	08/15/2012	**Final:** 1 mL	**Analyzed:**	08/16/2012 16:37	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.0	7.0	180	1	U
1,4-Dithiane	5.3	5.3	180	1	U

Report Authorization

Method	Analyst	Peer Review
Chemical Agent Breakdown	Thomas T. McKay	Thomas J. Masoian
SW 8270	Reed A. Hendricks	Matt Garvin
Solids/Moisture Determination	Ilse J. Ovalle	Ashley Waganheim

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ANALYTICAL REPORT

Workorder: 34-1222167
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint ,Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.
RL = Reporting Limit, a verified value of method/media/instrument sensitivity.
CRDL = Contract Required Detection Limit
Reg. Limit = Regulatory Limit.
ND = Not Detected, testing result not detected above the MDL or RL.
< This testing result is less than the numerical value.
** No result could be reported, see sample comments for details.

Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.
J = Qualifier Indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds calibration range.
P = Qualifier indicates that the RPD between the two columns is greater than 40%.

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1222167**

Limits: Historical/Performance	**Preparation:** Chemical Agent Breakdown, Soil Prep	**Analysis:** Chemical Agent Breakdown
Basis: ALS Laboratory Group	**Batch:** ELMS/1296 (HBN: 91939)	**Batch:** ELMS/1297 (HBN: 92002)
	Prepared By: Thomas T. McKay	**Analyzed By:** Thomas T. McKay

Blank

LMB: 290920
Analyzed: 08/17/2012 16:51
Units: ug/g

Analyte	Result	RL
Thiodiglycol	ND	0.5

LMB: 290925
Analyzed: 08/18/2012 03:09
Units: ug/g

Analyte	Result	RL
Thiodiglycol	ND	0.5

Laboratory Control Sample

LCS: 290921
Analyzed: 08/17/2012 17:27
Units: ug/g

Analyte	Result	Target	% Recovery	QC Limits	
Thiodiglycol	20.1	20	101	80	120

LCS: 290926
Analyzed: 08/18/2012 03:46
Units: ug/g

Analyte	Result	Target	% Recovery	QC Limits	
Thiodiglycol	21.2	20	106	80	120

Matrix Spike - Matrix Spike Duplicate

Sample: 1222167001
Analyzed: 08/18/2012 04:22
MS: 290927
Analyzed: 08/18/2012 04:58
MSD: 290928
Analyzed: 08/18/2012 06:11
Units: ug/g

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
Thiodiglycol	ND	37	36.5	101	80	120	37.6	94.9	1.62	0	20

Sample: 1222142001
Analyzed: 08/17/2012 18:40
MS: 290922
Analyzed: 08/17/2012 19:16
MSD: 290923
Analyzed: 08/17/2012 19:53
Units: ug/g

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
Thiodiglycol	ND	36.3	37.9	95.8	80	120	40.7	103	11.5	0	20

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1222167**

Limits: Historical/Performance	**Preparation:** Chemical Agent Breakdown, Soil Prep	**Analysis:** Chemical Agent Breakdown
Basis: ALS Laboratory Group	**Batch:** ELMS/1296 (HBN: 91939)	**Batch:** ELMS/1297 (HBN: 92002)
	Prepared By: Thomas T. McKay	**Analyzed By:** Thomas T. McKay

QC Data Approved and Reviewed by

Thomas T. McKay	Thomas J. Masoian	8/20/2012
Analyst	**Peer Review**	**Date**

Symbols and Definitions

* - Analyte above reporting limit or outside of control limits
▲ - Sample result is greater than 4 times the spike added
◓ - Sample and Matrix Duplicate less than 5 times the reporting limit

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable

Quality Control Sample
Batch Report

Analysis Information

Workorder: 1222167

Limits:	Historical/Performance	**Preparation:**	EPA 3550, Sonic Ext, SVOA Soil	**Analysis:**	SW 8270
Basis:	ALS Laboratory Group	**Batch:**	ENVX/15840 (HBN: 91685)	**Batch:**	ESVO/3827 (HBN: 91984)
		Prepared By:	Dustin Calder	**Analyzed By:**	Reed A. Hendricks

Blank

MB: 289984
Analyzed: 08/16/2012 12:44
Units: ug/Kg

Analyte	Result	RL
1,4-Oxathiane	ND	167
1,4-Dithiane	ND	167

Laboratory Control Sample

LCS: 289985
Analyzed: 08/16/2012 13:12
Units: ug/Kg

Analyte	Result	Target	% Recovery	QC Limits	
1,4-Oxathiane	785	1330	58.9	30	170
1,4-Dithiane	967	1330	72.5	30	170

Matrix Spike - Matrix Spike Duplicate

Sample: 1222167001
Analyzed: 08/16/2012 18:34
Units: ug/Kg

MS: 289986
Analyzed: 08/16/2012 19:03

MSD: 289987
Analyzed: 08/16/2012 19:32

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
1,4-Oxathiane	ND	567	1330	42.6	30	170	737	55.5	26	0	50
1,4-Dithiane	ND	624	1330	46.9	30	170	828	62.4	28	0	50

Surrogate Recoveries

Surrogate	2-Fluorobiphenyl			2-Fluorophenol			Phenol-d5		
QC Limits	38.1	125.1		15.3	128.2		14.5	131.9	
Units	ug/Kg			ug/Kg			ug/Kg		
Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
289984-MB	1280	1670	77.1	1060	1670	63.9	1340	1670	80.3
289985-LCS	1440	1670	86.4	1200	1670	72.2	1480	1670	88.6
289986-MS	1260	1660	76	945	1660	56.8	1240	1660	74.6
289987-MSD	1430	1660	86.3	1110	1660	67.1	1420	1660	85.6
1222167001	1240	1620	76.2	974	1620	60	1260	1620	77.6
1222167002	1320	1660	79.9	1040	1660	62.6	1310	1660	79.1
1222167003	1190	1660	72	937	1660	56.6	1190	1660	71.8
1222167004	1360	1660	81.9	1030	1660	61.9	1340	1660	80.8
1222167006	849	1630	52.1	680	1630	41.7	889	1630	54.5
1222167007	1380	1650	84	1130	1650	68.7	1460	1650	88.6
1222167008	1270	1650	77.2	1010	1650	61.3	1310	1650	79.4
1222302001	668	1630	40.9	767	1630	47.1	1030	1630	63.5
1222302002	815	1630	50.1	721	1630	44.3	1040	1630	64

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1222167**

Limits: Historical/Performance	**Preparation:** EPA 3550, Sonic Ext, SVOA Soil	**Analysis:** SW 8270
Basis: ALS Laboratory Group	**Batch:** ENVX/15840 (HBN: 91685)	**Batch:** ESVO/3827 (HBN: 91984)
	Prepared By: Dustin Calder	**Analyzed By:** Reed A. Hendricks

Surrogate Recoveries

Surrogate	Terphenyl-d14			Nitrobenzene-d5			2,4,6-Tribromophenol		
QC Limits	17.7	171.2		17.4	135.5		22.1	146.8	
Units	ug/Kg			ug/Kg			ug/Kg		
Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
289984-MB	1620	1670	97.2	1190	1670	71.6	1160	1670	69.4
289985-LCS	1770	1670	106	1360	1670	81.7	1290	1670	77.6
289986-MS	1870	1660	113	1110	1660	66.8	1340	1660	80.5
289987-MSD	2090	1660	126	1240	1660	74.7	1470	1660	88.4
1222167001	1650	1620	101	1110	1620	68.6	1240	1620	76.2
1222167002	1480	1660	89.3	1180	1660	71.1	1290	1660	77.6
1222167003	1450	1660	87.6	1070	1660	64.9	1230	1660	74.5
1222167004	1800	1660	108	1180	1660	71.2	1400	1660	84.1
1222167006	1130	1630	69.2	749	1630	45.9	881	1630	54.1
1222167007	1800	1650	109	1240	1650	75.1	1390	1650	84.2
1222167008	1670	1650	101	1110	1650	67.5	1230	1650	74.9
1222302001	1380	1630	84.6	735	1630	45.1	1050	1630	64.2
1222302002	1450	1630	89.3	750	1630	46.1	1040	1630	64.2

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1222167**

Limits:	Historical/Performance	**Preparation:**	EPA 3550, Sonic Ext, SVOA Soil	**Analysis:**	SW 8270
Basis:	ALS Laboratory Group	**Batch:**	ENVX/15840 (HBN: 91685)	**Batch:**	ESVO/3827 (HBN: 91984)
		Prepared By:	Dustin Calder	**Analyzed By:**	Reed A. Hendricks

QC Data Approved and Reviewed by

Reed A. Hendricks	Matt Garvin	8/20/2012
Analyst	**Peer Review**	**Date**

Symbols and Definitions

* - Analyte above reporting limit or outside of control limits
▲ - Sample result is greater than 4 times the spike added
◓ - Sample and Matrix Duplicate less than 5 times the reporting limit

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable

Subcontract to ALS Salt Lake City, UT 4853/1+2

ALS Enviro W 1222167

Ship to: 34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 2

Courier:

Tracking #: 79869043 652

9981198

Co. Name: ERT, inc

Contact (Report to): Mike Gearheart

Phone: 301-323-1403

Address: 6100 Frost PL
Suite A
Laurel MD 20707

Bill to (if different than Report to):

PO#:

Project Name/#: Ft. Stewart 3153-004

ALS Quote #:

TAT: [ ] Normal-Standard TAT is 10 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? [X] -Y Mike.Gearheart@ertcorp.com

Fax? [ ] -Y No.:

***Container Type	CG	AG													
***Container Size	4oz	8oz													
*** Preservative	N/A	N/A													

1222167

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	SW-846 6020	SW-846 8270D/8270	1,4-Dithiane 1,4-Oxathiane Thioglycol	HR-Arsenic only						
1 FTSW-HR-So-43		8/1/12	1621	G	So	1	1								
2 FTSW-HR-So-44		8/1/12	1633	G	So	1	1								
3 FTSW-HR-So-45		8/1/12	1645	G	So	1	1								
4 FTSW-HR-So-46		8/1/12	1700	G	So	1	1								
5 FTSW-HR-So-46 Dup		8/1/12	1705	G	So	1	1								
6 FTSW-HR-So-47		8/1/12	1730	G	So	1	1								
7 FTSW-HR-So-48		8/1/12	1740	G	So	1	1								
8 FTSW-HR-So-49		8/1/12	1750	G	So	1	1								

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)

Performed by: [illegible]

Cooler Temp: 10

Therm. ID: 17215

No. of Coolers:

Notes:

Sample Description/Location	Sample Date	Military Time	*G or C	**Matrix	Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
1 FTSW-HR-So-43	8/1/12	1621	G	So	N	N	N	N	N
2 FTSW-HR-So-44	8/1/12	1633	G	So	N	N	N	N	N
3 FTSW-HR-So-45	8/1/12	1645	G	So	N	N	N	N	N
4 FTSW-HR-So-46	8/1/12	1700	G	So	N	N	N	N	N
5 FTSW-HR-So-46 Dup	8/1/12	1705	G	So	N	N	N	N	N
6 FTSW-HR-So-47	8/1/12	1730	G	So	N	N	N	N	N
7 FTSW-HR-So-48	8/1/12	1740	G	So	N	N	N	N	N
8 FTSW-HR-So-49	8/1/12	1750	G	So	N	N	N	N	N

Correct containers? Correct sample volume? Correct preservation? Headspace/Volatiles? Circle appropriate Y or N.

SAMPLED BY (Please Print): Rebekah McCoy

LOGGED BY(signature): [signature] DATE: 8/3/12 TIME: 1300

REVIEWED BY(signature): [signature] DATE: 8/6/12 TIME: 1246

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] ERT	8/2/12	1200	2 [signature]	8/3/12	1900
3 [signature]	8/6/12	1645	4 [signature]	8/7/12	1000
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] (other)

EDDs Required? [ ] If yes, format type:

DOD Criteria Required?

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

Other GA

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 6/2011

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task: 3153-004	Split:	Workorder ID: 1222167
Client: ALS Laboratory Group		Account: 8001
Comments:		

Type: 8ozAGWM

Preservatives: COOL

Containers

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	ID(s)	Count	Chemical Agent Breakdown	SW8270
1	08/01/2012 16:21	FTSW-HR-So-43	1222167001		Soil/Solid/Sediment	A	1	A	A
2	08/01/2012 16:33	FTSW-HR-So-44	1222167002		Soil/Solid/Sediment	A	1	A	A
3	08/01/2012 16:45	FTSW-HR-So-45	1222167003		Soil/Solid/Sediment	A	1	A	A
4	08/01/2012 17:00	FTSW-HR-So-46	1222167004		Soil/Solid/Sediment	A	1	A	A
5	08/01/2012 17:05	FTSW-HR-So-46Dup	1222167005	DUP	Soil/Solid/Sediment	A	1	A	A
6	08/01/2012 17:30	FTSW-HR-So-47	1222167006		Soil/Solid/Sediment	A	1	A	A
7	08/01/2012 17:40	FTSW-HR-So-48	1222167007		Soil/Solid/Sediment	A	1	A	A
8	08/01/2012 17:50	FTSW-HR-So-49	1222167008		Soil/Solid/Sediment	A	1	A	A
9									
10									

Requested Analysis

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Warath, Julie	08/07/2012 10:00	ALS Sample Receiving	Sample Login
Julie Warath	8/8/12 16:45	13C	Storage
8/9/12 IJO [signature] R-33-1 13C IJO	8/9/12 13:30	[signature]	Solid
R-33-1 13C IJO	8/9/12 15:50	R-33-1 13C IJO	Storage
R-33-13C	8/14/12 15:00	B. Asingura	Ext
B. Asingura	8/14/12 17:00	R-319	Storage

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: SV

Lab Notebook No.:

Prepared / Analyzed by:

Date / Time:

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
B.A	8/15/12 15:00	[signature]	Lab
[signature]	8/15/12 17:00	R-72-8 [signature]	Stor

Wed, 08/08/12 4:32 PM

ALSCOCV2.4

From: (717) 944-5541
Steve Smith

34 DOGWOOD LANE

MIDDLETOWN, PA 17057

Origin ID: MDTA

FedEx Express

J122012070160325

Ship Date: 06AUG12
ActWgt: 31.0 LB
CAD: 7121996/INET3300

Delivery Address Bar Code

SHIP TO: (000) 000-0000

BILL SENDER

ALS - UT
ALS - UT
960 LEVOY DR

SALT LAKE CITY, UT 84123

Ref # Summa's
Invoice #
PO #
Dept #

TUE - 07 AUG A1
PRIORITY OVERNIGHT

TRK# 7987 0329 0732
0201

84123
UT-US
SLC

XH NPHA

515G2/0034/AA44

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2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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ALS LABORATORY GROUP SALT LAKE CITY-RELATED INFORMATION REPORT (CRIR)

COOLER OR CONTAINER INFORMATION CHECKLIST (Fill In or Circle)

Client Name: ALS Middletown — Project/Task/Site: 1222167

Date/Time of Receipt: 8/7/12 1000 — Number of Coolers Received: 1

Condition of Coolers:	Acceptable/Unacceptable	Temperature Control:	Present/Not Included
Custody Seals:	Present/Absent/NA	Location Temp Taken:	Cooler/Between Samples
	Intact/Broken/NA	Are all temperatures within	
Tamper Evident:	Yes/No/NA	project specific guidelines?	Yes/No/NA
Ice Present:	Yes/No/NA	Are all applicable pHs within	
	Frozen/Melted/NA	specific guidelines?	Yes/No/NA

pH Check Performed:	Metals	Yes/No/NA	Total Phenolics	Yes/No/NA	NO3/NO2	Yes/No/NA		
	Cyanide	Yes/No/NA	TPH – 418.1	Yes/No/NA	Oil & Grease	Yes/No/NA		
	Sulfide	Yes/No/NA	COD	Yes/No/NA	Total Phosphorous	Yes/No/NA		
	Ammonia	Yes/No/NA	TKN	Yes/No/NA	Gross A.B, Gamma Spec	Yes/No/NA		
Residual Chlorine Check Performed:	8270	Yes/No/NA	8310	Yes/No/NA	8330	Yes/No/NA		
	8081	Yes/No/NA	8151	Yes/No/NA				

Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.
1	C12- 8485	4 °C	4	C12-	°C	7	C12-	°C
2	C12-	°C	5	C12-	°C	8	C12-	°C
3	C12-	°C	6	C12-	°C	9	C12-	°C

Taken By: Mfred Edwd (Signature) — Meredith Edwards (Printed Name) — 8/7/12 (Date)

CLIENT-RELATED INFORMATION

☐ Missing Cooler	☐ Missing Samples/Bottles	☐ Incorrect Preservation	☐ Insufficient Sample Volume
☐ Cooler Conditions	☐ Broken/Leaking Samples	☐ pH Criteria Not Met	☐ Chain of Custody Problems
☐ Missing Paperwork	☐ Incorrect Bottle Type	☐ Residual Chlorine Present	☐ Other:
☐ Missing/Incorrect Bottle Labels	☐ Cooler Temperatures Out of Range	☐ Head Space in Bottles	EPA Custody Seal:

BRIEFLY DESCRIBE THE PROBLEM AND THE ACTION TAKEN:

Faxed to Client? YES ☐ NO ☐ (if yes, attach Fax Cover Sheet)

Response Required Within 24 Hours

PROJECT MANAGEMENT

PROJECT MANAGER COMMENTS:

ALS Project Manager: _____ (Printed Name) Returned to Sample Receipt by: _____ (Signature) Date: _____

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Chemical Breakdown

Analytical Documentation

ALS WO ID #(S):1222142; 1222167; 1222302
ALS Sample #(S):1222142001-011; 1222167001-008; 1222302001-002
ALS Account #(s): 8001 Method: ALS LC/MS Matrix: Soil
Sequence: \\CHEM32\1\SEQUENCE\17AUG12-ABP-S.S
Prep Date: 08/14/2012 Analysis Date: 08/17/12 - 08/18/12
Prep/Analysis HBN #s: 91939/92002 Instrument LOD: 0.050µg/mL
Analyte: **Thiodiglycol (TDG)**
Reported MDL: See Report Reported LOD: See Report

SAMPLE PREPARATION: All ALS sample #'s agreed with field ID #'s. Approximately 1.00g of each sample was weighed into a 15-mL centrifuge tube, and 9.9mL of ASTM Type II water was added to each tube. 100µL of internal standard solution was then added to each sample, bringing the total extraction volume to 10.0mL. The samples were capped, vortexed, rotated for at least 30 minutes, and filtered with Pall 0.45µm Ion Chromatography Acrodiscs prior to analysis.

REAGENTS: Eluent A: 100% ASTM Type II water/0.1% glacial acetic acid.
Eluent B: 95% ACN/ 5% ASTM Type II water/0.1% glacial acetic acid.

HORIZON STANDARD(S): TDG (14169); MPA (14170); IMPA (14172); EMPA (14174); DIMP (14179)
All standards are at 1000µg/mL. Standards used to create calibration standards and those used for CCVs (target = 5.00µg/mL) and RLVS (target = 0.050µg/mL).
Internal Standard Solution: TDG-D8 (14177) at 100ug/mL.

CALIBRATION CURVE: Run 05/01/2012.
Raw data can be found in \\Als1tws013\DataReview\85766.

INSTRUMENT CONDITIONS: Samples were analyzed with an Agilent 1200 LC/MSD system, in positive SIM mode, monitoring m/z 97, 125, 139, 146, 181, 105 and 113.
Instrument ID: LCMS03 Run Time: 35.00 min. Flow Rate: 0.8mL/min Temp: 30°C
Output Gain: 3 Injection Volume: 10µL Fragmentor Voltage: 75 & 125
Column: Phenomenex Synergi Hydro-RP 4 micron (4.6 x 250mm) s/n: 245485-24

GRADIENT:

Time(min)	%Eluent A	%Eluent B
0.00	100.0	0.0
15.00	100.0	0.0
17.00	50.0	50.0
25.00	50.0	50.0
25.01	100.0	0.0

QC DATA: LMB/LCS **290920/21** & **290925/26** were run with the batch. 1.00g of washed sand (EMD Lot# 36211706) was prepared in the same manner as the samples. 20µl of Horizon QC standard 13383 was added to 10.0mL of sample preparation for the LCSs. Target = 20.0ug/g. ASTM Type II water was used for LMB extractions.

MS/MSD: MS/MSDs were performed on samples 1222142001 & 1222167001. 50µl of Horizon standard 14169 was added to 10.0mL of sample preparation. Spike target = 50.0µg/g.

COMMENTS: 1) Quantitation was done using m/z 105 for TDG. No confirmation ions were available for TDG. Results are reported in ug/g.
2) All CCV, LMB, LCS and MS/MSD results were within acceptable limits.

Batch Worklist

Batch: ELMS/ 1296
Rule: Chemical Agent BD, Soil Prep

Created: 8/17/2012 15:09
Analyst: T. McKay

Instrument: NONE
Status: NA

HBN: 91939

Workorder: 1222142
Workorder: 1222167
Workorder: 1222302

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	290920	LMB for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LMB		DCAB....4P	5948	8/31/2012	8/10/2012	8/14/2012
2	290921	LCS for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LCS		DCAB....4P	5948	8/31/2012	8/10/2012	8/14/2012
3	290922	FTSW-HR-SO-50...(1222142001MS)	1.32 grams	10 mL	4	MS		DCAB....4P	5948	8/17/2012	8/10/2012	8/14/2012
4	290923	FTSW-HR-SO-5...(1222142001MSD)	1.27 grams	10 mL	4	MSD		DCAB....4P	5948	8/17/2012	8/10/2012	8/14/2012
5	290924	RLVS for HBN 91939 [ELMS/1296]	1 grams	10 mL	3	RLVS		DCAB....4P	5948	8/31/2012	8/10/2012	8/14/2012
6	1222142001	FTSW-HR-SO-50 (10)	1.51 grams	10 mL	4	SAMPLE	1222142001-A	DCAB....4P	5480	8/17/2012	8/13/2012	8/14/2012
7	1222142002	FTSW-HR-SO-51 (10)	1.22 grams	10 mL	4	SAMPLE	1222142002-A	DCAB....4P	5480	8/17/2012	8/13/2012	8/14/2012
8	1222142003	FTSW-HR-SO-52 (10)	1.65 grams	10 mL	4	SAMPLE	1222142003-A	DCAB....4P	5480	8/17/2012	8/13/2012	8/14/2012
9	1222142004	FTSW-HR-SO-53 (10)	1.25 grams	10 mL	4	SAMPLE	1222142004-A	DCAB....4P	5480	8/17/2012	8/13/2012	8/14/2012
10	1222142005	FTSW-HR-SO-54 (10)	1.62 grams	10 mL	4	SAMPLE	1222142005-A	DCAB....4P	5480	8/20/2012	8/13/2012	8/14/2012
11	1222142006	FTSW-HR-SO-55 (7.5)	1.38 grams	10 mL	4	SAMPLE	1222142006-A	DCAB....4P	5480	8/20/2012	8/13/2012	8/14/2012
12	1222142007	FTSW-HR-SO-56 (10)	1.11 grams	10 mL	4	SAMPLE	1222142007-A	DCAB....4P	5480	8/20/2012	8/13/2012	8/14/2012
13	1222142008	FTSW-HR-SO-57 (10)	1.2 grams	10 mL	4	SAMPLE	1222142008-A	DCAB....4P	5480	8/20/2012	8/13/2012	8/14/2012
14	1222142009	FTSW-HR-SO-58 (10)	1.38 grams	10 mL	4	SAMPLE	1222142009-A	DCAB....4P	5480	8/20/2012	8/13/2012	8/14/2012
15	1222142010	FTSW-HR-SO-59 (10)	1.28 grams	10 mL	4	SAMPLE	1222142010-A	DCAB....4P	5480	8/20/2012	8/13/2012	8/14/2012
16	1222142011	FTSW-HR-SO-60 (7.5)	1.16 grams	10 mL	4	SAMPLE	1222142011-A	DCAB....4P	5480	8/20/2012	8/13/2012	8/14/2012
17	290925	LMB for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LMB		DCAB....4P	5948	8/31/2012	8/10/2012	8/14/2012
18	290926	LCS for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LCS		DCAB....4P	5948	8/31/2012	8/10/2012	8/14/2012
19	1222167001	FTSW-HR-So-43	1.42 grams	10 mL	4	SAMPLE	1222167001-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012
20	290927	FTSW-HR-So-43(1222167001MS)	1.37 grams	10 mL	4	MS		DCAB....4P	5948	8/15/2012	8/10/2012	8/14/2012
21	290928	FTSW-HR-So-43(1222167001MSD)	1.26 grams	10 mL	4	MSD		DCAB....4P	5948	8/15/2012	8/10/2012	8/14/2012
22	1222167002	FTSW-HR-So-44	1.26 grams	10 mL	4	SAMPLE	1222167002-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012
23	1222167003	FTSW-HR-So-45	1.32 grams	10 mL	4	SAMPLE	1222167003-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012
24	1222167004	FTSW-HR-So-46	1.27 grams	10 mL	4	SAMPLE	1222167004-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012
25	1222167005	FTSW-HR-So-46Dup	1.1 grams	10 mL	4	DUP	1222167005-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012
26	1222167006	FTSW-HR-So-47	1.24 grams	10 mL	4	SAMPLE	1222167006-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012
27	1222167007	FTSW-HR-So-48	1.05 grams	10 mL	4	SAMPLE	1222167007-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012

Batch Worklist

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
28	1222167008	FTSW-HR-So-49	1.2 grams	10 mL	4	SAMPLE	1222167008-A	DCAB....4P	5480	8/15/2012	8/10/2012	8/14/2012
29	1222302001	FTSW-HR-SO-61 (9.5)	1.13 grams	10 mL	4	SAMPLE	1222302001-A	DCAB....4P	5480	8/21/2012	8/14/2012	8/14/2012
30	1222302002	FTSW-HR-SO-62 (10)	1.55 grams	10 mL	4	SAMPLE	1222302002-A	DCAB....4P	5480	8/21/2012	8/14/2012	8/14/2012

Batch Worklist

Batch: ELMS/ 1297
Rule: Chemical Agent BD, Soil

Created: 8/20/2012 12:36
Analyst: T. McKay

Instrument: LCMS03
Status: WP

HBN: 92002

Workorder: 1222142
Workorder: 1222167
Workorder: 1222302

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	290920	LMB for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LMB		DCAB....4Q	5948	9/22/2012	8/20/2012	8/17/2012
2	290921	LCS for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LCS		DCAB....4Q	5948	9/22/2012	8/20/2012	8/17/2012
3	290924	RLVS for HBN 91939 [ELMS/1296]	1 grams	10 mL	3	RLVS		DCAB...C4Q	5948		8/20/2012	8/17/2012
4	1222167001	FTSW-HR-So-43	1.42 grams	10 mL	4	SAMPLE	1222167001-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
5	290927	FTSW-HR-So-43(1222167001MS)	1.37 grams	10 mL	4	MS		DCAB....4Q	5948	9/22/2012	8/20/2012	8/18/2012
6	290928	FTSW-HR-So-43(1222167001MSD)	1.26 grams	10 mL	4	MSD		DCAB....4Q	5948	9/22/2012	8/20/2012	8/18/2012
7	1222167002	FTSW-HR-So-44	1.26 grams	10 mL	4	SAMPLE	1222167002-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
8	1222167003	FTSW-HR-So-45	1.32 grams	10 mL	4	SAMPLE	1222167003-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
9	1222167004	FTSW-HR-So-46	1.27 grams	10 mL	4	SAMPLE	1222167004-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
10	1222167005	FTSW-HR-So-46Dup	1.1 grams	10 mL	4	DUP	1222167005-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
11	1222167006	FTSW-HR-So-47	1.24 grams	10 mL	4	SAMPLE	1222167006-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
12	1222167007	FTSW-HR-So-48	1.05 grams	10 mL	4	SAMPLE	1222167007-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
13	1222167008	FTSW-HR-So-49	1.2 grams	10 mL	4	SAMPLE	1222167008-A	DCAB.....4	5480	9/22/2012	8/20/2012	8/18/2012
14	290925	LMB for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LMB		DCAB....4Q	5948	9/22/2012	8/20/2012	8/18/2012
15	290926	LCS for HBN 91939 [ELMS/1296]	1 grams	10 mL	4	LCS		DCAB....4Q	5948	9/22/2012	8/20/2012	8/18/2012
16	1222142001	FTSW-HR-SO-50 (10)	1.51 grams	10 mL	4	SAMPLE	1222142001-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/17/2012
17	290922	FTSW-HR-SO-50...(1222142001MS)	1.32 grams	10 mL	4	MS		DCAB....4Q	5948	9/22/2012	8/20/2012	8/17/2012
18	290923	FTSW-HR-SO-5...(1222142001MSD)	1.27 grams	10 mL	4	MSD		DCAB....4Q	5948	9/22/2012	8/20/2012	8/17/2012
19	1222142002	FTSW-HR-SO-51 (10)	1.22 grams	10 mL	4	SAMPLE	1222142002-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/17/2012
20	1222142003	FTSW-HR-SO-52 (10)	1.65 grams	10 mL	4	SAMPLE	1222142003-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/17/2012
21	1222142004	FTSW-HR-SO-53 (10)	1.25 grams	10 mL	4	SAMPLE	1222142004-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/17/2012
22	1222142005	FTSW-HR-SO-54 (10)	1.62 grams	10 mL	4	SAMPLE	1222142005-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/17/2012
23	1222142006	FTSW-HR-SO-55 (7.5)	1.38 grams	10 mL	4	SAMPLE	1222142006-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/17/2012
24	1222142007	FTSW-HR-SO-56 (10)	1.11 grams	10 mL	4	SAMPLE	1222142007-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/18/2012
25	1222142008	FTSW-HR-SO-57 (10)	1.2 grams	10 mL	4	SAMPLE	1222142008-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/18/2012
26	1222142009	FTSW-HR-SO-58 (10)	1.38 grams	10 mL	4	SAMPLE	1222142009-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/18/2012
27	1222142010	FTSW-HR-SO-59 (10)	1.28 grams	10 mL	4	SAMPLE	1222142010-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/18/2012

Batch Worklist

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
28	1222142011	FTSW-HR-SO-60 (7.5)	1.16 grams	10 mL	4	SAMPLE	1222142011-A	DCAB.....4	5480	9/22/2012	8/21/2012	8/18/2012
29	1222302001	FTSW-HR-SO-61 (9.5)	1.13 grams	10 mL	4	SAMPLE	1222302001-A	DCAB.....4	5480	9/22/2012	8/22/2012	8/18/2012
30	1222302002	FTSW-HR-SO-62 (10)	1.55 grams	10 mL	4	SAMPLE	1222302002-A	DCAB.....4	5480	9/22/2012	8/22/2012	8/18/2012

STANDARD REPORT

Working Standard - TDG WRK

TDG WRK — Description: Thiodiglycol Working Std.

Standard:	14189	Expires:	01/31/2013	Usable:	Yes
Lab Lot:	TDG WRK	Created By:	T. McKay	Amount:	12.15 mL
Part ID:		Create Date:	01/31/2012	Validated By:	
MFG:		MFG Lot:		Validated Date:	

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume Added	Expires
3824	TDG STOCK		TDG STK	12.15 mg	1/1/2025

STANDARD REPORT

Constituent

Stock Standard - TDG STOCK

TDG STOCK				Description - (Thiodiglycol Stock Std.)	
Standard:	3824	Expires:	1/1/2025	Usable:	Yes
Lab Lot:	TDG STK	Created By:	T. McKay	Amount:	100 grams
Part ID:	166782	Create Date:	4/1/2009	Validated By:	T. Bosch
MFG:	Aldrich	MFG Lot:	11613AR	Validated Date:	4/19/2009

Pos	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 mg/g

3824

Certificate of Analysis

SIGMA-ALDRICH

Product Name	2,2'-Thiodiethanol, ≥99%
Product Number	166782
Product Brand	Aldrich
CAS Number	111-48-8
Molecular Formula	$S(CH_2CH_2OH)_2$
Molecular Weight	122.19

TEST	SPECIFICATION	LOT 11613AR RESULTS
APPEARANCE	COLORLESS LIQUID	COLORLESS LIQUID
INFRARED SPECTRUM	CONFORMS TO STRUCTURE.	CONFORMS TO STRUCTURE AND STANDARD AS ILLUSTRATED ON PAGE 276B OF EDITION I, VOLUME 1 OF "THE ALDRICH LIBRARY OF FT-IR SPECTRA".
GAS LIQUID CHROMATOGRAPHY	99.0% (MINIMUM)	99.6 %
QUALITY CONTROL ACCEPTANCE DATE		JANUARY 1997

Barbara Rajzer, Supervisor
Quality Control
Milwaukee, Wisconsin USA

STANDARD REPORT

Working Standard - TDG QC WRK

TDG QC WRK					Description - Thiodiglycol QC Wrk
Standard:	13383	Expires:	11/21/2012	Usable:	Yes
Lab Lot:	TDG QC WRK	Created By:	T. McKay	Amount:	8.44 mL
Part ID:		Create Date:	11/21/2011	Validated By:	
MFG:		MFG Lot:		Validated Date:	

Pos	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume Added	Expires
5844	TDG QC STK	Thiodiglycol QC Stock	TDG QC STK	8.44 mg	1/1/2025

STANDARD REPORT

Constituent

Stock Standard - TDG QC STK

TDG QC STK				Description - Thiodiglycol QC Stock	
Standard:	5844	Expires:	1/1/2025	Usable:	Yes
Lab Lot:	TDG QC STK	Created By:	T. McKay	Amount:	50 grams
Part ID:	88559	Create Date:	10/7/2009	Validated By:	T. Bosch
MFG:	Fluka	MFG Lot:	1410377	Validated Date:	10/7/2009

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 mg/g

5844

SIGMA-ALDRICH

Fluka

Sigma-Aldrich Production GmbH
CH-9471 Buchs/Schweiz
www.sigma-aldrich.com

Telefon +41 81 755 2511
Telefax +41 81 755 2272
Email fluka@sial.com

Certificate of Analysis

Product Brand	Fluka
PRODUCT-NO	88559
PRODUCT	2,2'-THIODIETHANOL *BioChemika*
FORMULA	$C_4H_{10}O_2S$
MOLECULAR MASS	122.19
CAS NUMBER	111-48-8
LOT	1410377

Test	Specification	Result
APPEARANCE (COLOR)	COLORLESS	COLORLESS
APPEARANCE (FORM)	CLEAR TO CLEAR VISCOUS LIQUID	CLEAR VISCOUS LIQUID
PURITY (GC AREA %)	≥ 99.0 % REL	99.9 % REL
GC (METHOD)	--	100% POLYETHYLENEGLYCOL (30 M X 0.32 MM X 0.25 UM), IN DICHLORMETHANE
REFRACTIVE INDEX N20/D	1.520 - 1.522	1.522
RESIDUE ON IGNITION	≤ 0.1 %	< 0.05 %
CARBON CONTENT	39.32 % (THEORY)	38.90 %
HYDROGEN CONTENT	8.25 % (THEORY)	8.49 %
INFRARED SPECTRUM	CONFORMS TO STRUCTURE	CONFORMS

QC RELEASE DATE	28/OCT/08

E. Schwärzler

Edeltraud Schwärzler, Manager
Quality Control
Buchs, Switzerland

Sigma-Aldrich guarantees the 'Sales-Specification' values only, additional lot specific tests may be included for further information. The current 'Sales-Specifications' sheet is available on request. For further inquiries, please contact our Technical Service.Sigma-Aldrich warrants, that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice for additional terms and conditions of sale. The values given on the 'Certificate of Analysis' are the results determined at the time of analysis.

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

atch Report: C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG12-ABP.B

Batch Review Method: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M

['#' ==> Run has not been reprocessed with Batch Review Method
'*' ==> Run has been saved with batch file]

#	Sample	Location	Inj	Dilution	Thiodiglycol-D8 RT	Thiodiglycol-D8 Area	Thiodiglycol-D8 Amount
*	PRIME	Vial 51	1	1	12.991	2.28450e6	10.00000
*	CCV1	Vial 51	1	1	13.037	2.36740e6	10.00000
*	290920 LMB	Vial 52	1	1	13.021	2.17404e6	100.00000
*	290921 LCS	Vial 53	1	1	12.996	2.22191e6	100.00000
*	290924 RLVS	Vial 54	1	1	12.985	1.95173e6	10.00000
*	1222142001	Vial 55	1	1	13.007	1.76561e6	100.00000
*	290922 MS	Vial 56	1	1	12.996	1.77332e6	100.00000
*	290923 MSD	Vial 57	1	1	12.984	1.70778e6	100.00000
*	1222142002	Vial 58	1	1	12.990	1.89639e6	100.00000
*	1222142003	Vial 59	1	1	12.998	1.90070e6	100.00000
*	1222142004	Vial 60	1	1	13.007	1.83797e6	100.00000
*	1222142005	Vial 61	1	1	13.040	1.77543e6	100.00000
*	CCV2	Vial 51	1	1	13.000	2.26015e6	10.00000
*	1222142006	Vial 62	1	1	12.987	1.85223e6	100.00000
*	1222142007	Vial 63	1	1	12.993	1.80946e6	100.00000
*	1222142008	Vial 64	1	1	13.001	1.82786e6	100.00000
*	1222142009	Vial 65	1	1	13.006	1.84889e6	100.00000
*	1222142010	Vial 66	1	1	12.995	1.92324e6	100.00000
*	1222142011	Vial 67	1	1	12.994	1.71416e6	100.00000
*	290925 LMB	Vial 68	1	1	12.999	1.49852e6	100.00000
*	290926 LCS	Vial 69	1	1	12.995	1.59193e6	100.00000
*	1222167001	Vial 70	1	1	13.013	1.52356e6	100.00000
*	290927 MS	Vial 71	1	1	13.009	1.64084e6	100.00000
*	CCV3	Vial 51	1	1	13.035	2.16551e6	10.00000
*	290928 MSD	Vial 72	1	1	13.034	1.73775e6	100.00000
*	1222167002	Vial 73	1	1	13.051	1.61201e6	100.00000
*	1222167003	Vial 74	1	1	13.057	1.54112e6	100.00000
*	1222167004	Vial 75	1	1	13.045	1.48944e6	100.00000
*	1222167005	Vial 76	1	1	13.055	1.59211e6	100.00000
*	1222167006	Vial 77	1	1	13.072	1.62917e6	100.00000
*	1222167007	Vial 78	1	1	13.032	1.71610e6	100.00000
*	1222167008	Vial 79	1	1	13.034	1.59766e6	100.00000
*	1222302001	Vial 80	1	1	13.043	1.66377e6	100.00000
*	1222302002	Vial 81	1	1	13.038	1.60788e6	100.00000
*	CCV4	Vial 51	1	1	13.009	2.13155e6	10.00000

#	Sample	Location	Inj	Dilution	Thiodiglycol RT	Thiodiglycol Area	Thiodiglycol Amount
*	PRIME	Vial 51	1	1	13.591	9.52971e6	4.94520
*	CCV1	Vial 51	1	1	13.627	1.00182e7	5.02078
*	290920 LMB	Vial 52	1	1	0.000	0.00000	0.00000
*	290921 LCS	Vial 53	1	1	13.583	3.88291e6	20.11193

#	Sample	Location	Inj	Dilution	Thiodiglycol RT	Thiodiglycol Area	Thiodiglycol Amount
*	290924 RLVS	Vial 54	1	1	13.555	6.89958e4	4.90956e-2
*	1222142001	Vial 55	1	1	0.000	0.00000	0.00000
*	290922 MS	Vial 56	1	1	13.583	7.17668e6	47.89601
*	290923 MSD	Vial 57	1	1	13.577	7.42725e6	51.68282
*	1222142002	Vial 58	1	1	0.000	0.00000	0.00000
*	1222142003	Vial 59	1	1	0.000	0.00000	0.00000
*	1222142004	Vial 60	1	1	0.000	0.00000	0.00000
*	1222142005	Vial 61	1	1	0.000	0.00000	0.00000
*	CCV2	Vial 51	1	1	13.591	9.15080e6	4.79177
*	1222142006	Vial 62	1	1	0.000	0.00000	0.00000
*	1222142007	Vial 63	1	1	0.000	0.00000	0.00000
*	1222142008	Vial 64	1	1	0.000	0.00000	0.00000
*	1222142009	Vial 65	1	1	0.000	0.00000	0.00000
*	1222142010	Vial 66	1	1	0.000	0.00000	0.00000
*	1222142011	Vial 67	1	1	0.000	0.00000	0.00000
*	290925 LMB	Vial 68	1	1	0.000	0.00000	0.00000
*	290926 LCS	Vial 69	1	1	13.581	2.92822e6	21.18889
*	1222167001	Vial 70	1	1	0.000	0.00000	0.00000
*	290927 MS	Vial 71	1	1	13.603	7.01301e6	50.73884
*	CCV3	Vial 51	1	1	13.627	8.96610e6	4.90631
*	290928 MSD	Vial 72	1	1	13.625	6.96716e6	47.42531
*	1222167002	Vial 73	1	1	0.000	0.00000	0.00000
*	1222167003	Vial 74	1	1	0.000	0.00000	0.00000
*	1222167004	Vial 75	1	1	0.000	0.00000	0.00000
*	1222167005	Vial 76	1	1	0.000	0.00000	0.00000
*	1222167006	Vial 77	1	1	0.000	0.00000	0.00000
*	1222167007	Vial 78	1	1	0.000	0.00000	0.00000
*	1222167008	Vial 79	1	1	0.000	0.00000	0.00000
*	1222302001	Vial 80	1	1	0.000	0.00000	0.00000
*	1222302002	Vial 81	1	1	0.000	0.00000	0.00000
*	CCV4	Vial 51	1	1	13.602	8.61050e6	4.78026

*** End of Report ***

Sequence Table:

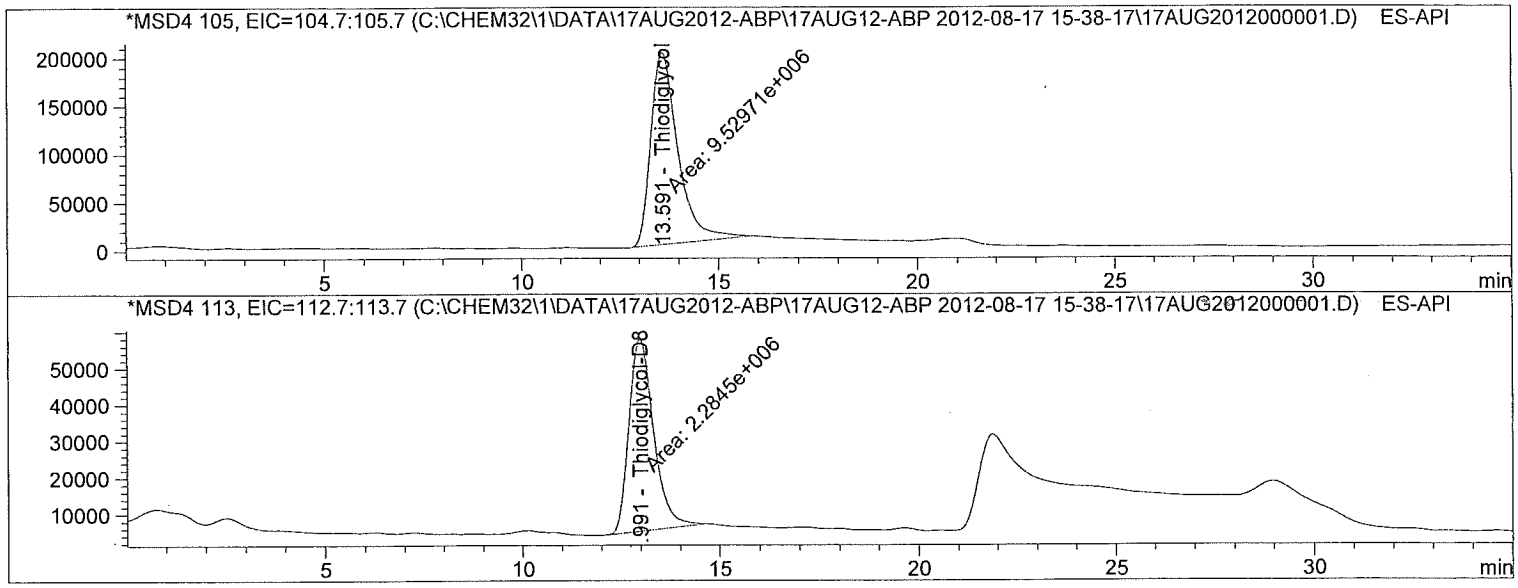
Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 51	PRIME	ABP-ON	1	Ctrl Samp	
2	Vial 51	CCV1	ABP-ON	1	Ctrl Samp	
3	Vial 52	290920 LMB	ABP-ON	1	Ctrl Samp	
4	Vial 53	290921 LCS	ABP-ON	1	Ctrl Samp	
5	Vial 54	290924 RLVS	ABP-ON	1	Ctrl Samp	
6	Vial 55	1222142001	ABP-ON	1	Sample	
7	Vial 56	290922 MS	ABP-ON	1	Ctrl Samp	
8	Vial 57	290923 MSD	ABP-ON	1	Ctrl Samp	
9	Vial 58	1222142002	ABP-ON	1	Sample	
10	Vial 59	1222142003	ABP-ON	1	Sample	
11	Vial 60	1222142004	ABP-ON	1	Sample	
12	Vial 61	1222142005	ABP-ON	1	Sample	
13	Vial 51	CCV2	ABP-ON	1	Ctrl Samp	
14	Vial 62	1222142006	ABP-ON	1	Sample	
15	Vial 63	1222142007	ABP-ON	1	Sample	
16	Vial 64	1222142008	ABP-ON	1	Sample	
17	Vial 65	1222142009	ABP-ON	1	Sample	
18	Vial 66	1222142010	ABP-ON	1	Sample	
19	Vial 67	1222142011	ABP-ON	1	Sample	
20	Vial 68	290925 LMB	ABP-ON	1	Ctrl Samp	
21	Vial 69	290926 LCS	ABP-ON	1	Ctrl Samp	

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
22	Vial 70	1222167001	ABP-ON	1	Sample	
23	Vial 71	290927 MS	ABP-ON	1	Ctrl Samp	
24	Vial 51	CCV3	ABP-ON	1	Ctrl Samp	
25	Vial 72	290928 MSD	ABP-ON	1	Ctrl Samp	
26	Vial 73	1222167002	ABP-ON	1	Sample	
27	Vial 74	1222167003	ABP-ON	1	Sample	
28	Vial 75	1222167004	ABP-ON	1	Sample	
29	Vial 76	1222167005	ABP-ON	1	Sample	
30	Vial 77	1222167006	ABP-ON	1	Sample	
31	Vial 78	1222167007	ABP-ON	1	Sample	
32	Vial 79	1222167008	ABP-ON	1	Sample	
33	Vial 80	1222302001	ABP-ON	1	Sample	
34	Vial 81	1222302002	ABP-ON	1	Sample	
35	Vial 51	CCV4	ABP-ON	1	Ctrl Samp	

atch Run # 1 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000001.D
ample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/17/2012 3:38:44 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	7/9/2012 11:13:05 AM
Multiplier	:	1.0000
Dilution	:	1.0000
Sample Amount	:	5.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs

Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.591	MM	1	9.52971e6	1.18548e-1	4.94520		Thiodiglycol

Batch Run # 1 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000001.D
Sample Name: PRIME

Acq. Operator : TTM
Seq. Line : 1
Acq. Instrument : LCMS3
Location : Vial 51
Injection Date : 8/17/2012 3:38:44 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 4.94520

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

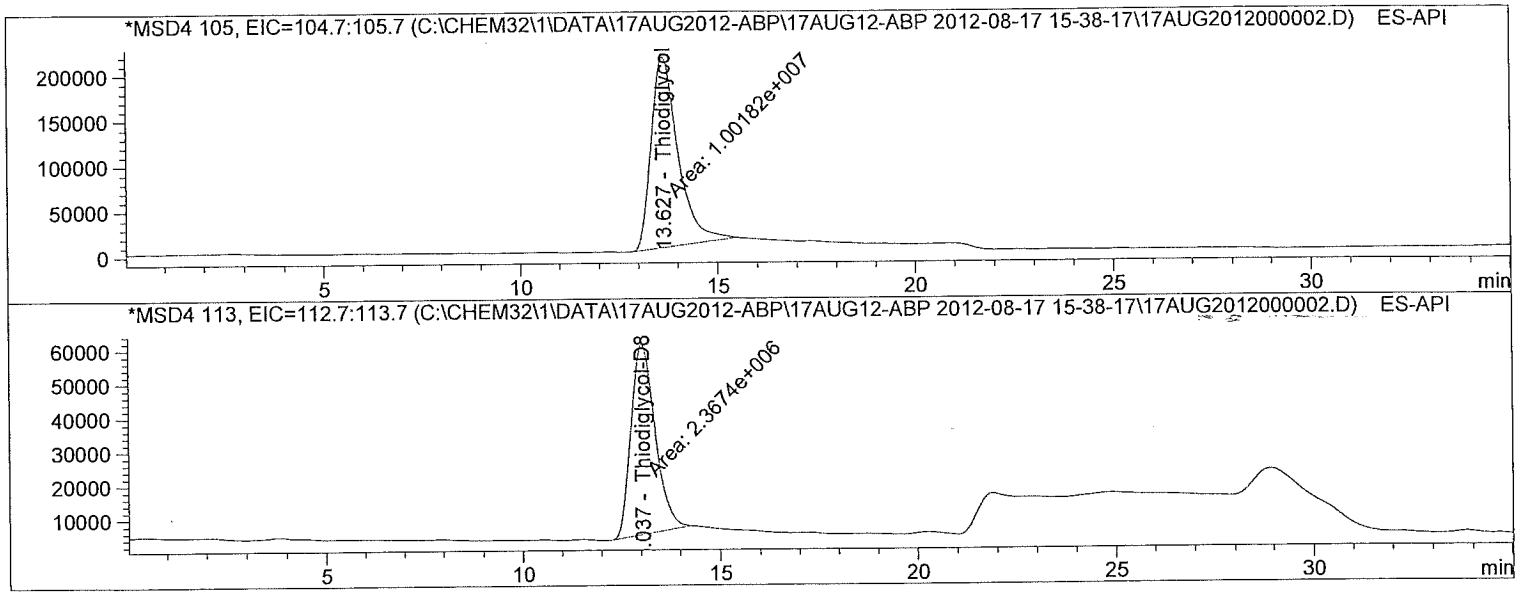
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.991	MM	I	1 2.28450e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 2 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000002.D
ample Name: CCV1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 8/17/2012 4:15:07 PM
Seq. Line : 2
Location : Vial 51
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.627	MM	1	1.00182e7	1.18646e-1	5.02078		Thiodiglycol

atch Run # 2 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000002.D
ample Name: CCV1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 8/17/2012 4:15:07 PM
Seq. Line : 2
Location : Vial 51
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 5.02078

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

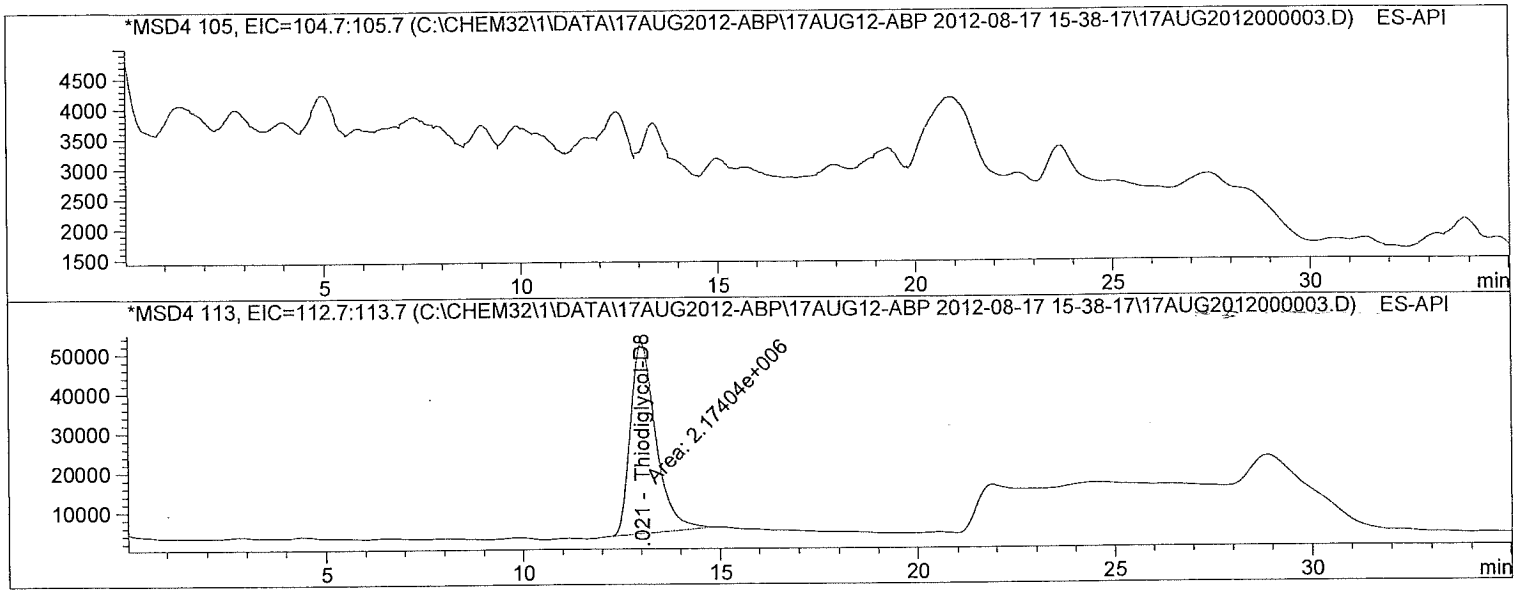
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.037	MM	I	1 2.36740e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 3 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000003.D
ample Name: 290920 LMB

Acq. Operator : TTM Seq. Line : 3
Acq. Instrument : LCMS3 Location : Vial 52
Injection Date : 8/17/2012 4:51:28 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 3 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000003.D
Sample Name: 290920 LMB

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 52
Injection Date	: 8/17/2012 4:51:28 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.021	MM	I	1 2.17404e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

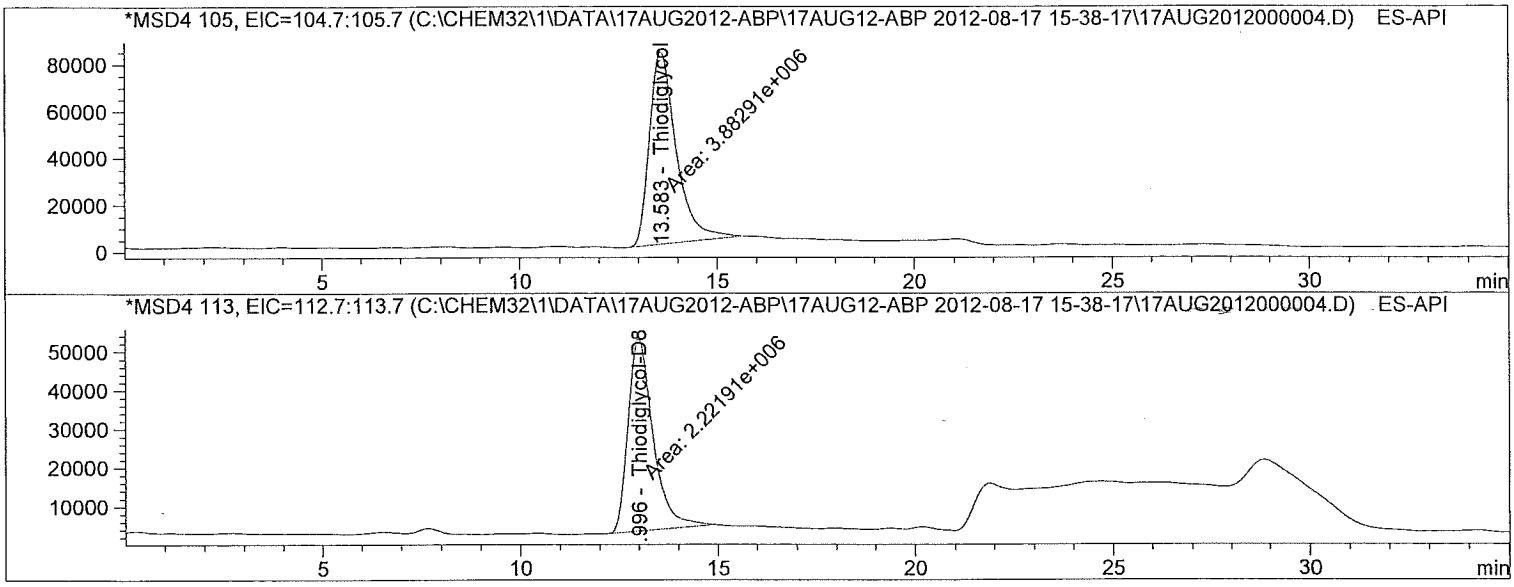
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 4 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000004.D
Sample Name: 290921 LCS

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 53
Injection Date	: 8/17/2012 5:27:52 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	7/9/2012 11:13:05 AM
Multiplier	:	10.0000
Dilution	:	1.0000
Sample Amount	:	20.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.583	MM	1	3.88291e6	1.15086e-1	20.11193		Thiodiglycol

atch Run # 4 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000004.D
ample Name: 290921 LCS

Acq. Operator : TTM Seq. Line : 4
Acq. Instrument : LCMS3 Location : Vial 53
Injection Date : 8/17/2012 5:27:52 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 20.11193

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

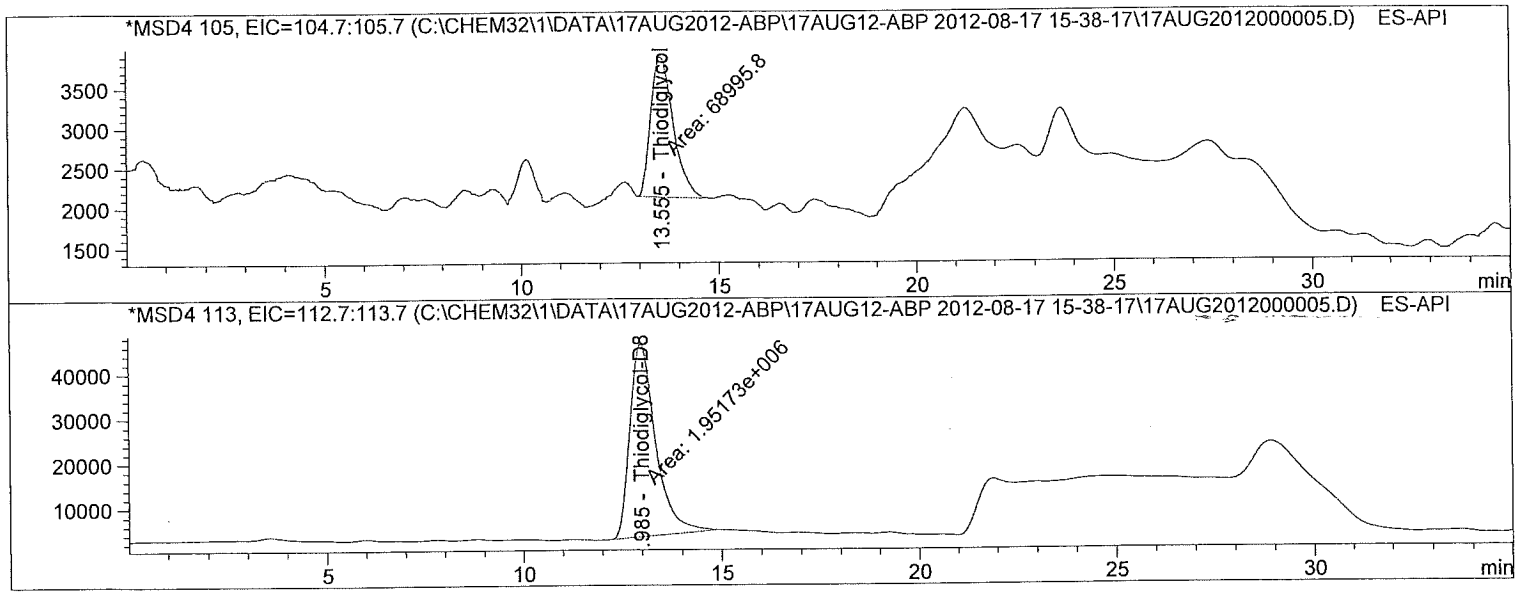
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.996	MM	I	1 2.22191e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 5 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000005.D
ample Name: 290924 RLVS

Acq. Operator : TTM Seq. Line : 5
Acq. Instrument : LCMS3 Location : Vial 54
Injection Date : 8/17/2012 6:04:13 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000e-1 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.555	MM	1	6.89958e4	1.38880e-1	4.90956e-2		Thiodiglycol

Batch Run # 5 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000005.D
Sample Name: 290924 RLVS

Acq. Operator : TTM Seq. Line : 5
Acq. Instrument : LCMS3 Location : Vial 54
Injection Date : 8/17/2012 6:04:13 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 4.90956e-2

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.985	MM	I	1 1.95173e6	1.00000	10.00000		Thiodiglycol-D8

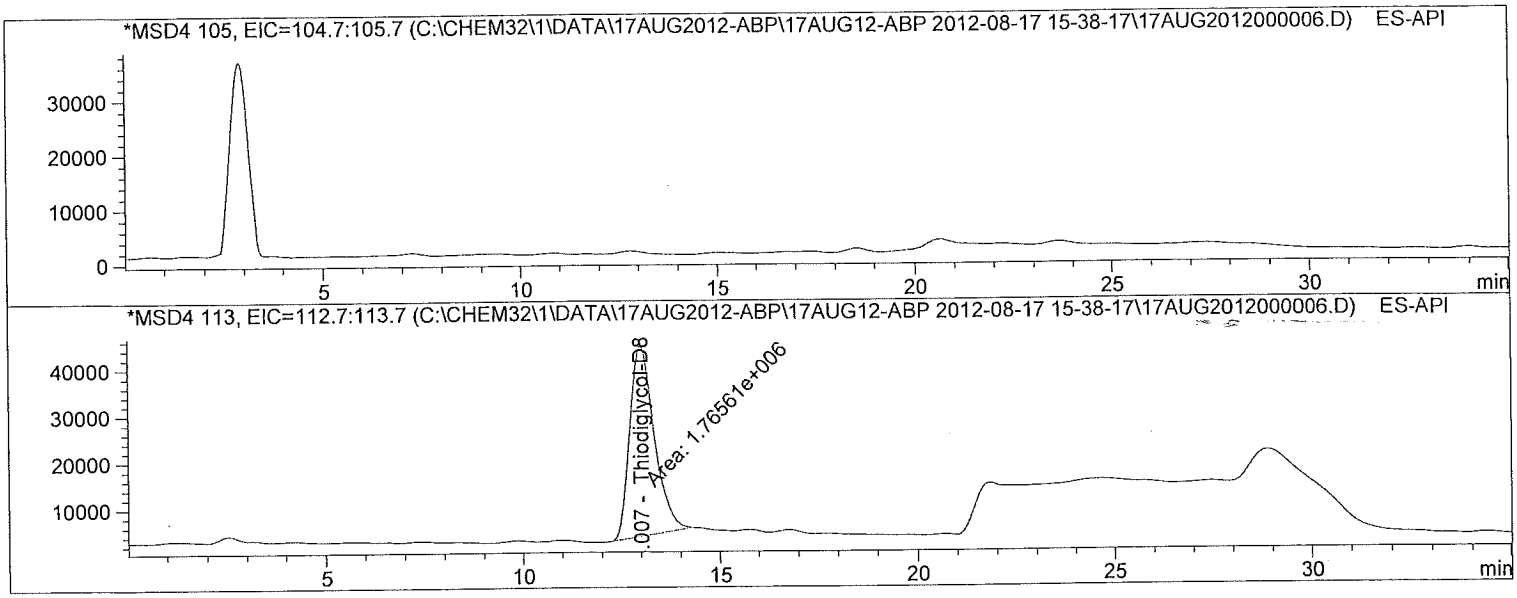
Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 6 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000006.D
ample Name: 1222142001

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 8/17/2012 6:40:36 PM
Seq. Line : 6
Location : Vial 55
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 6 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000006.D
Sample Name: 1222142001

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 55
Injection Date	: 8/17/2012 6:40:36 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.007	MM	I	1 1.76561e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

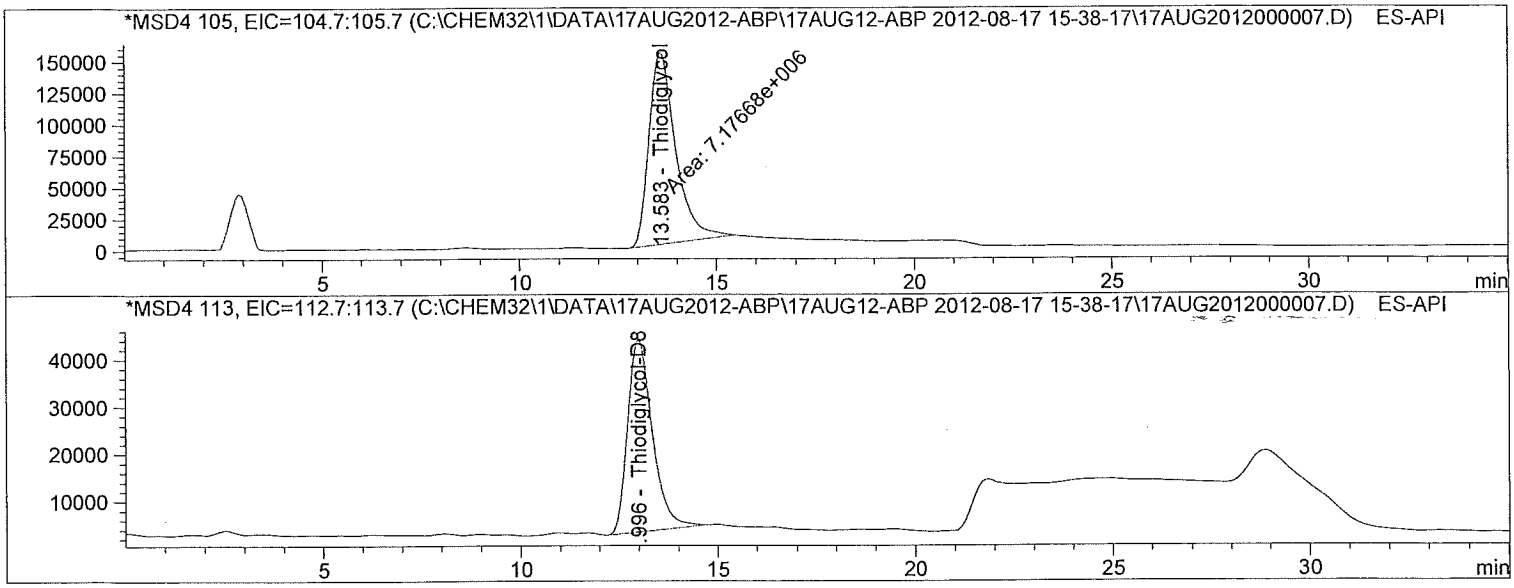
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 7 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000007.D
Sample Name: 290922 MS

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 56
Injection Date	: 8/17/2012 7:16:58 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs

Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.583	MM	1	7.17668e6	1.18349e-1	47.89601		Thiodiglycol

Totals without ISTD(s) : 47.89601

Batch Run # 7 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000007.D
Sample Name: 290922 MS

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 56
Injection Date	: 8/17/2012 7:16:58 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

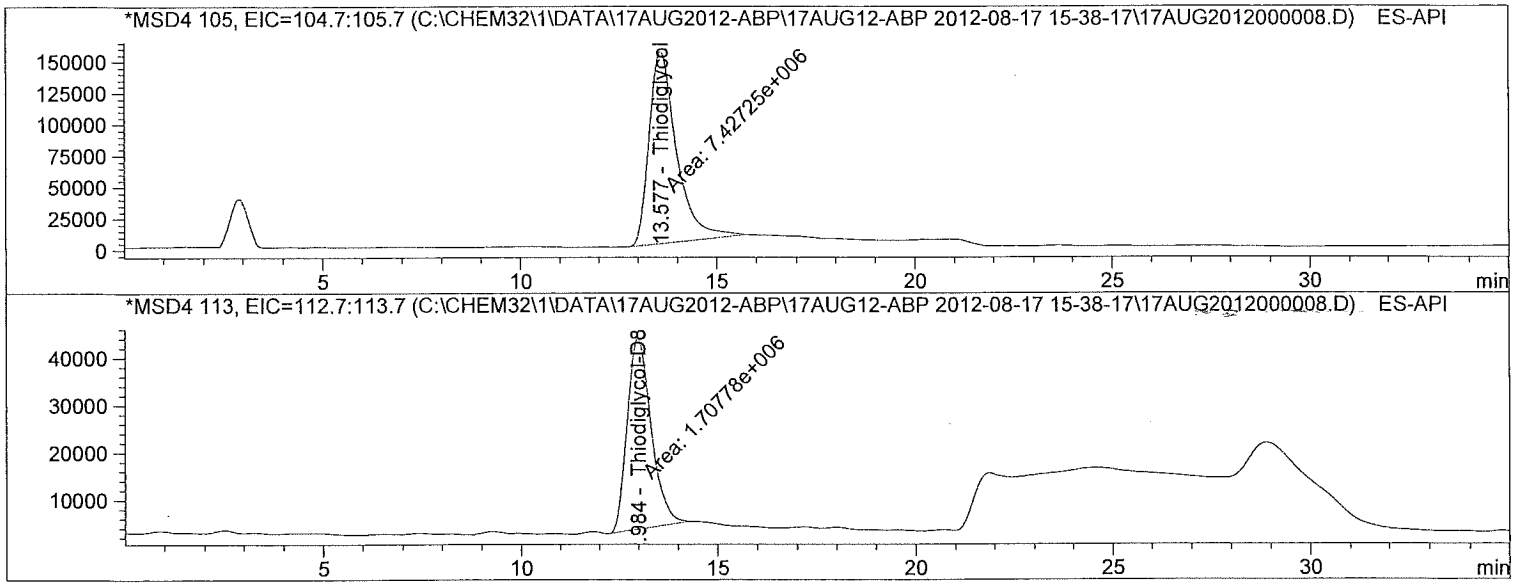
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.996	BB	I	1 1.77332e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 8 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000008.D
ample Name: 290923 MSD

Acq. Operator : TTM Seq. Line : 8
Acq. Instrument : LCMS3 Location : Vial 57
Injection Date : 8/17/2012 7:53:21 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.577	MM	1	7.42725e6	1.18836e-1	51.68282		Thiodiglycol

Totals without ISTD(s) : 51.68282

Batch Run # 8 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000008.D
Sample Name: 290923 MSD

Acq. Operator : TTM Seq. Line : 8
Acq. Instrument : LCMS3 Location : Vial 57
Injection Date : 8/17/2012 7:53:21 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

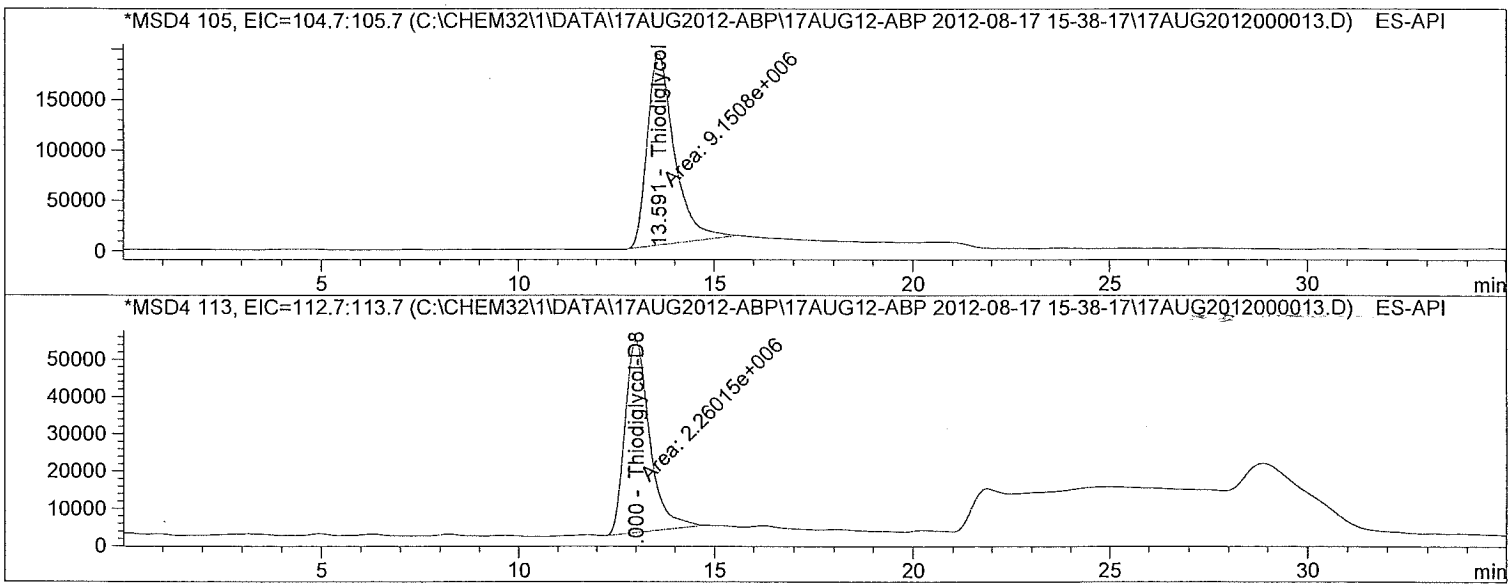
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.984	MM	I	1 1.70778e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 13 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000013.D
Sample Name: CCV2

Acq. Operator	: TTM	Seq. Line	: 13
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/17/2012 10:55:12 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	7/9/2012 11:13:05 AM	
Multiplier	:	1.0000	
Dilution	:	1.0000	
Sample Amount	:	5.00000 []	(not used in calc.)

Use Multiplier & Dilution Factor with ISTDs

Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.591	MM	1	9.15080e6	1.18351e-1	4.79177		Thiodiglycol

atch Run # 13 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000013.D
ample Name: CCV2

Acq. Operator : TTM
Seq. Line : 13
Acq. Instrument : LCMS3
Location : Vial 51
Injection Date : 8/17/2012 10:55:12 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 4.79177

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

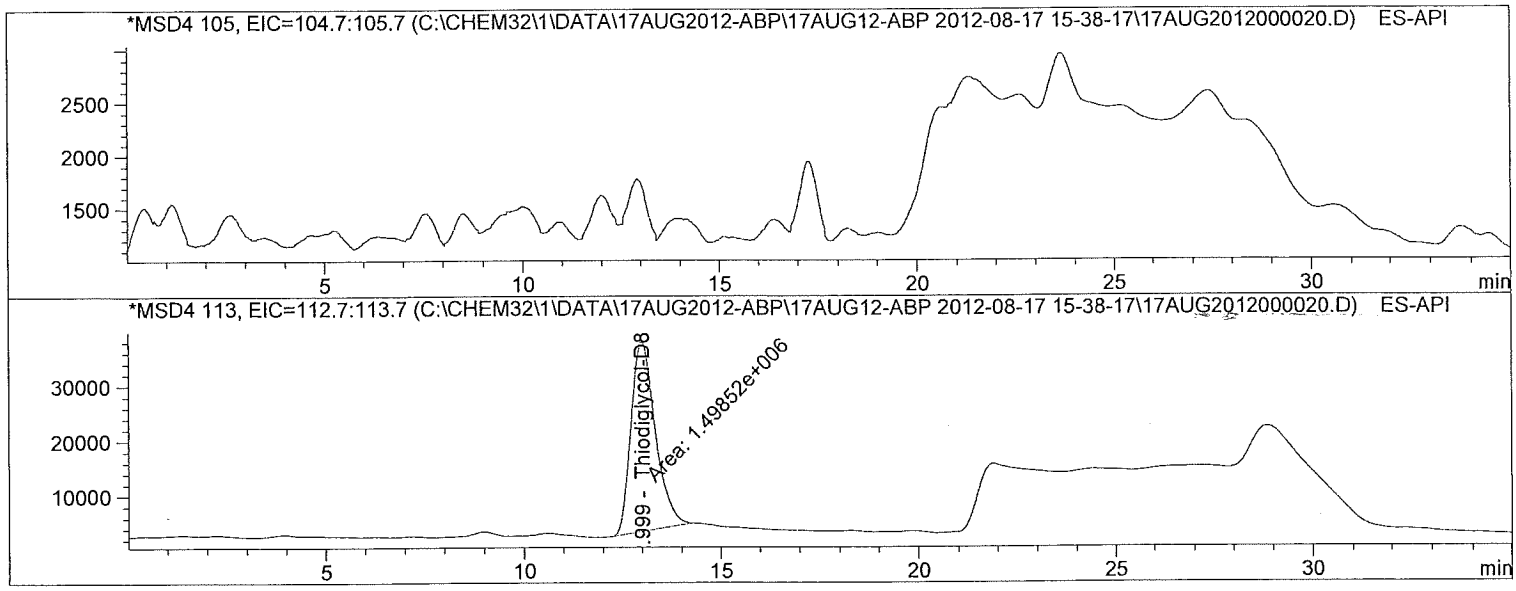
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.000	MM	I	1 2.26015e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 20 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000020.D
Sample Name: 290925 LMB

Acq. Operator : TTM
Seq. Line : 20
Acq. Instrument : LCMS3
Location : Vial 68
Injection Date : 8/18/2012 3:09:50 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

atch Run # 20 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000020.D
ample Name: 290925 LMB

Acq. Operator : TTM Seq. Line : 20
Acq. Instrument : LCMS3 Location : Vial 68
Injection Date : 8/18/2012 3:09:50 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.999	MM	I	1 1.49852e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

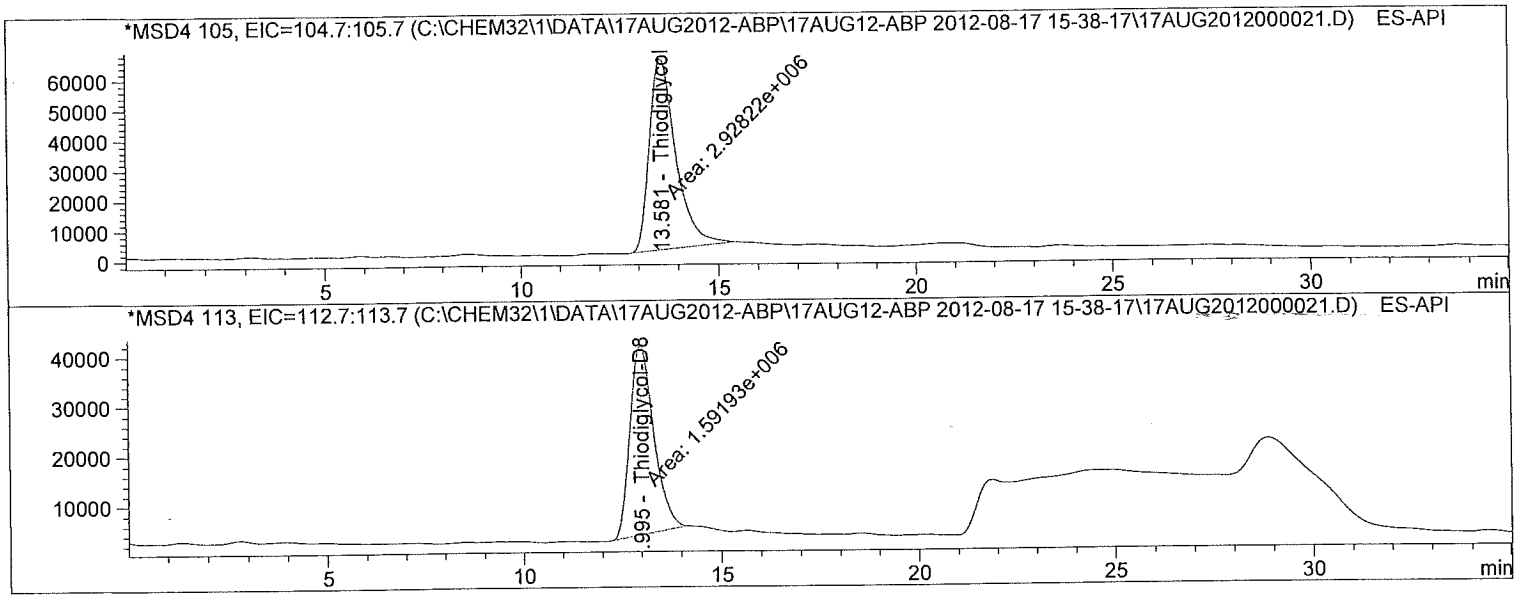
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

atch Run # 21 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000021.D
ample Name: 290926 LCS

Acq. Operator : TTM Seq. Line : 21
Acq. Instrument : LCMS3 Location : Vial 69
Injection Date : 8/18/2012 3:46:13 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Sample Amount : 20.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.581	MM	1	2.92822e6	1.15193e-1	21.18889		Thiodiglycol

atch Run # 21 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000021.D
ample Name: 290926 LCS

Acq. Operator : TTM
Seq. Line : 21
Acq. Instrument : LCMS3
Location : Vial 69
Injection Date : 8/18/2012 3:46:13 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 21.18889

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

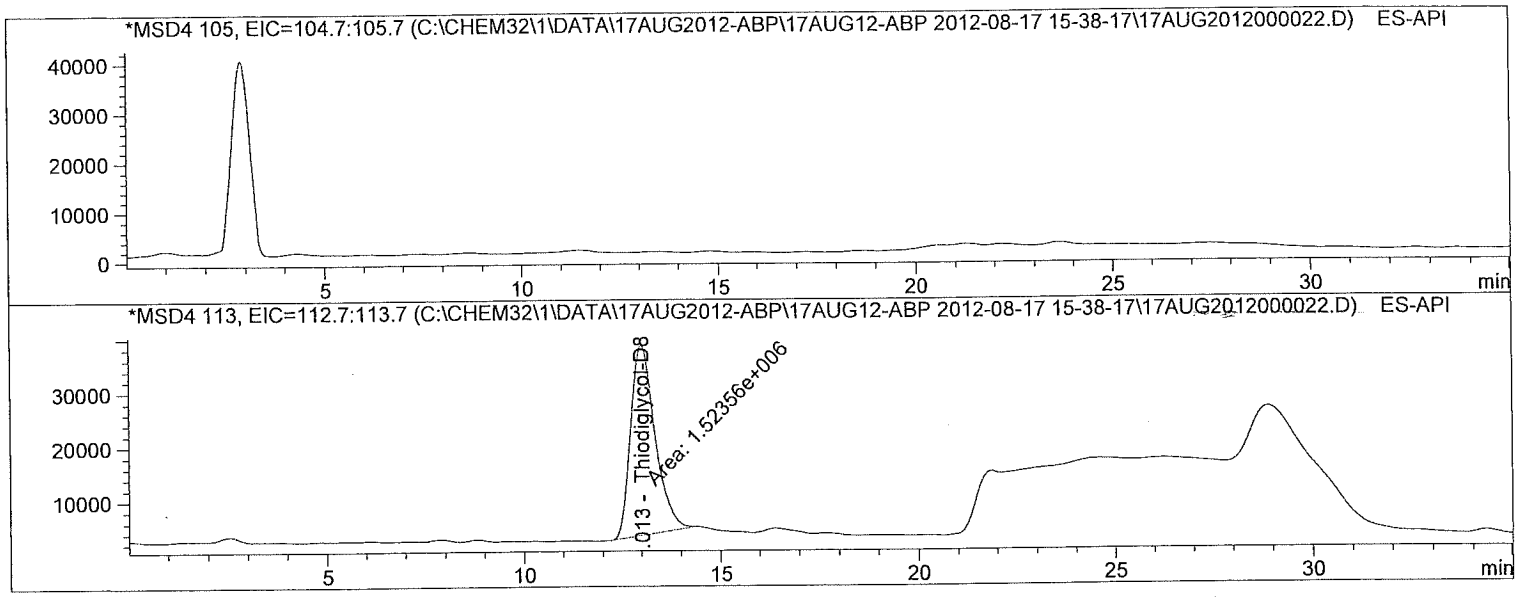
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.995	MM	I	1 1.59193e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 22 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000022.D
ample Name: 1222167001

Acq. Operator	: TTM	Seq. Line	: 22
Acq. Instrument	: LCMS3	Location	: Vial 70
Injection Date	: 8/18/2012 4:22:35 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

atch Run # 22 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000022.D
ample Name: 1222167001

Acq. Operator : TTM
Seq. Line : 22
Acq. Instrument : LCMS3
Location : Vial 70
Injection Date : 8/18/2012 4:22:35 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.013	MM	I	1 1.52356e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

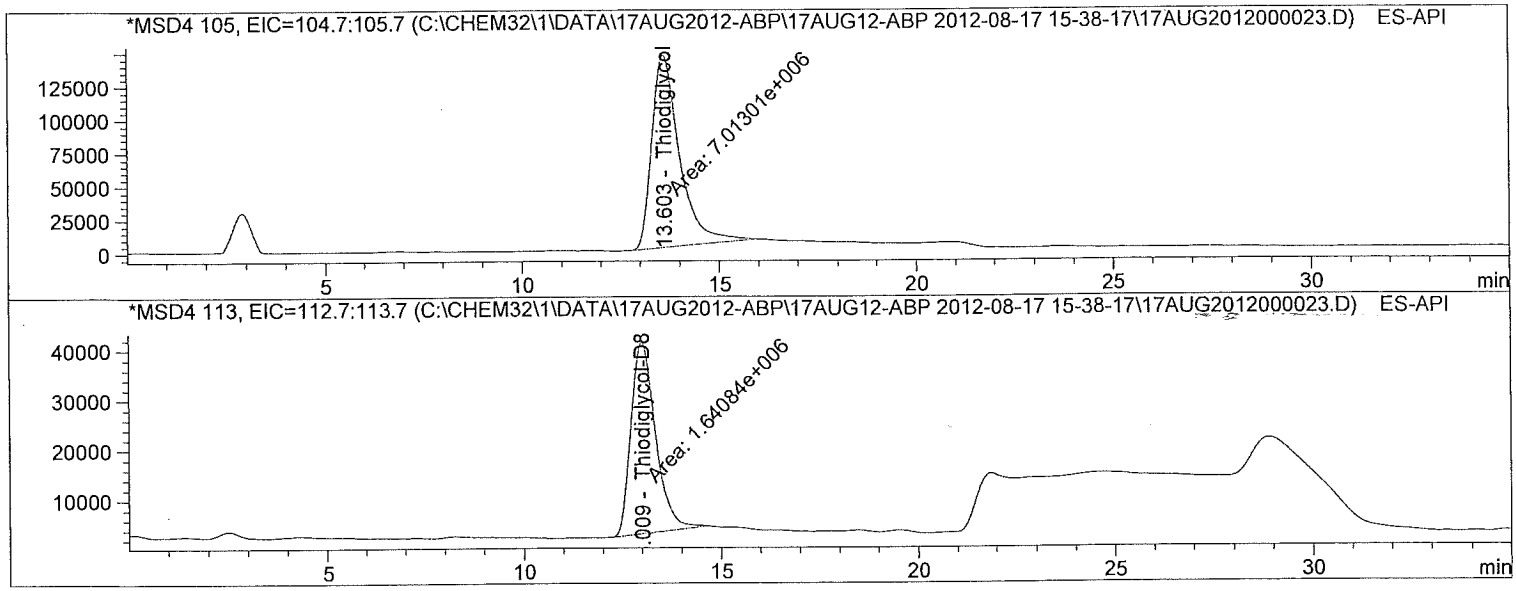
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

atch Run # 23 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000023.D
ample Name: 290927 MS

Acq. Operator : TTM Seq. Line : 23
Acq. Instrument : LCMS3 Location : Vial 71
Injection Date : 8/18/2012 4:58:59 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.603	MM	1	7.01301e6	1.18714e-1	50.73884		Thiodiglycol

Totals without ISTD(s) : 50.73884

Batch Run # 23 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000023.D
Sample Name: 290927 MS

Acq. Operator : TTM Seq. Line : 23
Acq. Instrument : LCMS3 Location : Vial 71
Injection Date : 8/18/2012 4:58:59 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

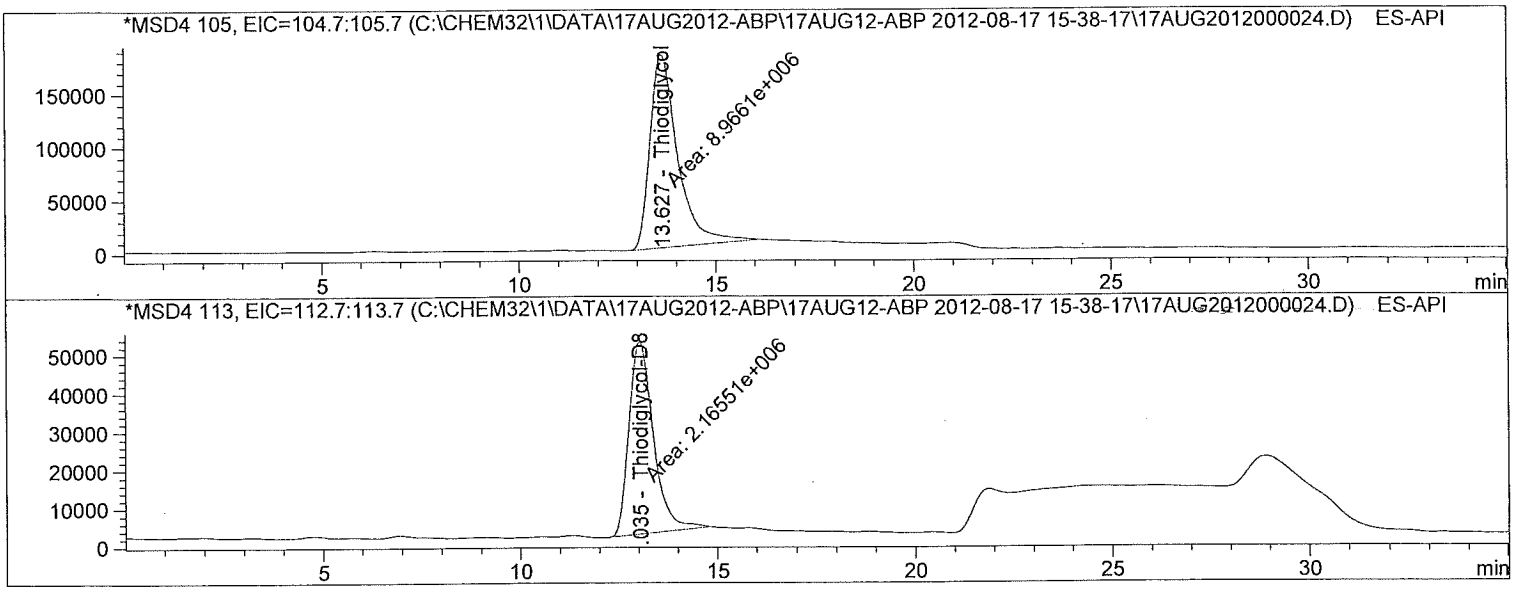
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.009	MM	I	1 1.64084e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 24 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000024.D
Sample Name: CCV3

Acq. Operator	: TTM	Seq. Line	: 24
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/18/2012 5:35:21 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	7/9/2012 11:13:05 AM
Multiplier	:	1.0000
Dilution	:	1.0000
Sample Amount	:	5.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.627	MM	1	8.96610e6	1.18498e-1	4.90631		Thiodiglycol

Batch Run # 24 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000024.D
Sample Name: CCV3

Acq. Operator : TTM Seq. Line : 24
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/18/2012 5:35:21 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 4.90631

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

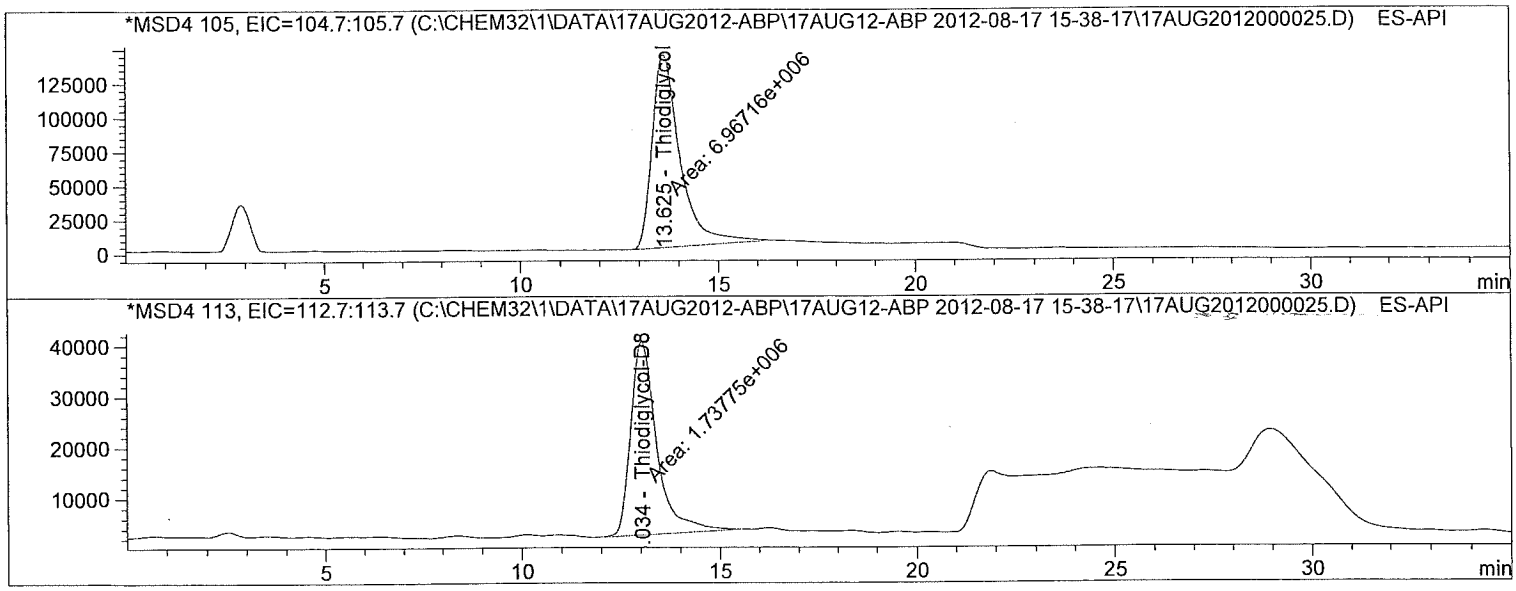
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.035	MM	I	1 2.16551e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 25 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000025.D
ample Name: 290928 MSD

Acq. Operator : TTM Seq. Line : 25
Acq. Instrument : LCMS3 Location : Vial 72
Injection Date : 8/18/2012 6:11:45 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.625	MM	1	6.96716e6	1.18289e-1	47.42531		Thiodiglycol

Totals without ISTD(s) : 47.42531

Batch Run # 25 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000025.D
Sample Name: 290928 MSD

Acq. Operator : TTM Seq. Line : 25
Acq. Instrument : LCMS3 Location : Vial 72
Injection Date : 8/18/2012 6:11:45 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

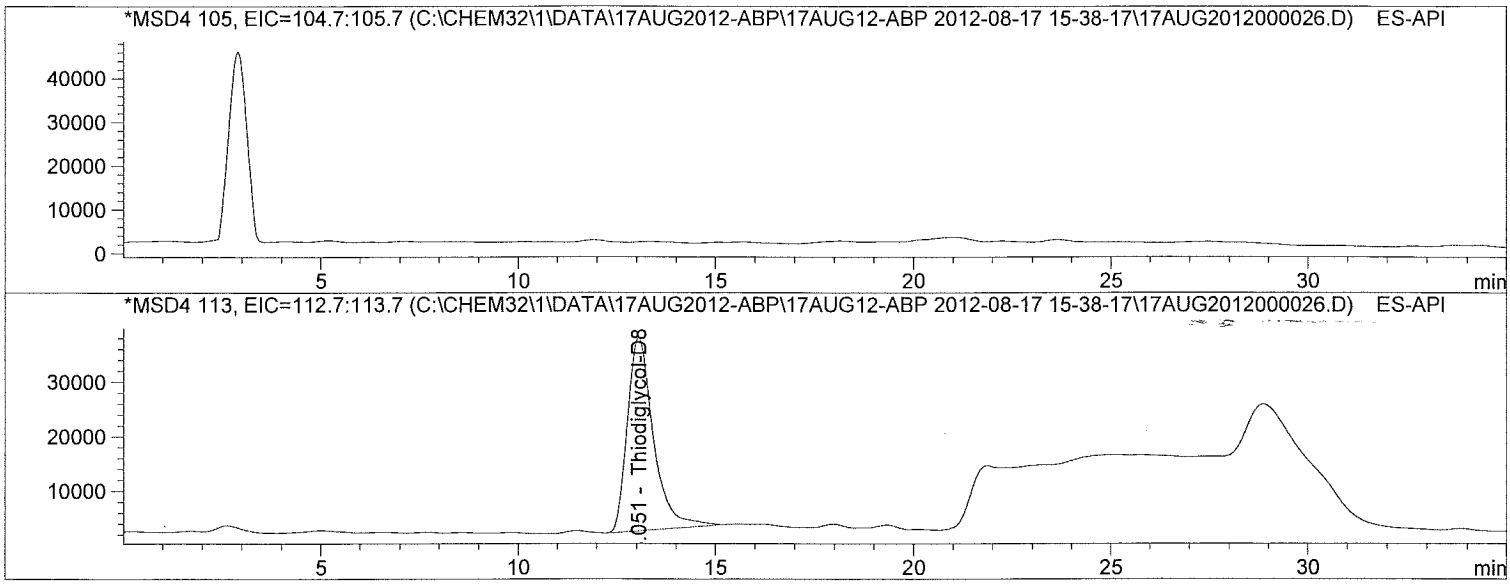
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.034	MM	I	1 1.73775e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 26 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000026.D
Sample Name: 1222167002

Acq. Operator : TTM Seq. Line : 26
Acq. Instrument : LCMS3 Location : Vial 73
Injection Date : 8/18/2012 6:48:06 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 26 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000026.D
Sample Name: 1222167002

Acq. Operator : TTM Seq. Line : 26
Acq. Instrument : LCMS3 Location : Vial 73
Injection Date : 8/18/2012 6:48:06 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.051	BB	I	1 1.61201e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

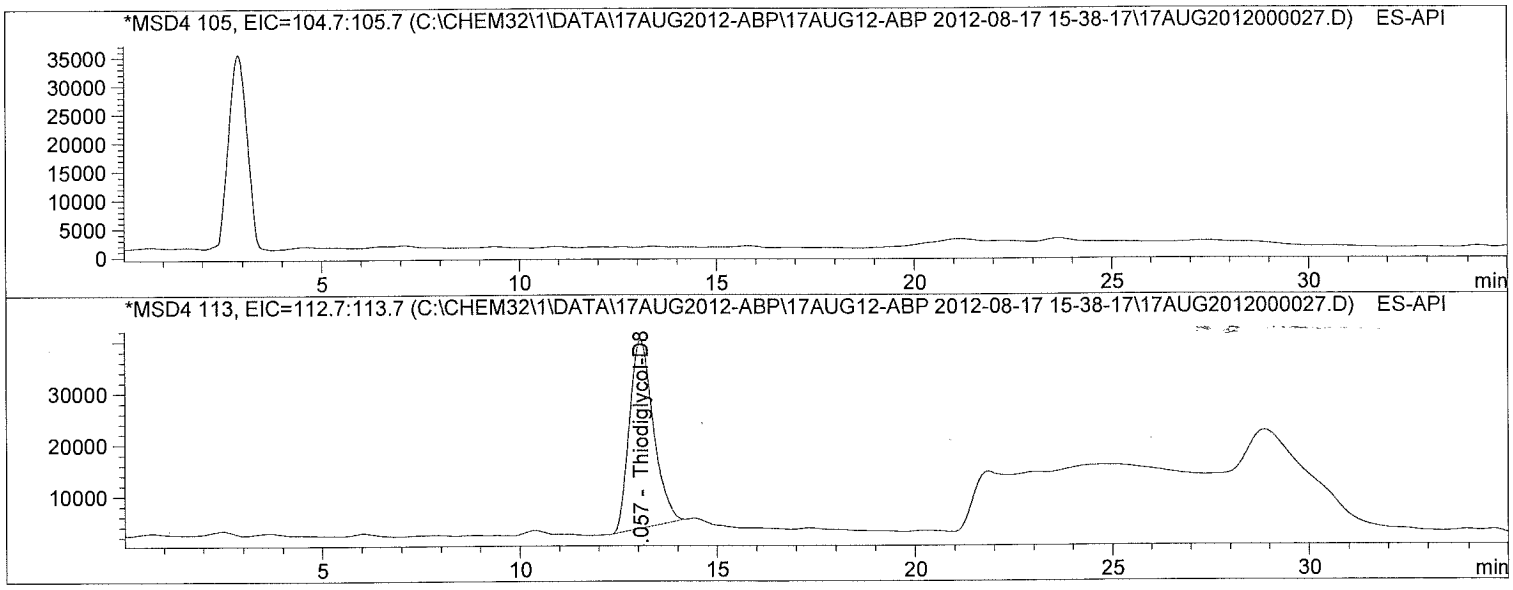
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 27 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000027.D
Sample Name: 1222167003

Acq. Operator	: TTM	Seq. Line	: 27
Acq. Instrument	: LCMS3	Location	: Vial 74
Injection Date	: 8/18/2012 7:24:27 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 27 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000027.D
Sample Name: 1222167003

Acq. Operator : TTM
Seq. Line : 27
Acq. Instrument : LCMS3
Location : Vial 74
Injection Date : 8/18/2012 7:24:27 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.057	BB	I	1 1.54112e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

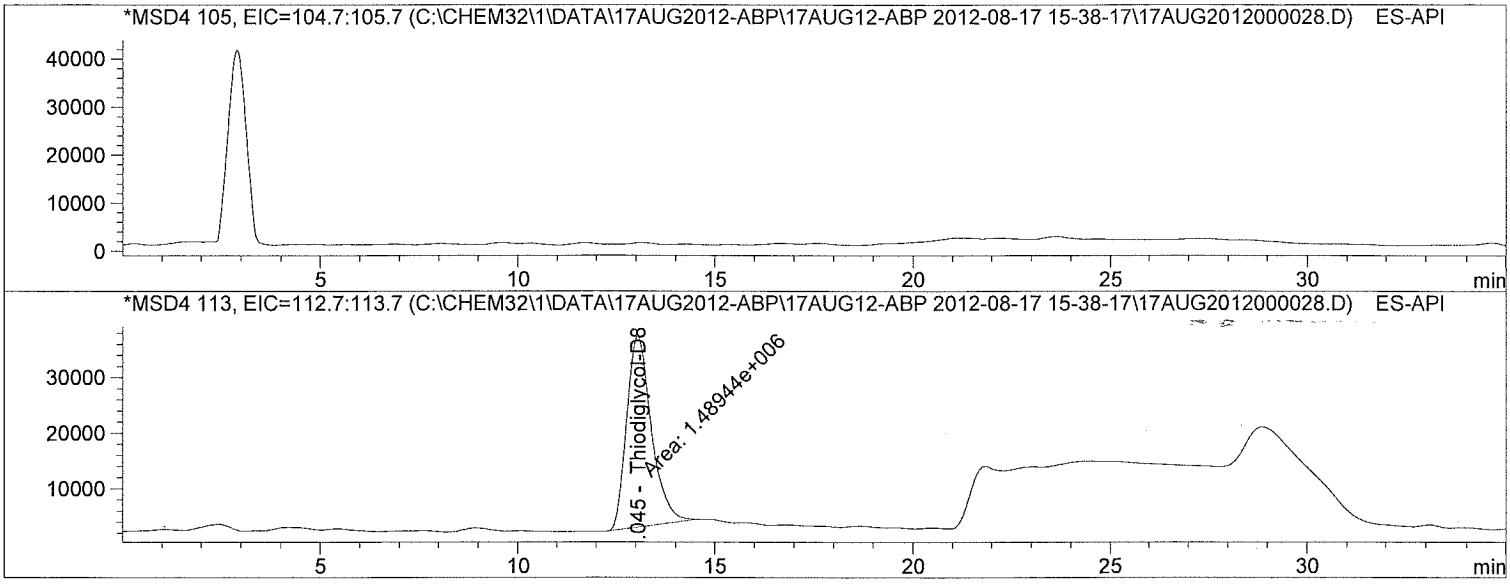
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 28 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000028.D
Sample Name: 1222167004

```
Acq. Operator    : TTM                                  Seq. Line :  28
Acq. Instrument  : LCMS3                                 Location : Vial 75
Injection Date   : 8/18/2012 8:00:52 AM                      Inj :   1
                                                       Inj Volume : 10 µl
Acq. Method      : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed     : 8/14/2012 7:45:11 AM by TTM
Analysis Method  : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed     : 8/13/2012 12:58:03 PM by TTM
                   (Results are from a previously saved Batch)
Method Info      : Agent Breakdown Products
```



Internal Standard Report

```
Sorted By             :      Signal
Calib. Data Modified  :      7/9/2012 11:13:05 AM
Multiplier            :     10.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:
```

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 28 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000028.D
Sample Name: 1222167004

Acq. Operator : TTM Seq. Line : 28
Acq. Instrument : LCMS3 Location : Vial 75
Injection Date : 8/18/2012 8:00:52 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.045	MM	I	1 1.48944e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

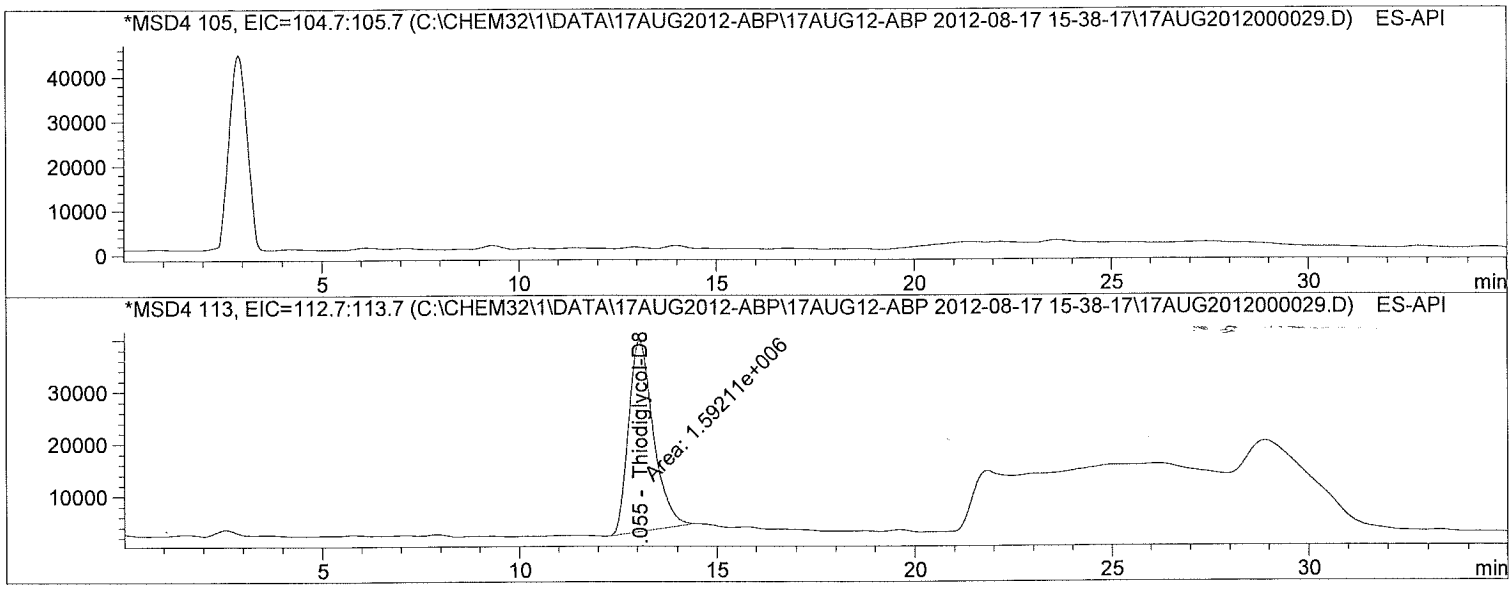
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 29 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000029.D
Sample Name: 1222167005

Acq. Operator	: TTM	Seq. Line	: 29
Acq. Instrument	: LCMS3	Location	: Vial 76
Injection Date	: 8/18/2012 8:37:14 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 29 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000029.D
Sample Name: 1222167005

Acq. Operator : TTM Seq. Line : 29
Acq. Instrument : LCMS3 Location : Vial 76
Injection Date : 8/18/2012 8:37:14 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.055	MM	I	1 1.59211e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

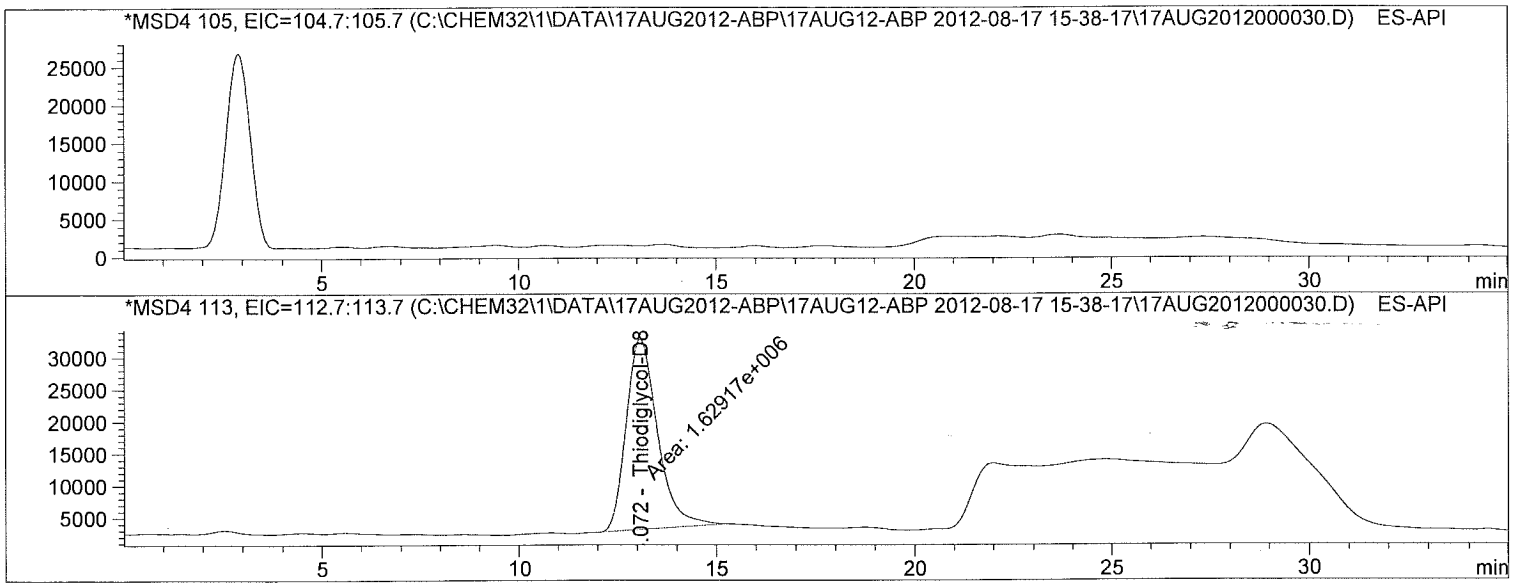
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 30 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000030.D
Sample Name: 1222167006

Acq. Operator : TTM
Seq. Line : 30
Acq. Instrument : LCMS3
Location : Vial 77
Injection Date : 8/18/2012 9:13:39 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 30 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000030.D
Sample Name: 1222167006

Acq. Operator : TTM Seq. Line : 30
Acq. Instrument : LCMS3 Location : Vial 77
Injection Date : 8/18/2012 9:13:39 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.072	MM	I	1 1.62917e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

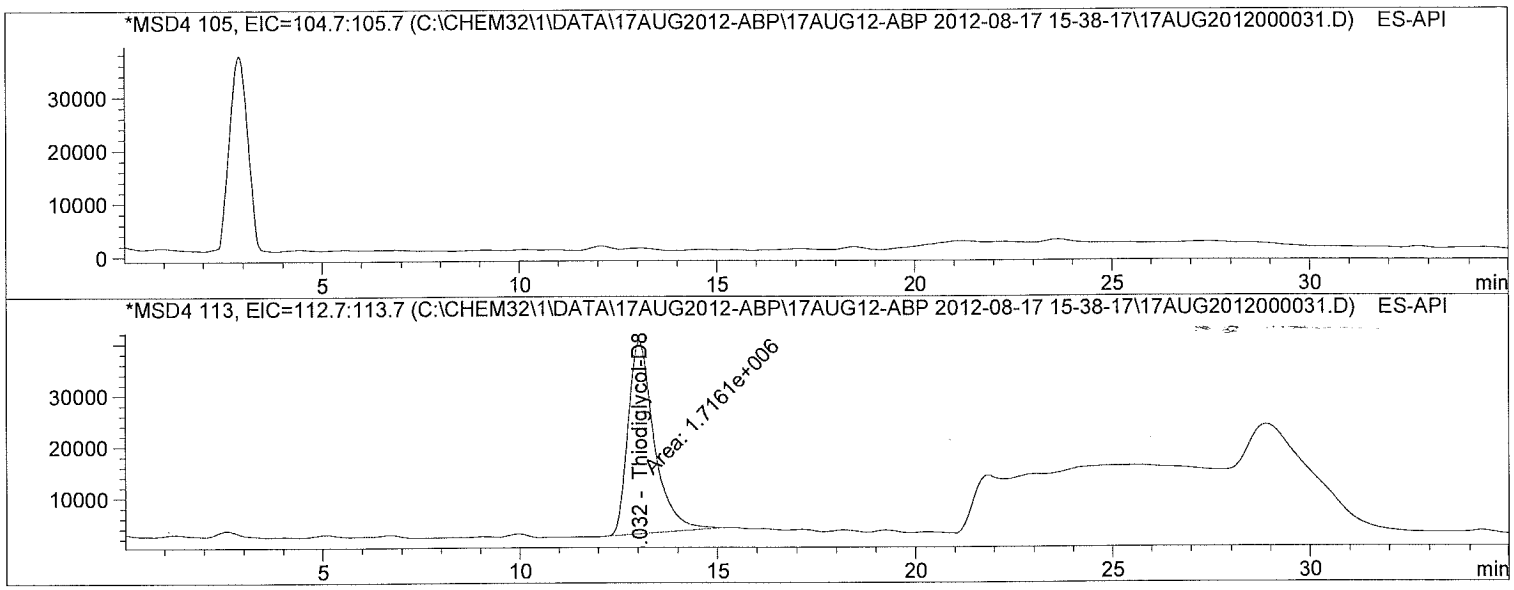
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 31 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000031.D
Sample Name: 1222167007

Acq. Operator	: TTM	Seq. Line	: 31
Acq. Instrument	: LCMS3	Location	: Vial 78
Injection Date	: 8/18/2012 9:50:01 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 31 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000031.D
Sample Name: 1222167007

Acq. Operator : TTM
Seq. Line : 31
Acq. Instrument : LCMS3
Location : Vial 78
Injection Date : 8/18/2012 9:50:01 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.032	MM	I	1 1.71610e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

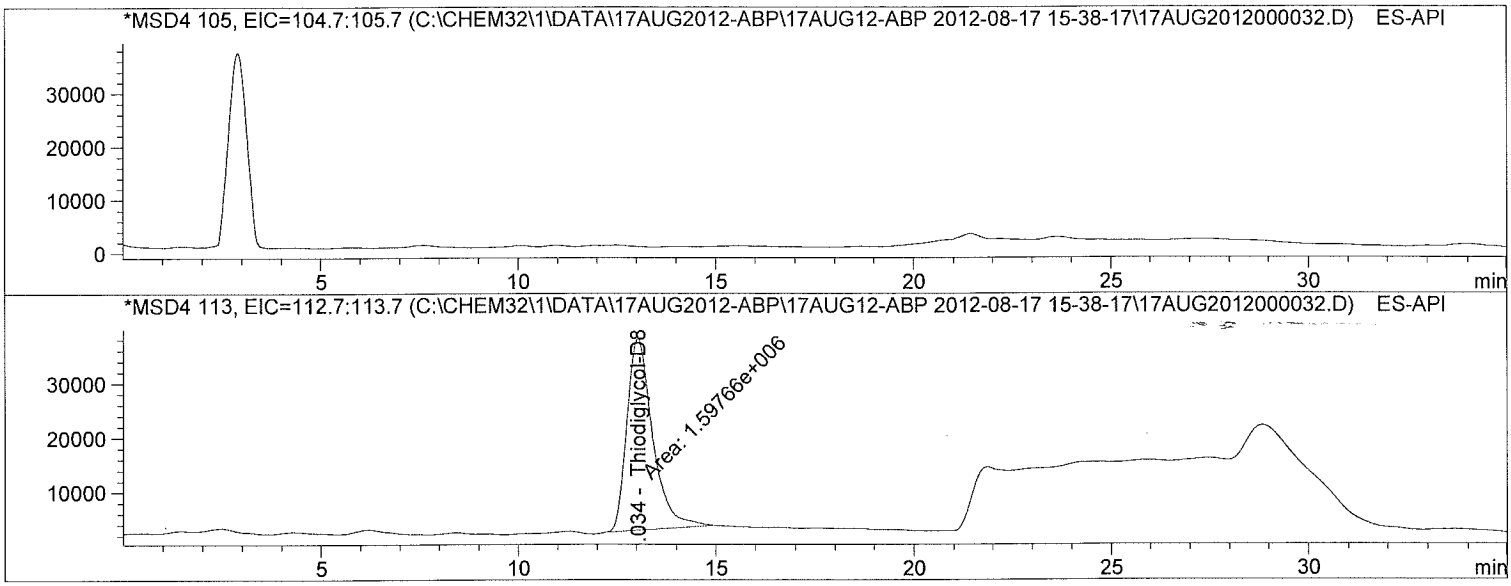
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 32 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000032.D
Sample Name: 1222167008

Acq. Operator	: TTM	Seq. Line	: 32
Acq. Instrument	: LCMS3	Location	: Vial 79
Injection Date	: 8/18/2012 10:26:24 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 32 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000032.D
Sample Name: 1222167008

```
Acq. Operator    : TTM                                  Seq. Line :  32
Acq. Instrument  : LCMS3                                 Location : Vial 79
Injection Date   : 8/18/2012 10:26:24 AM                      Inj :   1
                                                       Inj Volume : 10 µl
Acq. Method      : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed     : 8/14/2012 7:45:11 AM by TTM
Analysis Method  : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed     : 8/13/2012 12:58:03 PM by TTM
                   (Results are from a previously saved Batch)
Method Info      : Agent Breakdown Products
```

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.034	MM	I	1 1.59766e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

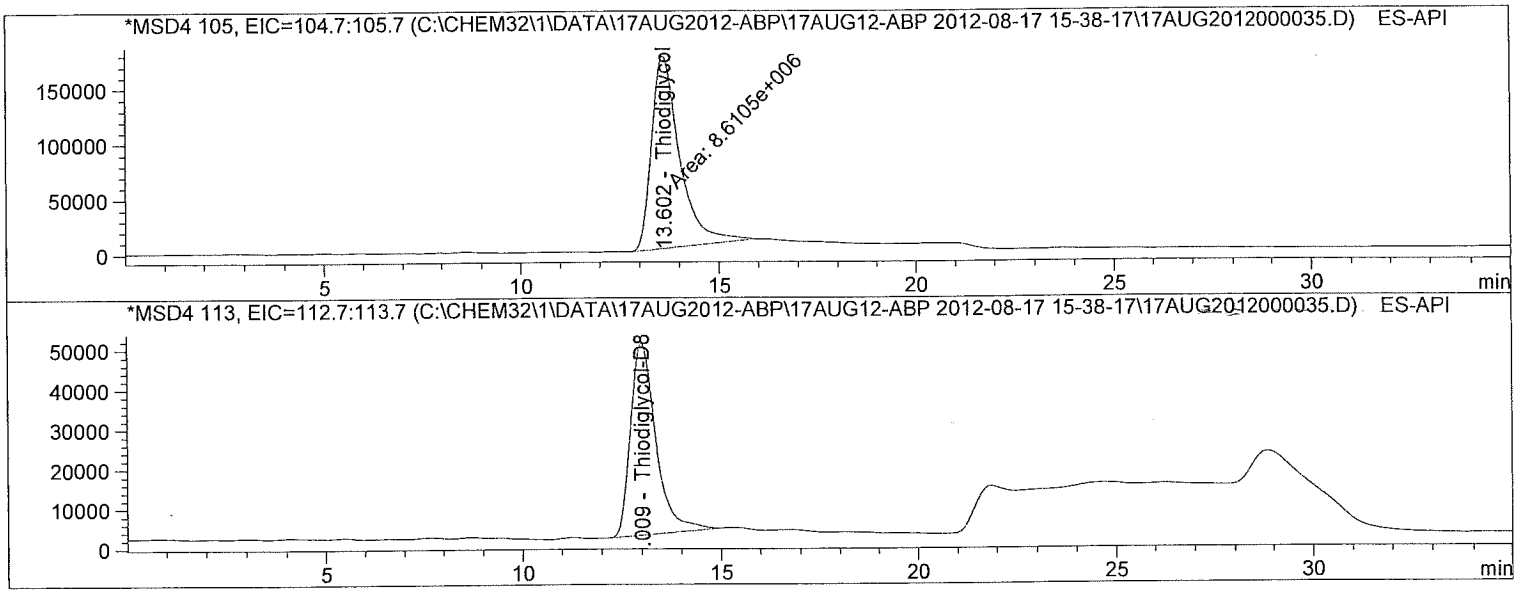
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

atch Run # 35 of 35
ata File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000035.D
ample Name: CCV4

Acq. Operator : TTM Seq. Line : 35
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/18/2012 12:15:30 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.602	MM	1	8.61050e6	1.18337e-1	4.78026		Thiodiglycol

Batch Run # 35 of 35
Data File C:\CHEM32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\17AUG2012000035.D
Sample Name: CCV4

Acq. Operator : TTM Seq. Line : 35
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/18/2012 12:15:30 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\17AUG2012-ABP\17AUG12-ABP 2012-08-17 15-38-17\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 4.78026

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.009	BB	I	1 2.13155e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Calibration

Raw Data

Method C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M

Calibration Table

Agent Breakdown Products

Calib. Data Modified : 7/9/2012 11:13:05 AM

Calculate : Internal Standard
Based on : Peak Area

Rel. Reference Window : 10.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 10.000 %
Abs. Non-ref. Window : 0.000 min
Use Multiplier & Dilution Factor with ISTDs
Uncalibrated Peaks : not reported
Partial Calibration : No recalibration if peaks missing

Curve Type : Quadratic (some peaks differ, see below)
Origin : Ignored (some peaks differ, see below)
Weight : Linear (Amnt) (some peaks differ, see below)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Default Sample ISTD Information (if not set in sample table):

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal 2: MSD4 113, EIC=112.7:113.7

RetTime [min]	Lvl	Sig	Amount	Area	Amt/Area	Ref	Grp	Name
12.890	2	1	10.00000	2.44245e6	4.09425e-6	I2		Thiodiglycol-D8
		2	10.00000	2.37259e6	4.21481e-6			
		3	10.00000	2.75981e6	3.62344e-6			
		4	10.00000	2.61922e6	3.81792e-6			
		5	10.00000	2.65549e6	3.76579e-6			
		6	10.00000	2.67017e6	3.74508e-6			
13.460	1	6	5.00000e-2	1.14698e5	4.35926e-7	2		Thiodiglycol
		5	1.00000e-1	2.17683e5	4.59383e-7			
		4	5.00000e-1	1.04468e6	4.78617e-7			
		3	1.00000	2.09084e6	4.78276e-7			
		2	5.00000	1.06254e7	4.70571e-7			
		1	10.00000	1.91630e7	5.21840e-7			

More compound-specific settings:

Compound: Thiodiglycol-D8
  Curve Type : Linear
  Origin : Included
  Calibration Level Weights:/
    Level 1 : 1
    Level 2 : 1
    Level 3 : 1
    Level 4 : 1
    Level 5 : 1
    Level 6 : 1

==========

Peak Sum Table

==========

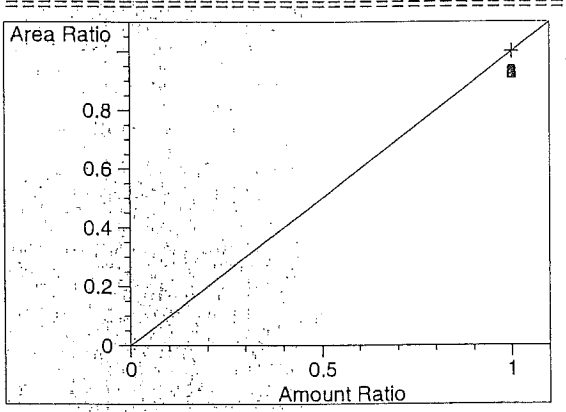
No Entries in table

==========

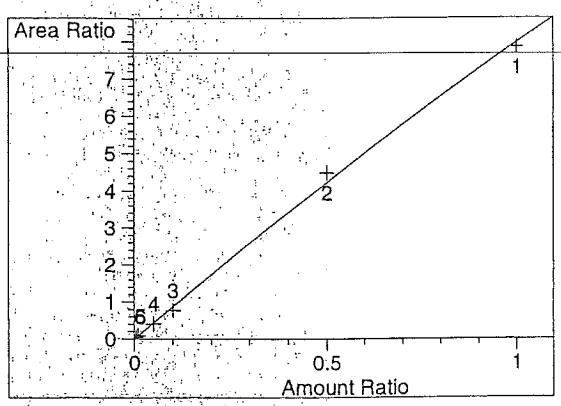
==========

Calibration Curves

==========



Thiodiglycol-D8 at exp. RT: 12.890
MSD4 113, EIC=112.7:113.7
Correlation: 1.00000
Residual Std. Dev.: 0.00000
Formula: y = mx + b
  m: 1.00000
  b: 0.00000
  x: Amount
  y: Area
Calibration Level Weights:
  Level 1 : 1
  Level 2 : 1
  Level 3 : 1
  Level 4 : 1
  Level 5 : 1
  Level 6 : 1



Thiodiglycol at exp. RT: 13.460
MSD4 105, EIC=104.7:105.7
Correlation: 0.99844
Residual Std. Dev.: 0.15671
Formula: y = ax² + bx + c
  a: -9.49682e-1
  b: 8.92207
  c: -8.42930e-3
  x: Amount
  y: Area
Calibration Level Weights:
  Level 6 : 1
  Level 5 : 0.5
  Level 4 : 0.1
  Level 3 : 0.05
  Level 2 : 0.01
  Level 1 : 0.005

==========

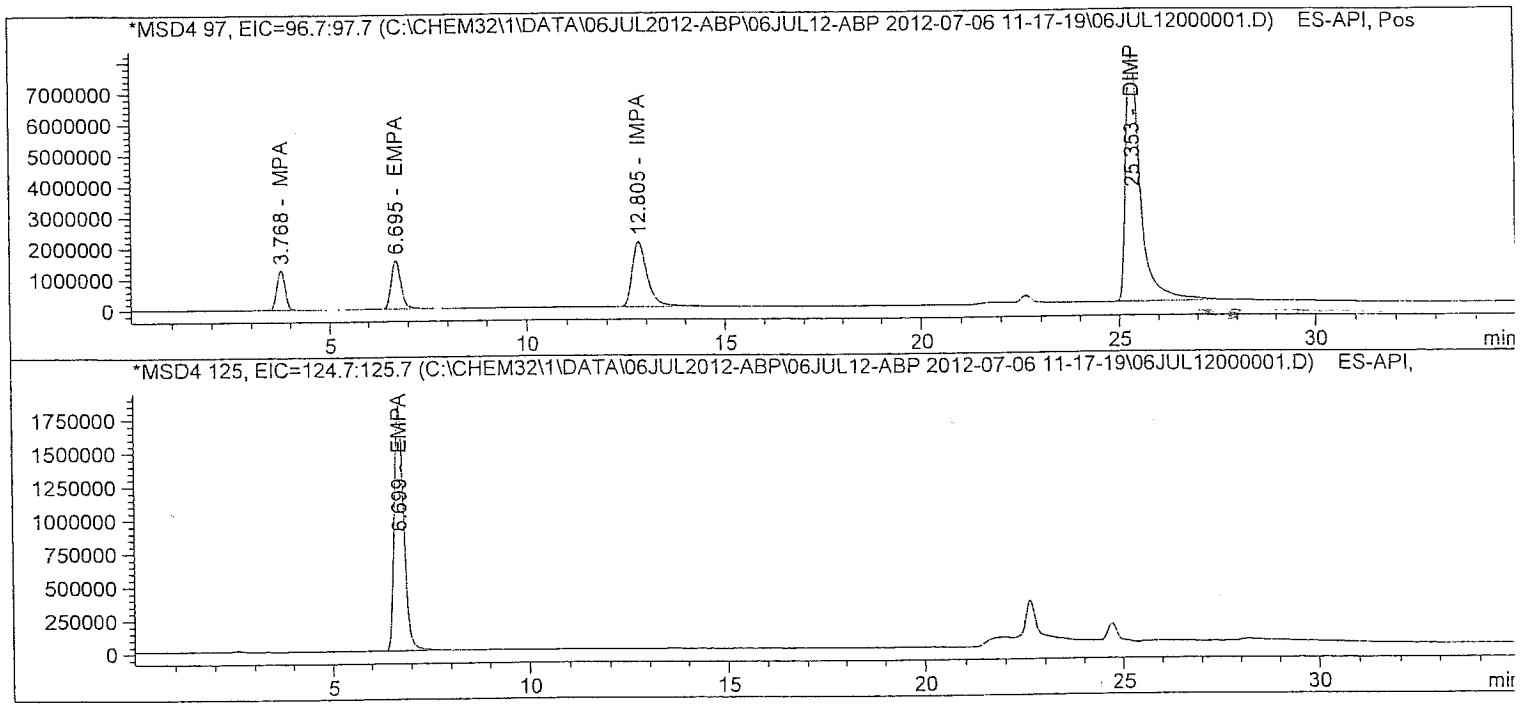
Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 1	PRIME	ABP-ON	1	Ctrl Samp	
2	Vial 1	$10	ABP-ON	1	Ctrl Samp	
3	Vial 2	$5	ABP-ON	1	Ctrl Samp	
4	Vial 3	$1	ABP-ON	1	Ctrl Samp	
5	Vial 4	$05	ABP-ON	1	Ctrl Samp	
6	Vial 5	$0.1	ABP-ON	1	Ctrl Samp	
7	Vial 6	$0.05	ABP-ON	1	Ctrl Samp	
8	Vial 7	ICV	ABP-ON	1	Ctrl Samp	
9	Vial 8	283055 LMB	ABP-ON	1	Ctrl Samp	
10	Vial 9	283056 LCS	ABP-ON	1	Ctrl Samp	
11	Vial 10	283057 RLVS	ABP-ON	1	Ctrl Samp	
12	Vial 11	1217861001	ABP-ON	1	Sample	
13	Vial 12	1217861002 MS	ABP-ON	1	Ctrl Samp	
14	Vial 13	1217861003 MSD	ABP-ON	1	Ctrl Samp	
15	Vial 2	CCV	ABP-ON	1	Ctrl Samp	

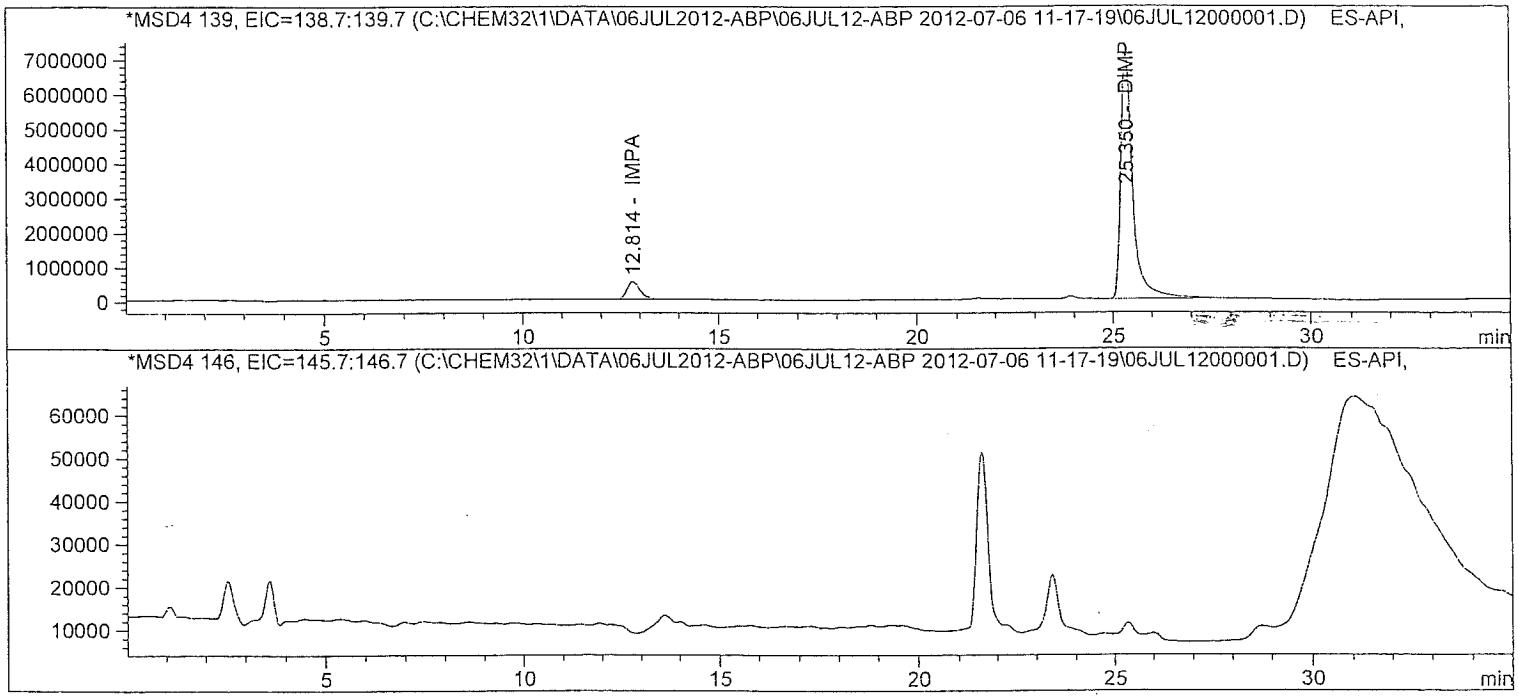
atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

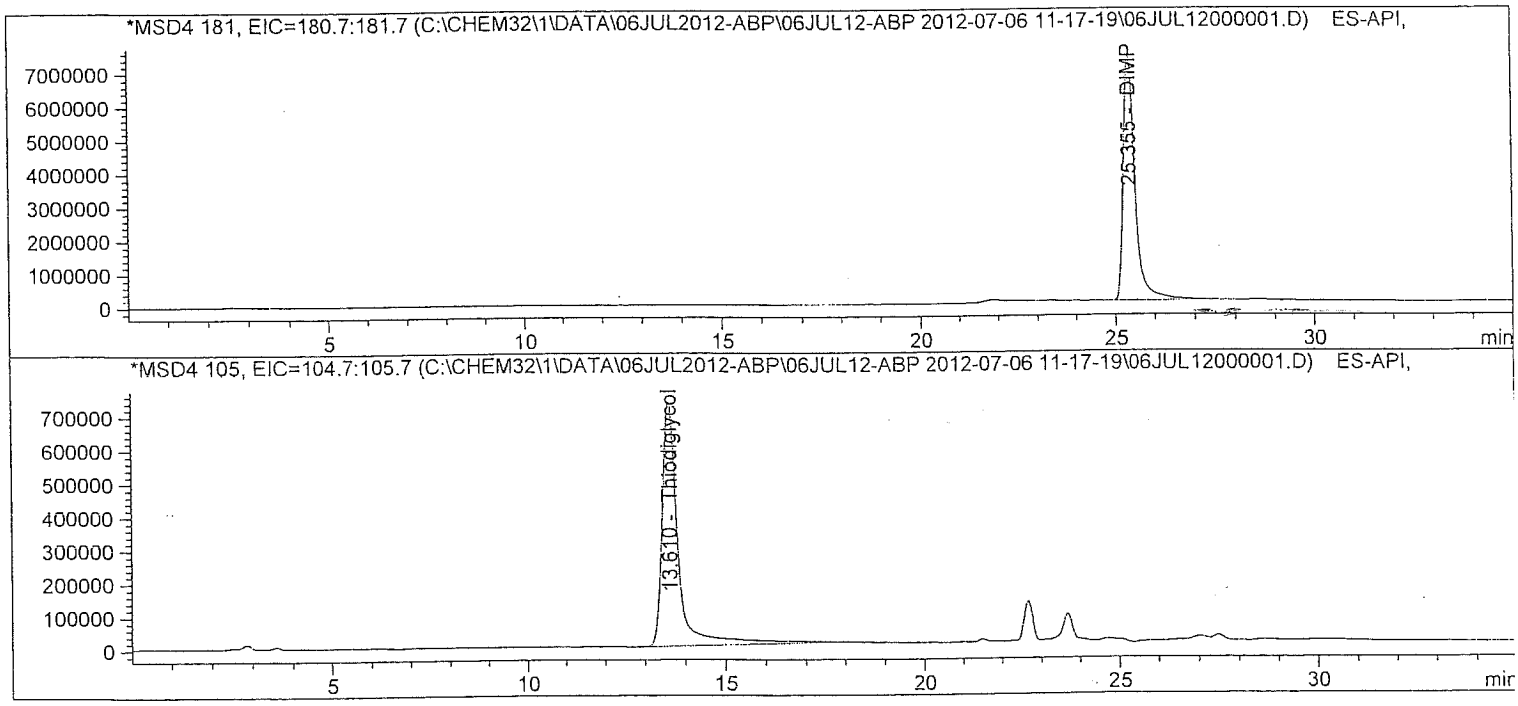
Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

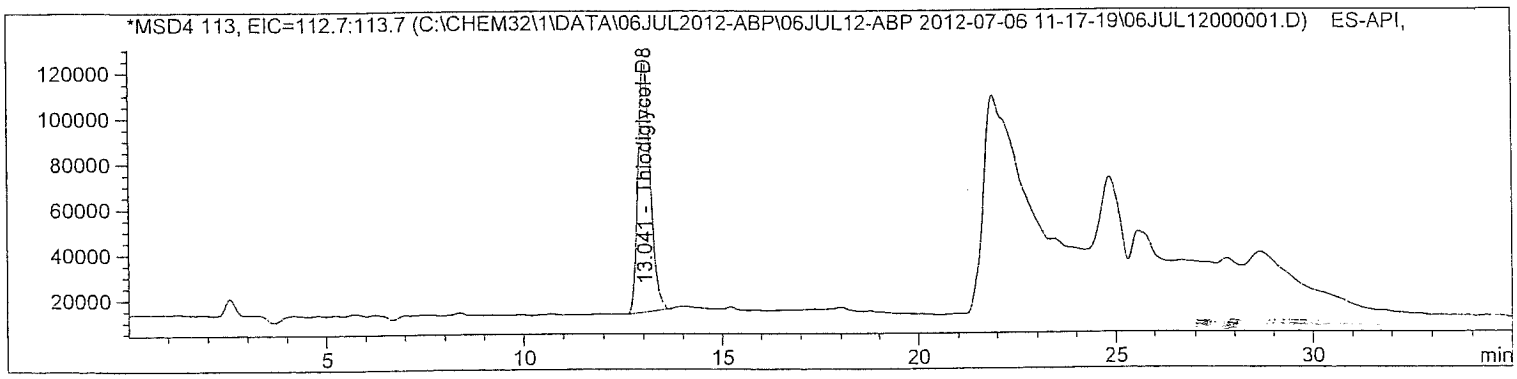
Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 10.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.768	BB	1	1.91978e7	1.32528e-1	10.64848		MPA
12.805	BBA	1	5.64639e7	4.37087e-2	10.32924		IMPA

Totals without ISTD(s) : 20.97773

atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator : TTM
Seq. Line : 1
Acq. Instrument : LCMS3
Location : Vial 1
Injection Date : 7/6/2012 11:17:43 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.699	BB	1	3.05963e7	7.98724e-2	10.22810		EMPA

Totals without ISTD(s) : 10.22810

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.355	BBA	1	1.54432e8	1.54383e-2	9.97853		DIMP

Totals without ISTD(s) : 9.97853

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.610	BBA	1	2.03461e7	1.26756e-1	10.79391		Thiodiglycol

Totals without ISTD(s) : 10.79391

Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

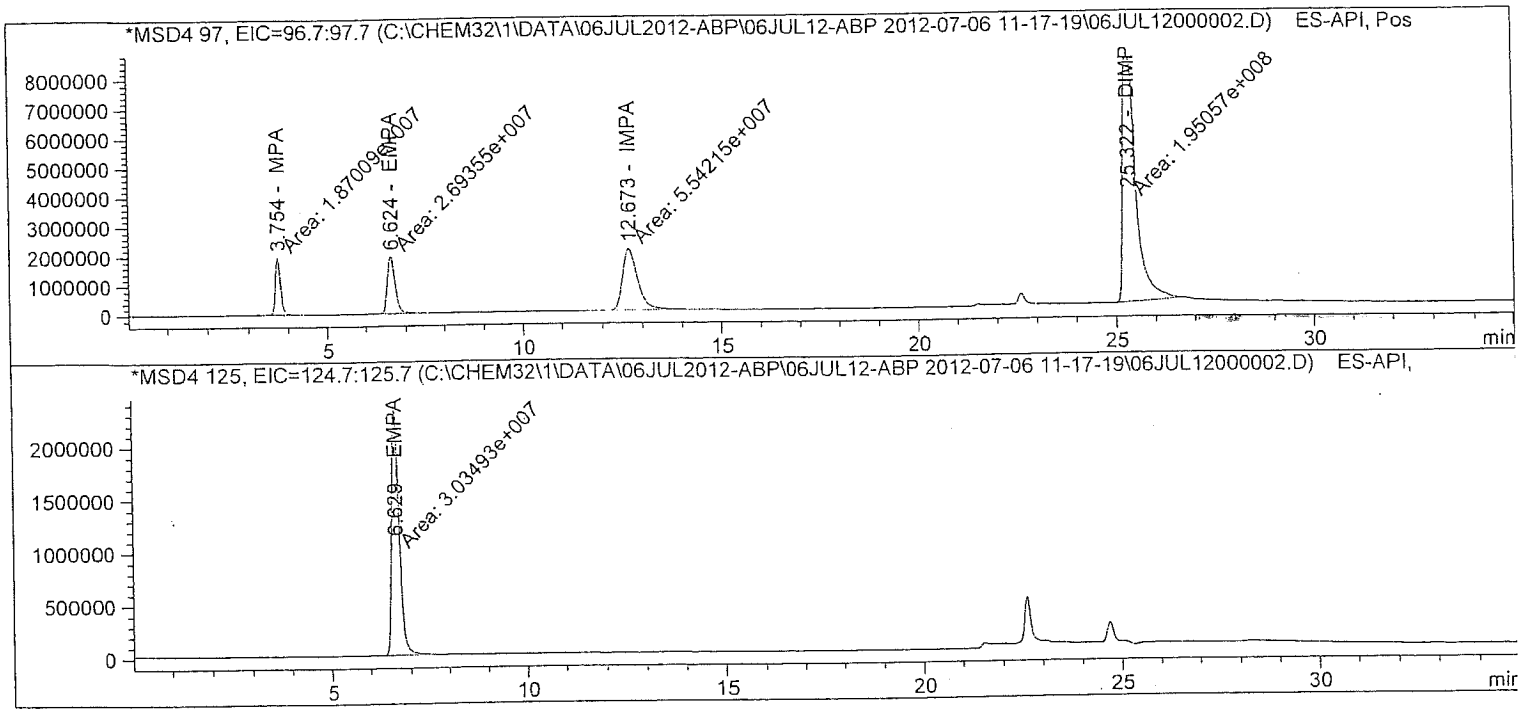
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.041	BB	I	1 2.38930e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

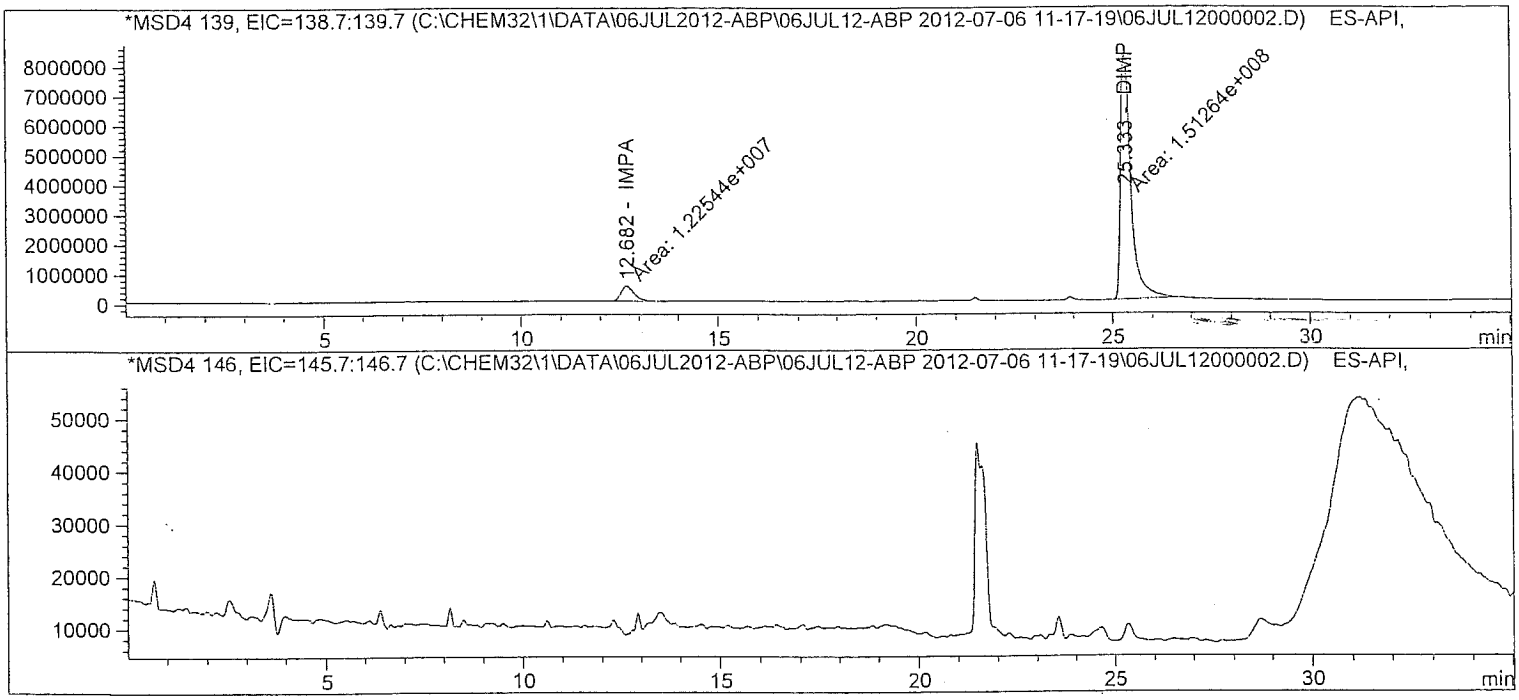
atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: S10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



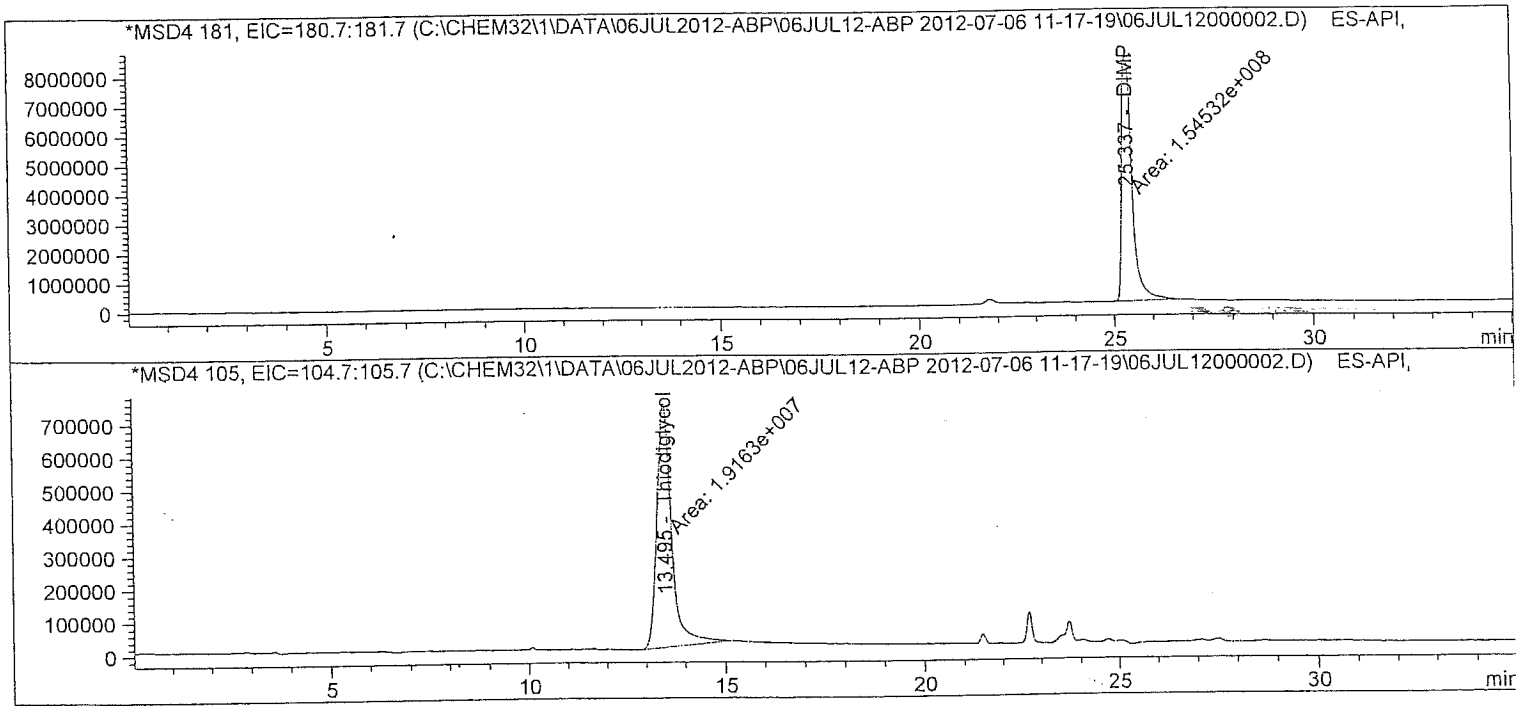
Batch Run # 2 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
Sample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



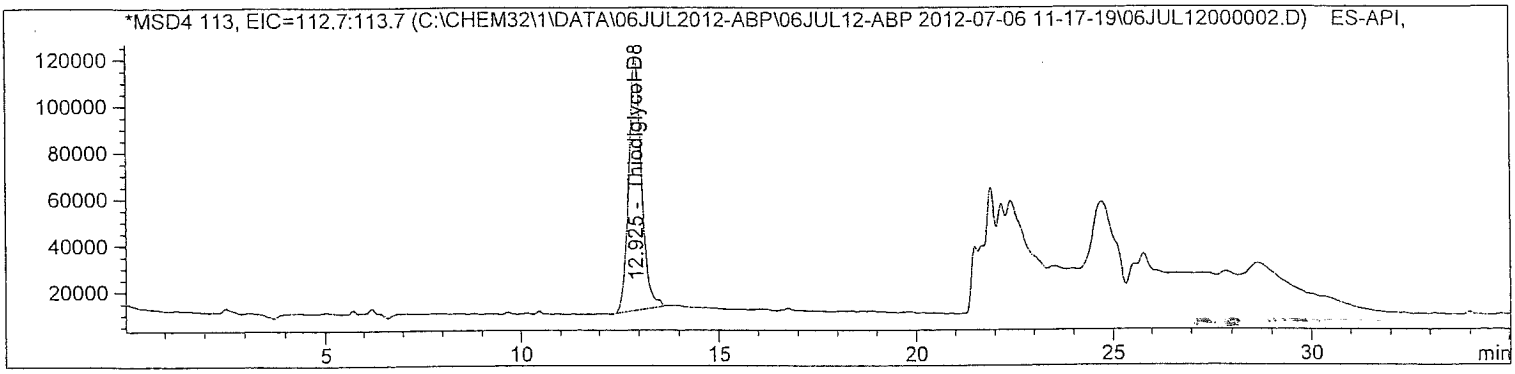
atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products .		



atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 10.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.754	MM	1	1.87009e7	1.29739e-1	9.93363		MPA
12.673	MM	1	5.54215e7	4.36500e-2	9.90458		IMPA

Totals without ISTD(s) : 19.83821

atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.629	MM	1	3.03493e7	7.97357e-2	9.90775		EMPA

Totals without ISTD(s) : 9.90775

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.337	MM	1	1.54532e8	1.48417e-2	9.39024		DIMP

Totals without ISTD(s) : 9.39024

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.495	MM	1	1.91630e7	1.25317e-1	9.83212		Thiodiglycol

Totals without ISTD(s) : 9.83212

atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator	: TTM	Seq. Line :	2
Acq. Instrument	: LCMS3	Location :	Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj :	1
		Inj Volume :	10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

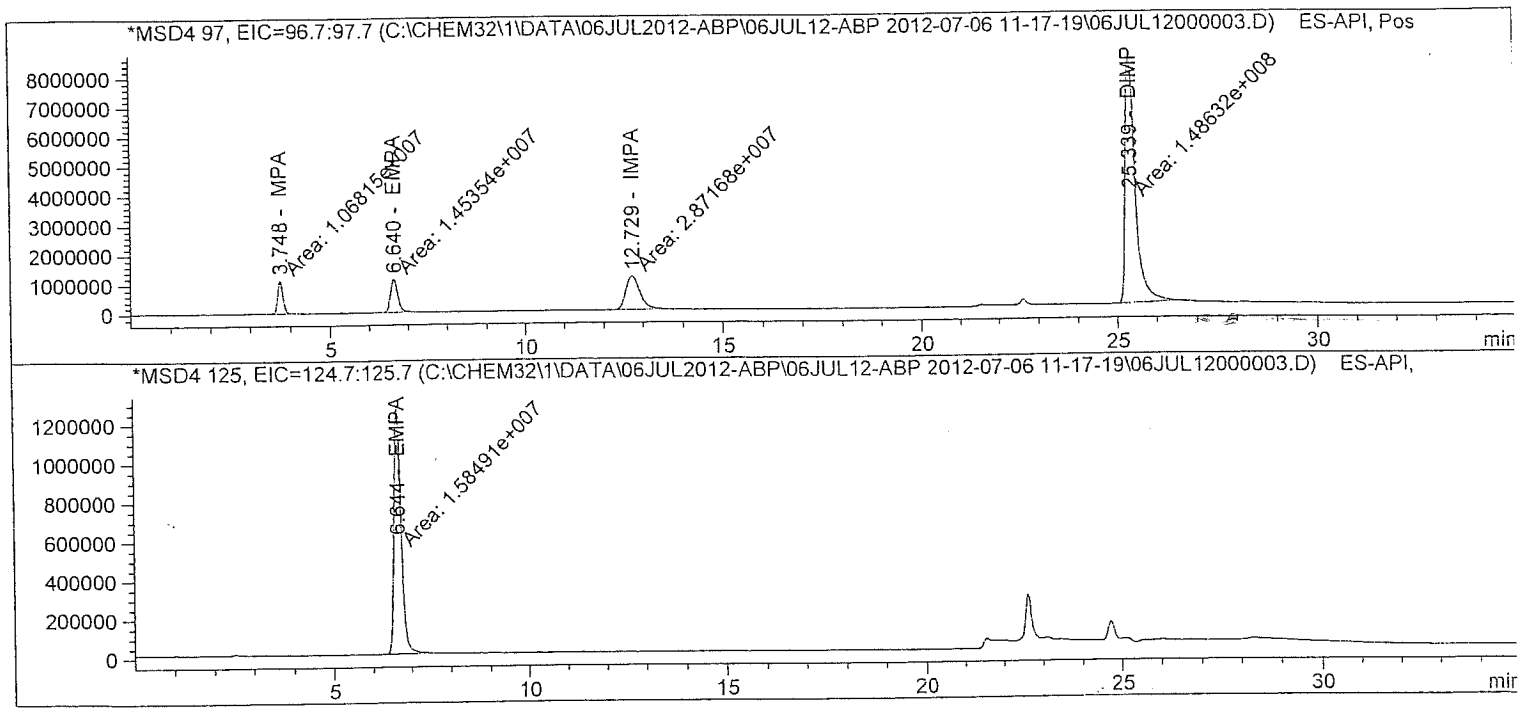
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.925	BB	I	1 2.44245e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

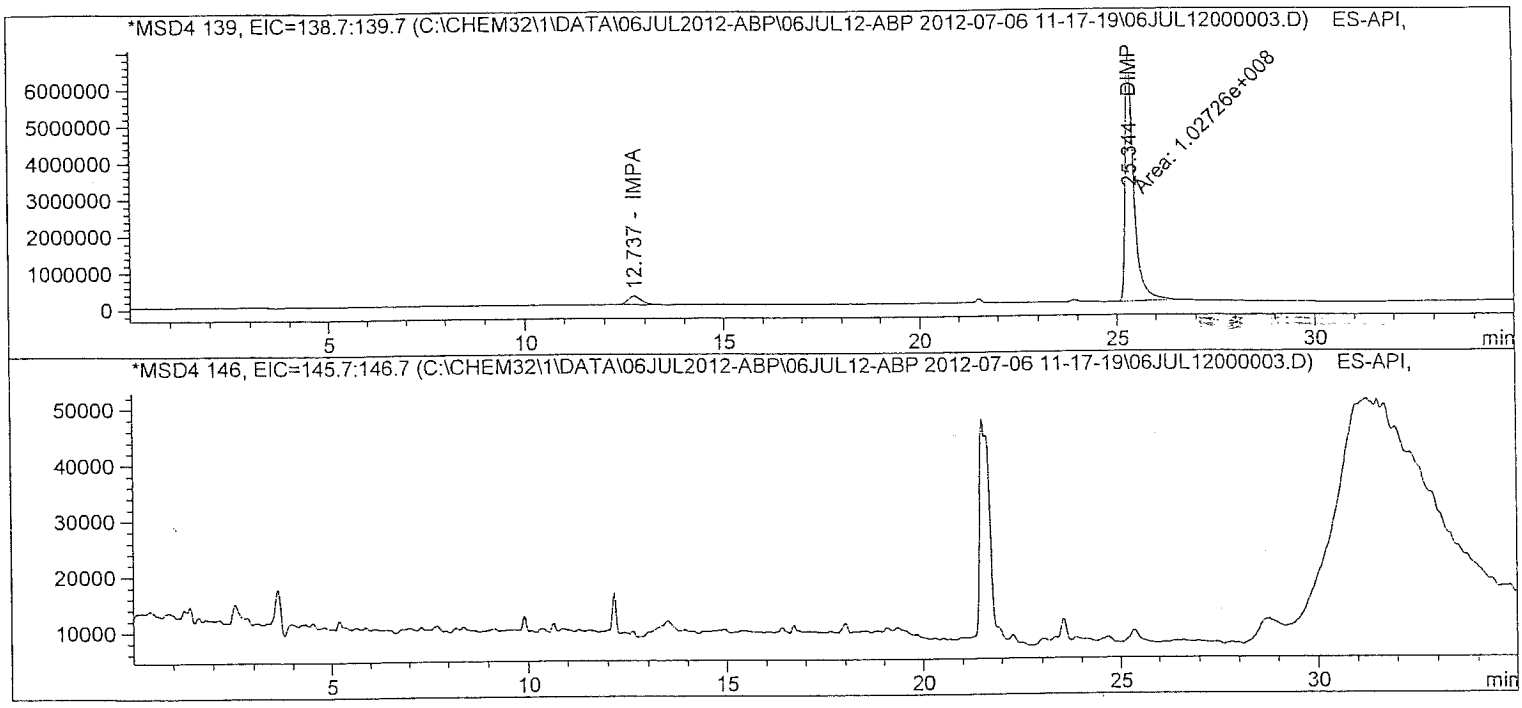
Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

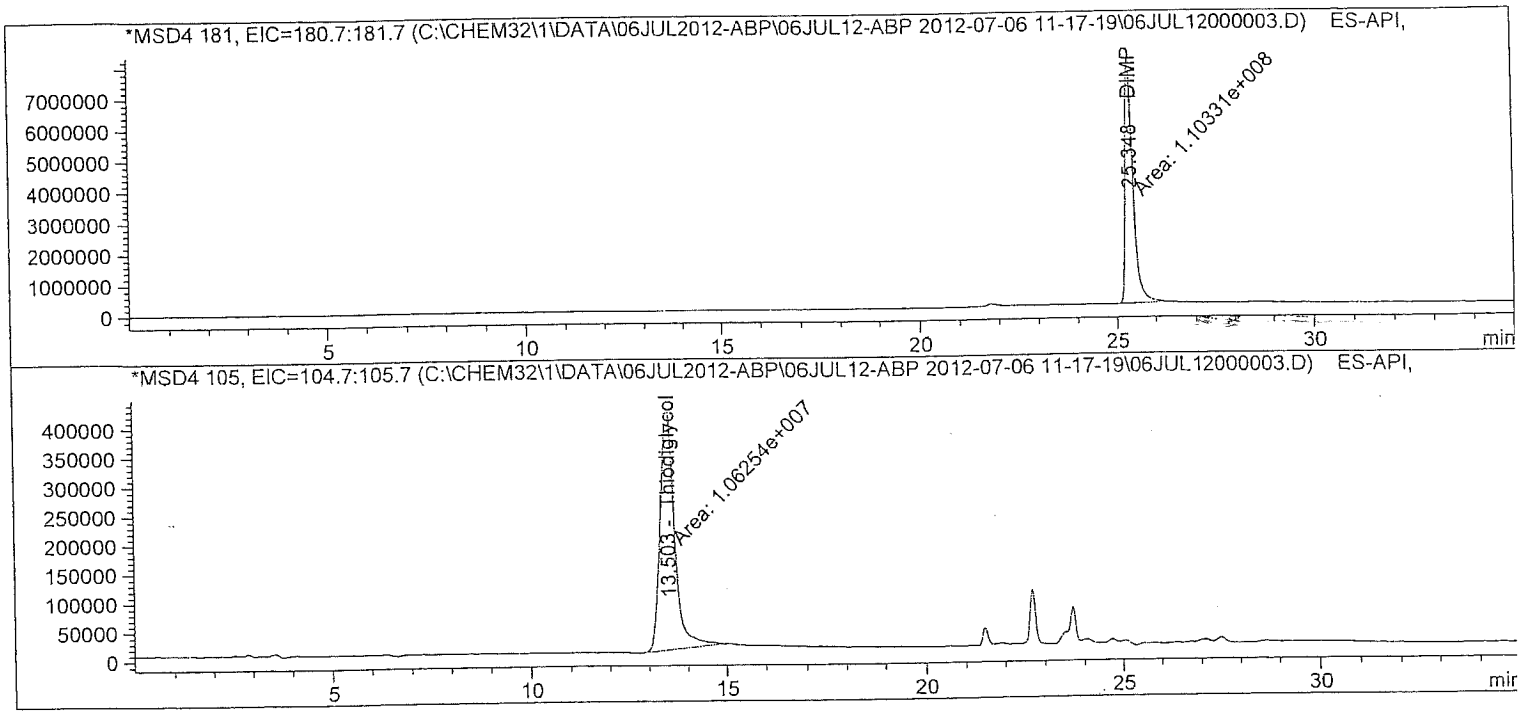
Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

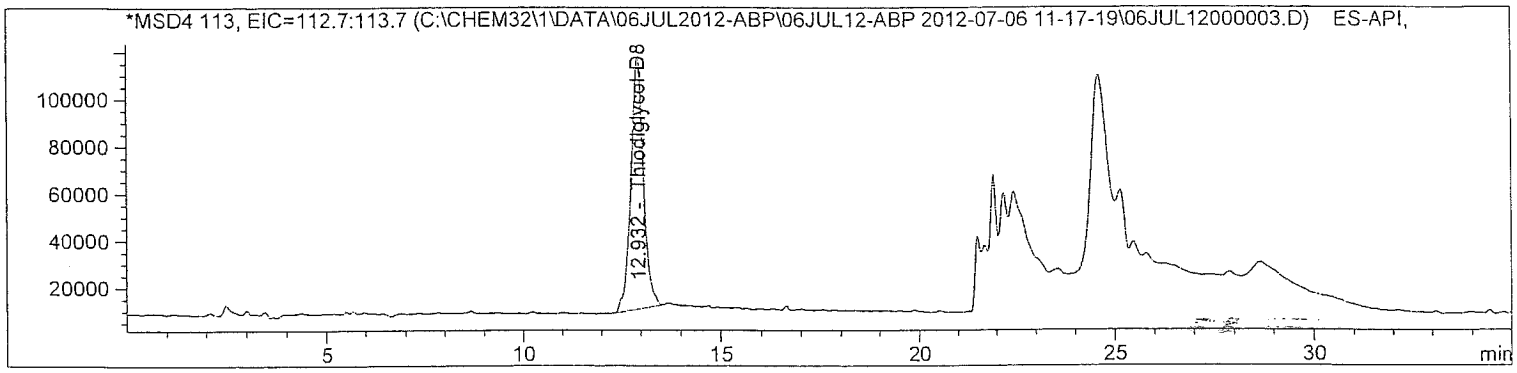
Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

Acq. Operator : TTM Seq. Line : 3
Acq. Instrument : LCMS3 Location : Vial 2
Injection Date : 7/6/2012 12:30:22 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.748	MM	1	1.06815e7	1.13483e-1	5.10907		MPA
12.729	MM	1	2.87168e7	4.30231e-2	5.20733		IMPA

Totals without ISTD(s) : 10.31641

atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

==========

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 12:30:22 PM

Seq. Line : 3
Location : Vial 2
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

==========

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.644	MM	1	1.58491e7	7.77744e-2	5.19540		EMPA

Totals without ISTD(s) : 5.19540

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	MM	1	1.10331e8	1.18266e-2	5.49964		DIMP

Totals without ISTD(s) : 5.49964

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.503	MM	1	1.06254e7	1.19049e-1	5.33146		Thiodiglycol

Totals without ISTD(s) : 5.33146

atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

Acq. Operator	: TTM	Seq. Line :	3
Acq. Instrument	: LCMS3	Location :	Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj :	1
		Inj Volume :	10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

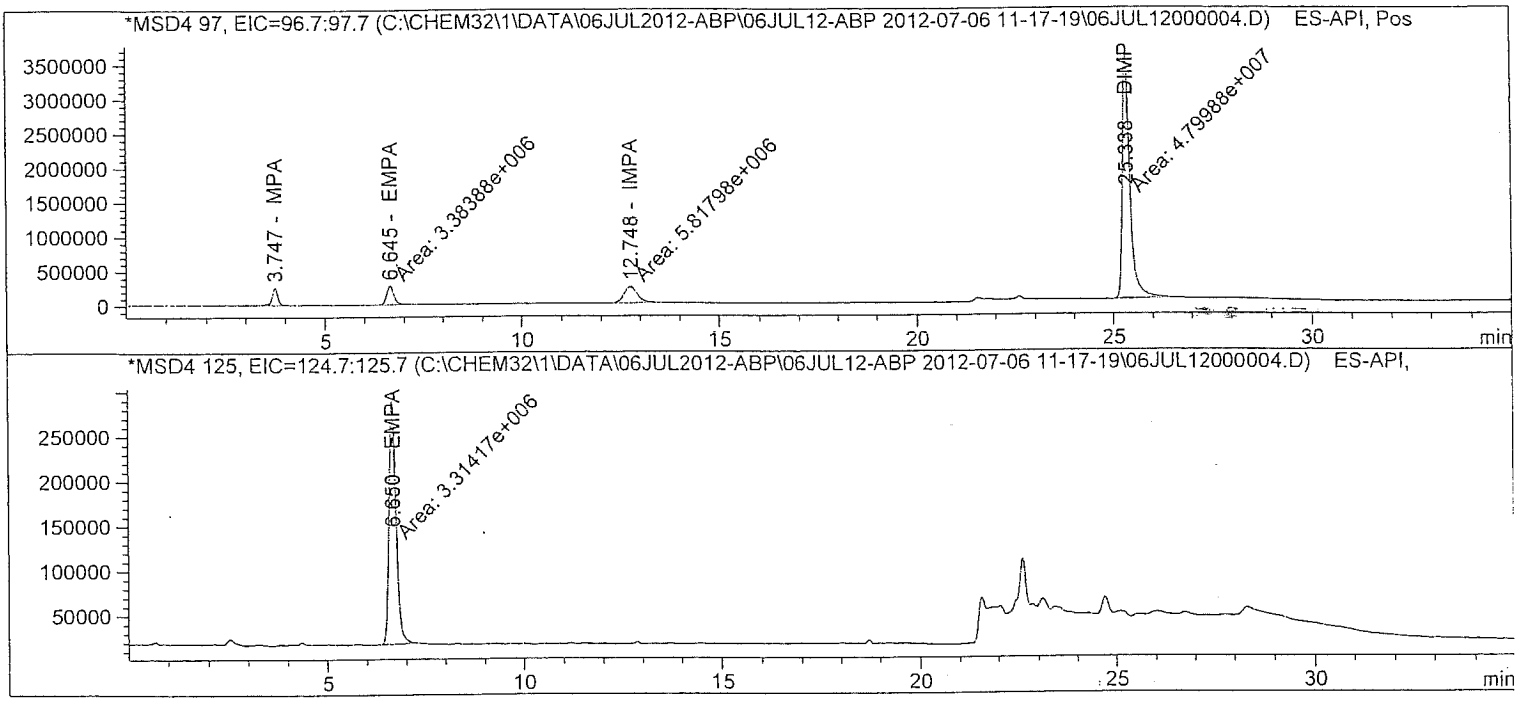
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.932	BB	I	1 2.37259e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

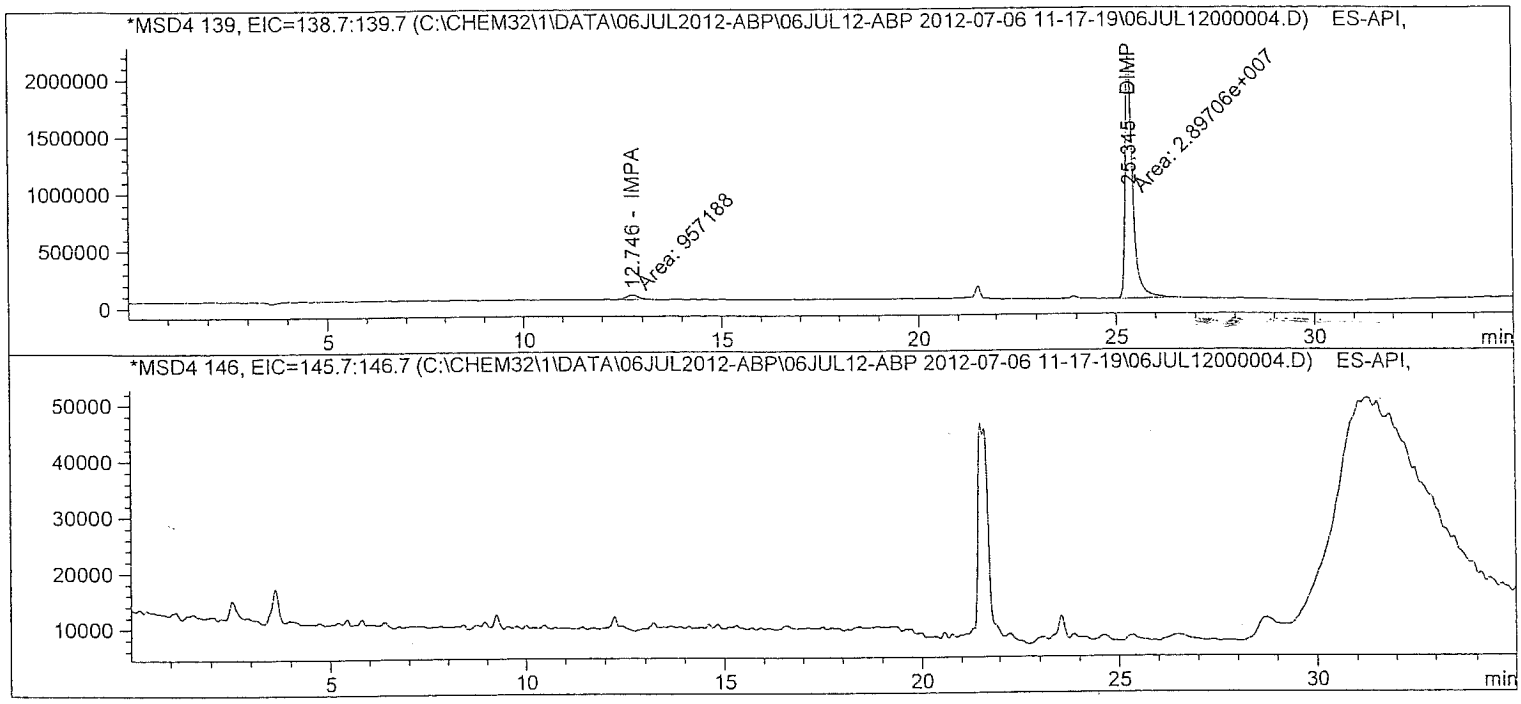
atch Run # 4 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
ample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



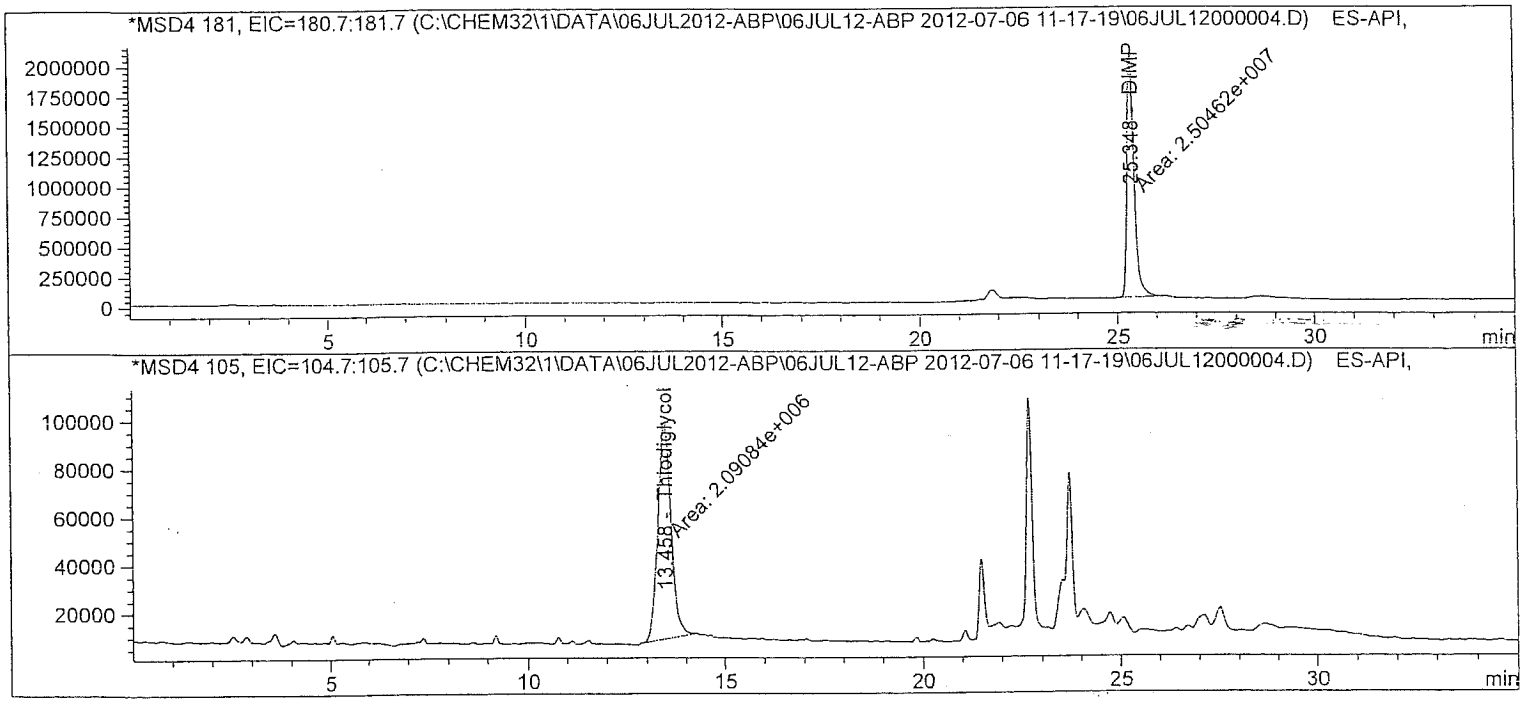
Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



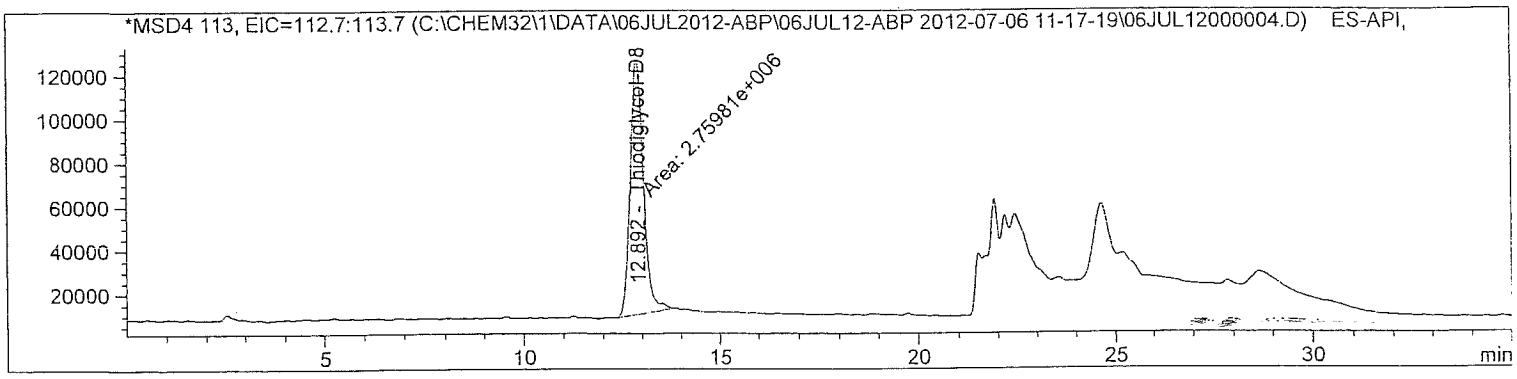
Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 1.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.747	BB	1	2.56450e6	1.00803e-1	9.36694e-1		MPA
12.748	MM	1	5.81798e6	4.26904e-2	8.99961e-1		IMPA

Totals without ISTD(s) : 1.83665

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 1:06:42 PM
Seq. Line : 4
Location : Vial 3
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.650	MM	1	3.31417e6	7.60313e-2	9.13037e-1		EMPA

Totals without ISTD(s) : 9.13037e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	MM	1	2.50462e7	9.62641e-3	8.73631e-1		DIMP

Totals without ISTD(s) : 8.73631e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.458	MM	1	2.09084e6	1.14384e-1	8.66577e-1		Thiodiglycol

Totals without ISTD(s) : 8.66577e-1

atch Run # 4 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
ample Name: $1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 1:06:42 PM
Seq. Line : 4
Location : Vial 3
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.892	MM	I	1 2.75981e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 5 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: $05

==========

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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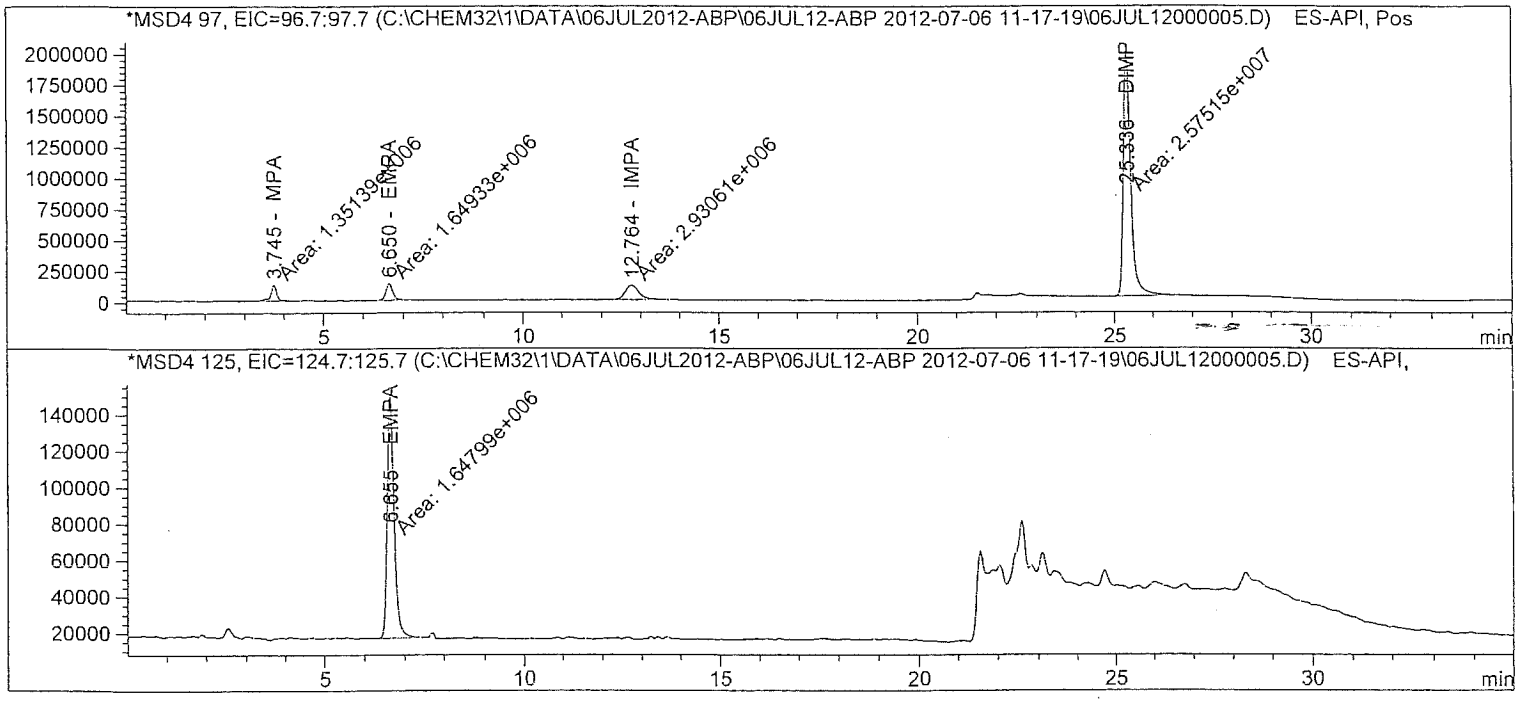
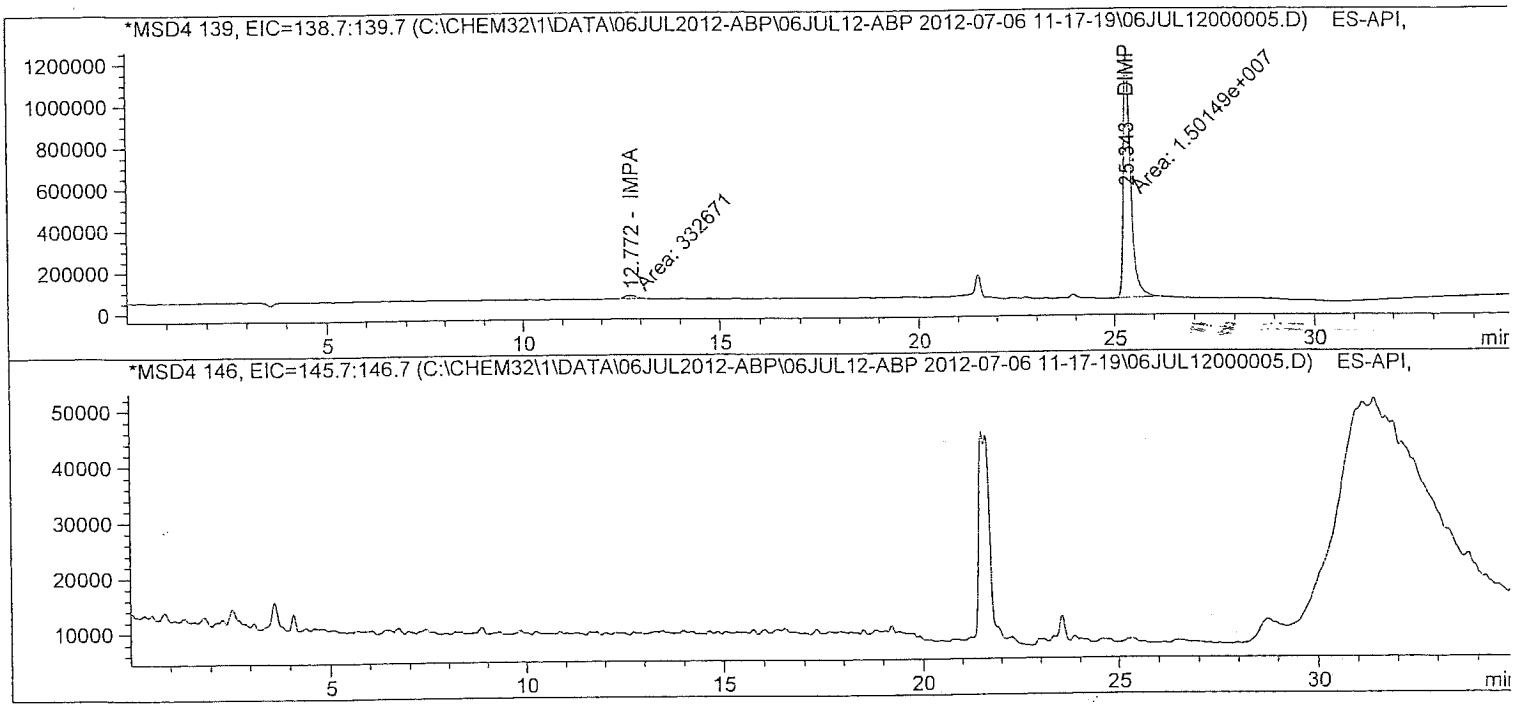


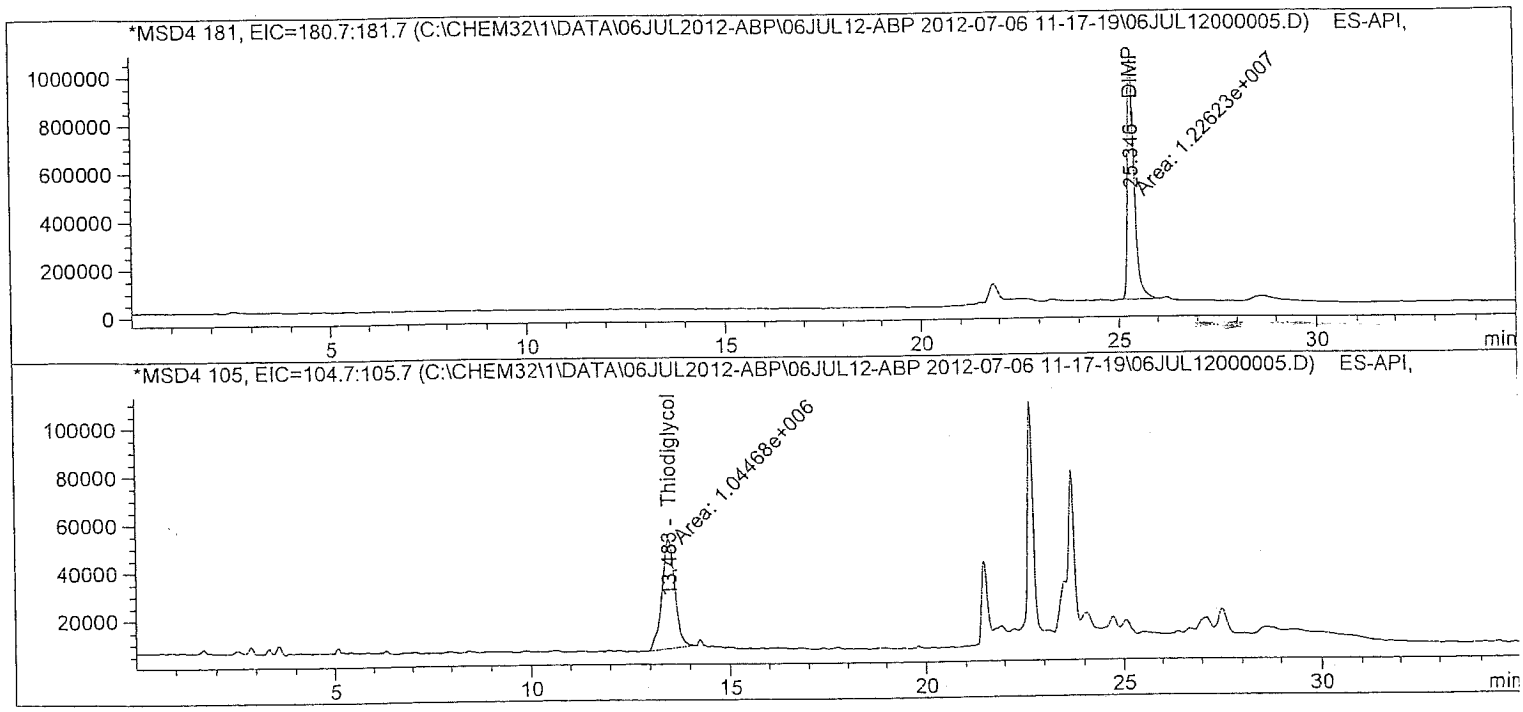
Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 5 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: $05

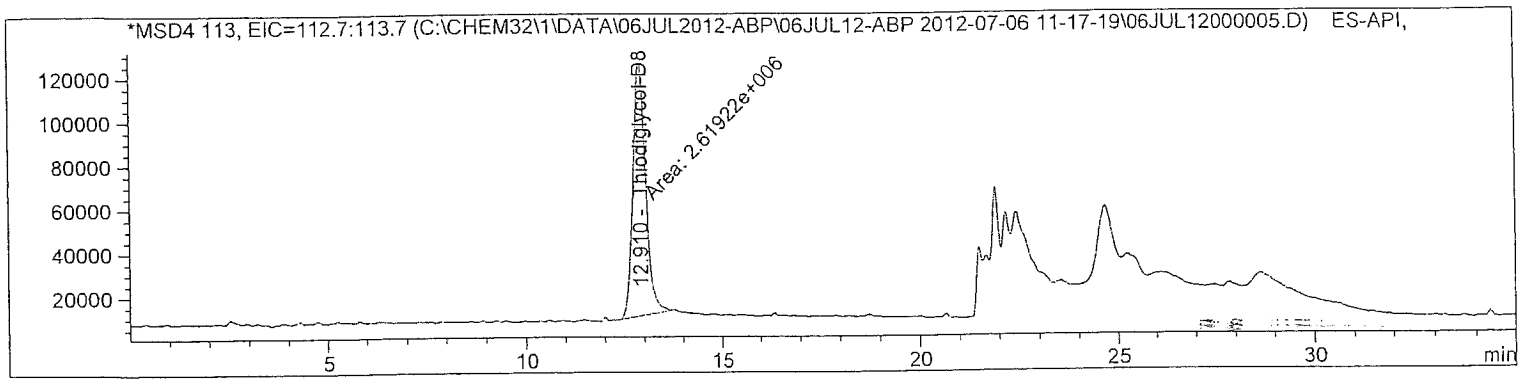
Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 5 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: $05

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 1:43:01 PM
Seq. Line : 5
Location : Vial 4
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000e-1 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.745	MM	1	1.35139e6	9.80980e-2	5.06138e-1		MPA
12.764	MM	1	2.93061e6	4.28998e-2	4.79999e-1		IMPA

Totals without ISTD(s) : 9.86138e-1

atch Run # 5 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: $05

==========

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 1:43:01 PM

Seq. Line : 5
Location : Vial 4
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.655	MM	1	1.64799e6	7.58113e-2	4.76997e-1		EMPA

Totals without ISTD(s) : 4.76997e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.346	MM	1	1.22623e7	9.57834e-3	4.48425e-1		DIMP

Totals without ISTD(s) : 4.48425e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.483	MM	1	1.04468e6	1.15012e-1	4.58725e-1		Thiodiglycol

Totals without ISTD(s) : 4.58725e-1

atch Run # 5 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: $05

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.910	MM	I	1 2.61922e6	1.00000	10.00000		Thiodiglycol-D8

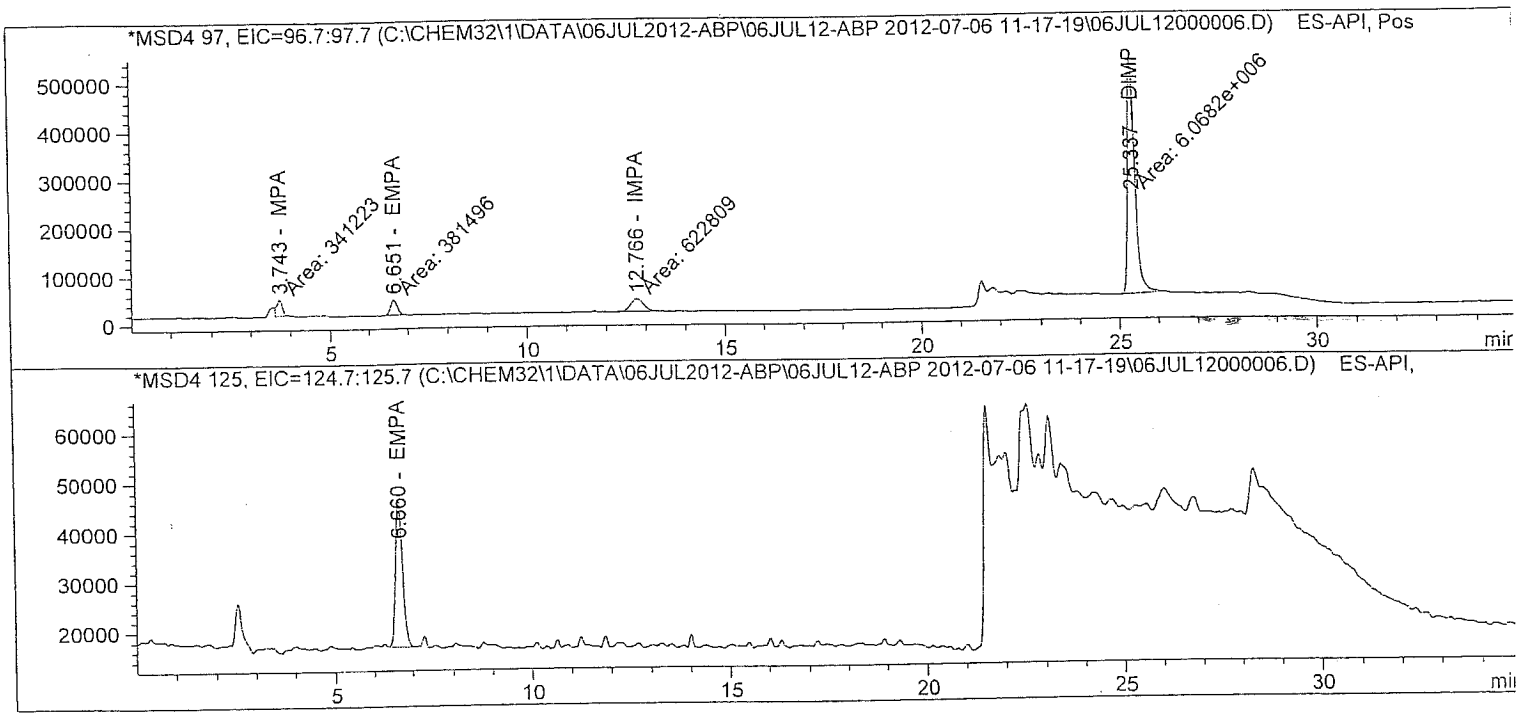
Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 6 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

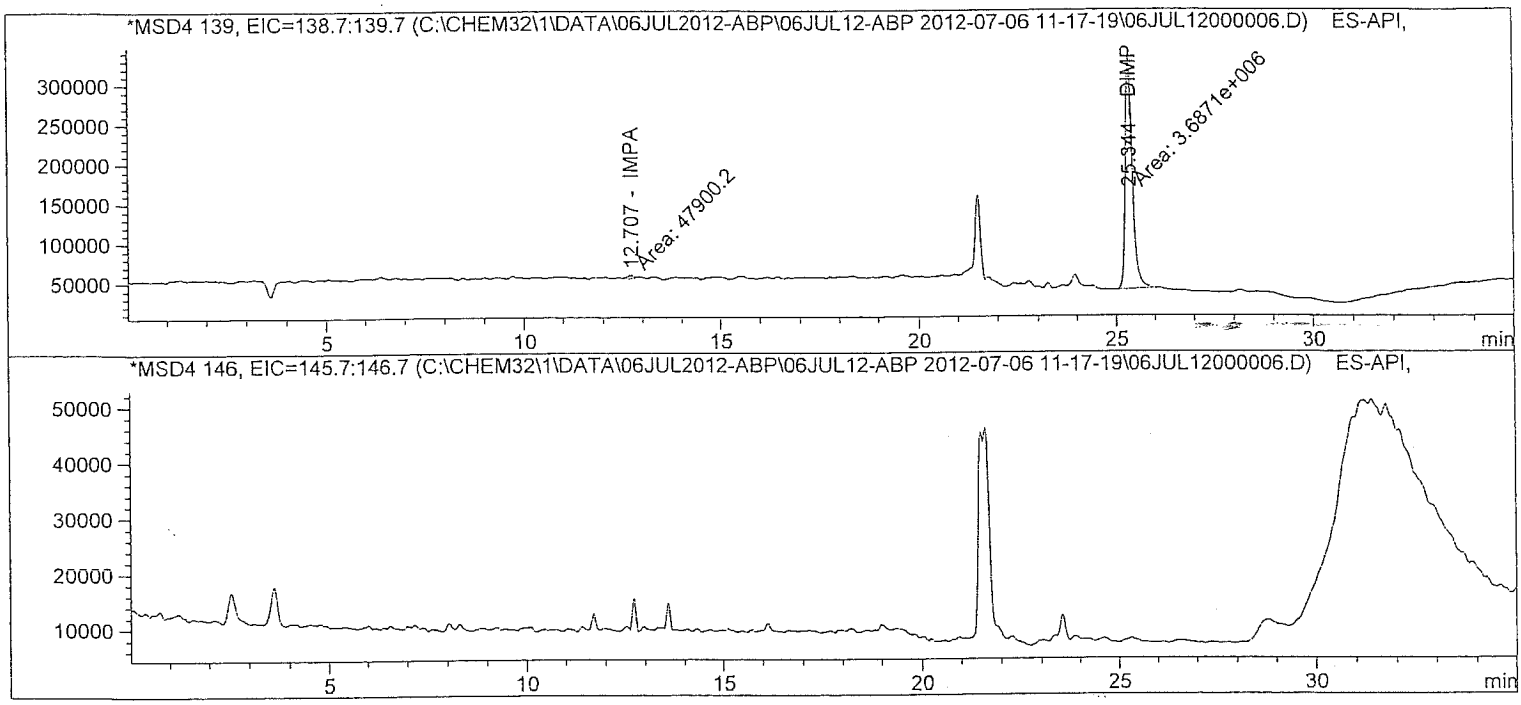
Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Batch Run # 6 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

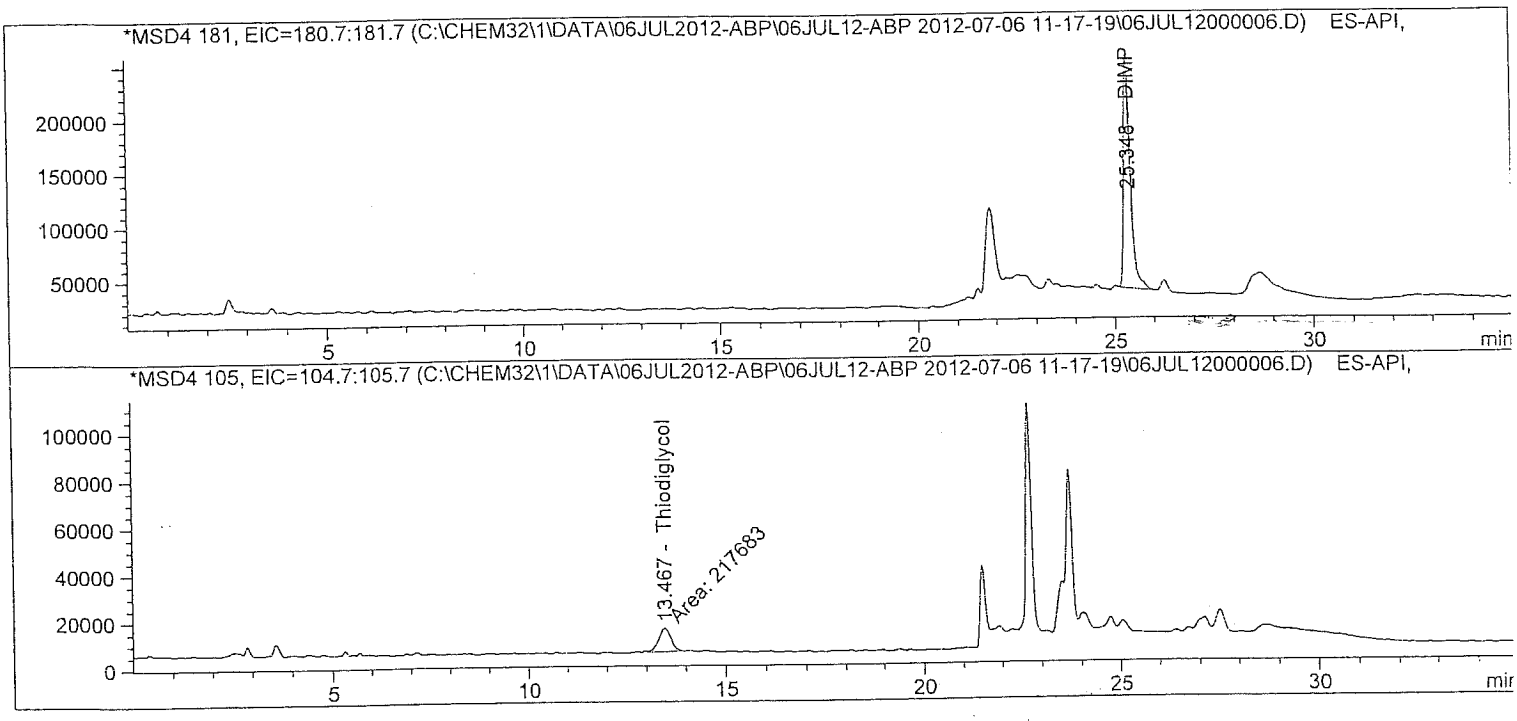
Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

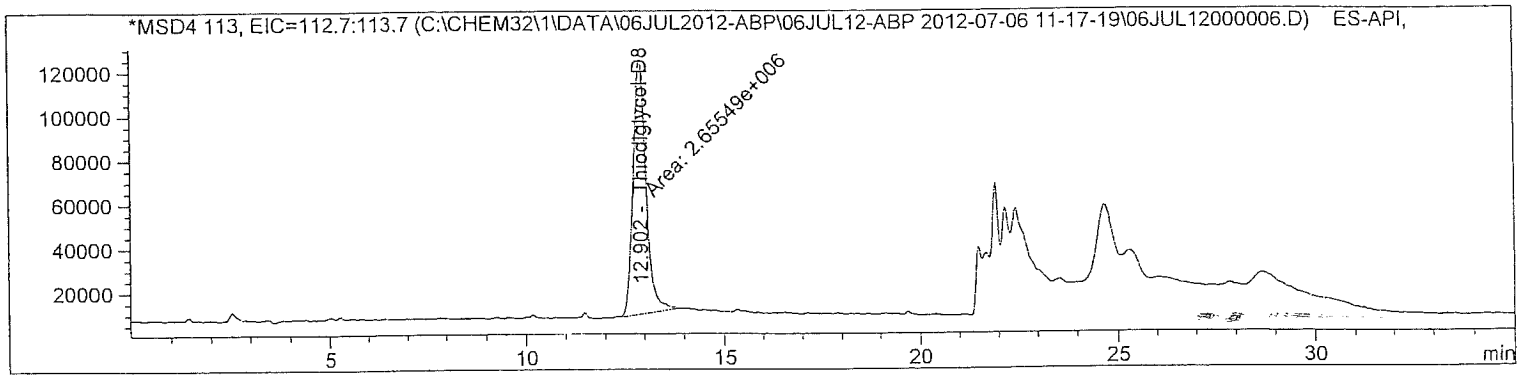
Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator : TTM
Seq. Line : 6
Acq. Instrument : LCMS3
Location : Vial 5
Injection Date : 7/6/2012 2:19:21 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 1.00000e-1 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.743	FM	1	3.41223e5	8.57299e-2	1.10161e-1		MPA
12.766	MM	1	6.22808e5	4.49809e-2	1.05497e-1		IMPA

Totals without ISTD(s) : 2.15657e-1

Batch Run # 6 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:19:21 PM
Seq. Line : 6
Location : Vial 5
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.660	BB	1	3.63294e5	7.52785e-2	1.02988e-1		EMPA

Totals without ISTD(s) : 1.02988e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	BB	1	2.58087e6	1.03862e-2	1.00944e-1		DIMP

Totals without ISTD(s) : 1.00944e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.467	MM	1	2.17683e5	1.23740e-1	1.01436e-1		Thiodiglycol

Totals without ISTD(s) : 1.01436e-1

atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:19:21 PM
Seq. Line : 6
Location : Vial 5
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

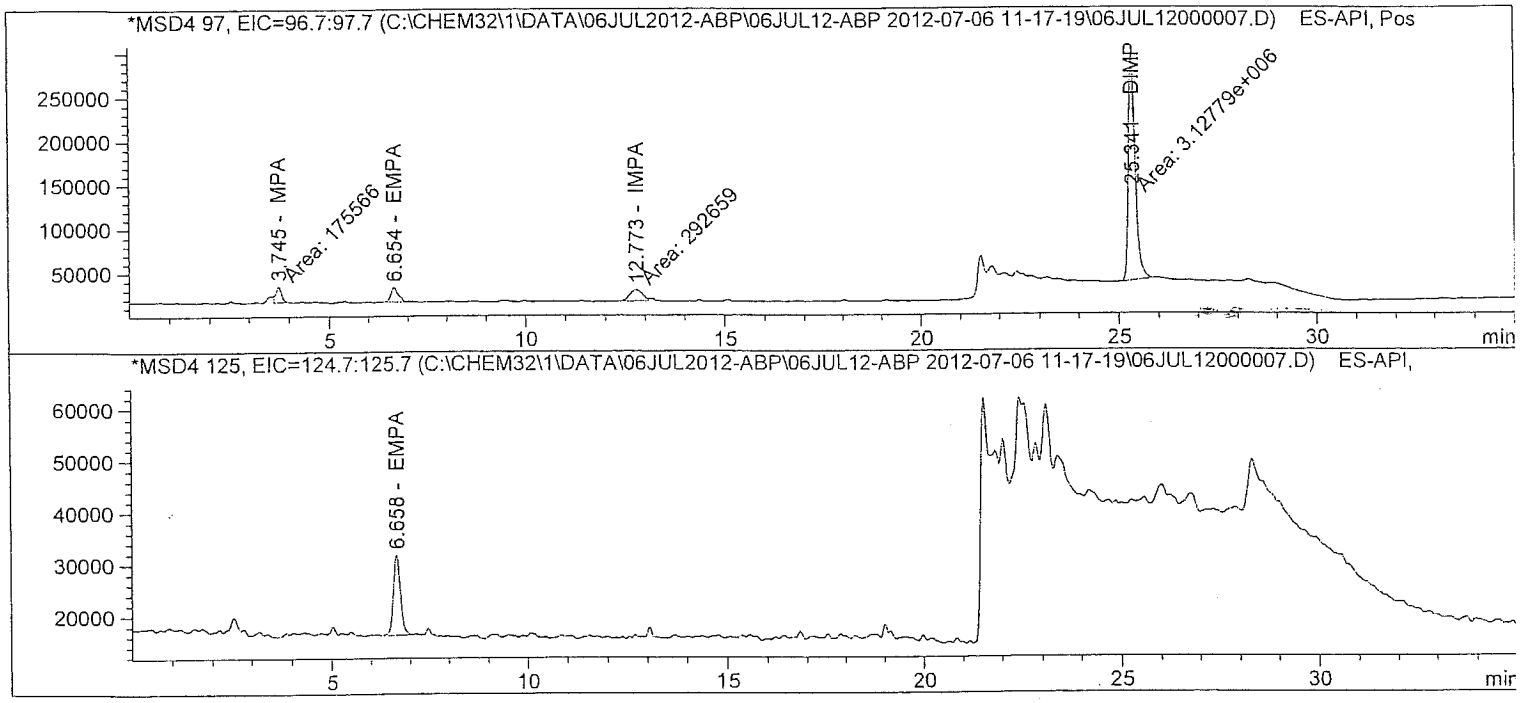
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.902	MM	I	1 2.65549e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

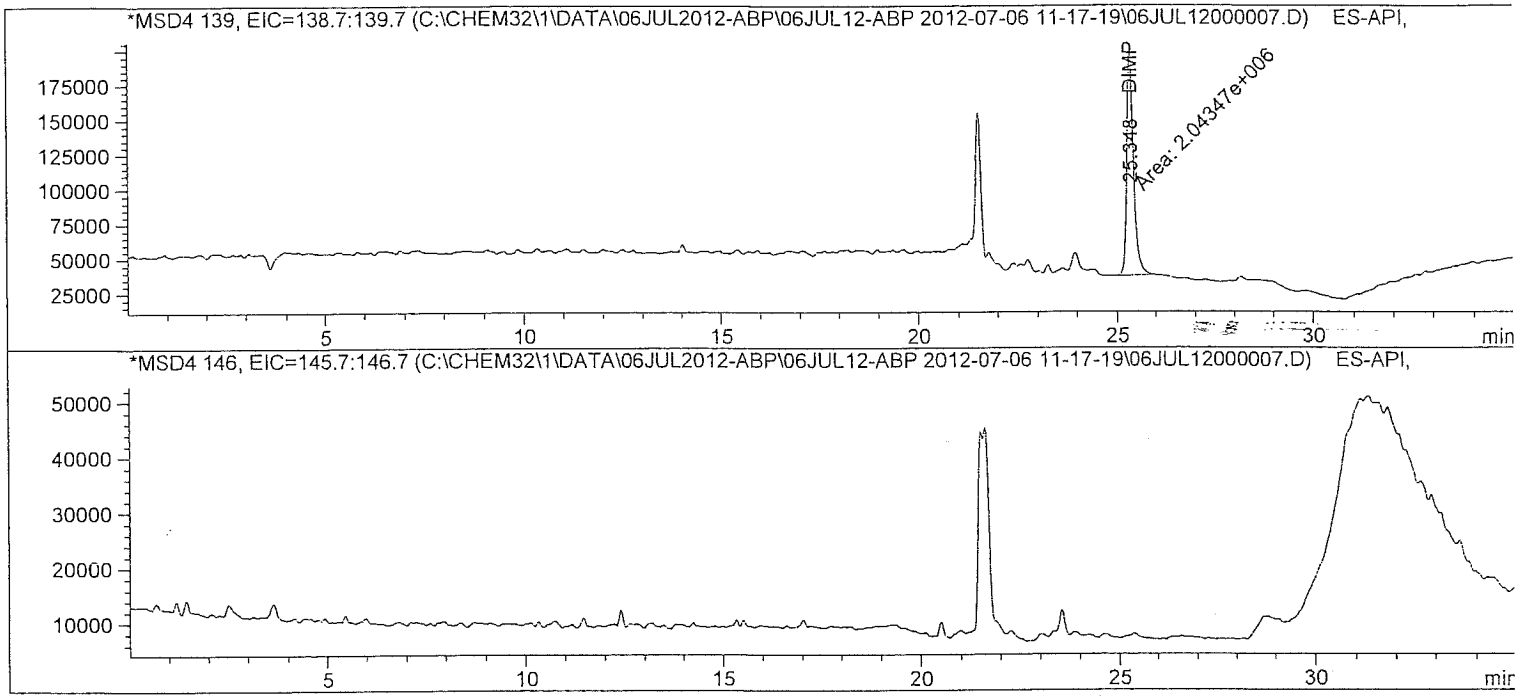
Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

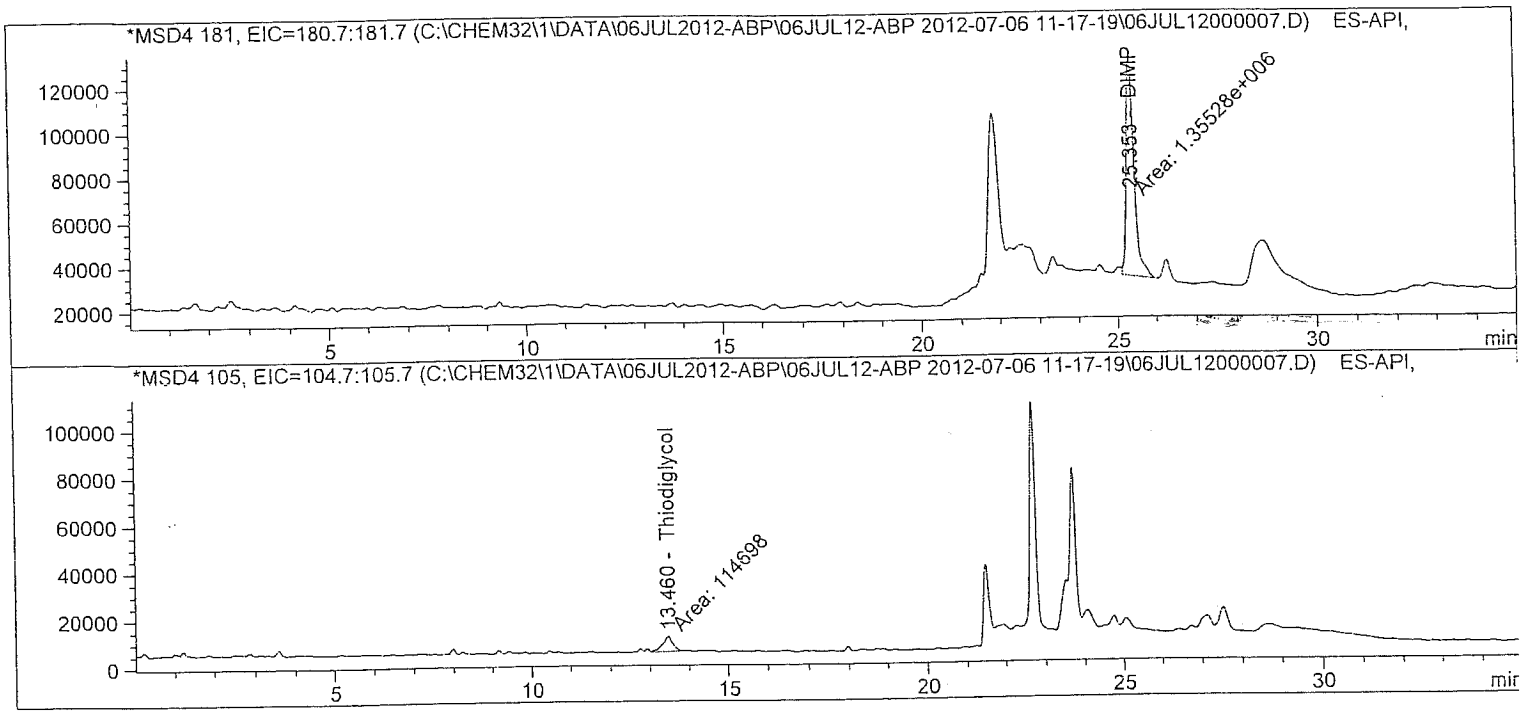
Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

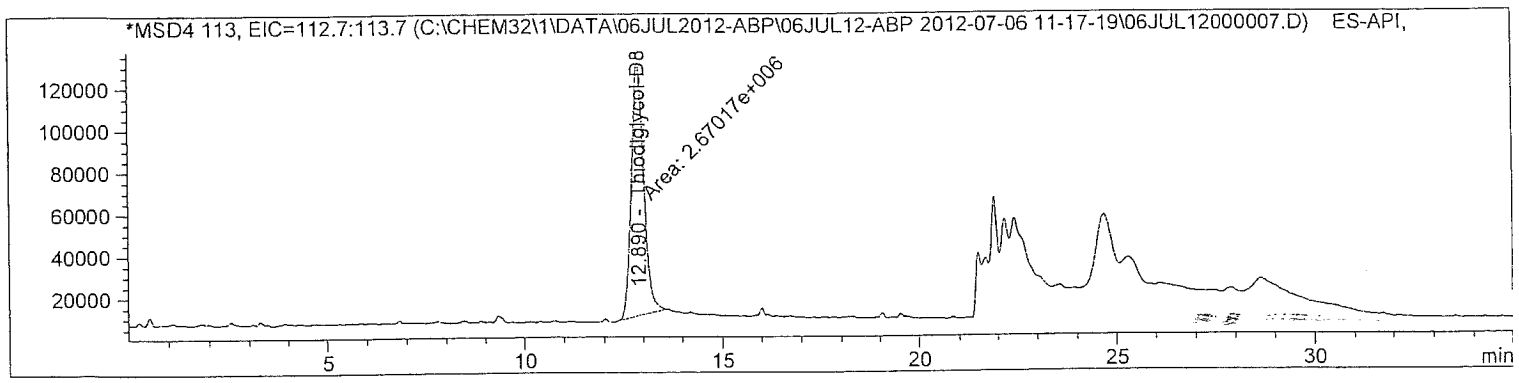
Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:55:42 PM
Seq. Line : 7
Location : Vial 6
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000e-2 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.745	FM	1	1.75566e5	7.10322e-2	4.67042e-2		MPA
12.773	MF	1	2.92659e5	4.80467e-2	5.26608e-2		IMPA

Totals without ISTD(s) : 9.93650e-2

atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:55:42 PM
Seq. Line : 7
Location : Vial 6
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.658	BB	1	1.91552e5	7.48089e-2	5.36662e-2		EMPA

Totals without ISTD(s) : 5.36662e-2

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.353	FM	1	1.35528e6	1.14558e-2	5.81454e-2		DIMP

Totals without ISTD(s) : 5.81454e-2

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460	MM	1	1.14698e5	1.34158e-1	5.76283e-2		Thiodiglycol

Totals without ISTD(s) : 5.76283e-2

Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

Acq. Operator : TTM
Seq. Line : 7
Acq. Instrument : LCMS3
Location : Vial 6
Injection Date : 7/6/2012 2:55:42 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.890	MM	I	1 2.67017e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

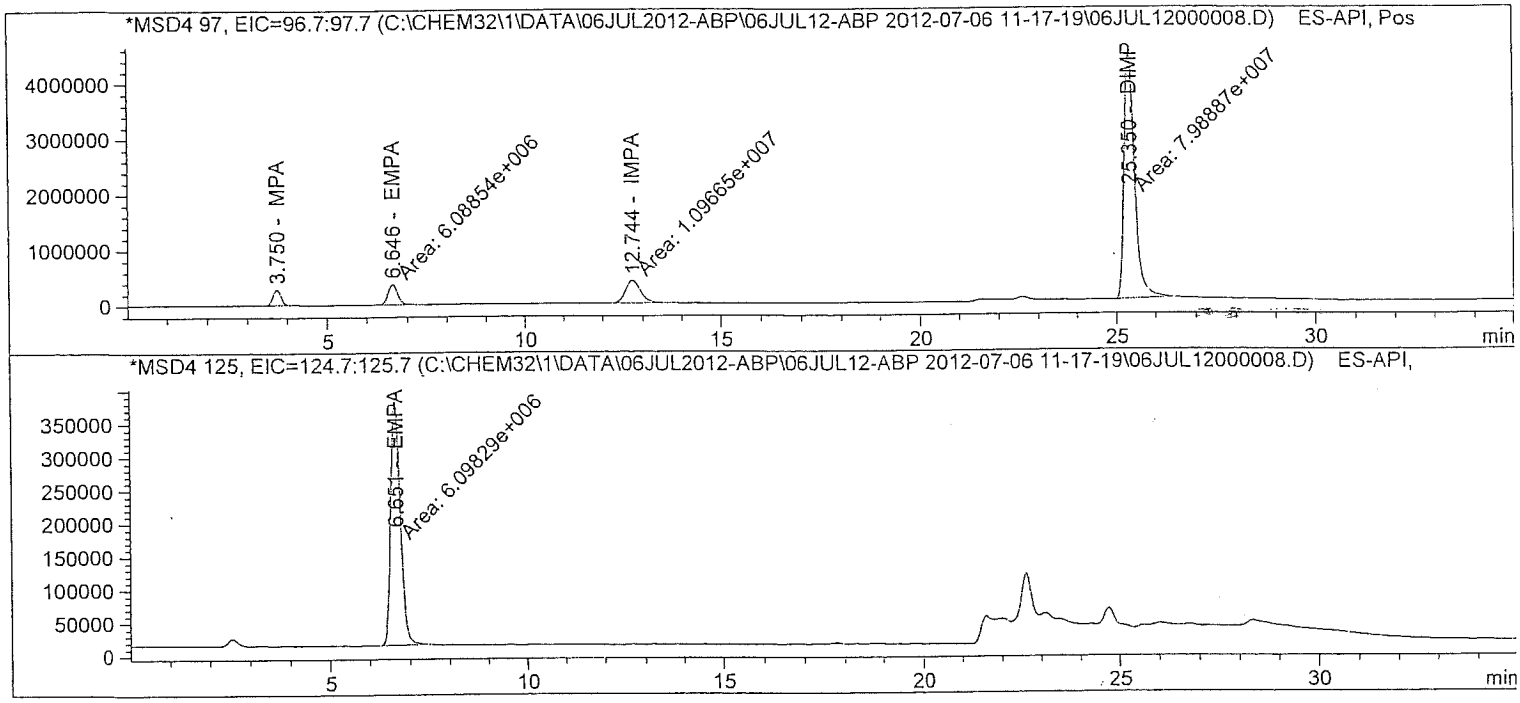
atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

==========

Acq. Operator	: TTM	Seq. Line :	8
Acq. Instrument	: LCMS3	Location :	Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj :	1
		Inj Volume :	10 µl

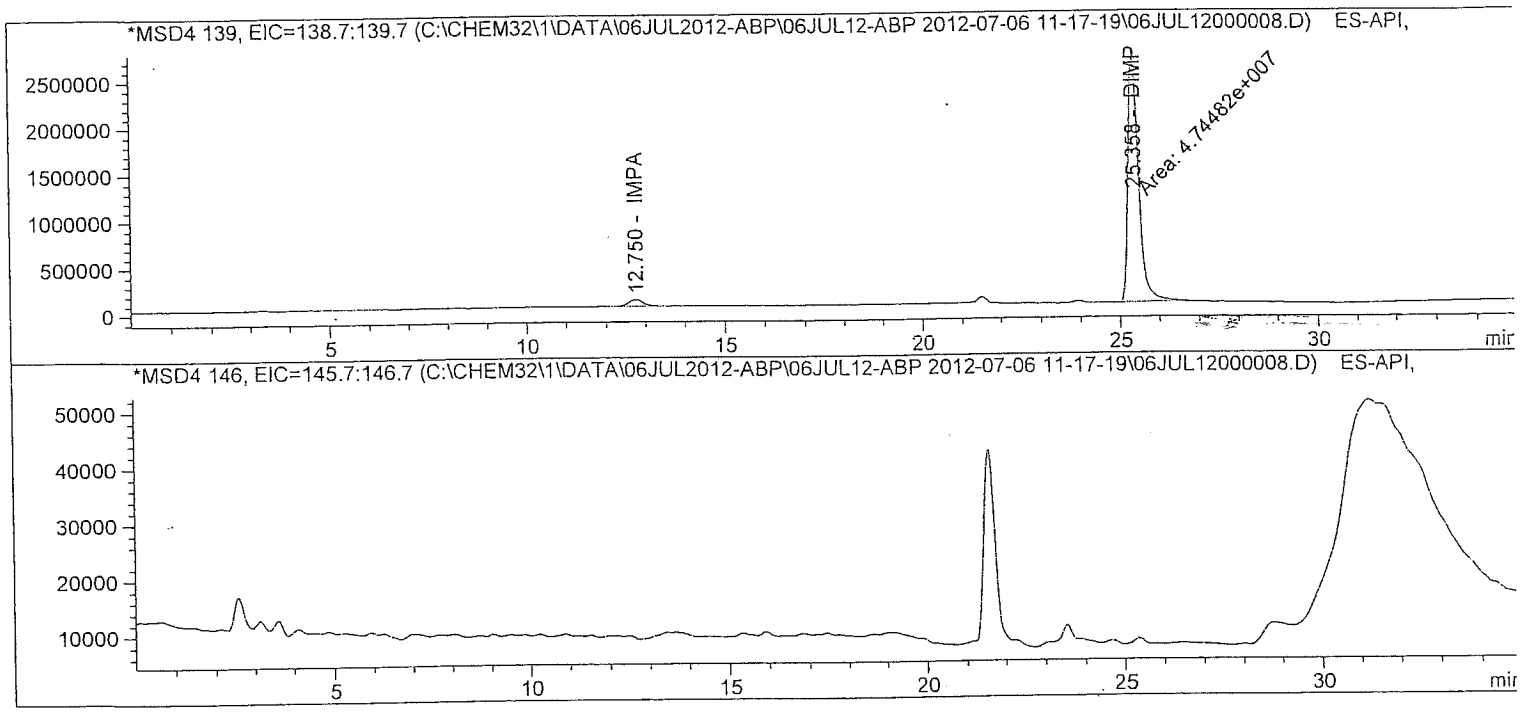
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

==========



atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

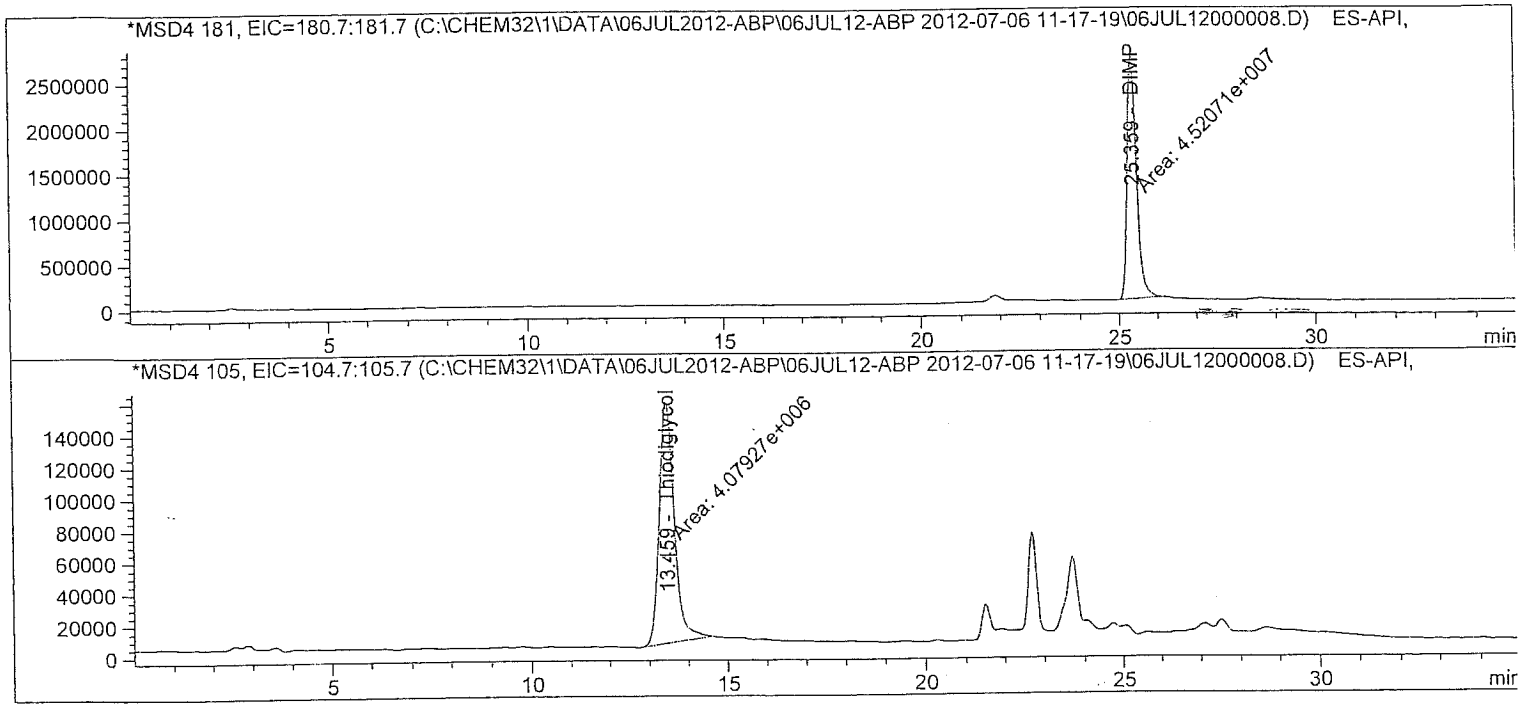
Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

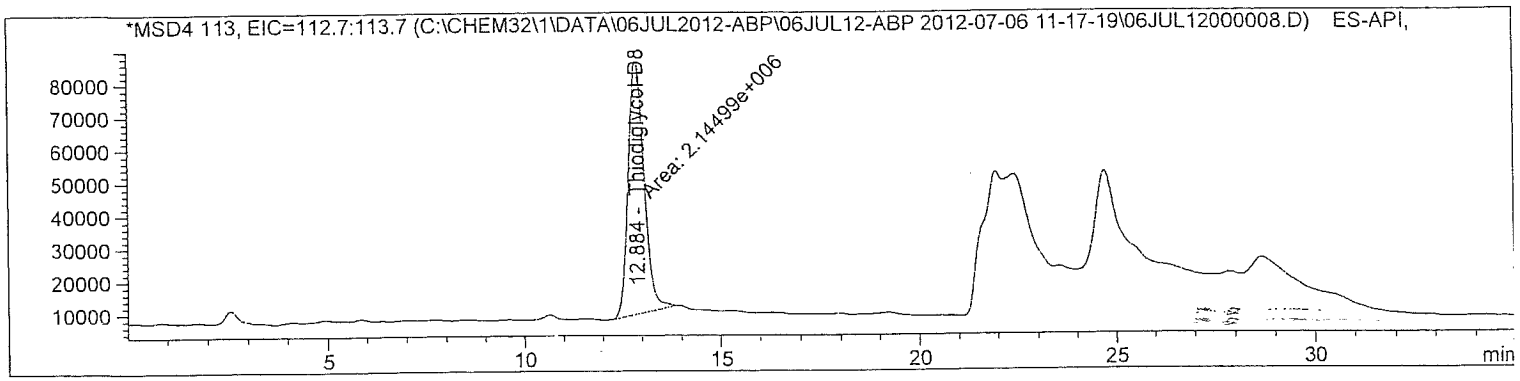
Acq. Operator	: TTM	Seq. Line :	8
Acq. Instrument	: LCMS3	Location :	Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj :	1
		Inj Volume :	10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 3:32:02 PM
Seq. Line : 8
Location : Vial 7
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 2.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.750	BB	1	4.04355e6	1.04390e-1	1.96787		MPA
12.744	MM	1	1.09665e7	4.26853e-2	2.18233		IMPA

Totals without ISTD(s) : 4.15020

atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator	: TTM	Seq. Line :	8
Acq. Instrument	: LCMS3	Location :	Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj :	1
		Inj Volume :	10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.651	MM	1	6.09829e6	7.65569e-2	2.17655		EMPA

Totals without ISTD(s) : 2.17655

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.359	MM	1	4.52071e7	1.00834e-2	2.12514		DIMP

Totals without ISTD(s) : 2.12514

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.459	MM	1	4.07927e6	1.15268e-1	2.19214		Thiodiglycol

Totals without ISTD(s) : 2.19214

Batch Run # 8 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
Sample Name: ICV

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.884	MM	I	1 2.14499e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***



ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

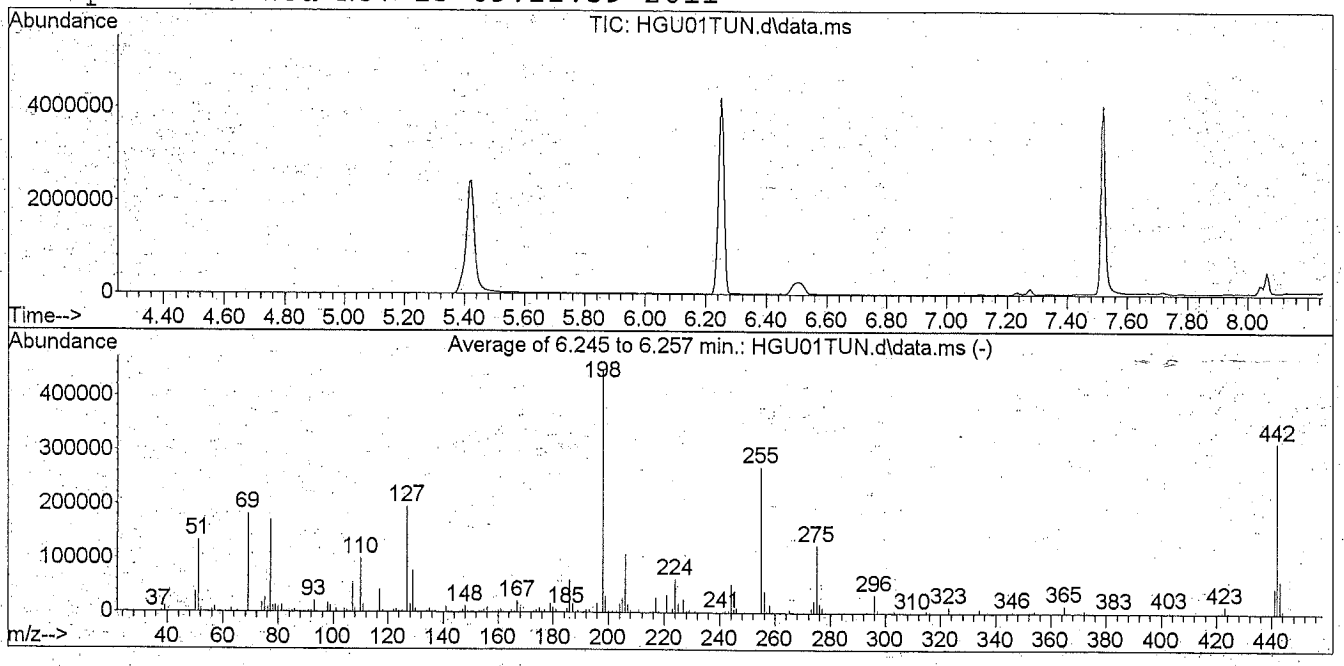
Semi-Volatiles

Analytical Documentation

Data Path : D:\1\DATA\2012\AUG12\08AUG12H\
Data File : HGU01TUN.d
Acq On : 08/08/2012 10:06
Operator : RAH
Sample : 8270 DFTPP 13808
Inst : 5975-H
Misc : X:1/11/13
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : D:\1\METHODS\8270DTUN.M
Title : EPA/CLP SOM01
Last Update : Wed Nov 23 09:22:39 2011



AutoFind: Scans 775, 776, 777; Background Corrected with Scan 767

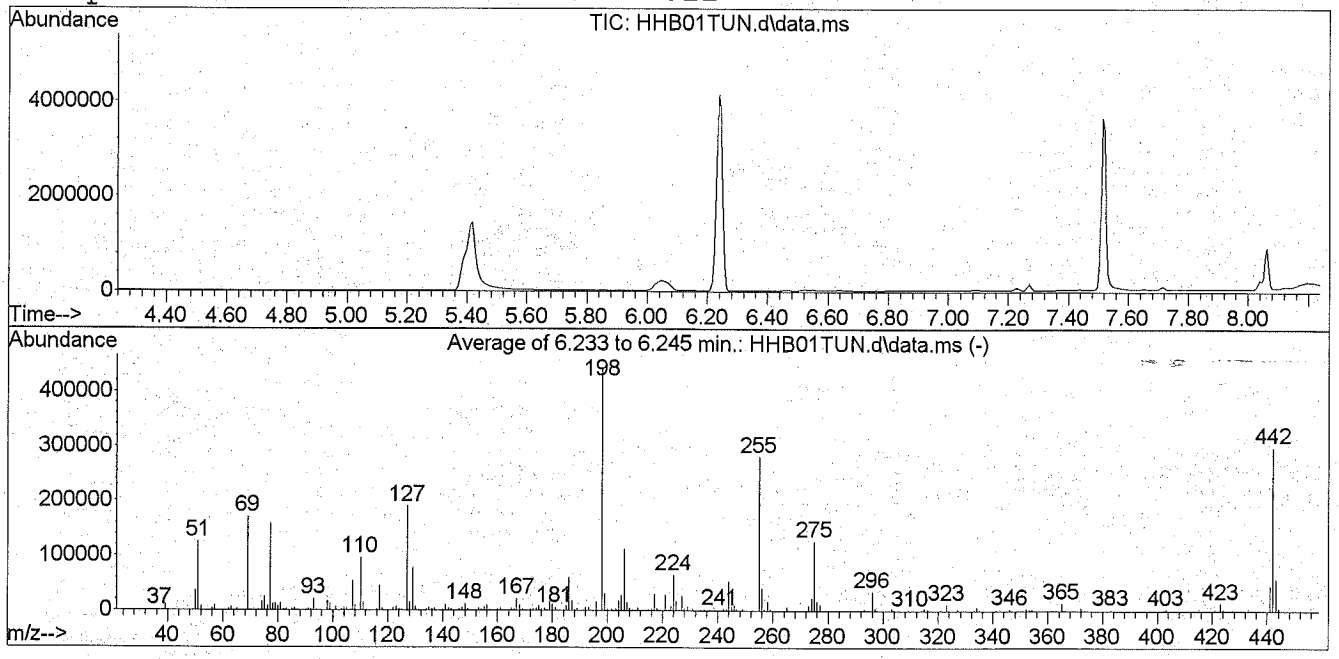
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.6	133016	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	40.5	182007	PASS
70	69	0.00	2	0.5	863	PASS
127	198	10	80	43.3	194795	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	449451	PASS
199	198	5	9	6.7	30245	PASS
275	198	10	60	27.8	124987	PASS
365	198	1	100	3.0	13675	PASS
441	443	0.01	100	78.8	47803	PASS
442	198	50	100	70.3	315904	PASS
443	442	15	24	19.2	60693	PASS

DFTPP

Data Path : D:\1\DATA\2012\AUG12\16AUG12H\
Data File : HHB01TUN.d
Acq On : 08/16/2012 11:45
Operator : RAH
Sample : 8270 DFTPP 13808
Inst : 5975-H
Misc : . X:1/11/13
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : D:\1\METHODS\8270DTUN.M
Title : EPA/CLP SOM01
Last Update : Wed Nov 23 09:22:39 2011



AutoFind: Scans 773, 774, 775; Background Corrected with Scan 765

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	28.3	125871	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	38.5	171159	PASS
70	69	0.00	2	0.6	945	PASS
127	198	10	80	42.7	189675	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	444224	PASS
199	198	5	9	6.9	30776	PASS
275	198	10	60	28.4	126069	PASS
365	198	1	100	2.9	12952	PASS
441	443	0.01	100	79.2	45587	PASS
442	198	50	100	67.4	299499	PASS
443	442	15	24	19.2	57525	PASS

Form 6 Equivalent

Initial Calibration Report

EPA Method 8270D

90 percent must meet criteria -- min RF and [RSD<15% or correllation coefficient > 0.990]

SSTD005 = HGU07S05.D
SSTD020 = HGU06S20.D
SSTD035 = HGU05S35.D
SSTD050 = HGU02S50.D
SSTD065 = HGU04S65.D
SSTD080 = HGU03S80.D

percent meeting criteria: **100.0**
PASSED

	RRF005	RRF020	RRF035	RRF050	RRF065	RRF080	RF-AVE	RSD	MIN RF	use quad regression?	correlation coefficient	meets criteria?
2) 2-Fluorophenol	1.161	1.359	1.371	1.386	1.399	1.387	1.344	**6.7**	0.001			ok
3) 1,4-Oxathiane	0.735	0.667	0.673	0.695	0.687	0.710	0.694	**3.6**	0.001			ok
4) Phenol-d5	1.548	1.771	1.805	1.792	1.838	1.821	1.762	**6.1**	0.001			ok
5) 1,4-Dithiane	1.194	1.078	1.092	1.125	1.117	1.144	1.125	**3.7**	0.001			ok
7) Nitrobenzene-d5	0.303	0.345	0.355	0.350	0.356	0.349	0.343	**5.7**	0.001			ok
9) 2-Fluorobiphenyl	1.357	1.493	1.522	1.504	1.512	1.514	1.484	**4.2**	0.001			ok
11) 2,4,6-Tribromophenol	0.109	0.132	0.140	0.141	0.143	0.143	0.135	**9.7**	0.001			ok
13) Terphenyl-d14	0.706	0.771	0.809	0.779	0.789	0.779	0.772	**4.5**	0.001			ok

Form 7 Equivalent

8270D Calibration Verification Report

Calibration Verification File: **HHB02S50.D** Initial Calibration: **HGU**

80 percent must meet criteria (%D<20 and min RF)
percent meeting criteria: **100.0** **PASSED**

	AVG RF	CCV RF	MIN RF	CCV conc	target conc	%difference *	%drift *	flag
2-Fluorophenol	1.343	1.274	0.001			**5.2**		ok
1,4-Oxathiane	0.694	0.641	0.001			**7.7**		ok
Phenol-d5	1.762	1.750	0.001			**0.7**		ok
1,4-Dithiane	1.125	1.097	0.001			**2.5**		ok
Nitrobenzene-d5	0.343	0.345	0.001			**0.8**		ok
2-Fluorobiphenyl	1.484	1.534	0.001			**3.4**		ok
2,4,6-Tribromophenol	0.135	0.133	0.001			**1.5**		ok
Terphenyl-d14	0.772	0.750	0.001			**2.9**		ok

* Percent difference is used for compounds quantitated by average response factor.
Percent drift is used for compounds quantitated by regression fits

INTERNAL STANDARD AREA SUMMARY

Form 8 equivalent

Continuing Standard Filename	HHB02S50.D	Area 1,4-dcb	Area nap-d8	Area ace-d10	Area phe-d10	Area chry-d12	Area per-d12	
8270 50 std 15952		506758	2249493	1366773	2647164	3357670	2439917	
	Upper Limit	1013516	4498986	2733546	5294328	6715340	4879834	
	Lower limit	253379	1124747	683387	1323582	1678835	1219959	
CLIENT Sample No.	**DCL Sample No.**	**Area 1,4-dcb**	**Area nap-d8**	**Area ace-d10**	**Area phe-d10**	**Area chry-d12**	**Area per-d12**	
BLANK	289984	502951	2310888	1401593	2712308	3105209	2509554	
LCS	289985	528274	2390317	1461030	2828548	3232246	2566742	
SO-44	1222167002	523033	2319022	1341696	2550849	2777706	1544027	
SO-45	1222167003	514537	2275200	1342659	2490340	2715168	1558965	
SO-46Dup	1222167005	531421	2375729	1398031	2620204	2702765	1464090	
SO-47	1222167006	706862	3148708	1826136	3497294	3721222	2222541	
SO-48	1222167007	570552	2573420	1532346	3012848	3036419	1649437	
SO-49	1222167008	522826	2334336	1383893	2687407	2620713	1448793	
SO-61(9.5)	1222302001	555707	2525225	1499298	2892299	2977840	1643447	
SO-62(10)	1222302002	528660	2430006	1477596	2927853	2977999	1615863	
SO-46	1222167004	483660	2130690	1247336	2427573	2576638	1280953	
SO-43	1222167001	504320	2239636	1327079	2538357	2462812	1126286	*
SO-43	289986	504388	2197574	1301197	2470453	2196807	945728	*
SO-43	289987	536484	2392585	1378040	2569049	2162322	924082	*

* MS and MSD confirm matrix effect, but this internal standard is not pertinent to the analysis because it does not reference the requested target analytes.

LIMITS: Areas should be within 50 to 200 percent of the corresponding area in the calibration standard.

INTERNAL STANDARD RETENTION-TIME SUMMARY

Form 8 equivalent

Continuing Standard Filename	HHB02S50.D	RT 1,4-dcb	RT nap-d8	RT ace-d10	RT phe-d10	RT chry-d12	RT per-d12
8270 50 std 15952		4.03	5.34	7.86	10.45	14.93	16.99
	Upper Limit	4.53	5.84	8.36	10.95	15.43	17.49
	Lower limit	3.53	4.84	7.36	9.95	14.43	16.49
CLIENT Sample No.	**DCL Sample No.**	**RT 1,4-dcb**	**RT nap-d8**	**RT ace-d10**	**RT phe-d10**	**RT chry-d12**	**RT per-d12**
BLANK	289984	4.03	5.34	7.86	10.45	14.92	16.99
LCS	289985	4.03	5.34	7.86	10.45	14.92	16.99
SO-44	1222167002	4.03	5.34	7.86	10.45	14.93	16.99
SO-45	1222167003	4.03	5.34	7.86	10.45	14.92	16.99
SO-46Dup	1222167005	4.04	5.34	7.86	10.44	14.93	16.99
SO-47	1222167006	4.04	5.34	7.86	10.45	14.93	16.99
SO-48	1222167007	4.04	5.34	7.86	10.45	14.93	16.99
SO-49	1222167008	4.03	5.34	7.86	10.45	14.93	16.99
SO-61(9.5)	1222302001	4.04	5.34	7.86	10.45	14.92	16.99
SO-62(10)	1222302002	4.04	5.34	7.86	10.45	14.92	16.99
SO-46	1222167004	4.04	5.34	7.86	10.45	14.93	16.99
SO-43	1222167001	4.04	5.34	7.86	10.45	14.93	16.99
SO-43	289986	4.04	5.34	7.86	10.45	14.92	16.99
SO-43	289987	4.04	5.34	7.86	10.45	14.93	17.00

LIMITS: Retention times should be within 30 seconds of the corresponding time in the calibration standard.

OTD

Batch Worklist

Batch: ENVX/ 15840 Created: 8/14/2012 14:41 Instrument: HBN: 91685

Rule: EPA 3550, Sonic SVOA Soil Analyst: C. Ahlers Status: NA

Workorder: 1222167

Workorder: 1222302

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	289984	MB for HBN 91685 [ENVX/15840]			4	MB		E3550SV.4P	6169	8/28/2012	8/10/2012	
2	289985	LCS for HBN 91685 [ENVX/15840]			4	LCS		E3550SV.4P	6169	8/28/2012	8/10/2012	
3	289986 BJ	FTSW-HR-So-43(1222167001MS)			4	MS		E3550SV.4P	6169	8/15/2012	8/10/2012	
4	289987 BJ	FTSW-HR-So-43(1222167001MSD)			4	MSD		E3550SV.4P	6169	8/15/2012	8/10/2012	
5	289988	RLVS for HBN 91685 [ENVX/15840			4	RLVS		E3550SV.4P	6169	8/28/2012	8/10/2012	
6	1222167001 BJ	FTSW-HR-So-43			4	SAMPLE	1222167001-A	E3550SV.4P	5480	8/15/2012	8/10/2012	
7	1222167002	FTSW-HR-So-44			4	SAMPLE	1222167002-A	E3550SV.4P	5480	8/15/2012	8/10/2012	
8	1222167003	FTSW-HR-So-45			4	SAMPLE	1222167003-A	E3550SV.4P	5480	8/15/2012	8/10/2012	
9	1222167004	FTSW-HR-So-46			4	SAMPLE	1222167004-A	E3550SV.4P	5480	8/15/2012	8/10/2012	
10	1222167005	FTSW-HR-So-46Dup			4	DUP	1222167005-A	E3550SV.4P	5480	8/15/2012	8/10/2012	
11	1222167006	FTSW-HR-So-47			4	SAMPLE	1222167006-A	E3550SV.4P	5480	8/15/2012	8/10/2012	
12	1222167007	FTSW-HR-So-48			4	SAMPLE	1222167007-A	E3550SV.4P	5480	8/15/2012	8/10/2012	
13	1222167008	FTSW-HR-So-49			4	SAMPLE	1222167008-A	E3550SV.4P	5480	8/15/2012	8/10/2012	
14	1222302001	FTSW-HR-SO-61 (9.5)			4	SAMPLE	1222302001-A	E3550SV.4P	5480	8/21/2012	8/14/2012	
15	1222302002	FTSW-HR-SO-62 (10)			4	SAMPLE	1222302002-A	E3550SV.4P	5480	8/21/2012	8/14/2012	

8270 SV

Batch Worklist

Batch: ESVO/ 3827
Rule: SW 8270, Soil

Created: 8/20/2012 09:52
Analyst: R. Hendricks

Instrument:
Status: WP

HBN: 91984

Workorder: 1222167
Workorder: 1222302

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	289984	MB for HBN 91685 [ENVX/15840]	30 grams	1 mL	4	MB		S827050.4Q	6169		8/20/2012	
2	289985	LCS for HBN 91685 [ENVX/15840]	30 grams	1 mL	4	LCS		S827050.4Q	6169		8/20/2012	
3	289986	FTSW-HR-So-43(1222167001MS)	30.06 grams	1 mL	4	MS		S827050.4Q	6169		8/20/2012	
4	289987	FTSW-HR-So-43(1222167001MSD)	30.15 grams	1 mL	4	MSD		S827050.4Q	6169		8/20/2012	
5	289988	RLVS for HBN 91685 [ENVX/15840	30 grams	1 mL	4	RLVS		S827050.4Q	6169		8/20/2012	
6	1222167001	FTSW-HR-So-43	30.81 grams	1 mL	4	SAMPLE	1222167001-A	S8270D...4	5480	9/23/2012	8/20/2012	
7	1222167002	FTSW-HR-So-44	30.21 grams	1 mL	4	SAMPLE	1222167002-A	S8270D...4	5480	9/23/2012	8/20/2012	
8	1222167003	FTSW-HR-So-45	30.2 grams	1 mL	4	SAMPLE	1222167003-A	S8270D...4	5480	9/23/2012	8/20/2012	
9	1222167004	FTSW-HR-So-46	30.06 grams	1 mL	4	SAMPLE	1222167004-A	S8270D...4	5480	9/23/2012	8/20/2012	
10	1222167005	FTSW-HR-So-46Dup	30.52 grams	1 mL	4	DUP	1222167005-A	S8270D...4	5480	9/23/2012	8/20/2012	
11	1222167006	FTSW-HR-So-47	30.67 grams	1 mL	4	SAMPLE	1222167006-A	S8270D...4	5480	9/23/2012	8/20/2012	
12	1222167007	FTSW-HR-So-48	30.37 grams	1 mL	4	SAMPLE	1222167007-A	S8270D...4	5480	9/23/2012	8/20/2012	
13	1222167008	FTSW-HR-So-49	30.39 grams	1 mL	4	SAMPLE	1222167008-A	S8270D...4	5480	9/23/2012	8/20/2012	
14	1222302001	FTSW-HR-SO-61 (9.5)	30.67 grams	1 mL	4	SAMPLE	1222302001-A	S8270D...4	5480	9/23/2012	8/22/2012	
15	1222302002	FTSW-HR-SO-62 (10)	30.73 grams	1 mL	4	SAMPLE	1222302002-A	S8270D...4	5480	9/23/2012	8/22/2012	

DATACHEM LABORATORIES - GC\MS SEMIVOLATILE ANALYSIS
INJECTION LOGBOOK
INSTRUMENT 5975-H

File Name	Date and Time Injected	OP	Method	ALS BOT	Run Length	Dil Fac	Sample name	Misc info
HGU01TUN	08/08/2012 10:06	RAH	8270DTUN	1	11.53	1	8270 DFTPP 13808	1/11/13
HGU02S50	08/08/2012 10:26	RAH	8270D07	2	20.49	1	8270 50 std 15952	X:1/9/13
HGU03S80	08/08/2012 11:01	RAH	8270D07	3	20.49	1	8270 80 std 15970	X:1/9/13
HGU04S65	08/08/2012 11:30	RAH	8270D07	4	20.49	1	8270 65 std 15971	X:1/9/13
HGU05S35	08/08/2012 12:00	RAH	8270D07	5	20.49	1	8270 35 std 15972	X:1/9/13
HGU06S20	08/08/2012 12:29	RAH	8270D07	6	20.49	1	8270 20 std 15973	X:1/9/13
HGU07S05	08/08/2012 12:59	RAH	8270D07	7	20.49	1	8270 5 std 15974	X:1/9/13
HGU08ICV	08/08/2012 13:29	RAH	8270D07	8	20.49	1	8270 ICV 15975	X:1/9/13
HGV01TUN	08/08/2012 14:07	RAH	8270DTUN	1	11.53	1	8270 DFTPP 13808	1/11/13
HGV02S50	08/08/2012 14:28	RAH	8270DOND	2	20.49	1	8270 50 std 15952	X:1/9/13
HGV03LCS	08/08/2012 14:58	RAH	8270DOND	3	20.49	1	288219	WATER 8270
HGV04LCS	08/08/2012 15:28	RAH	8270DOND	4	20.49	1	288239	SOIL 8270
HGV05BLK	08/08/2012 15:58	RAH	8270DOND	5	20.49	1	288238	SOIL 8270
HGV06RLV	08/08/2012 16:29	RAH	8270DOND	6	20.49	1	288240	SOIL 8270
HGV07C01	08/08/2012 16:58	RAH	8270DOND	7	20.49	1	1221555001	SOIL 8270
HGV08M02	08/08/2012 17:28	RAH	8270DOND	8	20.49	1	1221555002	SOIL 8270
HGV09M03	08/08/2012 17:56	RAH	8270DOND	9	20.49	1	1221555003	SOIL 8270
HGV10C04	08/08/2012 18:26	RAH	8270DOND	10	20.49	1	1221555004	SOIL 8270
HGV11C05	08/08/2012 18:55	RAH	8270DOND	11	20.49	1	1221555005	SOIL 8270
HGV12C07	08/08/2012 19:24	RAH	8270DOND	12	20.49	1	1221555007	SOIL 8270
HGV13C08	08/08/2012 19:54	RAH	8270DOND	13	20.49	1	1221555008	SOIL 8270
HGV14C09	08/08/2012 20:24	RAH	8270DOND	14	20.49	1	1221555009	SOIL 8270
HGV15C10	08/08/2012 20:53	RAH	8270DOND	15	20.49	1	1221555010	SOIL 8270
HGV16C11	08/08/2012 21:23	RAH	8270DOND	16	20.49	1	1221555011	SOIL 8270
HGV17C12	08/08/2012 21:52	RAH	8270DOND	17	20.49	1	1221555012	SOIL 8270
HGV18C13	08/08/2012 22:22	RAH	8270DOND	18	20.49	1	1221555013	SOIL 8270
HGV19C14	08/08/2012 22:51	RAH	8270DOND	19	20.49	1	1221555014	SOIL 8270

DATACHEM LABORATORIES - GC\MS SEMIVOLATILE ANALYSIS
INJECTION LOGBOOK
INSTRUMENT 5975-H

File Name	Date and Time Injected	OP	Method	ALS BOT	Run Length	Dil Fac	Sample name	Misc info
HHB01TUN	08/16/2012 11:45	RAH	8270DTUN	1	11.53	1	8270 DFTPP 13808	X:1/11/13
HHB02S50	08/16/2012 12:05	RAH	8270D07	2	20.49	1	8270 50 std 15952	X:1/9/13
HHB03BLK	08/16/2012 12:44	RAH	8270DOND	3	20.49	1	289984	SOIL 8270
HHB04LCS	08/16/2012 13:12	RAH	8270DOND	4	20.49	1	289985	SOIL 8270
HHB05RLV	08/16/2012 13:42	RAH	8270DOND	5	20.49	1	289988	SOIL 8270
HHB06C02	08/16/2012 14:12	RAH	8270DOND	6	20.49	1	1222167002	SOIL 8270
HHB07C03	08/16/2012 14:42	RAH	8270DOND	7	20.49	1	1222167003	SOIL 8270
HHB08C05	08/16/2012 15:10	RAH	8270DOND	8	20.49	1	1222167005	SOIL 8270
HHB09C06	08/16/2012 15:39	RAH	8270DOND	9	20.49	1	1222167006	SOIL 8270
HHB10C07	08/16/2012 16:08	RAH	8270DOND	10	20.49	1	1222167007	SOIL 8270
HHB11C08	08/16/2012 16:37	RAH	8270DOND	11	20.49	1	1222167008	SOIL 8270
HHB12C01	08/16/2012 17:07	RAH	8270DOND	12	20.49	1	1222302001	SOIL 8270
HHB13C02	08/16/2012 17:36	RAH	8270DOND	13	20.49	1	1222302002	SOIL 8270
HHB14C04	08/16/2012 18:05	RAH	8270DOND	14	20.49	1	1222167004	SOIL 8270
HHB15C01	08/16/2012 18:34	RAH	8270DOND	15	20.49	1	1222167001	SOIL 8270
HHB16AMS	08/16/2012 19:03	RAH	8270DOND	16	20.49	1	289986	SOIL 8270
HHB17MSD	08/16/2012 19:32	RAH	8270DOND	17	20.49	1	289987	SOIL 8270



ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

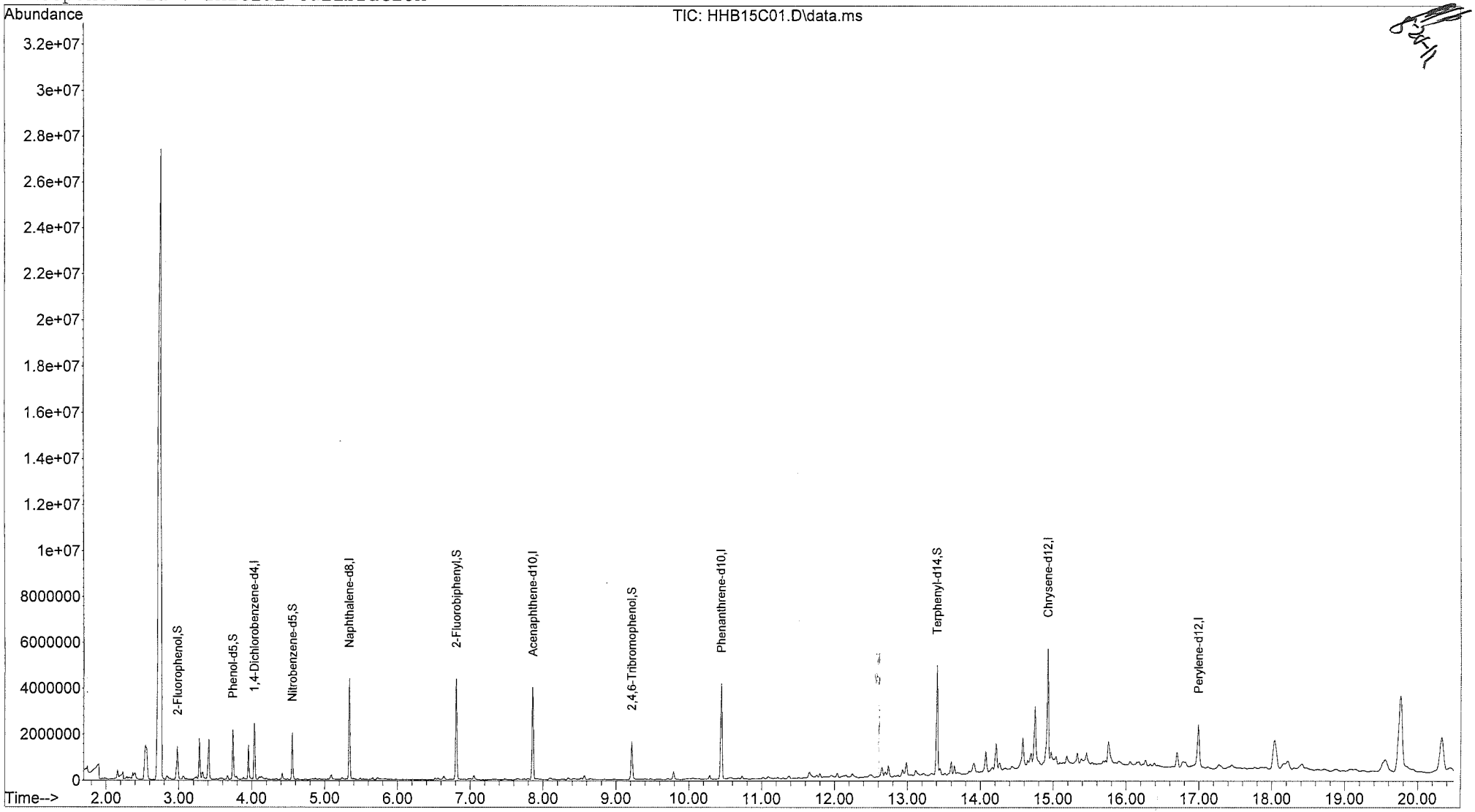
Raw Data

Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB15C01.D Vial: 15
Acq On : 08/16/2012 18:34 Operator: RAH
Sample : 1222167001 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 17 10:46:35 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB15C01.D Vial: 15
Acq On : 08/16/2012 18:34 Operator: RAH
Sample : 1222167001 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:46:35 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	400	152	504320	40.00 ug/mL
6) Naphthalene-d8	5.34	621	136	2239636	40.00 ug/mL
8) Acenaphthene-d10	7.86	1049	164	1327079	40.00 ug/mL
10) Phenanthrene-d10	10.45	1489	188	2538357	40.00 ug/mL
12) Chrysene-d12	14.93	2251	240	2462812	40.00 ug/mL
14) Perylene-d12	16.99	2602	264	1126286	40.00 ug/mL
System Monitoring Compounds					
2) 2-Fluorophenol	2.98	220	112	508249	30.007ug/mL
4) Phenol-d5	3.74	349	99	862132	38.799ug/mL
7) Nitrobenzene-d5	4.56	488	82	658172	34.282ug/mL
9) 2-Fluorobiphenyl	6.81	871	172	1874225	38.078ug/mL
11) 2,4,6-Tribromophenol	9.22	1280	330	325628	38.105ug/mL
13) Terphenyl-d14	13.40	1992	244	2410029	50.687ug/mL
Target Compounds					Qvalue
3) 1,4-Oxathiane	0.00			Not Detected	
5) 1,4-Dithiane	0.00			Not Detected	

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

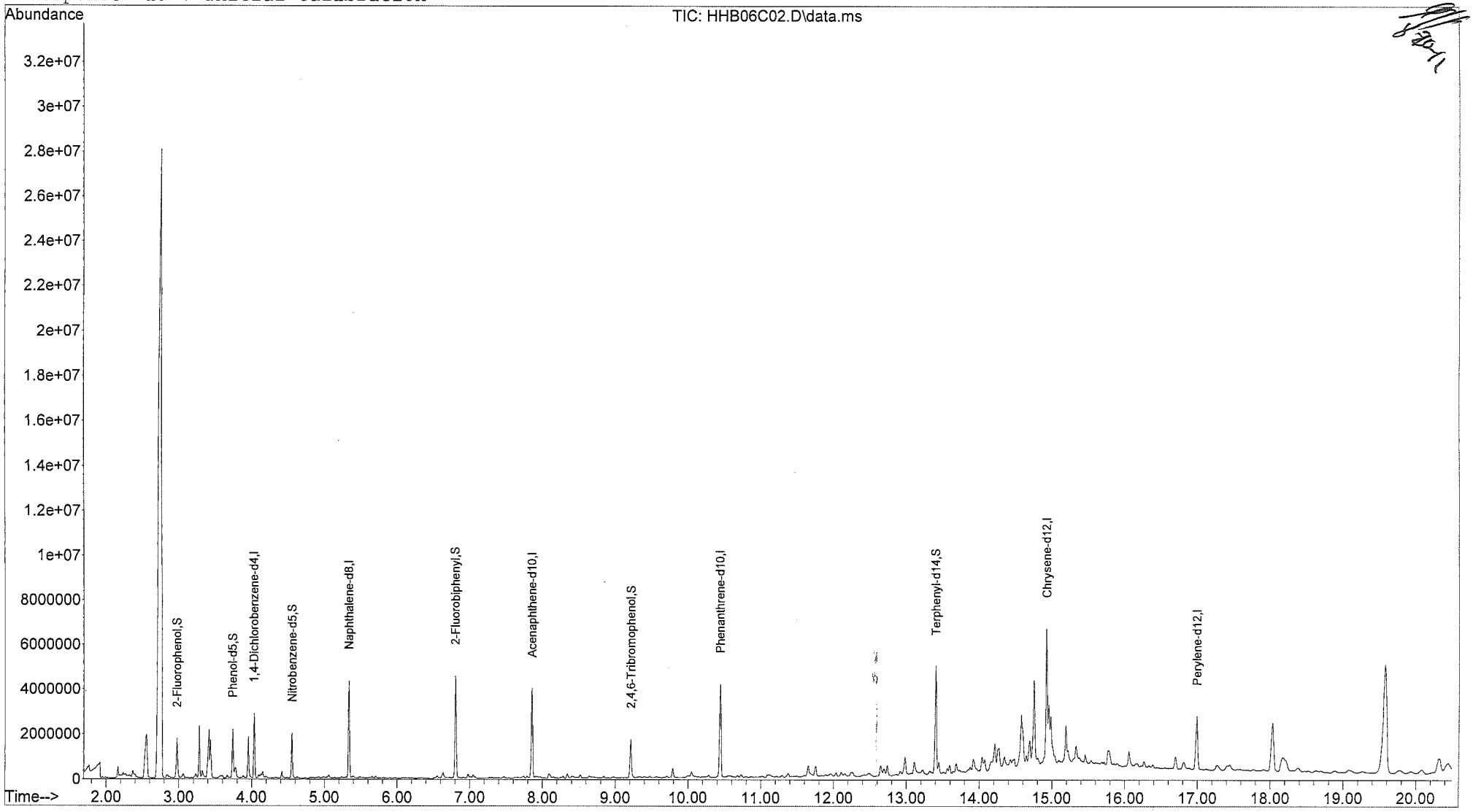
Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB06C02.D
Acq On : 08/16/2012 14:12
Sample : 1222167002
Misc : . SOIL 8270
MS Integration Params: rteint.p

Vial: 6
Operator: RAH
Inst : 5975-H
Injection volume : 1uL

Quant Time: Aug 17 10:40:44 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB06C02.D Vial: 6
Acq On : 08/16/2012 14:12 Operator: RAH
Sample : 1222167002 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:40:44 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc	Units
1) 1,4-Dichlorobenzene-d4	4.03	399	152	523033	40.00	ug/mL
6) Naphthalene-d8	5.34	621	136	2319022	40.00	ug/mL
8) Acenaphthene-d10	7.86	1049	164	1341696	40.00	ug/mL
10) Phenanthrene-d10	10.45	1489	188	2550849	40.00	ug/mL
12) Chrysene-d12	14.93	2251	240	2777706	40.00	ug/mL
14) Perylene-d12	16.99	2602	264	1544027	40.00	ug/mL
System Monitoring Compounds						
2) 2-Fluorophenol	2.97	219	112	549937	31.306	ug/mL
4) Phenol-d5	3.74	349	99	911277	39.543	ug/mL
7) Nitrobenzene-d5	4.56	488	82	706955	35.562	ug/mL
9) 2-Fluorobiphenyl	6.80	870	172	1988999	39.969	ug/mL
11) 2,4,6-Tribromophenol	9.22	1280	330	333405	38.824	ug/mL
13) Terphenyl-d14	13.40	1992	244	2394609	44.654	ug/mL
Target Compounds						Qvalue
3) 1,4-Oxathiane	0.00			Not Detected		
5) 1,4-Dithiane	0.00			Not Detected		

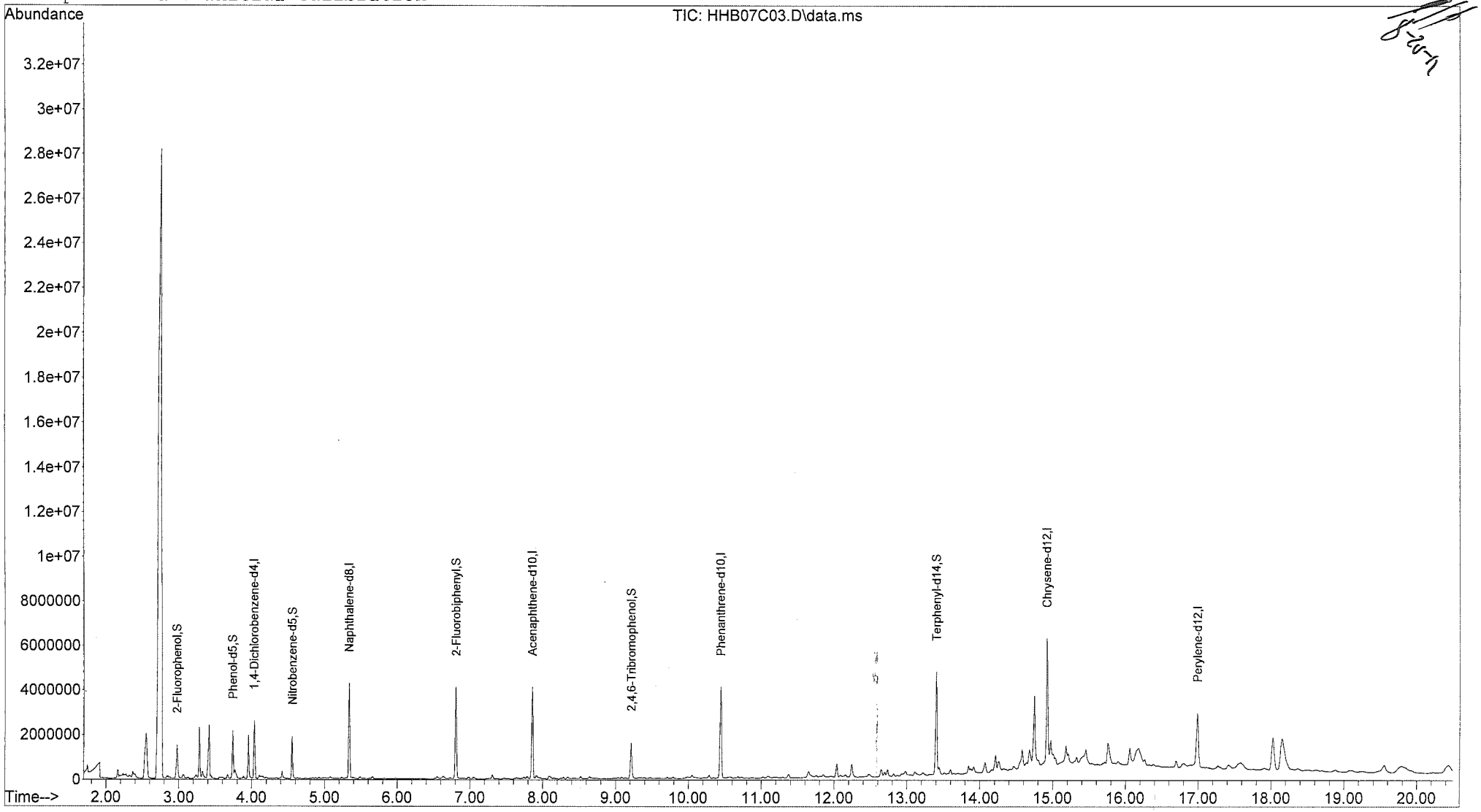
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB07C03.D Vial: 7
Acq On : 08/16/2012 14:42 Operator: RAH
Sample : 1222167003 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 17 10:42:06 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB07C03.D Vial: 7
Acq On : 08/16/2012 14:42 Operator: RAH
Sample : 1222167003 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:42:06 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	399	152	514537	40.00 ug/mL
6) Naphthalene-d8	5.34	621	136	2275200	40.00 ug/mL
8) Acenaphthene-d10	7.86	1049	164	1342659	40.00 ug/mL
10) Phenanthrene-d10	10.45	1489	188	2490340	40.00 ug/mL
12) Chrysene-d12	14.92	2250	240	2715168	40.00 ug/mL
14) Perylene-d12	16.99	2602	264	1558965	40.00 ug/mL
System Monitoring Compounds					
2) 2-Fluorophenol	2.98	219	112	489045	28.300ug/mL
4) Phenol-d5	3.74	349	99	814254	35.917ug/mL
7) Nitrobenzene-d5	4.56	488	82	632424	32.426ug/mL
9) 2-Fluorobiphenyl	6.81	871	172	1793351	36.012ug/mL
11) 2,4,6-Tribromophenol	9.22	1280	330	312280	37.248ug/mL
13) Terphenyl-d14	13.40	1992	244	2295388	43.789ug/mL
Target Compounds					Qvalue
3) 1,4-Oxathiane	0.00			Not Detected	
5) 1,4-Dithiane	0.00			Not Detected	

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

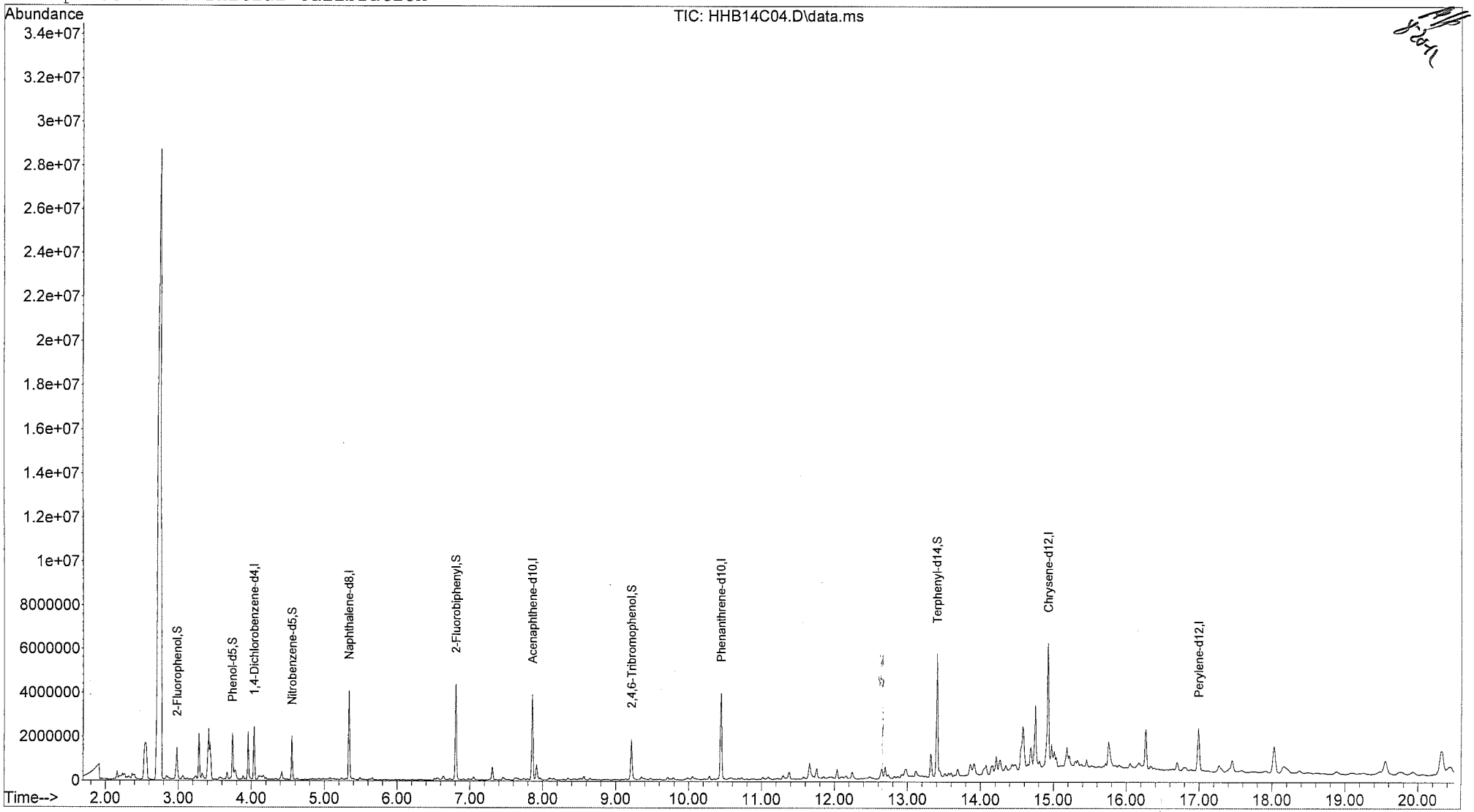
Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB14C04.D
Acq On : 08/16/2012 18:05
Sample : 1222167004
Misc : . SOIL 8270
MS Integration Params: rteint.p

Vial: 14
Operator: RAH
Inst : 5975-H
Injection volume : 1uL

Quant Time: Aug 17 10:46:02 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB14C04.D Vial: 14
Acq On : 08/16/2012 18:05 Operator: RAH
Sample : 1222167004 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:46:02 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	400	152	483660	40.00 ug/mL
6) Naphthalene-d8	5.34	621	136	2130690	40.00 ug/mL
8) Acenaphthene-d10	7.86	1049	164	1247336	40.00 ug/mL
10) Phenanthrene-d10	10.45	1489	188	2427573	40.00 ug/mL
12) Chrysene-d12	14.93	2251	240	2576638	40.00 ug/mL
14) Perylene-d12	16.99	2602	264	1280953	40.00 ug/mL
System Monitoring Compounds					
2) 2-Fluorophenol	2.98	220	112	502962	30.963ug/mL
4) Phenol-d5	3.74	349	99	861231	40.414ug/mL
7) Nitrobenzene-d5	4.56	488	82	649786	35.576ug/mL
9) 2-Fluorobiphenyl	6.81	871	172	1894740	40.955ug/mL
11) 2,4,6-Tribromophenol	9.22	1280	330	343588	42.042ug/mL
13) Terphenyl-d14	13.40	1992	244	2695064	54.178ug/mL
Target Compounds					Qvalue
3) 1,4-Oxathiane	0.00			Not Detected	
5) 1,4-Dithiane	0.00			Not Detected	

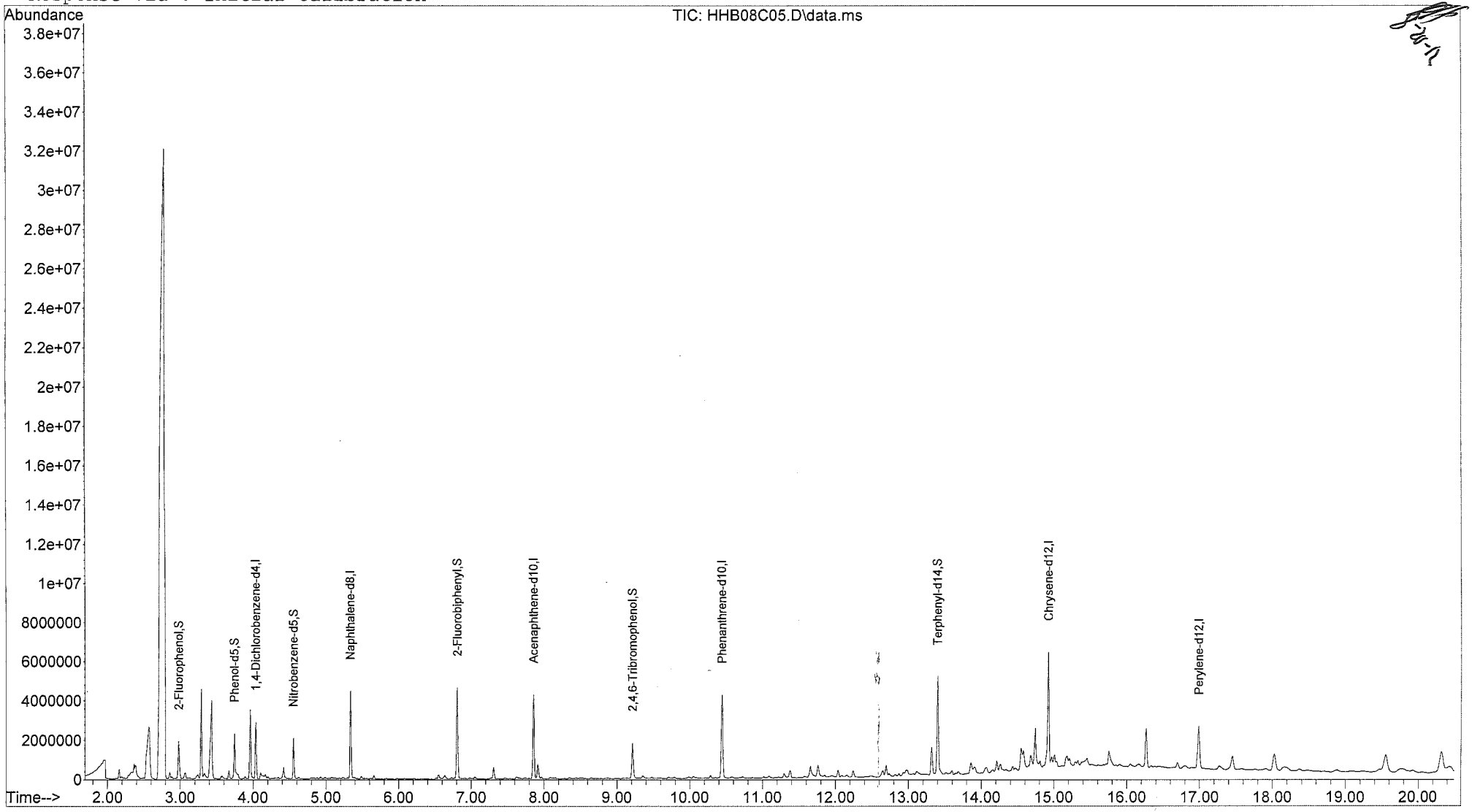
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB08C05.D Vial: 8
Acq On : 08/16/2012 15:10 Operator: RAH
Sample : 1222167005 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 17 10:42:44 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB08C05.D Vial: 8
Acq On : 08/16/2012 15:10 Operator: RAH
Sample : 1222167005 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:42:44 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	400	152	531421	40.00 ug/mL
6) Naphthalene-d8	5.34	621	136	2375729	40.00 ug/mL
8) Acenaphthene-d10	7.86	1049	164	1398031	40.00 ug/mL
10) Phenanthrene-d10	10.44	1489	188	2620204	40.00 ug/mL
12) Chrysene-d12	14.93	2251	240	2702765	40.00 ug/mL
14) Perylene-d12	16.99	2602	264	1464090	40.00 ug/mL
System Monitoring Compounds					
2) 2-Fluorophenol	2.98	220	112	531995	29.807ug/mL
4) Phenol-d5	3.75	350	99	888372	37.941ug/mL
7) Nitrobenzene-d5	4.56	488	82	678065	33.295ug/mL
9) 2-Fluorobiphenyl	6.81	871	172	1973183	38.054ug/mL
11) 2,4,6-Tribromophenol	9.22	1280	330	352372	39.947ug/mL
13) Terphenyl-d14	13.40	1992	244	2488612	47.693ug/mL
Target Compounds					Qvalue
3) 1,4-Oxathiane	0.00			Not Detected	
5) 1,4-Dithiane	0.00			Not Detected	

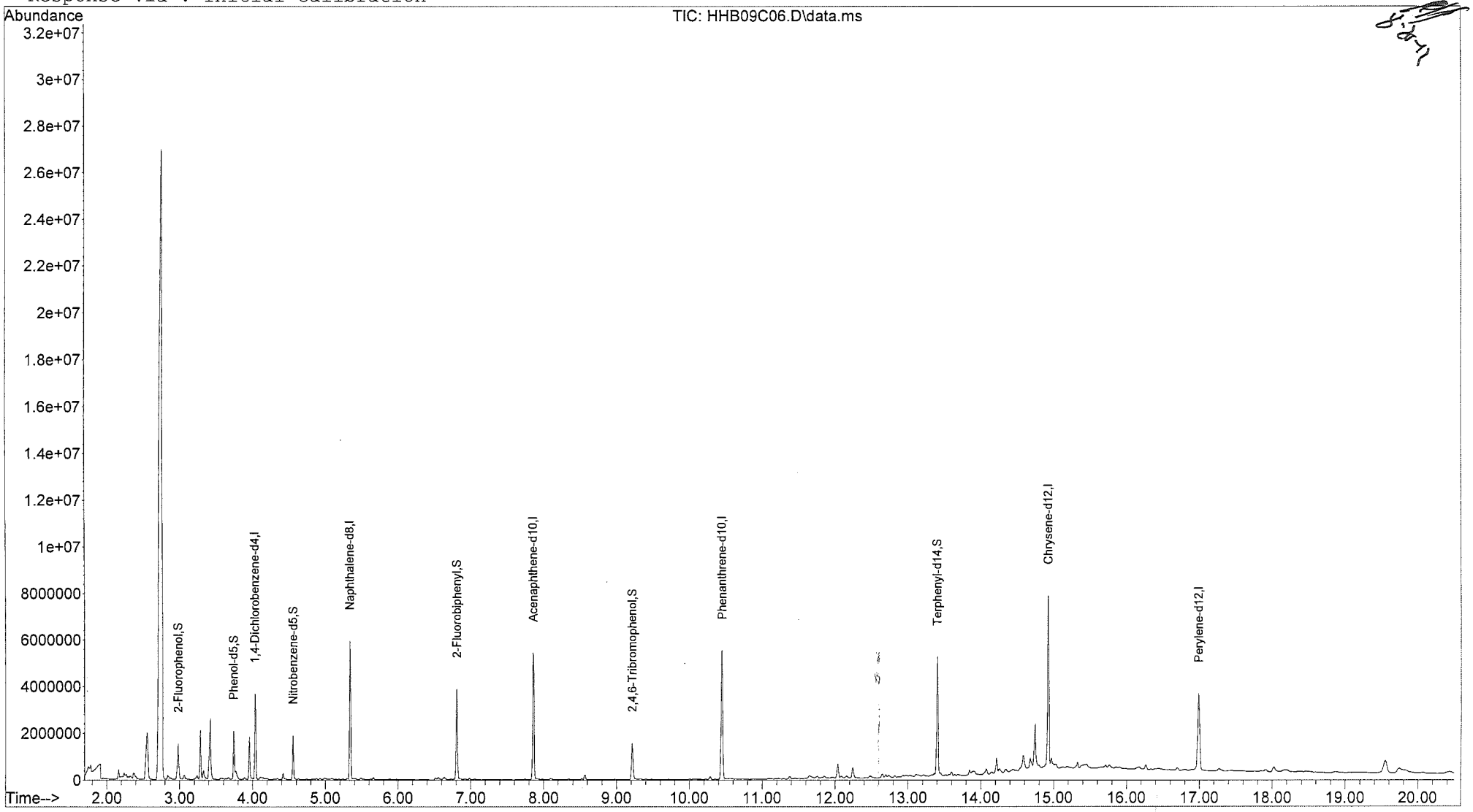
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB09C06.D Vial: 9
Acq On : 08/16/2012 15:39 Operator: RAH
Sample : 1222167006 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 17 10:43:17 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB09C06.D Vial: 9
Acq On : 08/16/2012 15:39 Operator: RAH
Sample : 1222167006 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:43:17 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	400	152	706862	40.00 ug/mL
6) Naphthalene-d8	5.34	621	136	3148708	40.00 ug/mL
8) Acenaphthene-d10	7.86	1049	164	1826136	40.00 ug/mL
10) Phenanthrene-d10	10.45	1490	188	3497294	40.00 ug/mL
12) Chrysene-d12	14.93	2251	240	3721222	40.00 ug/mL
14) Perylene-d12	16.99	2602	264	2222541	40.00 ug/mL
System Monitoring Compounds					
2) 2-Fluorophenol	2.98	220	112	495061	20.853ug/mL
4) Phenol-d5	3.74	349	99	848931	27.258ug/mL
7) Nitrobenzene-d5	4.56	488	82	620101	22.974ug/mL
9) 2-Fluorobiphenyl	6.81	871	172	1763614	26.038ug/mL
11) 2,4,6-Tribromophenol	9.22	1280	330	318301	27.035ug/mL
13) Terphenyl-d14	13.40	1992	244	2484742	34.586ug/mL
Target Compounds					Qvalue
3) 1,4-Oxathiane	0.00			Not Detected	
5) 1,4-Dithiane	0.00			Not Detected	

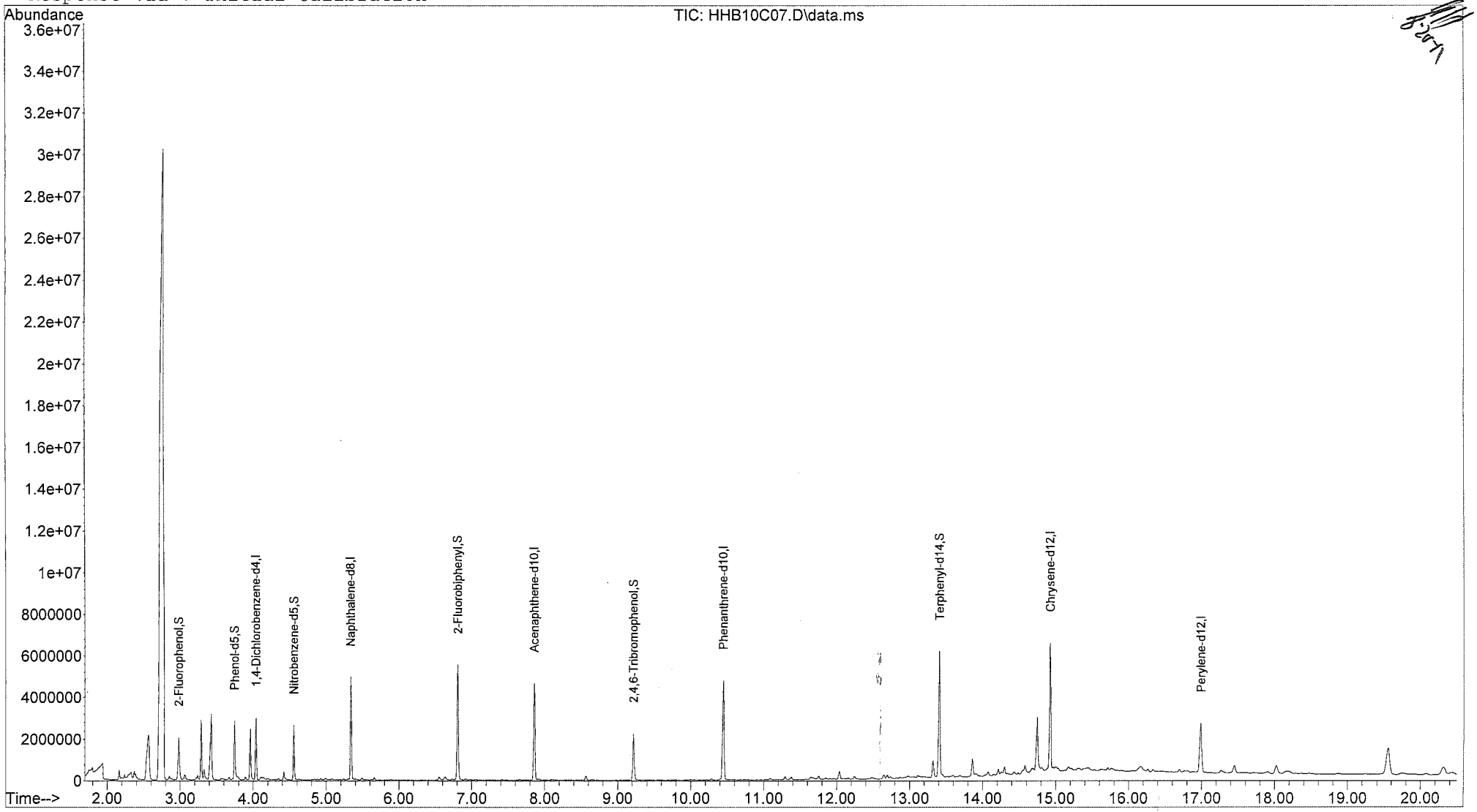
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB10C07.D Vial: 10
Acq On : 08/16/2012 16:08 Operator: RAH
Sample : 1222167007 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 17 10:43:48 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB10C07.D Vial: 10
Acq On : 08/16/2012 16:08 Operator: RAH
Sample : 1222167007 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:43:48 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	400	152	570552	40.00 ug/mL
6) Naphthalene-d8	5.34	621	136	2573420	40.00 ug/mL
8) Acenaphthene-d10	7.86	1049	164	1532346	40.00 ug/mL
10) Phenanthrene-d10	10.45	1490	188	3012848	40.00 ug/mL
12) Chrysene-d12	14.93	2251	240	3036419	40.00 ug/mL
14) Perylene-d12	16.99	2602	264	1649437	40.00 ug/mL
System Monitoring Compounds					
2) 2-Fluorophenol	2.98	220	112	657755	34.326ug/mL
4) Phenol-d5	3.75	350	99	1113450	44.292ug/mL
7) Nitrobenzene-d5	4.56	488	82	828236	37.545ug/mL
9) 2-Fluorobiphenyl	6.81	871	172	2387759	42.012ug/mL
11) 2,4,6-Tribromophenol	9.22	1280	330	427256	42.123ug/mL
13) Terphenyl-d14	13.40	1992	244	3202406	54.629ug/mL
Target Compounds					Qvalue
3) 1,4-Oxathiane	0.00			Not Detected	
5) 1,4-Dithiane	0.00			Not Detected	

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

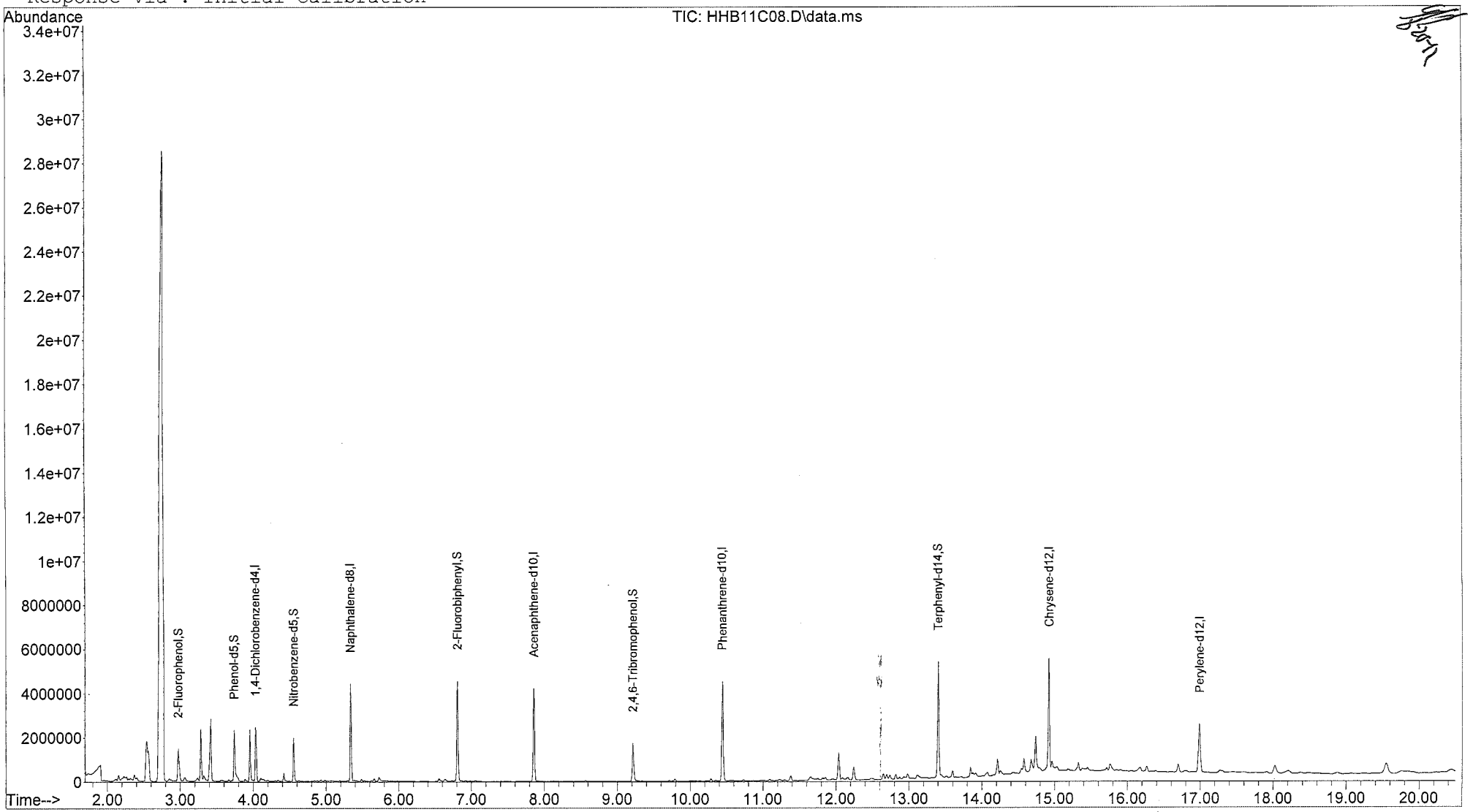
Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB11C08.D
Acq On : 08/16/2012 16:37
Sample : 1222167008
Misc : . SOIL 8270
MS Integration Params: rteint.p

Vial: 11
Operator: RAH
Inst : 5975-H
Injection volume : 1uL

Quant Time: Aug 17 10:44:23 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB11C08.D Vial: 11
Acq On : 08/16/2012 16:37 Operator: RAH
Sample : 1222167008 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:44:23 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	399	152	522826	40.00 ug/mL
6) Naphthalene-d8	5.34	621	136	2334336	40.00 ug/mL
8) Acenaphthene-d10	7.86	1049	164	1383893	40.00 ug/mL
10) Phenanthrene-d10	10.45	1489	188	2687407	40.00 ug/mL
12) Chrysene-d12	14.93	2251	240	2620713	40.00 ug/mL
14) Perylene-d12	16.99	2602	264	1448793	40.00 ug/mL
System Monitoring Compounds					
2) 2-Fluorophenol	2.97	219	112	538339	30.658ug/mL
4) Phenol-d5	3.74	349	99	914249	39.688ug/mL
7) Nitrobenzene-d5	4.56	488	82	675243	33.744ug/mL
9) 2-Fluorobiphenyl	6.81	871	172	1980925	38.593ug/mL
11) 2,4,6-Tribromophenol	9.22	1280	330	338806	37.448ug/mL
13) Terphenyl-d14	13.40	1992	244	2565889	50.714ug/mL
Target Compounds					Qvalue
3) 1,4-Oxathiane	0.00			Not Detected	
5) 1,4-Dithiane	0.00			Not Detected	

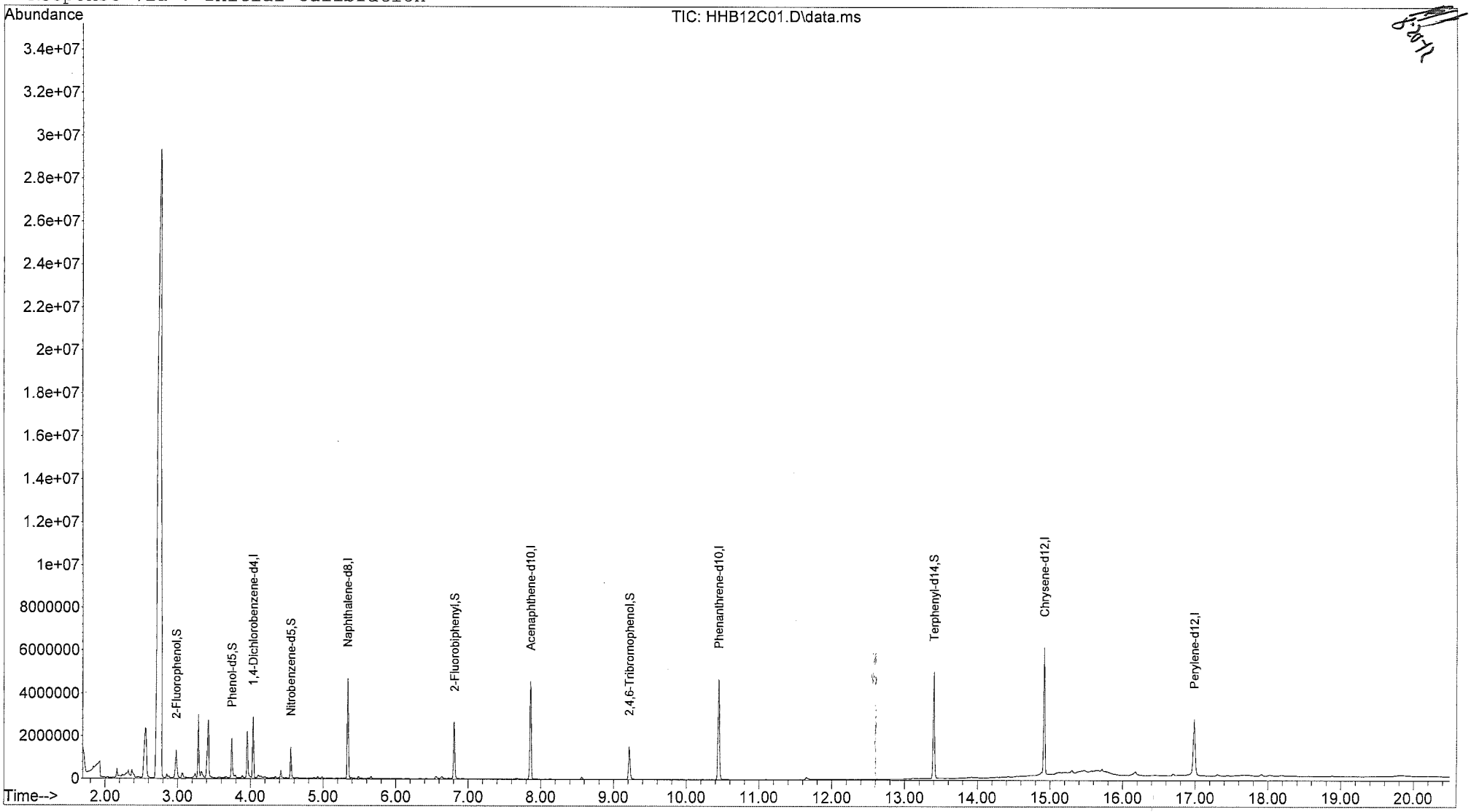
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB12C01.D Vial: 12
Acq On : 08/16/2012 17:07 Operator: RAH
Sample : 1222302001 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 17 10:44:55 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB12C01.D Vial: 12
Acq On : 08/16/2012 17:07 Operator: RAH
Sample : 1222302001 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:44:55 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	400	152	555707	40.00 ug/mL
6) Naphthalene-d8	5.34	621	136	2525225	40.00 ug/mL
8) Acenaphthene-d10	7.86	1049	164	1499298	40.00 ug/mL
10) Phenanthrene-d10	10.45	1489	188	2892299	40.00 ug/mL
12) Chrysene-d12	14.92	2250	240	2977840	40.00 ug/mL
14) Perylene-d12	16.99	2601	264	1643447	40.00 ug/mL
System Monitoring Compounds					
2) 2-Fluorophenol	2.98	220	112	439318	23.539ug/mL
4) Phenol-d5	3.75	350	99	776951	31.732ug/mL
7) Nitrobenzene-d5	4.56	488	82	487770	22.533ug/mL
9) 2-Fluorobiphenyl	6.81	871	172	1138469	20.473ug/mL
11) 2,4,6-Tribromophenol	9.22	1280	330	312658	32.110ug/mL
13) Terphenyl-d14	13.40	1992	244	2431725	42.298ug/mL
Target Compounds					Qvalue
3) 1,4-Oxathiane	0.00			Not Detected	
5) 1,4-Dithiane	0.00			Not Detected	

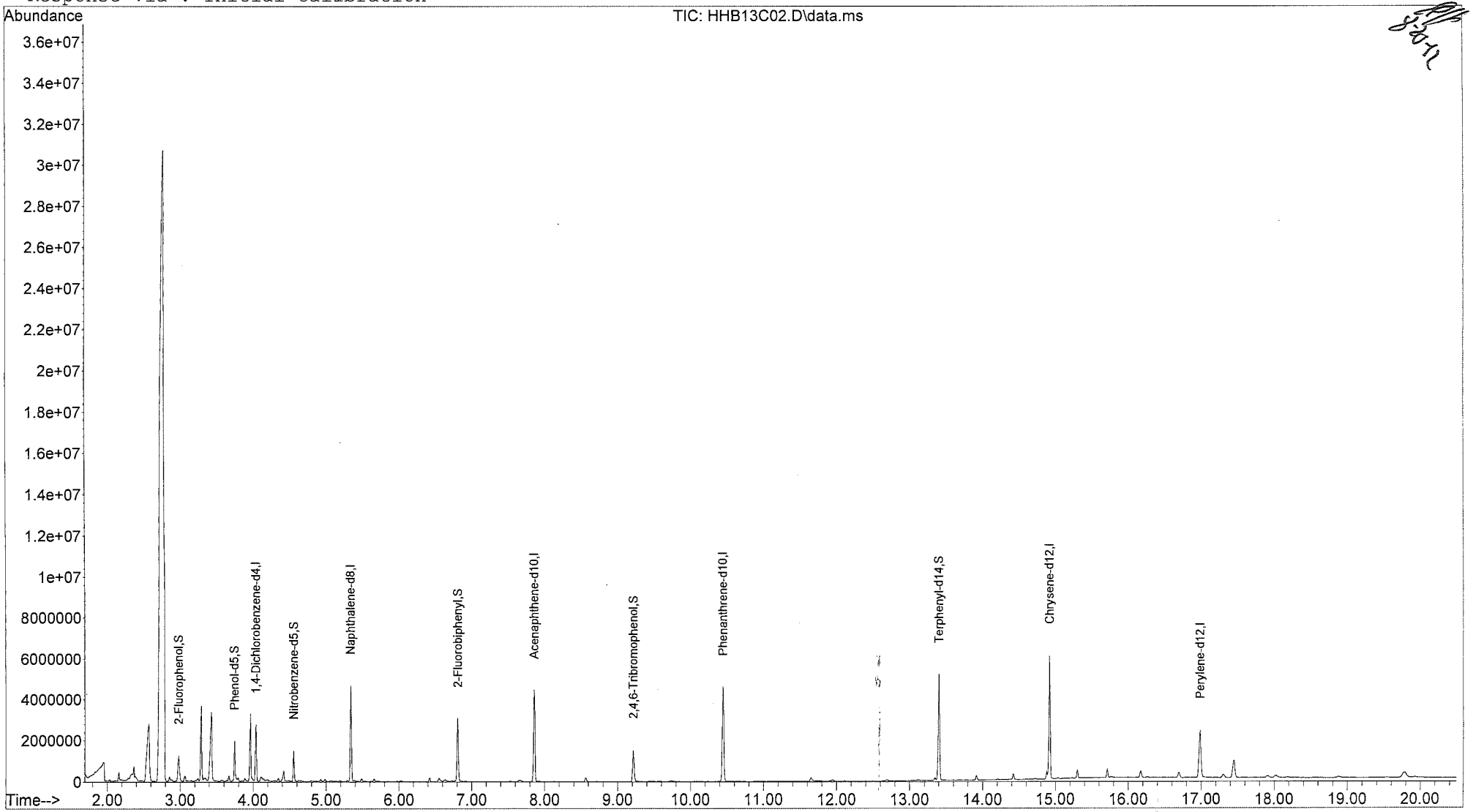
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB13C02.D Vial: 13
Acq On : 08/16/2012 17:36 Operator: RAH
Sample : 1222302002 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 17 10:45:28 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB13C02.D Vial: 13
Acq On : 08/16/2012 17:36 Operator: RAH
Sample : 1222302002 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:45:28 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	400	152	528660	40.00 ug/mL
6) Naphthalene-d8	5.34	621	136	2430006	40.00 ug/mL
8) Acenaphthene-d10	7.86	1049	164	1477596	40.00 ug/mL
10) Phenanthrene-d10	10.45	1489	188	2927853	40.00 ug/mL
12) Chrysene-d12	14.92	2250	240	2977999	40.00 ug/mL
14) Perylene-d12	16.99	2601	264	1615863	40.00 ug/mL
System Monitoring Compounds					
2) 2-Fluorophenol	2.98	220	112	393650	22.171ug/mL
4) Phenol-d5	3.75	350	99	745057	31.986ug/mL
7) Nitrobenzene-d5	4.56	488	82	479966	23.041ug/mL
9) 2-Fluorobiphenyl	6.81	871	172	1372159	25.038ug/mL
11) 2,4,6-Tribromophenol	9.22	1280	330	316431	32.103ug/mL
13) Terphenyl-d14	13.40	1992	244	2566085	44.633ug/mL
Target Compounds					Qvalue
3) 1,4-Oxathiane	0.00			Not Detected	
5) 1,4-Dithiane	0.00			Not Detected	

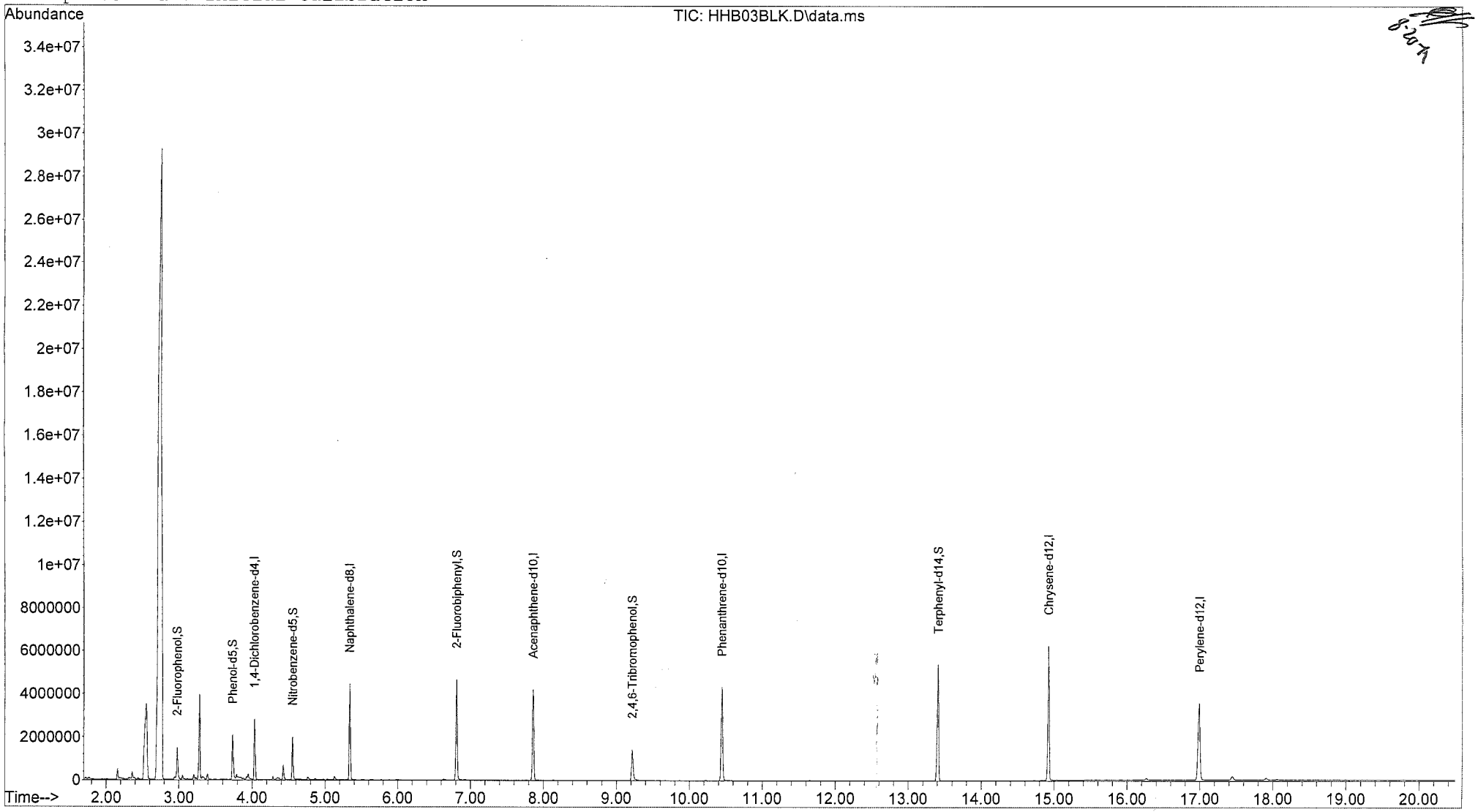
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB03BLK.D Vial: 3
Acq On : 08/16/2012 12:44 Operator: RAH
Sample : 289984 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 17 10:38:42 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB03BLK.D Vial: 3
Acq On : 08/16/2012 12:44 Operator: RAH
Sample : 289984 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 17 10:38:42 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc	Units
1) 1,4-Dichlorobenzene-d4	4.03	399	152	502951	40.00	ug/mL
6) Naphthalene-d8	5.34	621	136	2310888	40.00	ug/mL
8) Acenaphthene-d10	7.86	1049	164	1401593	40.00	ug/mL
10) Phenanthrene-d10	10.45	1489	188	2712308	40.00	ug/mL
12) Chrysene-d12	14.92	2250	240	3105209	40.00	ug/mL
14) Perylene-d12	16.99	2602	264	2509554	40.00	ug/mL
System Monitoring Compounds						
2) 2-Fluorophenol	2.98	220	112	539671	31.949	ug/mL
4) Phenol-d5	3.73	348	99	889976	40.161	ug/mL
7) Nitrobenzene-d5	4.56	488	82	709097	35.796	ug/mL
9) 2-Fluorobiphenyl	6.81	871	172	2003360	38.537	ug/mL
11) 2,4,6-Tribromophenol	9.22	1281	330	316703	34.684	ug/mL
13) Terphenyl-d14	13.41	1993	244	2914949	48.624	ug/mL
Target Compounds						Qvalue
3) 1,4-Oxathiane	0.00			Not Detected		
5) 1,4-Dithiane	0.00			Not Detected		

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

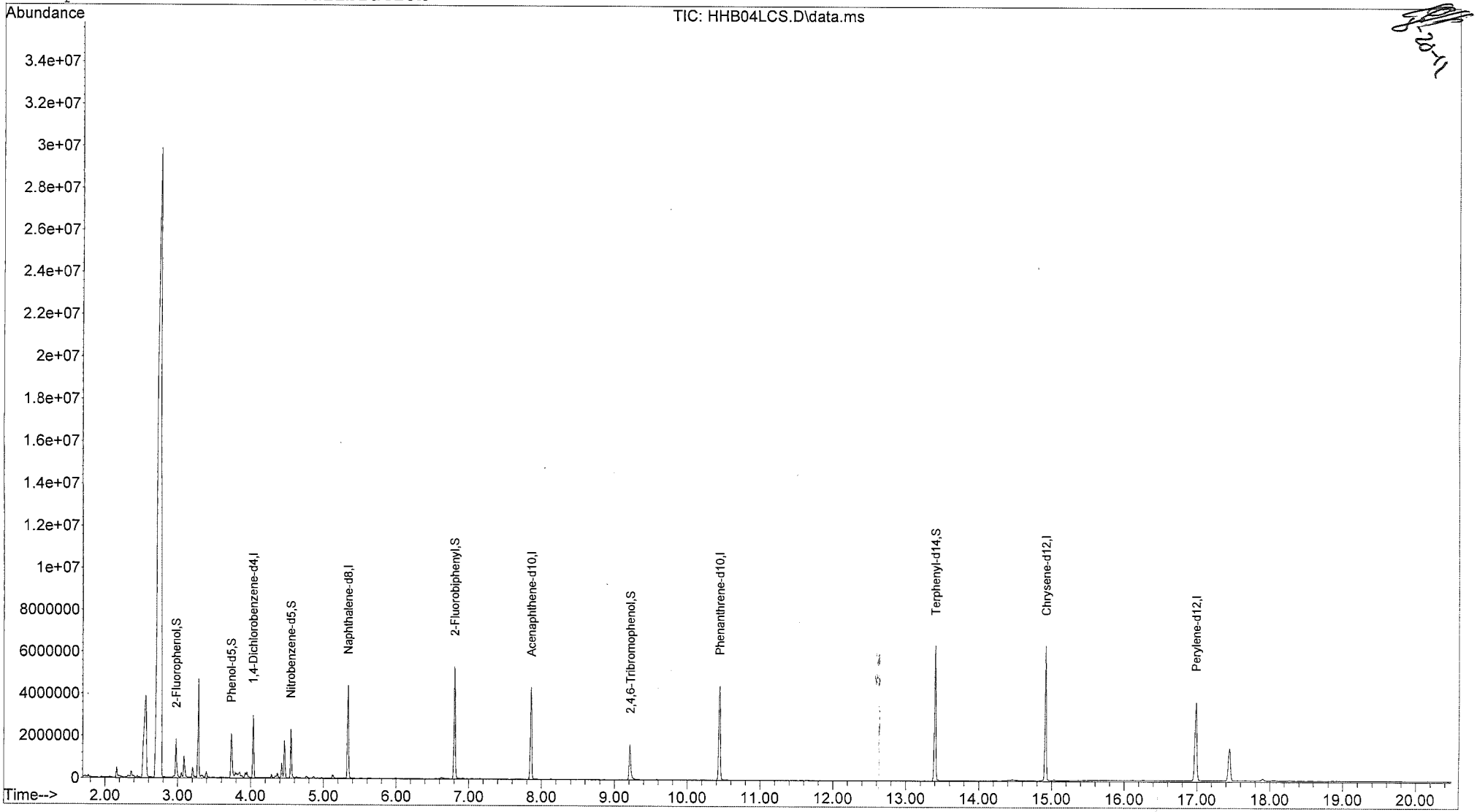
Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB04LCS.D
Acq On : 08/16/2012 13:12
Sample : 289985
Misc : . SOIL 8270
MS Integration Params: rteint.p

Vial: 4
Operator: RAH
Inst : 5975-H
Injection volume : 1uL

Quant Time: Aug 16 13:33:22 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB04LCS.D Vial: 4
Acq On : 08/16/2012 13:12 Operator: RAH
Sample : 289985 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 16 13:33:22 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc	Units	
1) 1,4-Dichlorobenzene-d4	4.03	399	152	528274	40.00	ug/mL	
6) Naphthalene-d8	5.34	621	136	2390317	40.00	ug/mL	
8) Acenaphthene-d10	7.86	1049	164	1461030	40.00	ug/mL	
10) Phenanthrene-d10	10.45	1489	188	2828548	40.00	ug/mL	
12) Chrysene-d12	14.92	2250	240	3232246	40.00	ug/mL	
14) Perylene-d12	16.99	2601	264	2566742	40.00	ug/mL	
System Monitoring Compounds							
2) 2-Fluorophenol	2.97	219	112	640467	36.098	ug/mL	
4) Phenol-d5	3.73	348	99	1031593	44.320	ug/mL	
7) Nitrobenzene-d5	4.55	487	82	837446	40.870	ug/mL	
9) 2-Fluorobiphenyl	6.80	870	172	2340460	43.190	ug/mL	
11) 2,4,6-Tribromophenol	9.22	1280	330	369491	38.802	ug/mL	
13) Terphenyl-d14	13.40	1992	244	3305214	52.967	ug/mL	
Target Compounds							Qvalue
3) 1,4-Oxathiane	3.09	238	104	216071	23.564	ug/mL	96
5) 1,4-Dithiane	4.46	472	120	430843	28.996	ug/mL	94

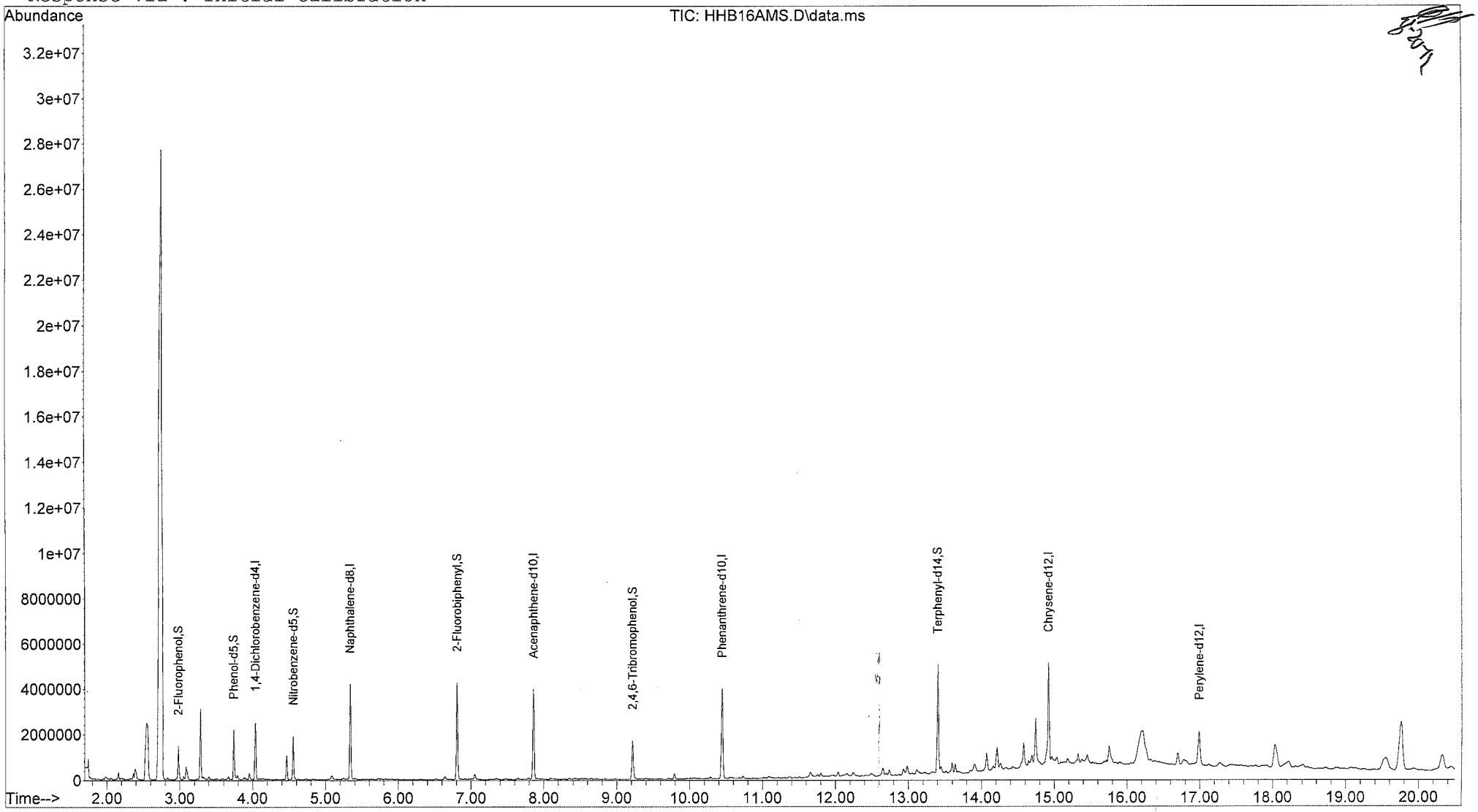
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB16AMS.D Vial: 16
Acq On : 08/16/2012 19:03 Operator: RAH
Sample : 289986 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 16 19:23:41 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB16AMS.D Vial: 16
Acq On : 08/16/2012 19:03 Operator: RAH
Sample : 289986 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 16 19:23:41 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc	Units	
1) 1,4-Dichlorobenzene-d4	4.04	400	152	504388	40.00	ug/mL	
6) Naphthalene-d8	5.34	621	136	2197574	40.00	ug/mL	
8) Acenaphthene-d10	7.86	1049	164	1301197	40.00	ug/mL	
10) Phenanthrene-d10	10.45	1489	188	2470453	40.00	ug/mL	
12) Chrysene-d12	14.92	2250	240	2196807	40.00	ug/mL	
14) Perylene-d12	16.99	2602	264	945728	40.00	ug/mL	
System Monitoring Compounds							
2) 2-Fluorophenol	2.98	220	112	481102	28.400	ug/mL	
4) Phenol-d5	3.74	349	99	829084	37.307	ug/mL	
7) Nitrobenzene-d5	4.56	488	82	629301	33.406	ug/mL	
9) 2-Fluorobiphenyl	6.81	871	172	1833920	38.000	ug/mL	
11) 2,4,6-Tribromophenol	9.22	1281	330	334586	40.229	ug/mL	
13) Terphenyl-d14	13.40	1992	244	2386306	56.265	ug/mL	
Target Compounds							Qvalue
3) 1,4-Oxathiane	3.09	238	104	149317	17.055	ug/mL	93
5) 1,4-Dithiane	4.47	473	120	266238	18.767	ug/mL	94

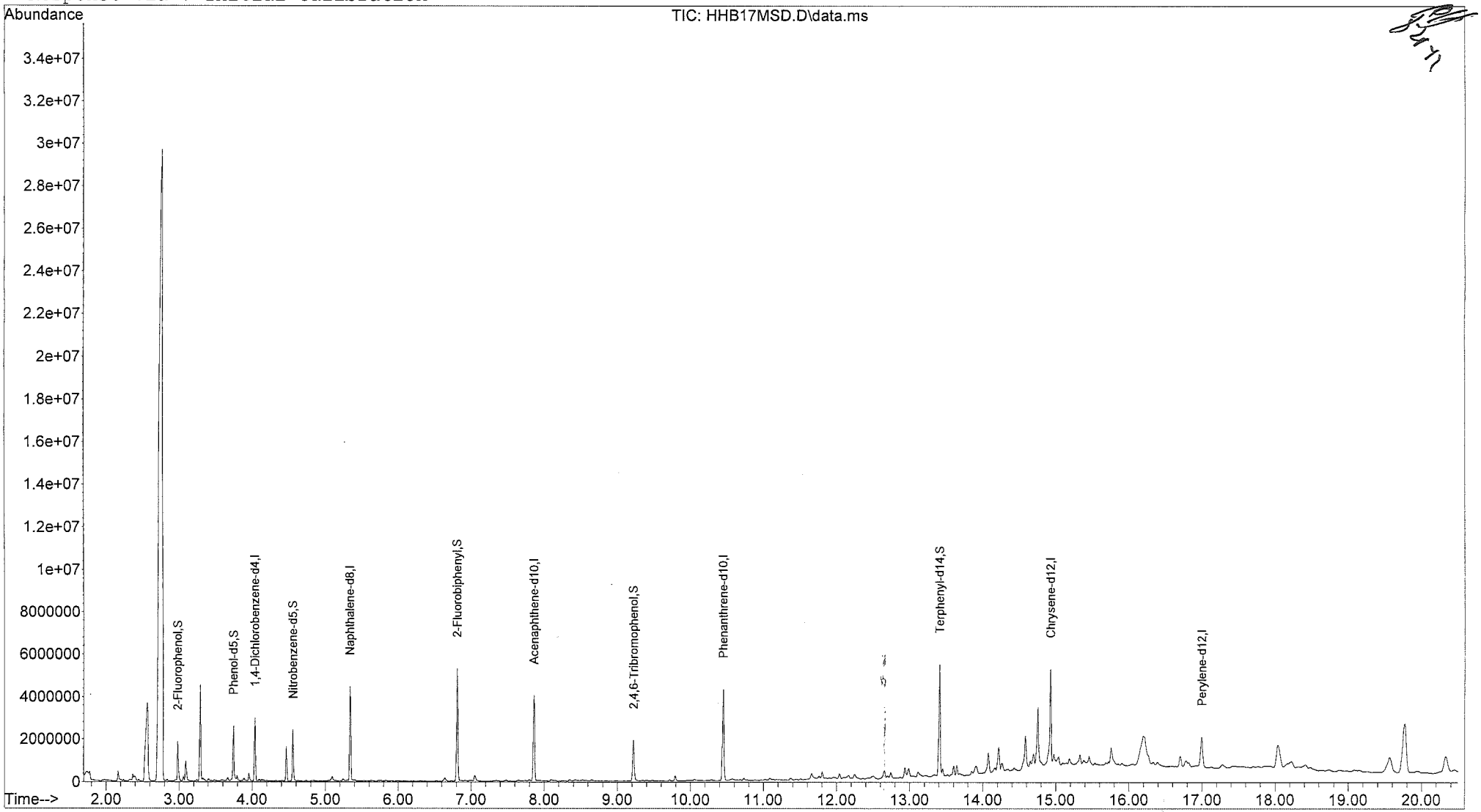
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\l222167etal\HHB17MSD.D
Vial: 17
Acq On : 08/16/2012 19:32
Operator: RAH
Sample : 289987
Inst : 5975-H
Misc : . SOIL 8270
Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 16 19:53:07 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1222167etal\HHB17MSD.D Vial: 17
Acq On : 08/16/2012 19:32 Operator: RAH
Sample : 289987 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: RTEINT.P
Quant Time: Aug 16 19:53:07 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270D07.M (RTE Integrator)
Title : SW-846 8270C
Last Update : Mon Dec 19 16:03:41 2011
Response via : Initial Calibration

Internal Standards	R.T.	Scan	QIon	Response	Conc	Units	
1) 1,4-Dichlorobenzene-d4	4.04	400	152	536484	40.00	ug/mL	
6) Naphthalene-d8	5.34	621	136	2392585	40.00	ug/mL	
8) Acenaphthene-d10	7.86	1050	164	1378040	40.00	ug/mL	
10) Phenanthrene-d10	10.45	1490	188	2569049	40.00	ug/mL	
12) Chrysene-d12	14.93	2251	240	2162322	40.00	ug/mL	
14) Perylene-d12	17.00	2603	264	924082	40.00	ug/mL	
System Monitoring Compounds							
2) 2-Fluorophenol	2.98	220	112	604378	33.543	ug/mL	
4) Phenol-d5	3.75	350	99	1011279	42.783	ug/mL	
7) Nitrobenzene-d5	4.56	488	82	765779	37.337	ug/mL	
9) 2-Fluorobiphenyl	6.81	871	172	2205856	43.158	ug/mL	
11) 2,4,6-Tribromophenol	9.22	1281	330	382296	44.202	ug/mL	
13) Terphenyl-d14	13.41	1993	244	2631424	63.034	ug/mL	
Target Compounds							Qvalue
3) 1,4-Oxathiane	3.09	239	104	206796	22.207	ug/mL	94
5) 1,4-Dithiane	4.47	473	120	376686	24.964	ug/mL	94

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.90	210	47.95	110	60.00	204	73.00	1416
37.00	789	49.10	1366	61.00	2048	74.00	16658
38.00	2065	50.10	37069	62.00	2129	75.00	26072
39.05	11447	51.10	133016	63.05	5870	76.10	8806
40.00	553	52.05	6888	64.05	797	77.10	169557
41.00	409	53.00	317	65.10	2951	78.10	11912
41.95	8	55.00	774	66.00	245	79.00	12159
43.00	174	56.00	4604	67.00	41	80.00	9544
43.95	213	56.95	9649	69.00	182007	80.95	12627
44.95	498	57.95	474	69.95	863	82.05	2981
46.90	50	59.05	212	71.00	84	83.00	2757

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
83.95	505	96.00	1100	107.00	51061	119.05	580
85.00	2076	96.95	164	108.00	7952	119.95	624
86.00	3686	98.00	15285	110.00	99453	120.90	137
86.95	1503	99.00	11947	111.00	14899	121.10	236
88.00	668	100.00	1055	112.00	1808	122.00	3851
88.95	332	100.95	6366	113.00	564	123.00	5511
91.00	2779	101.95	411	113.95	125	124.00	2550
92.00	3243	102.95	2332	115.00	255	125.00	2380
93.00	20146	104.00	4550	116.05	3193	127.00	194795
93.95	1286	105.00	4189	117.00	41283	128.00	14880
95.00	369	106.10	1215	118.00	2979	129.00	77256

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
130.00	6368	139.95	881	150.95	941	160.00	3180
130.95	1208	141.00	9687	151.20	517	161.00	4674
132.05	708	142.00	3150	151.70	439	161.95	1330
132.80	252	143.00	2120	152.00	274	162.80	161
133.00	135	143.95	625	153.00	3192	163.05	274
134.00	2181	145.00	646	154.00	2288	164.00	668
134.95	5754	146.05	1877	155.00	5190	164.95	3521
136.00	2380	147.00	4767	156.05	8000	166.05	2851
137.05	2966	148.00	10934	157.05	1896	166.95	19745
137.95	736	148.95	2140	157.95	1883	168.00	8501
138.95	478	150.05	661	159.00	1302	169.05	1743

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
170.05	659	181.00	5020	192.00	5090	205.00	26323
170.95	942	182.00	946	193.00	5198	206.00	108360
171.95	1888	183.00	572	194.00	1397	207.00	14246
173.00	2312	184.00	1287	195.05	970	208.00	3479
174.00	4313	185.00	7511	196.00	16758	208.95	1198
175.00	7834	186.00	59352	198.00	449451	210.30	703
176.05	2966	187.00	15865	199.00	30245	210.95	4542
177.00	3955	188.05	1696	200.00	2429	212.95	335
178.00	859	189.00	3403	201.45	3070	215.00	1191
179.00	15556	189.95	600	202.95	2845	216.05	2349
180.00	10462	191.00	1758	204.00	15477	217.00	27032

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
218.00	3469	230.00	769	240.95	1460	252.00	534
218.95	280	231.00	2262	242.00	3478	253.05	1166
219.20	106	231.95	384	243.10	4047	255.00	269404
221.00	32173	232.95	580	244.00	51989	256.00	38803
223.00	6700	234.00	1735	245.05	7448	257.00	3231
224.00	61472	234.95	1711	246.00	9407	258.00	14382
225.00	15875	235.95	1100	246.95	2002	259.00	2277
226.05	1856	237.00	2076	248.05	411	259.95	452
227.00	24363	238.05	341	249.00	1736	260.95	518
228.00	3479	238.95	964	250.00	378	263.00	155
229.00	5244	240.00	804	251.05	421	263.80	387

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
264.10	160	276.00	16781	288.00	125	299.00	58
265.00	5592	277.00	9464	288.90	438	300.95	468
265.90	1371	278.00	1550	289.95	375	301.95	650
266.90	202	278.80	76	291.05	236	303.05	4040
267.85	19	278.95	278	291.90	98	304.05	968
269.90	381	281.00	201	292.10	306	305.00	88
270.95	583	282.05	293	293.05	2240	308.00	529
272.05	745	283.00	1149	293.95	535	308.95	363
273.00	8812	284.00	800	296.00	33656	309.95	517
274.00	21501	285.00	1731	297.00	4977	311.00	52
275.00	124987	285.95	376	297.90	387	312.20	67

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
312.95	387	326.05	153	341.00	1397	365.95	2022
314.00	1732	327.00	2246	342.00	324	366.90	53
315.00	3856	328.00	1118	346.00	2412	369.95	327
316.00	2135	329.10	116	347.00	412	371.10	748
317.00	363	331.95	909	351.00	86	372.05	5254
319.90	179	333.00	1200	352.05	3088	373.00	1217
321.05	1110	334.05	7150	353.05	2118	374.05	166
322.05	618	335.05	1830	354.05	3337	383.05	1223
323.05	11178	336.05	286	355.05	607	383.95	469
324.05	2118	339.00	115	358.95	270	384.90	58
325.05	158	340.00	124	365.00	13675	390.00	645

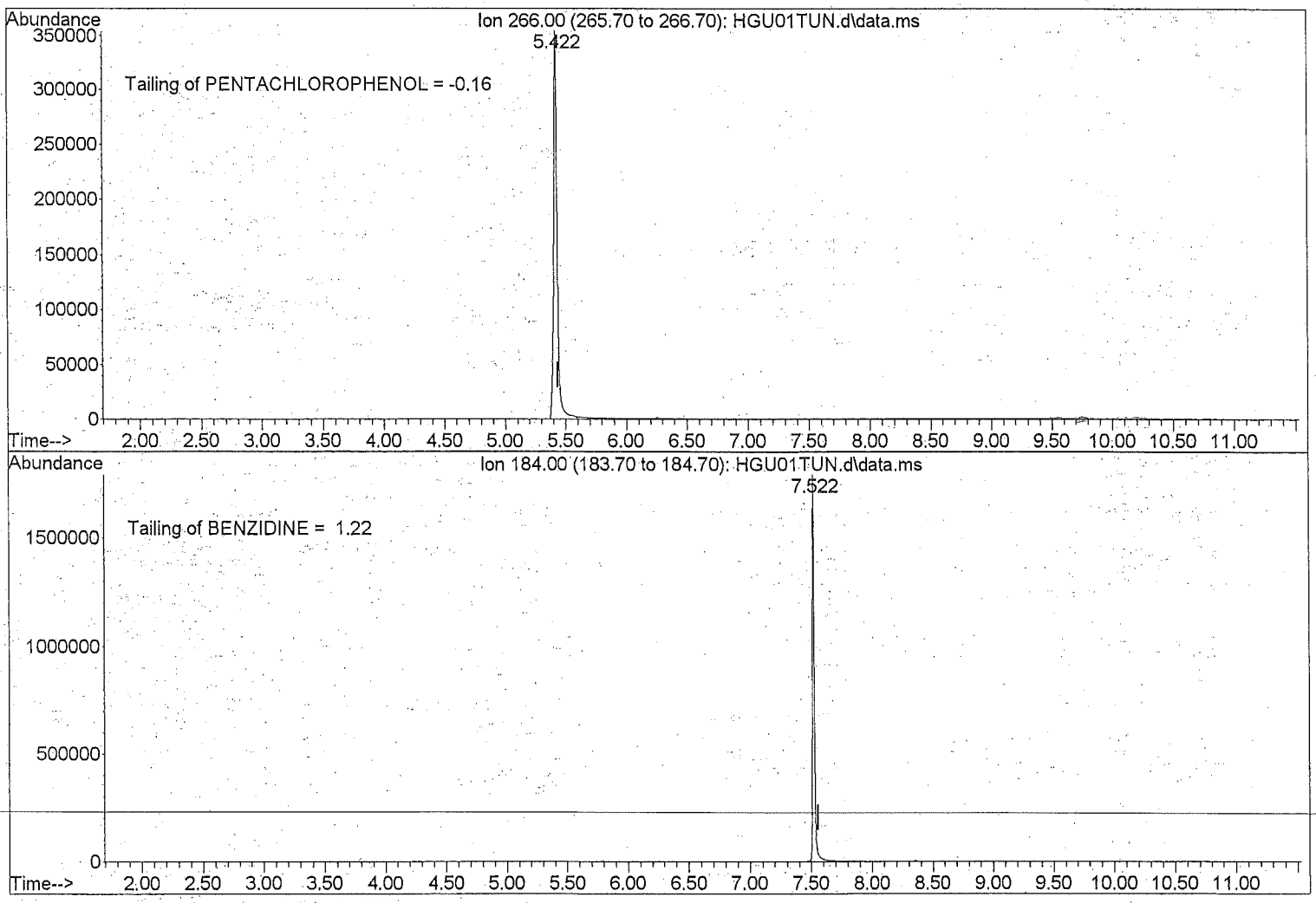
Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
391.05	452	425.05	302	444.10	5675		
392.05	336	435.45	112	445.00	368		
400.90	274	436.10	52				
402.00	1684	437.00	72				
403.00	2553	437.50	61				
404.00	801	437.70	106				
410.10	50	438.10	252				
421.00	1998	438.85	543				
422.05	1989	441.10	47803				
423.10	13843	442.10	315904				
424.05	2863	443.10	60693				

Data File: HGU01TUN.d
Date Acquired: 08/08/2012 10:06
Operator ID: RAH
Name: 8270 DFTPP 13808
Misc: X:1/11/13

Instrument: 5975-H
Acq Method: 8270DTUN.M
DA Method: 8270DTUN.M

Cal Title: EPA/CLP SOM01
Last Cal Update: Wed Nov 23 09:22:39 2011
X:1/11/13

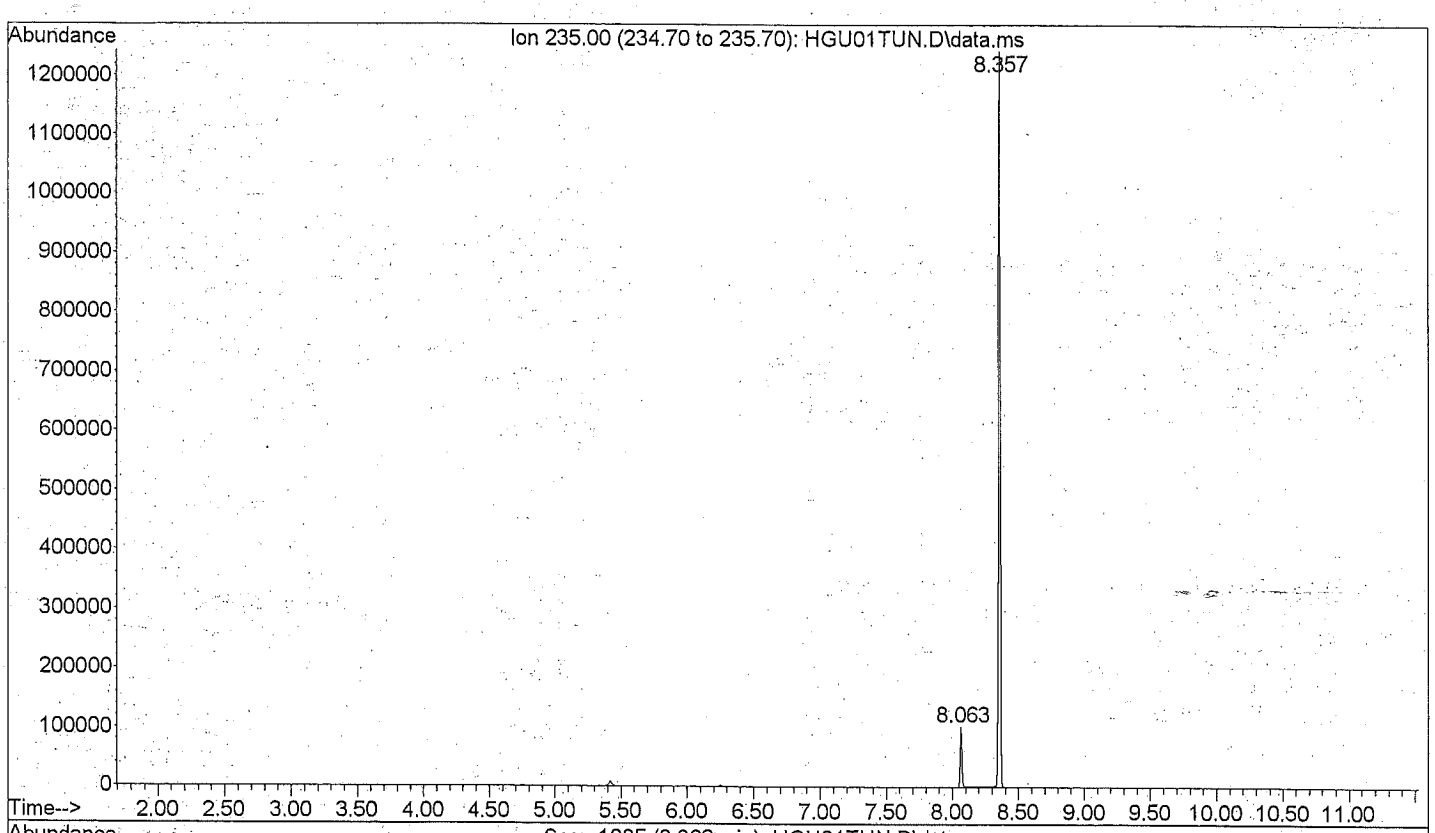


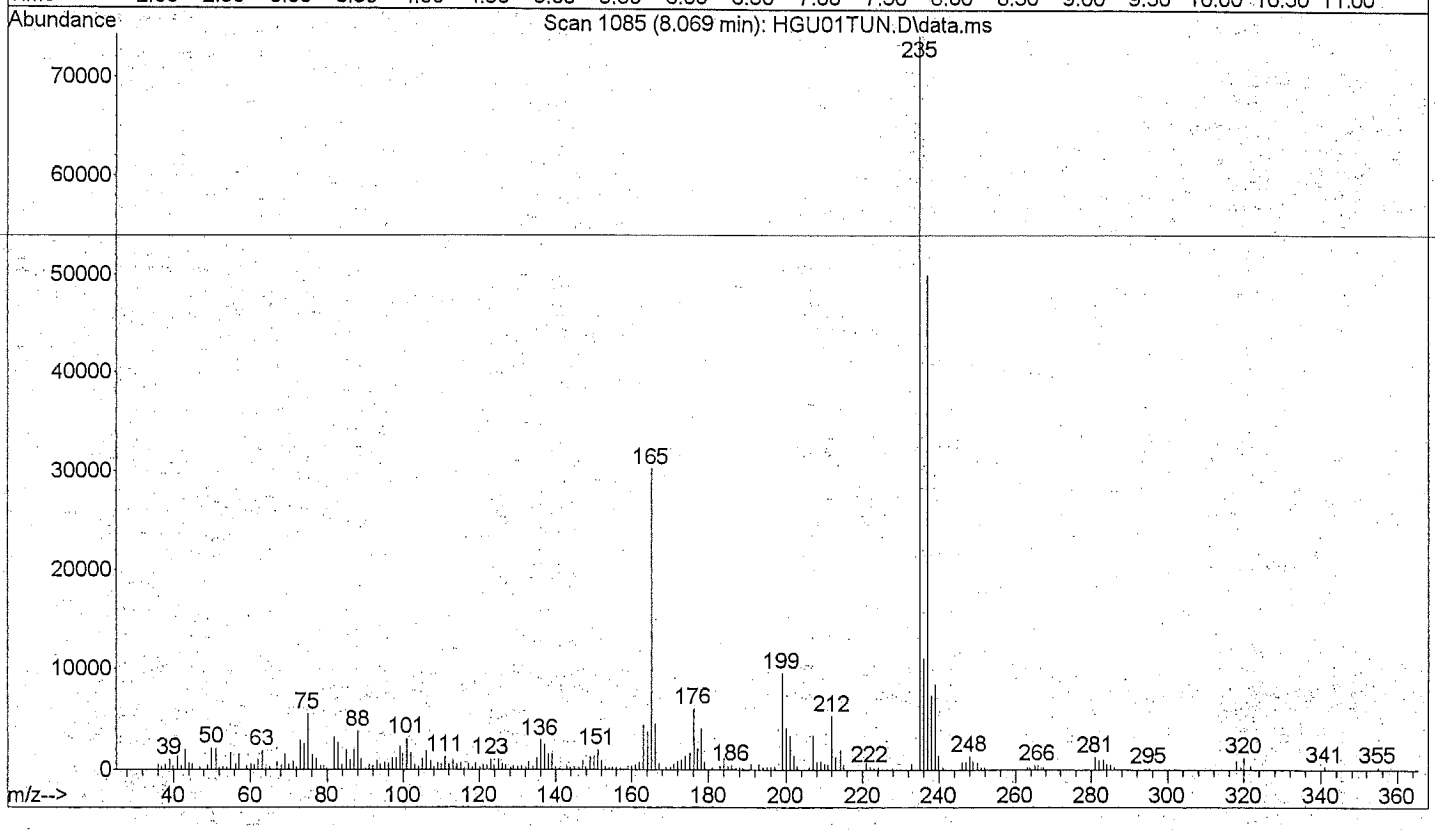
Ion 235.00 (234.70 to 235.70): HGU01TUN.D\data.ms
8270 DFTPP 13808

Peak #	Ret Time	Type	Width	Area	Start Time	End Time
1	8.063	rBV	0.082	94255	8.027	8.110
2	8.357	rVB	0.112	1143185	8.286	8.398

DDT degradation = $\frac{94255}{94255 + 1143185}$ = 7.6%

File :D:\1\DATA\2012\AUG12\08AUG12H\HGU01TUN.D
Operator : RAH
Acquired : 8 Aug 2012 10:06 am using AcqMethod 8270DTUN.M
Instrument : 5975-H
Sample Name: 8270 DFTPP 13808
Misc Info : X:1/11/13
Vial Number: 1



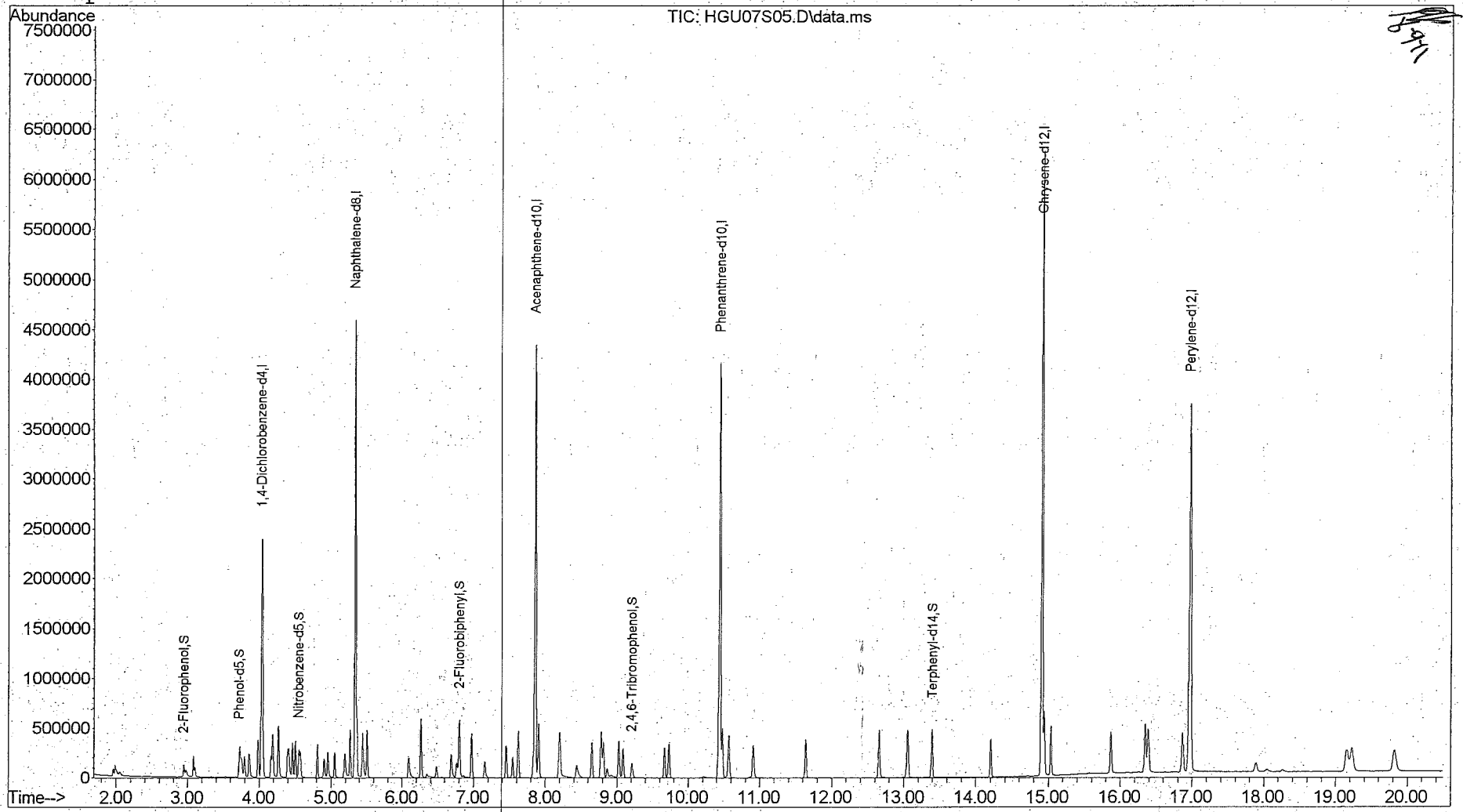


Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU07S05.D Vial: 7
Acq On : 08/08/2012 12:59 Operator: RAH
Sample : 8270 5 std 15974 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:23:28 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

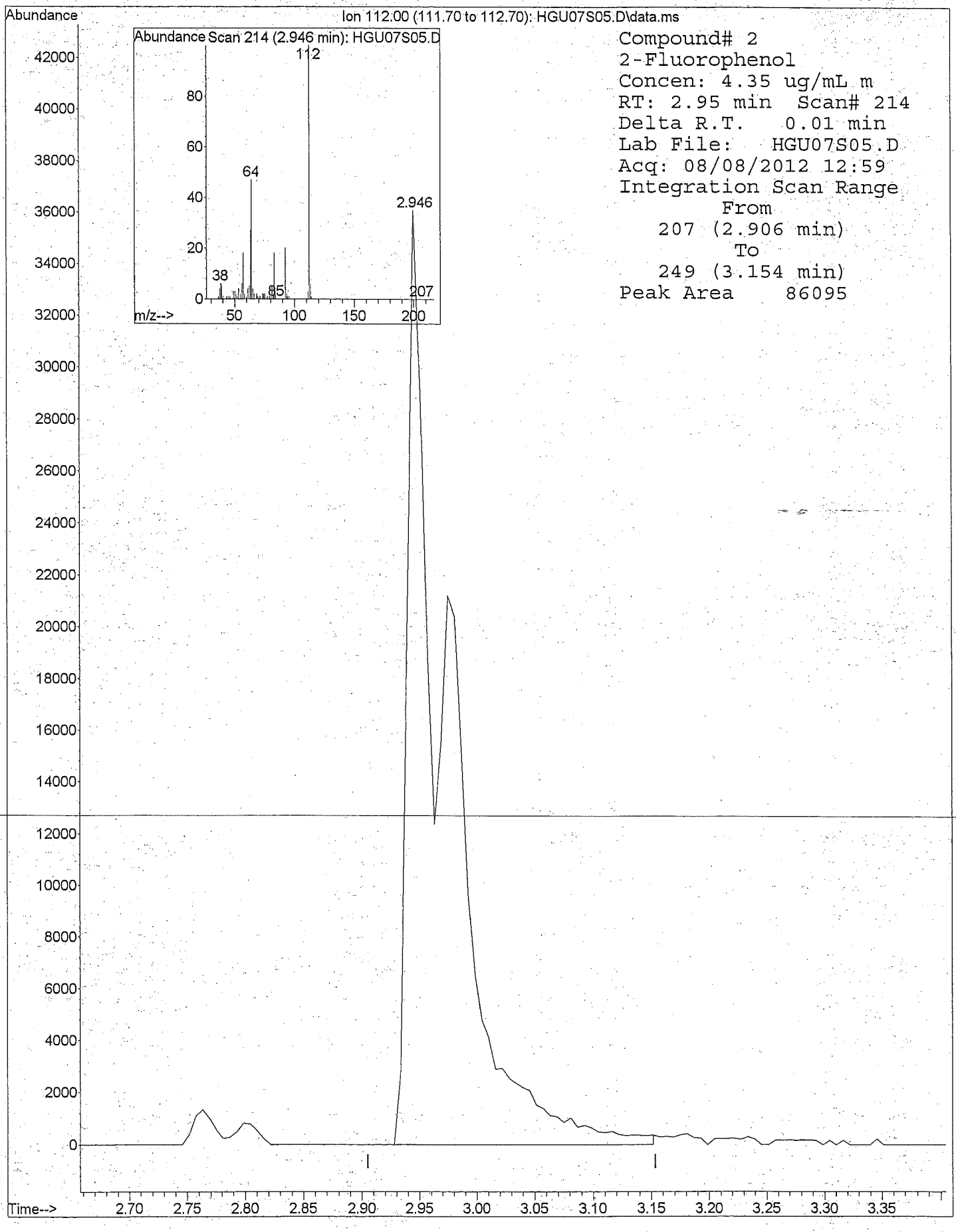
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU07S05.D Vial: 7
Acq On : 08/08/2012 12:59 Operator: RAH
Sample : 8270 5 std 15974 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:23:28 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	588867	40.00 ug/mL
6) Naphthalene-d8	5.33	136	2620860	40.00 ug/mL
8) Acenaphthene-d10	7.85	164	1436514	40.00 ug/mL
10) Phenanthrene-d10	10.43	188	2595047	40.00 ug/mL
12) Chrysene-d12	14.91	240	2776807	40.00 ug/mL
14) Perylene-d12	16.97	264	2442971	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	86095	4.352ug/mL m
4) Phenol-d5	3.72	99	113950	4.392ug/mL
7) Nitrobenzene-d5	4.55	82	99427	4.426ug/mL
9) 2-Fluorobiphenyl	6.80	172	243673	4.573ug/mL
11) 2,4,6-Tribromophenol	9.21	330	35477	4.061ug/mL
13) Terphenyl-d14	13.39	244	245085	4.572ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	54091	5.291ug/mL 99
5) 1,4-Dithiane	4.46	120	87903	5.307ug/mL 98

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



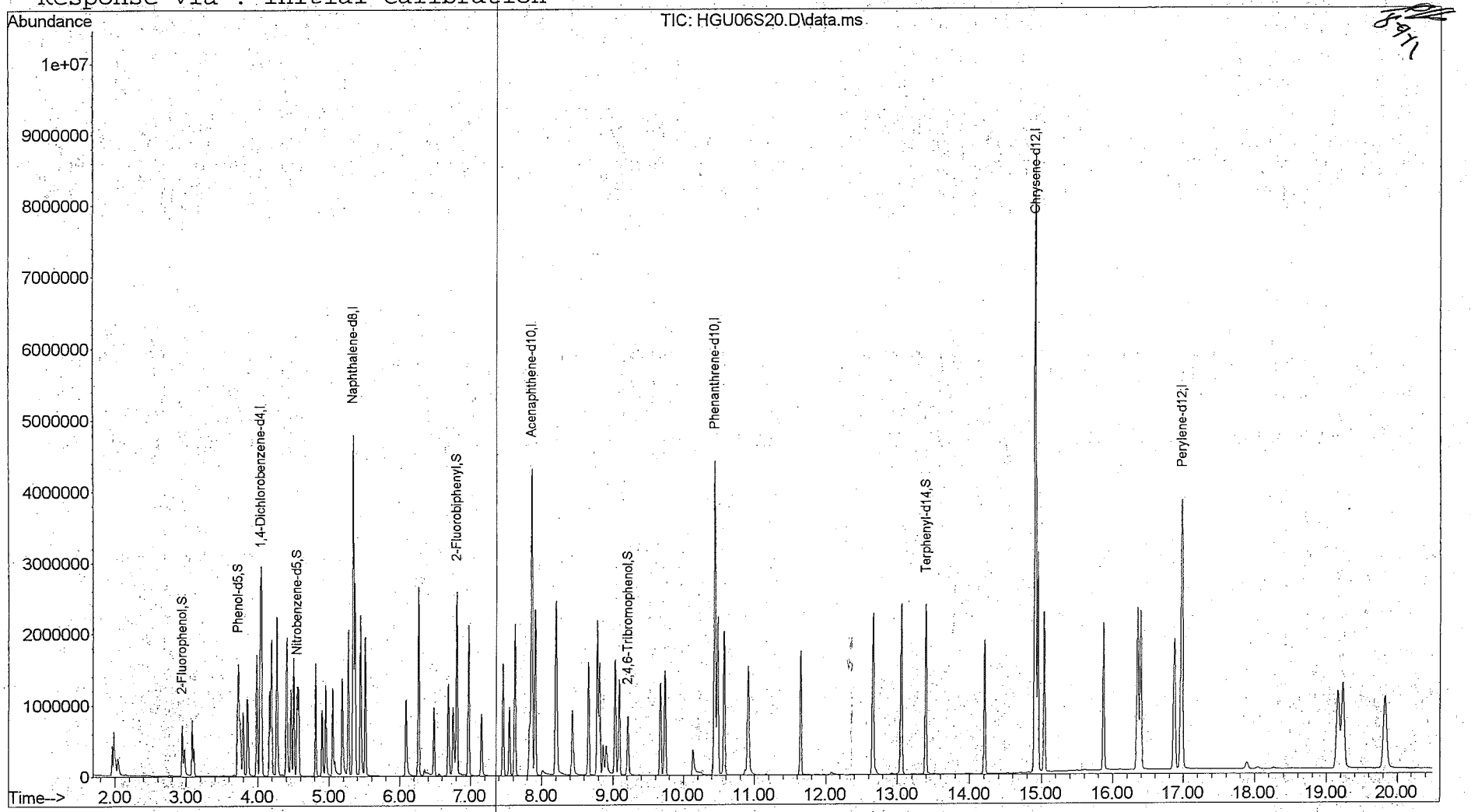
8270DOND.M 5975-H 8270DOND.M 8270 5 std 15974 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU06S20.D Vial: 6
Acq On : 08/08/2012 12:29 Operator: RAH
Sample : 8270 20 std 15973 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:23:14 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

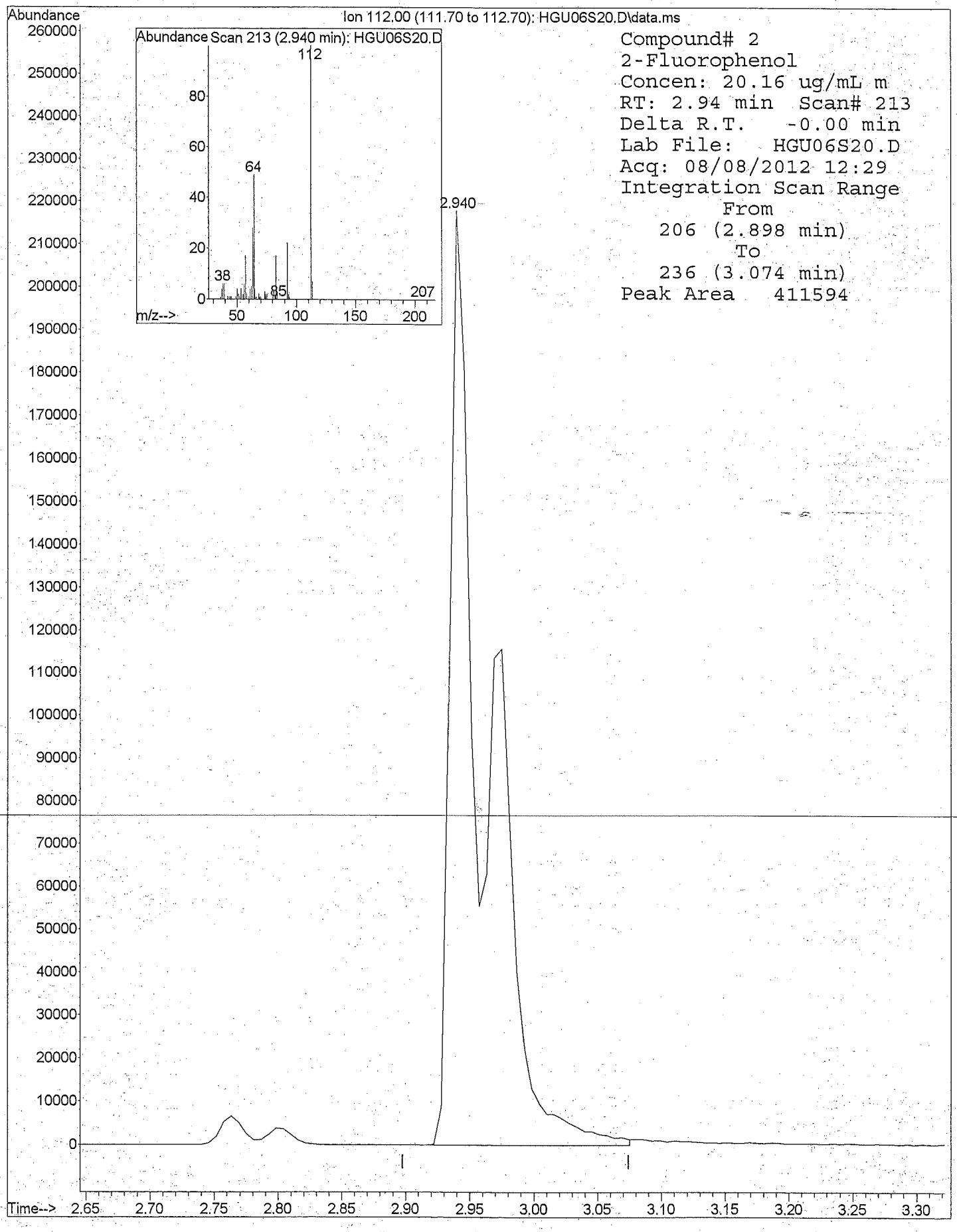
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU06S20.D Vial: 6
Acq On : 08/08/2012 12:29 Operator: RAH
Sample : 8270 20 std 15973 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:23:14 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	607773	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2617015	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1459213	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2715173	40.00 ug/mL
12) Chrysene-d12	14.92	240	3091127	40.00 ug/mL
14) Perylene-d12	16.97	264	2675827	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	411594	20.158ug/mL m
4) Phenol-d5	3.72	99	538093	20.094ug/mL
7) Nitrobenzene-d5	4.55	82	451447	20.124ug/mL
9) 2-Fluorobiphenyl	6.80	172	1088983	20.121ug/mL
11) 2,4,6-Tribromophenol	9.21	330	178946	19.577ug/mL
13) Terphenyl-d14	13.39	244	1191516	19.966ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	202599	19.200ug/mL m 99
5) 1,4-Dithiane	4.46	120	327670	19.168ug/mL 99

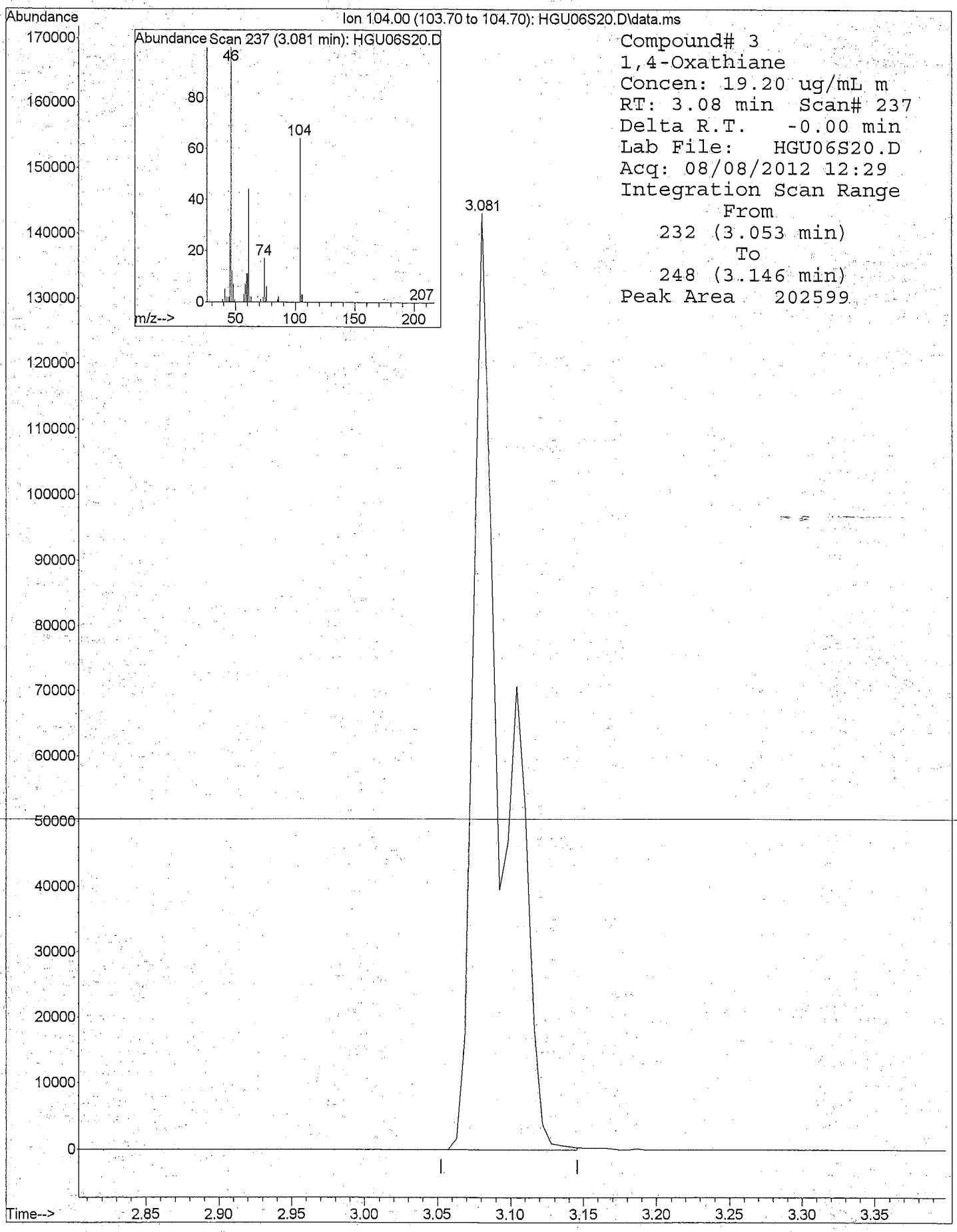
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 20 std 15973 . X:1/9/13

MANUAL INTEGRATION FOR 1,4-Oxathiane



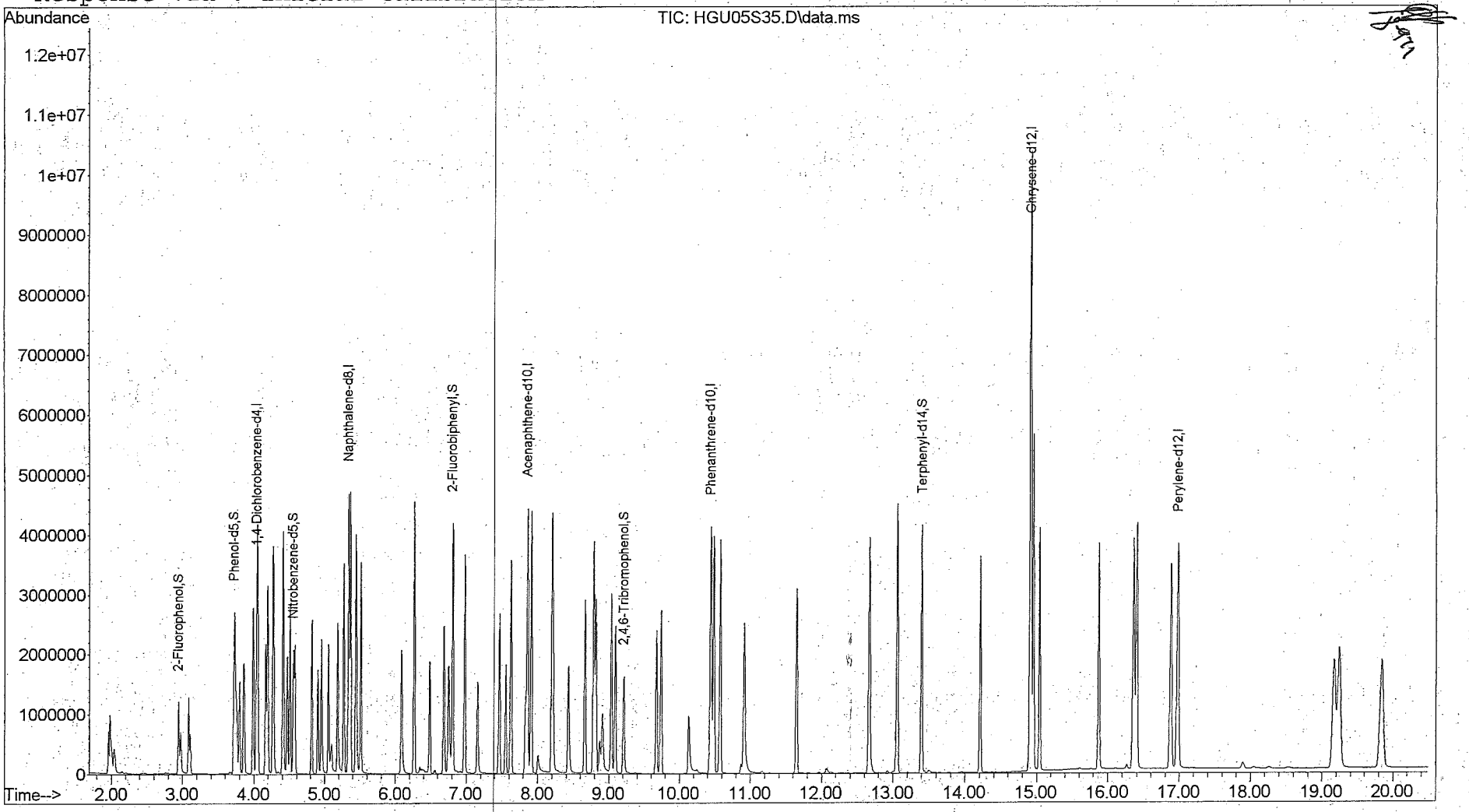
8270DOND.M 5975-H 8270DOND.M 8270 20 std 15973 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU05S35.D Vial: 5
Acq On : 08/08/2012 12:00 Operator: RAH
Sample : 8270 35 std 15972 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:57 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

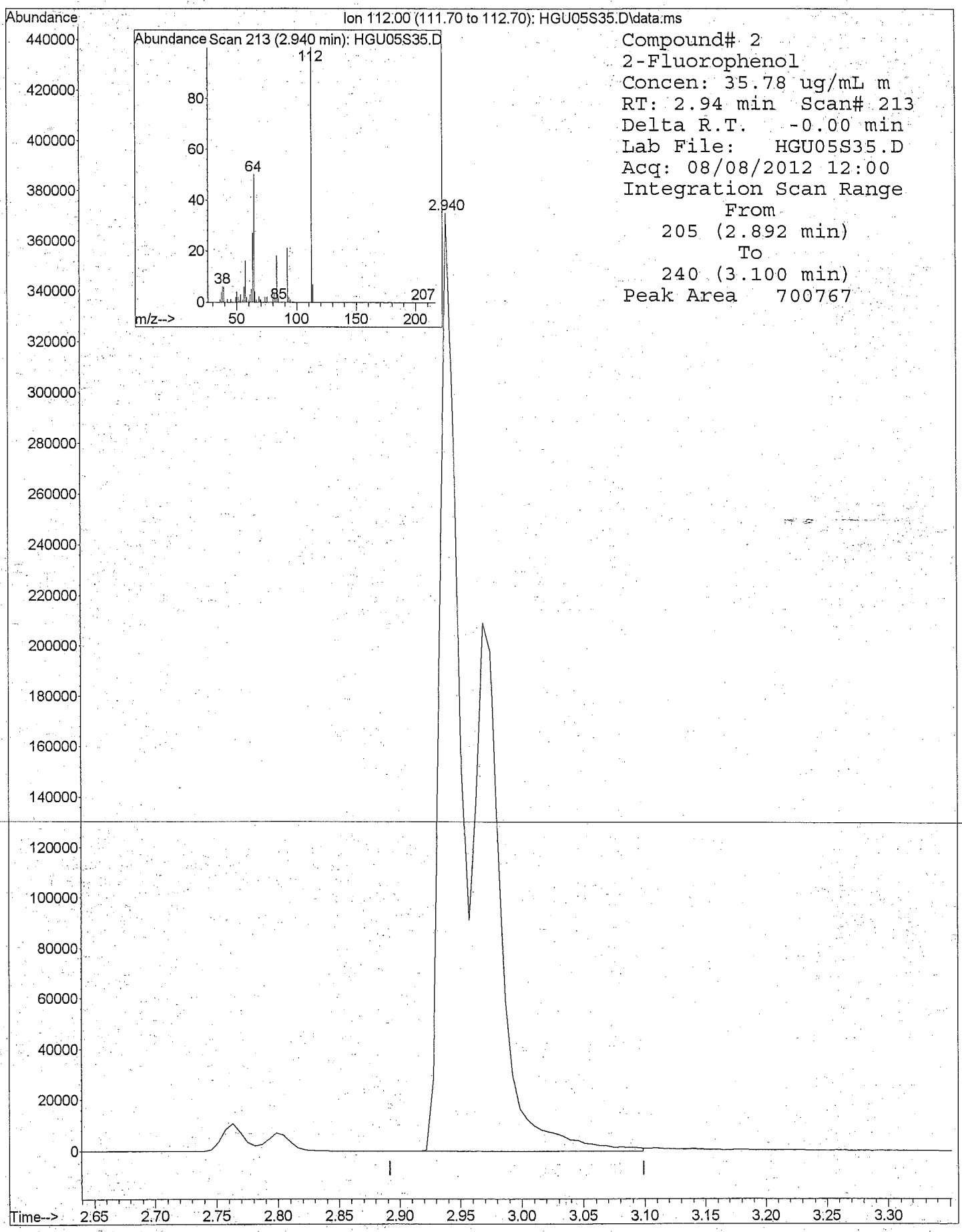
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU05S35.D Vial: 5
Acq On : 08/08/2012 12:00 Operator: RAH
Sample : 8270 35 std 15972 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:57 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	582911	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2556097	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1465004	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2738820	40.00 ug/mL
12) Chrysene-d12	14.92	240	3035266	40.00 ug/mL
14) Perylene-d12	16.97	264	2627498	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	700767	35.784ug/mL m
4) Phenol-d5	3.72	99	920516	35.841ug/mL
7) Nitrobenzene-d5	4.55	82	793614	36.219ug/mL
9) 2-Fluorobiphenyl	6.81	172	1951088	35.907ug/mL
11) 2,4,6-Tribromophenol	9.21	330	335739	36.413ug/mL
13) Terphenyl-d14	13.40	244	2149311	36.678ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	343846	33.975ug/mL m 99
5) 1,4-Dithiane	4.47	120	556869	33.965ug/mL 98

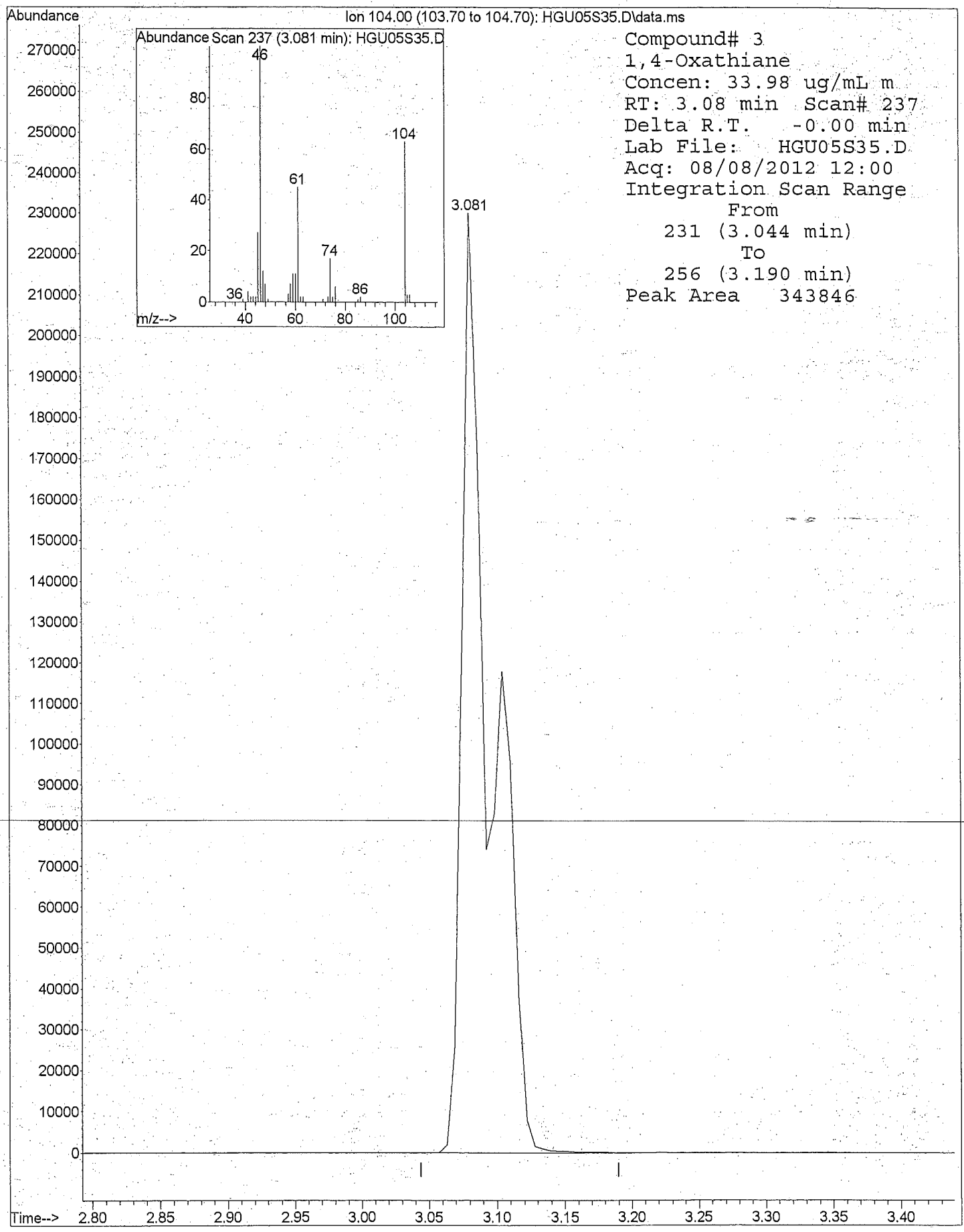
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 35 std 15972 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



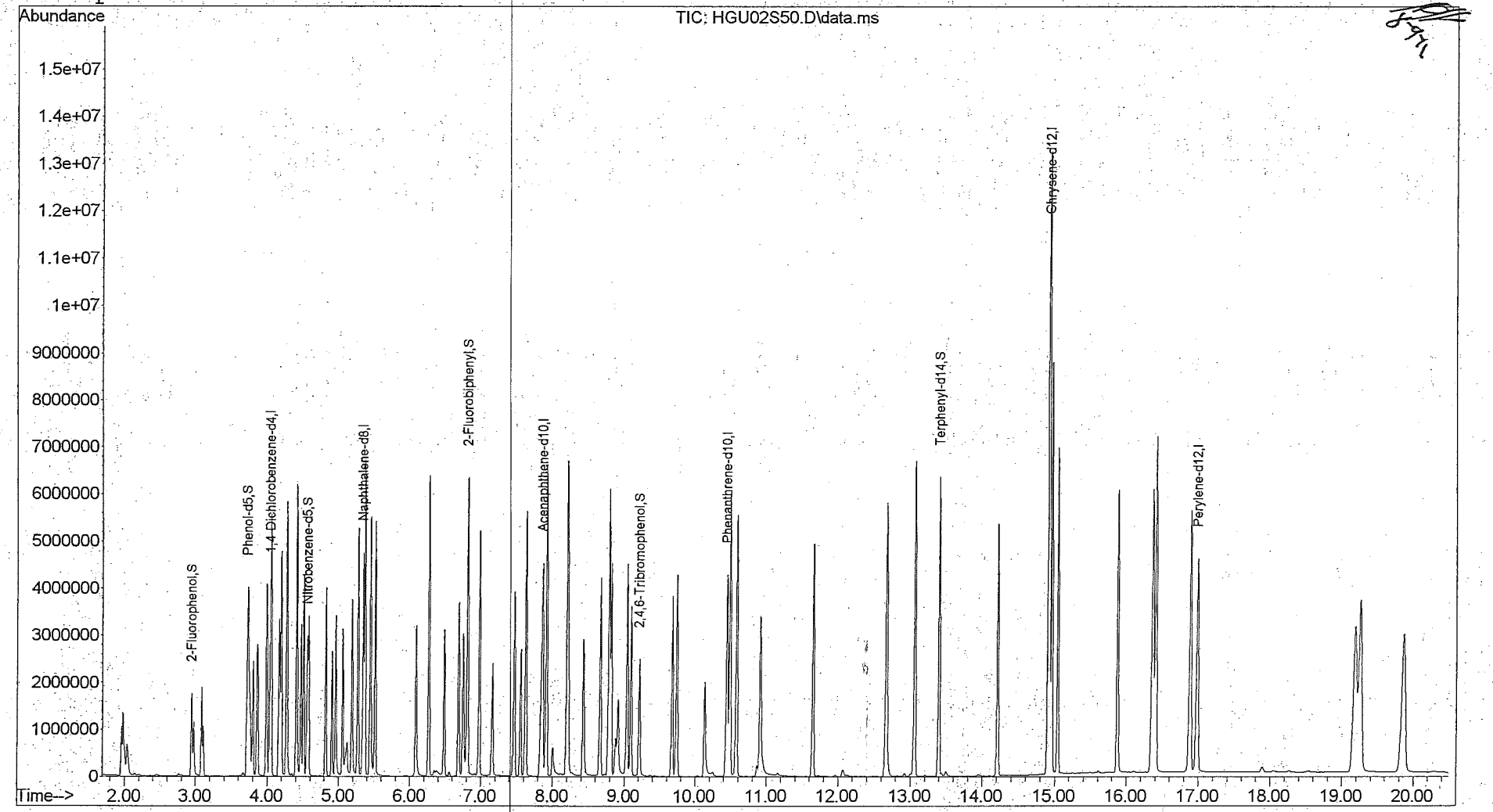
8270DOND.M 5975-H 8270DOND.M 8270 35 std 15972 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU02S50.D Vial: 2
Acq On : 08/08/2012 10:26 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:00 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

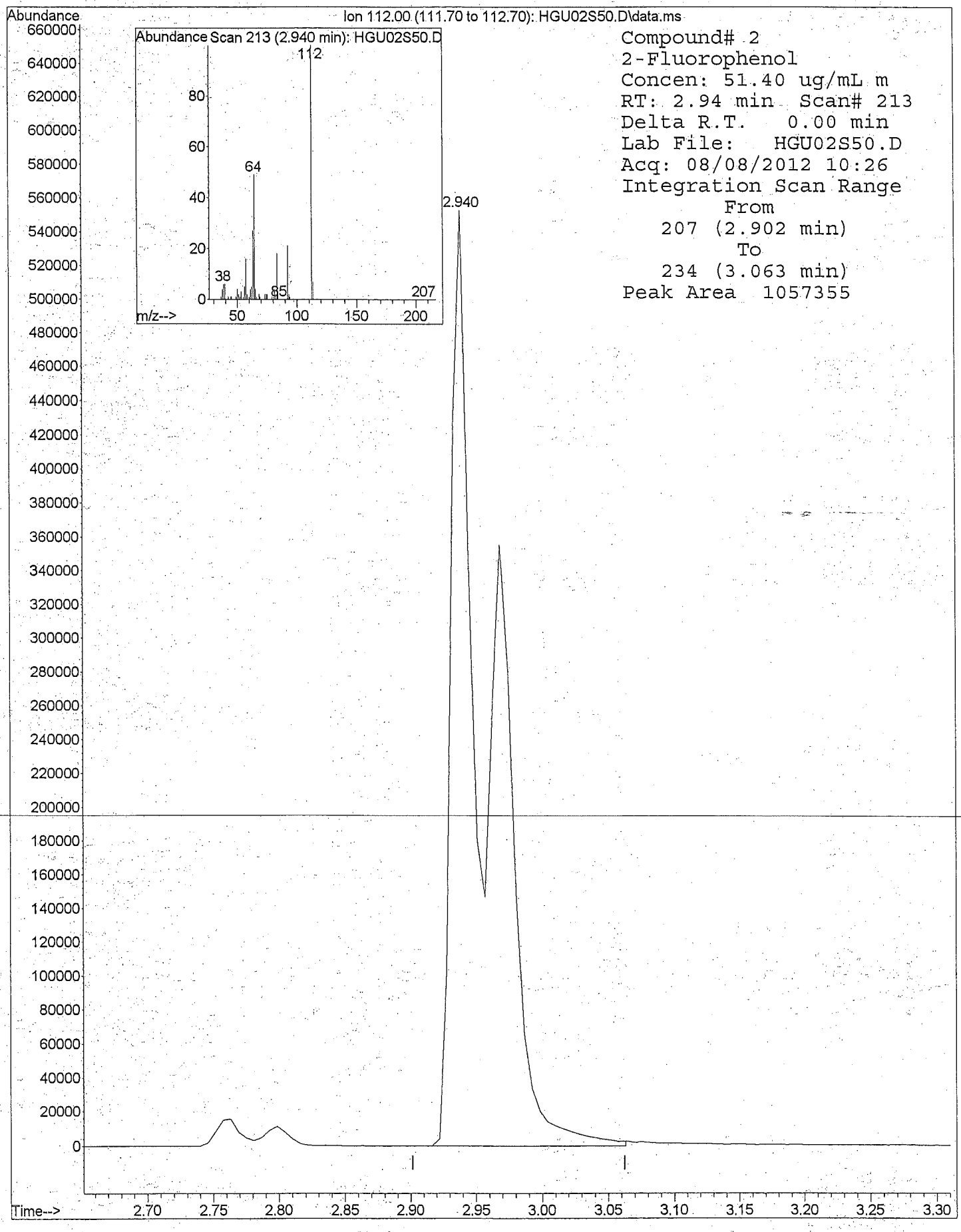
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU02S50.D Vial: 2
Acq On : 08/08/2012 10:26 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:00 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	
1) 1,4-Dichlorobenzene-d4	4.03	152	612345	40.00 ug/mL	
6) Naphthalene-d8	5.34	136	2685634	40.00 ug/mL	
8) Acenaphthene-d10	7.86	164	1537458	40.00 ug/mL	
10) Phenanthrene-d10	10.44	188	2905275	40.00 ug/mL	
12) Chrysene-d12	14.92	240	3449311	40.00 ug/mL	
14) Perylene-d12	16.98	264	3127477	40.00 ug/mL	
System Monitoring Compounds					
2) 2-Fluorophenol	2.94	112	1057355	51.398ug/mL	m
4) Phenol-d5	3.72	99	1371889	50.848ug/mL	
7) Nitrobenzene-d5	4.56	82	1173697	50.982ug/mL	
9) 2-Fluorobiphenyl	6.81	172	2890739	50.693ug/mL	
11) 2,4,6-Tribromophenol	9.21	330	511120	52.257ug/mL	
13) Terphenyl-d14	13.40	244	3359400	50.447ug/mL	
Target Compounds					Qvalue
3) 1,4-Oxathiane	3.08	104	531164	49.961ug/mL	m 98
5) 1,4-Dithiane	4.47	120	861261	50.006ug/mL	99

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

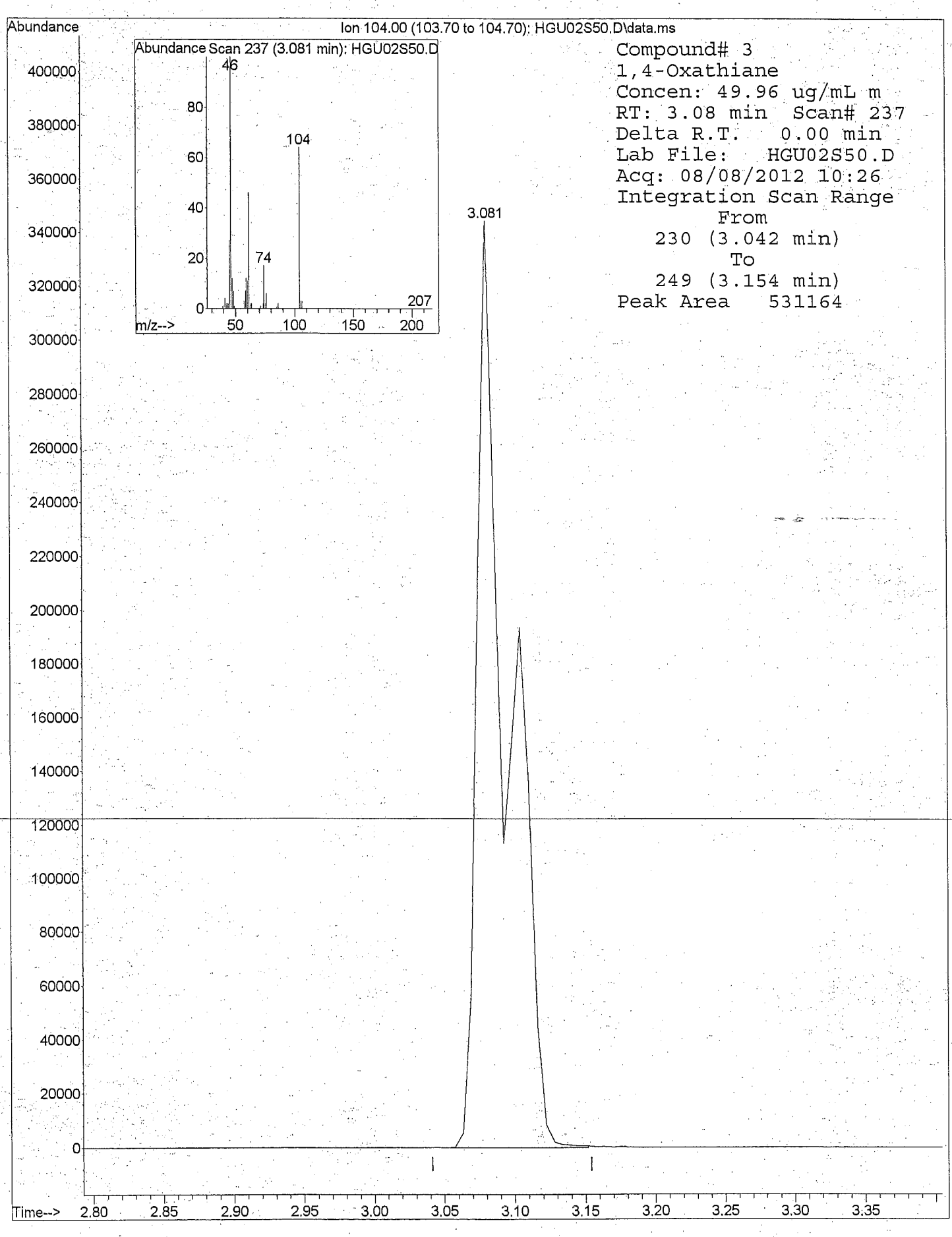
MANUAL INTEGRATION FOR 2-Fluorophenol



Compound# 2
2-Fluorophenol
Concen: 51.40 ug/mL m
RT: 2.94 min Scan# 213
Delta R.T. 0.00 min
Lab File: HGU02S50.D
Acq: 08/08/2012 10:26
Integration Scan Range
From
207 (2.902 min)
To
234 (3.063 min)
Peak Area 1057355

8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

MANUAL INTEGRATION FOR 1,4-Oxathiane



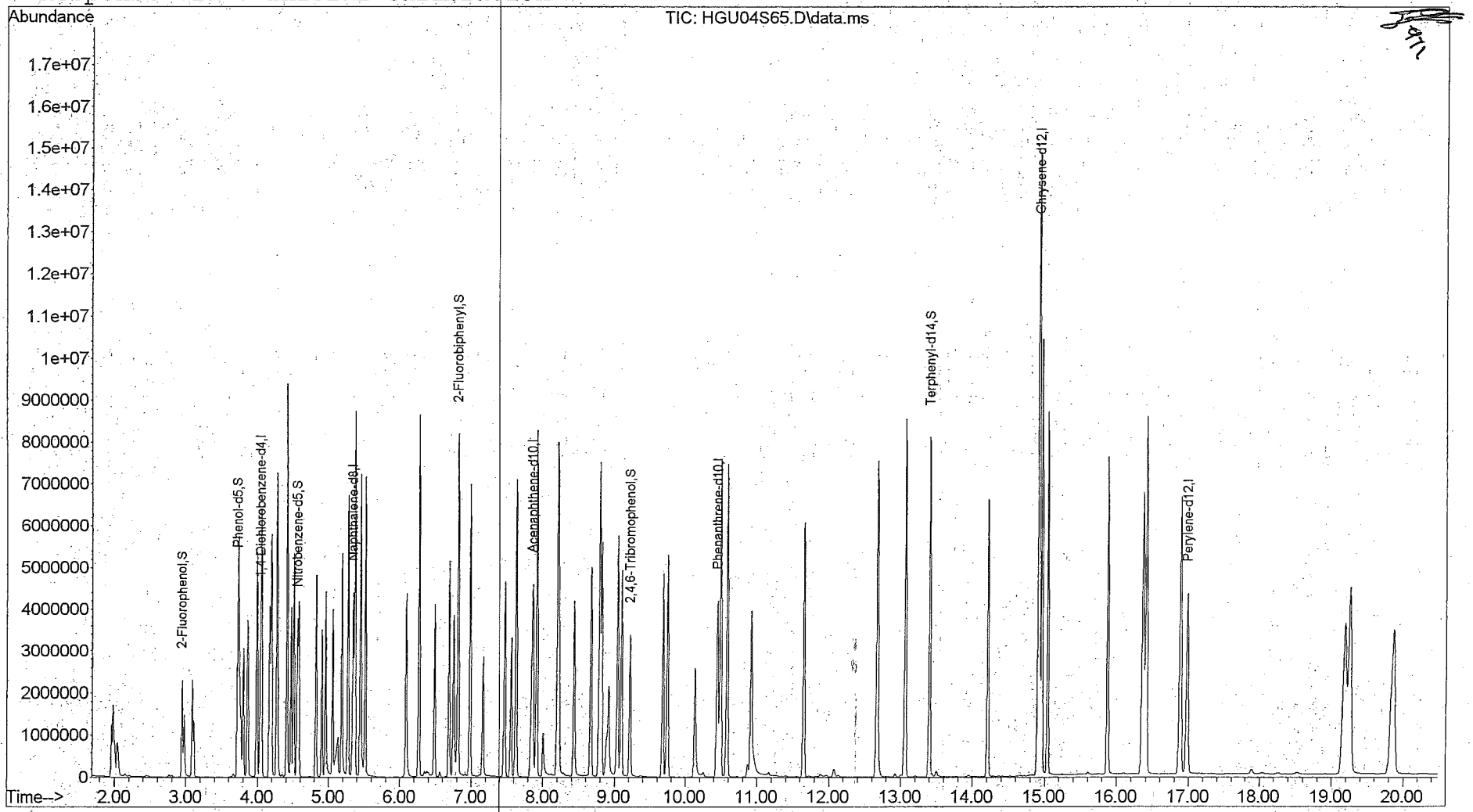
8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU04S65.D Vial: 4
Acq On : 08/08/2012 11:30 Operator: RAH
Sample : 8270 65 std 15971 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:39 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

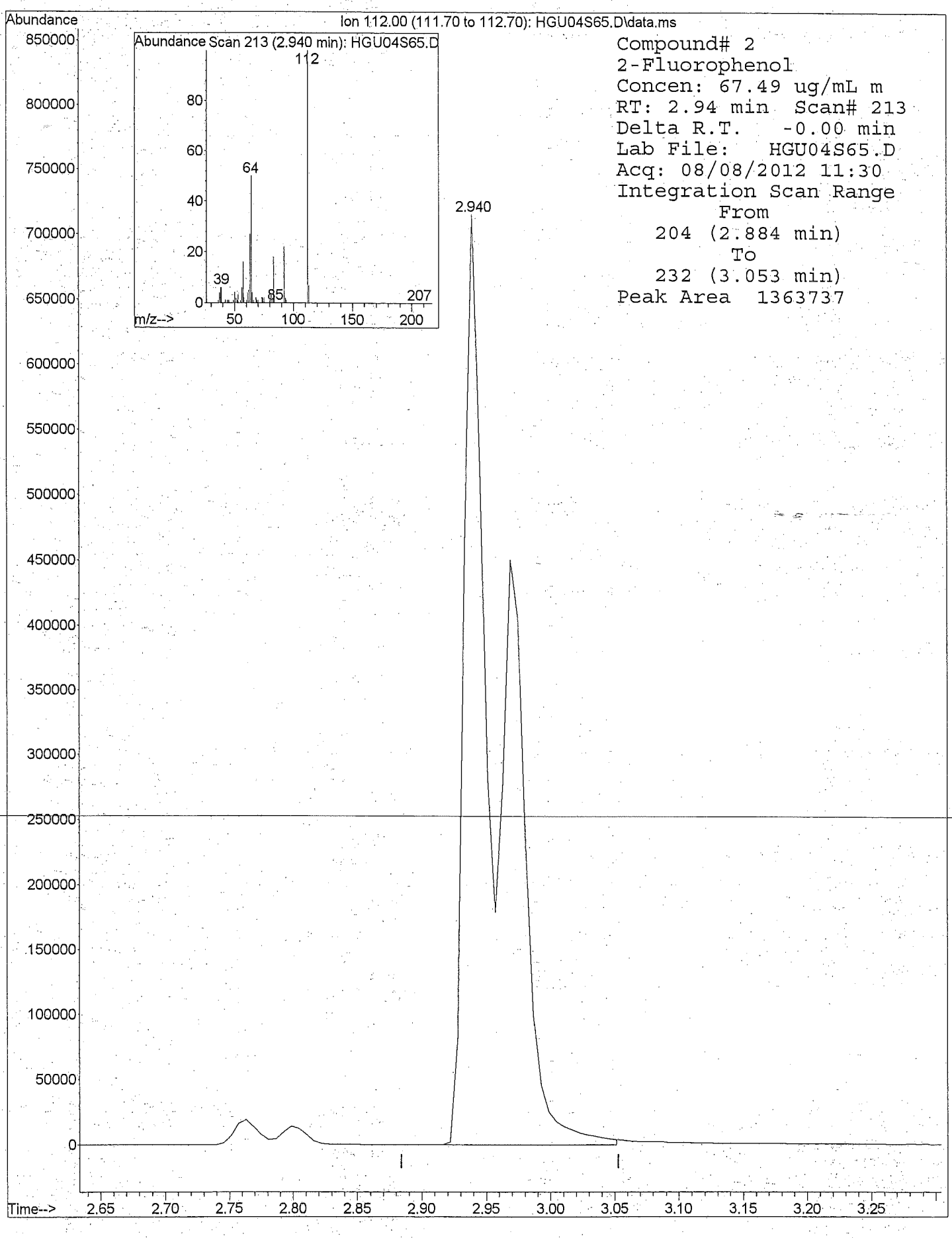
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU04S65.D Vial: 4
Acq On : 08/08/2012 11:30 Operator: RAH
Sample : 8270 65 std 15971 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:39 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	601456	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2621070	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1527619	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2869288	40.00 ug/mL
12) Chrysene-d12	14.92	240	3336798	40.00 ug/mL
14) Perylene-d12	16.98	264	2949965	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	1363737	67.491ug/mL m
4) Phenol-d5	3.72	99	1796093	67.776ug/mL
7) Nitrobenzene-d5	4.56	82	1514769	67.417ug/mL
9) 2-Fluorobiphenyl	6.81	172	3752969	66.238ug/mL
11) 2,4,6-Tribromophenol	9.22	330	665537	68.899ug/mL
13) Terphenyl-d14	13.40	244	4279647	66.433ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	671622	64.317ug/mL m 98
5) 1,4-Dithiane	4.47	120	1091903	64.545ug/mL 99

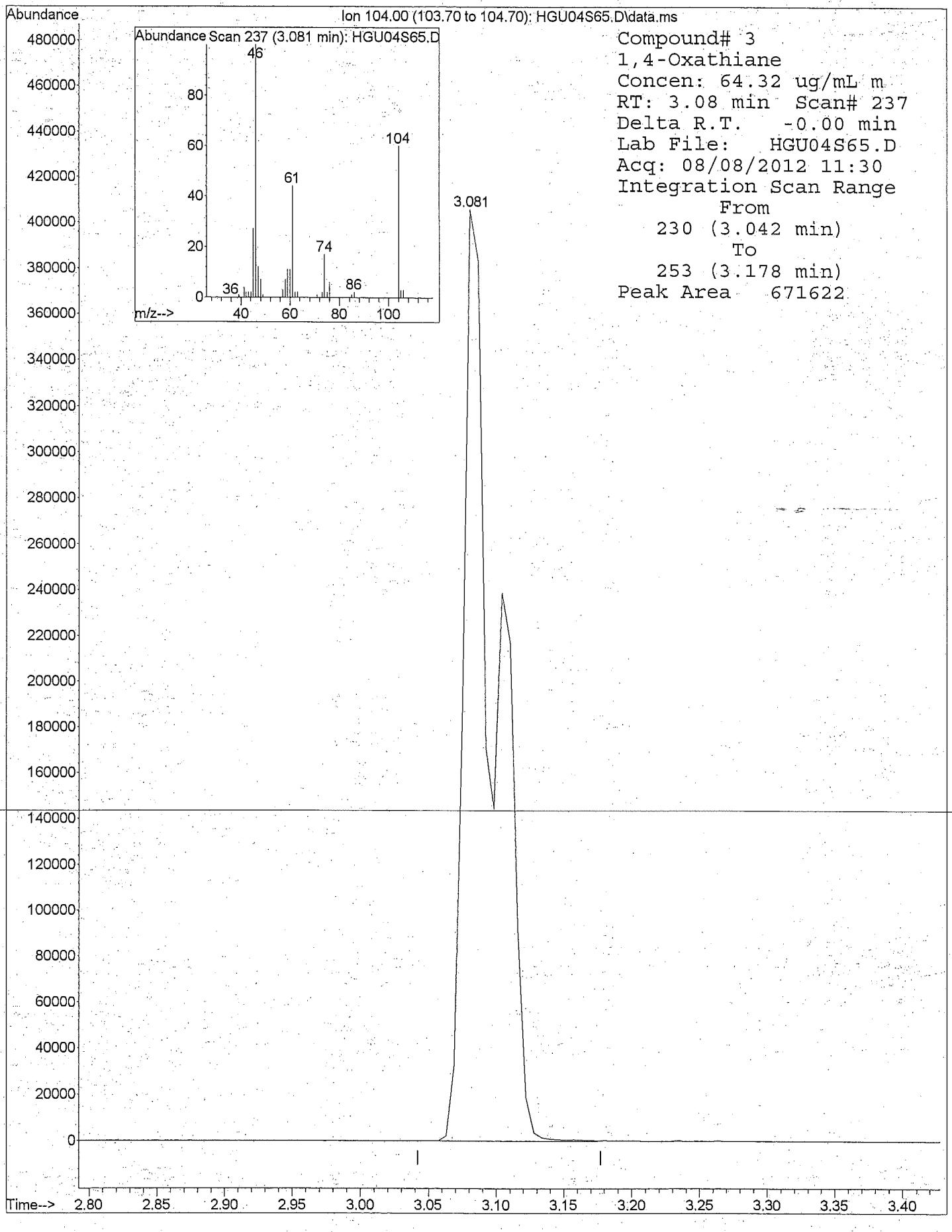
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 65 std 15971 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



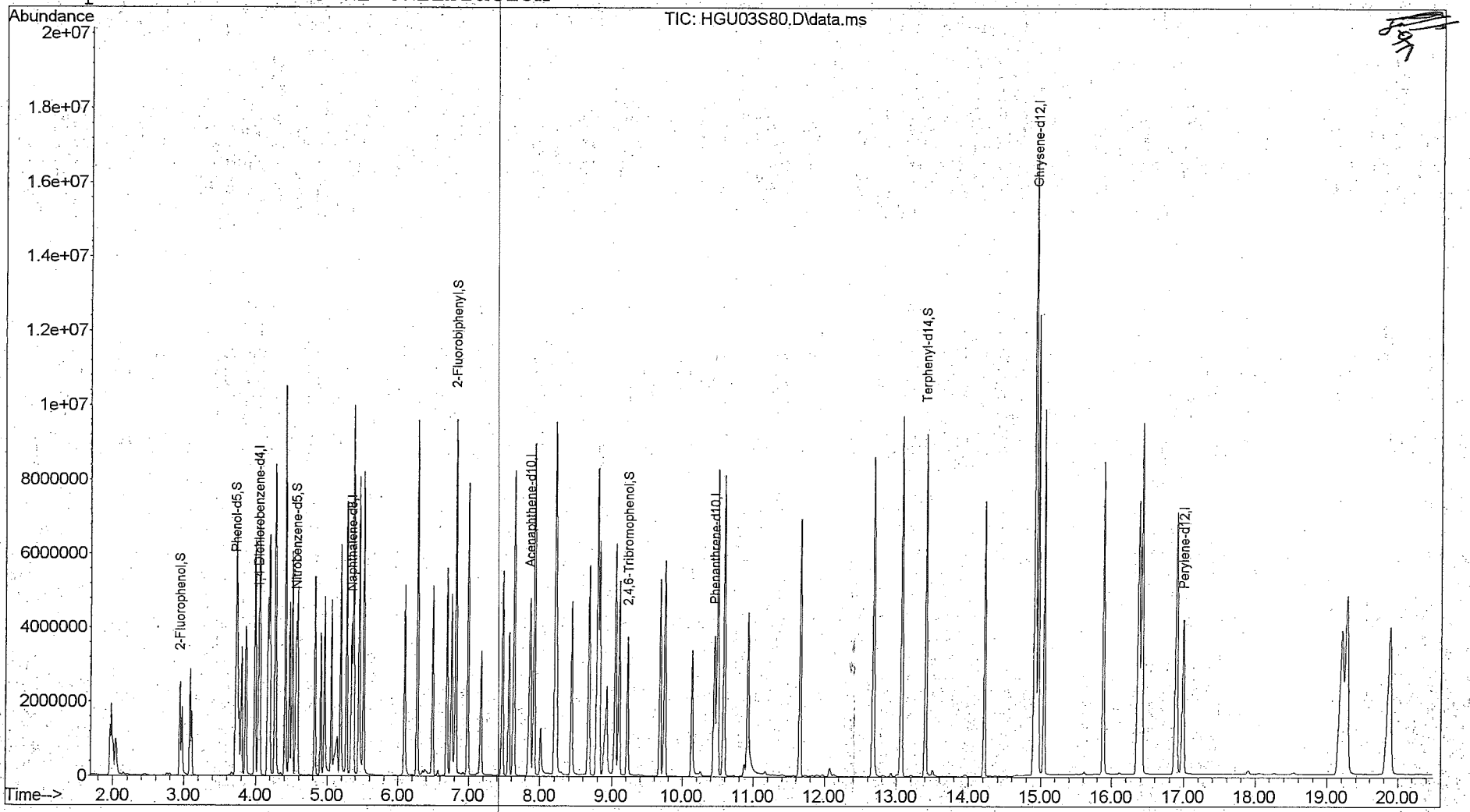
8270DOND.M 5975-H 8270DOND.M 8270 65 std 15971 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU03S80.D Vial: 3
Acq On : 08/08/2012 11:01 Operator: RAH
Sample : 8270 80 std 15970 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:20 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

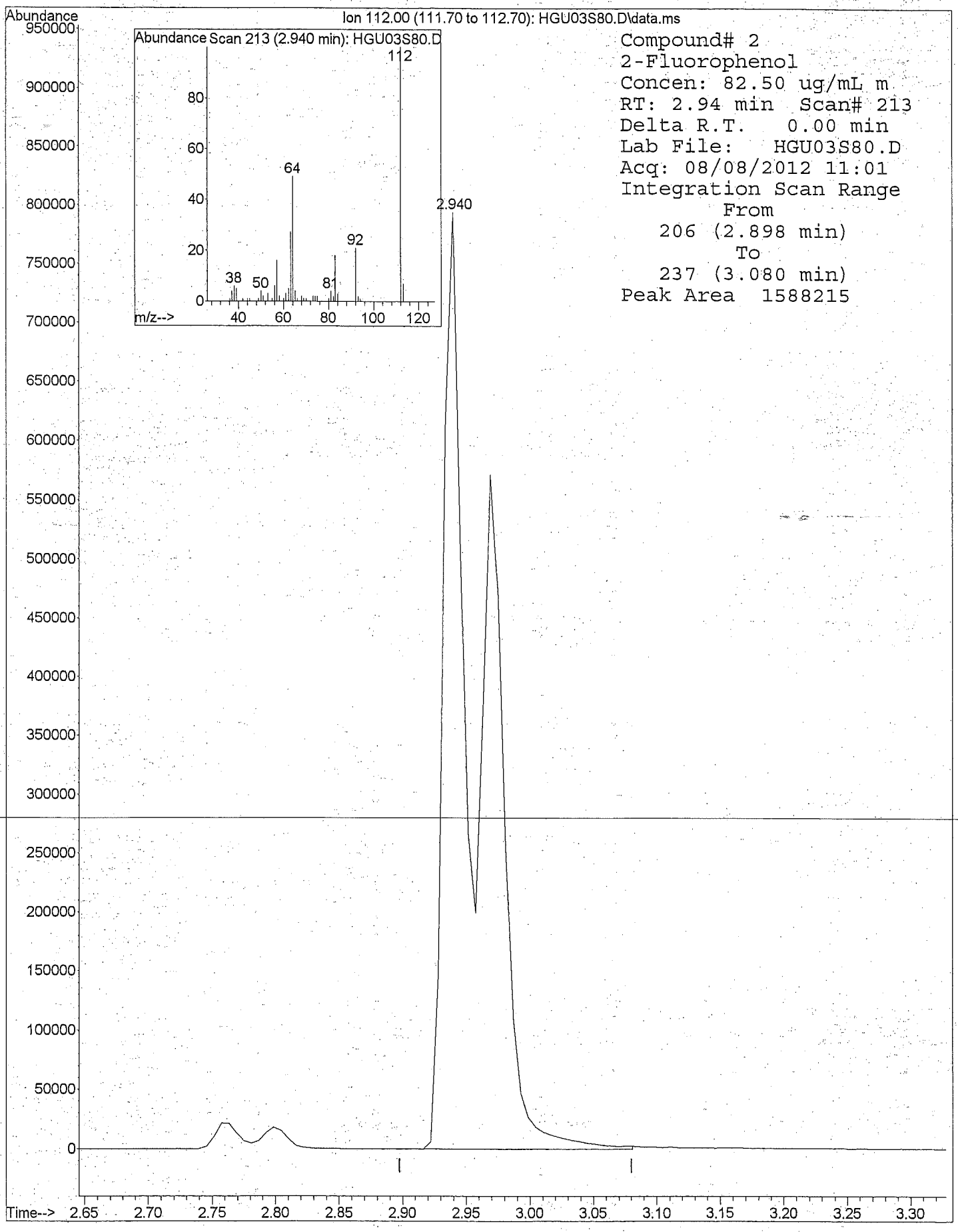
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU03S80.D Vial: 3
Acq On : 08/08/2012 11:01 Operator: RAH
Sample : 8270 80 std 15970 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:20 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	
1) 1,4-Dichlorobenzene-d4	4.03	152	573029	40.00 ug/mL	
6) Naphthalene-d8	5.35	136	2477577	40.00 ug/mL	
8) Acenaphthene-d10	7.86	164	1435287	40.00 ug/mL	
10) Phenanthrene-d10	10.45	188	2700617	40.00 ug/mL	
12) Chrysene-d12	14.93	240	3115162	40.00 ug/mL	
14) Perylene-d12	16.99	264	2729963	40.00 ug/mL	
System Monitoring Compounds					
2) 2-Fluorophenol	2.94	112	1588215	82.500ug/mL	m
4) Phenol-d5	3.72	99	2086917	82.657ug/mL	
7) Nitrobenzene-d5	4.56	82	1728073	81.365ug/mL	
9) 2-Fluorobiphenyl	6.82	172	4345820	81.635ug/mL	
11) 2,4,6-Tribromophenol	9.22	330	773542	85.081ug/mL	
13) Terphenyl-d14	13.40	244	4851775	80.673ug/mL	
Target Compounds					Qvalue
3) 1,4-Oxathiane	3.08	104	812617	81.679ug/mL	m 92
5) 1,4-Dithiane	4.47	120	1310784	81.328ug/mL	99

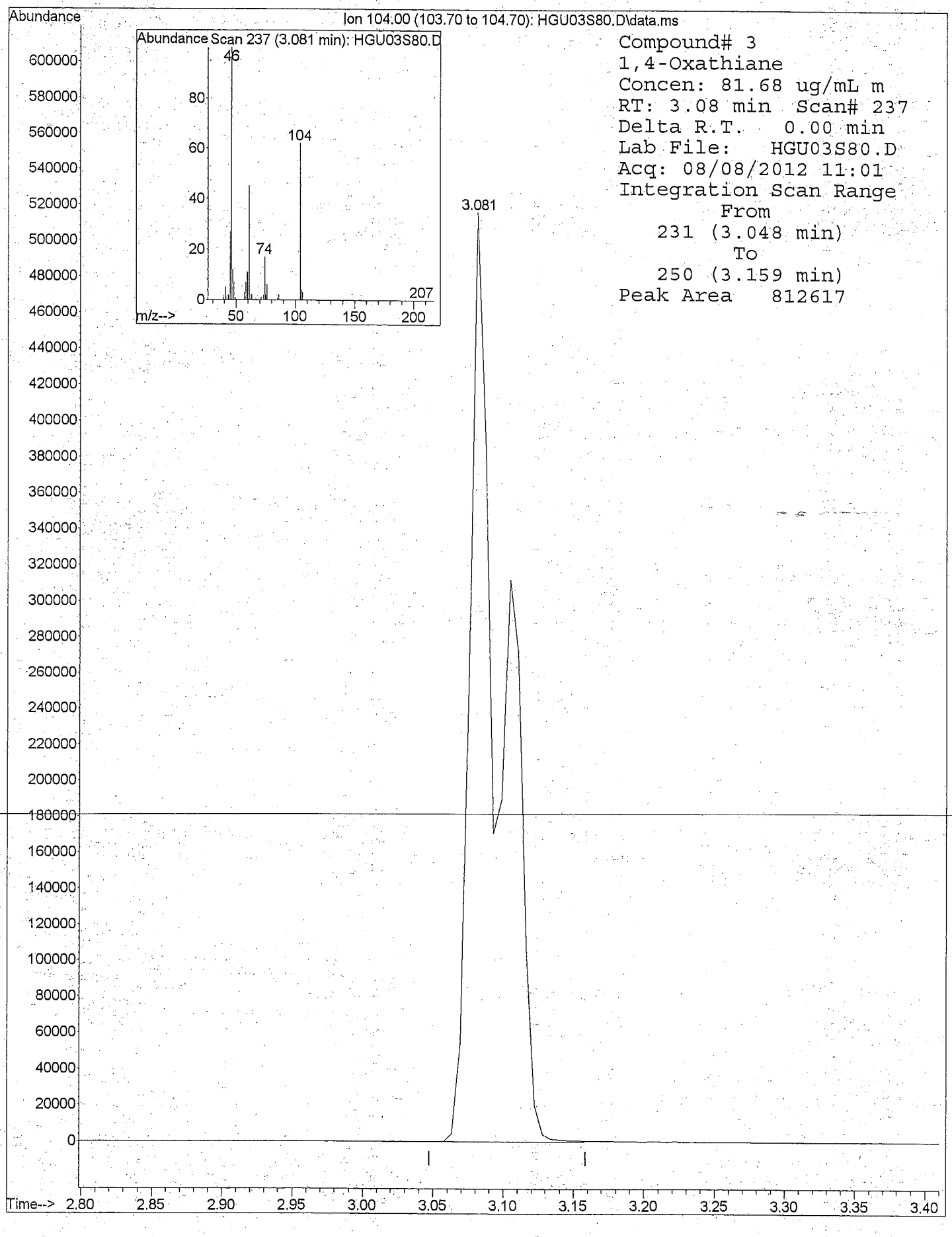
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 80 std 15970 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



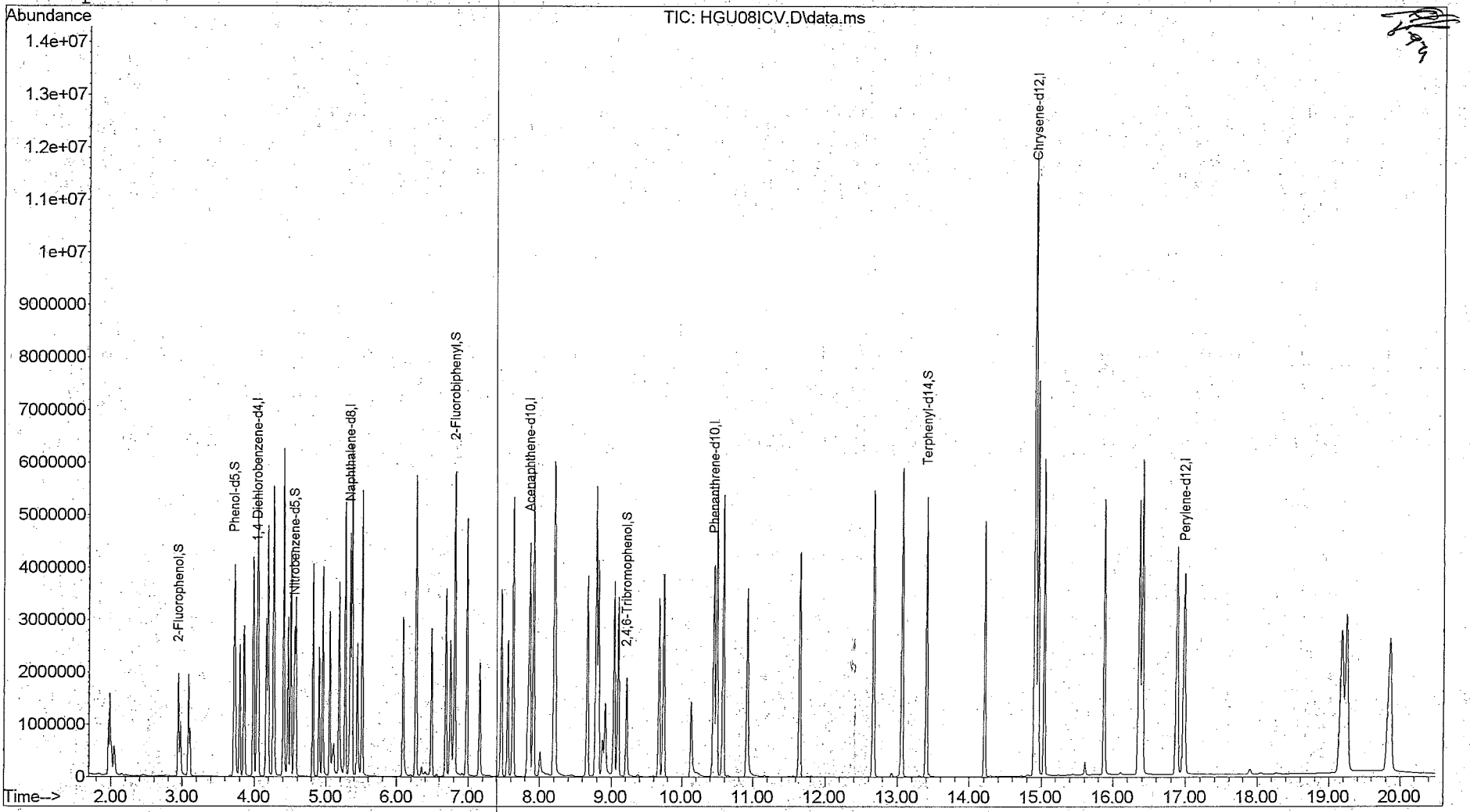
8270DOND.M 5975-H 8270DOND.M 8270 80 std 15970 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU08ICV.D Vial: 8
Acq On : 08/08/2012 13:29 Operator: RAH
Sample : 8270 ICV 15975 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 14:02:13 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

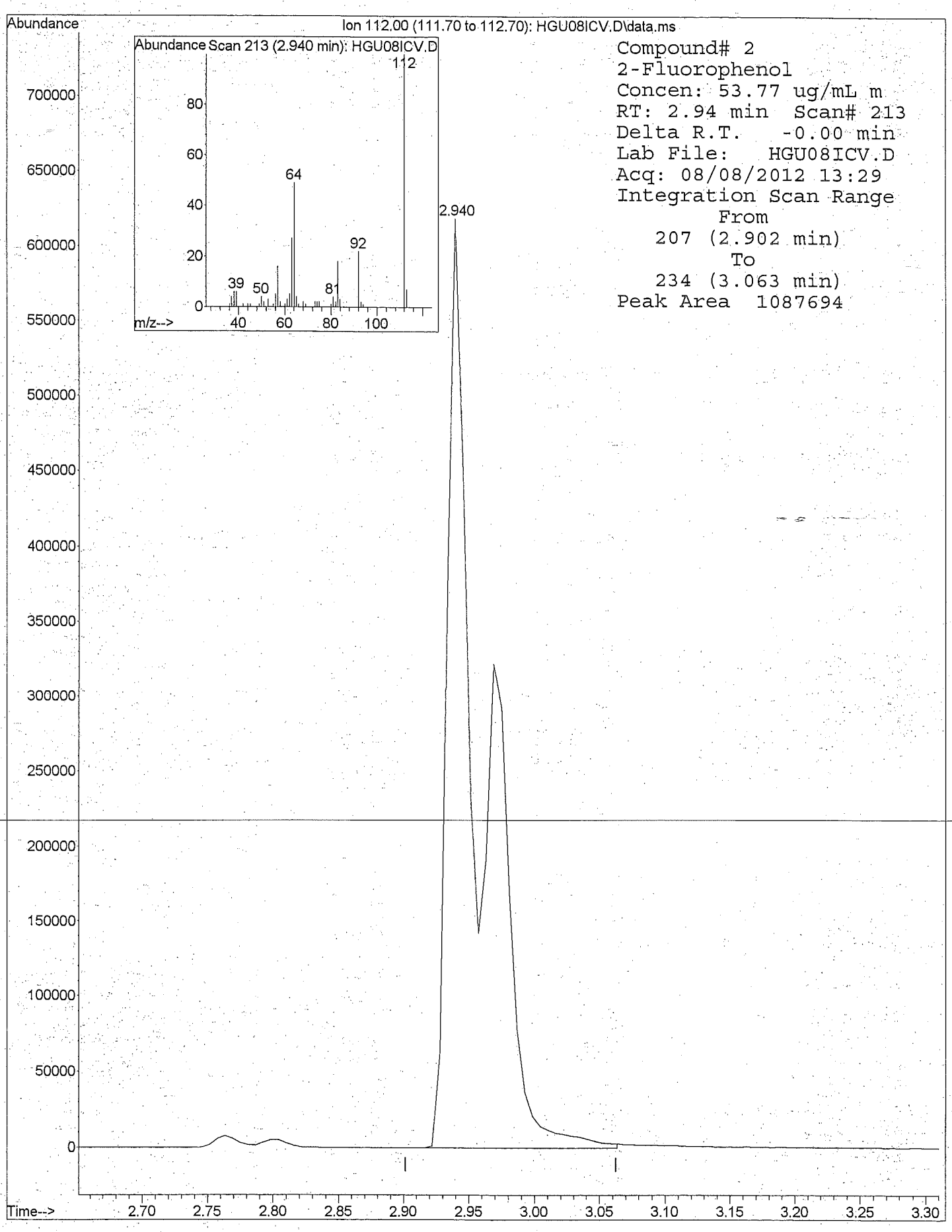
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU08ICV.D Vial: 8
Acq On : 08/08/2012 13:29 Operator: RAH
Sample : 8270 ICV 15975 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 14:02:13 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	602341	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2573963	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1459085	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2725972	40.00 ug/mL
12) Chrysene-d12	14.92	240	3150498	40.00 ug/mL
14) Perylene-d12	16.98	264	2694862	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	1087694	53.767ug/mL m
4) Phenol-d5	3.72	99	1280207	48.238ug/mL
7) Nitrobenzene-d5	4.56	82	1077669	48.841ug/mL
9) 2-Fluorobiphenyl	6.81	172	2644191	48.860ug/mL
11) 2,4,6-Tribromophenol	9.22	330	397803	43.347ug/mL
13) Terphenyl-d14	13.40	244	2731708	44.912ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	517926	49.537ug/mL m 99
5) 1,4-Dithiane	4.47	120	833107	49.175ug/mL 98

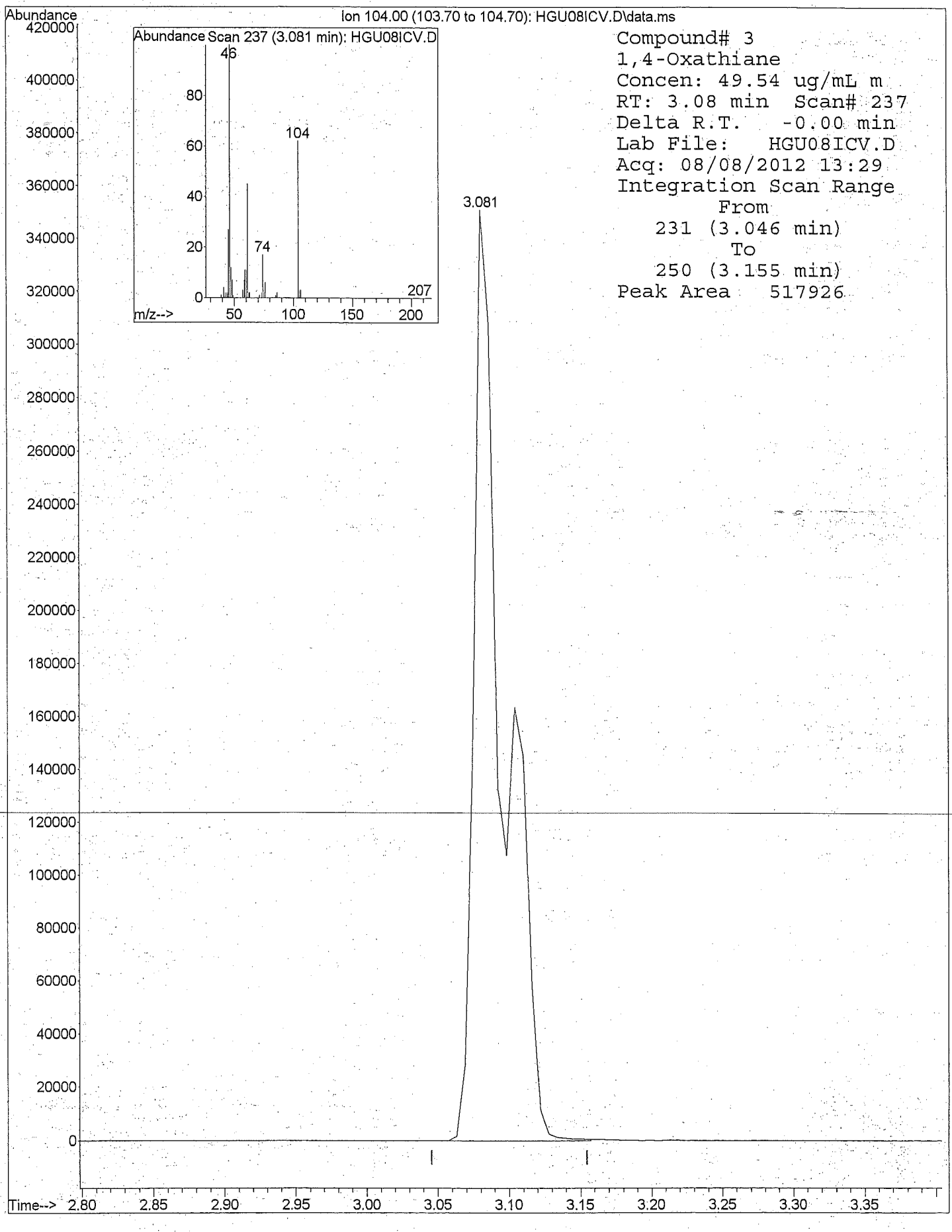
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 ICV 15975 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



8270DOND.M 5975-H 8270DOND.M 8270 ICV 15975 . X:1/9/13

Average of 6.233 to 6.245 min.: HHB01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.10	110	48.00	190	58.90	64	71.00	98
36.00	105	49.00	1422	59.95	217	71.80	79
37.00	697	50.00	36112	61.00	1789	72.10	61
38.05	2241	50.95	125871	62.00	2151	73.00	1470
39.00	10983	52.05	6537	63.00	5498	74.00	15849
40.00	594	53.05	449	64.00	894	75.00	24797
41.00	383	54.00	63	65.00	2445	76.10	8388
43.00	264	55.00	1005	65.95	237	77.05	159340
43.90	337	55.95	4295	66.95	233	78.05	11334
44.95	288	57.00	9038	68.95	171159	79.00	12037
46.90	145	57.95	537	69.95	945	80.00	9257

Average of 6.233 to 6.245 min.: HHB01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
80.95	12187	93.00	20665	103.00	2501	115.05	349
82.00	2803	94.00	1407	104.00	4522	116.00	3205
83.00	2953	94.95	367	105.00	4138	116.95	44888
83.90	269	96.00	830	106.05	1587	117.95	3160
85.00	2089	96.95	214	107.00	52208	118.95	388
85.95	3814	97.20	306	108.00	8270	119.95	808
87.00	1580	98.00	16324	110.00	96365	121.05	351
87.95	591	99.00	12108	111.00	14599	122.00	3616
88.95	428	99.95	1042	112.05	1929	123.00	5630
91.00	2748	100.95	6276	112.95	764	123.95	2667
92.05	3353	101.90	291	113.85	159	125.00	2249

Average of 6.233 to 6.245 min.: HHB01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
127.00	189675	137.95	455	149.00	2401	160.00	3224
128.00	14936	139.00	605	150.00	792	161.00	4752
129.00	77176	140.00	968	151.10	1402	162.00	1387
130.00	6508	141.00	9941	152.00	573	163.00	494
130.95	1186	142.00	3540	153.00	3340	164.05	632
132.00	586	143.00	2305	154.00	2397	164.95	3754
132.95	388	143.95	591	155.00	5689	166.00	3258
134.00	2304	145.00	665	156.00	7817	166.95	20800
135.00	5433	146.00	1965	157.05	2000	168.00	9393
136.00	2383	147.00	4976	158.00	1807	169.00	1938
137.00	3180	148.00	11560	159.00	1385	170.00	492

Average of 6.233 to 6.245 min.: HHB01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
170.20	270	181.00	5023	192.00	4978	205.00	27667
170.95	991	182.05	801	193.00	5754	206.00	112613
172.00	2008	183.00	537	193.95	1137	207.00	14299
173.00	2283	183.95	1350	195.05	934	208.00	3775
174.00	4411	185.00	7767	196.00	15518	209.00	1381
175.00	8124	186.00	59739	198.00	444224	211.05	4716
176.05	2595	187.00	16722	199.00	30776	212.95	400
177.00	3975	188.05	1740	200.00	2691	213.80	54
178.00	1499	189.00	3862	201.50	2959	214.00	58
179.00	16051	189.95	740	203.00	3342	214.95	1270
180.00	10839	191.05	1647	204.00	16030	216.00	2829

Average of 6.233 to 6.245 min.: HHB01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
217.00	29427	229.95	832	241.00	1656	251.95	510
218.00	3944	231.00	2227	242.05	3652	253.05	1077
218.95	444	231.95	473	243.10	4246	255.00	281024
221.00	28683	232.95	555	244.00	53261	256.00	41043
223.00	7425	233.95	1716	245.05	7291	257.00	3299
224.00	64304	235.00	1945	246.00	9723	258.00	15716
225.00	16636	235.95	1281	246.95	2010	258.95	2419
226.05	1816	237.00	1967	247.95	523	259.95	452
227.00	26360	237.90	301	249.00	1957	260.95	420
228.00	3812	239.00	1135	250.00	380	262.90	63
229.00	5635	240.00	880	250.90	440	263.10	64

Average of 6.233 to 6.245 min.: HHB01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
263.95	970	277.00	10696	288.80	128	301.05	487
264.95	6494	278.00	1538	288.95	373	302.00	712
265.85	875	278.95	358	289.95	433	303.00	4246
266.95	169	280.80	73	290.80	67	304.00	1012
269.95	508	281.05	137	291.00	189	305.00	116
270.95	541	282.00	380	292.05	546	307.95	519
272.05	884	283.00	1298	293.00	2178	308.95	322
273.00	8778	283.95	853	294.00	657	310.00	419
274.00	22451	285.05	1897	296.00	34701	311.00	57
275.00	126069	286.05	385	297.00	5214	312.00	56
276.00	17120	288.00	125	297.95	379	312.90	339

Average of 6.233 to 6.245 min.: HHB01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
314.00	1791	325.00	207	339.80	69	359.00	202
315.00	3875	326.05	285	341.05	1141	365.00	12952
316.00	2085	326.95	2352	341.95	262	366.00	2221
316.90	90	328.00	1056	345.10	74	366.70	76
317.05	345	328.85	147	346.00	2389	367.00	60
319.95	205	331.95	825	346.95	392	369.85	338
321.00	1190	332.95	1109	351.05	238	371.00	668
322.00	437	334.00	6651	352.00	3154	372.05	4935
322.20	253	334.95	1731	353.05	2349	373.00	1276
323.05	11248	336.05	187	354.00	3025	383.00	1257
324.00	2018	338.95	162	355.05	570	384.00	251

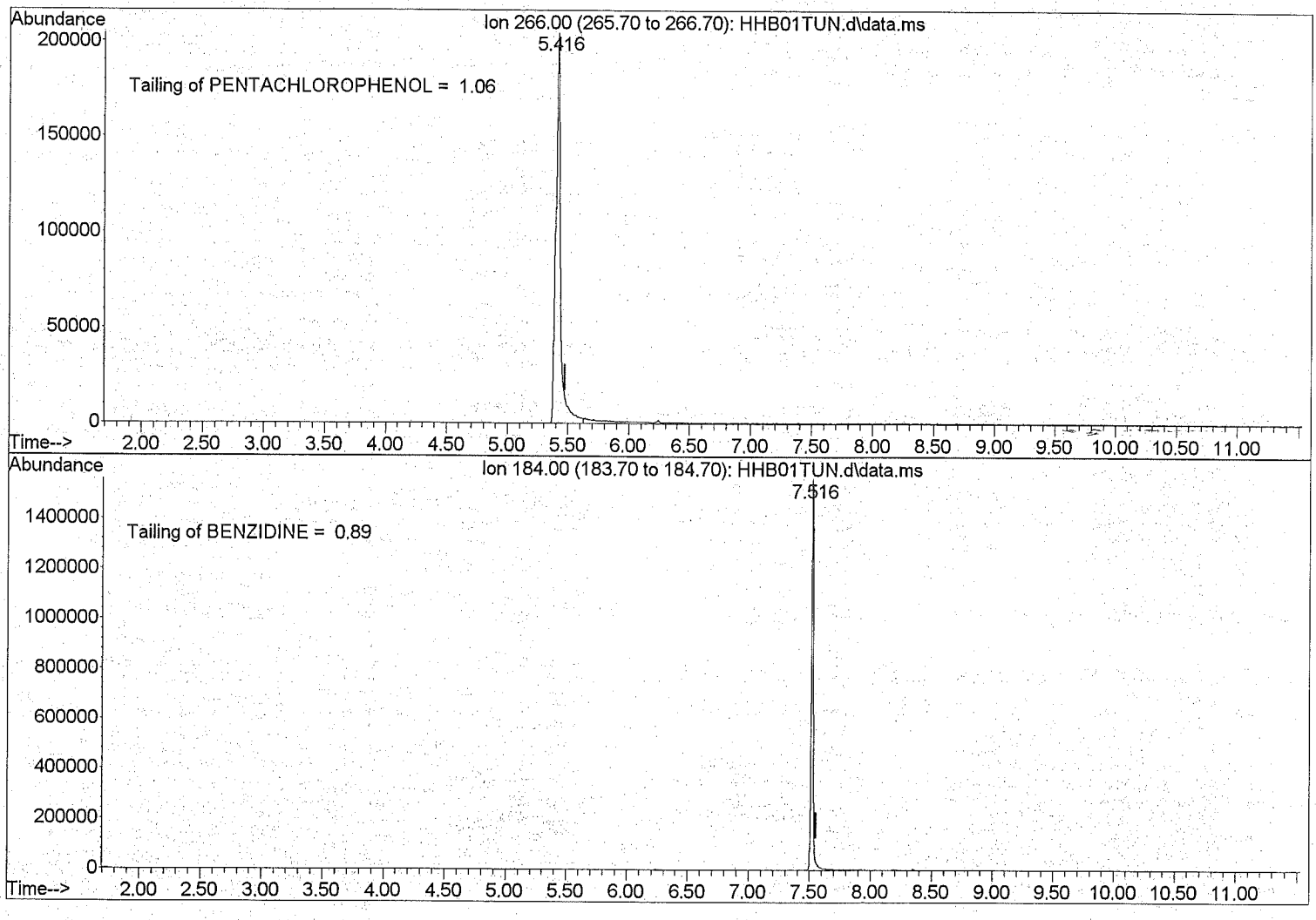
Average of 6.233 to 6.245 min.: HHB01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
390.00	555	421.00	1774	438.20	157		
390.70	52	422.10	1810	438.80	333		
391.05	368	423.05	13275	441.10	45587		
391.90	85	424.00	2601	442.10	299499		
392.05	213	425.00	289	443.10	57525		
400.90	90	436.30	126	444.05	5374		
401.15	136	436.70	78	445.05	345		
402.00	1581	437.10	83				
403.05	2011	437.30	109				
404.00	796	437.70	89				
404.90	69	438.00	121				

Data File: HHB01TUN.d
Date Acquired: 08/16/2012 11:45
Operator ID: RAH
Name: 8270 DFTPP 13808
Misc: . X:1/11/13

Instrument: 5975-H
Acq Method: 8270DTUN.M
DA Method: 8270DTUN.M

Cal Title: EPA/CLP SOM01
Last Cal Update: Wed Nov 23 09:22:39 2011
. X:1/11/13

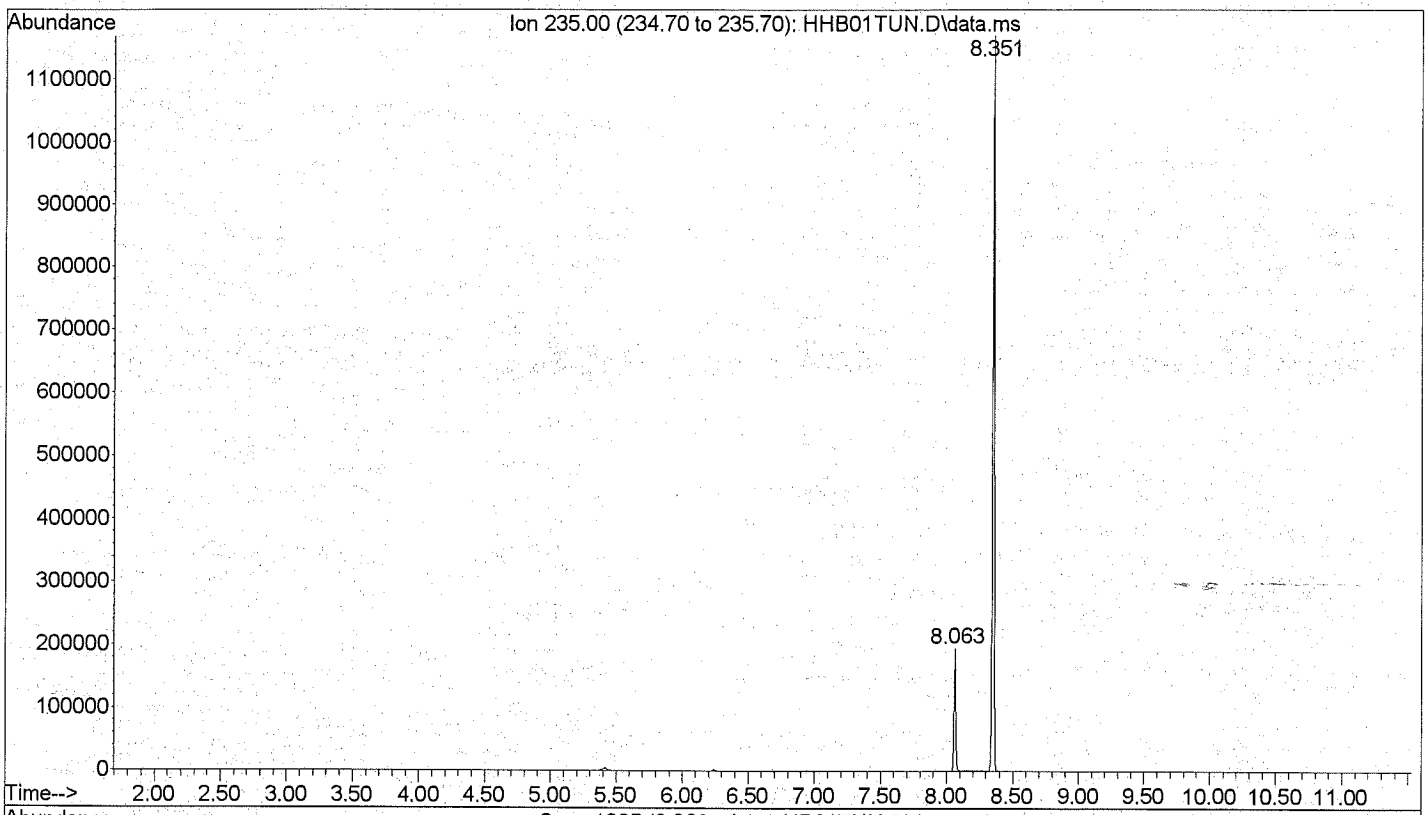


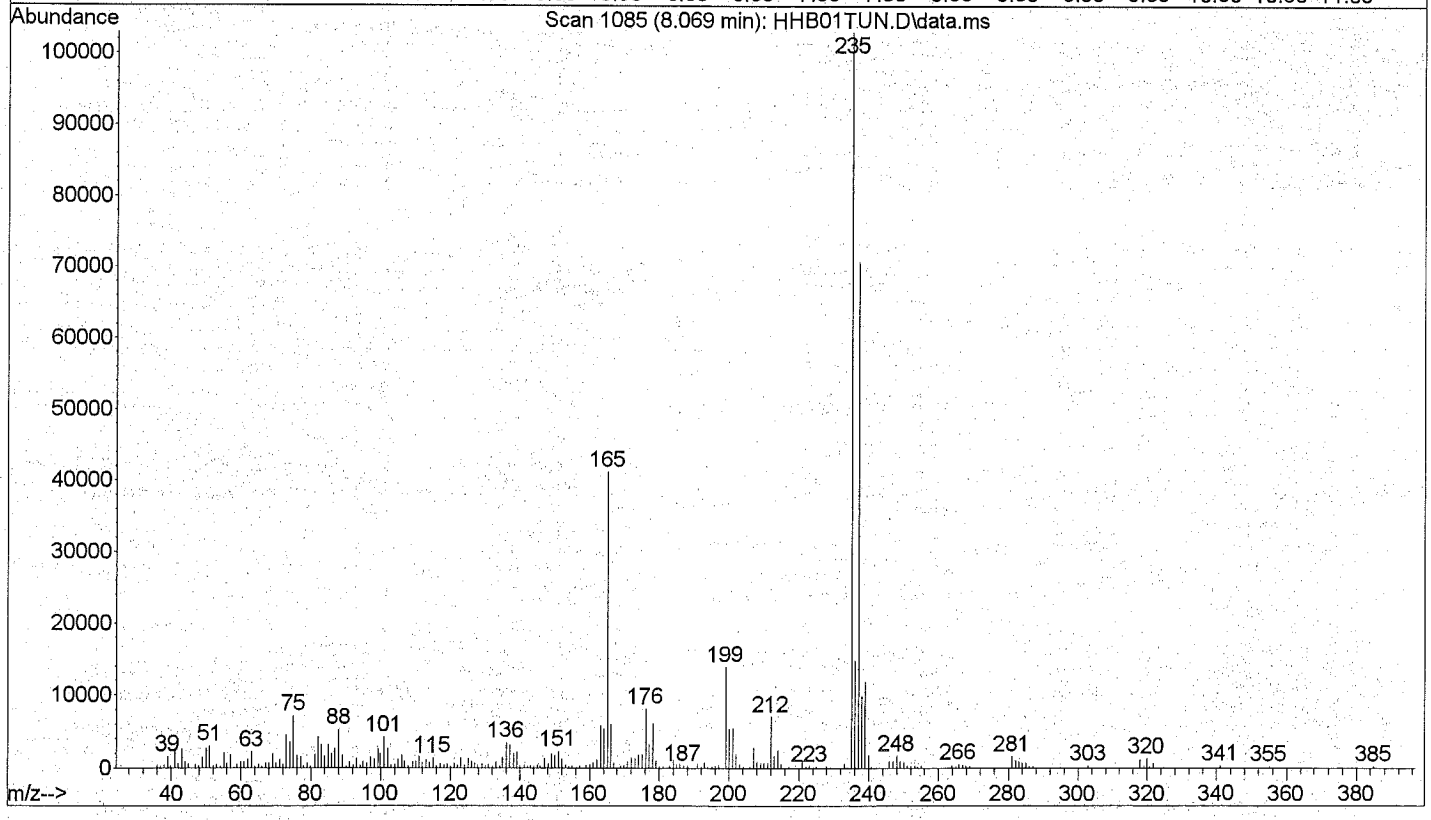
Ion 235.00 (234.70 to 235.70): HHB01TUN.D\data.ms
8270 DFTPP 13808

Peak #	Ret Time	Type	Width	Area	Start Time	End Time
1	8.063	rBV	0.088	180479	8.027	8.116
2	8.351	rVB	0.088	1011794	8.322	8.410

$$\text{DDT breakdown} = \frac{180479}{180479 + 1011794} = 15.1\%$$

File :D:\1\DATA\2012\AUG12\16AUG12H\HHB01TUN.D
Operator : RAH
Acquired : 16 Aug 2012 11:45 am using AcqMethod 8270DTUN.M
Instrument : 5975-H
Sample Name: 8270 DFTPP 13808
Misc Info : . X:1/11/13
Vial Number: 1



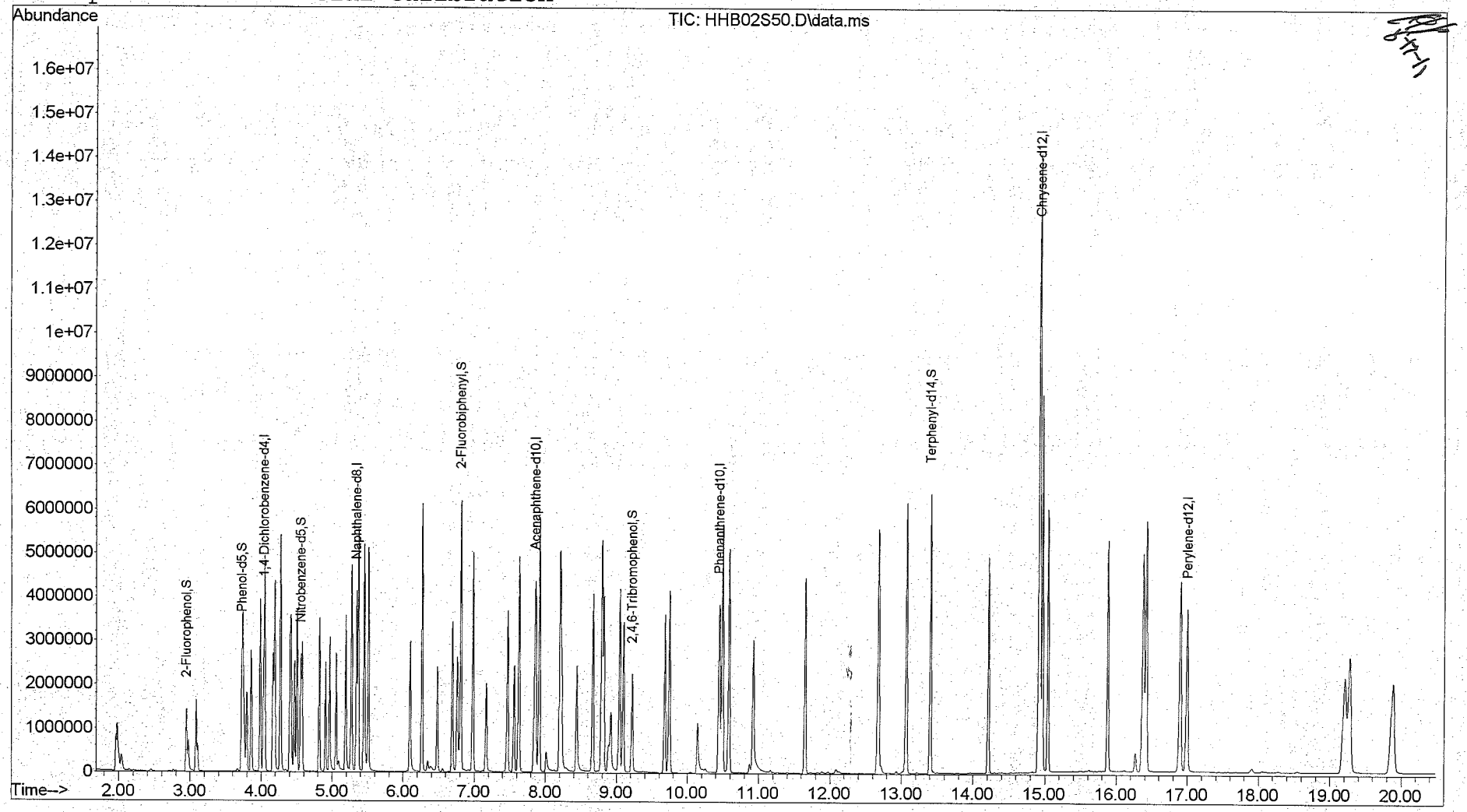


Quantitation Report

Data File : D:\1\DATA\2012\AUG12\16AUG12H\HHB02S50.D Vial: 2
Acq On : 08/16/2012 12:05 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 16 12:37:26 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

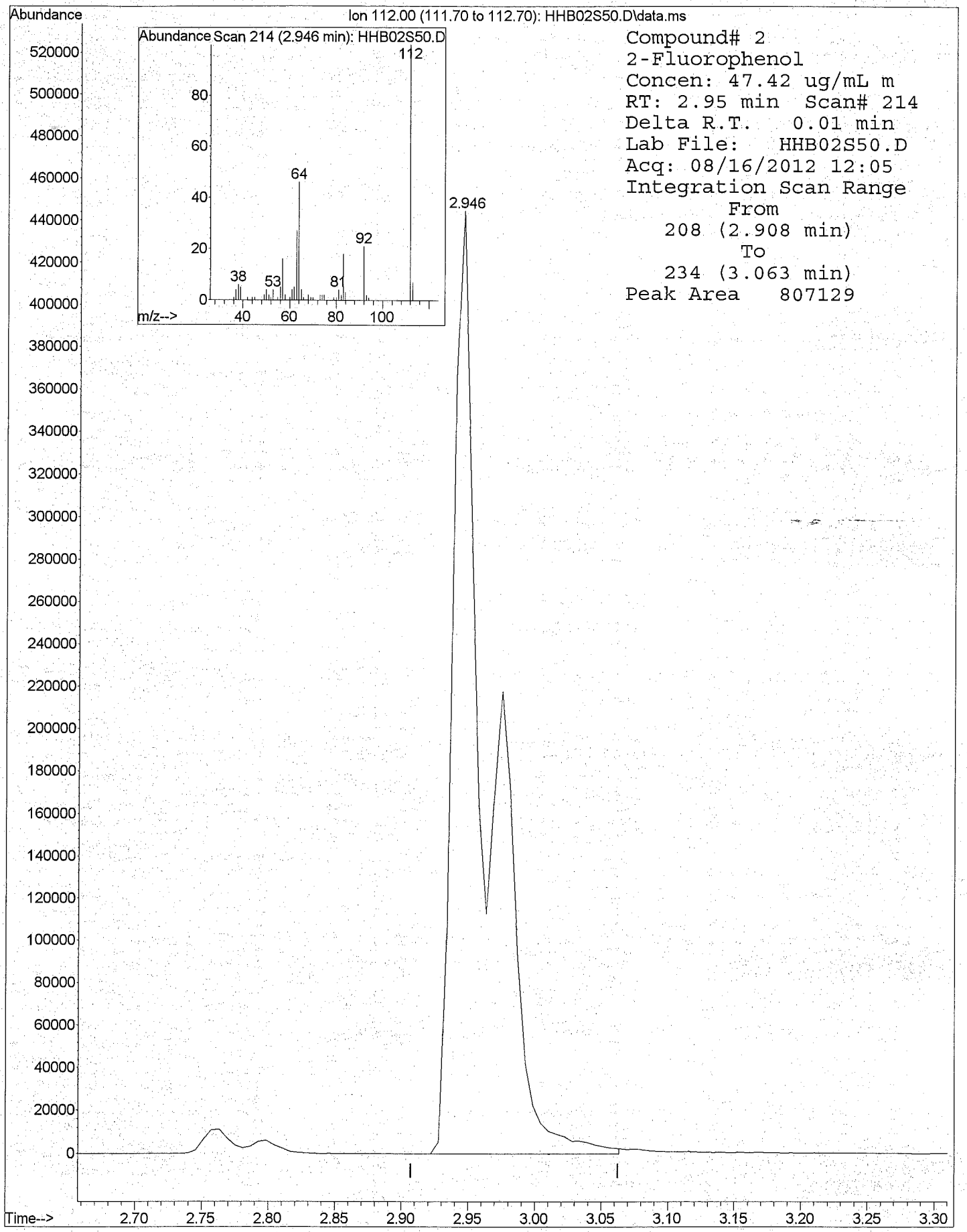
Data File : D:\1\DATA\2012\AUG12\16AUG12H\HHB02S50.D Vial: 2
Acq On : 08/16/2012 12:05 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 16 12:37:26 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	506758	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2249493	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1366773	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2647164	40.00 ug/mL
12) Chrysene-d12	14.93	240	3357670	40.00 ug/mL
14) Perylene-d12	16.99	264	2439917	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	807129	47.423ug/mL m
4) Phenol-d5	3.72	99	1108259	49.636ug/mL
7) Nitrobenzene-d5	4.56	82	971416	50.376ug/mL
9) 2-Fluorobiphenyl	6.81	172	2620843	51.700ug/mL
11) 2,4,6-Tribromophenol	9.22	330	439131	49.275ug/mL
13) Terphenyl-d14	13.40	244	3146675	48.542ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	406141	46.172ug/mL 97
5) 1,4-Dithiane	4.47	120	694991	48.760ug/mL 95

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

MANUAL INTEGRATION FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

PROJECT TITLE:
Fort Stewart

Earth Resources Technology, Inc.
6100 Frost Place
Laurel, MD 20707

Data Deliverable Group ERT-006
ALS#9981198

DoD QSM V.4.2
DATA PACKAGE

SAMPLES COLLECTED
August 1 and 2, 2012

Total Number of Pages 187

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    Analytical Logbook..... 159
Total Solids Summary Forms..... 174
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Subcontracting Data..... 180

Case Narrative

Earth Resources Technology, Inc.
Fort Stewart

ALS-Middletown
Case Narrative
ERT-006

Sample Management

This report contains the results of the analysis of eleven (11) solid samples collected on August 1 and 2, 2012. Analytical results and quality control information are summarized in this data package.

Qualifier Symbol Definitions:

U = Qualifier indicates that the analyte was not detected above the LOD.
J = Qualifier indicates that the analyte value is between the DL and the LOQ.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds the calibration range.
P = Qualifier indicates that the RPD between the two analytical columns is greater than 40%.
NSC = Qualifier indicates that spike recoveries were not calculated based on the spiking concentration.

Result Symbol Definitions:

DL = The smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence.
LOD = The smallest analyte concentration that must be present in a sample in order to be detected at a high level of confidence.
LOQ = The lowest concentration that produces a quantitative result within specified limits of precision or bias.

Sample Receipt

Samples arrived at ALS via courier on August 3, 2012. Upon receipt, the samples were inspected and compared to the Chain of Custody. Sample temperature was documented on the enclosed Chain of Custody. Samples were received intact and properly preserved, unless noted on the enclosed Certificate of Analysis and/or Chain of Custody.

Subcontracting

Eight (8) samples were subcontracted for Method 8270/8321 analysis. Results are provided at the end of this report.

Totals Metals by SW-846 Method 6020A

Sample handling. Eleven (11) solid samples were digested and analyzed for total metals on the Agilent 7700x using SW-846 Method 6020A. The samples were analyzed within the six-month holding time established for this method.

Calibration. All criteria associated with the calibration were within method control limits.

Blanks. Metals were not detected in the blanks.

Laboratory Control Samples. Recoveries were within method control limits.

Matrix Spike/Matrix Spike Duplicate. A matrix spike and matrix spike duplicate were performed on sample FTSW-HR-SO-45 (9981198003) in this data deliverable. The MS and MSD recoveries and their RPDs were within method control limits for all target analytes. The Aluminum concentration in the sample was greater than four times the spiking concentration; therefore, the spiked recoveries were not evaluated.

Total Solids by SM 2540G

Sample handling. Eleven (11) solid samples were analyzed for total solids by Standard Method 2540G for dry weight reporting purposes. The samples were analyzed within the 14-day method recommended hold time for dry weight reporting.

Duplicate. A duplicate analysis, identified as 1019216, was performed on sample 9980395009 (FTSW-AA-SO-30). The relative percent difference between the results was within the QC limit of 5%.

Chain of Custody

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 2

Co. Name: ERT, Inc
Contact (Report to): Mike Gearhart
Address: 600 Frost PL, Suite A, Laurel MD 20707
Phone: 301-323-1403
Bill to (if different than Report to):
P.O.#:
Project Name/#: Ft. Stuart 315300.4
ALS Quote #:
Email? Y N: Mike.Gearhart@ertcorp.com
Fax? Y No:
Normal-Standard TAT is 10 business days.
Rush-Subject to ALS approval and surcharges.
Data Required:
Approved By:
TAT:

| Sample Description/Location (as it will appear on the lab report) | COC Comments | Sample Date | Military Time | "G or C | "Matrix | Enter Number of Containers Per Analysis | | |

Page 2 of 2

Courier: Tracking #: 1Z98A9063 6570

9981198

CHAIN OF CUSTODY/
REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

ALS Environmental
Ship to: 34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

Co. Name: ERT, Inc
Contact (report to): Mike Gearhart Phone: 301-323-1403
Address: 6100 Frost Pl. Suite A Laurel MD 20707
Bill to (if different than Report to): PO#:
Project Name/#: Ft. Stewart 3153-004 ALS Quote #:
Turnaround Time: Normal-Standard TAT is 10 business days. Rush-Subject to ALS approval and surcharges. Date Required: Approved By:
Email? Y N Mike.Gearheart@ertcorp.com
Fax? Y N No.

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	6 or C	Matrix	Container Type	Container Size	Preservative
9 FTSW-AA-30		8/9/12	0930	G	SO	C	4oz	N/A
10 FTSW-AA-31		8/9/12	0855	G	SO			
11 FTSW-AA-32		8/9/12	1034	G	SO			
12								
13								
14								
15								
16								

Sub-814 6030

AA Al Ag As Ba Be Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Sr Tl V Zn Hg

Enter Number of Containers Per Analysis

ANALYSES/METHOD REQUESTED

Receipt Information (completed by Lab if Applicable)
Received: Y N
Cooler Temp: 10
Therm. ID: TH2
No. of Coolers:
Notes:

Custody seals Present? Y N
(if present) Seals Intact? Y N
Received on Ice? Y N
COC/Labels complete/accurate? Y N
Contact preservation? Y N
Headspace/Volatiles? Y N
Correct sample volume? Y N
Correct container? Y N
Circle appropriate Y or N.

Container is good condition? Y N

ALS FIELD SERVICES: Pickup, Labor, Composite Sampling, Rental Equipment, Other

Data Deliverables: Standard, CLP-like, NJ-Reduced, NJ-Full, Other
EDDs: Type:
Data Samples Collected in? MD, NJ, NY, PA
SDWA Forms/No: Yes/No
DQO Criteria Required? Yes/No

SAMPLED BY (Please Print): Rebekah McCoy

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1			2		
3 Rebekah McCoy / ERT	8/9/12	1200	4 Kelly Stevens / ALS	8/10/12	0910
5			6		
7			8		
9			10		

LOGGED BY (signature): K Stevens 8/10/12 1250
REVIEWED BY (signature): 8/10/12

*Matrix: Air-Air; DW-Drinking Water; GW-Groundwater; OH-Oil; OL-Other Liquid; SL-Sludge; SO-Soil; WP-Wipe; WW-Wastewater
**Container Type: AG-Amber Glass; CG-Clear Glass; PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.
*G-Grab; C-Composite

Copies: WHITE - ORIGINAL; CANARY - CUSTOMER COPY

Rev 6/2011

ALS Environmental
34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010, NY 11759, PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224, DE ID 11, GA 914, MA PA0102, MD 128, LA 04162, VA 421, WY EPA Region 8, WV 343

Subcontract to ALS Salt Lake City, UT

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALS Environmental

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK

Page 1 of 2
Courier:
Tracking #: 798609043 652

Ship to: 34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

Co. Name: ERT, inc
Contact (Report to): Mike Gearheart
Phone: 301-323-1403
Address: 6100 Frost PL
Suite A
Laurel MD 20707

Bill to (if different than Report to):
PO#:

Project Name/#: Ft. Stewart 3153-004
ALS Quote #:

TAT: Normal-Standard TAT is 10 business days. Rush-Subject to ALS approval and surcharges.
Date Required:
Approved By:

Email? X -Y Mike.Gearheart@ertcorp.com
Fax? -Y No:

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	SW-846 6020	SW-846 8270D	1,4-Dithiane 1,4-Oxathiane Thiophenol	HR-Arsenic only
1	FTSW-HR-SO-43		8/1/12	1621	G	SO	1	1		
2	FTSW-HR-SO-44		8/1/12	1633	G	SO	1	1		
3	FTSW-HR-SO-45		8/1/12	1645	G	SO	1	1		
4	FTSW-HR-SO-46		8/1/12	1700	G	SO	1	1		
5	FTSW-HR-SO-46 Dup		8/1/12	1705	G	SO	1	1		
6	FTSW-HR-SO-47		8/1/12	1730	G	SO	1	1		
7	FTSW-HR-SO-48		8/1/12	1740	G	SO	1	1		
8	FTSW-HR-SO-49		8/1/12	1750	G	SO	1	1		

Enter Number of Containers Per Analysis

	Receipt Information (Received by Sample Receiving)
Returned by:	
Cooler Temp:	10
Therm. ID:	7421
No. of Coolers:	
Notes:	

	Custody seals Present?	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
1	N	N	N	N	N	N
2	N	N	N	N	N	N
3	N	N	N	N	N	N
4	N	N	N	N	N	N
5	N	N	N	N	N	N
6	N	N	N	N	N	N
7	N	N	N	N	N	N
8	N	N	N	N	N	N

SAMPLED BY (Please Print): Rebekah McCoy
LOGGED BY (signature): [signature] 8/3/12 1300
REVIEWED BY (signature): [signature] 8/6/12 1246

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] ERT	8/2/12	1200	2 [signature]	8/3/12	0940
3 [signature]	8/6/12	1645	4		
5			6		
7			8		
9			10		

Data Deliverables: Standard / CLP-like / NJ-Reduced / NJ-Full / EDDs Required? If yes, format type: / DOD Criteria Required?
SWMA Forms? yes / yes / yes / yes
State Samples Collected In? MD / NJ / NY / PA / Other GA

ALS FIELD SERVICES: Pickup / Labor / Composite Sampling / Rental Equipment / Other

* G=Grab; C=Composite
**Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 540ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

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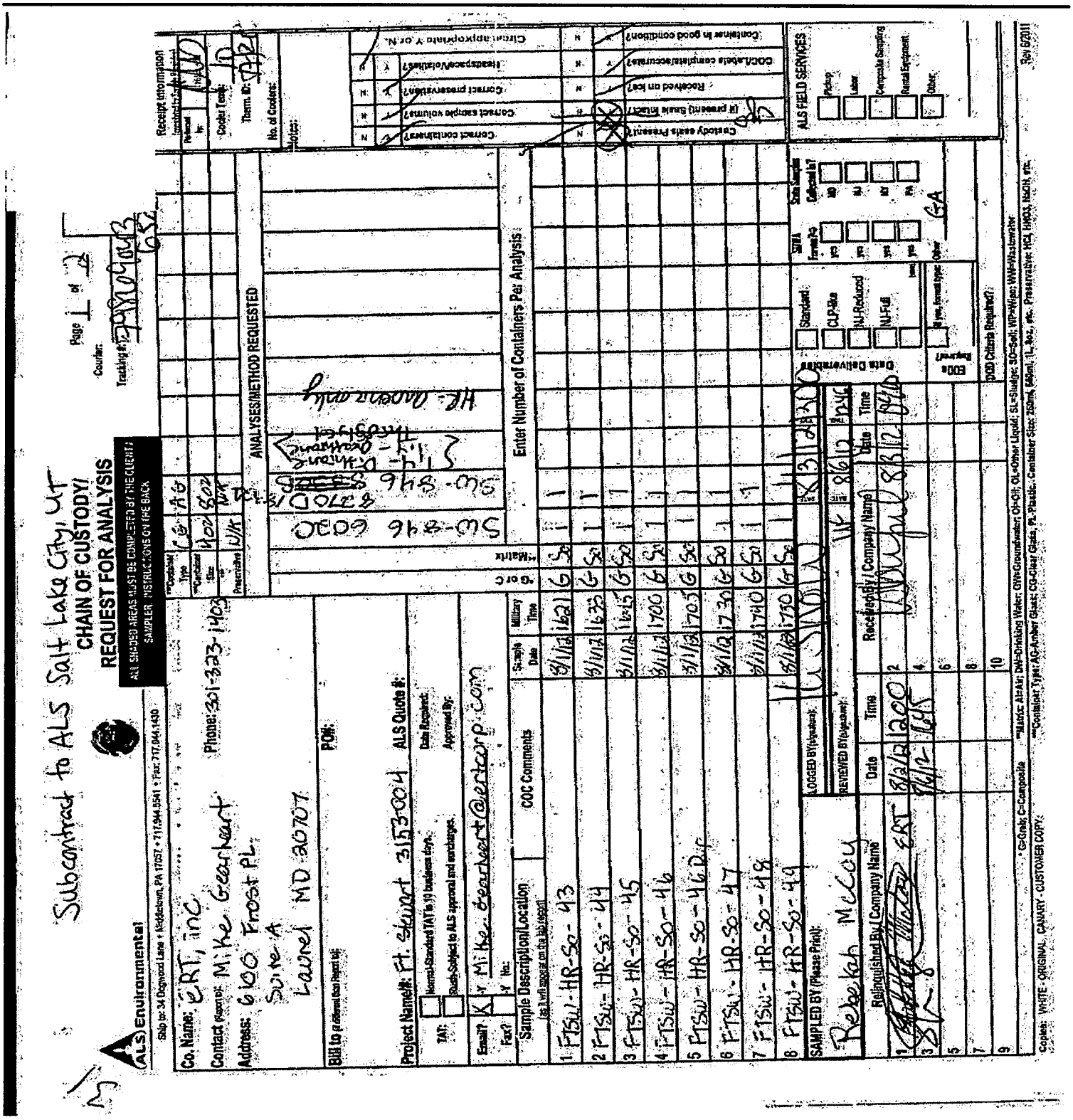
Rev 6/2011



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Internal Chain of Custody

Work Order: 9981198

9981198001-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:05	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198001-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 06:00	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198001-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198001-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198001-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:05	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198002-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:05	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198002-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 06:00	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198002-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198002-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198002-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:05	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

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Internal Chain of Custody
Work Order: 9981198

9981198003-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:05	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198003-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 06:00	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198003-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198003-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198003-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:05	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198004-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:05	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198004-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 06:00	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198004-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198004-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198004-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:05	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

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Internal Chain of Custody

Work Order: 9981198

9981198005-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:05	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198005-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 06:00	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198005-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198005-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198005-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:05	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198006-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:05	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198006-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 06:00	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198006-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198006-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198006-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:05	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

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Internal Chain of Custody

Work Order: 9981198

9981198007-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:05	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198007-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 06:00	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198007-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198007-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198007-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:05	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198008-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:05	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198008-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 06:00	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198008-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198008-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198008-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:05	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

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Internal Chain of Custody

Work Order: 9981198

9981198009-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:05	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198009-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 06:00	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198009-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198009-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198010-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:05	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198010-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 06:00	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198010-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198010-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198011-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:05	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

9981198011-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 06:00	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198011-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**

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Internal Chain of Custody

Work Order: 9981198

9981198011-A2 (cont)	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9981198011-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-03-12 13:00	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-03-12 09:10	*Sample Received At Lab*		

Certificate of Analysis

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

August 31, 2012

Mr. Mike Gearhart
Earth Resources Technology, Inc.
6100 Frost Place
Suite A
Laurel, MD 20707

Certificate of Analysis

Project Name:	**Ft. Stewart GA project**	Workorder:	**9981198**
Purchase Order:		Workorder ID:	**ERT006|Ft. Stewart 3153-004**

Dear Mr. Gearhart,

Enclosed are the analytical results for samples received by the laboratory on Friday, August 03, 2012.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Vicki Forney (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

ALS Environmental

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SAMPLE SUMMARY

Workorder: 9981198 ERT006|Ft. Stewart 3153-004 Discard Date: 09/14/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9981198001	FTSW-HR-SO-43	Solid	8/1/12 16:21	8/3/12 09:10	Customer
9981198002	FTSW-HR-SO-44	Solid	8/1/12 16:33	8/3/12 09:10	Customer
9981198003	FTSW-HR-SO-45	Solid	8/1/12 16:45	8/3/12 09:10	Customer
9981198004	FTSW-HR-SO-46	Solid	8/1/12 17:00	8/3/12 09:10	Customer
9981198005	FTSW-HR-SO-46 DUP	Solid	8/1/12 17:05	8/3/12 09:10	Customer
9981198006	FTSW-HR-SO-47	Solid	8/1/12 17:30	8/3/12 09:10	Customer
9981198007	FTSW-HR-SO-48	Solid	8/1/12 17:40	8/3/12 09:10	Customer
9981198008	FTSW-HR-SO-49	Solid	8/1/12 17:50	8/3/12 09:10	Customer
9981198009	FTSW-AA-SO-30	Solid	8/2/12 09:43	8/3/12 09:10	Customer
9981198010	FTSW-AA-SO-31	Solid	8/2/12 09:55	8/3/12 09:10	Customer
9981198011	FTSW-AA-SO-32	Solid	8/2/12 10:34	8/3/12 09:10	Customer

Workorder Comments:

Analytical results attached from ALS-Salt Lake City for 8270/8321 results. VLF

This report was modified to exclude arsenic for 009, 010, and 011. VLF

These reports were modified on 8/31/12 to replace the subcontracting data with updated reports. VLF

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SAMPLE SUMMARY

Workorder: 9981198 ERT006|Ft. Stewart 3153-004 Discard Date: 09/14/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

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ANALYTICAL RESULTS

Workorder: 9981198 ERT006|Ft. Stewart 3153-004

Lab ID: **9981198001** Date Collected: 8/1/2012 16:21 Matrix: Solid

Sample ID: **FTSW-HR-SO-43** Date Received: 8/3/2012 09:10

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	10.8	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
Total Solids	89.2	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
METALS											
Arsenic, Total	1.0U	mg/kg		1.6	1.0	0.52	SW846 6020A	8/8/12	8/13/12 21:22	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/18/12 04:22	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 9981198 ERT006|Ft. Stewart 3153-004

Lab ID: **9981198002** Date Collected: 8/1/2012 16:33 Matrix: Solid

Sample ID: **FTSW-HR-SO-44** Date Received: 8/3/2012 09:10

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	10.4	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
Total Solids	89.6	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
METALS											
Arsenic, Total	1.1U	mg/kg		1.6	1.1	0.53	SW846 6020A	8/8/12	8/13/12 21:26	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/18/12 06:48	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9981198 ERT006|Ft. Stewart 3153-004

Lab ID: **9981198003** Date Collected: 8/1/2012 16:45 Matrix: Solid

Sample ID: **FTSW-HR-SO-45** Date Received: 8/3/2012 09:10

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	11.9	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
Total Solids	88.1	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
METALS											
Arsenic, Total	1.1U	mg/kg		1.6	1.1	0.55	SW846 6020A	8/8/12	8/13/12 21:29	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/18/12 07:24	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9981198 ERT006|Ft. Stewart 3153-004

Lab ID: **9981198004** Date Collected: 8/1/2012 17:00 Matrix: Solid

Sample ID: **FTSW-HR-SO-46** Date Received: 8/3/2012 09:10

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	34.5	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
Total Solids	65.5	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
METALS											
Arsenic, Total	1.2J	mg/kg		2.0	1.3	0.67	SW846 6020A	8/8/12	8/13/12 21:53	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/18/12 08:00	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9981198 ERT006|Ft. Stewart 3153-004

Lab ID: **9981198005** Date Collected: 8/1/2012 17:05 Matrix: Solid

Sample ID: **FTSW-HR-SO-46 DUP** Date Received: 8/3/2012 09:10

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	26.1	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
Total Solids	73.9	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
METALS											
Arsenic, Total	1.3U	mg/kg		2.0	1.3	0.65	SW846 6020A	8/8/12	8/13/12 21:57	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/18/12 08:37	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9981198 ERT006|Ft. Stewart 3153-004

Lab ID: **9981198006** Date Collected: 8/1/2012 17:30 Matrix: Solid

Sample ID: **FTSW-HR-SO-47** Date Received: 8/3/2012 09:10

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	14.2	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
Total Solids	85.8	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
METALS											
Arsenic, Total	1.1U	mg/kg		1.7	1.1	0.57	SW846 6020A	8/8/12	8/13/12 22:00	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/18/12 09:13	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9981198 ERT006|Ft. Stewart 3153-004

Lab ID: **9981198007** Date Collected: 8/1/2012 17:40 Matrix: Solid

Sample ID: **FTSW-HR-SO-48** Date Received: 8/3/2012 09:10

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	7.2	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
Total Solids	92.8	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
METALS											
Arsenic, Total	1.0U	mg/kg		1.5	1.0	0.51	SW846 6020A	8/8/12	8/13/12 22:04	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/18/12 09:50	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9981198 ERT006|Ft. Stewart 3153-004

Lab ID: **9981198008** Date Collected: 8/1/2012 17:50 Matrix: Solid

Sample ID: **FTSW-HR-SO-49** Date Received: 8/3/2012 09:10

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	23.0	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
Total Solids	77.0	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
METALS											
Arsenic, Total	1.1U	mg/kg		1.7	1.1	0.55	SW846 6020A	8/8/12	8/13/12 22:07	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/18/12 10:26	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9981198 ERT006|Ft. Stewart 3153-004

Lab ID: **9981198009** Date Collected: 8/2/2012 09:43 Matrix: Solid

Sample ID: **FTSW-AA-SO-30** Date Received: 8/3/2012 09:10

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	10.1	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
Total Solids	89.9	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
METALS											
Aluminum, Total	4490	mg/kg		40.4	26.8	13.1	SW846 6020A	8/8/12	8/13/12 22:11	LAM	A2
Copper, Total	1.0J	mg/kg		2.5	1.7	0.81	SW846 6020A	8/8/12	8/13/12 22:11	LAM	A2
Lead, Total	11.8	mg/kg		1.0	0.66	0.33	SW846 6020A	8/8/12	8/13/12 22:11	LAM	A2
Zinc, Total	4.5	mg/kg		2.5	1.7	0.81	SW846 6020A	8/8/12	8/13/12 22:11	LAM	A2

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9981198 ERT006|Ft. Stewart 3153-004

Lab ID: **9981198010** Date Collected: 8/2/2012 09:55 Matrix: Solid

Sample ID: **FTSW-AA-SO-31** Date Received: 8/3/2012 09:10

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	13.1	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
Total Solids	86.9	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
METALS											
Aluminum, Total	5500	mg/kg		41.9	27.7	13.6	SW846 6020A	8/8/12	8/13/12 22:14	LAM	A2
Copper, Total	1.1J	mg/kg		2.6	1.7	0.84	SW846 6020A	8/8/12	8/13/12 22:14	LAM	A2
Lead, Total	5.9	mg/kg		1.0	0.68	0.35	SW846 6020A	8/8/12	8/13/12 22:14	LAM	A2
Zinc, Total	4.3	mg/kg		2.6	1.7	0.84	SW846 6020A	8/8/12	8/13/12 22:14	LAM	A2

Sample Comments:

Anna G Milliken
Technical Manager

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9981198 ERT006|Ft. Stewart 3153-004

Lab ID: **9981198011** Date Collected: 8/2/2012 10:34 Matrix: Solid

Sample ID: **FTSW-AA-SO-32** Date Received: 8/3/2012 09:10

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	13.2	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
Total Solids	86.8	%		0.1	0.1	0.01	SM20-2540 G		8/6/12 11:00	KED	A
METALS											
Aluminum, Total	8310	mg/kg		42.7	28.3	13.9	SW846 6020A	8/8/12	8/13/12 22:28	LAM	A2
Copper, Total	1.3J	mg/kg		2.7	1.8	0.85	SW846 6020A	8/8/12	8/13/12 22:28	LAM	A2
Lead, Total	5.0	mg/kg		1.1	0.69	0.35	SW846 6020A	8/8/12	8/13/12 22:28	LAM	A2
Zinc, Total	20.8	mg/kg		2.7	1.8	0.85	SW846 6020A	8/8/12	8/13/12 22:28	LAM	A2

Sample Comments:

Anna G Milliken
Technical Manager

Total Metals in Solid by 6020A Summary Forms

6020 3051
- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, Inc

SDG No.: ERT-006 Method Type: 6020 3051 SOW No.:

Contract: ERT006|Ft. Stewart 3 Lab Code: CAS Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
9981198001	FTSW-HR-SO-43	
9981198002	FTSW-HR-SO-44	
9981198003	FTSW-HR-SO-45	
9981198003S	FTSW-HR-SO-45S	Matrix Spike
9981198003SD	FTSW-HR-SO-45SD	Matrix Spike Duplicate
9981198004	FTSW-HR-SO-46	
9981198005	FTSW-HR-SO-46 DUP	
9981198006	FTSW-HR-SO-47	
9981198007	FTSW-HR-SO-48	
9981198008	FTSW-HR-SO-49	
9981198009	FTSW-AA-SO-30	
9981198010	FTSW-AA-SO-31	
9981198011	FTSW-AA-SO-32 -	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: Lisa Miller

Date: Title: Metals Manager

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-006 **Method Type:** 6020 3051

Sample ID: 9981198001 **Client ID:** FTSW-HR-SO-43

Matrix: SOIL **Date Received:** 8/3/2012 **Level:** LOW

% Solids: 89.2 **Sample Wt/Vol:** 0.54 **Final Vol:** 50.0

Prep Batch ID: 475033 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.04	mg/Kg	U		M	1.6	1.04	0.52	5.00	8/13/2012	21:22:44

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-006 **Method Type:** 6020 3051

Sample ID: 9981198002 **Client ID:** FTSW-HR-SO-44

Matrix: SOIL **Date Received:** 8/3/2012 **Level:** LOW

% Solids: 89.6 **Sample Wt/Vol:** 0.53 **Final Vol:** 50.0

Prep Batch ID: 475033 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.05	mg/Kg	U		M	1.6	1.05	0.53	5.00	8/13/2012	21:26:14

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-006 **Method Type:** 6020 3051

Sample ID: 9981198003 **Client ID:** FTSW-HR-SO-45

Matrix: SOIL **Date Received:** 8/3/2012 **Level:** LOW

% Solids: 88.1 **Sample Wt/Vol:** 0.52 **Final Vol:** 50.0

Prep Batch ID: 475033 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.09	mg/Kg	U		M	1.6	1.09	0.55	5.00	8/13/2012	21:29:44

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-006 **Method Type:** 6020 3051

Sample ID: 9981198004 **Client ID:** FTSW-HR-SO-46

Matrix: SOIL **Date Received:** 8/3/2012 **Level:** LOW

% Solids: 65.5 **Sample Wt/Vol:** 0.57 **Final Vol:** 50.0

Prep Batch ID: 475033 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.2	mg/Kg	J		M	2.0	1.34	0.67	5.00	8/13/2012	21:53:52

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-006 **Method Type:** 6020 3051

Sample ID: 9981198005 **Client ID:** FTSW-HR-SO-46 DUP

Matrix: SOIL **Date Received:** 8/3/2012 **Level:** LOW

% Solids: 73.9 **Sample Wt/Vol:** 0.52 **Final Vol:** 50.0

Prep Batch ID: 475033 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.30	mg/Kg	U		M	2.0	1.30	0.65	5.00	8/13/2012	21:57:19

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-006 **Method Type:** 6020 3051

Sample ID: 9981198006 **Client ID:** FTSW-HR-SO-47

Matrix: SOIL **Date Received:** 8/3/2012 **Level:** LOW

% Solids: 85.8 **Sample Wt/Vol:** 0.51 **Final Vol:** 50.0

Prep Batch ID: 475033 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.14	mg/Kg	U		M	1.7	1.14	0.57	5.00	8/13/2012	22:00:48

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-006 **Method Type:** 6020 3051

Sample ID: 9981198007 **Client ID:** FTSW-HR-SO-48

Matrix: SOIL **Date Received:** 8/3/2012 **Level:** LOW

% Solids: 92.8 **Sample Wt/Vol:** 0.53 **Final Vol:** 50.0

Prep Batch ID: 475033 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.02	mg/Kg	U		M	1.5	1.02	0.51	5.00	8/13/2012	22:04:19

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-006 **Method Type:** 6020 3051

Sample ID: 9981198008 **Client ID:** FTSW-HR-SO-49

Matrix: SOIL **Date Received:** 8/3/2012 **Level:** LOW

% Solids: 77.0 **Sample Wt/Vol:** 0.59 **Final Vol:** 50.0

Prep Batch ID: 475033 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.10	mg/Kg	U		M	1.7	1.10	0.55	5.00	8/13/2012	22:07:48

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-006 **Method Type:** 6020 3051

Sample ID: 9981198009 **Client ID:** FTSW-AA-SO-30

Matrix: SOIL **Date Received:** 8/3/2012 **Level:** LOW

% Solids: 89.9 **Sample Wt/Vol:** 0.55 **Final Vol:** 50.0

Prep Batch ID: 475033 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	DL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	4490	mg/Kg			M	40.4	5.00	8/13/2012	22:11:18
Copper	7440-50-8	1.00	mg/Kg	J		M	2.5	5.00	8/13/2012	22:11:18
Lead	7439-92-1	11.8	mg/Kg			M	1.0	5.00	8/13/2012	22:11:18
Zinc	7440-66-6	4.5	mg/Kg			M	2.5	5.00	8/13/2012	22:11:18

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-006 **Method Type:** 6020 3051

Sample ID: 9981198010 **Client ID:** FTSW-AA-SO-31

Matrix: SOIL **Date Received:** 8/3/2012 **Level:** LOW

% Solids: 86.9 **Sample Wt/Vol:** 0.55 **Final Vol:** 50.0

Prep Batch ID: 475033 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	DL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	5500	mg/Kg			M	41.9	5.00	8/13/2012	22:14:48
Copper	7440-50-8	1.1	mg/Kg	J		M	2.6	5.00	8/13/2012	22:14:48
Lead	7439-92-1	5.9	mg/Kg			M	1.0	5.00	8/13/2012	22:14:48
Zinc	7440-66-6	4.3	mg/Kg			M	2.6	5.00	8/13/2012	22:14:48

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-006 **Method Type:** 6020 3051

Sample ID: 9981198011 **Client ID:** FTSW-AA-SO-32

Matrix: SOIL **Date Received:** 8/3/2012 **Level:** LOW

% Solids: 86.8 **Sample Wt/Vol:** 0.54 **Final Vol:** 50.0

Prep Batch ID: 475033 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	DL	Dil	Analytical Date	Analytical Time
Aluminum	7429-90-5	8310	mg/Kg			M	42.7	5.00	8/13/2012	22:28:44
Copper	7440-50-8	1.3	mg/Kg	J		M	2.7	5.00	8/13/2012	22:28:44
Lead	7439-92-1	5.0	mg/Kg			M	1.1	5.00	8/13/2012	22:28:44
Zinc	7440-66-6	20.8	mg/Kg			M	2.7	5.00	8/13/2012	22:28:44

Comments:

6020 3051

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-006

Contract: ERT006|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
ICV										
	Aluminum	0.0994	0.1000	99		90 - 110	M	8/13/2012	12:37	A081312C
	Arsenic	0.0984	0.1000	98		90 - 110	M	8/13/2012	12:37	A081312C
	Copper	0.0996	0.1000	100		90 - 110	M	8/13/2012	12:37	A081312C
	Lead	0.0969	0.1000	97		90 - 110	M	8/13/2012	12:37	A081312C
	Zinc	0.0971	0.1000	97		90 - 110	M	8/13/2012	12:37	A081312C
LLICV										
	Aluminum	0.0819	0.0800	102		70 - 130	M	8/13/2012	12:47	A081312C
	Arsenic	0.0033	0.0030	110		70 - 130	M	8/13/2012	12:47	A081312C
	Copper	0.0051	0.0050	102		70 - 130	M	8/13/2012	12:47	A081312C
	Lead	0.0021	0.0020	105		70 - 130	M	8/13/2012	12:47	A081312C
	Zinc	0.0051	0.0050	102		70 - 130	M	8/13/2012	12:47	A081312C
LLCCV										
	Aluminum	0.4059	0.4000	101		70 - 130	M	8/13/2012	13:54	A081312C
	Arsenic	0.0154	0.0150	103		70 - 130	M	8/13/2012	13:54	A081312C
	Copper	0.0255	0.0250	102		70 - 130	M	8/13/2012	13:54	A081312C
	Lead	0.0100	0.0100	100		70 - 130	M	8/13/2012	13:54	A081312C
	Zinc	0.0254	0.0250	102		70 - 130	M	8/13/2012	13:54	A081312C
CCV										
	Aluminum	0.0994	0.1000	99		90 - 110	M	8/13/2012	13:58	A081312C
	Arsenic	0.0940	0.1000	94		90 - 110	M	8/13/2012	13:58	A081312C
	Copper	0.0977	0.1000	98		90 - 110	M	8/13/2012	13:58	A081312C
	Lead	0.0958	0.1000	96		90 - 110	M	8/13/2012	13:58	A081312C
	Zinc	0.0958	0.1000	96		90 - 110	M	8/13/2012	13:58	A081312C
CCV										
	Aluminum	0.1018	0.1000	102		90 - 110	M	8/13/2012	14:52	A081312C
	Arsenic	0.0930	0.1000	93		90 - 110	M	8/13/2012	14:52	A081312C
	Copper	0.1001	0.1000	100		90 - 110	M	8/13/2012	14:52	A081312C
	Lead	0.0967	0.1000	97		90 - 110	M	8/13/2012	14:52	A081312C
	Zinc	0.0972	0.1000	97		90 - 110	M	8/13/2012	14:52	A081312C

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-006

Contract: ERT006|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
LLCCV										
	Aluminum	0.0802	0.0800	100		70 - 130	M	8/13/2012	14:59	A081312C
	Arsenic	0.0032	0.0030	107		70 - 130	M	8/13/2012	14:59	A081312C
	Copper	0.0051	0.0050	102		70 - 130	M	8/13/2012	14:59	A081312C
	Lead	0.0020	0.0020	100		70 - 130	M	8/13/2012	14:59	A081312C
	Zinc	0.0051	0.0050	102		70 - 130	M	8/13/2012	14:59	A081312C
CCV										
	Aluminum	0.1009	0.1000	101		90 - 110	M	8/13/2012	20:47	A081312C
	Arsenic	0.0918	0.1000	92		90 - 110	M	8/13/2012	20:47	A081312C
	Copper	0.0972	0.1000	97		90 - 110	M	8/13/2012	20:47	A081312C
	Lead	0.0957	0.1000	96		90 - 110	M	8/13/2012	20:47	A081312C
	Zinc	0.0942	0.1000	94		90 - 110	M	8/13/2012	20:47	A081312C
LLCCV										
	Aluminum	0.0811	0.0800	101		70 - 130	M	8/13/2012	20:54	A081312C
	Arsenic	0.0030	0.0030	100		70 - 130	M	8/13/2012	20:54	A081312C
	Copper	0.0049	0.0050	98		70 - 130	M	8/13/2012	20:54	A081312C
	Lead	0.0020	0.0020	100		70 - 130	M	8/13/2012	20:54	A081312C
	Zinc	0.0050	0.0050	100		70 - 130	M	8/13/2012	20:54	A081312C
CCV										
	Aluminum	0.1038	0.1000	104		90 - 110	M	8/13/2012	21:33	A081312C
	Arsenic	0.0927	0.1000	93		90 - 110	M	8/13/2012	21:33	A081312C
	Copper	0.0990	0.1000	99		90 - 110	M	8/13/2012	21:33	A081312C
	Lead	0.0952	0.1000	95		90 - 110	M	8/13/2012	21:33	A081312C
	Zinc	0.0945	0.1000	94		90 - 110	M	8/13/2012	21:33	A081312C
LLCCV										
	Aluminum	0.0824	0.0800	103		70 - 130	M	8/13/2012	21:40	A081312C
	Arsenic	0.0033	0.0030	110		70 - 130	M	8/13/2012	21:40	A081312C
	Copper	0.0050	0.0050	100		70 - 130	M	8/13/2012	21:40	A081312C
	Lead	0.0020	0.0020	100		70 - 130	M	8/13/2012	21:40	A081312C
	Zinc	0.0055	0.0050	110		70 - 130	M	8/13/2012	21:40	A081312C

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-006

Contract: ERT006|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
CCV										
	Aluminum	0.5003	0.5000	100		90 - 110	M	8/13/2012	22:18	A081312C
	Arsenic	0.4652	0.5000	93		90 - 110	M	8/13/2012	22:18	A081312C
	Copper	0.4932	0.5000	99		90 - 110	M	8/13/2012	22:18	A081312C
	Lead	0.4758	0.5000	95		90 - 110	M	8/13/2012	22:18	A081312C
	Zinc	0.4743	0.5000	95		90 - 110	M	8/13/2012	22:18	A081312C
LLCCV										
	Aluminum	0.4152	0.4000	104		70 - 130	M	8/13/2012	22:25	A081312C
	Arsenic	0.0152	0.0150	101		70 - 130	M	8/13/2012	22:25	A081312C
	Copper	0.0253	0.0250	101		70 - 130	M	8/13/2012	22:25	A081312C
	Lead	0.0104	0.0100	104		70 - 130	M	8/13/2012	22:25	A081312C
	Zinc	0.0280	0.0250	112		70 - 130	M	8/13/2012	22:25	A081312C
CCV										
	Aluminum	0.5026	0.5000	101		90 - 110	M	8/13/2012	22:35	A081312C
	Arsenic	0.4664	0.5000	93		90 - 110	M	8/13/2012	22:35	A081312C
	Copper	0.4812	0.5000	96		90 - 110	M	8/13/2012	22:35	A081312C
	Lead	0.4800	0.5000	96		90 - 110	M	8/13/2012	22:35	A081312C
	Zinc	0.4714	0.5000	94		90 - 110	M	8/13/2012	22:35	A081312C
LLCCV										
	Aluminum	0.4120	0.4000	103		70 - 130	M	8/13/2012	22:42	A081312C
	Arsenic	0.0156	0.0150	104		70 - 130	M	8/13/2012	22:42	A081312C
	Copper	0.0249	0.0250	100		70 - 130	M	8/13/2012	22:42	A081312C
	Lead	0.0103	0.0100	103		70 - 130	M	8/13/2012	22:42	A081312C
	Zinc	0.0275	0.0250	110		70 - 130	M	8/13/2012	22:42	A081312C

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-006

Contract: ERT006|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Conc Qual	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
ICB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/13/2012	12:44	A081312C
	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	12:44	A081312C
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	12:44	A081312C
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/13/2012	12:44	A081312C
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	12:44	A081312C
CCB										
	Aluminum	0.4000	U	0.33	0.1500	0.4000	M	8/13/2012	13:51	A081312C
	Arsenic	0.0135	U	0.011	0.0050	0.0135	M	8/13/2012	13:51	A081312C
	Copper	0.0250	U	0.021	0.0095	0.0250	M	8/13/2012	13:51	A081312C
	Lead	0.0100	U	0.0081	0.0037	0.0100	M	8/13/2012	13:51	A081312C
	Zinc	0.0250	U	0.021	0.0095	0.0250	M	8/13/2012	13:51	A081312C
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/13/2012	14:56	A081312C
	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	14:56	A081312C
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	14:56	A081312C
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/13/2012	14:56	A081312C
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	14:56	A081312C
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/13/2012	20:51	A081312C
	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	20:51	A081312C
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	20:51	A081312C
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/13/2012	20:51	A081312C
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	20:51	A081312C
CCB										
	Aluminum	0.0800	U	0.066	0.0300	0.0800	M	8/13/2012	21:36	A081312C
	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	21:36	A081312C
	Copper	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	21:36	A081312C
	Lead	0.0020	U	0.0015	0.0007	0.0020	M	8/13/2012	21:36	A081312C
	Zinc	0.0050	U	0.0042	0.0019	0.0050	M	8/13/2012	21:36	A081312C

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-006

Contract: ERT006|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Conc Qual	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
CCB										
	Aluminum	0.4000	U	0.33	0.1500	0.4000	M	8/13/2012	22:21	A081312C
	Arsenic	0.0135	U	0.011	0.0050	0.0135	M	8/13/2012	22:21	A081312C
	Copper	0.0250	U	0.021	0.0095	0.0250	M	8/13/2012	22:21	A081312C
	Lead	0.0100	U	0.0081	0.0037	0.0100	M	8/13/2012	22:21	A081312C
	Zinc	0.0250	U	0.021	0.0095	0.0250	M	8/13/2012	22:21	A081312C
CCB										
	Aluminum	0.4000	U	0.33	0.1500	0.4000	M	8/13/2012	22:39	A081312C
	Arsenic	0.0135	U	0.011	0.0050	0.0135	M	8/13/2012	22:39	A081312C
	Copper	0.0250	U	0.021	0.0095	0.0250	M	8/13/2012	22:39	A081312C
	Lead	0.0100	U	0.0081	0.0037	0.0100	M	8/13/2012	22:39	A081312C
	Zinc	0.0250	U	0.021	0.0095	0.0250	M	8/13/2012	22:39	A081312C

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PREPARATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-006

Contract: ERT006|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result (mg/Kg)	Conc Qual	Q	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
1020195			QC-SOLID								
	Aluminum	40.0000	U		20	13.0000	40.0000	M	8/13/2012	14:45	A081312C
	Arsenic	1.50000	U		0.75	0.50000	1.50000	M	8/13/2012	14:45	A081312C
	Copper	2.50000	U		1.3	0.80000	2.50000	M	8/13/2012	14:45	A081312C
	Lead	1.00000	U		0.50	0.33000	1.00000	M	8/13/2012	14:45	A081312C
	Zinc	2.50000	U		1.3	0.80000	2.50000	M	8/13/2012	14:45	A081312C

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INTERFERENCE CHECK SAMPLE

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-006

Contract: ERT006|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

ICS Source: Inorganic Ventures **Instrument ID:** AGILENT 7700 ICPMS

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	Analysis Date	Analysis Time	Run Number
ICSA									
	Aluminum	86.2	100.0000	86		80 - 120%	8/13/2012	12:51	A081312C
	Arsenic	0.0006				-0.00300 - -0.00300	8/13/2012	12:51	A081312C
	Copper	0.0011				-0.00500 - -0.00500	8/13/2012	12:51	A081312C
	Lead	0.0005				-0.00200 - -0.00200	8/13/2012	12:51	A081312C
	Zinc	0.0035				-0.01000 - -0.01000	8/13/2012	12:51	A081312C
ICSAB									
	Aluminum	87.4	100.0000	87		80 - 120%	8/13/2012	13:00	A081312C
	Arsenic	0.0201	0.02000	100		80 - 120%	8/13/2012	13:00	A081312C
	Copper	0.0193	0.02000	96		80 - 120%	8/13/2012	13:00	A081312C
	Lead	0.0004				-0.00200 - -0.00200	8/13/2012	13:00	A081312C
	Zinc	0.0239	0.02000	120		80 - 120%	8/13/2012	13:00	A081312C

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MATRIX SPIKE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-006

Contract: ERT006|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Matrix: SOIL **Sample ID:** 9981198003 **Client ID:** FTSW-HR-SO-45S **LIMS ID:** 1020197

Percent Solids for Sample: 88.12 **Spiked ID:** 9981198003S **Percent Solids for Spike Sample:** 88.12

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	80 - 120	925.48		789.87		226.962	NSC	*	M
Arsenic	mg/Kg	80 - 120	21.24		1.70	U	22.696	94		M
Copper	mg/Kg	80 - 120	22.211		0.986		22.696	94		M
Lead	mg/Kg	80 - 120	25.379		3.971		22.696	94		M
Zinc	mg/Kg	80 - 120	221.270		3.063		226.962	96		M

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MATRIX SPIKE DUPLICATE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-006

Contract: ERT006|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: SOIL **Sample ID:** 9981198003 **Client ID:** FTSW-HR-SO-45SD **LIMS ID:** 1020198

Percent Solids for Sample: 88.12 **Spiked ID:** 9981198003SD **Percent Solids for Spike Sample:** 88.12

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	80 - 120	1153.05		789.87		218.232	NSC	*	M
Arsenic	mg/Kg	80 - 120	20.79		1.64	U	21.823	95		M
Copper	mg/Kg	80 - 120	21.907		0.986		21.823	96		M
Lead	mg/Kg	80 - 120	25.457		3.971		21.823	98		M
Zinc	mg/Kg	80 - 120	218.750		3.063		218.232	99		M

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DUPLICATE SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-006

Contract: ERT006|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: SOIL **Sample ID:** 9981198003S **Client ID:** FTSW-HR-SO-45SD **LIMS ID:** 1020198

Percent Solids for Sample: 88.12 **Duplicate ID:** 9981198003SD **Percent Solids for Duplicate:** 88.12

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	0 - 20	925.48		1153.05		21.90	*	M
Arsenic	mg/Kg	0 - 20	21.24		20.79		2		M
Copper	mg/Kg	0 - 20	22.211		21.907		1		M
Lead	mg/Kg	0 - 20	25.379		25.457		0		M
Zinc	mg/Kg	0 - 20	221.270		218.750		1		M

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LABORATORY CONTROL SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-006

Contract: ERT006|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Aqueous LCS Source: **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Q	QC Criteria	M
1020196									
	Aluminum	mg/Kg	200.0	202.7		101.4		80 - 120	M
	Arsenic	mg/Kg	20.0	19.5		97.5		80 - 120	M
	Copper	mg/Kg	20.0	20.0		100.0		80 - 120	M
	Lead	mg/Kg	20.0	20.3		101.5		80 - 120	M
	Zinc	mg/Kg	200.0	202.4		101.2		80 - 120	M

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LINEAR RANGES

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-006

Contract: ERT006|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Instrument ID: AGILENT 7700 ICPMS **Date:** 1/19/2012

Analyte	Integration Time (sec)	LDR mg/L
Aluminum	1.00	90
Arsenic	1.00	5
Copper	1.00	50
Lead	1.00	5
Zinc	1.00	50

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SAMPLE PREPARATION SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-006

Contract: ERT006|Ft. Stewart 3153-004 **Lab Code:** CAS **Method:** MS

Case No.: _____ **SAS No.:** _____

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	475033						
1020195	MB for HBN 475033 [MDIG/3742	MB	QC-SOLI	8/8/12	0.50	50.0	100.00
1020196	LCS for HBN 475033 [MDIG/3742	LCS	QC-SOLI	8/8/12	0.50	50.0	100.00
9981198001	FTSW-HR-SO-43	SAM	SOIL	8/8/12	0.54	50.0	89.17
9981198002	FTSW-HR-SO-44	SAM	SOIL	8/8/12	0.53	50.0	89.61
9981198003	FTSW-HR-SO-45	SAM	SOIL	8/8/12	0.52	50.0	88.12
9981198003S	FTSW-HR-SO-45S	MS	SOIL	8/8/12	0.50	50.0	88.12
9981198003SD	FTSW-HR-SO-45SD	MSD	SOIL	8/8/12	0.52	50.0	88.12
9981198004	FTSW-HR-SO-46	SAM	SOIL	8/8/12	0.57	50.0	65.52
9981198005	FTSW-HR-SO-46 DUP	SAM	SOIL	8/8/12	0.52	50.0	73.94
9981198006	FTSW-HR-SO-47	SAM	SOIL	8/8/12	0.51	50.0	85.77
9981198007	FTSW-HR-SO-48	SAM	SOIL	8/8/12	0.53	50.0	92.83
9981198008	FTSW-HR-SO-49	SAM	SOIL	8/8/12	0.59	50.0	76.95
9981198009	FTSW-AA-SO-30	SAM	SOIL	8/8/12	0.55	50.0	89.91
9981198010	FTSW-AA-SO-31	SAM	SOIL	8/8/12	0.55	50.0	86.86
9981198011	FTSW-AA-SO-32	SAM	SOIL	8/8/12	0.54	50.0	86.83

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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT006|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-006

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1212																										
BLK	1.00	1216		X		X							X		X											X	
STANDARD 1	1.00	1219		X		X							X		X											X	
STANDARD 2	1.00	1223		X		X							X		X											X	
STANDARD 3	1.00	1226		X		X							X		X											X	
STANDARD 4	1.00	1230		X		X							X		X											X	
STANDARD 5	1.00	1233		X		X							X		X											X	
ICV	1.00	1237		X		X							X		X											X	
ZZZZZZ	1.00	1240																										
ICB2	1.00	1244		X		X							X		X											X	
LLICV	1.00	1247		X		X							X		X											X	
ICS-A1	1.00	1251		X		X							X		X											X	
ICS-AB1	1.00	1300		X		X							X		X											X	
ZZZZZZ	5.00	1304																										
ZZZZZZ	5.00	1307																										
ZZZZZZ	5.00	1311																										
ZZZZZZ	5.00	1314																										
ZZZZZZ	5.00	1318																										
ZZZZZZ	5.00	1321																										
ZZZZZZ	5.00	1324																										
ZZZZZZ	5.00	1328																										
ZZZZZZ	5.00	1331																										
ZZZZZZ	5.00	1335																										
ZZZZZZ	5.00	1338																										
CCB1	5.00	1351		X		X							X		X											X	
LLCCV	5.00	1354		X		X							X		X											X	
CCV2	1.00	1358		X		X							X		X											X	
ZZZZZZ	5.00	1401																										
ZZZZZZ	5.00	1405																										
ZZZZZZ	5.00	1408																										
ZZZZZZ	5.00	1412																										
ZZZZZZ	5.00	1432																										
ZZZZZZ	5.00	1435																										
ZZZZZZ	5.00	1438																										
ZZZZZZ	5.00	1442																										
1020195	5.00	1445		X		X							X		X											X	

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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT006|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-006

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
1020196	5.00	1449		X		X							X		X										X	
CCV3	1.00	1452		X		X							X		X										X	
CCB2	1.00	1456		X		X							X		X										X	
LLCCV	1.00	1459		X		X							X		X										X	
ZZZZZZ	5.00	1503																								
ZZZZZZ	5.00	1506																								
ZZZZZZ	5.00	1510																								
ZZZZZZ	5.00	1513																								
ZZZZZZ	5.00	1517																								
ZZZZZZ	5.00	1520																								
ZZZZZZ	5.00	1524																								
ZZZZZZ	5.00	1527																								
ZZZZZZ	5.00	1531																								
ZZZZZZ	5.00	1534																								
ZZZZZZ	1.00	1538																								
ZZZZZZ	1.00	1541																								
ZZZZZZ	1.00	1545																								
ZZZZZZ	5.00	1550																								
ZZZZZZ	5.00	1554																								
ZZZZZZ	5.00	1557																								
ZZZZZZ	5.00	1600																								
ZZZZZZ	5.00	1604																								
ZZZZZZ	5.00	1607																								
ZZZZZZ	5.00	1611																								
ZZZZZZ	5.00	1614																								
ZZZZZZ	5.00	1618																								
ZZZZZZ	5.00	1621																								
ZZZZZZ	5.00	1624																								
ZZZZZZ	5.00	1628																								
ZZZZZZ	25.00	1631																								
ZZZZZZ	5.00	1635																								
ZZZZZZ	5.00	1638																								
ZZZZZZ	5.00	1642																								
ZZZZZZ	5.00	1645																								
ZZZZZZ	5.00	1649																								
ZZZZZZ	5.00	1652																								

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14
ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT006|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-006

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	1656																								
ZZZZZZ	1.00	1659																								
ZZZZZZ	1.00	1705																								
ZZZZZZ	1.00	1708																								
ZZZZZZ	5.00	1712																								
ZZZZZZ	5.00	1715																								
ZZZZZZ	5.00	1719																								
ZZZZZZ	5.00	1722																								
ZZZZZZ	25.00	1726																								
ZZZZZZ	5.00	1729																								
ZZZZZZ	5.00	1733																								
ZZZZZZ	5.00	1736																								
ZZZZZZ	5.00	1740																								
ZZZZZZ	5.00	1743																								
ZZZZZZ	1.00	1746																								
ZZZZZZ	1.00	1750																								
ZZZZZZ	1.00	1753																								
ZZZZZZ	25.00	1757																								
ZZZZZZ	5.00	1800																								
ZZZZZZ	5.00	1804																								
ZZZZZZ	5.00	1807																								
ZZZZZZ	5.00	1811																								
ZZZZZZ	5.00	1814																								
ZZZZZZ	5.00	1818																								
ZZZZZZ	5.00	1821																								
ZZZZZZ	5.00	1825																								
ZZZZZZ	5.00	1828																								
ZZZZZZ	1.00	1832																								
ZZZZZZ	1.00	1835																								
ZZZZZZ	1.00	1839																								
ZZZZZZ	5.00	1842																								
ZZZZZZ	5.00	1846																								
ZZZZZZ	5.00	1849																								
ZZZZZZ	5.00	1853																								
ZZZZZZ	5.00	1856																								
ZZZZZZ	5.00	1900																								

6020 3051
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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT006|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-006

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	1903																												
ZZZZZZ	5.00	1906																												
ZZZZZZ	5.00	1910																												
ZZZZZZ	25.00	1913																												
ZZZZZZ	1.00	1917																												
ZZZZZZ	1.00	1920																												
ZZZZZZ	1.00	1924																												
ZZZZZZ	5.00	1927																												
ZZZZZZ	5.00	1931																												
ZZZZZZ	5.00	1934																												
ZZZZZZ	5.00	1938																												
ZZZZZZ	5.00	1941																												
ZZZZZZ	5.00	1945																												
ZZZZZZ	5.00	1948																												
ZZZZZZ	25.00	1952																												
ZZZZZZ	5.00	1955																												
ZZZZZZ	5.00	1959																												
ZZZZZZ	1.00	2002																												
ZZZZZZ	1.00	2006																												
ZZZZZZ	1.00	2009																												
ZZZZZZ	5.00	2013																												
ZZZZZZ	5.00	2016																												
ZZZZZZ	5.00	2020																												
ZZZZZZ	5.00	2023																												
ZZZZZZ	5.00	2026																												
ZZZZZZ	5.00	2030																												
ZZZZZZ	5.00	2033																												
ZZZZZZ	5.00	2037																												
ZZZZZZ	5.00	2040																												
ZZZZZZ	5.00	2044																												
CCV12	1.00	2047		X		X							X		X											X				
CCB10	1.00	2051		X		X							X		X											X				
LLCCV	1.00	2054		X		X							X		X											X				
ZZZZZZ	5.00	2058																												
ZZZZZZ	5.00	2101																												
ZZZZZZ	5.00	2105																												

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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT006|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-006

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	2108																										
ZZZZZZ	25.00	2112																										
ZZZZZZ	5.00	2115																										
ZZZZZZ	25.00	2119																										
9981198001	5.00	2122				X																						
9981198002	5.00	2126				X																						
9981198003	5.00	2129				X																						
CCV13	1.00	2133		X		X							X		X											X		
CCB11	1.00	2136		X		X							X		X											X		
LLCCV	1.00	2140		X		X							X		X											X		
9981198003S	5.00	2143		X		X							X		X											X		
9981198003SD	5.00	2147		X		X							X		X											X		
9981198003PS	5.00	2150		X		X							X		X											X		
9981198004	5.00	2153				X																						
9981198005	5.00	2157				X																						
9981198006	5.00	2200				X																						
9981198007	5.00	2204				X																						
9981198008	5.00	2207				X																						
9981198009	5.00	2211		X		X							X		X											X		
9981198010	5.00	2214		X		X							X		X											X		
CCV14	5.00	2218		X		X							X		X											X		
CCB12	5.00	2221		X		X							X		X											X		
LLCCV	5.00	2225		X		X							X		X											X		
9981198011	5.00	2228		X		X							X		X											X		
9981198011L	25.00	2232		X		X							X		X											X		
CCV15	5.00	2235		X		X							X		X											X		
CCB13	5.00	2239		X		X							X		X											X		
LLCCV	5.00	2242		X		X							X		X											X		
ZZZZZZ	1.00	2246																										
ZZZZZZ	1.00	2256																										
ZZZZZZ	5.00	2259																										
ZZZZZZ	5.00	2311																										
ZZZZZZ	5.00	2315																										
ZZZZZZ	5.00	2318																										
ZZZZZZ	25.00	2327																										
ZZZZZZ	5.00	2330																										

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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT006|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-006

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	2339																										
ZZZZZZ	5.00	2343																										
ZZZZZZ	5.00	2346																										

6020 3051

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT006|Ft. Stewart 3153-004

Lab Code: CAS Case No.: _____ NRAS No.: _____ SDG NO.: ERT-006

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
BLK	ZZZZZZ	1212												
BLK	BLK	1216	100		100		100		100		100		100	
STANDARD 1	STANDARD 1	1219	112		99		97		102		91		95	
STANDARD 2	STANDARD 2	1223	113		100		98		103		102		102	
STANDARD 3	STANDARD 3	1226	116		100		101		101		102		105	
STANDARD 4	STANDARD 4	1230	114		100		99		105		103		104	
STANDARD 5	STANDARD 5	1233	117		101		101		104		103		105	
ICV	ICV	1237	115		99		99		104		102		103	
ICB1	ZZZZZZ	1240												
ICB2	ICB	1244	102		99		98		98		99		98	
LLICV	LLICV	1247	111		100		97		103		104		100	
ICS-A1	ICSA	1251	106		96		92		101		99		96	
ICS-AB1	ICSAB	1300	107		102		95		107		106		102	
1020719	ZZZZZZ	1304												
1020720	ZZZZZZ	1307												
9981408002	ZZZZZZ	1311												
9981430001	ZZZZZZ	1314												
1020721	ZZZZZZ	1318												
1020722	ZZZZZZ	1321												
9981430001P	ZZZZZZ	1324												
9981517002	ZZZZZZ	1328												
9981517003	ZZZZZZ	1331												
9981517003L	ZZZZZZ	1335												
CCV1	ZZZZZZ	1338												
CCB1	CCB	1351	112		107		104		111		112		112	
LLCCV	LLCCV	1354	109		105		100		109		113		109	
CCV2	CCV	1358	108		104		99		110		112		109	
1021781	ZZZZZZ	1401												
1021782	ZZZZZZ	1405												
1020183	ZZZZZZ	1408												
1020184	ZZZZZZ	1412												
1020187	ZZZZZZ	1432												
1020188	ZZZZZZ	1435												
1020191	ZZZZZZ	1438												
1020192	ZZZZZZ	1442												
1020195	MB for HBN 47503	1445	113		105		101		112		114		113	
1020196	LCS for HBN 4750	1449	111		106		105		113		115		114	
CCV3	CCV	1452	115		110		106		114		116		116	
CCB2	CCB	1456	117		112		108		115		116		116	
LLCCV	LLCCV	1459	111		107		105		114		113		114	
9980394001	ZZZZZZ	1503												
9980394002	ZZZZZZ	1506												
9980394003	ZZZZZZ	1510												
9980394004	ZZZZZZ	1513												
9980394005	ZZZZZZ	1517												

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT006|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-006

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For:													
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980394007	ZZZZZZ	1520												
9980394008	ZZZZZZ	1524												
9980394009	ZZZZZZ	1527												
9980394010	ZZZZZZ	1531												
9980394011	ZZZZZZ	1534												
CCV4	ZZZZZZ	1538												
CCB3	ZZZZZZ	1541												
LLCCV	ZZZZZZ	1545												
1020719	ZZZZZZ	1550												
1020720	ZZZZZZ	1554												
9981430001	ZZZZZZ	1557												
1020721	ZZZZZZ	1600												
1020722	ZZZZZZ	1604												
9981430001P	ZZZZZZ	1607												
CCV5	ZZZZZZ	1611												
CCB4	ZZZZZZ	1614												
LLCCV	ZZZZZZ	1618												
CCV6	ZZZZZZ	1621												
9980394012	ZZZZZZ	1624												
9980394013	ZZZZZZ	1628												
9980394013L	ZZZZZZ	1631												
9980395001	ZZZZZZ	1635												
9980395002	ZZZZZZ	1638												
9980395003	ZZZZZZ	1642												
1020185	ZZZZZZ	1645												
1020186	ZZZZZZ	1649												
9980395003P	ZZZZZZ	1652												
9980395004	ZZZZZZ	1656												
CCV7	ZZZZZZ	1659												
CCB5	ZZZZZZ	1705												
LLCCV	ZZZZZZ	1708												
9980395005	ZZZZZZ	1712												
9980395007	ZZZZZZ	1715												
9980395008	ZZZZZZ	1719												
9980395009	ZZZZZZ	1722												
9980395009L	ZZZZZZ	1726												
9980395010	ZZZZZZ	1729												
9980395011	ZZZZZZ	1733												
9980395012	ZZZZZZ	1736												
9980395013	ZZZZZZ	1740												
9980395014	ZZZZZZ	1743												
CCV8	ZZZZZZ	1746												
CCB6	ZZZZZZ	1750												
LLCCV	ZZZZZZ	1753												
9980395014L	ZZZZZZ	1757												

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT006|Ft. Stewart 3153-004

Lab Code: CAS Case No.: _____ NRAS No.: _____ SDG NO.: ERT-006

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980614001	ZZZZZZ	1800												
9980614002	ZZZZZZ	1804												
9980614003	ZZZZZZ	1807												
9980614004	ZZZZZZ	1811												
9980614005	ZZZZZZ	1814												
9980614006	ZZZZZZ	1818												
9980614007	ZZZZZZ	1821												
9980614008	ZZZZZZ	1825												
9980614009	ZZZZZZ	1828												
CCV9	ZZZZZZ	1832												
CCB7	ZZZZZZ	1835												
LLCCV	ZZZZZZ	1839												
9980614010	ZZZZZZ	1842												
9980614011	ZZZZZZ	1846												
9980614012	ZZZZZZ	1849												
9980614013	ZZZZZZ	1853												
1020189	ZZZZZZ	1856												
1020190	ZZZZZZ	1900												
9980614013P	ZZZZZZ	1903												
9980614014	ZZZZZZ	1906												
9980614015	ZZZZZZ	1910												
9980614015L	ZZZZZZ	1913												
CCV10	ZZZZZZ	1917												
CCB8	ZZZZZZ	1920												
LLCCV	ZZZZZZ	1924												
9980614016	ZZZZZZ	1927												
9980614017	ZZZZZZ	1931												
9980614018	ZZZZZZ	1934												
9980614019	ZZZZZZ	1938												
9980614020	ZZZZZZ	1941												
9980614021	ZZZZZZ	1945												
9980614022	ZZZZZZ	1948												
9980614022L	ZZZZZZ	1952												
9980875001	ZZZZZZ	1955												
1020193	ZZZZZZ	1959												
CCV11	ZZZZZZ	2002												
CCB9	ZZZZZZ	2006												
LLCCV	ZZZZZZ	2009												
1020194	ZZZZZZ	2013												
9980875001P	ZZZZZZ	2016												
9980875002	ZZZZZZ	2020												
9980875003	ZZZZZZ	2023												
9980875004	ZZZZZZ	2026												
9980875005	ZZZZZZ	2030												
9980875006	ZZZZZZ	2033												

6020 3051

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT006|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-006

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980875007	ZZZZZZ	2037												
9980875008	ZZZZZZ	2040												
9980875009	ZZZZZZ	2044												
CCV12	CCV	2047	108		104		101		113		112		109	
CCB10	CCB	2051	105		102		98		109		112		107	
LLCCV	LLCCV	2054	106		103		98		112		111		109	
9980875010	ZZZZZZ	2058												
9980875011	ZZZZZZ	2101												
9980875012	ZZZZZZ	2105												
9980875013	ZZZZZZ	2108												
9980875013L	ZZZZZZ	2112												
9980875014	ZZZZZZ	2115												
9980875014L	ZZZZZZ	2119												
9981198001	FTSW-HR-SO-43	2122	104		100		97		108		111		105	
9981198002	FTSW-HR-SO-44	2126	106		100		97		109		111		106	
9981198003	FTSW-HR-SO-45	2129	102		98		95		107		109		104	
CCV13	CCV	2133	104		101		96		108		113		105	
CCB11	CCB	2136	105		102		97		109		110		104	
LLCCV	LLCCV	2140	104		100		96		109		111		104	
9981198003S	FTSW-HR-SO-45S	2143	105		101		98		109		114		106	
9981198003S	FTSW-HR-SO-45SD	2147	103		99		96		109		112		106	
9981198003P	FTSW-HR-SO-45PS	2150	105		101		96		109		112		105	
9981198004	FTSW-HR-SO-46	2153	105		102		96		110		109		104	
9981198005	FTSW-HR-SO-46 DU	2157	104		100		95		107		109		105	
9981198006	FTSW-HR-SO-47	2200	104		98		96		106		108		102	
9981198007	FTSW-HR-SO-48	2204	105		99		95		107		107		102	
9981198008	FTSW-HR-SO-49	2207	104		98		94		107		110		103	
9981198009	FTSW-AA-SO-30	2211	106		100		97		110		111		106	
9981198010	FTSW-AA-SO-31	2214	107		100		97		112		112		107	
CCV14	CCV	2218	106		104		99		110		111		107	
CCB12	CCB	2221	106		102		97		109		110		105	
LLCCV	LLCCV	2225	104		100		97		108		112		106	
9981198011	FTSW-AA-SO-32	2228	104		99		96		110		111		105	
9981198011L	FTSW-AA-SO-32L	2232	106		100		98		111		109		105	
CCV15	CCV	2235	107		105		101		113		117		111	
CCB13	CCB	2239	112		107		102		111		113		108	
LLCCV	LLCCV	2242	104		103		98		111		112		106	
50 PPM LDR	ZZZZZZ	2246												
30 PPM LDR	ZZZZZZ	2256												
1020719	ZZZZZZ	2259												
CCV16	ZZZZZZ	2311												
CCB14	ZZZZZZ	2315												
LLCCV	ZZZZZZ	2318												
9980875009	ZZZZZZ	2327												
1021781	ZZZZZZ	2330												

6020 3051

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT006|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-006

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
CCV17	ZZZZZZ	2339												
CCB15	ZZZZZZ	2343												
LLCCV	ZZZZZZ	2346												

Total Metals in Solid by 6020A Raw Data

Dataset: A081312C 2nd Review MWO/ [illegible]

First Review: [illegible]/MWO Approval: MWO/ [illegible]

Internal Standards: **ICPMS9190**

200	60-125%	**6020Qc:**	70-130%	**6020A**	30-130%	**DOD:**	70-120%

Standards :
Tuning MS0361
Daily Standard: MS0361

Calibration Standards
MS0343
MS0344

PIPETTES:

03-028	10.0 mL
03-202	.200 mL
03-201	1.0 mL
03-031	1.0 mL

ICSA: MS0341
ICSAB:MS0340

Al LDR 30 ppm

GOLD: MS0346
DW LCS: MS0358
Second Source

MA1393	MA1388	MA1360
MA1342	MS0345	MA1381
MS0309	MA1359	

Internal Standards/ Target Analytes

Sc-Al,V,Cr,Mn,Co,Ni,Cu,Na, K, Ti, Mg, Ca, Fe, As, Zn, Se,
Y
In-Sr, Mo, Ag, Cd, Sn, Sb, Ba
Tb
Bi-Hg, Tl, Pb, U

Ranand ct passed

Case Narrative:

RR. MB 1020719 } Fe
LCS 1020720 } Mo } Carry over from ICSAB

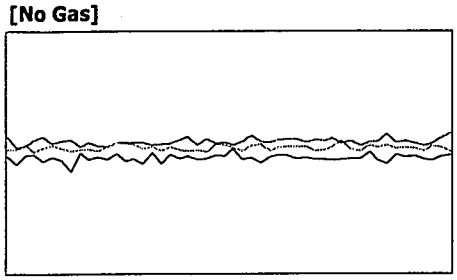
9981430001 - Mo
1020721
1020722

***D**: *D at the beginning of the Dataset Denotes that the samples were run on the Elan DRCe ICP-MS*

Tune Report

Batch Folder C:\Agilent\ICPMH\1\DATA\A081312.b
Report Comment
Instrument Name G3281A JP11040846

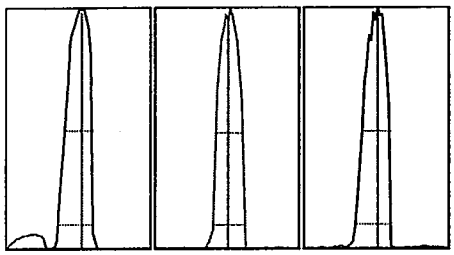
[No Gas]



Mass	Range	Count	RSD%	Background
7	20000	10949	2.467	16.800
89	10000	5213	2.148	10.900
205	5000	2399	3.205	29.500

Ratio (oxide) 156/140 0.448 % **Ratio (2+)** 70/140 12.811 %

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.311



Mass	Peak Height	Axis	W-50%	W-X%
7	10990.74	7.10	0.60	0.728
89	5222.83	89.05	0.59	0.689
205	2456.22	205.05	0.61	0.740

X = 10 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 22.74 **Y Axis** Linear

Tune Parameters

Plasma Paramters

RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	9.2 V	Deflect	16.0 V
Extract 2	-200.0 V	Cell Entrance	-32 V	Plate Bias	-50 V
Omega Bias	-85 V	Cell Exit	-48 V		

Cell Parameters

OctP Bias	-8.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	200 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

[he]

Mass	Range	Count	RSD%	Background
59	2000	1752	4.007	
89	5000	2182	3.418	
51	500	382	7.089	

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.306

Tune Parameters

Tune Report

Plasma Paramters

RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
Mass	**Range**	**Count**	**RSD%**	**Background**	
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	9.2 V	Deflect	0.0 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-85 V	Cell Exit	-60 V		

Cell Parameters

OctP Bias	-18.0 V	He Flow	3.5 mL/min	Energy Discrimination	3.0 V
OctP RF	200 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

[HeHe]

Mass	Range	Count	RSD%	Background
59	1000	573	5.217	
89	1000	478	5.792	
51	50	28	27.475	

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.306

Tune Parameters

Plasma Paramters

RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	9.2 V	Deflect	-73.2 V
Extract 2	-200.0 V	Cell Entrance	-140 V	Plate Bias	-150 V
Omega Bias	-85 V	Cell Exit	-150 V		

Cell Parameters

OctP Bias	-100.0 V	He Flow	10.0 mL/min	Energy Discrimination	7.0 V
OctP RF	180 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	001CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:12:50-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	2551	3.61
Cr	52	1	No Gas	9974	0.04
Mn	55	1	No Gas	19045	0.02
Co	59	1	No Gas	330	7.40
Ni	60	1	No Gas	18053	0.01
Cu	63	1	No Gas	601	0.73
Sr	88	1	No Gas	59	210.68
Ag	107	1	No Gas	56	164.96
Al	27	1	No Gas	7669	0.03
Sn	118	1	No Gas	215	1.39
Ti	47	1	No Gas	297	7.26
Zn	66	1	No Gas	660	3.98
As	75	3	HeHe	10	373.51
As	75	1	No Gas	24182	0.01
Sb	121	1	No Gas	167	18.33
Hg	201	1	No Gas	39	65.07
Be	9	1	No Gas	22	71.57
Pb	208	1	No Gas	463	4.16
Se	82	1	No Gas	41	386.23
Mo	98	1	No Gas	923	2.04
Ba	137	1	No Gas	53	162.38
Tl	205	1	No Gas	63	85.61
U	238	1	No Gas	107	53.04
Na	23	2	he	85677	0.00
Mg	24	2	he	200	13.89
K	39	2	he	193930	0.00
Se	82	3	HeHe	48	14.65
Fe	57	3	HeHe	126	26.53
Cd	114	1	No Gas	37	214.72
Ca	44	1	No Gas	123727	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	5836894	3.06
Sc	45	2	he	1293410	1.06
Ge	72	1	No Gas	677402	2.06
In	115	1	No Gas	3685121	2.00
Tb	159	1	No Gas	4485657	1.37

Calibration Blank Report

Bi	209	1	No Gas	2034548	4.06
Sc	45	3	HeHe	136772	1.11

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	002CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:16:22-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	1149	13.25
Cr	52	1	No Gas	10752	0.07
Mn	55	1	No Gas	31947	0.08
Co	59	1	No Gas	248	5.80
Ni	60	1	No Gas	18861	0.01
Cu	63	1	No Gas	595	1.97
Sr	88	1	No Gas	93	45.51
Ag	107	1	No Gas	37	337.22
Al	27	1	No Gas	8628	0.05
Sn	118	1	No Gas	193	6.24
Ti	47	1	No Gas	295	6.58
Zn	66	1	No Gas	783	1.76
As	75	3	HeHe	7	579.68
As	75	1	No Gas	23234	0.03
Sb	121	1	No Gas	126	31.60
Hg	201	1	No Gas	33	81.17
Be	9	1	No Gas	23	265.75
Pb	208	1	No Gas	293	14.59
Mo	98	1	No Gas	864	3.14
Ba	137	1	No Gas	50	105.83
Tl	205	1	No Gas	26	668.06
U	238	1	No Gas	37	247.43
Na	23	2	he	83881	0.00
Mg	24	2	he	152	54.16
K	39	2	he	200065	0.00
Se	82	3	HeHe	62	45.93
Fe	57	3	HeHe	174	12.88
Cd	114	1	No Gas	50	207.84
Ca	44	1	No Gas	123511	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	5896472	4.01
Sc	45	2	he	1271268	0.31
Ge	72	1	No Gas	682805	1.30
In	115	1	No Gas	3697856	1.76
Tb	159	1	No Gas	4404848	1.64
Bi	209	1	No Gas	1997135	4.62

Calibration Blank Report

Sc	45	3	HeHe	132951	0.59

Calibration Standard Report

Sample Table

Sample Name	Standard 1
Data File Name	003CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:19:52-04:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	5673	0.60
Cr	52	1	No Gas	15856	0.04
Mn	55	1	No Gas	38340	0.02
Co	59	1	No Gas	3771	0.10
Ni	60	1	No Gas	21774	0.02
Cu	63	1	No Gas	3188	0.06
Sr	88	1	No Gas	4608	0.25
Ag	107	1	No Gas	1700	0.31
Al	27	1	No Gas	94327	0.00
Sn	118	1	No Gas	1674	1.15
Ti	47	1	No Gas	1051	0.70
Zn	66	1	No Gas	2127	0.49
As	75	3	HeHe	32	48.14
As	75	1	No Gas	25894	0.02
Sb	121	1	No Gas	1559	0.78
Hg	201	1	No Gas	34	105.24
Be	9	1	No Gas	352	4.93
Pb	208	1	No Gas	3630	0.14
Se	82	1	No Gas	49	760.54
Mo	98	1	No Gas	2340	0.68
Ba	137	1	No Gas	527	4.30
Tl	205	1	No Gas	2463	0.17
U	238	1	No Gas	2708	0.13
Na	23	2	he	102533	0.00
Mg	24	2	he	2849	0.21
K	39	2	he	210864	0.00
Se	82	3	HeHe	57	31.86
Fe	57	3	HeHe	233	19.68
Cd	114	1	No Gas	833	2.16
Ca	44	1	No Gas	137356	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6025814	1.84	5896472	102.19	70	120	
Sc	45	2	he	1152938	27.74	1271268	90.69	70	120	
Ge	72	1	No Gas	676306	1.76	682805	99.05	70	120	

Calibration Standard Report

In	115	1	No Gas	3601392	3.13	3697856	97.39	70	120	
Tb	159	1	No Gas	4357156	1.15	4404848	98.92	70	120	
Bi	209	1	No Gas	2230028	3.15	1997135	111.66	70	120	
Sc	45	3	HeHe	126675	2.93	132951	95.28	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 2
Data File Name	004CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:23:22-04:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	36707	0.01
Cr	52	1	No Gas	43016	0.00
Mn	55	1	No Gas	64359	0.00
Co	59	1	No Gas	33047	0.01
Ni	60	1	No Gas	28157	0.01
Cu	63	1	No Gas	19610	0.01
Sr	88	1	No Gas	42535	0.00
Ag	107	1	No Gas	18389	0.02
Al	27	1	No Gas	65426	0.00
Sn	118	1	No Gas	8458	0.07
Ti	47	1	No Gas	2941	0.03
Zn	66	1	No Gas	7561	0.10
As	75	3	HeHe	346	3.44
As	75	1	No Gas	28695	0.01
Sb	121	1	No Gas	13917	0.03
Hg	201	1	No Gas	69	35.57
Be	9	1	No Gas	3490	0.12
Pb	208	1	No Gas	31540	0.01
Se	82	1	No Gas	200	55.45
Mo	98	1	No Gas	10991	0.02
Ba	137	1	No Gas	4901	0.05
Tl	205	1	No Gas	23645	0.02
U	238	1	No Gas	26795	0.01
Na	23	2	he	131719	0.00
Mg	24	2	he	19022	0.02
K	39	2	he	237673	0.00
Se	82	3	HeHe	74	11.51
Fe	57	3	HeHe	930	1.42
Cd	114	1	No Gas	8162	0.07
Ca	44	1	No Gas	141966	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6077153	2.03	5896472	103.06	70	120	
Sc	45	2	he	1293877	1.51	1271268	101.78	70	120	
Ge	72	1	No Gas	684931	2.11	682805	100.31	70	120	

Calibration Standard Report

In	115	1	No Gas	3628326	3.66	3697856	98.12	70	120	
Tb	159	1	No Gas	4313712	2.41	4404848	97.93	70	120	
Bi	209	1	No Gas	2247572	3.62	1997135	112.54	70	120	
Sc	45	3	HeHe	134887	1.50	132951	101.46	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 3
Data File Name	005CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:26:52-04:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	347687	0.00
Cr	52	1	No Gas	324578	0.00
Mn	55	1	No Gas	404655	0.00
Co	59	1	No Gas	336563	0.00
Ni	60	1	No Gas	94971	0.00
Cu	63	1	No Gas	179719	0.00
Sr	88	1	No Gas	419711	0.00
Ag	107	1	No Gas	186331	0.00
Al	27	1	No Gas	225467	0.00
Sn	118	1	No Gas	85168	0.01
Ti	47	1	No Gas	26475	0.01
Zn	66	1	No Gas	46308	0.01
As	75	3	HeHe	3572	0.14
As	75	1	No Gas	69418	0.00
Sb	121	1	No Gas	144398	0.00
Hg	201	1	No Gas	321	3.02
Be	9	1	No Gas	34814	0.00
Pb	208	1	No Gas	311633	0.00
Se	82	1	No Gas	2388	0.35
Mo	98	1	No Gas	105298	0.00
Ba	137	1	No Gas	49424	0.00
Tl	205	1	No Gas	238405	0.00
U	238	1	No Gas	284661	0.00
Na	23	2	he	378460	0.00
Mg	24	2	he	160598	0.00
K	39	2	he	470770	0.00
Se	82	3	HeHe	196	2.49
Fe	57	3	HeHe	8647	0.06
Cd	114	1	No Gas	83808	0.00
Ca	44	1	No Gas	219400	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5975593	2.40	5896472	101.34	70	120	
Sc	45	2	he	1295638	1.95	1271268	101.92	70	120	
Ge	72	1	No Gas	682250	0.93	682805	99.92	70	120	

Calibration Standard Report

In	115	1	No Gas	3734350	0.92	3697856	100.99	70	120	
Tb	159	1	No Gas	4329799	0.59	4404848	98.30	70	120	
Bi	209	1	No Gas	2313155	0.17	1997135	115.82	70	120	
Sc	45	3	HeHe	139923	1.19	132951	105.24	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 4
Data File Name	006CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:30:23-04:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	3327729	0.00
Cr	52	1	No Gas	3025690	0.00
Mn	55	1	No Gas	3711637	0.00
Co	59	1	No Gas	3336506	0.00
Ni	60	1	No Gas	758712	0.00
Cu	63	1	No Gas	1768262	0.00
Sr	88	1	No Gas	4216323	0.00
Ag	107	1	No Gas	1897625	0.00
Al	27	1	No Gas	1994166	0.00
Sn	118	1	No Gas	999552	0.00
Ti	47	1	No Gas	269085	0.00
Zn	66	1	No Gas	455362	0.00
As	75	3	HeHe	35929	0.00
As	75	1	No Gas	493405	0.00
Sb	121	1	No Gas	1435359	0.00
Hg	201	1	No Gas	2804	0.04
Be	9	1	No Gas	344243	0.00
Pb	208	1	No Gas	3113349	0.00
Se	82	1	No Gas	23663	0.00
Mo	98	1	No Gas	1133897	0.00
Ba	137	1	No Gas	484561	0.00
Tl	205	1	No Gas	2284952	0.00
U	238	1	No Gas	2921542	0.00
Na	23	2	he	2821420	0.00
Mg	24	2	he	1615680	0.00
K	39	2	he	2725055	0.00
Se	82	3	HeHe	1791	0.20
Fe	57	3	HeHe	81592	0.00
Cd	114	1	No Gas	835193	0.00
Ca	44	1	No Gas	979919	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6200036	1.53	5896472	105.15	70	120	
Sc	45	2	he	1303185	0.51	1271268	102.51	70	120	
Ge	72	1	No Gas	682451	1.66	682805	99.95	70	120	

Calibration Standard Report

In	115	1	No Gas	3670872	2.59	3697856	99.27	70	120	
Tb	159	1	No Gas	4348184	1.52	4404848	98.71	70	120	
Bi	209	1	No Gas	2283484	4.44	1997135	114.34	70	120	
Sc	45	3	HeHe	138327	1.35	132951	104.04	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 5
Data File Name	007CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:33:47-04:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	6563421	0.00
Cr	52	1	No Gas	5906265	0.00
Mn	55	1	No Gas	7211085	0.00
Co	59	1	No Gas	6504377	0.00
Ni	60	1	No Gas	1495844	0.00
Cu	63	1	No Gas	3519800	0.00
Sr	88	1	No Gas	8227989	0.00
Ag	107	1	No Gas	3678532	0.00
Al	27	1	No Gas	3886184	0.00
Sn	118	1	No Gas	2200502	0.00
Ti	47	1	No Gas	542859	0.00
Zn	66	1	No Gas	890715	0.00
As	75	3	HeHe	72900	0.00
As	75	1	No Gas	972406	0.00
Sb	121	1	No Gas	2915076	0.00
Hg	201	1	No Gas	5833	0.05
Be	9	1	No Gas	681346	0.00
Pb	208	1	No Gas	6208559	0.00
Se	82	1	No Gas	48679	0.00
Mo	98	1	No Gas	2354816	0.00
Ba	137	1	No Gas	968617	0.00
Tl	205	1	No Gas	4555286	0.00
U	238	1	No Gas	5741236	0.00
Na	23	2	he	5414301	0.00
Mg	24	2	he	3082653	0.00
K	39	2	he	5133884	0.00
Se	82	3	HeHe	3501	0.06
Fe	57	3	HeHe	164269	0.00
Cd	114	1	No Gas	1701177	0.00
Ca	44	1	No Gas	1821322	0.00

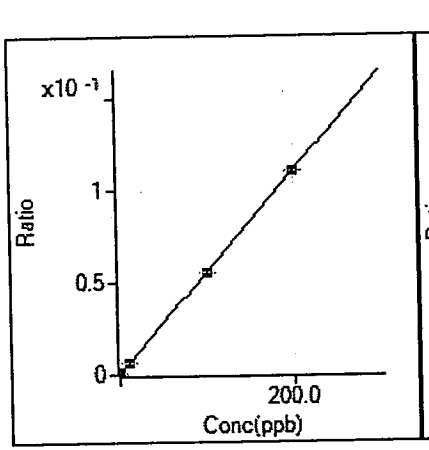
QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6151770	1.24	5896472	104.33	70	120	
Sc	45	2	he	1310111	1.57	1271268	103.06	70	120	
Ge	72	1	No Gas	687781	0.71	682805	100.73	70	120	

Calibration Standard Report

In	115	1	No Gas	3726710	1.53	3697856	100.78	70	120	
Tb	159	1	No Gas	4360250	1.19	4404848	98.99	70	120	
Bi	209	1	No Gas	2328198	0.87	1997135	116.58	70	120	
Sc	45	3	HeHe	139392	1.58	132951	104.84	70	120	

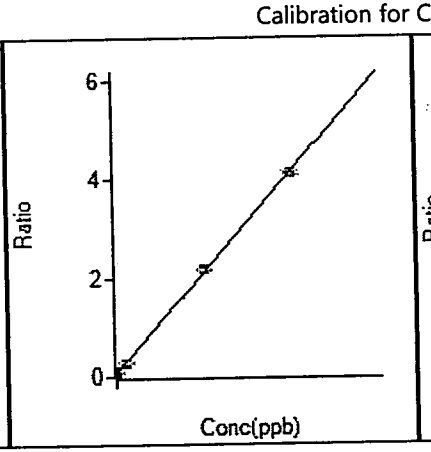
Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



9 Be [No Gas] / ISTD: 45 Sc

y = 5.541E-4 x + 4.025E-6

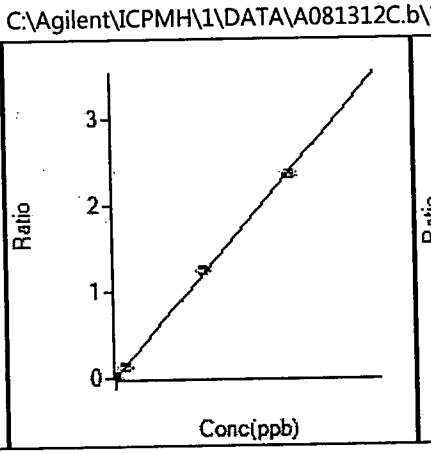
R	1.0000
DL	0.01445
BEC	0.007265



23 Na [he] / ISTD: 45 Sc

y = 2.047E-3 x + 6.598E-2

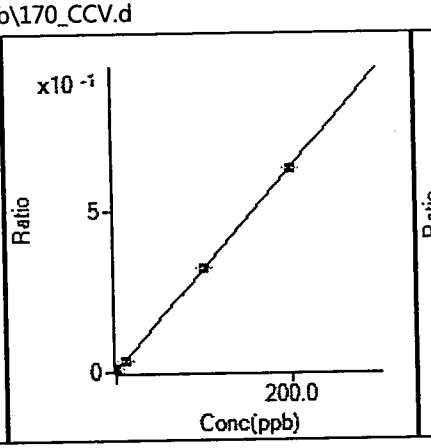
R	0.9999
DL	2.634
BEC	32.23



24 Mg [he] / ISTD: 45 Sc

y = 1.189E-3 x + 1.195E-4

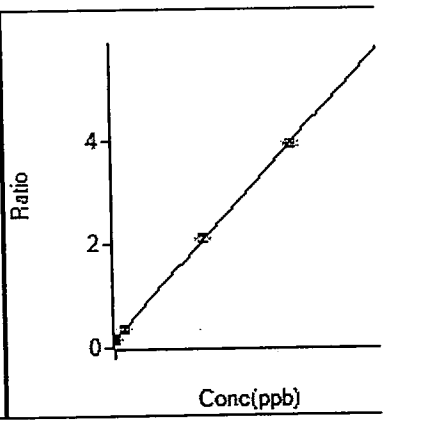
R	0.9997
DL	0.2482
BEC	0.1004



27 Al [No Gas] / ISTD: 45 Sc

y = 3.162E-3 x + 1.467E-3

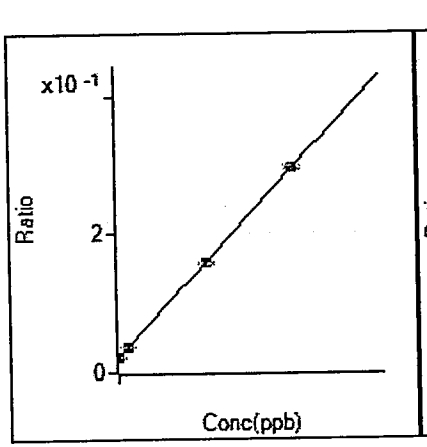
R	1.0000
DL	0.1167
BEC	0.4638



39 K [he] / ISTD: 45 Sc

y = 1.892E-3 x + 1.574E-1

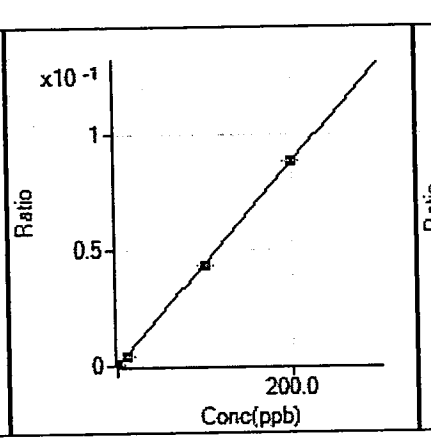
R	0.9999
DL	2.785
BEC	83.19



44 Ca [No Gas] / ISTD: 45 Sc

y = 1.375E-4 x + 2.096E-2

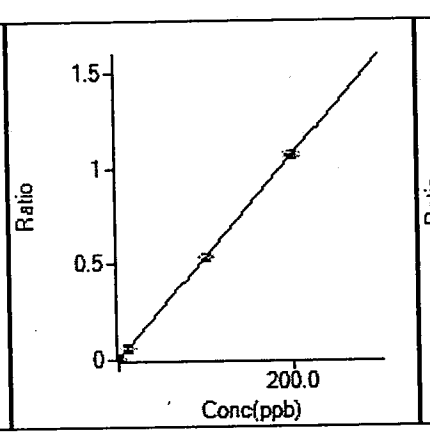
R	1.0000
DL	13.36
BEC	152.5



47 Ti [No Gas] / ISTD: 45 Sc

y = 4.395E-4 x + 5.013E-5

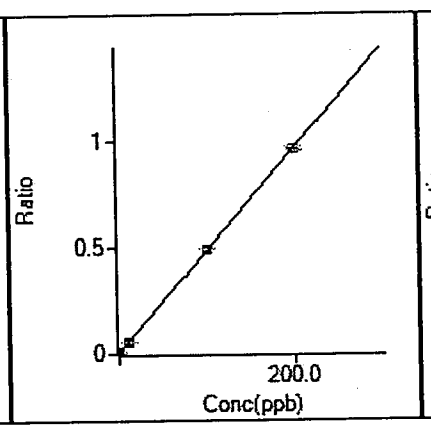
R	1.0000
DL	0.0652
BEC	0.1141



51 V [No Gas] / ISTD: 45 Sc

y = 5.340E-3 x + 2.003E-4

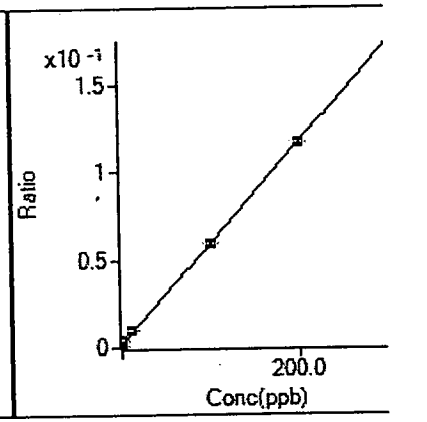
R	1.0000
DL	0.1719
BEC	0.03751



52 Cr [No Gas] / ISTD: 45 Sc

y = 4.807E-3 x + 1.824E-3

R	1.0000
DL	0.08261
BEC	0.3795

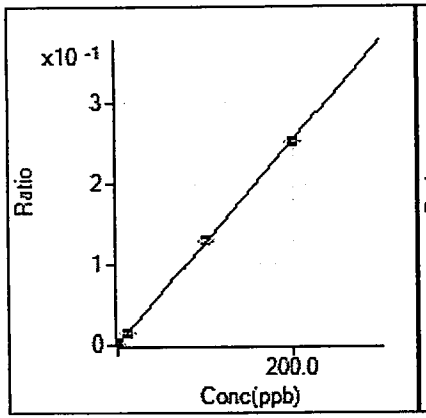


53 [V] [No Gas] / ISTD: 45 Sc

y = 5.795E-4 x + 1.368E-3

R	0.9998
DL	0.3926
BEC	2.361

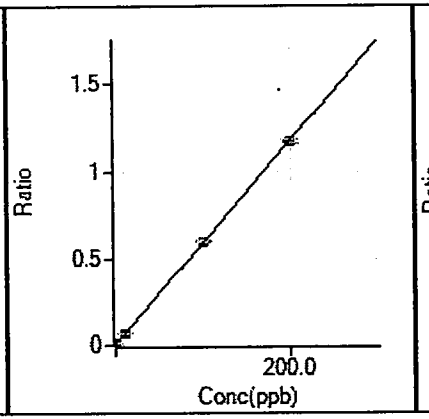
Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



53 [V] [he] / ISTD: 45 Sc

y = 1.270E-3 x + 6.762E-4

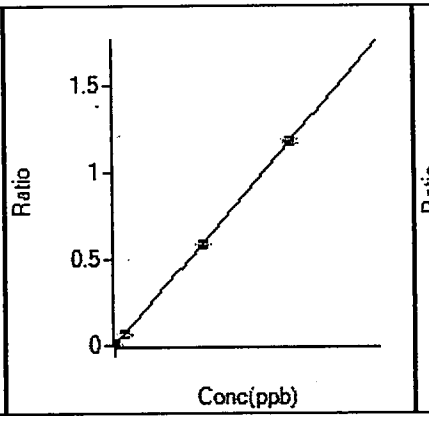
R	0.9999
DL	0.5229
BEC	0.5325



55 Mn [No Gas] / ISTD: 45 Sc

y = 5.855E-3 x + 5.402E-3

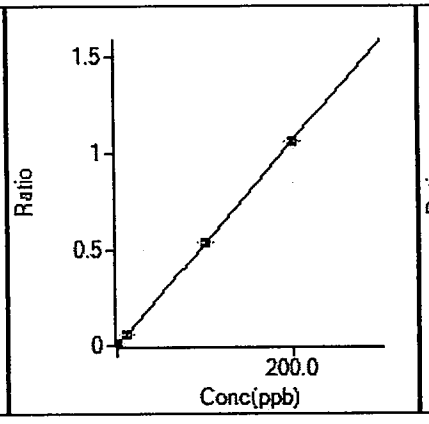
R	1.0000
DL	0.6308
BEC	0.9226



57 Fe [HeHe] / ISTD: 45 Sc

y = 5.887E-4 x + 1.311E-3

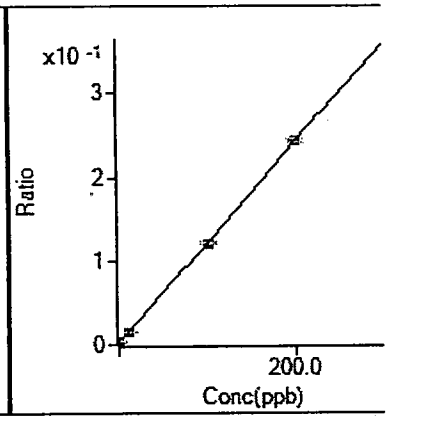
R	1.0000
DL	1.531
BEC	2.226



59 Co [No Gas] / ISTD: 45 Sc

y = 5.306E-3 x + 4.206E-5

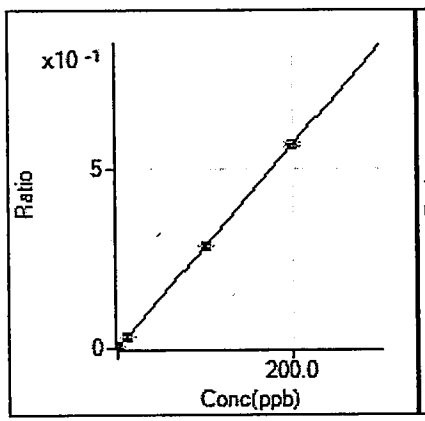
R	1.0000
DL	0.003114
BEC	0.007927



60 Ni [No Gas] / ISTD: 45 Sc

y = 1.198E-3 x + 3.204E-3

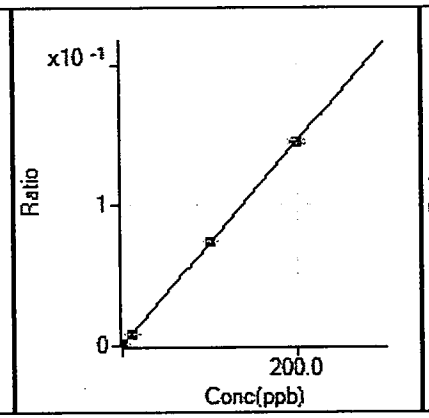
R	1.0000
DL	0.5389
BEC	2.674



63 Cu [No Gas] / ISTD: 45 Sc

y = 2.859E-3 x + 1.007E-4

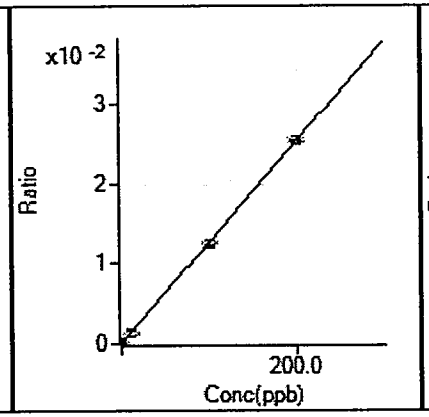
R	1.0000
DL	0.009209
BEC	0.03522



66 Zn [No Gas] / ISTD: 45 Sc

y = 7.254E-4 x + 1.333E-4

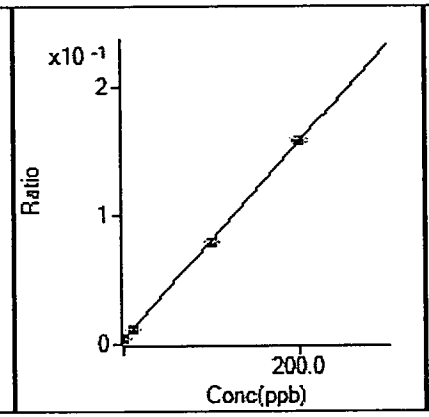
R	1.0000
DL	0.09382
BEC	0.1838



69 [Zn] [No Gas] / ISTD: 45 Sc

y = 1.267E-4 x + 3.180E-5

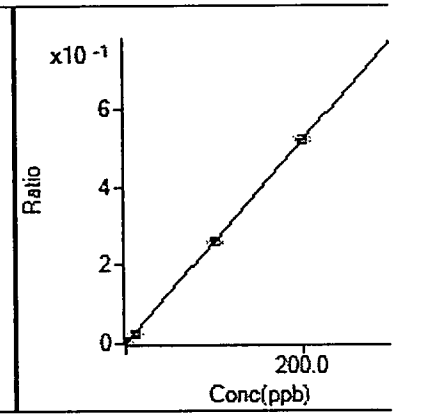
R	1.0000
DL	0.2514
BEC	0.251



75 As [No Gas] / ISTD: 45 Sc

y = 7.678E-4 x + 3.949E-3

R	1.0000
DL	1.424
BEC	5.143

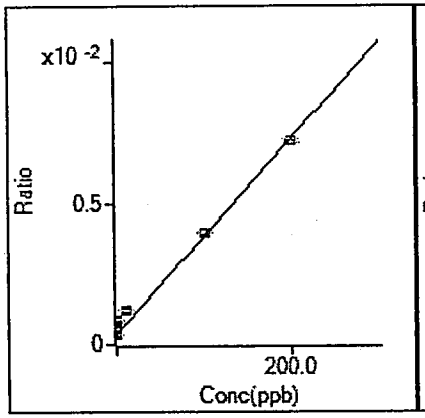


75 As [HeHe] / ISTD: 45 Sc

y = 2.611E-3 x + 5.400E-5

R	1.0000
DL	0.02561
BEC	0.02068

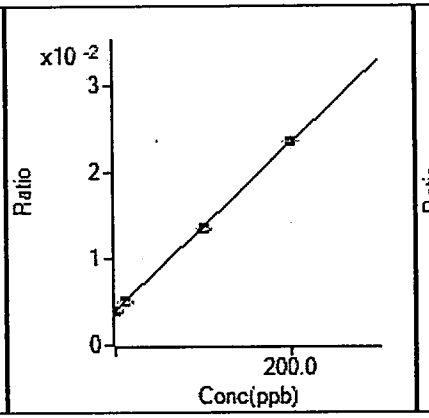
Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



77 [As] [No Gas] / ISTD: 45 Sc

y = 3.487E-5 x + 3.519E-4

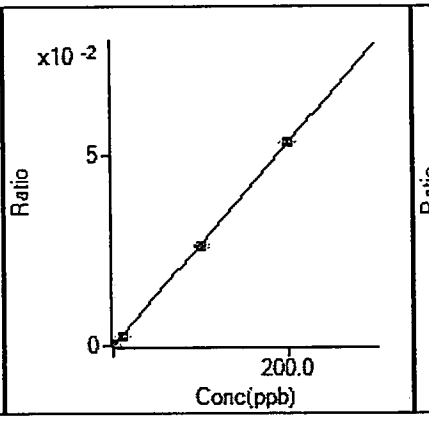
R	0.9974
DL	3.908
BEC	10.09



78 Se [No Gas] / ISTD: 45 Sc

y = 9.716E-5 x + 3.968E-3

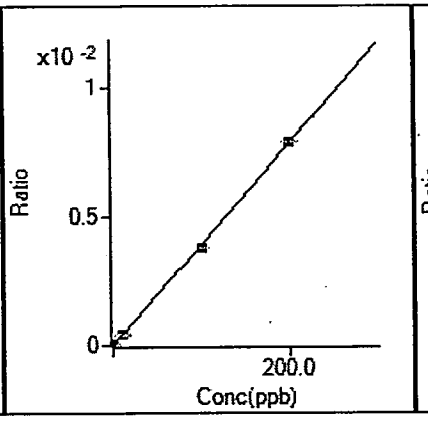
R	0.9999
DL	5.747
BEC	40.84



78 Se [HeHe] / ISTD: 45 Sc

y = 2.667E-4 x + 1.669E-5

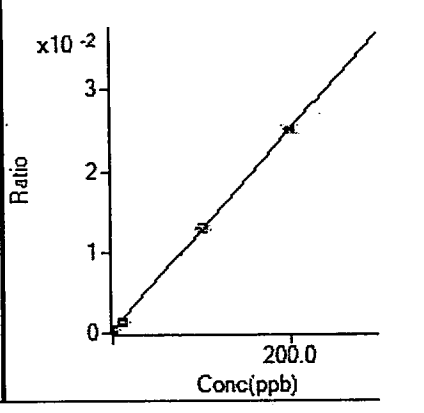
R	1.0000
DL	0.1883
BEC	0.06256



82 Se [No Gas] / ISTD: 45 Sc

y = 3.939E-5 x - 1.575E-5

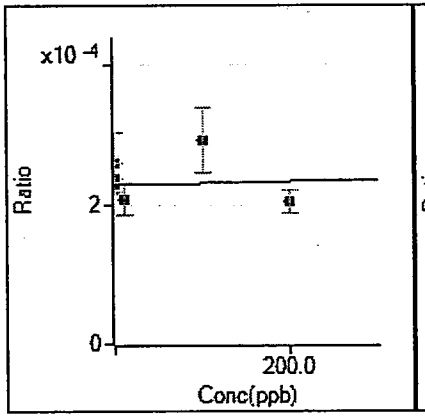
R	0.9999
DL	0.3858
BEC	-0.3998



82 Se [HeHe] / ISTD: 45 Sc

y = 1.235E-4 x + 4.684E-4

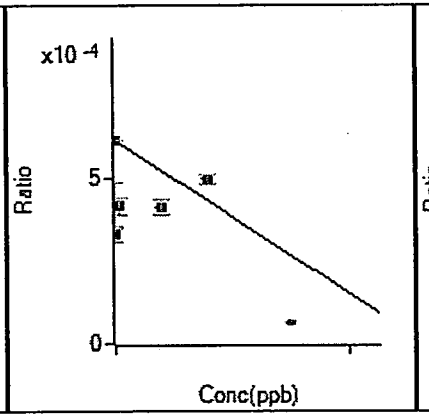
R	0.9999
DL	3.293
BEC	3.792



83 [Se] [No Gas] / ISTD: 115 In

y = 2.676E-8 x + 2.284E-4

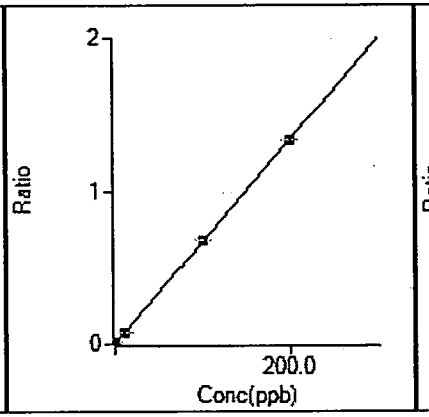
R	-0.1341
DL	2359
BEC	8534



83 [Se] [HeHe] / ISTD: 45 Sc

y = - 9.258E-7 x + 6.156E-4

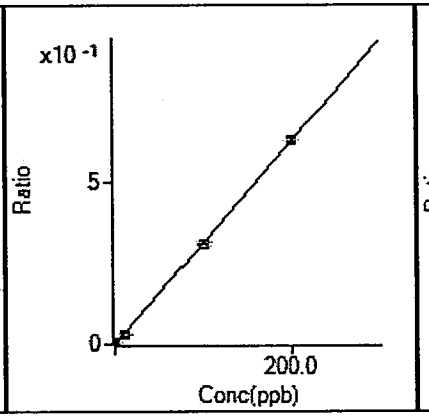
R	0.1431
DL	-12.3
BEC	-665



88 Sr [No Gas] / ISTD: 45 Sc

y = 6.711E-3 x + 1.555E-5

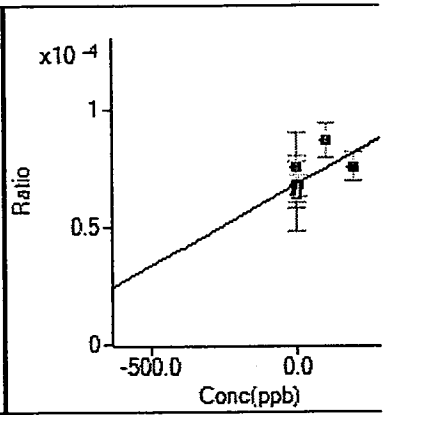
R	1.0000
DL	0.002704
BEC	0.002318



98 Mo [No Gas] / ISTD: 115 In

y = 3.143E-3 x + 2.337E-4

R	0.9999
DL	0.06173
BEC	0.07434

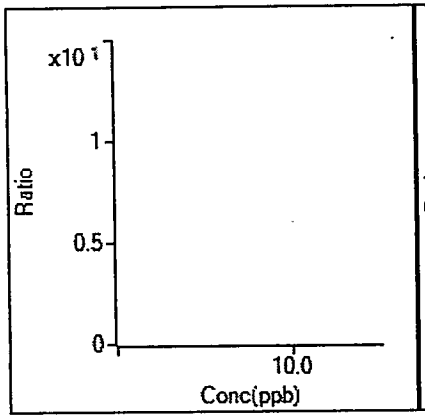


101 [Mo] [No Gas] / ISTD: 115 In

y = 6.819E-8 x + 6.787E-5

R	0.5579
DL	895.1
BEC	995.3

Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



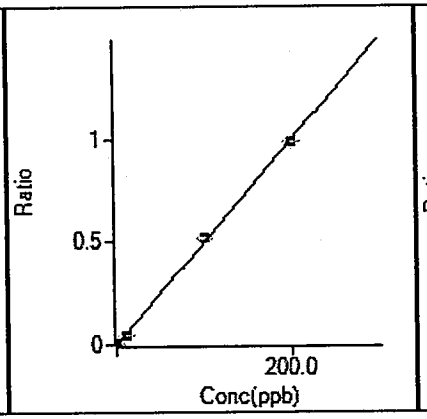
106 [Cd] [No Gas] / ISTD: 115 In

y =

R

DL

BEC



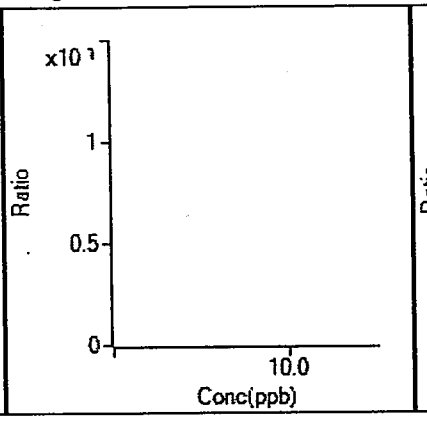
107 Ag [No Gas] / ISTD: 115 In

y = 4.983E-3 x + 1.008E-5

R 0.9997

DL 0.007648

BEC 0.002023



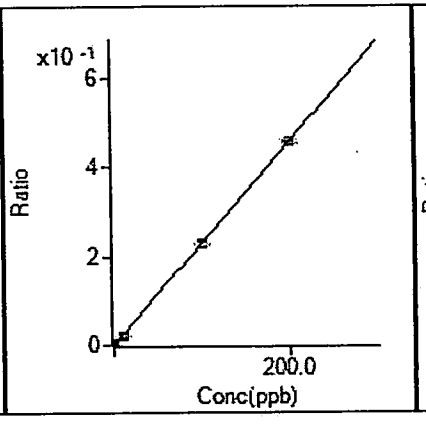
108 [Cd] [No Gas] / ISTD: 115 In

y =

R

DL

BEC



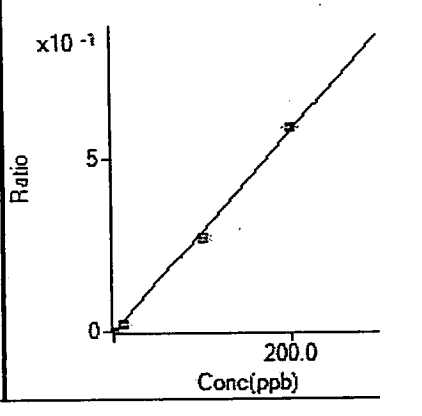
114 Cd [No Gas] / ISTD: 115 In

y = 2.281E-3 x + 1.336E-5

R 1.0000

DL 0.018

BEC 0.005859



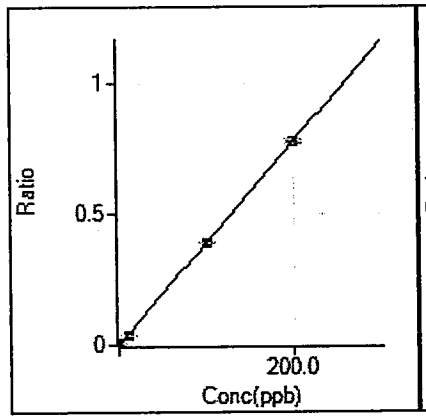
118 Sn [No Gas] / ISTD: 115 In

y = 2.905E-3 x + 5.207E-5

R 0.9993

DL 0.006195

BEC 0.01792



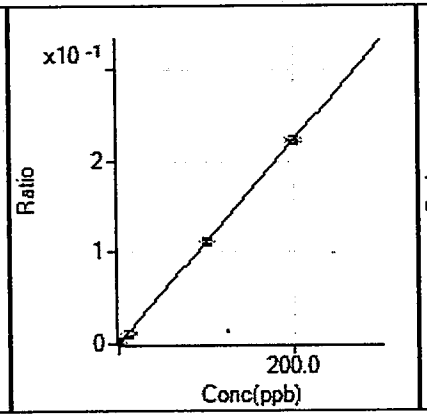
121 Sb [No Gas] / ISTD: 115 In

y = 3.911E-3 x + 3.410E-5

R 1.0000

DL 0.01061

BEC 0.008718



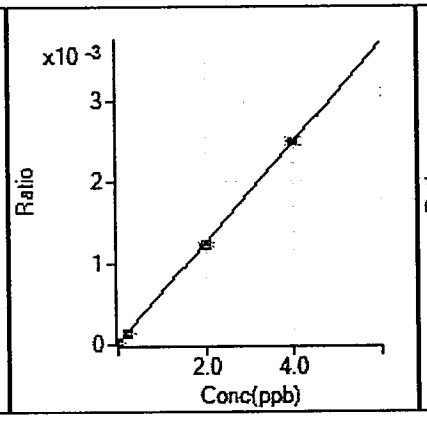
137 Ba [No Gas] / ISTD: 159 Tb

y = 1.112E-3 x + 1.129E-5

R 1.0000

DL 0.01568

BEC 0.01016



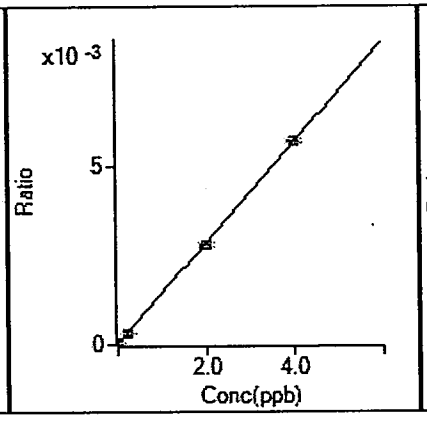
201 Hg [No Gas] / ISTD: 209 Bi

y = 6.191E-4 x + 1.681E-5

R 0.9999

DL 0.02511

BEC 0.02716



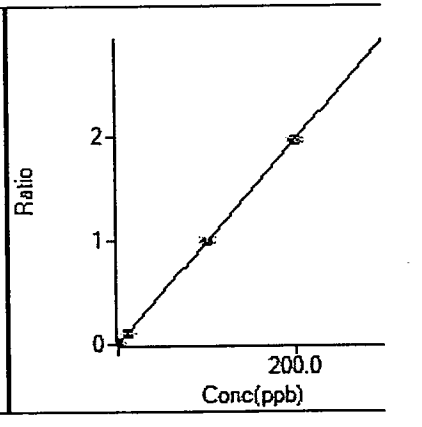
202 Hg [No Gas] / ISTD: 209 Bi

y = 1.413E-3 x + 1.890E-5

R 1.0000

DL 0.01015

BEC 0.01337



205 Tl [No Gas] / ISTD: 209 Bi

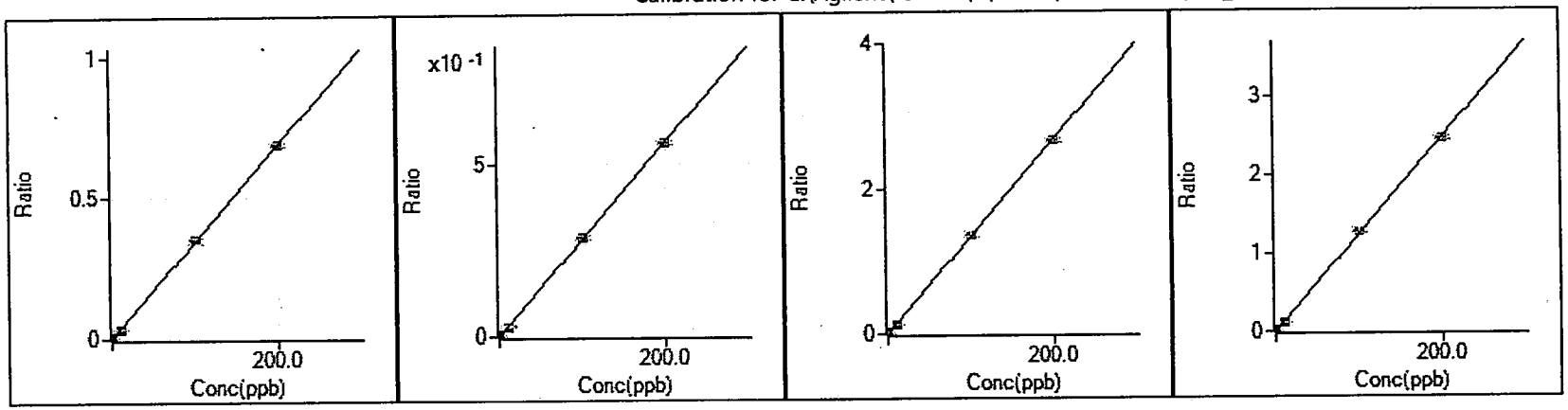
y = 9.832E-3 x + 1.279E-5

R 0.9999

DL 0.00676

BEC 0.001301

Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



206 [Pb] [No Gas] / ISTD: 209 Bi		207 [Pb] [No Gas] / ISTD: 209 Bi		208 Pb [No Gas] / ISTD: 209 Bi		238 U [No Gas] / ISTD: 209 Bi	
y = 3.452E-3 x + 2.751E-5		y = 2.838E-3 x + 2.212E-5		y = 1.340E-2 x + 1.450E-4		y = 1.243E-2 x + 1.804E-5	
R	1.0000	R	1.0000	R	0.9999	R	0.9998
DL	0.01696	DL	0.004877	DL	0.01306	DL	0.00397
BEC	0.00797	BEC	0.007795	BEC	0.01083	BEC	0.001452

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	008_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:37:09-04:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	98.742	1.626	3245310	1.36	100	98.7	90	110	
Cr	52	1	No Gas	97.531	1.079	2895291	0.94	100	97.5	90	110	
Mn	55	1	No Gas	99.658	1.042	3623044	0.49	100	99.7	90	110	
Co	59	1	No Gas	97.852	0.975	3194700	1.50	100	97.9	90	110	
Ni	60	1	No Gas	96.889	1.045	734016	0.49	100	96.9	90	110	
Cu	63	1	No Gas	99.610	1.149	1752874	2.11	100	99.6	90	110	
Sr	88	1	No Gas	99.428	1.067	4104861	0.44	100	99.4	90	110	
Ag	107	1	No Gas	98.743	0.588	1805761	1.29	100	98.7	90	110	
Al	27	1	No Gas	99.447	2.057	1943613	1.74	100	99.4	90	110	
Sn	118	1	No Gas	103.632	0.816	1105279	1.98	100	103.6	90	110	
Tl	47	1	No Gas	89.870	1.572	243295	1.48	100	89.9	90	110	ICV Main CR1 Failed
Zn	66	1	No Gas	97.104	1.054	434159	0.47	100	97.1	90	110	
As	75	3	HeHe	98.358	1.316	35022	1.16	100	98.4	90	110	
As	75	1	No Gas	96.807	1.290	481574	0.51	100	96.8	90	110	
Sb	121	1	No Gas	99.039	0.731	1421867	2.12	100	99.0	90	110	
Hg	201	1	No Gas	1.960	2.785	2832	3.79	2	98.0	90	110	
Be	9	1	No Gas	96.075	0.565	327551	1.32	100	96.1	90	110	
Pb	208	1	No Gas	96.947	0.294	2990417	1.22	100	96.9	90	110	
Se	82	1	No Gas	97.671	1.676	23568	0.48	100	97.7	90	110	
Mo	98	1	No Gas	98.092	0.652	1132499	1.15	100	98.1	90	110	
Ba	137	1	No Gas	96.951	2.061	467348	1.65	100	97.0	90	110	
Tl	205	1	No Gas	96.006	2.060	2172954	2.24	100	96.0	90	110	
U	238	1	No Gas	107.911	0.514	3086981	0.64	100	107.9	90	110	
Na	23	2	he	1016.583	0.510	2782809	1.42	1000	101.7	90	110	
Mg	24	2	he	1031.757	0.765	1590388	0.37	1000	103.2	90	110	
K	39	2	he	993.630	0.651	2640040	0.42	1000	99.4	90	110	
Se	82	3	HeHe	96.572	1.756	1690	2.10	100	96.6	90	110	
Fe	57	3	HeHe	1054.143	1.763	84778	1.53	1000	105.4	90	110	
Cd	114	1	No Gas	96.656	0.453	809269	1.89	100	96.7	90	110	
Ca	44	1	No Gas	975.081	1.456	953715	0.30	1000	97.5	90	110	

DL Nov

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6152674	1.51	5896472	104.35	70	120	
Sc	45	2	he	1296036	1.02	1271268	101.95	70	120	
Ge	72	1	No Gas	677632	0.92	682805	99.24	70	120	
In	115	1	No Gas	3670280	1.45	3697856	99.25	70	120	
Tb	159	1	No Gas	4336489	0.63	4404848	98.45	70	120	
Bi	209	1	No Gas	2302057	1.10	1997135	115.27	70	120	
Sc	45	3	HeHe	136339	1.09	132951	102.55	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	009_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:40:33-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.060	46.8	2984	28.2	9	
Cr	52	1	No Gas	-0.024	-100.7	9837	8.5	4	
Mn	55	1	No Gas	0.230	61.8	38897	13.7	25	
Co	59	1	No Gas	0.003	36.1	326	9.8	1	
Ni	60	1	No Gas	-0.970	-3.7	11748	1.2	25	
Cu	63	1	No Gas	0.016	17.0	843	3.8	25	
Sr	88	1	No Gas	0.002	47.7	163	21.9	25	
Ag	107	1	No Gas	0.003	30.2	100	19.2	9	
Al	27	1	No Gas	0.091	32.8	10100	4.3	1000000	
Sn	118	1	No Gas	0.273	9.0	3149	10.0	25	
Ti	47	1	No Gas	0.186	35.1	760	22.6	10000	
Zn	66	1	No Gas	-0.002	-1981.6	760	18.1	25	
As	75	3	HeHe	0.534	5.2	192	5.4	9	
As	75	1	No Gas	0.665	41.1	25663	4.1	9	
Sb	121	1	No Gas	0.317	27.9	4760	28.2	4	
Hg	201	1	No Gas	0.051	15.8	103	5.6	0.04	ICB Main CR1 Failed
Be	9	1	No Gas	0.009	48.8	51	28.0	1	
Pb	208	1	No Gas	0.041	38.8	1467	23.8	4	
Se	82	1	No Gas	1.216	31.7	185	46.4	25	
Mo	98	1	No Gas	0.870	17.2	11068	16.9	10000	
Ba	137	1	No Gas	0.012	45.1	107	23.6	25	
Tl	205	1	No Gas	0.058	16.2	1222	11.2	1	
U	238	1	No Gas	0.091	23.8	2452	28.0	25	
Na	23	2	he	0.911	105.6	86357	2.7	2500000	
Mg	24	2	he	0.022	179.4	185	33.0	2500000	
K	39	2	he	-1.460	-140.0	196775	1.6	5000000	
Se	82	3	HeHe	0.954	58.7	78	10.8	25	
Fe	57	3	HeHe	2.795	28.2	393	16.1	2500000	
Cd	114	1	No Gas	0.017	69.8	190	51.8	1	
Ca	44	1	No Gas	1.853	39.0	122116	1.5	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5755553	1.63	5896472	97.61	70	120	
Sc	45	2	he	1272979	1.57	1271268	100.13	70	120	
Ge	72	1	No Gas	678801	0.96	682805	99.41	70	120	
In	115	1	No Gas	3724033	1.61	3697856	100.71	70	120	

Initial Calibration Blank (ICB) Report

Tb	159	1	No Gas	4391649	2.36	4404848	99.70	70	120	
Bi	209	1	No Gas	2121785	6.49	1997135	106.24	70	120	
Sc	45	3	HeHe	132766	1.09	132951	99.86	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	010_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:44:04-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.060	23.2	2987	12.1	9	
Cr	52	1	No Gas	-0.020	-34.6	9970	2.9	4	
Mn	55	1	No Gas	-0.049	-139.3	29452	4.3	25	
Co	59	1	No Gas	0.001	231.9	282	32.1	1	
Ni	60	1	No Gas	-1.141	-6.8	10577	1.9	25	
Cu	63	1	No Gas	0.009	42.2	726	7.1	25	
Sr	88	1	No Gas	0.001	205.9	133	66.7	25	
Ag	107	1	No Gas	0.004	104.3	111	70.0	9	
Al	27	1	No Gas	0.097	68.0	10207	8.6	1000000	
Sn	118	1	No Gas	0.149	15.1	1756	13.3	25	
Ti	47	1	No Gas	0.097	27.4	537	16.1	10000	
Zn	66	1	No Gas	0.100	43.5	1183	13.1	25	
As	75	3	HeHe	0.233	13.5	86	12.7	9	
As	75	1	No Gas	0.497	37.8	24951	1.1	9	
Sb	121	1	No Gas	0.160	21.8	2389	20.5	4	
Hg	201	1	No Gas	0.021	58.8	60	23.1	0.04	
Be	9	1	No Gas	0.005	33.6	39	15.8	1	
Pb	208	1	No Gas	0.029	16.5	1096	10.2	4	
Se	82	1	No Gas	0.964	56.4	127	94.6	25	
Mo	98	1	No Gas	0.359	24.3	4943	19.9	10000	
Ba	137	1	No Gas	0.015	26.5	123	16.9	25	
Tl	205	1	No Gas	0.018	15.6	393	17.3	1	
U	238	1	No Gas	0.029	18.5	782	21.9	25	
Na	23	2	he	1.101	76.9	85432	2.0	2500000	
Mg	24	2	he	0.054	43.2	230	15.6	2500000	
K	39	2	he	-1.277	-156.7	193999	1.6	5000000	
Se	82	3	HeHe	-0.195	-280.4	58	13.9	25	
Fe	57	3	HeHe	1.010	11.2	248	5.2	2500000	
Cd	114	1	No Gas	0.001	229.3	60	44.1	1	
Ca	44	1	No Gas	-0.233	-2580.8	120570	0.6	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5765949	3.66	5896472	97.79	70	120	
Sc	45	2	he	1252133	0.83	1271268	98.49	70	120	
Ge	72	1	No Gas	672367	1.16	682805	98.47	70	120	

Initial Calibration Blank (ICB) Report

In	115	1	No Gas	3630295	0.40	3697856	98.17	70	120	
Tb	159	1	No Gas	4440065	1.55	4404848	100.80	70	120	
Bi	209	1	No Gas	2035819	5.74	1997135	101.94	70	120	
Sc	45	3	HeHe	130204	1.70	132951	97.93	70	120	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV
Data File Name	011LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:47:33-04:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.091	1.496	69306	1.16	2	104.6	70	130	
Cr	52	1	No Gas	2.203	0.635	75672	0.95	2	110.2	70	130	
Mn	55	1	No Gas	5.045	1.512	212993	1.07	5	100.9	70	130	
Co	59	1	No Gas	5.109	0.804	165513	1.18	5	102.2	70	130	
Ni	60	1	No Gas	3.934	3.998	48267	2.04	5	78.7	70	130	
Cu	63	1	No Gas	5.135	0.980	90105	1.31	5	102.7	70	130	
Sr	88	1	No Gas	4.703	0.815	192472	0.55	5	94.1	70	130	
Ag	107	1	No Gas	2.050	2.058	36540	1.72	2	102.5	70	130	
Al	27	1	No Gas	81.870	0.770	1587082	0.38	80	102.3	70	130	
Sn	118	1	No Gas	3.469	11.534	36237	12.68	2	173.4	70	130	LLICV Main CR1 Failed
Ti	47	1	No Gas	4.796	2.834	13156	3.17	5	95.9	70	130	
Zn	66	1	No Gas	5.054	1.676	23163	1.63	5	101.1	70	130	
As	75	3	HeHe	3.285	4.256	1152	4.98	3	109.5	70	130	
As	75	1	No Gas	3.625	8.318	41043	3.82	3	120.8	70	130	
Sb	121	1	No Gas	2.193	3.231	30770	3.86	2	109.6	70	130	
Hg	201	1	No Gas	0.220	6.167	341	7.00	0.2	110.0	70	130	
Be	9	1	No Gas	0.985	3.574	3352	3.17	1	98.5	70	130	
Pb	208	1	No Gas	2.061	3.918	61758	2.27	2	103.1	70	130	
Se	82	1	No Gas	5.592	26.926	1247	29.10	5	111.8	70	130	
Mo	98	1	No Gas	2.700	5.148	31185	6.35	2	135.0	70	130	LLICV Main CR1 Failed
Ba	137	1	No Gas	4.969	5.073	23564	5.89	5	99.4	70	130	
Tl	205	1	No Gas	1.024	3.850	22424	2.36	1	102.4	70	130	
U	238	1	No Gas	5.078	2.417	140424	0.90	5	101.6	70	130	
Na	23	2	he	106.819	2.456	376395	2.91	100	106.8	70	130	
Mg	24	2	he	102.005	0.843	160538	0.74	100	102.0	70	130	
K	39	2	he	111.098	2.411	485879	0.39	100	111.1	70	130	
Se	82	3	HeHe	6.391	3.045	168	1.15	5	127.8	70	130	
Fe	57	3	HeHe	60.742	8.525	4945	8.57	50	121.5	70	130	
Cd	114	1	No Gas	1.122	5.295	9203	6.69	1	112.2	70	130	
Ca	44	1	No Gas	105.838	0.870	216494	0.06	100	105.8	70	130	

NA

NN

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6096014	0.41	5896472	103.38	70	120	
Sc	45	2	he	1322090	1.04	1271268	104.00	70	120	
Ge	72	1	No Gas	679695	1.35	682805	99.54	70	120	
In	115	1	No Gas	3573913	1.49	3697856	96.65	70	120	
Tb	159	1	No Gas	4256462	0.84	4404848	96.63	70	120	
Bi	209	1	No Gas	2225339	1.63	1997135	111.43	70	120	
Sc	45	3	HeHe	133391	0.99	132951	100.33	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	012ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:51:03-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.408	14.9	14217	13.4	9	
Cr	52	1	No Gas	1.305	5.1	48404	3.5	4	
Mn	55	1	No Gas	1.387	6.3	80819	2.6	25	
Co	59	1	No Gas	1.341	6.0	42760	4.7	1	ICSA Main CR1 Failed
Ni	60	1	No Gas	-0.521	-8.8	15424	3.4	5	
Cu	63	1	No Gas	1.138	6.5	20033	4.9	5	
Ag	107	1	No Gas	0.229	8.9	3919	8.4	9	
Al	27	1	No Gas	86238.701	2.3	1629911165	0.9	110000	
Sn	118	1	No Gas	0.745	20.8	7539	20.2	25	
Tl	47	1	No Gas	1706.488	1.7	4483115	0.6	2200	
Zn	66	1	No Gas	3.487	6.4	15910	4.7	5	
As	75	3	HeHe	0.607	16.0	209	14.4	9	
As	75	1	No Gas	1.066	33.9	28487	4.7	9	
Sb	121	1	No Gas	0.449	5.0	6094	5.2	4	
Hg	201	1	No Gas	0.031	39.3	76	20.9	0.04	
Be	9	1	No Gas	0.008	40.2	51	21.5	1	
Pb	208	1	No Gas	0.503	14.0	14655	14.6	4	
Se	82	1	No Gas	0.519	17.6	28	77.8	25	
Mo	98	1	No Gas	1978.830	1.3	21173724	0.9	2200	
Ba	137	1	No Gas	0.155	3.0	763	4.0	25	
Tl	205	1	No Gas	0.027	10.5	589	10.5	1	
U	238	1	No Gas	0.080	20.7	2141	21.1	25	
Na	23	2	he	88481.402	1.0	228143533	0.7	110000	
Mg	24	2	he	88791.717	1.2	132950658	0.3	110000	
K	39	2	he	90634.329	0.7	216072962	0.1	110000	
Se	82	3	HeHe	0.170	252.5	63	11.8	25	
Fe	57	3	HeHe	95975.268	1.0	7219717	0.1	110000	
Cd	114	1	No Gas	0.807	3.6	6315	4.1	1	
Ca	44	1	No Gas	83755.733	1.9	68956089	0.5	110000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5978213	1.44	5896472	101.39	70	120	
Sc	45	2	he	1259096	0.87	1271268	99.04	70	120	
Ge	72	1	No Gas	652515	0.32	682805	95.56	70	120	
In	115	1	No Gas	3404061	0.52	3697856	92.05	70	120	
Tb	159	1	No Gas	4155147	1.57	4404848	94.33	70	120	
Bi	209	1	No Gas	2125630	0.86	1997135	106.43	70	120	
Sc	45	3	HeHe	127793	1.10	132951	96.12	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	013ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T13:00:47-04:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	39.560	1.314	1329992	0.73	40	98.9	80	120	
Cr	52	1	No Gas	19.750	2.876	608506	2.29	20	98.8	80	120	
Mn	55	1	No Gas	20.318	3.116	782143	2.19	20	101.6	80	120	
Co	59	1	No Gas	37.232	2.656	1242688	1.92	40	93.1	80	120	
Ni	60	1	No Gas	34.405	1.343	279478	1.08	40	86.0	80	120	
Cu	63	1	No Gas	19.315	2.159	347936	1.71	20	96.6	80	120	
Ag	107	1	No Gas	19.360	1.453	338694	1.83	20	96.8	80	120	
Al	27	1	No Gas	87401.980	1.778	1738225116	0.91	100000	87.4	90	110	ICSB Main CR1 Failed
Tl	47	1	No Gas	1734.566	1.843	4794854	1.45	2000	86.7	90	110	ICSB Main CR1 Failed
Zn	66	1	No Gas	23.932	2.902	110015	2.13	20	119.7	80	120	
As	75	3	HeHe	20.105	1.202	7128	1.50	20	100.5	80	120	
As	75	1	No Gas	20.392	2.981	123308	1.75	20	102.0	80	120	
Sb	121	1	No Gas	0.544	7.259	7595	7.45	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Hg	201	1	No Gas	0.019	59.638	61	24.91	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Be	9	1	No Gas	0.003	57.299	37	18.81	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Pb	208	1	No Gas	0.437	6.517	12858	6.46	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Se	82	1	No Gas	19.163	4.940	4647	4.00	20	95.8	80	120	
Mo	98	1	No Gas	2022.259	0.332	22316878	0.19	2000	101.1	90	110	
Ba	137	1	No Gas	0.221	7.541	1103	5.54	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Tl	205	1	No Gas	0.022	7.548	482	7.42	0	#DIV/0!	0	0	ICSB Main CR1 Failed
U	238	1	No Gas	0.066	15.781	1800	15.75	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Na	23	2	he	87984.945	1.603	242410011	2.05	100000	88.0	90	110	ICSB Main CR1 Failed
Mg	24	2	he	89548.792	1.071	143263065	0.20	100000	89.5	90	110	ICSB Main CR1 Failed
K	39	2	he	90005.881	0.921	229262169	0.27	100000	90.0	90	110	
Se	82	3	HeHe	19.533	10.748	391	8.56	20	97.7	80	120	
Fe	57	3	HeHe	95616.436	1.635	7634400	0.88	100000	95.6	90	110	
Cd	114	1	No Gas	10.043	3.166	80478	3.55	10	100.4	80	120	
Ca	44	1	No Gas	84131.326	1.047	72885131	0.52	100000	84.1	90	110	ICSB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6289971	1.06	5896472	106.67	70	120	
Sc	45	2	he	1345290	0.96	1271268	105.82	70	120	
Ge	72	1	No Gas	697499	1.87	682805	102.15	70	120	
In	115	1	No Gas	3510678	0.39	3697856	94.94	70	120	
Tb	159	1	No Gas	4306271	1.65	4404848	97.76	70	120	
Bi	209	1	No Gas	2142239	0.30	1997135	107.27	70	120	
Sc	45	3	HeHe	135647	1.32	132951	102.03	70	120	

Sample Report

Sample Table

Sample Name	1020195
Data File Name	036SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:45:54-04:00
Sample Type	Sample
Dilution	1
Comment	37996 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3207

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	0.265	0.265	15.15	10668	0.00	1000	
Cr	52	1	No Gas	0.266	0.266	7.39	20535	0.00	1000	
Mn	55	1	No Gas	0.268	0.268	14.87	46103	0.00	1000	
Co	59	1	No Gas	0.001	0.001	232.35	315	0.00	1000	
Ni	60	1	No Gas	-2.538	-2.538	-0.55	1077	-0.24	1000	
Cu	63	1	No Gas	0.160	0.160	6.46	3698	0.00	1000	
Sr	88	1	No Gas	0.020	0.020	15.53	982	0.00	1000	
Ag	107	1	No Gas	0.004	0.004	33.64	107	0.00	1000	
Al	27	1	No Gas	2.407	2.407	3.35	60056	0.00	100000	
Sn	118	1	No Gas	0.716	0.716	23.86	7999	0.01	100	
Ti	47	1	No Gas	0.345	0.345	30.20	1333	0.03	2000	
Zn	66	1	No Gas	0.382	0.382	16.27	2713	0.01	1000	
As	75	3	HeHe	0.418	0.418	8.61	172	0.24	1000	
As	75	1	No Gas	0.764	0.764	68.36	30003	0.00	1000	
Sb	121	1	No Gas	0.182	0.182	30.72	2800	0.01	100	
Hg	201	1	No Gas	0.036	0.036	56.67	87	0.04	4	
Be	9	1	No Gas	-0.002	-0.002	-74.18	21	-0.01	1000	
Pb	208	1	No Gas	0.033	0.033	16.76	1319	0.00	1000	
Se	82	1	No Gas	0.836	0.836	96.91	112	0.74	1000	
Mo	98	1	No Gas	0.662	0.662	31.79	8683	0.01	2000	
Ba	137	1	No Gas	0.102	0.102	25.06	543	0.02	1000	
Tl	205	1	No Gas	0.021	0.021	29.72	485	0.00	1000	
U	238	1	No Gas	0.005	0.005	43.86	189	0.00	1000	
Na	23	2	he	9.533	9.533	4.90	123341	0.01	100000	
Mg	24	2	he	1.084	1.084	13.94	2030	0.05	100000	
K	39	2	he	2.600	2.600	54.15	234113	0.00	100000	
Se	82	3	HeHe	-1.036	-1.036	-18.07	51	-2.03	1000	
Fe	57	3	HeHe	9.084	9.084	10.27	1000	0.91	100000	
Cd	114	1	No Gas	0.041	0.041	26.20	400	0.01	1000	
Ca	44	1	No Gas	-6.110	-6.110	-68.13	133122	0.00	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6617591	1.63	5896472	112.23	70	120	
Sc	45	2	he	1442739	1.19	1271268	113.49	70	120	

Sample Report

Ge	72	1	No Gas	718053	0.55	682805	105.16	70	120	
In	115	1	No Gas	3745766	1.07	3697856	101.30	70	120	
Tb	159	1	No Gas	4376834	2.39	4404848	99.36	70	120	
Bi	209	1	No Gas	2251289	2.22	1997135	112.73	70	120	
Sc	45	3	HeHe	150183	1.02	132951	112.96	70	120	

Sample Report

Sample Table

Sample Name	1020196
Data File Name	037SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:49:24-04:00
Sample Type	Sample
Dilution	1
Comment	37996 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3208

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	41.997	41.997	1.54	1498920	0.00	1000	
Cr	52	1	No Gas	40.306	40.306	0.54	1305754	0.00	1000	
Mn	55	1	No Gas	42.472	42.472	1.39	1696159	0.00	1000	
Co	59	1	No Gas	40.968	40.968	2.15	1451390	0.00	1000	
Ni	60	1	No Gas	37.325	37.325	2.42	319915	0.01	1000	
Cu	63	1	No Gas	39.975	39.975	1.64	763551	0.01	1000	
Sr	88	1	No Gas	38.689	38.689	2.35	1733378	0.00	1000	
Ag	107	1	No Gas	15.817	15.817	0.81	305606	0.01	1000	
Al	27	1	No Gas	405.302	405.302	1.78	8567178	0.00	100000	
Sn	118	1	No Gas	39.092	39.092	1.07	440577	0.01	100	
Ti	47	1	No Gas	37.298	37.298	1.60	109763	0.03	2000	
Zn	66	1	No Gas	404.870	404.870	1.65	1961456	0.02	1000	
As	75	3	HeHe	39.010	39.010	1.04	15405	0.25	1000	
As	75	1	No Gas	38.851	38.851	1.31	225487	0.02	1000	
Sb	121	1	No Gas	40.066	40.066	1.23	607661	0.01	100	
Hg	201	1	No Gas	0.433	0.433	6.41	632	0.07	4	
Be	9	1	No Gas	37.498	37.498	0.51	138739	0.03	1000	
Pb	208	1	No Gas	40.512	40.512	1.56	1203705	0.00	1000	
Se	82	1	No Gas	38.085	38.085	0.37	9909	0.38	1000	
Mo	98	1	No Gas	40.433	40.433	1.37	493666	0.01	2000	
Ba	137	1	No Gas	428.823	428.823	2.65	2120662	0.02	1000	
Tl	205	1	No Gas	40.612	40.612	1.41	885319	0.00	1000	
U	238	1	No Gas	0.004	0.004	32.84	141	0.00	1000	
Na	23	2	he	466.124	466.124	1.08	1489767	0.03	100000	
Mg	24	2	he	421.506	421.506	1.75	732171	0.06	100000	
K	39	2	he	443.414	443.414	1.05	1454647	0.03	100000	
Se	82	3	HeHe	35.513	35.513	7.84	734	4.84	1000	
Fe	57	3	HeHe	454.826	454.826	1.70	40666	1.12	100000	
Cd	114	1	No Gas	38.939	38.939	1.02	344405	0.01	1000	
Ca	44	1	No Gas	406.066	406.066	1.40	512628	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6676471	2.34	5896472	113.23	70	120	
Sc	45	2	he	1460278	1.11	1271268	114.87	70	120	

Ge	72	1	No Gas	726166	1.54	682805	106.35	70	120	
In	115	1	No Gas	3877246	0.92	3697856	104.85	70	120	
Tb	159	1	No Gas	4449198	0.98	4404848	101.01	70	120	
Bi	209	1	No Gas	2217477	1.96	1997135	111.03	70	120	
Sc	45	3	HeHe	151170	1.43	132951	113.70	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	038_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:52:51-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	100.342	0.861	3607283	0.88	100	100.3	90	110	
Cr	52	1	No Gas	98.206	1.673	3188450	0.84	100	98.2	90	110	
Mn	55	1	No Gas	102.665	0.140	4081801	1.62	100	102.7	90	110	
Co	59	1	No Gas	97.691	2.070	3488283	1.72	100	97.7	90	110	
Ni	60	1	No Gas	95.621	1.296	792621	0.65	100	95.6	90	110	
Cu	63	1	No Gas	100.063	2.328	1925718	2.09	100	100.1	90	110	
Sr	88	1	No Gas	101.148	0.948	4567626	0.84	100	101.1	90	110	
Ag	107	1	No Gas	99.440	1.473	1949285	0.65	100	99.4	90	110	
Al	27	1	No Gas	101.775	2.134	2175255	0.90	100	101.8	90	110	
Sn	118	1	No Gas	98.236	1.799	1122983	0.86	100	98.2	90	110	
Tl	47	1	No Gas	89.161	1.635	264018	1.55	100	89.2	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	97.198	1.062	475366	1.47	100	97.2	90	110	
As	75	3	HeHe	93.041	2.372	37531	2.83	100	93.0	90	110	
As	75	1	No Gas	95.419	2.230	519516	0.45	100	95.4	90	110	
Sb	121	1	No Gas	99.710	1.543	1534440	1.72	100	99.7	90	110	
Hg	201	1	No Gas	1.988	3.343	2866	3.78	2	99.4	90	110	
Be	9	1	No Gas	92.661	1.055	345522	0.88	100	92.7	90	110	
Pb	208	1	No Gas	96.714	2.907	2976376	1.55	100	96.7	90	110	
Se	82	1	No Gas	94.700	1.740	24991	0.51	100	94.7	90	110	
Mo	98	1	No Gas	97.240	1.242	1203454	0.59	100	97.2	90	110	
Ba	137	1	No Gas	98.519	0.867	494076	0.19	100	98.5	90	110	
Tl	205	1	No Gas	96.547	0.675	2180762	1.40	100	96.5	90	110	
U	238	1	No Gas	103.411	0.916	2952826	2.73	100	103.4	90	110	
Na	23	2	he	1009.441	0.996	3153775	0.90	1000	100.9	90	110	
Mg	24	2	he	1023.870	2.192	1801121	2.53	1000	102.4	90	110	
K	39	2	he	995.257	1.211	3017136	0.36	1000	99.5	90	110	
Se	82	3	HeHe	91.168	1.627	1812	1.11	100	91.2	90	110	
Fe	57	3	HeHe	1014.418	1.032	92426	1.47	1000	101.4	90	110	
Cd	114	1	No Gas	95.639	1.179	858320	0.86	100	95.6	90	110	
Ca	44	1	No Gas	975.801	1.350	1043939	1.77	1000	97.6	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6729857	1.72	5896472	114.13	70	120	
Sc	45	2	he	1478963	0.94	1271268	116.34	70	120	
Ge	72	1	No Gas	751230	0.64	682805	110.02	70	120	
In	115	1	No Gas	3934751	1.69	3697856	106.41	70	120	
Tb	159	1	No Gas	4511436	0.78	4404848	102.42	70	120	
Bi	209	1	No Gas	2297520	1.88	1997135	115.04	70	120	
Sc	45	3	HeHe	154433	0.45	132951	116.16	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	039_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:56:14-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.174	1.0	7679	2.9	9	
Cr	52	1	No Gas	0.064	23.6	14473	2.3	4	
Mn	55	1	No Gas	0.315	12.0	49189	0.9	25	
Co	59	1	No Gas	0.002	104.2	359	19.9	1	
Ni	60	1	No Gas	-2.561	-0.5	923	12.6	25	
Cu	63	1	No Gas	0.219	3.3	4927	1.4	25	
Sr	88	1	No Gas	0.009	38.3	526	28.7	25	
Ag	107	1	No Gas	0.010	28.4	241	25.4	9	
Al	27	1	No Gas	0.878	2.8	28798	1.3	1000000	
Sn	118	1	No Gas	1.070	22.7	12598	21.3	25	
Ti	47	1	No Gas	0.380	22.4	1479	19.2	10000	
Zn	66	1	No Gas	0.642	5.8	4070	5.5	25	
As	75	3	HeHe	0.682	11.5	283	11.9	9	
As	75	1	No Gas	0.877	3.1	31391	2.1	9	
Sb	121	1	No Gas	0.326	29.4	5223	27.7	4	
Hg	201	1	No Gas	0.011	102.9	55	27.6	0.04	
Be	9	1	No Gas	0.006	95.0	49	39.9	1	
Pb	208	1	No Gas	0.049	10.9	1885	7.1	4	
Se	82	1	No Gas	0.928	133.5	146	229.6	25	
Mo	98	1	No Gas	1.111	27.7	14850	24.6	10000	
Ba	137	1	No Gas	0.050	11.8	303	10.1	25	
Tl	205	1	No Gas	0.039	30.6	933	27.7	1	
U	238	1	No Gas	0.195	20.3	5709	19.2	25	
Na	23	2	he	8.842	4.8	124345	2.4	2500000	
Mg	24	2	he	0.478	26.0	1015	20.3	2500000	
K	39	2	he	2.115	51.8	238599	0.8	5000000	
Se	82	3	HeHe	0.103	846.9	74	21.5	25	
Fe	57	3	HeHe	7.978	7.3	926	6.2	2500000	
Cd	114	1	No Gas	0.041	14.8	423	11.9	1	
Ca	44	1	No Gas	-6.992	-18.3	135814	1.3	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6791089	2.12	5896472	115.17	70	120	
Sc	45	2	he	1478720	1.50	1271268	116.32	70	120	
Ge	72	1	No Gas	763164	2.30	682805	111.77	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3992092	2.76	3697856	107.96	70	120	
Tb	159	1	No Gas	4554022	2.98	4404848	103.39	70	120	
Bi	209	1	No Gas	2337198	2.84	1997135	117.03	70	120	
Sc	45	3	HeHe	154133	0.82	132951	115.93	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	040LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:59:43-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	2.277	5.072	82954	5.53	2	113.8	70	130		
Cr	52	1	No Gas	2.144	2.412	81420	2.66	2	107.2	70	130		
Mn	55	1	No Gas	5.400	1.722	248458	0.66	5	108.0	70	130		
Co	59	1	No Gas	5.004	1.957	178473	2.08	5	100.1	70	130		
Ni	60	1	No Gas	2.301	2.532	40013	0.86	5	46.0	70	130	LLCCV Main CR1 Failed	N/A
Cu	63	1	No Gas	5.051	0.804	97588	0.97	5	101.0	70	130		
Sr	88	1	No Gas	4.695	1.416	211538	0.46	5	93.9	70	130		
Ag	107	1	No Gas	2.028	4.098	39306	3.14	2	101.4	70	130		
Al	27	1	No Gas	80.239	1.554	1712993	2.64	80	100.3	70	130		
Sn	118	1	No Gas	2.665	10.894	30311	11.43	2	133.2	70	130	LLCCV Main CR1 Failed	N/A
Tl	47	1	No Gas	4.875	2.731	14719	3.73	5	97.5	70	130		
Zn	66	1	No Gas	5.117	2.048	25809	2.04	5	102.3	70	130		
As	75	3	HeHe	3.196	1.675	1277	2.34	3	106.5	70	130		
As	75	1	No Gas	3.624	1.522	45181	1.76	3	120.8	70	130		
Sb	121	1	No Gas	2.142	3.901	32707	5.00	2	107.1	70	130		
Hg	201	1	No Gas	0.202	7.605	315	5.75	0.2	100.9	70	130		
Be	9	1	No Gas	0.931	2.046	3490	2.27	1	93.1	70	130		
Pb	208	1	No Gas	2.043	0.682	61231	1.61	2	102.2	70	130		
Se	82	1	No Gas	5.905	2.520	1455	2.37	5	118.1	70	130		
Mo	98	1	No Gas	2.507	5.975	31546	6.40	2	125.3	70	130		
Ba	137	1	No Gas	5.154	2.864	25207	1.80	5	103.1	70	130		
Tl	205	1	No Gas	0.975	4.456	21371	5.64	1	97.5	70	130		
U	238	1	No Gas	4.843	1.143	133946	1.08	5	96.9	70	130		
Na	23	2	he	111.962	2.312	424089	1.81	100	112.0	70	130		
Mg	24	2	he	102.011	0.878	174470	0.91	100	102.0	70	130		
K	39	2	he	112.325	0.830	531372	0.23	100	112.3	70	130		
Se	82	3	HeHe	3.306	2.874	133	2.21	5	66.1	70	130	LLCCV Main CR1 Failed	N/A
Fe	57	3	HeHe	54.935	6.887	5120	7.85	50	109.9	70	130		
Cd	114	1	No Gas	1.086	4.884	9680	3.82	1	108.6	70	130		
Ca	44	1	No Gas	91.211	3.520	224849	0.94	100	91.2	70	130		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6711721	1.15	5896472	113.83	70	120	
Sc	45	2	he	1436675	0.31	1271268	113.01	70	120	
Ge	72	1	No Gas	733028	1.78	682805	107.36	70	120	
In	115	1	No Gas	3887074	1.18	3697856	105.12	70	120	
Tb	159	1	No Gas	4393092	2.33	4404848	99.73	70	120	
Bi	209	1	No Gas	2225007	1.29	1997135	111.41	70	120	
Sc	45	3	HeHe	152061	1.55	132951	114.37	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	139_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:47:54-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	97.020	2.638	3449386	2.14	100	97.0	90	110	
Cr	52	1	No Gas	95.099	1.277	3054214	0.76	100	95.1	90	110	
Mn	55	1	No Gas	99.998	2.156	3932659	1.92	100	100.0	90	110	
Co	59	1	No Gas	96.188	1.904	3396798	1.03	100	96.2	90	110	
Ni	60	1	No Gas	91.998	2.057	755019	1.42	100	92.0	90	110	
Cu	63	1	No Gas	97.193	1.382	1849989	0.98	100	97.2	90	110	
Sr	88	1	No Gas	98.460	1.910	4397167	1.14	100	98.5	90	110	
Ag	107	1	No Gas	101.377	0.138	1883798	0.71	100	101.4	90	110	
Al	27	1	No Gas	100.879	3.295	2132575	2.74	100	100.9	90	110	
Sn	118	1	No Gas	98.598	1.357	1068414	0.87	100	98.6	90	110	
Tl	47	1	No Gas	88.327	1.341	258677	0.85	100	88.3	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	94.152	2.272	455403	1.75	100	94.2	90	110	
As	75	3	HeHe	91.773	1.530	34768	1.03	100	91.8	90	110	
As	75	1	No Gas	93.326	0.973	503196	0.99	100	93.3	90	110	
Sb	121	1	No Gas	99.758	3.136	1455330	3.76	100	99.8	90	110	
Hg	201	1	No Gas	1.895	1.518	2560	1.32	2	94.7	90	110	
Be	9	1	No Gas	93.170	1.693	343593	1.06	100	93.2	90	110	
Pb	208	1	No Gas	95.653	2.891	2756947	2.70	100	95.7	90	110	
Se	82	1	No Gas	91.317	1.066	23834	1.72	100	91.3	90	110	
Mo	98	1	No Gas	97.339	0.684	1141902	0.43	100	97.3	90	110	
Ba	137	1	No Gas	98.643	1.348	468187	1.64	100	98.6	90	110	
Tl	205	1	No Gas	96.905	0.923	2049535	0.95	100	96.9	90	110	
U	238	1	No Gas	103.028	0.495	2754211	0.86	100	103.0	90	110	
Na	23	2	he	1046.301	0.600	3131610	1.02	1000	104.6	90	110	
Mg	24	2	he	1026.113	1.411	1730880	0.49	1000	102.6	90	110	
K	39	2	he	1035.370	2.913	3000735	1.64	1000	103.5	90	110	
Se	82	3	HeHe	90.772	3.631	1695	3.30	100	90.8	90	110	
Fe	57	3	HeHe	1029.229	1.194	88078	1.16	1000	102.9	90	110	
Cd	114	1	No Gas	95.278	0.652	810526	0.88	100	95.3	90	110	
Ca	44	1	No Gas	935.184	1.606	995246	1.16	1000	93.5	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6655609	0.93	5896472	112.87	70	120	
Sc	45	2	he	1418419	1.60	1271268	111.58	70	120	
Ge	72	1	No Gas	709310	0.80	682805	103.88	70	120	
In	115	1	No Gas	3729345	0.82	3697856	100.85	70	120	
Tb	159	1	No Gas	4269476	0.81	4404848	96.93	70	120	
Bi	209	1	No Gas	2151151	0.39	1997135	107.71	70	120	
Sc	45	3	HeHe	145060	0.58	132951	109.11	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	140_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:51:18-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.073	53.4	3830	37.2	9	
Cr	52	1	No Gas	0.090	9.1	14518	1.3	4	
Mn	55	1	No Gas	0.064	69.8	37128	1.7	25	
Co	59	1	No Gas	0.010	53.8	619	30.8	1	
Ni	60	1	No Gas	-2.328	-1.1	2667	5.4	25	
Cu	63	1	No Gas	0.196	8.9	4249	4.6	25	
Sr	88	1	No Gas	0.012	43.7	622	37.8	25	
Ag	107	1	No Gas	0.024	16.7	474	14.3	9	
Al	27	1	No Gas	0.930	5.9	28349	3.9	1000000	
Sn	118	1	No Gas	2.171	23.1	23003	24.0	25	
Ti	47	1	No Gas	0.726	22.7	2382	21.8	10000	
Zn	66	1	No Gas	0.457	1.6	2990	1.8	25	
As	75	3	HeHe	0.647	20.6	248	18.8	9	
As	75	1	No Gas	0.878	16.0	29763	5.0	9	
Sb	121	1	No Gas	0.428	29.3	6183	29.9	4	
Hg	201	1	No Gas	0.022	35.4	64	15.6	0.04	
Be	9	1	No Gas	0.011	26.9	67	18.3	1	
Pb	208	1	No Gas	0.047	12.4	1630	10.9	4	
Se	82	1	No Gas	1.323	61.8	232	88.5	25	
Mo	98	1	No Gas	1.819	29.0	21542	28.9	10000	
Ba	137	1	No Gas	0.057	20.8	307	18.8	25	
Tl	205	1	No Gas	0.049	8.3	1045	7.7	1	
U	238	1	No Gas	0.489	25.1	12836	25.2	25	
Na	23	2	he	11.808	19.9	128218	4.8	2500000	
Mg	24	2	he	0.390	9.7	830	7.4	2500000	
K	39	2	he	4.978	20.5	237233	0.3	5000000	
Se	82	3	HeHe	-0.133	-284.0	64	10.3	25	
Fe	57	3	HeHe	16.135	11.2	1541	9.6	2500000	
Cd	114	1	No Gas	0.078	28.3	693	27.0	1	
Ca	44	1	No Gas	-19.430	-15.1	117664	1.8	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6434950	2.88	5896472	109.13	70	120	
Sc	45	2	he	1422451	0.90	1271268	111.89	70	120	
Ge	72	1	No Gas	694946	0.90	682805	101.78	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3610899	1.20	3697856	97.65	70	120	
Tb	159	1	No Gas	4116856	1.82	4404848	93.46	70	120	
Bi	209	1	No Gas	2103391	0.76	1997135	105.32	70	120	
Sc	45	3	HeHe	142587	1.01	132951	107.25	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	141LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:54:47-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	2.151	0.756	76838	1.20	2	107.5	70	130		
Cr	52	1	No Gas	2.152	1.590	80000	1.39	2	107.6	70	130		
Mn	55	1	No Gas	4.950	1.318	226087	1.09	5	99.0	70	130		
Co	59	1	No Gas	4.805	0.837	167924	0.46	5	96.1	70	130		
Ni	60	1	No Gas	2.390	3.331	39896	1.06	5	47.8	70	130	LLCCV Main CR1 Failed	N/A
Cu	63	1	No Gas	4.932	2.037	93369	1.76	5	98.6	70	130		
Sr	88	1	No Gas	4.492	0.794	198281	0.48	5	89.8	70	130		
Ag	107	1	No Gas	2.010	1.298	36459	1.76	2	100.5	70	130		
Al	27	1	No Gas	81.061	1.372	1694958	0.81	80	101.3	70	130		
Sn	118	1	No Gas	2.986	11.641	31743	11.87	2	149.3	70	130	LLCCV Main CR1 Failed	N/A
Tl	47	1	No Gas	4.917	3.332	14538	3.15	5	98.3	70	130		
Zn	66	1	No Gas	4.953	4.076	24499	3.64	5	99.1	70	130		
As	75	3	HeHe	2.956	7.685	1129	9.16	3	98.5	70	130		
As	75	1	No Gas	3.650	6.309	44390	2.33	3	121.7	70	130		
Sb	121	1	No Gas	2.188	6.650	31245	6.89	2	109.4	70	130		
Hg	201	1	No Gas	0.181	20.185	272	15.50	0.2	90.7	70	130		
Be	9	1	No Gas	0.945	5.076	3468	4.46	1	94.5	70	130		
Pb	208	1	No Gas	2.042	3.862	58045	1.78	2	102.1	70	130		
Se	82	1	No Gas	6.015	8.947	1454	8.99	5	120.3	70	130		
Mo	98	1	No Gas	2.805	10.222	32912	10.13	2	140.2	70	130	LLCCV Main CR1 Failed	N/A
Ba	137	1	No Gas	5.141	2.362	23681	1.59	5	102.8	70	130		
Tl	205	1	No Gas	0.959	2.731	19921	1.58	1	95.9	70	130		
U	238	1	No Gas	4.833	2.919	126784	0.86	5	96.7	70	130		
Na	23	2	he	114.032	1.060	421027	1.38	100	114.0	70	130		
Mg	24	2	he	104.525	1.055	174959	1.32	100	104.5	70	130		
K	39	2	he	115.343	1.360	528099	1.33	100	115.3	70	130		
Se	82	3	HeHe	4.659	20.492	152	13.54	5	93.2	70	130		
Fe	57	3	HeHe	60.813	4.575	5394	7.17	50	121.6	70	130		
Cd	114	1	No Gas	1.028	4.614	8579	5.46	1	102.8	70	130		
Ca	44	1	No Gas	76.584	3.644	207058	0.69	100	76.6	70	130		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6575161	0.58	5896472	111.51	70	120	
Sc	45	2	he	1406092	0.90	1271268	110.61	70	120	
Ge	72	1	No Gas	703711	1.53	682805	103.06	70	120	
In	115	1	No Gas	3636374	0.90	3697856	98.34	70	120	
Tb	159	1	No Gas	4136338	0.78	4404848	93.90	70	120	
Bi	209	1	No Gas	2111260	2.05	1997135	105.71	70	120	
Sc	45	3	HeHe	145232	2.80	132951	109.24	70	120	

Sample Report

Sample Table

Sample Name	9981198001
Data File Name	149SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T21:22:44-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4402

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	3.456	3.456	3.12	118647	0.00	1000	
Cr	52	1	No Gas	2.377	2.377	2.98	84273	0.00	1000	
Mn	55	1	No Gas	2.454	2.454	0.69	125699	0.00	1000	
Co	59	1	No Gas	0.097	0.097	0.62	3534	0.00	1000	
Ni	60	1	No Gas	-2.001	-2.001	-2.07	5124	-0.04	1000	
Cu	63	1	No Gas	0.327	0.327	1.26	6581	0.00	1000	
Sr	88	1	No Gas	1.103	1.103	0.37	47177	0.00	1000	
Ag	107	1	No Gas	0.011	0.011	47.46	226	0.00	1000	
Al	27	1	No Gas	1943.822	1943.822	0.62	39094882	0.00	100000	
Sn	118	1	No Gas	0.514	0.514	6.71	5538	0.01	100	
Ti	47	1	No Gas	31.808	31.808	0.64	89212	0.04	2000	
Zn	66	1	No Gas	1.253	1.253	5.34	6626	0.02	1000	
As	75	3	HeHe	0.714	0.714	5.08	267	0.27	1000	
As	75	1	No Gas	1.512	1.512	9.83	32496	0.00	1000	
Sb	121	1	No Gas	0.124	0.124	19.77	1867	0.01	100	
Hg	201	1	No Gas	0.051	0.051	21.05	100	0.05	4	
Be	9	1	No Gas	0.049	0.049	12.60	199	0.02	1000	
Pb	208	1	No Gas	5.975	5.975	1.13	165710	0.00	1000	
Se	82	1	No Gas	0.975	0.975	44.64	144	0.68	1000	
Mo	98	1	No Gas	0.312	0.312	35.45	4353	0.01	2000	
Ba	137	1	No Gas	11.301	11.301	1.66	50990	0.02	1000	
Tl	205	1	No Gas	0.011	0.011	24.34	241	0.00	1000	
U	238	1	No Gas	0.261	0.261	2.73	6746	0.00	1000	
Na	23	2	he	21.677	21.677	3.67	155036	0.01	100000	
Mg	24	2	he	75.987	75.987	2.18	127117	0.06	100000	
K	39	2	he	59.470	59.470	4.70	379124	0.02	100000	
Se	82	3	HeHe	-0.056	-0.056	-1539.94	64	-0.09	1000	
Fe	57	3	HeHe	959.401	959.401	0.99	78743	1.22	100000	
Cd	114	1	No Gas	0.031	0.031	17.69	300	0.01	1000	
Ca	44	1	No Gas	5.337	5.337	27.63	137969	0.00	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6358709	1.02	5896472	107.84	70	120	
Sc	45	2	he	1404889	0.63	1271268	110.51	70	120	
Ge	72	1	No Gas	684263	0.41	682805	100.21	70	120	

In	115	1	No Gas	3586689	0.86	3697856	96.99	70	120	
Tb	159	1	No Gas	4055969	0.88	4404848	92.08	70	120	
Bi	209	1	No Gas	2066146	1.30	1997135	103.46	70	120	
Sc	45	3	HeHe	139096	1.74	132951	104.62	70	120	

Sample Report

Sample Table

Sample Name	9981198002
Data File Name	150SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T21:26:14-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4403

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	3.015	3.015	1.71	104389	0.00	1000	
Cr	52	1	No Gas	2.032	2.032	2.21	74226	0.00	1000	
Mn	55	1	No Gas	2.266	2.266	2.12	119539	0.00	1000	
Co	59	1	No Gas	0.111	0.111	3.40	4045	0.00	1000	
Ni	60	1	No Gas	-1.754	-1.754	-0.53	7058	-0.02	1000	
Cu	63	1	No Gas	0.476	0.476	2.04	9357	0.01	1000	
Sr	88	1	No Gas	1.222	1.222	3.85	52604	0.00	1000	
Ag	107	1	No Gas	0.010	0.010	31.50	211	0.00	1000	
Al	27	1	No Gas	1627.103	1627.103	0.52	32953977	0.00	100000	
Sn	118	1	No Gas	0.543	0.543	5.90	5820	0.01	100	
Tl	47	1	No Gas	35.204	35.204	0.75	99390	0.04	2000	
Zn	66	1	No Gas	1.474	1.474	8.13	7692	0.02	1000	
As	75	3	HeHe	0.627	0.627	12.49	237	0.26	1000	
As	75	1	No Gas	0.841	0.841	30.10	29433	0.00	1000	
Sb	121	1	No Gas	0.131	0.131	16.61	1959	0.01	100	
Hg	201	1	No Gas	0.061	0.061	22.73	115	0.05	4	
Be	9	1	No Gas	0.030	0.030	16.00	134	0.02	1000	
Pb	208	1	No Gas	6.409	6.409	0.61	181605	0.00	1000	
Se	82	1	No Gas	1.208	1.208	71.06	206	0.59	1000	
Mo	98	1	No Gas	0.279	0.279	20.93	3967	0.01	2000	
Ba	137	1	No Gas	6.602	6.602	1.92	30071	0.02	1000	
Tl	205	1	No Gas	0.011	0.011	16.21	259	0.00	1000	
U	238	1	No Gas	0.161	0.161	7.37	4279	0.00	1000	
Na	23	2	he	37.407	37.407	3.20	200626	0.02	100000	
Mg	24	2	he	92.259	92.259	1.91	154578	0.06	100000	
K	39	2	he	64.210	64.210	3.63	392415	0.02	100000	
Se	82	3	HeHe	-0.644	-0.644	-173.91	55	-1.17	1000	
Fe	57	3	HeHe	694.768	694.768	0.41	57643	1.21	100000	
Cd	114	1	No Gas	0.046	0.046	8.84	423	0.01	1000	
Ca	44	1	No Gas	7.038	7.038	24.55	140410	0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6403442	1.95	5896472	108.60	70	120	
Sc	45	2	he	1407401	0.94	1271268	110.71	70	120	
Ge	72	1	No Gas	679504	0.48	682805	99.52	70	120	

In	115	1	No Gas	3571014	1.55	3697856	96.57	70	120	
Tb	159	1	No Gas	4091553	1.00	4404848	92.89	70	120	
Bi	209	1	No Gas	2111412	2.28	1997135	105.72	70	120	
Sc	45	3	HeHe	140494	1.44	132951	105.67	70	120	

Sample Report

Sample Table

Sample Name	9981198003
Data File Name	151SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T21:29:44-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4404

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	3.212	3.212	3.37	109412	0.00	1000	
Cr	52	1	No Gas	2.283	2.283	0.61	80688	0.00	1000	
Mn	55	1	No Gas	3.195	3.195	2.71	152032	0.00	1000	
Co	59	1	No Gas	0.108	0.108	6.05	3886	0.00	1000	
Ni	60	1	No Gas	-1.730	-1.730	-2.28	7138	-0.02	1000	
Cu	63	1	No Gas	1.808	1.808	2.28	33230	0.01	1000	
Sr	88	1	No Gas	2.164	2.164	2.37	91685	0.00	1000	
Ag	107	1	No Gas	0.137	0.137	7.79	2423	0.01	1000	
Al	27	1	No Gas	1447.753	1447.753	1.36	28874153	0.01	100000	
Sn	118	1	No Gas	0.629	0.629	7.51	6572	0.01	100	
Ti	47	1	No Gas	56.426	56.426	1.69	156680	0.04	2000	
Zn	66	1	No Gas	5.615	5.615	2.27	26530	0.02	1000	
As	75	3	HeHe	0.513	0.513	14.31	193	0.27	1000	
As	75	1	No Gas	0.866	0.866	6.74	29091	0.00	1000	
Sb	121	1	No Gas	0.140	0.140	20.41	2030	0.01	100	
Hg	201	1	No Gas	0.077	0.077	19.36	131	0.06	4	
Be	9	1	No Gas	0.019	0.019	28.12	92	0.02	1000	
Pb	208	1	No Gas	7.278	7.278	0.56	198365	0.00	1000	
Se	82	1	No Gas	0.486	0.486	20.81	22	2.24	1000	
Mo	98	1	No Gas	0.338	0.338	27.16	4537	0.01	2000	
Ba	137	1	No Gas	4.925	4.925	2.48	22049	0.02	1000	
Tl	205	1	No Gas	0.023	0.023	14.33	489	0.00	1000	
U	238	1	No Gas	0.133	0.133	4.10	3404	0.00	1000	
Na	23	2	he	34.018	34.018	1.08	188143	0.02	100000	
Mg	24	2	he	99.401	99.401	2.29	164122	0.06	100000	
K	39	2	he	75.405	75.405	2.72	416135	0.02	100000	
Se	82	3	HeHe	-0.205	-0.205	-247.72	61	-0.33	1000	
Fe	57	3	HeHe	459.995	459.995	2.46	37775	1.22	100000	
Cd	114	1	No Gas	0.040	0.040	15.43	367	0.01	1000	
Ca	44	1	No Gas	210.871	210.871	0.22	315006	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6305800	1.85	5896472	106.94	70	120	
Sc	45	2	he	1387193	1.61	1271268	109.12	70	120	
Ge	72	1	No Gas	670141	1.87	682805	98.15	70	120	

In	115	1	No Gas	3493816	0.73	3697856	94.48	70	120	
Tb	159	1	No Gas	4018449	3.12	4404848	91.23	70	120	
Bi	209	1	No Gas	2031225	1.26	1997135	101.71	70	120	
Sc	45	3	HeHe	138829	0.57	132951	104.42	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	152_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T21:33:15-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	99.051	0.585	3375727	1.25	100	99.1	90	110	
Cr	52	1	No Gas	97.038	0.982	2987003	1.30	100	97.0	90	110	
Mn	55	1	No Gas	100.753	2.896	3796873	1.56	100	100.8	90	110	
Co	59	1	No Gas	97.038	1.341	3285063	2.08	100	97.0	90	110	
Ni	60	1	No Gas	91.911	1.232	723152	2.44	100	91.9	90	110	
Cu	63	1	No Gas	99.011	0.645	1806416	1.09	100	99.0	90	110	
Sr	88	1	No Gas	99.238	1.220	4248037	0.53	100	99.2	90	110	
Ag	107	1	No Gas	99.889	0.887	1765858	1.90	100	99.9	90	110	
Al	27	1	No Gas	103.774	0.608	2102743	1.36	100	103.8	90	110	
Sn	118	1	No Gas	96.659	1.876	996324	1.01	100	96.7	90	110	
Tl	47	1	No Gas	88.871	0.692	249473	1.06	100	88.9	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	94.529	1.409	438242	0.67	100	94.5	90	110	
As	75	3	HeHe	92.717	2.188	33777	0.36	100	92.7	90	110	
As	75	1	No Gas	94.332	1.113	487219	0.85	100	94.3	90	110	
Sb	121	1	No Gas	98.401	0.737	1365483	1.56	100	98.4	90	110	
Hg	201	1	No Gas	1.943	1.917	2523	2.52	2	97.1	90	110	
Be	9	1	No Gas	93.881	0.528	331879	1.51	100	93.9	90	110	
Pb	208	1	No Gas	95.237	1.067	2639846	1.22	100	95.2	90	110	
Se	82	1	No Gas	93.079	0.325	23287	1.42	100	93.1	90	110	
Mo	98	1	No Gas	96.839	0.764	1080783	1.62	100	96.8	90	110	
Ba	137	1	No Gas	98.523	1.796	441336	0.71	100	98.5	90	110	
Tl	205	1	No Gas	95.242	1.049	1937182	1.40	100	95.2	90	110	
U	238	1	No Gas	103.294	2.320	2655183	1.69	100	103.3	90	110	
Na	23	2	he	1045.596	2.215	3157737	2.29	1000	104.6	90	110	
Mg	24	2	he	1027.915	1.692	1749549	1.18	1000	102.8	90	110	
K	39	2	he	1025.026	0.795	3000177	0.41	1000	102.5	90	110	
Se	82	3	HeHe	93.213	8.359	1670	6.32	100	93.2	90	110	
Fe	57	3	HeHe	1009.296	1.581	83077	2.40	1000	100.9	90	110	
Cd	114	1	No Gas	94.780	1.204	767063	1.99	100	94.8	90	110	
Ca	44	1	No Gas	969.797	0.237	984406	1.91	1000	97.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6379650	1.73	5896472	108.19	70	120	
Sc	45	2	he	1431096	0.79	1271268	112.57	70	120	
Ge	72	1	No Gas	687380	0.12	682805	100.67	70	120	
In	115	1	No Gas	3547694	1.02	3697856	95.94	70	120	
Tb	159	1	No Gas	4030273	1.64	4404848	91.50	70	120	
Bi	209	1	No Gas	2068695	0.69	1997135	103.58	70	120	
Sc	45	3	HeHe	139520	1.93	132951	104.94	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	153_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T21:36:41-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.044	66.8	2794	36.0	9	
Cr	52	1	No Gas	0.092	18.2	14507	3.2	4	
Mn	55	1	No Gas	0.024	113.2	35480	3.1	25	
Co	59	1	No Gas	0.012	14.1	678	8.2	1	
Ni	60	1	No Gas	-2.372	-0.9	2317	7.4	25	
Cu	63	1	No Gas	0.187	0.4	4070	0.7	25	
Sr	88	1	No Gas	0.017	29.4	852	26.1	25	
Ag	107	1	No Gas	0.024	16.4	459	15.7	9	
Al	27	1	No Gas	0.938	6.0	28386	3.8	1000000	
Sn	118	1	No Gas	2.160	22.7	22799	24.3	25	
Ti	47	1	No Gas	0.724	23.7	2358	20.5	10000	
Zn	66	1	No Gas	0.444	14.0	2914	9.6	25	
As	75	3	HeHe	0.615	8.9	229	8.9	9	
As	75	1	No Gas	0.931	38.3	29865	5.9	9	
Sb	121	1	No Gas	0.362	23.7	5231	24.9	4	
Hg	201	1	No Gas	0.022	33.3	63	14.6	0.04	
Be	9	1	No Gas	0.014	1.7	75	1.5	1	
Pb	208	1	No Gas	0.036	17.3	1311	13.6	4	
Se	82	1	No Gas	1.290	8.2	225	12.2	25	
Mo	98	1	No Gas	1.692	31.6	20025	32.0	10000	
Ba	137	1	No Gas	0.058	24.3	307	21.0	25	
Tl	205	1	No Gas	0.049	13.6	1037	13.6	1	
U	238	1	No Gas	0.623	31.9	16277	32.0	25	
Na	23	2	he	10.890	7.1	123740	2.3	2500000	
Mg	24	2	he	0.530	13.3	1052	12.7	2500000	
K	39	2	he	6.508	27.0	237811	0.8	5000000	
Se	82	3	HeHe	0.221	117.1	69	6.6	25	
Fe	57	3	HeHe	13.258	5.7	1259	4.0	2500000	
Cd	114	1	No Gas	0.090	15.7	790	16.6	1	
Ca	44	1	No Gas	-18.004	-10.8	118389	1.5	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6403857	0.65	5896472	108.60	70	120	
Sc	45	2	he	1401756	1.56	1271268	110.26	70	120	
Ge	72	1	No Gas	698028	0.58	682805	102.23	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3592760	1.99	3697856	97.16	70	120	
Tb	159	1	No Gas	4026982	0.46	4404848	91.42	70	120	
Bi	209	1	No Gas	2096990	0.30	1997135	105.00	70	120	
Sc	45	3	HeHe	138208	1.39	132951	103.95	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	154LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T21:40:10-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	2.119	2.057	73639	2.87	2	105.9	70	130		
Cr	52	1	No Gas	2.189	2.348	78942	0.51	2	109.5	70	130		
Mn	55	1	No Gas	5.106	2.105	225698	1.46	5	102.1	70	130		
Co	59	1	No Gas	4.853	0.728	164955	0.92	5	97.1	70	130		
Ni	60	1	No Gas	2.617	6.209	40544	2.44	5	52.3	70	130	LLCCV Main CR1 Failed	N/A
Cu	63	1	No Gas	5.034	0.258	92687	1.38	5	100.7	70	130		
Sr	88	1	No Gas	4.449	0.760	191039	1.72	5	89.0	70	130		
Ag	107	1	No Gas	2.012	0.130	35468	1.23	2	100.6	70	130		
Al	27	1	No Gas	82.401	0.834	1675664	1.14	80	103.0	70	130		
Sn	118	1	No Gas	3.119	9.308	32229	10.29	2	155.9	70	130	LLCCV Main CR1 Failed	N/A
Tl	47	1	No Gas	4.861	1.709	13986	3.13	5	97.2	70	130		
Zn	66	1	No Gas	5.524	1.659	26477	2.13	5	110.5	70	130		
As	75	3	HeHe	3.303	1.549	1204	1.88	3	110.1	70	130		
As	75	1	No Gas	3.427	9.176	42095	4.81	3	114.2	70	130		
Sb	121	1	No Gas	2.206	3.431	30599	2.19	2	110.3	70	130		
Hg	201	1	No Gas	0.181	13.352	267	11.21	0.2	90.4	70	130		
Be	9	1	No Gas	0.986	4.431	3520	3.86	1	98.6	70	130		
Pb	208	1	No Gas	1.997	2.656	55897	1.36	2	99.9	70	130		
Se	82	1	No Gas	4.922	10.174	1138	9.61	5	98.4	70	130		
Mo	98	1	No Gas	2.647	4.423	30244	5.40	2	132.4	70	130	LLCCV Main CR1 Failed	N/A
Ba	137	1	No Gas	5.192	2.226	23337	1.69	5	103.8	70	130		
Tl	205	1	No Gas	0.953	3.117	19506	3.02	1	95.3	70	130		
U	238	1	No Gas	4.858	2.686	125489	2.05	5	97.2	70	130		
Na	23	2	he	117.416	1.796	430492	0.73	100	117.4	70	130		
Mg	24	2	he	101.597	0.604	169975	1.45	100	101.6	70	130		
K	39	2	he	112.623	0.666	520560	0.64	100	112.6	70	130		
Se	82	3	HeHe	3.995	39.318	134	21.68	5	79.9	70	130		
Fe	57	3	HeHe	63.111	4.855	5334	3.80	50	126.2	70	130		
Cd	114	1	No Gas	1.091	5.261	8843	4.41	1	109.1	70	130		
Ca	44	1	No Gas	86.317	1.520	209947	0.97	100	86.3	70	130		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6395212	1.51	5896472	108.46	70	120	
Sc	45	2	he	1405313	0.85	1271268	110.54	70	120	
Ge	72	1	No Gas	680617	1.40	682805	99.68	70	120	
In	115	1	No Gas	3534069	1.31	3697856	95.57	70	120	
Tb	159	1	No Gas	4035918	0.88	4404848	91.62	70	120	
Bi	209	1	No Gas	2078358	1.55	1997135	104.07	70	120	
Sc	45	3	HeHe	138733	1.40	132951	104.35	70	120	

Sample Report

Sample Table

Sample Name	1020197
Data File Name	155SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T21:43:38-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4405

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	42.811	42.811	1.57	1474856	0.00	1000	
Cr	52	1	No Gas	41.226	41.226	1.02	1288944	0.00	1000	
Mn	55	1	No Gas	42.452	42.452	0.90	1636889	0.00	1000	
Co	59	1	No Gas	39.336	39.336	2.33	1345619	0.00	1000	
Ni	60	1	No Gas	36.181	36.181	1.85	300114	0.01	1000	
Cu	63	1	No Gas	39.145	39.145	0.38	721962	0.01	1000	
Sr	88	1	No Gas	38.695	38.695	1.18	1673598	0.00	1000	
Ag	107	1	No Gas	15.493	15.493	0.35	280182	0.01	1000	
Al	27	1	No Gas	1631.074	1631.074	1.62	33253872	0.00	100000	
Sn	118	1	No Gas	38.325	38.325	2.76	404203	0.01	100	
Ti	47	1	No Gas	54.888	54.888	1.31	155809	0.04	2000	
Zn	66	1	No Gas	389.968	389.968	1.07	1823822	0.02	1000	
As	75	3	HeHe	37.434	37.434	2.86	13830	0.27	1000	
As	75	1	No Gas	37.428	37.428	1.20	210667	0.02	1000	
Sb	121	1	No Gas	37.794	37.794	1.23	536514	0.01	100	
Hg	201	1	No Gas	0.512	0.512	7.82	700	0.07	4	
Be	9	1	No Gas	37.884	37.884	0.47	135309	0.03	1000	
Pb	208	1	No Gas	44.728	44.728	0.52	1258782	0.00	1000	
Se	82	1	No Gas	36.625	36.625	1.38	9195	0.40	1000	
Mo	98	1	No Gas	39.887	39.887	0.96	455846	0.01	2000	
Ba	137	1	No Gas	426.786	426.786	2.67	1930884	0.02	1000	
Tl	205	1	No Gas	37.742	37.742	0.27	779343	0.00	1000	
U	238	1	No Gas	0.234	0.234	13.51	6161	0.00	1000	
Na	23	2	he	462.826	462.826	2.04	1462187	0.03	100000	
Mg	24	2	he	474.060	474.060	1.11	813661	0.06	100000	
K	39	2	he	477.164	477.164	1.56	1529509	0.03	100000	
Se	82	3	HeHe	35.405	35.405	8.21	685	5.17	1000	
Fe	57	3	HeHe	829.173	829.173	3.77	69192	1.20	100000	
Cd	114	1	No Gas	37.502	37.502	0.78	310438	0.01	1000	
Ca	44	1	No Gas	551.703	551.703	1.07	624025	0.09	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6444973	1.55	5896472	109.30	70	120	
Sc	45	2	he	1443077	1.86	1271268	113.51	70	120	
Ge	72	1	No Gas	687247	1.23	682805	100.65	70	120	

In	115	1	No Gas	3628851	1.54	3697856	98.13	70	120	
Tb	159	1	No Gas	4072486	3.34	4404848	92.45	70	120	
Bi	209	1	No Gas	2100219	2.51	1997135	105.16	70	120	
Sc	45	3	HeHe	141410	1.10	132951	106.36	70	120	

Sample Report

Sample Table

Sample Name	1020198
Data File Name	156SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T21:47:04-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4406

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	44.058	44.058	2.02	1506384	0.00	1000	
Cr	52	1	No Gas	42.457	42.457	3.07	1317151	0.00	1000	
Mn	55	1	No Gas	43.416	43.416	1.09	1660653	0.00	1000	
Co	59	1	No Gas	40.836	40.836	1.28	1386290	0.00	1000	
Ni	60	1	No Gas	37.629	37.629	2.12	308960	0.01	1000	
Cu	63	1	No Gas	40.154	40.154	1.46	735012	0.01	1000	
Sr	88	1	No Gas	39.617	39.617	2.07	1700768	0.00	1000	
Ag	107	1	No Gas	16.082	16.082	1.24	285250	0.01	1000	
Al	27	1	No Gas	2113.428	2113.428	1.09	42758521	0.00	100000	
Sn	118	1	No Gas	37.367	37.367	0.74	386576	0.01	100	
Ti	47	1	No Gas	78.084	78.084	1.25	219832	0.04	2000	
Zn	66	1	No Gas	400.948	400.948	0.98	1861284	0.02	1000	
As	75	3	HeHe	38.101	38.101	1.14	13987	0.27	1000	
As	75	1	No Gas	37.998	37.998	1.30	211891	0.02	1000	
Sb	121	1	No Gas	36.373	36.373	0.72	506437	0.01	100	
Hg	201	1	No Gas	0.524	0.524	6.74	703	0.07	4	
Be	9	1	No Gas	38.043	38.043	1.57	134866	0.03	1000	
Pb	208	1	No Gas	46.661	46.661	1.53	1288972	0.00	1000	
Se	82	1	No Gas	37.740	37.740	1.03	9407	0.40	1000	
Mo	98	1	No Gas	40.090	40.090	1.52	449435	0.01	2000	
Ba	137	1	No Gas	427.442	427.442	0.89	1922214	0.02	1000	
Tl	205	1	No Gas	38.827	38.827	1.90	786963	0.00	1000	
U	238	1	No Gas	0.191	0.191	8.75	4923	0.00	1000	
Na	23	2	he	472.194	472.194	3.01	1470680	0.03	100000	
Mg	24	2	he	518.886	518.886	2.00	879122	0.06	100000	
K	39	2	he	518.674	518.674	1.28	1621862	0.03	100000	
Se	82	3	HeHe	33.453	33.453	11.34	646	5.18	1000	
Fe	57	3	HeHe	895.714	895.714	1.87	74272	1.21	100000	
Cd	114	1	No Gas	38.580	38.580	0.71	313261	0.01	1000	
Ca	44	1	No Gas	591.276	591.276	1.25	654096	0.09	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6396296	0.86	5896472	108.48	70	120	
Sc	45	2	he	1424634	1.71	1271268	112.06	70	120	
Ge	72	1	No Gas	678774	1.08	682805	99.41	70	120	

In	115	1	No Gas	3559584	2.35	3697856	96.26	70	120	
Tb	159	1	No Gas	4045237	1.50	4404848	91.84	70	120	
Bi	209	1	No Gas	2061600	1.42	1997135	103.23	70	120	
Sc	45	3	HeHe	140529	1.66	132951	105.70	70	120	

Sample Report

Sample Table

Sample Name	9981198004
Data File Name	158SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T21:53:52-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass
Vial	4408

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	4.594	4.594	0.29	159997	0.00	1000	
Cr	52	1	No Gas	5.271	5.271	1.78	175720	0.00	1000	
Mn	55	1	No Gas	36.752	36.752	2.92	1426715	0.00	1000	
Co	59	1	No Gas	0.371	0.371	3.00	12991	0.00	1000	
Ni	60	1	No Gas	-1.165	-1.165	-4.83	11691	-0.01	1000	
Cu	63	1	No Gas	90.273	90.273	1.98	1670160	0.01	1000	
Sr	88	1	No Gas	1.354	1.354	1.77	58865	0.00	1000	
Ag	107	1	No Gas	0.104	0.104	13.48	1874	0.01	1000	
Al	27	1	No Gas	1855.881	1855.881	0.55	37969887	0.00	100000	
Sn	118	1	No Gas	10.443	10.443	3.00	108322	0.01	100	
Ti	47	1	No Gas	36.761	36.761	1.00	104834	0.04	2000	
Zn	66	1	No Gas	101.201	101.201	0.96	475732	0.02	1000	
As	75	3	HeHe	1.746	1.746	10.99	635	0.27	1000	
As	75	1	No Gas	1.935	1.935	13.83	35161	0.01	1000	
Sb	121	1	No Gas	8.372	8.372	7.11	116873	0.01	100	
Hg	201	1	No Gas	0.063	0.063	17.93	117	0.05	4	
Be	9	1	No Gas	0.068	0.068	10.01	268	0.03	1000	
Pb	208	1	No Gas	2254.616	2254.616	0.92	63482260	0.00	1000	>LDR
Se	82	1	No Gas	1.666	1.666	56.44	325	0.51	1000	
Mo	98	1	No Gas	2.519	2.519	25.72	29117	0.01	2000	
Ba	137	1	No Gas	11.500	11.500	4.30	52722	0.02	1000	
Tl	205	1	No Gas	0.039	0.039	11.82	833	0.00	1000	
U	238	1	No Gas	0.812	0.812	19.72	21272	0.00	1000	
Na	23	2	he	34.190	34.190	2.65	189030	0.02	100000	
Mg	24	2	he	90.216	90.216	2.41	149308	0.06	100000	
K	39	2	he	72.961	72.961	1.97	410617	0.02	100000	
Se	82	3	HeHe	0.999	0.999	31.49	81	1.23	1000	
Fe	57	3	HeHe	5722.132	5722.132	0.22	464056	1.23	100000	
Cd	114	1	No Gas	0.518	0.518	4.14	4256	0.01	1000	
Ca	44	1	No Gas	32.160	32.160	7.65	164182	0.02	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6468664	1.45	5896472	109.70	70	120	
Sc	45	2	he	1390099	0.56	1271268	109.35	70	120	
Ge	72	1	No Gas	692731	1.34	682805	101.45	70	120	

In	115	1	No Gas	3563249	1.56	3697856	96.36	70	120	
Tb	159	1	No Gas	4120980	0.34	4404848	93.56	70	120	
Bi	209	1	No Gas	2101426	1.37	1997135	105.22	70	120	
Sc	45	3	HeHe	137709	0.85	132951	103.58	70	120	

Sample Report

Sample Table

Sample Name	9981198005
Data File Name	159SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T21:57:19-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4409

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	1.784	1.784	4.72	61566	0.00	1000	
Cr	52	1	No Gas	1.784	1.784	0.72	65793	0.00	1000	
Mn	55	1	No Gas	1.622	1.622	2.75	94226	0.00	1000	
Co	59	1	No Gas	0.081	0.081	8.40	2978	0.00	1000	
Ni	60	1	No Gas	-1.666	-1.666	-1.53	7639	-0.02	1000	
Cu	63	1	No Gas	12.740	12.740	0.12	231057	0.01	1000	
Sr	88	1	No Gas	0.923	0.923	3.45	39306	0.00	1000	
Ag	107	1	No Gas	0.075	0.075	12.98	1352	0.01	1000	
Al	27	1	No Gas	734.176	734.176	0.75	14695109	0.00	100000	
Sn	118	1	No Gas	15.032	15.032	2.97	153702	0.01	100	
Tl	47	1	No Gas	20.377	20.377	0.44	56968	0.04	2000	
Zn	66	1	No Gas	34.147	34.147	1.11	157536	0.02	1000	
As	75	3	HeHe	0.697	0.697	29.76	249	0.28	1000	
As	75	1	No Gas	1.031	1.031	39.08	29967	0.00	1000	
Sb	121	1	No Gas	2.855	2.855	9.12	39392	0.01	100	
Hg	201	1	No Gas	0.054	0.054	4.53	105	0.05	4	
Be	9	1	No Gas	0.016	0.016	21.71	80	0.02	1000	
Pb	208	1	No Gas	277.809	277.809	0.84	7764126	0.00	1000	
Se	82	1	No Gas	1.211	1.211	66.97	203	0.60	1000	
Mo	98	1	No Gas	0.801	0.801	30.83	9693	0.01	2000	
Ba	137	1	No Gas	6.399	6.399	2.34	28913	0.02	1000	
Tl	205	1	No Gas	0.022	0.022	20.70	482	0.00	1000	
U	238	1	No Gas	0.171	0.171	15.84	4475	0.00	1000	
Na	23	2	he	43.007	43.007	3.43	213240	0.02	100000	
Mg	24	2	he	42.448	42.448	3.04	70043	0.06	100000	
K	39	2	he	48.302	48.302	4.05	344417	0.01	100000	
Se	82	3	HeHe	0.324	0.324	340.32	68	0.48	1000	
Fe	57	3	HeHe	864.576	864.576	30.05	67586	1.28	100000	
Cd	114	1	No Gas	0.554	0.554	7.38	4491	0.01	1000	
Ca	44	1	No Gas	18.389	18.389	14.54	148580	0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6326000	1.71	5896472	107.28	70	120	
Sc	45	2	he	1384913	2.58	1271268	108.94	70	120	

Ge	72	1	No Gas	681761	1.29	682805	99.85	70	120	
In	115	1	No Gas	3514321	1.29	3697856	95.04	70	120	
Tb	159	1	No Gas	4058551	1.30	4404848	92.14	70	120	
Bi	209	1	No Gas	2085840	1.26	1997135	104.44	70	120	
Sc	45	3	HeHe	139480	25.28	132951	104.91	70	120	

Sample Report

Sample Table

Sample Name	9981198006
Data File Name	160SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:00:48-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4410

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	2.387	2.387	1.45	80878	0.00	1000	
Cr	52	1	No Gas	1.651	1.651	2.66	60942	0.00	1000	
Mn	55	1	No Gas	2.282	2.282	0.78	117191	0.00	1000	
Co	59	1	No Gas	0.049	0.049	1.60	1893	0.00	1000	
Ni	60	1	No Gas	-2.096	-2.096	-2.33	4324	-0.05	1000	
Cu	63	1	No Gas	0.433	0.433	3.00	8363	0.01	1000	
Sr	88	1	No Gas	1.175	1.175	2.77	49361	0.00	1000	
Ag	107	1	No Gas	0.013	0.013	28.31	267	0.00	1000	
Al	27	1	No Gas	1449.178	1449.178	2.07	28632768	0.01	100000	
Sn	118	1	No Gas	0.853	0.853	9.05	8977	0.01	100	
Ti	47	1	No Gas	31.766	31.766	0.66	87510	0.04	2000	
Zn	66	1	No Gas	2.264	2.264	4.75	11084	0.02	1000	
As	75	3	HeHe	0.748	0.748	14.51	272	0.28	1000	
As	75	1	No Gas	1.106	1.106	19.46	29965	0.00	1000	
Sb	121	1	No Gas	0.978	0.978	20.20	13703	0.01	100	
Hg	201	1	No Gas	0.033	0.033	24.95	77	0.04	4	
Be	9	1	No Gas	0.041	0.041	5.89	169	0.02	1000	
Pb	208	1	No Gas	3.996	3.996	1.95	111161	0.00	1000	
Se	82	1	No Gas	0.891	0.891	57.99	122	0.73	1000	
Mo	98	1	No Gas	0.467	0.467	36.68	6050	0.01	2000	
Ba	137	1	No Gas	3.257	3.257	2.07	14560	0.02	1000	
Tl	205	1	No Gas	0.015	0.015	9.76	341	0.00	1000	
U	238	1	No Gas	0.222	0.222	7.45	5757	0.00	1000	
Na	23	2	he	23.428	23.428	2.81	155696	0.02	100000	
Mg	24	2	he	59.590	59.590	1.96	96999	0.06	100000	
K	39	2	he	46.408	46.408	1.50	335007	0.01	100000	
Se	82	3	HeHe	-0.604	-0.604	-56.69	53	-1.13	1000	
Fe	57	3	HeHe	539.089	539.089	1.84	43151	1.25	100000	
Cd	114	1	No Gas	0.059	0.059	23.79	527	0.01	1000	
Ca	44	1	No Gas	30.931	30.931	6.21	157461	0.02	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6245548	2.28	5896472	105.92	70	120	
Sc	45	2	he	1366443	0.59	1271268	107.49	70	120	
Ge	72	1	No Gas	671658	0.43	682805	98.37	70	120	

In	115	1	No Gas	3548467	1.13	3697856	95.96	70	120	
Tb	159	1	No Gas	4009518	0.22	4404848	91.03	70	120	
Bi	209	1	No Gas	2070685	0.57	1997135	103.68	70	120	
Sc	45	3	HeHe	135426	1.60	132951	101.86	70	120	

Sample Report

Sample Table

Sample Name	9981198007
Data File Name	161SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:04:19-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4411

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	3.242	3.242	2.47	110938	0.00	1000	
Cr	52	1	No Gas	13.725	13.725	0.75	429394	0.00	1000	
Mn	55	1	No Gas	2.778	2.778	0.51	137235	0.00	1000	
Co	59	1	No Gas	0.078	0.078	5.24	2900	0.00	1000	
Ni	60	1	No Gas	-2.096	-2.096	-2.64	4381	-0.05	1000	
Cu	63	1	No Gas	4.307	4.307	3.63	78607	0.01	1000	
Sr	88	1	No Gas	0.920	0.920	2.90	39186	0.00	1000	
Ag	107	1	No Gas	0.007	0.007	70.60	156	0.00	1000	
Al	27	1	No Gas	1028.128	1028.128	3.59	20597423	0.00	100000	
Sn	118	1	No Gas	0.630	0.630	12.22	6591	0.01	100	
Ti	47	1	No Gas	76.148	76.148	1.48	212288	0.04	2000	
Zn	66	1	No Gas	1.781	1.781	4.69	9025	0.02	1000	
As	75	3	HeHe	0.456	0.456	9.50	169	0.27	1000	
As	75	1	No Gas	0.779	0.779	42.28	28788	0.00	1000	
Sb	121	1	No Gas	0.691	0.691	13.20	9581	0.01	100	
Hg	201	1	No Gas	0.037	0.037	47.29	84	0.04	4	
Be	9	1	No Gas	0.014	0.014	51.40	76	0.02	1000	
Pb	208	1	No Gas	3.633	3.633	1.08	102495	0.00	1000	
Se	82	1	No Gas	-0.003	-0.003	-10955.18	-100	0.00	1000	
Mo	98	1	No Gas	0.435	0.435	38.93	5597	0.01	2000	
Ba	137	1	No Gas	3.027	3.027	5.34	13523	0.02	1000	
Tl	205	1	No Gas	0.011	0.011	4.18	244	0.00	1000	
U	238	1	No Gas	0.190	0.190	11.36	4990	0.00	1000	
Na	23	2	he	26.192	26.192	2.93	163060	0.02	100000	
Mg	24	2	he	65.146	65.146	0.72	105789	0.06	100000	
K	39	2	he	52.574	52.574	3.31	350150	0.02	100000	
Se	82	3	HeHe	-0.048	-0.048	-1200.69	63	-0.08	1000	
Fe	57	3	HeHe	472.122	472.122	3.24	37979	1.24	100000	
Cd	114	1	No Gas	0.034	0.034	33.33	320	0.01	1000	
Ca	44	1	No Gas	-5.900	-5.900	-34.88	127630	0.00	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6333980	1.24	5896472	107.42	70	120	
Sc	45	2	he	1363332	0.53	1271268	107.24	70	120	
Ge	72	1	No Gas	673566	0.69	682805	98.65	70	120	

In	115	1	No Gas	3503340	1.29	3697856	94.74	70	120	
Tb	159	1	No Gas	4005627	1.00	4404848	90.94	70	120	
Bi	209	1	No Gas	2099778	0.92	1997135	105.14	70	120	
Sc	45	3	HeHe	136016	1.00	132951	102.31	70	120	

Sample Report

Sample Table

Sample Name	9981198008
Data File Name	162SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:07:48-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4412

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	2.574	2.574	1.24	87741	0.00	1000	
Cr	52	1	No Gas	2.131	2.131	0.93	75892	0.00	1000	
Mn	55	1	No Gas	6.533	6.533	2.65	274505	0.00	1000	
Co	59	1	No Gas	0.157	0.157	5.15	5516	0.00	1000	
Ni	60	1	No Gas	-1.571	-1.571	-2.18	8312	-0.02	1000	
Cu	63	1	No Gas	0.914	0.914	0.74	17066	0.01	1000	
Sr	88	1	No Gas	2.691	2.691	1.15	113674	0.00	1000	
Ag	107	1	No Gas	0.015	0.015	7.26	296	0.01	1000	
Al	27	1	No Gas	1598.637	1598.637	2.15	31806837	0.01	100000	
Sn	118	1	No Gas	0.682	0.682	10.13	7102	0.01	100	
Tl	47	1	No Gas	43.153	43.153	0.69	119602	0.04	2000	
Zn	66	1	No Gas	8.474	8.474	2.41	39509	0.02	1000	
As	75	3	HeHe	0.665	0.665	13.71	246	0.27	1000	
As	75	1	No Gas	0.829	0.829	56.81	28809	0.00	1000	
Sb	121	1	No Gas	0.533	0.533	13.25	7406	0.01	100	
Hg	201	1	No Gas	0.051	0.051	35.42	101	0.05	4	
Be	9	1	No Gas	0.045	0.045	38.33	183	0.02	1000	
Pb	208	1	No Gas	8.012	8.012	1.12	223509	0.00	1000	
Se	82	1	No Gas	0.392	0.392	45.13	-2	-15.79	1000	
Mo	98	1	No Gas	0.433	0.433	21.77	5574	0.01	2000	
Ba	137	1	No Gas	14.145	14.145	1.13	63627	0.02	1000	
Tl	205	1	No Gas	0.011	0.011	15.80	248	0.00	1000	
U	238	1	No Gas	0.208	0.208	4.31	5405	0.00	1000	
Na	23	2	he	38.770	38.770	3.36	202473	0.02	100000	
Mg	24	2	he	74.651	74.651	1.12	123840	0.06	100000	
K	39	2	he	57.450	57.450	2.82	370618	0.02	100000	
Se	82	3	HeHe	-0.315	-0.315	-220.26	59	-0.54	1000	
Fe	57	3	HeHe	2197.747	2197.747	0.83	177678	1.24	100000	
Cd	114	1	No Gas	0.048	0.048	14.30	430	0.01	1000	
Ca	44	1	No Gas	88.316	88.316	0.03	208225	0.04	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6289766	2.36	5896472	106.67	70	120	
Sc	45	2	he	1393034	0.24	1271268	109.58	70	120	
Ge	72	1	No Gas	671471	2.40	682805	98.34	70	120	

In	115	1	No Gas	3491526	0.95	3697856	94.42	70	120	
Tb	159	1	No Gas	4043747	0.54	4404848	91.80	70	120	
Bi	209	1	No Gas	2079154	1.40	1997135	104.11	70	120	
Sc	45	3	HeHe	137199	0.33	132951	103.20	70	120	

Sample Report

Sample Table

Sample Name	9981198009
Data File Name	163SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:11:18-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4501

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	14.967	14.967	0.33	519378	0.00	1000	
Cr	52	1	No Gas	9.656	9.656	1.81	312653	0.00	1000	
Mn	55	1	No Gas	18.110	18.110	1.90	722387	0.00	1000	
Co	59	1	No Gas	0.587	0.587	2.96	20479	0.00	1000	
Ni	60	1	No Gas	-0.986	-0.986	-4.52	13105	-0.01	1000	
Cu	63	1	No Gas	1.974	1.974	1.06	37242	0.01	1000	
Sr	88	1	No Gas	19.905	19.905	0.49	865874	0.00	1000	
Ag	107	1	No Gas	0.015	0.015	40.81	311	0.00	1000	
Al	27	1	No Gas	8882.525	8882.525	1.86	182084848	0.00	100000	
Sn	118	1	No Gas	0.783	0.783	11.35	8366	0.01	100	
Ti	47	1	No Gas	37.755	37.755	1.52	107881	0.03	2000	
Zn	66	1	No Gas	8.966	8.966	2.93	43013	0.02	1000	
As	75	3	HeHe	1.383	1.383	14.19	515	0.27	1000	
As	75	1	No Gas	1.362	1.362	19.06	32379	0.00	1000	
Sb	121	1	No Gas	0.543	0.543	15.71	7761	0.01	100	
Hg	201	1	No Gas	0.069	0.069	16.84	126	0.05	4	
Be	9	1	No Gas	0.144	0.144	13.29	542	0.03	1000	
Pb	208	1	No Gas	23.264	23.264	1.31	661129	0.00	1000	
Se	82	1	No Gas	1.742	1.742	25.11	343	0.51	1000	
Mo	98	1	No Gas	0.500	0.500	26.74	6490	0.01	2000	
Ba	137	1	No Gas	39.225	39.225	2.12	182068	0.02	1000	
Tl	205	1	No Gas	0.055	0.055	25.89	1167	0.00	1000	
U	238	1	No Gas	1.118	1.118	1.35	29504	0.00	1000	
Na	23	2	he	47.143	47.143	3.98	229181	0.02	100000	
Mg	24	2	he	470.662	470.662	0.72	789706	0.06	100000	
K	39	2	he	355.061	355.061	0.13	1169416	0.03	100000	
Se	82	3	HeHe	1.615	1.615	51.57	94	1.72	1000	
Fe	57	3	HeHe	5365.786	5365.786	1.07	444187	1.21	100000	
Cd	114	1	No Gas	0.060	0.060	14.19	540	0.01	1000	
Ca	44	1	No Gas	1117.251	1117.251	1.00	1131569	0.10	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6481563	0.99	5896472	109.92	70	120	
Sc	45	2	he	1410527	0.56	1271268	110.95	70	120	
Ge	72	1	No Gas	683544	1.10	682805	100.11	70	120	

In	115	1	No Gas	3594570	0.23	3697856	97.21	70	120	
Tb	159	1	No Gas	4174391	1.46	4404848	94.77	70	120	
Bi	209	1	No Gas	2120340	1.20	1997135	106.17	70	120	
Sc	45	3	HeHe	140582	1.81	132951	105.74	70	120	

Sample Report

Sample Table

Sample Name	9981198010
Data File Name	164SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:14:48-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4502

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	17.990	17.990	2.45	637081	0.00	1000	
Cr	52	1	No Gas	12.042	12.042	1.61	395085	0.00	1000	
Mn	55	1	No Gas	25.738	25.738	1.04	1032976	0.00	1000	
Co	59	1	No Gas	0.728	0.728	1.23	25846	0.00	1000	
Ni	60	1	No Gas	-0.414	-0.414	-20.49	17923	0.00	1000	
Cu	63	1	No Gas	2.098	2.098	2.75	40366	0.01	1000	
Sr	88	1	No Gas	37.105	37.105	1.48	1647676	0.00	1000	
Ag	107	1	No Gas	0.016	0.016	27.75	319	0.00	1000	
Al	27	1	No Gas	10503.774	10503.774	0.65	219792836	0.00	100000	
Sn	118	1	No Gas	0.711	0.711	12.66	7569	0.01	100	
Ti	47	1	No Gas	71.145	71.145	1.07	207234	0.03	2000	
Zn	66	1	No Gas	8.305	8.305	1.93	40744	0.02	1000	
As	75	3	HeHe	1.986	1.986	3.82	743	0.27	1000	
As	75	1	No Gas	1.681	1.681	14.02	34666	0.00	1000	
Sb	121	1	No Gas	0.305	0.305	12.54	4382	0.01	100	
Hg	201	1	No Gas	0.038	0.038	26.54	86	0.04	4	
Be	9	1	No Gas	0.156	0.156	8.54	599	0.03	1000	
Pb	208	1	No Gas	11.248	11.248	1.73	321079	0.00	1000	
Se	82	1	No Gas	0.345	0.345	24.77	-14	-2.38	1000	
Mo	98	1	No Gas	0.601	0.601	13.78	7581	0.01	2000	
Ba	137	1	No Gas	41.794	41.794	2.98	192578	0.02	1000	
Tl	205	1	No Gas	0.054	0.054	9.44	1152	0.00	1000	
U	238	1	No Gas	1.167	1.167	1.65	30906	0.00	1000	
Na	23	2	he	29.162	29.162	3.87	179264	0.02	100000	
Mg	24	2	he	455.529	455.529	0.36	772993	0.06	100000	
K	39	2	he	428.112	428.112	2.59	1379747	0.03	100000	
Se	82	3	HeHe	1.942	1.942	36.35	100	1.93	1000	
Fe	57	3	HeHe	7032.489	7032.489	2.01	586836	1.20	100000	
Cd	114	1	No Gas	0.057	0.057	20.69	513	0.01	1000	
Ca	44	1	No Gas	2121.976	2121.976	0.47	2069274	0.10	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6617009	0.57	5896472	112.22	70	120	
Sc	45	2	he	1426519	1.10	1271268	112.21	70	120	
Ge	72	1	No Gas	684030	0.71	682805	100.18	70	120	

In	115	1	No Gas	3570023	1.43	3697856	96.54	70	120	
Tb	159	1	No Gas	4144457	0.92	4404848	94.09	70	120	
Bi	209	1	No Gas	2128889	1.54	1997135	106.60	70	120	
Sc	45	3	HeHe	141748	2.12	132951	106.62	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	165_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:18:17-04:00
Sample Type	CCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag	
V	51	1	No Gas	98.489	0.140	3400006	0.94	100	98.5	90	110		
Cr	52	1	No Gas	96.175	0.167	2998918	1.01	100	96.2	90	110		
Mn	55	1	No Gas	100.668	1.097	3843681	1.29	100	100.7	90	110		
Co	59	1	No Gas	97.132	0.504	3330633	0.93	100	97.1	90	110		
Ni	60	1	No Gas	92.955	0.314	740535	1.30	100	93.0	90	110		
Cu	63	1	No Gas	98.647	0.224	1823090	0.82	100	98.6	90	110		
Sr	88	1	No Gas	99.966	0.309	4334946	1.00	100	100.0	90	110		
Ag	107	1	No Gas	101.912	1.746	1850453	1.11	100	101.9	90	110		
Al	27	1	No Gas	100.062	0.924	2053992	0.53	100	100.1	90	110		
Sn	118	1	No Gas	98.930	2.335	1047495	1.26	100	98.9	90	110		
Tl	47	1	No Gas	89.009	0.502	253095	0.85	100	89.0	90	110	CCV Main CR1 Failed	N/A
Zn	66	1	No Gas	94.868	1.065	445545	1.49	100	94.9	90	110		
As	75	3	HeHe	93.039	0.636	34446	0.36	100	93.0	90	110		
As	75	1	No Gas	95.074	0.107	497242	1.11	100	95.1	90	110		
Sb	121	1	No Gas	99.069	1.483	1412330	2.44	100	99.1	90	110		
Hg	201	1	No Gas	1.975	1.461	2613	1.09	2	98.8	90	110		
Be	9	1	No Gas	93.819	0.564	335945	1.13	100	93.8	90	110		
Pb	208	1	No Gas	95.168	0.948	2687680	0.94	100	95.2	90	110		
Se	82	1	No Gas	92.910	2.231	23544	2.22	100	92.9	90	110		
Mo	98	1	No Gas	97.809	1.589	1121226	0.94	100	97.8	90	110		
Ba	137	1	No Gas	100.792	0.067	461146	0.78	100	100.8	90	110		
Tl	205	1	No Gas	95.607	0.981	1981394	1.76	100	95.6	90	110		
U	238	1	No Gas	104.864	0.793	2746645	0.86	100	104.9	90	110		
Na	23	2	he	1071.062	2.518	3181228	0.38	1000	107.1	90	110		
Mg	24	2	he	1049.269	3.223	1757546	0.77	1000	104.9	90	110		
K	39	2	he	1040.111	3.272	2992794	0.95	1000	104.0	90	110		
Se	82	3	HeHe	85.286	5.882	1560	5.85	100	85.3	90	110	CCV Main CR1 Failed	N/A
Fe	57	3	HeHe	1035.889	1.230	86631	1.65	1000	103.6	90	110		
Cd	114	1	No Gas	94.930	1.125	789144	0.83	100	94.9	90	110		
Ca	44	1	No Gas	971.159	0.427	998269	0.81	1000	97.1	90	110		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6461890	1.01	5896472	109.59	70	120	
Sc	45	2	he	1409033	2.49	1271268	110.84	70	120	
Ge	72	1	No Gas	707707	1.51	682805	103.65	70	120	
In	115	1	No Gas	3644465	1.14	3697856	98.56	70	120	
Tb	159	1	No Gas	4115630	0.81	4404848	93.43	70	120	
Bi	209	1	No Gas	2107744	0.88	1997135	105.54	70	120	
Sc	45	3	HeHe	141759	0.98	132951	106.63	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	166_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:21:43-04:00
Sample Type	CCB
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.074	77.7	3833	52.2	9	
Cr	52	1	No Gas	0.086	10.2	14407	2.4	4	
Mn	55	1	No Gas	0.259	15.5	44529	3.5	25	
Co	59	1	No Gas	0.011	4.6	663	2.6	1	
Ni	60	1	No Gas	-2.371	-1.4	2337	11.5	25	
Cu	63	1	No Gas	0.181	4.1	3972	2.5	25	
Sr	88	1	No Gas	0.022	8.2	1041	6.4	25	
Ag	107	1	No Gas	0.018	8.6	359	6.4	9	
Al	27	1	No Gas	0.904	7.5	27845	5.8	1000000	
Sn	118	1	No Gas	1.247	23.1	13080	21.2	25	
Ti	47	1	No Gas	0.404	16.7	1467	13.6	10000	
Zn	66	1	No Gas	0.461	8.7	3010	5.5	25	
As	75	3	HeHe	0.488	13.9	186	13.4	9	
As	75	1	No Gas	0.846	10.4	29600	1.7	9	
Sb	121	1	No Gas	0.331	26.4	4723	24.0	4	
Hg	201	1	No Gas	0.013	41.9	52	13.9	0.04	
Be	9	1	No Gas	0.013	7.6	73	5.7	1	
Pb	208	1	No Gas	0.110	4.6	3426	4.5	4	
Se	82	1	No Gas	1.087	60.1	173	94.3	25	
Mo	98	1	No Gas	0.849	35.3	10322	31.0	10000	
Ba	137	1	No Gas	0.066	27.9	350	25.4	25	
Tl	205	1	No Gas	0.040	31.2	856	30.6	1	
U	238	1	No Gas	0.196	14.5	5175	14.4	25	
Na	23	2	he	12.182	4.6	126875	1.2	2500000	
Mg	24	2	he	0.446	21.7	907	18.4	2500000	
K	39	2	he	6.418	14.6	236558	1.6	5000000	
Se	82	3	HeHe	-0.382	-105.4	59	11.8	25	
Fe	57	3	HeHe	14.246	11.4	1356	9.9	2500000	
Cd	114	1	No Gas	0.056	21.8	500	18.3	1	
Ca	44	1	No Gas	-21.116	-15.6	116238	2.8	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6436307	0.95	5896472	109.16	70	120	
Sc	45	2	he	1395461	0.62	1271268	109.77	70	120	
Ge	72	1	No Gas	694393	0.42	682805	101.70	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3568275	1.64	3697856	96.50	70	120	
Tb	159	1	No Gas	4102601	1.36	4404848	93.14	70	120	
Bi	209	1	No Gas	2107698	0.56	1997135	105.54	70	120	
Sc	45	3	HeHe	139797	0.13	132951	105.15	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	167LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:25:13-04:00
Sample Type	LLCCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	2.142	4.689	74077	4.11	2	107.1	70	130		
Cr	52	1	No Gas	2.164	1.093	77811	1.27	2	108.2	70	130		
Mn	55	1	No Gas	5.198	0.818	228119	1.11	5	104.0	70	130		
Co	59	1	No Gas	4.869	2.047	164743	3.30	5	97.4	70	130		
Ni	60	1	No Gas	2.422	3.464	38877	2.71	5	48.4	70	130	LLCCV Main CR1 Failed	N/A
Cu	63	1	No Gas	5.053	0.529	92596	0.78	5	101.1	70	130		
Sr	88	1	No Gas	4.506	1.255	192579	0.39	5	90.1	70	130		
Ag	107	1	No Gas	2.010	1.520	36032	2.86	2	100.5	70	130		
Al	27	1	No Gas	83.034	0.173	1680732	1.31	80	103.8	70	130		
Sn	118	1	No Gas	2.474	3.210	26025	4.54	2	123.7	70	130		
Ti	47	1	No Gas	4.846	1.802	13875	2.46	5	96.9	70	130		
Zn	66	1	No Gas	5.595	1.551	26685	2.25	5	111.9	70	130		
As	75	3	HeHe	3.038	5.363	1121	4.73	3	101.3	70	130		
As	75	1	No Gas	3.568	13.339	42567	4.89	3	118.9	70	130		
Sb	121	1	No Gas	2.147	3.608	30306	4.90	2	107.3	70	130		
Hg	201	1	No Gas	0.187	24.652	277	22.40	0.2	93.5	70	130		
Be	9	1	No Gas	0.967	2.405	3436	3.67	1	96.7	70	130		
Pb	208	1	No Gas	2.071	3.270	58092	2.24	2	103.6	70	130		
Se	82	1	No Gas	5.483	24.682	1272	25.85	5	109.7	70	130		
Mo	98	1	No Gas	2.336	3.080	27240	4.34	2	116.8	70	130		
Ba	137	1	No Gas	5.139	3.258	23361	1.77	5	102.8	70	130		
Tl	205	1	No Gas	0.995	0.442	20403	1.51	1	99.5	70	130		
U	238	1	No Gas	4.742	0.360	122790	1.10	5	94.8	70	130		
Na	23	2	he	116.192	1.611	431158	0.13	100	116.2	70	130		
Mg	24	2	he	102.316	2.740	172823	1.86	100	102.3	70	130		
K	39	2	he	111.533	3.369	522743	2.03	100	111.5	70	130		
Se	82	3	HeHe	3.263	15.526	122	5.06	5	65.3	70	130	LLCCV Main CR1 Failed	N/A
Fe	57	3	HeHe	61.760	5.705	5284	3.58	50	123.5	70	130		
Cd	114	1	No Gas	1.059	6.166	8723	4.93	1	105.9	70	130		
Ca	44	1	No Gas	87.052	4.470	209601	0.49	100	87.1	70	130		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6365601	1.29	5896472	107.96	70	120	
Sc	45	2	he	1419149	1.34	1271268	111.63	70	120	
Ge	72	1	No Gas	683996	0.55	682805	100.17	70	120	
In	115	1	No Gas	3593672	1.35	3697856	97.18	70	120	
Tb	159	1	No Gas	4083429	2.90	4404848	92.70	70	120	
Bi	209	1	No Gas	2083233	1.08	1997135	104.31	70	120	
Sc	45	3	HeHe	140405	2.59	132951	105.61	70	120	

Sample Report

Sample Table

Sample Name	9981198011
Data File Name	168SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:28:44-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4503

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	21.151	21.151	1.69	733197	0.00	1000	
Cr	52	1	No Gas	15.393	15.393	0.99	491212	0.00	1000	
Mn	55	1	No Gas	36.049	36.049	0.94	1402512	0.00	1000	
Co	59	1	No Gas	1.097	1.097	2.08	37990	0.00	1000	
Ni	60	1	No Gas	0.889	0.889	8.76	27659	0.00	1000	
Cu	63	1	No Gas	2.428	2.428	1.24	45629	0.01	1000	
Sr	88	1	No Gas	19.663	19.663	1.60	855096	0.00	1000	
Ag	107	1	No Gas	0.022	0.022	7.56	415	0.01	1000	
Al	27	1	No Gas	15586.498	15586.498	0.69	319358921	0.00	100000	
Sn	118	1	No Gas	1.285	1.285	13.09	13354	0.01	100	
Ti	47	1	No Gas	118.036	118.036	1.65	336447	0.04	2000	
Zn	66	1	No Gas	39.044	39.044	2.40	184390	0.02	1000	
As	75	3	HeHe	2.530	2.530	6.82	927	0.27	1000	
As	75	1	No Gas	2.478	2.478	12.56	37924	0.01	1000	
Sb	121	1	No Gas	0.289	0.289	18.29	4112	0.01	100	
Hg	201	1	No Gas	0.048	0.048	23.48	96	0.05	4	
Be	9	1	No Gas	0.174	0.174	7.31	649	0.03	1000	
Pb	208	1	No Gas	9.300	9.300	3.19	258800	0.00	1000	
Se	82	1	No Gas	0.994	0.994	45.17	152	0.65	1000	
Mo	98	1	No Gas	0.833	0.833	17.29	10059	0.01	2000	
Ba	137	1	No Gas	30.492	30.492	1.15	136174	0.02	1000	
Tl	205	1	No Gas	0.064	0.064	17.71	1330	0.00	1000	
U	238	1	No Gas	1.416	1.416	4.20	36530	0.00	1000	
Na	23	2	he	31.130	31.130	8.69	182324	0.02	100000	
Mg	24	2	he	661.778	661.778	4.40	1106080	0.06	100000	
K	39	2	he	639.210	639.210	1.54	1920753	0.03	100000	
Se	82	3	HeHe	1.938	1.938	46.37	99	1.97	1000	
Fe	57	3	HeHe	9926.462	9926.462	1.66	813858	1.22	100000	
Cd	114	1	No Gas	0.119	0.119	22.75	1010	0.01	1000	
Ca	44	1	No Gas	799.722	799.722	0.83	848269	0.09	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6479151	0.91	5896472	109.88	70	120	
Sc	45	2	he	1405611	1.15	1271268	110.57	70	120	
Ge	72	1	No Gas	672721	0.65	682805	98.52	70	120	

In	115	1	No Gas	3530007	0.64	3697856	95.46	70	120	
Tb	159	1	No Gas	4016328	0.51	4404848	91.18	70	120	
Bi	209	1	No Gas	2075211	1.14	1997135	103.91	70	120	
Sc	45	3	HeHe	139250	0.44	132951	104.74	70	120	

Sample Report

Sample Table

Sample Name	9981198011L
Data File Name	169SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:32:14-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF25
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4504

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	4.095	4.095	3.98	144402	0.00	1000	
Cr	52	1	No Gas	3.052	3.052	1.67	107942	0.00	1000	
Mn	55	1	No Gas	6.872	6.872	2.80	298697	0.00	1000	
Co	59	1	No Gas	0.201	0.201	3.62	7254	0.00	1000	
Ni	60	1	No Gas	-1.768	-1.768	-2.31	7102	-0.02	1000	
Cu	63	1	No Gas	0.501	0.501	3.18	10024	0.00	1000	
Sr	88	1	No Gas	3.727	3.727	2.65	163764	0.00	1000	
Ag	107	1	No Gas	0.009	0.009	38.33	204	0.00	1000	
Al	27	1	No Gas	2996.226	2996.226	3.48	62003160	0.00	100000	
Sn	118	1	No Gas	0.403	0.403	20.68	4449	0.01	100	
Ti	47	1	No Gas	22.847	22.847	4.31	66028	0.03	2000	
Zn	66	1	No Gas	7.649	7.649	4.06	37176	0.02	1000	
As	75	3	HeHe	0.567	0.567	7.76	215	0.26	1000	
As	75	1	No Gas	0.924	0.924	39.46	30472	0.00	1000	
Sb	121	1	No Gas	0.113	0.113	23.22	1737	0.01	100	
Hg	201	1	No Gas	0.013	0.013	39.74	53	0.03	4	
Be	9	1	No Gas	0.037	0.037	11.00	161	0.02	1000	
Pb	208	1	No Gas	1.829	1.829	4.44	52311	0.00	1000	
Se	82	1	No Gas	0.423	0.423	67.22	7	6.26	1000	
Mo	98	1	No Gas	0.213	0.213	25.77	3280	0.01	2000	
Ba	137	1	No Gas	5.740	5.740	3.16	26269	0.02	1000	
Tl	205	1	No Gas	0.017	0.017	28.89	378	0.00	1000	
U	238	1	No Gas	0.263	0.263	6.96	6983	0.00	1000	
Na	23	2	he	12.352	12.352	9.38	126272	0.01	100000	
Mg	24	2	he	127.249	127.249	2.11	209506	0.06	100000	
K	39	2	he	122.974	122.974	0.51	539536	0.02	100000	
Se	82	3	HeHe	-1.129	-1.129	-50.36	46	-2.46	1000	
Fe	57	3	HeHe	1915.633	1915.633	2.78	158025	1.21	100000	
Cd	114	1	No Gas	0.041	0.041	28.92	390	0.01	1000	
Ca	44	1	No Gas	131.884	131.884	6.80	255817	0.05	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6545817	1.81	5896472	111.01	70	120	
Sc	45	2	he	1383368	0.71	1271268	108.82	70	120	
Ge	72	1	No Gas	682866	0.42	682805	100.01	70	120	

In	115	1	No Gas	3639132	0.63	3697856	98.41	70	120	
Tb	159	1	No Gas	4110062	1.04	4404848	93.31	70	120	
Bi	209	1	No Gas	2122736	1.05	1997135	106.29	70	120	
Sc	45	3	HeHe	140023	2.08	132951	105.32	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	170_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:35:44-04:00
Sample Type	CCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	97.951	1.155	3486349	0.51	100	98.0	90	110	
Cr	52	1	No Gas	95.873	1.509	3082667	2.24	100	95.9	90	110	
Mn	55	1	No Gas	100.453	1.055	3954785	1.23	100	100.5	90	110	
Co	59	1	No Gas	97.154	0.416	3435058	1.27	100	97.2	90	110	
Ni	60	1	No Gas	92.702	0.421	761514	0.89	100	92.7	90	110	
Cu	63	1	No Gas	96.244	0.279	1834031	1.06	100	96.2	90	110	
Sr	88	1	No Gas	99.913	0.871	4467544	1.71	100	99.9	90	110	
Ag	107	1	No Gas	101.835	1.635	1896100	0.61	100	101.8	90	110	
Al	27	1	No Gas	100.524	0.429	2127654	0.72	100	100.5	90	110	
Sn	118	1	No Gas	97.991	1.256	1064085	1.05	100	98.0	90	110	
Tl	47	1	No Gas	87.895	0.605	257712	1.37	100	87.9	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	94.285	0.770	456597	1.61	100	94.3	90	110	
As	75	3	HeHe	93.285	1.385	36012	1.89	100	93.3	90	110	
As	75	1	No Gas	93.800	0.758	506191	1.48	100	93.8	90	110	
Sb	121	1	No Gas	101.211	0.553	1479481	1.26	100	101.2	90	110	
Hg	201	1	No Gas	1.917	4.800	2569	3.06	2	95.8	90	110	
Be	9	1	No Gas	93.570	0.591	345477	1.34	100	93.6	90	110	
Pb	208	1	No Gas	96.007	0.333	2747629	1.76	100	96.0	90	110	
Se	82	1	No Gas	92.626	1.274	24203	2.01	100	92.6	90	110	
Mo	98	1	No Gas	96.782	1.747	1137659	0.37	100	96.8	90	110	
Ba	137	1	No Gas	99.897	0.471	471266	1.37	100	99.9	90	110	
Tl	205	1	No Gas	97.010	2.227	2036830	1.46	100	97.0	90	110	
U	238	1	No Gas	104.398	0.978	2770723	0.86	100	104.4	90	110	
Na	23	2	he	1030.576	2.352	3240430	1.15	1000	103.1	90	110	
Mg	24	2	he	1022.357	3.342	1811231	3.31	1000	102.2	90	110	
K	39	2	he	1025.564	2.452	3123985	1.52	1000	102.6	90	110	
Se	82	3	HeHe	90.465	2.321	1721	1.39	100	90.5	90	110	
Fe	57	3	HeHe	1026.911	0.457	89542	1.02	1000	102.7	90	110	
Cd	114	1	No Gas	94.669	1.367	807010	1.13	100	94.7	90	110	
Ca	44	1	No Gas	962.506	0.669	1021422	1.43	1000	96.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6662739	0.86	5896472	113.00	70	120	
Sc	45	2	he	1489897	2.73	1271268	117.20	70	120	
Ge	72	1	No Gas	717825	2.32	682805	105.13	70	120	
In	115	1	No Gas	3737385	1.51	3697856	101.07	70	120	
Tb	159	1	No Gas	4243515	0.91	4404848	96.34	70	120	
Bi	209	1	No Gas	2135894	1.77	1997135	106.95	70	120	
Sc	45	3	HeHe	147802	1.03	132951	111.17	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	171_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:39:09-04:00
Sample Type	CCB
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.105	33.9	4941	25.0	9	
Cr	52	1	No Gas	0.102	20.2	15070	2.9	4	
Mn	55	1	No Gas	0.290	22.1	46265	4.0	25	
Co	59	1	No Gas	0.015	39.9	793	24.7	1	
Ni	60	1	No Gas	-2.413	-0.7	2040	5.2	25	
Cu	63	1	No Gas	0.186	1.2	4117	2.2	25	
Sr	88	1	No Gas	0.018	21.8	885	17.8	25	
Ag	107	1	No Gas	0.020	41.4	411	35.8	9	
Al	27	1	No Gas	0.872	1.5	27522	1.8	1000000	
Sn	118	1	No Gas	1.320	21.0	14752	22.6	25	
Ti	47	1	No Gas	0.414	25.7	1513	21.0	10000	
Zn	66	1	No Gas	0.504	18.7	3247	12.3	25	
As	75	3	HeHe	0.476	0.4	186	2.8	9	
As	75	1	No Gas	0.787	13.2	29679	2.8	9	
Sb	121	1	No Gas	0.308	23.6	4708	25.4	4	
Hg	201	1	No Gas	0.021	32.5	66	13.9	0.04	
Be	9	1	No Gas	0.017	35.5	89	26.1	1	
Pb	208	1	No Gas	0.081	7.2	2734	5.7	4	
Se	82	1	No Gas	0.848	107.1	115	203.8	25	
Mo	98	1	No Gas	0.913	28.9	11788	28.9	10000	
Ba	137	1	No Gas	0.079	27.4	427	25.8	25	
Tl	205	1	No Gas	0.038	18.7	856	18.9	1	
U	238	1	No Gas	0.190	24.0	5312	24.5	25	
Na	23	2	he	9.537	3.1	122702	2.0	2500000	
Mg	24	2	he	0.423	23.0	893	17.8	2500000	
K	39	2	he	6.863	16.9	244434	1.5	5000000	
Se	82	3	HeHe	-0.765	-18.7	54	2.4	25	
Fe	57	3	HeHe	14.803	0.6	1441	2.9	2500000	
Cd	114	1	No Gas	0.051	43.0	490	41.3	1	
Ca	44	1	No Gas	-17.972	-8.4	120500	0.6	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6517073	1.38	5896472	110.52	70	120	
Sc	45	2	he	1434900	1.33	1271268	112.87	70	120	
Ge	72	1	No Gas	728329	0.40	682805	106.67	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3785985	2.64	3697856	102.38	70	120	
Tb	159	1	No Gas	4317763	1.61	4404848	98.02	70	120	
Bi	209	1	No Gas	2233380	0.92	1997135	111.83	70	120	
Sc	45	3	HeHe	143721	2.40	132951	108.10	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	172LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:42:40-04:00
Sample Type	LLCCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.058	3.338	73217	3.15	2	102.9	70	130	
Cr	52	1	No Gas	2.147	1.622	79467	1.00	2	107.4	70	130	
Mn	55	1	No Gas	5.315	0.676	238951	0.25	5	106.3	70	130	
Co	59	1	No Gas	4.863	2.923	169098	2.73	5	97.3	70	130	
Ni	60	1	No Gas	2.329	1.489	39225	1.07	5	46.6	70	130	LLCCV Main CR1 Failed
Cu	63	1	No Gas	4.977	1.294	93750	1.13	5	99.5	70	130	
Sr	88	1	No Gas	4.586	2.243	201466	1.90	5	91.7	70	130	
Ag	107	1	No Gas	2.003	1.318	36366	1.78	2	100.2	70	130	
Al	27	1	No Gas	82.404	0.580	1714486	0.21	80	103.0	70	130	
Sn	118	1	No Gas	2.549	7.457	27145	8.00	2	127.4	70	130	
Tl	47	1	No Gas	4.726	3.164	13917	2.78	5	94.5	70	130	
Zn	66	1	No Gas	5.509	2.952	27017	2.55	5	110.2	70	130	
As	75	3	HeHe	3.125	1.340	1160	0.52	3	104.2	70	130	
As	75	1	No Gas	3.409	4.623	42965	1.88	3	113.6	70	130	
Sb	121	1	No Gas	2.202	4.642	31475	5.06	2	110.1	70	130	
Hg	201	1	No Gas	0.215	2.494	313	2.88	0.2	107.6	70	130	
Be	9	1	No Gas	0.955	1.235	3488	0.86	1	95.5	70	130	
Pb	208	1	No Gas	2.056	1.823	57677	0.39	2	102.8	70	130	
Se	82	1	No Gas	5.592	18.835	1338	20.30	5	111.8	70	130	
Mo	98	1	No Gas	2.415	2.116	28481	2.66	2	120.8	70	130	
Ba	137	1	No Gas	5.207	2.765	23945	2.80	5	104.1	70	130	
Tl	205	1	No Gas	0.989	4.596	20269	2.76	1	98.9	70	130	
U	238	1	No Gas	4.744	4.496	122804	2.88	5	94.9	70	130	
Na	23	2	he	114.936	2.401	428593	1.21	100	114.9	70	130	
Mg	24	2	he	101.831	0.568	172465	0.22	100	101.8	70	130	
K	39	2	he	113.647	2.373	529733	0.61	100	113.6	70	130	
Se	82	3	HeHe	4.891	16.873	151	9.85	5	97.8	70	130	
Fe	57	3	HeHe	57.291	6.256	4945	5.35	50	114.6	70	130	
Cd	114	1	No Gas	1.079	4.902	9006	4.33	1	107.9	70	130	
Ca	44	1	No Gas	84.364	7.153	213045	2.46	100	84.4	70	130	

PIR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6542879	0.38	5896472	110.96	70	120	
Sc	45	2	he	1422717	0.78	1271268	111.91	70	120	
Ge	72	1	No Gas	700131	1.31	682805	102.54	70	120	
In	115	1	No Gas	3639207	0.61	3697856	98.41	70	120	
Tb	159	1	No Gas	4129130	0.98	4404848	93.74	70	120	
Bi	209	1	No Gas	2083587	2.08	1997135	104.33	70	120	
Sc	45	3	HeHe	141190	0.86	132951	106.20	70	120	

Sample Report

Sample Table

Sample Name	30 PPM LDR
Data File Name	174SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081312C.b
Acq Date Time	2012-08-13T22:56:07-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4511

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag	
V	51	1	No Gas	0.085	0.085	130.10	4416	0.00	1000		
Cr	52	1	No Gas	0.345	0.345	3.99	23583	0.00	1000		
Mn	55	1	No Gas	-0.011	-0.011	-180.30	36151	0.00	1000		
Co	59	1	No Gas	0.007	0.007	31.29	544	0.00	1000		
Ni	60	1	No Gas	-2.495	-2.495	-0.50	1453	-0.17	1000		
Cu	63	1	No Gas	0.095	0.095	5.43	2522	0.00	1000		
Sr	88	1	No Gas	0.015	0.015	7.25	785	0.00	1000		
Ag	107	1	No Gas	0.016	0.016	33.56	326	0.00	1000		
Al	27	1	No Gas	28283.977	28283.977	0.58	605851843	0.00	100000		94%
Sn	118	1	No Gas	0.341	0.341	33.79	3897	0.01	100		
Ti	47	1	No Gas	0.122	0.122	20.40	704	0.02	2000		
Zn	66	1	No Gas	0.616	0.616	5.73	3929	0.02	1000		
As	75	3	HeHe	0.062	0.062	61.23	32	0.19	1000		
As	75	1	No Gas	0.909	0.909	7.94	31477	0.00	1000		
Sb	121	1	No Gas	0.063	0.063	29.36	1048	0.01	100		
Hg	201	1	No Gas	0.006	0.006	160.42	44	0.01	4		
Be	9	1	No Gas	0.001	0.001	276.27	31	0.00	1000		
Pb	208	1	No Gas	0.043	0.043	29.41	1559	0.00	1000		
Se	82	1	No Gas	0.678	0.678	44.52	75	0.91	1000		
Mo	98	1	No Gas	0.148	0.148	46.68	2603	0.01	2000		
Ba	137	1	No Gas	0.232	0.232	11.22	1137	0.02	1000		
Tl	205	1	No Gas	0.002	0.002	78.44	70	0.00	1000		
U	238	1	No Gas	0.014	0.014	27.61	426	0.00	1000		
Na	23	2	he	9.297	9.297	7.91	123653	0.01	100000		
Mg	24	2	he	0.448	0.448	16.61	948	0.05	100000		
K	39	2	he	2.656	2.656	37.26	236210	0.00	100000		
Se	82	3	HeHe	-0.050	-0.050	-980.66	69	-0.07	1000		
Fe	57	3	HeHe	43.578	43.578	3.90	3997	1.09	100000		
Cd	114	1	No Gas	0.015	0.015	45.70	173	0.01	1000		
Ca	44	1	No Gas	-38.180	-38.180	-6.41	106426	-0.04	100000		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6773953	1.32	5896472	114.88	70	120	
Sc	45	2	he	1454676	1.33	1271268	114.43	70	120	
Ge	72	1	No Gas	707192	1.08	682805	103.57	70	120	

In	115	1	No Gas	3736186	1.13	3697856	101.04	70	120	
Tb	159	1	No Gas	4221245	1.56	4404848	95.83	70	120	
Bi	209	1	No Gas	2152041	0.92	1997135	107.76	70	120	
Sc	45	3	HeHe	148272	1.34	132951	111.52	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	176_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081312C.b
Acq Date Time	2012-08-13T23:11:53-04:00
Sample Type	CCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	98.980	2.302	3555900	1.02	100	99.0	90	110	
Cr	52	1	No Gas	96.886	0.774	3144266	0.60	100	96.9	90	110	
Mn	55	1	No Gas	100.547	1.620	3995914	1.79	100	100.5	90	110	
Co	59	1	No Gas	95.565	1.648	3410828	2.04	100	95.6	90	110	
Ni	60	1	No Gas	91.888	2.193	762049	1.02	100	91.9	90	110	
Cu	63	1	No Gas	96.307	2.189	1852437	1.86	100	96.3	90	110	
Sr	88	1	No Gas	97.963	2.006	4421129	1.37	100	98.0	90	110	
Ag	107	1	No Gas	100.244	1.943	1864812	2.65	100	100.2	90	110	
Al	27	1	No Gas	99.326	0.814	2122333	1.24	100	99.3	90	110	
Sn	118	1	No Gas	96.711	1.178	1049045	0.69	100	96.7	90	110	
Tl	47	1	No Gas	88.195	1.484	261010	0.81	100	88.2	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	93.657	1.646	457783	0.49	100	93.7	90	110	
As	75	3	HeHe	92.592	1.736	35134	0.75	100	92.6	90	110	
As	75	1	No Gas	92.152	0.982	502427	0.60	100	92.2	90	110	
Sb	121	1	No Gas	99.121	1.267	1447259	0.87	100	99.1	90	110	
Hg	201	1	No Gas	1.869	4.928	2512	4.60	2	93.4	90	110	
Be	9	1	No Gas	92.851	1.855	346023	1.14	100	92.9	90	110	
Pb	208	1	No Gas	93.178	0.223	2671481	0.65	100	93.2	90	110	
Se	82	1	No Gas	90.630	2.985	23897	1.72	100	90.6	90	110	
Mo	98	1	No Gas	96.013	1.161	1127482	0.49	100	96.0	90	110	
Ba	137	1	No Gas	100.003	1.969	464237	2.00	100	100.0	90	110	
Tl	205	1	No Gas	96.100	0.999	2021863	1.82	100	96.1	90	110	
U	238	1	No Gas	102.287	1.084	2719961	1.58	100	102.3	90	110	
Na	23	2	he	1055.023	2.205	3265449	2.25	1000	105.5	90	110	
Mg	24	2	he	1031.410	1.861	1799536	0.46	1000	103.1	90	110	
K	39	2	he	1029.143	0.957	3087070	0.77	1000	102.9	90	110	
Se	82	3	HeHe	90.773	2.133	1697	2.46	100	90.8	90	110	
Fe	57	3	HeHe	1016.582	1.989	87152	2.86	1000	101.7	90	110	
Cd	114	1	No Gas	92.902	0.379	791116	0.41	100	92.9	90	110	
Ca	44	1	No Gas	938.083	1.138	1008411	0.43	1000	93.8	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6725963	1.33	5896472	114.07	70	120	
Sc	45	2	he	1467190	1.66	1271268	115.41	70	120	
Ge	72	1	No Gas	717091	0.51	682805	105.02	70	120	
In	115	1	No Gas	3733156	0.78	3697856	100.95	70	120	
Tb	159	1	No Gas	4176703	2.43	4404848	94.82	70	120	
Bi	209	1	No Gas	2139762	0.87	1997135	107.14	70	120	
Sc	45	3	HeHe	145315	2.03	132951	109.30	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	177_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081312C.b
Acq Date Time	2012-08-13T23:15:17-04:00
Sample Type	CCB
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.125	50.6	5645	36.9	9	
Cr	52	1	No Gas	0.172	16.4	17369	3.6	4	
Mn	55	1	No Gas	-0.010	-325.3	35042	1.4	25	
Co	59	1	No Gas	0.016	2.3	837	1.5	1	
Ni	60	1	No Gas	-2.451	-0.7	1754	7.3	25	
Cu	63	1	No Gas	0.199	3.8	4392	0.6	25	
Sr	88	1	No Gas	0.021	21.2	1030	19.1	25	
Ag	107	1	No Gas	0.025	6.2	500	3.8	9	
Al	27	1	No Gas	0.932	4.7	28935	3.1	1000000	
Sn	118	1	No Gas	1.401	23.8	15441	24.6	25	
Tl	47	1	No Gas	0.386	28.2	1447	24.3	10000	
Zn	66	1	No Gas	0.579	4.7	3630	3.6	25	
As	75	3	HeHe	0.442	28.3	176	23.0	9	
As	75	1	No Gas	0.912	26.7	30513	5.9	9	
Sb	121	1	No Gas	0.302	29.9	4549	29.6	4	
Hg	201	1	No Gas	0.019	95.2	61	40.8	0.04	
Be	9	1	No Gas	0.018	21.0	91	13.4	1	
Pb	208	1	No Gas	0.049	21.4	1708	18.7	4	
Se	82	1	No Gas	1.553	26.4	298	36.7	25	
Mo	98	1	No Gas	0.926	29.4	11773	27.8	10000	
Ba	137	1	No Gas	0.101	0.5	523	1.1	25	
Tl	205	1	No Gas	0.046	23.3	982	21.5	1	
U	238	1	No Gas	0.224	29.5	5946	28.5	25	
Na	23	2	he	9.768	5.4	124179	1.8	2500000	
Mg	24	2	he	0.548	12.9	1115	12.0	2500000	
K	39	2	he	5.797	7.9	243129	1.3	5000000	
Se	82	3	HeHe	-1.125	-20.0	49	10.8	25	
Fe	57	3	HeHe	12.057	11.3	1237	10.2	2500000	
Cd	114	1	No Gas	0.069	17.2	640	16.9	1	
Ca	44	1	No Gas	-31.978	-10.4	108621	1.3	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6559872	2.79	5896472	111.25	70	120	
Sc	45	2	he	1444279	1.07	1271268	113.61	70	120	
Ge	72	1	No Gas	708080	2.44	682805	103.70	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3736818	2.10	3697856	101.05	70	120	
Tb	159	1	No Gas	4232484	0.68	4404848	96.09	70	120	
Bi	209	1	No Gas	2122934	1.34	1997135	106.30	70	120	
Sc	45	3	HeHe	147150	4.06	132951	110.68	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	178LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081312C.b
Acq Date Time	2012-08-13T23:18:46-04:00
Sample Type	LLCCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.107	1.389	75854	1.83	2	105.4	70	130	
Cr	52	1	No Gas	2.232	4.820	83121	4.58	2	111.6	70	130	
Mn	55	1	No Gas	5.175	1.564	236460	2.44	5	103.5	70	130	
Co	59	1	No Gas	4.889	0.495	172046	0.82	5	97.8	70	130	
Ni	60	1	No Gas	2.476	0.619	40865	1.33	5	49.5	70	130	LLCCV Main CR1 Failed
Cu	63	1	No Gas	4.932	0.618	94041	1.24	5	98.6	70	130	
Sr	88	1	No Gas	4.526	0.339	201253	1.53	5	90.5	70	130	
Ag	107	1	No Gas	2.020	1.031	37064	0.25	2	101.0	70	130	
Al	27	1	No Gas	82.789	0.920	1743261	0.99	80	103.5	70	130	
Sn	118	1	No Gas	2.541	5.892	27360	7.15	2	127.0	70	130	
Tl	47	1	No Gas	4.675	3.379	13940	4.24	5	93.5	70	130	
Zn	66	1	No Gas	5.408	1.373	26863	2.62	5	108.2	70	130	
As	75	3	HeHe	3.140	3.029	1224	3.85	3	104.7	70	130	
As	75	1	No Gas	3.879	7.104	45864	1.82	3	129.3	70	130	
Sb	121	1	No Gas	2.110	2.905	30499	4.16	2	105.5	70	130	
Hg	201	1	No Gas	0.186	22.296	274	19.36	0.2	93.2	70	130	
Be	9	1	No Gas	0.970	0.766	3585	1.03	1	97.0	70	130	
Pb	208	1	No Gas	1.970	3.501	55004	3.02	2	98.5	70	130	
Se	82	1	No Gas	5.787	5.600	1405	5.39	5	115.7	70	130	
Mo	98	1	No Gas	2.300	1.599	27459	2.76	2	115.0	70	130	
Ba	137	1	No Gas	5.147	3.107	23731	3.63	5	102.9	70	130	
Tl	205	1	No Gas	0.977	3.156	19928	2.12	1	97.7	70	130	
U	238	1	No Gas	4.762	1.645	122725	1.90	5	95.2	70	130	
Na	23	2	he	116.631	2.401	445813	0.29	100	116.6	70	130	
Mg	24	2	he	102.185	1.556	177968	0.92	100	102.2	70	130	
K	39	2	he	117.418	1.999	555210	0.45	100	117.4	70	130	
Se	82	3	HeHe	4.154	9.202	146	3.97	5	83.1	70	130	
Fe	57	3	HeHe	55.573	11.818	5049	11.99	50	111.1	70	130	
Cd	114	1	No Gas	1.009	0.558	8516	1.37	1	100.9	70	130	
Ca	44	1	No Gas	70.394	5.118	202913	2.11	100	70.4	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6622192	1.31	5896472	112.31	70	120	
Sc	45	2	he	1463181	1.59	1271268	115.10	70	120	
Ge	72	1	No Gas	714673	1.65	682805	104.67	70	120	
In	115	1	No Gas	3679167	1.27	3697856	99.49	70	120	
Tb	159	1	No Gas	4139629	1.18	4404848	93.98	70	120	
Bi	209	1	No Gas	2073101	1.30	1997135	103.80	70	120	
Sc	45	3	HeHe	148320	1.01	132951	111.56	70	120	

Digestion Logbook

Microwave 3051 Prep (Soil) (Version 1 - 6/1/2010)

Batch: 37422	Queue: MDIG	HBN: 475033	RULE: D3051/6020	ALSI SOP: 09-3051
File Name: 37422_120808-123026			METHOD: SW3051	Microwave ID: MARS

COMMENTS:	Comment Codes:	Reagents:		Pipettes:		Start	Finish
	1. Sample failed initial digestion due to a weight loss >5g	HNO3:	L02030 JT BAKER		Date:	08/08/2012	08/08/2012
	2. Sample reacts with reagent	HCl:	K25031 MALLINCKRODT		Time:	14:44:00	15:08:00
	3. Less sample used due to high metal conten	Boiling Stones:	D1069103		Tech:	KMK	KMK
	4. Less sample used to result in successful microwave digestion				Reviewed/Approved By:		N/A
	5. Sample does not digest by microwave, digest by method 3050				Date:		

Sample ID	Cont ID	Samp Type	Vessel Initial WT, grams	Vessel Final WT, grams	Difference grams	Spike Amt uL of Each	Spike Lot#	Sample Size, grams	Final Vol mL	Parent Sample ID	Comment Code
1020195		MB	107.14	105.83	1.31			0.50	50		
1020196		LCS	108.74	107.49	1.25	40/50/500/500	/MS0360/MS0359/	0.50	50		
9980875014	A	S	106.31	104.64	1.67			0.57	50		
9981198001	A	S	106.85	105.69	1.16			0.54	50		
9981198002	A	S	106.74	105.34	1.40			0.53	50		
9981198003	A	S	107.34	105.20	2.14			0.52	50		
1020197		MS	107.45	106.46	0.99	40/50/500/500	/MS0360/MS0359/	0.50	50	9981198003	
1020198		MSD	107.32	105.24	2.08	40/50/500/500	/MS0360/MS0359/	0.52	50	9981198003	
9981198004	A	S	104.92	103.01	1.91			0.57	50		
9981198005	A	S	106.66	105.69	0.97			0.52	50		
9981198006	A	S	105.16	103.89	1.27			0.51	50		
9981198007	A	S	106.62	105.37	1.25			0.53	50		
9981198008	A	S	107.18	105.98	1.20			0.59	50		
9981198009	A	S	105.64	104.81	0.83			0.55	50		
9981198010	A	S	105.64	104.24	1.40			0.55	50		
9981198011	A	S	105.70	104.44	1.26			0.54	50		

End

Analytical Logbook

Batch Log

#	Acquired Date and Time	Sample Type	Sample Name	File Name	Comment	Vial#	Dilution Result	Operator
1	8/13/2012 12:11	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A081312C.b\001CALB.d		1101	1	Matthew Olley
2	8/13/2012 12:14	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A081312C.b\002CALB.d		1101	1	Matthew Olley
3	8/13/2012 12:18	CalStd	Standard 1	C:\Agilent\ICPMH\1\DATA\A081312C.b\003CALS.d		2101	1	Matthew Olley
4	8/13/2012 12:22	CalStd	Standard 2	C:\Agilent\ICPMH\1\DATA\A081312C.b\004CALS.d		2102	1	Matthew Olley
5	8/13/2012 12:25	CalStd	Standard 3	C:\Agilent\ICPMH\1\DATA\A081312C.b\005CALS.d		2103	1	Matthew Olley
6	8/13/2012 12:29	CalStd	Standard 4	C:\Agilent\ICPMH\1\DATA\A081312C.b\006CALS.d		2104	1	Matthew Olley
7	8/13/2012 12:32	CalStd	Standard 5	C:\Agilent\ICPMH\1\DATA\A081312C.b\007CALS.d		2105	1	Matthew Olley
8	8/13/2012 12:35	ICV	ICV	C:\Agilent\ICPMH\1\DATA\A081312C.b\008_ICV.d		1307	1	Matthew Olley
9	8/13/2012 12:39	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A081312C.b\009_ICB.d		1101	1	Matthew Olley
10	8/13/2012 12:42	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A081312C.b\010_ICB.d		1101	1	Matthew Olley
11	8/13/2012 12:46	LLICV	LLICV	C:\Agilent\ICPMH\1\DATA\A081312C.b\011LICV.d		1305	1	Matthew Olley
12	8/13/2012 12:49	ICSA	ICSA	C:\Agilent\ICPMH\1\DATA\A081312C.b\012ICSA.d		2111	1	Matthew Olley
13	8/13/2012 12:49							Matthew Olley
14	8/13/2012 12:59	ICSB	ICSAB	C:\Agilent\ICPMH\1\DATA\A081312C.b\013ICSB.d		2112	1	Matthew Olley
15	8/13/2012 13:02	Sample	1020719	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\014SMPL.d		3101	1	Matthew Olley
16	8/13/2012 13:06	Sample	1020720	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\015SMPL.d		3102	1	Matthew Olley
17	8/13/2012 13:09	Sample	9981408002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\016SMPL.d		3103	1	Matthew Olley
18	8/13/2012 13:13	Sample	9981430001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\017SMPL.d		3104	1	Matthew Olley
19	8/13/2012 13:16	Sample	1020721	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\018SMPL.d		3105	1	Matthew Olley
20	8/13/2012 13:20	Sample	1020722	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\019SMPL.d		3106	1	Matthew Olley

Batch Log

21	8/13/2012 13:23	Sample	9981430001PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\020SMPL.d	3107	1	Matthew Olley
22	8/13/2012 13:26	Sample	9981517002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\021SMPL.d	3108	1	Matthew Olley
23	8/13/2012 13:30	Sample	9981517003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\022SMPL.d	3109	1	Matthew Olley
24	8/13/2012 13:33	Sample	9981517003L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\023SMPL.d	3110	1	Matthew Olley
25	8/13/2012 13:37						Matthew Olley
26	8/13/2012 13:37	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\024_CCV.d	1307	1	Matthew Olley
27	8/13/2012 13:37						Matthew Olley
28	8/13/2012 13:49	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\025_CCB.d	1101	1	Matthew Olley
29	8/13/2012 13:53	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\026LCCV.d	1305	1	Matthew Olley
30	8/13/2012 13:56	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\027_CCV.d	1307	1	Matthew Olley
31	8/13/2012 14:00	Sample	1021781	C:\Agilent\ICPMH\1\DAT 37995 LAMDF5 A\A081312C.b\028SMPL.d	3111	1	Matthew Olley
32	8/13/2012 14:03						Matthew Olley
33	8/13/2012 14:03	Sample	1021782	C:\Agilent\ICPMH\1\DAT 37995 LAMDF5 A\A081312C.b\029SMPL.d	3112	1	Matthew Olley
34	8/13/2012 14:07						Matthew Olley
35	8/13/2012 14:07	Sample	1020183	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\030SMPL.d	3201	1	Matthew Olley
36	8/13/2012 14:10						Matthew Olley
37	8/13/2012 14:10	Sample	1020184	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\031SMPL.d	3202	1	Matthew Olley
38	8/13/2012 14:10						Matthew Olley
39	8/13/2012 14:14						Matthew Olley
40	8/13/2012 14:30	Sample	1020187	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\032SMPL.d	3203	1	Matthew Olley
41	8/13/2012 14:34						Matthew Olley
42	8/13/2012 14:34	Sample	1020188	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\033SMPL.d	3204	1	Matthew Olley
43	8/13/2012 14:37						Matthew Olley
44	8/13/2012 14:37	Sample	1020191	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\034SMPL.d	3205	1	Matthew Olley

Batch Log

45	8/13/2012 14:41						Matthew Olley
46	8/13/2012 14:41	Sample	1020192	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\035SMPL.d	3206	1	Matthew Olley
47	8/13/2012 14:44						Matthew Olley
48	8/13/2012 14:44	Sample	1020195	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\036SMPL.d	3207	1	Matthew Olley
49	8/13/2012 14:48						Matthew Olley
50	8/13/2012 14:48	Sample	1020196	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\037SMPL.d	3208	1	Matthew Olley
51	8/13/2012 14:51						Matthew Olley
52	8/13/2012 14:51	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\038_CCV.d	1307	1	Matthew Olley
53	8/13/2012 14:54	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\039_CCB.d	1101	1	Matthew Olley
54	8/13/2012 14:58	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\040LCCV.d	1305	1	Matthew Olley
55	8/13/2012 15:01	Sample	9980394001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\041SMPL.d	3209	1	Matthew Olley
56	8/13/2012 15:05						Matthew Olley
57	8/13/2012 15:05	Sample	9980394002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\042SMPL.d	3210	1	Matthew Olley
58	8/13/2012 15:08						Matthew Olley
59	8/13/2012 15:08	Sample	9980394003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\043SMPL.d	3211	1	Matthew Olley
60	8/13/2012 15:12						Matthew Olley
61	8/13/2012 15:12	Sample	9980394004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\044SMPL.d	3212	1	Matthew Olley
62	8/13/2012 15:15						Matthew Olley
63	8/13/2012 15:15	Sample	9980394005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\045SMPL.d	3301	1	Matthew Olley
64	8/13/2012 15:19						Matthew Olley
65	8/13/2012 15:19	Sample	9980394007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\046SMPL.d	3302	1	Matthew Olley
66	8/13/2012 15:22						Matthew Olley
67	8/13/2012 15:22	Sample	9980394008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\047SMPL.d	3303	1	Matthew Olley
68	8/13/2012 15:26						Matthew Olley

Batch Log

69	8/13/2012 15:26	Sample	9980394009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\048SMPL.d	3304	1	Matthew Olley
70	8/13/2012 15:29						Matthew Olley
71	8/13/2012 15:29	Sample	9980394010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\049SMPL.d	3305	1	Matthew Olley
72	8/13/2012 15:33						Matthew Olley
73	8/13/2012 15:33	Sample	9980394011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\050SMPL.d	3306	1	Matthew Olley
74	8/13/2012 15:36						Matthew Olley
75	8/13/2012 15:36	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\051_CCV.d	1307	1	Matthew Olley
76	8/13/2012 15:40	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\052_CCB.d	1101	1	Matthew Olley
77	8/13/2012 15:43	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\053LCCV.d	1305	1	Matthew Olley
78	8/13/2012 15:43						Matthew Olley
79	8/13/2012 15:49	Sample	1020719	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\054SMPL.d	3101	1	Matthew Olley
80	8/13/2012 15:52						Matthew Olley
81	8/13/2012 15:52	Sample	1020720	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\055SMPL.d	3102	1	Matthew Olley
82	8/13/2012 15:56						Matthew Olley
83	8/13/2012 15:56	Sample	9981430001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\056SMPL.d	3104	1	Matthew Olley
84	8/13/2012 15:59						Matthew Olley
85	8/13/2012 15:59	Sample	1020721	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\057SMPL.d	3105	1	Matthew Olley
86	8/13/2012 16:02						Matthew Olley
87	8/13/2012 16:02	Sample	1020722	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\058SMPL.d	3106	1	Matthew Olley
88	8/13/2012 16:06						Matthew Olley
89	8/13/2012 16:06	Sample	9981430001PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\059SMPL.d	3107	1	Matthew Olley
90	8/13/2012 16:09						Matthew Olley
91	8/13/2012 16:09	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\060_CCV.d	1307	1	Matthew Olley
92	8/13/2012 16:13	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\061_CCB.d	1101	1	Matthew Olley

Batch Log

93	8/13/2012 16:16	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\062LCCV.d	1305	1	Matthew Olley
94	8/13/2012 16:20	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\063_CCV.d	1307	1	Matthew Olley
95	8/13/2012 16:23	Sample	9980394012	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\064SMPL.d	3307	1	Matthew Olley
96	8/13/2012 16:26						Matthew Olley
97	8/13/2012 16:26	Sample	9980394013	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\065SMPL.d	3308	1	Matthew Olley
98	8/13/2012 16:30						Matthew Olley
99	8/13/2012 16:30	Sample	9980394013L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\066SMPL.d	3309	1	Matthew Olley
100	8/13/2012 16:33						Matthew Olley
101	8/13/2012 16:33	Sample	9980395001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\067SMPL.d	3310	1	Matthew Olley
102	8/13/2012 16:37						Matthew Olley
103	8/13/2012 16:37	Sample	9980395002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\068SMPL.d	3311	1	Matthew Olley
104	8/13/2012 16:40						Matthew Olley
105	8/13/2012 16:40	Sample	9980395003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\069SMPL.d	3312	1	Matthew Olley
106	8/13/2012 16:44						Matthew Olley
107	8/13/2012 16:44	Sample	1020185	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\070SMPL.d	3401	1	Matthew Olley
108	8/13/2012 16:47						Matthew Olley
109	8/13/2012 16:47	Sample	1020186	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\071SMPL.d	3402	1	Matthew Olley
110	8/13/2012 16:51						Matthew Olley
111	8/13/2012 16:51	Sample	9980395003PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\072SMPL.d	3403	1	Matthew Olley
112	8/13/2012 16:54						Matthew Olley
113	8/13/2012 16:54	Sample	9980395004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\073SMPL.d	3404	1	Matthew Olley
114	8/13/2012 16:58						Matthew Olley
115	8/13/2012 16:58	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\074_CCV.d	1307	1	Matthew Olley
116	8/13/2012 16:58						Matthew Olley

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117	8/13/2012 17:03	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A081312C.b\075_CCB.d	1101	1	Matthew Olley
118	8/13/2012 17:07	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DATA\A081312C.b\076LCCV.d	1305	1	Matthew Olley
119	8/13/2012 17:10	Sample	9980395005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\077SMPL.d	3405	1	Matthew Olley
120	8/13/2012 17:14						Matthew Olley
121	8/13/2012 17:14	Sample	9980395007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\078SMPL.d	3406	1	Matthew Olley
122	8/13/2012 17:17						Matthew Olley
123	8/13/2012 17:17	Sample	9980395008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\079SMPL.d	3407	1	Matthew Olley
124	8/13/2012 17:21						Matthew Olley
125	8/13/2012 17:21	Sample	9980395009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\080SMPL.d	3408	1	Matthew Olley
126	8/13/2012 17:24						Matthew Olley
127	8/13/2012 17:24	Sample	9980395009L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25A\A081312C.b\081SMPL.d	3409	1	Matthew Olley
128	8/13/2012 17:28						Matthew Olley
129	8/13/2012 17:28	Sample	9980395010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\082SMPL.d	3410	1	Matthew Olley
130	8/13/2012 17:31						Matthew Olley
131	8/13/2012 17:31	Sample	9980395011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\083SMPL.d	3411	1	Matthew Olley
132	8/13/2012 17:35						Matthew Olley
133	8/13/2012 17:35	Sample	9980395012	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\084SMPL.d	3412	1	Matthew Olley
134	8/13/2012 17:38						Matthew Olley
135	8/13/2012 17:38	Sample	9980395013	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\085SMPL.d	3501	1	Matthew Olley
136	8/13/2012 17:42						Matthew Olley
137	8/13/2012 17:42	Sample	9980395014	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\086SMPL.d	3502	1	Matthew Olley
138	8/13/2012 17:45						Matthew Olley
139	8/13/2012 17:45	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A081312C.b\087_CCV.d	1307	1	Matthew Olley
140	8/13/2012 17:49	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A081312C.b\088_CCB.d	1101	1	Matthew Olley

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141	8/13/2012 17:52	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DATA\A081312C.b\089LCCV.d	1305	1	Matthew Olley
142	8/13/2012 17:56	Sample	9980395014L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25A\A081312C.b\090SMPL.d	3503	1	Matthew Olley
143	8/13/2012 17:59						Matthew Olley
144	8/13/2012 17:59	Sample	9980614001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\091SMPL.d	3504	1	Matthew Olley
145	8/13/2012 18:02						Matthew Olley
146	8/13/2012 18:02	Sample	9980614002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\092SMPL.d	3505	1	Matthew Olley
147	8/13/2012 18:06						Matthew Olley
148	8/13/2012 18:06	Sample	9980614003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\093SMPL.d	3506	1	Matthew Olley
149	8/13/2012 18:09						Matthew Olley
150	8/13/2012 18:09	Sample	9980614004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\094SMPL.d	3507	1	Matthew Olley
151	8/13/2012 18:13						Matthew Olley
152	8/13/2012 18:13	Sample	9980614005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\095SMPL.d	3508	1	Matthew Olley
153	8/13/2012 18:16						Matthew Olley
154	8/13/2012 18:16	Sample	9980614006	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\096SMPL.d	3509	1	Matthew Olley
155	8/13/2012 18:20						Matthew Olley
156	8/13/2012 18:20	Sample	9980614007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\097SMPL.d	3510	1	Matthew Olley
157	8/13/2012 18:23						Matthew Olley
158	8/13/2012 18:23	Sample	9980614008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\098SMPL.d	3511	1	Matthew Olley
159	8/13/2012 18:27						Matthew Olley
160	8/13/2012 18:27	Sample	9980614009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\099SMPL.d	3512	1	Matthew Olley
161	8/13/2012 18:30						Matthew Olley
162	8/13/2012 18:30	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A081312C.b\100_CCV.d	1307	1	Matthew Olley
163	8/13/2012 18:34	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A081312C.b\101_CCB.d	1101	1	Matthew Olley
164	8/13/2012 18:37	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DATA\A081312C.b\102LCCV.d	1305	1	Matthew Olley

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165	8/13/2012 18:41	Sample	9980614010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\103SMPL.d	4101	1	Matthew Olley
166	8/13/2012 18:44						Matthew Olley
167	8/13/2012 18:44	Sample	9980614011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\104SMPL.d	4102	1	Matthew Olley
168	8/13/2012 18:48						Matthew Olley
169	8/13/2012 18:48	Sample	9980614012	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\105SMPL.d	4103	1	Matthew Olley
170	8/13/2012 18:51						Matthew Olley
171	8/13/2012 18:51	Sample	9980614013	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\106SMPL.d	4104	1	Matthew Olley
172	8/13/2012 18:55						Matthew Olley
173	8/13/2012 18:55	Sample	1020189	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\107SMPL.d	4105	1	Matthew Olley
174	8/13/2012 18:58						Matthew Olley
175	8/13/2012 18:58	Sample	1020190	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\108SMPL.d	4106	1	Matthew Olley
176	8/13/2012 19:02						Matthew Olley
177	8/13/2012 19:02	Sample	9980614013PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\109SMPL.d	4107	1	Matthew Olley
178	8/13/2012 19:05						Matthew Olley
179	8/13/2012 19:05	Sample	9980614014	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\110SMPL.d	4108	1	Matthew Olley
180	8/13/2012 19:09						Matthew Olley
181	8/13/2012 19:09	Sample	9980614015	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\111SMPL.d	4109	1	Matthew Olley
182	8/13/2012 19:12						Matthew Olley
183	8/13/2012 19:12	Sample	9980614015L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\112SMPL.d	4110	1	Matthew Olley
184	8/13/2012 19:16						Matthew Olley
185	8/13/2012 19:16	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\113_CCV.d	1307	1	Matthew Olley
186	8/13/2012 19:19	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\114_CCB.d	1101	1	Matthew Olley
187	8/13/2012 19:22	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\115LCCV.d	1305	1	Matthew Olley
188	8/13/2012 19:26	Sample	9980614016	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\116SMPL.d	4111	1	Matthew Olley

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189	8/13/2012 19:29						Matthew Olley
190	8/13/2012 19:29	Sample	9980614017	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\117SMPL.d	4112	1	Matthew Olley
191	8/13/2012 19:33						Matthew Olley
192	8/13/2012 19:33	Sample	9980614018	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\118SMPL.d	4201	1	Matthew Olley
193	8/13/2012 19:36						Matthew Olley
194	8/13/2012 19:36	Sample	9980614019	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\119SMPL.d	4202	1	Matthew Olley
195	8/13/2012 19:40						Matthew Olley
196	8/13/2012 19:40	Sample	9980614020	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\120SMPL.d	4203	1	Matthew Olley
197	8/13/2012 19:43						Matthew Olley
198	8/13/2012 19:43	Sample	9980614021	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\121SMPL.d	4204	1	Matthew Olley
199	8/13/2012 19:47						Matthew Olley
200	8/13/2012 19:47	Sample	9980614022	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\122SMPL.d	4205	1	Matthew Olley
201	8/13/2012 19:50						Matthew Olley
202	8/13/2012 19:50	Sample	9980614022L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\123SMPL.d	4206	1	Matthew Olley
203	8/13/2012 19:54						Matthew Olley
204	8/13/2012 19:54	Sample	9980875001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\124SMPL.d	4207	1	Matthew Olley
205	8/13/2012 19:57						Matthew Olley
206	8/13/2012 19:57	Sample	1020193	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\125SMPL.d	4208	1	Matthew Olley
207	8/13/2012 20:01						Matthew Olley
208	8/13/2012 20:01	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\126_CCV.d	1307	1	Matthew Olley
209	8/13/2012 20:04	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\127_CCB.d	1101	1	Matthew Olley
210	8/13/2012 20:08	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\128LCCV.d	1305	1	Matthew Olley
211	8/13/2012 20:11	Sample	1020194	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\129SMPL.d	4209	1	Matthew Olley
212	8/13/2012 20:15						Matthew Olley

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213	8/13/2012 20:15	Sample	9980875001PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\130SMPL.d	4210	1	Matthew Olley
214	8/13/2012 20:18						Matthew Olley
215	8/13/2012 20:18	Sample	9980875002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\131SMPL.d	4211	1	Matthew Olley
216	8/13/2012 20:22						Matthew Olley
217	8/13/2012 20:22	Sample	9980875003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\132SMPL.d	4212	1	Matthew Olley
218	8/13/2012 20:25						Matthew Olley
219	8/13/2012 20:25	Sample	9980875004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\133SMPL.d	4301	1	Matthew Olley
220	8/13/2012 20:29						Matthew Olley
221	8/13/2012 20:29	Sample	9980875005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\134SMPL.d	4302	1	Matthew Olley
222	8/13/2012 20:32						Matthew Olley
223	8/13/2012 20:32	Sample	9980875006	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\135SMPL.d	4303	1	Matthew Olley
224	8/13/2012 20:36						Matthew Olley
225	8/13/2012 20:36	Sample	9980875007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\136SMPL.d	4304	1	Matthew Olley
226	8/13/2012 20:39						Matthew Olley
227	8/13/2012 20:39	Sample	9980875008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\137SMPL.d	4305	1	Matthew Olley
228	8/13/2012 20:43						Matthew Olley
229	8/13/2012 20:43	Sample	9980875009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\138SMPL.d	4306	1	Matthew Olley
230	8/13/2012 20:46						Matthew Olley
231	8/13/2012 20:46	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\139_CCV.d	1307	1	Matthew Olley
232	8/13/2012 20:49	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\140_CCB.d	1101	1	Matthew Olley
233	8/13/2012 20:53	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\141LCCV.d	1305	1	Matthew Olley
234	8/13/2012 20:56	Sample	9980875010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\142SMPL.d	4307	1	Matthew Olley
235	8/13/2012 21:00						Matthew Olley
236	8/13/2012 21:00	Sample	9980875011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\143SMPL.d	4308	1	Matthew Olley

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237	8/13/2012 21:03						Matthew Olley
238	8/13/2012 21:03	Sample	9980875012	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\144SMPL.d	4309	1	Matthew Olley
239	8/13/2012 21:07						Matthew Olley
240	8/13/2012 21:07	Sample	9980875013	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\145SMPL.d	4310	1	Matthew Olley
241	8/13/2012 21:10						Matthew Olley
242	8/13/2012 21:10	Sample	9980875013L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\146SMPL.d	4311	1	Matthew Olley
243	8/13/2012 21:14						Matthew Olley
244	8/13/2012 21:14	Sample	9980875014	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\147SMPL.d	4312	1	Matthew Olley
245	8/13/2012 21:17						Matthew Olley
246	8/13/2012 21:17	Sample	9980875014L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\148SMPL.d	4401	1	Matthew Olley
247	8/13/2012 21:21						Matthew Olley
248	8/13/2012 21:21	Sample	9981198001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\149SMPL.d	4402	1	Matthew Olley
249	8/13/2012 21:24						Matthew Olley
250	8/13/2012 21:24	Sample	9981198002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\150SMPL.d	4403	1	Matthew Olley
251	8/13/2012 21:28						Matthew Olley
252	8/13/2012 21:28	Sample	9981198003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\151SMPL.d	4404	1	Matthew Olley
253	8/13/2012 21:31						Matthew Olley
254	8/13/2012 21:31	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\152_CCV.d	1306	1	Matthew Olley
255	8/13/2012 21:35	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\153_CCB.d	1101	1	Matthew Olley
256	8/13/2012 21:38	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\154LCCV.d	1304	1	Matthew Olley
257	8/13/2012 21:42	Sample	1020197	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\155SMPL.d	4405	1	Matthew Olley
258	8/13/2012 21:45						Matthew Olley
259	8/13/2012 21:45	Sample	1020198	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\156SMPL.d	4406	1	Matthew Olley
260	8/13/2012 21:49						Matthew Olley

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261	8/13/2012 21:49	Sample	9981198003PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\157SMPL.d	4407	1	Matthew Olley
262	8/13/2012 21:52						Matthew Olley
263	8/13/2012 21:52	Sample	9981198004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\158SMPL.d	4408	1	Matthew Olley
264	8/13/2012 21:55						Matthew Olley
265	8/13/2012 21:55	Sample	9981198005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\159SMPL.d	4409	1	Matthew Olley
266	8/13/2012 21:59						Matthew Olley
267	8/13/2012 21:59	Sample	9981198006	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\160SMPL.d	4410	1	Matthew Olley
268	8/13/2012 22:02						Matthew Olley
269	8/13/2012 22:02	Sample	9981198007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\161SMPL.d	4411	1	Matthew Olley
270	8/13/2012 22:06						Matthew Olley
271	8/13/2012 22:06	Sample	9981198008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\162SMPL.d	4412	1	Matthew Olley
272	8/13/2012 22:09						Matthew Olley
273	8/13/2012 22:09	Sample	9981198009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\163SMPL.d	4501	1	Matthew Olley
274	8/13/2012 22:13						Matthew Olley
275	8/13/2012 22:13	Sample	9981198010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\164SMPL.d	4502	1	Matthew Olley
276	8/13/2012 22:16						Matthew Olley
277	8/13/2012 22:16	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\165_CCV.d	1306	1	Matthew Olley
278	8/13/2012 22:20	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\166_CCB.d	1101	1	Matthew Olley
279	8/13/2012 22:23	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\167LCCV.d	1304	1	Matthew Olley
280	8/13/2012 22:27	Sample	9981198011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\168SMPL.d	4503	1	Matthew Olley
281	8/13/2012 22:30						Matthew Olley
282	8/13/2012 22:30	Sample	9981198011L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\169SMPL.d	4504	1	Matthew Olley
283	8/13/2012 22:34						Matthew Olley
284	8/13/2012 22:34	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\170_CCV.d	1306	1	Matthew Olley

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285	8/13/2012 22:37	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\171_CCB.d	37991 LAMDF5	1101	1 Matthew Olley
286	8/13/2012 22:41	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\172LCCV.d	37991 LAMDF5	1304	1 Matthew Olley
287	8/13/2012 22:44	Sample	50 PPM LDR	C:\Agilent\ICPMH\1\DAT A\A081312C.b\173SMPL.d		4512	1 Matthew Olley
288	8/13/2012 22:48						Matthew Olley
289	8/13/2012 22:54	CalBlk	blk			1101	Matthew Olley
290	8/13/2012 22:54	CalBlk	blk			1101	Matthew Olley
291	8/13/2012 22:54	CalStd	Standard 1			2101	Matthew Olley
292	8/13/2012 22:54	CalStd	Standard 2			2102	Matthew Olley
293	8/13/2012 22:54	CalStd	Standard 3			2103	Matthew Olley
294	8/13/2012 22:54	CalStd	Standard 4			2104	Matthew Olley
295	8/13/2012 22:54	CalStd	Standard 5			2105	Matthew Olley
296	8/13/2012 22:54	ICV	ICV			1307	Matthew Olley
297	8/13/2012 22:54	ICB	ICB			1101	Matthew Olley
298	8/13/2012 22:54	ICB	ICB			1101	Matthew Olley
299	8/13/2012 22:54	LLICV	LLICV			1305	Matthew Olley
300	8/13/2012 22:54	ICSA	ICSA			2111	Matthew Olley
301	8/13/2012 22:54	ICSB	ICSAB			2112	Matthew Olley
302	8/13/2012 22:54	Sample	30 PPM LDR	C:\Agilent\ICPMH\1\DAT A\A081312C.b\174SMPL.d		4511	1 Matthew Olley
303	8/13/2012 22:58	Sample	1020719	C:\Agilent\ICPMH\1\DAT A\A081312C.b\175SMPL.d	37991 LAMDF5	3101	1 Matthew Olley
304	8/13/2012 22:58						Matthew Olley
305	8/13/2012 22:58	Sample	1020720		37991 LAMDF5	3102	Matthew Olley
306	8/13/2012 22:58	Sample	9981408002		37991 LAMDF5	3103	Matthew Olley
307	8/13/2012 22:58	Sample	9981430001		37991 LAMDF5	3104	Matthew Olley
308	8/13/2012 22:58	Sample	1020721		37991 LAMDF5	3105	Matthew Olley
309	8/13/2012 22:58	Sample	1020722		37991 LAMDF5	3106	Matthew Olley
310	8/13/2012 22:58	Sample	9981430001PS		37991 LAMDF5	3107	Matthew Olley
311	8/13/2012 22:58	Sample	9981517002		37991 LAMDF5	3108	Matthew Olley
312	8/13/2012 22:58	Sample	9981517003		37991 LAMDF5	3109	Matthew Olley
313	8/13/2012 22:58	Sample	9981517003L		37991 LAMDF5	3110	Matthew Olley

Batch Log

314	8/13/2012 23:10	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\176_CCV.d	1306	1	Matthew Olley
315	8/13/2012 23:13	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\177_CCB.d	1101	1	Matthew Olley
316	8/13/2012 23:17	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\178LCCV.d	1304	1	Matthew Olley
317	8/13/2012 23:17						Matthew Olley
318	8/13/2012 23:26	Sample	9980875009	C:\Agilent\ICPMH\1\DAT 37996 LAMDF25 A\A081312C.b\179SMPL.d	2501	1	Matthew Olley
319	8/13/2012 23:29	Sample	1021781	C:\Agilent\ICPMH\1\DAT 37995 LAMDF5 A\A081312C.b\180SMPL.d	2502	1	Matthew Olley
320	8/13/2012 23:29						Matthew Olley
321	8/13/2012 23:38	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\181_CCV.d	1306	1	Matthew Olley
322	8/13/2012 23:41	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\182_CCB.d	1101	1	Matthew Olley
323	8/13/2012 23:45	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\183LCCV.d	1304	1	Matthew Olley
324	8/13/2012 23:45						Matthew Olley
325	8/14/2012 0:01	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\184_CCB.d	1101	1	Matthew Olley

Total Solids Summary Forms

Sample Description
FTSW-AA-SO-30

Form 7
Duplicate Summary

Analysis Method: 2540G
SDG No.: ERT-006

Matrix (soil/water): soil
Units: %
Instrument ID: N/A
GC Column: N/A
Sample % Moisture: N/A

Lab Sample ID: 9981198009
Lab File ID: N/A
Lab Sample Dup. ID: 1019216
Dup. Lab File ID: N/A
Dup. % Moisture: N/A

Analyte	Sample Concentration	Duplicate Concentration	Relative Percent Difference (RPD)	(1)	Acceptable Limit
Total Solids	89.9	89.4	0.6		5%

(1) The following qualifiers are used:
* : Values outside of acceptable limits

Comments:

Total Solids Raw Data

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Total Solids

Batch: 114015 Queue: WETC Analyst: KED

File Name: 114015_120806-090752 Date/Time: 08/06/12 11:00

Misc:		1st Time In	11:00	2nd Time In	22:05	3rd Time In		4th Time In	
		1st Temp In °C	104	2nd Temp In °C	104	3rd Temp In °C		4th Temp In °C	
		1st Time Out	21:50	2nd Time Out	23:25	3rd Time Out		4th Time Out	
		1st Temp Out °C	104	2nd Temp Out °C	104	3rd Temp Out °C		4th Temp Out °C	

Sample ID	Cont ID	Samp Type	TVS	Weight of dish and sample (g) or Volume of sample (ml)	Dish Wt. (g)	1st Dish + Sample Wt (g)	2nd Dish + Sample Wt (g)	3rd Dish + Sample Wt (g)	4th Dish + Sample Wt (g)	TS (%) or (mg/l)	Result1 TARE (g)	Result2 IWT (g)	Result3 FWT (g)
1019213	BALCHK			0.1000	0.1000	0.1000	0.1000			#DIV/0!	0.1000	0.1000	0.1000
1019214	A	DUP	O	11.0101	1.1589	2.9317	2.9157			17.8334	1.1589	11.0101	2.9157
9981045001	A	S		11.3306	1.1725	2.9972	2.9838			17.8311	1.1725	11.3306	2.9838
9981058001	A	S		14.9626	1.1870	13.8131	13.7903			91.4900	1.1870	14.9626	13.7903
9981058002	A	S		18.4801	1.1841	15.1732	15.1489			80.7401	1.1841	18.4801	15.1489
9981058003	A	S		17.1821	1.1640	14.4388	14.4184			82.7464	1.1640	17.1821	14.4184
9981089001	A	S		9.2997	1.1526	1.3146	1.3101			1.9332	1.1526	9.2997	1.3101
9981089002	A	S		11.2049	1.1603	1.3621	1.3586			1.9742	1.1603	11.2049	1.3586
9981095001	A	S		10.6722	1.1668	4.6060	4.5845			35.9554	1.1668	10.6722	4.5845
9981194001	A	S		29.9327	1.1733	23.4654	23.4418			77.4303	1.1733	29.9327	23.4418
9981194002	A	S		26.4196	1.1647	22.0965	22.0746			82.7954	1.1647	26.4196	22.0746
9981194003	A	S		18.5670	1.1717	16.0651	16.0380			85.4616	1.1717	18.5670	16.0380
1019215	A	DUP	O	14.9752	1.1615	12.9435	12.9187			85.1126	1.1615	14.9752	12.9187
9981194004	A	S		15.7633	1.1747	13.6204	13.5957			85.1418	1.1747	15.7633	13.5957
9981194005	A	S		19.7309	1.1492	16.7076	16.6871			83.6194	1.1492	19.7309	16.6871
9981198001	A	S		14.6061	1.1637	13.1602	13.1505			89.1716	1.1637	14.6061	13.1505
9981198002	A	S		14.5492	1.1687	13.1723	13.1586			89.6073	1.1687	14.5492	13.1586
9981198003	A	S		15.3567	1.1877	13.6879	13.6735			88.1205	1.1877	15.3567	13.6735
9981198004	A	S		27.5612	1.1737	18.4754	18.4615			65.5151	1.1737	27.5612	18.4615
9981198005	A	S		30.6859	1.1597	23.0017	22.9914			73.9401	1.1597	30.6859	22.9914
9981198006	A	S		21.8259	1.1805	18.8977	18.8888			85.7736	1.1805	21.8259	18.8888
9981198007	A	S		18.3897	1.1580	17.1640	17.1546			92.8324	1.1580	18.3897	17.1546
9981198008	A	S		31.4136	1.1578	24.4605	24.4407			76.9535	1.1578	31.4136	24.4407
1019216	A	DUP	0.6	13.0386	1.1612	11.7949	11.7803			89.4059	1.1612	13.0386	11.7803
9981198009	A	S		13.4824	1.1794	12.2537	12.2412			89.9114	1.1794	13.4824	12.2412
9981198010	A	S		26.8296	1.1868	23.4767	23.4612			86.8641	1.1868	26.8296	23.4612
9981198011	A	S		18.8923	1.1701	16.5727	16.5587			86.8323	1.1701	18.8923	16.5587
9981251001	A	S	XX	18.4633	1.1656	3.1150	3.1073			11.2252	1.1656	18.4633	3.1073
9981256001	A	S		16.1890	1.1750	13.6701	13.6586			83.1464	1.1750	16.1890	13.6586
9981256002	A	S		13.7721	1.1729	10.6997	10.6905			75.5413	1.1729	13.7721	10.6905
9981256003	A	S		17.2159	1.1644	9.2300	9.2239			50.2103	1.1644	17.2159	9.2239

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9981256004	A	S		17.2159	1.1826	10.1737	10.1557			55.9654	1.1826	17.2159	10.1557
9981256005	A	S		11.9959	1.1723	10.8662	10.8568			89.4758	1.1723	11.9959	10.8568
1019217	A	DUP	3.6	19.8029	1.1726	14.8295	14.8157			73.2307	1.1726	19.8029	14.8157
9981256006	A	S		21.4980	1.1717	16.6086	16.6017			75.9115	1.1717	21.4980	16.6017
9981256007	A	S		12.7810	1.1747	10.9083	10.9039			83.8269	1.1747	12.7810	10.9039
9981256008	A	S		17.3265	1.1730	12.0758	12.0600			67.3972	1.1730	17.3265	12.0600
9981256009	A	S		11.8417	1.1722	10.4453	10.4316			86.7838	1.1722	11.8417	10.4316
9981256010	A	S		28.4733	1.1664	18.5816	18.5724			63.7421	1.1664	28.4733	18.5724
9981256011	A	S		16.6027	1.1771	13.7150	13.7103			81.2494	1.1771	16.6027	13.7103
9981256012	A	S		32.2526	1.1886	25.1437	25.1499			77.1353	1.1886	32.2526	25.1499
9981256013	A	S		18.0881	1.1782	15.3557	15.3296			83.6871	1.1782	18.0881	15.3296
9981256014	A	S		19.0432	1.1677	16.1114	16.0898			83.4779	1.1677	19.0432	16.0898
9981256015	A	S		15.5679	1.1701	13.1484	13.1328			83.0870	1.1701	15.5679	13.1328
1019218	A	DUP	1.2	13.5065	1.1780	11.7822	11.7710			85.9229	1.1780	13.5065	11.7710
9981256016	A	S		15.7049	1.1853	13.5178	13.5088			84.8749	1.1853	15.7049	13.5088
9981262001	A	S		19.2754	1.1849	17.6851	17.6678			91.1136	1.1849	19.2754	17.6678
9981262002	C	S		19.1010	1.1840	17.0377	17.0208			88.3898	1.1840	19.1010	17.0208
9981262003	A	S		15.7038	1.1713	14.1606	14.1459			89.2799	1.1713	15.7038	14.1459
9981262004	C	S		21.0756	1.1817	19.1031	19.0906			90.0221	1.1817	21.0756	19.0906
9981262005	A	S		19.7747	1.1685	18.4896	18.4833			93.0593	1.1685	19.7747	18.4833
9981262006	C	S		21.7434	1.1649	20.3312	20.3189			93.0777	1.1649	21.7434	20.3189
9981262007	A	S		14.0663	1.1621	12.8032	12.7916			90.1218	1.1621	14.0663	12.7916
9981262008	C	S		15.1768	1.1863	13.7323	13.7213			89.5965	1.1863	15.1768	13.7213
9981262009	A	S		17.6694	1.1853	15.8201	15.8118			88.7310	1.1853	17.6694	15.8118
1019219	C	DUP	0.3	17.1479	1.1823	15.6010	15.5938			90.2659	1.1823	17.1479	15.5938
9981262010	C	S		16.5740	1.1832	15.1230	15.1111			90.4950	1.1832	16.5740	15.1111
9981262011	A	S		14.3142	1.1657	12.3440	12.3332			84.9336	1.1657	14.3142	12.3332
9981262012	C	S		20.4330	1.1448	18.4200	18.4103			89.5133	1.1448	20.4330	18.4103
9981262013	A	S		11.4949	1.1347	10.9032	10.8971			94.2298	1.1347	11.4949	10.8971
9981262014	A	S		16.6977	1.1775	15.0076	15.0002			89.0626	1.1775	16.6977	15.0002
9981262017	A	S		13.3975	1.1835	8.0388	8.0259			56.0210	1.1835	13.3975	8.0259
9981262018	A	S		15.7771	1.1795	14.1573	14.1447			88.8173	1.1795	15.7771	14.1447
9981262019	A	S		13.8394	1.1766	10.8818	10.8675			76.5305	1.1766	13.8394	10.8675
9981278001	A	S		22.4016	1.1665	20.5057	20.4997			91.0436	1.1665	22.4016	20.4997
9981278002	A	S		39.7794	1.1856	32.1510	32.1460			80.2212	1.1856	39.7794	32.1460
1019220	A	DUP	3.5	39.8752	1.1717	33.5274	33.5209			83.5821	1.1717	39.8752	33.5209
9981278003	A	S		40.4507	1.1645	35.1812	35.1757			86.5729	1.1645	40.4507	35.1757
9981330001	A	S		21.2096	1.1776	21.1789	21.1755			99.8298	1.1776	21.2096	21.1755
9981331001	A	S		22.7357	1.1552	19.3793	19.3739			84.4220	1.1552	22.7357	19.3739
9981331002	A	S		34.3092	1.1735	28.1374	28.1333			81.3618	1.1735	34.3092	28.1333
9981331003	A	S		28.2194	1.1868	23.9056	23.8979			84.0137	1.1868	28.2194	23.8979
9981331004	A	S		27.6228	1.1735	23.3155	23.3084			83.6880	1.1735	27.6228	23.3084
9981331005	A	S		27.4841	1.1719	22.4444	22.4387			80.8249	1.1719	27.4841	22.4387
9981331006	A	S		27.5922	1.1805	23.3012	23.2972			83.7383	1.1805	27.5922	23.2972
9981331007	A	S		30.7555	1.1773	24.7179	24.7133			79.5721	1.1773	30.7555	24.7133
9981331008	A	S		33.4803	1.1687	26.7274	26.7216			79.0827	1.1687	33.4803	26.7216
1019221	A	DUP	3.1	23.9017	1.1718	18.9962	18.9919			78.3994	1.1718	23.9017	18.9919
9981331009	A	S		23.7423	1.1789	18.3412	18.3372			76.0448	1.1789	23.7423	18.3372
9981331010	A	S		28.2786	1.1836	23.8286	23.8263			83.5678	1.1836	28.2786	23.8263
9981331011	A	S		29.9209	1.1836	24.3532	24.3508			80.6172	1.1836	29.9209	24.3508
9981331012	A	S		30.7643	1.1690	25.6352	25.6300			82.6516	1.1690	30.7643	25.6300

9981331013	A	S		28.8351	1.1700	23.9524	23.9486			82.3370	1.1700	28.8351	23.9486
9981331014	A	S		26.8088	1.1666	22.6534	22.6500			83.7814	1.1666	26.8088	22.6500
9981331015	A	S		26.7061	1.1832	22.4583	22.4557			83.3467	1.1832	26.7061	22.4557
1019222	BALCHK			0.1000	0.1000	0.1000	0.1000			#DIV/0!	0.1000	0.1000	0.1000

End

LJF
ENGINEERING REVIEW
SECOND REVIEW
APPROVED

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Subcontracting Data

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL REPORT

Report Date: August 20, 2012

Vicki Forney
ALS Environmental-Middletown
34 Dogwood Lane
Middletown, PA 17057

Phone: (717) 944-5541 x 3162
Fax: (717) 944-1430
E-mail: vicki.forney@ALSglobal.com

Workorder: 34-1222167
Project ID: Ft. Stewart 3153-004
Purchase Order: 3153-004

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
FTSW-HR-So-43	1222167001	08/01/12	08/07/12	Ft. Stewart
FTSW-HR-So-44	1222167002	08/01/12	08/07/12	Ft. Stewart
FTSW-HR-So-45	1222167003	08/01/12	08/07/12	Ft. Stewart
FTSW-HR-So-46	1222167004	08/01/12	08/07/12	Ft. Stewart
FTSW-HR-So-46Dup	1222167005	08/01/12	08/07/12	Ft. Stewart
FTSW-HR-So-47	1222167006	08/01/12	08/07/12	Ft. Stewart
FTSW-HR-So-48	1222167007	08/01/12	08/07/12	Ft. Stewart
FTSW-HR-So-49	1222167008	08/01/12	08/07/12	Ft. Stewart

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ALS Environmental

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL REPORT

Workorder: 34-1222167
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-So-43 9981198 001 | Sampling Site: Ft. Stewart | Collected: 08/01/2012
Lab ID: 1222167001 | Media: 8 oz Amber Glass Jar | Received: 08/07/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1296 (HBN: 91939)	Initial: 1.42 grams	Batch: ELMS/1297 (HBN: 92002)	Percent Solid: 81.7
Prepared: 08/14/2012	Final: 10 mL	Analyzed: 08/18/2012 04:22	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.022	0.022	0.43	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15840 (HBN: 91685)	Initial: 30.81 grams	Batch: ESVO/3827 (HBN: 91984)	Percent Solid: 81.7
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/16/2012 18:34	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.5	7.5	200	1	U
1,4-Dithiane	5.7	5.7	200	1	U

Sample ID: FTSW-HR-So-44 9981198 002 | Sampling Site: Ft. Stewart | Collected: 08/01/2012
Lab ID: 1222167002 | Media: 8 oz Amber Glass Jar | Received: 08/07/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1296 (HBN: 91939)	Initial: 1.26 grams	Batch: ELMS/1297 (HBN: 92002)	Percent Solid: 88.1
Prepared: 08/14/2012	Final: 10 mL	Analyzed: 08/18/2012 08:48	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.023	0.023	0.45	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15840 (HBN: 91685)	Initial: 30.21 grams	Batch: ESVO/3827 (HBN: 91984)	Percent Solid: 88.1
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/16/2012 14:12	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.1	7.1	190	1	U
1,4-Dithiane	5.4	5.4	190	1	U

Sample ID: FTSW-HR-So-45 9981198 003 | Sampling Site: Ft. Stewart | Collected: 08/01/2012
Lab ID: 1222167003 | Media: 8 oz Amber Glass Jar | Received: 08/07/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1296 (HBN: 91939)	Initial: 1.32 grams	Batch: ELMS/1297 (HBN: 92002)	Percent Solid: 89.4
Prepared: 08/14/2012	Final: 10 mL	Analyzed: 08/18/2012 07:24	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.022	0.022	0.42	1	U

Results Continued on Next Page

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ANALYTICAL REPORT

Workorder: 34-1222167
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-So-45 | Sampling Site: Ft. Stewart | Collected: 08/01/2012
Lab ID: 1222167003 | Media: 8 oz Amber Glass Jar | Received: 08/07/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15840 (HBN: 91685)	Initial: 30.2 grams	Batch: ESVO/3827 (HBN: 91984)	Percent Solid: 89.4
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/16/2012 14:42	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.0	7.0	190	1	U
1,4-Dithiane	5.3	5.3	190	1	U

Sample ID: FTSW-HR-So-46 9981198 004 | Sampling Site: Ft. Stewart | Collected: 08/01/2012
Lab ID: 1222167004 | Media: 8 oz Amber Glass Jar | Received: 08/07/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1296 (HBN: 91939)	Initial: 1.27 grams	Batch: ELMS/1297 (HBN: 92002)	Percent Solid: 80.6
Prepared: 08/14/2012	Final: 10 mL	Analyzed: 08/18/2012 08:00	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.025	0.025	0.49	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15840 (HBN: 91685)	Initial: 30.06 grams	Batch: ESVO/3827 (HBN: 91984)	Percent Solid: 80.6
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/16/2012 18:05	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.8	7.8	210	1	U
1,4-Dithiane	5.9	5.9	210	1	U

Sample ID: FTSW-HR-So-46Dup 9981198 005 | Sampling Site: Ft. Stewart | Collected: 08/01/2012
Lab ID: 1222167005 | Media: 8 oz Amber Glass Jar | Received: 08/07/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1296 (HBN: 91939)	Initial: 1.1 grams	Batch: ELMS/1297 (HBN: 92002)	Percent Solid: 87
Prepared: 08/14/2012	Final: 10 mL	Analyzed: 08/18/2012 08:37	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.027	0.027	0.52	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15840 (HBN: 91685)	Initial: 30.52 grams	Batch: ESVO/3827 (HBN: 91984)	Percent Solid: 87
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/16/2012 15:10	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.1	7.1	190	1	U

Results Continued on Next Page

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ANALYTICAL REPORT

Workorder: 34-1222167
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-So-46Dup | Sampling Site: Ft. Stewart | Collected: 08/01/2012
Lab ID: 1222167005 | Media: 8 oz Amber Glass Jar | Received: 08/07/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15840 (HBN: 91685)	Initial: 30.52 grams	Batch: ESVO/3827 (HBN: 91984)	Percent Solid: 87
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/16/2012 15:10	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Dithiane	5.4	5.4	190	1	U

Sample ID: FTSW-HR-So-47 9981198 006 | Sampling Site: Ft. Stewart | Collected: 08/01/2012
Lab ID: 1222167006 | Media: 8 oz Amber Glass Jar | Received: 08/07/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1296 (HBN: 91939)	Initial: 1.24 grams	Batch: ELMS/1297 (HBN: 92002)	Percent Solid: 76.4
Prepared: 08/14/2012	Final: 10 mL	Analyzed: 08/18/2012 09:13	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.027	0.027	0.53	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15840 (HBN: 91685)	Initial: 30.67 grams	Batch: ESVO/3827 (HBN: 91984)	Percent Solid: 76.4
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/16/2012 15:39	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	8.1	8.1	210	1	U
1,4-Dithiane	6.1	6.1	210	1	U

Sample ID: FTSW-HR-So-48 9981198 007 | Sampling Site: Ft. Stewart | Collected: 08/01/2012
Lab ID: 1222167007 | Media: 8 oz Amber Glass Jar | Received: 08/07/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1296 (HBN: 91939)	Initial: 1.05 grams	Batch: ELMS/1297 (HBN: 92002)	Percent Solid: 82.4
Prepared: 08/14/2012	Final: 10 mL	Analyzed: 08/18/2012 09:50	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.030	0.030	0.58	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15840 (HBN: 91685)	Initial: 30.37 grams	Batch: ESVO/3827 (HBN: 91984)	Percent Solid: 82.4
Prepared: 08/15/2012	Final: 1 mL	Analyzed: 08/16/2012 16:08	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.6	7.6	200	1	U
1,4-Dithiane	5.7	5.7	200	1	U

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ANALYTICAL REPORT

Workorder: 34-1222167
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-So-49 998|198.008 | Sampling Site: Ft. Stewart | Collected: 08/01/2012
Lab ID: 1222167008 | Media: 8 oz Amber Glass Jar | Received: 08/07/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method: Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis:	Chemical Agent Breakdown, Soil,	Instrument ID: LCMS03
Batch:	ELMS/1296 (HBN: 91939)	Initial: 1.2 grams	Batch:	ELMS/1297 (HBN: 92002)	Percent Solid: 89
Prepared:	08/14/2012	Final: 10 mL	Analyzed:	08/18/2012 10:28	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual
Thiodiglycol	0.024	0.024	0.47	1	U

Analysis Method: SW8270

Preparation:	EPA 3550, Sonic Ext. SVOA Soil	Weight/Volume	Analysis:	SW 8270D, Soil	Instrument ID: 5975-H
Batch:	ENVX/15840 (HBN: 91685)	Initial: 30.39 grams	Batch:	ESVO/3827 (HBN: 91984)	Percent Solid: 89
Prepared:	08/15/2012	Final: 1 mL	Analyzed:	08/16/2012 16:37	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual
1,4-Oxathiane	7.0	7.0	180	1	U
1,4-Dithiane	5.3	5.3	180	1	U

Report Authorization

Method	Analyst	Peer Review
Chemical Agent Breakdown	Thomas T. McKay	Thomas J. Masolan
SW 8270	Reed A. Hendricks	Matt Garvin
Solids/Moisture Determination	Ilse J. Ovalle	Ashley Waganheim

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ANALYTICAL REPORT

Workorder: 34-1222167
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint, Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.
RL = Reporting Limit, a verified value of method/media/instrument sensitivity.
CRDL = Contract Required Detection Limit
Reg. Limit = Regulatory Limit.
ND = Not Detected, testing result not detected above the MDL or RL.
< This testing result is less than the numerical value.
** No result could be reported, see sample comments for details.

Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.
J = Qualifier indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds calibration range.
P = Qualifier indicates that the RPD between the two columns is greater than 40%.

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FedEx.

Address Information

Ship to:	**Ship from:**
ALS - UT	Steve Smith
ALS - UT	
960 LEVOY DR	34 DOGWOOD LANE
SALT LAKE CITY, UT	MIDDLETOWN, PA
84123-2502	17057
US	US
0000000000	7179445541

Shipment Information:
Tracking no.: 798703290732
Ship date: 08/06/2012
Estimated shipping charges: 91.40

Package Information
Service type: Priority Overnight
Package type: Your Packaging
Number of packages: 1
Total weight: 31 LBS
Declared Value: 0.00 USD
Special Services:
Pickup/Drop-off: Drop off package at FedEx location

Billing Information:
Bill transportation to: MyAccount-686
Your reference: Summa's
P.O. no.:
Invoice no.:
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Case Narrative

Method: ALS-LC/MS
Analysis: Agent Breakdown Products
ALS WO ID(s): 1221656

Client: ALS Laboratory Group
Account: 08001
Matrix: Water
HBN #: 91545

General Set Information: There was one field sample in this workorder. The sample was analyzed for thiodiglycol (TDG).

Method Summary: Each sample was prepared as noted below and analyzed using an Agilent 1200 LC/MSD system in select ion monitoring (SIM) mode at m/z 97, 125, 139, 146, 181, 105 and 113. ChemStation software was used for instrument control and data analysis.

Sample Preparation: 9.9mL of each sample was transferred into a 15-mL centrifuge tube. 100µL of an internal standard solution was then added to each sample. The samples were capped, vortexed, and filtered with Phenomenex Phenex 0.45µm PES syringe filters.

Holding Times: All samples were analyzed within holding times.

Dilutions: No dilutions were necessary.

Method QC data: The method blank criteria were met. The method blank (LMB 289537) was less than 1/2 the RL of 50ug/L for all analytes. The recovery for LCS 289538 was within acceptable limits.

MS/MSD Analysis: A matrix spike and matrix spike duplicate were performed on parent sample 1221555006, which was in the same analytical batch. The recovery and RPD were within acceptable parameters.

Instrument QC: Instrument initial and continuing calibrations were performed in accordance with established procedures.

NC/CAR(s): None were required for this set.

Sample Calculation: Samples were reported in µg/L. Results were calculated in µg/L by the equation (A)x(B)x(C),

where: A = Analyte concentration from the standard curve (µg/mL)
B = Dilution performed at time of analysis
C = Conversion factor from µg/mL to µg/L (1000)

Miscellaneous Comments: None.

August 15, 2012

Thomas T. McKay Date

Case Narrative

Method: ALS-LC/MS
Analysis: Agent Breakdown Products
ALS WO ID(s): 1221656

Client: ALS Laboratory Group
Account: 08001
Matrix: Soil
HBN #: 91861

General Set Information: There were 14 field samples in this workorder. The samples were analyzed for thiodiglycol (TDG).

Method Summary: Each sample was prepared as noted below and analyzed using an Agilent 1200 LC/MSD system in select ion monitoring (SIM) mode at m/z 97, 125, 139, 146, 181, 105 and 113. ChemStation software was used for instrument control and data analysis.

Sample Preparation: Approximately 1.00g of each sample was weighed into a 15-mL centrifuge tube, and 9.9mL of ASTM Type II water was added to each tube. 100µL of internal standard solution was then added to each sample, bringing the total extract volume to 10mL. The samples were capped, vortexed, rotated for at least 30 minutes, and filtered with Phenomenex Phenex 0.45µm PES syringe filters.

Holding Times: Holding times were met for all samples.

Dilutions: No dilutions were necessary.

Method QC data: The method blank criteria were met. The method blank (LMB 290472) was less than 1/2 the RL of 0.5ug/g for all analytes. The recoveries for LCS 290473 were within acceptable parameters.

MS/MSD Analysis: The matrix spike and matrix spike duplicate were performed on parent sample 1221656001. Recoveries and RPDs were within acceptable limits for all analytes.

Instrument QC: Instrument initial and continuing calibrations were performed in accordance with established procedures.

NC/CAR(s): None.

Sample Calculation: Samples were reported in µg/g. Results were calculated in µg/g by the equation (A)x(B)x(C)/(D),

where: A = Analyte concentration from the standard curve (µg/mL)
B = Dilution performed at time of analysis
C = Volume of extract (10mL)
D = Actual weight of sample aliquot (g)

Miscellaneous Comments: None.

Thomas T. McKay — August 16, 2012
Date

Case Narrative

Method: 8270D
Analysis: Semivolatiles by GC/MS
SOP ref: OE-SW-3550, OE-SW-3510, OS-SW-8270D

Set ID: 1221656
Client: ALS Laboratory Group
Matrix: Soil and Water

General Set Information: There are fifteen field samples plus MS/MSD in this reporting group.

Method Summary: This is a GC/MS method for determination of semivolatile organic compounds in soil and water according to the SW-846 Guidelines. Thirty grams of soil were extracted by sonication and then concentrated to final volume of 1.0 mL. One liter of water is extracted by separatory funnel and then concentrated to a final volume of 1.0 mL. The resulting extract is analyzed using an Agilent model 5975 GC/MS system with an electron impact ionization source and a quadrapole mass-filter detector.

Sample Preparation: All samples were prepared in accordance with method 3550 or 3510.

Holding Times: All preparation and analysis holding times were met for all samples.

Dilutions: None.

Method and Sample QC data: All target compounds were within recovery limits for the laboratory control sample. The method blank met the acceptance criteria with no target compounds detected above the reporting limit. All samples met pertinent internal standard area criteria. In some instances the latter-eluting internal standard areas were low due to a likely matrix effect, but the requested target analytes do not reference those internal standards. Most surrogate recoveries were within QC limits. Recovery of surrogate 2,4,6-tribromophenol was below the QC limit in sample 1221656007. In the water extraction batch, surrogate terphenyl-d14 had high recovery in some of the samples. This surrogate has a tendency to precipitate out of solution when stored under refrigeration, and it is prone to becoming concentrated in the solution. The old solution has since been discarded and replaced with a fresh one. With the large number of analytes reported by Method 8270, it is to be expected that occasional outliers will occur. Based on the rule of marginal exceedences, the ALS SOP makes allowances for the data to be considered acceptable with one base/neutral surrogate and one acid surrogate outside control limits. Of the six surrogates used in Method 8270, the two eluting closest to oxathiane and dithiane are 2-fluorophenol and phenol-d6, both of which were within limits in all samples.

MS/MSD Analysis: Matrix spiking was performed on Sample 1221656001 (FTSW-HR-SO-31). There was not enough sample to perform matrix spiking on the water batch. All recoveries were within expected ranges.

Instrument QC: The instrument was tuned with 50 ng DFTPP. A six-point initial calibration curve was analyzed prior to sample analysis. The concentrations of the standards were: 5, 20, 35, 50, 65 and 80 µg/mL. A calibration verification standard at a concentration of 50 ug/mL was analyzed to verify instrument response against the initial calibration. The initial calibration and continuing calibration verification passed all method criteria.

Miscellaneous Comments: None.

8-15-12

Reed A. Hendricks August 15, 2012

ANALYTICAL REPORT

Report Date: August 28, 2012

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Workorder: **34-1221656**
Project ID: ALS Middletown 080312
Purchase Order: NA

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
FTSW-HR-SO-31	1221656001	08/01/12	08/03/12	ERT
FTSW-HR-SO-31 Dup	1221656004	08/01/12	08/03/12	ERT
FTSW-HR-SO-32(10)	1221656005	08/01/12	08/03/12	ERT
FTSW-HR-SO-33	1221656006	08/01/12	08/03/12	ERT
FTSW-HR-SO-34(10)	1221656007	08/01/12	08/03/12	ERT
FTSW-HR-SO-34(10)Dup	1221656008	08/01/12	08/03/12	ERT
FTSW-HR-SO-35	1221656009	08/01/12	08/03/12	ERT
FTSW-HR-SO-36	1221656010	08/01/12	08/03/12	ERT
FTSW-HR-SO-37(09.5)	1221656011	08/01/12	08/03/12	ERT
FTSW-HR-SO-38	1221656012	08/01/12	08/03/12	ERT
FTSW-HR-SO-39	1221656013	08/01/12	08/03/12	ERT
FTSW-HR-SO-40	1221656014	08/01/12	08/03/12	ERT
FTSW-HR-SO-41	1221656015	08/01/12	08/03/12	ERT
FTSW-HR-SO-42	1221656016	08/01/12	08/03/12	ERT
FTSW-HR-SO-37(09.5)ERB	1221656017	08/01/12	08/03/12	ERT

Client QC ID *	Lab ID	Collect Date	Receive Date	Sampling Site
FTSW-HR-SO-31 MS	1221656002	08/01/12	08/03/12	ERT
FTSW-HR-SO-31 MSD	1221656003	08/01/12	08/03/12	ERT

***Client QC is reported as part of the Quality Control results report, if requested.**

ANALYTICAL REPORT

Workorder: 34-1221656
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-31** | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656001 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1293 (HBN: 91784)	**Initial:** 1.06 grams	**Batch:**	ELMS/1295 (HBN: 91861)	**Percent Solid:** 92.1
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 20:31	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.027	0.027	0.51	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15752 (HBN: 91130)	**Initial:** 30.14 grams	**Batch:**	ESVO/3820 (HBN: 91737)	**Percent Solid:** 92.1
Prepared:	08/07/2012	**Final:** 1 mL	**Analyzed:**	08/09/2012 14:01	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.8	6.8	180	1	U
1,4-Dithiane	5.1	5.1	180	1	U

Sample ID: **FTSW-HR-SO-31 Dup** | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656004 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1293 (HBN: 91784)	**Initial:** 1.01 grams	**Batch:**	ELMS/1295 (HBN: 91861)	**Percent Solid:** 91.1
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 22:20	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.54	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15752 (HBN: 91130)	**Initial:** 30.07 grams	**Batch:**	ESVO/3820 (HBN: 91737)	**Percent Solid:** 91.1
Prepared:	08/07/2012	**Final:** 1 mL	**Analyzed:**	08/09/2012 15:31	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: **FTSW-HR-SO-32(10)** | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656005 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1293 (HBN: 91784)	**Initial:** 1 grams	**Batch:**	ELMS/1295 (HBN: 91861)	**Percent Solid:** 84.7
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 22:57	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.031	0.031	0.59	1	U

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ANALYTICAL REPORT

Workorder: 34-1221656
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-32(10)** | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656005 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15752 (HBN: 91130)	**Initial:** 30.13 grams	**Batch:**	ESVO/3820 (HBN: 91737)	**Percent Solid:** 84.7
Prepared:	08/07/2012	**Final:** 1 mL	**Analyzed:**	08/09/2012 16:01	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.4	7.4	200	1	U
1,4-Dithiane	5.6	5.6	200	1	U

Sample ID: **FTSW-HR-SO-33** | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656006 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1293 (HBN: 91784)	**Initial:** 1.03 grams	**Batch:**	ELMS/1295 (HBN: 91861)	**Percent Solid:** 92.8
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 23:33	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.027	0.027	0.52	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15752 (HBN: 91130)	**Initial:** 30.04 grams	**Batch:**	ESVO/3820 (HBN: 91737)	**Percent Solid:** 92.8
Prepared:	08/07/2012	**Final:** 1 mL	**Analyzed:**	08/09/2012 16:30	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.8	6.8	180	1	U
1,4-Dithiane	5.1	5.1	180	1	U

Sample ID: **FTSW-HR-SO-34(10)** | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656007 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1293 (HBN: 91784)	**Initial:** 1.02 grams	**Batch:**	ELMS/1295 (HBN: 91861)	**Percent Solid:** 81.7
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/16/2012 00:10	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.031	0.031	0.60	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15752 (HBN: 91130)	**Initial:** 30.01 grams	**Batch:**	ESVO/3820 (HBN: 91737)	**Percent Solid:** 81.7
Prepared:	08/07/2012	**Final:** 1 mL	**Analyzed:**	08/09/2012 21:22	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.7	7.7	200	1	U

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ANALYTICAL REPORT

Workorder: 34-1221656
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-34(10)** Sampling Site: ERT Collected: 08/01/2012
Lab ID: 1221656007 Media: 8 oz Glass Jar Wide Mouth Received: 08/03/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15752 (HBN: 91130)	**Initial:** 30.01 grams	**Batch:**	ESVO/3820 (HBN: 91737)	**Percent Solid:** 81.7
Prepared:	08/07/2012	**Final:** 1 mL	**Analyzed:**	08/09/2012 21:22	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Dithiane	5.8	5.8	200	1	U

Sample ID: **FTSW-HR-SO-34(10)Dup** Sampling Site: ERT Collected: 08/01/2012
Lab ID: 1221656008 Media: 8 oz Glass Jar Wide Mouth Received: 08/03/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1293 (HBN: 91784)	**Initial:** 1 grams	**Batch:**	ELMS/1295 (HBN: 91861)	**Percent Solid:** 78.8
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/16/2012 01:22	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.033	0.033	0.63	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15752 (HBN: 91130)	**Initial:** 30.08 grams	**Batch:**	ESVO/3820 (HBN: 91737)	**Percent Solid:** 78.8
Prepared:	08/07/2012	**Final:** 1 mL	**Analyzed:**	08/09/2012 17:00	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	8.0	8.0	210	1	U
1,4-Dithiane	6.0	6.0	210	1	U

Sample ID: **FTSW-HR-SO-35** Sampling Site: ERT Collected: 08/01/2012
Lab ID: 1221656009 Media: 8 oz Glass Jar Wide Mouth Received: 08/03/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1293 (HBN: 91784)	**Initial:** 1.05 grams	**Batch:**	ELMS/1295 (HBN: 91861)	**Percent Solid:** 89.3
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/16/2012 01:59	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.53	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15752 (HBN: 91130)	**Initial:** 30.09 grams	**Batch:**	ESVO/3820 (HBN: 91737)	**Percent Solid:** 89.3
Prepared:	08/07/2012	**Final:** 1 mL	**Analyzed:**	08/09/2012 17:29	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.0	7.0	190	1	U
1,4-Dithiane	5.3	5.3	190	1	U

ANALYTICAL REPORT

Workorder: 34-1221656
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-36** | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656010 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1293 (HBN: 91784)	**Initial:** 1.01 grams	**Batch:**	ELMS/1295 (HBN: 91861)	**Percent Solid:** 82.4
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/16/2012 02:35	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.031	0.031	0.60	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15752 (HBN: 91130)	**Initial:** 30.13 grams	**Batch:**	ESVO/3820 (HBN: 91737)	**Percent Solid:** 82.4
Prepared:	08/07/2012	**Final:** 1 mL	**Analyzed:**	08/09/2012 17:58	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.6	7.6	200	1	U
1,4-Dithiane	5.8	5.8	200	1	U

Sample ID: **FTSW-HR-SO-37(09.5)** | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656011 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1293 (HBN: 91784)	**Initial:** 1.01 grams	**Batch:**	ELMS/1295 (HBN: 91861)	**Percent Solid:** 75.5
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/16/2012 03:11	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.034	0.034	0.66	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15752 (HBN: 91130)	**Initial:** 30.05 grams	**Batch:**	ESVO/3820 (HBN: 91737)	**Percent Solid:** 75.5
Prepared:	08/07/2012	**Final:** 1 mL	**Analyzed:**	08/09/2012 19:54	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	8.3	8.3	220	1	U
1,4-Dithiane	6.3	6.3	220	1	U

Sample ID: **FTSW-HR-SO-38** | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656012 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1293 (HBN: 91784)	**Initial:** 1.03 grams	**Batch:**	ELMS/1295 (HBN: 91861)	**Percent Solid:** 91.1
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/16/2012 03:48	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.53	1	U

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ANALYTICAL REPORT

Workorder: 34-1221656
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-38** | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656012 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15752 (HBN: 91130)	**Initial:** 30.06 grams	**Batch:**	ESVO/3820 (HBN: 91737)	**Percent Solid:** 91.1
Prepared:	08/07/2012	**Final:** 1 mL	**Analyzed:**	08/09/2012 18:27	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: **FTSW-HR-SO-39** | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656013 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1293 (HBN: 91784)	**Initial:** 1.04 grams	**Batch:**	ELMS/1295 (HBN: 91861)	**Percent Solid:** 90.5
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/16/2012 04:24	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.53	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15752 (HBN: 91130)	**Initial:** 30.04 grams	**Batch:**	ESVO/3820 (HBN: 91737)	**Percent Solid:** 90.5
Prepared:	08/07/2012	**Final:** 1 mL	**Analyzed:**	08/09/2012 18:56	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.0	7.0	180	1	U
1,4-Dithiane	5.3	5.3	180	1	U

Sample ID: **FTSW-HR-SO-40** | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656014 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1293 (HBN: 91784)	**Initial:** 1.04 grams	**Batch:**	ELMS/1295 (HBN: 91861)	**Percent Solid:** 74.4
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/16/2012 05:00	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.034	0.034	0.65	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15752 (HBN: 91130)	**Initial:** 30 grams	**Batch:**	ESVO/3820 (HBN: 91737)	**Percent Solid:** 74.4
Prepared:	08/07/2012	**Final:** 1 mL	**Analyzed:**	08/09/2012 20:24	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	8.5	8.5	220	1	U

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ANALYTICAL REPORT

Workorder: 34-1221656
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-40** | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656014 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15752 (HBN: 91130)	**Initial:** 30 grams	**Batch:**	ESVO/3820 (HBN: 91737)	**Percent Solid:** 74.4
Prepared:	08/07/2012	**Final:** 1 mL	**Analyzed:**	08/09/2012 20:24	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Dithiane	6.4	6.4	220	1	U

Sample ID: **FTSW-HR-SO-41** | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656015 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1293 (HBN: 91784)	**Initial:** 1.05 grams	**Batch:**	ELMS/1295 (HBN: 91861)	**Percent Solid:** 83.2
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/16/2012 05:37	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.030	0.030	0.57	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15752 (HBN: 91130)	**Initial:** 30.04 grams	**Batch:**	ESVO/3820 (HBN: 91737)	**Percent Solid:** 83.2
Prepared:	08/07/2012	**Final:** 1 mL	**Analyzed:**	08/09/2012 20:53	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.6	7.6	200	1	U
1,4-Dithiane	5.7	5.7	200	1	U

Sample ID: **FTSW-HR-SO-42** | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656016 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1293 (HBN: 91784)	**Initial:** 1.06 grams	**Batch:**	ELMS/1295 (HBN: 91861)	**Percent Solid:** 83.1
Prepared:	08/06/2012	**Final:** 10 mL	**Analyzed:**	08/16/2012 06:13	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.030	0.030	0.57	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15752 (HBN: 91130)	**Initial:** 30.11 grams	**Batch:**	ESVO/3820 (HBN: 91737)	**Percent Solid:** 83.1
Prepared:	08/07/2012	**Final:** 1 mL	**Analyzed:**	08/09/2012 19:25	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.6	7.6	200	1	U
1,4-Dithiane	5.7	5.7	200	1	U

ANALYTICAL REPORT

Workorder: 34-1221656
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-37(09.5)ERB | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656017 | Media: 1000 mL Amber Glass | Received: 08/03/2012
Matrix: Water | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Not Applicable	**Analysis:** Chemical Agent Breakdown, Water	**Instrument ID:** LCMS03
	Batch: ELMS/1288 (HBN: 91545)	**Percent Solid:** NA
	Analyzed: 08/13/2012 15:56	**Report Basis:** Wet

Analyte	ug/L	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual.
Thiodiglycol	2.6	2.6	50	1	U

Analysis Method - SW 8270

Preparation: EPA 3510, Sep Funnel SVOA	**Weight/Volume**	**Analysis:** SW 8270D, Water	**Instrument ID:** 5975-H
Batch: ENVX/15783 (HBN: 91345)	**Initial:** 1000 mL	**Batch:** ESVO/3811 (HBN: 91473)	**Percent Solid:** NA
Prepared: 08/08/2012	**Final:** 1 mL	**Analyzed:** 08/09/2012 12:33	**Report Basis:** Wet

Analyte	ug/L	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual.
1,4-Oxathiane	1.5	1.5	5.0	1	U
1,4-Dithiane	1.5	1.5	5.0	1	U

Comments

Quality Control: SW 8270 - (HBN: 91473)

Surrogate terphenyl-d14 was above the QC limits in some samples. With the large number of analytes reported by Method 8270, it is to be expected that occasional outliers will occur. Based on the rule of marginal exceedences, the ALS SOP makes allowances for the data to be considered acceptable with one base/neutral surrogate and one acid surrogate outside control limits.

Quality Control: SW 8270 - (HBN: 91737)

Recovery of surrogate 2,4,6-tribromophenol was below the QC limit in sample 1221656007. With the large number of analytes reported by Method 8270, it is to be expected that occasional outliers will occur. Based on the rule of marginal exceedences, the ALS SOP makes allowances for the data to be considered acceptable with one base/neutral surrogate and one acid surrogate outside control limits.

Report Authorization

Method	Analyst	Peer Review
Chemical Agent Breakdown	Thomas T. McKay	Thomas J. Masoian
SW 8270	Reed A. Hendricks	Guy Barker
Solids/Moisture Determination	Ilse J. Ovalle	Ashley Waganheim

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alsslc.com

ANALYTICAL REPORT

Workorder: 34-1221656
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint ,Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.
RL = Reporting Limit, a verified value of method/media/instrument sensitivity.
CRDL = Contract Required Detection Limit
Reg. Limit = Regulatory Limit.
ND = Not Detected, testing result not detected above the MDL or RL.
< This testing result is less than the numerical value.
** No result could be reported, see sample comments for details.

Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.
J = Qualifier Indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds calibration range.
P = Qualifier indicates that the RPD between the two columns is greater than 40%.

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1221656**

Limits:	Historical/Performance	**Preparation:**	NA
Basis:	ALS Laboratory Group	**Batch:**	NA
		Prepared By:	NA
Analysis:	Chemical Agent Breakdown		
Batch:	ELMS/1288 (HBN: 91545)		
Analyzed By:	Thomas T. McKay		

Blank

LMB: 289537
Analyzed: 08/13/2012 12:17
Units: ug/L

Analyte	Result	RL
Thiodiglycol	ND	50

Laboratory Control Sample

LCS: 289538
Analyzed: 08/13/2012 12:54
Units: ug/L

Analyte	Result	Target	% Recovery	QC Limits	
Thiodiglycol	2270	2000	113	73	131.2

Matrix Spike - Matrix Spike Duplicate

Sample: 1221555006
Analyzed: 08/13/2012 14:07
Units: ug/L

MS: 289539
Analyzed: 08/13/2012 14:43

MSD: 289540
Analyzed: 08/13/2012 15:19

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
Thiodiglycol	ND	5260	5000	105	80	120	5850	117	10.5	0	20

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1221656**

Limits: Historical/Performance	**Preparation:** NA	**Analysis:** Chemical Agent Breakdown
Basis: ALS Laboratory Group	**Batch:** NA	**Batch:** ELMS/1288 (HBN: 91545)
	Prepared By: NA	**Analyzed By:** Thomas T. McKay

QC Data Approved and Reviewed by

Thomas T. McKay	Thomas J. Masoian	8/15/2012
Analyst	**Peer Review**	**Date**

Symbols and Definitions

* - Analyte above reporting limit or outside of control limits
▲ - Sample result is greater than 4 times the spike added
◓ - Sample and Matrix Duplicate less than 5 times the reporting limit

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1221656**

Limits: Historical/Performance	**Preparation:** Chemical Agent Breakdown, Soil Prep	**Analysis:** Chemical Agent Breakdown
Basis: ALS Laboratory Group	**Batch:** ELMS/1293 (HBN: 91784)	**Batch:** ELMS/1295 (HBN: 91861)
	Prepared By: Thomas T. McKay	**Analyzed By:** Thomas T. McKay

Blank

LMB: 290472
Analyzed: 08/15/2012 18:42
Units: ug/g

Analyte	Result	RL
Thiodiglycol	ND	0.5

Laboratory Control Sample

LCS: 290473
Analyzed: 08/15/2012 19:18
Units: ug/g

Analyte	Result	Target	% Recovery	QC Limits	
Thiodiglycol	21.8	20	109	80	120

Matrix Spike - Matrix Spike Duplicate

Sample: 1221656001	**MS:** 1221656002	**MSD:** 1221656003
Analyzed: 08/15/2012 20:31	**Analyzed:** 08/15/2012 21:08	**Analyzed:** 08/15/2012 21:44
Units: ug/g		

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
Thiodiglycol	ND	48.2	48.1	100	80	120	50	101	3.7	0	20

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1221656**

Limits: Historical/Performance	**Preparation:** Chemical Agent Breakdown, Soil Prep	**Analysis:** Chemical Agent Breakdown
Basis: ALS Laboratory Group	**Batch:** ELMS/1293 (HBN: 91784)	**Batch:** ELMS/1295 (HBN: 91861)
	Prepared By: Thomas T. McKay	**Analyzed By:** Thomas T. McKay

QC Data Approved and Reviewed by

Thomas T. McKay	Thomas J. Masoian	8/16/2012
Analyst	**Peer Review**	**Date**

Symbols and Definitions

* - Analyte above reporting limit or outside of control limits
▲ - Sample result is greater than 4 times the spike added
◓ - Sample and Matrix Duplicate less than 5 times the reporting limit

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1221656**

Limits: Historical/Performance	**Preparation:** EPA 3510, Sep Funnel SVOA	**Analysis:** SW 8270
Basis: ALS Laboratory Group	**Batch:** ENVX/15783 (HBN: 91345)	**Batch:** ESVO/3811 (HBN: 91473)
	Prepared By: Dustin Calder	**Analyzed By:** Reed A. Hendricks

Blank

MB: 289024
Analyzed: 08/09/2012 10:35
Units: ug/L

Analyte	Result	RL
1,4-Oxathiane	ND	5
1,4-Dithiane	ND	5

Laboratory Control Sample - Laboratory Control Sample Duplicate

LCS: 289025
Analyzed: 08/09/2012 11:05
Units: ug/L

LCSD: 289026
Analyzed: 08/09/2012 11:34

Analyte	Result	Target	% Recovery	QC Limits		Result	RPD	QC Limits	
1,4-Oxathiane	28.5	40	71.2	36.2	101.4	23.8	17.8	0	50
1,4-Dithiane	30.4	40	75.9	50.7	98.8	25.7	16.6	0	50

Surrogate Recoveries

Surrogate	2-Fluorophenol		Nitrobenzene-d5		Phenol-d5	
QC Limits	0	121	22	130.3	0	145
Units	ug/L		ug/L		ug/L	

Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
289024-MB	18.6	50	37.3	37.2	50	74.4	15.8	50	31.5
289025-LCS	21.4	50	42.9	38.6	50	77.2	16.6	50	33.1
289026-LCSD	16.8	50	33.5	30.4	50	60.8	13.1	50	26.2
1221555006	20.9	50	41.7	37.6	50	75.2	16.1	50	32.2
1221656017	18.1	50	36.2	32.7	50	65.5	14.3	50	28.7

Surrogate	2,4,6-Tribromophenol		Terphenyl-d14		2-Fluorobiphenyl	
QC Limits	12.1	139.9	16.2	143.5	35.1	113.6
Units	ug/L		ug/L		ug/L	

Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
289024-MB	35.4	50	70.8	85.3	50	*171	37.3	50	74.6
289025-LCS	40.1	50	80.2	93.7	50	*187	40.2	50	80.4
289026-LCSD	32.5	50	65.1	61.9	50	124	31.7	50	63.4
1221555006	39.5	50	79	84.8	50	*170	39.3	50	78.6
1221656017	35.5	50	71	60.1	50	120	34.5	50	69

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1221656**

Limits: Historical/Performance	**Preparation:** EPA 3510, Sep Funnel SVOA	**Analysis:** SW 8270
Basis: ALS Laboratory Group	**Batch:** ENVX/15783 (HBN: 91345)	**Batch:** ESVO/3811 (HBN: 91473)
	Prepared By: Dustin Calder	**Analyzed By:** Reed A. Hendricks

Comments

Surrogate terphenyl-d14 was above the QC limits in some samples. With the large number of analytes reported by Method 8270, it is to be expected that occasional outliers will occur. Based on the rule of marginal exceedences, the ALS SOP makes allowances for the data to be considered acceptable with one base/neutral surrogate and one acid surrogate outside control limits.

QC Data Approved and Reviewed by

Reed A. Hendricks	Guy Barker	8/16/2012
Analyst	**Peer Review**	**Date**

Symbols and Definitions

* - Analyte above reporting limit or outside of control limits
▲ - Sample result is greater than 4 times the spike added
◓ - Sample and Matrix Duplicate less than 5 times the reporting limit

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable

Quality Control Sample
Batch Report

Analysis Information

Workorder: 1221656

Limits:	Historical/Performance	**Preparation:**	EPA 3550, Sonic Ext, SVOA Soil	**Analysis:**	SW 8270
Basis:	ALS Laboratory Group	**Batch:**	ENVX/15752 (HBN: 91130)	**Batch:**	ESVO/3820 (HBN: 91737)
		Prepared By:	Dustin Calder	**Analyzed By:**	Reed A. Hendricks

Blank

MB: 288277
Analyzed: 08/09/2012 13:02
Units: ug/Kg

Analyte	Result	RL
1,4-Oxathiane	ND	167
1,4-Dithiane	ND	167

Laboratory Control Sample

LCS: 288278
Analyzed: 08/09/2012 13:32
Units: ug/Kg

Analyte	Result	Target	% Recovery	QC Limits	
1,4-Oxathiane	644	1330	48.3	30	170
1,4-Dithiane	776	1330	58.2	30	170

Matrix Spike - Matrix Spike Duplicate

Sample: 1221656001
Analyzed: 08/09/2012 14:01
Units: ug/Kg

MS: 1221656002
Analyzed: 08/09/2012 14:31

MSD: 1221656003
Analyzed: 08/09/2012 15:01

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
1,4-Oxathiane	ND	737	1330	55.3	30	170	716	53.7	2.81	0	50
1,4-Dithiane	ND	855	1330	64.2	30	170	841	63.1	1.68	0	50

Surrogate Recoveries

Surrogate	2-Fluorobiphenyl			2-Fluorophenol			Phenol-d5		
QC Limits	38.1	125.1		15.3	128.2		14.5	131.9	
Units	ug/Kg			ug/Kg			ug/Kg		
Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
288277-MB	1020	1670	60.9	917	1670	55	1200	1670	72.1
288278-LCS	1210	1670	72.6	1060	1670	63.8	1390	1670	83.4
1221656001	1170	1660	70.3	941	1660	56.7	1230	1660	74.1
1221656002-MS	1320	1670	79.1	1100	1670	66.1	1420	1670	85.4
1221656003-MSD	1270	1670	76.4	1040	1670	62.4	1370	1670	82.4
1221656004-DUP	1280	1660	77.1	1050	1660	63.3	1350	1660	81.4
1221656005	1110	1660	67.1	959	1660	57.8	1280	1660	77.1
1221656006	898	1660	54	687	1660	41.3	917	1660	55.1
1221656007	1080	1670	64.8	798	1670	47.9	603	1670	36.2
1221656008-DUP	1050	1660	63.1	982	1660	59.1	1260	1660	75.8
1221656009	1260	1660	75.6	1080	1660	64.8	1430	1660	86
1221656010	1480	1660	89	1200	1660	72.3	1540	1660	92.8
1221656011	1200	1660	72.1	1100	1660	66.3	1380	1660	82.8
1221656012	1220	1660	73.3	980	1660	58.9	1270	1660	76.1

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1221656**

Limits: Historical/Performance
Basis: ALS Laboratory Group

Preparation: EPA 3550, Sonic Ext, SVOA Soil
Batch: ENVX/15752 (HBN: 91130)
Prepared By: Dustin Calder

Analysis: SW 8270
Batch: ESVO/3820 (HBN: 91737)
Analyzed By: Reed A. Hendricks

Surrogate Recoveries

Surrogate	2-Fluorobiphenyl			2-Fluorophenol			Phenol-d5		
QC Limits	38.1	125.1		15.3	128.2		14.5	131.9	
Units	ug/Kg			ug/Kg			ug/Kg		
Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
1221656013	996	1660	59.9	815	1660	49	1040	1660	62.7
1221656014	1480	1670	88.7	1220	1670	73	1580	1670	94.7
1221656015	1360	1660	81.7	1100	1660	66.1	1410	1660	84.6
1221656016	1250	1660	75.1	982	1660	59.1	1290	1660	77.5

Surrogate	Terphenyl-d14			Nitrobenzene-d5			2,4,6-Tribromophenol		
QC Limits	17.7	171.2		17.4	135.5		22.1	146.8	
Units	ug/Kg			ug/Kg			ug/Kg		
Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
288277-MB	1260	1670	75.6	943	1670	56.6	1180	1670	70.8
288278-LCS	1340	1670	80.5	1140	1670	68.1	1280	1670	76.9
1221656001	2300	1660	138	1010	1660	60.7	1310	1660	78.9
1221656002-MS	1390	1670	83.6	1200	1670	71.8	1440	1670	86.5
1221656003-MSD	1370	1670	82.2	1150	1670	69	1420	1670	85.3
1221656004-DUP	1360	1660	81.6	1150	1660	69.2	1460	1660	87.5
1221656005	1250	1660	75.3	986	1660	59.4	1280	1660	77.1
1221656006	931	1660	56	763	1660	45.8	992	1660	59.6
1221656007	1860	1670	112	955	1670	57.3	322	1670	*19.3
1221656008-DUP	1240	1660	74.8	985	1660	59.3	1030	1660	62.2
1221656009	1610	1660	97.1	1160	1660	69.5	1350	1660	81.5
1221656010	1530	1660	92.5	1350	1660	81.3	1630	1660	98.2
1221656011	1520	1660	91.4	1170	1660	70.1	1160	1660	69.7
1221656012	1350	1660	81	1060	1660	63.8	1320	1660	79.5
1221656013	1520	1660	91.4	898	1660	53.9	1050	1660	62.9
1221656014	2010	1670	120	1340	1670	80.6	1600	1670	95.8
1221656015	1650	1660	98.9	1250	1660	75.2	1430	1660	85.8
1221656016	1320	1660	79.7	1090	1660	65.7	1320	1660	79.8

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1221656**

Limits:	Historical/Performance	**Preparation:**	EPA 3550, Sonic Ext, SVOA Soil	**Analysis:**	SW 8270
Basis:	ALS Laboratory Group	**Batch:**	ENVX/15752 (HBN: 91130)	**Batch:**	ESVO/3820 (HBN: 91737)
		Prepared By:	Dustin Calder	**Analyzed By:**	Reed A. Hendricks

Comments

Recovery of surrogate 2,4,6-tribromophenol was below the QC limit in sample 1221656007. With the large number of analytes reported by Method 8270, it is to be expected that occasional outliers will occur. Based on the rule of marginal exceedences, the ALS SOP makes allowances for the data to be considered acceptable with one base/neutral surrogate and one acid surrogate outside control limits.

QC Data Approved and Reviewed by

Reed A. Hendricks	Guy Barker	8/16/2012
Analyst	**Peer Review**	**Date**

Symbols and Definitions

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▲ - Sample result is greater than 4 times the spike added
◓ - Sample and Matrix Duplicate less than 5 times the reporting limit

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable

SUBCONTRACT TO ALS SALT LAKE CITY

1221656

ALS Environmental

Ship to: 34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

9855/1,2,3,4

Page 1 of 3

Courier:

Tracking #: 79860719 434

1221656

9980875

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Co. Name: ERT inc

Contact (Report to): Mike Gearheart

Phone: 301-323-1403

Address: 6100 Frost PL
Suite A
Laurel MD 20707

Bill to (if different than Report to):

PO#:

Project Name/#: Ft. Stewart 3153-004

ALS Quote #:

TAT: [ ] Normal-Standard TAT is 10 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? [X] -Y Mike.Gearheart@ertcorp.com

Fax? [ ] -Y No.:

***Container Type	CG	AG														
***Container Size	4oz	8oz														
*** Preservative	—	—														

ANALYSES/METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	SW-846 6020	SW-846 8270D/8321								
1	FTSW-HR-SO-31		8/1/12	0744	G	So	1	1								
2	FTSW-HR-SO-31 Dup		8/1/12	0746	G	So	1	1								
3	FTSW-HR-SO-31 MS		8/1/12	0748	G	So	1	1								
4	FTSW-HR-SO-31 MSD		8/1/12	0751	G	So	1	1								
5	FTSW-HR-SO-32 (10)		8/1/12	0853	G	So	1	1								
6	FTSW-HR-SO-33		8/1/12	0924	G	So	1	1								
7	FTSW-HR-SO-34 (10)		8/1/12	1016	G	So	1	1								
8	FTSW-HR-SO-34 (10) Dup		8/1/12	1018	G	So	1	1								

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)

Performed by: [illegible] INITIAL HERE

Cooler Temp: 4

Therm. ID: AP1

No. of Coolers:

Notes:

Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
Y	Y	Y	Y	Y
N	N	N	N	N

Correct containers? Y N

Correct sample volume? Y N

Correct preservation? Y N

Headspace/Volatiles? Y N

Circle appropriate Y or N

SAMPLED BY (Please Print): Rebekah McCoy

LOGGED BY(signature): K. Snow DATE: 8/2/12 TIME: 1050

REVIEWED BY(signature): DATE: TIME:

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature] McCoy ERT	8/1/12	1530	2	[signature]	8/2/12	0915
3	[signature]	8-2-12	1720	4	[signature]	8/3/12	838
5				6			
7				8			
9				10			

Data Deliverables: [ ] Standard [X] CLP-like [ ] NJ-Reduced [ ] NJ-Full [X] DOD (other)

EDDs Required? [X] If yes, format type: SEDD

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

Other GA

DOD Criteria Required? YES QAPP

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite

**Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 6/2011

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

(ALS) Environmental

Ship to: 34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 2 of 3

Courier:

Tracking #: 298687[illegible]

9980875

Co. Name: ERT, inc

Contact (Report to): Mike. Gearheart Phone: 301-323-1403

Address: 6100 Frost PL
Suite A
Laurel MD 20707

Bill to (if different than Report to): PO#:

Project Name/#: Ft. Stewart 3153-004 ALS Quote #:

TAT: Normal-Standard TAT is 10 business days. Date Required:
Rush-Subject to ALS approval and surcharges. Approved By:

Email? K -Y Mike.Gearheart@ertcorp.com

Fax? -Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	***Container Type	***Container Size	*** Preservative	SW-846 6020	SW-846 8270D/8331	NH3-N, TKN, Nitrate/Nitrite	2-CEVP, 1,2,3	Split Sample	Enter Number of Containers Per Analysis
						CG	AG							4349
						4oz	8oz							
						—	—							
1 FTSW-HR-SO-35		8/1/12	1046	G	So				1	1				
2 FTSW-HR-SO-36		8/1/12	1125	G	So				1	10				broke in transition
3 FTSW-HR-SO-37 (0-9.5)		8/1/12	1226	G	So				1	1				
4 FTSW-HR-SO-38		8/1/12	1357	G	So				1	1				
5 FTSW-HR-SO-39		8/1/12	1405	G	So				1	1				
6 FTSW-HR-SO-40		8/1/12	1415	G	So				1	1				
7 FTSW-HR-SO-41		8/1/12	1425	G	So				1	1				
8 FTSW-HR-SO-42		8/1/12	1432	G	So				1	1				

SAMPLED BY (Please Print): Rebekah McCoy

LOGGED BY(signature): [signature] DATE: 8/2/12 TIME: 1050

REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] ERT	8/1/12	1530	2 [signature]	8/2/12	0915
3 [signature]	8/2/12	1720	4 [signature]	8/3/12	838
5			6		
7			8		
9			10		

Data Deliverables: Standard; CLP-like; NJ-Reduced; NJ-Full; (new)

EDDs Required? If yes, format type:

DOD Criteria Required?

SDWA Forms? ⇒ yes

State Samples Collected In? MD; NJ; NY; PA

Other: GA

Receipt Information (completed by Sample Receiving)

Performed by: [illegible]

Cooler Temp: 4

Therm. ID: T#2

No. of Coolers:

Notes:

Circle appropriate Y or N.	Container in good condition?	COC/Labels complete/accurate?	Received on Ice?	Correct preservation?	Correct sample volume?	Headspace/Volatiles?	Custody seals Present?	(If present) Seals intact?	Correct containers?
	Y	Y	Y	N	N	Y	N	N	N
	N	N	N	N	N	N	Y	Y	Y

ALS FIELD SERVICES

- Pickup
- Labor
- Composite Sampling
- Rental Equipment
- Other:

* G=Grab; C=Composite

**Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 6/2011

ALS Environmental

Ship to: 34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier:

Tracking #: 7980875 8 9349

9980875

Co. Name: ERT, inc

Contact (Report to): Mike Gearheart Phone: 301-323-1403

Address: 6100 Frost PL
Suite A
Laurel MD 20707

Bill to (if different than Report to): PO#:

Project Name/#: Ft. Stewart 3153-004 ALS Quote #:

TAT: ☐ Normal-Standard TAT is 10 business days. ☐ Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? X -Y Mike.Gearheart@ertcorp.com

Fax? -Y No.:

***Container Type	AG	PL													
***Container Size	1L	250ml													
*** Preservative	—	HNO3													

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	SW-846 8270D/8321	SW-846 6020								
1 FTSW-HR-SO-37(09.5) ERB		8/1/12		G	WW	2	1								
2															
3															
4															
5															
6															
7															
8															

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)

Performed by: [illegible] INITIAL HERE

Cooler Temp: 4

Therm. ID: 7 12 15

No. of Coolers:

Notes:

Circle appropriate Y or N.	Headspace/Volatiles?	Correct preservation?	Correct sample volume?	Correct containers?
Y	Y	Y	Y	Y
N	N	N	N	N

Container in good condition?	COC/Labels complete/accurate?	Received on ice?	(if present) Seals intact?	Custody seals Present?
Y	Y	Y	Y	Y
N	N	N	N	N

SAMPLED BY (Please Print): Rebekah McCoy

LOGGED BY(signature): K. Snow DATE: 8/2/12 TIME: 1050

REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] ERT	8/1/12	1530	2 [signature]	8/2/12	0915
3 [signature]	8/2/12	1820	4 [signature]	8/3/12	838
5			6		
7			8		
9			10		

Data Deliverables: ☐ Standard ☐ CLP-like ☐ NJ-Reduced ☐ NJ-Full ☐ (other)

SDWA Forms?⇒ yes ☐ yes ☐ yes ☐ yes ☐

State Samples Collected In? MD ☐ NJ ☐ NY ☐ PA ☐

EDDs Required? ☐ If yes, format type: Other GA

DOD Criteria Required?

ALS FIELD SERVICES: ☐ Pickup ☐ Labor ☐ Composite Sampling ☐ Rental Equipment ☐ Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 6/2011

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task:	Split:	Workorder ID: 1221656
Client: ALS Laboratory Group		Account: 8001
Comments:		

Type: 1000AG

Preservatives: COOL

Containers

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	ID(s)	Count	Chemical Agent Breakdown	SW8270
1	08/01/2012 14:34	FTSW-HR-SO-37(09.5)ERB	1221656017		Water	A,B	2	A	A
2									
3									
4									
5									
6									
7									
8									
9									
10									

Requested Analysis

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Edwards, Meredith D.	08/03/2012 08:38	ALS Sample Receiving	Sample Login
Meredith Edwards	8/3/12	R-33-1 Cont	Storage
R-33-1 CP	8/6/12 12:00	Chalin Pre	Ext
Chalin Pre	8/6/12 14:00	R-33-1 Cart CP	Storage
R-33-1	8-8-12 1600	Dustin Calder	Ext
~~D~~	Sample	Consumed DC 8-13-12	
Dustin Calder	8-8-12 1730	R-33-1	Storage
R-33-1	08/13/12 1120	[illegible]	TDG
- Sample Consumed -			

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: _____ Lab Notebook No.: _____

Prepared / Analyzed by: _____ Date / Time: _____

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location

Fri, 08/03/12 5:38 PM

ALSCOCV2.4

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task:	Split:	Workorder ID: 1221656
Client: ALS Laboratory Group		Account: 8001
Comments:		

Type: 8ozGWM

Preservatives: COOL

Requested Analysis: Chemical Agent Breakdown; SW8270

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	Containers ID(s)	Containers Count	Chemical Agent Breakdown	SW8270
1	08/01/2012 07:44	FTSW-HR-SO-31	1221656001		Soil/Solid/Sediment	A	1	A	A
2	08/01/2012 07:48	FTSW-HR-SO-31 MS	1221656002	MS	Soil/Solid/Sediment	A	1	A	A
3	08/01/2012 07:51	FTSW-HR-SO-31 MSD	1221656003	MSD	Soil/Solid/Sediment	A	1	A	A
4	08/01/2012 07:46	FTSW-HR-SO-31 Dup	1221656004	DUP	Soil/Solid/Sediment	A	1	A	A
5	08/01/2012 08:53	FTSW-HR-SO-32(10)	1221656005		Soil/Solid/Sediment	A	1	A	A
6	08/01/2012 09:24	FTSW-HR-SO-33	1221656006		Soil/Solid/Sediment	A	1	A	A
7	08/01/2012 10:16	FTSW-HR-SO-34(10)	1221656007		Soil/Solid/Sediment	A	1	A	A
8	08/01/2012 10:18	FTSW-HR-SO-34(10)Dup	1221656008	DUP	Soil/Solid/Sediment	A	1	A	A
9	08/01/2012 10:46	FTSW-HR-SO-35	1221656009		Soil/Solid/Sediment	A	1	A	A
10	08/01/2012 11:28	FTSW-HR-SO-36	1221656010		Soil/Solid/Sediment	A	1	A	A

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Edwards, Meredith D.	08/03/2012 08:38	ALS Sample Receiving	Sample Login
Meredith Edwards	8/3/12	13c	Storage
R-33-1	8/6/12 15:15	[illegible]	Ext
[illegible]	8/6/12 16:15	R-319-1	Storage

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: _____ Lab Notebook No.: _____

Prepared / Analyzed by: _____ Date / Time: _____

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task:	Split:	Workorder ID: 1221656
Client: ALS Laboratory Group		Account: 8001
Comments:		

Type: 8ozGWM

Preservatives: COOL

Requested Analysis: Chemical Agent Breakdown; SW8270

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	Containers ID(s)	Containers Count	Chemical Agent Breakdown	SW8270
11	08/01/2012 12:52	FTSW-HR-SO-37(09.5)	1221656011		Soil/Solid/Sediment	A	1	A	A
12	08/01/2012 13:57	FTSW-HR-SO-38	1221656012		Soil/Solid/Sediment	A	1	A	A
13	08/01/2012 14:05	FTSW-HR-SO-39	1221656013		Soil/Solid/Sediment	A	1	A	A
14	08/01/2012 14:15	FTSW-HR-SO-40	1221656014		Soil/Solid/Sediment	A	1	A	A
15	08/01/2012 14:25	FTSW-HR-SO-41	1221656015		Soil/Solid/Sediment	A	1	A	A
16	08/01/2012 14:34	FTSW-HR-SO-42	1221656016		Soil/Solid/Sediment	A	1	A	A
17									
18									
19									
20									

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Edwards, Meredith D.	08/03/2012 08:38	ALS Sample Receiving	Sample Login
[signature]	8/3/12	[signature]	Storage
R-33-1	8/6/12 15:15	[signature]	Ext
[signature]	8/6/12 16:15	R-315-1	storage

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: _____ Lab Notebook No.: _____

Prepared / Analyzed by: _____ Date / Time: _____

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location

From: (717) 944-5541
Steve Smith

34 DOGWOOD LANE

MIDDLETOWN, PA 17057

Origin ID: MDTA

FedEx Express

J12201207 tc0525

Ship Date: 02AUG12
ActWgt: 62.0 LB
CAD: 7121996/NET3300

Delivery Address Bar Code

Ref # Summa's
Invoice #
PO #
Dept #

SHIP TO: (000) 000-0000

BILL SENDER

ALS - UT
ALS - UT
960 LEVOY DR

SALT LAKE CITY, UT 84123

FRI - 03 AUG A1
PRIORITY OVERNIGHT

TRK# 7938 6293 7156
0201

XH NPHA

84123
UT-US
SLC

515G1/A270/AA44

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $500, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task:	Split:	Workorder ID: 1221656	Requested Analysis
Client: ALS Laboratory Group		Account: 8001	Type: 1000AG
Comments:			Preservatives: COOL

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	Containers ID(s)	Containers Count	Chemical Agent Breakdown	SW8270
1	08/01/2012 14:34	FTSW-HR-SO-37(09.5)ERB	1221656017		Water	A,B	2	A	A
2									
3									
4									
5									
6									
7									
8									
9									
10									

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Edwards, Meredith D.	08/03/2012 08:38	ALS Sample Receiving	Sample Login
Meredith Edwards	8/3/12	[illegible]	Storage
R-33-1 CP	8/16/12 12:00	Chalin Pro	Ext
Chalin Pro	8/16/12 14:00	R-33-1 Cart CP	Storage
R-33-1	8-8-12 1600	Dusti Calder	Ext
⊖	Sample	Consumed	

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: SV Lab Notebook No.: _____

Prepared / Analyzed by: _____ Date / Time: _____

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Dusti Calder	8/8/12 17:20	R-63-1	Storage
R-63-1 [illegible]	8/9/12 8:00	[illegible]	cone
[illegible]	8/9/12 9:00	R-[illegible]	Stor

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task:	Split:	Workorder ID: 1221656
Client: ALS Laboratory Group		Account: 8001
Comments:		

Type: 8ozGWM

Preservatives: COOL

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	Containers ID(s)	Containers Count	Requested Analysis: Chemical Agent Breakdown	Requested Analysis: SW8270
1	08/01/2012 07:44	FTSW-HR-SO-31	1221656001		Soil/Solid/Sediment	A	1	A	A
2	08/01/2012 07:48	FTSW-HR-SO-31 MS	1221656002	MS	Soil/Solid/Sediment	A	1	A	A
3	08/01/2012 07:51	FTSW-HR-SO-31 MSD	1221656003	MSD	Soil/Solid/Sediment	A	1	A	A
4	08/01/2012 07:46	FTSW-HR-SO-31 Dup	1221656004	DUP	Soil/Solid/Sediment	A	1	A	A
5	08/01/2012 08:53	FTSW-HR-SO-32(10)	1221656005		Soil/Solid/Sediment	A	1	A	A
6	08/01/2012 09:24	FTSW-HR-SO-33	1221656006		Soil/Solid/Sediment	A	1	A	A
7	08/01/2012 10:16	FTSW-HR-SO-34(10)	1221656007		Soil/Solid/Sediment	A	1	A	A
8	08/01/2012 10:18	FTSW-HR-SO-34(10)Dup	1221656008	DUP	Soil/Solid/Sediment	A	1	A	A
9	08/01/2012 10:46	FTSW-HR-SO-35	1221656009		Soil/Solid/Sediment	A	1	A	A
10	08/01/2012 11:28	FTSW-HR-SO-36	1221656010		Soil/Solid/Sediment	A	1	A	A

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Edwards, Meredith D.	08/03/2012 08:38	ALS Sample Receiving	Sample Login
Meredith Edwards	8/3/12	13v	Storage
R-33-1	8/6/12 15:15	[illegible]	Ext
[illegible]	8/6/12 16:15	R-319-1	Storage

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: SV Lab Notebook No.: _____

Prepared / Analyzed by: _____ Date / Time: _____

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
[illegible]	08/07/12 14:00	[illegible]	cone
[illegible]	08/07/12 16:00	[illegible]	Stor

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task:	Split:	Workorder ID: 1221656
Client: ALS Laboratory Group		Account: 8001
Comments:		

Type: 8ozGWM

Preservatives: COOL

Requested Analysis: Chemical Agent Breakdown; SW8270

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	Containers ID(s)	Containers Count	Chemical Agent Breakdown	SW8270
11	08/01/2012 12:52	FTSW-HR-SO-37(09.5)	1221656011		Soil/Solid/Sediment	A	1	A	A
12	08/01/2012 13:57	FTSW-HR-SO-38	1221656012		Soil/Solid/Sediment	A	1	A	A
13	08/01/2012 14:05	FTSW-HR-SO-39	1221656013		Soil/Solid/Sediment	A	1	A	A
14	08/01/2012 14:15	FTSW-HR-SO-40	1221656014		Soil/Solid/Sediment	A	1	A	A
15	08/01/2012 14:25	FTSW-HR-SO-41	1221656015		Soil/Solid/Sediment	A	1	A	A
16	08/01/2012 14:34	FTSW-HR-SO-42	1221656016		Soil/Solid/Sediment	A	1	A	A
17									
18									
19									
20									

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Edwards, Meredith D.	08/03/2012 08:38	ALS Sample Receiving	Sample Login
Meredith Edwards	8/3/12		Storage
R-33-1	8/6/12 15:15		F.A
	8/6/12 16:15	R-319-1	storage

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: SV

Lab Notebook No.:

Prepared / Analyzed by:

Date / Time:

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
	08/07/12 14:00		cone
	08/07/12 16:00		Store

ALS Laboratory Group Salt Lake City-Related Information Report (CRIR)

Cooler or Container Information Checklist (Fill In or Circle)

Client Name: ALS Middleton — Project/Task/Site: WO#656

Date/Time of Receipt: 8/3/12 838 — Number of Coolers Received: 1

Condition of Coolers:	Acceptable/Unacceptable	Temperature Control:	Present/Not Included
Custody Seals:	Present/Absent/NA	Location Temp Taken:	Cooler/Between Samples
	Intact/Broken/NA	Are all temperatures within	
Tamper Evident:	Yes/No/NA	project specific guidelines?	Yes/No/NA (see 8/3/12)
Ice Present:	Yes/No/NA	Are all applicable pHs within	
	Frozen/Melted/NA	specific guidelines?	Yes/No/NA

pH Check Performed:	Metals	Yes/No/NA	Total Phenolics	Yes/No/NA	NO3/NO2	Yes/No/NA
	Cyanide	Yes/No/NA	TPH – 418.1	Yes/No/NA	Oil & Grease	Yes/No/NA
	Sulfide	Yes/No/NA	COD	Yes/No/NA	Total Phosphorous	Yes/No/NA
	Ammonia	Yes/No/NA	TKN	Yes/No/NA	Gross A.B, Gamma Spec	Yes/No/NA
Residual Chlorine Check Performed:	8270	Yes/No/NA	8310	Yes/No/NA	8330	Yes/No/NA
	8081	Yes/No/NA	8151	Yes/No/NA		

Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.
1	C12- 8473	4 °C	4	C12-	°C	7	C12-	°C
2	C12-	°C	5	C12-	°C	8	C12-	°C
3	C12-	°C	6	C12-	°C	9	C12-	°C

Taken By: [signature] (Signature) — Meredith Edwards (Printed Name) — 8/3/12 (Date)

Client-Related Information

☐ Missing Cooler	☐ Missing Samples/Bottles	☐ Incorrect Preservation	☐ Insufficient Sample Volume
☐ Cooler Conditions	☑ Broken/Leaking Samples	☐ pH Criteria Not Met	☐ Chain of Custody Problems
☐ Missing Paperwork	☐ Incorrect Bottle Type	☐ Residual Chlorine Present	☐ Other:
☐ Missing/Incorrect Bottle Labels	☐ Cooler Temperatures Out of Range	☐ Head Space in Bottles	EPA Custody Seal:

Briefly Describe the Problem and the Action Taken:

FTSW-HR-SO-35 received with a crossed lid.

FTSW-HR-SO-34 Dup received with a crossed lid.

Faxed to Client? YES ☐ NO ☐ (if yes, attach Fax Cover Sheet)

Response Required Within 24 Hours

Project Management

Project Manager Comments:

Spoke with Kelly in Sample receiving Middleton, advised crossed lids. She advised to proceed. MT 8/3/12

ALS Project Manager: _____ (Printed Name) Returned to Sample Receipt by: _____ (Signature) Date: _____

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Soil

Analytical Documentation

Batch Worklist

Batch: ELMS/ 1295 **Created:** 8/16/2012 14:10 **Instrument:** HBN: 91861

Rule: Chemical Agent BD, Soil **Analyst:** T. McKay **Status:** WP

Workorder: 1221656

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	290472	LMB for HBN 91784 [ELMS/1293]	1 grams	10 mL	4	LMB		DCAB....4Q	5948	9/15/2012	8/16/2012	
2	290473	LCS for HBN 91784 [ELMS/1293]	1 grams	10 mL	4	LCS		DCAB....4Q	5948	9/15/2012	8/16/2012	
3	290474	RLVS for HBN 91784 [ELMS/1293]	1 grams	10 mL	3	RLVS		DCAB...C4Q	5948		8/16/2012	
4	1221656001	FTSW-HR-SO-31	1.06 grams	10 mL	4	SAMPLE	1221656001-A	DCAB.....4	5480	9/15/2012	8/16/2012	
5	1221656002	FTSW-HR-SO-31 MS	1.04 grams	10 mL	4	MS	1221656002-A	DCAB....4Q	5480	9/15/2012	8/16/2012	
6	1221656003	FTSW-HR-SO-31 MSD	1.01 grams	10 mL	4	MSD	1221656003-A	DCAB....4Q	5480	9/15/2012	8/16/2012	
7	1221656004	FTSW-HR-SO-31 Dup	1.01 grams	10 mL	4	DUP	1221656004-A	DCAB.....4	5480	9/15/2012	8/16/2012	
8	1221656005	FTSW-HR-SO-32(10)	1 grams	10 mL	4	SAMPLE	1221656005-A	DCAB.....4	5480	9/15/2012	8/16/2012	
9	1221656006	FTSW-HR-SO-33	1.03 grams	10 mL	4	SAMPLE	1221656006-A	DCAB.....4	5480	9/15/2012	8/16/2012	
10	1221656007	FTSW-HR-SO-34(10)	1.02 grams	10 mL	4	SAMPLE	1221656007-A	DCAB.....4	5480	9/15/2012	8/16/2012	
11	1221656008	FTSW-HR-SO-34(10)Dup	1 grams	10 mL	4	DUP	1221656008-A	DCAB.....4	5480	9/15/2012	8/16/2012	
12	1221656009	FTSW-HR-SO-35	1.05 grams	10 mL	4	SAMPLE	1221656009-A	DCAB.....4	5480	9/15/2012	8/16/2012	
13	1221656010	FTSW-HR-SO-36	1.01 grams	10 mL	4	SAMPLE	1221656010-A	DCAB.....4	5480	9/15/2012	8/16/2012	
14	1221656011	FTSW-HR-SO-37(09.5)	1.01 grams	10 mL	4	SAMPLE	1221656011-A	DCAB.....4	5480	9/15/2012	8/16/2012	
15	1221656012	FTSW-HR-SO-38	1.03 grams	10 mL	4	SAMPLE	1221656012-A	DCAB.....4	5480	9/15/2012	8/16/2012	
16	1221656013	FTSW-HR-SO-39	1.04 grams	10 mL	4	SAMPLE	1221656013-A	DCAB.....4	5480	9/15/2012	8/16/2012	
17	1221656014	FTSW-HR-SO-40	1.04 grams	10 mL	4	SAMPLE	1221656014-A	DCAB.....4	5480	9/15/2012	8/16/2012	
18	1221656015	FTSW-HR-SO-41	1.05 grams	10 mL	4	SAMPLE	1221656015-A	DCAB.....4	5480	9/15/2012	8/16/2012	
19	1221656016	FTSW-HR-SO-42	1.06 grams	10 mL	4	SAMPLE	1221656016-A	DCAB.....4	5480	9/15/2012	8/16/2012	

Batch Worklist

Batch: ELMS/ 1293 **Created:** 8/15/2012 16:56 **Instrument:** HBN: 91784

Rule: Chemical Agent BD, Soil Prep **Analyst:** T. McKay **Status:** NA

Workorder: 1221656

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	290472	LMB for HBN 91784 [ELMS/1293]			4	LMB		DCAB....4P	5948	8/29/2012	8/8/2012	
2	290473	LCS for HBN 91784 [ELMS/1293]			4	LCS		DCAB....4P	5948	8/29/2012	8/8/2012	
3	290474	RLVS for HBN 91784 [ELMS/1293]			3	RLVS		DCAB....4P	5948	8/29/2012	8/8/2012	
4	1221656001	FTSW-HR-SO-31			4	SAMPLE	1221656001-A	DCAB....4P	5480	8/15/2012	8/8/2012	
5	1221656002	FTSW-HR-SO-31 MS			4	MS	1221656002-A	DCAB....4P	5480	8/15/2012	8/8/2012	
6	1221656003	FTSW-HR-SO-31 MSD			4	MSD	1221656003-A	DCAB....4P	5480	8/15/2012	8/8/2012	
7	1221656004	FTSW-HR-SO-31 Dup			4	DUP	1221656004-A	DCAB....4P	5480	8/15/2012	8/8/2012	
8	1221656005	FTSW-HR-SO-32(10)			4	SAMPLE	1221656005-A	DCAB....4P	5480	8/15/2012	8/8/2012	
9	1221656006	FTSW-HR-SO-33			4	SAMPLE	1221656006-A	DCAB....4P	5480	8/15/2012	8/8/2012	
10	1221656007	FTSW-HR-SO-34(10)			4	SAMPLE	1221656007-A	DCAB....4P	5480	8/15/2012	8/8/2012	
11	1221656008	FTSW-HR-SO-34(10)Dup			4	DUP	1221656008-A	DCAB....4P	5480	8/15/2012	8/8/2012	
12	1221656009	FTSW-HR-SO-35			4	SAMPLE	1221656009-A	DCAB....4P	5480	8/15/2012	8/8/2012	
13	1221656010	FTSW-HR-SO-36			4	SAMPLE	1221656010-A	DCAB....4P	5480	8/15/2012	8/8/2012	
14	1221656011	FTSW-HR-SO-37(09.5)			4	SAMPLE	1221656011-A	DCAB....4P	5480	8/15/2012	8/8/2012	
15	1221656012	FTSW-HR-SO-38			4	SAMPLE	1221656012-A	DCAB....4P	5480	8/15/2012	8/8/2012	
16	1221656013	FTSW-HR-SO-39			4	SAMPLE	1221656013-A	DCAB....4P	5480	8/15/2012	8/8/2012	
17	1221656014	FTSW-HR-SO-40			4	SAMPLE	1221656014-A	DCAB....4P	5480	8/15/2012	8/8/2012	
18	1221656015	FTSW-HR-SO-41			4	SAMPLE	1221656015-A	DCAB....4P	5480	8/15/2012	8/8/2012	
19	1221656016	FTSW-HR-SO-42			4	SAMPLE	1221656016-A	DCAB....4P	5480	8/15/2012	8/8/2012	

ALS WO ID #(S):1221656
ALS Sample #(S):1221656001-016
ALS Account #(s): 8001 Method: ALS LC/MS Matrix: Soil
Sequence: \\CHEM32\1\SEQUENCE\15AUG12-ABP-S.S
Prep Date: 08/06/2012 Analysis Date: 08/15/12 - 08/16/12
Prep/Analysis HBN #s: 91784/91861 Instrument LOD: 0.050µg/mL
Analyte: **Thiodiglycol (TDG)**
Reported MDL: See Report Reported LOD: See Report

SAMPLE PREPARATION: All ALS sample #'s agreed with field ID #'s. Approximately 1.00g of each sample was weighed into a 15-mL centrifuge tube, and 9.9mL of ASTM Type II water was added to each tube. 100µL of internal standard solution was then added to each sample, bringing the total extraction volume to 10.0mL. The samples were capped, vortexed, rotated for at least 30 minutes, and filtered with Pall 0.45µm Ion Chromatography Acrodiscs prior to analysis.

REAGENTS: Eluent A: 100% ASTM Type II water/0.1% glacial acetic acid.
Eluent B: 95% ACN/ 5% ASTM Type II water/0.1% glacial acetic acid.

HORIZON STANDARD(S): TDG (14169); MPA (14170); IMPA (14172); EMPA (14174); DIMP (14179)
All standards are at 1000µg/mL. Standards used to create calibration standards and those used for CCVs (target = 5.00µg/mL) and RLVS (target = 0.050µg/mL).
Internal Standard Solution: TDG-D8 (14177) at 100ug/mL.

CALIBRATION CURVE: Run 05/01/2012.
Raw data can be found in \\Alsltws013\DataReview\85766.

INSTRUMENT CONDITIONS: Samples were analyzed with an Agilent 1200 LC/MSD system, in positive SIM mode, monitoring m/z 97, 125, 139, 146, 181, 105 and 113.
Instrument ID: LCMS03 Run Time: 35.00 min. Flow Rate: 0.8mL/min Temp: 30°C
Output Gain: 3 Injection Volume: 10µL Fragmentor Voltage: 75 & 125
Column: Phenomenex Synergi Hydro-RP 4 micron (4.6 x 250mm) s/n: 245485-24

GRADIENT:

Time(min)	%Eluent A	%Eluent B
0.00	100.0	0.0
15.00	100.0	0.0
17.00	50.0	50.0
25.00	50.0	50.0
25.01	100.0	0.0

QC DATA: LMB/LCS **290472/73** were run with the batch. 1.00g of washed sand (EMD Lot# 36211706) was prepared in the same manner as the samples. 20µl of Horizon QC standard 13383 was added to 10.0mL of sample preparation for the LCS. Target = 20.0ug/g. ASTM Type II water was used for LMB extraction.

MS/MSD: MS/MSD was performed on sample 1221656001. 50µl of Horizon standard 14169 was added to 10.0mL of sample preparation. Spike target = 50.0µg/g.

COMMENTS: 1) Quantitation was done using m/z 105 for TDG. No confirmation ions were available for TDG. Results are reported in ug/g.
2) All CCV, LMB, LCS and MS/MSD results were within acceptable limits.

STANDARD REPORT

Working Standard - TDG WRK

TDG WRK — Description - Thiodiglycol Working Std.

Standard:	14169	Expires:	01/31/2013	Usable:	Yes
Lab Lot:	TDG WRK	Created By:	T. McKay	Amount:	12.15 mL
Part ID:		Create Date:	01/31/2012	Validated By:	
MFG:		MFG Lot:		Validated Date:	

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume Added	Expires
3824	TDG STOCK		TDG STK	12.15 mg	1/1/2025

STANDARD REPORT

Constituent

Stock Standard - TDG STOCK

TDG STOCK					Description - (Thiodiglycol Stock Std.)
Standard:	3624	Expires:	1/1/2025	Usable:	Yes
Lab Lot:	TDG STK	Created By:	T. McKay	Amount:	100 grams
Part ID:	166782	Create Date:	4/1/2009	Validated By:	T. Bosch
MFG:	Aldrich	MFG Lot:	11613AR	Validated Date:	4/19/2009

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 mg/g

3824

Certificate of Analysis

SIGMA-ALDRICH

Product Name	2,2'-Thiodiethanol, ≥99%
Product Number	166782
Product Brand	Aldrich
CAS Number	111-48-8
Molecular Formula	$S(CH_2CH_2OH)_2$
Molecular Weight	122.19

TEST	SPECIFICATION	LOT 11613AR RESULTS
APPEARANCE	COLORLESS LIQUID	COLORLESS LIQUID
INFRARED SPECTRUM	CONFORMS TO STRUCTURE.	CONFORMS TO STRUCTURE AND STANDARD AS ILLUSTRATED ON PAGE 276B OF EDITION I, VOLUME 1 OF "THE ALDRICH LIBRARY OF FT-IR SPECTRA".
GAS LIQUID CHROMATOGRAPHY	99.0% (MINIMUM)	99.6 %
QUALITY CONTROL ACCEPTANCE DATE		JANUARY 1997

Barbara Rajzer

Barbara Rajzer, Supervisor
Quality Control
Milwaukee, Wisconsin USA

STANDARD REPORT

Working Standard - TDG QC WRK

TDG QC WRK — Description - Thiodiglycol QC Wrk

Standard:	13383	Expires:	11/21/2012	Usable:	Yes
Lab Lot:	TDG QC WRK	Created By:	T. McKay	Amount:	8.44 mL
Part ID:		Create Date:	11/21/2011	Validated By:	
MFG:		MFG Lot:		Validated Date:	

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume Added	Expires
5844	TDG QC STK	Thiodiglycol QC Stock	TDG QC STK	8.44 mg	1/1/2025

STANDARD REPORT

Constituent

Stock Standard - TDG QC STK

TDG QC STK					Description - Thiodiglycol QC Stock
Standard:	5844	Expires:	1/1/2025	Usable:	Yes
Lab Lot:	TDG QC STK	Created By:	T. McKay	Amount:	50 grams
Part ID:	88559	Create Date:	10/7/2009	Validated By:	T. Bosch
MFG:	Fluka	MFG Lot:	1410377	Validated Date:	10/7/2009

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 mg/g

2008-10-08-0844 01

5844

SIGMA-ALDRICH

Fluka

Sigma-Aldrich Production GmbH
CH-9471 Buchs/Schweiz
www.sigma-aldrich.com

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Telefax +41 81 755 2272
Email fluka@sial.com

Certificate of Analysis

Product Brand	Fluka
PRODUCT-NO	88559
PRODUCT	2,2'-THIODIETHANOL *BioChemika*
FORMULA	$C_4H_{10}O_2S$
MOLECULAR MASS	122.19
CAS NUMBER	111-48-8
LOT	1410377

Test	Specification	Result
APPEARANCE (COLOR)	COLORLESS	COLORLESS
APPEARANCE (FORM)	CLEAR TO CLEAR VISCOUS LIQUID	CLEAR VISCOUS LIQUID
PURITY (GC AREA %)	≥ 99.0 % REL	99.9 % REL
GC (METHOD)	--	100% POLYETHYLENEGLYCOL (30 M X 0.32 MM X 0.25 UM), IN DICHLORMETHANE
REFRACTIVE INDEX N20/D	1.520 - 1.522	1.522
RESIDUE ON IGNITION	≤ 0.1 %	< 0.05 %
CARBON CONTENT	39.32 % (THEORY)	38.90 %
HYDROGEN CONTENT	8.25 % (THEORY)	8.49 %
INFRARED SPECTRUM	CONFORMS TO STRUCTURE	CONFORMS
QC RELEASE DATE	28/OCT/08	

E. Schwärzler

Edeltraud Schwärzler, Manager
Quality Control
Buchs, Switzerland

Sigma-Aldrich guarantees the 'Sales-Specification' values only, additional lot specific tests may be included for further information. The current 'Sales-Specifications' sheet is available on request. For further inquiries, please contact our Technical Service.Sigma-Aldrich warrants, that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice for additional terms and conditions of sale. The values given on the 'Certificate of Analysis' are the results determined at the time of analysis.



ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

Batch Report: C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG12-ABP.B

Batch Review Method: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M

['#' ==> Run has not been reprocessed with Batch Review Method
'*' ==> Run has been saved with batch file]

#	Sample	Location	Inj	Dilution	Thiodiglycol-D8 RT	Thiodiglycol-D8 Area	Thiodiglycol-D8 Amount
*	PRIME	Vial 51	1	1	13.186	2.23586e6	10.00000
*	CCV1	Vial 51	1	1	13.108	2.38951e6	10.00000
*	290472 LMB	Vial 52	1	1	13.117	2.07104e6	100.00000
*	290473 LCS	Vial 53	1	1	13.100	2.06693e6	100.00000
*	290474 RLVS	Vial 54	1	1	13.080	1.92894e6	10.00000
*	1221656001	Vial 55	1	1	13.111	1.63754e6	100.00000
*	1221656002 MS	Vial 56	1	1	13.106	1.76588e6	100.00000
*	1221656003 MSD	Vial 57	1	1	13.077	1.80035e6	100.00000
*	1221656004	Vial 58	1	1	13.079	1.63475e6	100.00000
*	1221656005	Vial 59	1	1	13.102	1.81754e6	100.00000
*	1221656006	Vial 60	1	1	13.086	1.62035e6	100.00000
*	1221656007	Vial 61	1	1	13.084	1.72339e6	100.00000
*	CCV2	Vial 51	1	1	13.106	2.41015e6	10.00000
*	1221656008	Vial 62	1	1	13.107	1.81575e6	100.00000
*	1221656009	Vial 63	1	1	13.089	1.75485e6	100.00000
*	1221656010	Vial 64	1	1	13.109	1.52671e6	100.00000
*	1221656011	Vial 65	1	1	13.109	1.83582e6	100.00000
*	1221656012	Vial 66	1	1	13.087	1.66702e6	100.00000
*	1221656013	Vial 67	1	1	13.113	1.57960e6	100.00000
*	1221656014	Vial 68	1	1	13.115	1.29928e6	100.00000
*	1221656015	Vial 69	1	1	13.122	1.39191e6	100.00000
*	1221656016	Vial 70	1	1	13.121	1.37641e6	100.00000
*	CCV3	Vial 51	1	1	13.132	2.22842e6	10.00000

#	Sample	Location	Inj	Dilution	Thiodiglycol RT	Thiodiglycol Area	Thiodiglycol Amount
*	PRIME	Vial 51	1	1	13.785	9.81801e6	5.22132
*	CCV1	Vial 51	1	1	13.704	9.88070e6	4.89958
*	290472 LMB	Vial 52	1	1	0.000	0.00000	0.00000
*	290473 LCS	Vial 53	1	1	13.693	3.90357e6	21.76634
*	290474 RLVS	Vial 54	1	1	13.669	1.25539e5	8.24647e-2
*	1221656001	Vial 55	1	1	0.000	0.00000	0.00000
*	1221656002 MS	Vial 56	1	1	13.699	7.46060e6	50.12145
*	1221656003 MSD	Vial 57	1	1	13.675	7.66187e6	50.50949
*	1221656004	Vial 58	1	1	0.000	0.00000	0.00000
*	1221656005	Vial 59	1	1	0.000	0.00000	0.00000
*	1221656006	Vial 60	1	1	0.000	0.00000	0.00000
*	1221656007	Vial 61	1	1	0.000	0.00000	0.00000
*	CCV2	Vial 51	1	1	13.705	9.84284e6	4.83567
*	1221656008	Vial 62	1	1	0.000	0.00000	0.00000
*	1221656009	Vial 63	1	1	0.000	0.00000	0.00000
*	1221656010	Vial 64	1	1	0.000	0.00000	0.00000

#	Sample	Location	Inj	Dilution	Thiodiglycol RT	Thiodiglycol Area	Thiodiglycol Amount
*	1221656011	Vial 65	1	1	0.000	0.00000	0.00000
*	1221656012	Vial 66	1	1	0.000	0.00000	0.00000
*	1221656013	Vial 67	1	1	0.000	0.00000	0.00000
*	1221656014	Vial 68	1	1	0.000	0.00000	0.00000
*	1221656015	Vial 69	1	1	0.000	0.00000	0.00000
*	1221656016	Vial 70	1	1	0.000	0.00000	0.00000
*	CCV3	Vial 51	1	1	13.734	9.60768e6	5.12090

*** End of Report ***

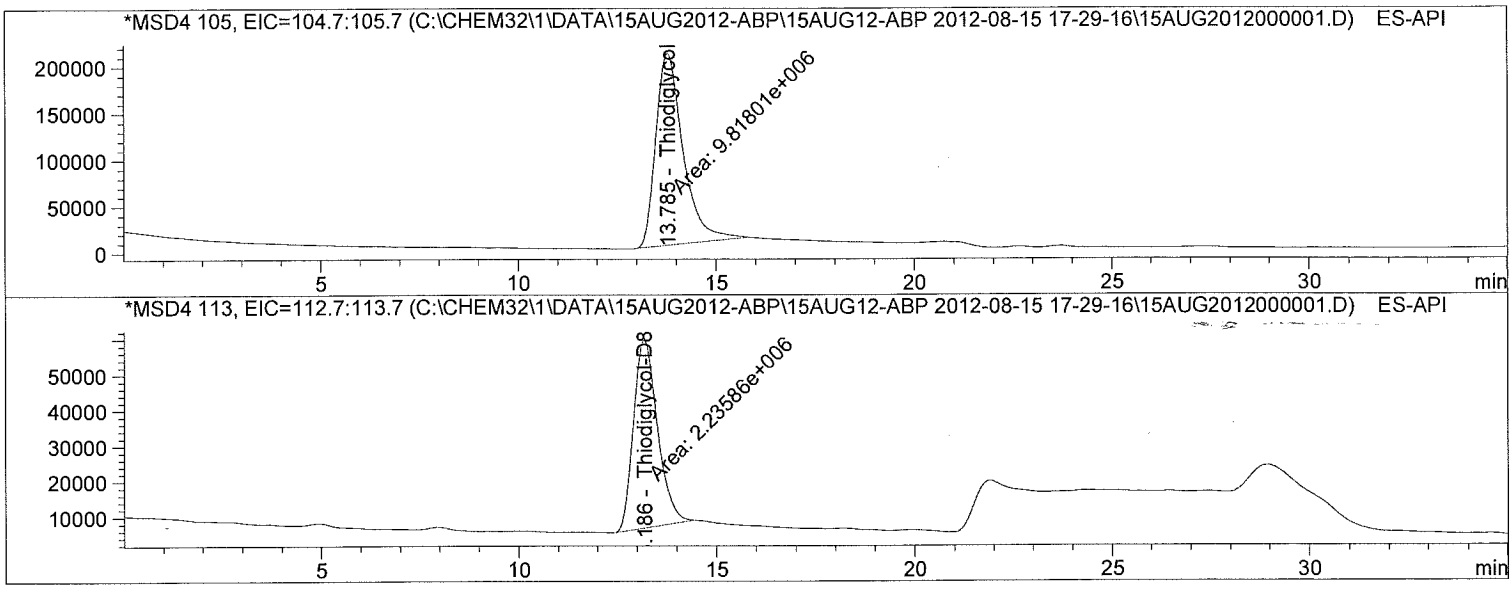
Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 51	PRIME	ABP-ON	1	Ctrl Samp	
2	Vial 51	CCV1	ABP-ON	1	Ctrl Samp	
3	Vial 52	290472 LMB	ABP-ON	1	Ctrl Samp	
4	Vial 53	290473 LCS	ABP-ON	1	Ctrl Samp	
5	Vial 54	290474 RLVS	ABP-ON	1	Ctrl Samp	
6	Vial 55	1221656001	ABP-ON	1	Sample	
7	Vial 56	1221656002 MS	ABP-ON	1	Ctrl Samp	
8	Vial 57	1221656003 MSD	ABP-ON	1	Ctrl Samp	
9	Vial 58	1221656004	ABP-ON	1	Sample	
10	Vial 59	1221656005	ABP-ON	1	Sample	
11	Vial 60	1221656006	ABP-ON	1	Sample	
12	Vial 61	1221656007	ABP-ON	1	Sample	
13	Vial 51	CCV2	ABP-ON	1	Ctrl Samp	
14	Vial 62	1221656008	ABP-ON	1	Sample	
15	Vial 63	1221656009	ABP-ON	1	Sample	
16	Vial 64	1221656010	ABP-ON	1	Sample	
17	Vial 65	1221656011	ABP-ON	1	Sample	
18	Vial 66	1221656012	ABP-ON	1	Sample	
19	Vial 67	1221656013	ABP-ON	1	Sample	
20	Vial 68	1221656014	ABP-ON	1	Sample	
21	Vial 69	1221656015	ABP-ON	1	Sample	
22	Vial 70	1221656016	ABP-ON	1	Sample	
23	Vial 51	CCV3	ABP-ON	1	Ctrl Samp	

Batch Run # 1 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000001.D
Sample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/15/2012 5:29:45 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 5.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.785	MM	1	9.81801e6	1.18905e-1	5.22132		Thiodiglycol

Batch Run # 1 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000001.D
Sample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/15/2012 5:29:45 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Totals without ISTD(s) : 5.22132

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

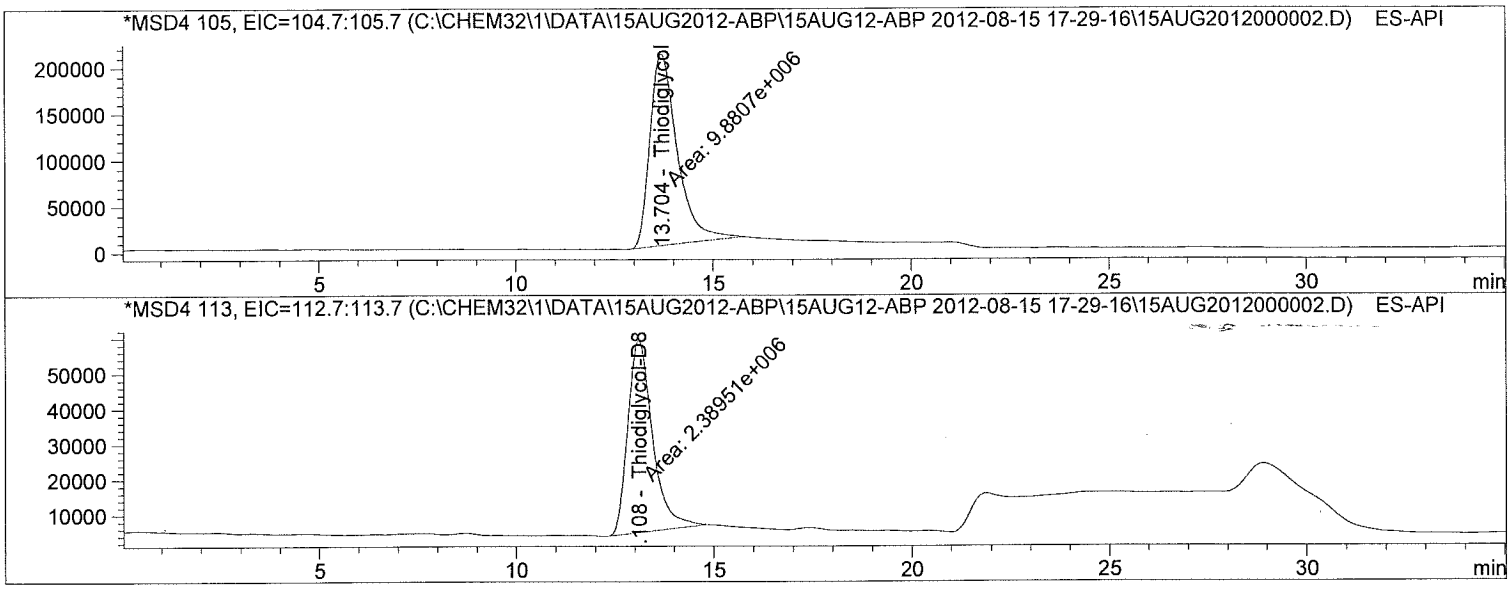
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.186	MM	I	1 2.23586e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 2 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000002.D
Sample Name: CCV1

```
Acq. Operator    : TTM                                  Seq. Line :   2
Acq. Instrument  : LCMS3                                 Location : Vial 51
Injection Date   : 8/15/2012 6:06:08 PM                      Inj :   1
                                                      Inj Volume : 10 µl
Acq. Method      : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed     : 8/14/2012 7:45:11 AM by TTM
Analysis Method  : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed     : 8/13/2012 12:58:03 PM by TTM
                   (Results are from a previously saved Batch)
Method Info      : Agent Breakdown Products
```



Internal Standard Report

```
Sorted By             :      Signal
Calib. Data Modified  :      7/9/2012 11:13:05 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      5.00000  []   (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:
ISTD  ISTD Amount   Name
  #
----|-------------|-------------------------
  2     10.00000   Thiodiglycol-D8


Signal 1: MSD4 105, EIC=104.7:105.7
 Signal has been modified after loading from rawdata file!

RetTime  Type  ISTD    Area      Amt/Area    Amount   Grp   Name
 [min]         used              ratio
-------|------|----|----------|----------|----------|--|------------------
 13.704 MM        1 9.88070e6  1.18490e-1    4.89958    Thiodiglycol
```

Batch Run # 2 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000002.D
Sample Name: CCV1

Acq. Operator : TTM Seq. Line : 2
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/15/2012 6:06:08 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 4.89958

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

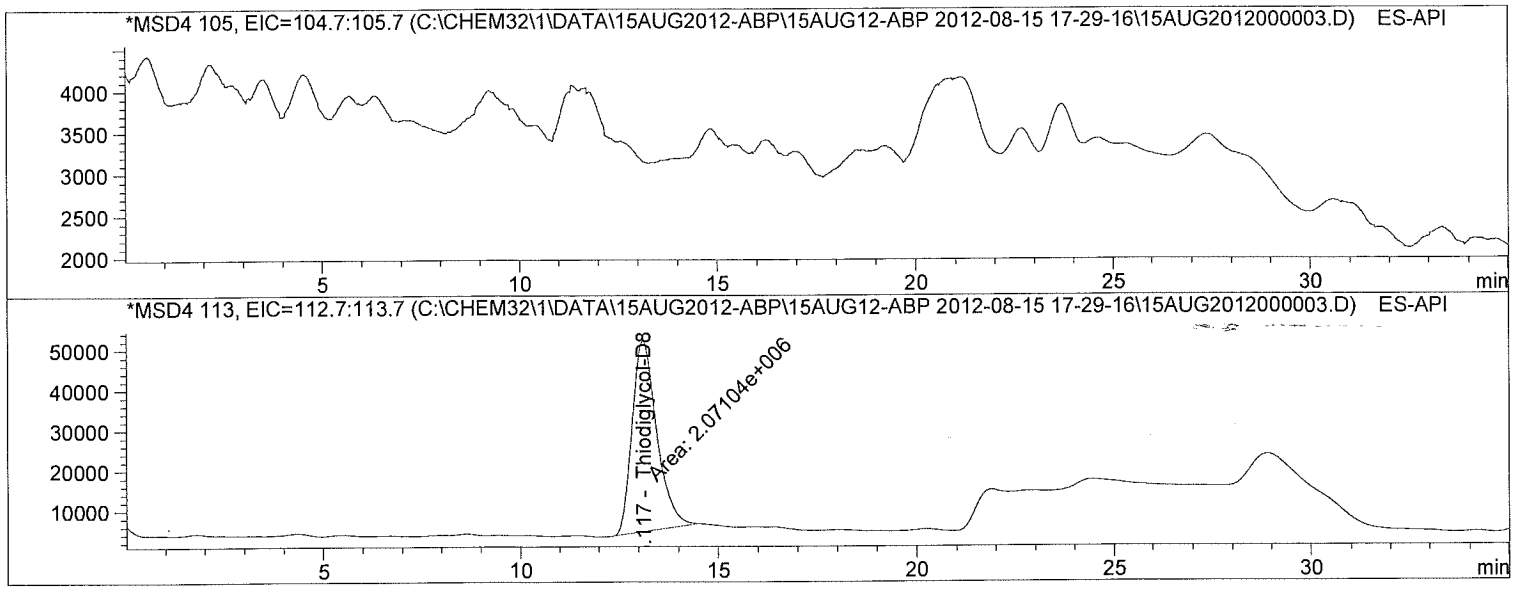
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.108	MM	I	1 2.38951e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 3 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000003.D
Sample Name: 290472 LMB

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 52
Injection Date	: 8/15/2012 6:42:31 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 3 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000003.D
Sample Name: 290472 LMB

Acq. Operator : TTM Seq. Line : 3
Acq. Instrument : LCMS3 Location : Vial 52
Injection Date : 8/15/2012 6:42:31 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.117	MM	I	1 2.07104e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

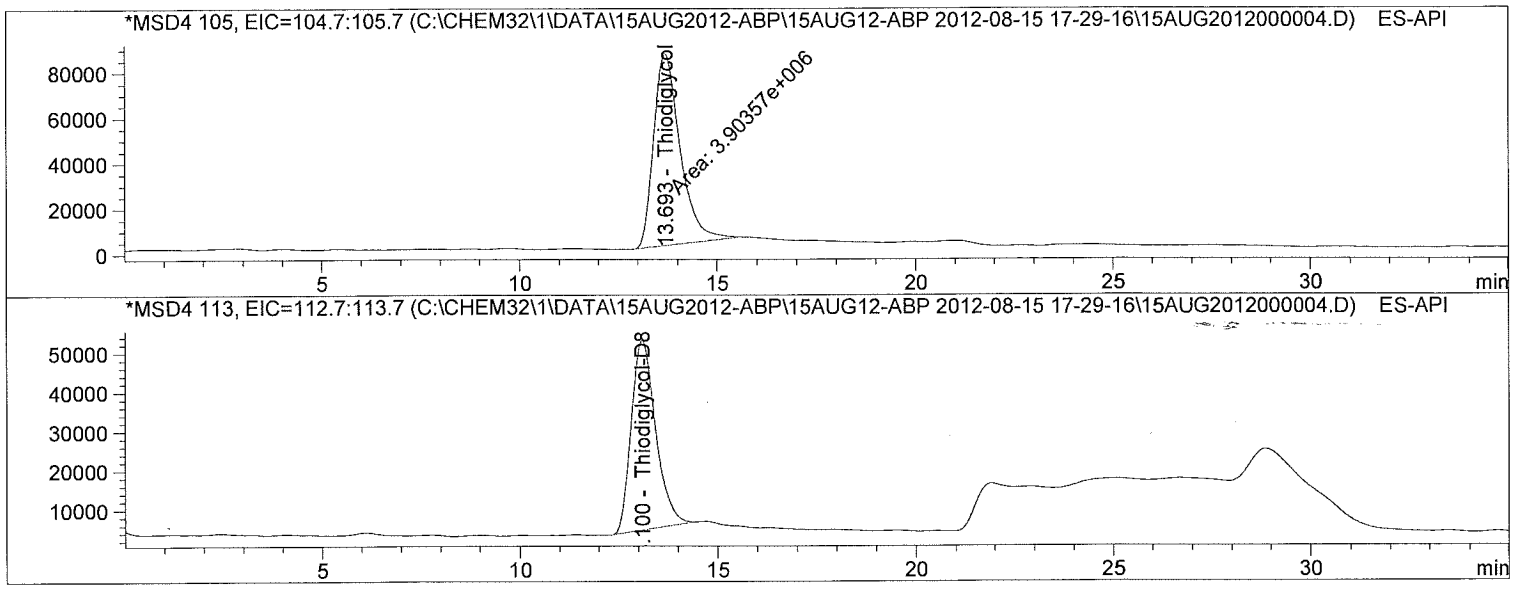
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 4 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000004.D
Sample Name: 290473 LCS

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 53
Injection Date	: 8/15/2012 7:18:54 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Sample Amount : 20.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.693	MM	1	3.90357e6	1.15252e-1	21.76634		Thiodiglycol

Batch Run # 4 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000004.D
Sample Name: 290473 LCS

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 53
Injection Date	: 8/15/2012 7:18:54 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Totals without ISTD(s) : 21.76634

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

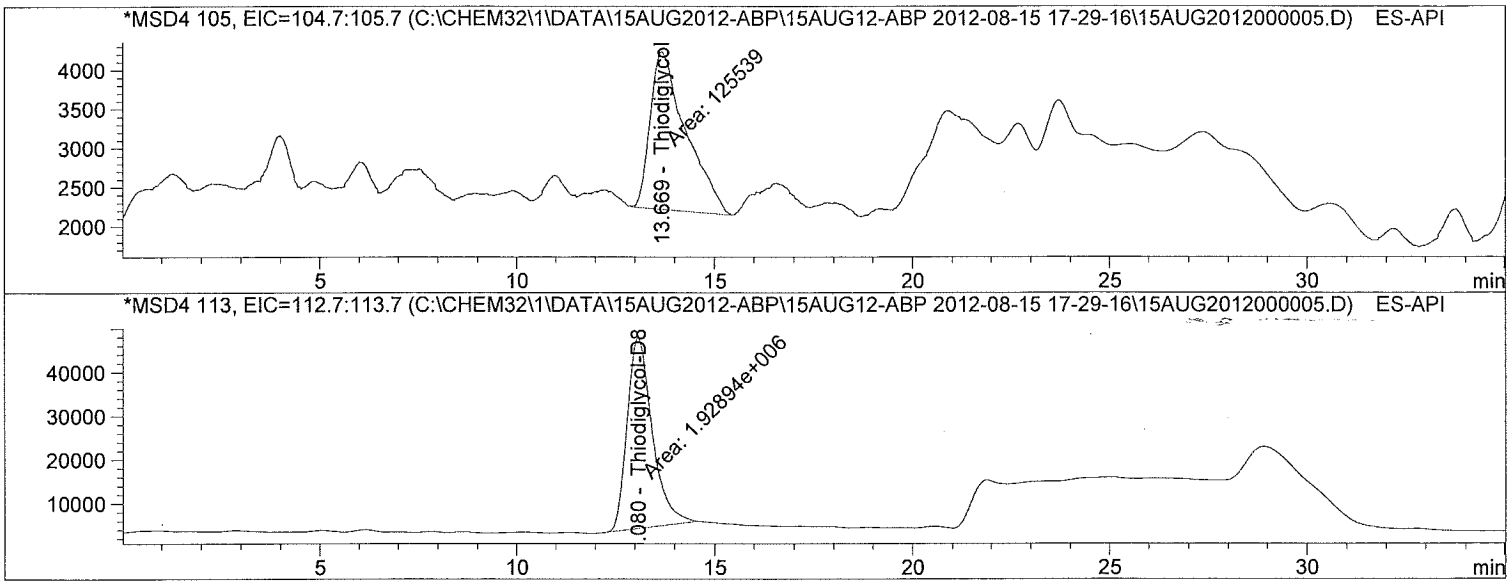
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.100	BB	I	1 2.06693e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 5 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000005.D
Sample Name: 290474 RLVS

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 54
Injection Date	: 8/15/2012 7:55:13 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000e-1 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.669	MM	1	1.25539e5	1.26710e-1	8.24647e-2		Thiodiglycol

Batch Run # 5 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000005.D
Sample Name: 290474 RLVS

Acq. Operator : TTM Seq. Line : 5
Acq. Instrument : LCMS3 Location : Vial 54
Injection Date : 8/15/2012 7:55:13 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 8.24647e-2

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

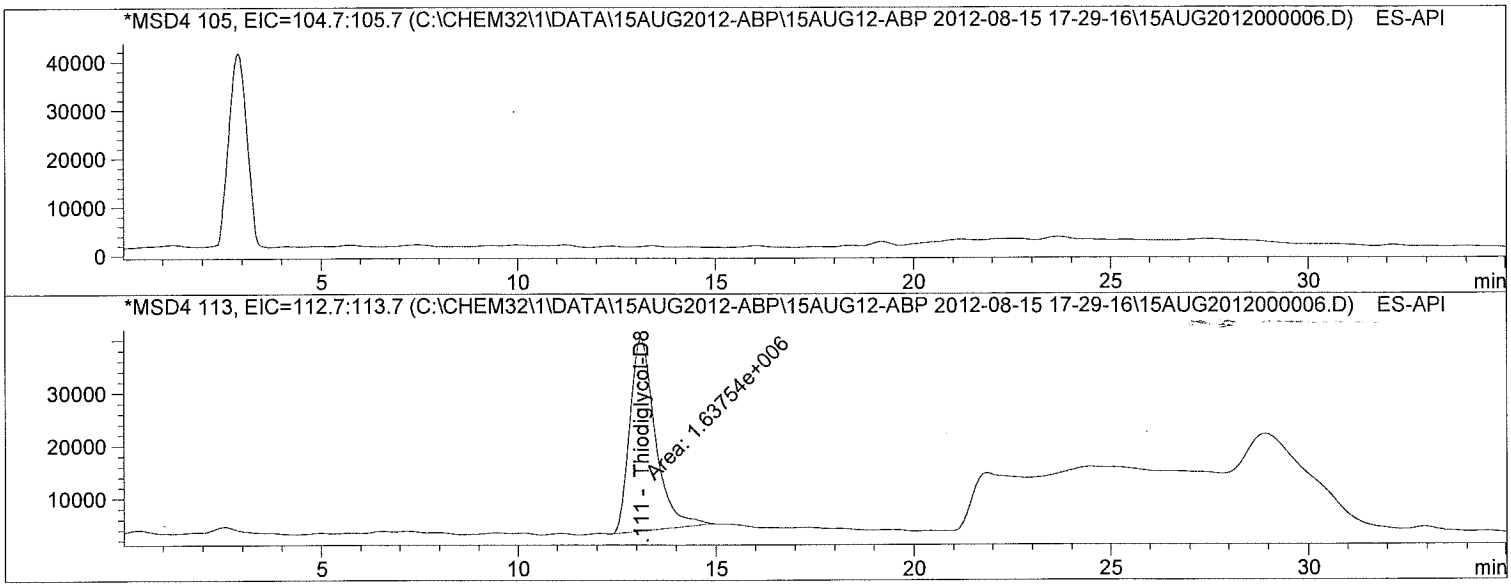
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.080	MM	I	1 1.92894e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 6 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000006.D
Sample Name: 1221656001

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 55
Injection Date	: 8/15/2012 8:31:40 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 6 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000006.D
Sample Name: 1221656001

Acq. Operator : TTM
Seq. Line : 6
Acq. Instrument : LCMS3
Location : Vial 55
Injection Date : 8/15/2012 8:31:40 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.111	MM	I	1 1.63754e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

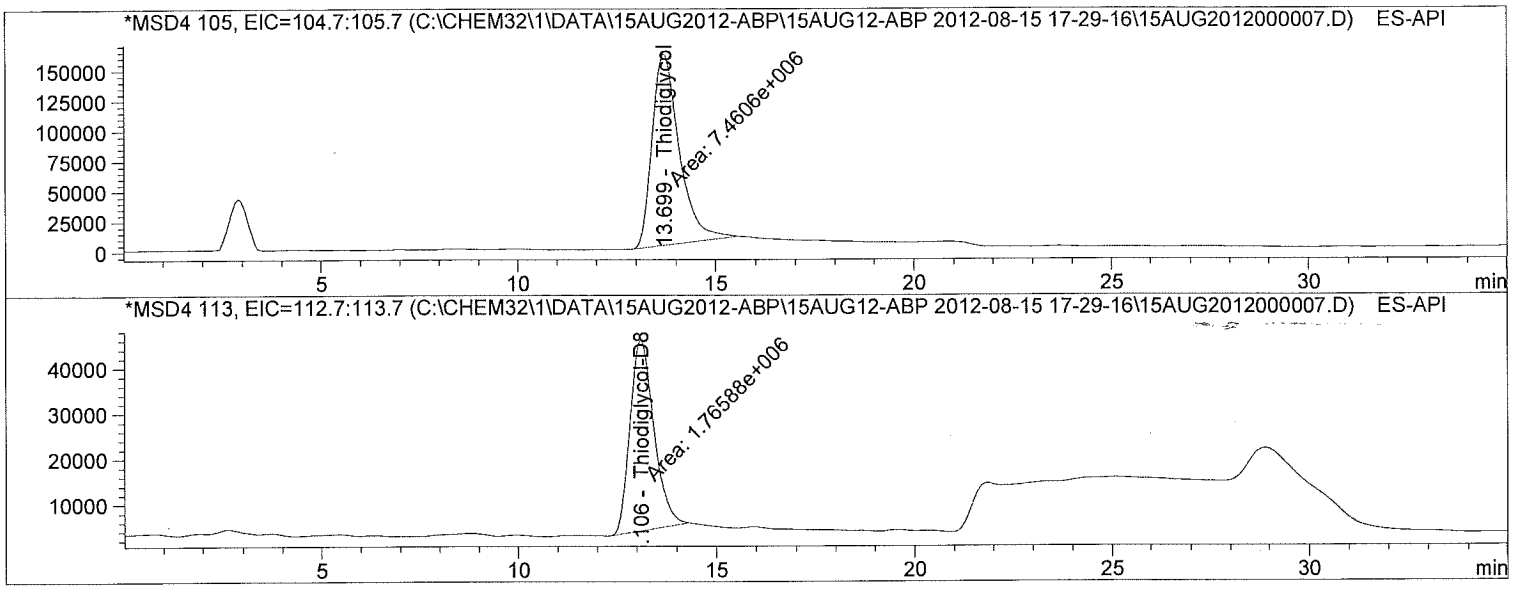
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 7 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000007.D
Sample Name: 1221656002 MS

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 56
Injection Date	: 8/15/2012 9:08:00 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.699	MM	1	7.46060e6	1.18634e-1	50.12145		Thiodiglycol

Totals without ISTD(s) : 50.12145

Batch Run # 7 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000007.D
Sample Name: 1221656002 MS

Acq. Operator : TTM Seq. Line : 7
Acq. Instrument : LCMS3 Location : Vial 56
Injection Date : 8/15/2012 9:08:00 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

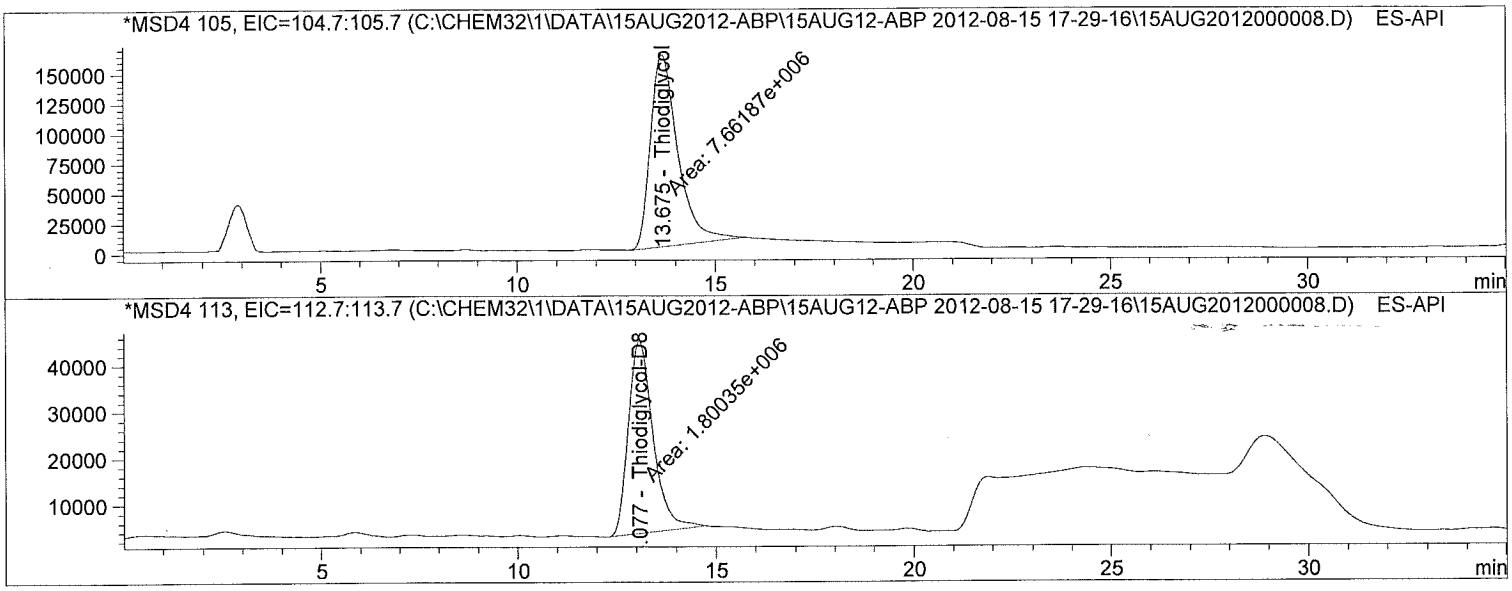
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.106	MM	I	1 1.76588e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 8 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000008.D
Sample Name: 1221656003 MSD

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 57
Injection Date	: 8/15/2012 9:44:27 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.675	MM	1	7.66187e6	1.18685e-1	50.50949		Thiodiglycol

Totals without ISTD(s) : 50.50949

Batch Run # 8 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000008.D
Sample Name: 1221656003 MSD

Acq. Operator : TTM Seq. Line : 8
Acq. Instrument : LCMS3 Location : Vial 57
Injection Date : 8/15/2012 9:44:27 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

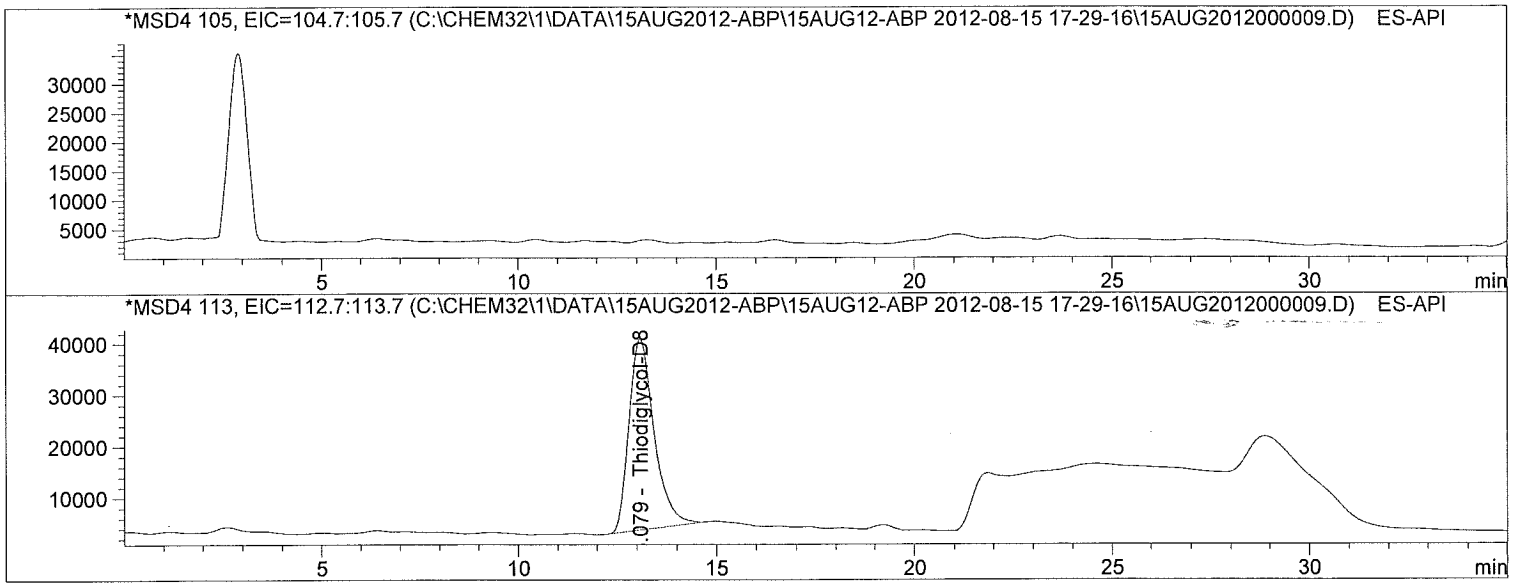
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.077	MM	I	1 1.80035e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 9 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000009.D
Sample Name: 1221656004

Acq. Operator	: TTM	Seq. Line	: 9
Acq. Instrument	: LCMS3	Location	: Vial 58
Injection Date	: 8/15/2012 10:20:49 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 9 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000009.D
Sample Name: 1221656004

Acq. Operator : TTM
Seq. Line : 9
Acq. Instrument : LCMS3
Location : Vial 58
Injection Date : 8/15/2012 10:20:49 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.079	BB	I	1 1.63475e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

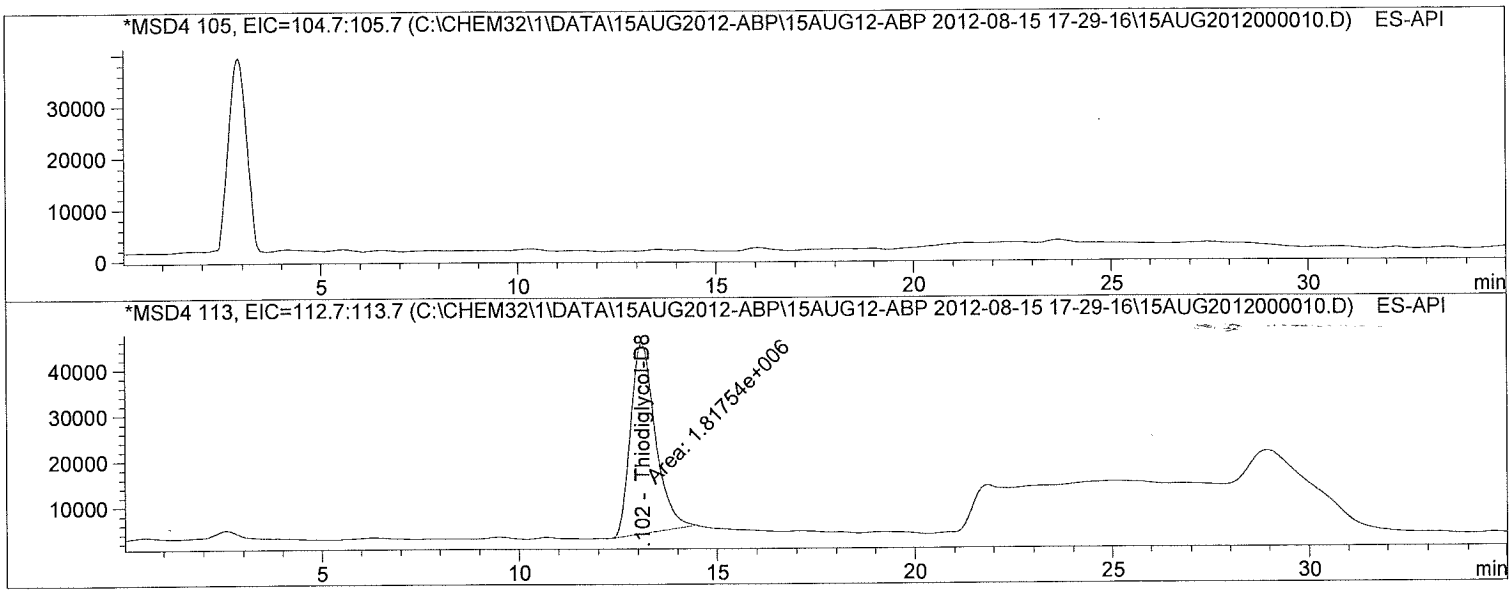
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 10 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000010.D
Sample Name: 1221656005

Acq. Operator	: TTM	Seq. Line	: 10
Acq. Instrument	: LCMS3	Location	: Vial 59
Injection Date	: 8/15/2012 10:57:15 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 10 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000010.D
Sample Name: 1221656005

Acq. Operator : TTM
Seq. Line : 10
Acq. Instrument : LCMS3
Location : Vial 59
Injection Date : 8/15/2012 10:57:15 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.102	MM	I	1 1.81754e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

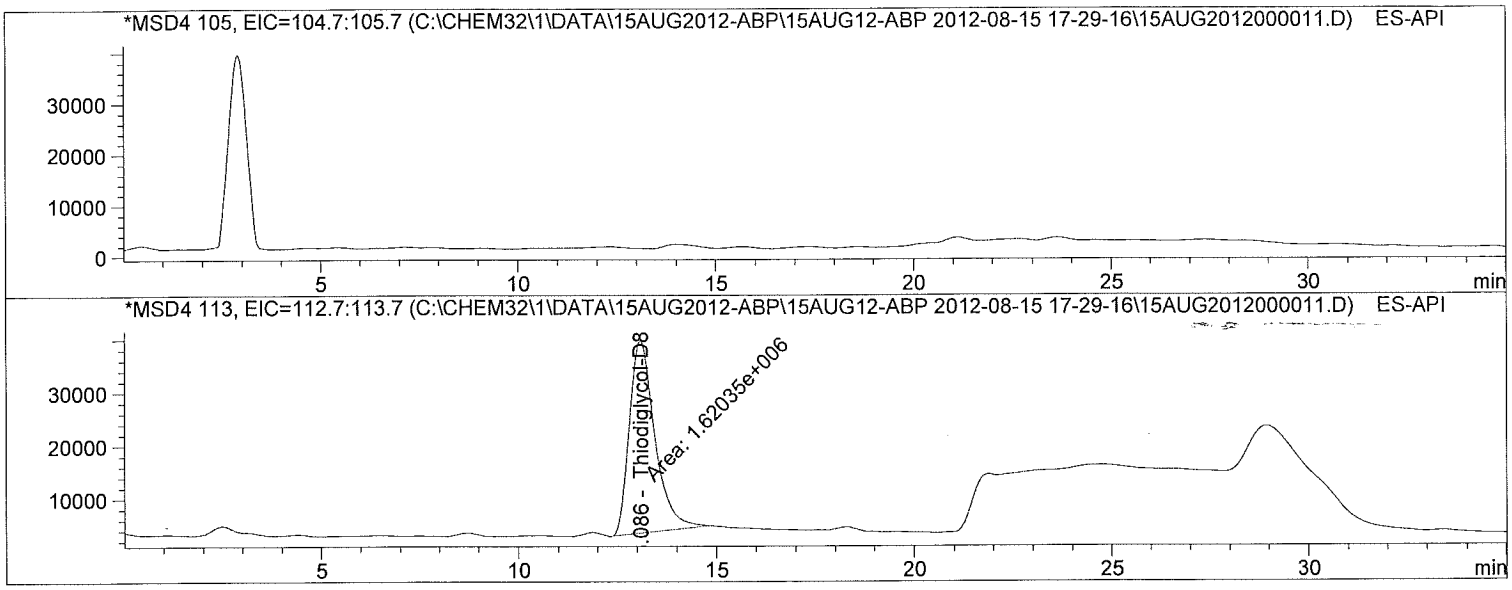
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 11 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000011.D
Sample Name: 1221656006

Acq. Operator	: TTM	Seq. Line	: 11
Acq. Instrument	: LCMS3	Location	: Vial 60
Injection Date	: 8/15/2012 11:33:36 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	7/9/2012 11:13:05 AM	
Multiplier	:	10.0000	
Dilution	:	1.0000	

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 11 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000011.D
Sample Name: 1221656006

Acq. Operator : TTM Seq. Line : 11
Acq. Instrument : LCMS3 Location : Vial 60
Injection Date : 8/15/2012 11:33:36 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.086	MM	I	1 1.62035e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

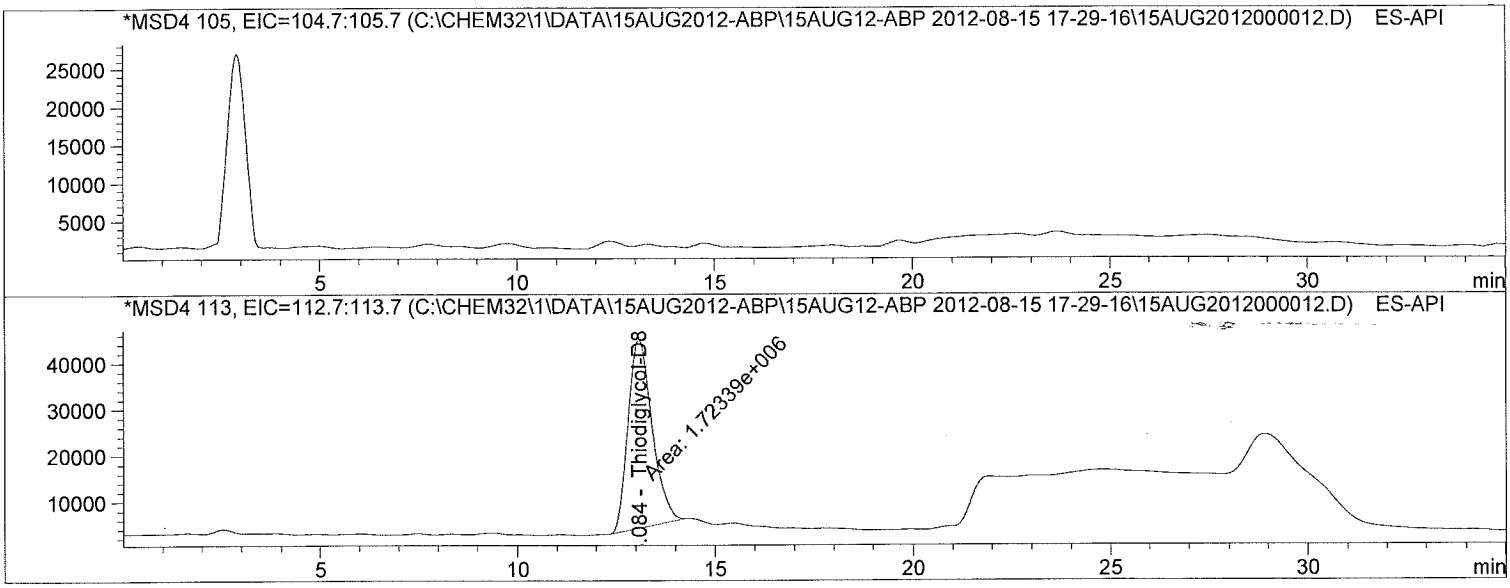
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 12 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000012.D
Sample Name: 1221656007

Acq. Operator	: TTM	Seq. Line	: 12
Acq. Instrument	: LCMS3	Location	: Vial 61
Injection Date	: 8/16/2012 12:10:01 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

```
==========================================================================
Acq. Operator   : TTM                              Seq. Line :  12
Acq. Instrument : LCMS3                             Location : Vial 61
Injection Date  : 8/16/2012 12:10:01 AM                  Inj :   1
                                                  Inj Volume : 10 µl
Acq. Method     : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed    : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed    : 8/13/2012 12:58:03 PM by TTM
                  (Results are from a previously saved Batch)
Method Info     : Agent Breakdown Products

==========================================================================
```

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.084	MM	I	1 1.72339e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

1 Warnings or Errors :

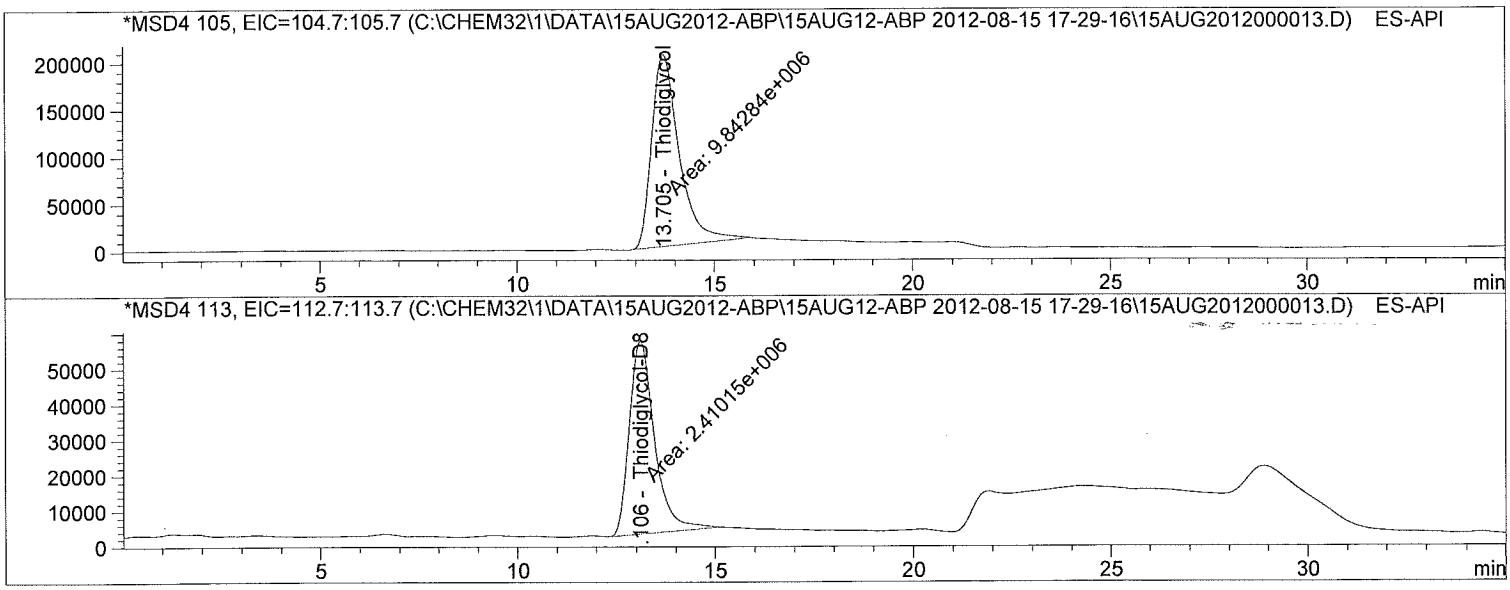
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Batch Run # 13 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000013.D
Sample Name: CCV2

Acq. Operator	: TTM	Seq. Line	: 13
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/16/2012 12:46:23 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 5.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.705	MM	1	9.84284e6	1.18408e-1	4.83567		Thiodiglycol

Batch Run # 13 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000013.D
Sample Name: CCV2

Acq. Operator : TTM Seq. Line : 13
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/16/2012 12:46:23 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 4.83567

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

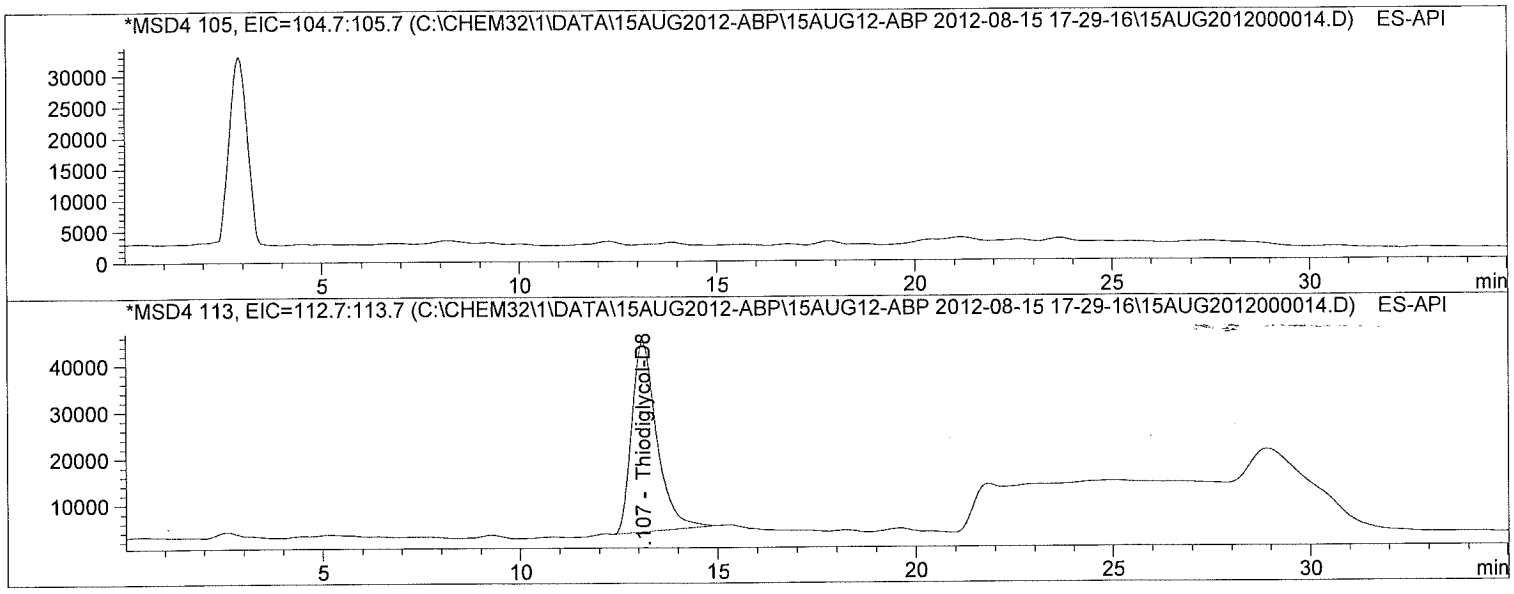
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.106	MM	I	1 2.41015e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 14 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000014.D
Sample Name: 1221656008

Acq. Operator	: TTM	Seq. Line	: 14
Acq. Instrument	: LCMS3	Location	: Vial 62
Injection Date	: 8/16/2012 1:22:46 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 14 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000014.D
Sample Name: 1221656008

Acq. Operator : TTM Seq. Line : 14
Acq. Instrument : LCMS3 Location : Vial 62
Injection Date : 8/16/2012 1:22:46 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.107	BB	I	1 1.81575e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

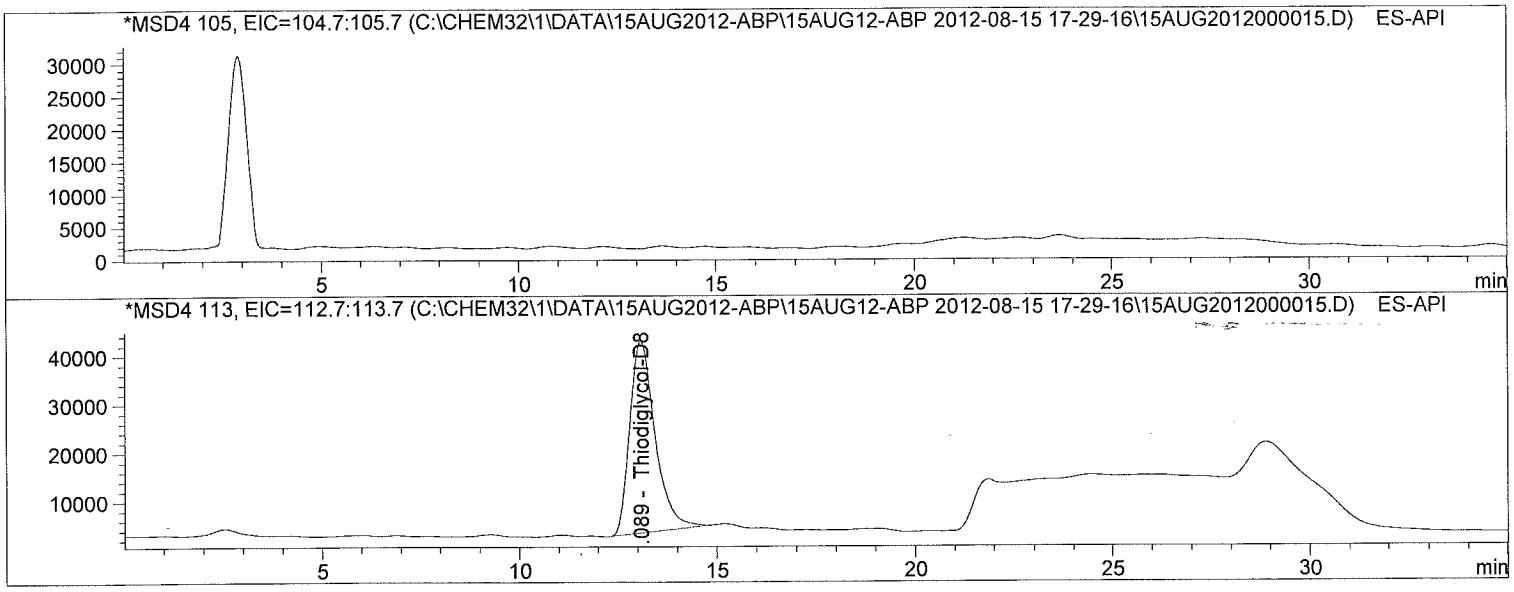
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 15 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000015.D
Sample Name: 1221656009

Acq. Operator	: TTM	Seq. Line	: 15
Acq. Instrument	: LCMS3	Location	: Vial 63
Injection Date	: 8/16/2012 1:59:08 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 15 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000015.D
Sample Name: 1221656009

Acq. Operator : TTM
Seq. Line : 15
Acq. Instrument : LCMS3
Location : Vial 63
Injection Date : 8/16/2012 1:59:08 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.089	BB	I	1 1.75485e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

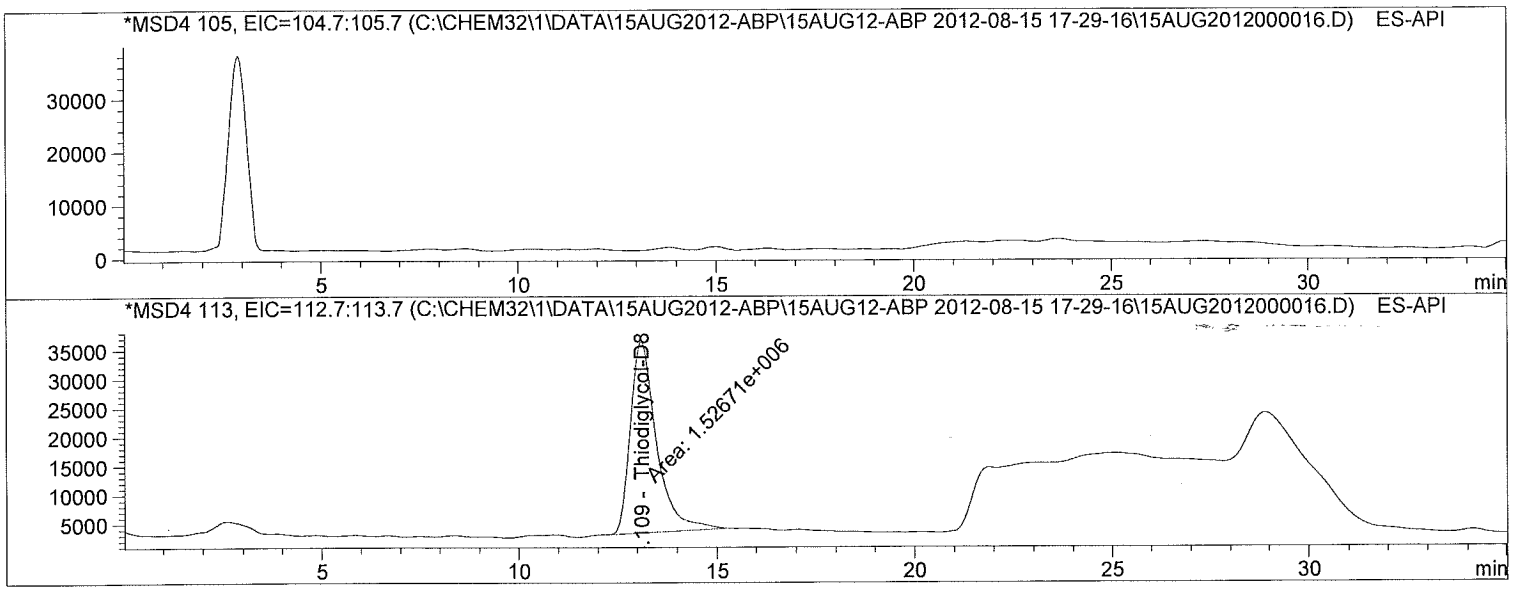
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 16 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000016.D
Sample Name: 1221656010

Acq. Operator	: TTM	Seq. Line	: 16
Acq. Instrument	: LCMS3	Location	: Vial 64
Injection Date	: 8/16/2012 2:35:29 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 16 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000016.D
Sample Name: 1221656010

Acq. Operator : TTM Seq. Line : 16
Acq. Instrument : LCMS3 Location : Vial 64
Injection Date : 8/16/2012 2:35:29 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.109	MM	I	1 1.52671e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

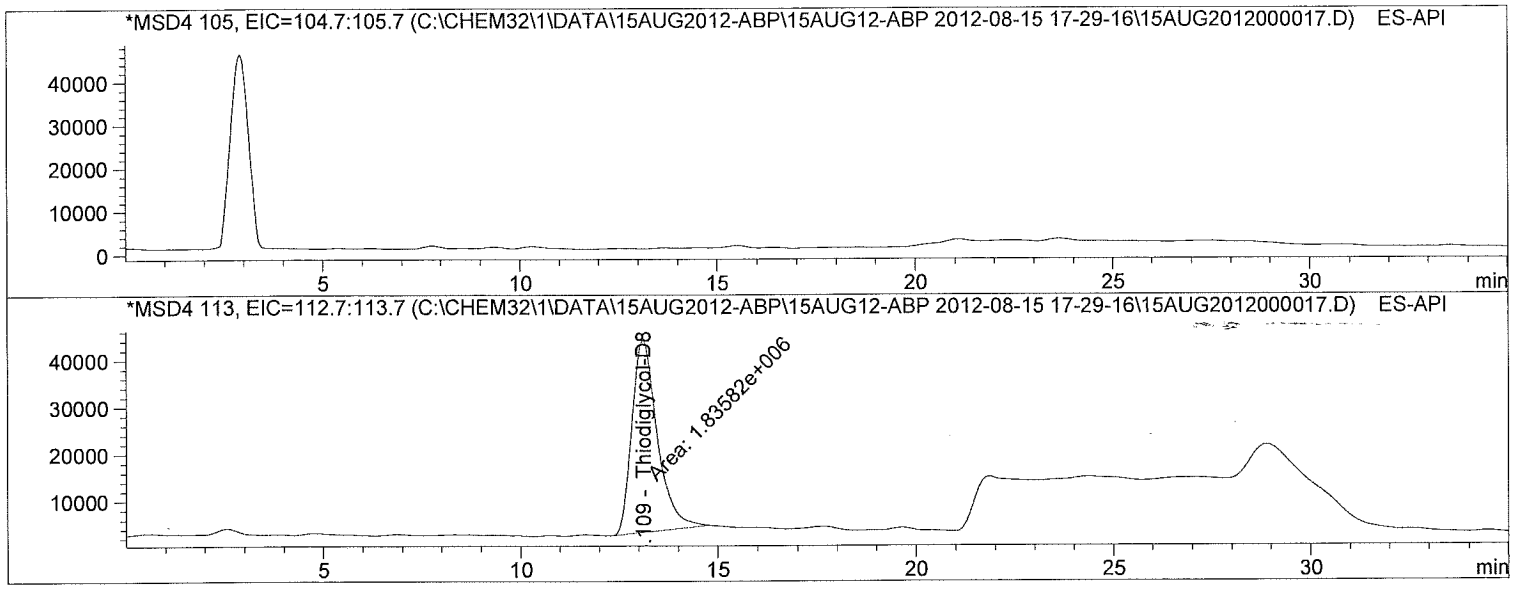
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 17 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000017.D
Sample Name: 1221656011

Acq. Operator	: TTM	Seq. Line	: 17
Acq. Instrument	: LCMS3	Location	: Vial 65
Injection Date	: 8/16/2012 3:11:52 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 17 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000017.D
Sample Name: 1221656011

Acq. Operator : TTM Seq. Line : 17
Acq. Instrument : LCMS3 Location : Vial 65
Injection Date : 8/16/2012 3:11:52 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.109	MM	I	1 1.83582e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

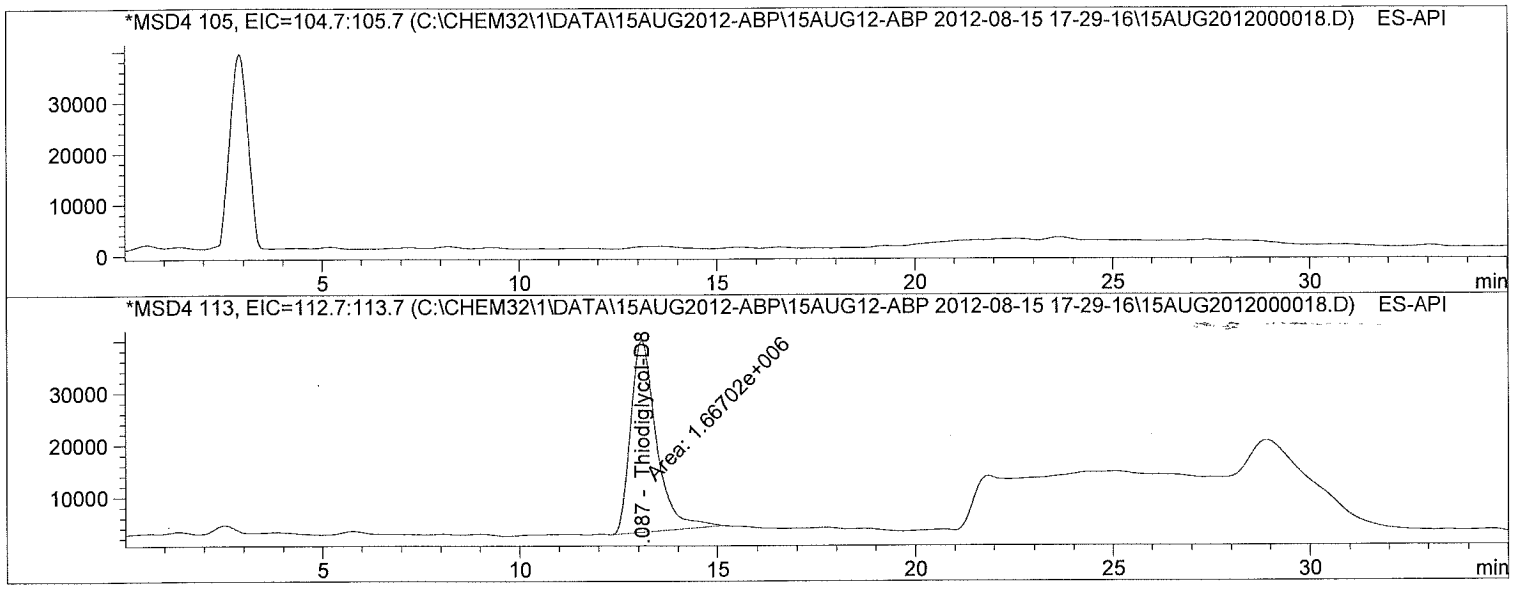
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 18 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000018.D
Sample Name: 1221656012

Acq. Operator	: TTM	Seq. Line	: 18
Acq. Instrument	: LCMS3	Location	: Vial 66
Injection Date	: 8/16/2012 3:48:13 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 18 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000018.D
Sample Name: 1221656012

Acq. Operator : TTM Seq. Line : 18
Acq. Instrument : LCMS3 Location : Vial 66
Injection Date : 8/16/2012 3:48:13 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.087	MM	I	1 1.66702e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

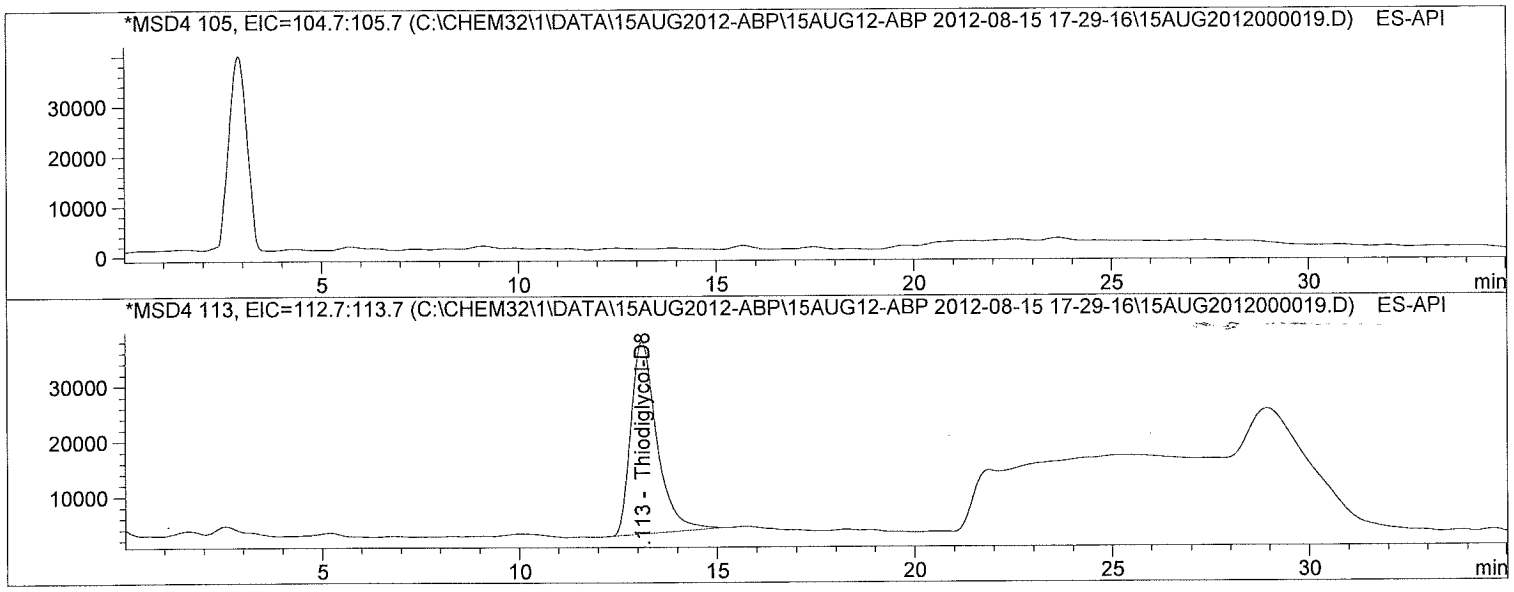
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 19 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000019.D
Sample Name: 1221656013

Acq. Operator : TTM
Seq. Line : 19
Acq. Instrument : LCMS3
Location : Vial 67
Injection Date : 8/16/2012 4:24:34 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 19 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000019.D
Sample Name: 1221656013

Acq. Operator : TTM
Seq. Line : 19
Acq. Instrument : LCMS3
Location : Vial 67
Injection Date : 8/16/2012 4:24:34 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 l13, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.113	BB	I	1 1.57960e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

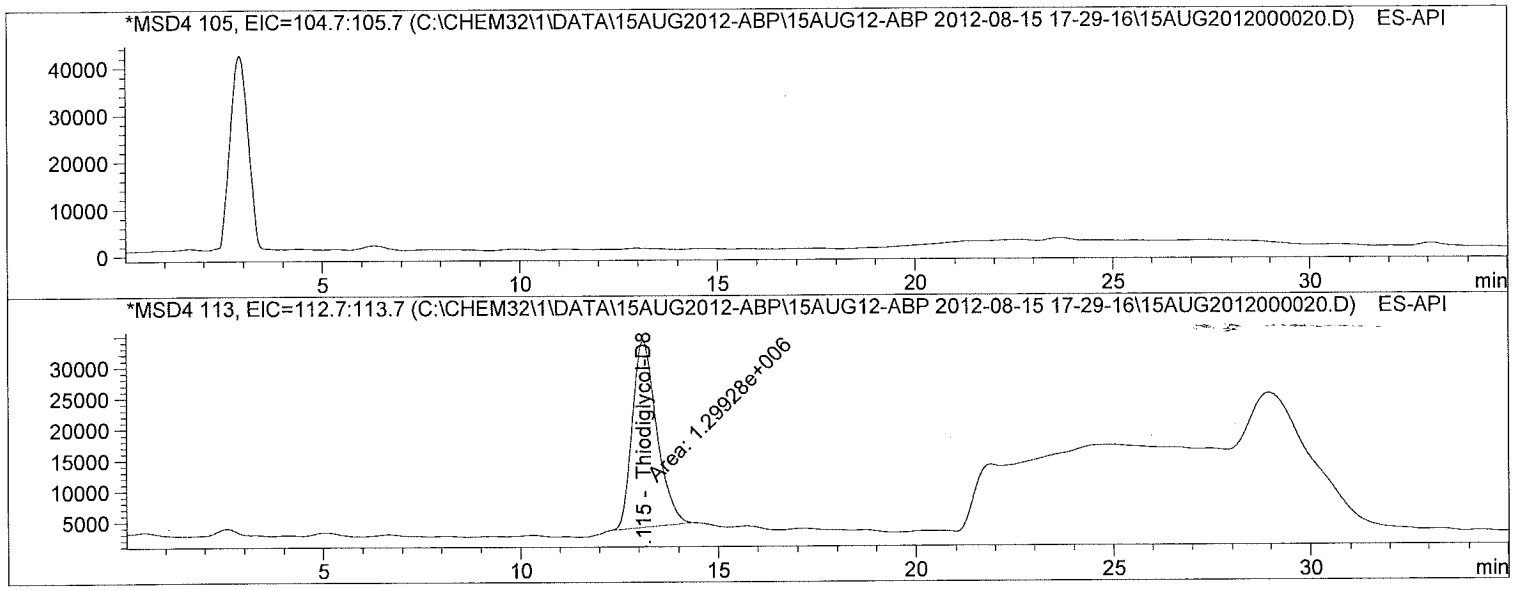
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 20 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000020.D
Sample Name: 1221656014

Acq. Operator	: TTM	Seq. Line	: 20
Acq. Instrument	: LCMS3	Location	: Vial 68
Injection Date	: 8/16/2012 5:00:59 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 20 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000020.D
Sample Name: 1221656014

Acq. Operator : TTM
Seq. Line : 20
Acq. Instrument : LCMS3
Location : Vial 68
Injection Date : 8/16/2012 5:00:59 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.115	MM	I	1 1.29928e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

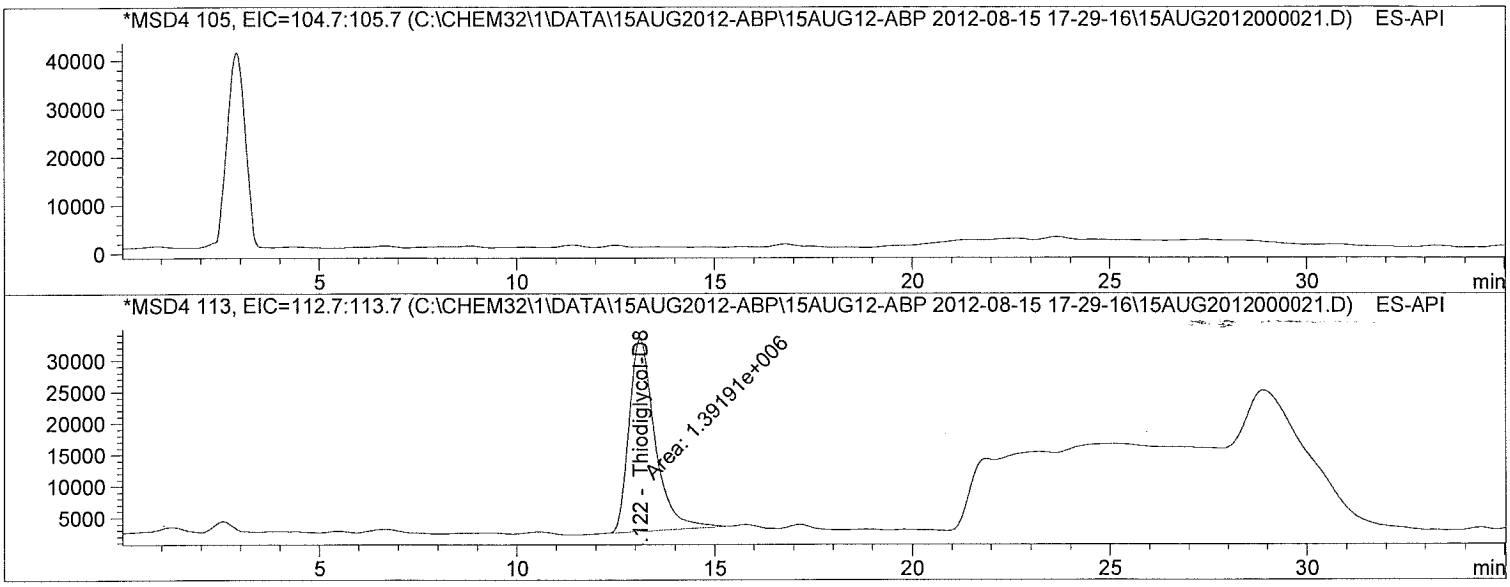
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 21 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000021.D
Sample Name: 1221656015

Acq. Operator	: TTM	Seq. Line	: 21
Acq. Instrument	: LCMS3	Location	: Vial 69
Injection Date	: 8/16/2012 5:37:20 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 21 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000021.D
Sample Name: 1221656015

Acq. Operator : TTM
Seq. Line : 21
Acq. Instrument : LCMS3
Location : Vial 69
Injection Date : 8/16/2012 5:37:20 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.122	FM	I	1 1.39191e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

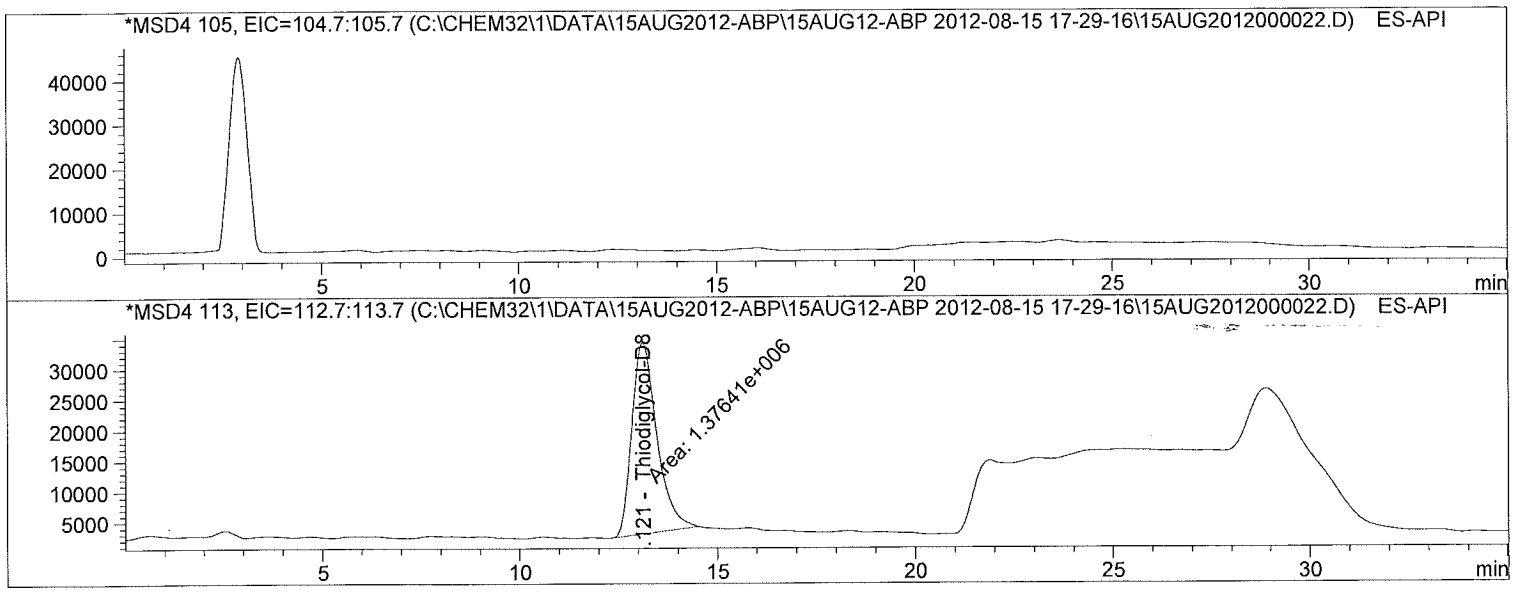
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 22 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000022.D
Sample Name: 1221656016

Acq. Operator	: TTM	Seq. Line	: 22
Acq. Instrument	: LCMS3	Location	: Vial 70
Injection Date	: 8/16/2012 6:13:42 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 22 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000022.D
Sample Name: 1221656016

Acq. Operator : TTM Seq. Line : 22
Acq. Instrument : LCMS3 Location : Vial 70
Injection Date : 8/16/2012 6:13:42 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.121	MM	I	1 1.37641e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

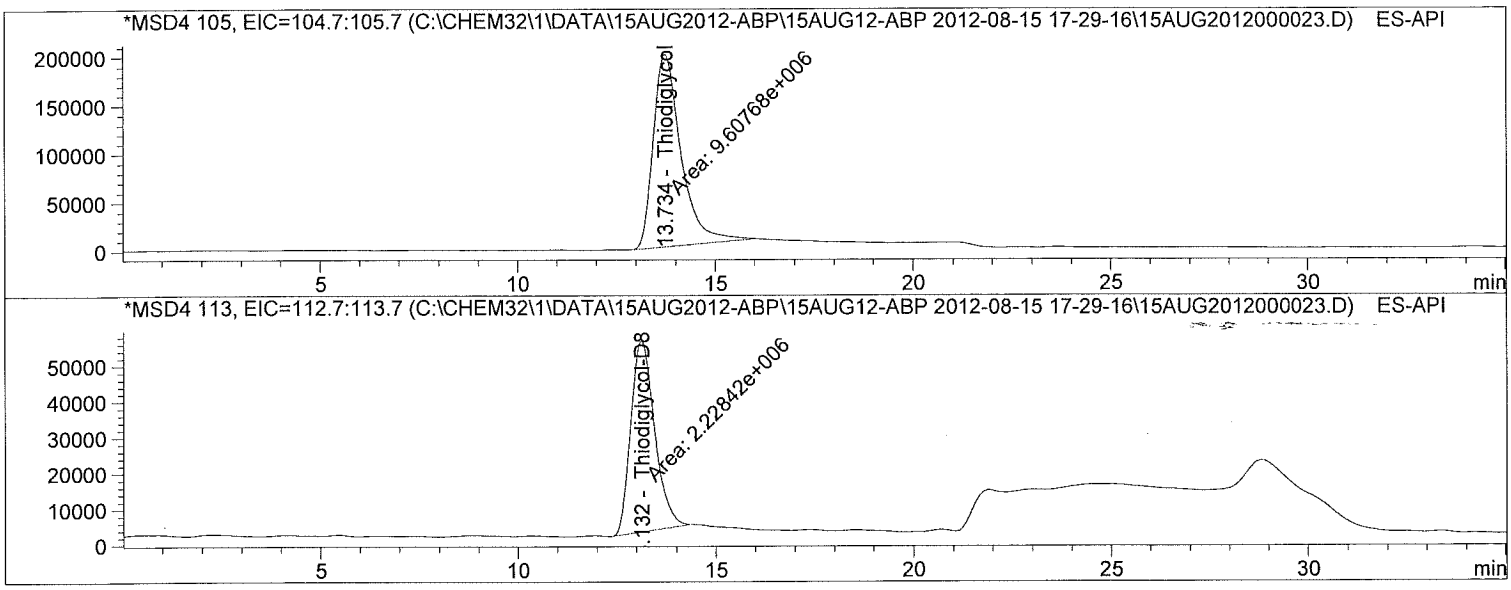
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 23 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000023.D
Sample Name: CCV3

Acq. Operator : TTM
Seq. Line : 23
Acq. Instrument : LCMS3
Location : Vial 51
Injection Date : 8/16/2012 6:50:04 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.734	MM	1	9.60768e6	1.18775e-1	5.12090		Thiodiglycol

Batch Run # 23 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000023.D
Sample Name: CCV3

Acq. Operator : TTM Seq. Line : 23
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/16/2012 6:50:04 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 5.12090

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.132	MM	I	1 2.22842e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Calibration

Raw Data

Calibration Table

Agent Breakdown Products

Calib. Data Modified : 7/9/2012 11:13:05 AM

Calculate : Internal Standard
Based on : Peak Area

Rel. Reference Window : 10.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 10.000 %
Abs. Non-ref. Window : 0.000 min
Use Multiplier & Dilution Factor with ISTDs
Uncalibrated Peaks : not reported
Partial Calibration : No recalibration if peaks missing

Curve Type : Quadratic (some peaks differ, see below)
Origin : Ignored (some peaks differ, see below)
Weight : Linear (Amnt) (some peaks differ, see below)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Default Sample ISTD Information (if not set in sample table):

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal 2: MSD4 113, EIC=112.7:113.7

RetTime [min]	Sig	Lvl	Amount	Area	Amt/Area	Ref	Grp	Name
12.890	2	1	10.00000	2.44245e6	4.09425e-6	I2		Thiodiglycol-D8
		2	10.00000	2.37259e6	4.21481e-6			
		3	10.00000	2.75981e6	3.62344e-6			
		4	10.00000	2.61922e6	3.81792e-6			
		5	10.00000	2.65549e6	3.76579e-6			
		6	10.00000	2.67017e6	3.74508e-6			
13.460	1	6	5.00000e-2	1.14698e5	4.35926e-7	2		Thiodiglycol
		5	1.00000e-1	2.17683e5	4.59383e-7			
		4	5.00000e-1	1.04468e6	4.78617e-7			
		3	1.00000	2.09084e6	4.78276e-7			
		2	5.00000	1.06254e7	4.70571e-7			
		1	10.00000	1.91630e7	5.21840e-7			

More compound-specific settings:

Compound: Thiodiglycol-D8
  Curve Type : Linear
  Origin : Included
  Calibration Level Weights:/
    Level 1 : 1
    Level 2 : 1
    Level 3 : 1
    Level 4 : 1
    Level 5 : 1
    Level 6 : 1

==========

Peak Sum Table

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No Entries in table

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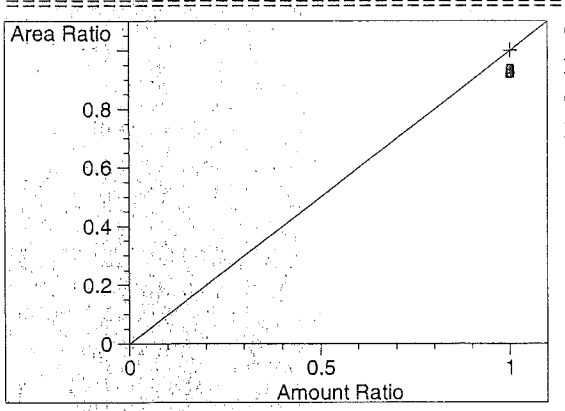
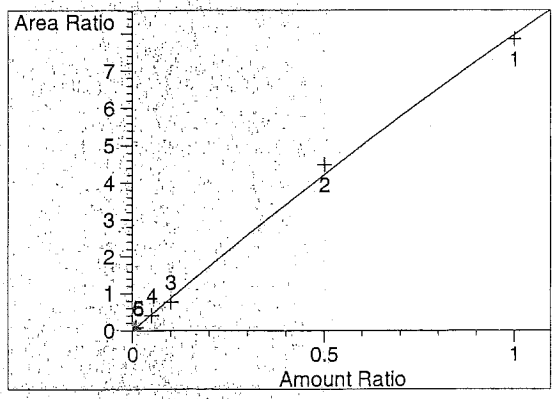
Calibration Curves

==========



Thiodiglycol-D8 at exp. RT: 12.890
MSD4 113, EIC=112.7:113.7
Correlation: 1.00000
Residual Std. Dev.: 0.00000
Formula: y = mx + b
  m: 1.00000
  b: 0.00000
  x: Amount
  y: Area
Calibration Level Weights:
  Level 1 : 1
  Level 2 : 1
  Level 3 : 1
  Level 4 : 1
  Level 5 : 1
  Level 6 : 1



Thiodiglycol at exp. RT: 13.460
MSD4 105, EIC=104.7:105.7
Correlation: 0.99844
Residual Std. Dev.: 0.15671
Formula: y = ax² + bx + c
  a: -9.49682e-1
  b: 8.92207
  c: -8.42930e-3
  x: Amount
  y: Area
Calibration Level Weights:
  Level 6 : 1
  Level 5 : 0.5
  Level 4 : 0.1
  Level 3 : 0.05
  Level 2 : 0.01
  Level 1 : 0.005

==========

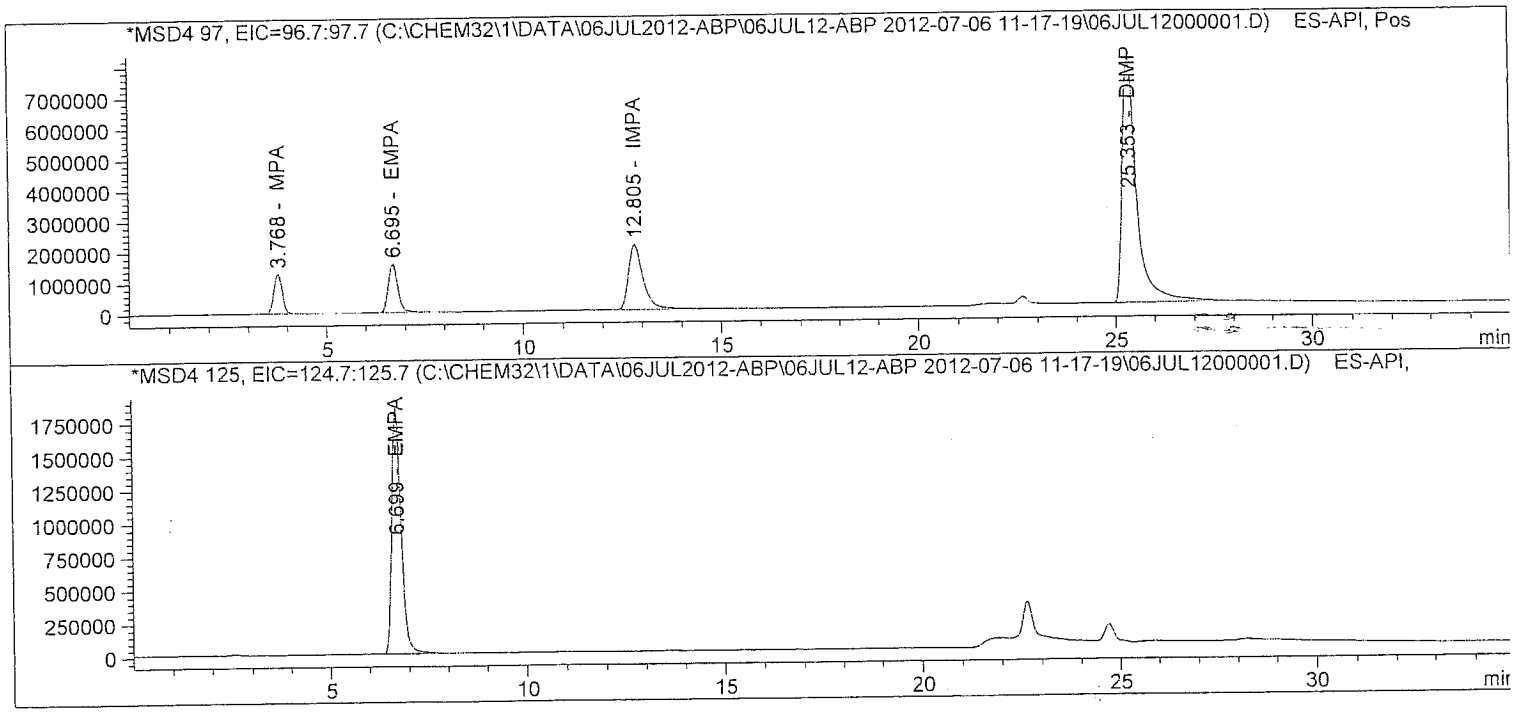
Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 1	PRIME	ABP-ON	1	Ctrl Samp	
2	Vial 1	$10	ABP-ON	1	Ctrl Samp	
3	Vial 2	$5	ABP-ON	1	Ctrl Samp	
4	Vial 3	$1	ABP-ON	1	Ctrl Samp	
5	Vial 4	$05	ABP-ON	1	Ctrl Samp	
6	Vial 5	$0.1	ABP-ON	1	Ctrl Samp	
7	Vial 6	$0.05	ABP-ON	1	Ctrl Samp	
8	Vial 7	ICV	ABP-ON	1	Ctrl Samp	
9	Vial 8	283055 LMB	ABP-ON	1	Ctrl Samp	
10	Vial 9	283056 LCS	ABP-ON	1	Ctrl Samp	
11	Vial 10	283057 RLVS	ABP-ON	1	Ctrl Samp	
12	Vial 11	1217861001	ABP-ON	1	Sample	
13	Vial 12	1217861002 MS	ABP-ON	1	Ctrl Samp	
14	Vial 13	1217861003 MSD	ABP-ON	1	Ctrl Samp	
15	Vial 2	CCV	ABP-ON	1	Ctrl Samp	

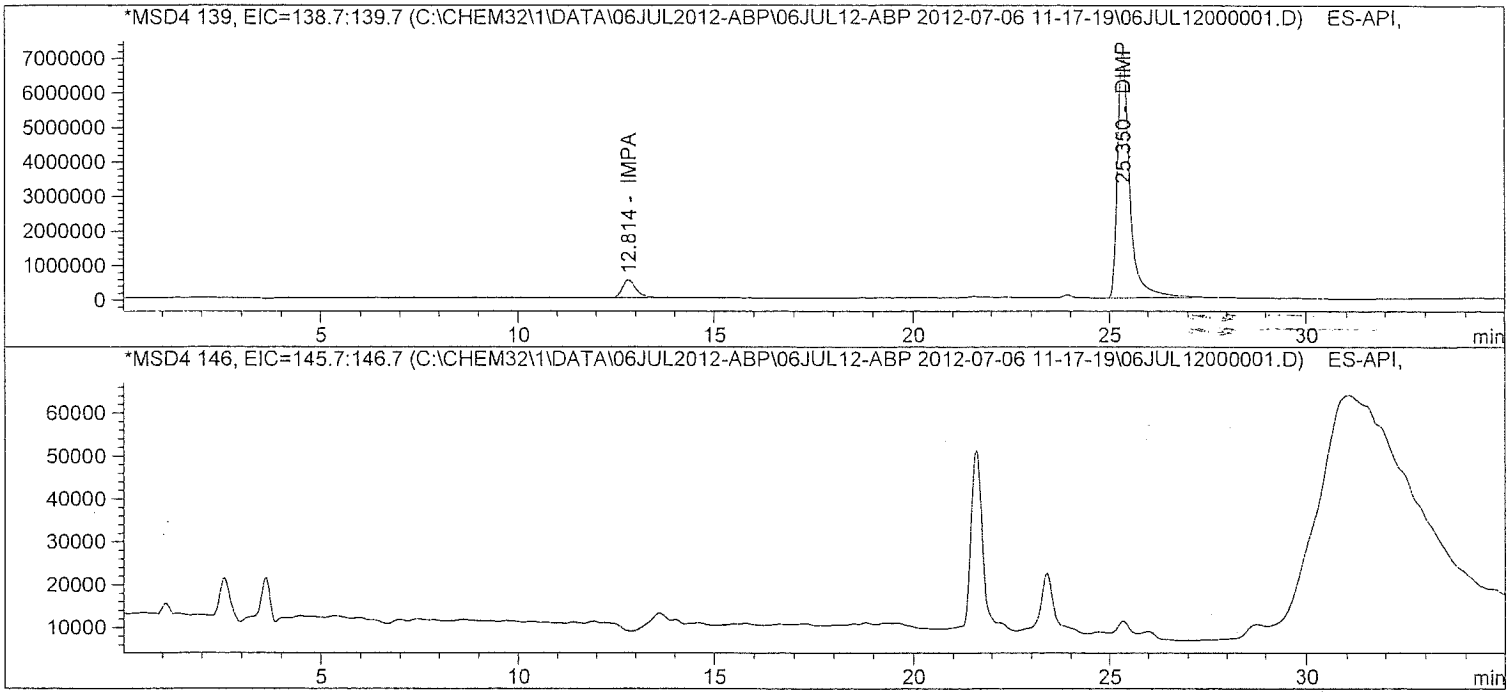
atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

==========

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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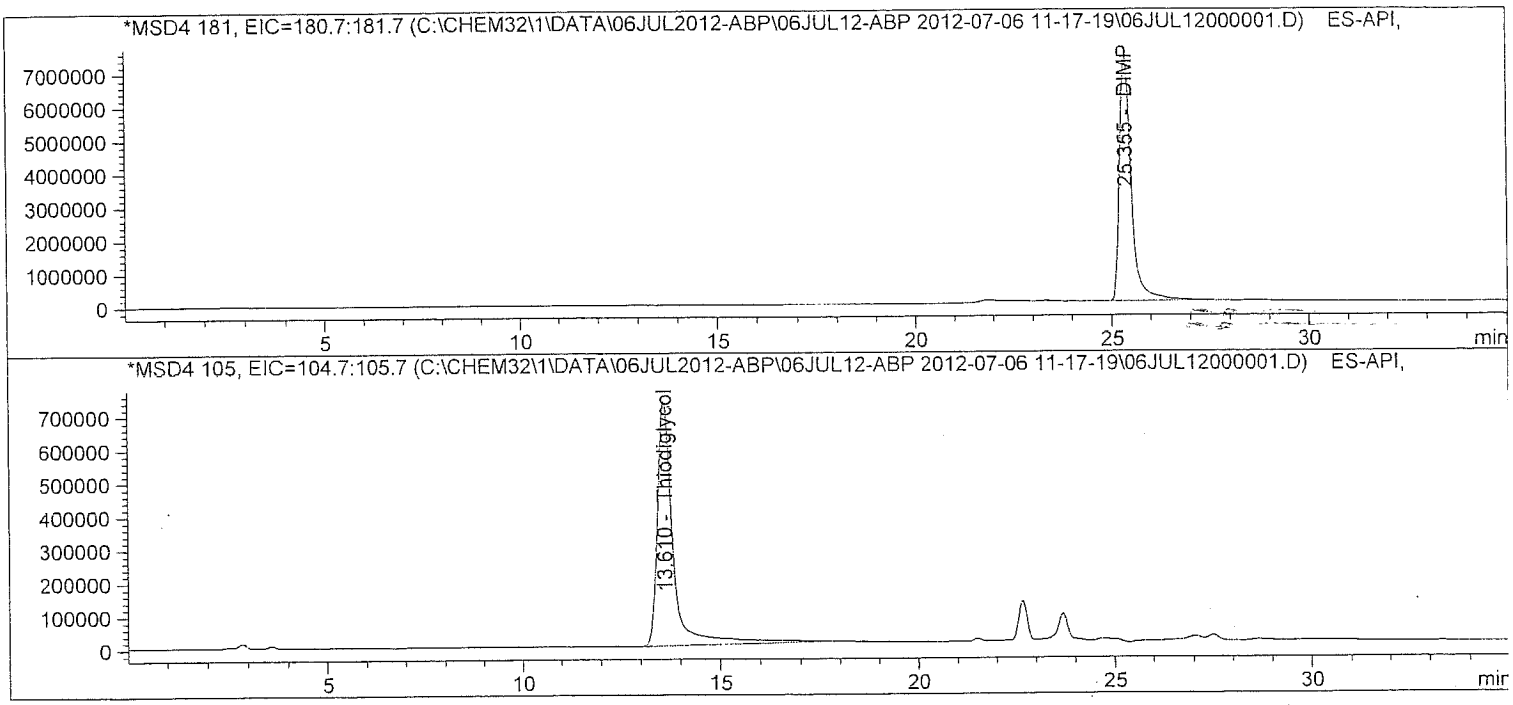
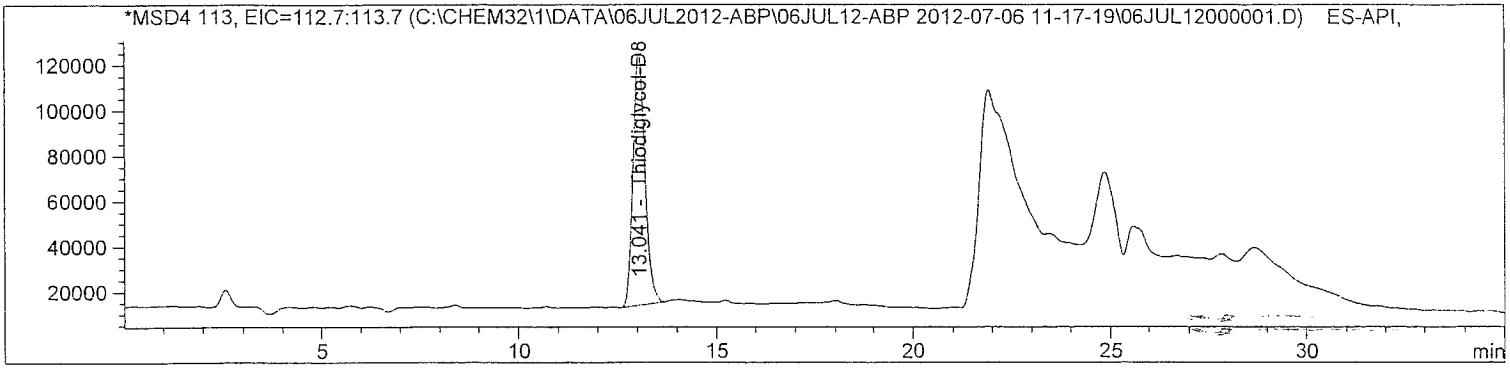


Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	7/9/2012 11:13:05 AM
Multiplier	:	1.0000
Dilution	:	1.0000
Sample Amount	:	10.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.768	BB	1	1.91978e7	1.32528e-1	10.64848		MPA
12.805	BBA	1	5.64639e7	4.37087e-2	10.32924		IMPA

Totals without ISTD(s) : 20.97773

atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 11:17:43 AM
Seq. Line : 1
Location : Vial 1
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.699	BB	1	3.05963e7	7.98724e-2	10.22810		EMPA

Totals without ISTD(s) : 10.22810

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.355	BBA	1	1.54432e8	1.54383e-2	9.97853		DIMP

Totals without ISTD(s) : 9.97853

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.610	BBA	1	2.03461e7	1.26756e-1	10.79391		Thiodiglycol

Totals without ISTD(s) : 10.79391

Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

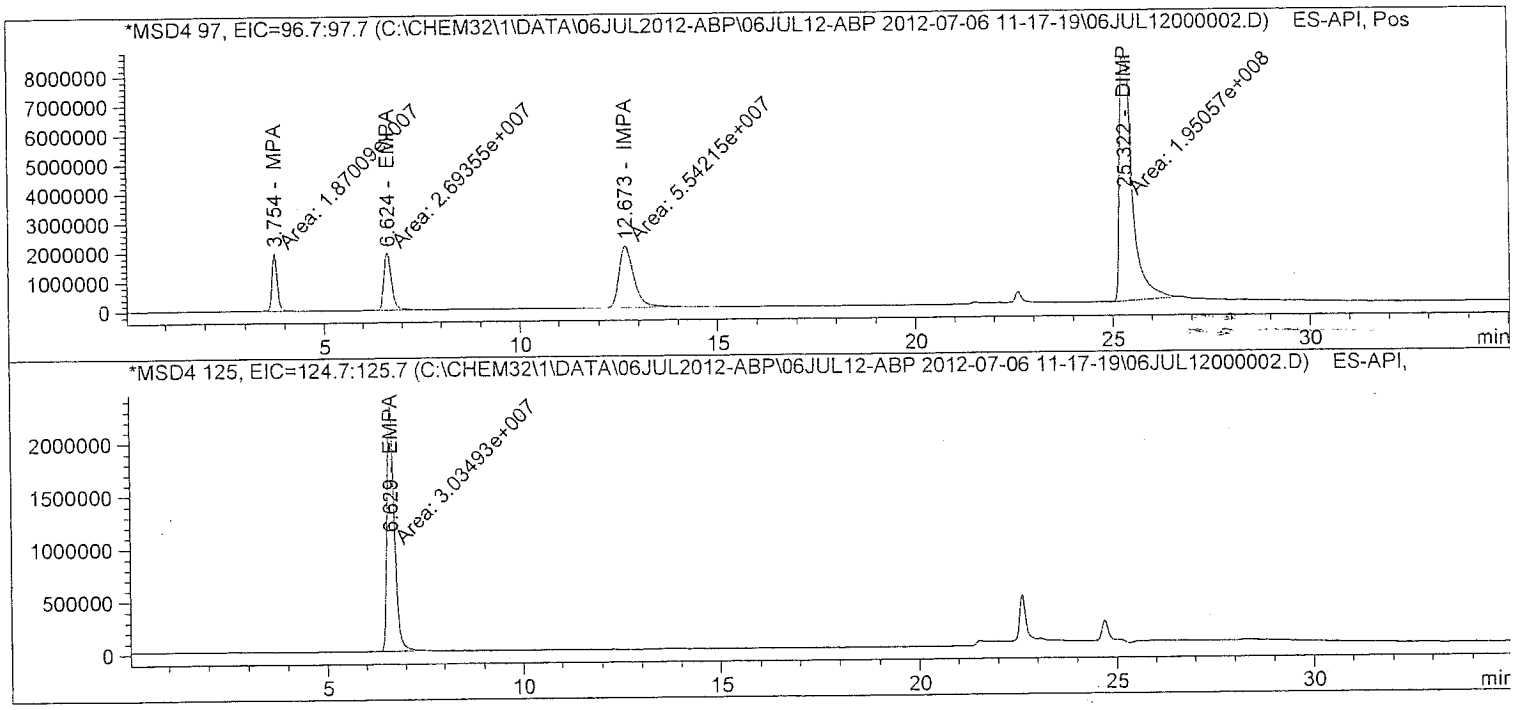
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.041	BB	I	1 2.38930e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 2 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
Sample Name: S10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 2 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
Sample Name: $10

==========

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

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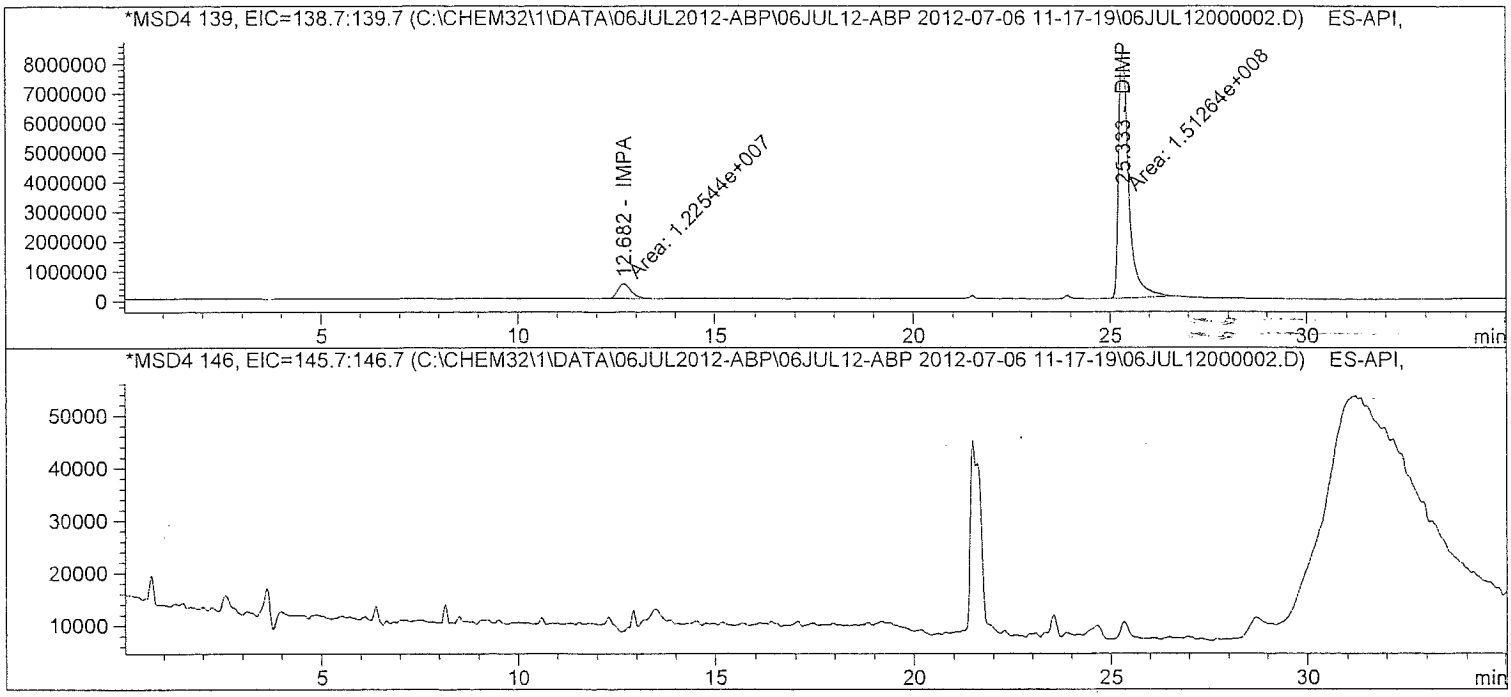
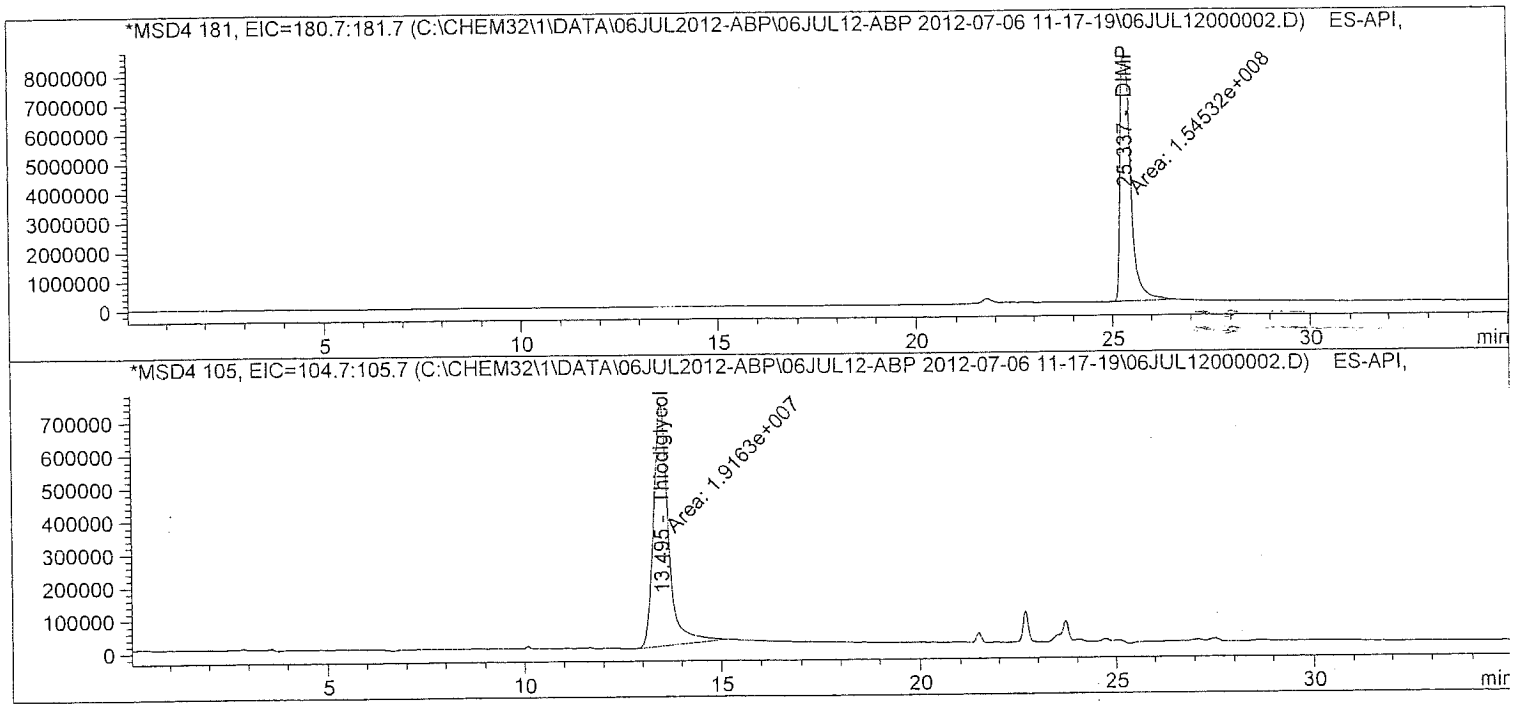


atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 2 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
Sample Name: $10

==========

Acq. Operator : TTM Seq. Line : 2
Acq. Instrument : LCMS3 Location : Vial 1
Injection Date : 7/6/2012 11:54:02 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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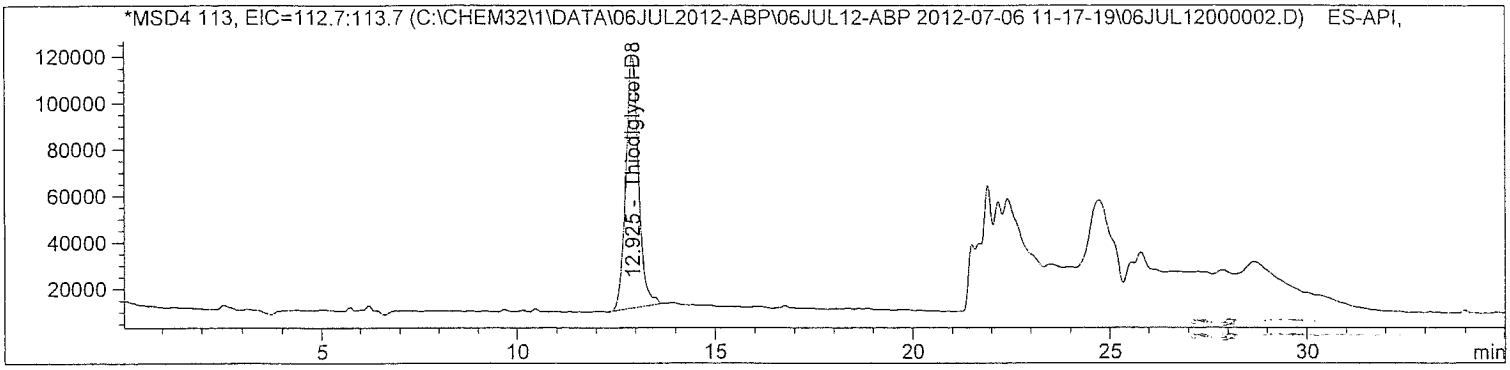

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Internal Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 10.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.754	MM	1	1.87009e7	1.29739e-1	9.93363		MPA
12.673	MM	1	5.54215e7	4.36500e-2	9.90458		IMPA

Totals without ISTD(s) : 19.83821

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 11:54:02 AM
Seq. Line : 2
Location : Vial 1
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.629	MM	1	3.03493e7	7.97357e-2	9.90775		EMPA

Totals without ISTD(s) : 9.90775

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.337	MM	1	1.54532e8	1.48417e-2	9.39024		DIMP

Totals without ISTD(s) : 9.39024

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.495	MM	1	1.91630e7	1.25317e-1	9.83212		Thiodiglycol

Totals without ISTD(s) : 9.83212

atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator : TTM
Seq. Line : 2
Acq. Instrument : LCMS3
Location : Vial 1
Injection Date : 7/6/2012 11:54:02 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 l13, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

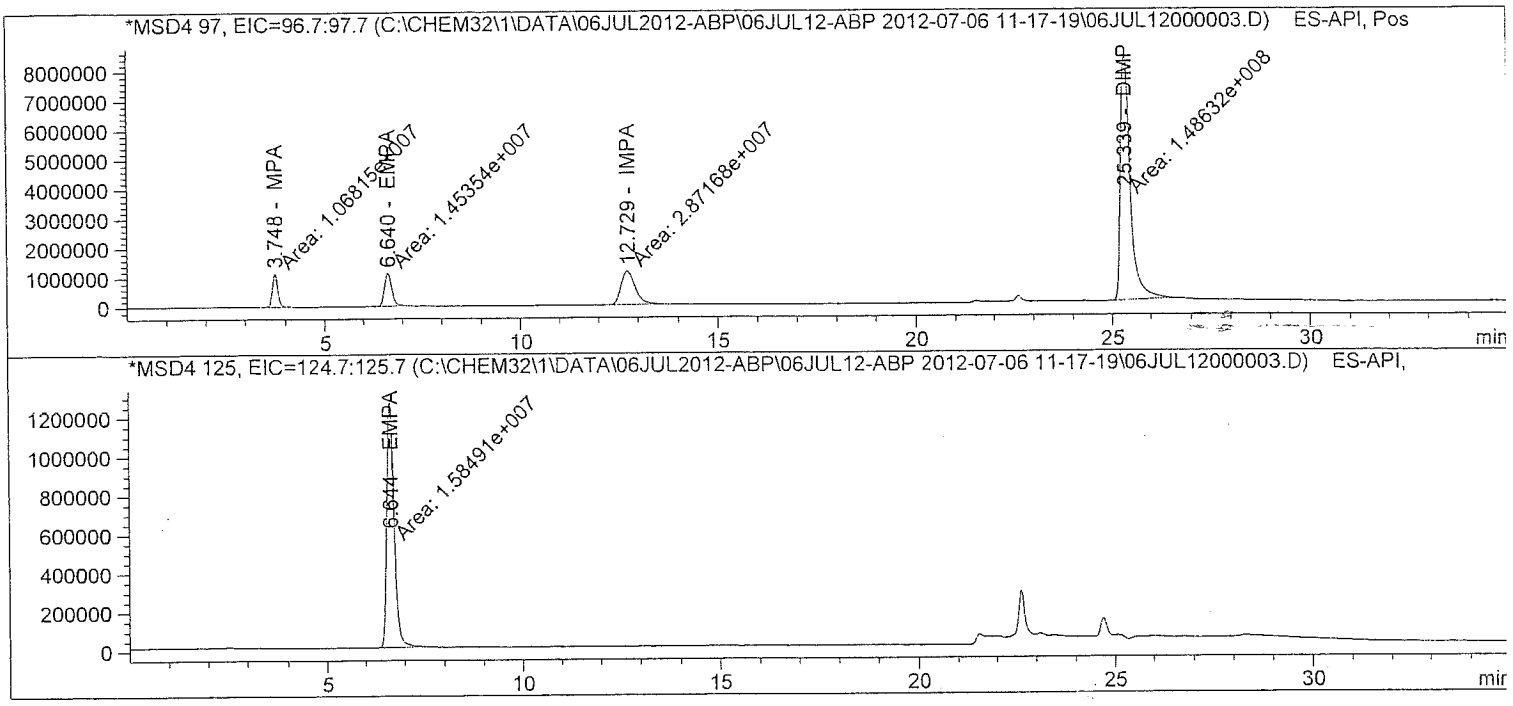
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.925	BB	I	1 2.44245e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

==========

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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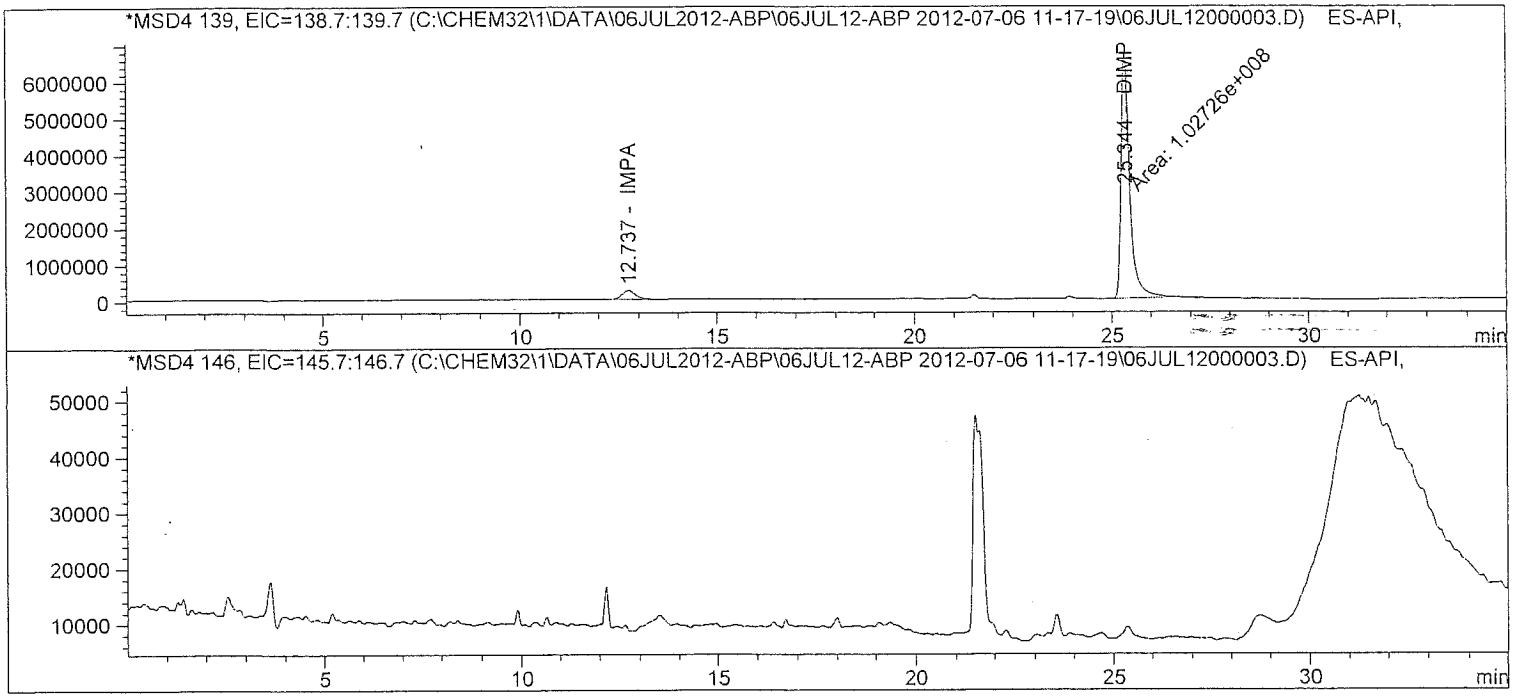
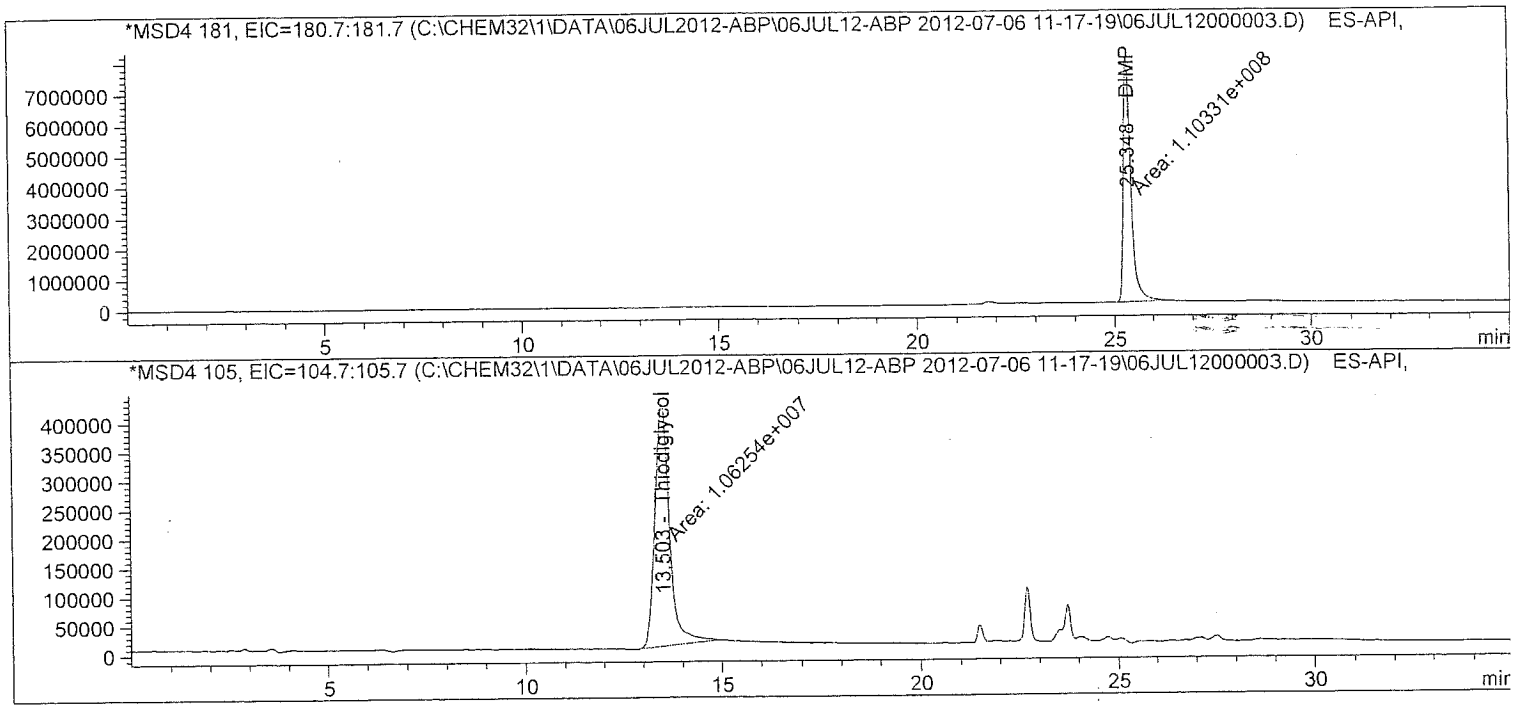


atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

==========

Acq. Operator : TTM Seq. Line : 3
Acq. Instrument : LCMS3 Location : Vial 2
Injection Date : 7/6/2012 12:30:22 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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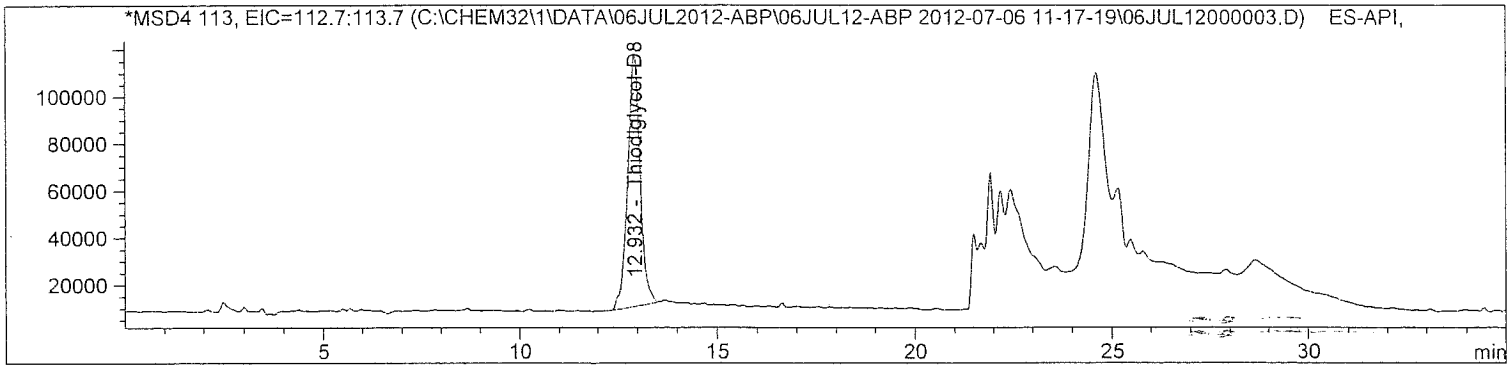

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Internal Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.748	MM	1	1.06815e7	1.13483e-1	5.10907		MPA
12.729	MM	1	2.87168e7	4.30231e-2	5.20733		IMPA

Totals without ISTD(s) : 10.31641

Acq. Operator : TTM
Seq. Line : 3
Acq. Instrument : LCMS3
Location : Vial 2
Injection Date : 7/6/2012 12:30:22 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.644	MM	1	1.58491e7	7.77744e-2	5.19540		EMPA

Totals without ISTD(s) : 5.19540

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	MM	1	1.10331e8	1.18266e-2	5.49964		DIMP

Totals without ISTD(s) : 5.49964

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.503	MM	1	1.06254e7	1.19049e-1	5.33146		Thiodiglycol

Totals without ISTD(s) : 5.33146

atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

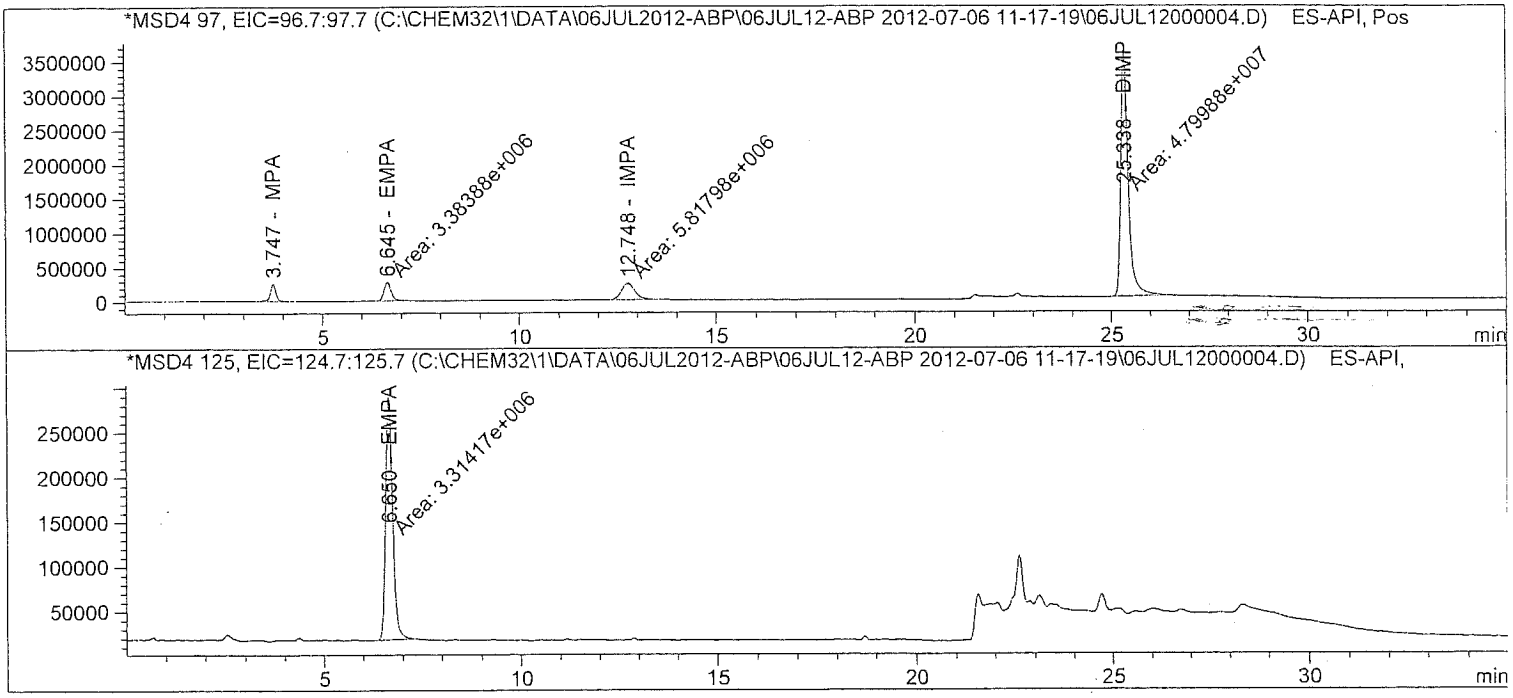
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.932	BB	I	1 2.37259e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

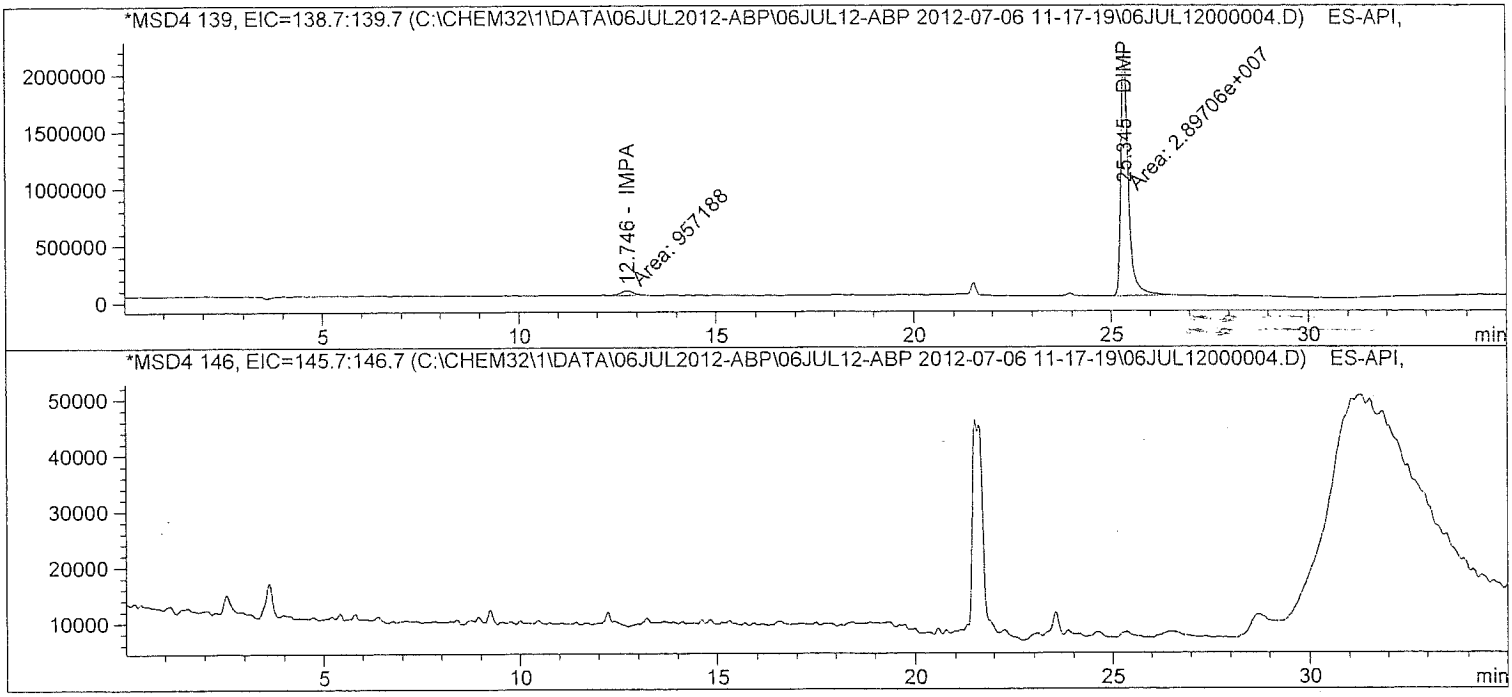
atch Run # 4 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
ample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

==========

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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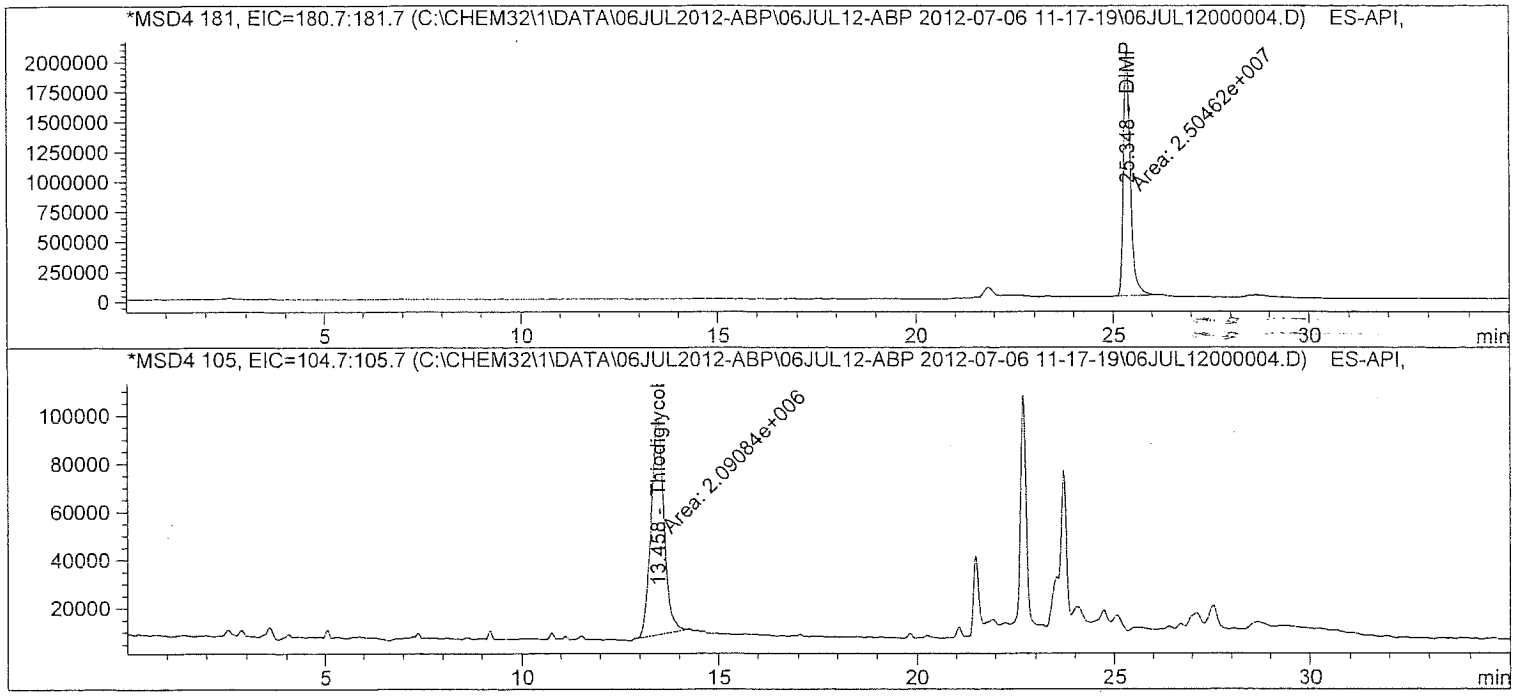

Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

==========

Acq. Operator : TTM
Seq. Line : 4
Acq. Instrument : LCMS3
Location : Vial 3
Injection Date : 7/6/2012 1:06:42 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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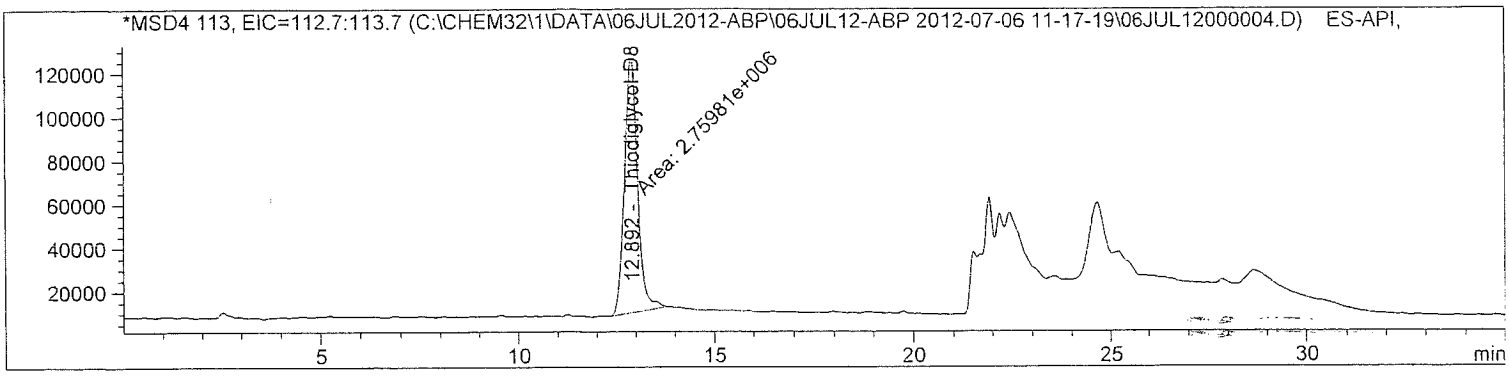


==========

Internal Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 1.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.747	BB	1	2.56450e6	1.00803e-1	9.36694e-1		MPA
12.748	MM	1	5.81798e6	4.26904e-2	8.99961e-1		IMPA

Totals without ISTD(s) : 1.83665

atch Run # 4 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
ample Name: $1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 1:06:42 PM
Seq. Line : 4
Location : Vial 3
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.650	MM	1	3.31417e6	7.60313e-2	9.13037e-1		EMPA

Totals without ISTD(s) : 9.13037e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	MM	1	2.50462e7	9.62641e-3	8.73631e-1		DIMP

Totals without ISTD(s) : 8.73631e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.458	MM	1	2.09084e6	1.14384e-1	8.66577e-1		Thiodiglycol

Totals without ISTD(s) : 8.66577e-1

Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

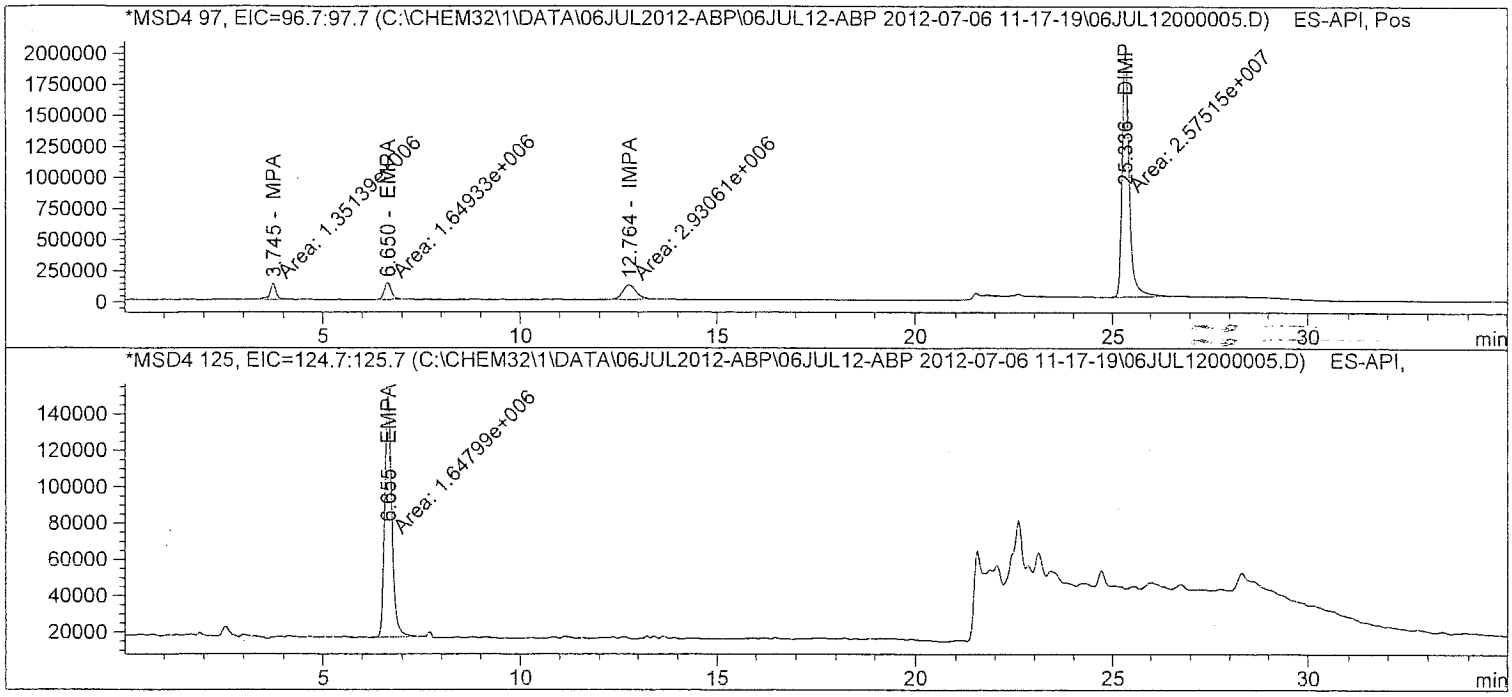
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.892	MM	I	1 2.75981e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

==========

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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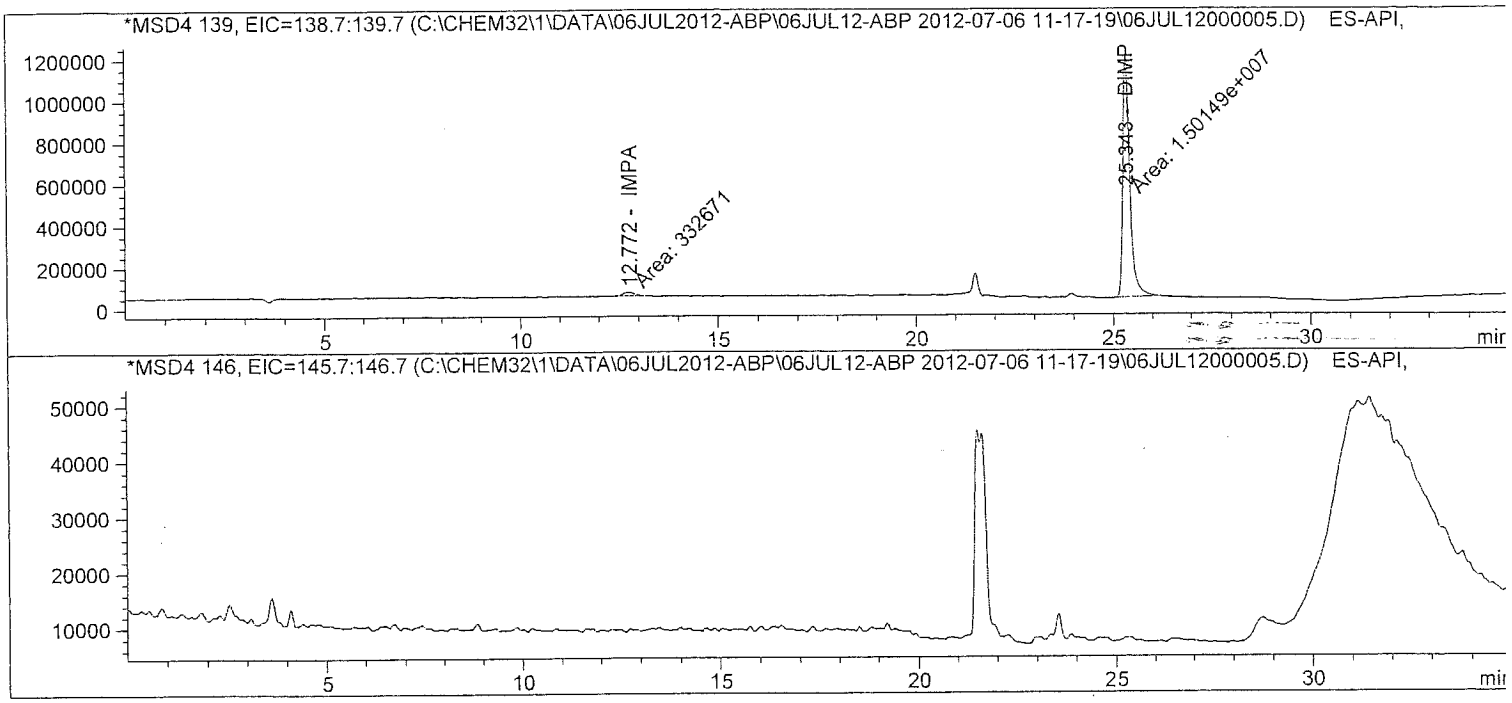

Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

==========

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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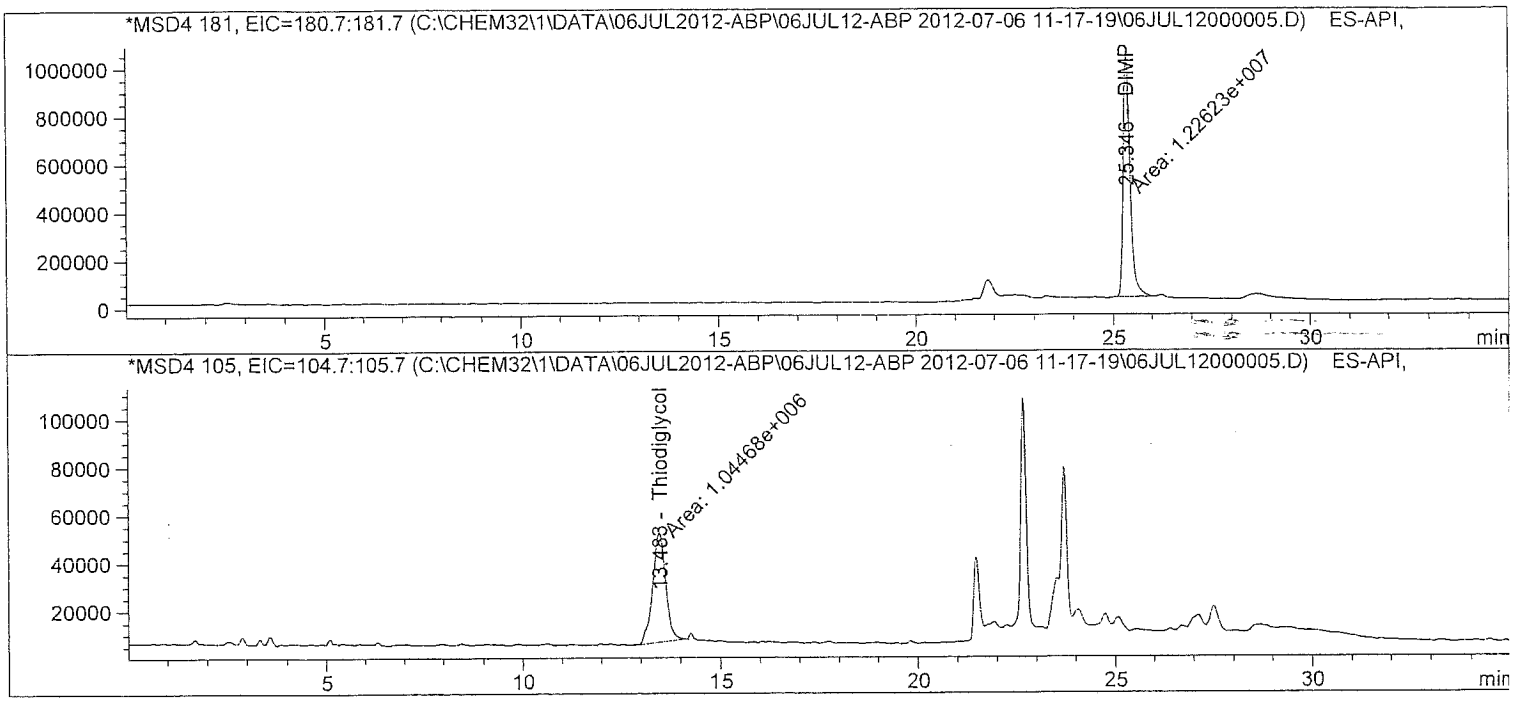

Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

==========

Acq. Operator : TTM Seq. Line : 5
Acq. Instrument : LCMS3 Location : Vial 4
Injection Date : 7/6/2012 1:43:01 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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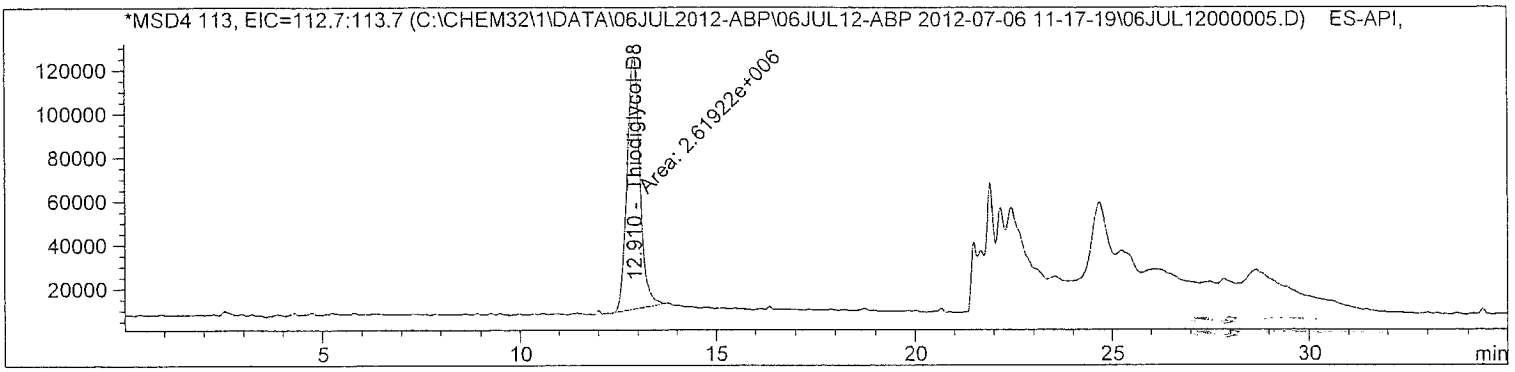

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Internal Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000e-1 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.745	MM	1	1.35139e6	9.80980e-2	5.06138e-1		MPA
12.764	MM	1	2.9306le6	4.28998e-2	4.79999e-1		IMPA

Totals without ISTD(s) : 9.86138e-1

atch Run # 5 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: $05

Acq. Operator : TTM Seq. Line : 5
Acq. Instrument : LCMS3 Location : Vial 4
Injection Date : 7/6/2012 1:43:01 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.655	MM	1	1.64799e6	7.58113e-2	4.76997e-1		EMPA

Totals without ISTD(s) : 4.76997e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.346	MM	1	1.22623e7	9.57834e-3	4.48425e-1		DIMP

Totals without ISTD(s) : 4.48425e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.483	MM	1	1.04468e6	1.15012e-1	4.58725e-1		Thiodiglycol

Totals without ISTD(s) : 4.58725e-1

Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

==========

Acq. Operator : TTM Seq. Line : 5
Acq. Instrument : LCMS3 Location : Vial 4
Injection Date : 7/6/2012 1:43:01 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.910	MM	I	1 2.61922e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

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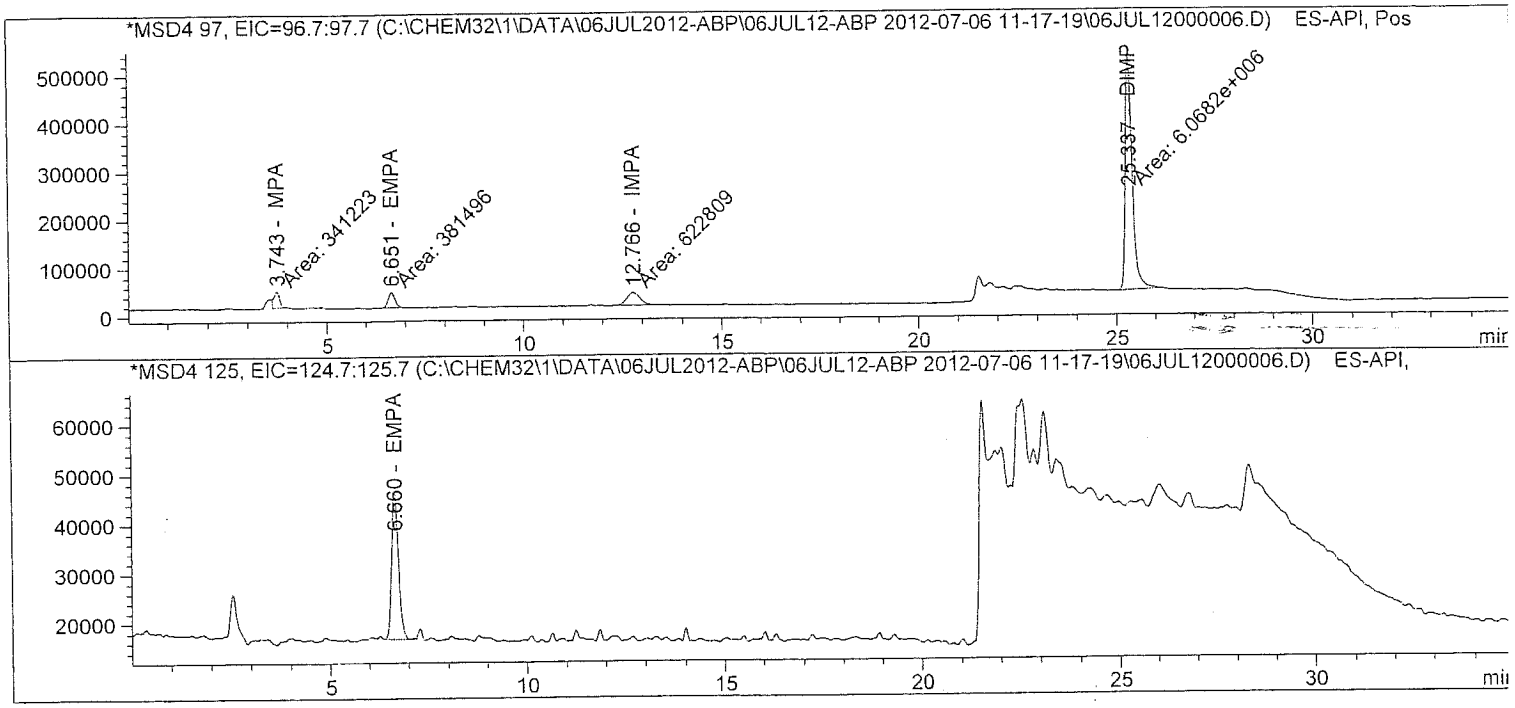
*** End of Report ***

Batch Run # 6 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 6 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

==========

Acq. Operator : TTM
Seq. Line : 6
Acq. Instrument : LCMS3
Location : Vial 5
Injection Date : 7/6/2012 2:19:21 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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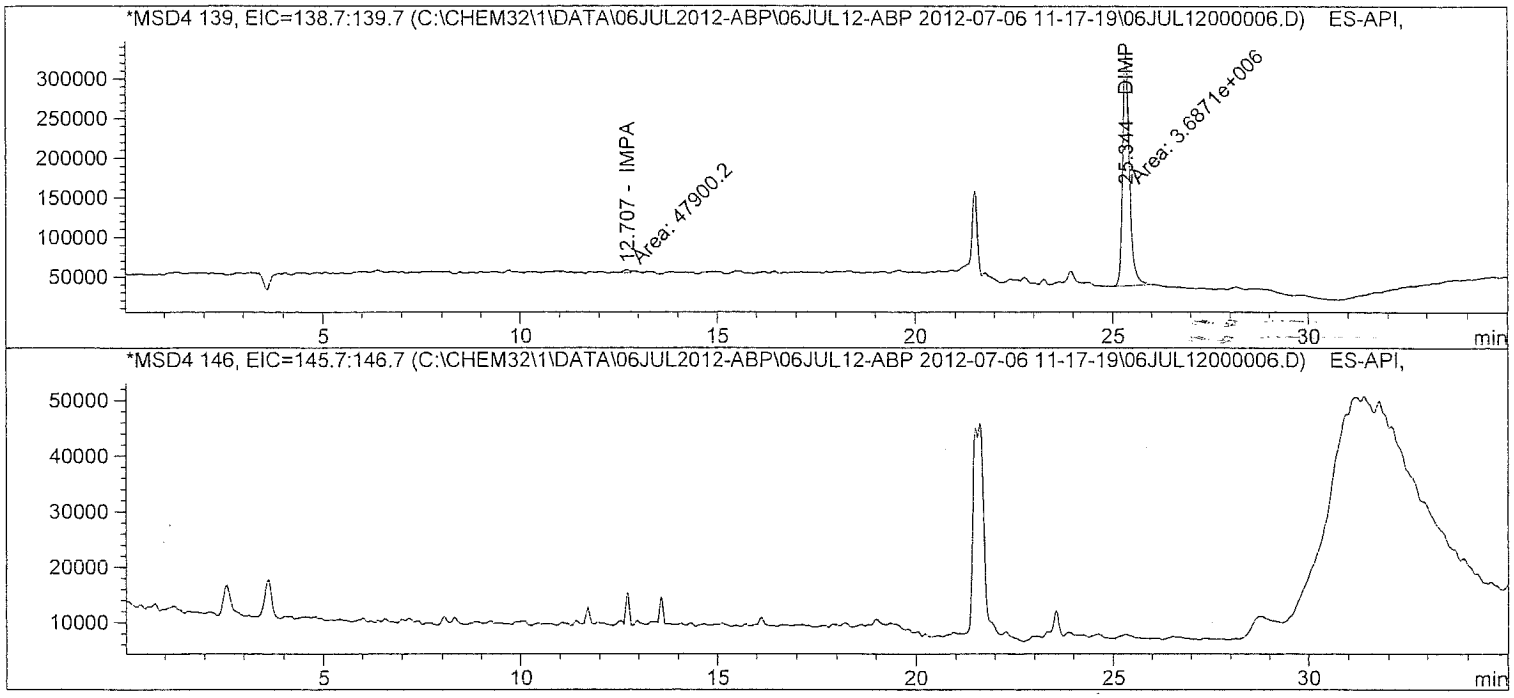
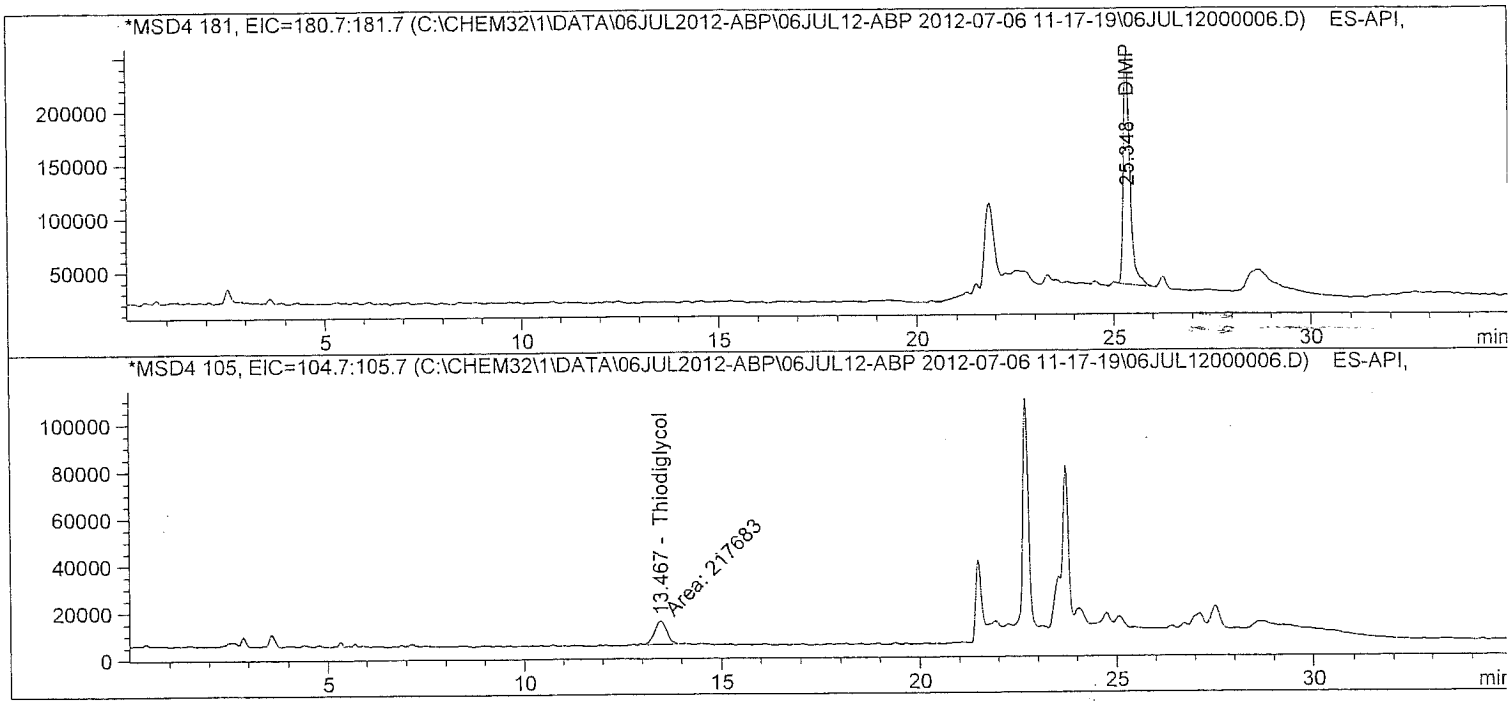


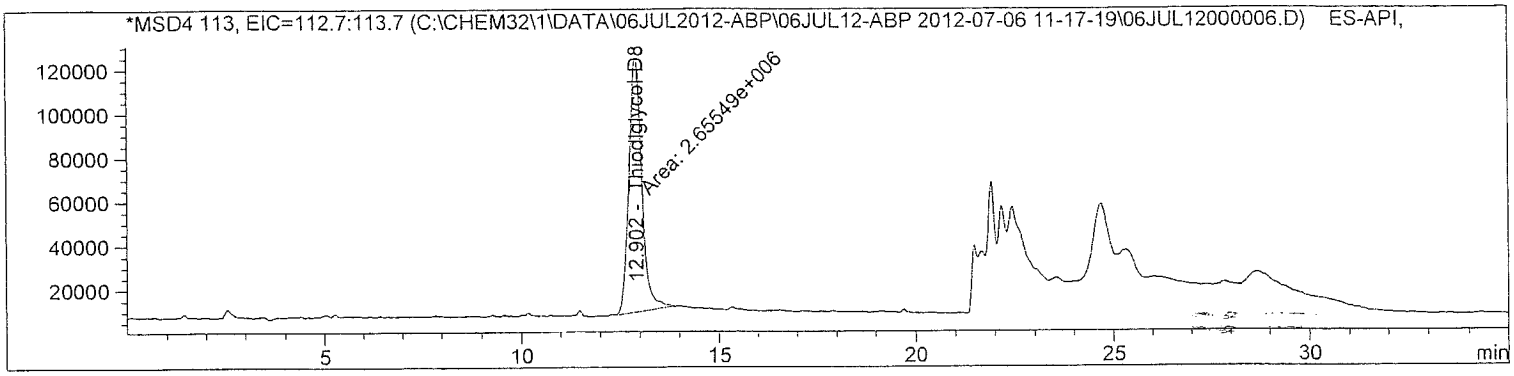
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 1.00000e-1 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.743	FM	1	3.41223e5	8.57299e-2	1.10161e-1		MPA
12.766	MM	1	6.22808e5	4.49809e-2	1.05497e-1		IMPA

Totals without ISTD(s) : 2.15657e-1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:19:21 PM
Seq. Line : 6
Location : Vial 5
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.660	BB	1	3.63294e5	7.52785e-2	1.02988e-1		EMPA

Totals without ISTD(s) : 1.02988e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	BB	1	2.58087e6	1.03862e-2	1.00944e-1		DIMP

Totals without ISTD(s) : 1.00944e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.467	MM	1	2.17683e5	1.23740e-1	1.01436e-1		Thiodiglycol

Totals without ISTD(s) : 1.01436e-1

atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

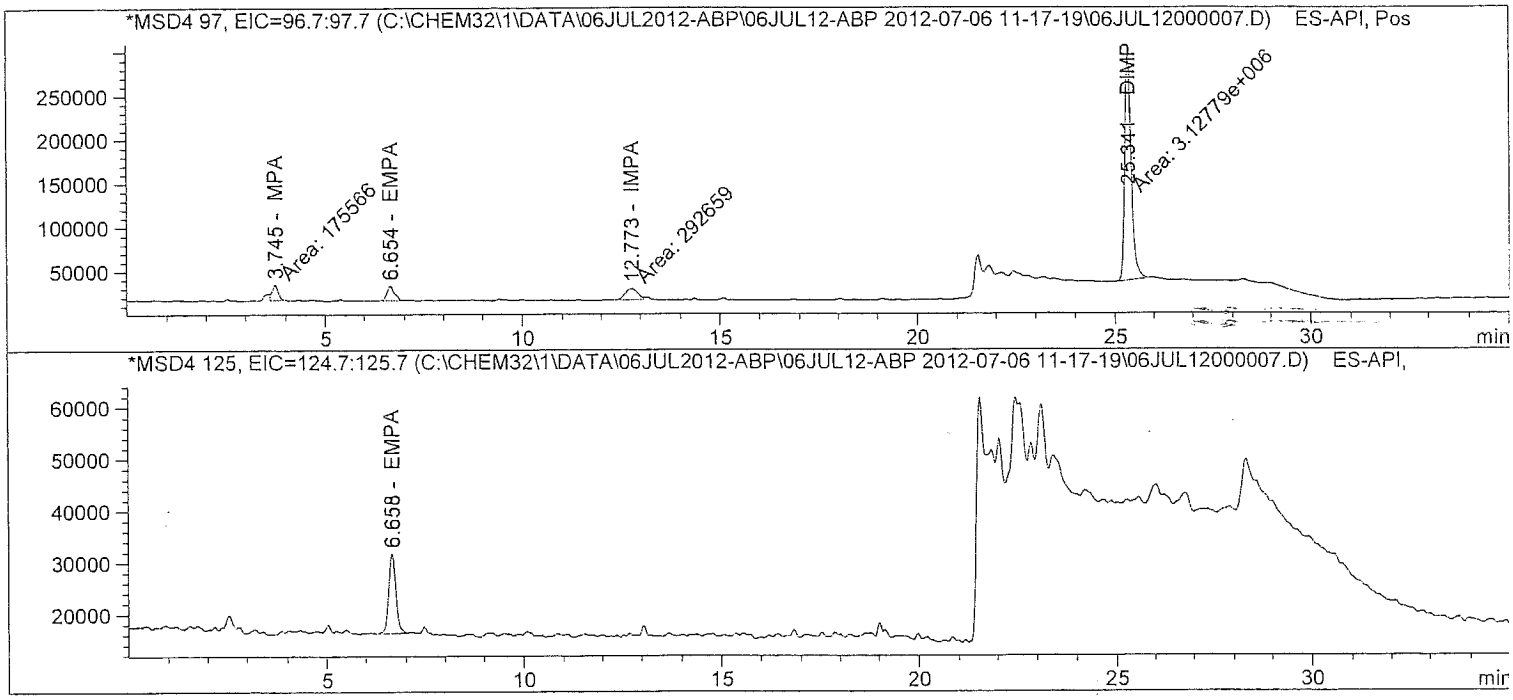
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.902	MM	I	1 2.65549e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

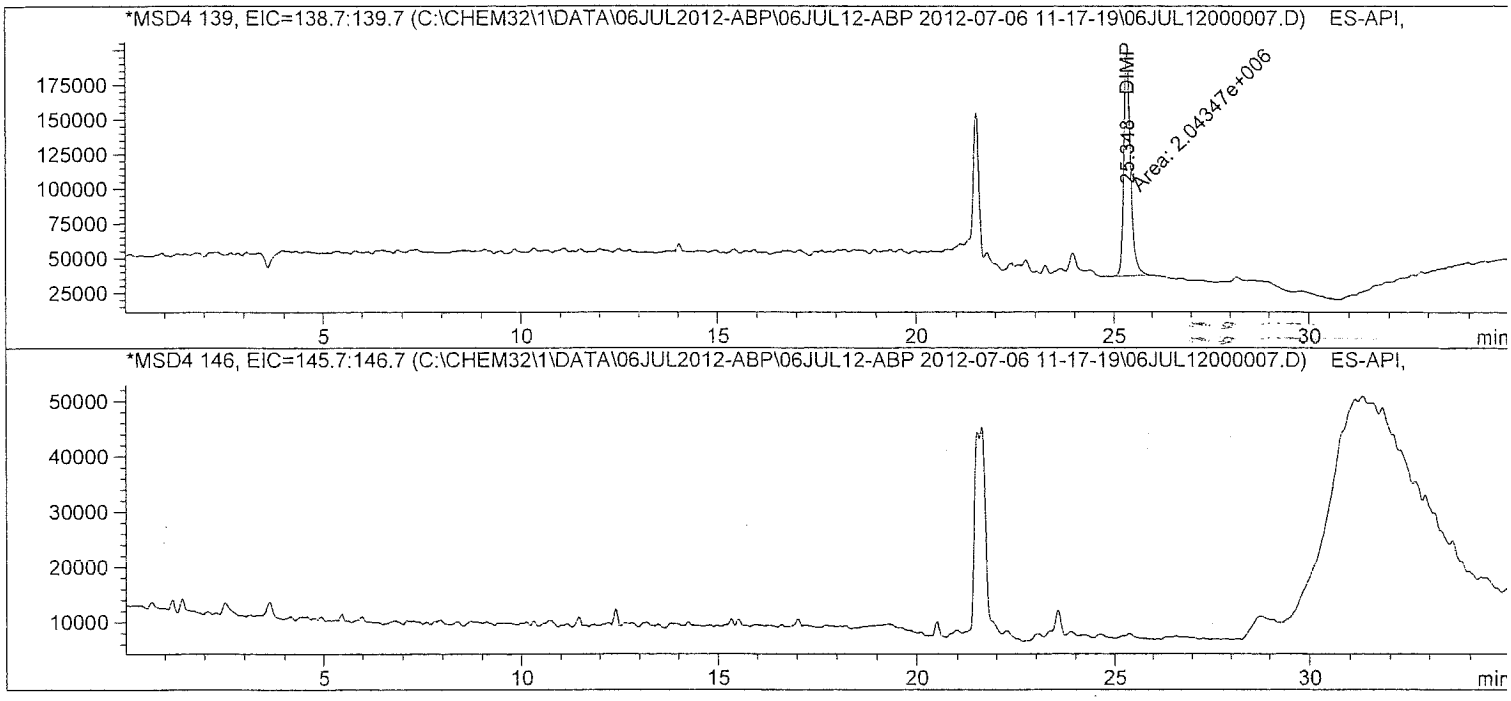
Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



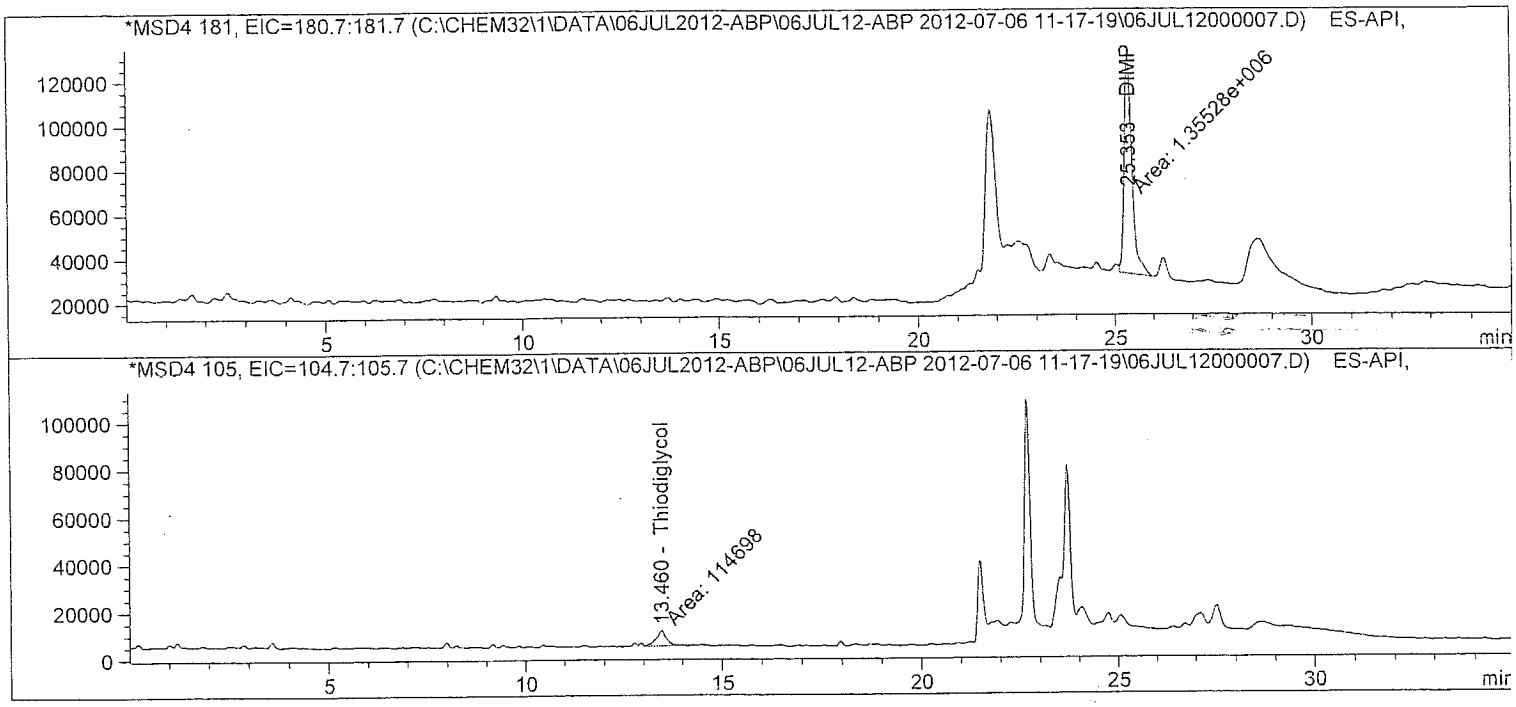
Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



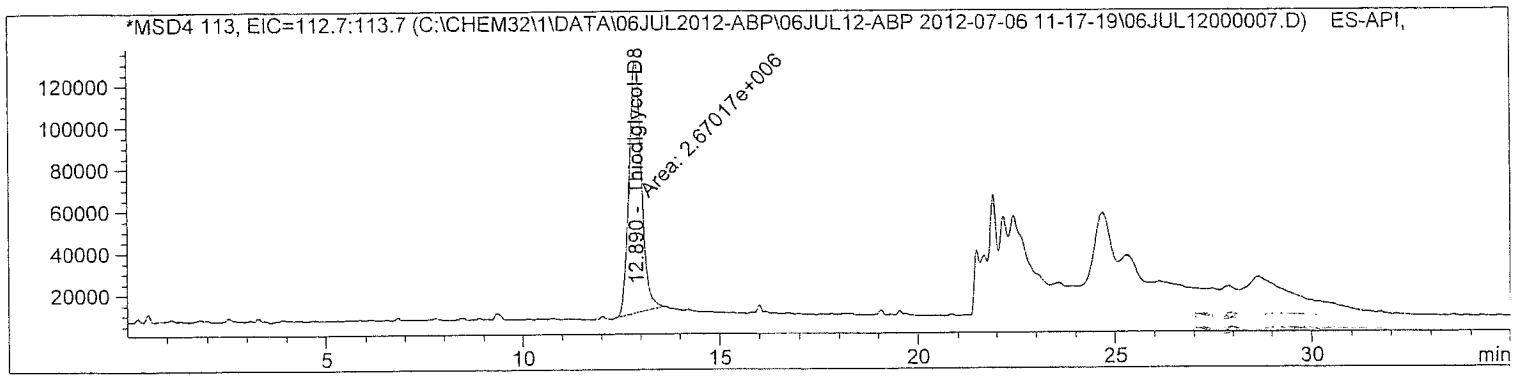
atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:55:42 PM
Seq. Line : 7
Location : Vial 6
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000e-2 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.745	FM	1	1.75566e5	7.10322e-2	4.67042e-2		MPA
12.773	MF	1	2.92659e5	4.80467e-2	5.26608e-2		IMPA

Totals without ISTD(s) : 9.93650e-2

atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator : TTM
Seq. Line : 7
Acq. Instrument : LCMS3
Location : Vial 6
Injection Date : 7/6/2012 2:55:42 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.658	BB	1	1.91552e5	7.48089e-2	5.36662e-2		EMPA

Totals without ISTD(s) : 5.36662e-2

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.353	FM	1	1.35528e6	1.14558e-2	5.81454e-2		DIMP

Totals without ISTD(s) : 5.81454e-2

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460	MM	1	1.14698e5	1.34158e-1	5.76283e-2		Thiodiglycol

Totals without ISTD(s) : 5.76283e-2

Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

Acq. Operator : TTM
Seq. Line : 7
Acq. Instrument : LCMS3
Location : Vial 6
Injection Date : 7/6/2012 2:55:42 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

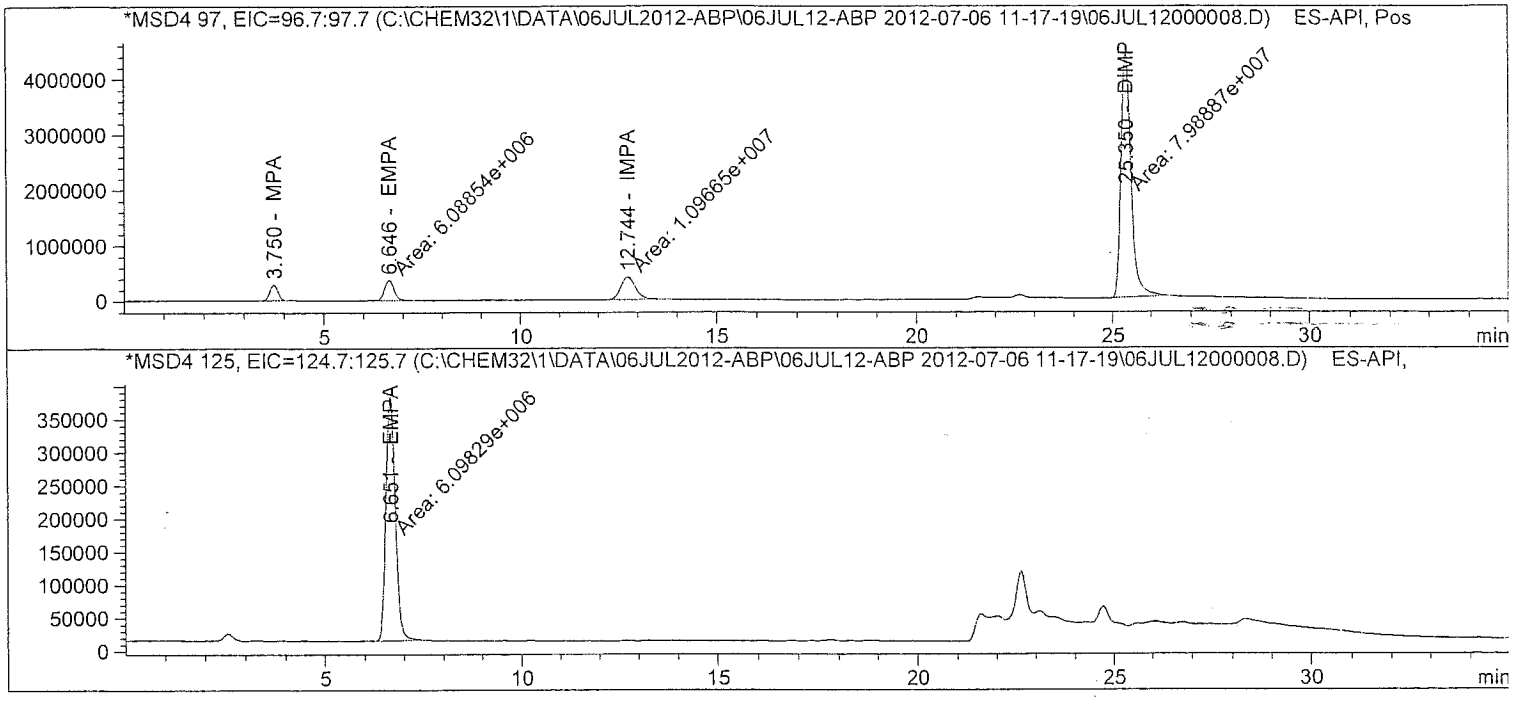
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.890	MM	I	1 2.67017e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 8 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
Sample Name: ICV

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

==========

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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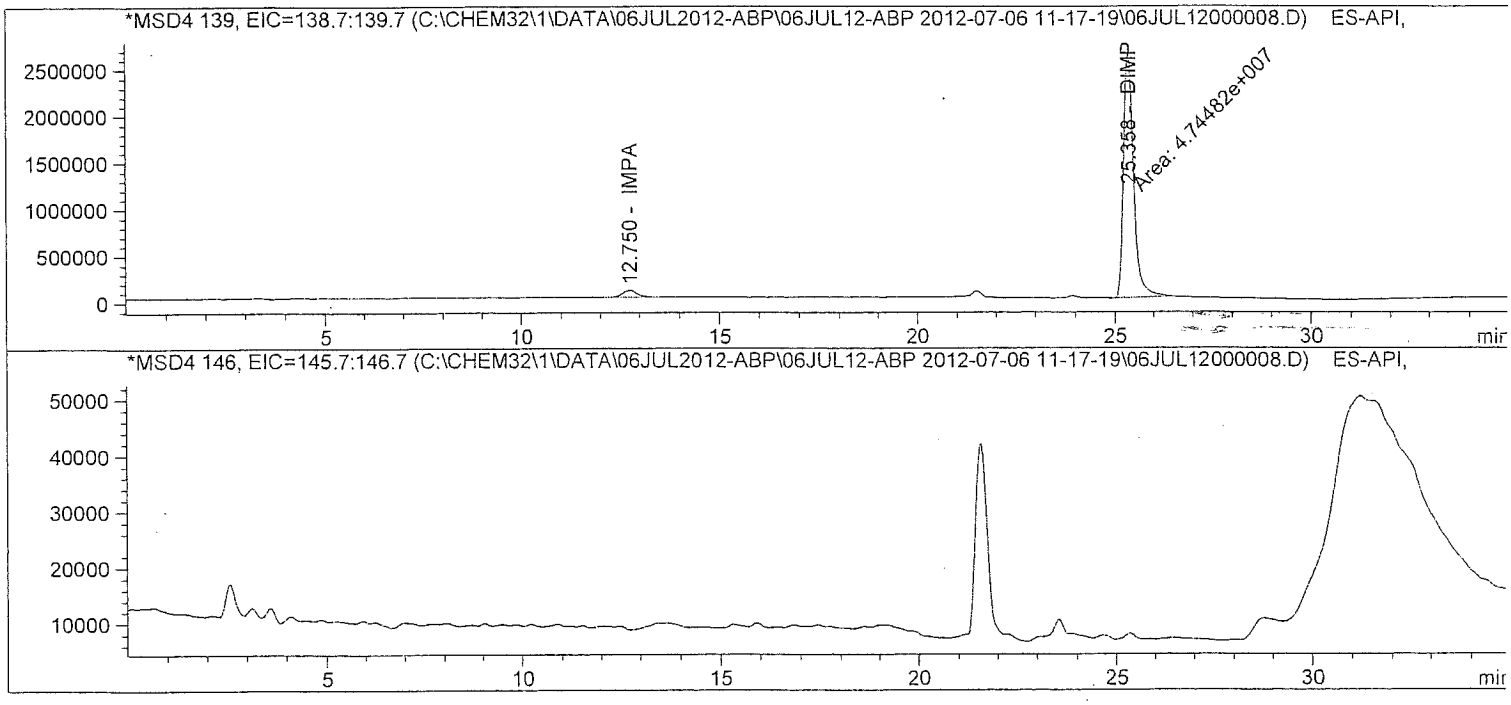
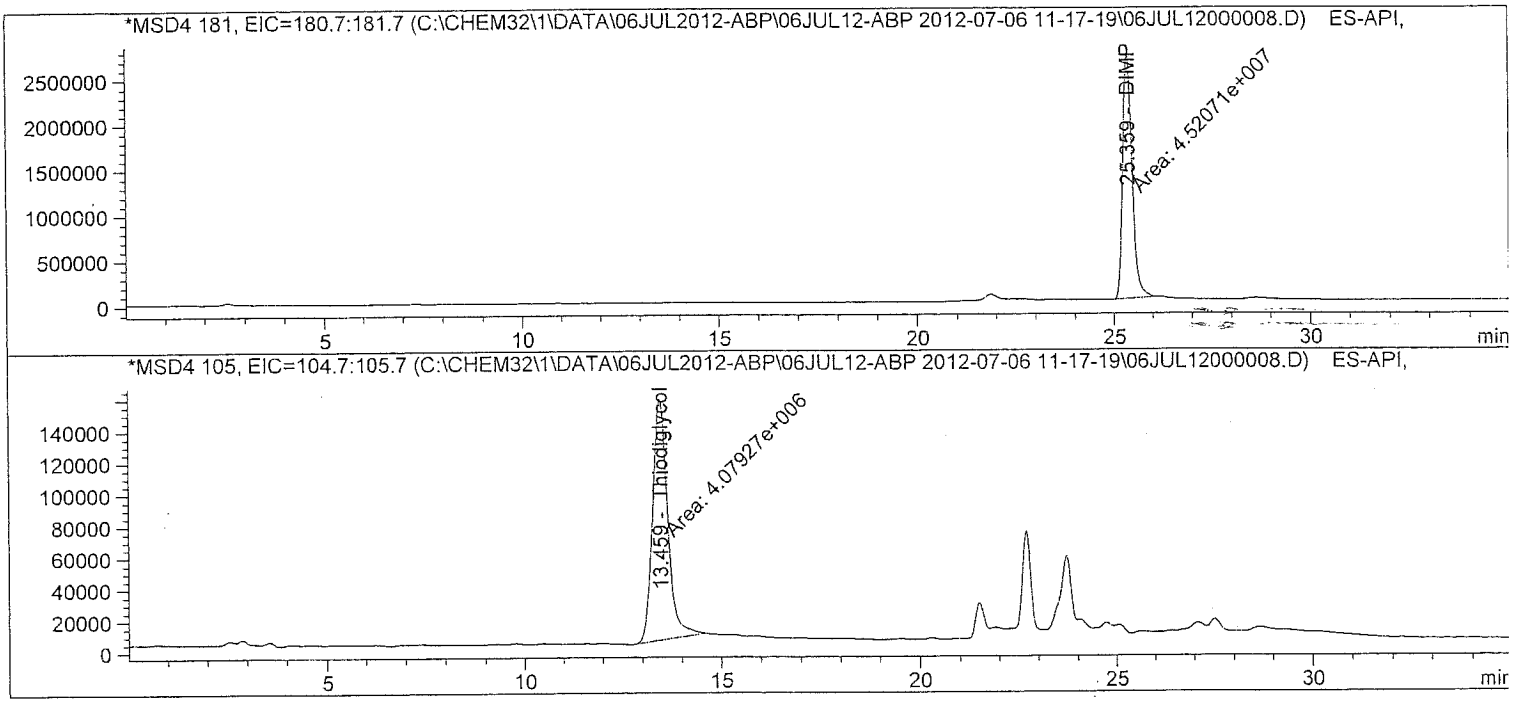


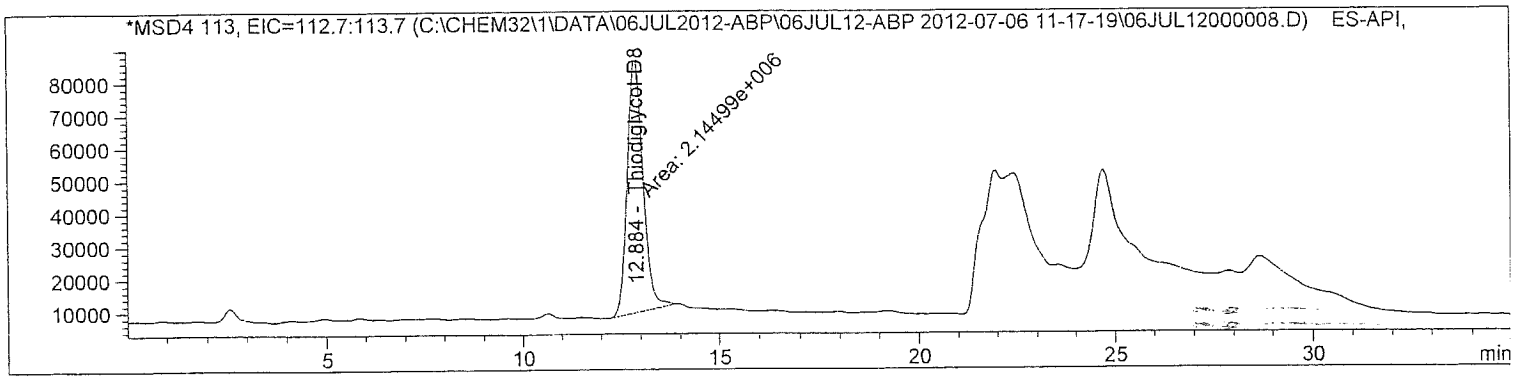
atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 3:32:02 PM
Seq. Line : 8
Location : Vial 7
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 2.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.750	BB	1	4.04355e6	1.04390e-1	1.96787		MPA
12.744	MM	1	1.09665e7	4.26853e-2	2.18233		IMPA

Totals without ISTD(s) : 4.15020

atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 3:32:02 PM
Seq. Line : 8
Location : Vial 7
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.651	MM	1	6.09829e6	7.65569e-2	2.17655		EMPA

Totals without ISTD(s) : 2.17655

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.359	MM	1	4.52071e7	1.00834e-2	2.12514		DIMP

Totals without ISTD(s) : 2.12514

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.459	MM	1	4.07927e6	1.15268e-1	2.19214		Thiodiglycol

Totals without ISTD(s) : 2.19214

Batch Run # 8 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
Sample Name: ICV

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 3:32:02 PM
Seq. Line : 8
Location : Vial 7
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.884	MM	I	1 2.14499e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Water

Analytical Documentation

ALS WO ID #(S):1221555; 1221656; 1222142
ALS Sample #(S):1221555006; 1221656017; 1222142012
ALS Account #(s): 8001 Method: ALS LC/MS Matrix: Water
Sequence: \\CHEM32\1\SEQUENCE\13AUG12-ABP.S
Prep Date: 08/13/2012 Analysis Date: 08/13/2012
HBN #: 91545 Instrument LOD: 0.050µg/mL
Analyte: **Thiodiglycol (TDG)**
Reported MDL: See Report Reported LOD: 50µg/L

SAMPLE PREPARATION: All ALS sample #'s agreed with field ID #'s. Samples were prepared by TTM. 9.9mL of each sample was transferred into a 15-mL centrifuge tube. 100µL of an internal standard solution was then added to each sample. The samples were capped, vortexed, and filtered with Phenex 0.45µm PES filters prior to analysis.

REAGENTS: Eluent A: 100% ASTM Type II water/0.1% glacial acetic acid.
Eluent B: 95% ACN/ 5% ASTM Type II water/0.1% glacial acetic acid.

HORIZON STANDARD(S): TDG (14169); MPA (14170); IMPA (14172); EMPA (14174); DIMP (14179)
All standards are at 1000µg/mL. Standards used to create calibration standards and those used for CCVs (target = 5.00µg/mL) and RLVS (target = 0.050µg/mL).
Internal Standard Solution: TDG-D8 (14177) at 100ug/mL.

CALIBRATION CURVE: Run 03/05/2012.
Raw data can be found in \\Alsltws013\DataReview\82050

INSTRUMENT CONDITIONS: Samples were analyzed with an Agilent 1200 LC/MSD system, in positive SIM mode, monitoring m/z 97, 125, 139, 146, 181, 105 and 113.
Instrument ID: LCMS03 Run Time: 35.00 min. Flow Rate: 0.8mL/min Temp: 30°C
Output Gain: 3 Injection Volume: 10µL Fragmentor Voltage: 75 & 125
Column: Phenomenex Synergi Hydro-RP 4 micron (4.6 x 250mm) s/n: 245485-24

GRADIENT:

Time(min)	%Eluent A	%Eluent B
0.00	100.0	0.0
15.00	100.0	0.0
17.00	50.0	50.0
25.00	50.0	50.0
25.01	100.0	0.0

QC DATA: 20µl of Horizon QC standard 13383 were used to spike LCS 289538; target = 2000µg/L. ASTM type II water was used for LMB 289537.

MS/MSD: MS/MSD was performed on sample 1221555006. 50µl of Horizon standard 14169 was added to 10.0mL of sample preparation. Spike target = 5000µg/L.

COMMENTS: 1) Quantitation was done using m/z 105 for TDG. No confirmation ions were available for TDG. Results are reported in ug/L.
2) All CCV, Blank, LCS and MS/MSD results were within acceptable limits.

Batch Worklist

Batch: ELMS/ 1288
Rule: Chemical Agent BD, Water

Created: 8/13/2012 10:16
Analyst: T. McKay

Instrument:
Status: WP

HBN: 91545

Workorder: 1221555
Workorder: 1221656
Workorder: 1222142

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	289537	LMB for HBN 91545 [ELMS/1288]			3	LMB		DCAB....3Q	5948	8/27/2012	8/13/2012	
2	289538	LCS for HBN 91545 [ELMS/1288]			3	LCS		DCAB....3Q	5948	8/27/2012	8/13/2012	
3	289539	FTSW-HR-SO-02...(1221555006MS)			3	MS		DCAB....3Q	5948	8/13/2012	8/13/2012	
4	289540	FTSW-HR-SO-0...(1221555006MSD)			3	MSD		DCAB....3Q	5948	8/13/2012	8/13/2012	
5	289541	RLVS for HBN 91545 [ELMS/1288]			3	RLVS		DCAB...C3Q	5948		8/13/2012	
6	1221555006	FTSW-HR-SO-02(01.5)ERB			3	SAMPLE	1221555006-A	DCAB....3	5480	8/13/2012	8/13/2012	
7	1221656017	FTSW-HR-SO-37(09.5)ERB			3	SAMPLE	1221656017-A	DCAB.....3	5480	8/15/2012	8/15/2012	
8	1222142012	FTSW-HR-SO-60 (7.5) ERB			3	SAMPLE	1222142012-A	DCAB....3	5480	8/20/2012	8/20/2012	

STANDARD REPORT

Working Standard - TDG WRK

TDG WRK — Description - Thiodiglycol Working Std.

Standard:	14169	Expires:	01/31/2013	Usable:	Yes
Lab Lot:	TDG WRK	Created By:	T. McKay	Amount:	12.15 mL
Part ID:		Create Date:	01/31/2012	Validated By:	
MFG:		MFG Lot:		Validated Date:	

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume Added	Expires
3824	TDG STOCK		TDG STK	12.15 mg	1/1/2025

Stock Standard - TDG STOCK

TDG STOCK				Description - (Thiodiglycol Stock Std.)	
Standard:	3824	Expires:	1/1/2025	Usable:	Yes
Lab Lot:	TDG STK	Created By:	T. McKay	Amount:	100 grams
Part ID:	166782	Create Date:	4/1/2009	Validated By:	T. Bosch
MFG:	Aldrich	MFG Lot:	11613AR	Validated Date:	4/19/2009

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 mg/g

S 3824

Certificate of Analysis

SIGMA-ALDRICH

Product Name	2,2'-Thiodiethanol, ≥99%
Product Number	166782
Product Brand	Aldrich
CAS Number	111-48-8
Molecular Formula	$S(CH_2CH_2OH)_2$
Molecular Weight	122.19

TEST	SPECIFICATION	LOT 11613AR RESULTS
APPEARANCE	COLORLESS LIQUID	COLORLESS LIQUID
INFRARED SPECTRUM	CONFORMS TO STRUCTURE.	CONFORMS TO STRUCTURE AND STANDARD AS ILLUSTRATED ON PAGE 276B OF EDITION I, VOLUME 1 OF "THE ALDRICH LIBRARY OF FT-IR SPECTRA".
GAS LIQUID CHROMATOGRAPHY	99.0% (MINIMUM)	99.6 %
QUALITY CONTROL ACCEPTANCE DATE		JANUARY 1997

Barbara Rajzer

Barbara Rajzer, Supervisor
Quality Control
Milwaukee, Wisconsin USA

STANDARD REPORT

Working Standard - TDG QC WRK

TDG QC WRK — Description - Thiodiglycol QC Wrk

Standard:	13383	Expires:	11/21/2012	Usable:	Yes
Lab Lot:	TDG QC WRK	Created By:	T. McKay	Amount:	8.44 mL
Part ID:		Create Date:	11/21/2011	Validated By:	
MFG:		MFG Lot:		Validated Date:	

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume Added	Expires
5844	TDG QC STK	Thiodiglycol QC Stock	TDG QC STK	8.44 mg	1/1/2025

STANDARD REPORT

Constituent

Stock Standard - TDG QC STK

TDG QC STK					Description - Thiodiglycol QC Stock
Standard:	5844	Expires:	1/1/2025	Usable:	Yes
Lab Lot:	TDG QC STK	Created By:	T. McKay	Amount:	50 grams
Part ID:	88559	Create Date:	10/7/2009	Validated By:	T. Bosch
MFG:	Fluka	MFG Lot:	1410377	Validated Date:	10/7/2009

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 mg/g

2008-10-08-s844-01

5844

SIGMA-ALDRICH

Fluka

Sigma-Aldrich Production GmbH
CH-9471 Buchs/Schweiz
www.sigma-aldrich.com

Telefon +41 81 755 2511
Telefax +41 81 755 2272
Email fluka@sial.com

Certificate of Analysis

Product Brand	Fluka
PRODUCT-NO	88559
PRODUCT	2,2'-THIODIETHANOL *BioChemika*
FORMULA	$C_4H_{10}O_2S$
MOLECULAR MASS	122.19
CAS NUMBER	111-48-8
LOT	1410377

Test	Specification	Result
APPEARANCE (COLOR)	COLORLESS	COLORLESS
APPEARANCE (FORM)	CLEAR TO CLEAR VISCOUS LIQUID	CLEAR VISCOUS LIQUID
PURITY (GC AREA %)	≥ 99.0 % REL	99.9 % REL
GC (METHOD)	--	100% POLYETHYLENEGLYCOL (30 M X 0.32 MM X 0.25 UM), IN DICHLORMETHANE
REFRACTIVE INDEX N20/D	1.520 - 1.522	1.522
RESIDUE ON IGNITION	≤ 0.1 %	< 0.05 %
CARBON CONTENT	39.32 % (THEORY)	38.90 %
HYDROGEN CONTENT	8.25 % (THEORY)	8.49 %
INFRARED SPECTRUM	CONFORMS TO STRUCTURE	CONFORMS
QC RELEASE DATE	28/OCT/08	

Edeltraud Schwärzler, Manager
Quality Control
Buchs, Switzerland

Sigma-Aldrich guarantees the 'Sales-Specification' values only, additional lot specific tests may be included for further information. The current 'Sales-Specifications' sheet is available on request. For further inquiries, please contact our Technical Service.Sigma-Aldrich warrants, that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice for additional terms and conditions of sale. The values given on the 'Certificate of Analysis' are the results determined at the time of analysis.



ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

Batch Report: C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG12-ABP.B

Batch Review Method: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M

['#' ==> Run has not been reprocessed with Batch Review Method
'*' ==> Run has been saved with batch file]

#	Sample	Location	Inj	Dilution	Thiodiglycol-D8 RT	Thiodiglycol-D8 Area	Thiodiglycol-D8 Amount
#*	CCV1	Vial 51	1	1	12.443	2.66277e6	10.00000
#*	289537 LMB	Vial 52	1	1	12.469	2.27023e6	10.00000
#*	289538 LCS	Vial 53	1	1	12.548	2.32108e6	10.00000
#*	289541 RLVS	Vial 54	1	1	12.594	2.31433e6	10.00000
#*	1221555006	Vial 55	1	1	12.666	2.59930e6	10.00000
#*	289539 MS	Vial 56	1	1	12.719	2.27916e6	10.00000
#*	289540 MSD	Vial 57	1	1	12.773	2.12715e6	10.00000
#*	1221656017	Vial 58	1	1	12.827	2.49470e6	10.00000
#*	1222142012	Vial 59	1	1	12.866	3.07357e6	10.00000
#*	CCV2	Vial 51	1	1	12.939	2.85012e6	10.00000

#	Sample	Location	Inj	Dilution	Thiodiglycol RT	Thiodiglycol Area	Thiodiglycol Amount (ng/mL)
#*	CCV1	Vial 51	1	1	12.990	1.14519e7	5.10747
#*	289537 LMB	Vial 52	1	1	0.000	0.00000	0.00000
#*	289538 LCS	Vial 53	1	1	13.102	4.56238e6	2.26727
#*	289541 RLVS	Vial 54	1	1	13.189	1.10307e5	6.29108e-2
#*	1221555006	Vial 55	1	1	0.000	0.00000	0.00000
#*	289539 MS	Vial 56	1	1	13.286	1.00825e7	5.26247
#*	289540 MSD	Vial 57	1	1	13.343	1.03868e7	5.84614
#*	1221656017	Vial 58	1	1	0.000	0.00000	0.00000
#*	1222142012	Vial 59	1	1	0.000	0.00000	0.00000
#*	CCV2	Vial 51	1	1	13.524	1.29505e7	5.41429

*** End of Report ***

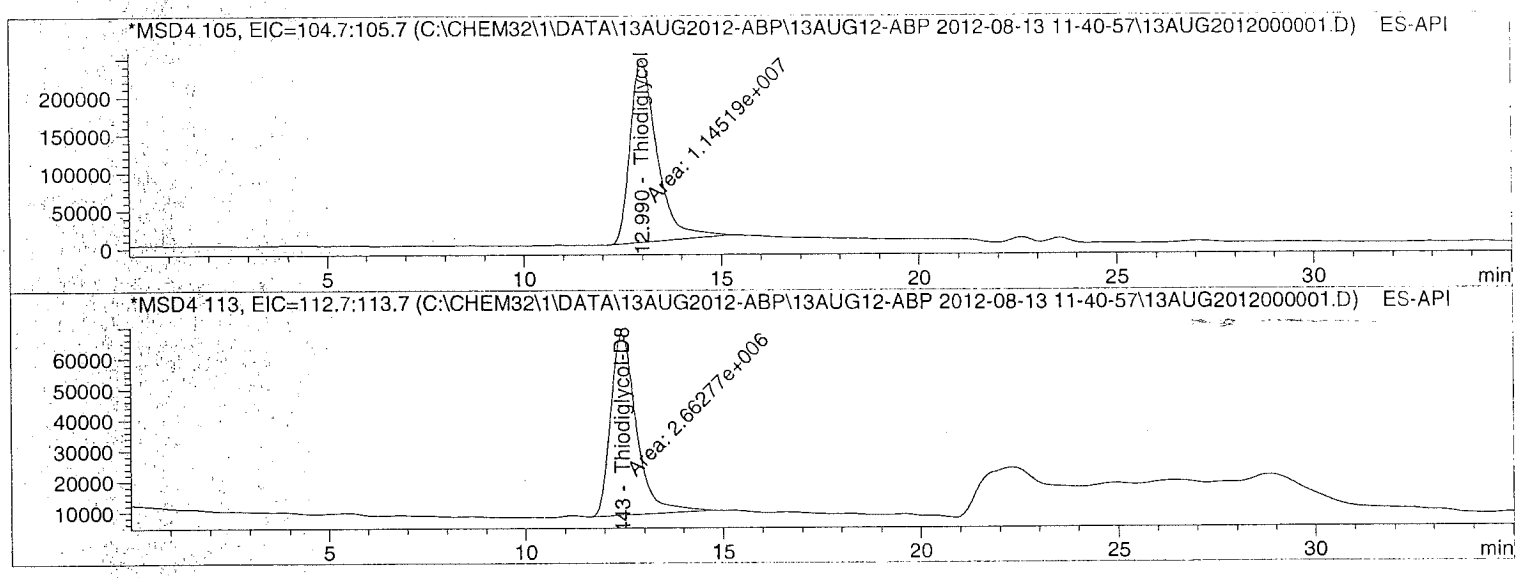
Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 51	CCV1	ABP-ON	1	Ctrl Samp	
2	Vial 52	289537 LMB	ABP-ON	1	Ctrl Samp	
3	Vial 53	289538 LCS	ABP-ON	1	Ctrl Samp	
4	Vial 54	289541 RLVS	ABP-ON	1	Ctrl Samp	
5	Vial 55	1221555006	ABP-ON	1	Sample	
6	Vial 56	289539 MS	ABP-ON	1	Ctrl Samp	
7	Vial 57	289540 MSD	ABP-ON	1	Ctrl Samp	
8	Vial 58	1221656017	ABP-ON	1	Sample	
9	Vial 59	1222142012	ABP-ON	1	Sample	
10	Vial 51	CCV2	ABP-ON	1	Ctrl Samp	

Batch Run # 1 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000001.D
Sample Name: CCV1

Acq. Operator : TTM Seq. Line : 1
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/13/2012 11:41:25 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 11:42:34 AM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

Batch Run # 1 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000001.D
Sample Name: CCV1

Acq. Operator : TTM Seq. Line : 1
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/13/2012 11:41:25 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 11:42:34 AM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.990	MM	1	1.14519e7	1.18758e-1	5.10747		Thiodiglycol

Totals without ISTD(s) : 5.10747

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.443	MM I	1	2.66277e6	1.00000	10.00000		Thiodiglycol-D8

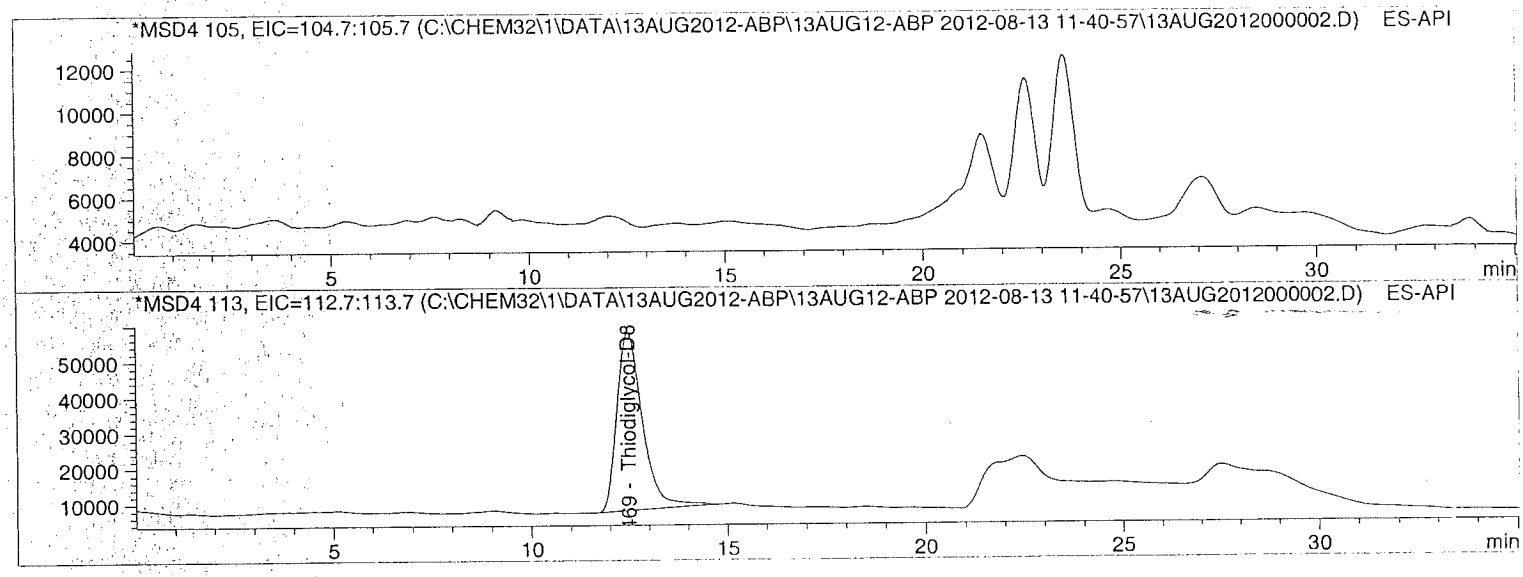
Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 2 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000002.D
Sample Name: 289537 LMb

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 52
Injection Date	: 8/13/2012 12:17:54 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 12:17:34 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000002.D
Sample Name: 286537 LMB

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 8/13/2012 12:17:54 PM
Seq. Line : 2
Location : Vial 52
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 12:17:34 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 0.00000

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.469	BB	I	1 2.27023e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

1 Warnings or Errors :

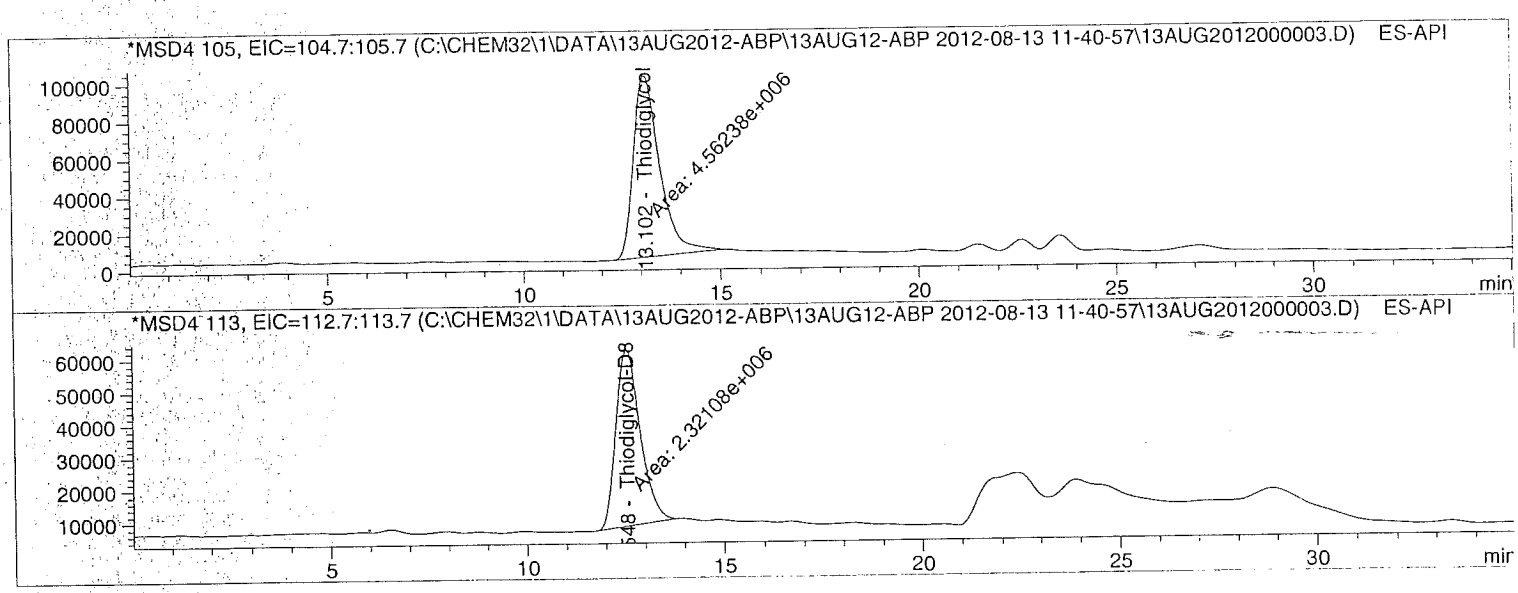
Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 3 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000003.D
Sample Name: 289538 LCS

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 8/13/2012 12:54:19 PM
Seq. Line : 3
Location : Vial 53
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 12:54:07 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 2.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

Batch Run # 3 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG12000303.D
Sample Name: 289538 LCS

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 8/13/2012 12:54:19 PM

Seq. Line : 3
Location : Vial 53
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 12:54:07 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.102	MM	1	4.56238e6	1.15346e-1	2.26727		Thiodiglycol

Totals without ISTD(s) : 2.26727

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.548	MM I	1	2.32108e6	1.00000	10.00000		Thiodiglycol-D8

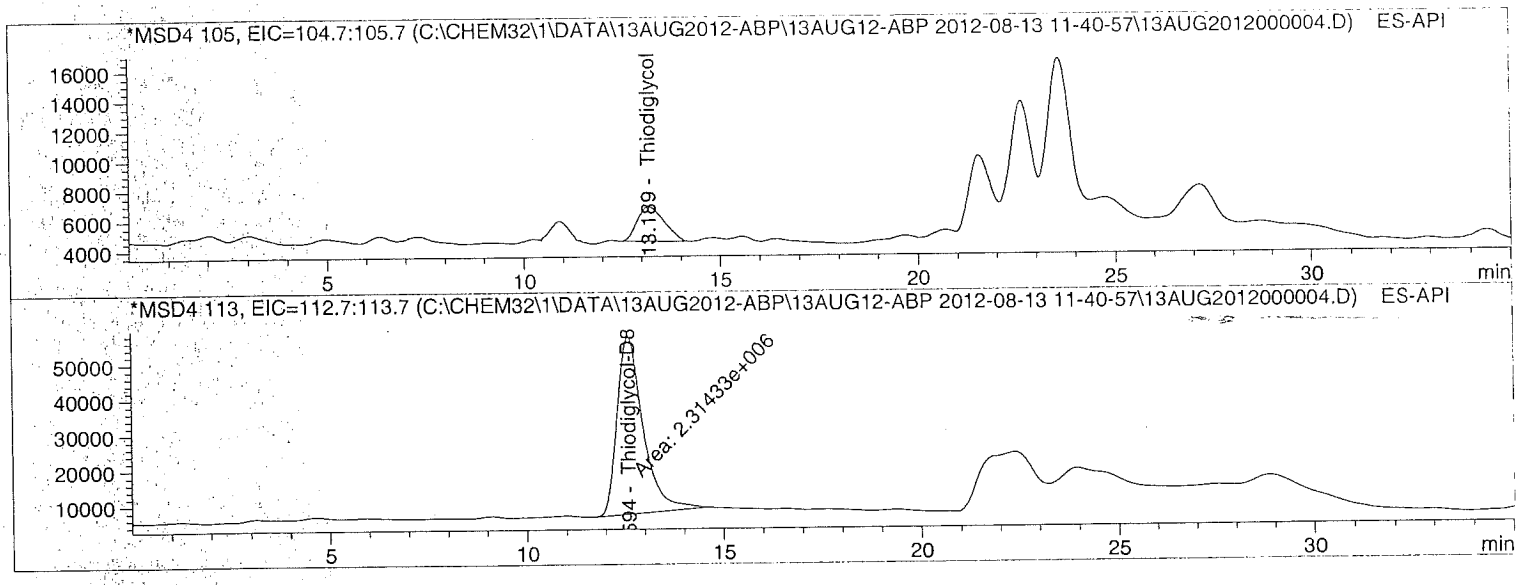
Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 4 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000004.D
Sample Name: 289541 RLVS

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 54
Injection Date	: 8/13/2012 1:30:40 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 1:30:28 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	7/9/2012 11:13:05 AM
Multiplier	:	1.0000
Dilution	:	1.0000
Sample Amount	:	5.00000e-2 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

Batch Run # 4 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000004.D
Sample Name: 289541 RLVS

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 8/13/2012 1:30:40 PM
Seq. Line : 4
Location : Vial 54
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 1:30:28 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.189	BB	1	1.10307e5	1.31992e-1	6.29108e-2		Thiodiglycol

Totals without ISTD(s) : 6.29108e-2

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.594	MM I	1	2.31433e6	1.00000	10.00000		Thiodiglycol-D8

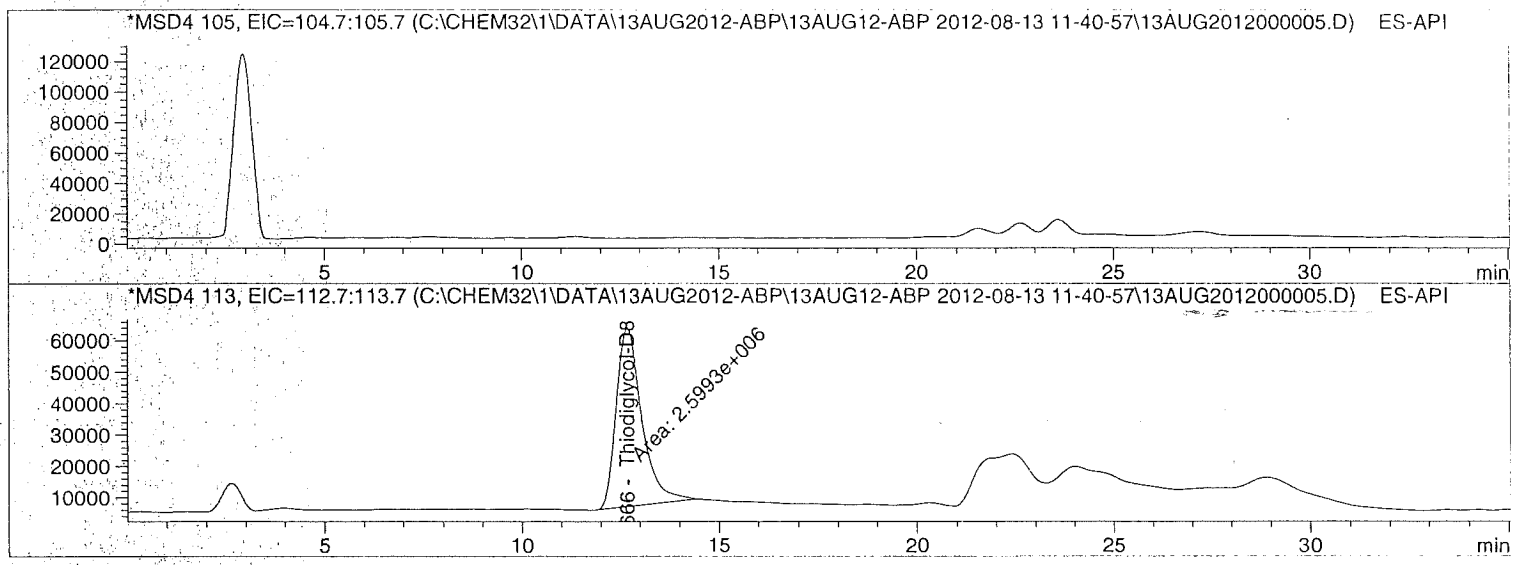
Totals without ISTD(s) : 0.00000

*** End of Report ***

Data Run # 5 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000005.D
Sample Name: 1221555006

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 55
Injection Date	: 8/13/2012 2:07:02 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 2:06:49 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Batch Run # 5 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000005.D
Sample Name: 1221555006

Acq. Operator : TTM Seq. Line : 5
Acq. Instrument : LCMS3 Location : Vial 55
Injection Date : 8/13/2012 2:07:02 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 2:06:49 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 0.00000

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.666	MM	I	1 2.59930e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

1 Warnings or Errors :

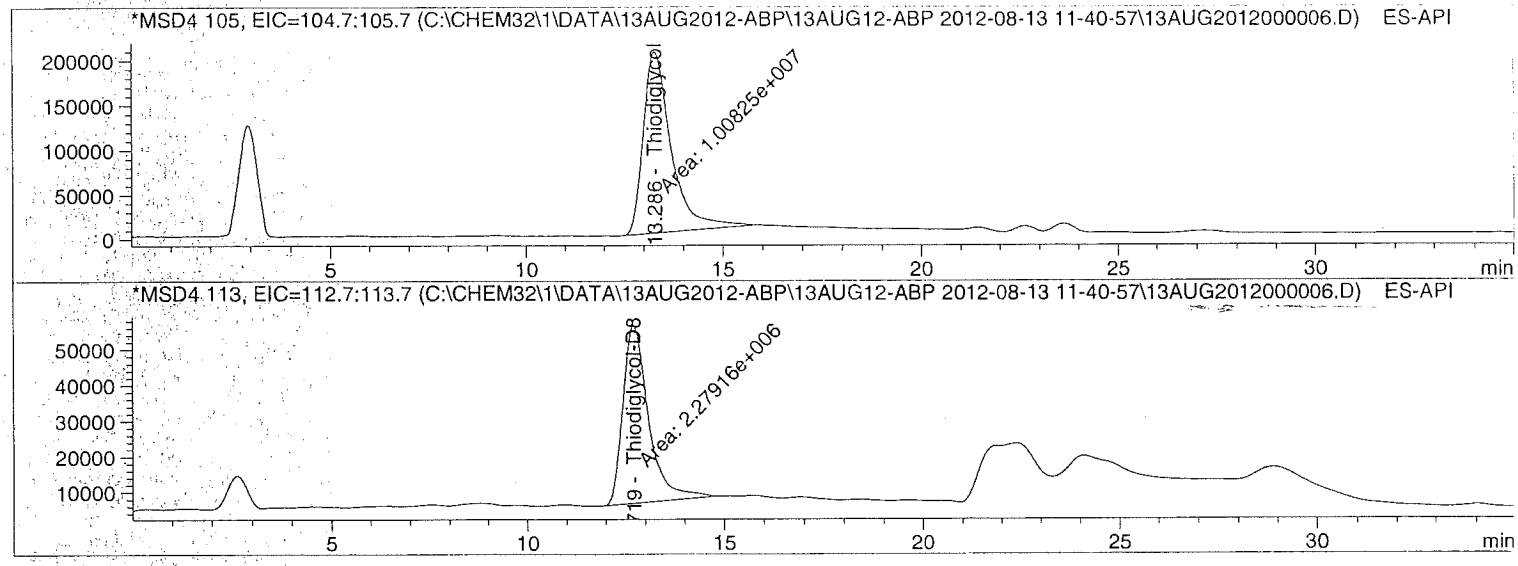
Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 6 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000006.D
Sample Name: 289539 MS

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 56
Injection Date	: 8/13/2012 2:43:24 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 2:43:11 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.286	MM	1	1.00825e7	1.18959e-1	5.26247		Thiodiglycol

Batch Run # 6 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2013060006.D
Sample Name: 289539 MS

Acq. Operator : TTM Seq. Line : 6
Acq. Instrument : LCMS3 Location : Vial 56
Injection Date : 8/13/2012 2:43:24 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 2:43:11 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 5.26247

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.719	MM	I	1 2.27916e6	1.00000	10.00000		Thiodiglycol-D8

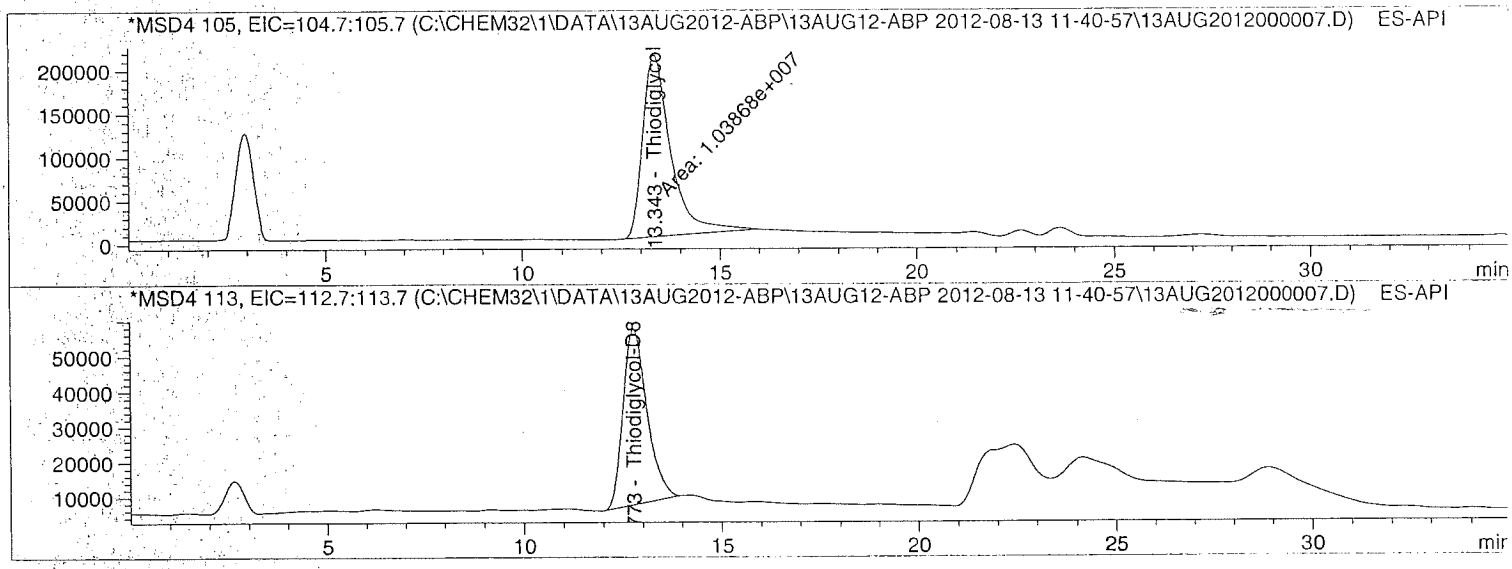
Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 7 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000007.D
Sample Name: 289540 MSD

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 57
Injection Date	: 8/13/2012 3:19:49 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 3:19:36 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.343	MM	1	1.03868e7	1.19725e-1	5.84614		Thiodiglycol

Batch Run # 7 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000007.D
Sample Name: 239540 MSD

Acq. Operator : TTM Seq. Line : 7
Acq. Instrument : LCMS3 Location : Vial 57
Injection Date : 8/13/2012 3:19:49 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 3:19:36 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 5.84614

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.773	BB	I	1 2.12715e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 8 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000008.D
Sample Name: 1221656017

==========

Acq. Operator : TTM Seq. Line : 8
Acq. Instrument : LCMS3 Location : Vial 58
Injection Date : 8/13/2012 3:56:10 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 3:55:57 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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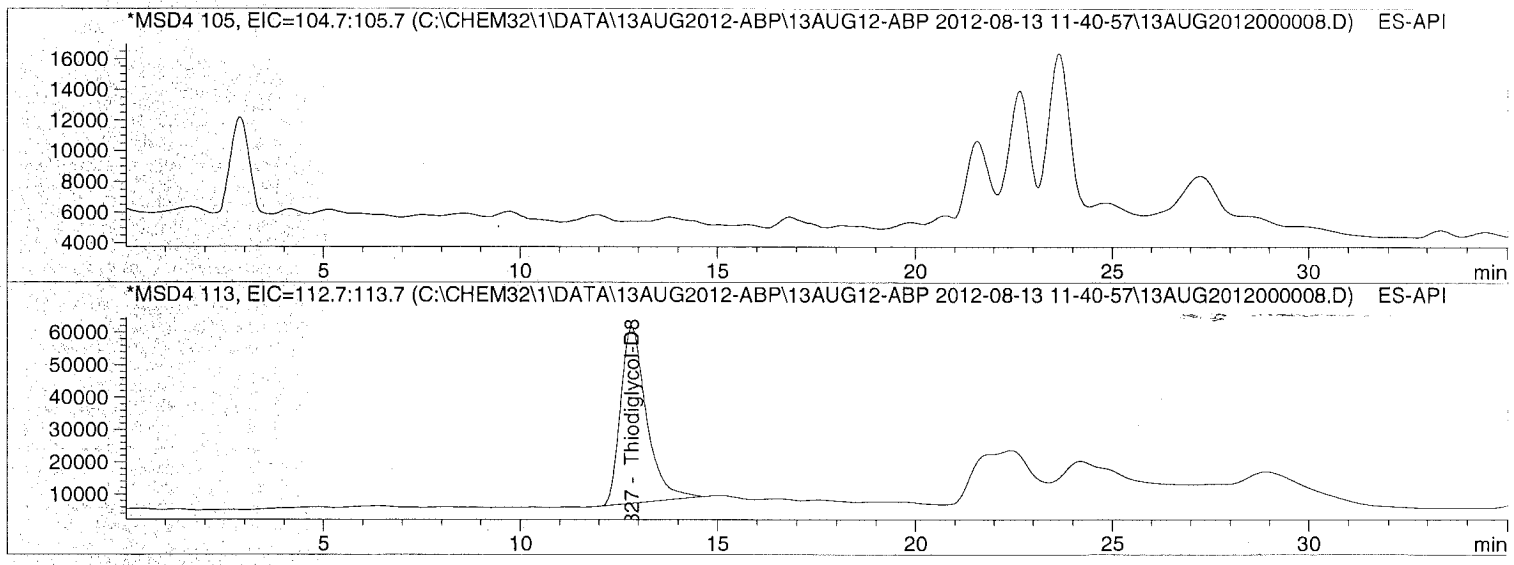

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Internal Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Batch Run # 8 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000008.D
Sample Name: 1221656017

Acq. Operator : TTM Seq. Line : 8
Acq. Instrument : LCMS3 Location : Vial 58
Injection Date : 8/13/2012 3:56:10 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 3:55:57 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 0.00000

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.827	BB	I	1 2.49470e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

1 Warnings or Errors :

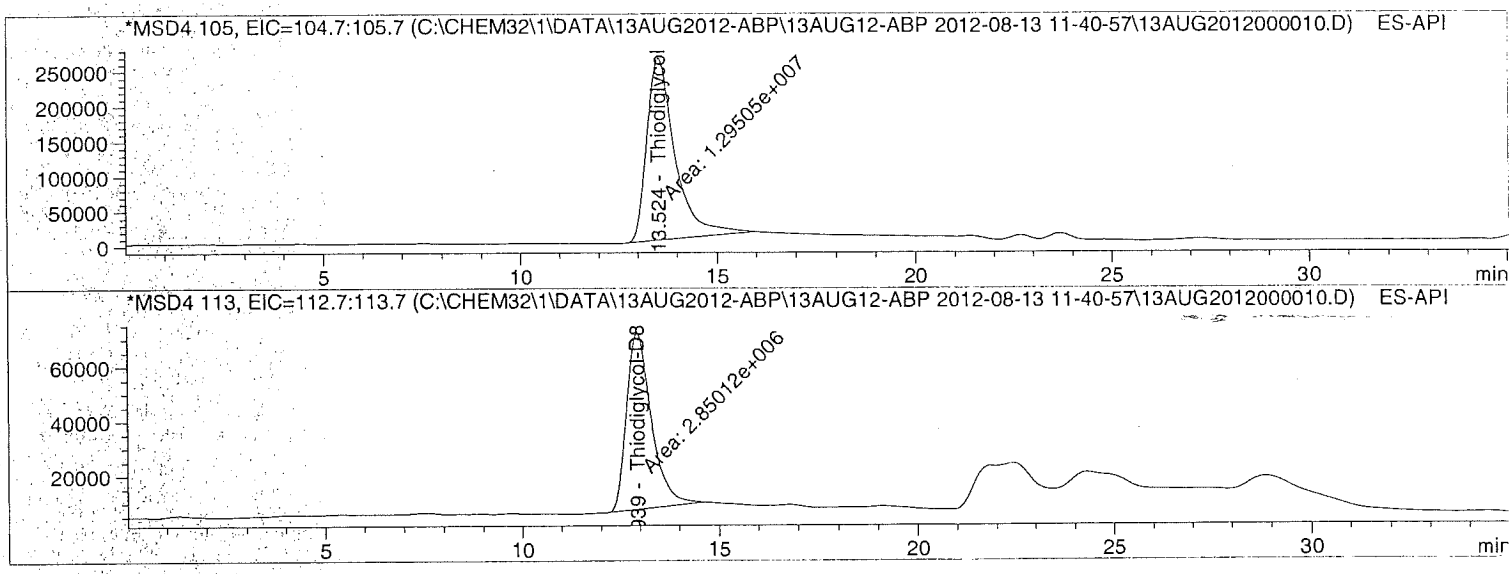
Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 10 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000010.D
Sample Name: CCV2

Acq. Operator	: TTM	Seq. Line	: 10
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/13/2012 5:08:54 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 5:08:41 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	7/9/2012 11:13:05 AM
Multiplier	:	1.0000
Dilution	:	1.0000
Sample Amount	:	5.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

Batch Run # 10 of 10
Data File C:\CHEM32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\13AUG2012000010.D
Sample Name: CCV2

Acq. Operator : TTM Seq. Line : 10
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/13/2012 5:08:54 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\13AUG2012-ABP\13AUG12-ABP 2012-08-13 11-40-57\ABP-ON.M
Last changed : 8/13/2012 5:08:41 PM by TTM
(modified after loading)
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/15/2012 1:40:59 PM by TTM
(modified after loading) (Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.524	MM	1	1.29505e7	1.19157e-1	5.41429		Thiodiglycol

Totals without ISTD(s) : 5.41429

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.939	MM I	1	2.85012e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Calibration

Raw Data

Calibration Table

Agent Breakdown Products

Calib. Data Modified : 7/9/2012 11:13:05 AM

Calculate : Internal Standard
Based on : Peak Area

Rel. Reference Window : 10.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 10.000 %
Abs. Non-ref. Window : 0.000 min
Use Multiplier & Dilution Factor with ISTDs
Uncalibrated Peaks : not reported
Partial Calibration : No recalibration if peaks missing

Curve Type : Quadratic (some peaks differ, see below)
Origin : Ignored (some peaks differ, see below)
Weight : Linear (Amnt) (some peaks differ, see below)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Default Sample ISTD Information (if not set in sample table):

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal 2: MSD4 113, EIC=112.7:113.7

RetTime [min]	Sig	Lvl	Amount	Area	Amt/Area	Ref	Grp	Name
12.890	2	1	10.00000	2.44245e6	4.09425e-6	I2		Thiodiglycol-D8
		2	10.00000	2.37259e6	4.21481e-6			
		3	10.00000	2.75981e6	3.62344e-6			
		4	10.00000	2.61922e6	3.81792e-6			
		5	10.00000	2.65549e6	3.76579e-6			
		6	10.00000	2.67017e6	3.74508e-6			
13.460	1	6	5.00000e-2	1.14698e5	4.35926e-7	2		Thiodiglycol
		5	1.00000e-1	2.17683e5	4.59383e-7			
		4	5.00000e-1	1.04468e6	4.78617e-7			
		3	1.00000	2.09084e6	4.78276e-7			
		2	5.00000	1.06254e7	4.70571e-7			
		1	10.00000	1.91630e7	5.21840e-7			

More compound-specific settings:

Compound: Thiodiglycol-D8
  Curve Type : Linear
  Origin : Included
  Calibration Level Weights:/
    Level 1 : 1
    Level 2 : 1
    Level 3 : 1
    Level 4 : 1
    Level 5 : 1
    Level 6 : 1

==========

Peak Sum Table

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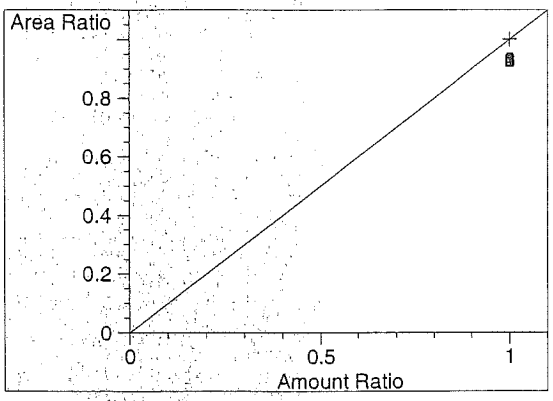
No Entries in table

==========

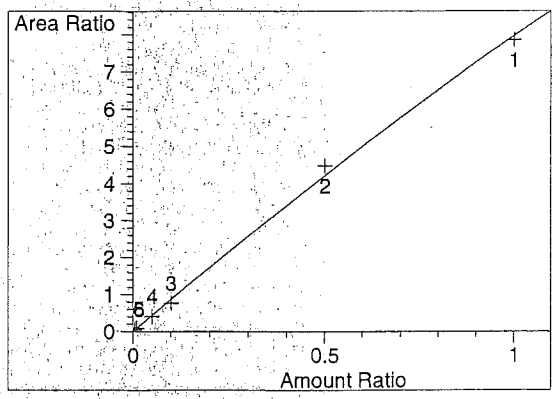
==========

Calibration Curves

==========



Thiodiglycol-D8 at exp. RT: 12.890
MSD4 113, EIC=112.7:113.7
Correlation: 1.00000
Residual Std. Dev.: 0.00000
Formula: y = mx + b
  m: 1.00000
  b: 0.00000
  x: Amount
  y: Area
Calibration Level Weights:
  Level 1 : 1
  Level 2 : 1
  Level 3 : 1
  Level 4 : 1
  Level 5 : 1
  Level 6 : 1



Thiodiglycol at exp. RT: 13.460
MSD4 105, EIC=104.7:105.7
Correlation: 0.99844
Residual Std. Dev.: 0.15671
Formula: y = ax² + bx + c
  a: -9.49682e-1
  b: 8.92207
  c: -8.42930e-3
  x: Amount
  y: Area
Calibration Level Weights:
  Level 6 : 1
  Level 5 : 0.5
  Level 4 : 0.1
  Level 3 : 0.05
  Level 2 : 0.01
  Level 1 : 0.005

==========

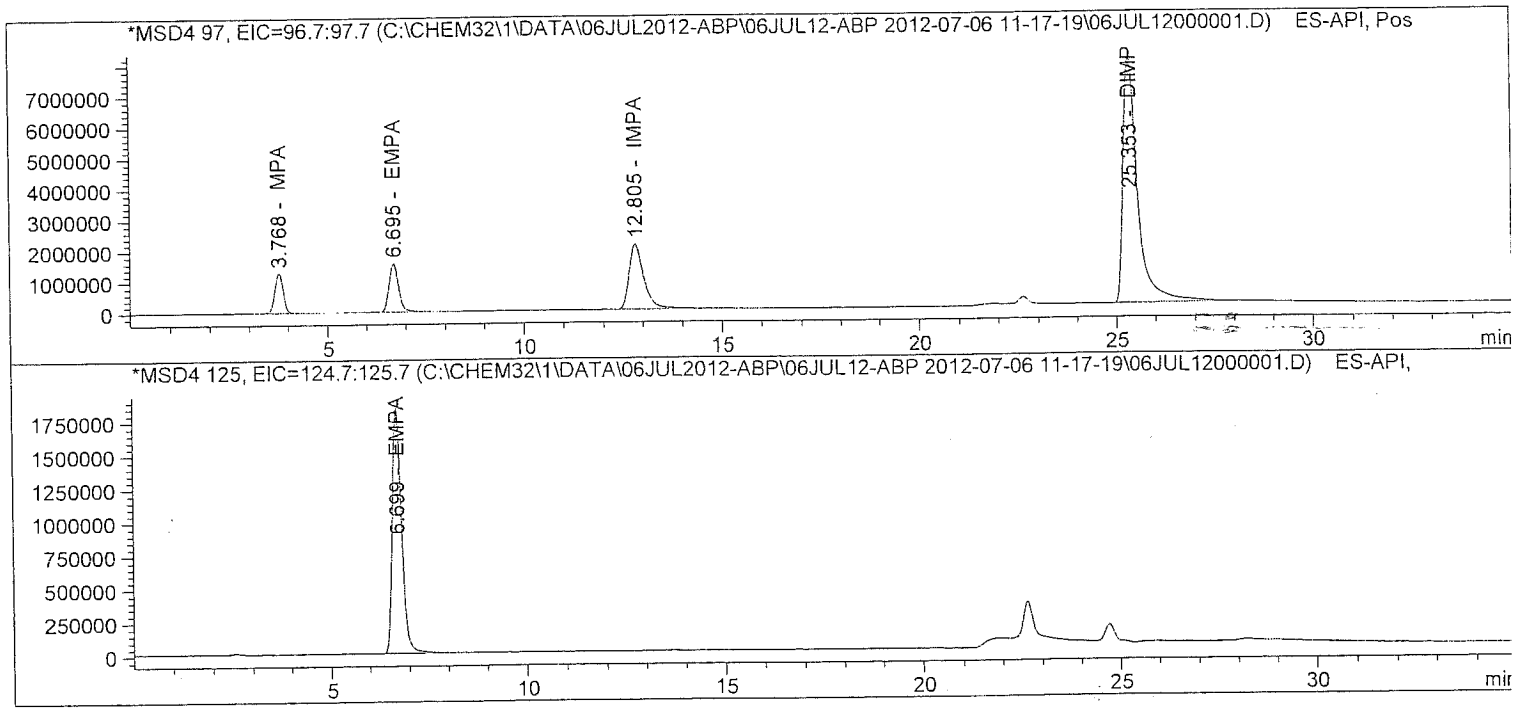
Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 1	PRIME	ABP-ON	1	Ctrl Samp	
2	Vial 1	$10	ABP-ON	1	Ctrl Samp	
3	Vial 2	$5	ABP-ON	1	Ctrl Samp	
4	Vial 3	$1	ABP-ON	1	Ctrl Samp	
5	Vial 4	$05	ABP-ON	1	Ctrl Samp	
6	Vial 5	$0.1	ABP-ON	1	Ctrl Samp	
7	Vial 6	$0.05	ABP-ON	1	Ctrl Samp	
8	Vial 7	ICV	ABP-ON	1	Ctrl Samp	
9	Vial 8	283055 LMB	ABP-ON	1	Ctrl Samp	
10	Vial 9	283056 LCS	ABP-ON	1	Ctrl Samp	
11	Vial 10	283057 RLVS	ABP-ON	1	Ctrl Samp	
12	Vial 11	1217861001	ABP-ON	1	Sample	
13	Vial 12	1217861002 MS	ABP-ON	1	Ctrl Samp	
14	Vial 13	1217861003 MSD	ABP-ON	1	Ctrl Samp	
15	Vial 2	CCV	ABP-ON	1	Ctrl Samp	

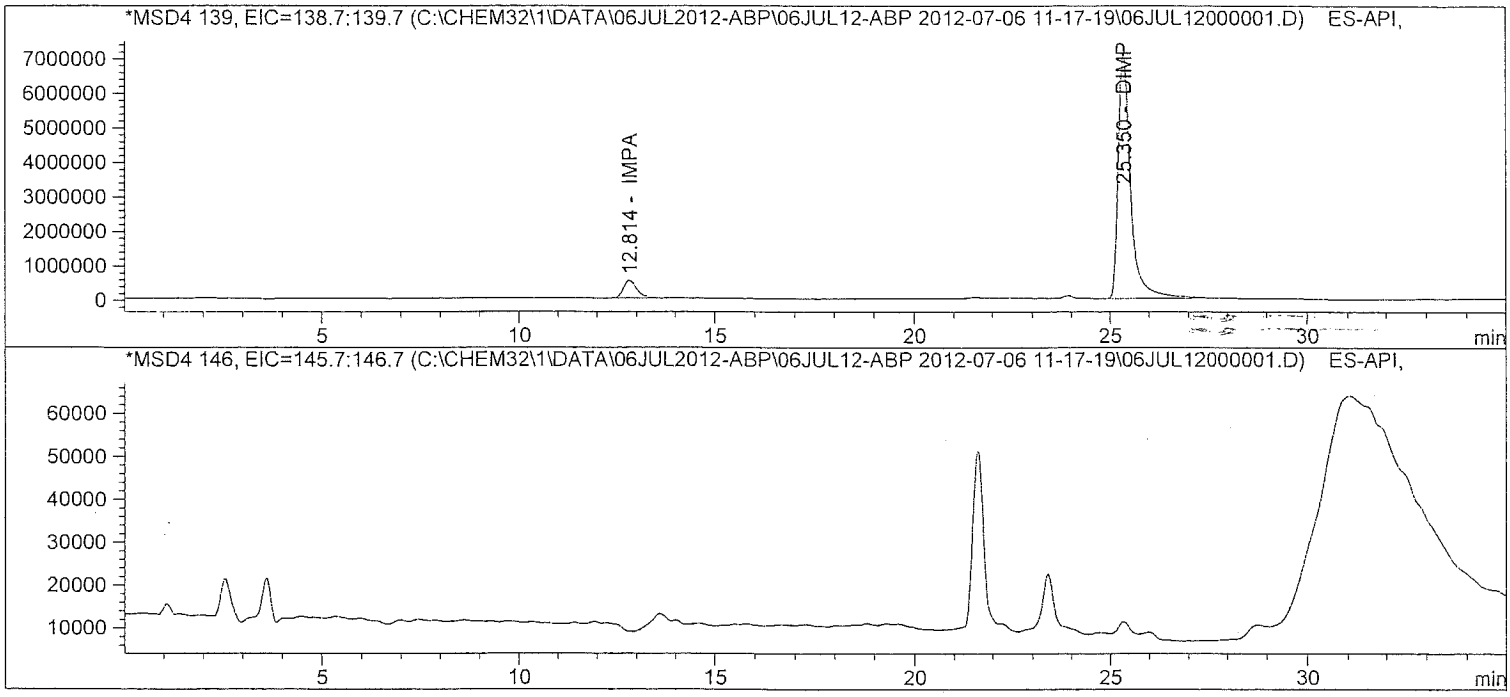
atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



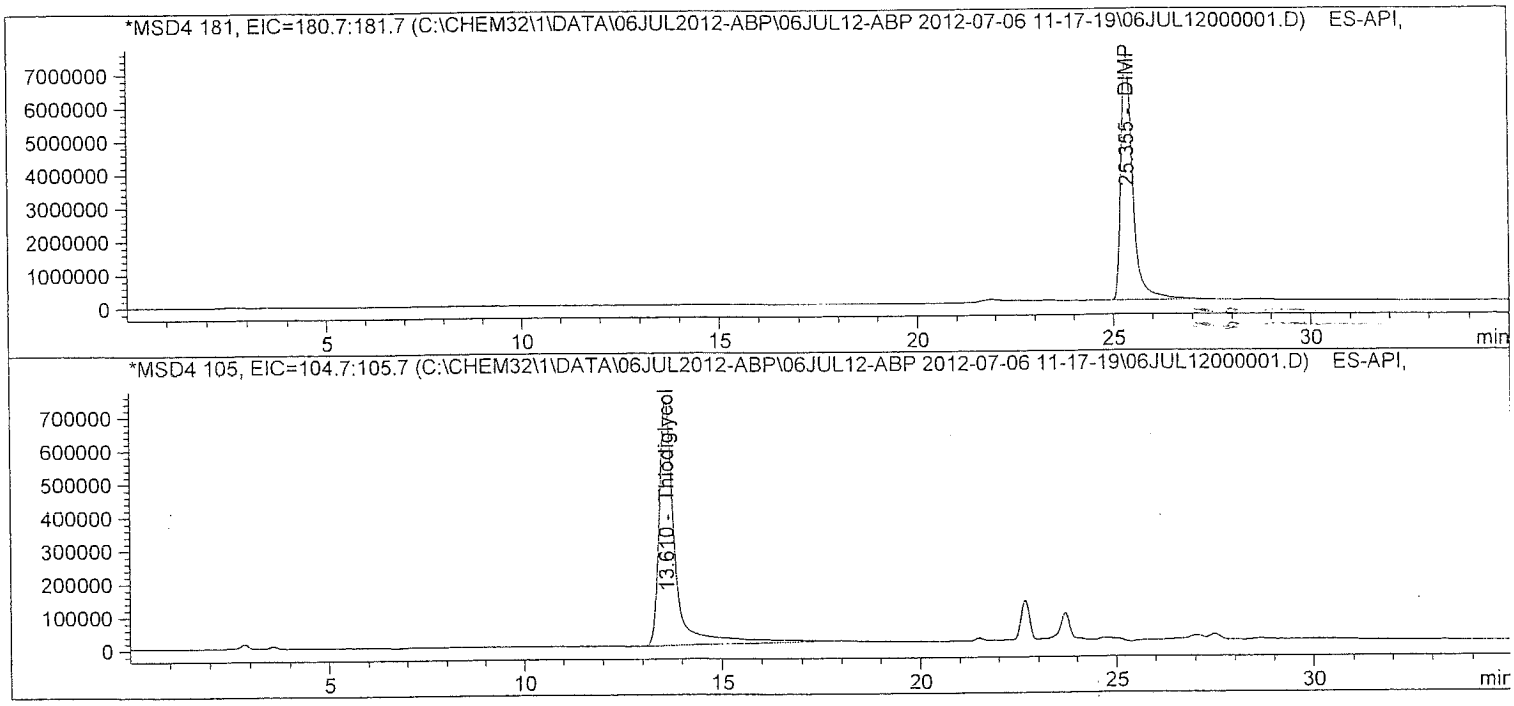
Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

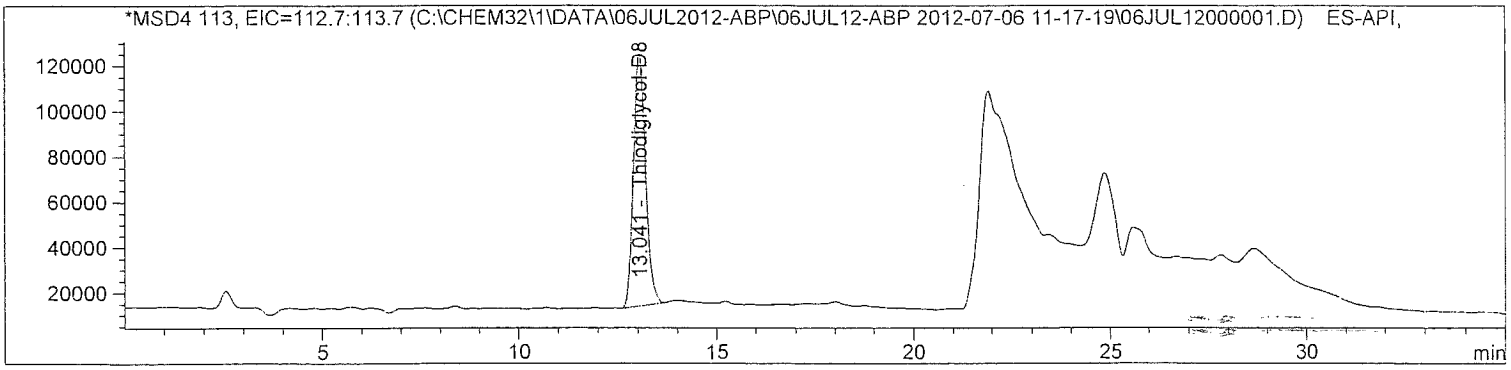


Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

==========

Acq. Operator : TTM Seq. Line : 1
Acq. Instrument : LCMS3 Location : Vial 1
Injection Date : 7/6/2012 11:17:43 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

==========



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Internal Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 10.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.768	BB	1	1.91978e7	1.32528e-1	10.64848		MPA
12.805	BBA	1	5.64639e7	4.37087e-2	10.32924		IMPA

Totals without ISTD(s) : 20.97773

atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 11:17:43 AM
Seq. Line : 1
Location : Vial 1
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.699	BB	1	3.05963e7	7.98724e-2	10.22810		EMPA

Totals without ISTD(s) : 10.22810

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.355	BBA	1	1.54432e8	1.54383e-2	9.97853		DIMP

Totals without ISTD(s) : 9.97853

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.610	BBA	1	2.03461e7	1.26756e-1	10.79391		Thiodiglycol

Totals without ISTD(s) : 10.79391

Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

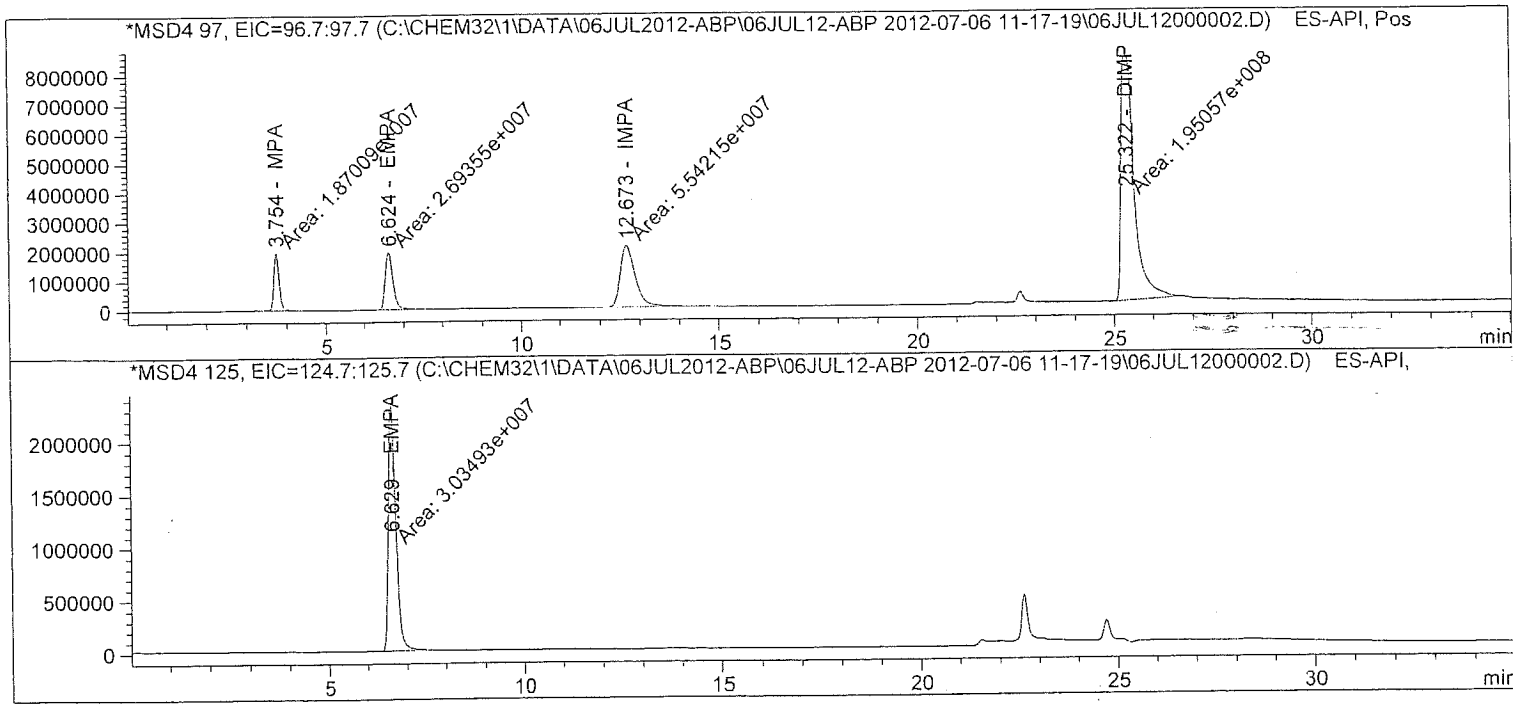
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.041	BB	I	1 2.38930e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 2 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
Sample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 2 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
Sample Name: $10

==========

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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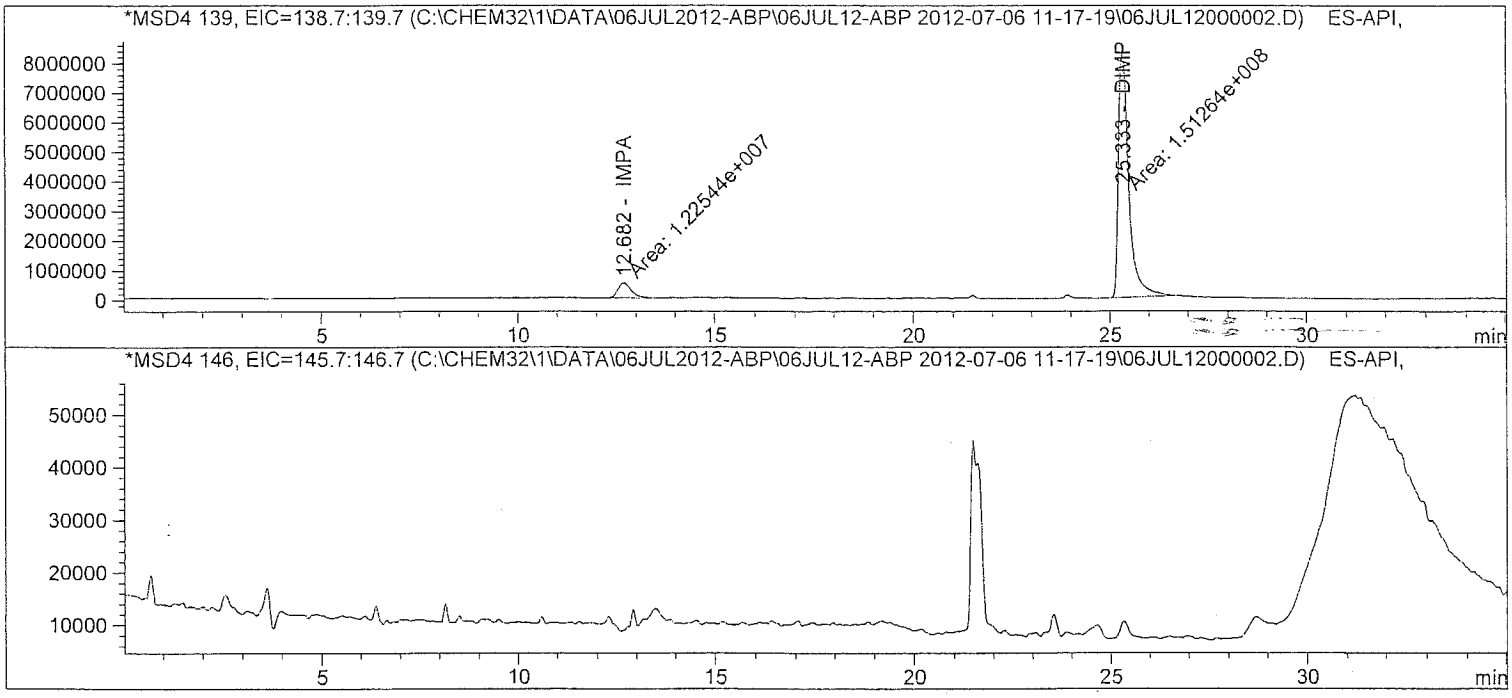
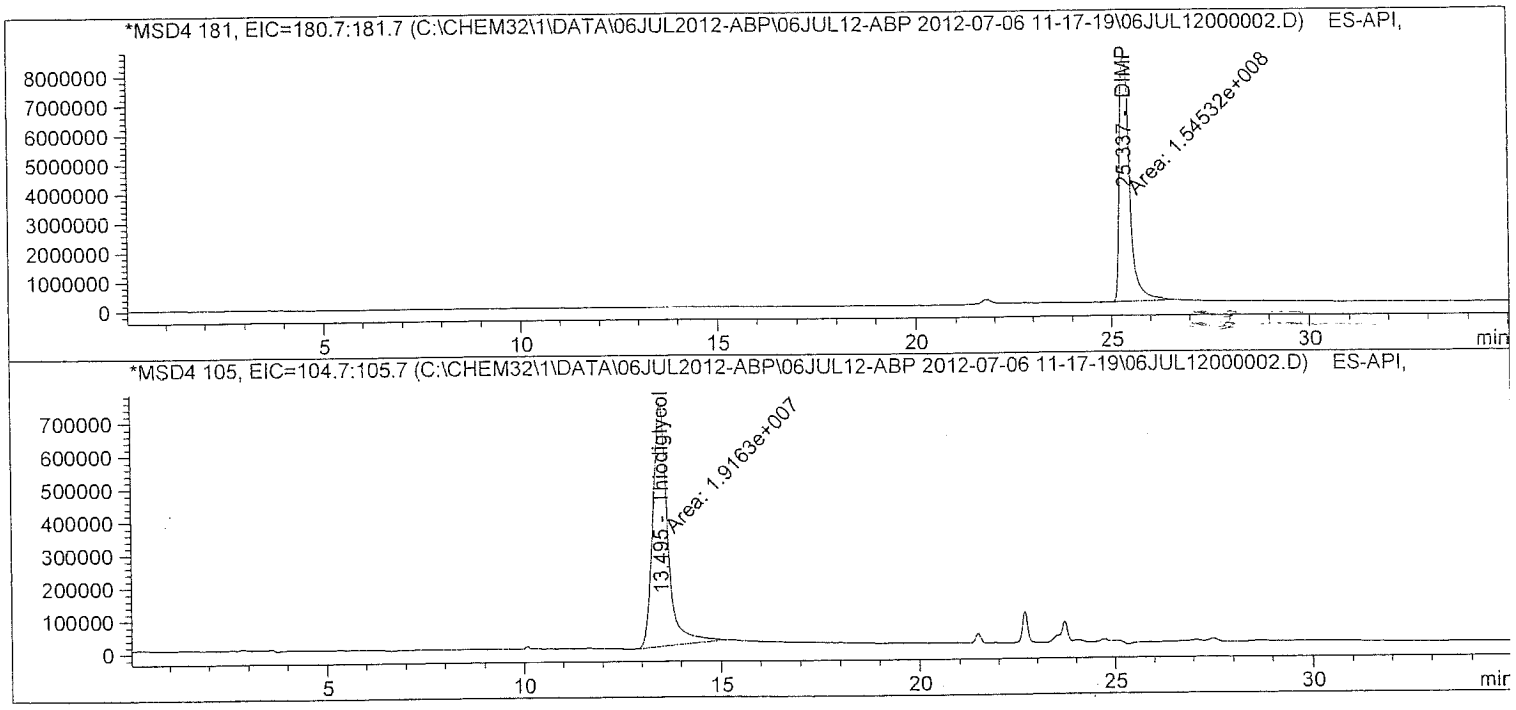


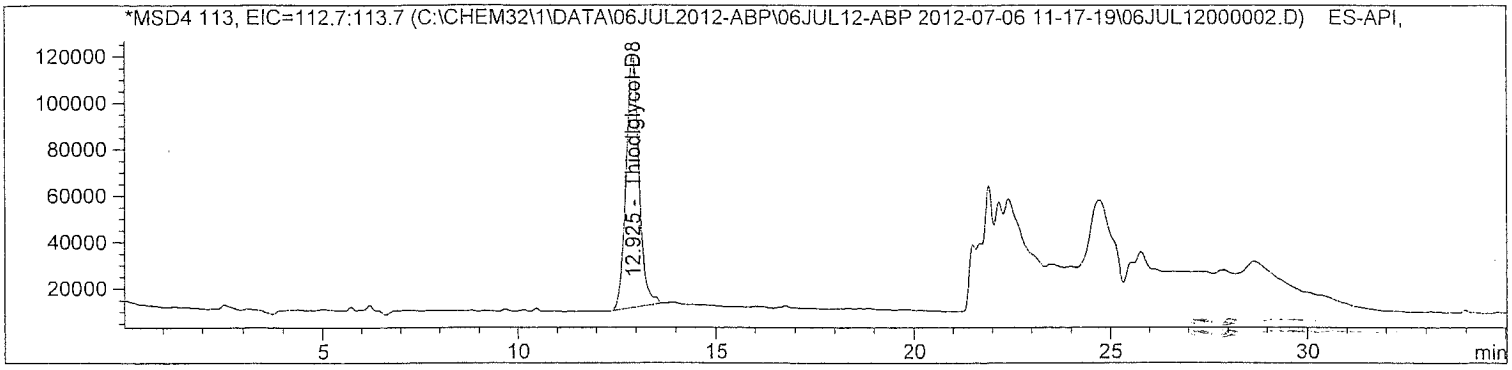
atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 2 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
Sample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 10.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.754	MM	1	1.87009e7	1.29739e-1	9.93363		MPA
12.673	MM	1	5.54215e7	4.36500e-2	9.90458		IMPA

Totals without ISTD(s) : 19.83821

atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 11:54:02 AM
Seq. Line : 2
Location : Vial 1
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.629	MM	1	3.03493e7	7.97357e-2	9.90775		EMPA

Totals without ISTD(s) : 9.90775

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.337	MM	1	1.54532e8	1.48417e-2	9.39024		DIMP

Totals without ISTD(s) : 9.39024

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.495	MM	1	1.91630e7	1.25317e-1	9.83212		Thiodiglycol

Totals without ISTD(s) : 9.83212

atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.925	BB	I	1 2.44245e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

==========

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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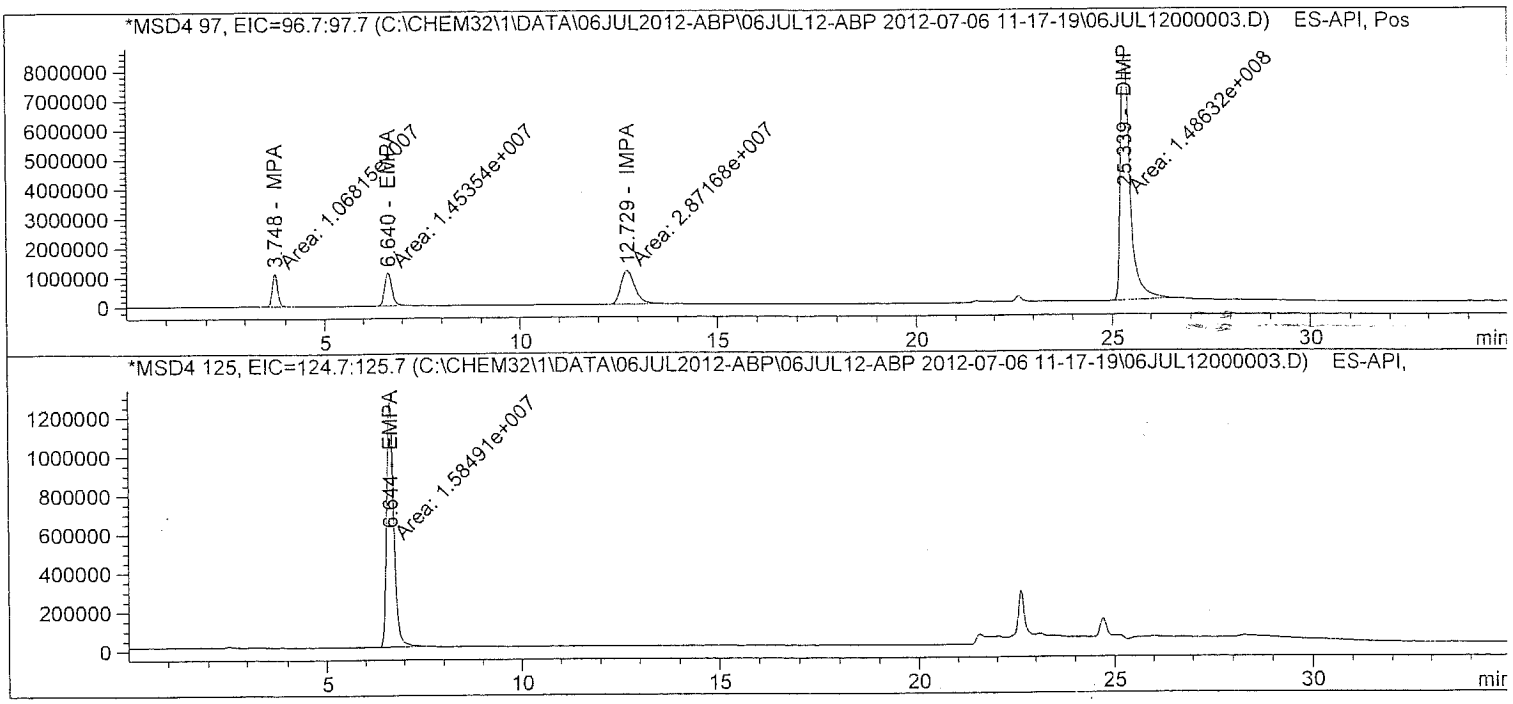

Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

==========

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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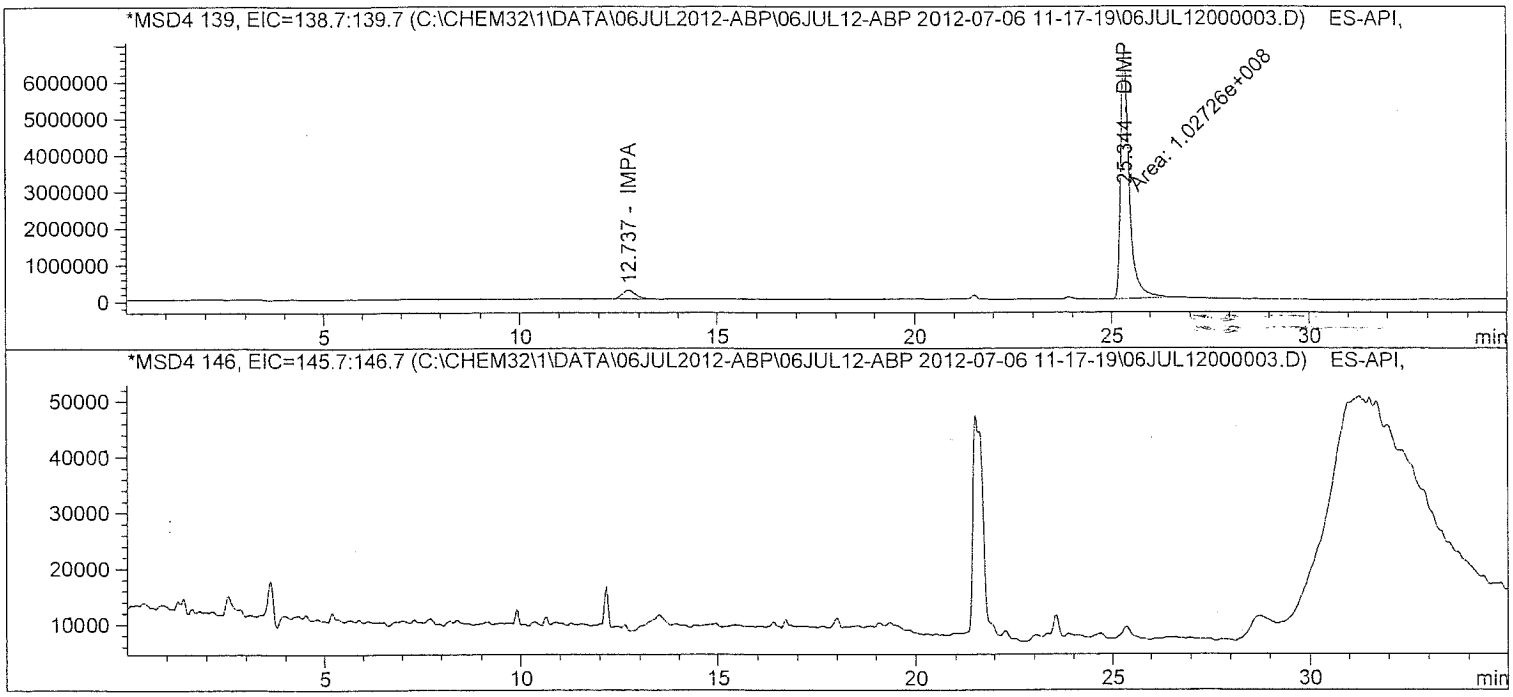
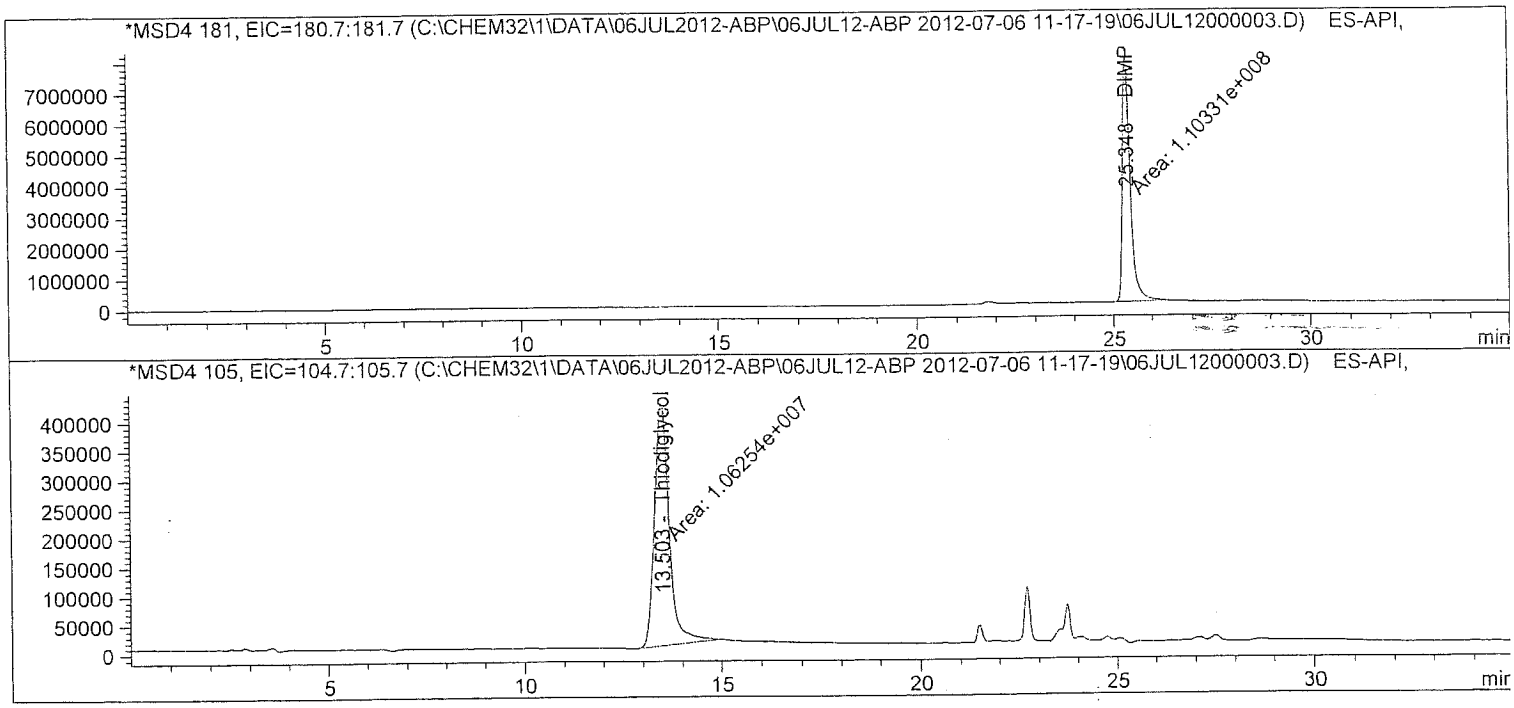


atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

```
==========================================================================
Acq. Operator    : TTM                              Seq. Line :   3
Acq. Instrument  : LCMS3                             Location : Vial 2
Injection Date   : 7/6/2012 12:30:22 PM                   Inj :   1
                                                   Inj Volume : 10 µl
Acq. Method      : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed     : 7/3/2012 3:32:22 PM by TTM
Analysis Method  : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed     : 7/9/2012 11:13:23 AM by TTM
                   (Results are from a previously saved Batch)
Method Info      : Agent Breakdown Products

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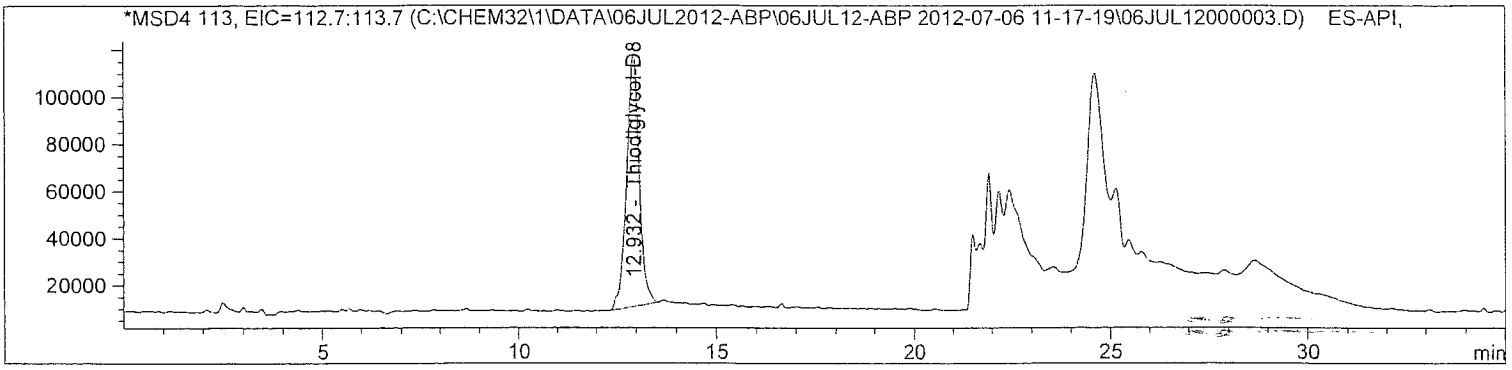


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==========================================================================
                        Internal Standard Report
==========================================================================

Sorted By              :      Signal
Calib. Data Modified   :      7/9/2012 11:13:05 AM
Multiplier             :      1.0000
Dilution               :      1.0000
Sample Amount          :      5.00000  []    (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:
ISTD  ISTD Amount   Name
  #
----|-------------|-------------------------
  2     10.00000   Thiodiglycol-D8


Signal 1: MSD4 97, EIC=96.7:97.7
 Signal has been modified after loading from rawdata file!

RetTime  Type  ISTD    Area     Amt/Area    Amount   Grp   Name
 [min]         used              ratio
-------|------|----|----------|----------|----------|--|------------------
  3.748 MM        1 1.06815e7  1.13483e-1    5.10907    MPA
 12.729 MM        1 2.87168e7  4.30231e-2    5.20733    IMPA

Totals without ISTD(s) :                10.31641
```

atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

Acq. Operator : TTM
Seq. Line : 3
Acq. Instrument : LCMS3
Location : Vial 2
Injection Date : 7/6/2012 12:30:22 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.644	MM	1	1.58491e7	7.77744e-2	5.19540		EMPA

Totals without ISTD(s) : 5.19540

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	MM	1	1.10331e8	1.18266e-2	5.49964		DIMP

Totals without ISTD(s) : 5.49964

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.503	MM	1	1.06254e7	1.19049e-1	5.33146		Thiodiglycol

Totals without ISTD(s) : 5.33146

Acq. Operator : TTM
Seq. Line : 3
Acq. Instrument : LCMS3
Location : Vial 2
Injection Date : 7/6/2012 12:30:22 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

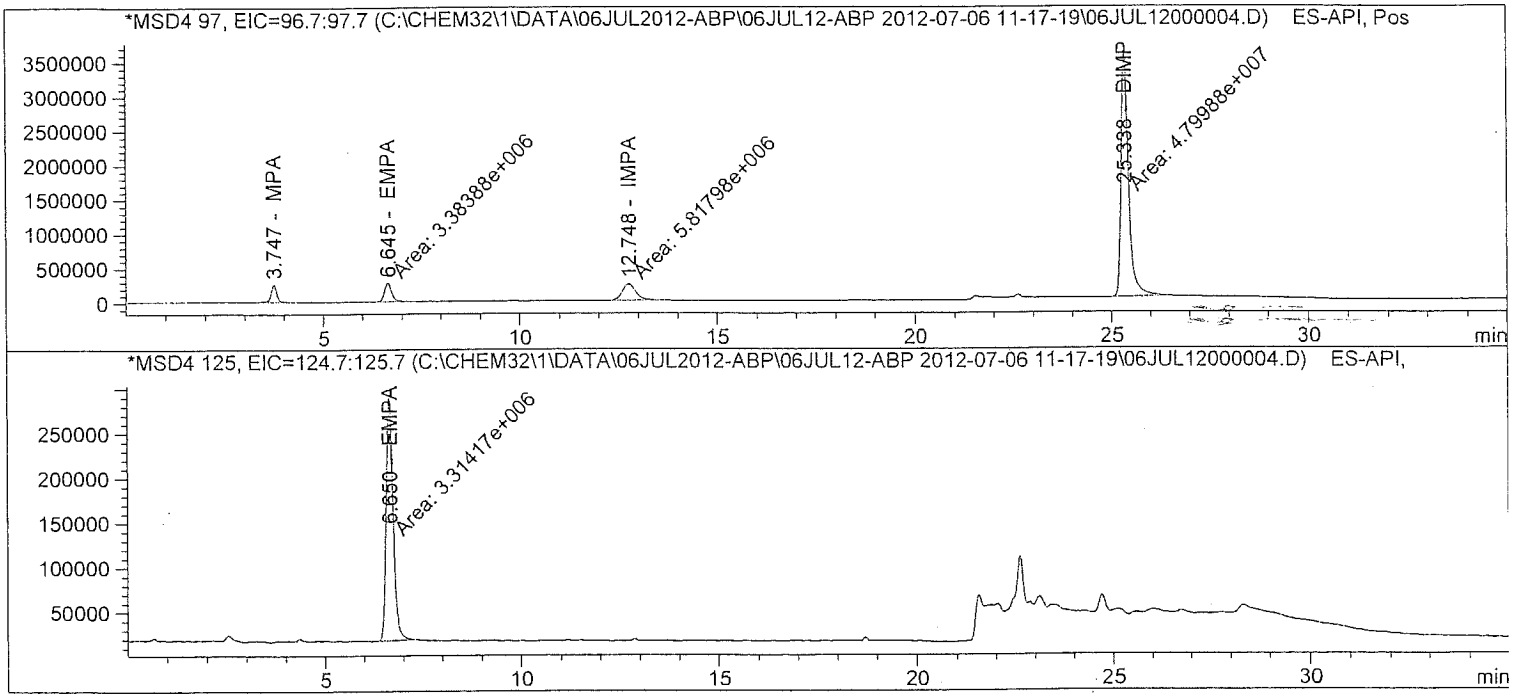
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.932	BB	I	1 2.37259e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 4 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
ample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



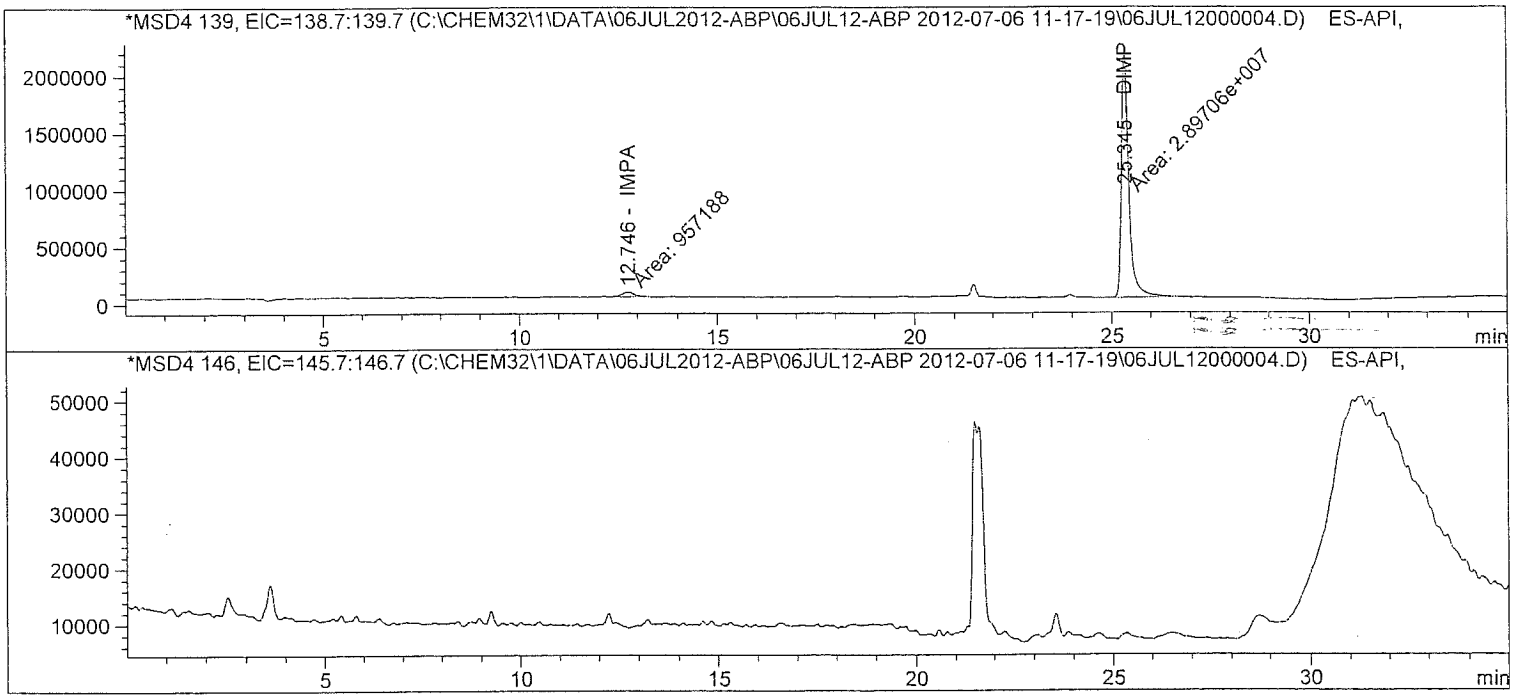
Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

==========

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

==========



Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

==========

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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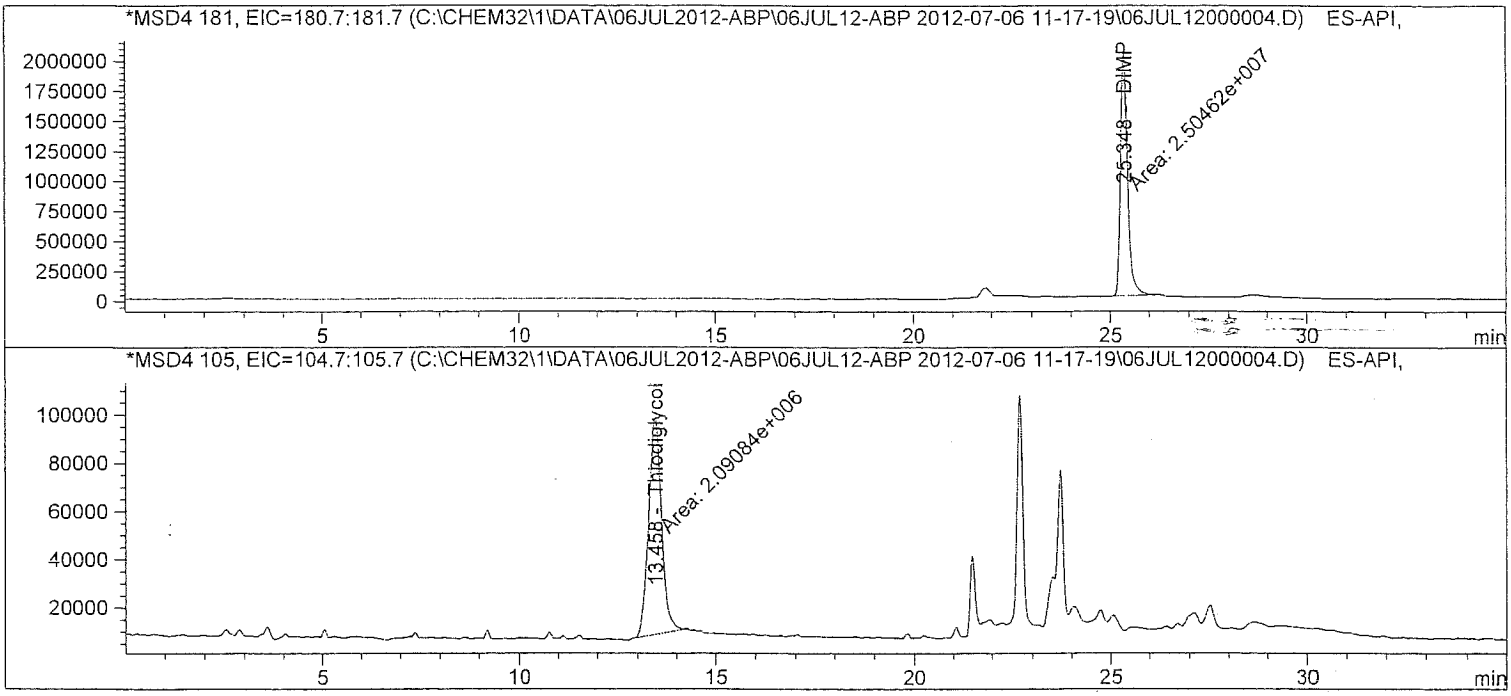

Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

==========

Acq. Operator : TTM
Seq. Line : 4
Acq. Instrument : LCMS3
Location : Vial 3
Injection Date : 7/6/2012 1:06:42 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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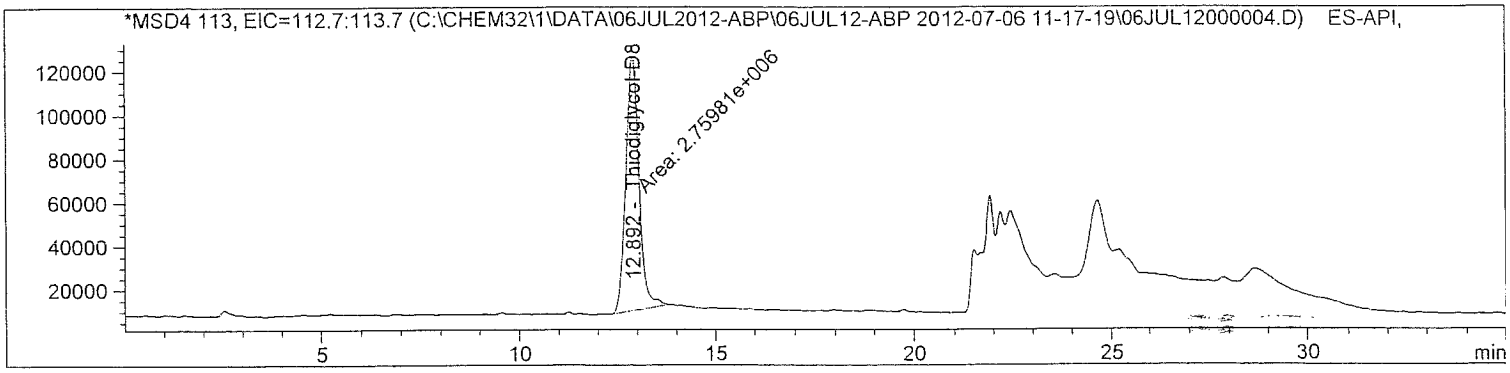

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Internal Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 1.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.747	BB	1	2.56450e6	1.00803e-1	9.36694e-1		MPA
12.748	MM	1	5.81798e6	4.26904e-2	8.99961e-1		IMPA

Totals without ISTD(s) : 1.83665

atch Run # 4 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
ample Name: $1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 1:06:42 PM
Seq. Line : 4
Location : Vial 3
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.650	MM	1	3.31417e6	7.60313e-2	9.13037e-1		EMPA

Totals without ISTD(s) : 9.13037e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	MM	1	2.50462e7	9.62641e-3	8.73631e-1		DIMP

Totals without ISTD(s) : 8.73631e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.458	MM	1	2.09084e6	1.14384e-1	8.66577e-1		Thiodiglycol

Totals without ISTD(s) : 8.66577e-1

Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 1:06:42 PM
Seq. Line : 4
Location : Vial 3
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.892	MM	I	1 2.75981e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

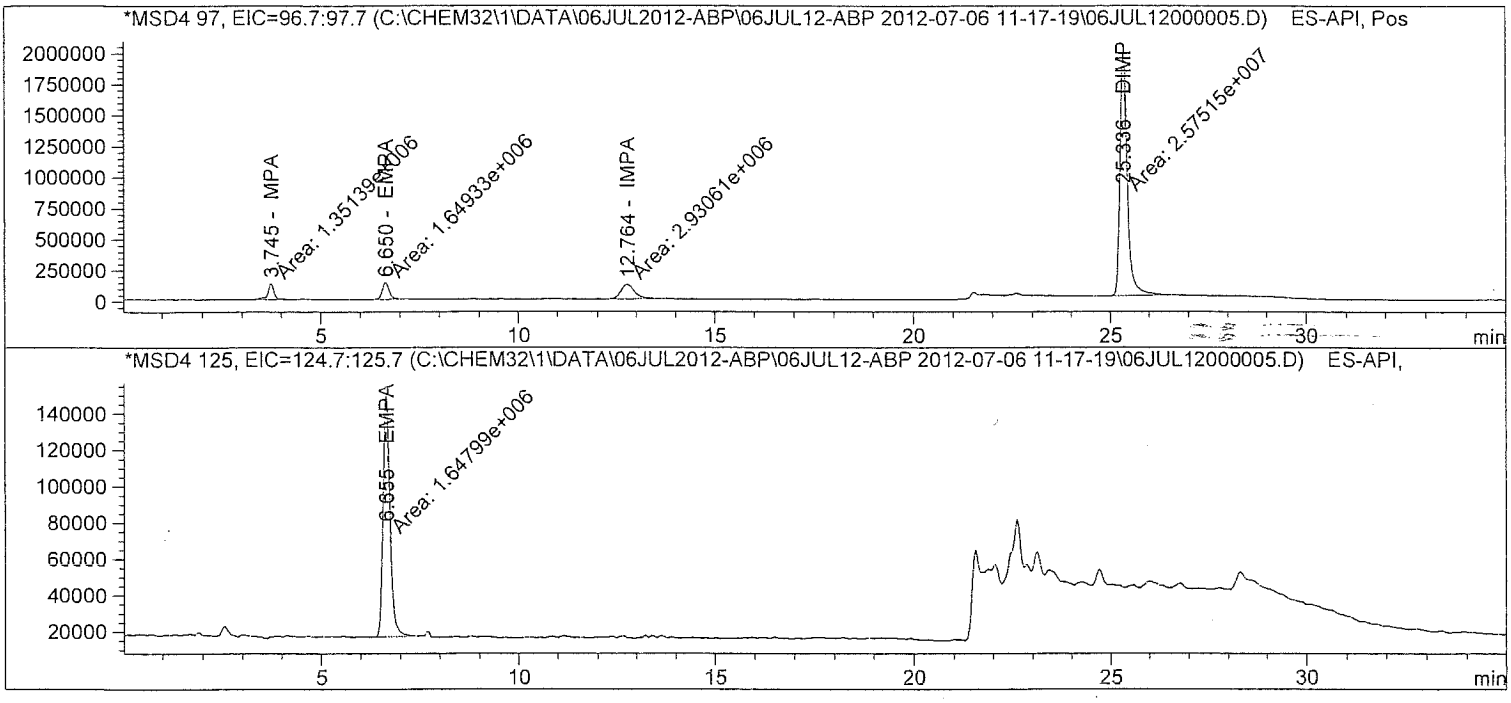
Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

==========

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

==========



Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

==========

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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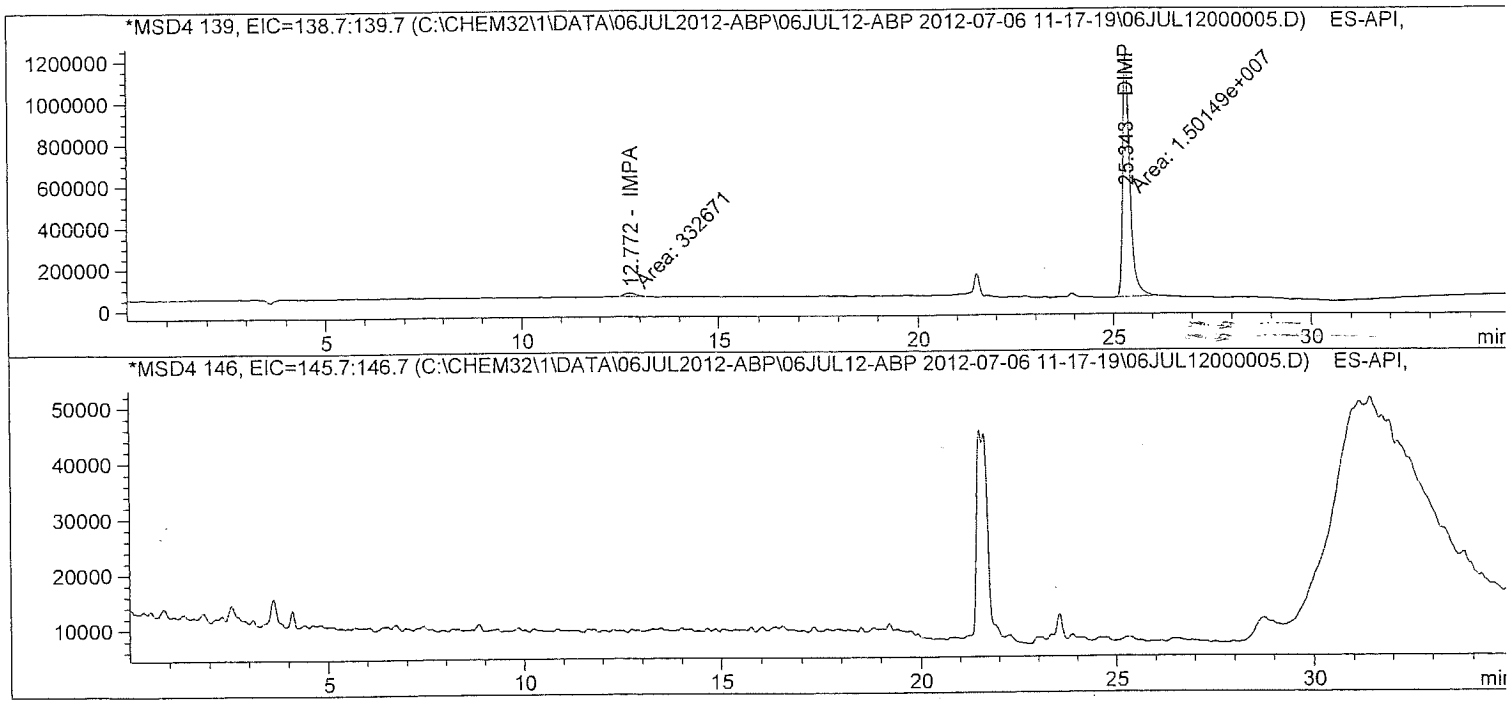

Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

==========

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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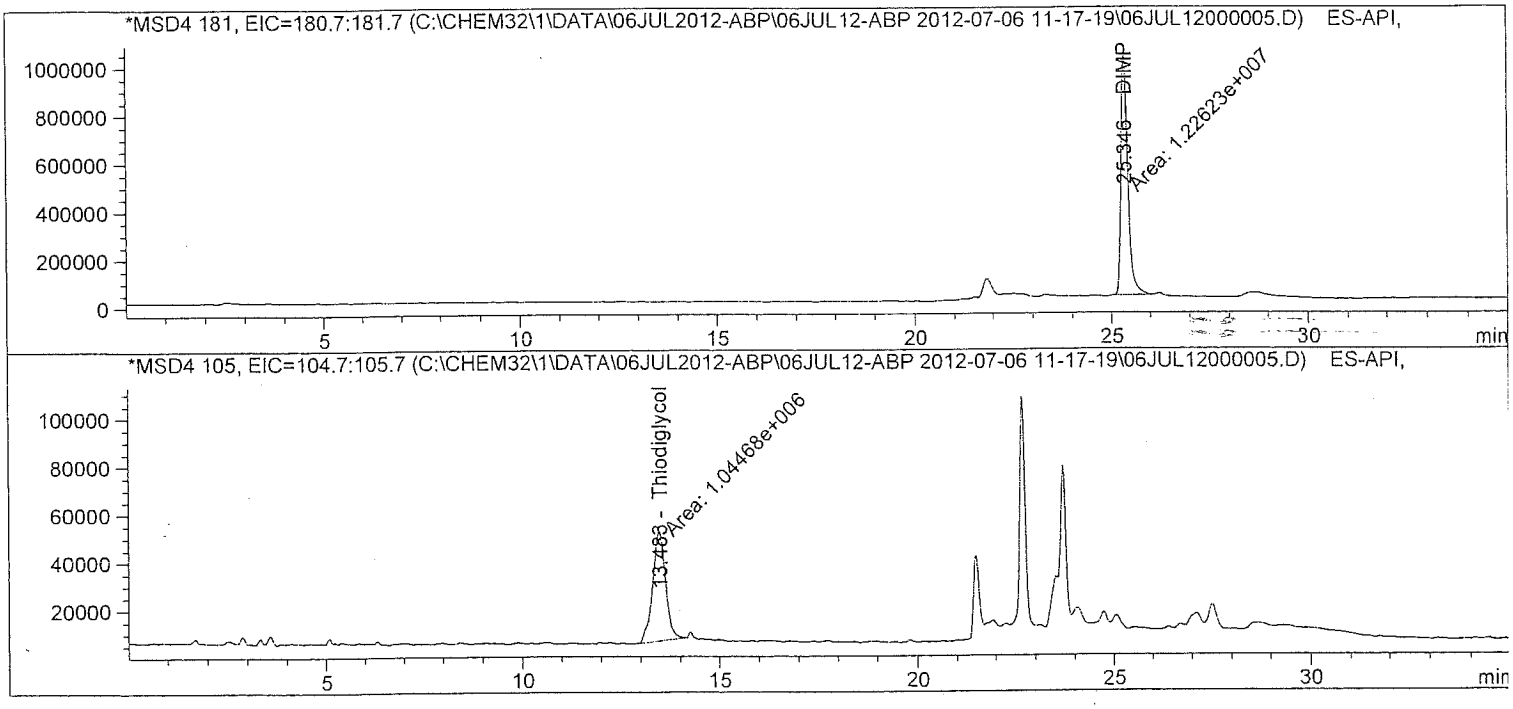

Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

==========

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 1:43:01 PM

Seq. Line : 5
Location : Vial 4
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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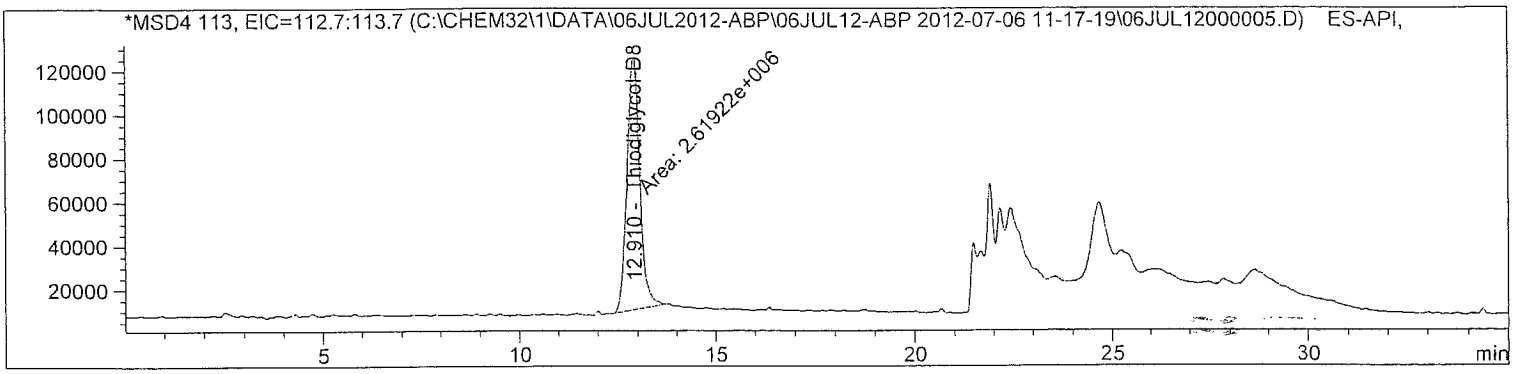

==========

Internal Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000e-1 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.745	MM	1	1.35139e6	9.80980e-2	5.06138e-1		MPA
12.764	MM	1	2.93061e6	4.28998e-2	4.79999e-1		IMPA

Totals without ISTD(s) : 9.86138e-1

atch Run # 5 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: $05

```
==================================================================
Acq. Operator   : TTM                          Seq. Line :   5
Acq. Instrument : LCMS3                         Location : Vial 4
Injection Date  : 7/6/2012 1:43:01 PM                Inj :   1
                                               Inj Volume : 10 µl
Acq. Method     : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed    : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed    : 7/9/2012 11:13:23 AM by TTM
                  (Results are from a previously saved Batch)
Method Info     : Agent Breakdown Products

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```

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.655	MM	1	1.64799e6	7.58113e-2	4.76997e-1		EMPA

Totals without ISTD(s) : 4.76997e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.346	MM	1	1.22623e7	9.57834e-3	4.48425e-1		DIMP

Totals without ISTD(s) : 4.48425e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.483	MM	1	1.04468e6	1.15012e-1	4.58725e-1		Thiodiglycol

Totals without ISTD(s) : 4.58725e-1

Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

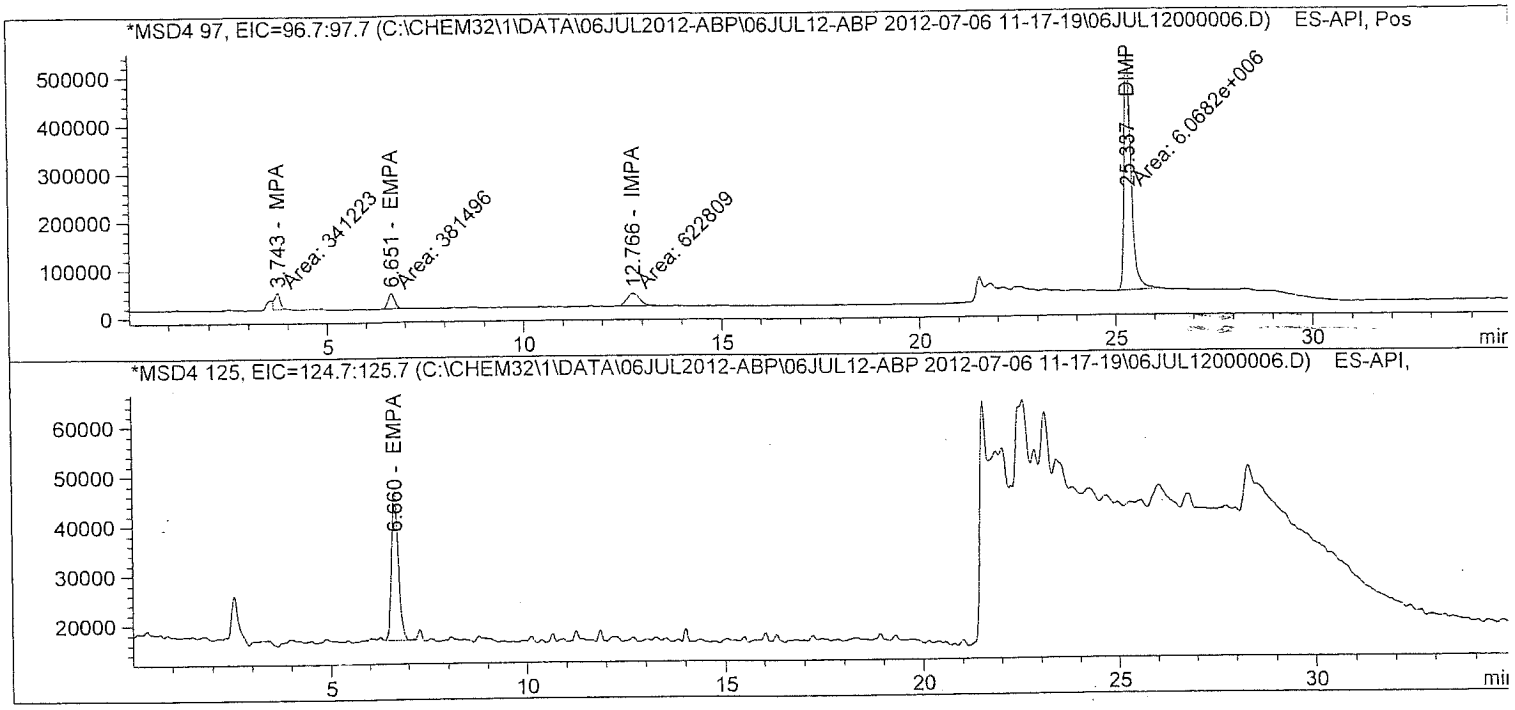
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.910	MM	I	1 2.61922e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

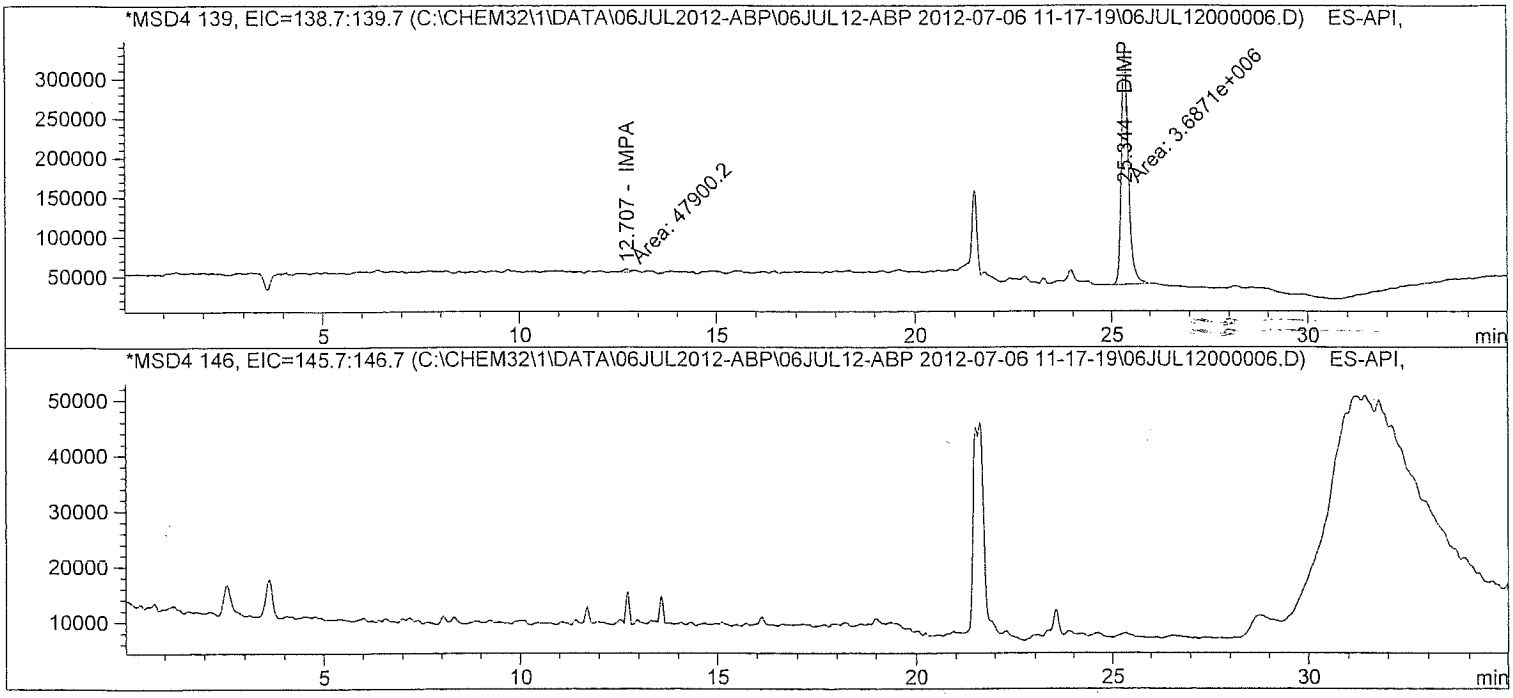
Batch Run # 6 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 6 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

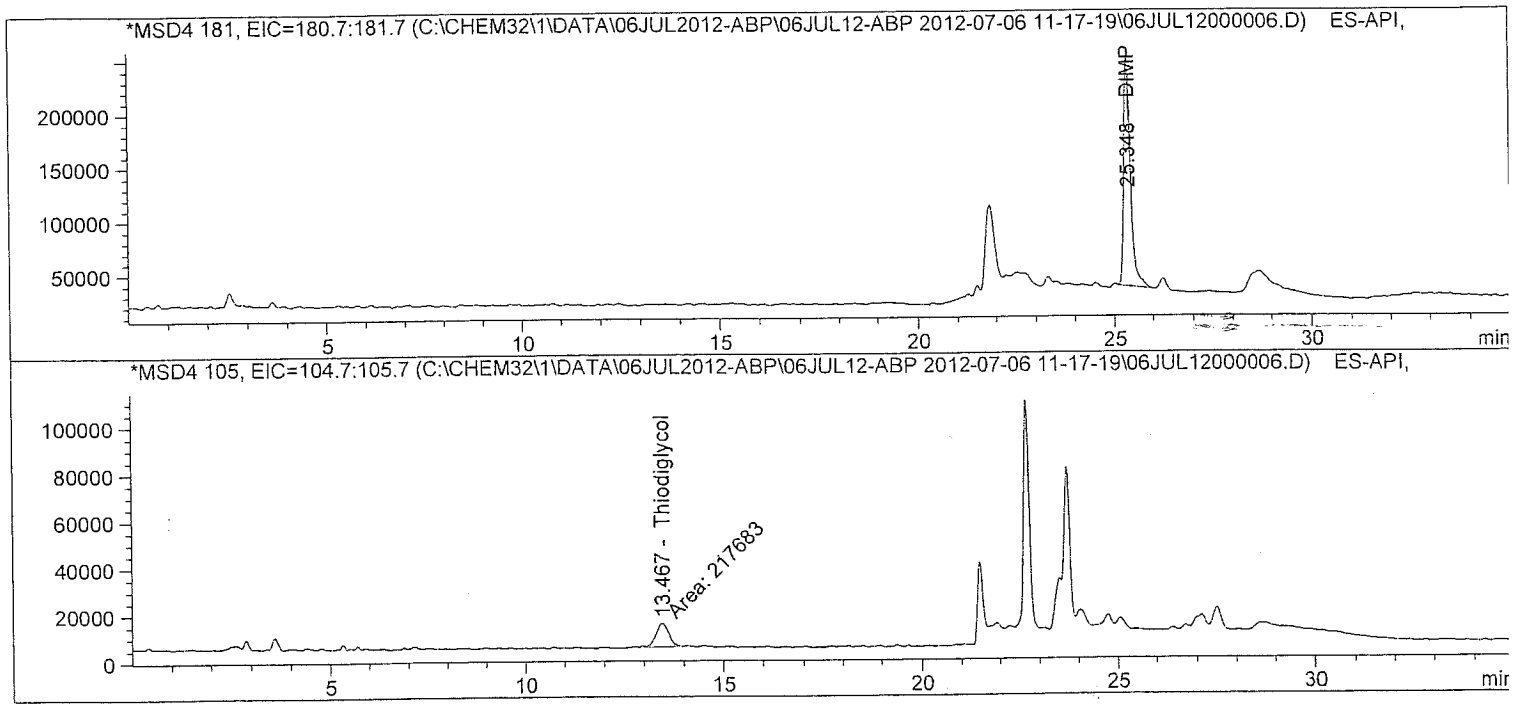
Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

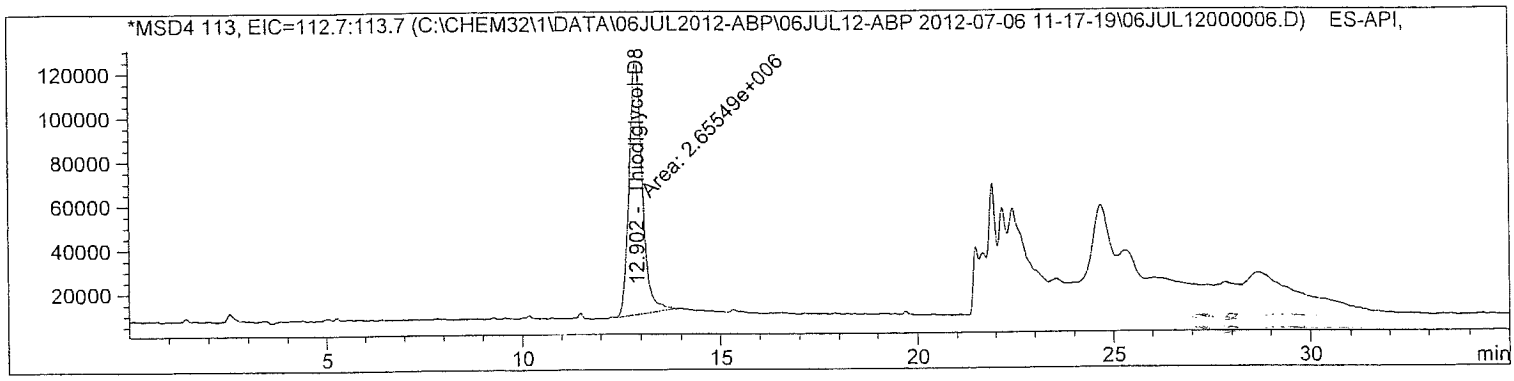
Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	7/9/2012 11:13:05 AM
Multiplier	:	1.0000
Dilution	:	1.0000
Sample Amount	:	1.00000e-1 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.743	FM	1	3.41223e5	8.57299e-2	1.10161e-1		MPA
12.766	MM	1	6.22808e5	4.49809e-2	1.05497e-1		IMPA

Totals without ISTD(s) : 2.15657e-1

Batch Run # 6 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:19:21 PM
Seq. Line : 6
Location : Vial 5
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.660	BB	1	3.63294e5	7.52785e-2	1.02988e-1		EMPA

Totals without ISTD(s) : 1.02988e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	BB	1	2.58087e6	1.03862e-2	1.00944e-1		DIMP

Totals without ISTD(s) : 1.00944e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.467	MM	1	2.17683e5	1.23740e-1	1.01436e-1		Thiodiglycol

Totals without ISTD(s) : 1.01436e-1

atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator	: TTM	Seq. Line :	6
Acq. Instrument	: LCMS3	Location :	Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj :	1
		Inj Volume :	10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

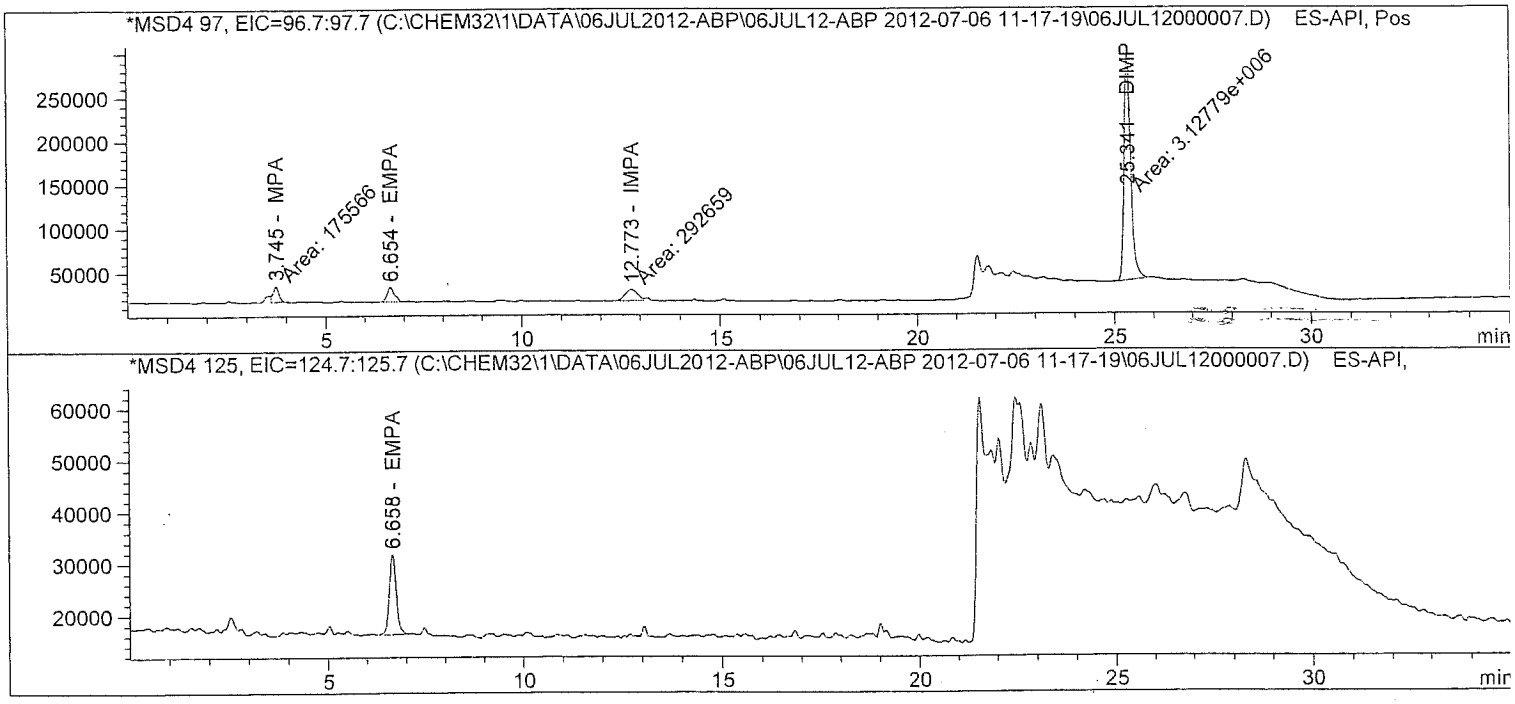
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.902	MM	I	1 2.65549e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

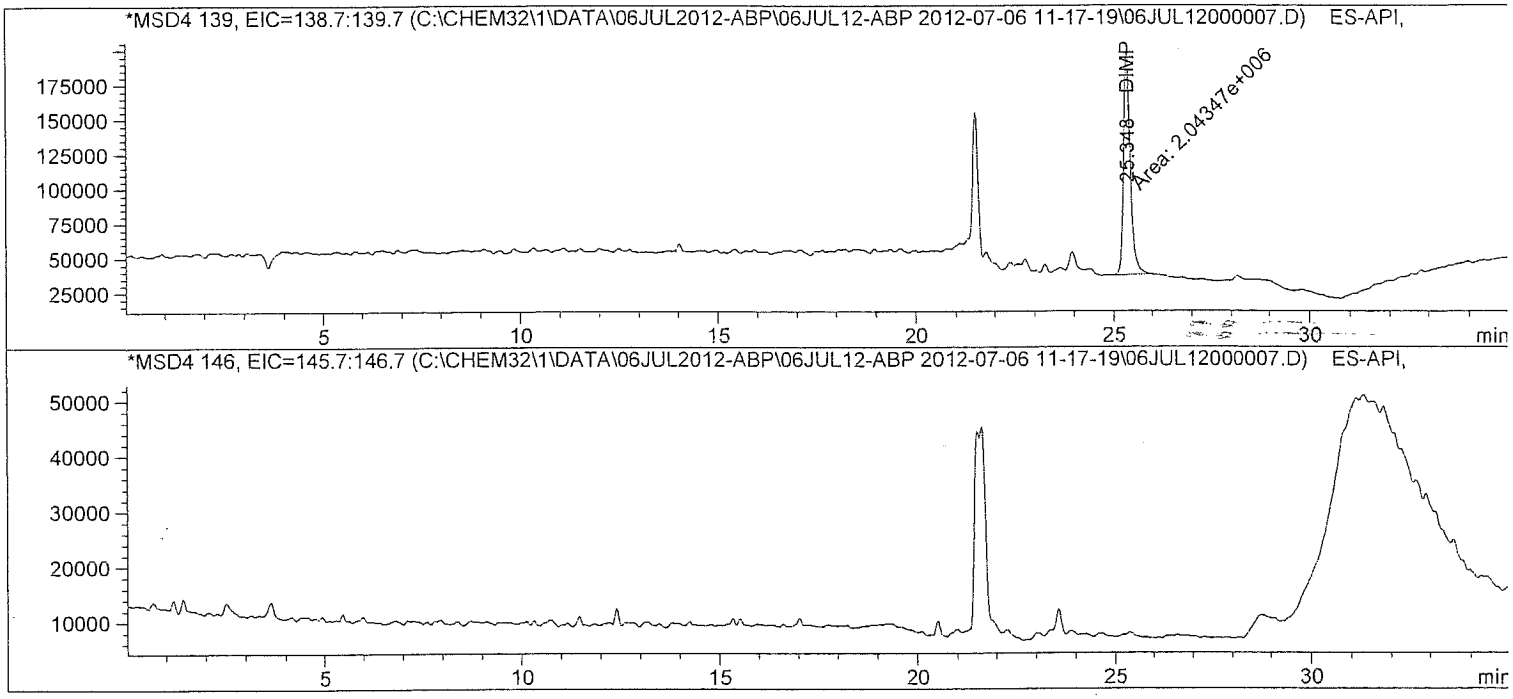
Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



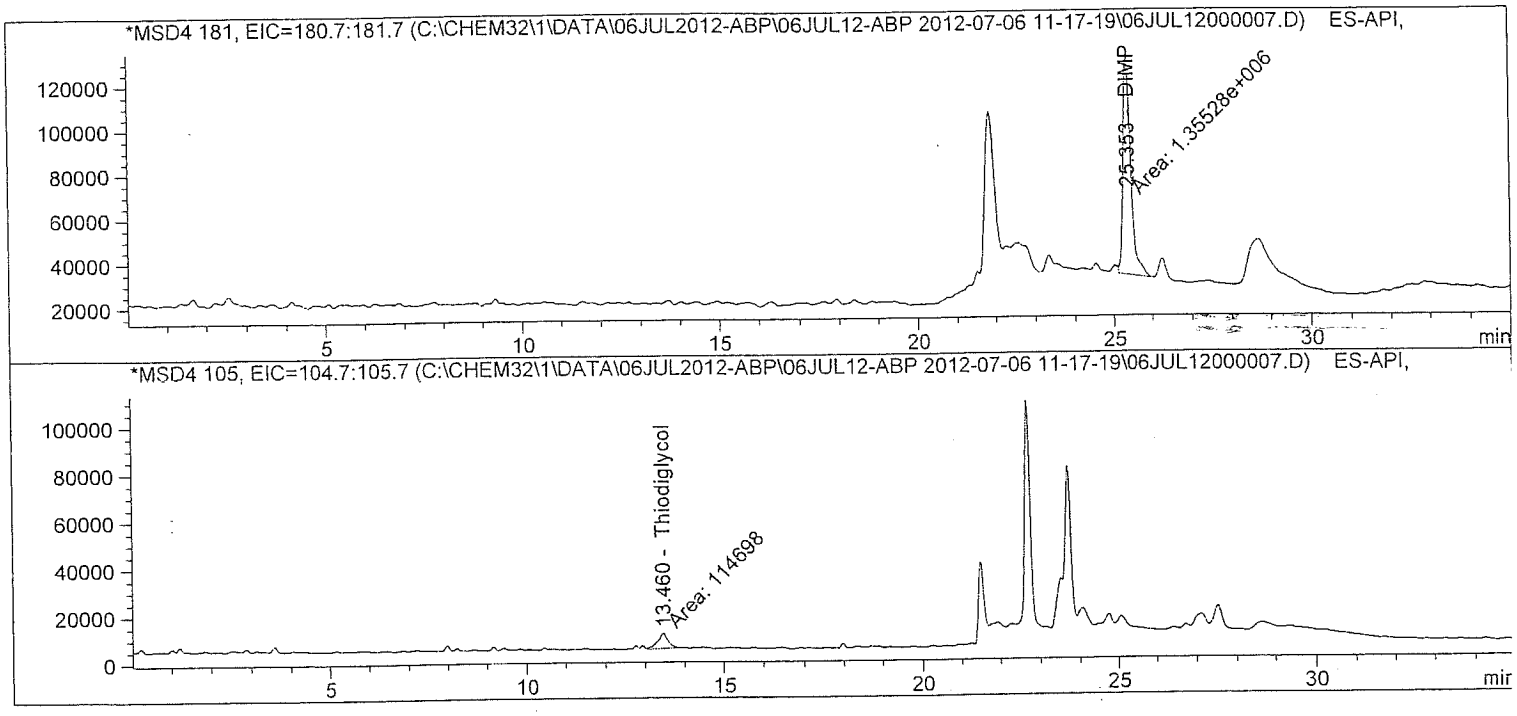
Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



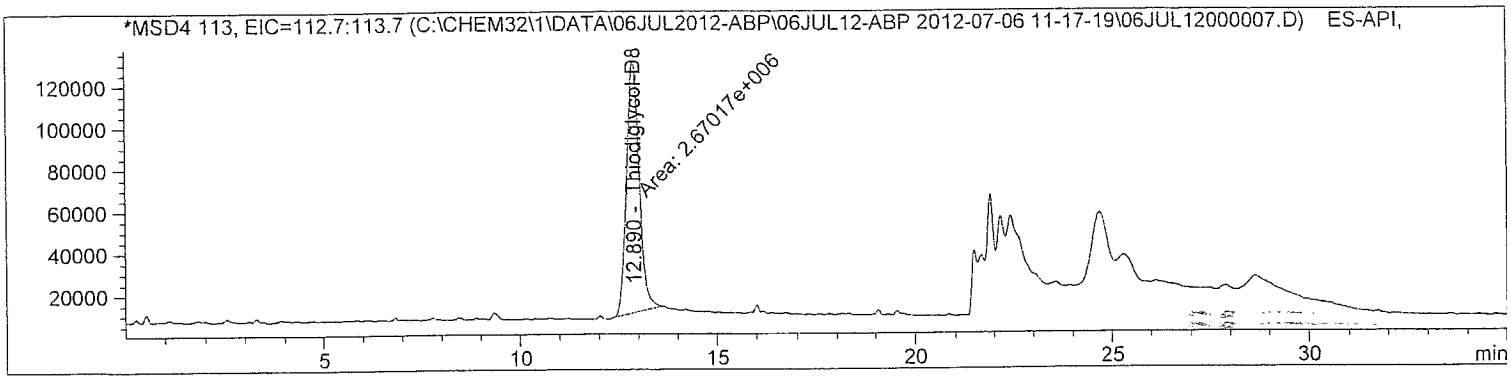
atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:55:42 PM
Seq. Line : 7
Location : Vial 6
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000e-2 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.745	FM	1	1.75566e5	7.10322e-2	4.67042e-2		MPA
12.773	MF	1	2.92659e5	4.80467e-2	5.26608e-2		IMPA

Totals without ISTD(s) : 9.93650e-2

atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:55:42 PM
Seq. Line : 7
Location : Vial 6
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.658	BB	1	1.91552e5	7.48089e-2	5.36662e-2		EMPA

Totals without ISTD(s) : 5.36662e-2

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.353	FM	1	1.35528e6	1.14558e-2	5.81454e-2		DIMP

Totals without ISTD(s) : 5.81454e-2

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460	MM	1	1.14698e5	1.34158e-1	5.76283e-2		Thiodiglycol

Totals without ISTD(s) : 5.76283e-2

Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

Acq. Operator : TTM
Seq. Line : 7
Acq. Instrument : LCMS3
Location : Vial 6
Injection Date : 7/6/2012 2:55:42 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

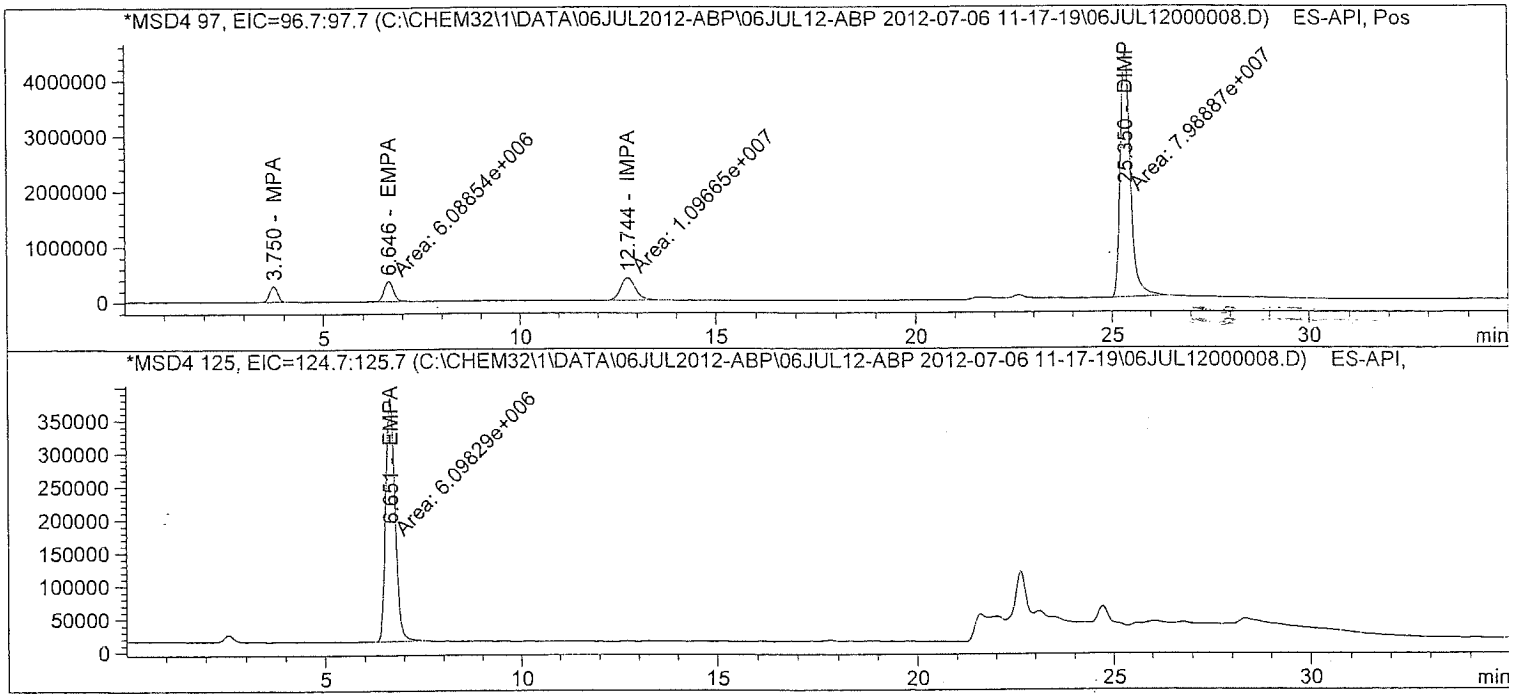
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.890	MM	I	1 2.67017e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

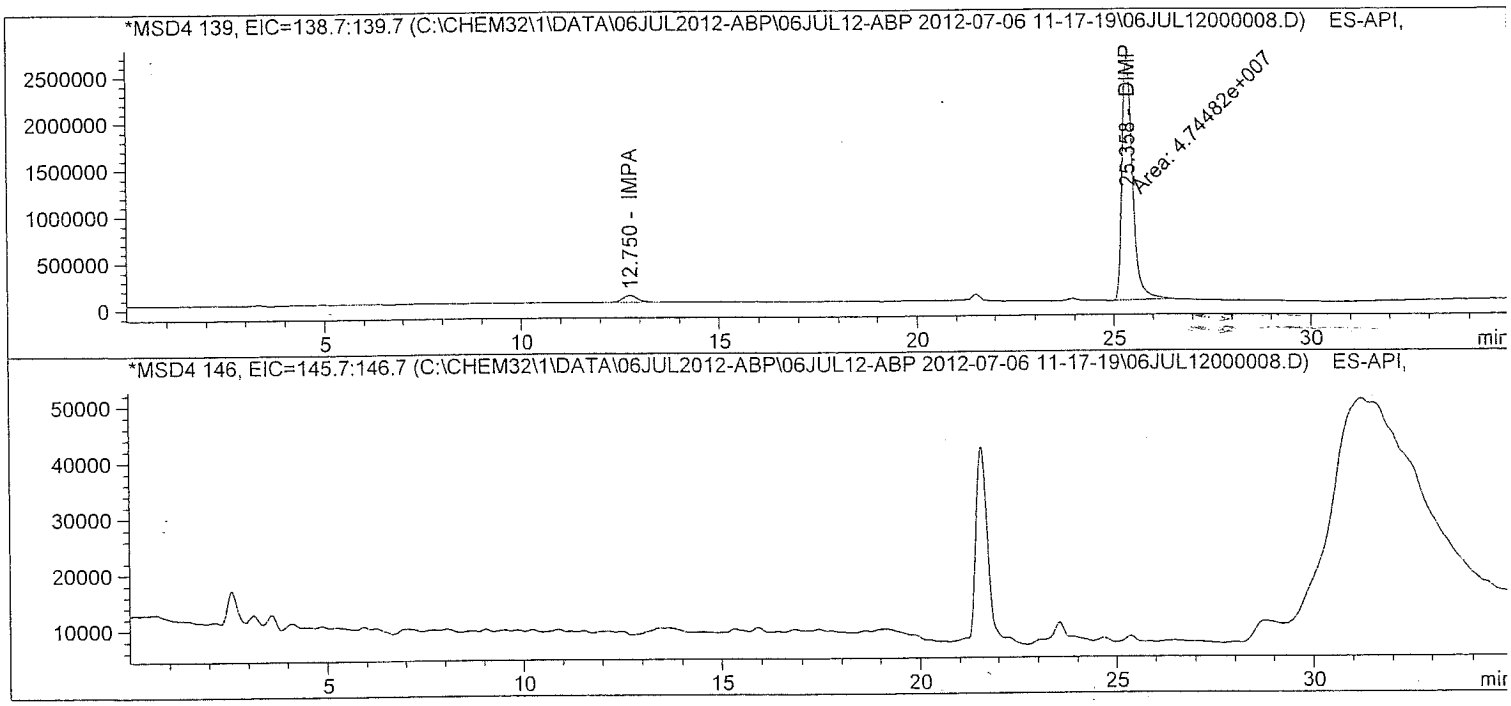
Batch Run # 8 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
Sample Name: ICV

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

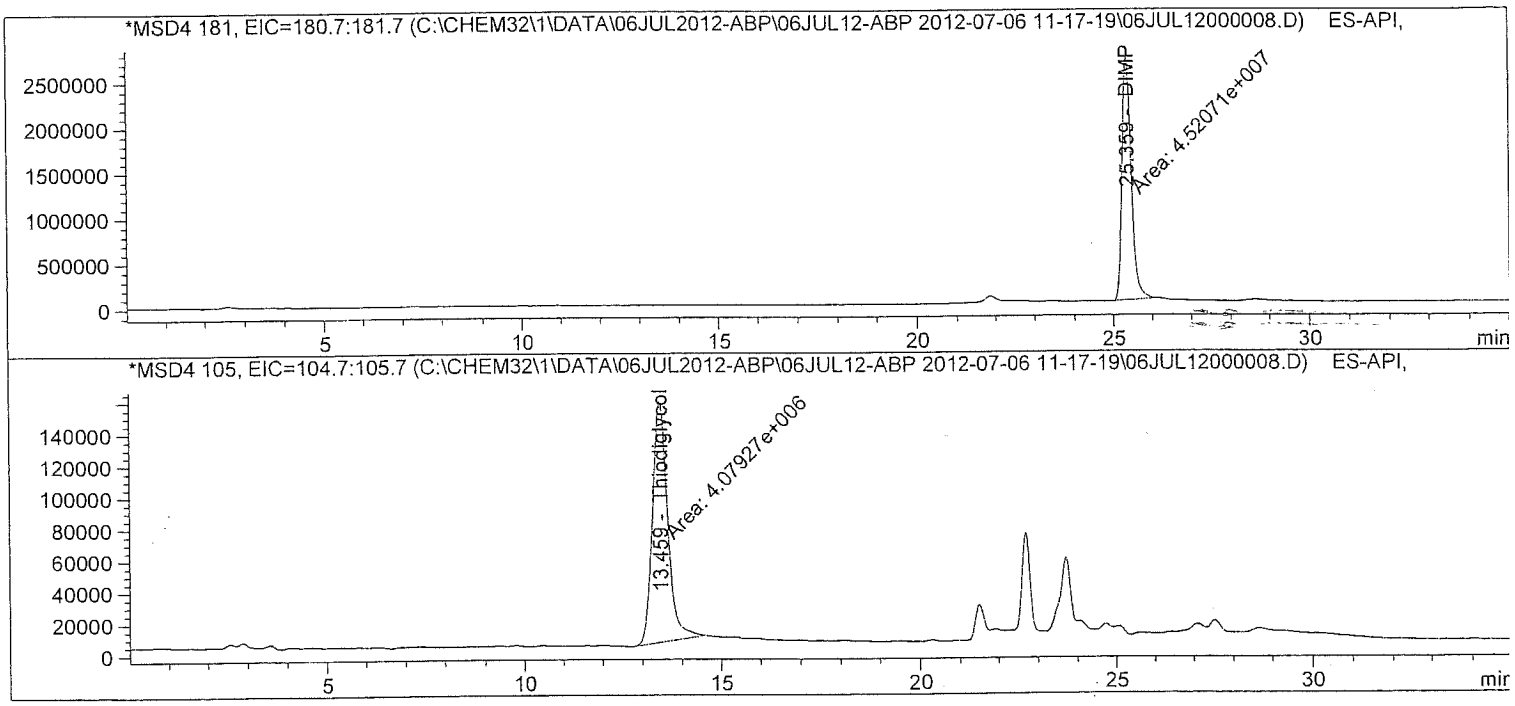
Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

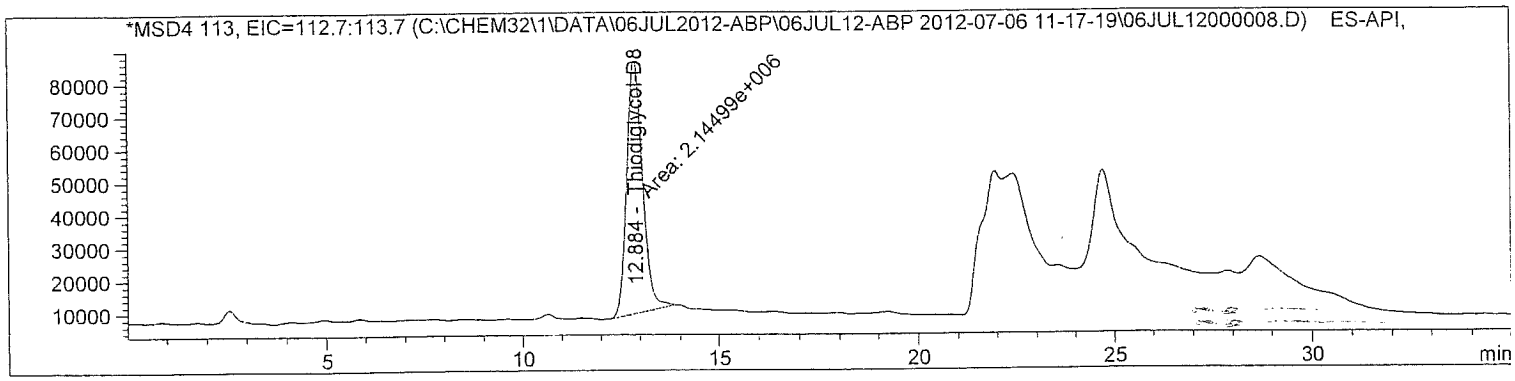
Acq. Operator	: TTM	Seq. Line :	8
Acq. Instrument	: LCMS3	Location :	Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj :	1
		Inj Volume :	10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 3:32:02 PM
Seq. Line : 8
Location : Vial 7
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 2.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.750	BB	1	4.04355e6	1.04390e-1	1.96787		MPA
12.744	MM	1	1.09665e7	4.26853e-2	2.18233		IMPA

Totals without ISTD(s) : 4.15020

atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator : TTM
Seq. Line : 8
Acq. Instrument : LCMS3
Location : Vial 7
Injection Date : 7/6/2012 3:32:02 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.651	MM	1	6.09829e6	7.65569e-2	2.17655		EMPA

Totals without ISTD(s) : 2.17655

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.359	MM	1	4.52071e7	1.00834e-2	2.12514		DIMP

Totals without ISTD(s) : 2.12514

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.459	MM	1	4.07927e6	1.15268e-1	2.19214		Thiodiglycol

Totals without ISTD(s) : 2.19214

Batch Run # 8 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
Sample Name: ICV

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 3:32:02 PM
Seq. Line : 8
Location : Vial 7
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.884	MM	I	1 2.14499e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

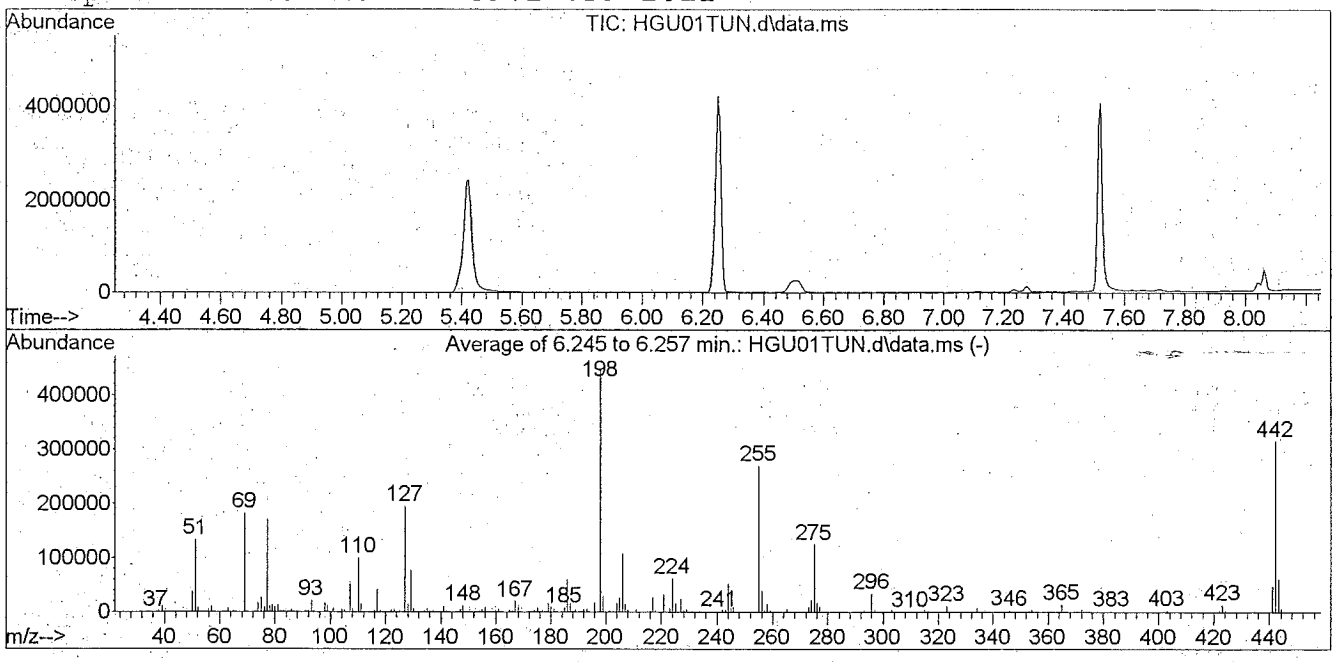
8270

Analytical Documentation

Data Path : D:\1\DATA\2012\AUG12\08AUG12H\
Data File : HGU01TUN.d
Acq On : 08/08/2012 10:06
Operator : RAH
Sample : 8270 DFTPP 13808
Inst : 5975-H
Misc : X:1/11/13
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : D:\1\METHODS\8270DTUN.M
Title : EPA/CLP SOM01
Last Update : Wed Nov 23 09:22:39 2011



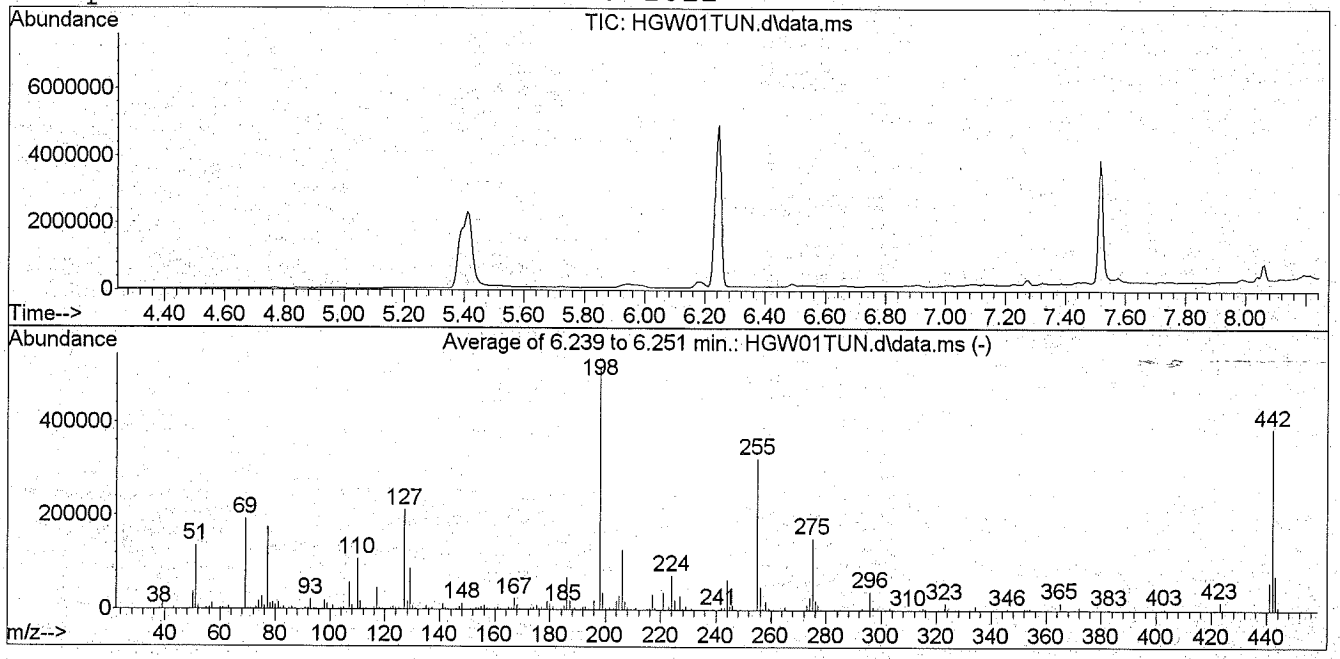
AutoFind: Scans 775, 776, 777; Background Corrected with Scan 767

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.6	133016	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	40.5	182007	PASS
70	69	0.00	2	0.5	863	PASS
127	198	10	80	43.3	194795	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	449451	PASS
199	198	5	9	6.7	30245	PASS
275	198	10	60	27.8	124987	PASS
365	198	1	100	3.0	13675	PASS
441	443	0.01	100	78.8	47803	PASS
442	198	50	100	70.3	315904	PASS
443	442	15	24	19.2	60693	PASS

Data Path : D:\1\DATA\2012\AUG12\09AUG12H\
Data File : HGW01TUN.d
Acq On : 08/09/2012 09:47
Operator : RAH
Sample : 8270 DFTPP 13808
Inst : 5975-H
Misc : X:1/11/13
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : D:\1\METHODS\8270DTUN.M
Title : EPA/CLP SOM01
Last Update : Wed Nov 23 09:22:39 2011



AutoFind: Scans 774, 775, 776; Background Corrected with Scan 761

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	26.1	135702	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	36.9	191394	PASS
70	69	0.00	2	0.9	1708	PASS
127	198	10	80	40.8	211858	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	519373	PASS
199	198	5	9	6.9	35650	PASS
275	198	10	60	29.2	151723	PASS
365	198	1	100	3.0	15653	PASS
441	443	0.01	100	78.9	58533	PASS
442	198	50	100	74.5	387008	PASS
443	442	15	24	19.2	74211	PASS

Form 6 Equivalent

Initial Calibration Report

EPA Method 8270D

90 percent must meet criteria -- min RF and [RSD<15% or correllation coefficient > 0.990]

SSTD005 = HGU07S05.D
SSTD020 = HGU06S20.D
SSTD035 = HGU05S35.D
SSTD050 = HGU02S50.D
SSTD065 = HGU04S65.D
SSTD080 = HGU03S80.D

percent meeting criteria: **100.0**

PASSED

	RRF005	RRF020	RRF035	RRF050	RRF065	RRF080	RF-AVE	RSD	MIN RF	use quad regression?	correlation coefficient	meets criteria?
2) 2-Fluorophenol	1.161	1.359	1.371	1.386	1.399	1.387	1.344	**6.7**	0.001			ok
3) 1,4-Oxathiane	0.735	0.667	0.673	0.695	0.687	0.710	0.694	**3.6**	0.001			ok
4) Phenol-d5	1.548	1.771	1.805	1.792	1.838	1.821	1.762	**6.1**	0.001			ok
5) 1,4-Dithiane	1.194	1.078	1.092	1.125	1.117	1.144	1.125	**3.7**	0.001			ok
7) Nitrobenzene-d5	0.303	0.345	0.355	0.350	0.356	0.349	0.343	**5.7**	0.001			ok
9) 2-Fluorobiphenyl	1.357	1.493	1.522	1.504	1.512	1.514	1.484	**4.2**	0.001			ok
11) 2,4,6-Tribromophenol	0.109	0.132	0.140	0.141	0.143	0.143	0.135	**9.7**	0.001			ok
13) Terphenyl-d14	0.706	0.771	0.809	0.779	0.789	0.779	0.772	**4.5**	0.001			ok

Form 7 Equivalent

8270D Calibration Verification Report

Calibration Verification File: **HGW02S50.D** Initial Calibration: **HGU**

80 percent must meet criteria (%D<20 and min RF)
percent meeting criteria: **100.0** **PASSED**

	AVG RF	CCV RF	MIN RF	CCV conc	target conc	%difference *	%drift *	flag
2-Fluorophenol	1.343	1.364	0.001			**1.5**		ok
1,4-Oxathiane	0.694	0.656	0.001			**5.5**		ok
Phenol-d5	1.762	1.838	0.001			**4.3**		ok
1,4-Dithiane	1.125	1.094	0.001			**2.8**		ok
Nitrobenzene-d5	0.343	0.356	0.001			**3.8**		ok
2-Fluorobiphenyl	1.484	1.508	0.001			**1.7**		ok
2,4,6-Tribromophenol	0.135	0.141	0.001			**4.6**		ok
Terphenyl-d14	0.772	0.781	0.001			**1.2**		ok

* Percent difference is used for compounds quantitated by average response factor.
Percent drift is used for compounds quantitated by regression fits

INTERNAL STANDARD AREA SUMMARY

Form 8 equivalent

Continuing Standard Filename	HGW02S50.D	Area 1,4-dcb	Area nap-d8	Area ace-d10	Area phe-d10	Area chry-d12	Area per-d12
8270 50 std 15952		617440	2748326	1665713	3295873	3959164	3437480
	Upper Limit	1234880	5496652	3331426	6591746	7918328	6874960
	Lower limit	308720	1374163	832857	1647937	1979582	1718740

CLIENT Sample No.	DCL Sample No.	Area 1,4-dcb	Area nap-d8	Area ace-d10	Area phe-d10	Area chry-d12	Area per-d12
BLANK	289024	662265	2960502	1742167	3344079	3897327	3482876
LCS	289025	654888	2883649	1628301	3156371	3521185	3155976
LCS (DUP)	289026	835574	3763165	2206399	4300599	4926060	4356509
SO-02(01.5)ERB	1221555006	654210	2919579	1705329	3308929	3686258	3181948
SO-37(09.5)ERB	1221656017	765811	3442945	1987125	3782071	4341900	3787157

LIMITS: Areas should be within 50 to 200 percent of the corresponding area in the calibration standard.

INTERNAL STANDARD RETENTION-TIME SUMMARY

Form 8 equivalent

Continuing Standard Filename	HGW02S50.D	RT 1,4-dcb	RT nap-d8	RT ace-d10	RT phe-d10	RT chry-d12	RT per-d12
8270 50 std 15952		4.03	5.34	7.86	10.45	14.93	16.99
	Upper Limit	4.53	5.84	8.36	10.95	15.43	17.49
	Lower limit	3.53	4.84	7.36	9.95	14.43	16.49
CLIENT Sample No.	**DCL Sample No.**	**RT 1,4-dcb**	**RT nap-d8**	**RT ace-d10**	**RT phe-d10**	**RT chry-d12**	**RT per-d12**
BLANK	289024	4.03	5.34	7.86	10.45	14.92	16.99
LCS	289025	4.03	5.34	7.86	10.45	14.92	16.99
LCS (DUP)	289026	4.03	5.34	7.86	10.45	14.92	16.99
SO-02(01.5)ERB	1221555006	4.03	5.34	7.86	10.45	14.92	16.98
SO-37(09.5)ERB	1221656017	4.03	5.34	7.86	10.45	14.92	16.99

LIMITS: Retention times should be within 30 seconds of the corresponding time in the calibration standard.

INTERNAL STANDARD AREA SUMMARY

Form 8 equivalent

Continuing Standard		Area	Area	Area	Area	Area	Area
Filename	HGW02S50.D	1,4-dcb	nap-d8	ace-d10	phe-d10	chry-d12	per-d12
8270 50 std 15952		617440	2748326	1665713	3295873	3959164	3437480
	Upper Limit	1234880	5496652	3331426	6591746	7918328	6874960
	Lower limit	308720	1374163	832857	1647937	1979582	1718740

CLIENT Sample No.	DCL Sample No.	Area 1,4-dcb	Area nap-d8	Area ace-d10	Area phe-d10	Area chry-d12	Area per-d12	
BLANK	288277	620648	2851002	1747094	3360320	3841439	3221013	
LCS	288278	642887	2958886	1778485	3462346	3990666	3322042	
SO-31	1221656001	595742	2664480	1585095	3056361	3464234	2806546	
SO-31	1221656002	670810	3006115	1768953	3457796	4015872	3218925	
SO-31	1221656003	665264	2963709	1782674	3478305	3887885	3145272	
SO-31 Dup	1221656004	632850	2827643	1657991	3200622	3687521	3015467	
SO-32(10)	1221656005	639638	2867378	1678112	3281837	3687912	3069325	
SO-33	1221656006	868721	3859701	2266676	4423000	5010991	3435713	
SO-34(10)Dup	1221656008	641277	2883252	1695968	3276529	3735832	2961171	
SO-35	1221656009	663957	3015622	1794824	3499503	3924255	2880485	
SO-36	1221656010	622557	2763692	1632571	3216308	3589145	2281200	
SO-38	1221656012	650763	2895621	1717233	3356698	3483822	2231888	
SO-39	1221656013	650102	2884592	1705246	3344152	3794954	2547811	
SO-42	1221656016	641092	2828359	1676550	3304124	3577644	2146850	
SO-37(09.5)	1221656011	642817	2880602	1702871	3292039	3323821	2086575	
SO-40	1221656014	581299	2586416	1553005	3071830	2640065	1106297	*
SO-41	1221656015	630338	2758815	1641430	3169255	2725887	1167996	*
SO-34(10)	1221656007	668430	2981132	1734060	3184579	1954179 *	712058	*

* This internal standard is not pertinent to the analysis. It does not reference the requested analytes.

LIMITS: Areas should be within 50 to 200 percent of the corresponding area in the calibration standard.

INTERNAL STANDARD RETENTION-TIME SUMMARY

Form 8 equivalent

Continuing Standard		RT	RT	RT	RT	RT	RT
Filename	HGW02S50.D	1,4-dcb	nap-d8	ace-d10	phe-d10	chry-d12	per-d12
8270 50 std 15952		4.03	5.34	7.86	10.45	14.93	16.99
	Upper Limit	4.53	5.84	8.36	10.95	15.43	17.49
	Lower limit	3.53	4.84	7.36	9.95	14.43	16.49
CLIENT	**DCL**	**RT**	**RT**	**RT**	**RT**	**RT**	**RT**
Sample No.	**Sample No.**	**1,4-dcb**	**nap-d8**	**ace-d10**	**phe-d10**	**chry-d12**	**per-d12**
BLANK	288277	4.04	5.34	7.86	10.45	14.92	16.98
LCS	288278	4.04	5.34	7.86	10.45	14.92	16.98
SO-31	1221656001	4.04	5.34	7.86	10.45	14.92	16.98
SO-31	1221656002	4.04	5.34	7.86	10.45	14.92	16.98
SO-31	1221656003	4.04	5.34	7.86	10.45	14.92	16.99
SO-31 Dup	1221656004	4.04	5.34	7.86	10.45	14.92	16.99
SO-32(10)	1221656005	4.04	5.34	7.86	10.45	14.92	16.99
SO-33	1221656006	4.04	5.34	7.86	10.45	14.92	16.99
SO-34(10)Dup	1221656008	4.03	5.34	7.86	10.45	14.92	16.98
SO-35	1221656009	4.03	5.34	7.86	10.45	14.92	16.98
SO-36	1221656010	4.03	5.34	7.86	10.45	14.92	16.99
SO-38	1221656012	4.03	5.34	7.86	10.45	14.92	16.98
SO-39	1221656013	4.03	5.34	7.86	10.45	14.92	16.98
SO-42	1221656016	4.04	5.34	7.86	10.45	14.92	16.99
SO-37(09.5)	1221656011	4.04	5.34	7.86	10.45	14.92	16.99
SO-40	1221656014	4.04	5.34	7.86	10.45	14.93	17.00
SO-41	1221656015	4.04	5.34	7.86	10.45	14.93	16.99
SO-34(10)	1221656007	4.04	5.34	7.86	10.45	14.92	16.98

LIMITS: Retention times should be within 30 seconds of the corresponding time in the calibration standard.

Batch Worklist

Batch: ESVO/ 3811
Rule: SW 8270, Water

Created: 8/10/2012 13:37
Analyst: R. Hendricks

Instrument:
Status: WP

HBN: 91473

Workorder: 1221555
Workorder: 1221656

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	289024	MB for HBN 91345 [ENVX/15783]	1000 mL	1 mL	3	MB		S8270...3Q	6141		8/14/2012	
2	289025	LCS for HBN 91345 [ENVX/15783]	1000 mL	1 mL	3	LCS		S8270...3Q	6141		8/14/2012	
3	289026	LCSD for HBN 91345 [ENVX/15783	1000 mL	1 mL	3	LCSD		S8270...3Q	6141		8/14/2012	
4	1221555006	FTSW-HR-SO-02(01.5)ERB	1000 mL	1 mL	3	SAMPLE	1221555006-A	S8270D...3	5480	9/17/2012	8/14/2012	
	RERUN[5195,RX]											
5	1221656017	FTSW-HR-SO-37(09.5)ERB	1000 mL	1 mL	3	SAMPLE	1221656017-A	S8270D...3	5480	9/17/2012	8/17/2012	
	RERUN[5195,RX]											

Batch Worklist

Batch: ESVO/ 3820
Rule: SW 8270, Soil

Created: 8/15/2012 09:42
Analyst: R. Hendricks

Instrument:
Status: WP

HBN: 91737
|%R91737|

Workorder: 1221656

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	288277	MB for HBN 91130 [ENVX/15752]	30 grams	1 mL	4	MB		S827050.4Q	6158		8/13/2012	
2	288278	LCS for HBN 91130 [ENVX/15752]	30 grams	1 mL	4	LCS		S827050.4Q	6158		8/13/2012	
3	288279	RLVS for HBN 91130 [ENVX/15752	30 grams	1 mL	4	RLVS		S827050.4Q	6158		8/13/2012	
4	1221656001	FTSW-HR-SO-31	30.14 grams	1 mL	4	SAMPLE	1221656001-A	S8270D...4	5480	9/15/2012	8/16/2012	
5	1221656002	FTSW-HR-SO-31 MS	30.02 grams	1 mL	4	MS	1221656002-A	S827050.4Q	5480		8/16/2012	
6	1221656003	FTSW-HR-SO-31 MSD	30 grams	1 mL	4	MSD	1221656003-A	S827050.4Q	5480		8/16/2012	
7	1221656004	FTSW-HR-SO-31 Dup	30.07 grams	1 mL	4	DUP	1221656004-A	S8270D...4	5480	9/15/2012	8/16/2012	
8	1221656005	FTSW-HR-SO-32(10)	30.13 grams	1 mL	4	SAMPLE	1221656005-A	S8270D...4	5480	9/15/2012	8/16/2012	
9	1221656006	FTSW-HR-SO-33	30.04 grams	1 mL	4	SAMPLE	1221656006-A	S8270D...4	5480	9/15/2012	8/16/2012	
10	1221656007	FTSW-HR-SO-34(10)	30.01 grams	1 mL	4	SAMPLE	1221656007-A	S8270D...4	5480	9/15/2012	8/16/2012	
11	1221656008	FTSW-HR-SO-34(10)Dup	30.08 grams	1 mL	4	DUP	1221656008-A	S8270D...4	5480	9/15/2012	8/16/2012	
12	1221656009	FTSW-HR-SO-35	30.09 grams	1 mL	4	SAMPLE	1221656009-A	S8270D...4	5480	9/15/2012	8/16/2012	
13	1221656010	FTSW-HR-SO-36	30.13 grams	1 mL	4	SAMPLE	1221656010-A	S8270D...4	5480	9/15/2012	8/16/2012	
14	1221656011	FTSW-HR-SO-37(09.5)	30.05 grams	1 mL	4	SAMPLE	1221656011-A	S8270D...4	5480	9/15/2012	8/16/2012	
15	1221656012	FTSW-HR-SO-38	30.06 grams	1 mL	4	SAMPLE	1221656012-A	S8270D...4	5480	9/15/2012	8/16/2012	
16	1221656013	FTSW-HR-SO-39	30.04 grams	1 mL	4	SAMPLE	1221656013-A	S8270D...4	5480	9/15/2012	8/16/2012	
17	1221656014	FTSW-HR-SO-40	30 grams	1 mL	4	SAMPLE	1221656014-A	S8270D...4	5480	9/15/2012	8/16/2012	
18	1221656015	FTSW-HR-SO-41	30.04 grams	1 mL	4	SAMPLE	1221656015-A	S8270D...4	5480	9/15/2012	8/16/2012	
19	1221656016	FTSW-HR-SO-42	30.11 grams	1 mL	4	SAMPLE	1221656016-A	S8270D...4	5480	9/15/2012	8/16/2012	

DATACHEM LABORATORIES - GC\MS SEMIVOLATILE ANALYSIS
INJECTION LOGBOOK
INSTRUMENT 5975-H

File Name	Date and Time Injected	OP	Method	ALS BOT	Run Length	Dil Fac	Sample name	Misc info
HGU01TUN	08/08/2012 10:06	RAH	8270DTUN	1	11.53	1	8270 DFTPP 13808	1/11/13
HGU02S50	08/08/2012 10:26	RAH	8270D07	2	20.49	1	8270 50 std 15952	X:1/9/13
HGU03S80	08/08/2012 11:01	RAH	8270D07	3	20.49	1	8270 80 std 15970	X:1/9/13
HGU04S65	08/08/2012 11:30	RAH	8270D07	4	20.49	1	8270 65 std 15971	X:1/9/13
HGU05S35	08/08/2012 12:00	RAH	8270D07	5	20.49	1	8270 35 std 15972	X:1/9/13
HGU06S20	08/08/2012 12:29	RAH	8270D07	6	20.49	1	8270 20 std 15973	X:1/9/13
HGU07S05	08/08/2012 12:59	RAH	8270D07	7	20.49	1	8270 5 std 15974	X:1/9/13
HGU08ICV	08/08/2012 13:29	RAH	8270D07	8	20.49	1	8270 ICV 15975	X:1/9/13
HGV01TUN	08/08/2012 14:07	RAH	8270DTUN	1	11.53	1	8270 DFTPP 13808	1/11/13
HGV02S50	08/08/2012 14:28	RAH	8270DOND	2	20.49	1	8270 50 std 15952	X:1/9/13
HGV03LCS	08/08/2012 14:58	RAH	8270DOND	3	20.49	1	288219	WATER 8270
HGV04LCS	08/08/2012 15:28	RAH	8270DOND	4	20.49	1	288239	SOIL 8270
HGV05BLK	08/08/2012 15:58	RAH	8270DOND	5	20.49	1	288238	SOIL 8270
HGV06RLV	08/08/2012 16:29	RAH	8270DOND	6	20.49	1	288240	SOIL 8270
HGV07C01	08/08/2012 16:58	RAH	8270DOND	7	20.49	1	1221555001	SOIL 8270
HGV08M02	08/08/2012 17:28	RAH	8270DOND	8	20.49	1	1221555002	SOIL 8270
HGV09M03	08/08/2012 17:56	RAH	8270DOND	9	20.49	1	1221555003	SOIL 8270
HGV10C04	08/08/2012 18:26	RAH	8270DOND	10	20.49	1	1221555004	SOIL 8270
HGV11C05	08/08/2012 18:55	RAH	8270DOND	11	20.49	1	1221555005	SOIL 8270
HGV12C07	08/08/2012 19:24	RAH	8270DOND	12	20.49	1	1221555007	SOIL 8270
HGV13C08	08/08/2012 19:54	RAH	8270DOND	13	20.49	1	1221555008	SOIL 8270
HGV14C09	08/08/2012 20:24	RAH	8270DOND	14	20.49	1	1221555009	SOIL 8270
HGV15C10	08/08/2012 20:53	RAH	8270DOND	15	20.49	1	1221555010	SOIL 8270
HGV16C11	08/08/2012 21:23	RAH	8270DOND	16	20.49	1	1221555011	SOIL 8270
HGV17C12	08/08/2012 21:52	RAH	8270DOND	17	20.49	1	1221555012	SOIL 8270
HGV18C13	08/08/2012 22:22	RAH	8270DOND	18	20.49	1	1221555013	SOIL 8270
HGV19C14	08/08/2012 22:51	RAH	8270DOND	19	20.49	1	1221555014	SOIL 8270

DATACHEM LABORATORIES - GC\MS SEMIVOLATILE ANALYSIS
INJECTION LOGBOOK
INSTRUMENT 5975-H

File Name	Date and Time Injected	OP	Method	ALS BOT	Run Length	Dil Fac	Sample name	Misc info
HGW01TUN	08/09/2012 09:47	RAH	8270DTUN	1	11.53	1	8270 DFTPP 13808	1/11/13
HGW02S50	08/09/2012 10:07	RAH	8270DOND	2	20.49	1	8270 50 std 15952	X:1/9/13
HGW03BLK	08/09/2012 10:35	RAH	8270DOND	3	20.49	1	289024	WATER 8270
HGW04LCS	08/09/2012 11:05	RAH	8270DOND	4	20.49	1	289025	WATER 8270
HGW05LCD	08/09/2012 11:34	RAH	8270DOND	5	20.49	1	289026	WATER 8270
HGW06C06	08/09/2012 12:03	RAH	8270DOND	6	20.49	1	1221555006	WATER 8270
HGW07C17	08/09/2012 12:33	RAH	8270DOND	7	20.49	1	1221656017	WATER 8270
HGW08BLK	08/09/2012 13:02	RAH	8270DOND	8	20.49	1	288277	SOIL 8270
HGW09LCS	08/09/2012 13:32	RAH	8270DOND	9	20.49	1	288278	SOIL 8270
HGW10C01	08/09/2012 14:01	RAH	8270DOND	10	20.49	1	1221656001	SOIL 8270
HGW11M02	08/09/2012 14:31	RAH	8270DOND	11	20.49	1	1221656002	SOIL 8270
HGW12M03	08/09/2012 15:01	RAH	8270DOND	12	20.49	1	1221656003	SOIL 8270
HGW13C04	08/09/2012 15:31	RAH	8270DOND	13	20.49	1	1221656004	SOIL 8270
HGW14C05	08/09/2012 16:01	RAH	8270DOND	14	20.49	1	1221656005	SOIL 8270
HGW15C06	08/09/2012 16:30	RAH	8270DOND	15	20.49	1	1221656006	SOIL 8270
HGW16C08	08/09/2012 17:00	RAH	8270DOND	16	20.49	1	1221656008	SOIL 8270
HGW17C09	08/09/2012 17:29	RAH	8270DOND	17	20.49	1	1221656009	SOIL 8270
HGW18C10	08/09/2012 17:58	RAH	8270DOND	18	20.49	1	1221656010	SOIL 8270
HGW19C12	08/09/2012 18:27	RAH	8270DOND	19	20.49	1	1221656012	SOIL 8270
HGW20C13	08/09/2012 18:56	RAH	8270DOND	20	20.49	1	1221656013	SOIL 8270
HGW21C16	08/09/2012 19:25	RAH	8270DOND	21	20.49	1	1221656016	SOIL 8270
HGW22C11	08/09/2012 19:54	RAH	8270DOND	22	20.49	1	1221656011	SOIL 8270
HGW23C14	08/09/2012 20:24	RAH	8270DOND	23	20.49	1	1221656014	SOIL 8270
HGW24C15	08/09/2012 20:53	RAH	8270DOND	24	20.49	1	1221656015	SOIL 8270
HGW25C07	08/09/2012 21:22	RAH	8270DOND	25	20.49	1	1221656007	SOIL 8270
HGW26RLV	08/09/2012 21:51	RAH	8270DOND	26	20.49	1	288279	SOIL 8270



ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

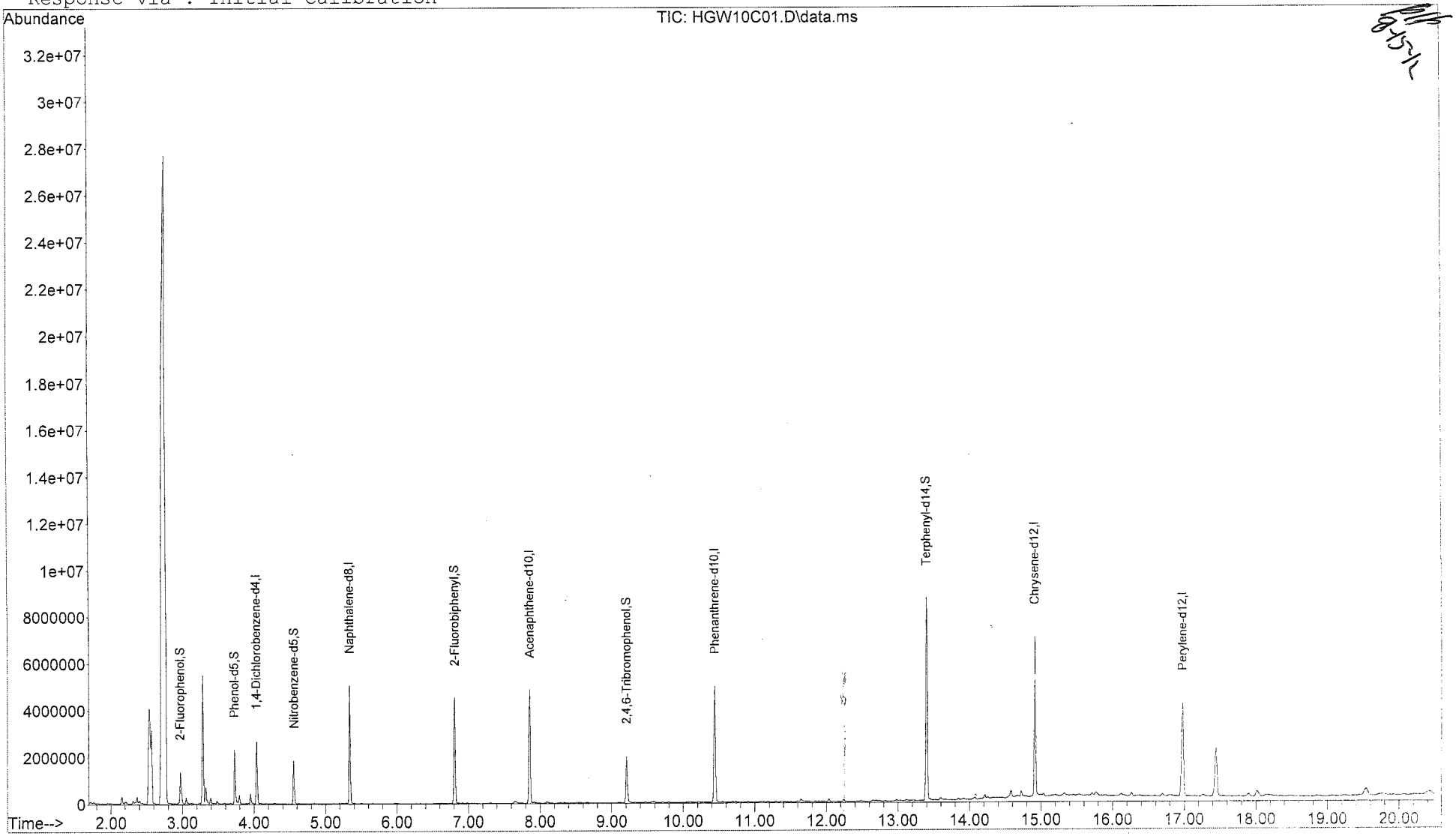
Raw Data

Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW10C01.D Vial: 10
Acq On : 08/09/2012 14:01 Operator: RAH
Sample : 1221656001 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 09:12:14 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW10C01.D Vial: 10
Acq On : 08/09/2012 14:01 Operator: RAH
Sample : 1221656001 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1ul
MS Integration Params: rteint.p
Quant Time: Aug 10 09:12:14 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	595742	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2664480	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1585095	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3056361	40.00 ug/mL
12) Chrysene-d12	14.92	240	3464234	40.00 ug/mL
14) Perylene-d12	16.98	264	2806546	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	567655	28.371ug/mL
4) Phenol-d5	3.73	99	971940	37.028ug/mL
7) Nitrobenzene-d5	4.56	82	692648	30.325ug/mL
9) 2-Fluorobiphenyl	6.81	172	2066377	35.148ug/mL
11) 2,4,6-Tribromophenol	9.21	330	405694	39.428ug/mL
13) Terphenyl-d14	13.40	244	4629799	69.225ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

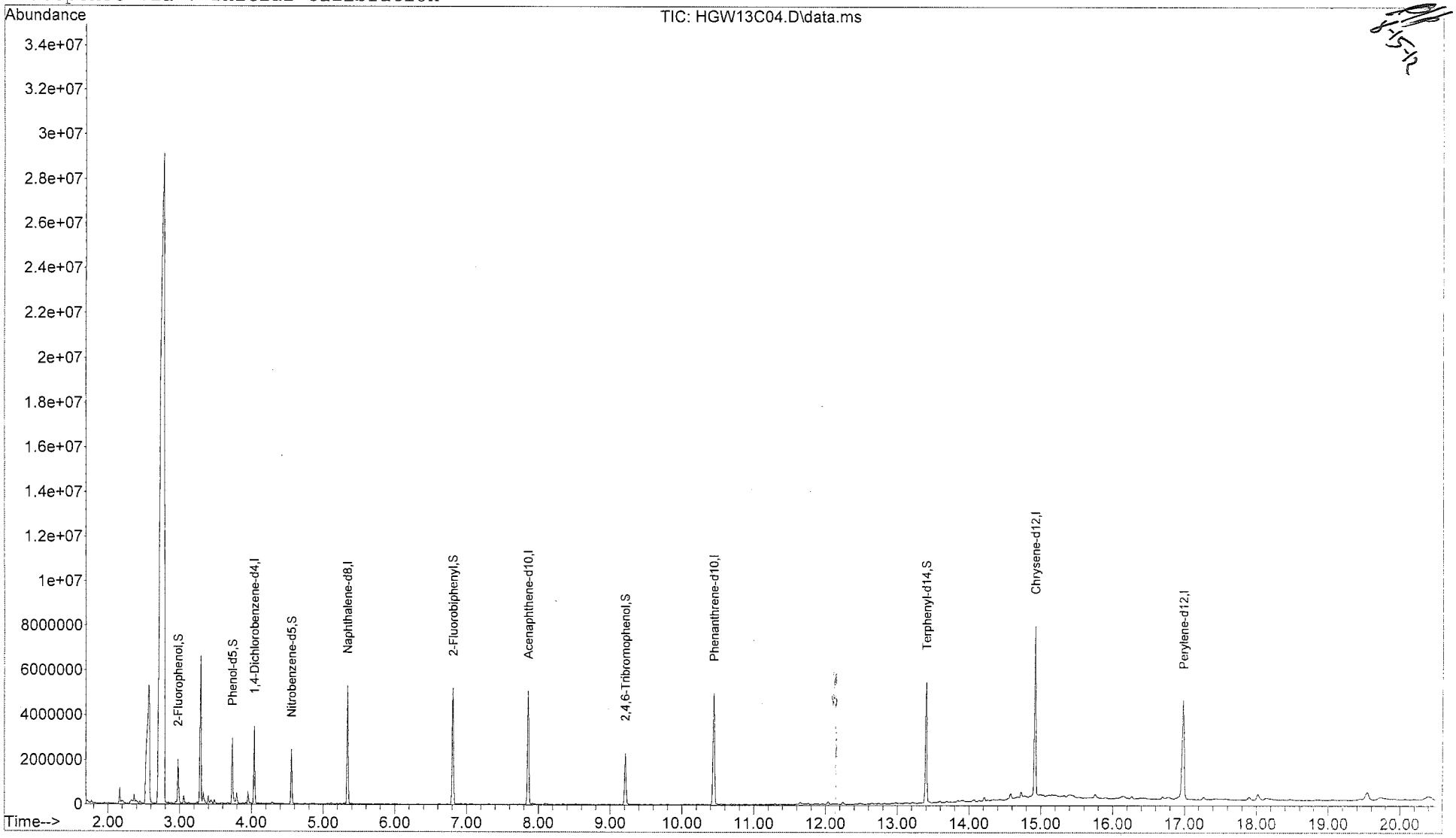
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW13C04.D Vial: 13
Acq On : 08/09/2012 15:31 Operator: RAH
Sample : 1221656004 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 15 09:47:39 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW15C04.D Vial: 13
Acq On : 08/09/2012 15:31 Operator: RAH
Sample : 1221656004 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 15 09:47:39 2012 Results File: 8270DCND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	632850	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2827643	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1657991	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3200622	40.00 ug/mL
12) Chrysene-d12	14.92	240	3687521	40.00 ug/mL
14) Perylene-d12	16.99	264	3015467	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	672171	31.625ug/mL
4) Phenol-d5	3.73	99	1134246	40.678ug/mL
7) Nitrobenzene-d5	4.56	82	838775	34.604ug/mL
9) 2-Fluorobiphenyl	6.81	172	2370402	38.546ug/mL
11) 2,4,6-Tribromophenol	9.22	330	471665	43.774ug/mL
13) Terphenyl-d14	13.40	244	2902927	40.776ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

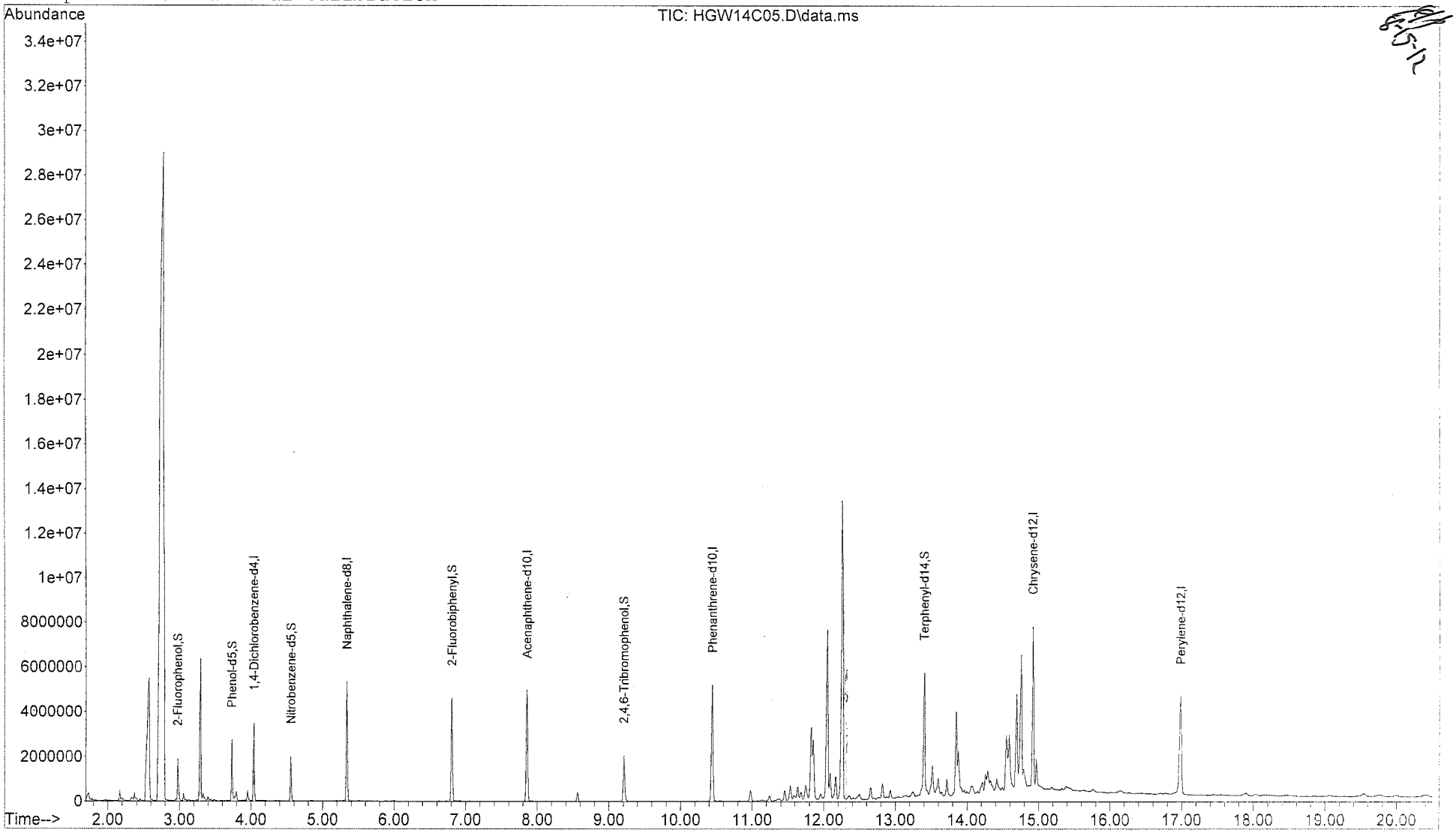
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW14C05.D Vial: 14
Acq On : 08/09/2012 16:01 Operator: RAH
Sample : 1221656005 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 09:15:07 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW14C05.D Vial: 14
Acq On : 08/09/2012 16:01 Operator: RAH
Sample : 1221656005 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 09:15:07 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	639638	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2867378	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1678112	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3281837	40.00 ug/mL
12) Chrysene-d12	14.92	240	3687912	40.00 ug/mL
14) Perylene-d12	16.99	264	3069325	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	620915	28.903ug/mL
4) Phenol-d5	3.73	99	1085944	38.532ug/mL
7) Nitrobenzene-d5	4.56	82	730438	29.717ug/mL
9) 2-Fluorobiphenyl	6.81	172	2089252	33.567ug/mL
11) 2,4,6-Tribromophenol	9.21	330	425825	38.541ug/mL
13) Terphenyl-d14	13.40	244	2681275	37.659ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

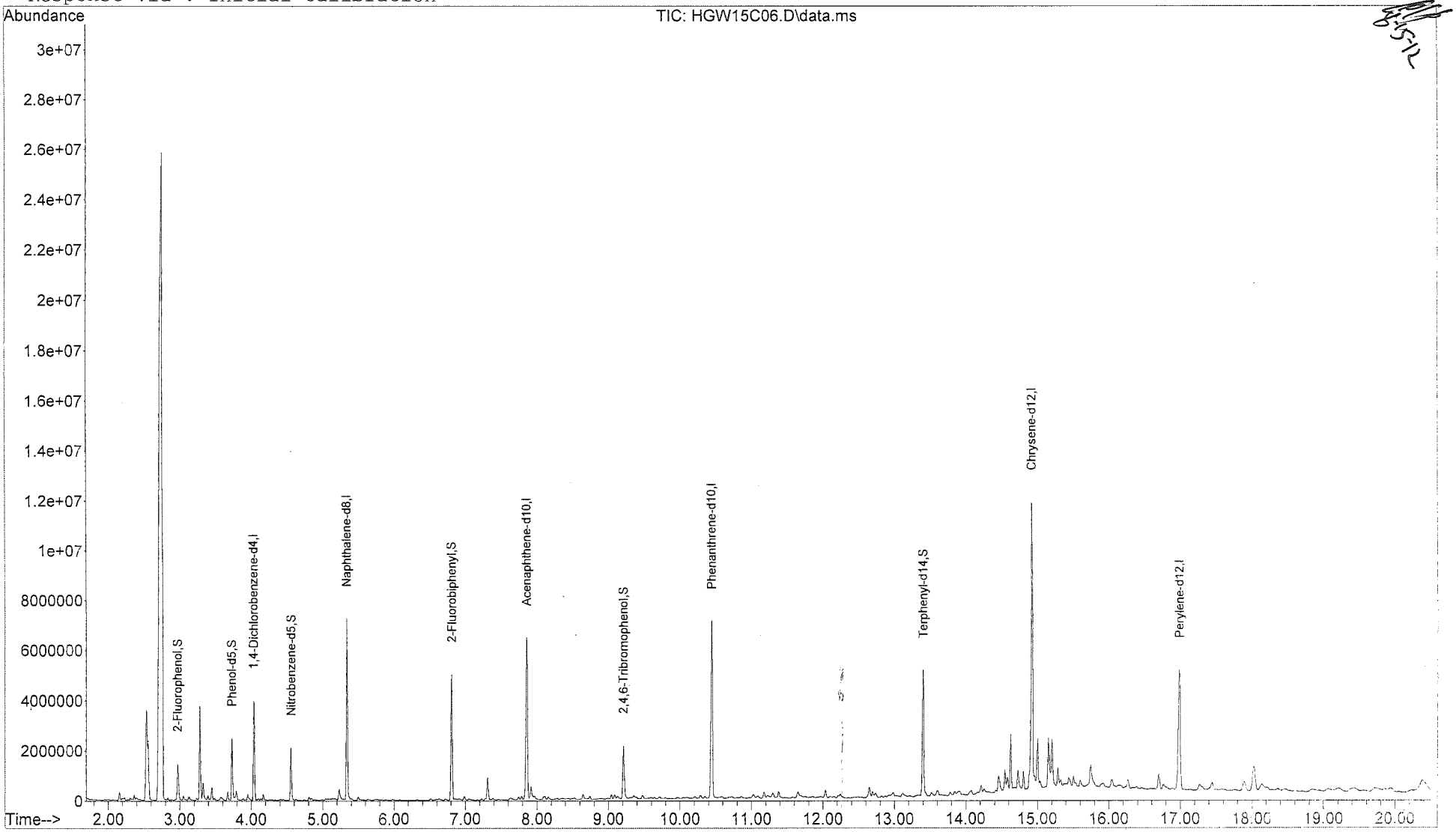
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW15C06.D Vial: 15
Acq On : 08/09/2012 16:30 Operator: RAH
Sample : 1221656006 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 09:15:58 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW15C06.D Vial: 15
Acq On : 08/09/2012 16:30 Operator: RAH
Sample : 1221656006 Inst : 5975-H
Misc : , SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 09:15:58 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	868721	40.00 ug/mL
6) Naphthalene-d8	5.34	136	3859701	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	2266676	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	4423000	40.00 ug/mL
12) Chrysene-d12	14.92	240	5010991	40.00 ug/mL
14) Perylene-d12	16.99	264	3435713	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	602424	20.648ug/mL
4) Phenol-d5	3.73	99	1054539	27.551ug/mL
7) Nitrobenzene-d5	4.56	82	758105	22.913ug/mL
9) 2-Fluorobiphenyl	6.81	172	2268643	26.985ug/mL
11) 2,4,6-Tribromophenol	9.21	330	443705	29.798ug/mL
13) Terphenyl-d14	13.40	244	2706812	27.980ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

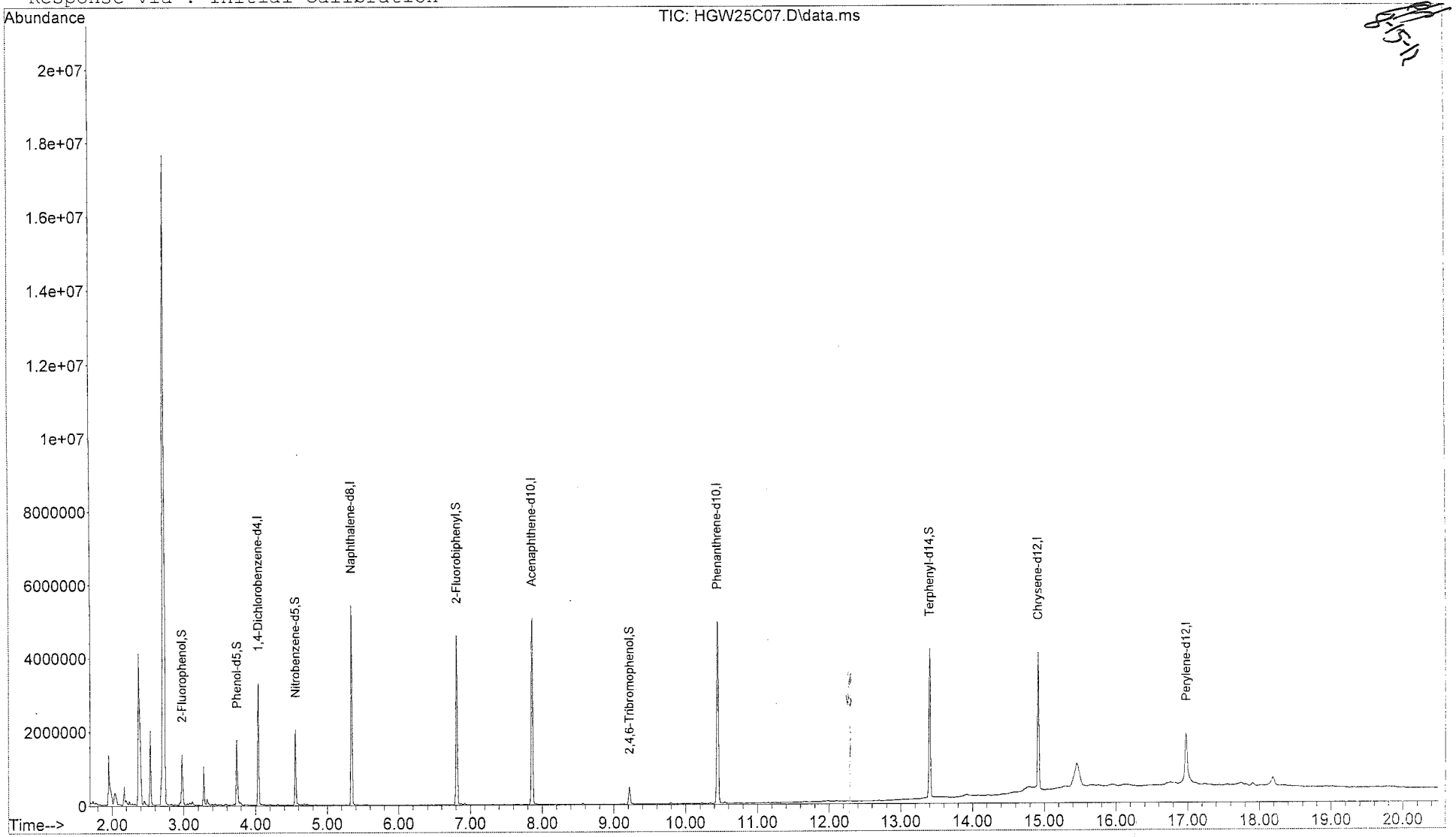
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW25C07.D Vial: 25
Acq On : 08/09/2012 21:22 Operator: RAH
Sample : 1221656007 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 09:23:00 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW25C07.D Vial: 25
Acq On : 08/09/2012 21:22 Operator: RAH
Sample : 1221656007 Inst : 5975-H
Misc : , SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 09:23:00 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	668430	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2981132	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1734060	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3184579	40.00 ug/mL
12) Chrysene-d12	14.92	240	1954179	40.00 ug/mL
14) Perylene-d12	16.98	264	712058	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	537294	23.933ug/mL
4) Phenol-d5	3.73	99	532894	18.094ug/mL
7) Nitrobenzene-d5	4.56	82	732421	28.661ug/mL
9) 2-Fluorobiphenyl	6.81	172	2084076	32.404ug/mL
11) 2,4,6-Tribromophenol	9.22	330	103632	9.666ug/mL
13) Terphenyl-d14	13.40	244	2111199	55.959ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

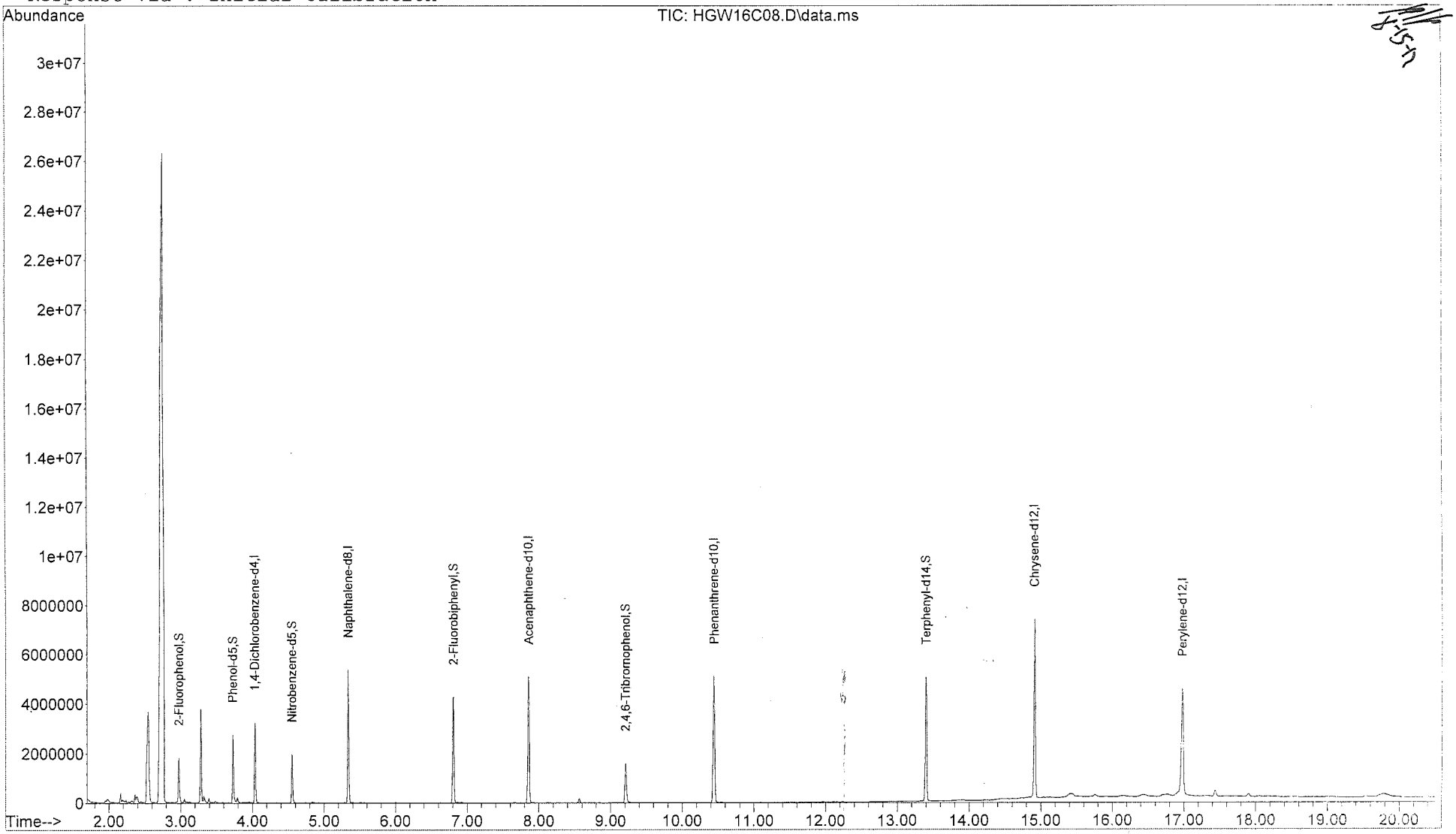
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW16C08.D Vial: 16
Acq On : 08/09/2012 17:00 Operator: RAH
Sample : 1221656008 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 09:16:50 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW16C08.D Vial: 16
Acq On : 08/09/2012 17:00 Operator: RAH
Sample : 1221656C08 Inst : 5975-H
Misc : , SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 09:16:50 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	641277	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2883252	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1695968	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3276529	40.00 ug/mL
12) Chrysene-d12	14.92	240	3735832	40.00 ug/mL
14) Perylene-d12	16.98	264	2961171	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	635997	29.530ug/mL
4) Phenol-d5	3.73	99	1070534	37.888ug/mL
7) Nitrobenzene-d5	4.55	82	732639	29.642ug/mL
9) 2-Fluorobiphenyl	6.81	172	1983266	31.529ug/mL
11) 2,4,6-Tribromophenol	9.21	330	343273	31.120ug/mL
13) Terphenyl-d14	13.40	244	2696346	37.385ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

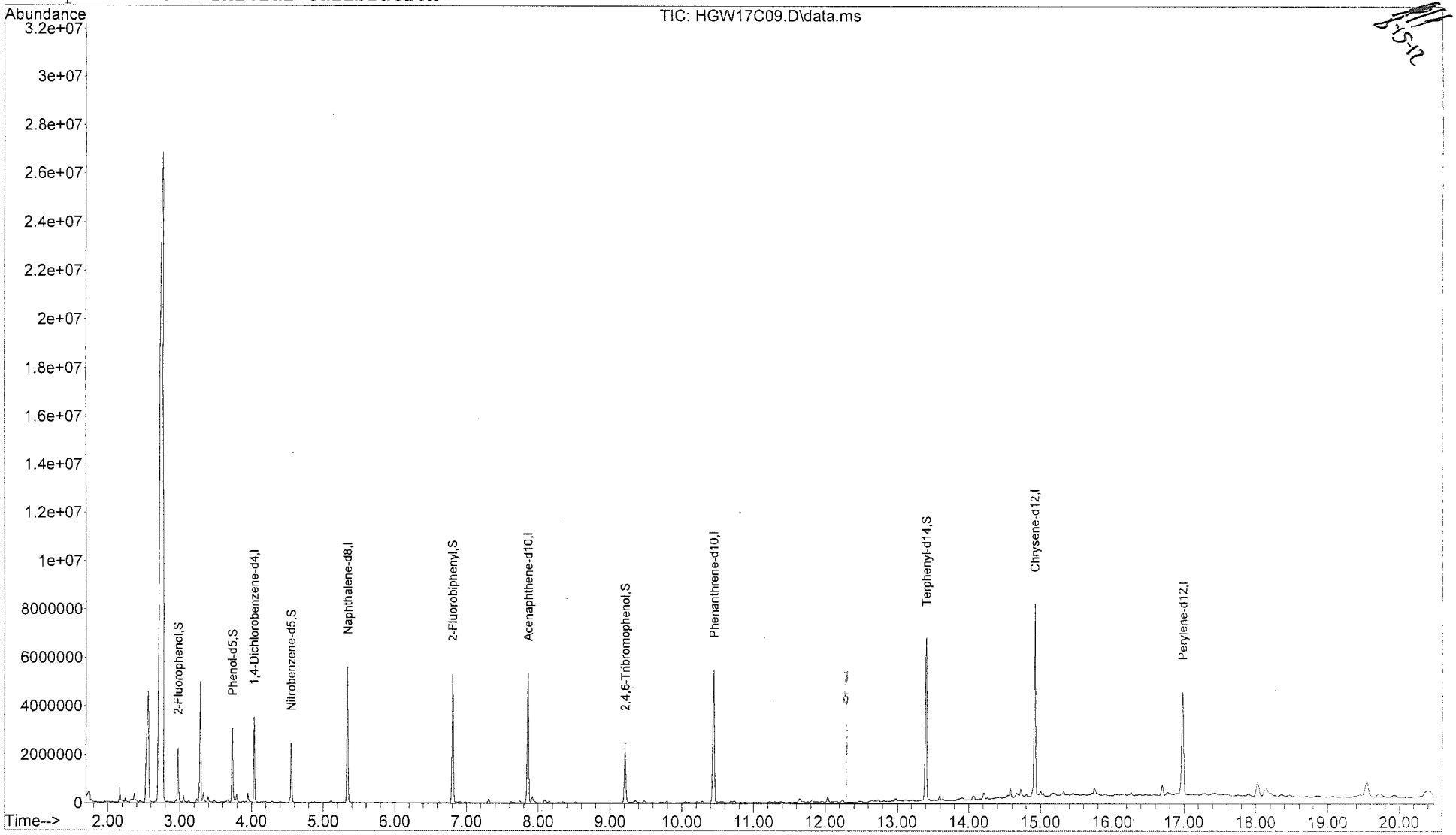
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW17C09.D Vial: 17
Acq On : 08/09/2012 17:29 Operator: RAH
Sample : 1221656009 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 09:17:58 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW17C09.D Vial: 17
Acq On : 08/09/2012 17:29 Operator: RAH
Sample : 1221656009 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 09:17:58 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	663957	40.00 ug/mL
6) Naphthalene-d8	5.34	136	3015622	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1794824	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3499503	40.00 ug/mL
12) Chrysene-d12	14.92	240	3924255	40.00 ug/mL
14) Perylene-d12	16.98	264	2880485	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	721955	32.376ug/mL
4) Phenol-d5	3.73	99	1258599	43.023ug/mL
7) Nitrobenzene-d5	4.55	82	898505	34.757ug/mL
9) 2-Fluorobiphenyl	6.80	172	2516819	37.807ug/mL
11) 2,4,6-Tribromophenol	9.21	330	479875	40.732ug/mL
13) Terphenyl-d14	13.40	244	3677957	48.546ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

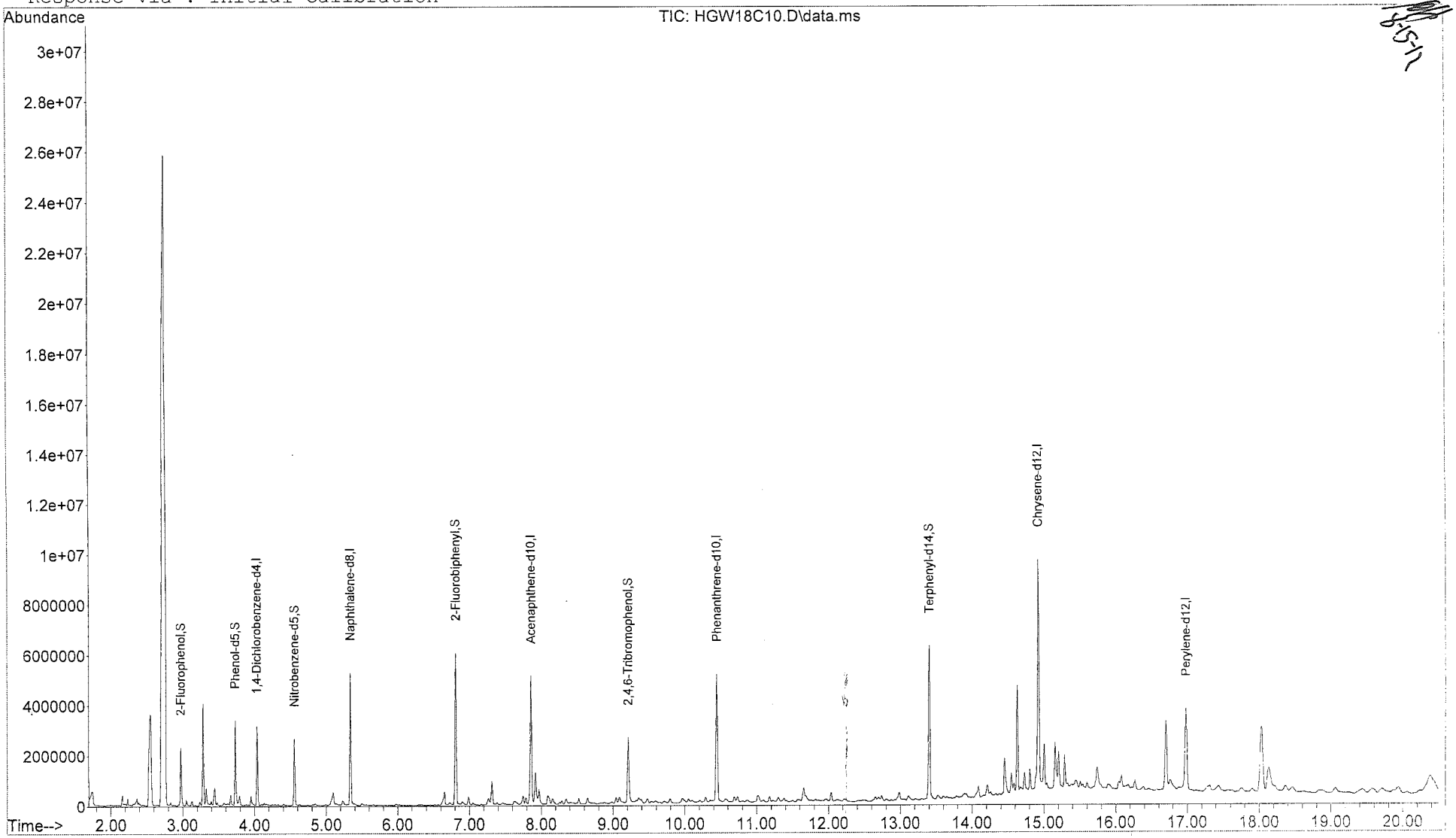
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW18C10.D Vial: 18
Acq On : 08/09/2012 17:58 Operator: RAH
Sample : 1221656010 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 09:19:00 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW18C10.D Vial: 18
Acq On : 08/09/2012 17:58 Operator: RAH
Sample : 1221656010 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 09:19:00 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	622557	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2763692	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1632571	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3216308	40.00 ug/mL
12) Chrysene-d12	14.92	240	3589145	40.00 ug/mL
14) Perylene-d12	16.99	264	2281200	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	756362	36.174ug/mL
4) Phenol-d5	3.73	99	1272463	46.389ug/mL
7) Nitrobenzene-d5	4.56	82	963184	40.656ug/mL
9) 2-Fluorobiphenyl	6.81	172	2694132	44.493ug/mL
11) 2,4,6-Tribromophenol	9.22	330	531487	49.085ug/mL
13) Terphenyl-d14	13.40	244	3204602	46.248ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

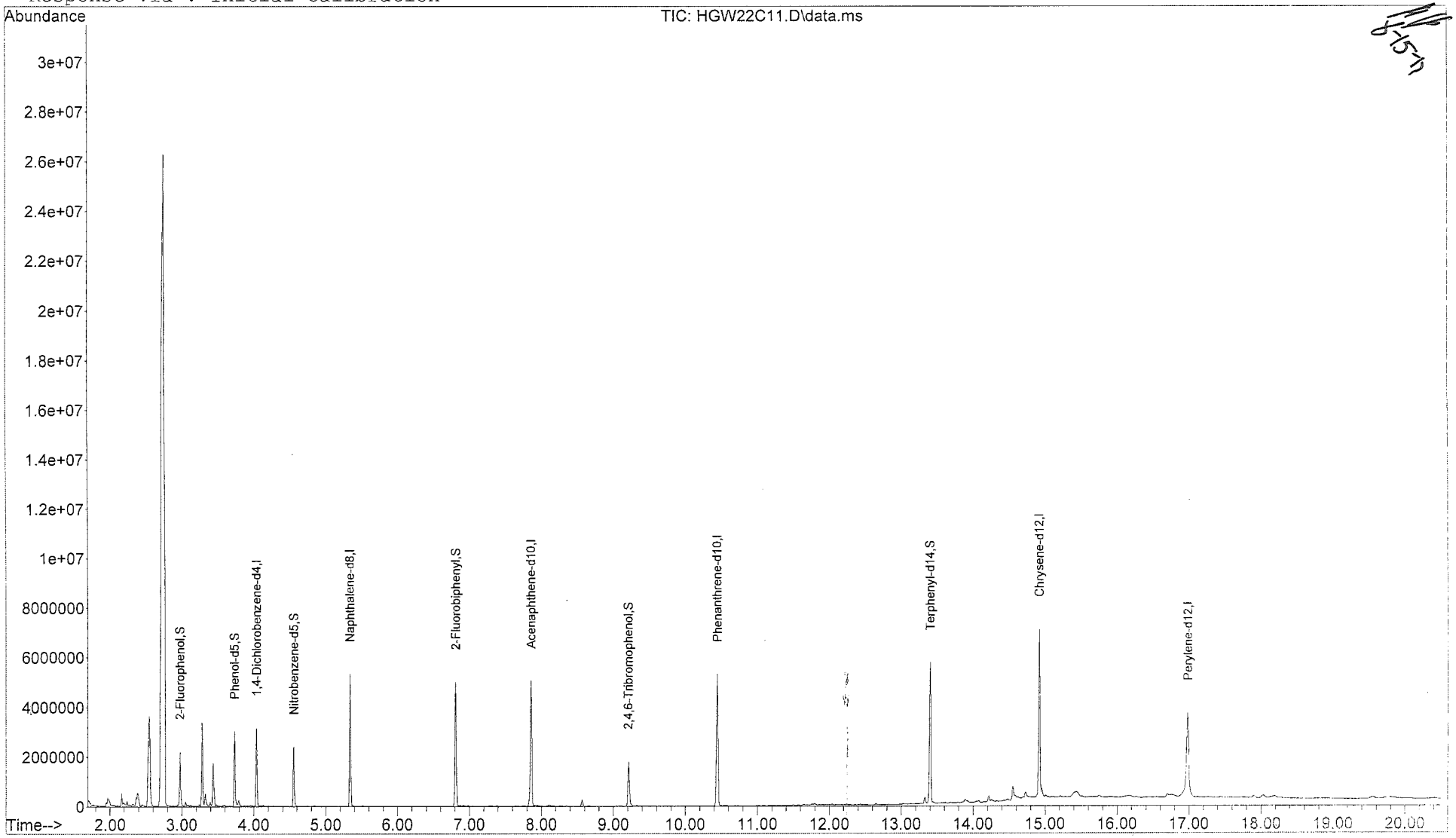
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW22C11.D Vial: 22
Acq On : 08/09/2012 19:54 Operator: RAH
Sample : 1221656011 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 09:21:07 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW22C11.D Vial: 22
Acq On : 08/09/2012 19:54 Operator: RAH
Sample : 1221656011 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 09:21:07 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	642817	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2880602	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1702871	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3292039	40.00 ug/mL
12) Chrysene-d12	14.92	240	3323821	40.00 ug/mL
14) Perylene-d12	16.99	264	2086575	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	715848	33.158ug/mL
4) Phenol-d5	3.73	99	1172083	41.383ug/mL
7) Nitrobenzene-d5	4.56	82	866079	35.073ug/mL
9) 2-Fluorobiphenyl	6.81	172	2276647	36.046ug/mL
11) 2,4,6-Tribromophenol	9.22	330	386191	34.846ug/mL
13) Terphenyl-d14	13.40	244	2931373	45.682ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

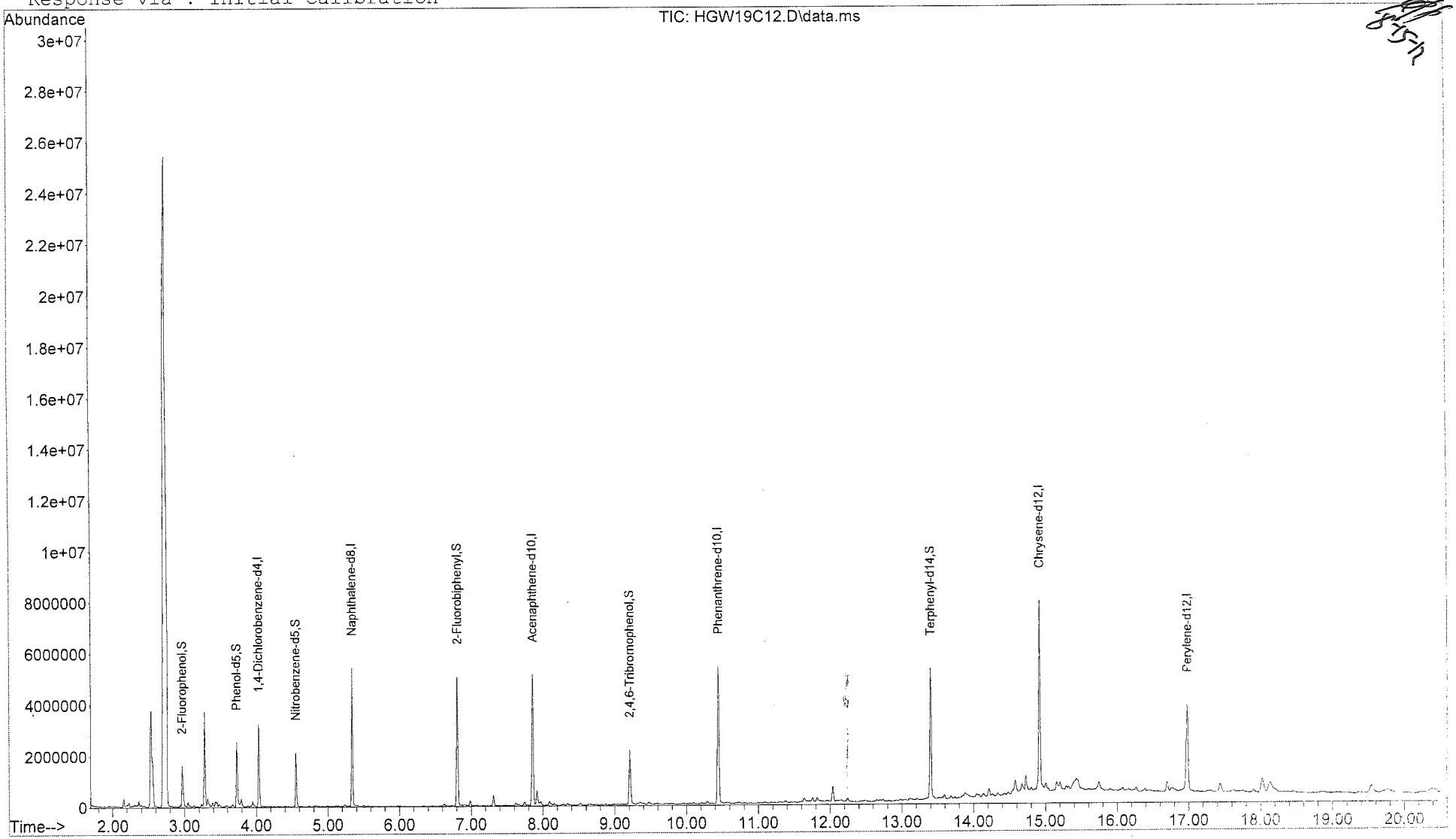
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW19C12.D Vial: 19
Acq On : 08/09/2012 18:27 Operator: RAH
Sample : 1221656012 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 09:19:15 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221656\HCW19C12.D Vial: 19
Acq On : 08/09/2012 18:27 Operator: RAH
Sample : 1221656012 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 09:19:15 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	650763	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2895621	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1717233	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3356698	40.00 ug/mL
12) Chrysene-d12	14.92	240	3483822	40.00 ug/mL
14) Perylene-d12	16.98	264	2231888	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	643700	29.452ug/mL
4) Phenol-d5	3.73	99	1091176	38.056ug/mL
7) Nitrobenzene-d5	4.55	82	791941	31.905ug/mL
9) 2-Fluorobiphenyl	6.81	172	2334433	36.652ug/mL
11) 2,4,6-Tribromophenol	9.21	330	449055	39.737ug/mL
13) Terphenyl-d14	13.40	244	2725307	40.520ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

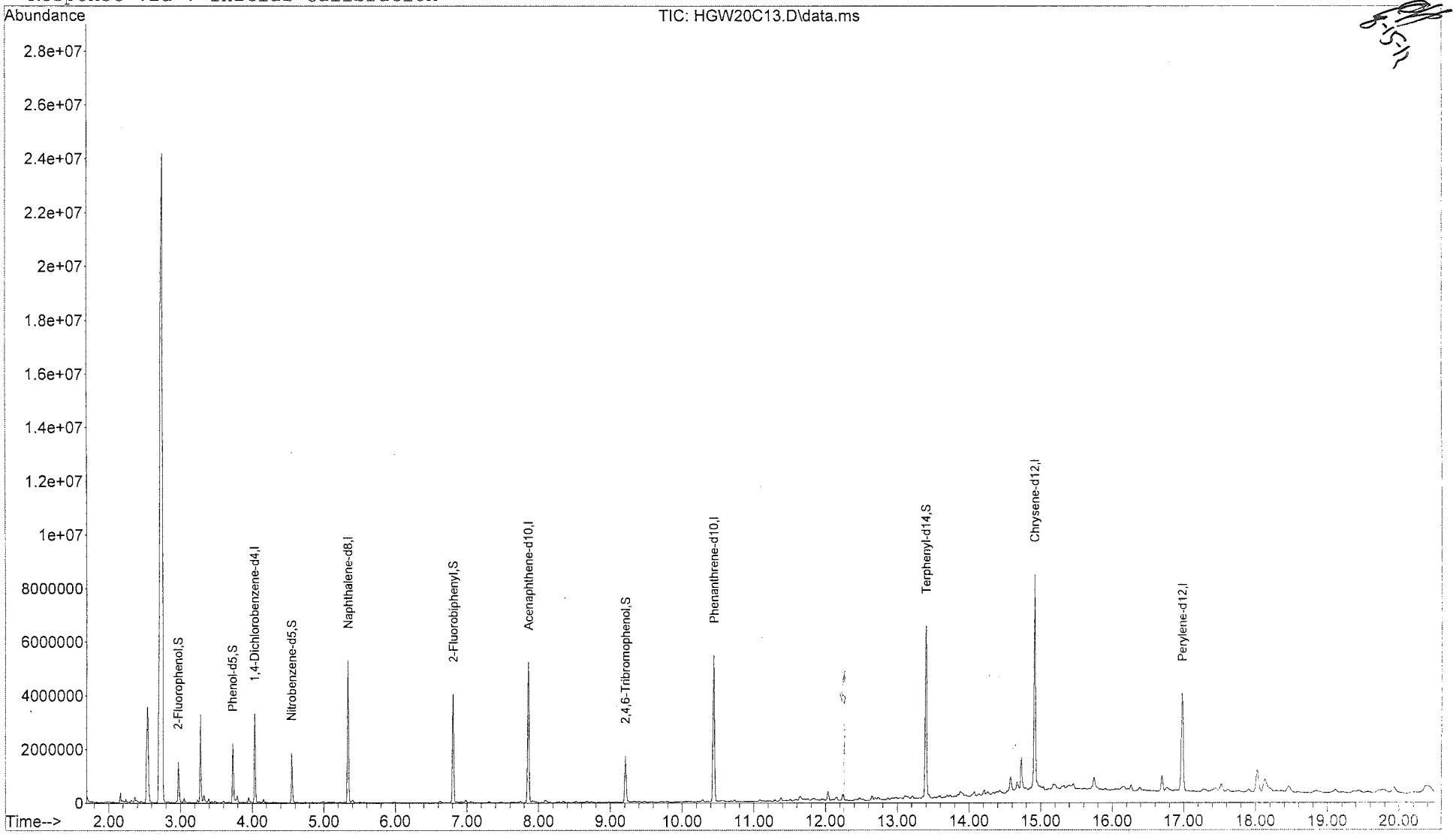
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW20C13.D Vial: 20
Acq On : 08/09/2012 18:56 Operator: RAH
Sample : 1221656013 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 09:19:56 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW20C13.D Vial: 20
Acq On : 08/09/2012 18:56 Operator: RAH
Sample : 1221656013 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 09:19:56 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	650102	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2884592	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1705246	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3344152	40.00 ug/mL
12) Chrysene-d12	14.92	240	3794954	40.00 ug/mL
14) Perylene-d12	16.98	264	2547811	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	534494	24.480ug/mL
4) Phenol-d5	3.73	99	898154	31.356ug/mL
7) Nitrobenzene-d5	4.55	82	667000	26.974ug/mL
9) 2-Fluorobiphenyl	6.81	172	1893039	29.931ug/mL
11) 2,4,6-Tribromophenol	9.21	330	354351	31.475ug/mL
13) Terphenyl-d14	13.40	244	3348150	45.699ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

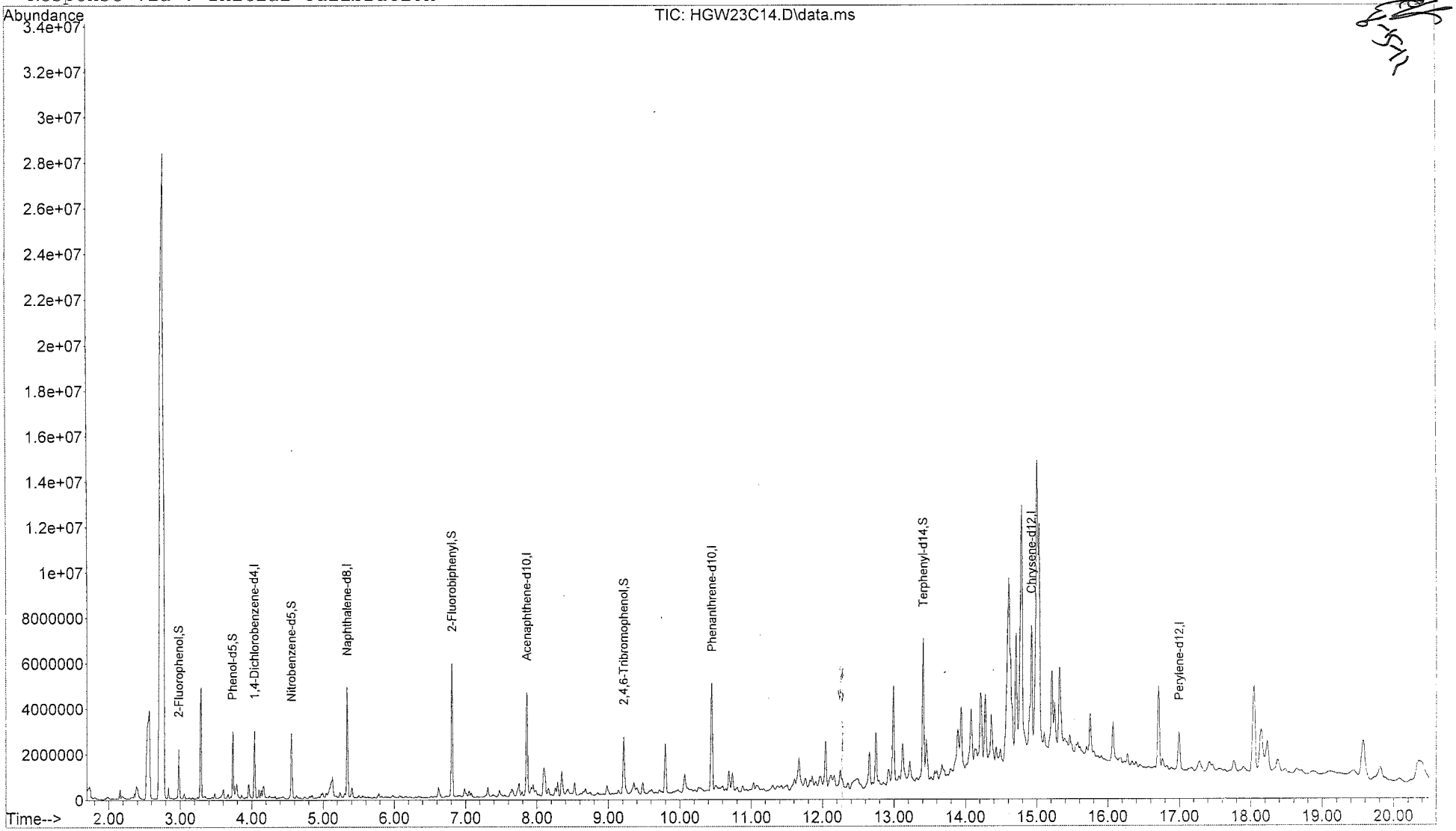
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW23C14.D Vial: 23
Acq On : 08/09/2012 20:24 Operator: RAH
Sample : 1221656014 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 09:21:44 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221656\HCW23C14.D Vial: 23
Acq On : 08/09/2012 20:24 Operator: RAH
Sample : 1221656014 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 09:21:44 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	581299	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2586416	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1553005	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3071830	40.00 ug/mL
12) Chrysene-d12	14.93	240	2640065	40.00 ug/mL
14) Perylene-d12	17.00	264	1106297	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	712563	36.498ug/mL
4) Phenol-d5	3.73	99	1213050	47.362ug/mL
7) Nitrobenzene-d5	4.56	82	893665	40.307ug/mL
9) 2-Fluorobiphenyl	6.81	172	2553571	44.332ug/mL
11) 2,4,6-Tribromophenol	9.22	330	495594	47.923ug/mL
13) Terphenyl-d14	13.41	244	3068660	60.206ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

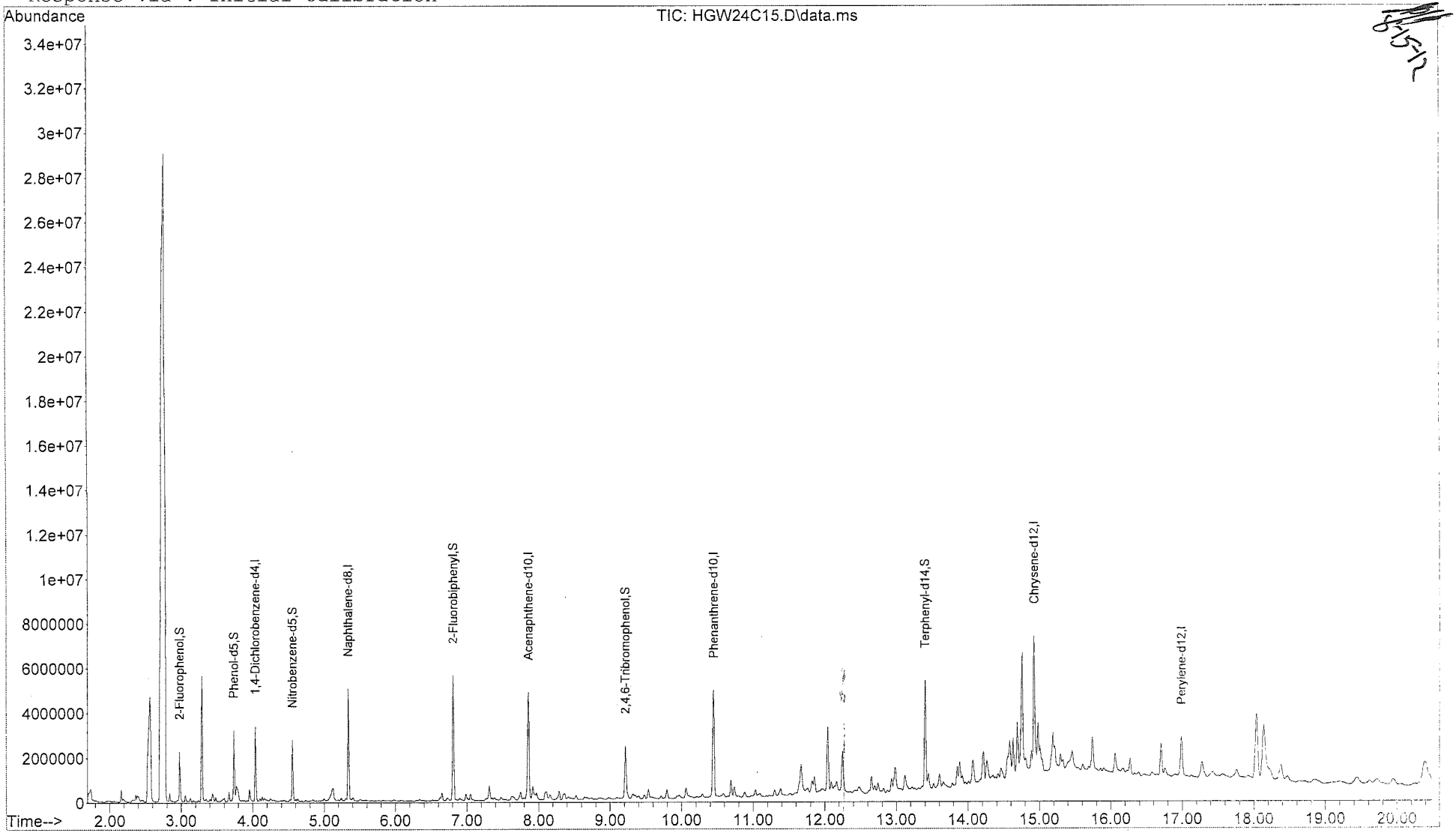
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW24C15.D Vial: 24
Acq On : 08/09/2012 20:53 Operator: RAH
Sample : 1221656015 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 09:22:25 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW24C15.D Vial: 24
Acq On : 08/09/2012 20:53 Operator: RAH
Sample : 1221656015 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 09:22:25 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	630338	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2758815	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1641430	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3169255	40.00 ug/mL
12) Chrysene-d12	14.93	240	2725887	40.00 ug/mL
14) Perylene-d12	16.99	264	1167996	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	700054	33.068ug/mL
4) Phenol-d5	3.74	99	1175340	42.320ug/mL
7) Nitrobenzene-d5	4.56	82	888938	37.588ug/mL
9) 2-Fluorobiphenyl	6.81	172	2486771	40.847ug/mL
11) 2,4,6-Tribromophenol	9.22	330	457622	42.891ug/mL
13) Terphenyl-d14	13.40	244	2602231	49.448ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

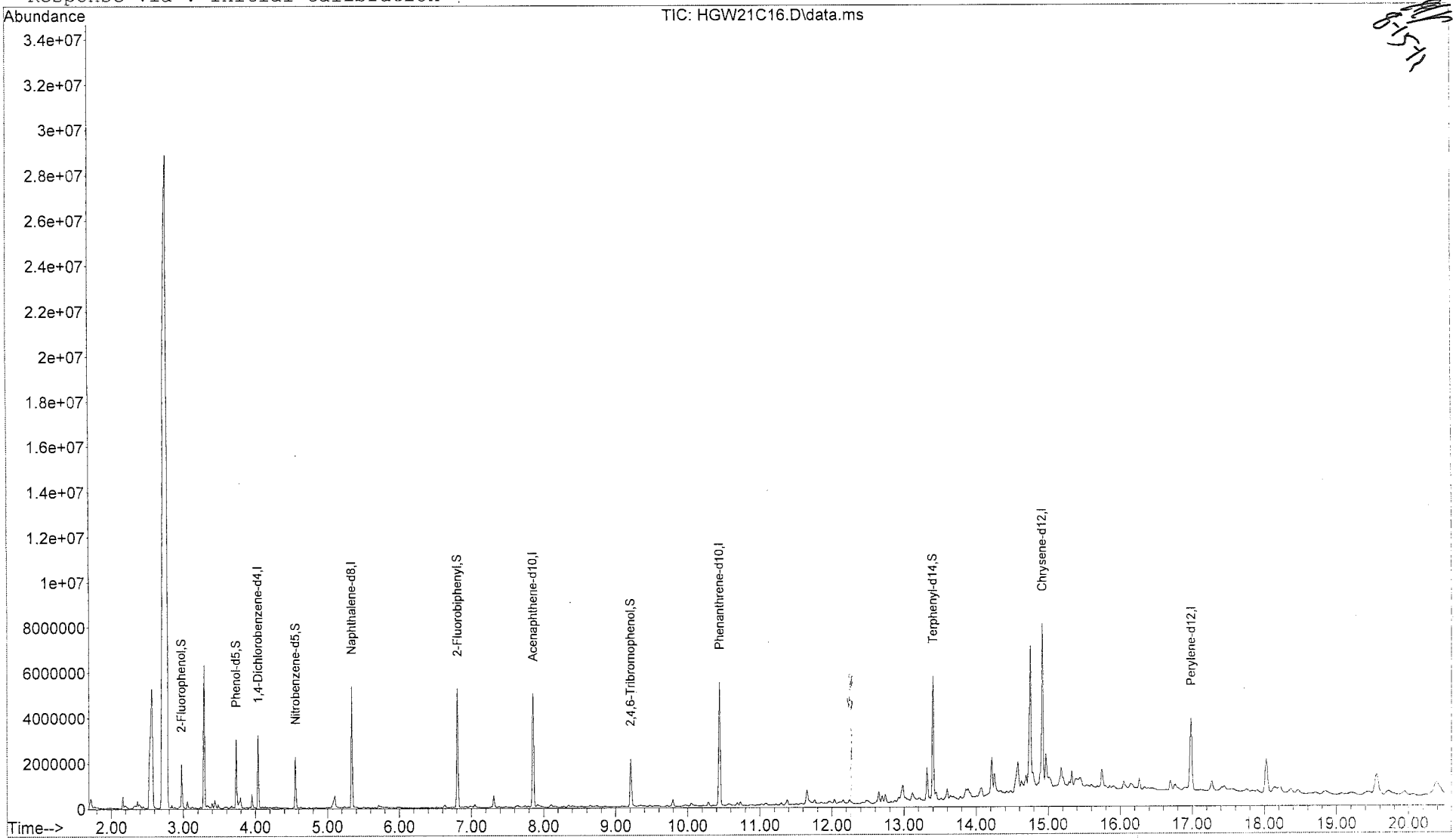
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW21C16.D Vial: 21
Acq On : 08/09/2012 19:25 Operator: RAH
Sample : 1221656016 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 09:20:31 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW21C16.D Vial: 21
Acq On : 08/09/2012 19:25 Operator: RAH
Sample : 1221656016 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 09:20:31 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	641092	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2828359	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1676550	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3304124	40.00 ug/mL
12) Chrysene-d12	14.92	240	3577644	40.00 ug/mL
14) Perylene-d12	16.99	264	2146850	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	636658	29.569ug/mL
4) Phenol-d5	3.73	99	1094108	38.734ug/mL
7) Nitrobenzene-d5	4.56	82	796477	32.851ug/mL
9) 2-Fluorobiphenyl	6.81	172	2334175	37.537ug/mL
11) 2,4,6-Tribromophenol	9.22	330	443566	39.876ug/mL
13) Terphenyl-d14	13.40	244	2752117	39.845ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

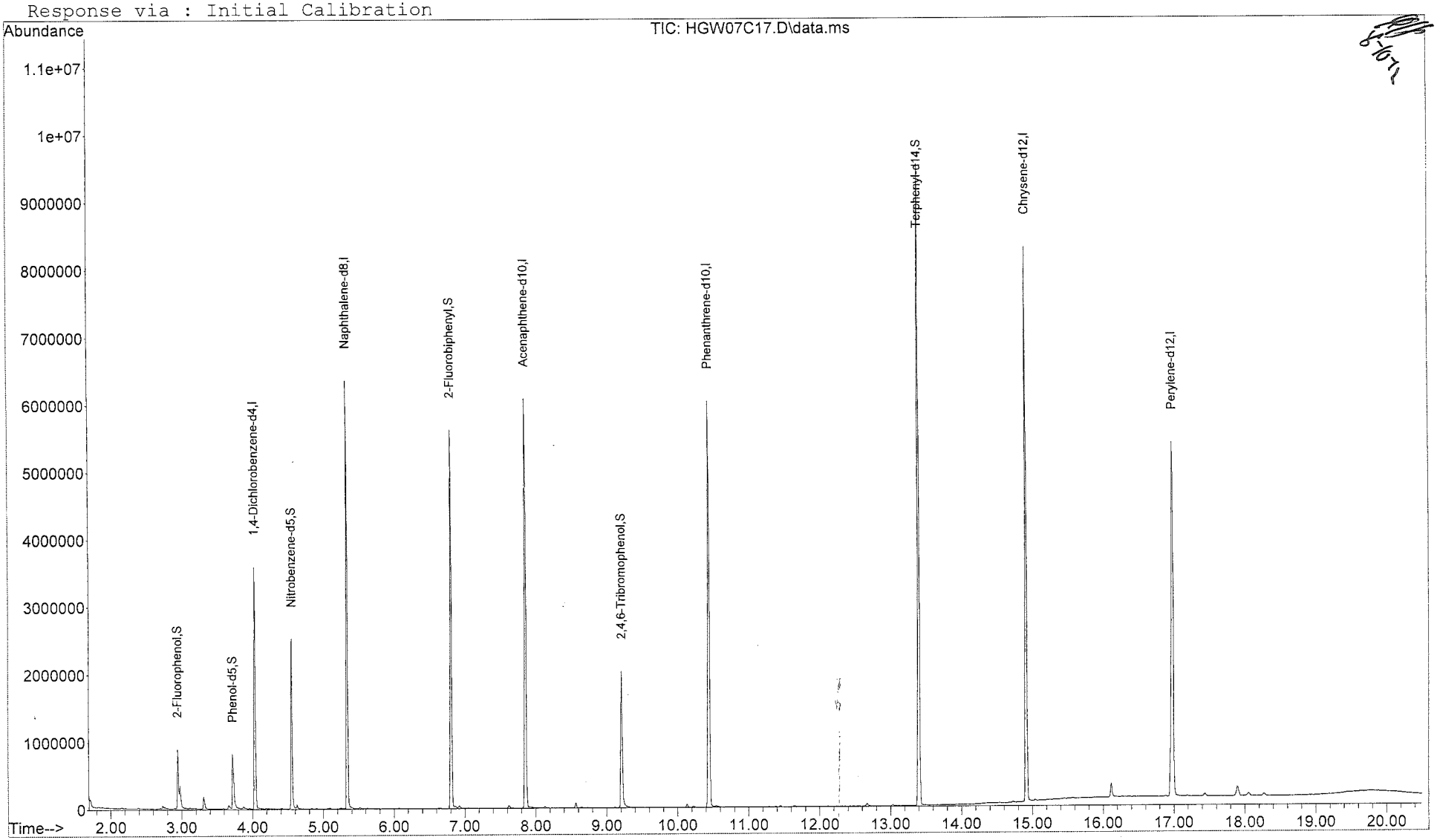
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221555wa\HGW07C17.D Vial: 7
Acq On : 08/09/2012 12:33 Operator: RAH
Sample : 1221656017 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 12:57:00 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221555wa\HGW07C17.D Vial: 7
Acq On : 08/09/2012 12:33 Operator: RAH
Sample : 1221656017 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 12:57:00 2012 Results File: 8270DOND.RES

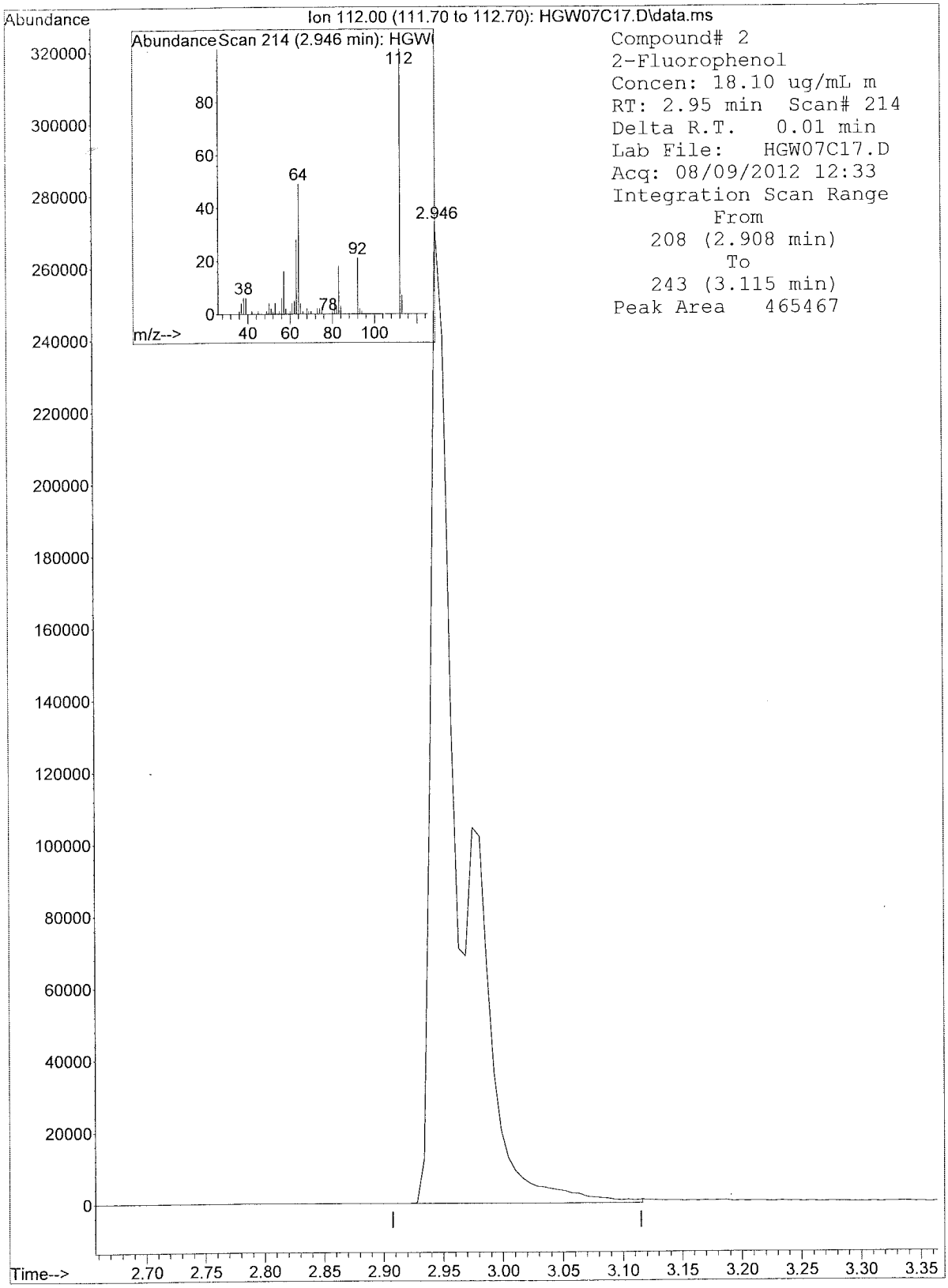
Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	765811	40.00 ug/mL
6) Naphthalene-d8	5.34	136	3442945	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1987125	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3782071	40.00 ug/mL
12) Chrysene-d12	14.92	240	4341900	40.00 ug/mL
14) Perylene-d12	16.99	264	3787157	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	465467	18.097ug/mL m
4) Phenol-d5	3.72	99	483840	14.339ug/mL
7) Nitrobenzene-d5	4.56	82	965841	32.725ug/mL
9) 2-Fluorobiphenyl	6.81	172	2544268	34.521ug/mL
11) 2,4,6-Tribromophenol	9.22	330	452183	35.514ug/mL
13) Terphenyl-d14	13.40	244	5040659	60.133ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

8-10-12

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

MANUAL INTEGRATION FOR 2-Fluorophenol



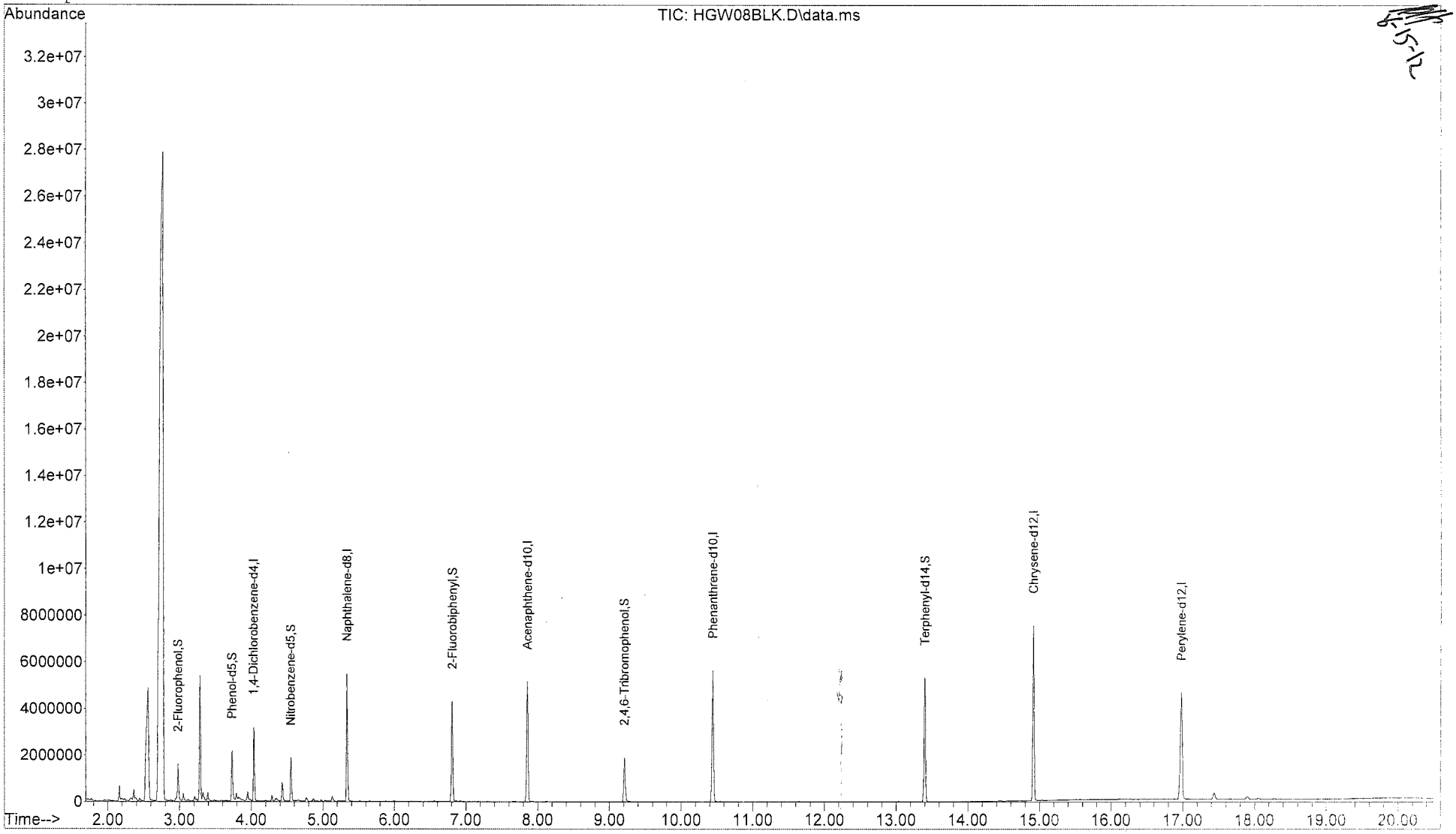
8270DOND.M 5975-H 8270DOND.M 1221656017 . WATER 8270

Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW08BLK.D Vial: 8
Acq On : 08/09/2012 13:02 Operator: RAH
Sample : 288277 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 09:10:30 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221656\NGW03ELK.D Vial: 8
Acq On : 08/09/2012 13:02 Operator: PAH
Sample : 288277 Inst : 5975-H
Misc : , SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 09:10:30 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	620648	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2851002	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1747094	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3360320	40.00 ug/mL
12) Chrysene-d12	14.92	240	3841439	40.00 ug/mL
14) Perylene-d12	16.98	264	3221013	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	573534	27.515ug/mL
4) Phenol-d5	3.73	99	986239	36.065ug/mL
7) Nitrobenzene-d5	4.55	82	691228	28.283ug/mL
9) 2-Fluorobiphenyl	6.81	172	1974449	30.470ug/mL
11) 2,4,6-Tribromophenol	9.21	330	400283	35.383ug/mL
13) Terphenyl-d14	13.40	244	2803775	37.806ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

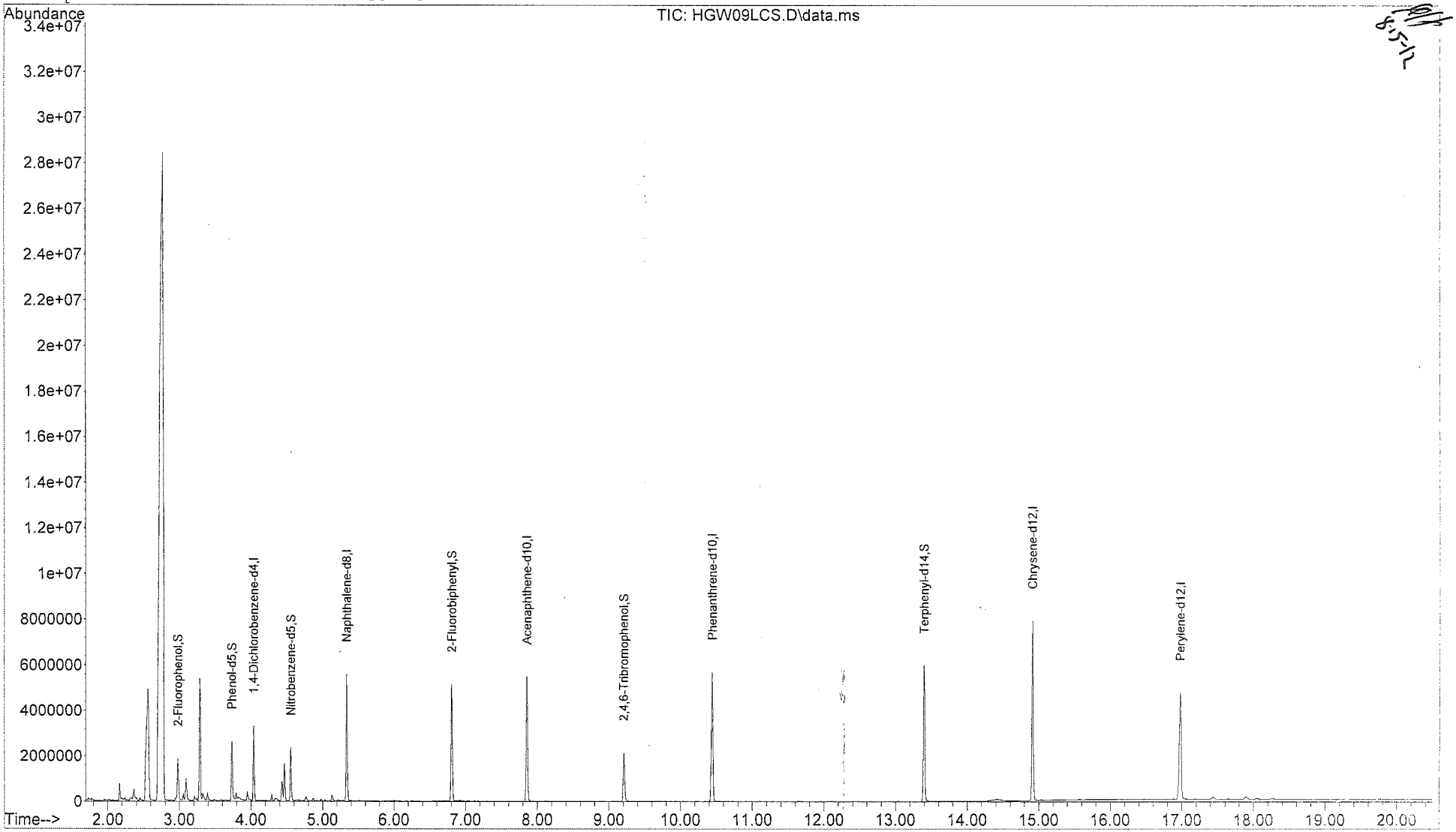
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW09LCS.D Vial: 9
Acq On : 08/09/2012 13:32 Operator: RAH
Sample : 288278 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 13:53:09 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW09LCS.D Vial: 9
Acq On : 08/09/2012 13:32 Operator: RAH
Sample : 288278 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 13:53:09 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	
1) 1,4-Dichlorobenzene-d4	4.04	152	642887	40.00 ug/mL	
6) Naphthalene-d8	5.34	136	2958886	40.00 ug/mL	
8) Acenaphthene-d10	7.86	164	1778485	40.00 ug/mL	
10) Phenanthrene-d10	10.45	188	3462346	40.00 ug/mL	
12) Chrysene-d12	14.92	240	3990666	40.00 ug/mL	
14) Perylene-d12	16.98	264	3322042	40.00 ug/mL	
System Monitoring Compounds					
2) 2-Fluorophenol	2.98	112	688839	31.903ug/mL	
4) Phenol-d5	3.73	99	1181094	41.697ug/mL	
7) Nitrobenzene-d5	4.56	82	863906	34.060ug/mL	
9) 2-Fluorobiphenyl	6.81	172	2394875	36.306ug/mL	
11) 2,4,6-Tribromophenol	9.21	330	448420	38.470ug/mL	
13) Terphenyl-d14	13.40	244	3102040	40.263ug/mL	
Target Compounds					Qvalue
3) 1,4-Oxathiane	3.09	104	215450	19.307ug/mL	98
5) 1,4-Dithiane	4.47	120	420989	23.282ug/mL	97

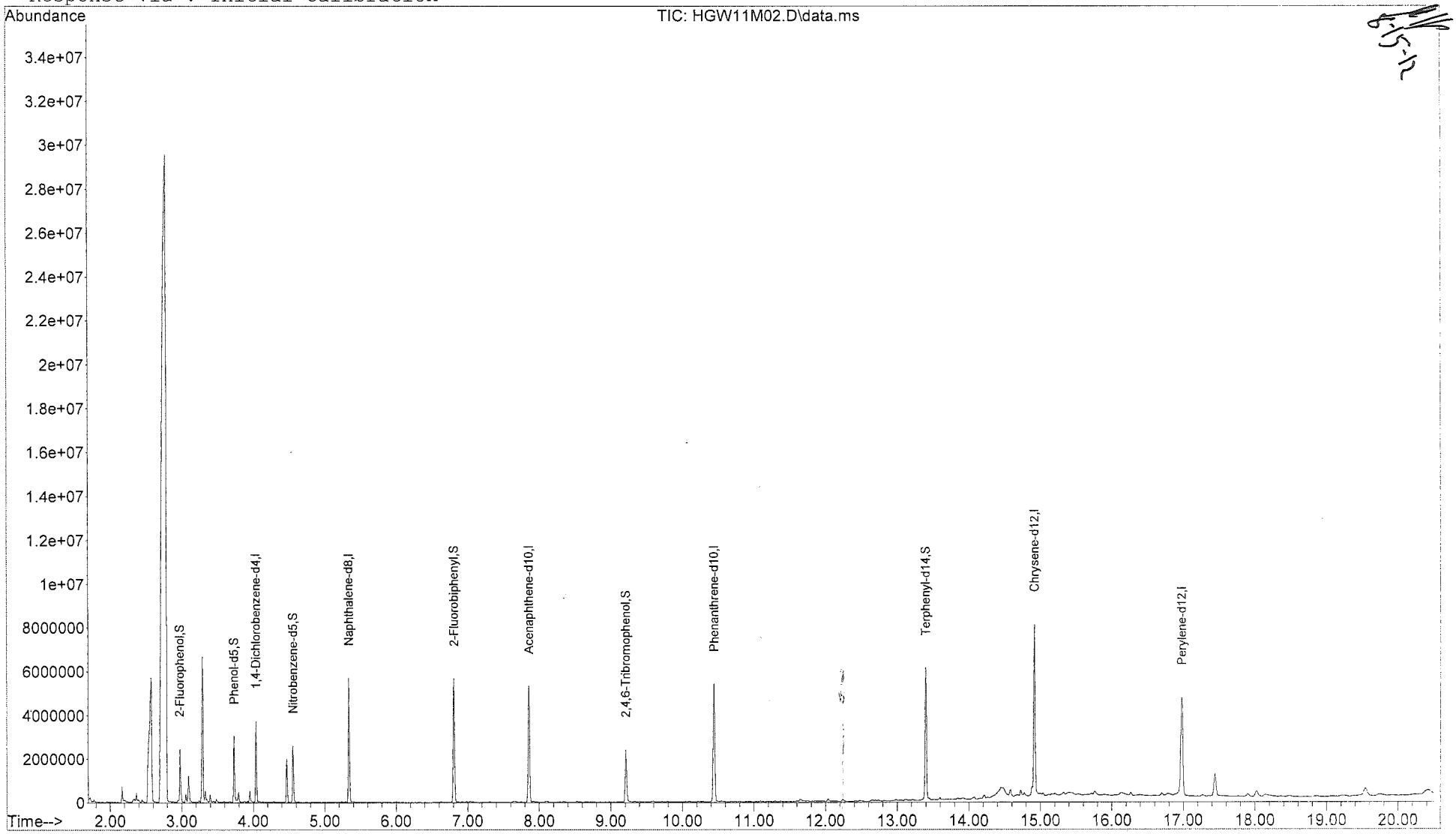
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW11M02.D Vial: 11
Acq On : 08/09/2012 14:31 Operator: RAH
Sample : 1221656002 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 14:52:16 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221656\HCW11M02.D Vial: 11
Acq On : 08/09/2012 14:31 Operator: RAH
Sample : 1221656002 Inst : 5975-H
Misc : , SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 14:52:16 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	
1) 1,4-Dichlorobenzene-d4	4.04	152	670810	40.00 ug/mL	
6) Naphthalene-d8	5.34	136	3006115	40.00 ug/mL	
8) Acenaphthene-d10	7.86	164	1768953	40.00 ug/mL	
10) Phenanthrene-d10	10.45	188	3457796	40.00 ug/mL	
12) Chrysene-d12	14.92	240	4015872	40.00 ug/mL	
14) Perylene-d12	16.98	264	3218925	40.00 ug/mL	
System Monitoring Compounds					
2) 2-Fluorophenol	2.98	112	744557	33.048ug/mL	
4) Phenol-d5	3.73	99	1261744	42.690ug/mL	
7) Nitrobenzene-d5	4.56	82	925615	35.919ug/mL	
9) 2-Fluorobiphenyl	6.81	172	2595754	39.563ug/mL	
11) 2,4,6-Tribromophenol	9.21	330	503705	43.270ug/mL	
13) Terphenyl-d14	13.40	244	3241960	41.815ug/mL	
Target Compounds					Qvalue
3) 1,4-Oxathiane	3.09	104	257489	22.114ug/mL	98
5) 1,4-Dithiane	4.47	120	484447	25.676ug/mL	97

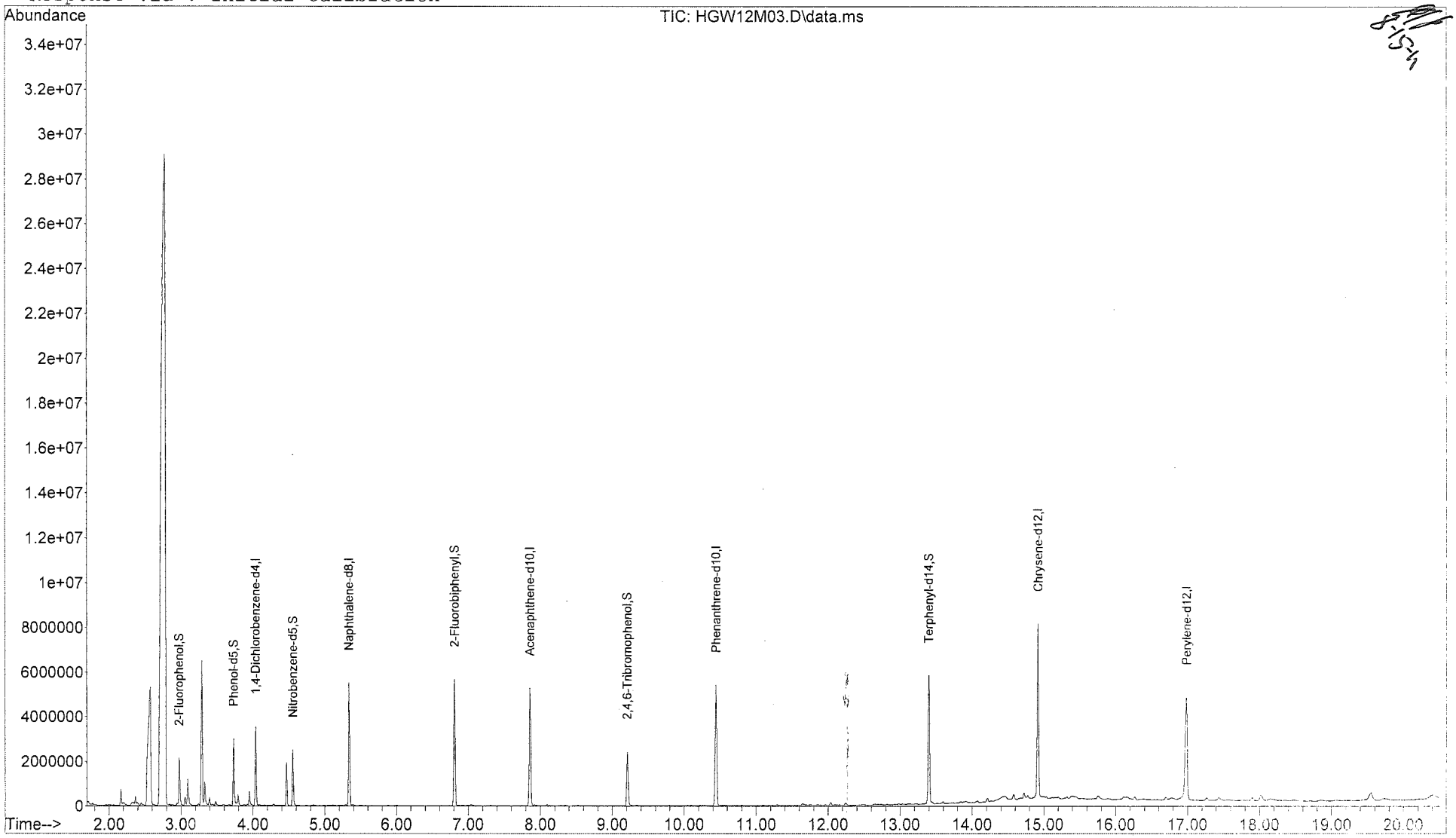
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW12M03.D Vial: 12
Acq On : 08/09/2012 15:01 Operator: RAH
Sample : 1221656003 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 15:21:57 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221656\HGW12M03.D Vial: 12
Acq On : 08/09/2012 15:01 Operator: RAH
Sample : 1221656003 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 15:21:57 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	665264	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2963709	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1782674	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3478305	40.00 ug/mL
12) Chrysene-d12	14.92	240	3887885	40.00 ug/mL
14) Perylene-d12	16.99	264	3145272	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	697223	31.205ug/mL
4) Phenol-d5	3.73	99	1207627	41.199ug/mL
7) Nitrobenzene-d5	4.56	82	875938	34.478ug/mL
9) 2-Fluorobiphenyl	6.81	172	2525954	38.203ug/mL
11) 2,4,6-Tribromophenol	9.21	330	499446	42.651ug/mL
13) Terphenyl-d14	13.40	244	3086105	41.115ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.09	104	248123	21.487ug/mL 98
5) 1,4-Dithiane	4.47	120	472133	25.232ug/mL 97

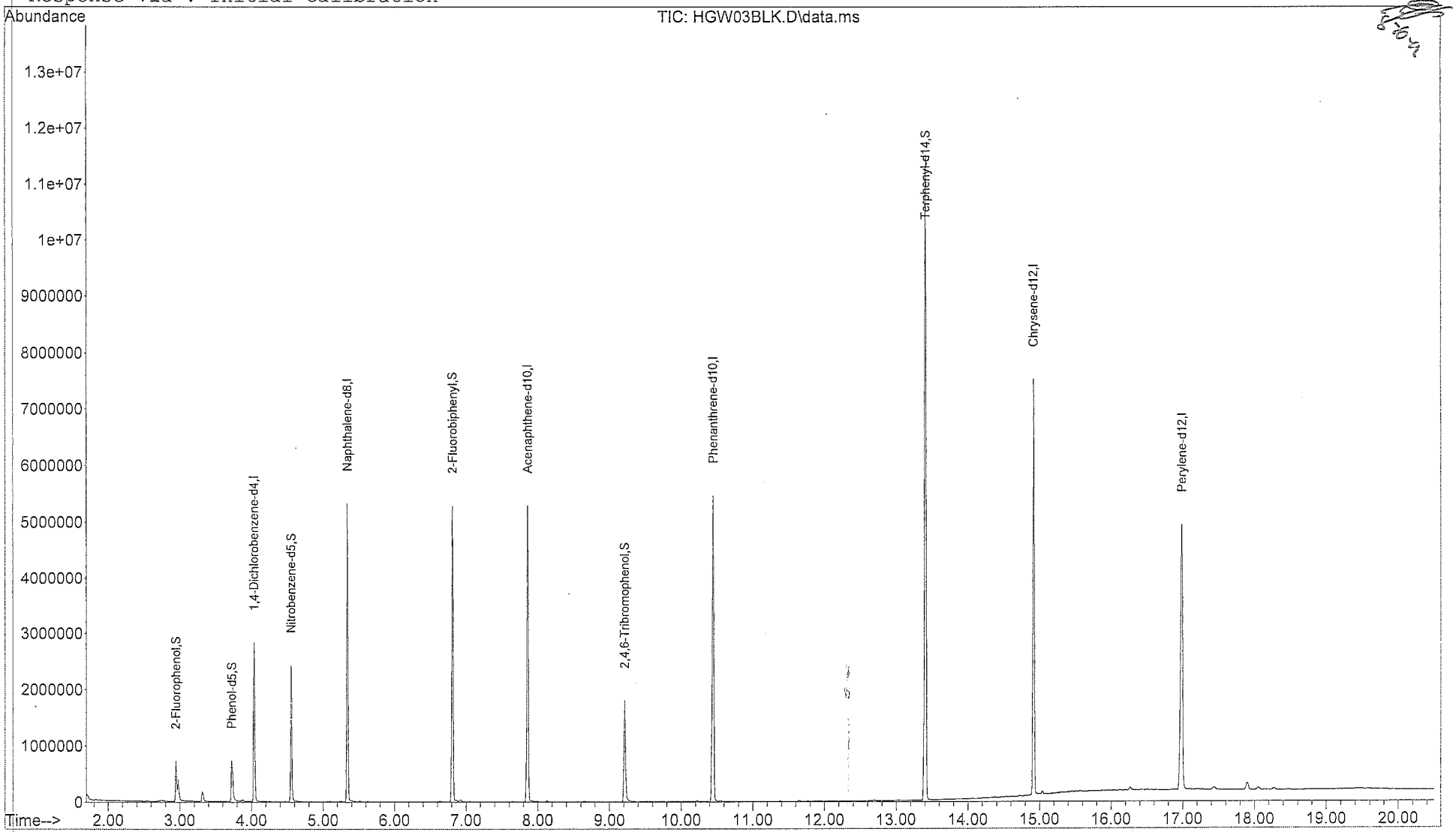
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221555wa\HGW03BLK.D Vial: 3
Acq On : 08/09/2012 10:35 Operator: RAH
Sample : 289024 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 11:02:02 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221555wa\HGW03BLK.D Vial: 3
Acq On : 08/09/2012 10:35 Operator: RAH
Sample : 289024 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 11:02:02 2012 Results File: 8270DOND.RES

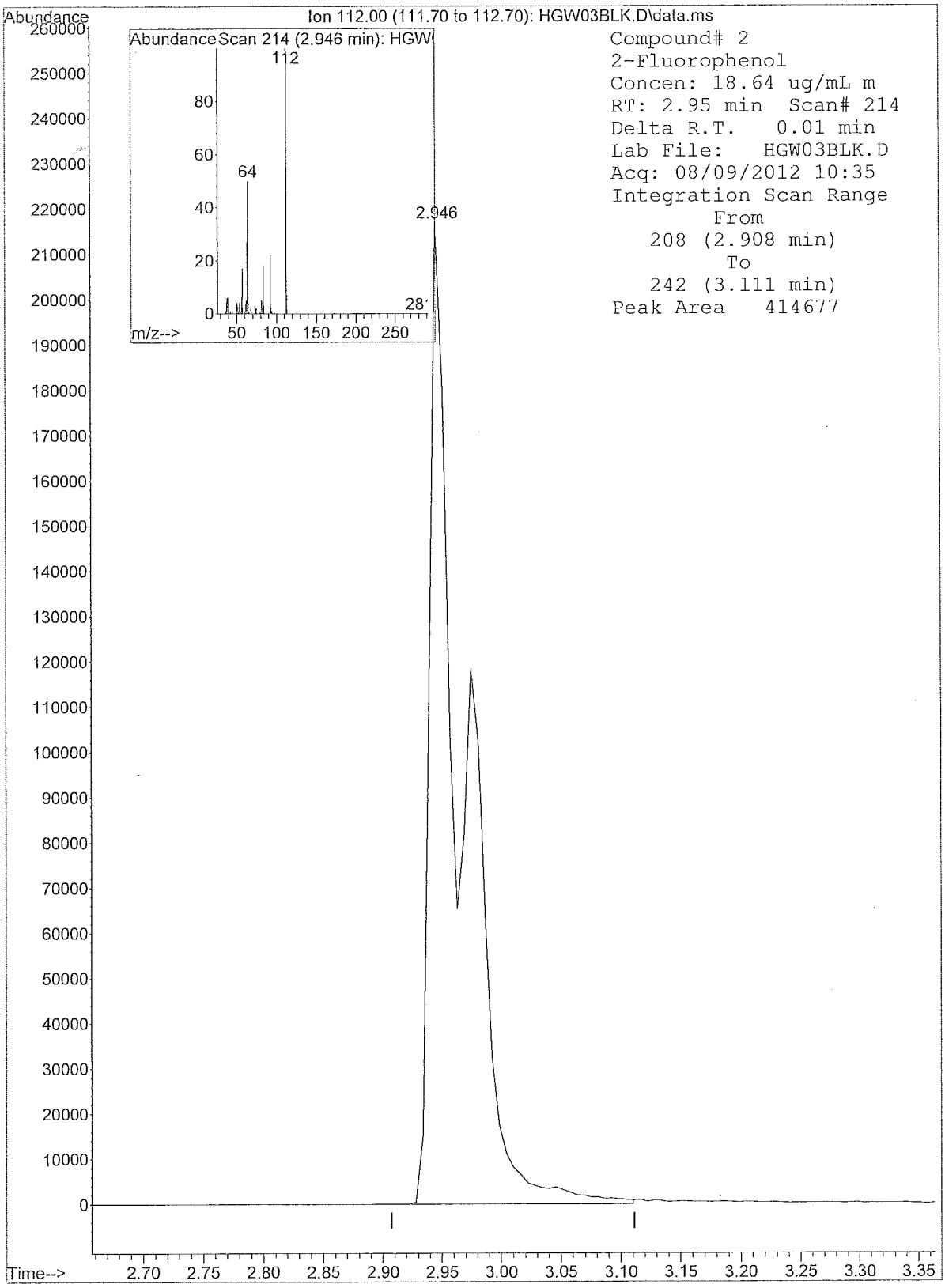
Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	662265	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2960502	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1742167	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3344079	40.00 ug/mL
12) Chrysene-d12	14.92	240	3897327	40.00 ug/mL
14) Perylene-d12	16.99	264	3482876	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	414677	18.643ug/mL m
4) Phenol-d5	3.72	99	460256	15.773ug/mL
7) Nitrobenzene-d5	4.55	82	943940	37.195ug/mL
9) 2-Fluorobiphenyl	6.81	172	2410285	37.301ug/mL
11) 2,4,6-Tribromophenol	9.22	330	398551	35.401ug/mL
13) Terphenyl-d14	13.41	244	6414924	85.257ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

8-10-12

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



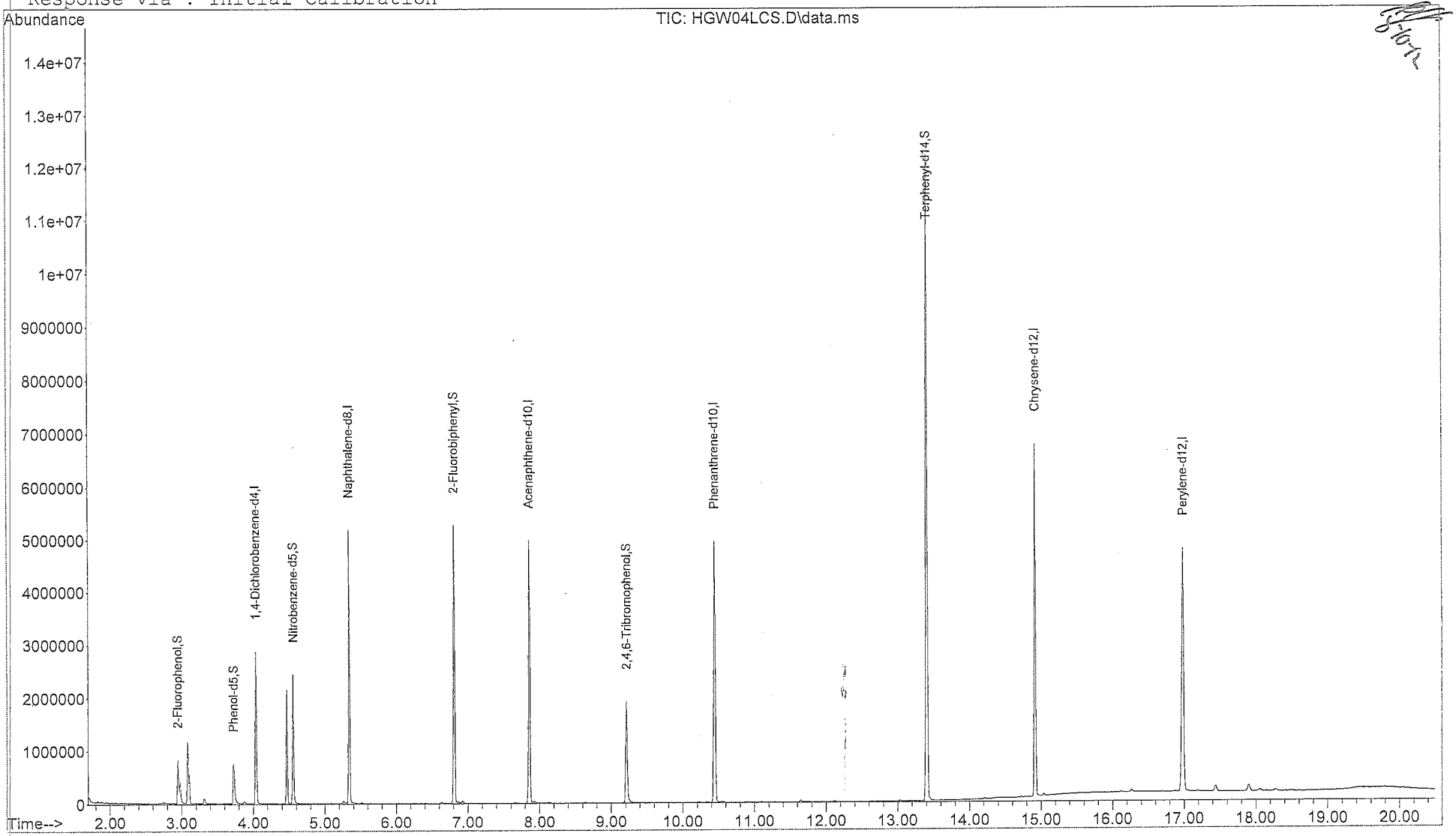
8270DOND.M 5975-H 8270DOND.M 289024 . WATER 8270

Quantitation Report

Data File : C:\msdchem\1\data\1221555wa\HGW04LCS.D Vial: 4
Acq On : 08/09/2012 11:05 Operator: RAH
Sample : 289025 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 11:46:14 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

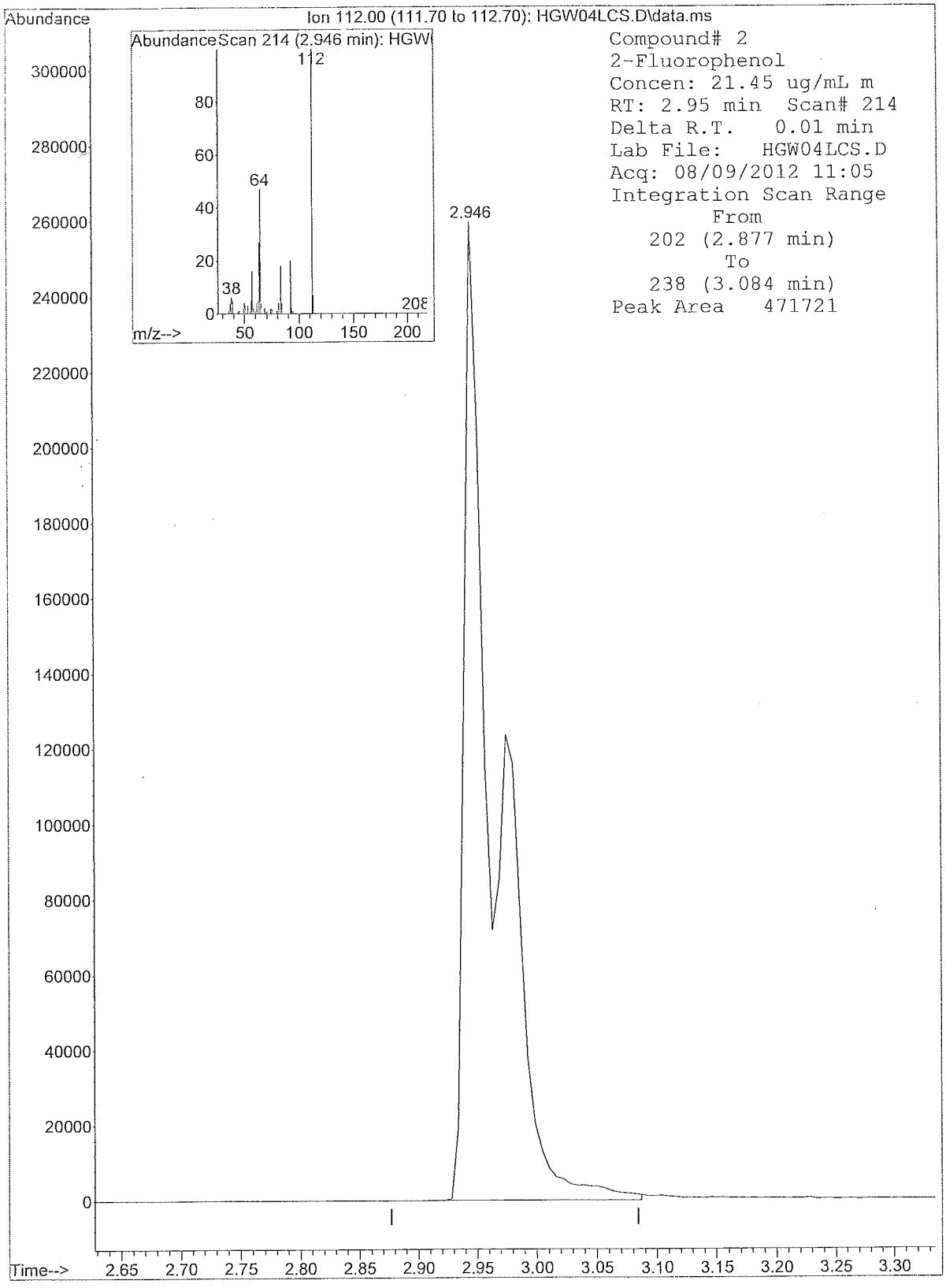
Data File : C:\msdchem\1\data\1221555wa\HGW04LCS.D Vial: 4
Acq On : 08/09/2012 11:05 Operator: RAH
Sample : 289025 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 11:46:14 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	654888	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2883649	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1628301	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3156371	40.00 ug/mL
12) Chrysene-d12	14.92	240	3521185	40.00 ug/mL
14) Perylene-d12	16.99	264	3155976	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	471721	21.447ug/mL m
4) Phenol-d5	3.72	99	477787	16.558ug/mL
7) Nitrobenzene-d5	4.56	82	953990	38.593ug/mL
9) 2-Fluorobiphenyl	6.81	172	2427422	40.193ug/mL
11) 2,4,6-Tribromophenol	9.22	330	425993	40.089ug/mL
13) Terphenyl-d14	13.41	244	6368023	93.675ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.09	104	323729	28.479ug/mL 99
5) 1,4-Dithiane	4.47	120	559425	30.371ug/mL 97

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

MANUAL INTEGRATION FOR 2-Fluorophenol

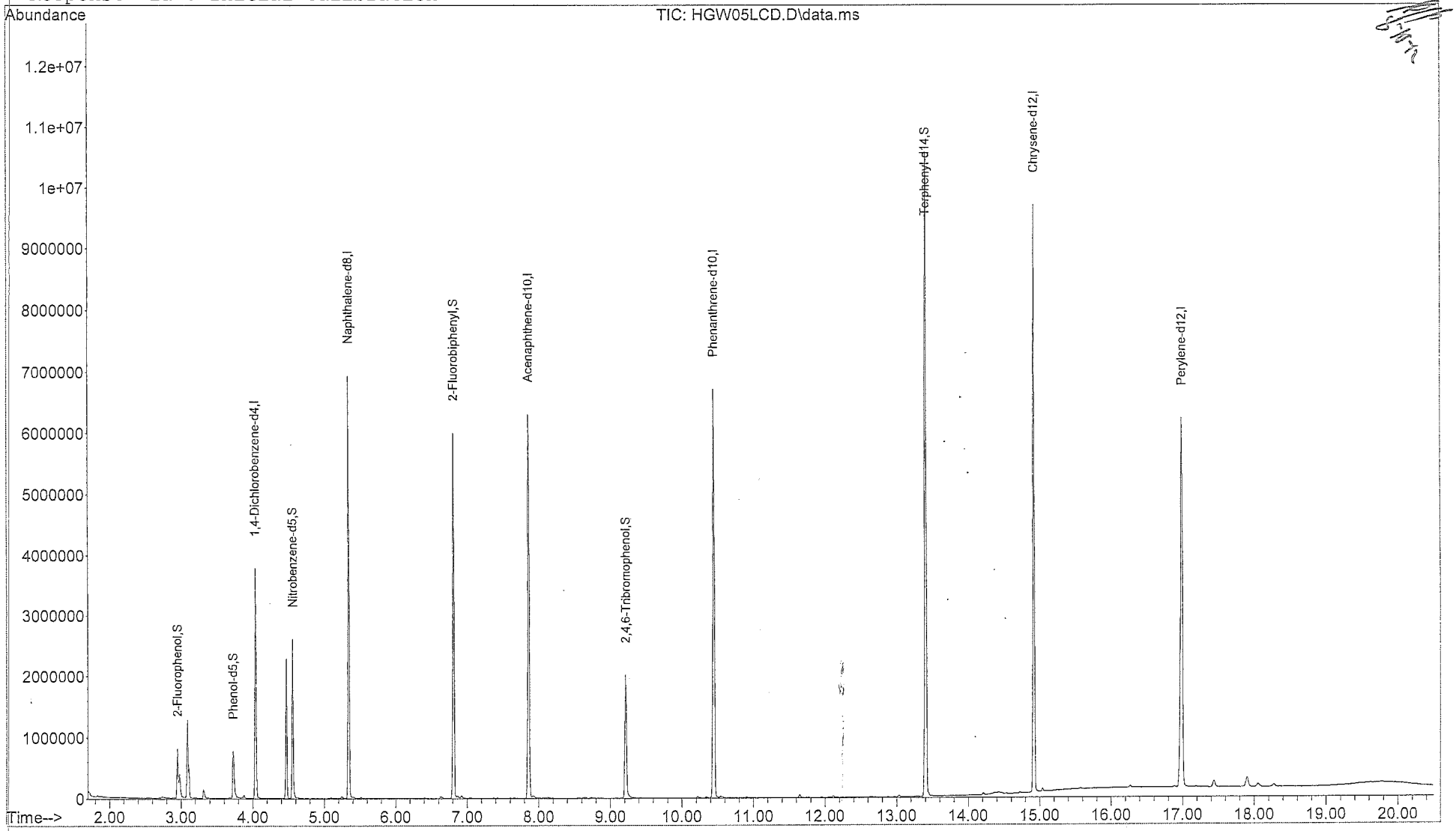


Quantitation Report

Data File : C:\msdchem\1\data\1221555wa\HGW05LCD.D Vial: 5
Acq On : 08/09/2012 11:34 Operator: RAH
Sample : 289026 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 12:10:21 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

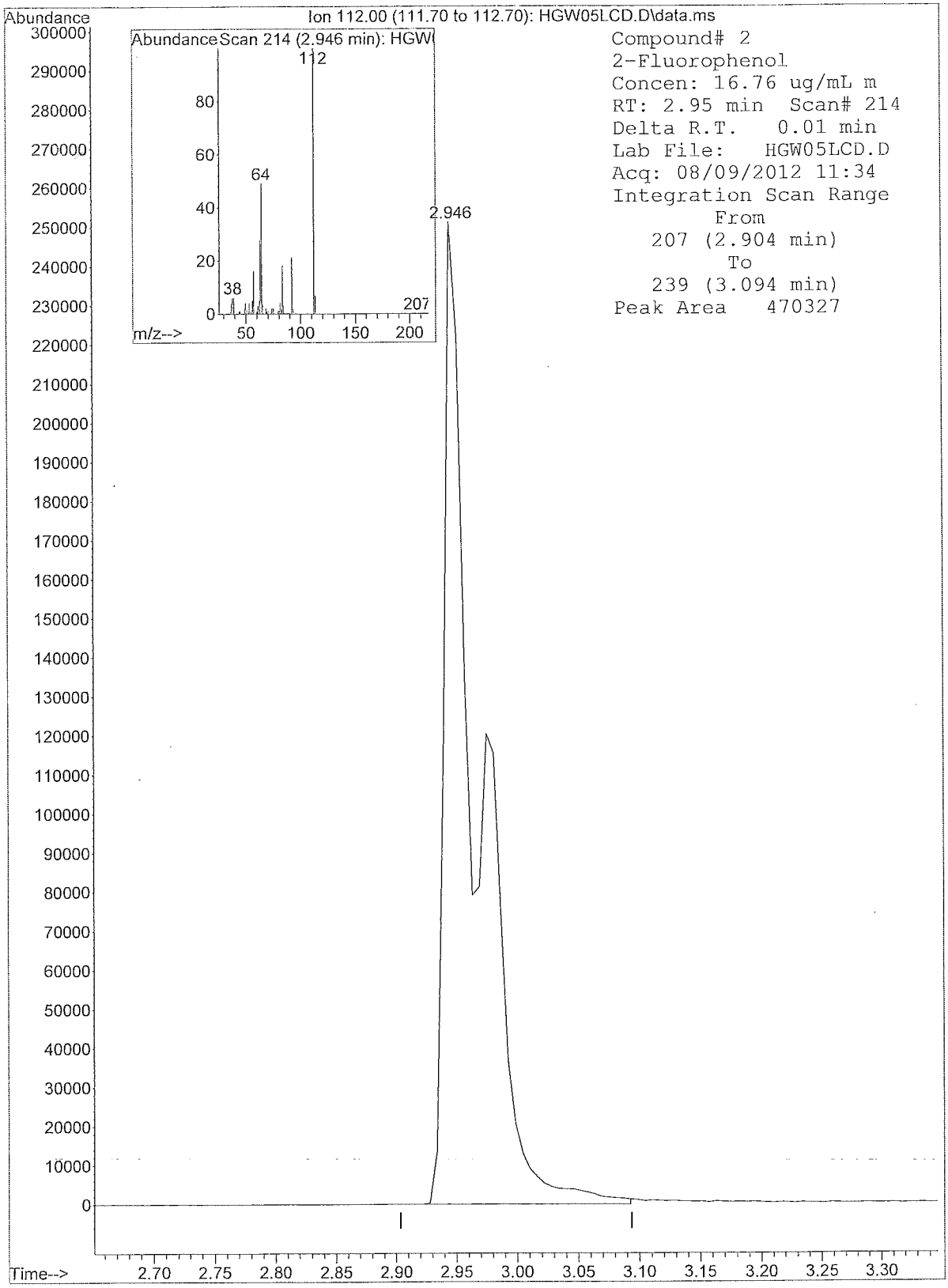
Data File : C:\msdchem\1\data\1221555wa\HGW05LCD.D Vial: 5
Acq On : 08/09/2012 11:34 Operator: RAH
Sample : 289026 Inst : 5975-H
Misc : . WATER 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 09 12:10:21 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	835574	40.00 ug/mL
6) Naphthalene-d8	5.34	136	3763165	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	2206399	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	4300599	40.00 ug/mL
12) Chrysene-d12	14.92	240	4926060	40.00 ug/mL
14) Perylene-d12	16.99	264	4356509	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	470327	16.760ug/mL m 8-10-12
4) Phenol-d5	3.72	99	482896	13.117ug/mL
7) Nitrobenzene-d5	4.56	82	980354	30.390ug/mL
9) 2-Fluorobiphenyl	6.81	172	2593150	31.688ug/mL
11) 2,4,6-Tribromophenol	9.22	330	471185	32.544ug/mL
13) Terphenyl-d14	13.40	244	5885996	61.891ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.09	104	345647	23.832ug/mL 98
5) 1,4-Dithiane	4.47	120	604189	25.708ug/mL 97

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.90	210	47.95	110	60.00	204	73.00	1416
37.00	789	49.10	1366	61.00	2048	74.00	16658
38.00	2065	50.10	37069	62.00	2129	75.00	26072
39.05	11447	51.10	133016	63.05	5870	76.10	8806
40.00	553	52.05	6888	64.05	797	77.10	169557
41.00	409	53.00	317	65.10	2951	78.10	11912
41.95	8	55.00	774	66.00	245	79.00	12159
43.00	174	56.00	4604	67.00	41	80.00	9544
43.95	213	56.95	9649	69.00	182007	80.95	12627
44.95	498	57.95	474	69.95	863	82.05	2981
46.90	50	59.05	212	71.00	84	83.00	2757

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
83.95	505	96.00	1100	107.00	51061	119.05	580
85.00	2076	96.95	164	108.00	7952	119.95	624
86.00	3686	98.00	15285	110.00	99453	120.90	137
86.95	1503	99.00	11947	111.00	14899	121.10	236
88.00	668	100.00	1055	112.00	1808	122.00	3851
88.95	332	100.95	6366	113.00	564	123.00	5511
91.00	2779	101.95	411	113.95	125	124.00	2550
92.00	3243	102.95	2332	115.00	255	125.00	2380
93.00	20146	104.00	4550	116.05	3193	127.00	194795
93.95	1286	105.00	4189	117.00	41283	128.00	14880
95.00	369	106.10	1215	118.00	2979	129.00	77256

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
130.00	6368	139.95	881	150.95	941	160.00	3180
130.95	1208	141.00	9687	151.20	517	161.00	4674
132.05	708	142.00	3150	151.70	439	161.95	1330
132.80	252	143.00	2120	152.00	274	162.80	161
133.00	135	143.95	625	153.00	3192	163.05	274
134.00	2181	145.00	646	154.00	2288	164.00	668
134.95	5754	146.05	1877	155.00	5190	164.95	3521
136.00	2380	147.00	4767	156.05	8000	166.05	2851
137.05	2966	148.00	10934	157.05	1896	166.95	19745
137.95	736	148.95	2140	157.95	1883	168.00	8501
138.95	478	150.05	661	159.00	1302	169.05	1743

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
170.05	659	181.00	5020	192.00	5090	205.00	26323
170.95	942	182.00	946	193.00	5198	206.00	108360
171.95	1888	183.00	572	194.00	1397	207.00	14246
173.00	2312	184.00	1287	195.05	970	208.00	3479
174.00	4313	185.00	7511	196.00	16758	208.95	1198
175.00	7834	186.00	59352	198.00	449451	210.30	703
176.05	2966	187.00	15865	199.00	30245	210.95	4542
177.00	3955	188.05	1696	200.00	2429	212.95	335
178.00	859	189.00	3403	201.45	3070	215.00	1191
179.00	15556	189.95	600	202.95	2845	216.05	2349
180.00	10462	191.00	1758	204.00	15477	217.00	27032

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
218.00	3469	230.00	769	240.95	1460	252.00	534
218.95	280	231.00	2262	242.00	3478	253.05	1166
219.20	106	231.95	384	243.10	4047	255.00	269404
221.00	32173	232.95	580	244.00	51989	256.00	38803
223.00	6700	234.00	1735	245.05	7448	257.00	3231
224.00	61472	234.95	1711	246.00	9407	258.00	14382
225.00	15875	235.95	1100	246.95	2002	259.00	2277
226.05	1856	237.00	2076	248.05	411	259.95	452
227.00	24363	238.05	341	249.00	1736	260.95	518
228.00	3479	238.95	964	250.00	378	263.00	155
229.00	5244	240.00	804	251.05	421	263.80	387

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
264.10	160	276.00	16781	288.00	125	299.00	58
265.00	5592	277.00	9464	288.90	438	300.95	468
265.90	1371	278.00	1550	289.95	375	301.95	650
266.90	202	278.80	76	291.05	236	303.05	4040
267.85	19	278.95	278	291.90	98	304.05	968
269.90	381	281.00	201	292.10	306	305.00	88
270.95	583	282.05	293	293.05	2240	308.00	529
272.05	745	283.00	1149	293.95	535	308.95	363
273.00	8812	284.00	800	296.00	33656	309.95	517
274.00	21501	285.00	1731	297.00	4977	311.00	52
275.00	124987	285.95	376	297.90	387	312.20	67

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
312.95	387	326.05	153	341.00	1397	365.95	2022
314.00	1732	327.00	2246	342.00	324	366.90	53
315.00	3856	328.00	1118	346.00	2412	369.95	327
316.00	2135	329.10	116	347.00	412	371.10	748
317.00	363	331.95	909	351.00	86	372.05	5254
319.90	179	333.00	1200	352.05	3088	373.00	1217
321.05	1110	334.05	7150	353.05	2118	374.05	166
322.05	618	335.05	1830	354.05	3337	383.05	1223
323.05	11178	336.05	286	355.05	607	383.95	469
324.05	2118	339.00	115	358.95	270	384.90	58
325.05	158	340.00	124	365.00	13675	390.00	645

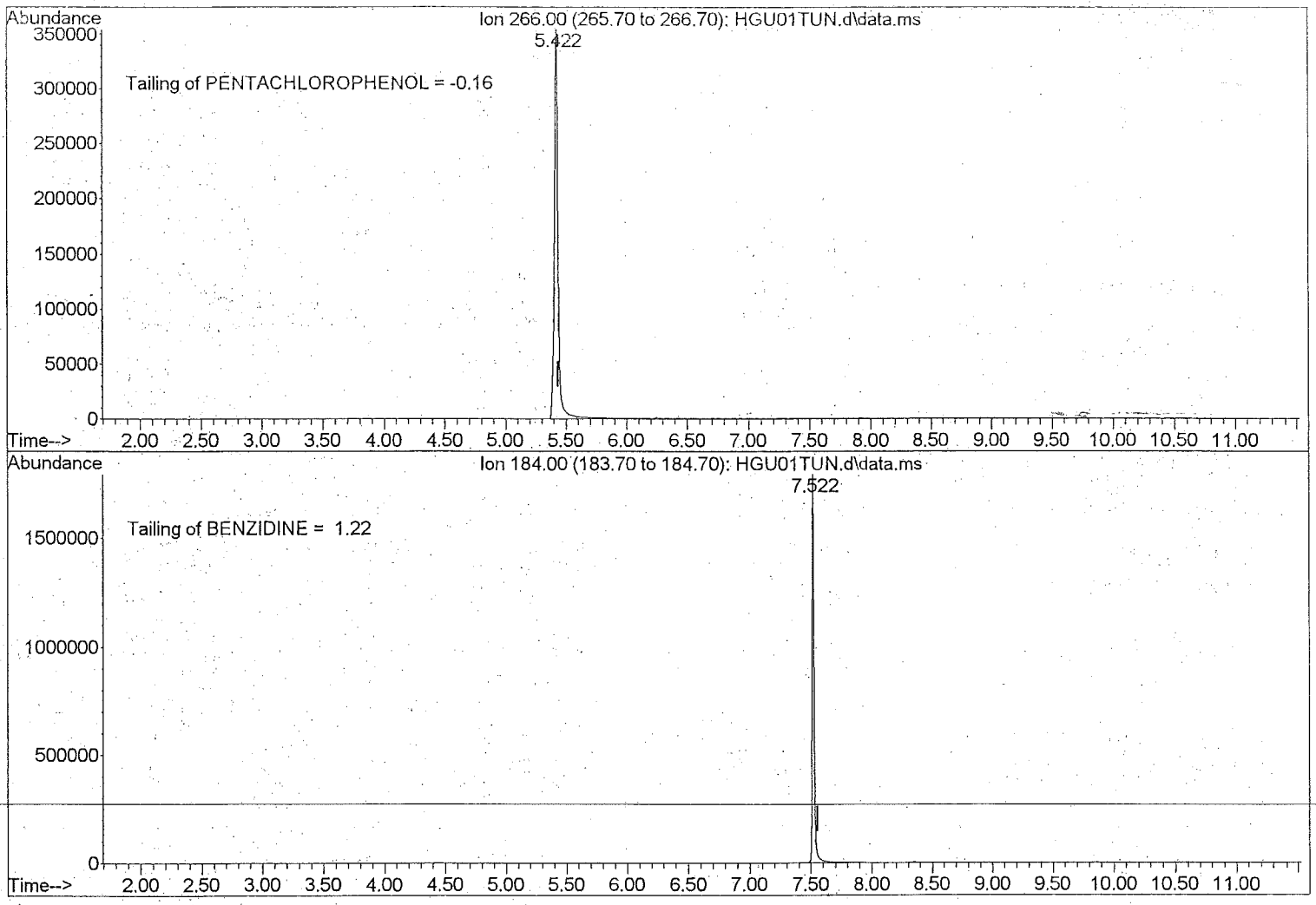
Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
391.05	452	425.05	302	444.10	5675		
392.05	336	435.45	112	445.00	368		
400.90	274	436.10	52				
402.00	1684	437.00	72				
403.00	2553	437.50	61				
404.00	801	437.70	106				
410.10	50	438.10	252				
421.00	1998	438.85	543				
422.05	1989	441.10	47803				
423.10	13843	442.10	315904				
424.05	2863	443.10	60693				

Data File: HGU01TUN.d
Date Acquired: 08/08/2012 10:06
Operator ID: RAH
Name: 8270 DFTPP 13808
Misc: X:1/11/13

Instrument: 5975-H
Acq Method: 8270DTUN.M
DA Method: 8270DTUN.M

Cal Title: EPA/CLP SOM01
Last Cal Update: Wed Nov 23 09:22:39 2011
X:1/11/13

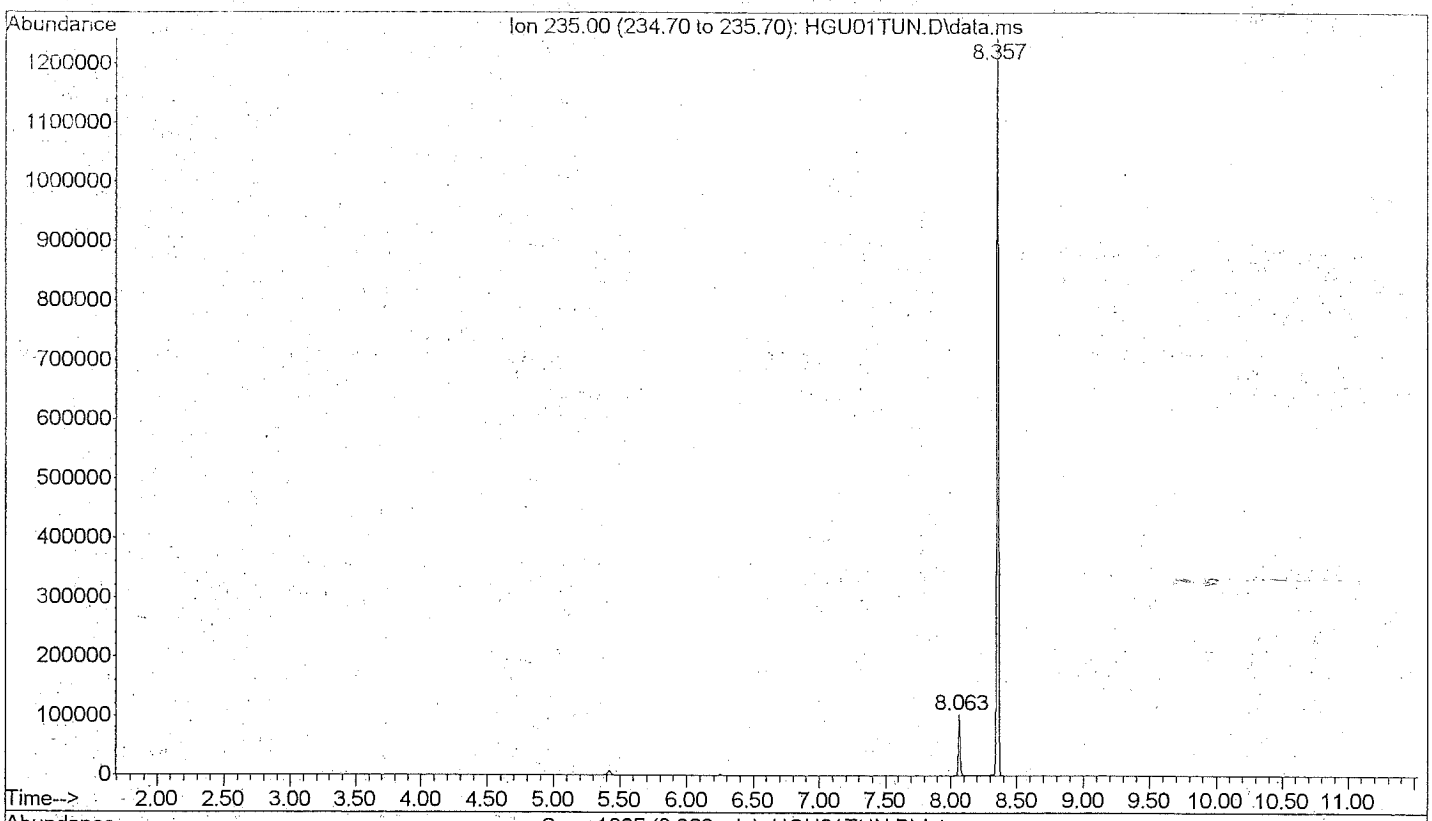


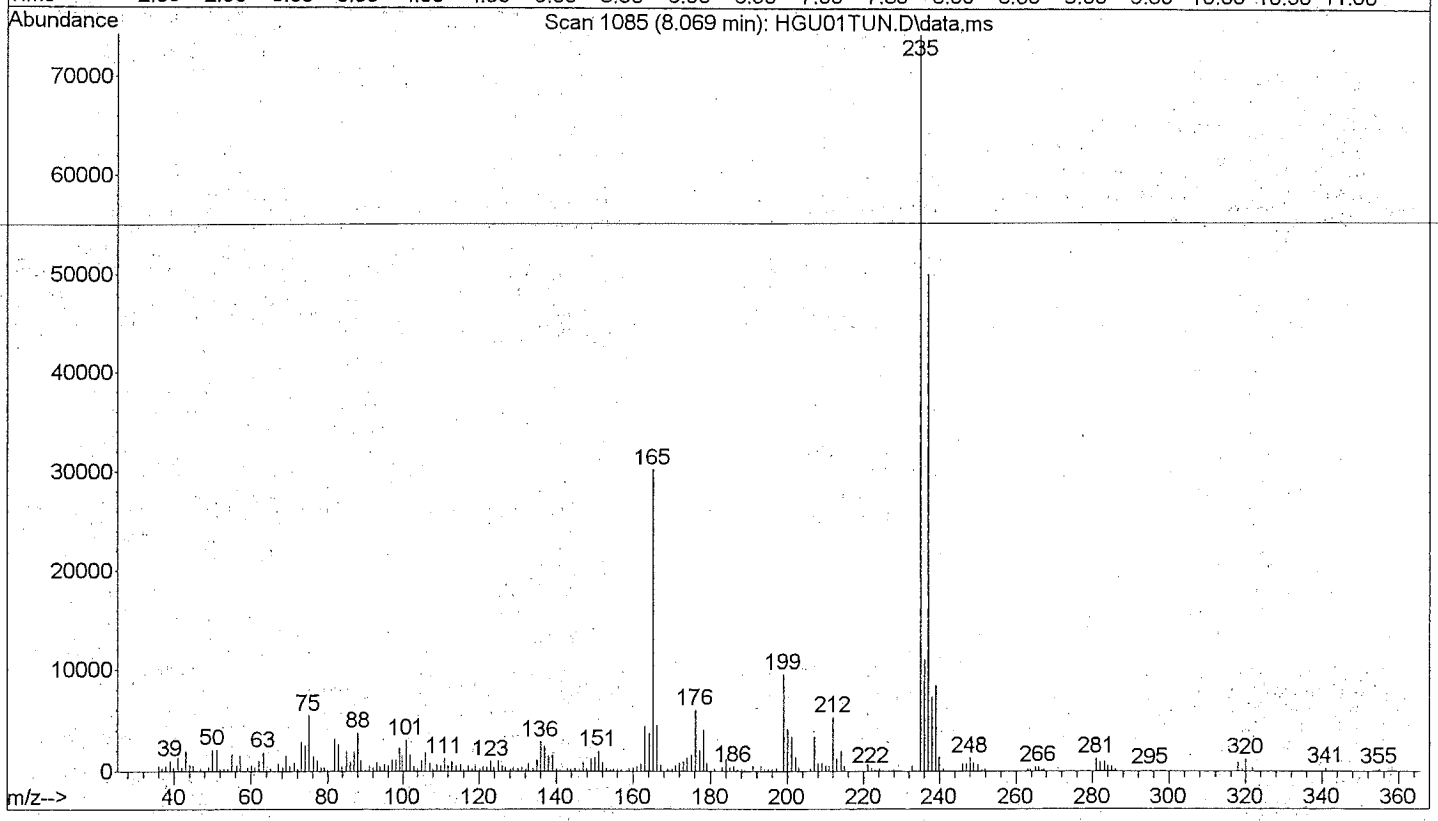
Ion 235.00 (234.70 to 235.70): HGU01TUN.D\data.ms
3270 DFTPP 13808

Peak #	Ret Time	Type	Width	Area	Start Time	End Time
1	8.063	rBV	0.082	94255	8.027	8.110
2	8.357	rVB	0.112	1143185	8.286	8.398

$$\text{DDT degradation} = \frac{94255}{94255 + 1143185} = 7.6\%$$

File :D:\1\DATA\2012\AUG12\08AUG12H\HGU01TUN.D
Operator : RAH
Acquired : 8 Aug 2012 10:06 am using AcqMethod 8270DTUN.M
Instrument : 5975-H
Sample Name: 8270 DFTPP 13808
Misc Info : X:1/11/13
Vial Number: 1



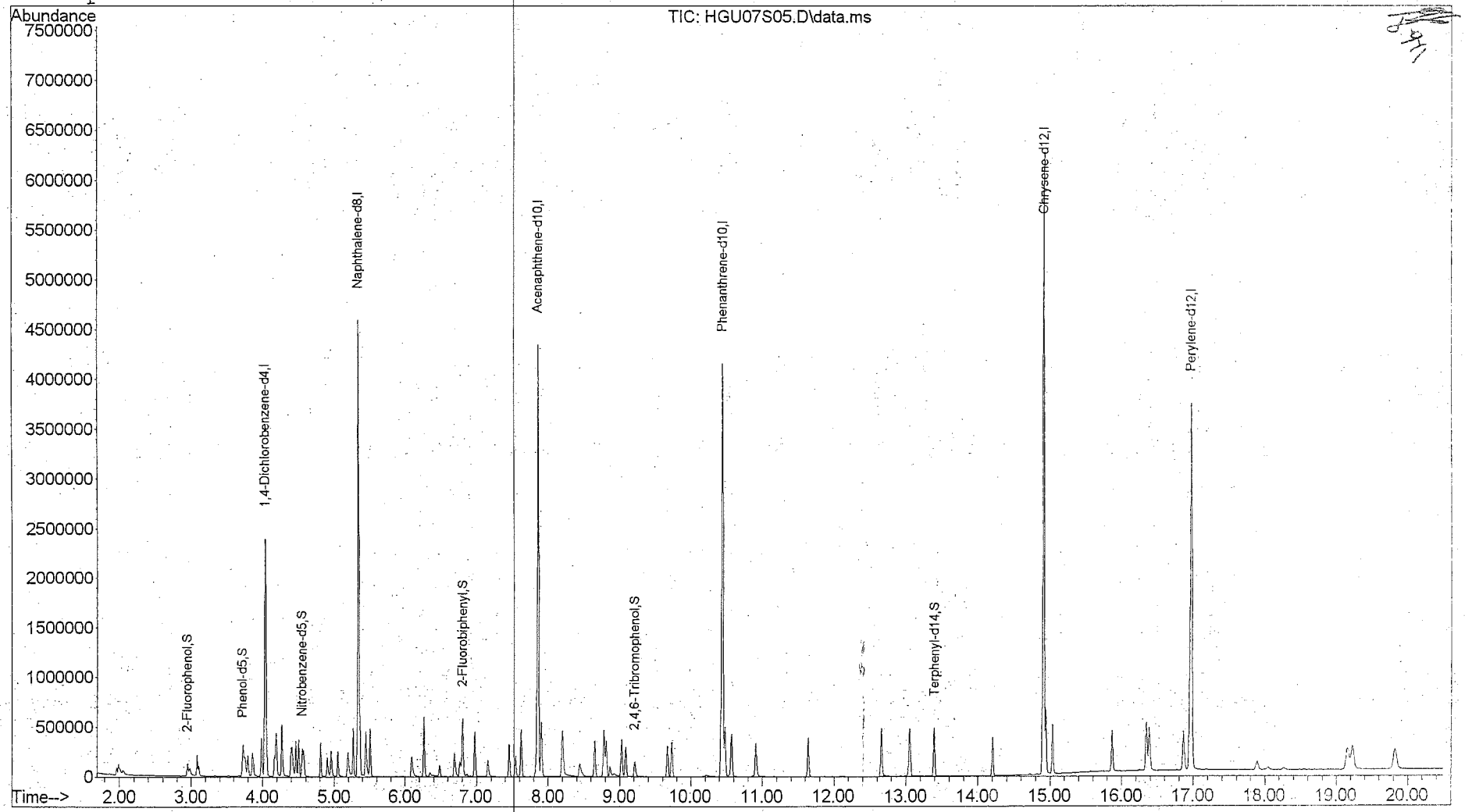


Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU07S05.D Vial: 7
Acq On : 08/08/2012 12:59 Operator: RAH
Sample : 8270 5 std 15974 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:23:28 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

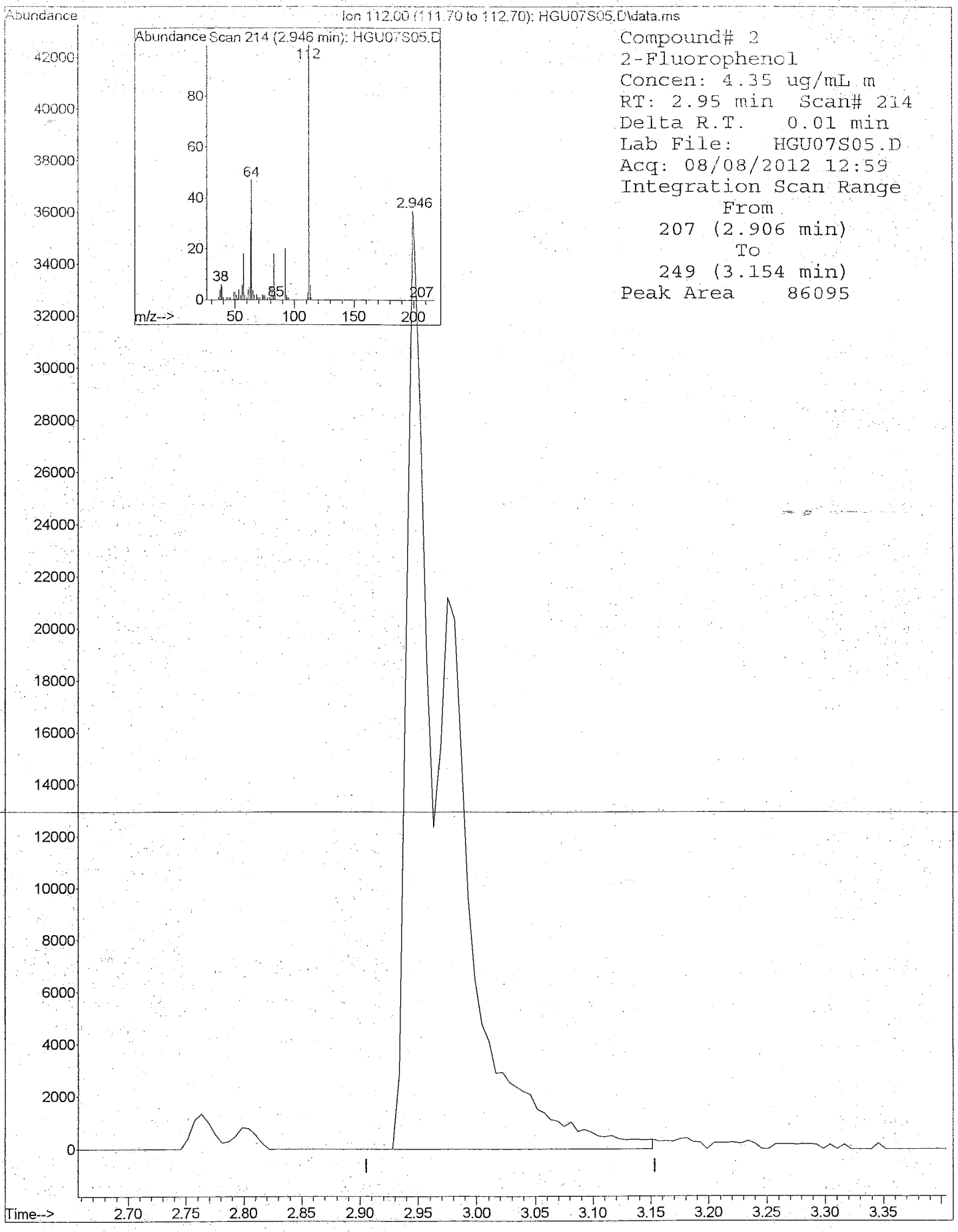
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU07S05.D Vial: 7
Acq On : 08/08/2012 12:59 Operator: RAH
Sample : 8270 5 std 15974 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:23:28 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	588867	40.00 ug/mL
6) Naphthalene-d8	5.33	136	2620860	40.00 ug/mL
8) Acenaphthene-d10	7.85	164	1436514	40.00 ug/mL
10) Phenanthrene-d10	10.43	188	2595047	40.00 ug/mL
12) Chrysene-d12	14.91	240	2776807	40.00 ug/mL
14) Perylene-d12	16.97	264	2442971	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	86095	4.352ug/mL m
4) Phenol-d5	3.72	99	113950	4.392ug/mL
7) Nitrobenzene-d5	4.55	82	99427	4.426ug/mL
9) 2-Fluorobiphenyl	6.80	172	243673	4.573ug/mL
11) 2,4,6-Tribromophenol	9.21	330	35477	4.061ug/mL
13) Terphenyl-d14	13.39	244	245085	4.572ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	54091	5.291ug/mL 99
5) 1,4-Dithiane	4.46	120	87903	5.307ug/mL 98

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



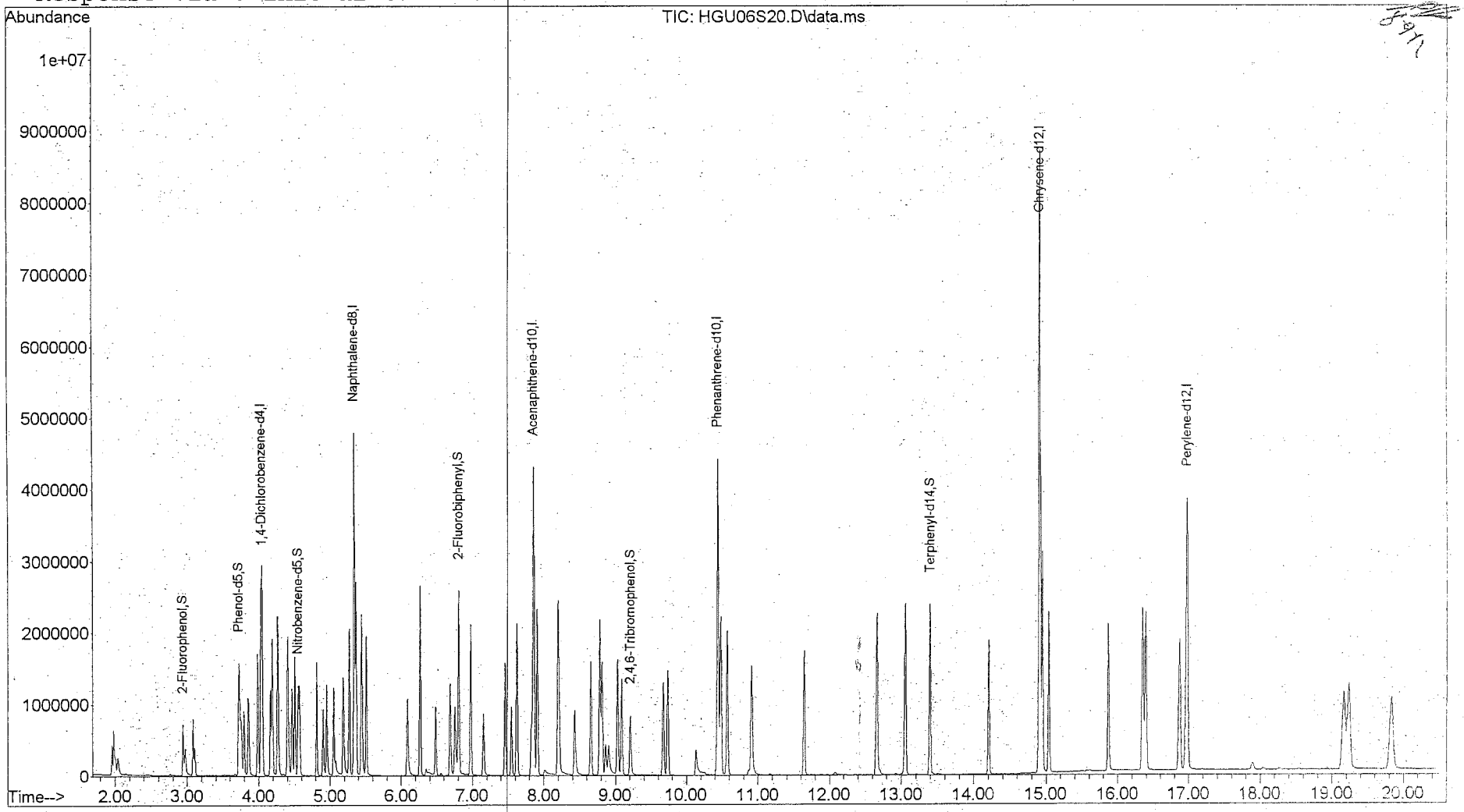
8270DOND.M 5975-H 8270DOND.M 8270 5 std 15974 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU06S20.D Vial: 6
Acq On : 08/08/2012 12:29 Operator: RAH
Sample : 8270 20 std 15973 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:23:14 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

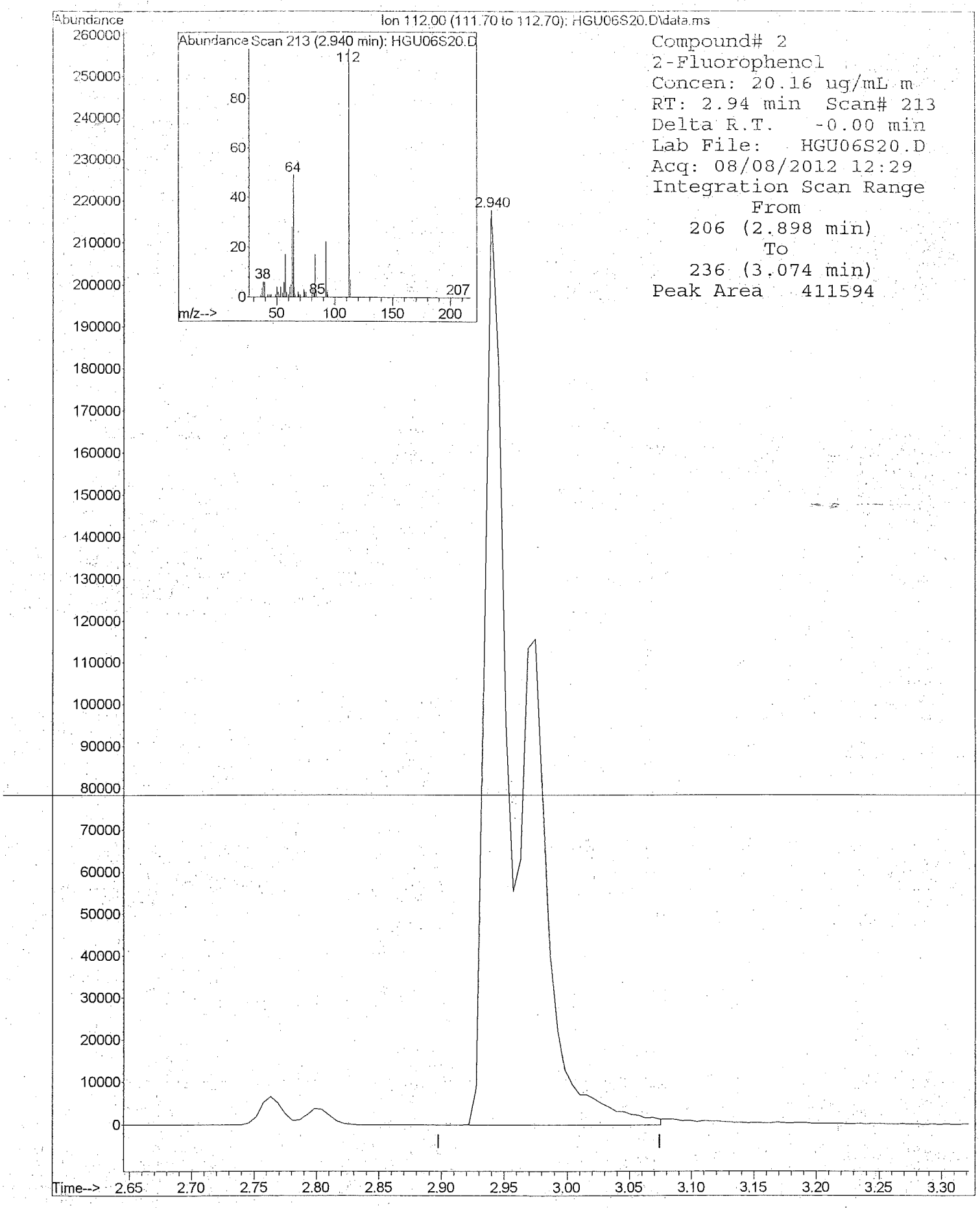
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU06S20.D Vial: 6
Acq On : 08/08/2012 12:29 Operator: RAH
Sample : 8270 20 std 15973 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:23:14 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	607773	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2617015	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1459213	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2715173	40.00 ug/mL
12) Chrysene-d12	14.92	240	3091127	40.00 ug/mL
14) Perylene-d12	16.97	264	2675827	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	411594	20.158ug/mL m
4) Phenol-d5	3.72	99	538093	20.094ug/mL
7) Nitrobenzene-d5	4.55	82	451447	20.124ug/mL
9) 2-Fluorobiphenyl	6.80	172	1088983	20.121ug/mL
11) 2,4,6-Tribromophenol	9.21	330	178946	19.577ug/mL
13) Terphenyl-d14	13.39	244	1191516	19.966ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	202599	19.200ug/mL m 99
5) 1,4-Dithiane	4.46	120	327670	19.168ug/mL 99

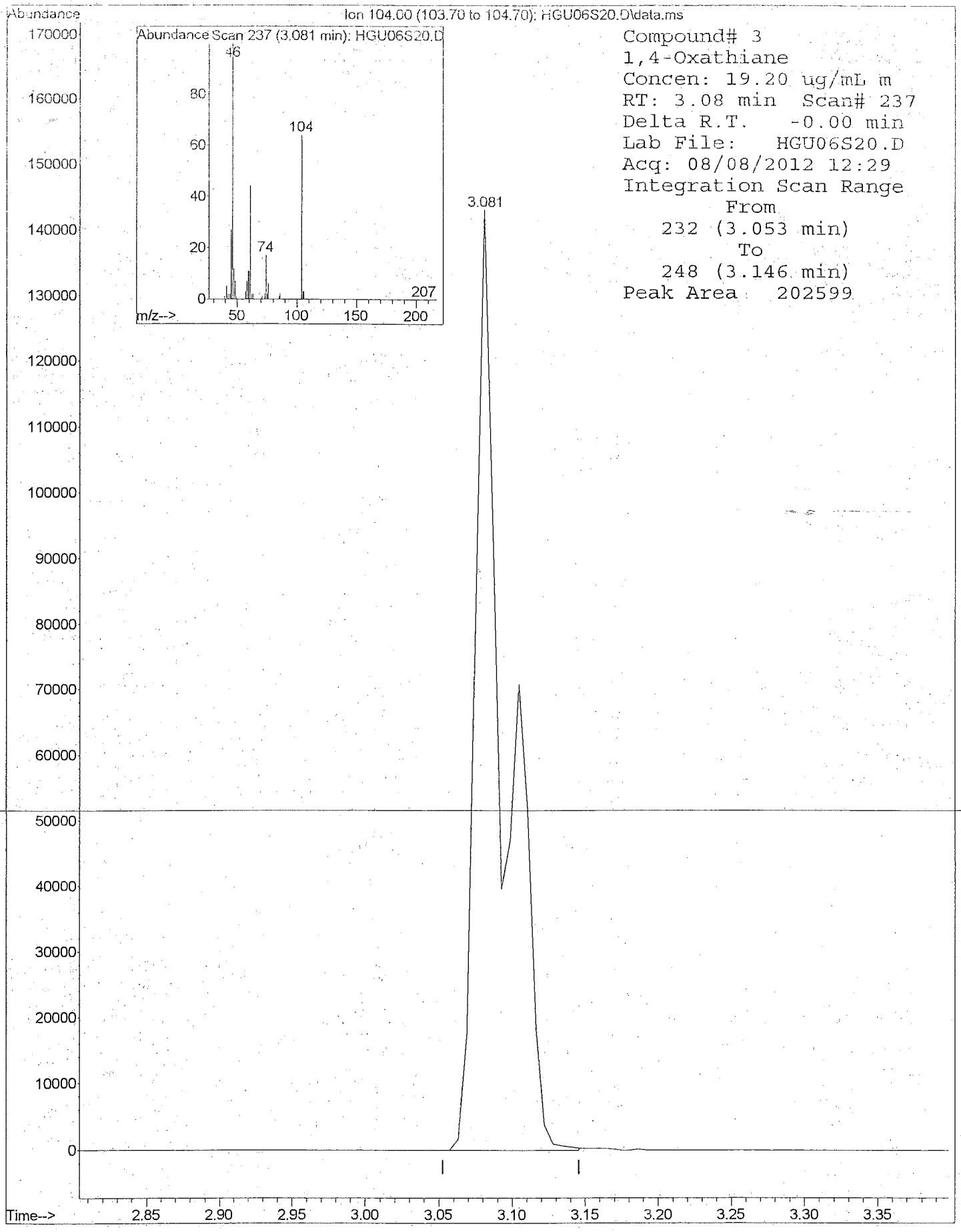
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 20 std 15973 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



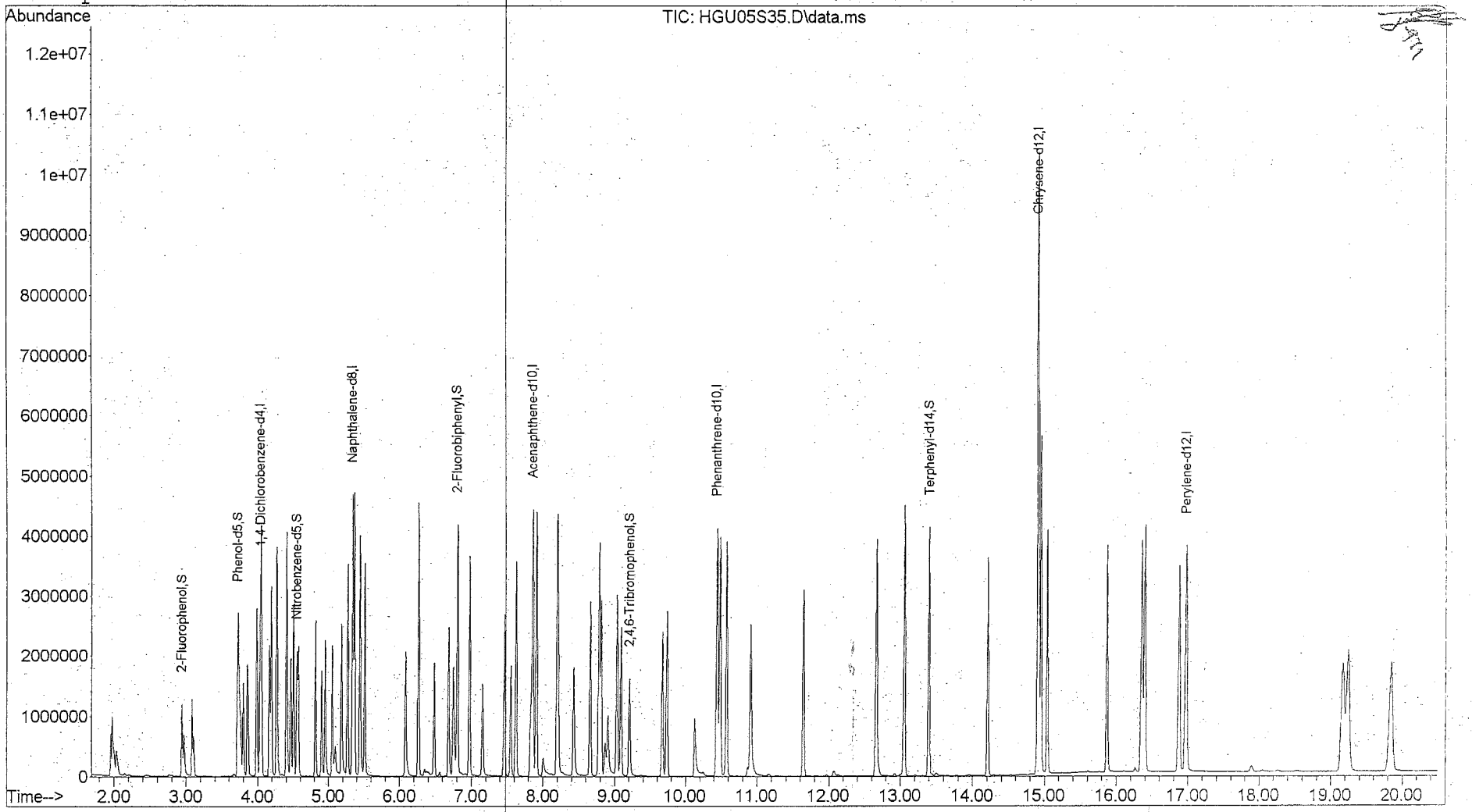
8270DOND.M 5975-H 8270DOND.M 8270 20 std 15973 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU05S35.D Vial: 5
Acq On : 08/08/2012 12:00 Operator: RAH
Sample : 8270 35 std 15972 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:57 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

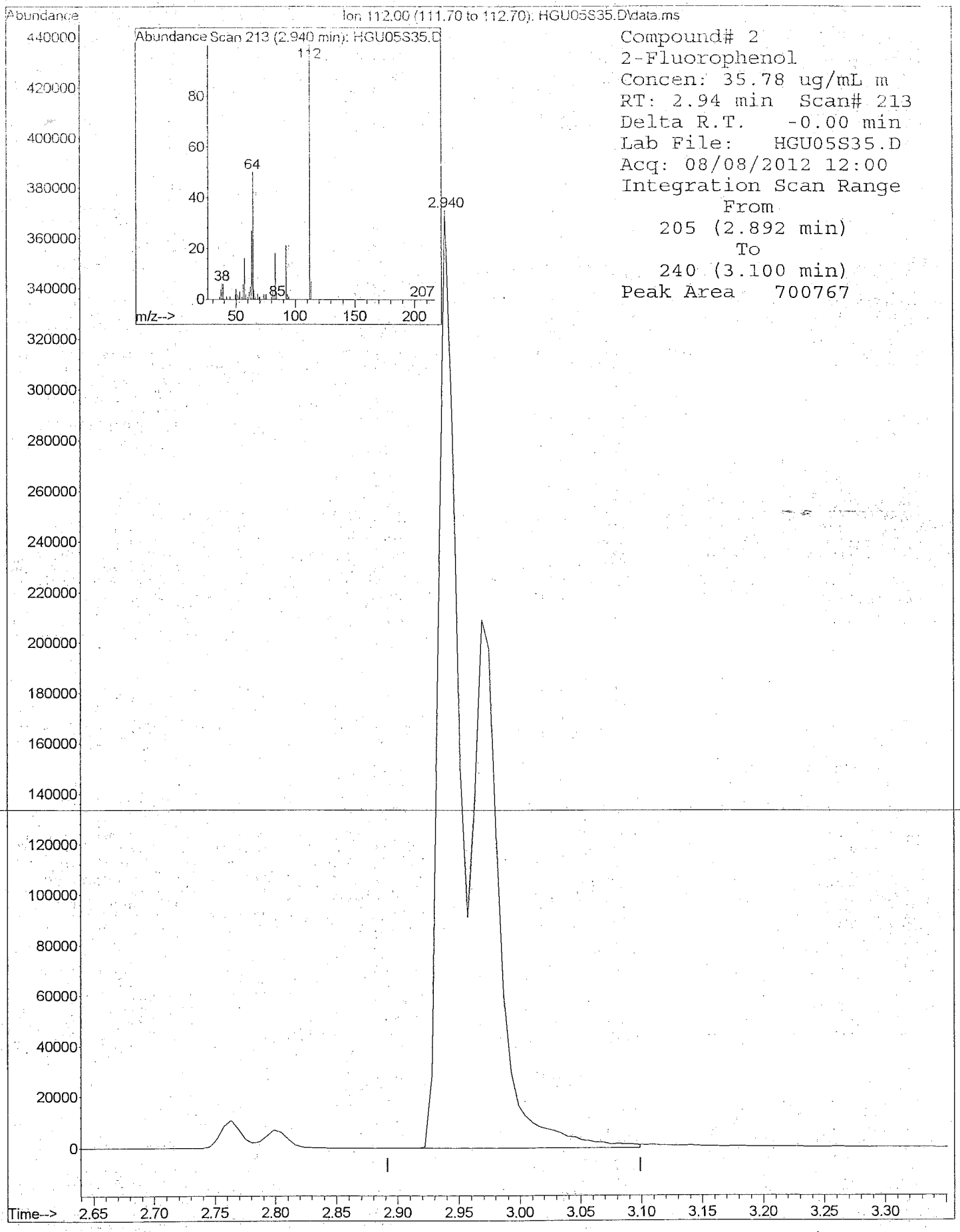
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU05S35.D Vial: 5
Acq On : 08/08/2012 12:00 Operator: RAH
Sample : 8270 35 std 15972 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:57 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	582911	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2556097	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1465004	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2738820	40.00 ug/mL
12) Chrysene-d12	14.92	240	3035266	40.00 ug/mL
14) Perylene-d12	16.97	264	2627498	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	700767	35.784ug/mL m
4) Phenol-d5	3.72	99	920516	35.841ug/mL
7) Nitrobenzene-d5	4.55	82	793614	36.219ug/mL
9) 2-Fluorobiphenyl	6.81	172	1951088	35.907ug/mL
11) 2,4,6-Tribromophenol	9.21	330	335739	36.413ug/mL
13) Terphenyl-d14	13.40	244	2149311	36.678ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	343846	33.975ug/mL m 99
5) 1,4-Dithiane	4.47	120	556869	33.965ug/mL 98

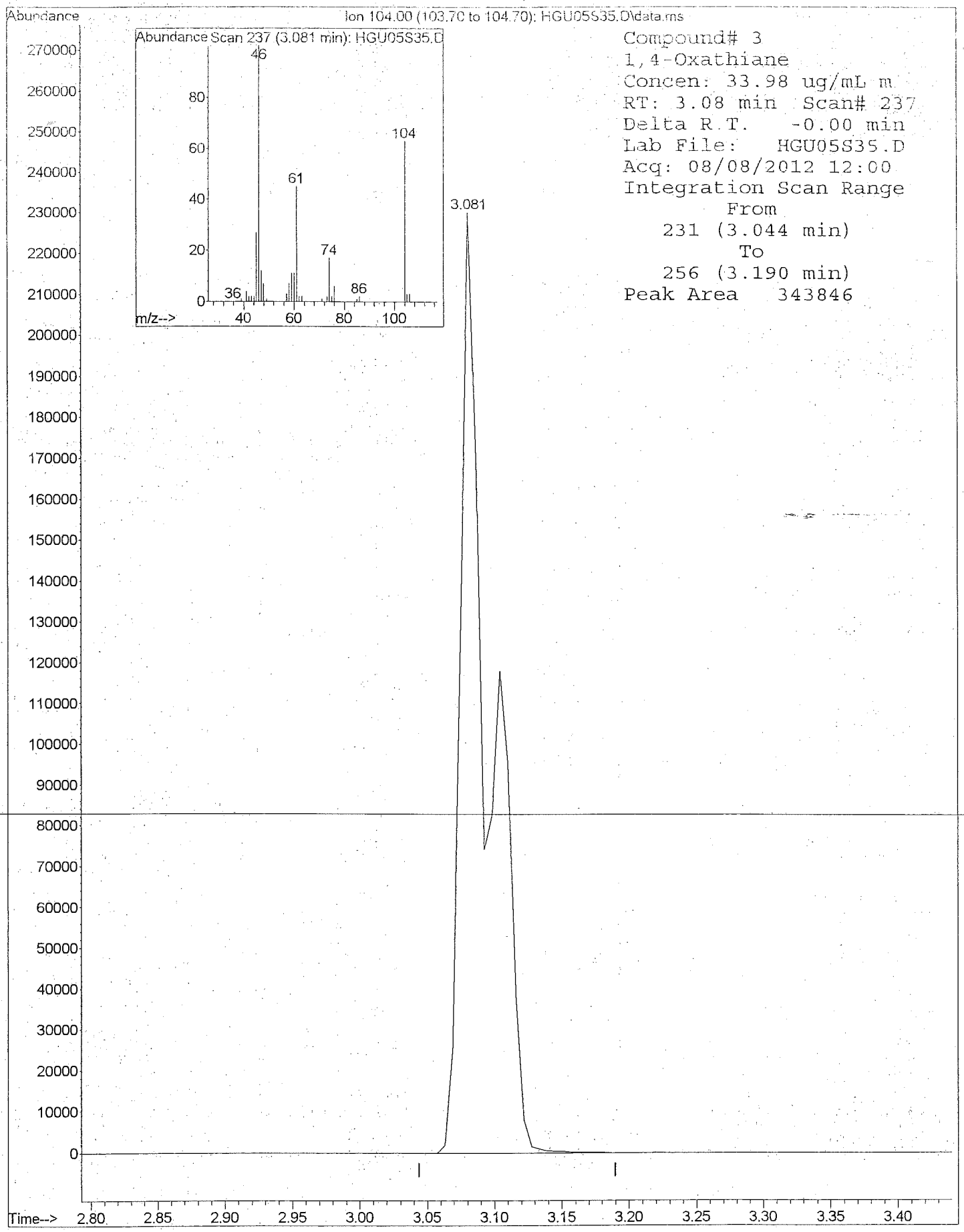
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 35 std 15972 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



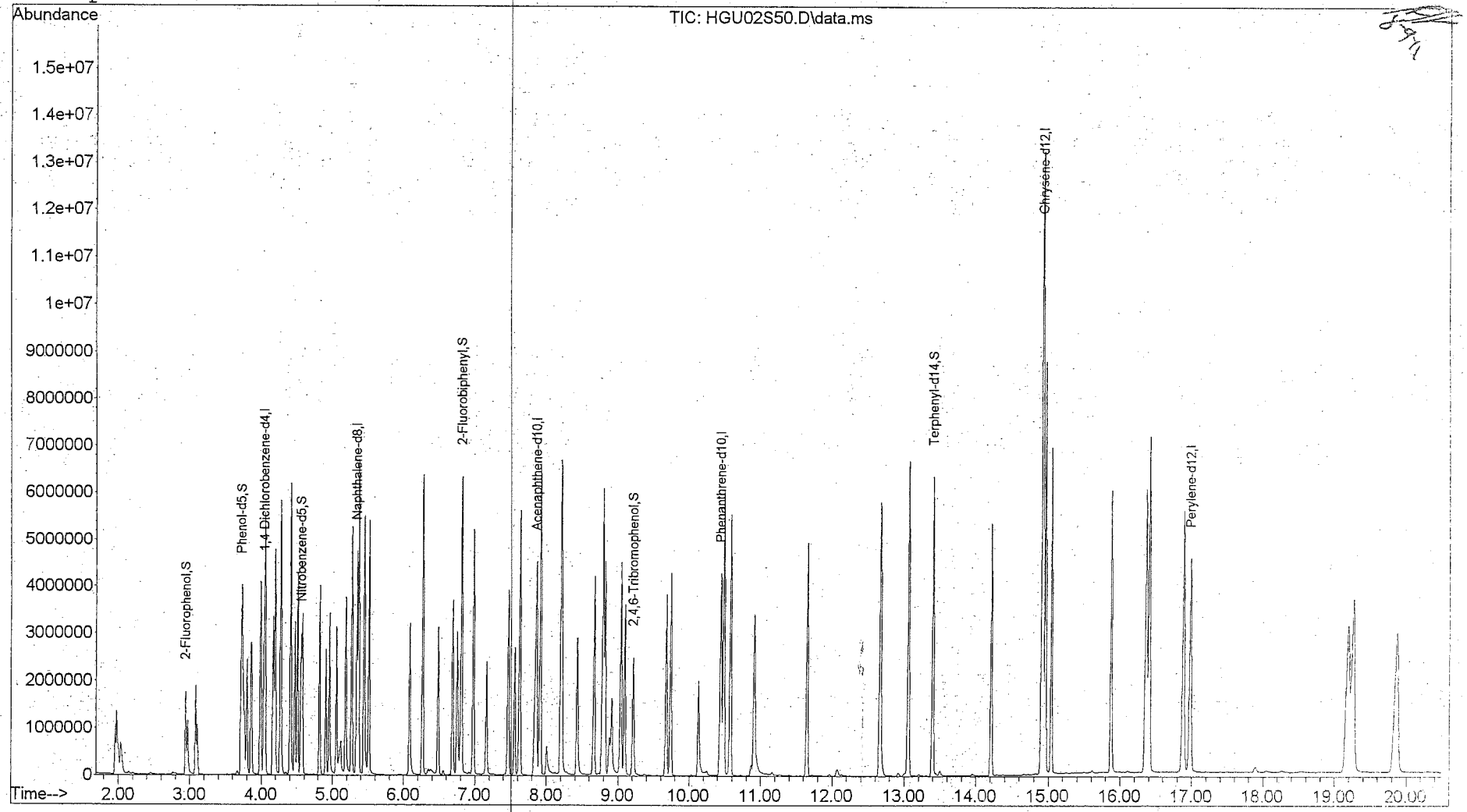
8270DOND.M 5975-H 8270DOND.M 8270 35 std 15972 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU02S50.D Vial: 2
Acq On : 08/08/2012 10:26 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:00 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

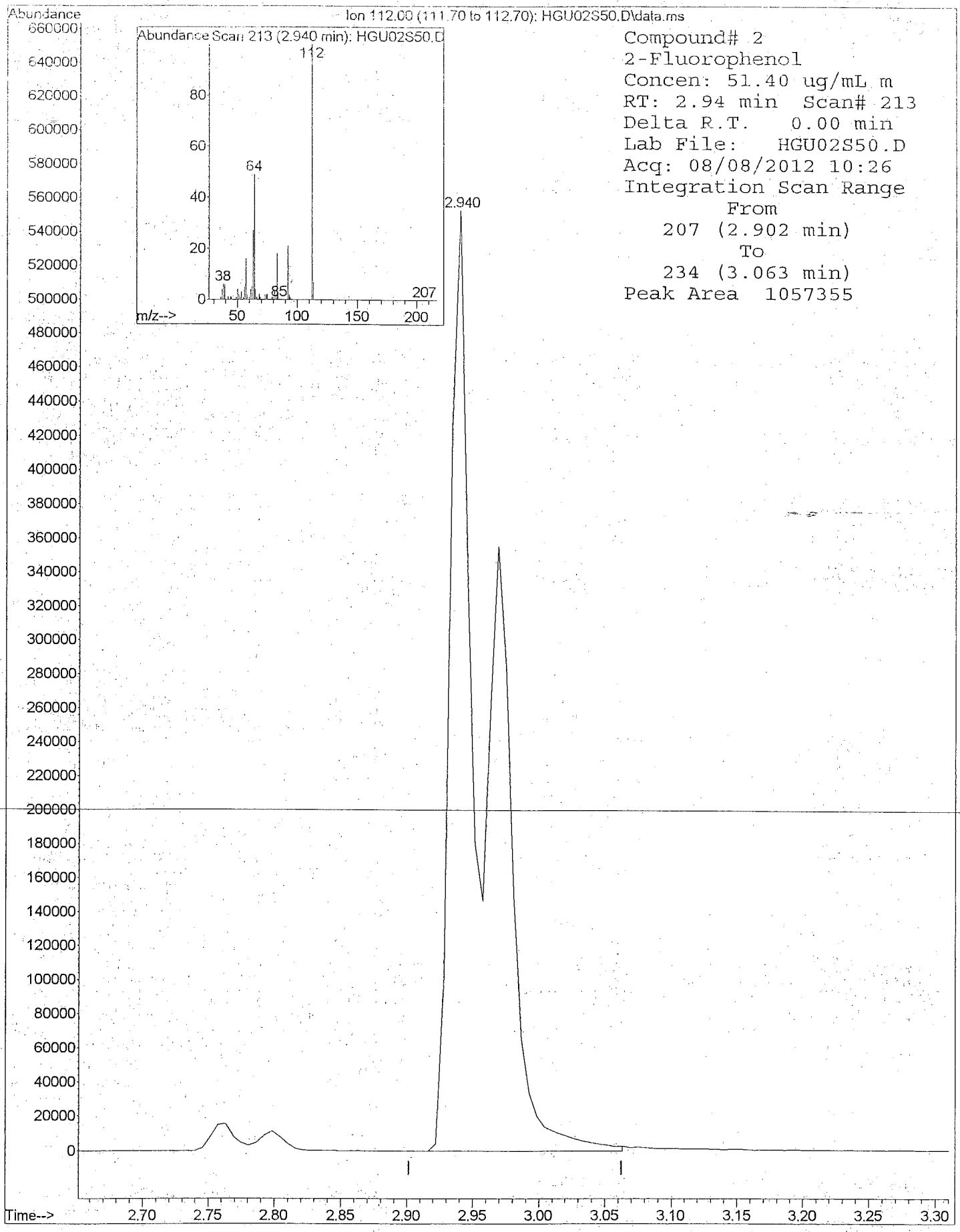
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU02S50.D Vial: 2
Acq On : 08/08/2012 10:26 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:00 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	612345	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2685634	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1537458	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2905275	40.00 ug/mL
12) Chrysene-d12	14.92	240	3449311	40.00 ug/mL
14) Perylene-d12	16.98	264	3127477	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	1057355	51.398ug/mL m
4) Phenol-d5	3.72	99	1371889	50.848ug/mL
7) Nitrobenzene-d5	4.56	82	1173697	50.982ug/mL
9) 2-Fluorobiphenyl	6.81	172	2890739	50.693ug/mL
11) 2,4,6-Tribromophenol	9.21	330	511120	52.257ug/mL
13) Terphenyl-d14	13.40	244	3359400	50.447ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	531164	49.961ug/mL m 98
5) 1,4-Dithiane	4.47	120	861261	50.006ug/mL 99

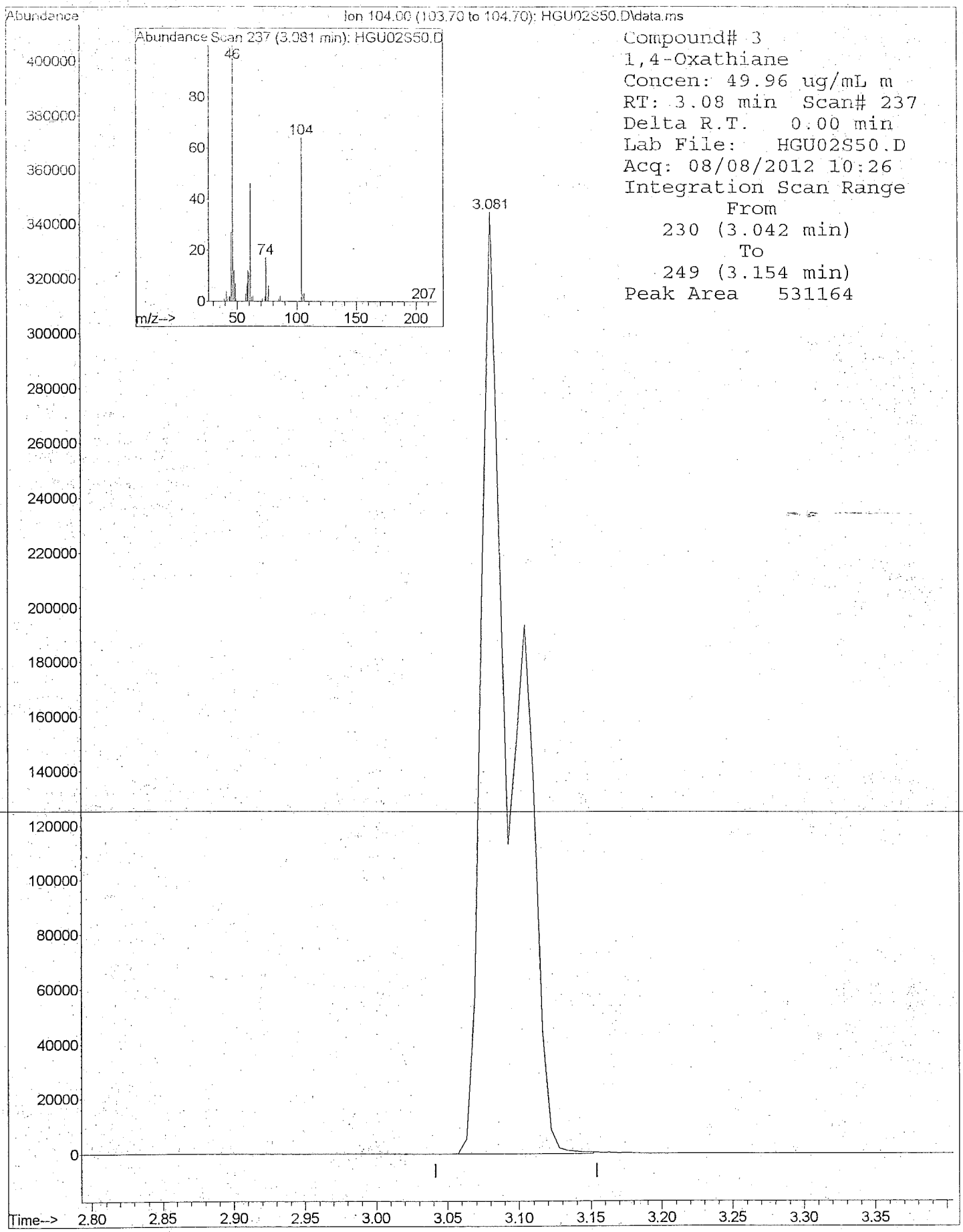
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

MANUAL INTEGRATION FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



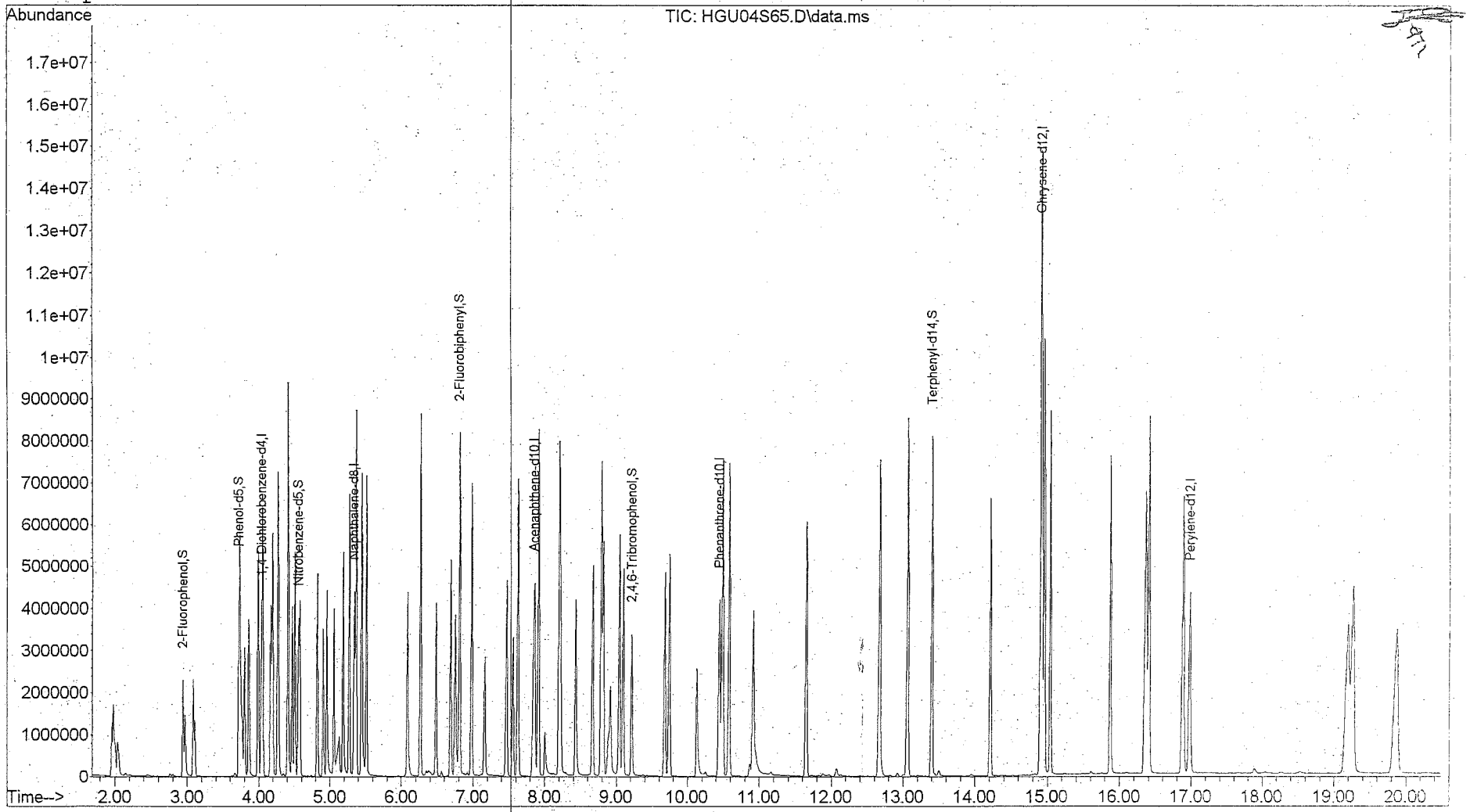
8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU04S65.D Vial: 4
Acq On : 08/08/2012 11:30 Operator: RAH
Sample : 8270 65 std 15971 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:39 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

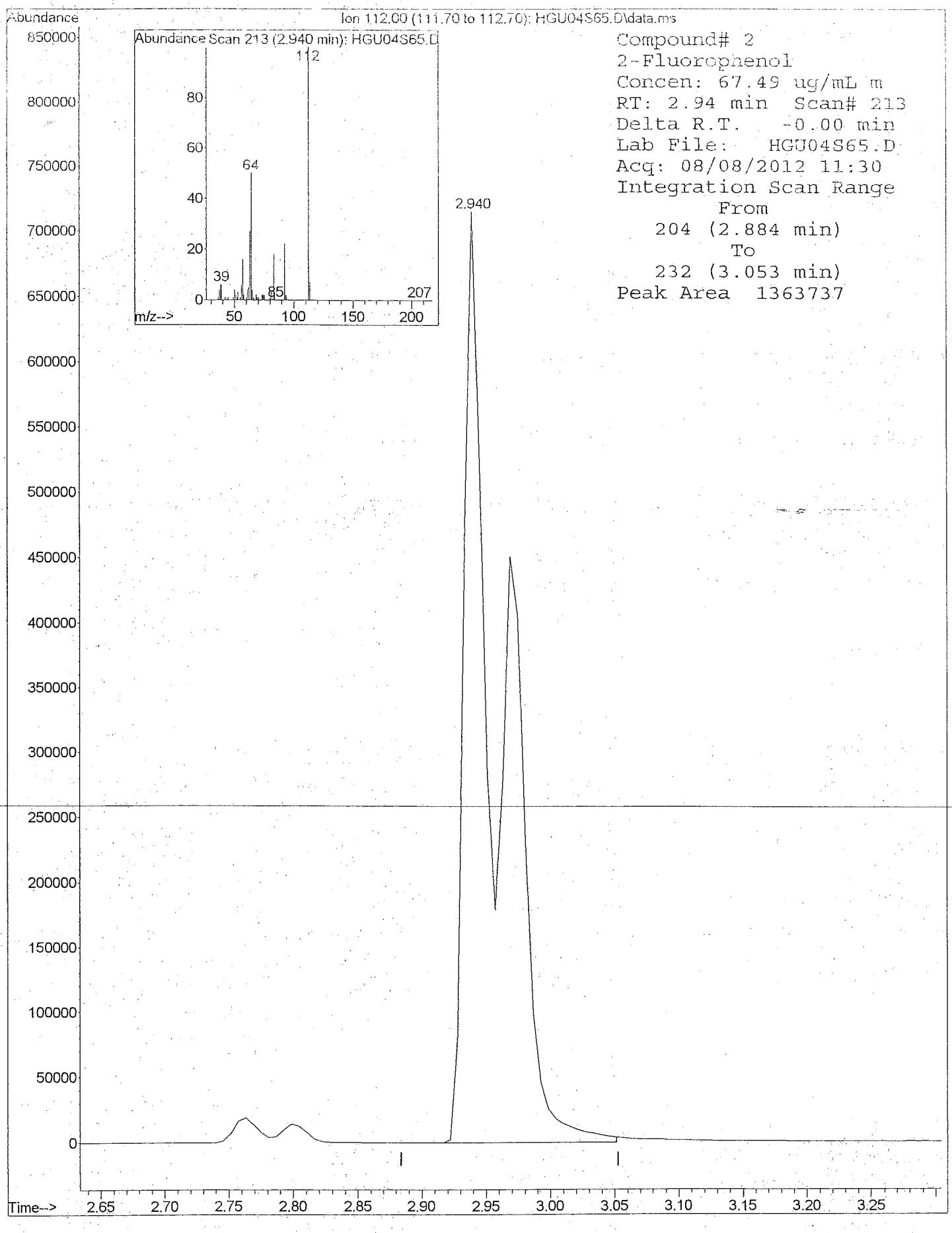
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU04S65.D Vial: 4
Acq On : 08/08/2012 11:30 Operator: RAH
Sample : 8270 65 std 15971 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:39 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	601456	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2621070	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1527619	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2869288	40.00 ug/mL
12) Chrysene-d12	14.92	240	3336798	40.00 ug/mL
14) Perylene-d12	16.98	264	2949965	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	1363737	67.491ug/mL m
4) Phenol-d5	3.72	99	1796093	67.776ug/mL
7) Nitrobenzene-d5	4.56	82	1514769	67.417ug/mL
9) 2-Fluorobiphenyl	6.81	172	3752969	66.238ug/mL
11) 2,4,6-Tribromophenol	9.22	330	665537	68.899ug/mL
13) Terphenyl-d14	13.40	244	4279647	66.433ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	671622	64.317ug/mL m 98
5) 1,4-Dithiane	4.47	120	1091903	64.545ug/mL 99

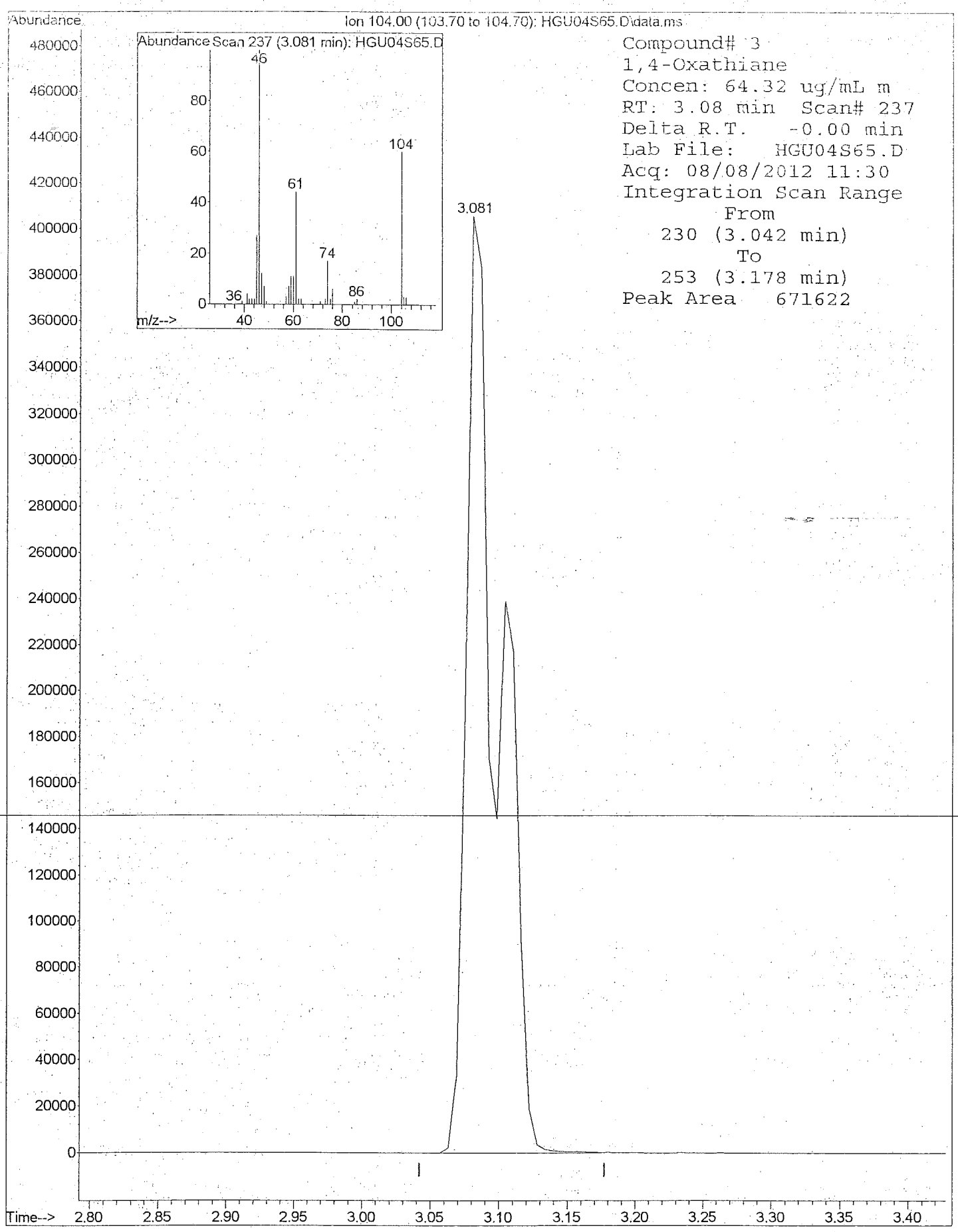
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

MANUAL INTEGRATION FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 65 std 15971 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



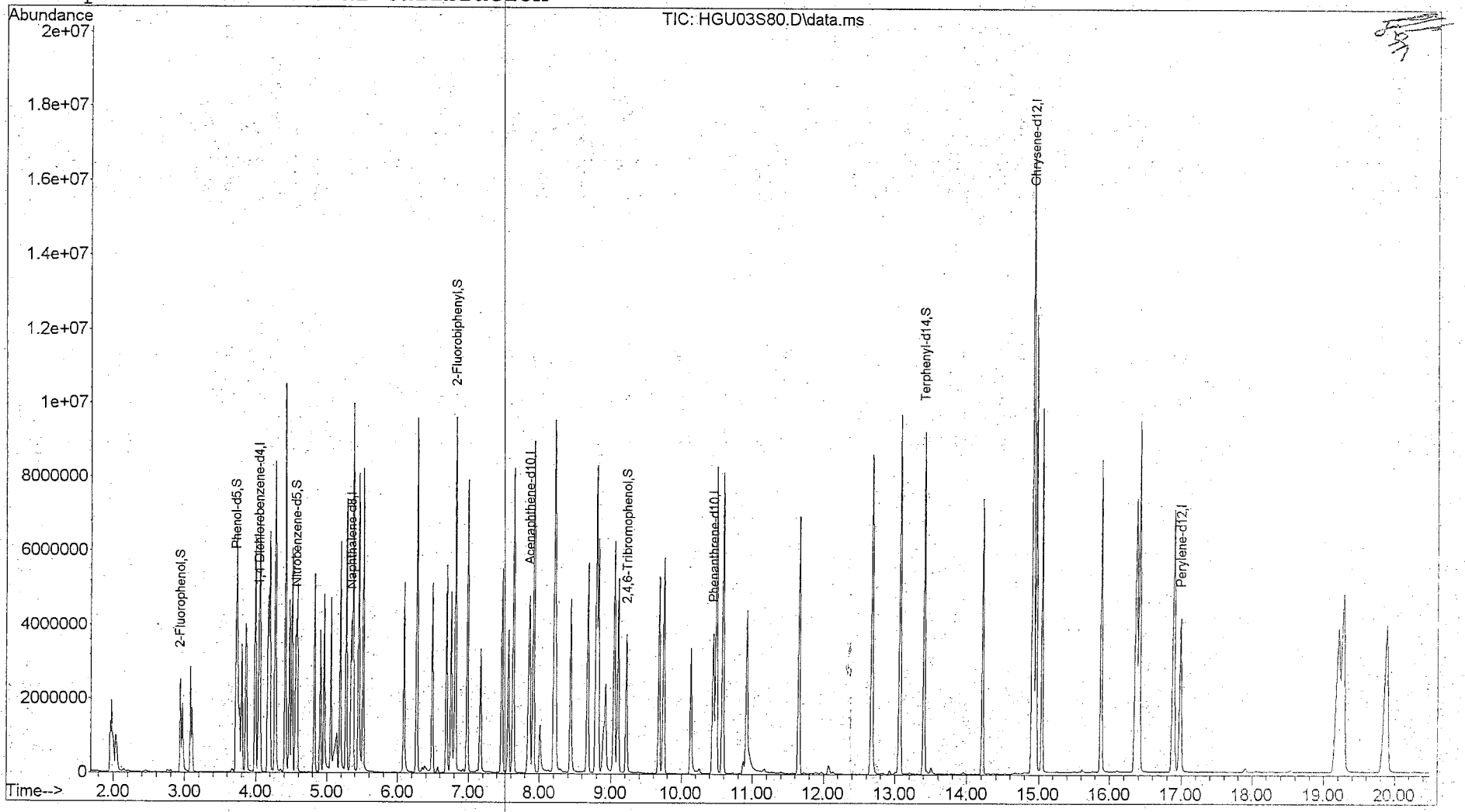
8270DOND.M 5975-H 8270DOND.M 8270 65 std 15971 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU03S80.D Vial: 3
Acq On : 08/08/2012 11:01 Operator: RAH
Sample : 8270 80 std 15970 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:20 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

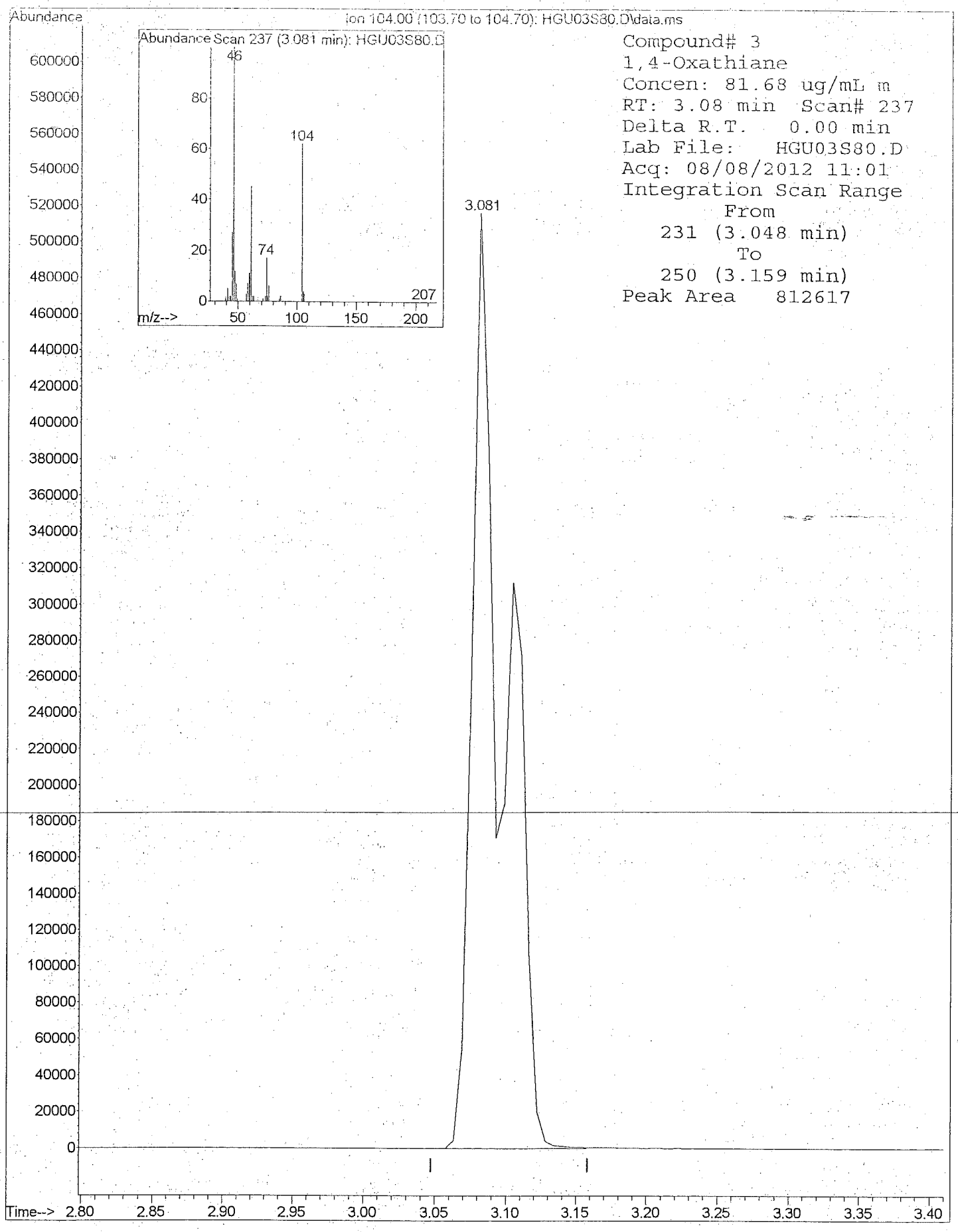
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU03S80.D Vial: 3
Acq On : 08/08/2012 11:01 Operator: RAH
Sample : 8270 80 std 15970 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:20 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	
1) 1,4-Dichlorobenzene-d4	4.03	152	573029	40.00 ug/mL	
6) Naphthalene-d8	5.35	136	2477577	40.00 ug/mL	
8) Acenaphthene-d10	7.86	164	1435287	40.00 ug/mL	
10) Phenanthrene-d10	10.45	188	2700617	40.00 ug/mL	
12) Chrysene-d12	14.93	240	3115162	40.00 ug/mL	
14) Perylene-d12	16.99	264	2729963	40.00 ug/mL	
System Monitoring Compounds					
2) 2-Fluorophenol	2.94	112	1588215	82.500ug/mL	m
4) Phenol-d5	3.72	99	2086917	82.657ug/mL	
7) Nitrobenzene-d5	4.56	82	1728073	81.365ug/mL	
9) 2-Fluorobiphenyl	6.82	172	4345820	81.635ug/mL	
11) 2,4,6-Tribromophenol	9.22	330	773542	85.081ug/mL	
13) Terphenyl-d14	13.40	244	4851775	80.673ug/mL	
Target Compounds					Qvalue
3) 1,4-Oxathiane	3.08	104	812617	81.679ug/mL	m 92
5) 1,4-Dithiane	4.47	120	1310784	81.328ug/mL	99

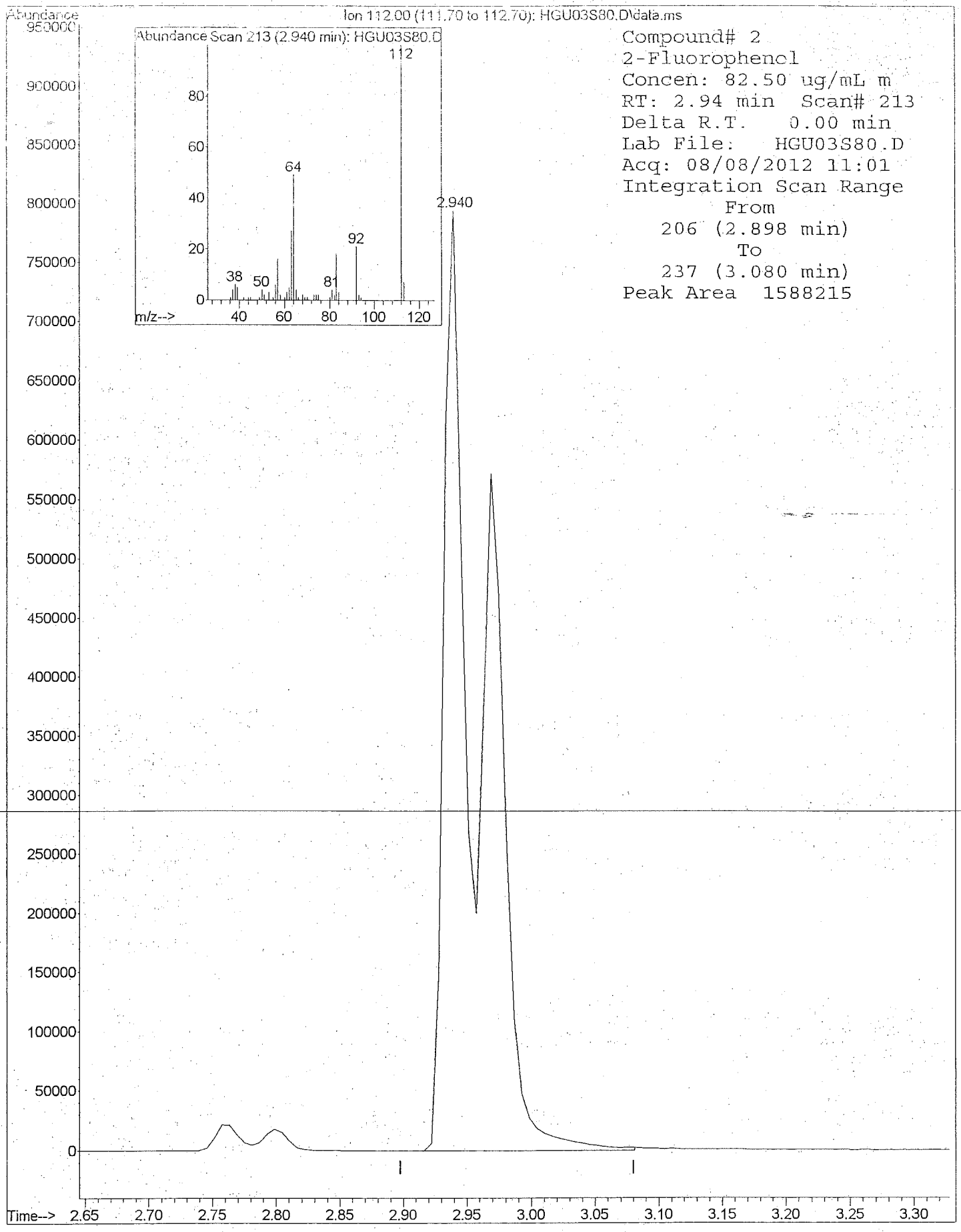
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



8270DOND.M 5975-H 8270DOND.M 8270 80 std 15970 . X:1/9/13

MANUAL INTEGRATION FOR 2-Fluorophenol



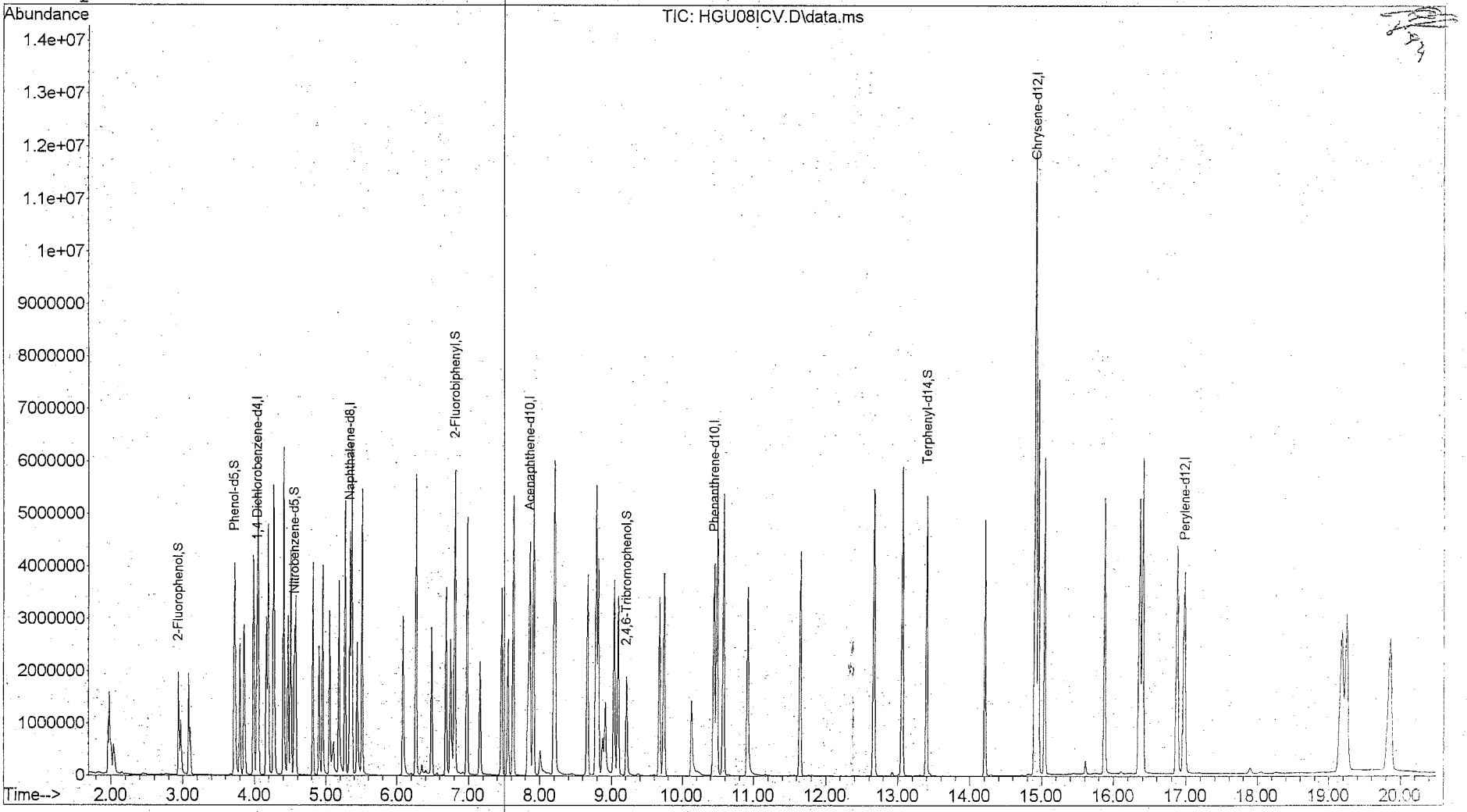
8270DOND.M 5975-H 8270DOND.M 8270 80 std 15970 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU08ICV.D Vial: 8
Acq On : 08/08/2012 13:29 Operator: RAH
Sample : 8270 ICV 15975 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 14:02:13 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

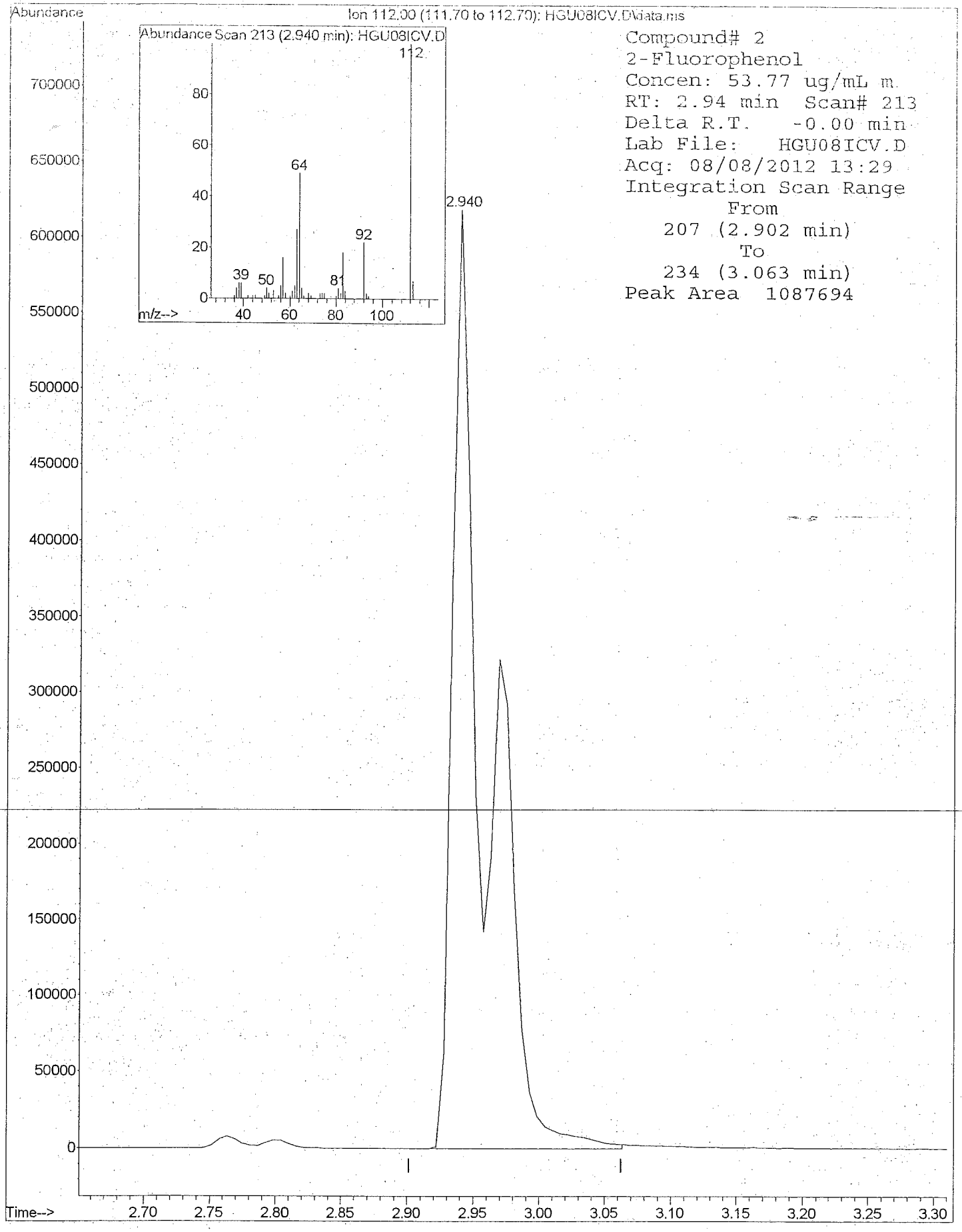
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU08ICV.D Vial: 8
Acq On : 08/08/2012 13:29 Operator: RAH
Sample : 8270 ICV 15975 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 14:02:13 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	602341	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2573963	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1459085	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2725972	40.00 ug/mL
12) Chrysene-d12	14.92	240	3150498	40.00 ug/mL
14) Perylene-d12	16.98	264	2694862	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	1087694	53.767ug/mL m
4) Phenol-d5	3.72	99	1280207	48.238ug/mL
7) Nitrobenzene-d5	4.56	82	1077669	48.841ug/mL
9) 2-Fluorobiphenyl	6.81	172	2644191	48.860ug/mL
11) 2,4,6-Tribromophenol	9.22	330	397803	43.347ug/mL
13) Terphenyl-d14	13.40	244	2731708	44.912ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	517926	49.537ug/mL m 99
5) 1,4-Dithiane	4.47	120	833107	49.175ug/mL 98

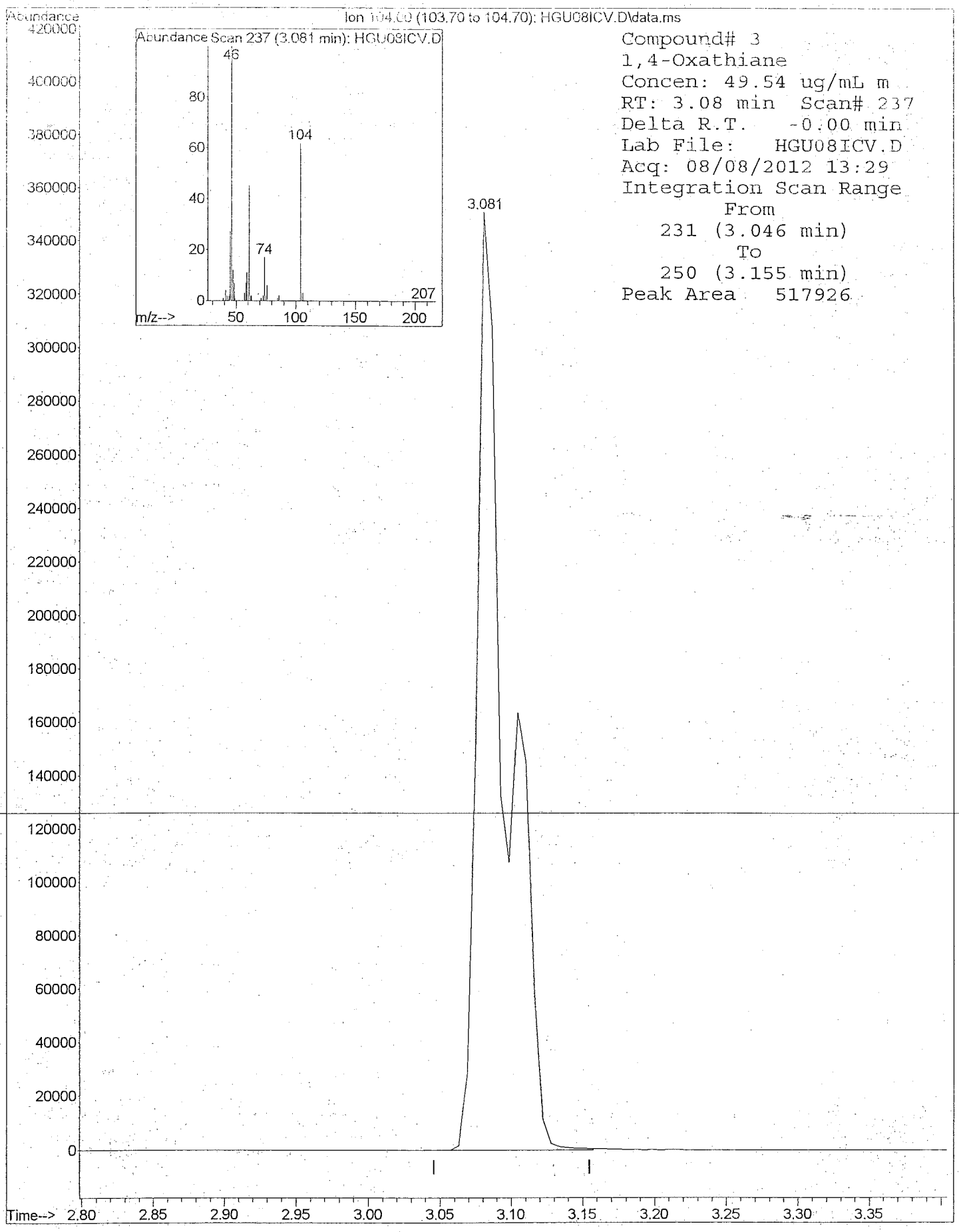
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 ICV 15975 . X:1/9/13

MANUAL INTEGRATION FOR 1,4-Oxathiane



8270DOND.M 5975-H 8270DOND.M 8270 ICV 15975 . X:1/9/13

Average of 6.239 to 6.251 min.: HGW01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.95	117	48.00	47	58.90	63	70.00	1708
37.00	700	49.00	1346	59.10	179	71.00	1696
38.00	1964	50.00	37352	60.00	2419	72.00	85
39.05	11339	51.05	135702	61.00	2496	73.00	4555
40.00	512	52.00	7208	62.00	2312	74.00	16870
41.05	612	52.95	410	63.00	5703	75.00	26040
42.00	607	54.00	201	64.00	635	76.05	7375
43.10	2983	55.05	3397	65.00	1292	77.05	175196
44.00	285	56.00	4457	66.00	108	78.00	12490
45.00	643	57.00	11966	67.05	796	79.00	13238
46.90	27	58.00	479	69.00	191394	80.00	9733

Average of 6.239 to 6.251 min.: HGW01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
81.00	13898	92.00	3235	103.00	2510	115.00	645
82.00	3457	93.00	20585	104.00	2683	116.05	3687
83.00	4560	94.00	1305	105.00	3481	116.95	44818
83.95	874	95.00	954	106.05	56	117.95	3372
85.00	3068	96.05	1210	107.00	56603	119.05	937
86.00	4102	97.10	1494	108.00	8422	120.00	872
87.00	2139	98.00	17249	110.00	107108	122.00	3377
87.95	622	99.00	12314	111.00	16515	123.00	5536
89.00	443	99.95	1101	112.00	2194	124.00	2951
89.95	152	101.00	7335	113.05	846	125.00	2642
91.00	3177	101.95	518	114.00	420	127.00	211858

Average of 6.239 to 6.251 min.: HGW01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
128.00	16192	139.00	473	151.90	1026	163.05	412
129.00	85923	140.00	1245	153.00	3362	164.05	963
130.00	7317	141.00	10727	153.95	2805	165.00	4319
131.00	1288	142.00	3532	155.00	6037	166.05	3435
132.00	614	143.00	2357	156.00	8863	167.00	23002
133.05	606	144.00	764	157.00	2518	168.00	9335
134.00	2454	145.05	625	158.00	2268	169.00	1663
135.00	6484	146.00	2162	159.00	1573	170.00	888
136.00	2523	147.00	5522	160.00	3071	171.05	1363
137.00	3069	148.00	12295	161.00	4965	172.00	2123
137.95	1097	151.00	1182	162.00	1605	173.05	2949

Average of 6.239 to 6.251 min.: HGW01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
174.00	5084	184.95	9179	196.00	19373	209.05	1136
175.00	9031	186.00	66890	198.00	519373	210.15	1450
176.05	3541	187.00	18475	199.00	35650	211.05	5298
177.00	4037	188.05	2056	200.00	2690	213.05	871
178.00	1482	188.95	3821	201.45	3558	214.05	467
178.95	17276	190.05	802	203.00	3531	215.00	1364
180.00	11710	191.05	2021	204.00	17298	216.00	2830
181.00	5474	192.00	5548	205.00	29449	217.00	31777
182.05	943	193.00	5882	206.00	126702	218.00	4156
183.05	618	194.05	1333	207.00	16058	219.05	556
183.95	1587	195.05	556	208.00	4287	221.00	36387

Average of 6.239 to 6.251 min.: HGW01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
223.00	6648	234.00	1922	245.05	8415	257.05	3770
224.00	73022	235.00	1942	246.00	10533	258.00	16773
225.00	19002	236.00	1497	246.95	2152	259.00	2809
226.05	2049	237.00	2194	247.95	564	260.05	581
227.00	28591	238.05	538	248.95	2336	261.05	585
227.95	3770	239.00	1107	250.00	478	263.00	160
229.00	6558	240.05	910	250.95	615	263.90	524
229.90	749	241.05	1673	252.05	641	265.00	6731
231.00	2788	242.05	4149	252.95	1307	265.90	893
231.95	630	243.05	4872	255.00	322595	266.95	91
233.00	586	244.00	62728	256.00	47921	269.00	172

Average of 6.239 to 6.251 min.: HGW01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
269.90	567	282.00	464	292.00	397	303.00	4786
271.05	705	283.00	1553	292.20	136	304.05	1305
272.10	1071	283.90	278	293.00	2805	304.95	120
273.00	10614	284.10	663	294.05	648	307.95	583
274.00	25917	285.00	1865	296.00	39485	308.95	405
275.00	151723	286.00	432	297.00	6051	310.00	527
276.00	19869	287.15	239	298.00	495	310.90	60
277.00	11406	288.00	95	299.00	214	311.90	98
278.00	1914	288.95	511	300.15	128	313.00	434
278.95	483	290.00	415	300.95	570	314.00	2010
281.05	136	290.95	315	302.05	573	315.00	4231

Average of 6.239 to 6.251 min.: HGW01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
316.00	2513	328.00	1287	342.00	435	365.00	15653
316.95	414	328.95	291	345.95	2747	365.95	2233
320.00	71	332.00	989	347.00	436	367.00	140
320.95	1377	333.00	1268	350.95	163	369.95	378
322.10	497	334.00	8093	352.05	3525	371.05	930
323.10	13750	335.05	2090	353.00	2675	372.05	5816
324.05	2575	335.95	254	354.05	3745	373.05	1548
324.95	263	338.80	64	355.05	852	374.10	223
326.00	213	339.05	176	356.00	59	377.00	146
326.20	91	339.95	200	358.95	298	383.00	1445
327.00	2542	341.05	1633	363.70	93	383.95	414

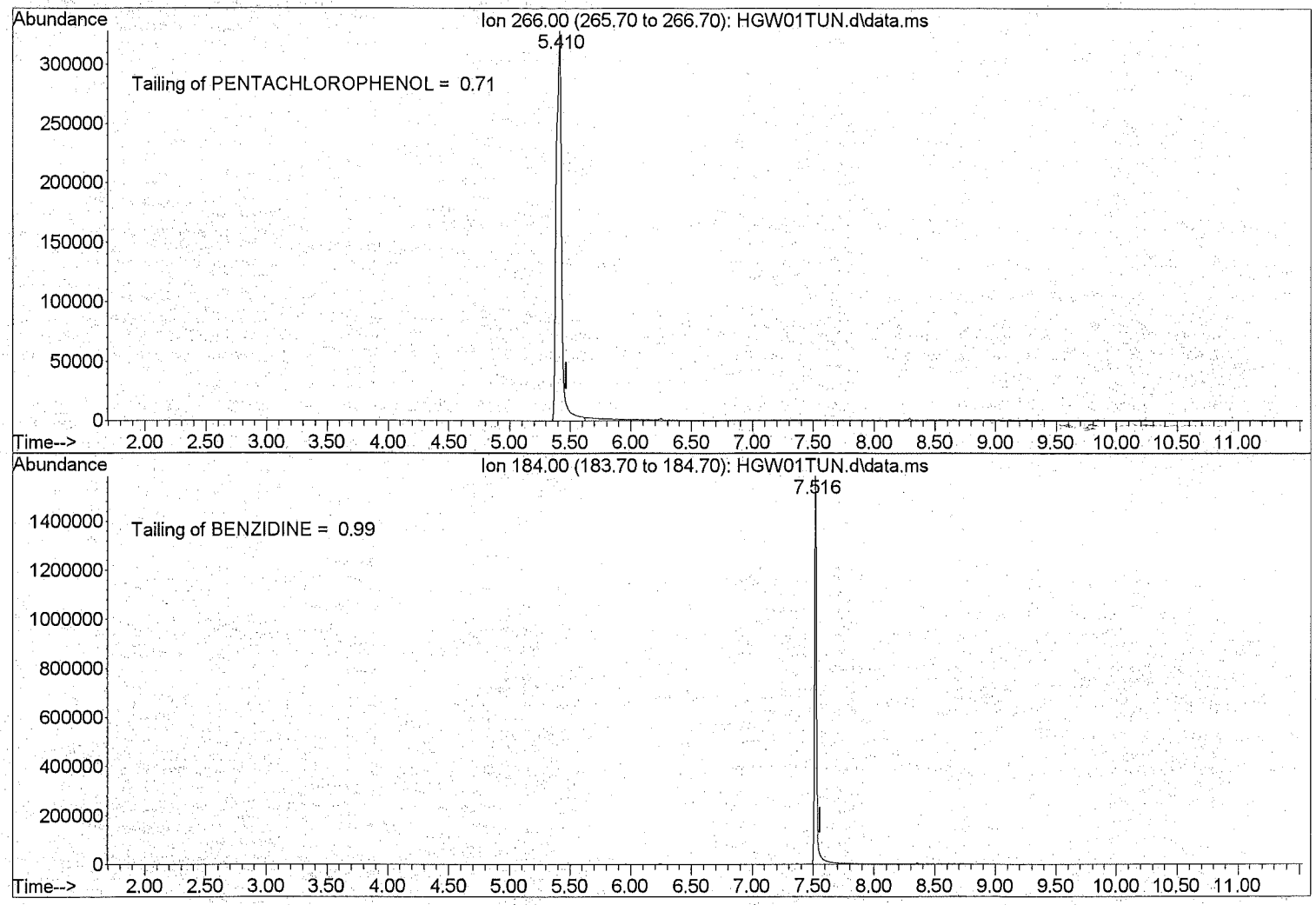
Average of 6.239 to 6.251 min.: HGW01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
385.00	58	423.10	16744	441.10	58533		
389.95	724	424.05	3322	442.10	387008		
391.00	517	425.00	325	443.10	74211		
392.00	396	435.50	57	444.10	6722		
401.05	376	436.40	67	444.95	399		
402.05	2019	436.75	153				
403.00	2782	437.45	202				
404.00	833	438.00	236				
414.90	83	438.80	267				
421.00	2359	439.25	537				
422.10	2125	439.50	395				

Data File: HGW01TUN.d
Date Acquired: 08/09/2012 09:47
Operator ID: RAH
Name: 8270 DFTPP 13808
Misc: X:1/11/13

Instrument: 5975-H
Acq Method: 8270DTUN.M
DA Method: 8270DTUN.M

Cal Title: EPA/CLP SOM01
Last Cal Update: Wed Nov 23 09:22:39 2011
X:1/11/13

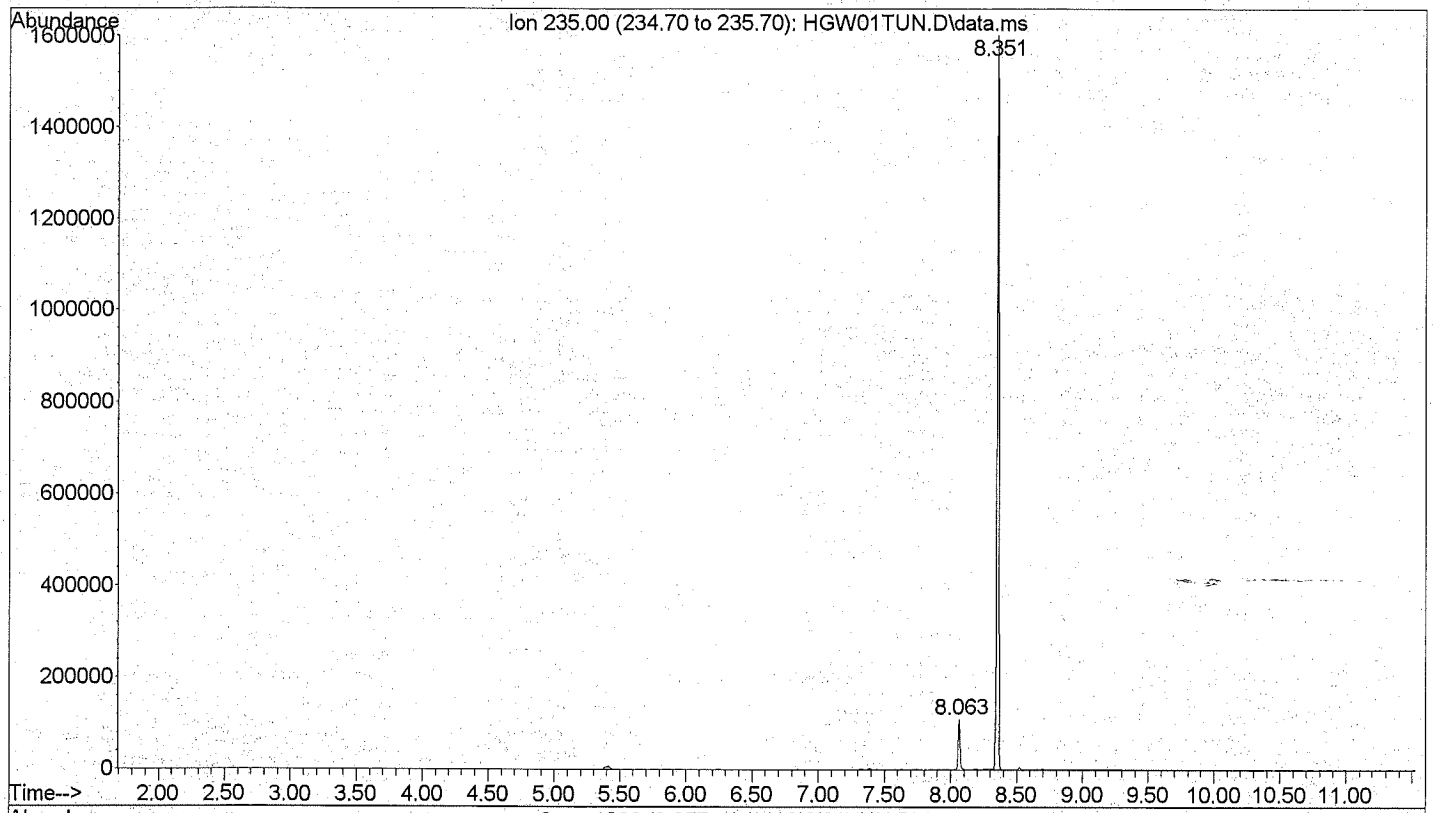


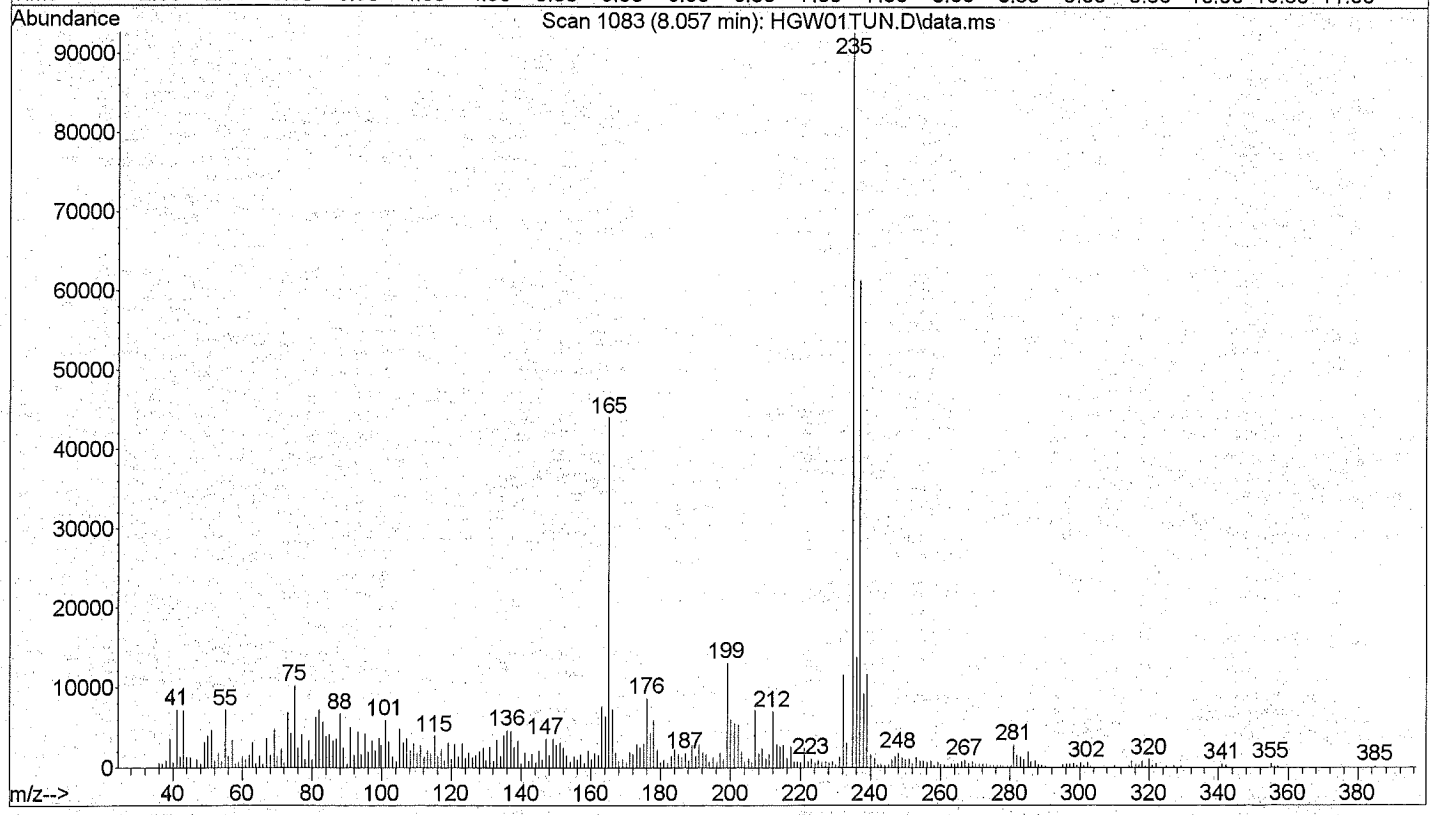
Ion 235.00 (234.70 to 235.70): HGW01TUN.D\data.ms
8270 DFTPP 13808

Peak #	Ret Time	Type	Width	Area	Start Time	End Time
1	8.063	rBV	0.094	109410	8.016	8.110
2	8.351	rVB	0.112	1544042	8.322	8.433

DDT Degradation = $\frac{109410}{109410 + 1544042} = 6.6\%$

File :D:\1\DATA\2012\AUG12\09AUG12H\HGW01TUN.D
Operator : RAH
Acquired : 9 Aug 2012 9:47 am using AcqMethod 8270DTUN.M
Instrument : 5975-H
Sample Name: 8270 DFTPP 13808
Misc Info : X:1/11/13
Vial Number: 1



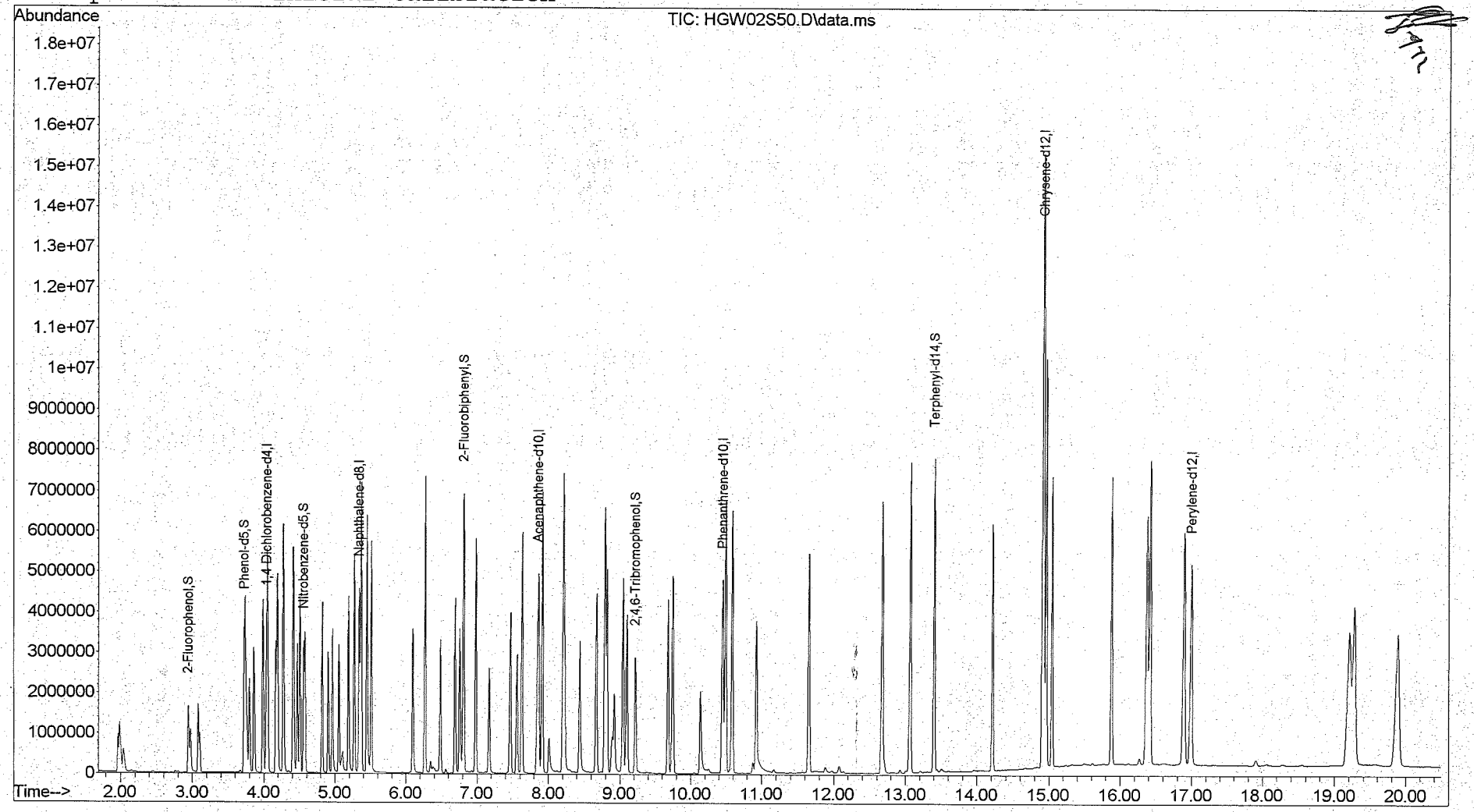


Quantitation Report

Data File : D:\1\DATA\2012\AUG12\09AUG12H\HGW02S50.D Vial: 2
Acq On : 08/09/2012 10:07 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 09 10:29:48 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

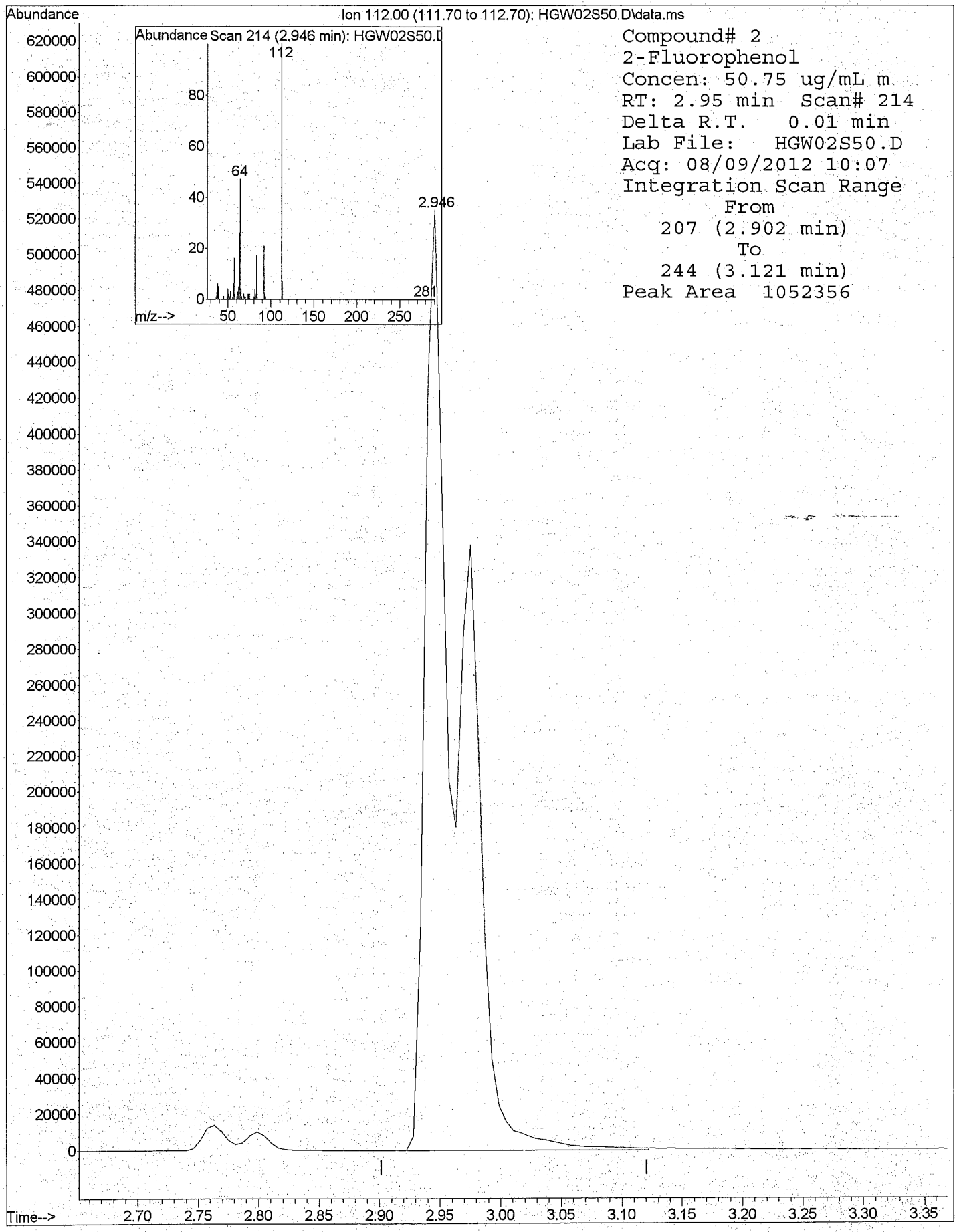
Data File : D:\1\DATA\2012\AUG12\09AUG12H\HGW02S50.D Vial: 2
Acq On : 08/09/2012 10:07 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 09 10:29:48 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	617440	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2748326	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1665713	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3295873	40.00 ug/mL
12) Chrysene-d12	14.93	240	3959164	40.00 ug/mL
14) Perylene-d12	16.99	264	3437480	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	1052356	50.748ug/mL m
4) Phenol-d5	3.72	99	1418613	52.146ug/mL
7) Nitrobenzene-d5	4.56	82	1222779	51.902ug/mL
9) 2-Fluorobiphenyl	6.81	172	3140140	50.827ug/mL
11) 2,4,6-Tribromophenol	9.22	330	580564	52.323ug/mL
13) Terphenyl-d14	13.40	244	3866750	50.588ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	506249	47.236ug/mL m 78
5) 1,4-Dithiane	4.47	120	844222	48.612ug/mL 97

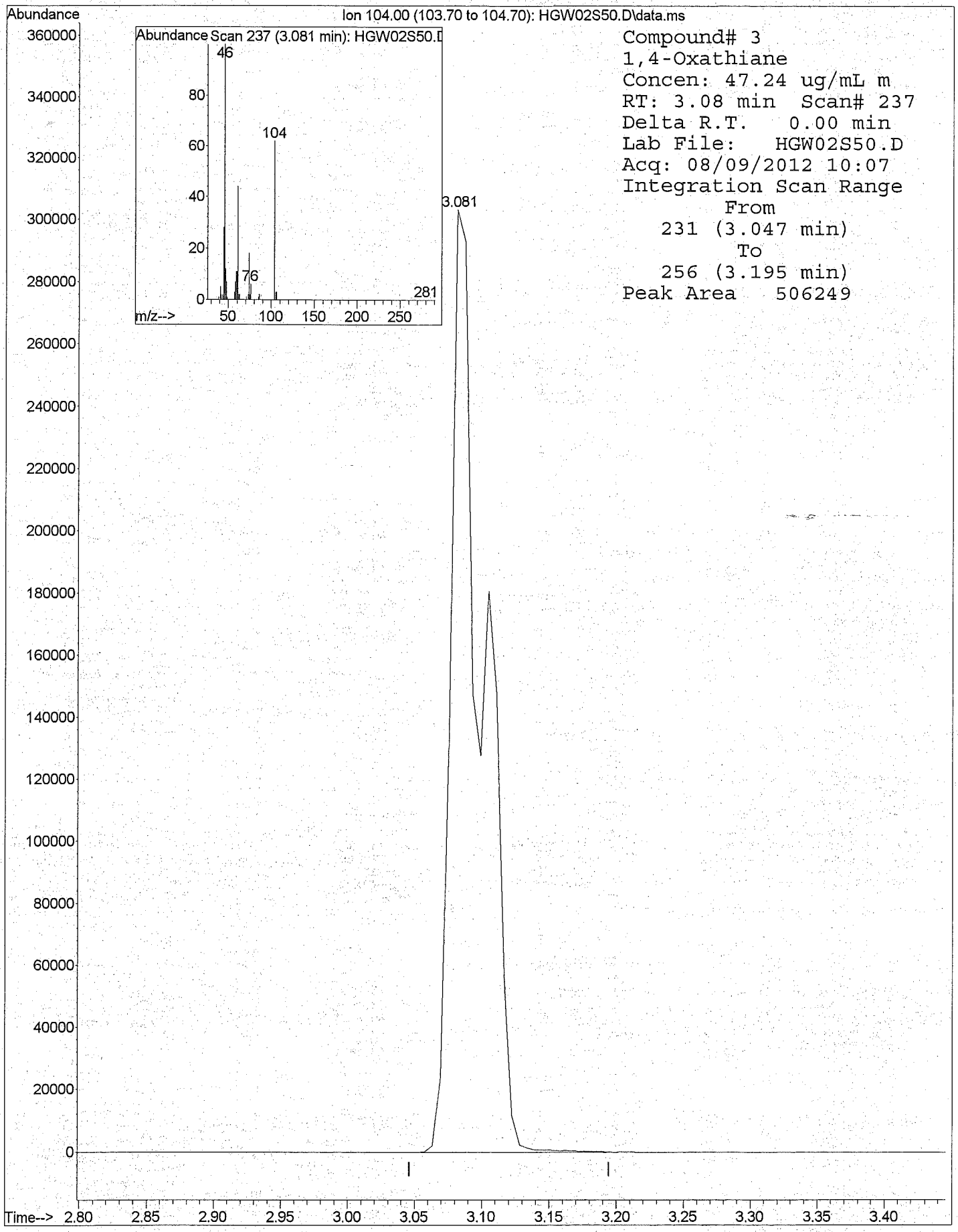
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

MANUAL INTEGRATION FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

PROJECT TITLE:
Fort Stewart

Earth Resources Technology, Inc.
6100 Frost Place
Laurel, MD 20707

Data Deliverable Group ERT-005
ALS#9980875

DoD QSM V.4.2
DATA PACKAGE

SAMPLES COLLECTED
August 1, 2012

Total Number of Pages 327

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Case Narrative

Earth Resources Technology, Inc.
Fort Stewart

ALS-Middletown
Case Narrative
ERT-005

Sample Management

This report contains the results of the analysis of one (1) water sample and fourteen (14) solid samples collected on August 1, 2012. Analytical results and quality control information are summarized in this data package.

Qualifier Symbol Definitions:

U = Qualifier indicates that the analyte was not detected above the LOD.
J = Qualifier indicates that the analyte value is between the DL and the LOQ.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds the calibration range.
P = Qualifier indicates that the RPD between the two analytical columns is greater than 40%.
NSC = Qualifier indicates that spike recoveries were not calculated based on the spiking concentration.

Result Symbol Definitions:

DL = The smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence.
LOD = The smallest analyte concentration that must be present in a sample in order to be detected at a high level of confidence.
LOQ = The lowest concentration that produces a quantitative result within specified limits of precision or bias.

Sample Receipt

Samples arrived at ALS via courier on August 2, 2012. Upon receipt, the samples were inspected and compared to the Chain of Custody. Sample temperature was documented on the enclosed Chain of Custody. Samples were received intact and properly preserved, unless noted on the enclosed Certificate of Analysis and/or Chain of Custody.

Subcontracting

Fifteen (15) samples were subcontracted for Method 8270/8321 analysis. Results are provided at the end of this report.

Totals Metals by SW-846 Method 6020A

Sample handling. One (1) water sample was analyzed for total metals on the Agilent 7700x using SW-846 Method 6020A. The sample was analyzed within the six-month holding time established for this method.

Calibration. All criteria associated with the calibration were within method control limits.

Blanks. Metals were not detected in the blanks.

Laboratory Control Samples. Recoveries were within method control limits.

Matrix Spike/Matrix Spike Duplicate. A matrix spike and matrix spike were performed on sample FTSW-HR-SO-37 (09.5) ER (9980875015) in this data deliverable. The MS and MSD recoveries and their RPDs were within method control limits.

Totals Metals by SW-846 Method 6020A

Sample handling. Fourteen (14) solid samples were digested and analyzed for total metals on the Agilent 7700x using SW-846 Method 6020A. The samples were analyzed within the six-month holding time established for this method.

Calibration. All criteria associated with the calibration were within method control limits.

Blanks. Metals were not detected in the blanks.

Laboratory Control Samples. Recoveries were within method control limits.

Matrix Spike/Matrix Spike Duplicate. A matrix spike and matrix spike duplicate were performed on sample FTSW-HR-SO-31 (9980875001) in this data deliverable. The MS and MSD recoveries and their RPDs were within method control limits.

Total Solids by SM 2540G

Sample handling. Fourteen (14) solid samples were analyzed for total solids by Standard Method 2540G for dry weight reporting purposes. The samples were analyzed within the 14-day method recommended hold time for dry weight reporting.

Duplicate. A duplicate analysis, identified as 1018298, was performed on sample 9980875011(FTSW-HR-SO-39). The relative percent difference between the results was within the QC limit of 5%.

Chain of Custody

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT! SAMPLER: INSTRUCTIONS ON THE BACK.

ALS Environmental (Ship to: 34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430)

Co. Name: ERT inc
Contact (Report to): Mike Gearheart Phone: 301-323-1403
Address: 6000 Frost Pl Suite A Laurel MD 20707
Bill to (if different than Report to): PO#:
Project Name/#: Ft. Stewart 3153-004 ALS Quote #:
TAT: Normal-Standard TAT is 10 business days. Rush-Subject to ALS approval and surcharges. Date Required: Approved By:
Email?: Y N Mike.Gearheart@ertcorp.com
Fax?: Y N

Page 1 of 3

Courier: Tracking #: 7958078 4257

Receipt Information (condition upon receipt): Preserved: Y N Cooler Temp: 2.4 Therm. ID#: 2

No. of Coolers: Notes:

Circle appropriate Y or N:
- Custody seals present? Y N
- (if present) Seals intact? Y N
- Received on ice? Y N
- COC/Labels complete/accurate? Y N
- Container in good condition? Y N
- Headspace/Volatiles? Y N
- Correct preservation? Y N
- Correct sample volume? Y N
- Correct containers? Y N

ANALYSES/METHOD REQUESTED

Container Type: G
Container Size: 4oz
Preservative: —

Matrix: SO
Enter Number of Containers Per Analysis: 1

HR-Arsenic only
Subcontract to Eastern Analytical

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	G or C	Matrix	Enter Number of Containers Per Analysis
1	FTSW-HR-SO-31		8/1/12	0744	G	SO	1
2	FTSW-HR-SO-31 DUP		8/1/12	0744	G	SO	1
3	FTSW-HR-SO-31MS		8/1/12	0746	G	SO	1
4	FTSW-HR-SO-31MSD		8/1/12	0751	G	SO	1
5	FTSW-HR-SO-32(10)		8/1/12	0853	G	SO	1
6	FTSW-1-HR-SO-33		8/1/12	0924	G	SO	1
7	FTSW-HR-SO-34 (10)		8/1/12	0916	G	SO	1
8	FTSW-HR-S3-34 (10) DUP		8/1/12	1016	G	SO	1

SAMPLED BY (Please Print): Rebekah McCoy

LOGGED BY (Signature): [illegible] DATE 8/2/12 MONTH

RELINQUISHED BY (Signature): [illegible] Date 8/2/12 Time 1105

Relinquished By (Company Name): Date Time

Received By (Company Name): Date Time

1 Rebekah McCoy ERT 8/1/12 1530 2 [illegible] 8/2/12 1105

3 4 5 6 7 8 9 10

ALS FIELD SERVICES: Pickup Labor Composite Sampling Rental Equipment Other

Data Deliverables: Standard CLP-like NJ-Reduced NJ-Full Other (If yes, format type:) EDD's (If yes, format type:)

State Samples Collected In? MD NJ NY PA

State Forms? MD NJ NY PA Other

DOD Criteria Required? Yes No

*Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OW=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WW=Wipe; WW=Wastewater

**Container Type: AG=Amber Glass; CG=Clear Glass; PL=Plastic; Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

* G=Grab; C=Composite

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Rev 6/2011

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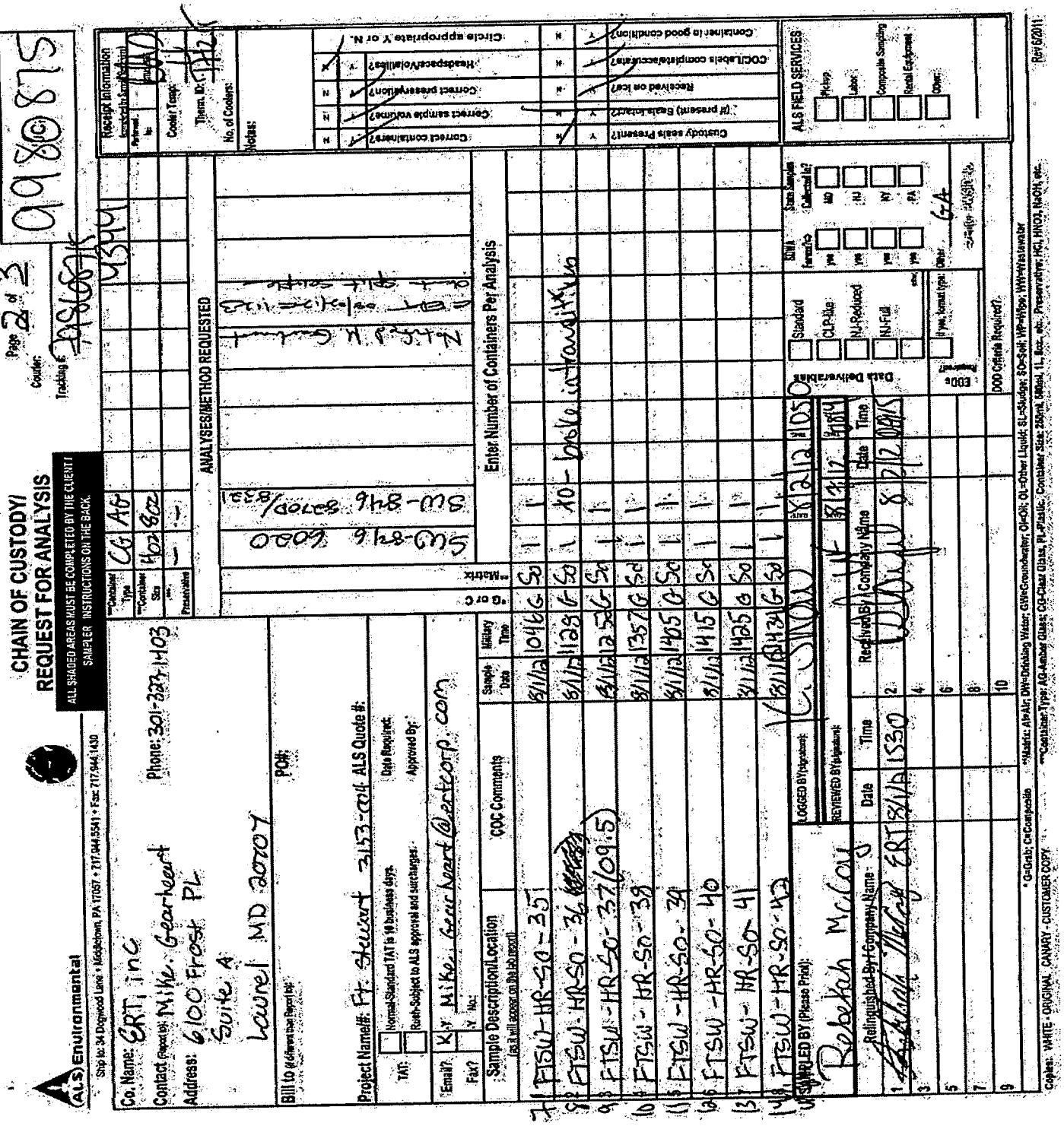
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



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Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT! SAMPLER INSTRUCTIONS ON THE BACK

Page 3 of 3 — Courier: — Tracking #: 7908874300 — 09980875

ALS Environmental — Ship to: 34 Dogwood Lane ▪ Middletown, PA 17057 ▪ 717.944.5541 ▪ Fax: 717.944.1430

Co. Name: EAT, Inc — Phone: 301-323-1403
Contact Person: Mike Gearheart
Address: 6100 Frost Pl. Suite A, Laurel MD 20707
Bill to (if different than Report to): — PO#:
Project Name/#: Ft. Stewart 3153-02-4 — ALS Quote #:
Email: Y N Mike.Gearheart@eaterp.com — Fax: Y N No.:

TAT: Normal-Standard TAT is 10 business days. Rush-Subject to ALS approval and surcharges. — Date Required: — Approved By:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	# of Containers	Matrix (S or L)	Container Type	Container Size	Preservative
1 FTSW-HR-SS-37(0,5) ERB		8/1/12	1340	2	W	AG	1L	HNO3
2								
3								
4								
5								
6								
7								
8								

ANALYSES/METHOD REQUESTED — Enter Number of Containers Per Analysis

1 — 8260 TCL VOCs
1 — 8270 TCL SVOCs
2 — TCL PEST/PCBs

SAMPLED BY (Please Print): Rebekah McCord — Relinquished By / Company Name: Rebekah McCord ERT — Date: 8/1/12 — Time: 1530

LOGGED BY (signature): K. Simms — RECEIVED BY (signature): — Received By / Company Name: — Date: 8/2/12 — Time: 0915

Receipt Information: Ice present? Y / N — Cooler Temp: 4.7 — Therm. ID: #17 — No. of Coolers: 1 — Notes:

	Y	N
Custody seals Present?	Y	
(if present) Seals Intact?		N
Received on ice?	Y	
COCs/labels complete/accurate?	Y	
Container in good condition?	Y	
Contact sample volume?	Y	N
Contact preservation?	Y	N
Headspace/Volatiles?	Y	N
Circle appropriate Y or N.		

ALS FIELD SERVICES: Pickup — Labor — Composite Sampling — Rental Equipment — Other

Data Deliverables: Standard — CLP-like — NJ-Reduced — NJ-Full — If yes, format type: — EDDs: Equis — Other

State Samples Collected In? MD NJ NY PA

Soil: Y N — Format: Y N — Other: 64

DOD Criteria Required? Y N

Rev 6/2011

Copies: WHITE - ORIGINAL / CANARY - CUSTOMER COPY — *Grab; C=Composite — **Matrix: A=Air; DW=Drinking Water; GW=Groundwater; O=Oil; O.L=Other Liquid; SL=Sludge; S=Soil; WP=Wipe; WW=Wastewater — ***Container Type: AG=Amber Glass; CG=Clear Glass; PL=Plastic; Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

FedEx Shipment Receipt

Address Information

Ship to:	**Ship from:**
ALS - UT	Steve Smith
ALS - UT	
960 LEVOY DR	34 DOGWOOD LANE
SALT LAKE CITY, UT	MIDDLETOWN, PA
84123-2502	17057
US	US
0000000000	7179445541

Shipment Information:
Tracking no.: 793862937156
Ship date: 08/02/2012
Estimated shipping charges: 164.45

Package Information
Service type: Priority Overnight
Package type: Your Packaging
Number of packages: 1
Total weight: 62 LBS
Declared Value: 0.00 USD
Special Services:
Pickup/Drop-off: Drop off package at FedEx location

Billing Information:
Bill transportation to: MyAccount-686
Your reference: Summa's
P.O. no.:
Invoice no.:
Department no.:

Thank you for shipping online with FedEx ShipManager at fedex.com.

Please Note
FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $500, e.g., jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits. Consult the applicable FedEx Service Guide for details.
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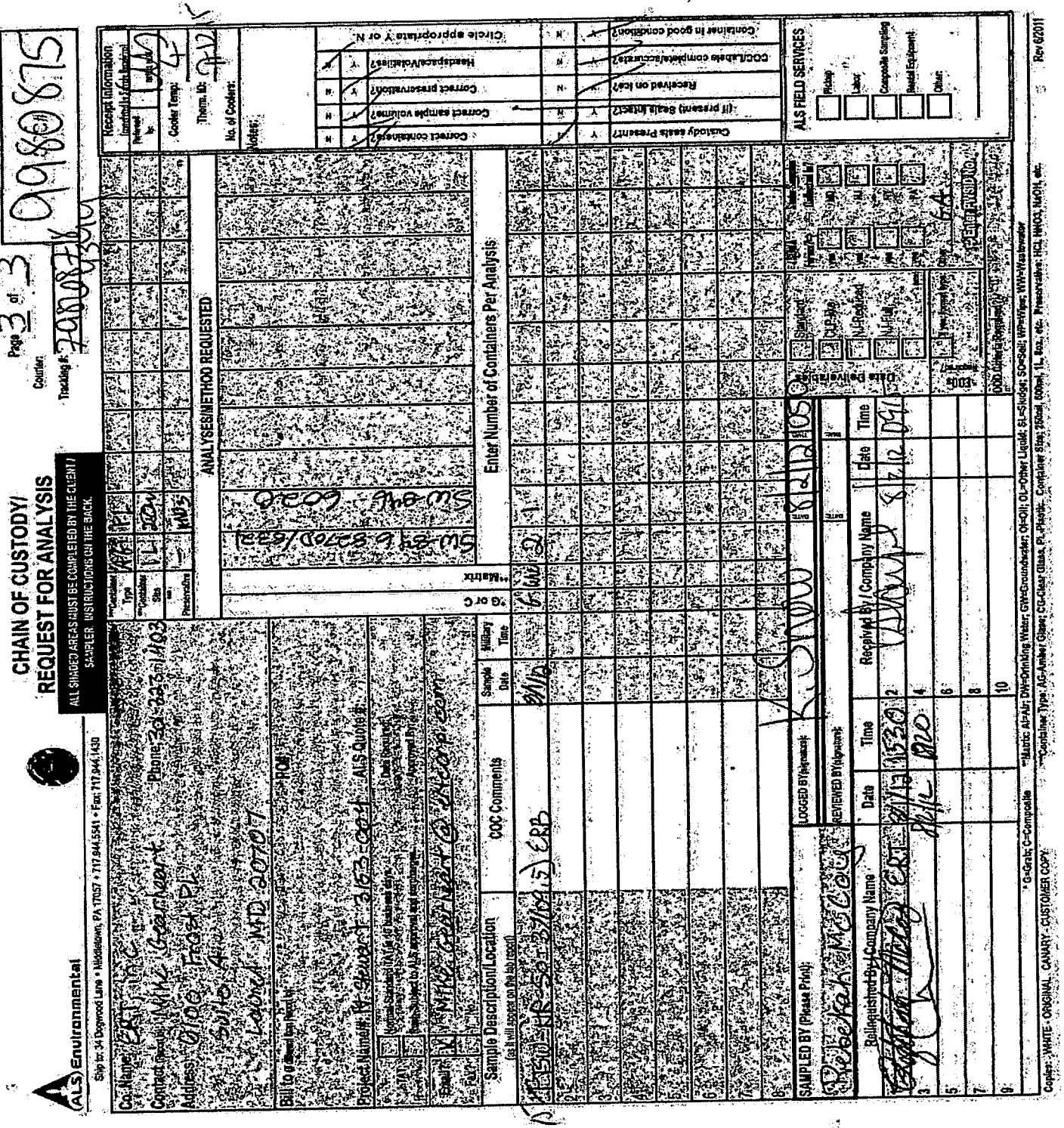

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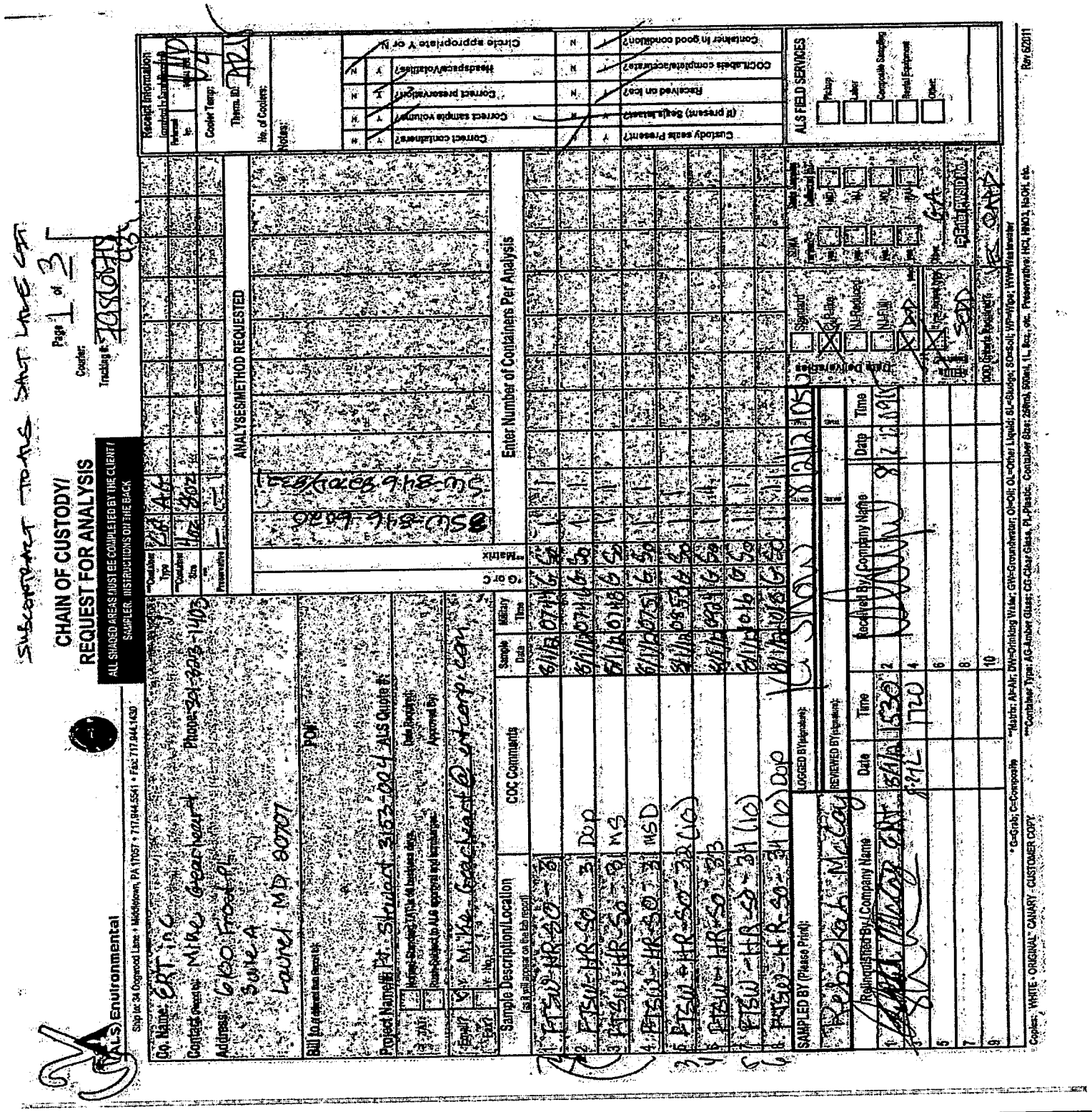

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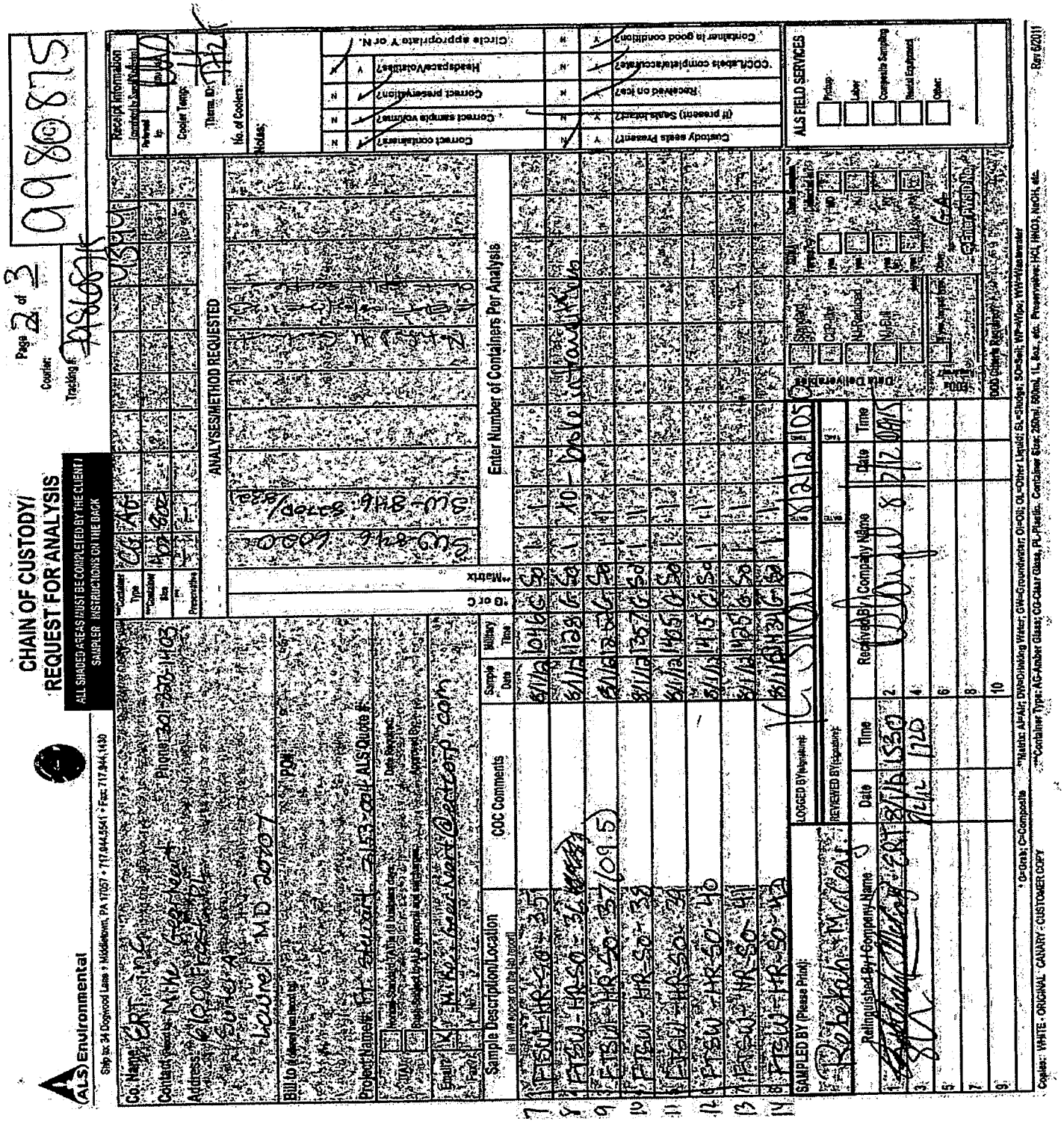
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



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Internal Chain of Custody

Work Order: 9980875

9980875001-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875001-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:59	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875001-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875001-B	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875001-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875001-D	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875001-E	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875001-F	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875001-G	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

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Internal Chain of Custody
Work Order: 9980875

9980875002-A — **G - CLEAR GLASS**

Transfer Date	To Location	Transfer Reason	Transferred To
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875002-A1 — **OPHG - Output Container - HG**

Transfer Date	To Location	Transfer Reason	Transferred To
08-07-12 05:59	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875002-A2 — **OPHG - Output Container - HG**

Transfer Date	To Location	Transfer Reason	Transferred To
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875002-B — **COC - Chain of Custody**

Transfer Date	To Location	Transfer Reason	Transferred To
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875002-C — **G - CLEAR GLASS**

Transfer Date	To Location	Transfer Reason	Transferred To
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875003-A — **G - CLEAR GLASS**

Transfer Date	To Location	Transfer Reason	Transferred To
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875003-A1 — **OPHG - Output Container - HG**

Transfer Date	To Location	Transfer Reason	Transferred To
08-07-12 05:59	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875003-A2 — **OPHG - Output Container - HG**

Transfer Date	To Location	Transfer Reason	Transferred To
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875003-B — **COC - Chain of Custody**

Transfer Date	To Location	Transfer Reason	Transferred To
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875003-C — **G - CLEAR GLASS**

Transfer Date	To Location	Transfer Reason	Transferred To
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

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Internal Chain of Custody
Work Order: 9980875

9980875004-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875004-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:59	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875004-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875004-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875004-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875005-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875005-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:59	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875005-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875005-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875005-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

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Internal Chain of Custody
Work Order: 9980875

9980875006-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875006-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:59	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875006-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875006-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875006-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875007-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875007-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:59	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875007-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875007-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875007-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

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Internal Chain of Custody
Work Order: 9980875

9980875008-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875008-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:59	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875008-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875008-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875008-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:33	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 11:33	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875009-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875009-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:59	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875009-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875009-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875009-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

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Internal Chain of Custody
Work Order: 9980875

9980875010-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875010-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:59	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875010-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875010-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875010-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875011-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875011-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:59	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875011-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875011-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875011-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

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Internal Chain of Custody
Work Order: 9980875

9980875012-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875012-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:59	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875012-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875012-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875012-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875013-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875013-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 05:59	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875013-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875013-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875013-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

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Internal Chain of Custody
Work Order: 9980875

9980875014-A	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875014-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 06:00	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875014-A2	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-08-12 06:21	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875014-B	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875014-C	G - CLEAR GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875015-A	P - PLASTIC		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:03	META-LAB	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875015-A1	OPHG - Output Container - HG		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-07-12 12:40	META-LAB	6020/3015 ANALYSIS	Olley, Mr. Matthew W.
08-07-12 06:01	INORPREP-LAB		Kauffman, Mr. Kevin M

9980875015-B	A - AMBER GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875015-C	A - AMBER GLASS		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 11:02	NEW-WALKIN	STORAGE	Snow, Ms. Kelli A.
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

9980875015-D	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**

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Internal Chain of Custody

Work Order: 9980875

9980875015-D (cont)	COC - Chain of Custody		
Transfer Date	**To Location**	**Transfer Reason**	**Transferred To**
08-02-12 10:50	RECEIVING	LOGIN	Snow, Ms. Kelli A.
08-02-12 09:15	*Sample Received At Lab*		

Certificate of Analysis

ALS Environmental

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August 31, 2012

Mr. Mike Gearhart
Earth Resources Technology, Inc.
6100 Frost Place
Suite A
Laurel, MD 20707

Certificate of Analysis

Project Name:	**Ft. Stewart GA project**	Workorder:	**9980875**
Purchase Order:		Workorder ID:	**ERT005|Ft. Stewart 3153-004**

Dear Mr. Gearhart,

Enclosed are the analytical results for samples received by the laboratory on Thursday, August 02, 2012.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Vicki Forney (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

ALS Environmental

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SAMPLE SUMMARY

Workorder: 9980875 ERT005|Ft. Stewart 3153-004 Discard Date: 09/14/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9980875001	FTSW-HR-SO-31	Solid	8/1/12 07:44	8/2/12 09:15	Customer
9980875002	FTSW-HR-SO-31DUP	Solid	8/1/12 07:46	8/2/12 09:15	Customer
9980875003	FTSW-HR-SO-32 (10)	Solid	8/1/12 08:53	8/2/12 09:15	Customer
9980875004	FTSW-HR-SO-33	Solid	8/1/12 09:24	8/2/12 09:15	Customer
9980875005	FTSW-HR-SO-34 (10)	Solid	8/1/12 10:16	8/2/12 09:15	Customer
9980875006	FTSW-HR-SO-34 (10) DUP	Solid	8/1/12 10:18	8/2/12 09:15	Customer
9980875007	FTSW-HR-SO-35	Solid	8/1/12 10:46	8/2/12 09:15	Customer
9980875008	FTSW-HR-SO-36	Solid	8/1/12 11:28	8/2/12 09:15	Customer
9980875009	FTSW-HR-SO-37 (09.5)	Solid	8/1/12 12:52	8/2/12 09:15	Customer
9980875010	FTSW-HR-SO-38	Solid	8/1/12 13:57	8/2/12 09:15	Customer
9980875011	FTSW-HR-SO-39	Solid	8/1/12 14:05	8/2/12 09:15	Customer
9980875012	FTSW-HR-SO-40	Solid	8/1/12 14:15	8/2/12 09:15	Customer
9980875013	FTSW-HR-SO-41	Solid	8/1/12 14:25	8/2/12 09:15	Customer
9980875014	FTSW-HR-SO-42	Solid	8/1/12 14:34	8/2/12 09:15	Customer
9980875015	FTSW-HR-SO-37 (09.5) ERB	Water	8/1/12 13:40	8/2/12 09:15	Customer

Workorder Comments:

Analytical results attached from ALS-Salt Lake City for 8270/8321 results. VLF

These reports were modified on 8/31/12 to replace the subcontracting data with updated reports. VLF

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SAMPLE SUMMARY

Workorder: 9980875 ERT005|Ft. Stewart 3153-004 Discard Date: 09/14/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

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ANALYTICAL RESULTS

Workorder: 9980875 ERT005|Ft. Stewart 3153-004

Lab ID: **9980875001** Date Collected: 8/1/2012 07:44 Matrix: Solid

Sample ID: **FTSW-HR-SO-31** Date Received: 8/2/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	11.0	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
Total Solids	89.0	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
METALS											
Arsenic, Total	1.0U	mg/kg		1.6	1.0	0.52	SW846 6020A	8/8/12	8/13/12 19:55	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 20:31	CLT	E

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9980875 ERT005|Ft. Stewart 3153-004

Lab ID: **9980875002** Date Collected: 8/1/2012 07:46 Matrix: Solid

Sample ID: **FTSW-HR-SO-31DUP** Date Received: 8/2/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	12.3	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
Total Solids	87.7	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
METALS											
Arsenic, Total	0.82J	mg/kg		1.6	1.1	0.55	SW846 6020A	8/8/12	8/13/12 20:20	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 22:20	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9980875 ERT005|Ft. Stewart 3153-004

Lab ID: **9980875003** Date Collected: 8/1/2012 08:53 Matrix: Solid

Sample ID: **FTSW-HR-SO-32 (10)** Date Received: 8/2/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	19.2	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
Total Solids	80.8	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
METALS											
Arsenic, Total	1.1U	mg/kg		1.7	1.1	0.56	SW846 6020A	8/8/12	8/13/12 20:23	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 22:57	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980875 ERT005|Ft. Stewart 3153-004

Lab ID: **9980875004** Date Collected: 8/1/2012 09:24 Matrix: Solid

Sample ID: **FTSW-HR-SO-33** Date Received: 8/2/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	6.0	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
Total Solids	94.0	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
METALS											
Arsenic, Total	0.55J	mg/kg		1.6	1.0	0.52	SW846 6020A	8/8/12	8/13/12 20:26	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/15/12 23:33	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980875 ERT005|Ft. Stewart 3153-004

Lab ID: **9980875005** Date Collected: 8/1/2012 10:16 Matrix: Solid

Sample ID: **FTSW-HR-SO-34 (10)** Date Received: 8/2/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	22.4	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
Total Solids	77.6	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
METALS											
Arsenic, Total	1.1U	mg/kg		1.6	1.1	0.54	SW846 6020A	8/8/12	8/13/12 20:30	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/16/12 00:10	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980875 ERT005|Ft. Stewart 3153-004

Lab ID: **9980875006** Date Collected: 8/1/2012 10:18 Matrix: Solid

Sample ID: **FTSW-HR-SO-34 (10) DUP** Date Received: 8/2/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	22.5	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
Total Solids	77.5	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
METALS											
Arsenic, Total	1.1U	mg/kg		1.7	1.1	0.57	SW846 6020A	8/8/12	8/13/12 20:33	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/16/12 01:22	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980875 ERT005|Ft. Stewart 3153-004

Lab ID: **9980875007** Date Collected: 8/1/2012 10:46 Matrix: Solid

Sample ID: **FTSW-HR-SO-35** Date Received: 8/2/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	11.3	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
Total Solids	88.7	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
METALS											
Arsenic, Total	0.99U	mg/kg		1.5	0.99	0.49	SW846 6020A	8/8/12	8/13/12 20:37	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/16/12 01:59	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980875 ERT005|Ft. Stewart 3153-004

Lab ID: **9980875008** Date Collected: 8/1/2012 11:28 Matrix: Solid

Sample ID: **FTSW-HR-SO-36** Date Received: 8/2/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	18.6	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
Total Solids	81.4	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
METALS											
Arsenic, Total	0.77J	mg/kg		1.8	1.2	0.59	SW846 6020A	8/8/12	8/13/12 20:40	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/16/12 02:35	CLT	

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980875 ERT005|Ft. Stewart 3153-004

Lab ID: **9980875009** Date Collected: 8/1/2012 12:52 Matrix: Solid

Sample ID: **FTSW-HR-SO-37 (09.5)** Date Received: 8/2/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	22.4	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
Total Solids	77.6	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
METALS											
Arsenic, Total	1.2U	mg/kg		1.8	1.2	0.60	SW846 6020A	8/8/12	8/13/12 20:44	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/16/12 03:11	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980875 ERT005|Ft. Stewart 3153-004

Lab ID: **9980875010** Date Collected: 8/1/2012 13:57 Matrix: Solid

Sample ID: **FTSW-HR-SO-38** Date Received: 8/2/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	8.3	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
Total Solids	91.7	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
METALS											
Arsenic, Total	0.58J	mg/kg		1.6	1.0	0.52	SW846 6020A	8/8/12	8/13/12 20:58	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/16/12 03:48	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9980875 ERT005|Ft. Stewart 3153-004

Lab ID: **9980875011** Date Collected: 8/1/2012 14:05 Matrix: Solid

Sample ID: **FTSW-HR-SO-39** Date Received: 8/2/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	8.6	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
Total Solids	91.4	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
METALS											
Arsenic, Total	0.73J	mg/kg		1.6	1.1	0.54	SW846 6020A	8/8/12	8/13/12 21:01	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/16/12 04:24	CLT	C

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9980875 ERT005|Ft. Stewart 3153-004

Lab ID: **9980875012** Date Collected: 8/1/2012 14:15 Matrix: Solid

Sample ID: **FTSW-HR-SO-40** Date Received: 8/2/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	15.5	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
Total Solids	84.5	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
METALS											
Arsenic, Total	0.66J	mg/kg		1.7	1.1	0.56	SW846 6020A	8/8/12	8/13/12 21:05	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/16/12 05:00	CLT	C

Sample Comments:

Anna G Milliken
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ANALYTICAL RESULTS

Workorder: 9980875 ERT005|Ft. Stewart 3153-004

Lab ID: **9980875013** Date Collected: 8/1/2012 14:25 Matrix: Solid

Sample ID: **FTSW-HR-SO-41** Date Received: 8/2/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	17.8	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
Total Solids	82.2	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
METALS											
Arsenic, Total	0.86J	mg/kg		1.7	1.1	0.57	SW846 6020A	8/8/12	8/13/12 21:08	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/16/12 05:37	CLT	C

Sample Comments:

Anna G Milliken
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ANALYTICAL RESULTS

Workorder: 9980875 ERT005|Ft. Stewart 3153-004

Lab ID: **9980875014** Date Collected: 8/1/2012 14:34 Matrix: Solid

Sample ID: **FTSW-HR-SO-42** Date Received: 8/2/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	15.0	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
Total Solids	85.0	%		0.1	0.1	0.01	SM20-2540 G		8/2/12 15:00	KED	A
METALS											
Arsenic, Total	0.69J	mg/kg		1.5	1.0	0.52	SW846 6020A	8/8/12	8/13/12 21:15	LAM	A2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/16/12 06:13	CLT	C

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9980875 ERT005|Ft. Stewart 3153-004

Lab ID: **9980875015** Date Collected: 8/1/2012 13:40 Matrix: Water

Sample ID: **FTSW-HR-SO-37 (09.5) ERB** Date Received: 8/2/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
METALS											
Arsenic, Total	0.0011J	mg/L		0.0030	0.0020	0.0010	SW846 6020A	8/7/12	8/7/12 14:54	MWO	A1
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached						Subcontract		8/13/12 15:56	CLT	B

Sample Comments:

Anna G Milliken
Technical Manager

Total Metals in Water by 6020A Summary Forms

6020 3015
- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, Inc

SDG No.: ERT-005 **Method Type:** 6020 3015 **SOW No.:**

Contract: ERT005|Ft. Stewart 3 **Lab Code:** CAS **Case No.:** **SAS No.:**

Lab Sample ID	Client Sample ID	QC Description
9980875015	FTSW-HR-SO-37 (09.5) ER	
9980875015S	FTSW-HR-SO-37 (09.5) ER	Matrix Spike
9980875015SD	FTSW-HR-SO-37 (09.5) ER	Matrix Spike Duplicate

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: **Lisa Miller**

Date: Title: **Metals Manager**

6020 3015

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-005 **Method Type:** 6020 3015

Sample ID: 9980875015 **Client ID:** FTSW-HR-SO-37 (09.5) ERB

Matrix: WATER **Date Received:** 8/2/2012 **Level:** LOW

% Solids: **Sample Wt/Vol:** 45.00 **Final Vol:** 50.0

Prep Batch ID: 474817 **Prep Date:** 8/7/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.0011	mg/L	J		M	0.0030	0.0020	0.0010	1.00	8/7/2012	14:54:42

Comments:

6020 3015
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
ICV	Arsenic	0.1038	0.1000	104		90 - 110	M	8/7/2012	08:39	A080712
LLICV	Arsenic	0.0033	0.0030	110		70 - 130	M	8/7/2012	08:51	A080712
LLCCV	Arsenic	0.0031	0.0030	103		70 - 130	M	8/7/2012	13:00	A080712
CCV	Arsenic	0.0979	0.1000	98		90 - 110	M	8/7/2012	13:04	A080712
LLCCV	Arsenic	0.0032	0.0030	107		70 - 130	M	8/7/2012	14:17	A080712
CCV	Arsenic	0.0985	0.1000	98		90 - 110	M	8/7/2012	14:21	A080712
LLCCV	Arsenic	0.0034	0.0030	113		70 - 130	M	8/7/2012	15:17	A080712
CCV	Arsenic	0.1011	0.1000	101		90 - 110	M	8/7/2012	15:28	A080712

6020 3015

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Conc Qual	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
ICB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/7/2012	08:47	A080712
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/7/2012	12:52	A080712
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/7/2012	14:13	A080712
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/7/2012	15:13	A080712

6020 3015
- 3b -
PREPARATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result (mg/L)	Conc Qual	Q	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
1019627			QC-WATER								
	Arsenic	0.00300	U		0.0015	0.00100	0.00300	M	8/7/2012	13:33	A080712

6020 3015

- 4 -

INTERFERENCE CHECK SAMPLE

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

ICS Source: Inorganic Ventures **Instrument ID:** AGILENT 7700 ICPMS

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	Analysis Date	Analysis Time	Run Number
ICSA									
	Arsenic	0.0005				-0.00300 - -0.00300	8/7/2012	08:57	A080712
ICSAB									
	Arsenic	0.0192	0.02000	96		80 - 120%	8/7/2012	09:01	A080712

6020 3015

- 5a -

MATRIX SPIKE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: WATER **Sample ID:** 9980875015 **Client ID:** FTSW-HR-SO-37 (09.5) ERBS **LIMS ID:** 1019629

Percent Solids for Sample: 0.00 **Spiked ID:** 9980875015S **Percent Solids for Spike Sample:** 0.00

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/L	80 - 120	0.220		0.001		0.222	99		M

6020 3015

- 5a -

MATRIX SPIKE DUPLICATE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: WATER **Sample ID:** 9980875015 **Client ID:** FTSW-HR-SO-37 (09.5) **LIMS ID:** 1019630

Percent Solids for Sample: 0.00 **Spiked ID:** 9980875015SD ERBSD **Percent Solids for Spike Sample:** 0.00

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/L	80 - 120	0.213		0.001		0.222	95		M

6020 3015
- 6 -
DUPLICATE SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: WATER **Sample ID:** 9980875015S **Client ID:** FTSW-HR-SO-37 (09.5) ERBSD **LIMS ID:** 1019630

Percent Solids for Sample: 0.00 **Duplicate ID:** 9980875015SD **Percent Solids for Duplicate:** 0.00

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/L	0 - 20	0.220		0.213		3		M

6020 3015

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LABORATORY CONTROL SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Q	QC Criteria	M
1019628	Arsenic	mg/L	0.2220	0.2003		90		80 - 120	M

6020 3015

- 12 -
LINEAR RANGES

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Instrument ID: AGILENT 7700 ICPMS **Date:** 1/19/2012

Analyte	Integration Time (sec)	LDR mg/L
Arsenic	1.00	5

6020 3015
- 13 -
SAMPLE PREPARATION SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Method:** MS

Case No.: **SAS No.:**

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	474817						
1019627	MB for HBN 474817 [MDIG/3740	MB	QC-WAT	8/7/12	45.0	50.0	
1019628	LCS for HBN 474817 [MDIG/3740	LCS	QC-WAT	8/7/12	45.0	50.0	
9980875015	FTSW-HR-SO-37 (09.5) ERB	SAM	WATER	8/7/12	45.0	50.0	
9980875015S	FTSW-HR-SO-37 (09.5) ERBS	MS	WATER	8/7/12	45.0	50.0	
9980875015SD	FTSW-HR-SO-37 (09.5) ERBSD	MSD	WATER	8/7/12	45.0	50.0	

6020 3015
14
ANALYSIS RUŃ LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT005|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-005

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A080712

Start Date: 8/7/2012 End Date: 8/7/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	0812																								
BLK	1.00	0816				X																				
STANDARD 1	1.00	0820				X																				
STANDARD 2	1.00	0824				X																				
STANDARD 3	1.00	0827				X																				
STANDARD 4	1.00	0831				X																				
STANDARD 5	1.00	0835				X																				
ICV	1.00	0839				X																				
ZZZZZZ	1.00	0843																								
ICB2	1.00	0847				X																				
LLICV	1.00	0851				X																				
ICS-A1	1.00	0857				X																				
ICS-AB1	1.00	0901				X																				
ZZZZZZ	5.00	0908																								
ZZZZZZ	5.00	0912																								
ZZZZZZ	5.00	0916																								
ZZZZZZ	5.00	0920																								
ZZZZZZ	5.00	0924																								
ZZZZZZ	5.00	0927																								
ZZZZZZ	5.00	0931																								
ZZZZZZ	5.00	0935																								
ZZZZZZ	5.00	0939																								
ZZZZZZ	5.00	0943																								
ZZZZZZ	1.00	0946																								
ZZZZZZ	1.00	0950																								
ZZZZZZ	1.00	0954																								
ZZZZZZ	25.00	0959																								
ZZZZZZ	1.00	1003																								
ZZZZZZ	1.00	1009																								
ZZZZZZ	5.00	1014																								
ZZZZZZ	5.00	1019																								
ZZZZZZ	5.00	1023																								
ZZZZZZ	5.00	1027																								
ZZZZZZ	5.00	1031																								
ZZZZZZ	5.00	1035																								
ZZZZZZ	5.00	1039																								

6020 3015
14
ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT005|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-005

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A080712

Start Date: 8/7/2012 End Date: 8/7/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1.00	1043																												
ZZZZZZ	1.00	1047																												
ZZZZZZ	1.00	1050																												
ZZZZZZ	5.00	1054																												
ZZZZZZ	5.00	1058																												
ZZZZZZ	5.00	1102																												
ZZZZZZ	5.00	1106																												
ZZZZZZ	5.00	1110																												
ZZZZZZ	5.00	1114																												
ZZZZZZ	5.00	1118																												
ZZZZZZ	5.00	1122																												
ZZZZZZ	5.00	1125																												
ZZZZZZ	5.00	1129																												
ZZZZZZ	1.00	1133																												
ZZZZZZ	1.00	1137																												
ZZZZZZ	1.00	1141																												
ZZZZZZ	5.00	1145																												
ZZZZZZ	5.00	1149																												
ZZZZZZ	5.00	1153																												
ZZZZZZ	5.00	1157																												
ZZZZZZ	5.00	1201																												
ZZZZZZ	5.00	1204																												
ZZZZZZ	5.00	1208																												
ZZZZZZ	5.00	1212																												
ZZZZZZ	5.00	1216																												
ZZZZZZ	25.00	1220																												
ZZZZZZ	1.00	1224																												
ZZZZZZ	1.00	1231																												
ZZZZZZ	1.00	1234																												
ZZZZZZ	1.00	1239																												
ZZZZZZ	1.00	1243																												
ZZZZZZ	1.00	1248																												
CCB5	1.00	1252				X																								
LLCCV	1.00	1300				X																								
CCV6	1.00	1304				X																								
ZZZZZZ	1.00	1308																												

6020 3015
14
ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT005|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-005

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A080712

Start Date: 8/7/2012 End Date: 8/7/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1329																								
1019627	1.00	1333				X																				
1019628	1.00	1337				X																				
ZZZZZZ	1.00	1340																								
ZZZZZZ	1.00	1344																								
ZZZZZZ	5.00	1348																								
ZZZZZZ	1.00	1352																								
ZZZZZZ	1.00	1359																								
ZZZZZZ	1.00	1409																								
CCB6	1.00	1413				X																				
LLCCV	1.00	1417				X																				
CCV8	1.00	1421				X																				
ZZZZZZ	1.00	1425																								
ZZZZZZ	1.00	1447																								
ZZZZZZ	1.00	1450																								
9980875015	1.00	1454				X																				
9980875015S	1.00	1458				X																				
9980875015SD	1.00	1502				X																				
ZZZZZZ	5.00	1506																								
ZZZZZZ	1.00	1510																								
CCB7	1.00	1513				X																				
LLCCV	1.00	1517				X																				
CCV10	1.00	1528				X																				
ZZZZZZ	5.00	1549																								
ZZZZZZ	5.00	1553																								
ZZZZZZ	1.00	1558																								
ZZZZZZ	1.00	1602																								
ZZZZZZ	1.00	1606																								
ZZZZZZ	5.00	1642																								
ZZZZZZ	5.00	1646																								
ZZZZZZ	5.00	1650																								
ZZZZZZ	5.00	1654																								
ZZZZZZ	5.00	1658																								
ZZZZZZ	5.00	1702																								
ZZZZZZ	5.00	1706																								
ZZZZZZ	1.00	1710																								

6020 3015
14
ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT005|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-005

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A080712

Start Date: 8/7/2012 End Date: 8/7/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1.00	1713																												
ZZZZZZ	1.00	1717																												
ZZZZZZ	1.00	1721																												
ZZZZZZ	1.00	1725																												
ZZZZZZ	5.00	1729																												
ZZZZZZ	5.00	1733																												
ZZZZZZ	1.00	1737																												
ZZZZZZ	1.00	1741																												
ZZZZZZ	1.00	1745																												
ZZZZZZ	1.00	1749																												
ZZZZZZ	1.00	1752																												
ZZZZZZ	1.00	1756																												
ZZZZZZ	1.00	1800																												
ZZZZZZ	1.00	1804																												
ZZZZZZ	1.00	1808																												
ZZZZZZ	1.00	1945																												

6020 3015

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT005|Ft. Stewart 3153-004

Lab Code: CAS Case No.: _____ NRAS No.: _____ SDG NO.: ERT-005

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/07/2012 End Date: 08/07/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
BLK	ZZZZZZ	0812												
BLK	BLK	0816	100		100		100		100		100		100	
STANDARD 1	STANDARD 1	0820	99		98		98		100		101		101	
STANDARD 2	STANDARD 2	0824	104		101		103		104		105		102	
STANDARD 3	STANDARD 3	0827	103		100		104		104		104		101	
STANDARD 4	STANDARD 4	0831	106		105		109		110		109		106	
STANDARD 5	STANDARD 5	0835	104		102		107		108		102		106	
ICV	ICV	0839	105		102		105		105		105		103	
ICB1	ZZZZZZ	0843												
ICB2	ICB	0847	107		102		108		107		111		103	
LLICV	LLICV	0851	103		98		105		107		94		100	
ICS-A1	ICSA	0857	93		99		97		105		109		106	
ICS-AB1	ICSAB	0901	94		102		99		106		109		109	
1015362	ZZZZZZ	0908												
1015363	ZZZZZZ	0912												
1017907	ZZZZZZ	0916												
1017908	ZZZZZZ	0920												
9980583001	ZZZZZZ	0924												
1017909	ZZZZZZ	0927												
1017910	ZZZZZZ	0931												
9980583001P	ZZZZZZ	0935												
9980583002	ZZZZZZ	0939												
9980583004	ZZZZZZ	0943												
CCV1	ZZZZZZ	0946												
CCB1	ZZZZZZ	0950												
LLCCV	ZZZZZZ	0954												
9980583004L	ZZZZZZ	0959												
LDR 2 PPM	ZZZZZZ	1003												
CHECK	ZZZZZZ	1009												
1017046	ZZZZZZ	1014												
1017047	ZZZZZZ	1019												
9980109001	ZZZZZZ	1023												
9980109003	ZZZZZZ	1027												
9980109004	ZZZZZZ	1031												
9980109005	ZZZZZZ	1035												
9980109006	ZZZZZZ	1039												
CCV2	ZZZZZZ	1043												
CCB2	ZZZZZZ	1047												
LLCCV	ZZZZZZ	1050												
9980109007	ZZZZZZ	1054												
9980109008	ZZZZZZ	1058												
9980109009	ZZZZZZ	1102												
9980109010	ZZZZZZ	1106												
9980109011	ZZZZZZ	1110												
1017048	ZZZZZZ	1114												

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT005|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-005

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/07/2012 End Date: 08/07/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
1017049	ZZZZZZ	1118												
9980109011	ZZZZZZ	1122												
9980109012	ZZZZZZ	1125												
9980109013	ZZZZZZ	1129												
CCV3	ZZZZZZ	1133												
CCB3	ZZZZZZ	1137												
LLCCV	ZZZZZZ	1141												
9980109014	ZZZZZZ	1145												
9980109015	ZZZZZZ	1149												
9980109016	ZZZZZZ	1153												
9980109017	ZZZZZZ	1157												
1017050	ZZZZZZ	1201												
1017051	ZZZZZZ	1204												
9980109017P	ZZZZZZ	1208												
9980109018	ZZZZZZ	1212												
9980109019	ZZZZZZ	1216												
9980109019L	ZZZZZZ	1220												
CCV4	ZZZZZZ	1224												
CCB4	ZZZZZZ	1231												
LLCCV	ZZZZZZ	1234												
LDR 50 PPM	ZZZZZZ	1239												
CHECK	ZZZZZZ	1243												
CCV5	ZZZZZZ	1248												
CCB5	CCB	1252	101		101		103		105		106		103	
LLCCV	LLCCV	1300	101		101		103		106		107		100	
CCV6	CCV	1304	102		101		104		107		106		102	
1017577	ZZZZZZ	1308												
1017578	ZZZZZZ	1329												
1019627	MB for HBN 47481	1333	100		100		101		104		103		103	
1019628	LCS for HBN 4748	1337	102		101		104		107		108		104	
9980109002	ZZZZZZ	1340												
9980394006	ZZZZZZ	1344												
9980394006L	ZZZZZZ	1348												
9980394014	ZZZZZZ	1352												
9980394006P	ZZZZZZ	1359												
CCV7	ZZZZZZ	1409												
CCB6	CCB	1413	103		102		104		104		105		101	
LLCCV	LLCCV	1417	100		99		102		98		107		102	
CCV8	CCV	1421	101		99		102		100		107		102	
9980395006	ZZZZZZ	1425												
1017579	ZZZZZZ	1447												
1017580	ZZZZZZ	1450												
9980875015	FTSW-HR-SO-37 (0	1454	103		99		100		101		100		98	
9980875015S	FTSW-HR-SO-37 (0	1458	95		90		93		96		98		95	
9980875015S	FTSW-HR-SO-37 (0	1502	103		98		103		102		101		98	

6020 3015

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT005|Ft. Stewart 3153-004

Lab Code: CAS Case No.: _____ NRAS No.: _____ SDG NO.: ERT-005

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/07/2012 End Date: 08/07/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980875015L	ZZZZZZ	1506												
CCV9	ZZZZZZ	1510												
CCB7	CCB	1513	105		98		104		100		102		96	
LLCCV	LLCCV	1517	105		99		103		103		102		98	
CCV10	CCV	1528	103		98		103		103		101		95	
9979663004	ZZZZZZ	1549												
9979678003	ZZZZZZ	1553												
CCV11	ZZZZZZ	1558												
CCB8	ZZZZZZ	1602												
LLCCV	ZZZZZZ	1606												
9980477001	ZZZZZZ	1642												
9980477002	ZZZZZZ	1646												
9980478001	ZZZZZZ	1650												
9980478002	ZZZZZZ	1654												
9980478003	ZZZZZZ	1658												
9980478004	ZZZZZZ	1702												
9980478004L	ZZZZZZ	1706												
CCV12	ZZZZZZ	1710												
CCB9	ZZZZZZ	1713												
LLCCV	ZZZZZZ	1717												
9975539001	ZZZZZZ	1721												
9975539002	ZZZZZZ	1725												
9975539001	ZZZZZZ	1729												
9975539002	ZZZZZZ	1733												
CHECK	ZZZZZZ	1737												
CHECK	ZZZZZZ	1741												
CHECK	ZZZZZZ	1745												
CHECK	ZZZZZZ	1749												
CHECK	ZZZZZZ	1752												
CHECK	ZZZZZZ	1756												
CCV13	ZZZZZZ	1800												
CCB10	ZZZZZZ	1804												
LLCCV	ZZZZZZ	1808												
LLCCV	ZZZZZZ	1945												

Total Metals in Water by 6020A Raw Data

Dataset: A080712 2nd Review Lsm

First Review: MWO Approval: Lsm 8.7.12

Internal Standards: **ICPMS9190**

200	60-125%	**6020Qc:**	70-130%	**6020A**	30-130%	**DOD:**	70-120%

Standards :
Tuning MS0361
Daily Standard: MS0361

Calibration Standards
MS0343
MS0344

PIPETTES:

03-028	10.0 mL
03-202	.200 mL
03-201	1.0 mL
03-031	1.0 mL

ICSA: MS0341
ICSAB:MS0340

GOLD: MS0346
DW LCS: MS0358
Second Source

MA1393	MA1388	MA1360
MA1342	MS0345	MA1381
MS0309	MA1359	

Internal Standards/ Target Analytes

Sc-Al,V,Cr,Mn,Co,Ni,Cu,Na, K, Ti, Mg, Ca, Fe, As, Zn, Se,
Y
In-Sr, Mo, Ag, Cd, Sn, Sb, Ba
Tb
Bi-Hg, Tl, Pb, U

Fe out in opening QC.

Case Narrative:

*D: *D at the beginning of the Dataset Denotes that the samples were run on the Elan DRCe ICP-MS*

200.8 Tune Check Sample Report

Batch Folder C:\Agilent\ICPMH\1\DATA\A080612 TUNE.b
Report Comment
Instrument Name G3281A JP11040846

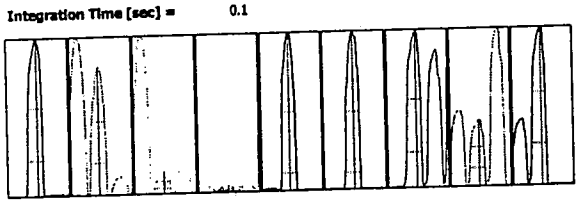
[no Gas]

Mass	Count (Actual)
9	48981
24	156895
25	21828
26	26320
59	336983
115	438792
206	102692
207	95589
208	202094

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	0.72	5.00	
24	0.79	5.00	
25	1.10	5.00	
26	0.46	5.00	
59	1.19	5.00	
115	0.82	5.00	
206	1.24	5.00	
207	2.29	5.00	
208	0.55	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	49517	48977	48772	49057	48581
24	158720	157559	156215	156388	155590
25	22019	21960	21791	21944	21423
26	26506	26367	26289	26190	26247
59	342220	339661	336783	333396	332855
115	443308	440284	438250	438724	433395
206	104659	102986	102654	101485	101678
207	98827	96854	94434	94117	93711
208	203164	202058	203261	200775	201211

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	7425	9.00	6.9 - 9.1		0.792	0.850	
24	25341	23.90	23.9 - 24.1		0.786	0.850	
25	3445	24.95	24.9 - 25.1		0.787	0.850	
26	4225	25.95	25.9 - 26.1		0.773	0.850	
59	54681	58.95	58.9 - 59.1		0.771	0.850	
115	74884	115.00	114.9 - 115.1		0.725	0.850	
206	16322	205.95	205.9 - 206.1		0.747	0.850	
207	14151	206.95	206.9 - 207.1		0.738	0.850	
208	33931	207.95	207.9 - 208.1		0.737	0.850	

X% = 10 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 235.1 **Y Axis =** Linear

Tune Parameters

## Plasma Paramters ##					
RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
RF Matching	1.80 V	Optional Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	DilutionGas
## Lenses Parameters ##					
Extract 1	0.0 V	Omega Lens	9.7 V	Deflect	15.4 V
Extract 2	-190.0 V	Cell Entrance	-34 V	Plate Bias	-50 V
Omega Bias	-100 V	Cell Exit	-50 V		
## Cell Parameters ##					
OctP Bias	-8.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	200 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	001CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:12:17-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	21852	0.14
Cr	52	1	No Gas	34572	0.01
Mn	55	1	No Gas	30791	0.02
Co	59	1	No Gas	244	14.04
Ni	60	1	No Gas	500	2.80
Cu	63	1	No Gas	11909	0.00
Sr	88	1	No Gas	248	10.26
Ag	107	1	No Gas	85	31.88
Al	27	1	No Gas	10403	0.02
Sn	118	1	No Gas	13077	0.23
Ti	47	1	No Gas	3264	0.80
Zn	66	1	No Gas	1003	0.40
As	75	3	HeHe	100	16.05
As	75	1	No Gas	26028	0.07
Sb	121	1	No Gas	5731	0.49
Hg	201	1	No Gas	36	131.85
Be	9	1	No Gas	14	269.97
Pb	208	1	No Gas	21200	0.00
Se	82	1	No Gas	179	60.64
Mo	98	1	No Gas	37245	0.09
Ba	137	1	No Gas	83	59.96
Tl	205	1	No Gas	107	62.66
U	238	1	No Gas	1371	2.25
Na	23	2	he	112860	0.00
Mg	24	2	he	470	6.14
K	39	2	he	253444	0.00
Se	82	3	HeHe	87	22.26
Fe	57	3	HeHe	474	6.73
Cd	114	1	No Gas	703	5.28
Ca	44	1	No Gas	65587	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	9318028	0.91
Sc	45	2	he	1766521	1.57
Ge	72	1	No Gas	1005789	0.47
In	115	1	No Gas	5661518	1.48
Tb	159	1	No Gas	6831155	0.65

Calibration Blank Report

Bi	209	1	No Gas	3774501	0.92
Sc	45	3	HeHe	172918	0.76

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	002CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:16:15-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	21094	0.14
Cr	52	1	No Gas	34138	0.01
Mn	55	1	No Gas	36389	0.00
Co	59	1	No Gas	159	48.25
Ni	60	1	No Gas	510	2.69
Cu	63	1	No Gas	11740	0.00
Sr	88	1	No Gas	193	19.95
Ag	107	1	No Gas	70	56.46
Al	27	1	No Gas	10326	0.02
Sn	118	1	No Gas	6861	0.34
Ti	47	1	No Gas	1316	1.88
Zn	66	1	No Gas	993	1.13
As	75	3	HeHe	39	99.57
As	75	1	No Gas	26735	0.04
Sb	121	1	No Gas	2856	0.80
Hg	201	1	No Gas	23	97.96
Be	9	1	No Gas	22	180.12
Pb	208	1	No Gas	17529	0.02
Se	82	1	No Gas	64	27.91
Mo	98	1	No Gas	11922	0.33
Ba	137	1	No Gas	93	35.07
Tl	205	1	No Gas	56	108.00
U	238	1	No Gas	285	11.78
Na	23	2	he	111386	0.00
Mg	24	2	he	374	4.65
K	39	2	he	243446	0.00
Se	82	3	HeHe	113	7.35
Fe	57	3	HeHe	374	0.46
Cd	114	1	No Gas	360	8.59
Ca	44	1	No Gas	64419	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	9248342	1.26
Sc	45	2	he	1744643	1.17
Ge	72	1	No Gas	1012122	1.06
In	115	1	No Gas	5760110	0.77
Tb	159	1	No Gas	6952439	1.03

Calibration Blank Report

Bi	209	1	No Gas	3846945	0.42
Sc	45	3	HeHe	171212	2.47

Calibration Standard Report

Sample Table

Sample Name	Standard 1
Data File Name	003CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:20:10-04:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	18063	0.07
Cr	52	1	No Gas	38963	0.01
Mn	55	1	No Gas	49023	0.00
Co	59	1	No Gas	5383	0.09
Ni	60	1	No Gas	1580	0.11
Cu	63	1	No Gas	15285	0.01
Sr	88	1	No Gas	6524	0.12
Ag	107	1	No Gas	3104	0.22
Al	27	1	No Gas	59462	0.00
Sn	118	1	No Gas	6709	0.35
Ti	47	1	No Gas	1652	0.72
Zn	66	1	No Gas	1780	0.74
As	75	3	HeHe	68	24.13
As	75	1	No Gas	26543	0.06
Sb	121	1	No Gas	4705	0.18
Hg	201	1	No Gas	38	49.94
Be	9	1	No Gas	661	1.29
Pb	208	1	No Gas	20348	0.03
Se	82	1	No Gas	132	106.96
Mo	98	1	No Gas	10414	0.29
Ba	137	1	No Gas	893	1.26
Tl	205	1	No Gas	3982	0.08
U	238	1	No Gas	4697	0.16
Na	23	2	he	117342	0.00
Mg	24	2	he	3408	0.35
K	39	2	he	261549	0.00
Se	82	3	HeHe	89	12.06
Fe	57	3	HeHe	293	11.04
Cd	114	1	No Gas	1547	1.11
Ca	44	1	No Gas	69431	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9230482	1.11	9248342	99.81	70	120	
Sc	45	2	he	1761372	0.68	1744643	100.96	70	120	
Ge	72	1	No Gas	991031	1.22	1012122	97.92	70	120	

Calibration Standard Report

In	115	1	No Gas	5660258	1.42	5760110	98.27	70	120	
Tb	159	1	No Gas	6804369	1.26	6952439	97.87	70	120	
Bl	209	1	No Gas	3791147	2.08	3846945	98.55	70	120	
Sc	45	3	HeHe	172414	2.77	171212	100.70	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 2
Data File Name	004CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:24:04-04:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	75240	0.01
Cr	52	1	No Gas	79879	0.00
Mn	55	1	No Gas	97795	0.00
Co	59	1	No Gas	50904	0.00
Ni	60	1	No Gas	12542	0.01
Cu	63	1	No Gas	41498	0.00
Sr	88	1	No Gas	67816	0.00
Ag	107	1	No Gas	31349	0.01
Al	27	1	No Gas	140284	0.00
Sn	118	1	No Gas	23599	0.02
Ti	47	1	No Gas	5303	0.05
Zn	66	1	No Gas	12980	0.00
As	75	3	HeHe	484	0.89
As	75	1	No Gas	32611	0.01
Sb	121	1	No Gas	26036	0.02
Hg	201	1	No Gas	93	35.35
Be	9	1	No Gas	6422	0.04
Pb	208	1	No Gas	81148	0.00
Se	82	1	No Gas	320	7.94
Mo	98	1	No Gas	26675	0.05
Ba	137	1	No Gas	9030	0.04
Tl	205	1	No Gas	42273	0.01
U	238	1	No Gas	51558	0.00
Na	23	2	he	158442	0.00
Mg	24	2	he	24922	0.02
K	39	2	he	304695	0.00
Se	82	3	HeHe	123	10.00
Fe	57	3	HeHe	1474	0.83
Cd	114	1	No Gas	13716	0.00
Ca	44	1	No Gas	87487	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9606577	0.99	9248342	103.87	70	120	
Sc	45	2	he	1830837	0.65	1744643	104.94	70	120	
Ge	72	1	No Gas	1021767	0.80	1012122	100.95	70	120	

Calibration Standard Report

In	115	1	No Gas	5934139	0.96	5760110	103.02	70	120	
Tb	159	1	No Gas	7112799	0.83	6952439	102.31	70	120	
Bi	209	1	No Gas	3993179	0.68	3846945	103.80	70	120	
Sc	45	3	HeHe	174349	0.65	171212	101.83	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 3
Data File Name	005CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:27:58-04:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	536384	0.00
Cr	52	1	No Gas	499471	0.00
Mn	55	1	No Gas	607526	0.00
Co	59	1	No Gas	513478	0.00
Ni	60	1	No Gas	115198	0.00
Cu	63	1	No Gas	291757	0.00
Sr	88	1	No Gas	673644	0.00
Ag	107	1	No Gas	302621	0.00
Al	27	1	No Gas	419330	0.00
Sn	118	1	No Gas	180565	0.00
Tl	47	1	No Gas	41510	0.00
Zn	66	1	No Gas	78050	0.00
As	75	3	HeHe	4653	0.12
As	75	1	No Gas	92057	0.00
Sb	121	1	No Gas	236636	0.00
Hg	201	1	No Gas	544	0.31
Be	9	1	No Gas	64582	0.00
Pb	208	1	No Gas	585512	0.00
Se	82	1	No Gas	3813	0.30
Mo	98	1	No Gas	185502	0.00
Ba	137	1	No Gas	83581	0.00
Tl	205	1	No Gas	422428	0.00
U	238	1	No Gas	512538	0.00
Na	23	2	he	496695	0.00
Mg	24	2	he	224038	0.00
K	39	2	he	599398	0.00
Se	82	3	HeHe	317	2.40
Fe	57	3	HeHe	11456	0.02
Cd	114	1	No Gas	138636	0.00
Ca	44	1	No Gas	202707	0.00

QC ISTD-Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9599585	0.21	9248342	103.80	70	120	
Sc	45	2	he	1819752	1.49	1744643	104.31	70	120	
Ge	72	1	No Gas	1016046	0.79	1012122	100.39	70	120	

Calibration Standard Report

In	115	1	No Gas	5960241	0.35	5760110	103.47	70	120	
Tb	159	1	No Gas	7215156	0.72	6952439	103.78	70	120	
Bi	209	1	No Gas	3949111	0.62	3846945	102.66	70	120	
Sc	45	3	HeHe	172939	1.30	171212	101.01	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 4
Data File Name	006CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:31:52-04:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	5638942	0.00
Cr	52	1	No Gas	4979669	0.00
Mn	55	1	No Gas	6192129	0.00
Co	59	1	No Gas	5447044	0.00
Ni	60	1	No Gas	1182013	0.00
Cu	63	1	No Gas	2985102	0.00
Sr	88	1	No Gas	6997417	0.00
Ag	107	1	No Gas	3174830	0.00
Al	27	1	No Gas	3653098	0.00
Sn	118	1	No Gas	1886235	0.00
Tl	47	1	No Gas	418509	0.00
Zn	66	1	No Gas	721550	0.00
As	75	3	HeHe	49452	0.00
As	75	1	No Gas	739186	0.00
Sb	121	1	No Gas	2555108	0.00
Hg	201	1	No Gas	5250	0.01
Be	9	1	No Gas	666474	0.00
Pb	208	1	No Gas	5859721	0.00
Se	82	1	No Gas	38718	0.00
Mo	98	1	No Gas	1996551	0.00
Ba	137	1	No Gas	841402	0.00
Tl	205	1	No Gas	4323264	0.00
U	238	1	No Gas	5263199	0.00
Na	23	2	he	4611890	0.00
Mg	24	2	he	2551831	0.00
K	39	2	he	3991640	0.00
Se	82	3	HeHe	2508	0.14
Fe	57	3	HeHe	117956	0.00
Cd	114	1	No Gas	1480140	0.00
Ca	44	1	No Gas	1479565	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	10207257	1.85	9248342	110.37	70	120	
Sc	45	2	he	1908011	1.86	1744643	109.36	70	120	
Ge	72	1	No Gas	1060324	1.35	1012122	104.76	70	120	

Calibration Standard Report

In	115	1	No Gas	6277627	0.94	5760110	108.98	70	120	
Tb	159	1	No Gas	7433190	0.78	6952439	106.91	70	120	
Bi	209	1	No Gas	4079951	1.27	3846945	106.06	70	120	
Sc	45	3	HeHe	181248	0.69	171212	105.86	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 5
Data File Name	007CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:35:41-04:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	10826451	0.00
Cr	52	1	No Gas	9637889	0.00
Mn	55	1	No Gas	11866703	0.00
Co	59	1	No Gas	10711214	0.00
Ni	60	1	No Gas	2413544	0.00
Cu	63	1	No Gas	5819480	0.00
Sr	88	1	No Gas	13751395	0.00
Ag	107	1	No Gas	6225088	0.00
Al	27	1	No Gas	6829165	0.00
Sn	118	1	No Gas	3750576	0.00
Tl	47	1	No Gas	823588	0.00
Zn	66	1	No Gas	1429052	0.00
As	75	3	HeHe	96786	0.00
As	75	1	No Gas	1481593	0.00
Sb	121	1	No Gas	4866586	0.00
Hg	201	1	No Gas	10743	0.02
Be	9	1	No Gas	1447602	0.00
Pb	208	1	No Gas	11462241	0.00
Se	82	1	No Gas	76676	0.00
Mo	98	1	No Gas	3907993	0.00
Ba	137	1	No Gas	1694987	0.00
Tl	205	1	No Gas	8390950	0.00
U	238	1	No Gas	10428690	0.00
Na	23	2	he	8720906	0.00
Mg	24	2	he	4821494	0.00
K	39	2	he	7360101	0.00
Se	82	3	HeHe	4959	0.02
Fe	57	3	HeHe	233280	0.00
Cd	114	1	No Gas	2908805	0.00
Ca	44	1	No Gas	2795845	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9993227	0.18	9248342	108.05	70	120	
Sc	45	2	he	1774489	1.33	1744643	101.71	70	120	
Ge	72	1	No Gas	1031020	0.52	1012122	101.87	70	120	

Calibration Standard Report

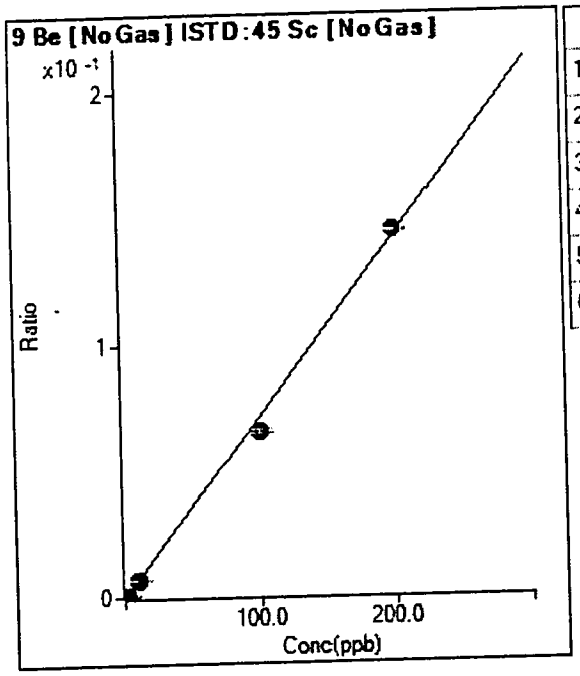
In	115	1	No Gas	6133321	1.61	5760110	106.48	70	120	
Tb	159	1	No Gas	7274529	1.23	6952439	104.63	70	120	
Bi	209	1	No Gas	4005913	0.87	3846945	104.13	70	120	
Sc	45	3	HeHe	182051	0.95	171212	106.33	70	120	

Calibration for 071_CCV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\A080712.b\
Analysis File: A080712.batch.bin
DA Date-Time: 8/7/2012 1:05:32 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	002CALB.d	blk	8/7/2012 8:16:15 AM
2	003CALS.d	Standard 1	8/7/2012 8:20:10 AM
3	004CALS.d	Standard 2	8/7/2012 8:24:04 AM
4	005CALS.d	Standard 3	8/7/2012 8:27:58 AM
5	006CALS.d	Standard 4	8/7/2012 8:31:52 AM
6	007CALS.d	Standard 5	8/7/2012 8:35:41 AM

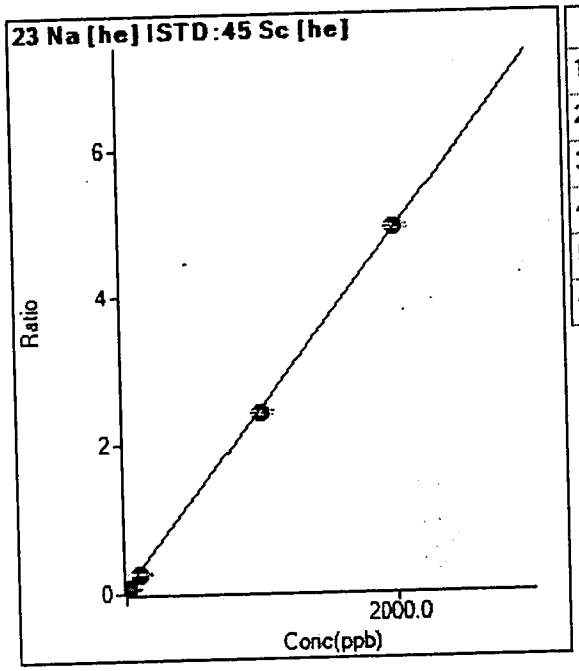
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.00	0.0000	P	40.0
2	☐	0.100	0.098	661.35	0.0001	P	8.4
3	☐	1.000	0.938	6422.49	0.0007	P	2.3
4	☐	10.000	9.473	64581.75	0.0067	P	1.2
5	☐	100.000	91.991	666474.04	0.0653	P	2.3
6	☐	200.000	204.031	1447602.42	0.1449	A	0.8

y = 7.0996E-004 * x + 2.3808E-006
R = 0.9989
DL = 0.004029
BEC = 0.003353

Weight: <None>
Min Conc: <None>

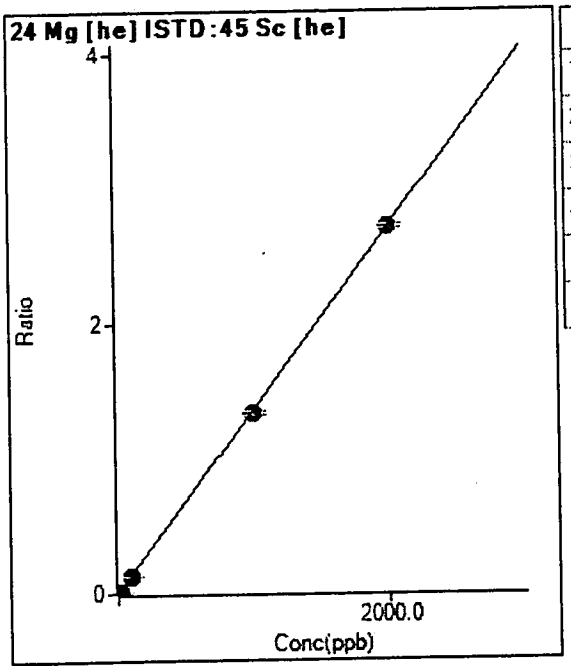


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	111385.71	0.0639	P	4.6
2	☐			117342.24	0.0666	P	1.3
3	☐	10.000	9.407	158441.63	0.0865	P	1.3
4	☐	100.000	86.740	496695.47	0.2730	P	1.2
5	☐	1000.000	976.358	4611889.86	2.4174	A	1.7
6	☐	2000.000	2012.487	8720906.27	4.9150	A	1.0

y = 0.0024 * x + 0.0639
R = 0.9999
DL = 3.687
BEC = 26.49

Weight: <None>
Min Conc: <None>

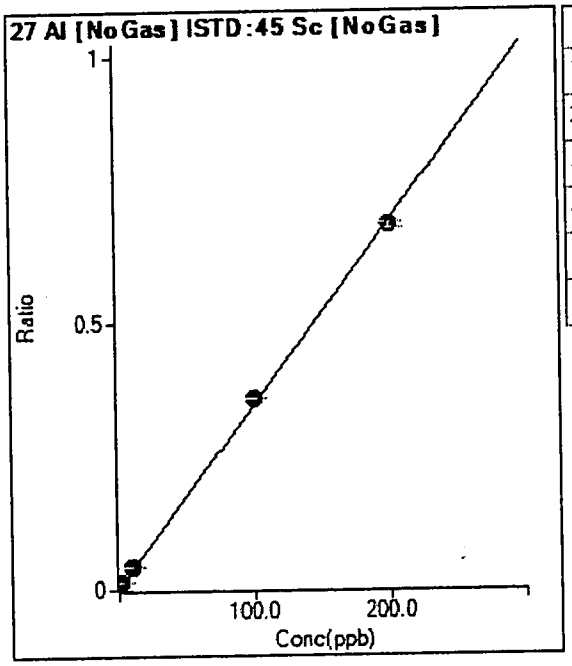
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	374.10	0.0002	P	16.5
2	☐			3407.90	0.0019	P	11.9
3	☐	10.000	9.897	24921.94	0.0136	P	6.1
4	☐	100.000	90.757	224037.56	0.1231	P	0.7
5	☐	1000.000	987.738	2551831.50	1.3377	A	2.2
6	☐	2000.000	2006.594	4821493.91	2.7174	A	1.2

y = 0.0014 * x + 2.1419E-004
R = 1.0000
DL = 0.07847
BEC = 0.1582

Weight: <None>
Min Conc: <None>

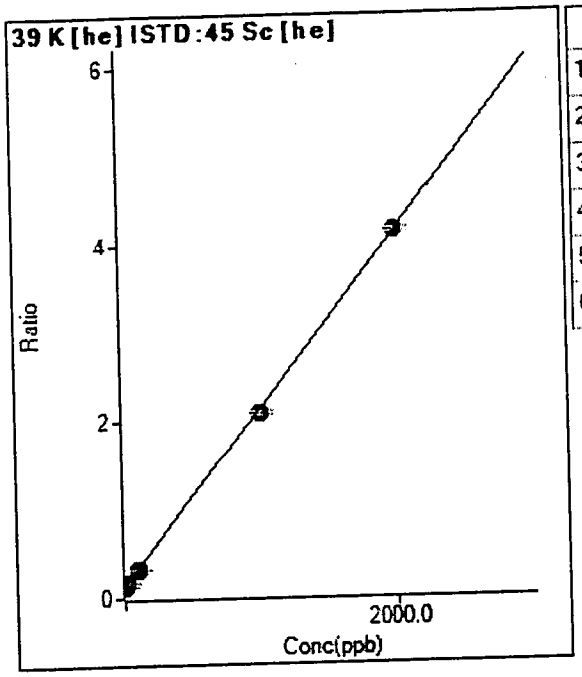


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10325.69	0.0011	P	3.2
2	☐			59461.87	0.0064	P	2.9
3	☐	1.000	3.916	140283.57	0.0146	P	1.6
4	☐	10.000	12.358	419330.09	0.0437	P	1.3
5	☐	100.000	103.580	3653098.12	0.3579	A	0.6
6	☐	200.000	198.078	6829164.54	0.6834	A	1.4

y = 0.0034 * x + 0.0011
R = 0.9998
DL = 0.03075
BEC = 0.3242

Weight: <None>
Min Conc: <None>

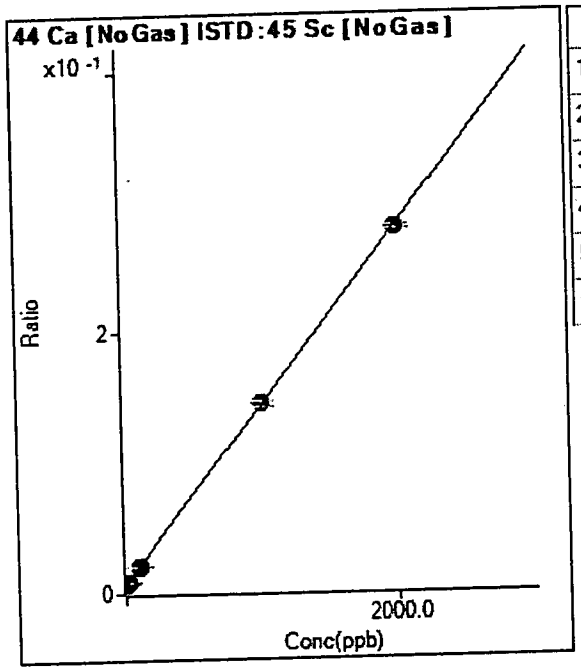
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	243445.55	0.1396	P	2.7
2	☐			261549.24	0.1485	P	0.7
3	☐	10.000	13.468	304695.36	0.1664	P	0.6
4	☐	100.000	95.209	599397.65	0.3294	P	2.1
5	☐	1000.000	979.526	3991640.12	2.0926	A	2.1
6	☐	2000.000	2010.459	7360101.33	4.1480	A	1.1

y = 0.0020 * x + 0.1396
R = 0.9999
DL = 5.695
BEC = 70

Weight: <None>
Min Conc: <None>

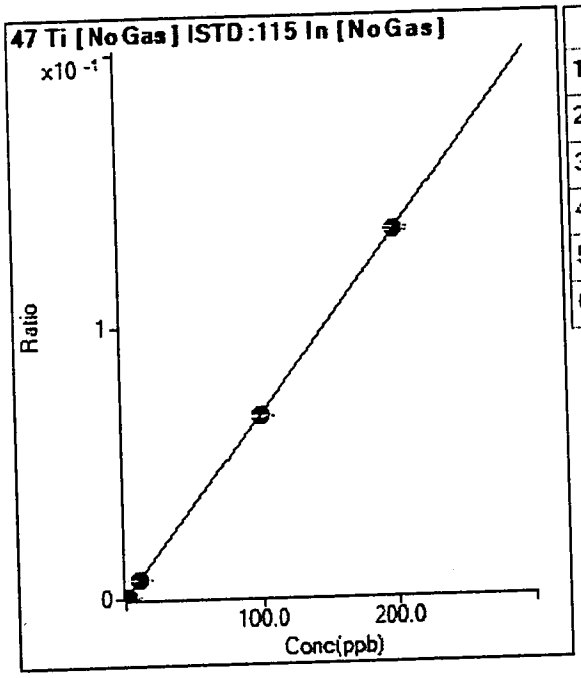


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	64419.26	0.0070	P	2.5
2	☐			69430.84	0.0075	P	8.6
3	☐	10.000	15.649	87487.23	0.0091	P	4.2
4	☐	100.000	103.491	202707.19	0.0211	P	1.7
5	☐	1000.000	1009.457	1479564.93	0.1450	A	3.2
6	☐	2000.000	1995.069	2795845.17	0.2798	A	1.1

y = 1.3674E-004 * x + 0.0070
R = 1.0000
DL = 3.8
BEC = 50.93

Weight: <None>
Min Conc: <None>

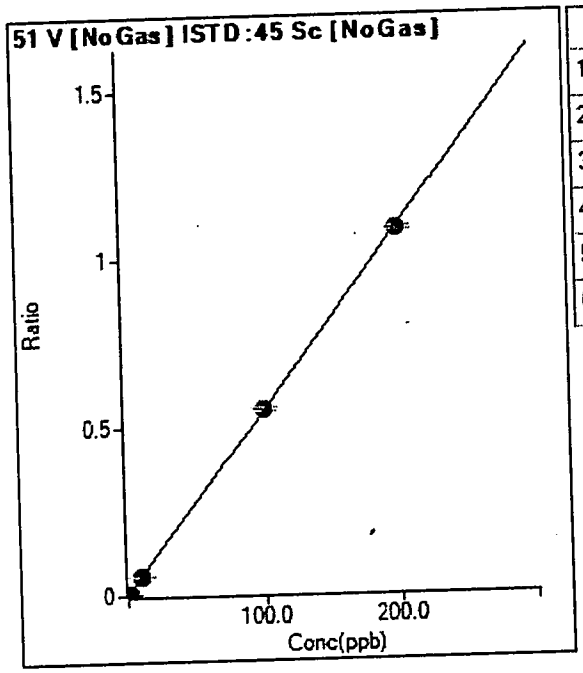
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1315.75	0.0002	P	24.7
2	☐	0.100	0.095	1651.73	0.0003	P	13.3
3	☐	1.000	0.995	5303.43	0.0009	P	3.6
4	☐	10.000	10.067	41510.48	0.0070	P	1.7
5	☐	100.000	99.291	418508.63	0.0667	P	1.1
6	☐	200.000	200.351	823588.40	0.1343	P	1.2

y = 6.6917E-004 * x + 2.2834E-004
R = 1.0000
DL = 0.2524
BEC = 0.3412

Weight: <None>
Min Conc: <None>

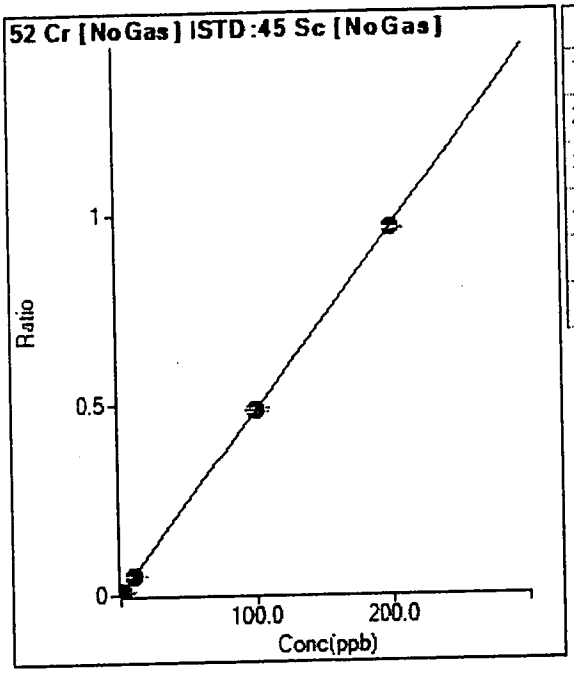


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21093.76	0.0023	P	29.5
2	☐	0.100	-0.061	18063.48	0.0020	P	11.4
3	☐	1.000	1.022	75239.91	0.0078	P	8.3
4	☐	10.000	9.879	536384.01	0.0559	P	2.7
5	☐	100.000	101.444	5638942.05	0.5526	A	2.4
6	☐	200.000	199.284	10826451.35	1.0834	A	1.1

y = 0.0054 * x + 0.0023
R = 1.0000
DL = 0.3732
BEC = 0.4215

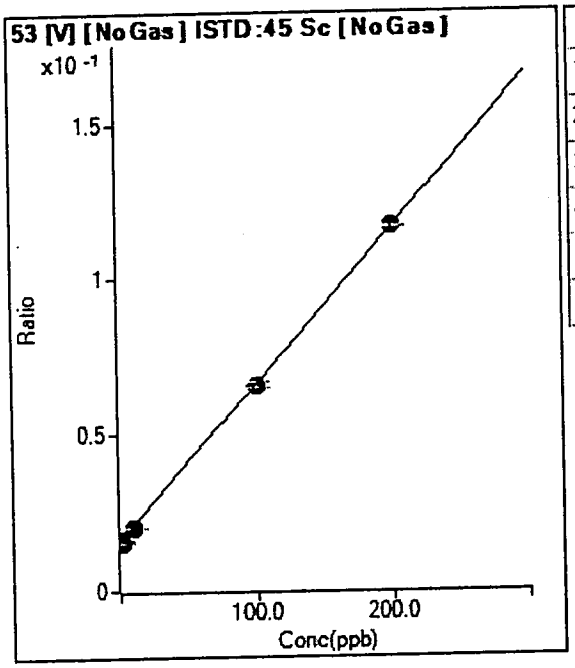
Weight: <None>
Min Conc: <None>

Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34138.23	0.0037	P	5.7
2	☐	0.100	0.110	38962.87	0.0042	P	3.2
3	☐	1.000	0.961	79879.22	0.0083	P	2.2
4	☐	10.000	10.046	499471.34	0.0520	P	1.1
5	☐	100.000	100.638	4979668.67	0.4879	A	2.0
6	☐	200.000	199.679	9637888.74	0.9644	A	0.6

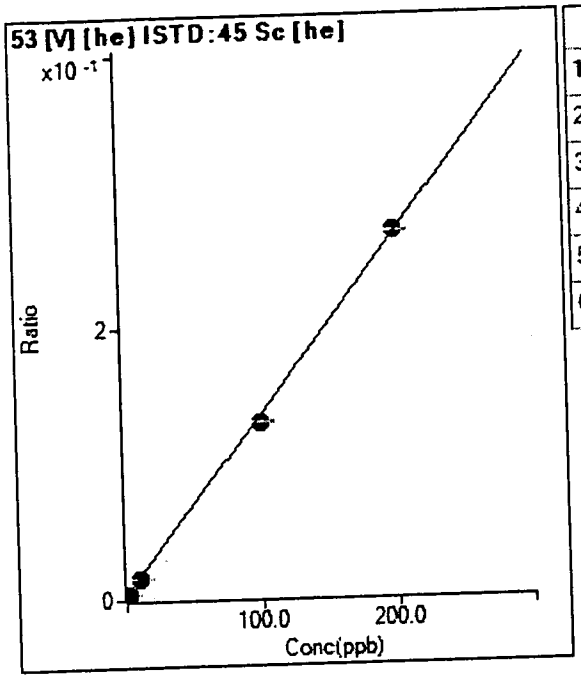
y = 0.0048 * x + 0.0037
R = 1.0000
DL = 0.1302
BEC = 0.7675
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	149554.69	0.0162	P	0.5
2	☐	0.100	1.015	153951.55	0.0167	P	1.7
3	☐	1.000	-1.133	149877.05	0.0156	P	2.0
4	☐	10.000	8.414	195723.03	0.0204	P	2.1
5	☐	100.000	98.717	669822.89	0.0656	P	2.8
6	☐	200.000	200.731	1166872.46	0.1168	P	0.5

y = 5.0114E-004 * x + 0.0162
R = 0.9999
DL = 0.4835
BEC = 32.27
Weight: <None>
Min Conc: <None>

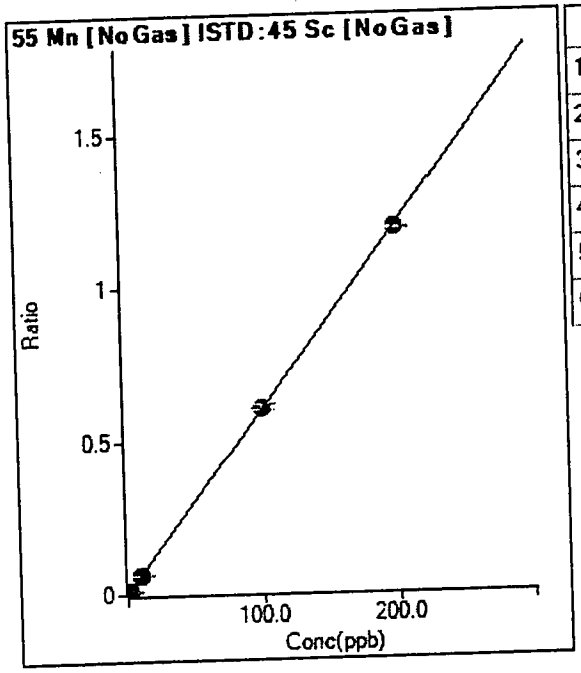
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	6523.76	0.0037	P	2.7
2		0.100	0.178	7001.69	0.0040	P	5.9
3		1.000	0.660	8439.50	0.0046	P	3.8
4		10.000	9.229	28935.89	0.0159	P	2.5
5		100.000	96.246	249133.30	0.1306	P	1.3
6		200.000	201.917	478832.97	0.2699	P	0.5

y = 0.0013 * x + 0.0037
R = 0.9998
DL = 0.2296
BEC = 2.838

Weight: <None>
Min Conc: <None>

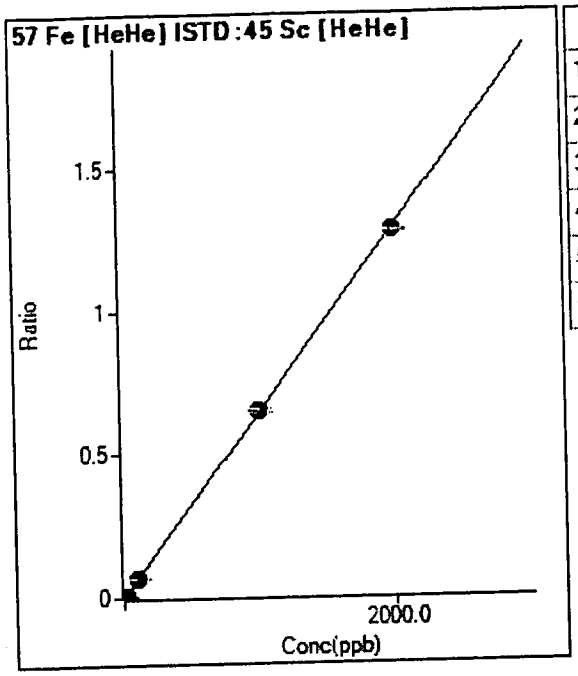


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	36389.16	0.0039	P	2.5
2		0.100	0.232	49022.90	0.0053	P	2.6
3		1.000	1.052	97794.51	0.0102	P	3.7
4		10.000	9.992	607526.39	0.0633	P	0.9
5		100.000	101.501	6192129.38	0.6068	A	3.1
6		200.000	199.249	11866703.23	1.1875	A	0.4

y = 0.0059 * x + 0.0039
R = 1.0000
DL = 0.04907
BEC = 0.6625

Weight: <None>
Min Conc: <None>

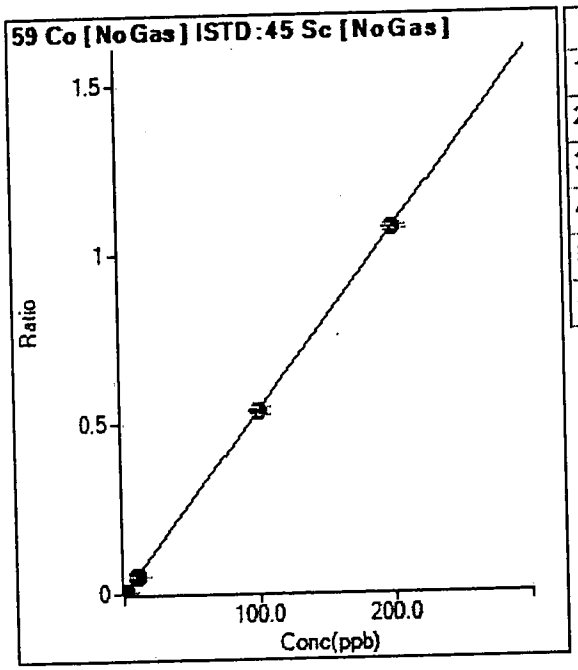
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	3.400	374.10	0.0022	P	2.1
2	☐			292.61	0.0017	P	29.7
3	☐	10.000	13.155	1474.21	0.0085	P	12.3
4	☐	100.000	103.056	11456.05	0.0662	P	1.6
5	☐	1000.000	1012.524	117955.50	0.6508	P	2.3
6	☐	2000.000	1993.570	233280.34	1.2814	P	0.4

y = 6.4275E-004 * x
R = 1.0000
DL = 0.2166
BEC = 0

Weight: <None>
Min Conc: <None>

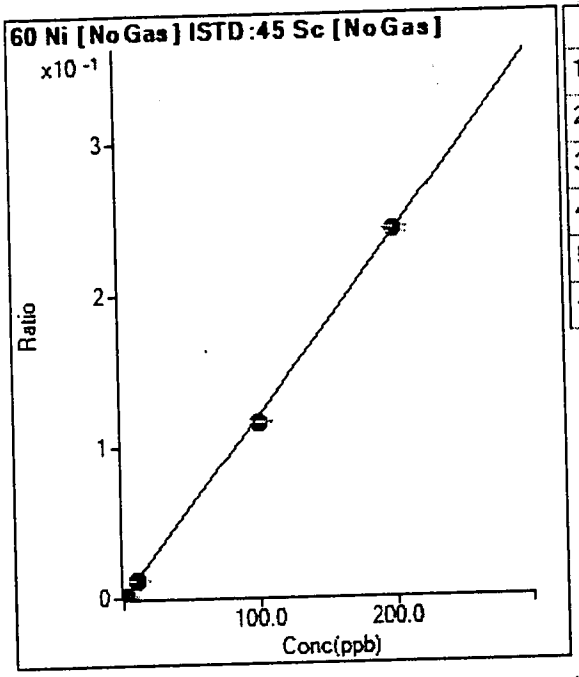


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	159.27	0.0000	P	75.6
2	☐	0.100	0.106	5382.58	0.0006	P	4.0
3	☐	1.000	0.986	50904.40	0.0053	P	2.9
4	☐	10.000	9.985	513478.35	0.0535	P	0.7
5	☐	100.000	99.702	5447043.65	0.5339	A	4.4
6	☐	200.000	200.150	10711213.93	1.0718	A	1.0

y = 0.0054 * x + 1.7113E-005
R = 1.0000
DL = 0.007244
BEC = 0.003196

Weight: <None>
Min Conc: <None>

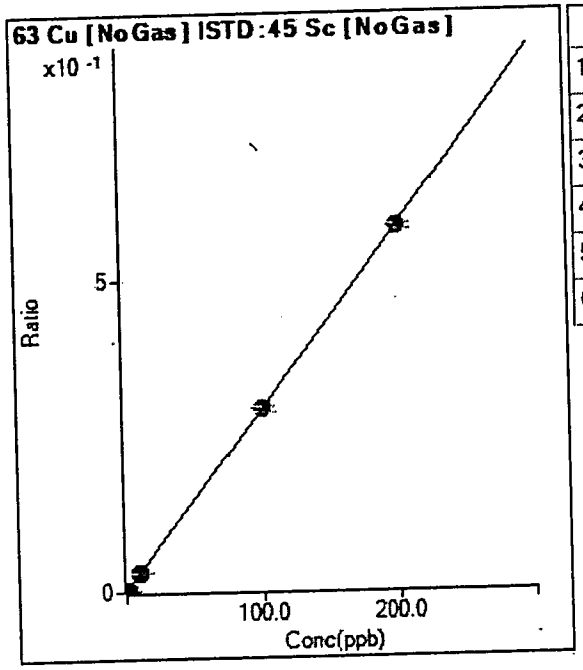
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	510.03	0.0001	P	13.6
2	☐	0.100	0.097	1580.14	0.0002	P	2.7
3	☐	1.000	1.044	12541.64	0.0013	P	1.1
4	☐	10.000	9.976	115198.15	0.0120	P	0.8
5	☐	100.000	96.689	1182012.74	0.1158	P	2.0
6	☐	200.000	201.656	2413544.03	0.2415	A	1.8

y = 0.0012 * x + 5.5141E-005
R = 0.9998
DL = 0.01879
BEC = 0.04605

Weight: <None>
Min Conc: <None>

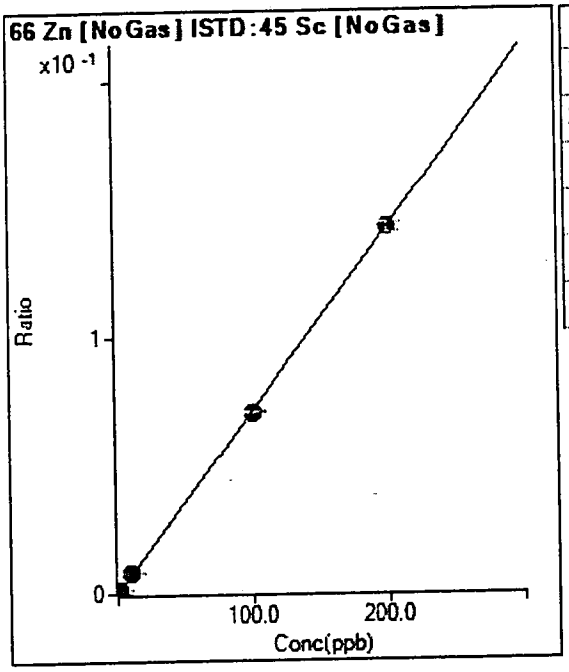


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11739.95	0.0013	P	1.5
2	☐	0.100	0.133	15285.32	0.0017	P	1.6
3	☐	1.000	1.049	41498.26	0.0043	P	0.4
4	☐	10.000	10.019	291757.45	0.0304	P	0.6
5	☐	100.000	100.204	2985102.00	0.2926	A	2.9
6	☐	200.000	199.897	5819480.00	0.5823	A	1.3

y = 0.0029 * x + 0.0013
R = 1.0000
DL = 0.01912
BEC = 0.4367

Weight: <None>
Min Conc: <None>

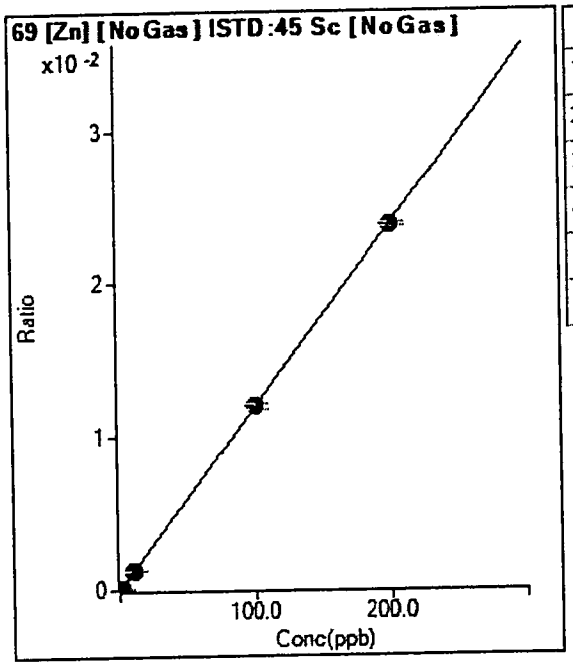
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	993.30	0.0001	P	11.9
2		0.100	0.120	1779.98	0.0002	P	14.2
3		1.000	1.745	12980.00	0.0014	P	1.6
4		10.000	11.253	78050.21	0.0081	P	0.6
5		100.000	99.016	721549.68	0.0707	P	1.3
6		200.000	200.426	1429051.62	0.1430	M	2.8

y = 7.1295E-004 * x + 1.0747E-004
R = 1.0000
DL = 0.05375
BEC = 0.1507

Weight: <None>
Min Conc: <None>

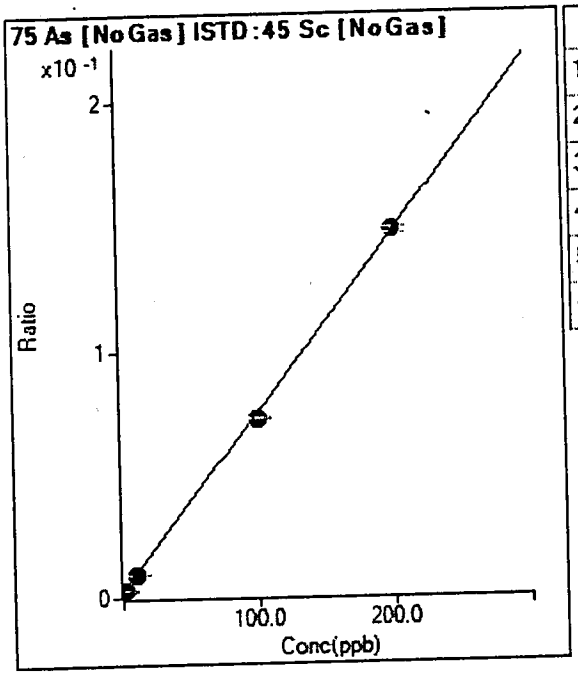


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	77.78	0.0000	P	38.2
2		0.100	0.061	144.45	0.0000	P	32.5
3		1.000	1.161	1407.54	0.0001	P	5.4
4		10.000	10.400	11956.58	0.0012	P	3.1
5		100.000	100.273	121816.85	0.0119	P	2.7
6		200.000	199.843	237644.60	0.0238	P	1.2

y = 1.1895E-004 * x + 8.4155E-006
R = 1.0000
DL = 0.081
BEC = 0.07075

Weight: <None>
Min Conc: <None>

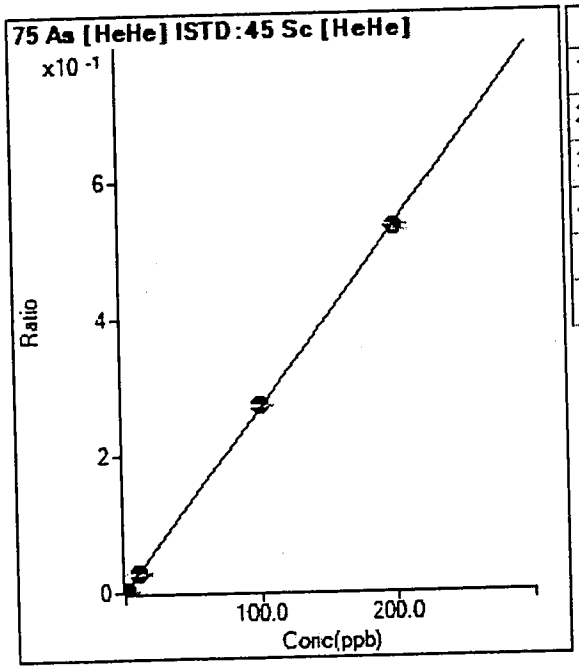
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26735.37	0.0029	P	11.7
2	☐	0.100	-0.023	26542.86	0.0029	P	16.6
3	☐	1.000	0.697	32610.52	0.0034	P	2.9
4	☐	10.000	9.295	92057.25	0.0096	P	0.3
5	☐	100.000	96.521	739186.23	0.0724	P	1.4
6	☐	200.000	201.776	1481592.55	0.1483	A	1.5

y = 7.2043E-004 * x + 0.0029
R = 0.9998
DL = 1.407
BEC = 4.016

Weight: <None>
Min Conc: <None>

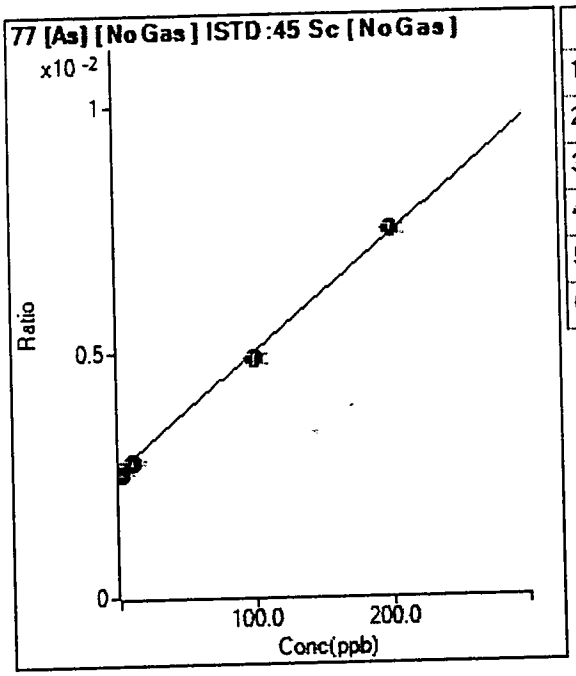


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	39.22	0.0002	P	38.4
2	☐	0.100	0.063	67.97	0.0004	P	18.9
3	☐	1.000	0.953	483.67	0.0028	P	3.8
4	☐	10.000	9.985	4652.94	0.0269	P	4.4
5	☐	100.000	102.077	49451.53	0.2728	P	0.8
6	☐	200.000	198.962	96786.09	0.5316	P	1.4

y = 0.0027 * x + 2.2845E-004
R = 0.9999
DL = 0.09864
BEC = 0.08554

Weight: <None>
Min Conc: <None>

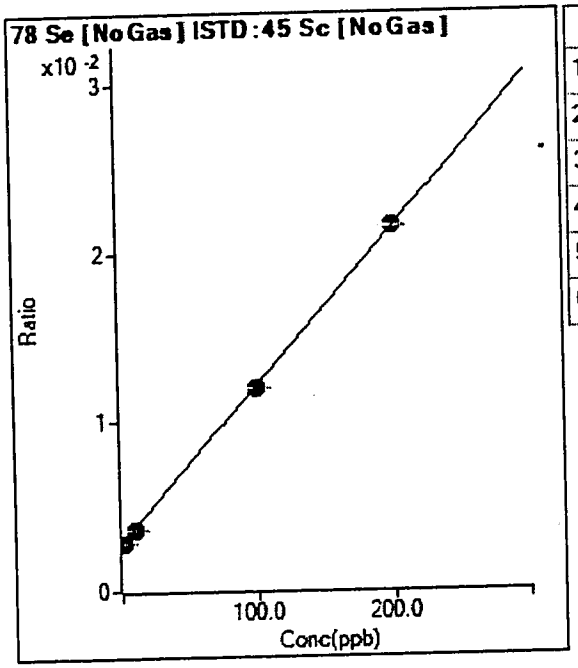
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24210.54	0.0026	P	2.3
2	☐	0.100	2.024	24603.69	0.0027	P	5.3
3	☐	1.000	-3.740	24291.98	0.0025	P	0.3
4	☐	10.000	6.064	26513.84	0.0028	P	2.0
5	☐	100.000	93.540	49411.89	0.0048	P	3.8
6	☐	200.000	203.449	74527.42	0.0075	P	2.4

y = 2.3790E-005 * x + 0.0026
R = 0.9990
DL = 7.636
BEC = 110

Weight: <None>
Min Conc: <None>

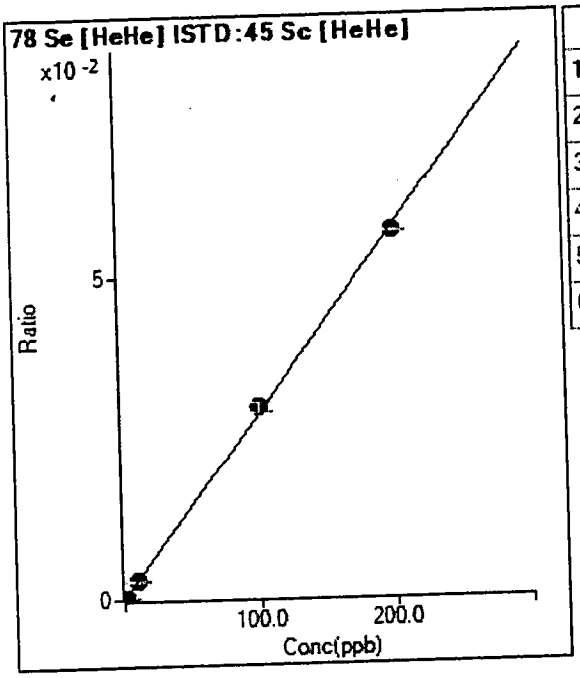


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26343.91	0.0028	P	2.2
2	☐	0.100	0.320	26569.76	0.0029	P	1.3
3	☐	1.000	-0.037	27335.03	0.0028	P	0.9
4	☐	10.000	8.456	34905.20	0.0036	P	1.5
5	☐	100.000	98.162	122331.43	0.0120	P	0.7
6	☐	200.000	201.001	215431.20	0.0216	P	0.6

y = 9.3077E-005 * x + 0.0028
R = 0.9999
DL = 2.022
BEC = 30.61

Weight: <None>
Min Conc: <None>

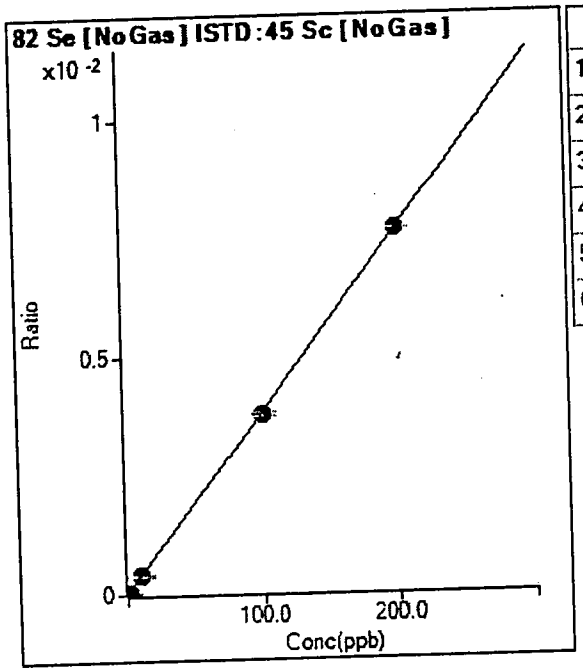
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5.23	0.0000	P	57.8
2	☐	0.100	0.278	18.96	0.0001	P	11.9
3	☐	1.000	1.019	56.21	0.0003	P	7.6
4	☐	10.000	10.023	501.97	0.0029	P	6.4
5	☐	100.000	103.649	5387.14	0.0297	P	5.3
6	☐	200.000	198.174	10339.07	0.0568	P	0.7

y = 2.8642E-004 * x + 3.0497E-005
R = 0.9998
DL = 0.1846
BEC = 0.1065

Weight: <None>
Min Conc: <None>

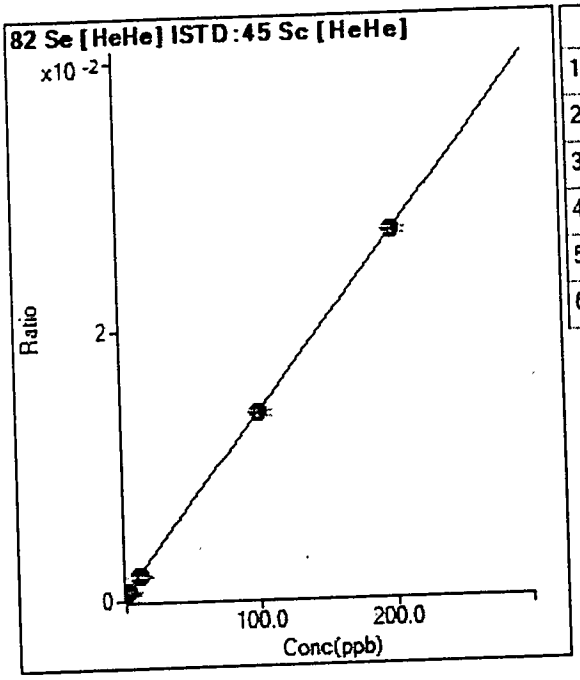


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	64.08	0.0000	P	18.3
2	☐	0.100	0.193	131.66	0.0000	P	140.0
3	☐	1.000	0.691	319.83	0.0000	P	26.2
4	☐	10.000	10.206	3813.38	0.0004	P	11.4
5	☐	100.000	99.040	38717.56	0.0038	P	2.2
6	☐	200.000	200.471	76676.06	0.0077	P	0.1

y = 3.8239E-005 * x + 6.9315E-006
R = 1.0000
DL = 0.09932
BEC = 0.1813

Weight: <None>
Min Conc: <None>

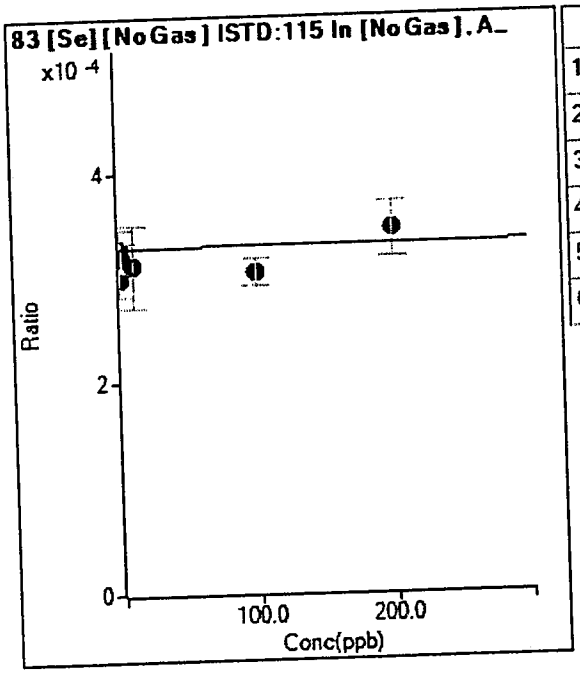
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	112.59	0.0007	P	9.8
2	☐	0.100	-1.098	88.52	0.0005	P	7.9
3	☐	1.000	0.351	122.96	0.0007	P	11.7
4	☐	10.000	8.836	316.67	0.0018	P	6.7
5	☐	100.000	99.349	2508.34	0.0138	P	3.0
6	☐	200.000	200.388	4959.24	0.0272	P	1.3

y = 1.3266E-004 * x + 6.5835E-004
R = 1.0000
DL = 1.454
BEC = 4.963

Weight: <None>
Min Conc: <None>

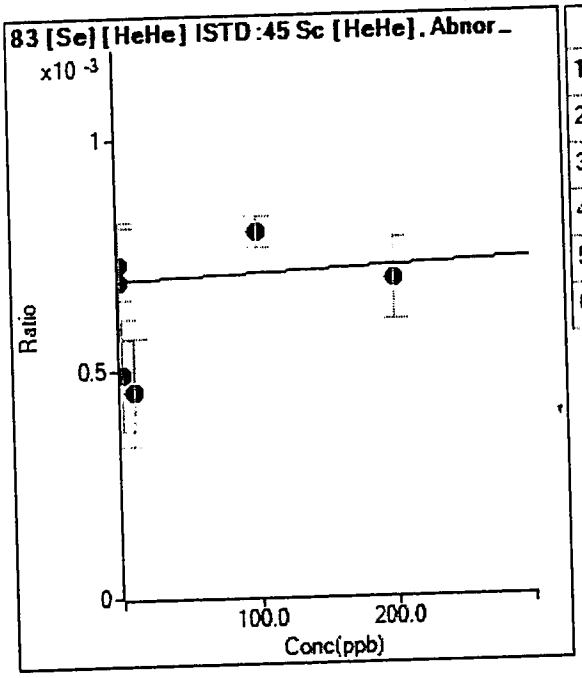


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1892.79	0.0003	P	10.9
2	☐	0.100	-3730.420	1689.05	0.0003	P	10.4
3	☐	1.000	-1145.853	1896.51	0.0003	P	8.5
4	☐	10.000	-2114.365	1855.75	0.0003	P	25.4
5	☐	100.000	-3045.833	1907.62	0.0003	P	8.5
6	☐	200.000	1886.734	2107.65	0.0003	P	15.4

y = 8.1625E-009 * x + 3.2878E-004
R = 0.5535
DL = 1.313E+04
BEC = 4.028E+04

Weight: <None>
Min Conc: <None>

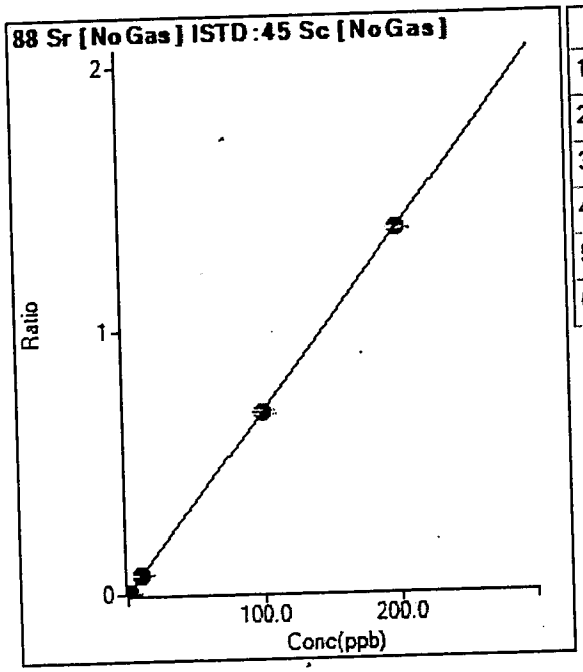
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	118.52	0.0007	P	37.1
2	☐	0.100	273.424	125.93	0.0007	P	20.8
3	☐	1.000	-1480.379	85.19	0.0005	P	49.9
4	☐	10.000	-1750.027	77.78	0.0005	P	52.8
5	☐	100.000	735.343	144.45	0.0008	P	8.4
6	☐	200.000	-22.400	125.93	0.0007	P	25.6

y = 1.3900E-007 * x + 6.9509E-004
R = 0.4026
DL = 5563
BEC = 5001

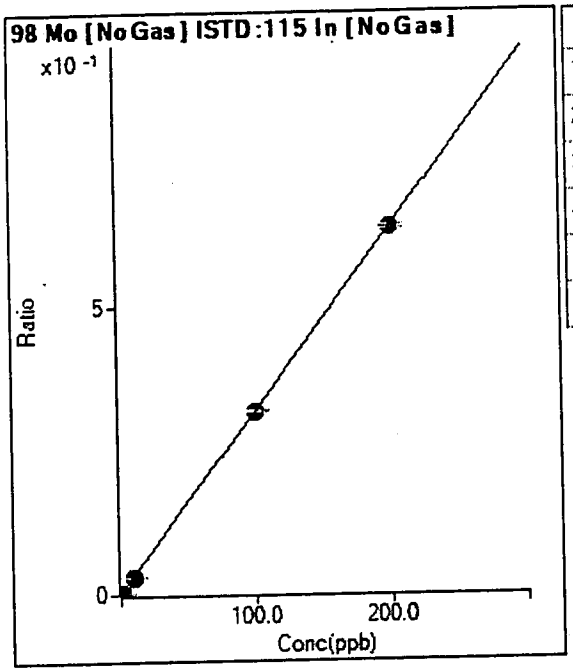
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	192.60	0.0000	P	39.3
2	☐	0.100	0.100	6523.87	0.0007	P	7.8
3	☐	1.000	1.024	67815.96	0.0071	P	1.5
4	☐	10.000	10.203	673643.91	0.0702	P	0.6
5	☐	100.000	99.721	6997417.08	0.6857	A	1.9
6	☐	200.000	200.129	13751394.82	1.3761	A	0.8

y = 0.0069 * x + 2.0867E-005
R = 1.0000
DL = 0.003578
BEC = 0.003035

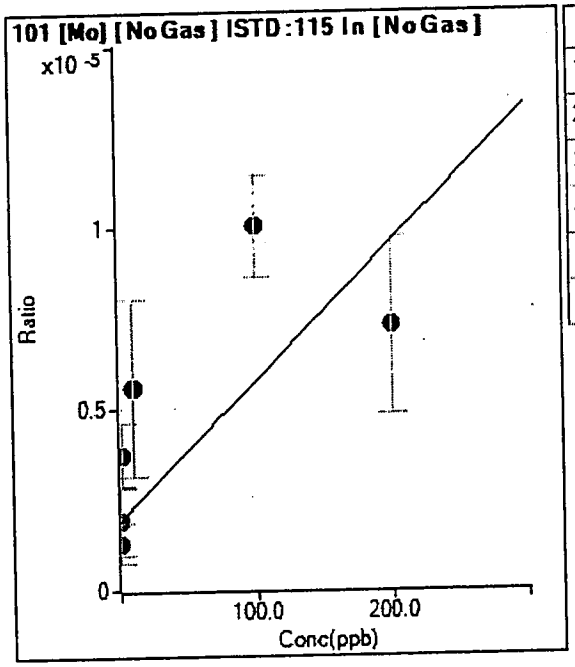
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11922.35	0.0021	P	38.8
2	☐	0.100	-0.070	10414.07	0.0018	P	30.9
3	☐	1.000	0.766	26675.06	0.0045	P	13.1
4	☐	10.000	9.159	185501.65	0.0311	P	1.7
5	☐	100.000	99.614	1996550.72	0.3181	A	1.0
6	☐	200.000	200.236	3907993.07	0.6372	A	1.1

y = 0.0032 * x + 0.0021
R = 1.0000
DL = 0.7586
BEC = 0.652

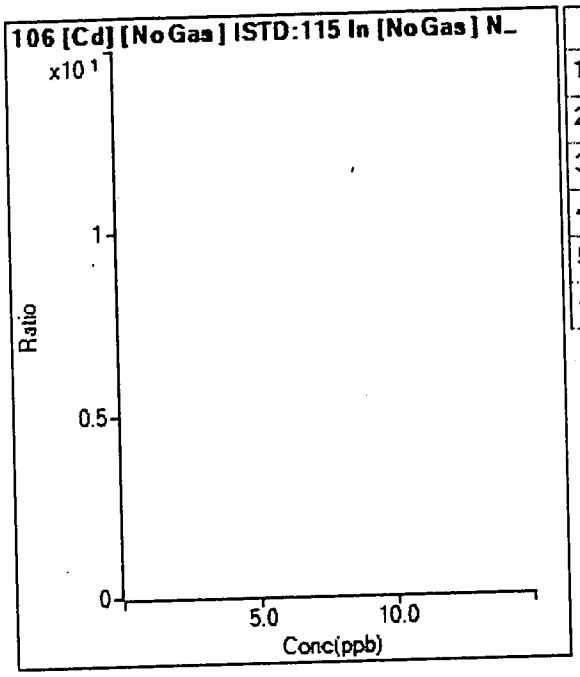
Weight: <None>
Min Conc: <None>



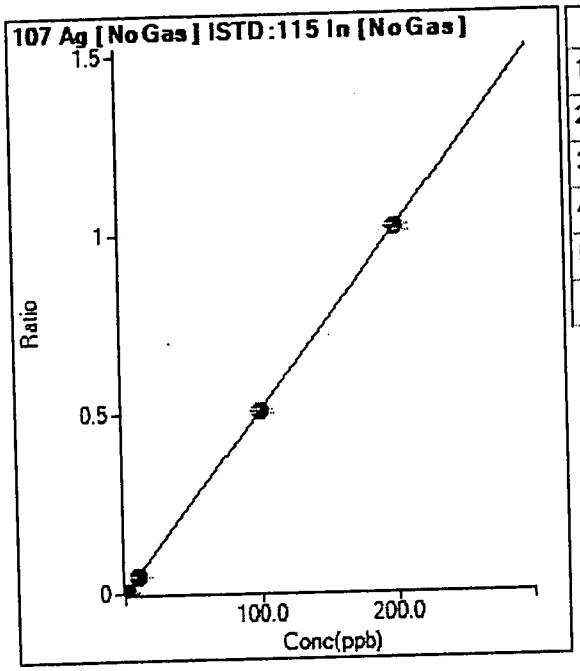
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11.11	0.0000	P	99.8
2	☐	0.100	-16.512	7.41	0.0000	P	86.6
3	☐	1.000	46.903	22.22	0.0000	P	49.2
4	☐	10.000	95.059	33.34	0.0000	P	88.2
5	☐	100.000	211.476	62.97	0.0000	P	27.8
6	☐	200.000	139.788	44.45	0.0000	P	66.8

y = 3.8363E-008 * x + 1.9349E-006
R = 0.7075
DL = 151
BEC = 50.44

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.100					
3	☐	1.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					

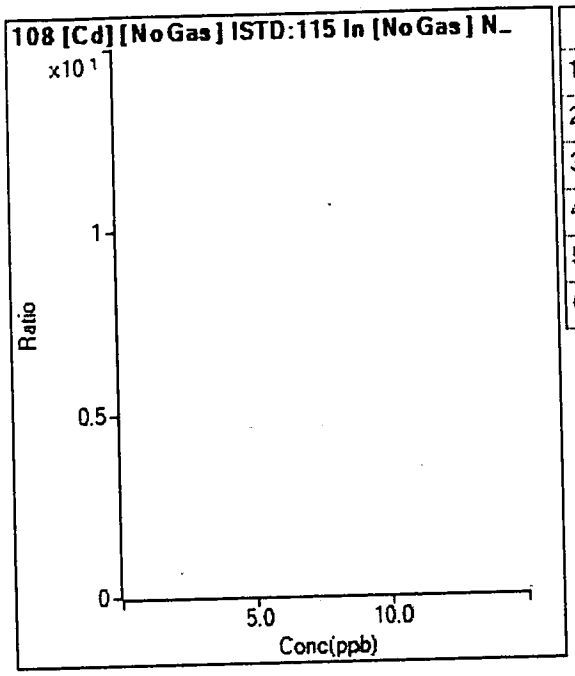


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.37	0.0000	P	39.0
2	☐	0.100	0.106	3104.18	0.0005	P	5.8
3	☐	1.000	1.039	31348.53	0.0053	P	1.7
4	☐	10.000	10.008	302621.10	0.0508	P	1.3
5	☐	100.000	99.715	3174830.08	0.5058	A	1.6
6	☐	200.000	200.142	6225088.41	1.0152	A	1.9

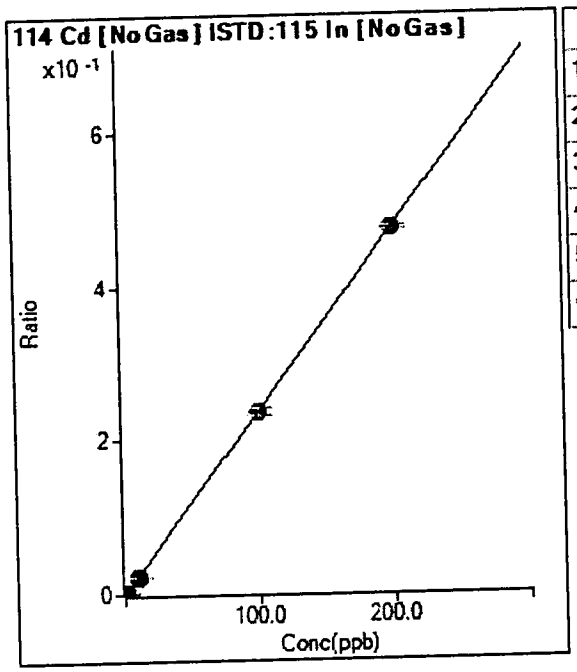
y = 0.0051 * x + 1.2193E-005
R = 1.0000
DL = 0.002811
BEC = 0.002404

Weight: <None>
Min Conc: <None>

Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.100					
3	☐	1.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	360.02	0.0001	P	30.5
2	☐	0.100	0.089	1546.80	0.0003	P	17.7
3	☐	1.000	0.950	13716.25	0.0023	P	1.2
4	☐	10.000	9.794	138635.90	0.0233	P	1.7
5	☐	100.000	99.547	1480139.82	0.2358	M	3.8
6	☐	200.000	200.237	2908805.06	0.4743	A	1.1

y = 0.0024 * x + 6.2458E-005

R = 1.0000

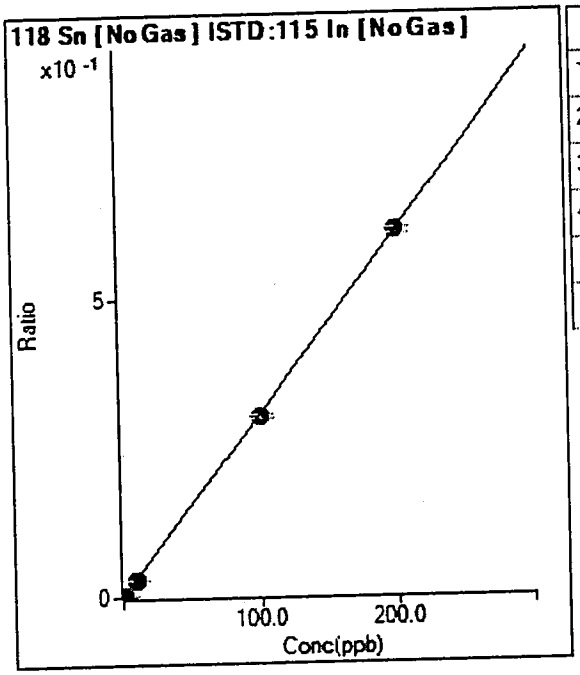
DL = 0.02414

BEC = 0.02637

Weight: <None>

Min Conc: <None>

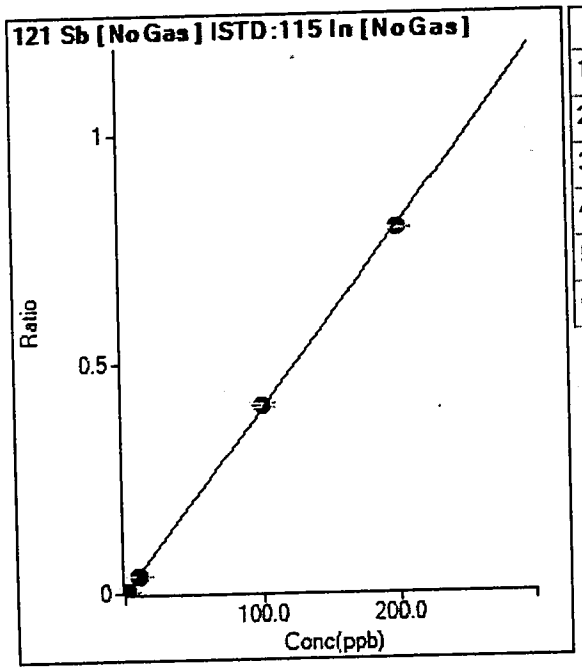
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6861.06	0.0012	P	22.9
2	☐	0.100	-0.001	6709.16	0.0012	P	24.9
3	☐	1.000	0.917	23599.10	0.0040	P	4.5
4	☐	10.000	9.573	180564.67	0.0303	P	1.4
5	☐	100.000	98.455	1886234.53	0.3005	A	1.8
6	☐	200.000	200.794	3750575.89	0.6116	A	1.7

y = 0.0030 * x + 0.0012
R = 1.0000
DL = 0.269
BEC = 0.3916

Weight: <None>
Min Conc: <None>

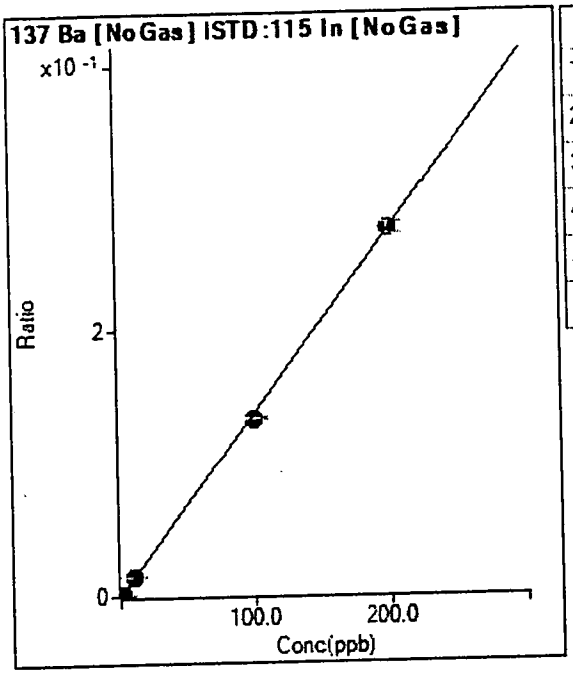


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2855.95	0.0005	P	22.8
2	☐	0.100	0.084	4704.59	0.0008	P	9.7
3	☐	1.000	0.977	26036.13	0.0044	P	6.2
4	☐	10.000	9.839	236636.34	0.0397	P	0.6
5	☐	100.000	102.030	2555108.35	0.4071	A	2.1
6	☐	200.000	198.993	4866585.80	0.7934	A	0.5

y = 0.0040 * x + 4.9561E-004
R = 0.9999
DL = 0.085
BEC = 0.1244

Weight: <None>
Min Conc: <None>

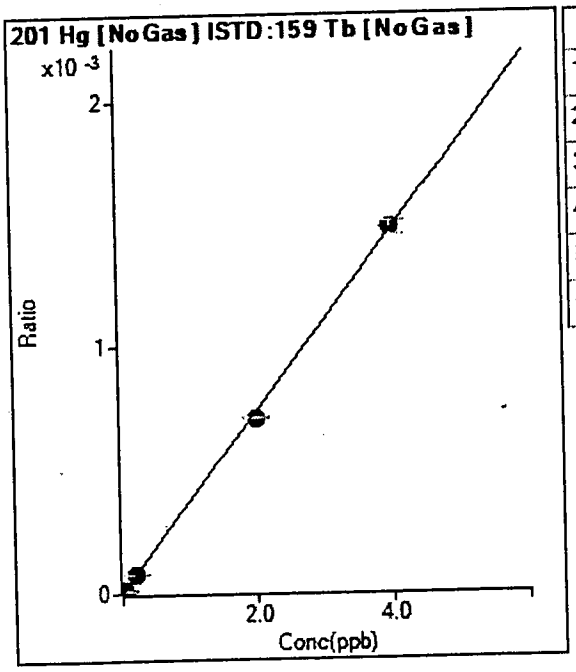
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.34	0.0000	P	33.0
2	☐	0.100	0.103	893.40	0.0002	P	12.5
3	☐	1.000	1.096	9029.55	0.0015	P	3.7
4	☐	10.000	10.196	83581.16	0.0140	P	0.9
5	☐	100.000	97.570	841402.25	0.1340	P	2.1
6	☐	200.000	201.205	1694987.47	0.2764	A	3.2

y = 0.0014 * x + 1.6210E-005
R = 0.9999
DL = 0.01168
BEC = 0.0118

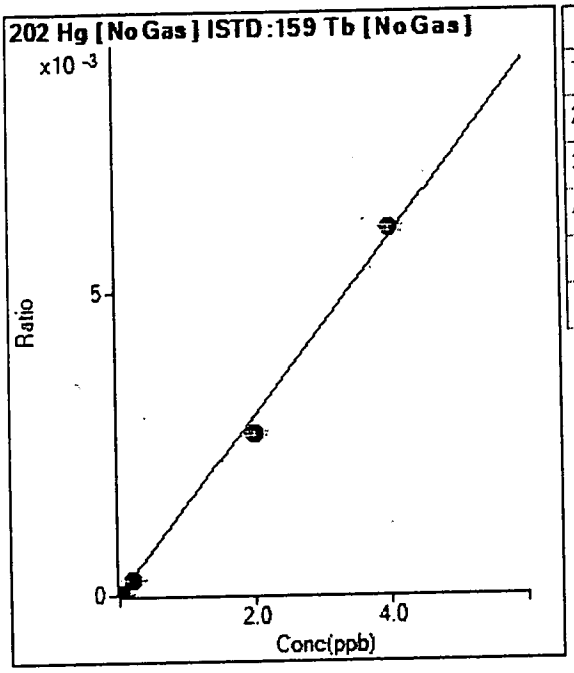
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.67	0.0000	P	21.2
2	☐			38.00	0.0000	P	18.8
3	☐	0.020	0.027	92.67	0.0000	P	32.3
4	☐	0.200	0.198	544.01	0.0001	P	1.0
5	☐	2.000	1.926	5249.57	0.0007	P	1.5
6	☐	4.000	4.037	10743.02	0.0015	P	3.6

y = 3.6509E-004 * x + 3.2556E-006
R = 0.9997
DL = 0.005662
BEC = 0.008917

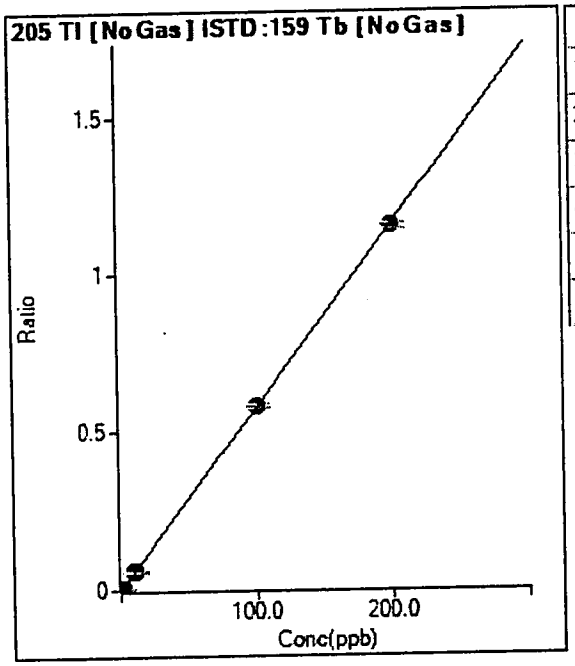
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	44.00	0.0000	P	36.7
2	☐			56.00	0.0000	P	23.2
3	☐	0.020	0.018	231.33	0.0000	P	1.9
4	☐	0.200	0.174	1894.80	0.0003	P	7.0
5	☐	2.000	1.796	19738.35	0.0027	P	2.1
6	☐	4.000	4.103	44068.81	0.0061	P	1.6

y = 0.0015 * x + 6.3210E-006
R = 0.9981
DL = 0.004714
BEC = 0.004286

Weight: <None>
Min Conc: <None>

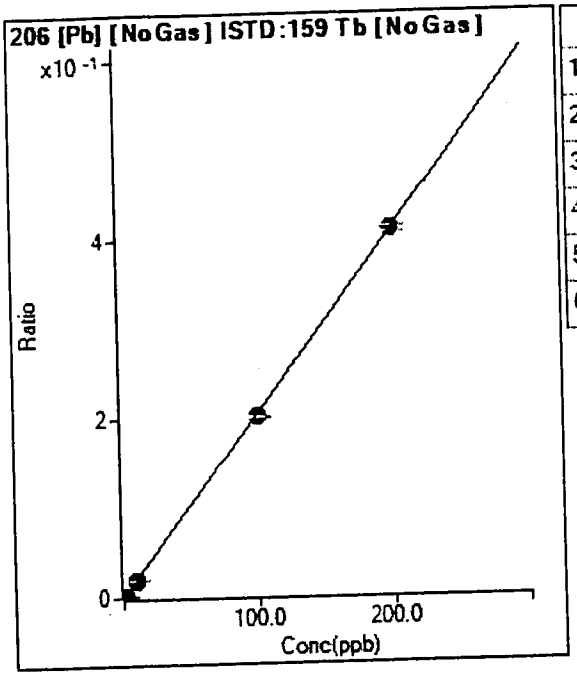


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55.56	0.0000	P	60.1
2	☐	0.100	0.100	3982.22	0.0006	P	4.0
3	☐	1.000	1.027	42273.29	0.0059	P	4.3
4	☐	10.000	10.133	422428.46	0.0586	P	1.8
5	☐	100.000	100.671	4323263.95	0.5817	A	1.6
6	☐	200.000	199.658	8390949.67	1.1536	A	1.5

y = 0.0058 * x + 7.9818E-006
R = 1.0000
DL = 0.002491
BEC = 0.001381

Weight: <None>
Min Conc: <None>

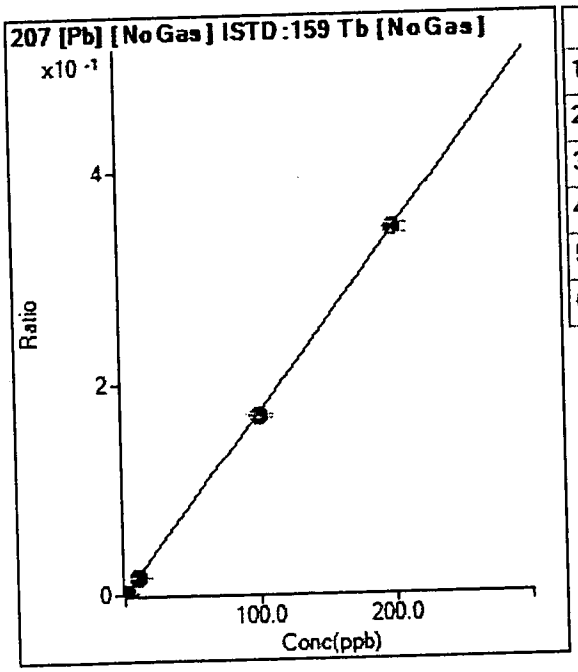
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	162.98	0.0000	P	63.8
2	☐	0.100	0.091	1426.06	0.0002	P	15.0
3	☐	1.000	0.994	14585.33	0.0021	P	3.5
4	☐	10.000	9.891	145726.66	0.0202	P	0.7
5	☐	100.000	98.456	1492734.84	0.2008	M	0.3
6	☐	200.000	200.778	2978569.21	0.4095	A	1.7

y = 0.0020 * x + 2.3543E-005
R = 1.0000
DL = 0.02208
BEC = 0.01154

Weight: <None>
Min Conc: <None>

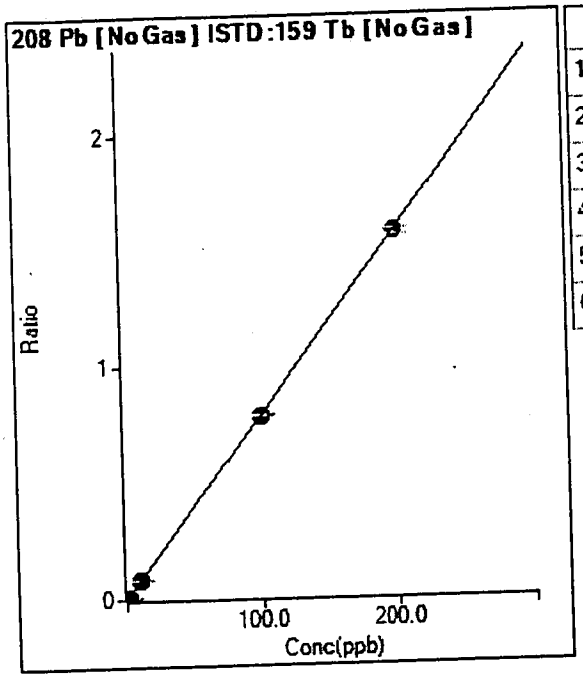


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	137.05	0.0000	P	41.7
2	☐	0.100	0.100	1296.42	0.0002	P	0.6
3	☐	1.000	1.036	12783.59	0.0018	P	0.5
4	☐	10.000	9.748	120751.66	0.0167	P	1.4
5	☐	100.000	98.151	1251344.91	0.1684	P	1.8
6	☐	200.000	200.937	2506560.95	0.3446	A	2.7

y = 0.0017 * x + 1.9709E-005
R = 0.9999
DL = 0.01439
BEC = 0.01149

Weight: <None>
Min Conc: <None>

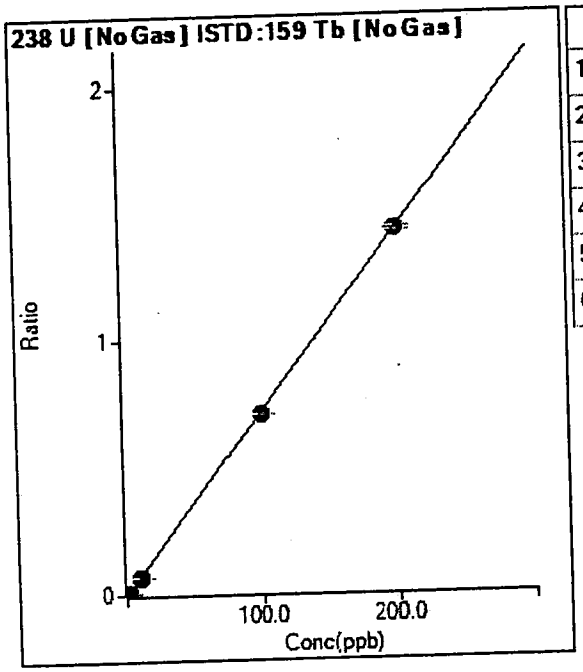
Calibration for 071_CCV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17528.94	0.0025	P	4.6
2	☐	0.100	0.060	20348.15	0.0030	P	4.9
3	☐	1.000	1.130	81148.00	0.0114	P	2.5
4	☐	10.000	9.997	585511.81	0.0812	P	1.1
5	☐	100.000	99.911	5859720.94	0.7883	A	1.2
6	☐	200.000	200.044	11462240.81	1.5759	A	1.8

y = 0.0079 * x + 0.0025
R = 1.0000
DL = 0.04449
BEC = 0.3207

Weight: <None>
Min Conc: <None>

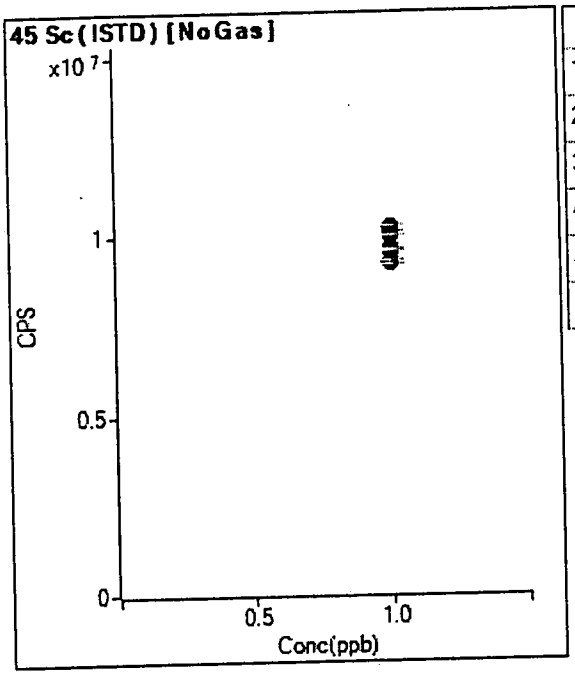


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	285.20	0.0000	P	32.7
2	☐	0.100	0.091	4697.27	0.0007	P	6.2
3	☐	1.000	1.008	51557.87	0.0072	P	0.4
4	☐	10.000	9.929	512538.03	0.0710	P	0.8
5	☐	100.000	99.018	5263199.44	0.7081	A	0.5
6	☐	200.000	200.495	10428690.33	1.4337	A	1.1

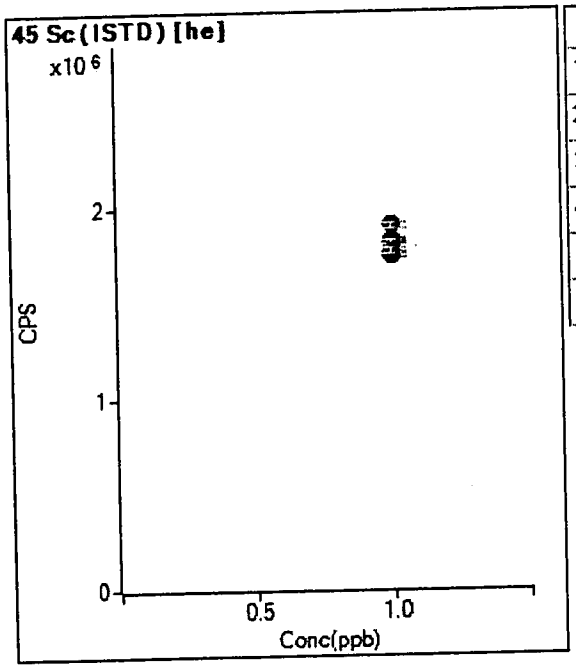
y = 0.0072 * x + 4.0951E-005
R = 1.0000
DL = 0.005613
BEC = 0.005727

Weight: <None>
Min Conc: <None>

Calibration for 071_CCV.d

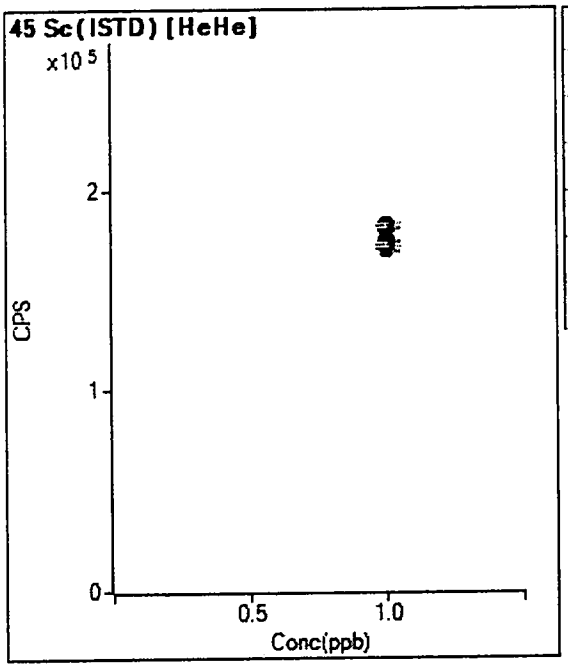


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9248342.15		A	1.3
2	☐	1.000		9230482.15		A	1.1
3	☐	1.000		9606577.15		A	1.0
4	☐	1.000		9599584.86		A	0.2
5	☐	1.000		10207256.51		A	1.9
6	☐	1.000		9993226.93		A	0.2

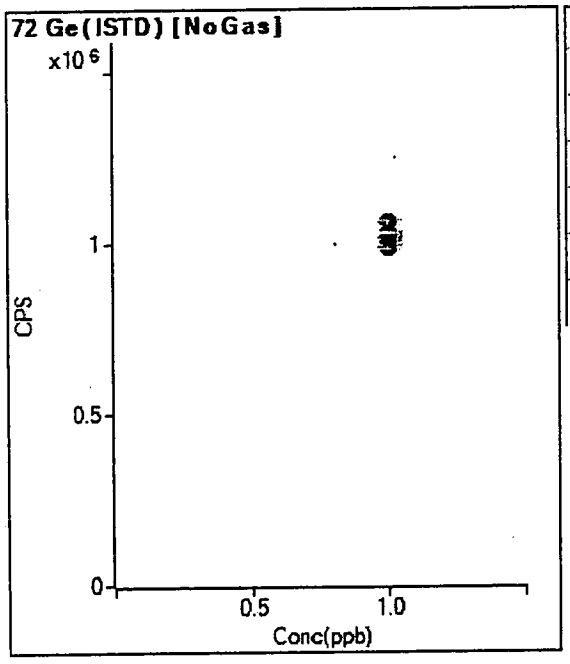


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1744642.74		A	1.2
2	☐	1.000		1761371.59		A	0.7
3	☐	1.000		1830836.90		A	0.7
4	☐	1.000		1819752.47		A	1.5
5	☐	1.000		1908010.65		A	1.9
6	☐	1.000		1774489.14		A	1.3

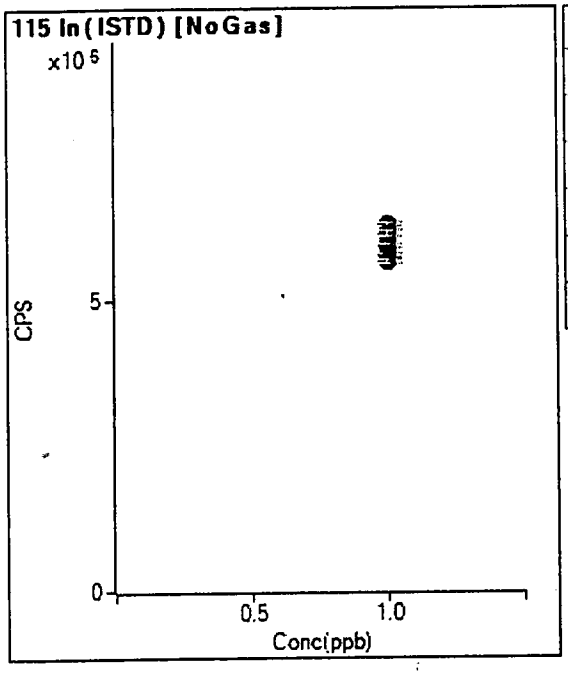
Calibration for 071_CCV.d



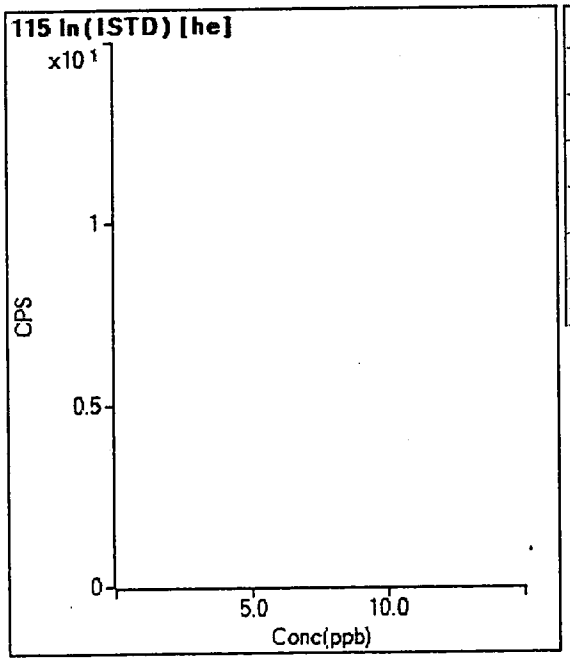
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		171212.05		P	2.5
2	☐	1.000		172413.77		P	2.8
3	☐	1.000		174348.69		P	0.7
4	☐	1.000		172938.55		P	1.3
5	☐	1.000		181247.61		P	0.7
6	☐	1.000		182051.31		P	0.9



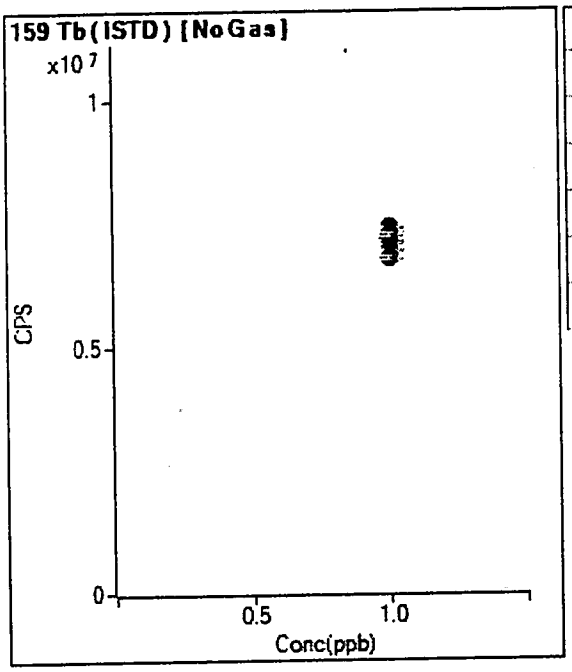
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1012122.41		P	1.1
2	☐	1.000		991031.21		P	1.2
3	☐	1.000		1021766.60		P	0.8
4	☐	1.000		1016045.53		P	0.8
5	☐	1.000		1060324.32		P	1.3
6	☐	1.000		1031019.78		P	0.5



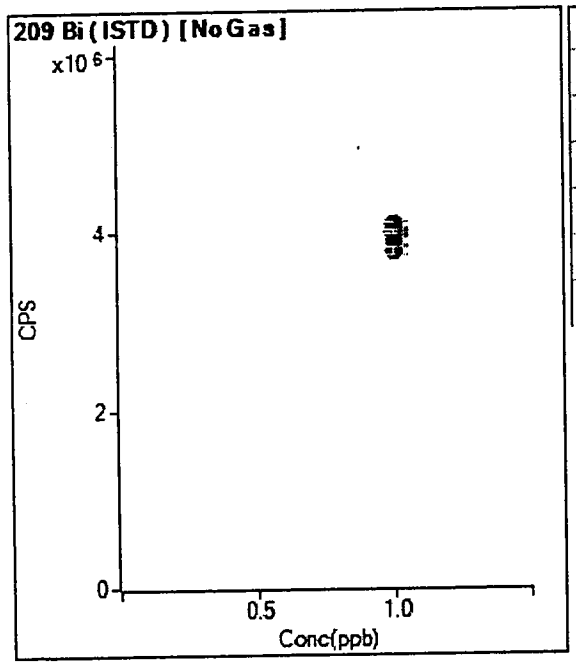
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5760109.93		A	0.8
2	☐	1.000		5660257.78		A	1.4
3	☐	1.000		5934138.78		A	1.0
4	☐	1.000		5960241.09		A	0.4
5	☐	1.000		6277626.82		A	0.9
6	☐	1.000		6133320.70		A	1.6



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000					
2	☐	1.000					
3	☐	1.000					
4	☐	1.000					
5	☐	1.000					
6	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6952439.08		A	1.0
2	☐	1.000		6804368.71		A	1.3
3	☐	1.000		7112798.56		A	0.8
4	☐	1.000		7215155.50		A	0.7
5	☐	1.000		7433189.75		A	0.8
6	☐	1.000		7274528.88		A	1.2



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3846945.10		A	0.4
2	☐	1.000		3791147.42		A	2.1
3	☐	1.000		3993178.89		A	0.7
4	☐	1.000		3949111.19		A	0.6
5	☐	1.000		4079951.34		A	1.3
6	☐	1.000		4005913.04		A	0.9

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	008_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:39:25-04:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	108.179	2.709	5710375	1.80	100	108.2	90	110	
Cr	52	1	No Gas	105.830	2.653	4971760	2.29	100	105.8	90	110	
Mn	55	1	No Gas	107.755	1.182	6242864	0.99	100	107.8	90	110	
Co	59	1	No Gas	104.761	2.670	5437450	0.71	100	104.8	90	110	
Ni	60	1	No Gas	102.457	1.892	1189685	0.67	100	102.5	90	110	
Cu	63	1	No Gas	106.175	3.458	3003279	1.38	100	106.2	90	110	
Sr	88	1	No Gas	107.029	2.725	7132974	1.46	100	107.0	90	110	
Ag	107	1	No Gas	105.943	2.149	3247896	0.58	100	105.9	90	110	
Al	27	1	No Gas	105.462	1.641	3532024	0.55	100	105.5	90	110	
Sn	118	1	No Gas	109.712	1.569	2023323	1.40	100	109.7	90	110	
Tl	47	1	No Gas	95.360	0.803	387126	1.08	100	95.4	90	110	
Zn	66	1	No Gas	101.792	1.795	704513	0.97	100	101.8	90	110	
As	75	3	HeHe	103.827	1.129	48839	0.75	100	103.8	90	110	
As	75	1	No Gas	102.010	1.477	740450	0.91	100	102.0	90	110	
Sb	121	1	No Gas	94.059	0.519	2268852	1.61	100	94.1	90	110	
Hg	201	1	No Gas	2.186	1.811	5791	2.32	2	109.3	90	110	
Be	9	1	No Gas	98.115	0.934	675312	1.20	100	98.1	90	110	
Pb	208	1	No Gas	104.590	0.978	5961329	0.61	100	104.6	90	110	
Se	82	1	No Gas	107.144	1.831	39781	0.89	100	107.1	90	110	
Mo	98	1	No Gas	107.705	2.634	2077591	2.05	100	107.7	90	110	
Ba	137	1	No Gas	101.442	0.784	842492	1.25	100	101.4	90	110	
Tl	205	1	No Gas	103.196	0.236	4307888	0.86	100	103.2	90	110	
U	238	1	No Gas	113.386	1.420	5858268	1.71	100	113.4	90	110	ICV Main CR1 Failed
Na	23	2	he	1005.870	1.299	4539165	0.92	1000	100.6	90	110	
Mg	24	2	he	1021.926	0.258	2524588	0.52	1000	102.2	90	110	
K	39	2	he	1006.474	2.495	3914766	1.98	1000	100.6	90	110	
Se	82	3	HeHe	108.537	1.617	2650	1.59	100	108.5	90	110	
Fe	57	3	HeHe	1108.579	1.499	125514	1.06	1000	110.9	90	110	ICV Main CR1 Failed
Cd	114	1	No Gas	104.693	1.043	1499274	0.85	100	104.7	90	110	
Ca	44	1	No Gas	1082.944	3.117	1502683	0.98	1000	108.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9695488	2.06	9248342	104.83	70	120	
Sc	45	2	he	1824095	0.70	1744643	104.55	70	120	
Ge	72	1	No Gas	1029221	0.98	1012122	101.69	70	120	
In	115	1	No Gas	6045633	1.87	5760110	104.96	70	120	
Tb	159	1	No Gas	7224955	0.73	6952439	103.92	70	120	
Bi	209	1	No Gas	4025671	1.37	3846945	104.65	70	120	
Sc	45	3	HeHe	175990	0.55	171212	102.79	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	009_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:43:14-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	-0.081	-2.8	17532	1.6	9	
Cr	52	1	No Gas	-0.074	-2.7	31678	1.2	4	
Mn	55	1	No Gas	0.246	6.2	51233	2.6	25	
Co	59	1	No Gas	0.006	14.8	485	10.8	1	
Ni	60	1	No Gas	0.009	32.3	630	5.7	25	
Cu	63	1	No Gas	0.075	13.7	14116	1.1	25	
Sr	88	1	No Gas	0.006	13.5	559	8.3	25	
Ag	107	1	No Gas	0.020	21.4	663	20.0	9	
Al	27	1	No Gas	0.011	112.2	10956	4.0	1000000	
Sn	118	1	No Gas	2.619	32.6	54438	27.4	25	
Tl	47	1	No Gas	0.478	47.9	3260	27.0	10000	
Zn	66	1	No Gas	0.000	-4630.7	1017	13.2	25	
As	75	3	HeHe	0.995	10.0	513	9.2	9	
As	75	1	No Gas	0.377	108.8	30020	8.8	9	
Sb	121	1	No Gas	1.986	15.4	50073	13.5	4	
Hg	201	1	No Gas	0.032	10.9	107	7.8	0.04	
Be	9	1	No Gas	0.011	14.3	100	10.6	1	
Pb	208	1	No Gas	0.134	13.7	25658	4.0	4	
Se	82	1	No Gas	1.568	46.7	636	42.2	25	
Mo	98	1	No Gas	1.355	41.9	37865	27.3	10000	
Ba	137	1	No Gas	0.009	45.3	170	20.4	25	
Tl	205	1	No Gas	0.029	13.2	1256	12.4	1	
U	238	1	No Gas	0.360	22.4	18824	22.9	25	
Na	23	2	he	-0.993	-107.2	113339	3.9	2500000	
Mg	24	2	he	0.030	115.7	470	19.2	2500000	
K	39	2	he	6.181	1.7	280084	0.9	5000000	
Se	82	3	HeHe	0.813	80.5	136	11.6	25	
Fe	57	3	HeHe	22.555	6.7	2578	6.4	2500000	
Cd	114	1	No Gas	0.087	13.4	1593	9.4	1	
Ca	44	1	No Gas	0.780	245.6	67097	3.1	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9490102	0.93	9248342	102.61	70	120	
Sc	45	2	he	1843980	1.02	1744643	105.69	70	120	
Ge	72	1	No Gas	1022478	0.29	1012122	101.02	70	120	

Initial Calibration Blank (ICB) Report

In	115	1	No Gas	5960261	1.04	5760110	103.47	70	120	
Tb	159	1	No Gas	7178623	1.54	6952439	103.25	70	120	
Bi	209	1	No Gas	3964814	2.06	3846945	103.06	70	120	
Sc	45	3	HeHe	177859	1.13	171212	103.88	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	010_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:47:09-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	-0.082	-187.1	18158	43.9	9	
Cr	52	1	No Gas	-0.114	-36.7	31143	4.8	4	
Mn	55	1	No Gas	0.124	53.5	46226	6.8	25	
Co	59	1	No Gas	0.002	117.7	300	51.5	1	
Ni	60	1	No Gas	0.003	372.1	577	19.0	25	
Cu	63	1	No Gas	0.013	139.3	12943	2.4	25	
Sr	88	1	No Gas	0.001	133.2	281	34.5	25	
Ag	107	1	No Gas	0.012	22.0	441	17.7	9	
Al	27	1	No Gas	0.004	58.7	11208	1.0	1000000	
Sn	118	1	No Gas	1.085	36.8	27914	26.5	25	
Ti	47	1	No Gas	0.089	101.3	1792	20.5	10000	
Zn	66	1	No Gas	0.035	73.0	1307	12.2	25	
As	75	3	HeHe	0.387	13.8	222	13.1	9	
As	75	1	No Gas	-0.105	-334.7	27881	7.5	9	
Sb	121	1	No Gas	0.664	21.1	19535	17.0	4	
Hg	201	1	No Gas	0.013	23.0	61	14.9	0.04	
Be	9	1	No Gas	0.003	22.5	43	11.8	1	
Pb	208	1	No Gas	0.230	6.2	32315	4.3	4	
Se	82	1	No Gas	0.285	323.9	176	196.5	25	
Mo	98	1	No Gas	0.267	119.5	18133	34.1	10000	
Ba	137	1	No Gas	0.003	149.1	130	33.5	25	
Tl	205	1	No Gas	0.011	29.2	519	26.4	1	
U	238	1	No Gas	0.088	38.8	4997	35.3	25	
Na	23	2	he	-3.213	-75.3	108189	2.3	2500000	
Mg	24	2	he	-0.043	-70.1	304	31.1	2500000	
K	39	2	he	-1.040	-597.4	265253	0.8	5000000	
Se	82	3	HeHe	0.712	132.6	132	15.7	25	
Fe	57	3	HeHe	7.980	14.3	900	15.0	2500000	
Cd	114	1	No Gas	0.045	35.7	1050	22.0	1	
Ca	44	1	No Gas	-0.531	-496.7	68240	3.9	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9906263	1.73	9248342	107.11	70	120	
Sc	45	2	he	1939137	8.60	1744643	111.15	70	120	
Ge	72	1	No Gas	1034853	2.32	1012122	102.25	70	120	

Initial Calibration Blank (ICB) Report

In	115	1	No Gas	6223600	1.77	5760110	108.05	70	120	
Tb	159	1	No Gas	7453756	1.79	6952439	107.21	70	120	
Bi	209	1	No Gas	4097513	1.57	3846945	106.51	70	120	
Sc	45	3	HeHe	175440	2.93	171212	102.47	70	120	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV
Data File Name	011LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:51:04-04:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	1.888	6.549	123562	3.30	2	94.4	70	130	
Cr	52	1	No Gas	1.902	4.742	126733	1.61	2	95.1	70	130	
Mn	55	1	No Gas	5.198	5.144	343367	2.56	5	104.0	70	130	
Co	59	1	No Gas	4.868	3.211	257370	1.26	5	97.4	70	130	
Ni	60	1	No Gas	5.046	2.217	60156	0.30	5	100.9	70	130	
Cu	63	1	No Gas	4.912	1.893	153432	0.56	5	98.2	70	130	
Sr	88	1	No Gas	4.577	1.484	310777	1.04	5	91.5	70	130	
Ag	107	1	No Gas	2.072	3.978	63461	2.45	2	103.6	70	130	
Al	27	1	No Gas	81.097	3.237	2766965	1.93	80	101.4	70	130	
Sn	118	1	No Gas	2.221	6.778	47910	5.58	2	111.0	70	130	
Ti	47	1	No Gas	4.671	1.044	20238	1.93	5	93.4	70	130	
Zn	66	1	No Gas	5.327	2.204	38534	0.31	5	106.5	70	130	
As	75	3	HeHe	3.338	7.180	1564	4.33	3	111.3	70	130	
As	75	1	No Gas	2.759	7.719	48166	3.16	3	92.0	70	130	
Sb	121	1	No Gas	2.370	3.581	59965	2.64	2	118.5	70	130	
Hg	201	1	No Gas	0.209	3.501	573	6.07	0.2	104.3	70	130	
Be	9	1	No Gas	0.984	5.708	6911	3.69	1	98.4	70	130	
Pb	208	1	No Gas	2.202	4.037	142892	1.20	2	110.1	70	130	
Se	82	1	No Gas	4.627	10.783	1812	8.24	5	92.5	70	130	
Mo	98	1	No Gas	1.837	10.684	47616	6.68	2	91.9	70	130	
Ba	137	1	No Gas	5.050	1.016	41954	2.05	5	101.0	70	130	
Tl	205	1	No Gas	1.027	5.946	42804	4.29	1	102.7	70	130	
U	238	1	No Gas	5.057	3.278	260762	1.18	5	101.1	70	130	
Na	23	2	he	105.890	20.966	512463	1.89	100	105.9	70	130	
Mg	24	2	he	105.193	16.306	229184	1.36	100	105.2	70	130	
K	39	2	he	121.763	25.859	614153	1.48	100	121.8	70	130	
Se	82	3	HeHe	4.972	3.369	226	5.44	5	99.4	70	130	
Fe	57	3	HeHe	57.454	7.586	6316	3.96	50	114.9	70	130	
Cd	114	1	No Gas	1.066	4.748	15611	5.75	1	106.6	70	130	
Ca	44	1	No Gas	96.240	3.208	198569	0.33	100	96.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9869984	2.25	9248342	106.72	70	120	
Sc	45	2	he	1631911	14.38	1744643	93.54	70	120	
Ge	72	1	No Gas	994170	2.25	1012122	98.23	70	120	
In	115	1	No Gas	6033756	1.88	5760110	104.75	70	120	
Tb	159	1	No Gas	7207597	3.16	6952439	103.67	70	120	
Bi	209	1	No Gas	3955991	0.95	3846945	102.83	70	120	
Sc	45	3	HeHe	171360	3.89	171212	100.09	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	012ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T08:57:04-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.069	100.9	25883	12.1	9	
Cr	52	1	No Gas	0.875	8.4	76952	2.5	4	
Mn	55	1	No Gas	1.383	2.6	118312	0.7	25	
Co	59	1	No Gas	1.318	3.3	68913	1.6	1	ICSA Main CR1 Failed
Ni	60	1	No Gas	1.779	4.8	21270	2.6	5	
Cu	63	1	No Gas	0.725	3.3	32914	3.8	5	
Ag	107	1	No Gas	0.313	6.8	8914	6.7	9	
Al	27	1	No Gas	91092.374	3.8	3054773805	1.8	110000	
Sn	118	1	No Gas	0.381	43.5	13102	21.5	25	
Tl	47	1	No Gas	1987.139	0.6	7420386	1.0	2200	
Zn	66	1	No Gas	2.478	3.1	18252	2.4	5	
As	75	3	HeHe	0.535	10.2	302	9.2	9	
As	75	1	No Gas	0.328	184.1	30434	12.4	9	
Sb	121	1	No Gas	1.027	22.9	25595	20.3	4	
Hg	201	1	No Gas	0.026	17.3	87	12.6	0.04	
Be	9	1	No Gas	0.007	19.3	74	15.0	1	
Pb	208	1	No Gas	0.345	3.3	36343	1.4	4	
Se	82	1	No Gas	0.301	148.1	180	92.7	25	
Mo	98	1	No Gas	2043.986	1.8	36184089	1.1	2200	
Ba	137	1	No Gas	0.145	9.5	1200	7.9	25	
Tl	205	1	No Gas	0.023	23.7	967	22.2	1	
U	238	1	No Gas	0.046	31.9	2571	28.8	25	
Na	23	2	he	87602.701	1.2	402491965	0.7	110000	
Mg	24	2	he	89786.071	1.9	231657739	1.2	110000	
K	39	2	he	87734.642	0.9	333588053	1.0	110000	
Se	82	3	HeHe	-0.198	-387.9	115	13.9	25	
Fe	57	3	HeHe	96996.857	1.0	11353561	1.6	110000	
Cd	114	1	No Gas	0.899	3.4	12232	3.3	1	
Ca	44	1	No Gas	87923.254	1.3	117159318	0.7	110000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9740728	2.02	9248342	105.32	70	120	
Sc	45	2	he	1905649	1.54	1744643	109.23	70	120	
Ge	72	1	No Gas	1000038	0.21	1012122	98.81	70	120	
In	115	1	No Gas	5579503	1.14	5760110	96.86	70	120	
Tb	159	1	No Gas	6938038	0.55	6952439	99.79	70	120	
Bi	209	1	No Gas	3590926	0.94	3846945	93.34	70	120	
Sc	45	3	HeHe	182138	2.50	171212	106.38	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	013ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T09:01:05-04:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	39.555	0.949	2122524	1.39	40	98.9	80	120		
Cr	52	1	No Gas	18.427	0.839	903873	1.04	20	92.1	80	120		
Mn	55	1	No Gas	19.453	2.088	1169466	2.29	20	97.3	80	120		
Co	59	1	No Gas	36.923	0.752	1935255	0.22	40	92.3	80	120		
Ni	60	1	No Gas	34.784	2.562	408157	2.45	40	87.0	80	120		
Cu	63	1	No Gas	17.329	2.085	505390	1.51	20	86.6	80	120		
Ag	107	1	No Gas	18.509	0.538	533985	0.74	20	92.5	80	120		
Al	27	1	No Gas	88937.217	3.298	2997864948	2.88	100000	88.9	90	110	ICSB Main CR1 Failed	OK
Tl	47	1	No Gas	1955.453	0.846	7443662	1.43	2000	97.8	90	110		
Zn	66	1	No Gas	20.410	1.049	143463	0.58	20	102.1	80	120		
As	75	3	HeHe	19.195	1.701	9605	1.97	20	96.0	80	120		
As	75	1	No Gas	19.233	2.359	163911	1.52	20	96.2	80	120		
Sb	121	1	No Gas	0.677	15.156	18166	12.43	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Hg	201	1	No Gas	0.014	10.238	59	5.21	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Be	9	1	No Gas	0.004	51.279	54	29.63	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Pb	208	1	No Gas	0.419	3.277	41674	2.51	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Se	82	1	No Gas	19.234	3.486	7267	3.98	20	96.2	80	120		
Mo	98	1	No Gas	2015.635	1.722	36377624	2.12	2000	100.8	90	110		
Ba	137	1	No Gas	0.185	5.927	1540	6.19	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Tl	205	1	No Gas	0.020	8.888	885	7.14	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
U	238	1	No Gas	0.022	23.670	1433	20.67	0	#DIV/0!	0	0	ICSB Main CR1 Failed	
Na	23	2	he	86138.637	1.876	394590809	1.24	100000	86.1	90	110	ICSB Main CR1 Failed	OK
Mg	24	2	he	88611.427	1.607	227968124	1.45	100000	88.6	90	110	ICSB Main CR1 Failed	OK
K	39	2	he	87486.841	1.339	331652461	0.63	100000	87.5	90	110	ICSB Main CR1 Failed	OK
Se	82	3	HeHe	18.828	6.911	589	4.63	20	94.1	80	120		
Fe	57	3	HeHe	93298.201	1.093	11185401	0.25	100000	93.3	90	110		
Cd	114	1	No Gas	9.576	2.163	129339	1.56	10	95.8	80	120		
Ca	44	1	No Gas	86786.790	1.704	116213412	1.63	100000	86.8	90	110	ICSB Main CR1 Failed	OK

80-120

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9786977	0.53	9248342	105.82	70	120	
Sc	45	2	he	1899930	0.70	1744643	108.90	70	120	
Ge	72	1	No Gas	1032635	1.10	1012122	102.03	70	120	
In	115	1	No Gas	5687437	0.80	5760110	98.74	70	120	
Tb	159	1	No Gas	7167544	1.87	6952439	103.09	70	120	
Bi	209	1	No Gas	3604212	0.69	3846945	93.69	70	120	
Sc	45	3	HeHe	186537	0.98	171212	108.95	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	069_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T12:52:37-04:00
Sample Type	CCB
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	-0.268	-37.0	8099	65.8	9	
Cr	52	1	No Gas	-0.097	-9.1	31325	0.1	4	
Mn	55	1	No Gas	0.391	2.4	60756	2.0	25	
Co	59	1	No Gas	0.006	48.8	496	31.4	1	
Ni	60	1	No Gas	0.004	231.7	580	17.9	25	
Cu	63	1	No Gas	-0.240	-2.4	5556	2.2	25	
Sr	88	1	No Gas	0.005	20.9	556	12.2	25	
Ag	107	1	No Gas	0.016	12.3	567	11.8	9	
Al	27	1	No Gas	0.290	3.6	20535	2.9	1000000	
Sn	118	1	No Gas	1.870	30.3	40746	24.7	25	
Ti	47	1	No Gas	0.358	43.4	2774	22.0	10000	
Zn	66	1	No Gas	-0.001	-1496.9	1037	7.8	25	
As	75	3	HeHe	0.655	11.0	347	9.2	9	
As	75	1	No Gas	0.253	40.2	29856	1.2	9	
Sb	121	1	No Gas	1.713	13.4	43425	12.3	4	
Hg	201	1	No Gas	0.018	33.2	71	21.0	0.04	
Be	9	1	No Gas	0.011	14.7	102	10.2	1	
Pb	208	1	No Gas	-0.172	-9.1	8432	8.7	4	
Se	82	1	No Gas	1.172	58.6	501	50.6	25	
Mo	98	1	No Gas	0.768	50.8	26701	27.2	10000	
Ba	137	1	No Gas	0.008	29.9	160	12.5	25	
Tl	205	1	No Gas	0.026	6.5	1148	7.4	1	
U	238	1	No Gas	0.311	21.6	16369	22.8	25	
Na	23	2	he	0.918	30.4	122432	1.8	2500000	
Mg	24	2	he	0.013	131.9	430	11.9	2500000	
K	39	2	he	-0.778	-145.2	255691	1.0	5000000	
Se	82	3	HeHe	0.016	3482.2	116	11.4	25	
Fe	57	3	HeHe	17.138	10.1	1934	10.5	2500000	
Cd	114	1	No Gas	0.073	30.3	1390	22.0	1	
Ca	44	1	No Gas	-9.123	-10.7	55522	3.2	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9710532	1.19	9248342	105.00	70	120	
Sc	45	2	he	1852940	1.95	1744643	106.21	70	120	
Ge	72	1	No Gas	1020074	1.24	1012122	100.79	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	5931519	1.02	5760110	102.98	70	120	
Tb	159	1	No Gas	7198771	1.74	6952439	103.54	70	120	
Bi	209	1	No Gas	3879305	2.29	3846945	100.84	70	120	
Sc	45	3	HeHe	175486	0.64	171212	102.50	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	070LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:00:08-04:00
Sample Type	LLCCV
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	1.754	4.471	115299	2.25	2	87.7	70	130	
Cr	52	1	No Gas	1.880	4.742	124463	0.87	2	94.0	70	130	
Mn	55	1	No Gas	5.282	2.716	345009	0.11	5	105.6	70	130	
Co	59	1	No Gas	4.931	2.917	258153	1.34	5	98.6	70	130	
Ni	60	1	No Gas	4.972	2.213	58712	1.42	5	99.4	70	130	
Cu	63	1	No Gas	4.664	2.194	144900	0.74	5	93.3	70	130	
Sr	88	1	No Gas	4.584	2.520	308189	0.54	5	91.7	70	130	
Ag	107	1	No Gas	2.050	1.881	61636	0.64	2	102.5	70	130	
Al	27	1	No Gas	84.005	1.384	2839190	2.62	80	105.0	70	130	
Sn	118	1	No Gas	2.145	13.963	45612	10.26	2	107.3	70	130	
Tl	47	1	No Gas	4.740	0.190	20133	1.46	5	94.8	70	130	
Zn	66	1	No Gas	5.307	3.168	38014	0.85	5	106.1	70	130	
As	75	3	HeHe	3.086	4.381	1453	2.98	3	102.9	70	130	
As	75	1	No Gas	3.321	12.504	51624	3.62	3	110.7	70	130	
Sb	121	1	No Gas	2.499	5.689	61863	3.88	2	124.9	70	130	
Hg	201	1	No Gas	0.185	7.895	504	8.10	0.2	92.5	70	130	
Be	9	1	No Gas	0.948	1.752	6599	2.74	1	94.8	70	130	
Pb	208	1	No Gas	1.846	2.049	121306	1.29	2	92.3	70	130	
Se	82	1	No Gas	3.992	21.021	1558	19.29	5	79.8	70	130	
Mo	98	1	No Gas	1.775	7.478	45561	3.98	2	88.8	70	130	
Ba	137	1	No Gas	5.025	1.503	40975	3.01	5	100.5	70	130	
Tl	205	1	No Gas	0.968	1.094	39863	2.40	1	96.8	70	130	
U	238	1	No Gas	5.112	1.361	260510	0.28	5	102.2	70	130	
Na	23	2	he	90.605	0.630	525217	0.72	100	90.6	70	130	
Mg	24	2	he	92.476	1.448	233410	1.81	100	92.5	70	130	
K	39	2	he	97.706	2.901	622130	1.19	100	97.7	70	130	
Se	82	3	HeHe	4.870	11.736	224	8.36	5	97.4	70	130	
Fe	57	3	HeHe	56.379	5.850	6220	6.52	50	112.8	70	130	
Cd	114	1	No Gas	0.992	2.343	14277	1.58	1	99.2	70	130	
Ca	44	1	No Gas	87.034	5.532	184308	1.11	100	87.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9774994	2.54	9248342	105.69	70	120	
Sc	45	2	he	1860682	0.52	1744643	106.65	70	120	
Ge	72	1	No Gas	1023845	1.17	1012122	101.16	70	120	
In	115	1	No Gas	5921225	1.58	5760110	102.80	70	120	
Tb	159	1	No Gas	7118830	1.32	6952439	102.39	70	120	
Bi	209	1	No Gas	3884486	0.47	3846945	100.98	70	120	
Sc	45	3	HeHe	171623	2.48	171212	100.24	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	071_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:04:04-04:00
Sample Type	CCV
Dilution	1
Comment	37926 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	104.313	1.131	5608981	0.43	100	104.3	90	110	
Cr	52	1	No Gas	102.136	1.366	4888446	2.06	100	102.1	90	110	
Mn	55	1	No Gas	102.979	2.280	6078469	2.96	100	103.0	90	110	
Co	59	1	No Gas	99.751	0.652	5274049	1.36	100	99.8	90	110	
Ni	60	1	No Gas	97.719	0.452	1155685	0.26	100	97.7	90	110	
Cu	63	1	No Gas	100.944	0.199	2909426	0.52	100	100.9	90	110	
Sr	88	1	No Gas	102.149	0.766	6934255	0.76	100	102.1	90	110	
Ag	107	1	No Gas	103.306	1.699	3129874	1.21	100	103.3	90	110	
Al	27	1	No Gas	104.516	0.749	3565265	1.39	100	104.5	90	110	
Sn	118	1	No Gas	103.323	0.938	1883441	1.16	100	103.3	90	110	
Tl	47	1	No Gas	93.027	0.952	373206	0.46	100	93.0	90	110	
Zn	66	1	No Gas	98.262	0.557	692676	0.15	100	98.3	90	110	
As	75	3	HeHe	97.916	1.301	45707	1.09	100	97.9	90	110	
As	75	1	No Gas	95.677	1.241	709064	1.24	100	95.7	90	110	
Sb	121	1	No Gas	93.821	1.555	2236111	1.20	100	93.8	90	110	
Hg	201	1	No Gas	2.002	1.904	5256	0.62	2	100.1	90	110	
Be	9	1	No Gas	90.950	0.809	637488	0.12	100	91.0	90	110	
Pb	208	1	No Gas	99.521	1.552	5620664	0.39	100	99.5	90	110	
Se	82	1	No Gas	99.092	1.481	37475	0.96	100	99.1	90	110	
Mo	98	1	No Gas	102.963	0.277	1963362	0.37	100	103.0	90	110	
Ba	137	1	No Gas	98.494	1.591	808278	1.25	100	98.5	90	110	
Tl	205	1	No Gas	98.661	1.136	4080533	1.23	100	98.7	90	110	
U	238	1	No Gas	113.568	1.307	5813068	0.19	100	113.6	90	110	CCV Main CR1 Failed
Na	23	2	he	986.366	1.543	4498375	1.47	1000	98.6	90	110	
Mg	24	2	he	997.598	2.433	2488982	1.40	1000	99.8	90	110	
K	39	2	he	985.482	1.772	3877099	1.13	1000	98.5	90	110	
Se	82	3	HeHe	96.509	2.035	2351	0.52	100	96.5	90	110	
Fe	57	3	HeHe	1033.798	3.458	116045	3.65	1000	103.4	90	110	
Cd	114	1	No Gas	96.467	1.302	1365187	1.39	100	96.5	90	110	
Ca	44	1	No Gas	1035.556	0.218	1466786	0.86	1000	103.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9872611	0.70	9248342	106.75	70	120	
Sc	45	2	he	1842695	2.01	1744643	105.62	70	120	
Ge	72	1	No Gas	1021483	1.09	1012122	100.92	70	120	
In	115	1	No Gas	5973461	0.49	5760110	103.70	70	120	
Tb	159	1	No Gas	7158631	1.29	6952439	102.97	70	120	
Bi	209	1	No Gas	3938738	1.43	3846945	102.39	70	120	
Sc	45	3	HeHe	174651	1.66	171212	102.01	70	120	

Sample Report

Sample Table

Sample Name	1019627
Data File Name	074SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:33:05-04:00
Sample Type	Sample
Dilution	1
Comment	37932 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3409

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	-0.104	-0.104	-130.03	16581	0.00	1000	
Cr	52	1	No Gas	0.321	0.321	19.09	50187	0.00	1000	
Mn	55	1	No Gas	0.415	0.415	3.97	61335	0.00	1000	
Co	59	1	No Gas	0.030	0.030	11.91	1715	0.00	1000	
Ni	60	1	No Gas	0.392	0.392	4.74	5029	0.01	1000	
Cu	63	1	No Gas	-0.116	-0.116	-7.69	8944	0.00	1000	
Sr	88	1	No Gas	0.446	0.446	2.62	29571	0.00	1000	
Ag	107	1	No Gas	0.019	0.019	22.49	619	0.00	1000	
Al	27	1	No Gas	5.543	5.543	1.99	193660	0.00	100000	
Sn	118	1	No Gas	0.520	0.520	41.98	16131	0.00	100	
Ti	47	1	No Gas	0.479	0.479	34.76	3192	0.01	2000	
Zn	66	1	No Gas	1.510	1.510	7.10	11340	0.01	1000	
As	75	3	HeHe	0.838	0.838	13.18	433	0.19	1000	
As	75	1	No Gas	0.688	0.688	95.49	32416	0.00	1000	
Sb	121	1	No Gas	0.635	0.635	32.25	17607	0.00	100	
Hg	201	1	No Gas	0.029	0.029	33.32	98	0.03	4	
Be	9	1	No Gas	0.015	0.015	18.49	128	0.01	1000	
Pb	208	1	No Gas	-0.038	-0.038	-54.98	15821	0.00	1000	
Se	82	1	No Gas	0.823	0.823	91.42	374	0.22	1000	
Mo	98	1	No Gas	0.940	0.940	40.43	29382	0.00	2000	
Ba	137	1	No Gas	0.186	0.186	3.69	1577	0.01	1000	
Tl	205	1	No Gas	0.057	0.057	2.14	2393	0.00	1000	
U	238	1	No Gas	0.011	0.011	41.09	863	0.00	1000	
Na	23	2	he	10.529	10.529	15.51	160105	0.01	100000	
Mg	24	2	he	3.833	3.833	1.43	9703	0.04	100000	
K	39	2	he	-0.292	-0.292	-359.79	249421	0.00	100000	
Se	82	3	HeHe	-0.176	-0.176	-275.62	111	-0.16	1000	
Fe	57	3	HeHe	12.443	12.443	11.98	1404	0.89	100000	
Cd	114	1	No Gas	0.049	0.049	5.30	1043	0.00	1000	
Ca	44	1	No Gas	12.049	12.049	30.78	82488	0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9586363	3.12	9248342	103.65	70	120	
Sc	45	2	he	1794891	1.68	1744643	102.88	70	120	

Ge	72	1	No Gas	1011698	2.46	1012122	99.96	70	120	
In	115	1	No Gas	5807425	1.23	5760110	100.82	70	120	
Tb	159	1	No Gas	7108665	1.42	6952439	102.25	70	120	
Bi	209	1	No Gas	3840655	0.54	3846945	99.84	70	120	
Sc	45	3	HeHe	175570	0.49	171212	102.55	70	120	

Sample Report

Sample Table

Sample Name	1019628
Data File Name	075SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T13:37:01-04:00
Sample Type	Sample
Dilution	1
Comment	37932 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass
Vial	3410

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	196.473	196.473	0.84	10614355	0.00	1000	
Cr	52	1	No Gas	194.634	194.634	0.88	9342945	0.00	1000	
Mn	55	1	No Gas	196.142	196.142	0.40	11616836	0.00	1000	
Co	59	1	No Gas	192.150	192.150	1.67	10225851	0.00	1000	
Ni	60	1	No Gas	195.993	195.993	0.17	2332616	0.01	1000	
Cu	63	1	No Gas	188.235	188.235	1.54	5450176	0.00	1000	
Sr	88	1	No Gas	177.456	177.456	0.94	12125197	0.00	1000	
Ag	107	1	No Gas	97.880	97.880	0.62	2977109	0.00	1000	
Al	27	1	No Gas	2020.769	2020.769	0.88	69178549	0.00	100000	
Sn	118	1	No Gas	187.306	187.306	1.45	3421889	0.01	100	>LDR
Ti	47	1	No Gas	182.624	182.624	1.83	734121	0.02	2000	
Zn	66	1	No Gas	183.827	183.827	1.01	1303468	0.01	1000	
As	75	3	HeHe	180.287	180.287	0.45	85957	0.21	1000	
As	75	1	No Gas	182.182	182.182	2.45	1332969	0.01	1000	
Sb	121	1	No Gas	186.417	186.417	0.62	4457540	0.00	100	>LDR
Hg	201	1	No Gas	1.943	1.943	0.59	5244	0.04	4	
Be	9	1	No Gas	189.090	189.090	1.37	1334049	0.01	1000	
Pb	208	1	No Gas	190.493	190.493	2.24	11038452	0.00	1000	
Se	82	1	No Gas	184.870	184.870	0.35	70318	0.26	1000	
Mo	98	1	No Gas	200.752	200.752	0.64	3831160	0.01	2000	
Ba	137	1	No Gas	1902.188	1902.188	0.35	15669603	0.01	1000	>LDR
Tl	205	1	No Gas	185.270	185.270	2.40	7873284	0.00	1000	
U	238	1	No Gas	0.010	0.010	35.86	804	0.00	1000	
Na	23	2	he	1893.798	1893.798	0.76	8740625	0.02	100000	
Mg	24	2	he	1880.605	1880.605	1.46	4808724	0.04	100000	
K	39	2	he	1843.907	1843.907	1.06	7205221	0.03	100000	
Se	82	3	HeHe	181.389	181.389	0.91	4411	4.11	1000	
Fe	57	3	HeHe	2026.983	2026.983	2.29	232396	0.87	100000	
Cd	114	1	No Gas	189.656	189.656	0.79	2693929	0.01	1000	
Ca	44	1	No Gas	2033.873	2033.873	1.24	2832933	0.07	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9937337	0.28	9248342	107.45	70	120	
Sc	45	2	he	1888280	0.77	1744643	108.23	70	120	
Ge	72	1	No Gas	1024189	1.38	1012122	101.19	70	120	

In	115	1	No Gas	5996724	1.02	5760110	104.11	70	120	
Tb	159	1	No Gas	7357888	2.44	6952439	105.83	70	120	
Bi	209	1	No Gas	3935478	0.65	3846945	102.30	70	120	
Sc	45	3	HeHe	178434	2.24	171212	104.22	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	082_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T14:13:31-04:00
Sample Type	CCB
Dilution	1
Comment	37932 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.302	25.7	37553	10.4	9	
Cr	52	1	No Gas	-0.096	-28.5	30913	2.7	4	
Mn	55	1	No Gas	0.331	17.5	56508	5.5	25	
Co	59	1	No Gas	0.006	42.1	489	26.2	1	
Ni	60	1	No Gas	0.425	3.7	5401	1.9	25	
Cu	63	1	No Gas	-0.176	-2.1	7263	3.2	25	
Sr	88	1	No Gas	0.007	22.8	659	17.7	25	
Ag	107	1	No Gas	0.022	12.5	756	13.1	9	
Al	27	1	No Gas	3.656	2.0	131288	2.9	1000000	
Sn	118	1	No Gas	1.785	32.3	39732	26.0	25	
Tl	47	1	No Gas	0.283	56.5	2509	25.4	10000	
Zn	66	1	No Gas	0.079	30.5	1573	12.7	25	
As	75	3	HeHe	0.780	7.0	401	7.4	9	
As	75	1	No Gas	0.212	49.6	29156	0.9	9	
Sb	121	1	No Gas	1.886	17.5	48112	16.1	4	
Hg	201	1	No Gas	0.018	25.1	71	15.6	0.04	
Be	9	1	No Gas	0.014	19.7	118	13.9	1	
Pb	208	1	No Gas	-0.105	-16.7	12108	6.3	4	
Se	82	1	No Gas	0.164	369.4	124	175.8	25	
Mo	98	1	No Gas	0.838	48.5	28371	26.6	10000	
Ba	137	1	No Gas	0.018	19.7	243	10.3	25	
Tl	205	1	No Gas	0.026	4.0	1111	5.2	1	
U	238	1	No Gas	0.377	20.2	19562	21.6	25	
Na	23	2	he	-0.568	-126.9	113990	2.7	2500000	
Mg	24	2	he	0.071	44.3	567	13.6	2500000	
K	39	2	he	-3.377	-28.6	242296	1.8	5000000	
Se	82	3	HeHe	0.818	45.3	133	5.4	25	
Fe	57	3	HeHe	23.653	2.7	2637	3.4	2500000	
Cd	114	1	No Gas	0.073	34.8	1407	24.6	1	
Ca	44	1	No Gas	-8.848	-4.2	55098	1.3	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9575561	2.24	9248342	103.54	70	120	
Sc	45	2	he	1823982	0.49	1744643	104.55	70	120	
Ge	72	1	No Gas	1030800	0.62	1012122	101.85	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	6007535	1.77	5760110	104.30	70	120	
Tb	159	1	No Gas	7132871	1.72	6952439	102.60	70	120	
Bi	209	1	No Gas	3949172	0.63	3846945	102.66	70	120	
Sc	45	3	HeHe	173458	1.12	171212	101.31	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	083LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T14:17:26-04:00
Sample Type	LLCCV
Dilution	1
Comment	37932 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	2.346	6.718	135419	7.68	2	117.3	70	130		
Cr	52	1	No Gas	2.079	8.832	123254	1.12	2	104.0	70	130		
Mn	55	1	No Gas	5.847	8.398	347793	1.25	5	116.9	70	130		
Co	59	1	No Gas	5.307	5.564	256006	1.60	5	106.1	70	130		
Ni	60	1	No Gas	5.402	6.169	58712	0.66	5	108.0	70	130		
Cu	63	1	No Gas	5.101	6.483	144875	0.78	5	102.0	70	130		
Sr	88	1	No Gas	4.918	6.684	304476	0.15	5	98.4	70	130		
Ag	107	1	No Gas	2.059	4.622	61052	1.81	2	102.9	70	130		
Al	27	1	No Gas	89.398	7.084	2780330	1.10	80	111.7	70	130		
Sn	118	1	No Gas	2.032	1.595	43072	3.32	2	101.6	70	130		
Tl	47	1	No Gas	4.754	1.609	19922	1.36	5	95.1	70	130		
Zn	66	1	No Gas	5.707	6.626	37581	0.24	5	114.1	70	130		
As	75	3	HeHe	3.162	1.257	1511	1.55	3	105.4	70	130		
As	75	1	No Gas	3.927	14.818	51484	2.61	3	130.9	70	130	LLCCV Main CR1 Failed	N/A
Sb	121	1	No Gas	2.746	1.666	66886	4.42	2	137.3	70	130	LLCCV Main CR1 Failed	N/A
Hg	201	1	No Gas	0.193	12.204	517	12.58	0.2	96.5	70	130		
Be	9	1	No Gas	1.022	6.179	6554	1.89	1	102.2	70	130		
Pb	208	1	No Gas	1.914	2.901	123082	1.43	2	95.7	70	130		
Se	82	1	No Gas	5.762	24.793	2030	17.51	5	115.2	70	130		
Mo	98	1	No Gas	1.916	3.968	47642	5.67	2	95.8	70	130		
Ba	137	1	No Gas	5.049	1.253	40628	1.90	5	101.0	70	130		
Tl	205	1	No Gas	1.026	2.214	41560	2.00	1	102.6	70	130		
U	238	1	No Gas	5.286	1.588	265009	0.35	5	105.7	70	130		
Na	23	2	he	85.688	1.171	502691	0.32	100	85.7	70	130		
Mg	24	2	he	90.216	0.873	227494	0.20	100	90.2	70	130		
K	39	2	he	89.652	1.780	591738	0.78	100	89.7	70	130		
Se	82	3	HeHe	4.438	31.187	217	13.80	5	88.8	70	130		
Fe	57	3	HeHe	60.438	2.885	6765	1.60	50	120.9	70	130		
Cd	114	1	No Gas	1.026	1.834	14574	2.88	1	102.6	70	130		
Ca	44	1	No Gas	98.871	8.187	184419	1.27	100	98.9	70	130		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9023869	6.48	9248342	97.57	70	120	
Sc	45	2	he	1859008	0.68	1744643	106.56	70	120	
Ge	72	1	No Gas	1000366	0.96	1012122	98.84	70	120	
In	115	1	No Gas	5845025	2.83	5760110	101.47	70	120	
Tb	159	1	No Gas	7004733	1.26	6952439	100.75	70	120	
Bi	209	1	No Gas	3842730	1.67	3846945	99.89	70	120	
Sc	45	3	HeHe	174190	1.86	171212	101.74	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	084_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T14:21:21-04:00
Sample Type	CCV
Dilution	1
Comment	37932 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	112.062	9.650	5596580	1.93	100	112.1	90	110	CCV Main CR1 Failed
Cr	52	1	No Gas	109.929	9.855	4884488	1.98	100	109.9	90	110	
Mn	55	1	No Gas	112.777	10.045	6178074	1.01	100	112.8	90	110	CCV Main CR1 Failed
Co	59	1	No Gas	109.270	9.990	5365252	1.05	100	109.3	90	110	
Ni	60	1	No Gas	103.974	9.922	1142019	0.86	100	104.0	90	110	
Cu	63	1	No Gas	110.688	8.695	2964043	0.97	100	110.7	90	110	CCV Main CR1 Failed
Sr	88	1	No Gas	110.699	9.770	6979742	0.58	100	110.7	90	110	CCV Main CR1 Failed
Ag	107	1	No Gas	105.584	8.422	3129492	0.89	100	105.6	90	110	
Al	27	1	No Gas	110.162	9.379	3490674	1.06	100	110.2	90	110	CCV Main CR1 Failed
Sn	118	1	No Gas	106.972	8.830	1907158	2.20	100	107.0	90	110	
Tl	47	1	No Gas	95.700	8.549	375536	1.01	100	95.7	90	110	
Zn	66	1	No Gas	105.026	8.695	688033	0.48	100	105.0	90	110	
As	75	3	HeHe	98.529	1.029	45854	1.61	100	98.5	90	110	
As	75	1	No Gas	105.030	9.957	720451	0.53	100	105.0	90	110	
Sb	121	1	No Gas	97.762	8.028	2279812	1.13	100	97.8	90	110	
Hg	201	1	No Gas	2.086	9.031	5422	1.23	2	104.3	90	110	
Be	9	1	No Gas	97.262	10.860	632810	1.62	100	97.3	90	110	
Pb	208	1	No Gas	103.260	8.625	5776936	0.53	100	103.3	90	110	
Se	82	1	No Gas	108.991	11.454	38244	2.32	100	109.0	90	110	
Mo	98	1	No Gas	106.946	9.418	1993709	2.19	100	106.9	90	110	
Ba	137	1	No Gas	101.912	7.813	818409	0.58	100	101.9	90	110	
Tl	205	1	No Gas	102.136	9.030	4183817	1.28	100	102.1	90	110	
U	238	1	No Gas	115.082	9.999	5831745	2.21	100	115.1	90	110	CCV Main CR1 Failed
Na	23	2	he	948.858	2.604	4401935	1.26	1000	94.9	90	110	
Mg	24	2	he	969.750	3.490	2458659	1.74	1000	97.0	90	110	
K	39	2	he	952.918	1.686	3819121	1.58	1000	95.3	90	110	
Se	82	3	HeHe	95.856	1.614	2329	2.24	100	95.9	90	110	
Fe	57	3	HeHe	1012.432	1.402	113294	1.64	1000	101.2	90	110	
Cd	114	1	No Gas	100.505	7.727	1391850	0.65	100	100.5	90	110	
Ca	44	1	No Gas	1136.240	9.538	1489429	2.40	1000	113.6	90	110	CCV Main CR1 Failed

All samples ND. ok 10/10

OK

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9222142	8.73	9248342	99.72	70	120	
Sc	45	2	he	1872800	1.89	1744643	107.35	70	120	
Ge	72	1	No Gas	998859	5.41	1012122	98.69	70	120	
In	115	1	No Gas	5867485	7.27	5760110	101.86	70	120	
Tb	159	1	No Gas	7122545	7.69	6952439	102.45	70	120	
Bi	209	1	No Gas	3879956	5.83	3846945	100.86	70	120	
Sc	45	3	HeHe	174099	0.73	171212	101.69	70	120	

Sample Report

Sample Table

Sample Name	9980875015
Data File Name	088SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T14:54:42-04:00
Sample Type	Sample
Dilution	1
Comment	37932 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3507

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	0.313	0.313	6.18	37353	0.00	1000	
Cr	52	1	No Gas	0.359	0.359	6.54	50844	0.00	1000	
Mn	55	1	No Gas	0.451	0.451	11.59	62019	0.00	1000	
Co	59	1	No Gas	0.029	0.029	3.31	1626	0.00	1000	
Ni	60	1	No Gas	0.358	0.358	9.06	4537	0.01	1000	
Cu	63	1	No Gas	0.191	0.191	11.35	17110	0.00	1000	
Sr	88	1	No Gas	0.658	0.658	1.75	42636	0.00	1000	
Ag	107	1	No Gas	0.026	0.026	9.50	826	0.00	1000	
Al	27	1	No Gas	9.577	9.577	4.50	319747	0.00	100000	
Sn	118	1	No Gas	0.355	0.355	54.42	13117	0.00	100	
Ti	47	1	No Gas	0.528	0.528	35.54	3364	0.02	2000	
Zn	66	1	No Gas	1.470	1.470	4.98	10836	0.01	1000	
As	75	3	HeHe	0.961	0.961	10.55	469	0.20	1000	
As	75	1	No Gas	0.537	0.537	32.36	30775	0.00	1000	
Sb	121	1	No Gas	0.591	0.591	35.12	16483	0.00	100	
Hg	201	1	No Gas	0.039	0.039	10.52	124	0.03	4	
Be	9	1	No Gas	0.020	0.020	22.20	153	0.01	1000	
Pb	208	1	No Gas	-0.059	-0.059	-36.40	14654	0.00	1000	
Se	82	1	No Gas	1.393	1.393	32.80	564	0.25	1000	
Mo	98	1	No Gas	1.085	1.085	41.41	31860	0.00	2000	
Ba	137	1	No Gas	0.264	0.264	3.96	2190	0.01	1000	
Tl	205	1	No Gas	0.065	0.065	14.37	2715	0.00	1000	
U	238	1	No Gas	0.012	0.012	24.31	885	0.00	1000	
Na	23	2	he	62.289	62.289	1.64	373760	0.02	100000	
Mg	24	2	he	3.773	3.773	0.87	9299	0.04	100000	
K	39	2	he	0.332	0.332	449.06	244874	0.00	100000	
Se	82	3	HeHe	0.240	0.240	57.41	116	0.21	1000	
Fe	57	3	HeHe	14.551	14.551	5.93	1571	0.93	100000	
Cd	114	1	No Gas	0.058	0.058	14.20	1157	0.01	1000	
Ca	44	1	No Gas	35.682	35.682	5.53	111066	0.03	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9379463	1.57	9248342	101.42	70	120	
Sc	45	2	he	1746649	1.74	1744643	100.11	70	120	

Ge	72	1	No Gas	1003078	1.15	1012122	99.11	70	120	
In	115	1	No Gas	5782813	0.26	5760110	100.39	70	120	
Tb	159	1	No Gas	7129205	1.87	6952439	102.54	70	120	
Bi	209	1	No Gas	3944421	2.02	3846945	102.53	70	120	
Sc	45	3	HeHe	167999	1.62	171212	98.12	70	120	

Sample Report

Sample Table

Sample Name	1019629
Data File Name	089SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T14:58:37-04:00
Sample Type	Sample
Dilution	1
Comment	37932 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass
Vial	3508

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	222.837	222.837	12.47	10640988	0.00	1000	
Cr	52	1	No Gas	221.119	221.119	11.12	9390979	0.00	1000	
Mn	55	1	No Gas	224.259	224.259	11.42	11747001	0.00	1000	
Co	59	1	No Gas	216.232	216.232	11.39	10181461	0.00	1000	
Ni	60	1	No Gas	219.202	219.202	12.11	2307064	0.01	1000	
Cu	63	1	No Gas	212.436	212.436	12.13	5437929	0.00	1000	
Sr	88	1	No Gas	203.751	203.751	12.86	12305248	0.00	1000	
Ag	107	1	No Gas	110.482	110.482	10.08	2981818	0.00	1000	
Al	27	1	No Gas	2161.167	2161.167	12.36	65415870	0.00	100000	
Sn	118	1	No Gas	217.704	217.704	10.05	3528575	0.01	100	>LDR
Ti	47	1	No Gas	204.452	204.452	11.17	728622	0.03	2000	
Zn	66	1	No Gas	198.156	198.156	10.96	1243488	0.02	1000	
As	75	3	HeHe	198.191	198.191	2.83	86437	0.23	1000	
As	75	1	No Gas	202.182	202.182	12.41	1305440	0.02	1000	
Sb	121	1	No Gas	215.126	215.126	10.88	4561306	0.00	100	>LDR
Hg	201	1	No Gas	2.270	2.270	13.29	5530	0.04	4	
Be	9	1	No Gas	218.682	218.682	14.85	1361751	0.02	1000	
Pb	208	1	No Gas	222.233	222.233	11.79	11647865	0.00	1000	
Se	82	1	No Gas	209.952	209.952	11.78	70631	0.30	1000	
Mo	98	1	No Gas	227.875	227.875	10.90	3854822	0.01	2000	
Ba	137	1	No Gas	2116.467	2116.467	10.30	15466922	0.01	1000	>LDR
Tl	205	1	No Gas	216.196	216.196	11.34	8315015	0.00	1000	
U	238	1	No Gas	0.011	0.011	37.01	804	0.00	1000	
Na	23	2	he	2038.721	2038.721	1.23	8514965	0.02	100000	
Mg	24	2	he	1977.941	1977.941	1.12	4581725	0.04	100000	
K	39	2	he	1930.866	1930.866	1.93	6822855	0.03	100000	
Se	82	3	HeHe	194.305	194.305	2.05	4315	4.50	1000	
Fe	57	3	HeHe	2142.021	2142.021	2.57	224738	0.95	100000	
Cd	114	1	No Gas	216.641	216.641	11.13	2728393	0.01	1000	
Ca	44	1	No Gas	2192.618	2192.618	12.77	2695638	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	8863460	10.56	9248342	95.84	70	120	
Sc	45	2	he	1710589	1.50	1744643	98.05	70	120	
Ge	72	1	No Gas	906012	11.83	1012122	89.52	70	120	

In	115	1	No Gas	5360306	11.00	5760110	93.06	70	120	
Tb	159	1	No Gas	6715446	11.61	6952439	96.59	70	120	
Bi	209	1	No Gas	3642348	11.71	3846945	94.68	70	120	
Sc	45	3	HeHe	163274	1.43	171212	95.36	70	120	

Sample Report

Sample Table

Sample Name	1019630
Data File Name	090SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T15:02:23-04:00
Sample Type	Sample
Dilution	1
Comment	37932 MWO
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass
Vial	3509

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	204.872	204.872	1.31	10527291	0.00	1000	
Cr	52	1	No Gas	205.405	205.405	1.70	9377204	0.00	1000	
Mn	55	1	No Gas	207.217	207.217	1.23	11672269	0.00	1000	
Co	59	1	No Gas	198.470	198.470	1.30	10046803	0.00	1000	
Ni	60	1	No Gas	201.837	201.837	0.17	2285122	0.01	1000	
Cu	63	1	No Gas	195.804	195.804	1.17	5392269	0.00	1000	
Sr	88	1	No Gas	188.939	188.939	0.36	12280818	0.00	1000	
Ag	107	1	No Gas	100.294	100.294	1.25	3011946	0.00	1000	
Al	27	1	No Gas	2028.329	2028.329	3.25	66047860	0.00	100000	
Sn	118	1	No Gas	192.402	192.402	2.18	3470040	0.01	100	>LDR
Ti	47	1	No Gas	183.765	183.765	1.97	729376	0.03	2000	
Zn	66	1	No Gas	187.132	187.132	0.47	1262189	0.01	1000	
As	75	3	HeHe	191.987	191.987	0.97	86118	0.22	1000	
As	75	1	No Gas	186.908	186.908	0.88	1300230	0.01	1000	
Sb	121	1	No Gas	195.676	195.676	2.01	4619629	0.00	100	>LDR
Hg	201	1	No Gas	1.978	1.978	1.60	5278	0.04	4	
Be	9	1	No Gas	199.601	199.601	2.37	1339510	0.01	1000	
Pb	208	1	No Gas	199.357	199.357	0.74	11425175	0.00	1000	
Se	82	1	No Gas	193.378	193.378	2.14	69962	0.28	1000	
Mo	98	1	No Gas	203.888	203.888	2.57	3841370	0.01	2000	
Ba	137	1	No Gas	1908.921	1908.921	0.92	15526419	0.01	1000	>LDR
Tl	205	1	No Gas	197.678	197.678	0.78	8308528	0.00	1000	
U	238	1	No Gas	0.008	0.008	50.46	700	0.00	1000	
Na	23	2	he	1979.301	1979.301	0.48	8485080	0.02	100000	
Mg	24	2	he	1938.436	1938.436	2.63	4607124	0.04	100000	
K	39	2	he	1877.595	1877.595	0.16	6814754	0.03	100000	
Se	82	3	HeHe	190.775	190.775	1.48	4359	4.38	1000	
Fe	57	3	HeHe	2118.154	2118.154	2.23	228554	0.93	100000	
Cd	114	1	No Gas	194.109	194.109	2.09	2722148	0.01	1000	
Ca	44	1	No Gas	2068.853	2068.853	0.77	2740066	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9453110	0.59	9248342	102.21	70	120	
Sc	45	2	he	1754965	0.97	1744643	100.59	70	120	
Ge	72	1	No Gas	995423	0.82	1012122	98.35	70	120	

In	115	1	No Gas	5921307	1.28	5760110	102.80	70	120	
Tb	159	1	No Gas	7274712	0.83	6952439	104.64	70	120	
Bi	209	1	No Gas	3970149	1.61	3846945	103.20	70	120	
Sc	45	3	HeHe	167885	0.39	171212	98.06	70	120	

Sample Report

Sample Table

Sample Name	9980875015L
Data File Name	091SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T15:06:09-04:00
Sample Type	Sample
Dilution	1
Comment	37932 MWODF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3510

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	0.052	0.052	87.11	26329	0.00	1000	
Cr	52	1	No Gas	-0.060	-0.060	-84.86	34813	0.00	1000	
Mn	55	1	No Gas	0.365	0.365	6.37	62592	0.00	1000	
Co	59	1	No Gas	0.013	0.013	23.59	907	0.00	1000	
Ni	60	1	No Gas	0.090	0.090	20.87	1663	0.01	1000	
Cu	63	1	No Gas	-0.096	-0.096	-19.82	10136	0.00	1000	
Sr	88	1	No Gas	0.130	0.130	9.58	9329	0.00	1000	
Ag	107	1	No Gas	0.020	0.020	10.27	704	0.00	1000	
Al	27	1	No Gas	2.389	2.389	9.61	95555	0.00	100000	
Sn	118	1	No Gas	0.259	0.259	64.47	12098	0.00	100	
Ti	47	1	No Gas	0.303	0.303	50.20	2639	0.01	2000	
Zn	66	1	No Gas	0.346	0.346	8.87	3624	0.01	1000	
As	75	3	HeHe	0.895	0.895	6.62	435	0.21	1000	
As	75	1	No Gas	0.262	0.262	282.47	31411	0.00	1000	
Sb	121	1	No Gas	2.228	2.228	20.68	57508	0.00	100	
Hg	201	1	No Gas	0.024	0.024	34.45	91	0.03	4	
Be	9	1	No Gas	0.018	0.018	0.73	155	0.01	1000	
Pb	208	1	No Gas	-0.128	-0.128	-10.69	11352	0.00	1000	
Se	82	1	No Gas	1.126	1.126	28.65	508	0.22	1000	
Mo	98	1	No Gas	0.507	0.507	74.15	22430	0.00	2000	
Ba	137	1	No Gas	0.100	0.100	17.41	943	0.01	1000	
Tl	205	1	No Gas	0.036	0.036	16.82	1630	0.00	1000	
U	238	1	No Gas	-0.003	-0.003	-19.40	167	0.00	1000	
Na	23	2	he	11.446	11.446	8.92	161557	0.01	100000	
Mg	24	2	he	0.916	0.916	4.24	2571	0.04	100000	
K	39	2	he	-3.259	-3.259	-60.55	235049	0.00	100000	
Se	82	3	HeHe	0.891	0.891	76.67	129	0.69	1000	
Fe	57	3	HeHe	11.466	11.466	20.50	1222	0.94	100000	
Cd	114	1	No Gas	0.020	0.020	54.57	673	0.00	1000	
Ca	44	1	No Gas	-1.928	-1.928	-141.56	68619	0.00	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	10262278	6.33	9248342	110.96	70	120	
Sc	45	2	he	1767473	3.25	1744643	101.31	70	120	

Ge	72	1	No Gas	1045548	7.03	1012122	103.30	70	120	
In	115	1	No Gas	6192942	7.69	5760110	107.51	70	120	
Tb	159	1	No Gas	7494589	5.25	6952439	107.80	70	120	
Bi	209	1	No Gas	4165140	7.37	3846945	108.27	70	120	
Sc	45	3	HeHe	166228	1.87	171212	97.09	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	093_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T15:13:53-04:00
Sample Type	CCB
Dilution	1
Comment	37932 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.008	689.2	21609	12.1	9	
Cr	52	1	No Gas	-0.088	-16.3	30346	3.1	4	
Mn	55	1	No Gas	0.413	5.4	59310	2.1	25	
Co	59	1	No Gas	0.009	51.3	619	37.4	1	
Ni	60	1	No Gas	0.477	10.0	5808	8.3	25	
Cu	63	1	No Gas	-0.144	-1.8	7888	1.9	25	
Sr	88	1	No Gas	0.008	27.9	707	21.2	25	
Ag	107	1	No Gas	0.023	20.1	759	16.1	9	
Al	27	1	No Gas	3.916	2.4	135559	1.2	1000000	
Sn	118	1	No Gas	2.081	28.5	45061	25.5	25	
Ti	47	1	No Gas	0.413	43.9	3025	25.4	10000	
Zn	66	1	No Gas	0.060	16.1	1397	3.5	25	
As	75	3	HeHe	0.874	5.2	422	4.9	9	
As	75	1	No Gas	0.724	17.1	31705	3.7	9	
Sb	121	1	No Gas	2.011	12.3	50935	12.7	4	
Hg	201	1	No Gas	0.023	17.4	85	13.8	0.04	
Be	9	1	No Gas	0.018	7.4	139	7.2	1	
Pb	208	1	No Gas	-0.183	-1.3	7932	3.2	4	
Se	82	1	No Gas	0.814	60.3	354	49.3	25	
Mo	98	1	No Gas	0.835	42.2	28257	24.9	10000	
Ba	137	1	No Gas	0.028	6.3	323	6.4	25	
Tl	205	1	No Gas	0.031	20.2	1348	17.2	1	
U	238	1	No Gas	0.393	24.8	20842	22.4	25	
Na	23	2	he	-2.182	-12.0	104118	2.1	2500000	
Mg	24	2	he	0.055	143.8	511	35.6	2500000	
K	39	2	he	-3.524	-61.6	235367	0.4	5000000	
Se	82	3	HeHe	0.556	261.2	120	25.9	25	
Fe	57	3	HeHe	19.952	11.0	2111	12.0	2500000	
Cd	114	1	No Gas	0.074	42.0	1423	32.2	1	
Ca	44	1	No Gas	-7.194	-13.1	55530	3.1	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9283288	1.09	9248342	100.38	70	120	
Sc	45	2	he	1776963	3.03	1744643	101.85	70	120	
Ge	72	1	No Gas	990483	1.46	1012122	97.86	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	5982989	2.32	5760110	103.87	70	120	
Tb	159	1	No Gas	7330064	2.05	6952439	105.43	70	120	
Bi	209	1	No Gas	4028595	1.44	3846945	104.72	70	120	
Sc	45	3	HeHe	164511	1.84	171212	96.09	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	094LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A08
Acq Date Time	2012-08-07T15:17:48-04:00
Sample Type	LLCCV
Dilution	1
Comment	37932 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.054	0.913	128431	0.75	2	102.7	70	130	
Cr	52	1	No Gas	1.894	2.778	122511	2.67	2	94.7	70	130	
Mn	55	1	No Gas	5.283	1.729	337795	0.66	5	105.7	70	130	
Co	59	1	No Gas	4.867	1.622	249450	0.86	5	97.3	70	130	
Ni	60	1	No Gas	4.863	1.778	56228	1.93	5	97.3	70	130	
Cu	63	1	No Gas	4.783	0.899	145138	0.33	5	95.7	70	130	
Sr	88	1	No Gas	4.622	1.388	304196	0.52	5	92.4	70	130	
Ag	107	1	No Gas	1.993	0.271	60264	0.65	2	99.7	70	130	
Al	27	1	No Gas	83.026	2.030	2746052	1.59	80	103.8	70	130	
Sn	118	1	No Gas	2.189	9.381	46722	8.74	2	109.4	70	130	
Tl	47	1	No Gas	4.621	1.771	19771	2.53	5	92.4	70	130	
Zn	66	1	No Gas	5.240	2.625	36755	1.50	5	104.8	70	130	
As	75	3	HeHe	3.355	9.553	1543	8.26	3	111.8	70	130	
As	75	1	No Gas	3.183	3.266	49610	1.83	3	106.1	70	130	
Sb	121	1	No Gas	2.818	6.633	69847	7.24	2	140.9	70	130	LLCCV Main CR1 Failed
Hg	201	1	No Gas	0.197	0.925	545	1.18	0.2	98.3	70	130	
Be	9	1	No Gas	0.972	2.369	6623	3.24	1	97.2	70	130	
Pb	208	1	No Gas	1.778	1.289	119967	0.60	2	88.9	70	130	
Se	82	1	No Gas	4.961	10.538	1880	9.13	5	99.2	70	130	
Mo	98	1	No Gas	1.824	7.557	46770	6.39	2	91.2	70	130	
Ba	137	1	No Gas	5.033	0.309	41263	0.95	5	100.7	70	130	
Tl	205	1	No Gas	1.006	0.903	42299	0.21	1	100.6	70	130	
U	238	1	No Gas	5.219	2.173	271431	1.08	5	104.4	70	130	
Na	23	2	he	87.067	1.763	486770	0.70	100	87.1	70	130	
Mg	24	2	he	91.372	0.155	220418	1.17	100	91.4	70	130	
K	39	2	he	90.892	0.309	570481	1.15	100	90.9	70	130	
Se	82	3	HeHe	4.265	8.520	206	1.95	5	85.3	70	130	
Fe	57	3	HeHe	55.518	4.804	5998	6.06	50	111.0	70	130	
Cd	114	1	No Gas	1.032	3.643	14930	4.29	1	103.2	70	130	
Ca	44	1	No Gas	87.475	1.375	181033	0.51	100	87.5	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9565731	1.04	9248342	103.43	70	120	
Sc	45	2	he	1778385	1.27	1744643	101.93	70	120	
Ge	72	1	No Gas	1003538	0.16	1012122	99.15	70	120	
In	115	1	No Gas	5953828	0.92	5760110	103.36	70	120	
Tb	159	1	No Gas	7266788	1.09	6952439	104.52	70	120	
Bi	209	1	No Gas	4022852	1.10	3846945	104.57	70	120	
Sc	45	3	HeHe	168017	2.06	171212	98.13	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	095_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A080712.b
Acq Date Time	2012-08-07T15:28:52-04:00
Sample Type	CCV
Dilution	1
Comment	37932 MWO
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	104.607	0.775	5421985	0.55	100	104.6	90	110	
Cr	52	1	No Gas	102.549	2.193	4730315	1.60	100	102.5	90	110	
Mn	55	1	No Gas	106.090	2.091	6034097	1.71	100	106.1	90	110	
Co	59	1	No Gas	101.247	1.009	5159726	0.70	100	101.2	90	110	
Ni	60	1	No Gas	97.610	0.819	1112766	0.88	100	97.6	90	110	
Cu	63	1	No Gas	102.431	1.914	2845448	1.36	100	102.4	90	110	
Sr	88	1	No Gas	103.862	1.130	6795992	0.61	100	103.9	90	110	
Ag	107	1	No Gas	101.791	0.911	3063273	1.12	100	101.8	90	110	
Al	27	1	No Gas	104.574	1.123	3438360	0.90	100	104.6	90	110	
Sn	118	1	No Gas	103.339	1.376	1870840	0.72	100	103.3	90	110	
Ti	47	1	No Gas	91.710	1.126	365443	0.52	100	91.7	90	110	
Zn	66	1	No Gas	97.943	0.840	665520	0.58	100	97.9	90	110	
As	75	3	HeHe	101.113	1.466	43749	1.04	100	101.1	90	110	
As	75	1	No Gas	96.932	0.582	692103	1.10	100	96.9	90	110	
Sb	121	1	No Gas	94.127	0.509	2228342	1.17	100	94.1	90	110	
Hg	201	1	No Gas	2.029	2.900	5377	3.37	2	101.5	90	110	
Be	9	1	No Gas	95.455	0.751	644941	0.74	100	95.5	90	110	
Pb	208	1	No Gas	100.983	0.703	5756834	0.06	100	101.0	90	110	
Se	82	1	No Gas	99.626	1.534	36318	1.12	100	99.6	90	110	
Mo	98	1	No Gas	101.478	1.226	1922015	0.56	100	101.5	90	110	
Ba	137	1	No Gas	98.604	0.096	803735	0.72	100	98.6	90	110	
Tl	205	1	No Gas	98.918	1.185	4129636	1.39	100	98.9	90	110	
U	238	1	No Gas	114.960	2.032	5939458	1.39	100	115.0	90	110	CCV Main CR1 Failed
Na	23	2	he	981.370	0.821	4297385	1.46	1000	98.1	90	110	
Mg	24	2	he	1014.201	0.091	2429584	0.93	1000	101.4	90	110	
K	39	2	he	973.256	1.225	3679122	1.22	1000	97.3	90	110	
Se	82	3	HeHe	96.843	2.361	2186	1.70	100	96.8	90	110	
Fe	57	3	HeHe	1046.507	1.366	108878	0.18	1000	104.7	90	110	
Cd	114	1	No Gas	95.613	1.023	1343979	1.54	100	95.6	90	110	
Ca	44	1	No Gas	1030.147	3.088	1406778	2.84	1000	103.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	9516435	0.58	9248342	102.90	70	120	
Sc	45	2	he	1768801	0.90	1744643	101.38	70	120	
Ge	72	1	No Gas	994049	0.91	1012122	98.21	70	120	
In	115	1	No Gas	5933018	0.66	5760110	103.00	70	120	
Tb	159	1	No Gas	7225503	0.66	6952439	103.93	70	120	
Bi	209	1	No Gas	3957481	0.90	3846945	102.87	70	120	
Sc	45	3	HeHe	161884	1.19	171212	94.55	70	120	

Digestion Logbook

Microwave 3015 Prep (Water) (Version 1- 6/1/2010)

Note: All TCLP matrix spikes are spiked prior to preservation as noted in the TCLP logbook.

Batch: 37400	Queue: MDIG	HBN: 474817	RULE: D3015/6020	ALSI SOP: 09-3015
File Name: 37400_120807-083405			METHOD: 3015	Microwave ID: MARS

Batch Type:	Comment Codes:	Reagents:		Pipettes:		Start	Finish
T: TCLP	1. Sample failed initial digestion due to a weight loss >5g	HNO3:	L12065 JT BAKER		Date:	08/07/2012	08/07/2012
S: SPLP	2. Sample reacts with reagent				Time:	08:38:00	09:05:00
M: 6020	3. Less sample used due to high metal content				Tech:	KMK	KMK
W: 6010	4. Less sample used to result in successful microwave digestion				Reviewed/Approved By:		N/A
A: ASTM	5. Sample does not digest by microwave, digest by method 3050				Date:		

Sample ID	Cont ID	Samp Type	Vessel Initial WT, grams	Vessel Final WT, grams	Difference grams	Spike Amt uL of Each	Spike Lot#	Sample Size, mL	Final Vol mL	Batch Type	Parent Sample ID	Comment Code
1019627		MB	207.93	207.88	0.05			45	50	M		
1019628		LCS	210.85	210.78	0.07	40/50/50/50	MR2788/MA1346/N	45	50	M		
9980875015	A	S	210.09	210.05	0.04			45	50	M		
1019629		MS	211.45	211.40	0.05	40/50/50/50	MR2788/MA1346/N	45	50	M	9980875015	
1019630		MSD	210.07	210.03	0.04	40/50/50/50	MR2788/MA1346/N	45	50	M	9980875015	

End

Analytical Logbook

Batch Log

#	Acquired Date and Time	Sample Type	Sample Name	File Name	Comment	Vial#	Dilution Result	Operator
1	8/7/2012 8:10	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A080712.b\001CALB.d		1101	1	Matthew Olley
2	8/7/2012 8:14	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A080712.b\002CALB.d		1101	1	Matthew Olley
3	8/7/2012 8:18	CalStd	Standard 1	C:\Agilent\ICPMH\1\DATA\A080712.b\003CALS.d		2101	1	Matthew Olley
4	8/7/2012 8:22	CalStd	Standard 2	C:\Agilent\ICPMH\1\DATA\A080712.b\004CALS.d		2102	1	Matthew Olley
5	8/7/2012 8:26	CalStd	Standard 3	C:\Agilent\ICPMH\1\DATA\A080712.b\005CALS.d		2103	1	Matthew Olley
6	8/7/2012 8:30	CalStd	Standard 4	C:\Agilent\ICPMH\1\DATA\A080712.b\006CALS.d		2104	1	Matthew Olley
7	8/7/2012 8:34	CalStd	Standard 5	C:\Agilent\ICPMH\1\DATA\A080712.b\007CALS.d		2105	1	Matthew Olley
8	8/7/2012 8:38	ICV	ICV	C:\Agilent\ICPMH\1\DATA\A080712.b\008_ICV.d		1307	1	Matthew Olley
9	8/7/2012 8:41	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A080712.b\009_ICB.d		1101	1	Matthew Olley
10	8/7/2012 8:45	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A080712.b\010_ICB.d		1101	1	Matthew Olley
11	8/7/2012 8:49	LLICV	LLICV	C:\Agilent\ICPMH\1\DATA\A080712.b\011LICV.d		1305	1	Matthew Olley
12	8/7/2012 8:49							Matthew Olley
13	8/7/2012 8:55	ICSA	ICSA	C:\Agilent\ICPMH\1\DATA\A080712.b\012ICSA.d		2111	1	Matthew Olley
14	8/7/2012 8:59	ICSB	ICSAB	C:\Agilent\ICPMH\1\DATA\A080712.b\013ICSB.d		2112	1	Matthew Olley
15	8/7/2012 8:59							Matthew Olley
16	8/7/2012 9:07	Sample	1015362	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\014SMPL.d		3101	1	Matthew Olley
17	8/7/2012 9:11	Sample	1015363	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\015SMPL.d		3102	1	Matthew Olley
18	8/7/2012 9:14	Sample	1017907	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\016SMPL.d		3103	1	Matthew Olley
19	8/7/2012 9:18	Sample	1017908	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\017SMPL.d		3104	1	Matthew Olley
20	8/7/2012 9:22	Sample	9980583001	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\018SMPL.d		3105	1	Matthew Olley
21	8/7/2012 9:26	Sample	1017909	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\019SMPL.d		3106	1	Matthew Olley

Batch Log

22	8/7/2012 9:30	Sample	1017910	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\020SMPL.d	3107	1	Matthew Olley
23	8/7/2012 9:34	Sample	9980583001PS	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\021SMPL.d	3108	1	Matthew Olley
24	8/7/2012 9:37	Sample	9980583002	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\022SMPL.d	3109	1	Matthew Olley
25	8/7/2012 9:41	Sample	9980583004	C:\Agilent\ICPMH\1\DAT 37925 MWODF5 A\A080712.b\023SMPL.d	3110	1	Matthew Olley
26	8/7/2012 9:45						Matthew Olley
27	8/7/2012 9:45	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37925 MWO A\A080712.b\024_CCV.d	1307	1	Matthew Olley
28	8/7/2012 9:49	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37925 MWO A\A080712.b\025_CCB.d	1101	1	Matthew Olley
29	8/7/2012 9:53	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37925 MWO A\A080712.b\026LCCV.d	1305	1	Matthew Olley
30	8/7/2012 9:53						Matthew Olley
31	8/7/2012 9:58	Sample	9980583004L	C:\Agilent\ICPMH\1\DAT 37925 MWODF25 A\A080712.b\027SMPL.d	3111	1	Matthew Olley
32	8/7/2012 10:02						Matthew Olley
33	8/7/2012 10:02	Sample	LDR 2 PPM	C:\Agilent\ICPMH\1\DAT 37925 MWO A\A080712.b\028SMPL.d	3112	1	Matthew Olley
34	8/7/2012 10:02						Matthew Olley
35	8/7/2012 10:05						Matthew Olley
36	8/7/2012 10:08	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\029SMPL.d	3201	1	Matthew Olley
37	8/7/2012 10:08						Matthew Olley
38	8/7/2012 10:12						Matthew Olley
39	8/7/2012 10:13	Sample	1017046	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\030SMPL.d	3202	1	Matthew Olley
40	8/7/2012 10:13						Matthew Olley
41	8/7/2012 10:17						Matthew Olley
42	8/7/2012 10:18	Sample	1017047	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\031SMPL.d	3203	1	Matthew Olley
43	8/7/2012 10:22						Matthew Olley
44	8/7/2012 10:22	Sample	9980109001	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\032SMPL.d	3204	1	Matthew Olley
45	8/7/2012 10:26						Matthew Olley

Batch Log

46	8/7/2012 10:26	Sample	9980109003	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\033SMPL.d	3205	1	Matthew Olley
47	8/7/2012 10:30						Matthew Olley
48	8/7/2012 10:30	Sample	9980109004	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\034SMPL.d	3206	1	Matthew Olley
49	8/7/2012 10:33						Matthew Olley
50	8/7/2012 10:33	Sample	9980109005	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\035SMPL.d	3207	1	Matthew Olley
51	8/7/2012 10:37						Matthew Olley
52	8/7/2012 10:37	Sample	9980109006	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\036SMPL.d	3208	1	Matthew Olley
53	8/7/2012 10:41						Matthew Olley
54	8/7/2012 10:41	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\037_CCV.d	1307	1	Matthew Olley
55	8/7/2012 10:45	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\038_CCB.d	1101	1	Matthew Olley
56	8/7/2012 10:49	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\039LCCV.d	1305	1	Matthew Olley
57	8/7/2012 10:53	Sample	9980109007	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\040SMPL.d	3209	1	Matthew Olley
58	8/7/2012 10:57						Matthew Olley
59	8/7/2012 10:57	Sample	9980109008	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\041SMPL.d	3210	1	Matthew Olley
60	8/7/2012 11:01						Matthew Olley
61	8/7/2012 11:01	Sample	9980109009	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\042SMPL.d	3211	1	Matthew Olley
62	8/7/2012 11:05						Matthew Olley
63	8/7/2012 11:05	Sample	9980109010	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\043SMPL.d	3212	1	Matthew Olley
64	8/7/2012 11:09						Matthew Olley
65	8/7/2012 11:09	Sample	9980109011	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\044SMPL.d	3301	1	Matthew Olley
66	8/7/2012 11:12						Matthew Olley
67	8/7/2012 11:12	Sample	1017048	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\045SMPL.d	3302	1	Matthew Olley
68	8/7/2012 11:16						Matthew Olley
69	8/7/2012 11:16	Sample	1017049	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\046SMPL.d	3303	1	Matthew Olley

Batch Log

70	8/7/2012 11:20						Matthew Olley
71	8/7/2012 11:20	Sample	9980109011	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\047SMPL.d	3304	1	Matthew Olley
72	8/7/2012 11:24						Matthew Olley
73	8/7/2012 11:24	Sample	9980109012	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\048SMPL.d	3305	1	Matthew Olley
74	8/7/2012 11:28						Matthew Olley
75	8/7/2012 11:28	Sample	9980109013	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\049SMPL.d	3306	1	Matthew Olley
76	8/7/2012 11:32						Matthew Olley
77	8/7/2012 11:32	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\050_CCV.d	1307	1	Matthew Olley
78	8/7/2012 11:36	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\051_CCB.d	1101	1	Matthew Olley
79	8/7/2012 11:39	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\052LCCV.d	1305	1	Matthew Olley
80	8/7/2012 11:43	Sample	9980109014	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\053SMPL.d	3307	1	Matthew Olley
81	8/7/2012 11:47						Matthew Olley
82	8/7/2012 11:47	Sample	9980109015	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\054SMPL.d	3308	1	Matthew Olley
83	8/7/2012 11:51						Matthew Olley
84	8/7/2012 11:51	Sample	9980109016	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\055SMPL.d	3309	1	Matthew Olley
85	8/7/2012 11:55						Matthew Olley
86	8/7/2012 11:55	Sample	9980109017	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\056SMPL.d	3310	1	Matthew Olley
87	8/7/2012 11:59						Matthew Olley
88	8/7/2012 11:59	Sample	1017050	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\057SMPL.d	3311	1	Matthew Olley
89	8/7/2012 12:03						Matthew Olley
90	8/7/2012 12:03	Sample	1017051	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\058SMPL.d	3312	1	Matthew Olley
91	8/7/2012 12:07						Matthew Olley
92	8/7/2012 12:07	Sample	9980109017PS	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\059SMPL.d	3401	1	Matthew Olley
93	8/7/2012 12:11						Matthew Olley

Batch Log

94	8/7/2012 12:11	Sample	9980109018	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\060SMPL.d	3402	1	Matthew Olley
95	8/7/2012 12:15						Matthew Olley
96	8/7/2012 12:15	Sample	9980109019	C:\Agilent\ICPMH\1\DAT 37926 MWODF5 A\A080712.b\061SMPL.d	3403	1	Matthew Olley
97	8/7/2012 12:19						Matthew Olley
98	8/7/2012 12:19	Sample	9980109019L	C:\Agilent\ICPMH\1\DAT 37926 MWODF25 A\A080712.b\062SMPL.d	3404	1	Matthew Olley
99	8/7/2012 12:22						Matthew Olley
100	8/7/2012 12:22	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\063_CCV.d	1307	1	Matthew Olley
101	8/7/2012 12:22						Matthew Olley
102	8/7/2012 12:29	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\064_CCB.d	1101	1	Matthew Olley
103	8/7/2012 12:33	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\065LCCV.d	1305	1	Matthew Olley
104	8/7/2012 12:33						Matthew Olley
105	8/7/2012 12:37	Sample	LDR 50 PPM	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\066SMPL.d	3405	1	Matthew Olley
106	8/7/2012 12:37						Matthew Olley
107	8/7/2012 12:41						Matthew Olley
108	8/7/2012 12:42	Sample	CHECK	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\067SMPL.d	3406	1	Matthew Olley
109	8/7/2012 12:42						Matthew Olley
110	8/7/2012 12:46						Matthew Olley
111	8/7/2012 12:47	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\068_CCV.d	1307	1	Matthew Olley
112	8/7/2012 12:51	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\069_CCB.d	1101	1	Matthew Olley
113	8/7/2012 12:51						Matthew Olley
114	8/7/2012 12:58	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\070LCCV.d	1305	1	Matthew Olley
115	8/7/2012 13:02	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\071_CCV.d	1307	1	Matthew Olley
116	8/7/2012 13:02						Matthew Olley
117	8/7/2012 13:07	Sample	1017577	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\072SMPL.d	3407	1	Matthew Olley
118	8/7/2012 13:07						Matthew Olley

Batch Log

119	8/7/2012 13:10						Matthew Olley
120	8/7/2012 13:27	Sample	1017578	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\073SMPL.d	3408	1	Matthew Olley
121	8/7/2012 13:31						Matthew Olley
122	8/7/2012 13:31	Sample	1019627	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\074SMPL.d	3409	1	Matthew Olley
123	8/7/2012 13:35						Matthew Olley
124	8/7/2012 13:35	Sample	1019628	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\075SMPL.d	3410	1	Matthew Olley
125	8/7/2012 13:39						Matthew Olley
126	8/7/2012 13:39	Sample	9980109002	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\076SMPL.d	3411	1	Matthew Olley
127	8/7/2012 13:43						Matthew Olley
128	8/7/2012 13:43	Sample	9980394006	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\077SMPL.d	3412	1	Matthew Olley
129	8/7/2012 13:47						Matthew Olley
130	8/7/2012 13:47	Sample	9980394006L	C:\Agilent\ICPMH\1\DAT 37932 MWODF5 A\A080712.b\078SMPL.d	3501	1	Matthew Olley
131	8/7/2012 13:51						Matthew Olley
132	8/7/2012 13:51	Sample	9980394014	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\079SMPL.d	3502	1	Matthew Olley
133	8/7/2012 13:51						Matthew Olley
134	8/7/2012 13:54						Matthew Olley
135	8/7/2012 13:58	Sample	9980394006PS	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\080SMPL.d	3503	1	Matthew Olley
136	8/7/2012 13:58						Matthew Olley
137	8/7/2012 14:02						Matthew Olley
138	8/7/2012 14:08	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\081_CCV.d	1307	1	Matthew Olley
139	8/7/2012 14:12	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\082_CCB.d	1101	1	Matthew Olley
140	8/7/2012 14:16	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\083LCCV.d	1305	1	Matthew Olley
141	8/7/2012 14:19	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\084_CCV.d	1307	1	Matthew Olley
142	8/7/2012 14:23	Sample	9980395006	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\085SMPL.d	3504	1	Matthew Olley
143	8/7/2012 14:23						Matthew Olley

Batch Log

144	8/7/2012 14:27						Matthew Olley
145	8/7/2012 14:45	Sample	1017579	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\086SMPL.d	3505	1	Matthew Olley
146	8/7/2012 14:49						Matthew Olley
147	8/7/2012 14:49	Sample	1017580	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\087SMPL.d	3506	1	Matthew Olley
148	8/7/2012 14:53						Matthew Olley
149	8/7/2012 14:53	Sample	9980875015	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\088SMPL.d	3507	1	Matthew Olley
150	8/7/2012 14:57						Matthew Olley
151	8/7/2012 14:57	Sample	1019629	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\089SMPL.d	3508	1	Matthew Olley
152	8/7/2012 15:00						Matthew Olley
153	8/7/2012 15:00	Sample	1019630	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\090SMPL.d	3509	1	Matthew Olley
154	8/7/2012 15:04						Matthew Olley
155	8/7/2012 15:04	Sample	9980875015L	C:\Agilent\ICPMH\1\DAT 37932 MWODF5A\A080712.b\091SMPL.d	3510	1	Matthew Olley
156	8/7/2012 15:08						Matthew Olley
157	8/7/2012 15:08	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\092_CCV.d	1307	1	Matthew Olley
158	8/7/2012 15:12	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\093_CCB.d	1101	1	Matthew Olley
159	8/7/2012 15:16	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37932 MWOA\A080712.b\094LCCV.d	1305	1	Matthew Olley
160	8/7/2012 15:26	CalBlk	blk		1101		Matthew Olley
161	8/7/2012 15:26	CalBlk	blk		1101		Matthew Olley
162	8/7/2012 15:26	CalStd	Standard 1		2101		Matthew Olley
163	8/7/2012 15:26	CalStd	Standard 2		2102		Matthew Olley
164	8/7/2012 15:26	CalStd	Standard 3		2103		Matthew Olley
165	8/7/2012 15:26	CalStd	Standard 4		2104		Matthew Olley
166	8/7/2012 15:26	CalStd	Standard 5		2105		Matthew Olley
167	8/7/2012 15:26	ICV	ICV		1307		Matthew Olley
168	8/7/2012 15:26	ICB	ICB		1101		Matthew Olley
169	8/7/2012 15:26	ICB	ICB		1101		Matthew Olley
170	8/7/2012 15:26	LLICV	LLICV		1305		Matthew Olley

Batch Log

171	8/7/2012 15:26	ICSA	ICSA		2111		Matthew Olley
172	8/7/2012 15:26	ICSB	ICSAB		2112		Matthew Olley
173	8/7/2012 15:27	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\095_CCV.d	1307	1	Matthew Olley
174	8/7/2012 15:27						Matthew Olley
175	8/7/2012 15:47	Sample	9979663004	C:\Agilent\ICPMH\1\DAT 37936 MWODF5 A\A080712.b\096SMPL.d	3101	1	Matthew Olley
176	8/7/2012 15:51	Sample	9979678003	C:\Agilent\ICPMH\1\DAT 37936 MWODF5 A\A080712.b\097SMPL.d	3102	1	Matthew Olley
177	8/7/2012 15:51						Matthew Olley
178	8/7/2012 15:57	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\098_CCV.d	1307	1	Matthew Olley
179	8/7/2012 16:01	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\099_CCB.d	1101	1	Matthew Olley
180	8/7/2012 16:05	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37932 MWO A\A080712.b\100LCCV.d	1305	1	Matthew Olley
181	8/7/2012 16:05						Matthew Olley
182	8/7/2012 16:41	Sample	9980477001	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\101SMPL.d	3101	1	Matthew Olley
183	8/7/2012 16:45	Sample	9980477002	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\102SMPL.d	3102	1	Matthew Olley
184	8/7/2012 16:49	Sample	9980478001	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\103SMPL.d	3103	1	Matthew Olley
185	8/7/2012 16:53	Sample	9980478002	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\104SMPL.d	3104	1	Matthew Olley
186	8/7/2012 16:56	Sample	9980478003	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\105SMPL.d	3105	1	Matthew Olley
187	8/7/2012 17:00	Sample	9980478004	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\106SMPL.d	3106	1	Matthew Olley
188	8/7/2012 17:04	Sample	9980478004L	C:\Agilent\ICPMH\1\DAT 37938 MWODF5 A\A080712.b\107SMPL.d	3107	1	Matthew Olley
189	8/7/2012 17:08	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\108_CCV.d	1307	1	Matthew Olley
190	8/7/2012 17:12	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\109_CCB.d	1101	1	Matthew Olley
191	8/7/2012 17:16	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37926 MWO A\A080712.b\110LCCV.d	1305	1	Matthew Olley
192	8/7/2012 17:20	Sample	9975539001	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A080712.b\111SMPL.d	3108	1	Matthew Olley

Batch Log

193	8/7/2012 17:24	Sample	9975539002	C:\Agilent\ICPMH\1\DAT 99999 MWO A\A080712.b\112SMPL.d	3109	1	Matthew Olley
194	8/7/2012 17:28	Sample	9975539001	C:\Agilent\ICPMH\1\DAT 99999 MWODF5 A\A080712.b\113SMPL.d	3110	1	Matthew Olley
195	8/7/2012 17:32	Sample	9975539002	C:\Agilent\ICPMH\1\DAT 99999 MWODF5 A\A080712.b\114SMPL.d	3111	1	Matthew Olley
196	8/7/2012 17:35	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\115SMPL.d	3112	1	Matthew Olley
197	8/7/2012 17:39	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\116SMPL.d	3201	1	Matthew Olley
198	8/7/2012 17:43	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\117SMPL.d	3202	1	Matthew Olley
199	8/7/2012 17:47	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\118SMPL.d	3203	1	Matthew Olley
200	8/7/2012 17:51	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\119SMPL.d	3204	1	Matthew Olley
201	8/7/2012 17:55	Sample	CHECK	C:\Agilent\ICPMH\1\DAT A\A080712.b\120SMPL.d	3205	1	Matthew Olley
202	8/7/2012 17:59						Matthew Olley
203	8/7/2012 17:59	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A080712.b\121_CCV.d	1307	1	Matthew Olley
204	8/7/2012 18:03	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A080712.b\122_CCB.d	1101	1	Matthew Olley
205	8/7/2012 18:07	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A080712.b\123LCCV.d	1305	1	Matthew Olley

Total Metals in Solid by 6020A Summary Forms

6020 3051
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INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, Inc

SDG No.: ERT-005 Method Type: 6020 3051 SOW No.:

Contract: ERT005|Ft. Stewart 3 Lab Code: CAS Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
9980875001	FTSW-HR-SO-31	
9980875001S	FTSW-HR-SO-31S	Matrix Spike
9980875001SD	FTSW-HR-SO-31SD	Matrix Spike Duplicate
9980875002	FTSW-HR-SO-31DUP	
9980875003	FTSW-HR-SO-32 (10)	
9980875004	FTSW-HR-SO-33	
9980875005	FTSW-HR-SO-34 (10)	
9980875006	FTSW-HR-SO-34 (10) DUP	
9980875007	FTSW-HR-SO-35	
9980875008	FTSW-HR-SO-36	
9980875009	FTSW-HR-SO-37 (09.5)	
9980875010	FTSW-HR-SO-38	
9980875011	FTSW-HR-SO-39	
9980875012	FTSW-HR-SO-40	

Were ICP interelement corrections applied?	Yes/No	Yes
Were ICP background corrections applied?	Yes/No	Yes
If yes - were raw data generated before applications of background corrections?	Yes/No	No

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: Lisa Miller

Date: Title: Metals Manager

6020 3051
- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, Inc

SDG No.: ERT-005 Method Type: 6020 3051 SOW No.:

Contract: ERT005|Ft. Stewart 3 Lab Code: CAS Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
9980875013	FTSW-HR-SO-41	
9980875014	FTSW-HR-SO-42	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: **Lisa Miller**

Date: Title: **Metals Manager**

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-005 **Method Type:** 6020 3051

Sample ID: 9980875001 **Client ID:** FTSW-HR-SO-31

Matrix: SOIL **Date Received:** 8/2/2012 **Level:** LOW

% Solids: 89.0 **Sample Wt/Vol:** 0.54 **Final Vol:** 50.0

Prep Batch ID: 475032 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.04	mg/Kg	U		M	1.6	1.04	0.52	5.00	8/13/2012	19:55:44

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-005 **Method Type:** 6020 3051

Sample ID: 9980875002 **Client ID:** FTSW-HR-SO-31DUP

Matrix: SOIL **Date Received:** 8/2/2012 **Level:** LOW

% Solids: 87.7 **Sample Wt/Vol:** 0.52 **Final Vol:** 50.0

Prep Batch ID: 475032 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.82	mg/Kg	J		M	1.6	1.10	0.55	5.00	8/13/2012	20:20:00

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-005 **Method Type:** 6020 3051

Sample ID: 9980875003 **Client ID:** FTSW-HR-SO-32 (10)

Matrix: SOIL **Date Received:** 8/2/2012 **Level:** LOW

% Solids: 80.8 **Sample Wt/Vol:** 0.55 **Final Vol:** 50.0

Prep Batch ID: 475032 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.12	mg/Kg	U		M	1.7	1.12	0.56	5.00	8/13/2012	20:23:28

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-005 **Method Type:** 6020 3051

Sample ID: 9980875004 **Client ID:** FTSW-HR-SO-33

Matrix: SOIL **Date Received:** 8/2/2012 **Level:** LOW

% Solids: 94.0 **Sample Wt/Vol:** 0.51 **Final Vol:** 50.0

Prep Batch ID: 475032 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.55	mg/Kg	J		M	1.6	1.04	0.52	5.00	8/13/2012	20:26:58

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-005 **Method Type:** 6020 3051

Sample ID: 9980875005 **Client ID:** FTSW-HR-SO-34 (10)

Matrix: SOIL **Date Received:** 8/2/2012 **Level:** LOW

% Solids: 77.6 **Sample Wt/Vol:** 0.60 **Final Vol:** 50.0

Prep Batch ID: 475032 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.07	mg/Kg	U		M	1.6	1.07	0.54	5.00	8/13/2012	20:30:28

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-005 **Method Type:** 6020 3051

Sample ID: 9980875006 **Client ID:** FTSW-HR-SO-34 (10) DUP

Matrix: SOIL **Date Received:** 8/2/2012 **Level:** LOW

% Solids: 77.5 **Sample Wt/Vol:** 0.57 **Final Vol:** 50.0

Prep Batch ID: 475032 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.13	mg/Kg	U		M	1.7	1.13	0.57	5.00	8/13/2012	20:33:56

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-005 **Method Type:** 6020 3051

Sample ID: 9980875007 **Client ID:** FTSW-HR-SO-35

Matrix: SOIL **Date Received:** 8/2/2012 **Level:** LOW

% Solids: 88.7 **Sample Wt/Vol:** 0.57 **Final Vol:** 50.0

Prep Batch ID: 475032 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.99	mg/Kg	U		M	1.5	0.99	0.49	5.00	8/13/2012	20:37:26

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-005 **Method Type:** 6020 3051

Sample ID: 9980875008 **Client ID:** FTSW-HR-SO-36

Matrix: SOIL **Date Received:** 8/2/2012 **Level:** LOW

% Solids: 81.4 **Sample Wt/Vol:** 0.52 **Final Vol:** 50.0

Prep Batch ID: 475032 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.77	mg/Kg	J		M	1.8	1.18	0.59	5.00	8/13/2012	20:40:55

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-005 **Method Type:** 6020 3051

Sample ID: 9980875009 **Client ID:** FTSW-HR-SO-37 (09.5)

Matrix: SOIL **Date Received:** 8/2/2012 **Level:** LOW

% Solids: 77.6 **Sample Wt/Vol:** 0.54 **Final Vol:** 50.0

Prep Batch ID: 475032 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	1.19	mg/Kg	U		M	1.8	1.19	0.60	5.00	8/13/2012	20:44:25

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-005 **Method Type:** 6020 3051

Sample ID: 9980875010 **Client ID:** FTSW-HR-SO-38

Matrix: SOIL **Date Received:** 8/2/2012 **Level:** LOW

% Solids: 91.7 **Sample Wt/Vol:** 0.52 **Final Vol:** 50.0

Prep Batch ID: 475032 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.58	mg/Kg	J		M	1.6	1.05	0.52	5.00	8/13/2012	20:58:17

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-005 **Method Type:** 6020 3051

Sample ID: 9980875011 **Client ID:** FTSW-HR-SO-39

Matrix: SOIL **Date Received:** 8/2/2012 **Level:** LOW

% Solids: 91.4 **Sample Wt/Vol:** 0.51 **Final Vol:** 50.0

Prep Batch ID: 475032 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.73	mg/Kg	J		M	1.6	1.07	0.54	5.00	8/13/2012	21:01:46

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-005 **Method Type:** 6020 3051

Sample ID: 9980875012 **Client ID:** FTSW-HR-SO-40

Matrix: SOIL **Date Received:** 8/2/2012 **Level:** LOW

% Solids: 84.5 **Sample Wt/Vol:** 0.53 **Final Vol:** 50.0

Prep Batch ID: 475032 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.66	mg/Kg	J		M	1.7	1.12	0.56	5.00	8/13/2012	21:05:15

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-005 **Method Type:** 6020 3051

Sample ID: 9980875013 **Client ID:** FTSW-HR-SO-41

Matrix: SOIL **Date Received:** 8/2/2012 **Level:** LOW

% Solids: 82.2 **Sample Wt/Vol:** 0.53 **Final Vol:** 50.0

Prep Batch ID: 475032 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.86	mg/Kg	J		M	1.7	1.15	0.57	5.00	8/13/2012	21:08:46

Comments:

6020 3051

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: ERT Earth Resources Technology, I **SDG No.:** ERT-005 **Method Type:** 6020 3051

Sample ID: 9980875014 **Client ID:** FTSW-HR-SO-42

Matrix: SOIL **Date Received:** 8/2/2012 **Level:** LOW

% Solids: 85.0 **Sample Wt/Vol:** 0.57 **Final Vol:** 50.0

Prep Batch ID: 475033 **Prep Date:** 8/8/2012 **Total/Dissolved:** TOTAL

Analyte	CAS No.	Concentration	Units	C	Qual	M	LOQ	LOD	MDL	Dil	Analytical Date	Analytical Time
Arsenic	7440-38-2	0.69	mg/Kg	J		M	1.5	1.03	0.52	5.00	8/13/2012	21:15:46

Comments:

6020 3051
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
ICV	Arsenic	0.0984	0.1000	98		90 - 110	M	8/13/2012	12:37	A081312C
LLICV	Arsenic	0.0033	0.0030	110		70 - 130	M	8/13/2012	12:47	A081312C
LLCCV	Arsenic	0.0154	0.0150	103		70 - 130	M	8/13/2012	13:54	A081312C
CCV	Arsenic	0.0940	0.1000	94		90 - 110	M	8/13/2012	13:58	A081312C
CCV	Arsenic	0.0930	0.1000	93		90 - 110	M	8/13/2012	14:52	A081312C
LLCCV	Arsenic	0.0032	0.0030	107		70 - 130	M	8/13/2012	14:59	A081312C
CCV	Arsenic	0.0929	0.1000	93		90 - 110	M	8/13/2012	19:17	A081312C
LLCCV	Arsenic	0.0031	0.0030	103		70 - 130	M	8/13/2012	19:24	A081312C
CCV	Arsenic	0.0939	0.1000	94		90 - 110	M	8/13/2012	20:02	A081312C
LLCCV	Arsenic	0.0032	0.0030	107		70 - 130	M	8/13/2012	20:09	A081312C
CCV	Arsenic	0.0918	0.1000	92		90 - 110	M	8/13/2012	20:47	A081312C

6020 3051
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	M	Analysis Date	Analysis Time	Run Number
LLCCV										
	Arsenic	0.0030	0.0030	100		70 - 130	M	8/13/2012	20:54	A081312C
CCV										
	Arsenic	0.0927	0.1000	93		90 - 110	M	8/13/2012	21:33	A081312C
LLCCV										
	Arsenic	0.0033	0.0030	110		70 - 130	M	8/13/2012	21:40	A081312C

6020 3051

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Conc Qual	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
ICB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	12:44	A081312C
CCB	Arsenic	0.0135	U	0.011	0.0050	0.0135	M	8/13/2012	13:51	A081312C
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	14:56	A081312C
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	19:20	A081312C
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	20:06	A081312C
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	20:51	A081312C
CCB	Arsenic	0.0027	U	0.0022	0.0010	0.0027	M	8/13/2012	21:36	A081312C

6020 3051
- 3b -
PREPARATION BLANK SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Sample ID	Analyte	Result (mg/Kg)	Conc Qual	Q	QC Criteria	MDL	LOQ	M	Analysis Date	Analysis Time	Run
1020191			**QC-SOLID**								
	Arsenic	1.50000	U		0.75	0.50000	1.50000	M	8/13/2012	14:38	A081312C
1020195			**QC-SOLID**								
	Arsenic	1.50000	U		0.75	0.50000	1.50000	M	8/13/2012	14:45	A081312C

6020 3051
- 4 -
INTERFERENCE CHECK SAMPLE

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

ICS Source: Inorganic Ventures **Instrument ID:** AGILENT 7700 ICPMS

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Q	QC Criteria	Analysis Date	Analysis Time	Run Number
ICSA									
	Arsenic	0.0006				-0.00300 - -0.00300	8/13/2012	12:51	A081312C
ICSAB									
	Arsenic	0.0201	0.02000	100		80 - 120%	8/13/2012	13:00	A081312C

6020 3051
- 5a -
MATRIX SPIKE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: SOIL **Sample ID:** 9980875001 **Client ID:** FTSW-HR-SO-31S **LIMS ID:** 1020193

Percent Solids for Sample: 89.01 **Spiked ID:** 9980875001S **Percent Solids for Spike Sample:** 89.01

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/Kg	80 - 120	18.24		1.53	U	20.426	89		M

6020 3051

- 5a -

MATRIX SPIKE DUPLICATE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: SOIL **Sample ID:** 9980875001 **Client ID:** FTSW-HR-SO-31SD **LIMS ID:** 1020194

Percent Solids for Sample: 89.01 **Spiked ID:** 9980875001SD **Percent Solids for Spike Sample:** 89.01

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/Kg	80 - 120	20.53		1.56	U	20.805	99		M

6020 3051
- 6 -
DUPLICATE SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **Level:** LOW **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** _____ **SAS No.:** _____

Matrix: SOIL **Sample ID:** 9980875001S **Client ID:** FTSW-HR-SO-31SD **LIMS ID:** 1020194

Percent Solids for Sample: 89.01 **Duplicate ID:** 9980875001SD **Percent Solids for Duplicate:** 89.01

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/Kg	0 - 20	18.24		20.53		12		M

6020 3051

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LABORATORY CONTROL SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Aqueous LCS Source: **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Q	QC Criteria	M
1020192									
	Arsenic	mg/Kg	20.0	18.9		94.5		80 - 120	M

6020 3051

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LABORATORY CONTROL SAMPLE SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Aqueous LCS Source: **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Q	QC Criteria	M
1020196									
	Arsenic	mg/Kg	20.0	19.5		97.5		80 - 120	M

6020 3051

- 12 -
LINEAR RANGES

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Case No.:** **SAS No.:**

Instrument ID: AGILENT 7700 ICPMS **Date:** 1/19/2012

Analyte	Integration Time (sec)	LDR mg/L
Arsenic	1.00	5

6020 3051
- 13 -
SAMPLE PREPARATION SUMMARY

Client: ERT Earth Resources Technology, Inc. **SDG No.:** ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS **Method:** MS

Case No.: _____ **SAS No.:** _____

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	475032						
1020191	MB for HBN 475032 [MDIG/3742	MB	QC-SOLI	8/8/12	0.50	50.0	100.00
1020192	LCS for HBN 475032 [MDIG/3742	LCS	QC-SOLI	8/8/12	0.50	50.0	100.00
9980875001	FTSW-HR-SO-31	SAM	SOIL	8/8/12	0.54	50.0	89.01
9980875001S	FTSW-HR-SO-31S	MS	SOIL	8/8/12	0.55	50.0	89.01
9980875001SD	FTSW-HR-SO-31SD	MSD	SOIL	8/8/12	0.54	50.0	89.01
9980875002	FTSW-HR-SO-31DUP	SAM	SOIL	8/8/12	0.52	50.0	87.71
9980875003	FTSW-HR-SO-32 (10)	SAM	SOIL	8/8/12	0.55	50.0	80.81
9980875004	FTSW-HR-SO-33	SAM	SOIL	8/8/12	0.51	50.0	93.97
9980875005	FTSW-HR-SO-34 (10)	SAM	SOIL	8/8/12	0.60	50.0	77.58
9980875006	FTSW-HR-SO-34 (10) DUP	SAM	SOIL	8/8/12	0.57	50.0	77.45
9980875007	FTSW-HR-SO-35	SAM	SOIL	8/8/12	0.57	50.0	88.72
9980875008	FTSW-HR-SO-36	SAM	SOIL	8/8/12	0.52	50.0	81.38
9980875009	FTSW-HR-SO-37 (09.5)	SAM	SOIL	8/8/12	0.54	50.0	77.61
9980875010	FTSW-HR-SO-38	SAM	SOIL	8/8/12	0.52	50.0	91.74
9980875011	FTSW-HR-SO-39	SAM	SOIL	8/8/12	0.51	50.0	91.44
9980875012	FTSW-HR-SO-40	SAM	SOIL	8/8/12	0.53	50.0	84.49
9980875013	FTSW-HR-SO-41	SAM	SOIL	8/8/12	0.53	50.0	82.17

6020 3051
- 13 -
SAMPLE PREPARATION SUMMARY

Client: ERT Earth Resources Technology, Inc.

SDG No.: ERT-005

Contract: ERT005|Ft. Stewart 3153-004 **Lab Code:** CAS

Method: MS

Case No.: _____ **SAS No.:** _____

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	475033						
1020195	MB for HBN 475033 [MDIG/3742	MB	QC-SOLI	8/8/12	0.50	50.0	100.00
1020196	LCS for HBN 475033 [MDIG/3742	LCS	QC-SOLI	8/8/12	0.50	50.0	100.00
9980875014	FTSW-HR-SO-42	SAM	SOIL	8/8/12	0.57	50.0	84.97

6020 3051
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ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT005|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-005

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1212																								
BLK	1.00	1216				X																				
STANDARD 1	1.00	1219				X																				
STANDARD 2	1.00	1223				X																				
STANDARD 3	1.00	1226				X																				
STANDARD 4	1.00	1230				X																				
STANDARD 5	1.00	1233				X																				
ICV	1.00	1237				X																				
ZZZZZZ	1.00	1240																								
ICB2	1.00	1244				X																				
LLICV	1.00	1247				X																				
ICS-A1	1.00	1251				X																				
ICS-AB1	1.00	1300				X																				
ZZZZZZ	5.00	1304																								
ZZZZZZ	5.00	1307																								
ZZZZZZ	5.00	1311																								
ZZZZZZ	5.00	1314																								
ZZZZZZ	5.00	1318																								
ZZZZZZ	5.00	1321																								
ZZZZZZ	5.00	1324																								
ZZZZZZ	5.00	1328																								
ZZZZZZ	5.00	1331																								
ZZZZZZ	5.00	1335																								
ZZZZZZ	5.00	1338																								
CCB1	5.00	1351				X																				
LLCCV	5.00	1354				X																				
CCV2	1.00	1358				X																				
ZZZZZZ	5.00	1401																								
ZZZZZZ	5.00	1405																								
ZZZZZZ	5.00	1408																								
ZZZZZZ	5.00	1412																								
ZZZZZZ	5.00	1432																								
ZZZZZZ	5.00	1435																								
1020191	5.00	1438				X																				
1020192	5.00	1442				X																				
1020195	5.00	1445				X																				

6020 3051
14
ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT005|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-005

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
1020196	5.00	1449				X																								
CCV3	1.00	1452				X																								
CCB2	1.00	1456				X																								
LLCCV	1.00	1459				X																								
ZZZZZZ	5.00	1503																												
ZZZZZZ	5.00	1506																												
ZZZZZZ	5.00	1510																												
ZZZZZZ	5.00	1513																												
ZZZZZZ	5.00	1517																												
ZZZZZZ	5.00	1520																												
ZZZZZZ	5.00	1524																												
ZZZZZZ	5.00	1527																												
ZZZZZZ	5.00	1531																												
ZZZZZZ	5.00	1534																												
ZZZZZZ	1.00	1538																												
ZZZZZZ	1.00	1541																												
ZZZZZZ	1.00	1545																												
ZZZZZZ	5.00	1550																												
ZZZZZZ	5.00	1554																												
ZZZZZZ	5.00	1557																												
ZZZZZZ	5.00	1600																												
ZZZZZZ	5.00	1604																												
ZZZZZZ	5.00	1607																												
ZZZZZZ	5.00	1611																												
ZZZZZZ	5.00	1614																												
ZZZZZZ	5.00	1618																												
ZZZZZZ	5.00	1621																												
ZZZZZZ	5.00	1624																												
ZZZZZZ	5.00	1628																												
ZZZZZZ	25.00	1631																												
ZZZZZZ	5.00	1635																												
ZZZZZZ	5.00	1638																												
ZZZZZZ	5.00	1642																												
ZZZZZZ	5.00	1645																												
ZZZZZZ	5.00	1649																												
ZZZZZZ	5.00	1652																												

6020 3051
14
ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT005|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-005

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	1656																								
ZZZZZZ	1.00	1659																								
ZZZZZZ	1.00	1705																								
ZZZZZZ	1.00	1708																								
ZZZZZZ	5.00	1712																								
ZZZZZZ	5.00	1715																								
ZZZZZZ	5.00	1719																								
ZZZZZZ	5.00	1722																								
ZZZZZZ	25.00	1726																								
ZZZZZZ	5.00	1729																								
ZZZZZZ	5.00	1733																								
ZZZZZZ	5.00	1736																								
ZZZZZZ	5.00	1740																								
ZZZZZZ	5.00	1743																								
ZZZZZZ	1.00	1746																								
ZZZZZZ	1.00	1750																								
ZZZZZZ	1.00	1753																								
ZZZZZZ	25.00	1757																								
ZZZZZZ	5.00	1800																								
ZZZZZZ	5.00	1804																								
ZZZZZZ	5.00	1807																								
ZZZZZZ	5.00	1811																								
ZZZZZZ	5.00	1814																								
ZZZZZZ	5.00	1818																								
ZZZZZZ	5.00	1821																								
ZZZZZZ	5.00	1825																								
ZZZZZZ	5.00	1828																								
ZZZZZZ	1.00	1832																								
ZZZZZZ	1.00	1835																								
ZZZZZZ	1.00	1839																								
ZZZZZZ	5.00	1842																								
ZZZZZZ	5.00	1846																								
ZZZZZZ	5.00	1849																								
ZZZZZZ	5.00	1853																								
ZZZZZZ	5.00	1856																								
ZZZZZZ	5.00	1900																								

6020 3051
14
ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT005|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-005

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	%R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	1903																								
ZZZZZZ	5.00	1906																								
ZZZZZZ	5.00	1910																								
ZZZZZZ	25.00	1913																								
CCV10	1.00	1917				X																				
CCB8	1.00	1920				X																				
LLCCV	1.00	1924				X																				
ZZZZZZ	5.00	1927																								
ZZZZZZ	5.00	1931																								
ZZZZZZ	5.00	1934																								
ZZZZZZ	5.00	1938																								
ZZZZZZ	5.00	1941																								
ZZZZZZ	5.00	1945																								
ZZZZZZ	5.00	1948																								
ZZZZZZ	25.00	1952																								
9980875001	5.00	1955				X																				
9980875001S	5.00	1959				X																				
CCV11	1.00	2002				X																				
CCB9	1.00	2006				X																				
LLCCV	1.00	2009				X																				
9980875001SD	5.00	2013				X																				
9980875001PS	5.00	2016				X																				
9980875002	5.00	2020				X																				
9980875003	5.00	2023				X																				
9980875004	5.00	2026				X																				
9980875005	5.00	2030				X																				
9980875006	5.00	2033				X																				
9980875007	5.00	2037				X																				
9980875008	5.00	2040				X																				
9980875009	5.00	2044				X																				
CCV12	1.00	2047				X																				
CCB10	1.00	2051				X																				
LLCCV	1.00	2054				X																				
9980875010	5.00	2058				X																				
9980875011	5.00	2101				X																				
9980875012	5.00	2105				X																				

6020 3051
14
ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT005|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-005

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
9980875013	5.00	2108				X																								
9980875013L	25.00	2112				X																								
9980875014	5.00	2115				X						·																		
9980875014L	25.00	2119				X																								
ZZZZZZ	5.00	2122																												
ZZZZZZ	5.00	2126																												
ZZZZZZ	5.00	2129																												
CCV13	1.00	2133				X																								
CCB11	1.00	2136				X																								
LLCCV	1.00	2140				X																								
ZZZZZZ	5.00	2143																												
ZZZZZZ	5.00	2147																												
ZZZZZZ	5.00	2150																												
ZZZZZZ	5.00	2153																												
ZZZZZZ	5.00	2157																												
ZZZZZZ	5.00	2200																												
ZZZZZZ	5.00	2204																												
ZZZZZZ	5.00	2207																												
ZZZZZZ	5.00	2211																												
ZZZZZZ	5.00	2214																												
ZZZZZZ	5.00	2218																												
ZZZZZZ	5.00	2221																												
ZZZZZZ	5.00	2225																												
ZZZZZZ	5.00	2228																												
ZZZZZZ	25.00	2232																												
ZZZZZZ	5.00	2235																												
ZZZZZZ	5.00	2239																												
ZZZZZZ	5.00	2242																												
ZZZZZZ	1.00	2246																												
ZZZZZZ	1.00	2256																												
ZZZZZZ	5.00	2259																												
ZZZZZZ	5.00	2311																												
ZZZZZZ	5.00	2315																												
ZZZZZZ	5.00	2318																												
ZZZZZZ	25.00	2327																												
ZZZZZZ	5.00	2330																												

6020 3051
14
ANALYSIS RUN LOG

Client: ERT Earth Resources Technology, Inc. Contract: ERT005|Ft. Stewart 3153-004

Lab Code: CAS Case No.: SAS No.: SDG No.: ERT-005

Instrument ID Number: AGILENT 7700 ICPMS Method: M Run Number: A081312C

Start Date: 8/13/2012 End Date: 8/13/2012

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	2339																								
ZZZZZZ	5.00	2343																								
ZZZZZZ	5.00	2346																								

6020 3051

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT005|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-005

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
BLK	ZZZZZZ	1212												
BLK	BLK	1216	100		100		100		100		100		100	
STANDARD 1	STANDARD 1	1219	112		99		97		102		91		95	
STANDARD 2	STANDARD 2	1223	113		100		98		103		102		102	
STANDARD 3	STANDARD 3	1226	116		100		101		101		102		105	
STANDARD 4	STANDARD 4	1230	114		100		99		105		103		104	
STANDARD 5	STANDARD 5	1233	117		101		101		104		103		105	
ICV	ICV	1237	115		99		99		104		102		103	
ICB1	ZZZZZZ	1240												
ICB2	ICB	1244	102		99		98		98		99		98	
LLICV	LLICV	1247	111		100		97		103		104		100	
ICS-A1	ICSA	1251	106		96		92		101		99		96	
ICS-AB1	ICSAB	1300	107		102		95		107		106		102	
1020719	ZZZZZZ	1304												
1020720	ZZZZZZ	1307												
9981408002	ZZZZZZ	1311												
9981430001	ZZZZZZ	1314												
1020721	ZZZZZZ	1318												
1020722	ZZZZZZ	1321												
9981430001P	ZZZZZZ	1324												
9981517002	ZZZZZZ	1328												
9981517003	ZZZZZZ	1331												
9981517003L	ZZZZZZ	1335												
CCV1	ZZZZZZ	1338												
CCB1	CCB	1351	112		107		104		111		112		112	
LLCCV	LLCCV	1354	109		105		100		109		113		109	
CCV2	CCV	1358	108		104		99		110		112		109	
1021781	ZZZZZZ	1401												
1021782	ZZZZZZ	1405												
1020183	ZZZZZZ	1408												
1020184	ZZZZZZ	1412												
1020187	ZZZZZZ	1432												
1020188	ZZZZZZ	1435												
1020191	MB for HBN 47503	1438	107		103		97		106		109		107	
1020192	LCS for HBN 4750	1442	106		104		98		109		112		109	
1020195	MB for HBN 47503	1445	113		105		101		112		114		113	
1020196	LCS for HBN 4750	1449	111		106		105		113		115		114	
CCV3	CCV	1452	115		110		106		114		116		116	
CCB2	CCB	1456	117		112		108		115		116		116	
LLCCV	LLCCV	1459	111		107		105		114		113		114	
9980394001	ZZZZZZ	1503												
9980394002	ZZZZZZ	1506												
9980394003	ZZZZZZ	1510												
9980394004	ZZZZZZ	1513												
9980394005	ZZZZZZ	1517												

6020 3051

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT005|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-005

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980394007	ZZZZZZ	1520												
9980394008	ZZZZZZ	1524												
9980394009	ZZZZZZ	1527												
9980394010	ZZZZZZ	1531												
9980394011	ZZZZZZ	1534												
CCV4	ZZZZZZ	1538												
CCB3	ZZZZZZ	1541												
LLCCV	ZZZZZZ	1545												
1020719	ZZZZZZ	1550												
1020720	ZZZZZZ	1554												
9981430001	ZZZZZZ	1557												
1020721	ZZZZZZ	1600												
1020722	ZZZZZZ	1604												
9981430001P	ZZZZZZ	1607												
CCV5	ZZZZZZ	1611												
CCB4	ZZZZZZ	1614												
LLCCV	ZZZZZZ	1618												
CCV6	ZZZZZZ	1621												
9980394012	ZZZZZZ	1624												
9980394013	ZZZZZZ	1628												
9980394013L	ZZZZZZ	1631												
9980395001	ZZZZZZ	1635												
9980395002	ZZZZZZ	1638												
9980395003	ZZZZZZ	1642												
1020185	ZZZZZZ	1645												
1020186	ZZZZZZ	1649												
9980395003P	ZZZZZZ	1652												
9980395004	ZZZZZZ	1656												
CCV7	ZZZZZZ	1659												
CCB5	ZZZZZZ	1705												
LLCCV	ZZZZZZ	1708												
9980395005	ZZZZZZ	1712												
9980395007	ZZZZZZ	1715												
9980395008	ZZZZZZ	1719												
9980395009	ZZZZZZ	1722												
9980395009L	ZZZZZZ	1726												
9980395010	ZZZZZZ	1729												
9980395011	ZZZZZZ	1733												
9980395012	ZZZZZZ	1736												
9980395013	ZZZZZZ	1740												
9980395014	ZZZZZZ	1743												
CCV8	ZZZZZZ	1746												
CCB6	ZZZZZZ	1750												
LLCCV	ZZZZZZ	1753												
9980395014L	ZZZZZZ	1757												

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT005|Ft. Stewart 3153-004

Lab Code: CAS Case No.: _____ NRAS No.: _____ SDG NO.: ERT-005

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980614001	ZZZZZZ	1800												
9980614002	ZZZZZZ	1804												
9980614003	ZZZZZZ	1807												
9980614004	ZZZZZZ	1811												
9980614005	ZZZZZZ	1814												
9980614006	ZZZZZZ	1818												
9980614007	ZZZZZZ	1821												
9980614008	ZZZZZZ	1825												
9980614009	ZZZZZZ	1828												
CCV9	ZZZZZZ	1832												
CCB7	ZZZZZZ	1835												
LLCCV	ZZZZZZ	1839												
9980614010	ZZZZZZ	1842												
9980614011	ZZZZZZ	1846												
9980614012	ZZZZZZ	1849												
9980614013	ZZZZZZ	1853												
1020189	ZZZZZZ	1856												
1020190	ZZZZZZ	1900												
9980614013P	ZZZZZZ	1903												
9980614014	ZZZZZZ	1906												
9980614015	ZZZZZZ	1910												
9980614015L	ZZZZZZ	1913												
CCV10	CCV	1917	107		103		98		109		114		107	
CCB8	CCB	1920	110		103		102		109		111		107	
LLCCV	LLCCV	1924	107		103		99		110		114		108	
9980614016	ZZZZZZ	1927												
9980614017	ZZZZZZ	1931												
9980614018	ZZZZZZ	1934												
9980614019	ZZZZZZ	1938												
9980614020	ZZZZZZ	1941												
9980614021	ZZZZZZ	1945												
9980614022	ZZZZZZ	1948												
9980614022L	ZZZZZZ	1952												
9980875001	FTSW-HR-SO-31	1955	103		99		95		106		109		104	
9980875001S	FTSW-HR-SO-31S	1959	105		100		97		109		109		105	
CCV11	CCV	2002	105		103		98		110		113		108	
CCB9	CCB	2006	106		106		102		110		111		109	
LLCCV	LLCCV	2009	100		98		94		105		110		108	
9980875001S	FTSW-HR-SO-31SD	2013	104		101		98		110		113		108	
9980875001P	FTSW-HR-SO-31PS	2016	103		102		97		108		111		106	
9980875002	FTSW-HR-SO-31DUP	2020	106		100		98		108		109		105	
9980875003	FTSW-HR-SO-32 (1	2023	107		100		97		109		112		108	
9980875004	FTSW-HR-SO-33	2026	106		101		98		109		78		97	
9980875005	FTSW-HR-SO-34 (1	2030	104		100		98		111		112		107	
9980875006	FTSW-HR-SO-34 (1	2033	106		102		98		113		111		110	

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT005|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-005

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For: Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
9980875007	FTSW-HR-SO-35	2037	108		101		97		110		110		105	
9980875008	FTSW-HR-SO-36	2040	109		102		99		111		113		108	
9980875009	FTSW-HR-SO-37 (0	2044	106		102		98		113		113		108	
CCV12	CCV	2047	108		104		101		113		112		109	
CCB10	CCB	2051	105		102		98		109		112		107	
LLCCV	LLCCV	2054	106		103		98		112		111		109	
9980875010	FTSW-HR-SO-38	2058	109		102		100		111		110		107	
9980875011	FTSW-HR-SO-39	2101	105		101		95		110		114		108	
9980875012	FTSW-HR-SO-40	2105	106		101		96		109		112		105	
9980875013	FTSW-HR-SO-41	2108	105		101		97		111		113		107	
9980875013L	FTSW-HR-SO-41L	2112	107		103		100		114		114		109	
9980875014	FTSW-HR-SO-42	2115	105		102		97		109		111		88	
9980875014L	FTSW-HR-SO-42L	2119	105		101		97		109		111		107	
9981198001	ZZZZZZ	2122												
9981198002	ZZZZZZ	2126												
9981198003	ZZZZZZ	2129												
CCV13	CCV	2133	104		101		96		108		113		105	
CCB11	CCB	2136	105		102		97		109		110		104	
LLCCV	LLCCV	2140	104		100		96		109		111		104	
9981198003S	ZZZZZZ	2143												
9981198003S	ZZZZZZ	2147												
9981198003P	ZZZZZZ	2150												
9981198004	ZZZZZZ	2153												
9981198005	ZZZZZZ	2157												
9981198006	ZZZZZZ	2200												
9981198007	ZZZZZZ	2204												
9981198008	ZZZZZZ	2207												
9981198009	ZZZZZZ	2211												
9981198010	ZZZZZZ	2214												
CCV14	ZZZZZZ	2218												
CCB12	ZZZZZZ	2221												
LLCCV	ZZZZZZ	2225												
9981198011	ZZZZZZ	2228												
9981198011L	ZZZZZZ	2232												
CCV15	ZZZZZZ	2235												
CCB13	ZZZZZZ	2239												
LLCCV	ZZZZZZ	2242												
50 PPM LDR	ZZZZZZ	2246												
30 PPM LDR	ZZZZZZ	2256												
1020719	ZZZZZZ	2259												
CCV16	ZZZZZZ	2311												
CCB14	ZZZZZZ	2315												
LLCCV	ZZZZZZ	2318												
9980875009	ZZZZZZ	2327												
1021781	ZZZZZZ	2330												

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract: ERT005|Ft. Stewart 3153-004

Lab Code: CAS Case No.: NRAS No.: SDG NO.: ERT-005

ICP-MS Instrument ID: AGILENT 7700 ICPMS Start Date: 08/13/2012 End Date: 08/13/2012

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi_209	Q	Element Ge_72	Q	Element In_115	Q	Element Sc_45	Q	Element Sc_45-2	Q	Element Sc_45-3	Q
CCV17	ZZZZZZ	2339												
CCB15	ZZZZZZ	2343												
LLCCV	ZZZZZZ	2346												

Total Metals in Solid by 6020A Raw Data

Dataset: A081312C 2nd Review MWO / [illegible]

First Review: [illegible] / MWO Approval: MWO / [illegible]

Internal Standards: **ICPMS9190**

200	60-125%	**6020Qc:**	70-130%	**6020A**	30-130%	**DOD:**	70-120%

Standards :
Tuning MS0361
Daily Standard: MS0361

Calibration Standards
MS0343
MS0344

PIPETTES:

03-028	10.0 mL
03-202	.200 mL
03-201	1.0 mL
03-031	1.0 mL

ICSA: MS0341
ICSAB:MS0340

Al LDR 30 ppm

GOLD: MS0346
DW LCS: MS0358
Second Source

MA1393	MA1388	MA1360
MA1342	MS0345	MA1381
MS0309	MA1359	

Internal Standards/ Target Analytes

Sc-Al,V,Cr,Mn,Co,Ni,Cu,Na, K, Ti, Mg, Ca, Fe, As, Zn, Se,
Y
In-Sr, Mo, Ag, Cd, Sn, Sb, Ba
Tb
Bi-Hg, Tl, Pb, U

Ranard ct passed

RR. MB 1020719 } Fe } Carry
LCS 1020720 } Mo } over
from ICSAB

Case Narrative:

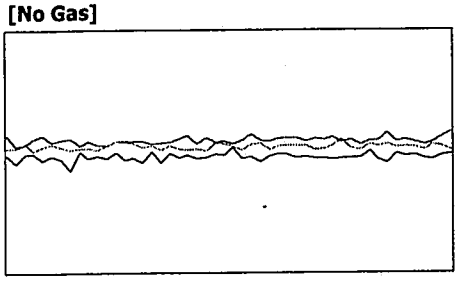
9981430001 - Mo
1020721
1020722

***D**: *D at the beginning of the Dataset Denotes that the samples were run on the Elan DRCe ICP-MS*

Tune Report

Batch Folder C:\Agilent\ICPMH\1\DATA\A081312.b
Report Comment
Instrument Name G3281A JP11040846

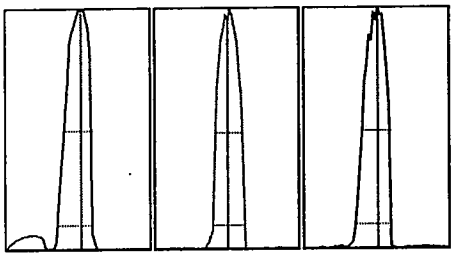
[No Gas]



Mass	Range	Count	RSD%	Background
7	20000	10949	2.467	16.800
89	10000	5213	2.148	10.900
205	5000	2399	3.205	29.500

Ratio (oxide) 156/140 0.448 % **Ratio (2+)** 70/140 12.811 %

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.311



Mass	Peak Height	Axis	W-50%	W-X%
7	10990.74	7.10	0.60	0.728
89	5222.83	89.05	0.59	0.689
205	2456.22	205.05	0.61	0.740

X = 10 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 22.74 **Y Axis** Linear

Tune Parameters

Plasma Paramters

RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	9.2 V	Deflect	16.0 V
Extract 2	-200.0 V	Cell Entrance	-32 V	Plate Bias	-50 V
Omega Bias	-85 V	Cell Exit	-48 V		

Cell Parameters

OctP Bias	-8.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	200 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

[he]

Mass	Range	Count	RSD%	Background
59	2000	1752	4.007	
89	5000	2182	3.418	
51	500	382	7.089	

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.306

Tune Parameters

Tune Report

Plasma Paramters

RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
Mass	**Range**	**Count**	**RSD%**	**Background**	
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	9.2 V	Deflect	0.0 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-85 V	Cell Exit	-60 V		

Cell Parameters

OctP Bias	-18.0 V	He Flow	3.5 mL/min	Energy Discrimination	3.0 V
OctP RF	200 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

[HeHe]

Mass	Range	Count	RSD%	Background
59	1000	573	5.217	
89	1000	478	5.792	
51	50	28	27.475	

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.306

Tune Parameters

Plasma Paramters

RF Power	1550 W	Carrier Gas	0.50 L/min	S/C Temp	2 °C
RF Matching	1.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.60 L/min
Smpl Depth	10.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	9.2 V	Deflect	-73.2 V
Extract 2	-200.0 V	Cell Entrance	-140 V	Plate Bias	-150 V
Omega Bias	-85 V	Cell Exit	-150 V		

Cell Parameters

OctP Bias	-100.0 V	He Flow	10.0 mL/min	Energy Discrimination	7.0 V
OctP RF	180 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	001CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:12:50-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	2551	3.61
Cr	52	1	No Gas	9974	0.04
Mn	55	1	No Gas	19045	0.02
Co	59	1	No Gas	330	7.40
Ni	60	1	No Gas	18053	0.01
Cu	63	1	No Gas	601	0.73
Sr	88	1	No Gas	59	210.68
Ag	107	1	No Gas	56	164.96
Al	27	1	No Gas	7669	0.03
Sn	118	1	No Gas	215	1.39
Ti	47	1	No Gas	297	7.26
Zn	66	1	No Gas	660	3.98
As	75	3	HeHe	10	373.51
As	75	1	No Gas	24182	0.01
Sb	121	1	No Gas	167	18.33
Hg	201	1	No Gas	39	65.07
Be	9	1	No Gas	22	71.57
Pb	208	1	No Gas	463	4.16
Se	82	1	No Gas	41	386.23
Mo	98	1	No Gas	923	2.04
Ba	137	1	No Gas	53	162.38
Tl	205	1	No Gas	63	85.61
U	238	1	No Gas	107	53.04
Na	23	2	he	85677	0.00
Mg	24	2	he	200	13.89
K	39	2	he	193930	0.00
Se	82	3	HeHe	48	14.65
Fe	57	3	HeHe	126	26.53
Cd	114	1	No Gas	37	214.72
Ca	44	1	No Gas	123727	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	5836894	3.06
Sc	45	2	he	1293410	1.06
Ge	72	1	No Gas	677402	2.06
In	115	1	No Gas	3685121	2.00
Tb	159	1	No Gas	4485657	1.37

Calibration Blank Report

Bi	209	1	No Gas	2034548	4.06
Sc	45	3	HeHe	136772	1.11

Calibration Blank Report

Sample Table

Sample Name	blk
Data File Name	002CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:16:22-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	1149	13.25
Cr	52	1	No Gas	10752	0.07
Mn	55	1	No Gas	31947	0.08
Co	59	1	No Gas	248	5.80
Ni	60	1	No Gas	18861	0.01
Cu	63	1	No Gas	595	1.97
Sr	88	1	No Gas	93	45.51
Ag	107	1	No Gas	37	337.22
Al	27	1	No Gas	8628	0.05
Sn	118	1	No Gas	193	6.24
Ti	47	1	No Gas	295	6.58
Zn	66	1	No Gas	783	1.76
As	75	3	HeHe	7	579.68
As	75	1	No Gas	23234	0.03
Sb	121	1	No Gas	126	31.60
Hg	201	1	No Gas	33	81.17
Be	9	1	No Gas	23	265.75
Pb	208	1	No Gas	293	14.59
Mo	98	1	No Gas	864	3.14
Ba	137	1	No Gas	50	105.83
Tl	205	1	No Gas	26	668.06
U	238	1	No Gas	37	247.43
Na	23	2	he	83881	0.00
Mg	24	2	he	152	54.16
K	39	2	he	200065	0.00
Se	82	3	HeHe	62	45.93
Fe	57	3	HeHe	174	12.88
Cd	114	1	No Gas	50	207.84
Ca	44	1	No Gas	123511	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Sc	45	1	No Gas	5896472	4.01
Sc	45	2	he	1271268	0.31
Ge	72	1	No Gas	682805	1.30
In	115	1	No Gas	3697856	1.76
Tb	159	1	No Gas	4404848	1.64
Bi	209	1	No Gas	1997135	4.62

Calibration Blank Report

Sc	45	3	HeHe	132951	0.59

Calibration Standard Report

Sample Table

Sample Name	Standard 1
Data File Name	003CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:19:52-04:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	5673	0.60
Cr	52	1	No Gas	15856	0.04
Mn	55	1	No Gas	38340	0.02
Co	59	1	No Gas	3771	0.10
Ni	60	1	No Gas	21774	0.02
Cu	63	1	No Gas	3188	0.06
Sr	88	1	No Gas	4608	0.25
Ag	107	1	No Gas	1700	0.31
Al	27	1	No Gas	94327	0.00
Sn	118	1	No Gas	1674	1.15
Tl	47	1	No Gas	1051	0.70
Zn	66	1	No Gas	2127	0.49
As	75	3	HeHe	32	48.14
As	75	1	No Gas	25894	0.02
Sb	121	1	No Gas	1559	0.78
Hg	201	1	No Gas	34	105.24
Be	9	1	No Gas	352	4.93
Pb	208	1	No Gas	3630	0.14
Se	82	1	No Gas	49	760.54
Mo	98	1	No Gas	2340	0.68
Ba	137	1	No Gas	527	4.30
Tl	205	1	No Gas	2463	0.17
U	238	1	No Gas	2708	0.13
Na	23	2	he	102533	0.00
Mg	24	2	he	2849	0.21
K	39	2	he	210864	0.00
Se	82	3	HeHe	57	31.86
Fe	57	3	HeHe	233	19.68
Cd	114	1	No Gas	833	2.16
Ca	44	1	No Gas	137356	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6025814	1.84	5896472	102.19	70	120	
Sc	45	2	he	1152938	27.74	1271268	90.69	70	120	
Ge	72	1	No Gas	676306	1.76	682805	99.05	70	120	

Calibration Standard Report

In	115	1	No Gas	3601392	3.13	3697856	97.39	70	120	
Tb	159	1	No Gas	4357156	1.15	4404848	98.92	70	120	
Bi	209	1	No Gas	2230028	3.15	1997135	111.66	70	120	
Sc	45	3	HeHe	126675	2.93	132951	95.28	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 2
Data File Name	004CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:23:22-04:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	36707	0.01
Cr	52	1	No Gas	43016	0.00
Mn	55	1	No Gas	64359	0.00
Co	59	1	No Gas	33047	0.01
Ni	60	1	No Gas	28157	0.01
Cu	63	1	No Gas	19610	0.01
Sr	88	1	No Gas	42535	0.00
Ag	107	1	No Gas	18389	0.02
Al	27	1	No Gas	65426	0.00
Sn	118	1	No Gas	8458	0.07
Ti	47	1	No Gas	2941	0.03
Zn	66	1	No Gas	7561	0.10
As	75	3	HeHe	346	3.44
As	75	1	No Gas	28695	0.01
Sb	121	1	No Gas	13917	0.03
Hg	201	1	No Gas	69	35.57
Be	9	1	No Gas	3490	0.12
Pb	208	1	No Gas	31540	0.01
Se	82	1	No Gas	200	55.45
Mo	98	1	No Gas	10991	0.02
Ba	137	1	No Gas	4901	0.05
Tl	205	1	No Gas	23645	0.02
U	238	1	No Gas	26795	0.01
Na	23	2	he	131719	0.00
Mg	24	2	he	19022	0.02
K	39	2	he	237673	0.00
Se	82	3	HeHe	74	11.51
Fe	57	3	HeHe	930	1.42
Cd	114	1	No Gas	8162	0.07
Ca	44	1	No Gas	141966	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6077153	2.03	5896472	103.06	70	120	
Sc	45	2	he	1293877	1.51	1271268	101.78	70	120	
Ge	72	1	No Gas	684931	2.11	682805	100.31	70	120	

Calibration Standard Report

In	115	1	No Gas	3628326	3.66	3697856	98.12	70	120	
Tb	159	1	No Gas	4313712	2.41	4404848	97.93	70	120	
Bi	209	1	No Gas	2247572	3.62	1997135	112.54	70	120	
Sc	45	3	HeHe	134887	1.50	132951	101.46	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 3
Data File Name	005CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:26:52-04:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	347687	0.00
Cr	52	1	No Gas	324578	0.00
Mn	55	1	No Gas	404655	0.00
Co	59	1	No Gas	336563	0.00
Ni	60	1	No Gas	94971	0.00
Cu	63	1	No Gas	179719	0.00
Sr	88	1	No Gas	419711	0.00
Ag	107	1	No Gas	186331	0.00
Al	27	1	No Gas	225467	0.00
Sn	118	1	No Gas	85168	0.01
Ti	47	1	No Gas	26475	0.01
Zn	66	1	No Gas	46308	0.01
As	75	3	HeHe	3572	0.14
As	75	1	No Gas	69418	0.00
Sb	121	1	No Gas	144398	0.00
Hg	201	1	No Gas	321	3.02
Be	9	1	No Gas	34814	0.00
Pb	208	1	No Gas	311633	0.00
Se	82	1	No Gas	2388	0.35
Mo	98	1	No Gas	105298	0.00
Ba	137	1	No Gas	49424	0.00
Tl	205	1	No Gas	238405	0.00
U	238	1	No Gas	284661	0.00
Na	23	2	he	378460	0.00
Mg	24	2	he	160598	0.00
K	39	2	he	470770	0.00
Se	82	3	HeHe	196	2.49
Fe	57	3	HeHe	8647	0.06
Cd	114	1	No Gas	83808	0.00
Ca	44	1	No Gas	219400	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5975593	2.40	5896472	101.34	70	120	
Sc	45	2	he	1295638	1.95	1271268	101.92	70	120	
Ge	72	1	No Gas	682250	0.93	682805	99.92	70	120	

Calibration Standard Report

In	115	1	No Gas	3734350	0.92	3697856	100.99	70	120	
Tb	159	1	No Gas	4329799	0.59	4404848	98.30	70	120	
Bi	209	1	No Gas	2313155	0.17	1997135	115.82	70	120	
Sc	45	3	HeHe	139923	1.19	132951	105.24	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 4
Data File Name	006CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:30:23-04:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	3327729	0.00
Cr	52	1	No Gas	3025690	0.00
Mn	55	1	No Gas	3711637	0.00
Co	59	1	No Gas	3336506	0.00
Ni	60	1	No Gas	758712	0.00
Cu	63	1	No Gas	1768262	0.00
Sr	88	1	No Gas	4216323	0.00
Ag	107	1	No Gas	1897625	0.00
Al	27	1	No Gas	1994166	0.00
Sn	118	1	No Gas	999552	0.00
Ti	47	1	No Gas	269085	0.00
Zn	66	1	No Gas	455362	0.00
As	75	3	HeHe	35929	0.00
As	75	1	No Gas	493405	0.00
Sb	121	1	No Gas	1435359	0.00
Hg	201	1	No Gas	2804	0.04
Be	9	1	No Gas	344243	0.00
Pb	208	1	No Gas	3113349	0.00
Se	82	1	No Gas	23663	0.00
Mo	98	1	No Gas	1133897	0.00
Ba	137	1	No Gas	484561	0.00
Tl	205	1	No Gas	2284952	0.00
U	238	1	No Gas	2921542	0.00
Na	23	2	he	2821420	0.00
Mg	24	2	he	1615680	0.00
K	39	2	he	2725055	0.00
Se	82	3	HeHe	1791	0.20
Fe	57	3	HeHe	81592	0.00
Cd	114	1	No Gas	835193	0.00
Ca	44	1	No Gas	979919	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6200036	1.53	5896472	105.15	70	120	
Sc	45	2	he	1303185	0.51	1271268	102.51	70	120	
Ge	72	1	No Gas	682451	1.66	682805	99.95	70	120	

Calibration Standard Report

In	115	1	No Gas	3670872	2.59	3697856	99.27	70	120	
Tb	159	1	No Gas	4348184	1.52	4404848	98.71	70	120	
Bi	209	1	No Gas	2283484	4.44	1997135	114.34	70	120	
Sc	45	3	HeHe	138327	1.35	132951	104.04	70	120	

Calibration Standard Report

Sample Table

Sample Name	Standard 5
Data File Name	007CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:33:47-04:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
V	51	1	No Gas	6563421	0.00
Cr	52	1	No Gas	5906265	0.00
Mn	55	1	No Gas	7211085	0.00
Co	59	1	No Gas	6504377	0.00
Ni	60	1	No Gas	1495844	0.00
Cu	63	1	No Gas	3519800	0.00
Sr	88	1	No Gas	8227989	0.00
Ag	107	1	No Gas	3678532	0.00
Al	27	1	No Gas	3886184	0.00
Sn	118	1	No Gas	2200502	0.00
Ti	47	1	No Gas	542859	0.00
Zn	66	1	No Gas	890715	0.00
As	75	3	HeHe	72900	0.00
As	75	1	No Gas	972406	0.00
Sb	121	1	No Gas	2915076	0.00
Hg	201	1	No Gas	5833	0.05
Be	9	1	No Gas	681346	0.00
Pb	208	1	No Gas	6208559	0.00
Se	82	1	No Gas	48679	0.00
Mo	98	1	No Gas	2354816	0.00
Ba	137	1	No Gas	968617	0.00
Tl	205	1	No Gas	4555286	0.00
U	238	1	No Gas	5741236	0.00
Na	23	2	he	5414301	0.00
Mg	24	2	he	3082653	0.00
K	39	2	he	5133884	0.00
Se	82	3	HeHe	3501	0.06
Fe	57	3	HeHe	164269	0.00
Cd	114	1	No Gas	1701177	0.00
Ca	44	1	No Gas	1821322	0.00

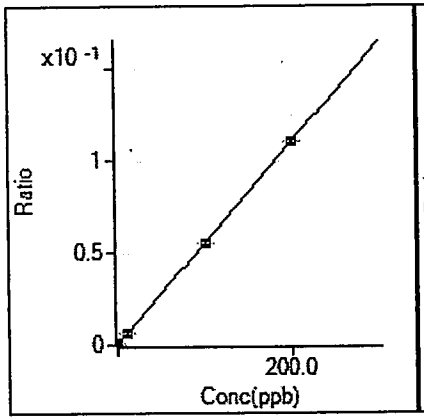
QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6151770	1.24	5896472	104.33	70	120	
Sc	45	2	he	1310111	1.57	1271268	103.06	70	120	
Ge	72	1	No Gas	687781	0.71	682805	100.73	70	120	

Calibration Standard Report

In	115	1	No Gas	3726710	1.53	3697856	100.78	70	120	
Tb	159	1	No Gas	4360250	1.19	4404848	98.99	70	120	
Bi	209	1	No Gas	2328198	0.87	1997135	116.58	70	120	
Sc	45	3	HeHe	139392	1.58	132951	104.84	70	120	

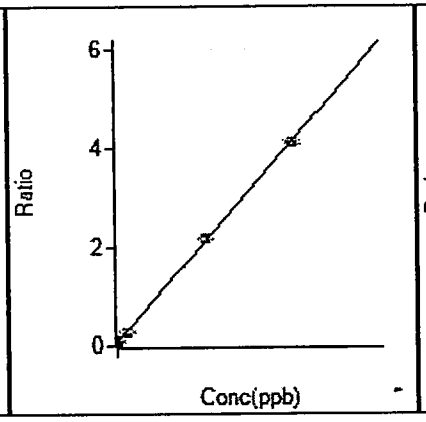
Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



9 Be [No Gas] / ISTD: 45 Sc

y = 5.541E-4 x + 4.025E-6

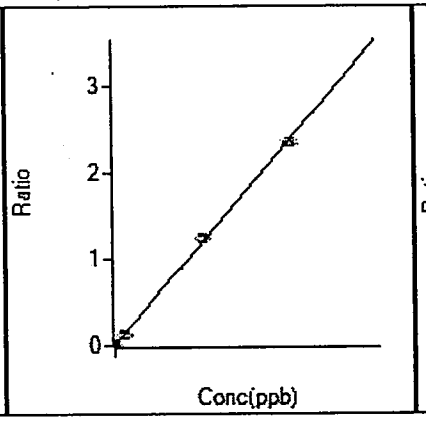
R	1.0000
DL	0.01445
BEC	0.007265



23 Na [he] / ISTD: 45 Sc

y = 2.047E-3 x + 6.598E-2

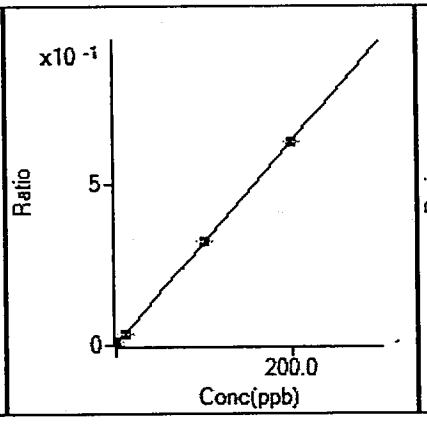
R	0.9999
DL	2.634
BEC	32.23



24 Mg [he] / ISTD: 45 Sc

y = 1.189E-3 x + 1.195E-4

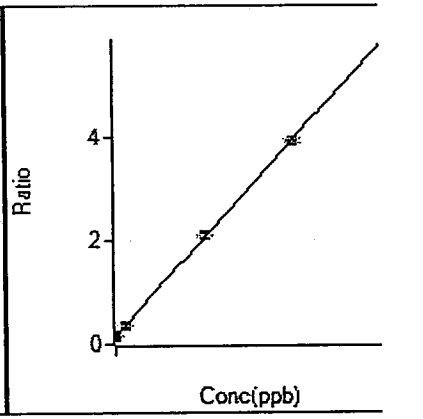
R	0.9997
DL	0.2482
BEC	0.1004



27 Al [No Gas] / ISTD: 45 Sc

y = 3.162E-3 x + 1.467E-3

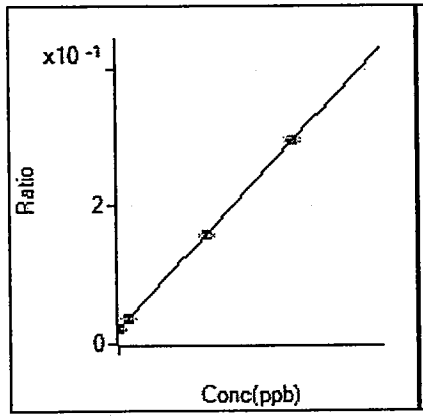
R	1.0000
DL	0.1167
BEC	0.4638



39 K [he] / ISTD: 45 Sc

y = 1.892E-3 x + 1.574E-1

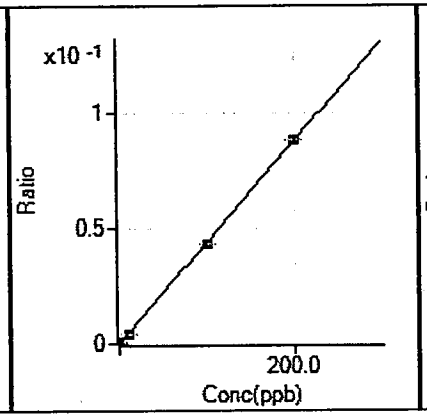
R	0.9999
DL	2.785
BEC	83.19



44 Ca [No Gas] / ISTD: 45 Sc

y = 1.375E-4 x + 2.096E-2

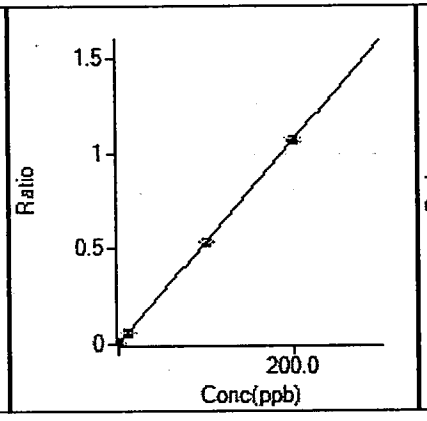
R	1.0000
DL	13.36
BEC	152.5



47 Ti'[No Gas] / ISTD: 45 Sc

y = 4.395E-4 x + 5.013E-5

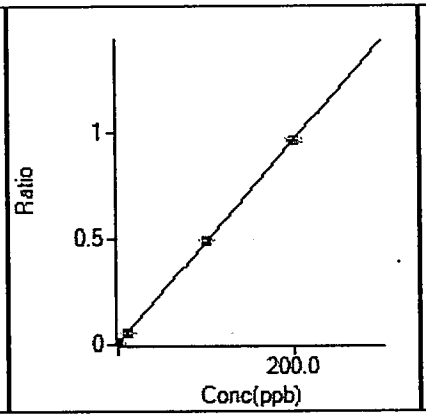
R	1.0000
DL	0.0652
BEC	0.1141



51 V [No Gas] / ISTD: 45 Sc

y = 5.340E-3 x + 2.003E-4

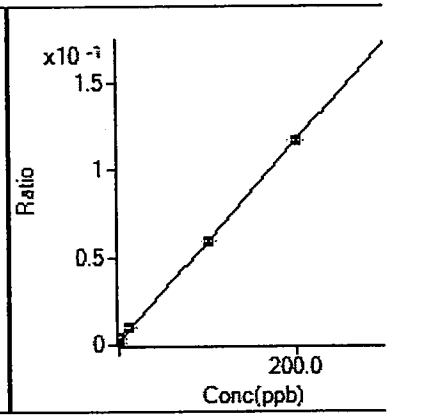
R	1.0000
DL	0.1719
BEC	0.03751



52 Cr [No Gas] / ISTD: 45 Sc

y = 4.807E-3 x + 1.824E-3

R	1.0000
DL	0.08261
BEC	0.3795

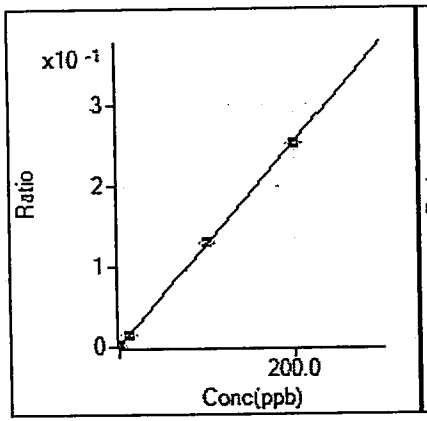


53 [V] [No Gas] / ISTD: 45 Sc

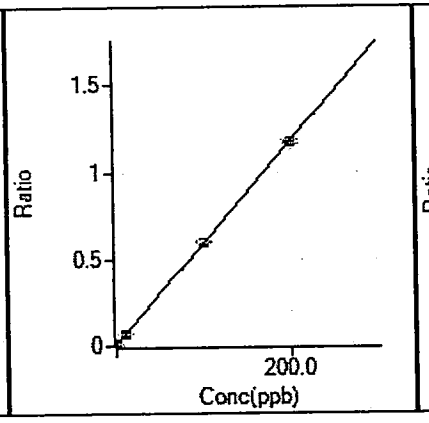
y = 5.795E-4 x + 1.368E-3

R	0.9998
DL	0.3926
BEC	2.361

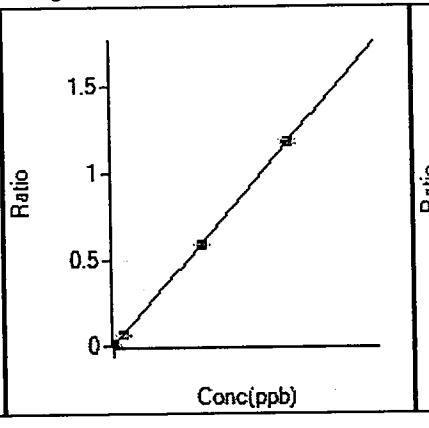
Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



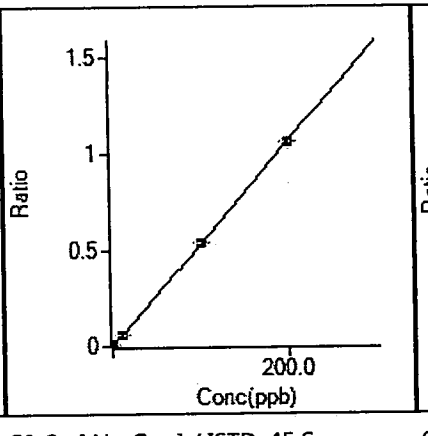
53 [V] [he] / ISTD: 45 Sc
y = 1.270E-3 x + 6.762E-4
R 0.9999
DL 0.5229
BEC 0.5325



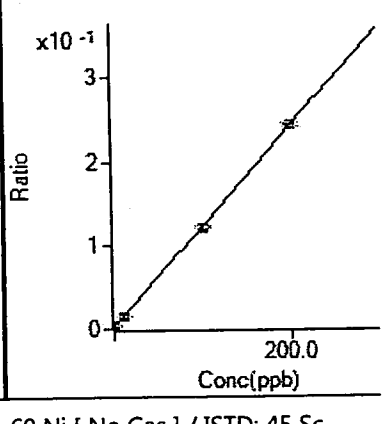
55 Mn [No Gas] / ISTD: 45 Sc
y = 5.855E-3 x + 5.402E-3
R 1.0000
DL 0.6308
BEC 0.9226



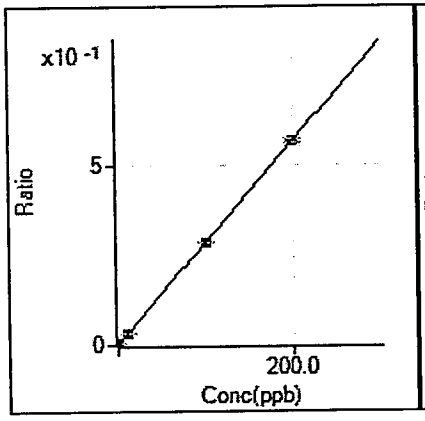
57 Fe [HeHe] / ISTD: 45 Sc
y = 5.887E-4 x + 1.311E-3
R 1.0000
DL 1.531
BEC 2.226



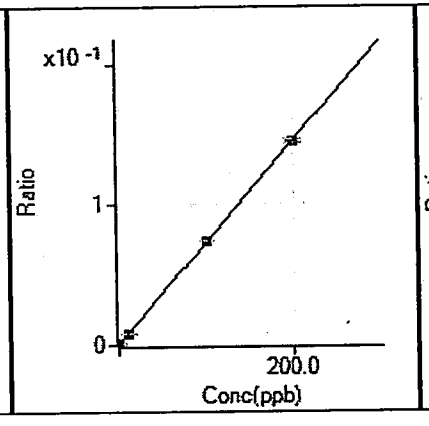
59 Co [No Gas] / ISTD: 45 Sc
y = 5.306E-3 x + 4.206E-5
R 1.0000
DL 0.003114
BEC 0.007927



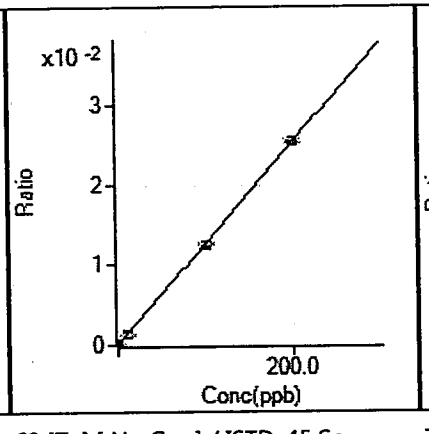
60 Ni [No Gas] / ISTD: 45 Sc
y = 1.198E-3 x + 3.204E-3
R 1.0000
DL 0.5389
BEC 2.674



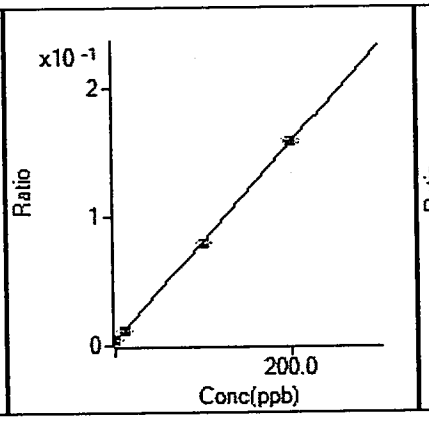
63 Cu [No Gas] / ISTD: 45 Sc
y = 2.859E-3 x + 1.007E-4
R 1.0000
DL 0.009209
BEC 0.03522



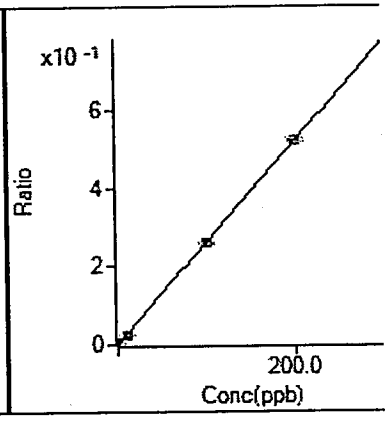
66 Zn [No Gas] / ISTD: 45 Sc
y = 7.254E-4 x + 1.333E-4
R 1.0000
DL 0.09382
BEC 0.1838



69 [Zn] [No Gas] / ISTD: 45 Sc
y = 1.267E-4 x + 3.180E-5
R 1.0000
DL 0.2514
BEC 0.251

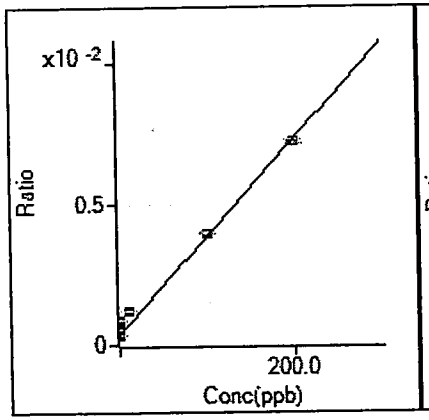


75 As [No Gas] / ISTD: 45 Sc
y = 7.678E-4 x + 3.949E-3
R 1.0000
DL 1.424
BEC 5.143



75 As [HeHe] / ISTD: 45 Sc
y = 2.611E-3 x + 5.400E-5
R 1.0000
DL 0.02561
BEC 0.02068

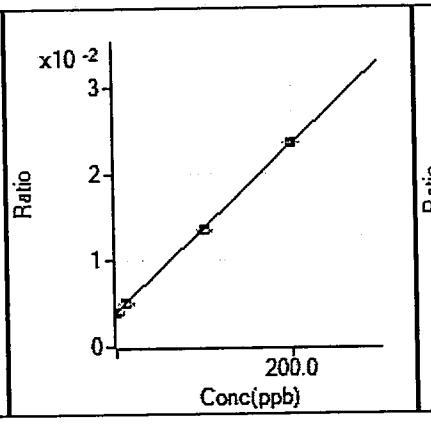
Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



77 [As] [No Gas] / ISTD: 45 Sc

y = 3.487E-5 x + 3.519E-4

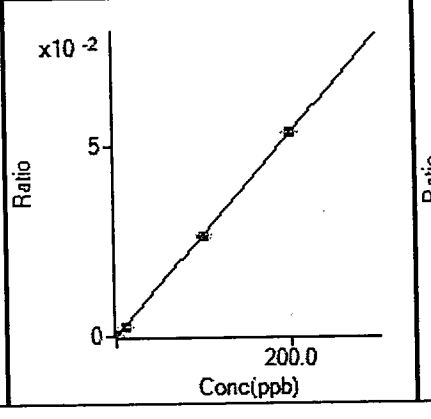
R	0.9974
DL	3.908
BEC	10.09



78 Se [No Gas] / ISTD: 45 Sc

y = 9.716E-5 x + 3.968E-3

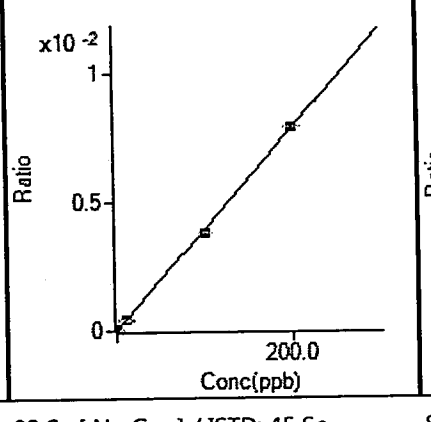
R	0.9999
DL	5.747
BEC	40.84



78 Se [HeHe] / ISTD: 45 Sc

y = 2.667E-4 x + 1.669E-5

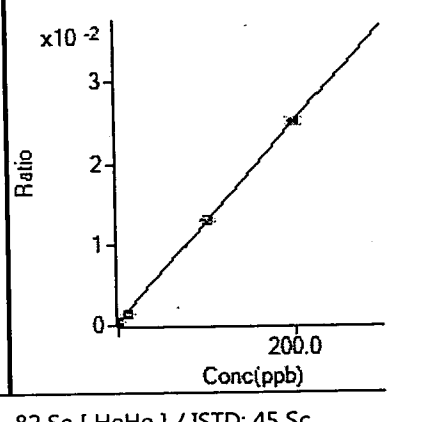
R	1.0000
DL	0.1883
BEC	0.06256



82 Se [No Gas] / ISTD: 45 Sc

y = 3.939E-5 x - 1.575E-5

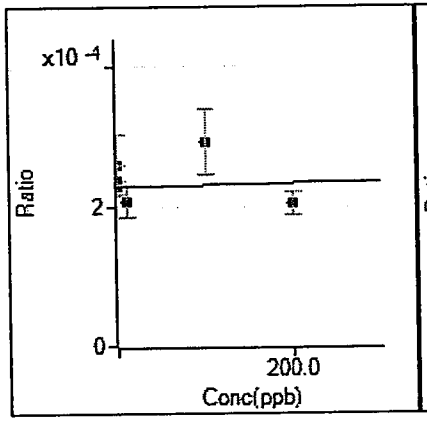
R	0.9999
DL	0.3858
BEC	-0.3998



82 Se [HeHe] / ISTD: 45 Sc

y = 1.235E-4 x + 4.684E-4

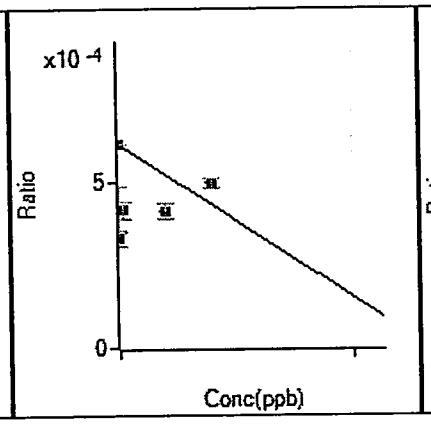
R	0.9999
DL	3.293
BEC	3.792



83 [Se] [No Gas] / ISTD: 115 In

y = 2.676E-8 x + 2.284E-4

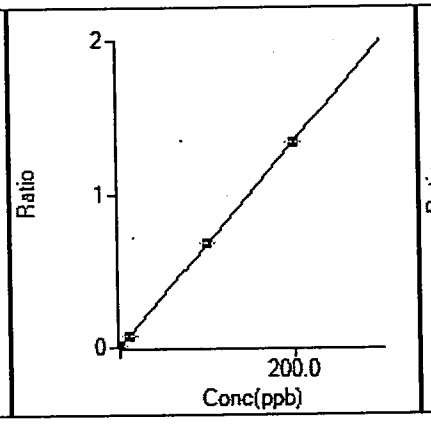
R	-0.1341
DL	2359
BEC	8534



83 [Se] [HeHe] / ISTD: 45 Sc

y = - 9.258E-7 x + 6.156E-4

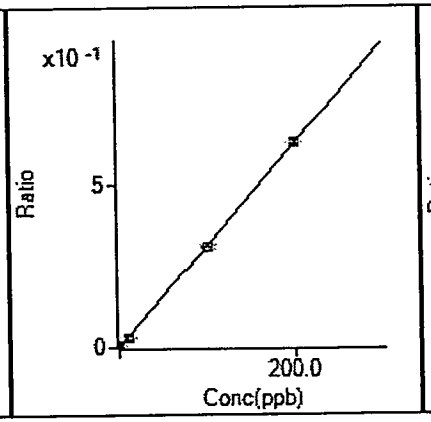
R	0.1431
DL	-12.3
BEC	-665



88 Sr [No Gas] / ISTD: 45 Sc

y = 6.711E-3 x + 1.555E-5

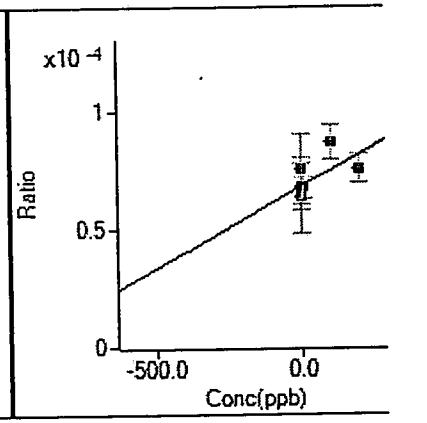
R	1.0000
DL	0.002704
BEC	0.002318



98 Mo [No Gas] / ISTD: 115 In

y = 3.143E-3 x + 2.337E-4

R	0.9999
DL	0.06173
BEC	0.07434

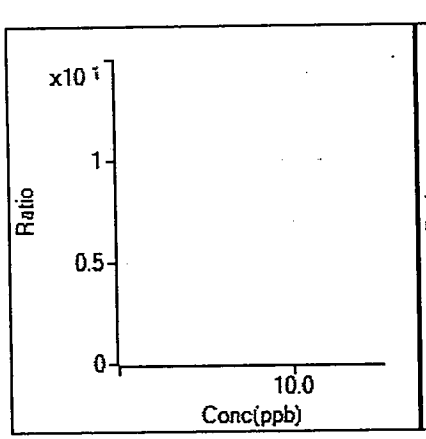


101 [Mo] [No Gas] / ISTD: 115 In

y = 6.819E-8 x + 6.787E-5

R	0.5579
DL	895.1
BEC	995.3

Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



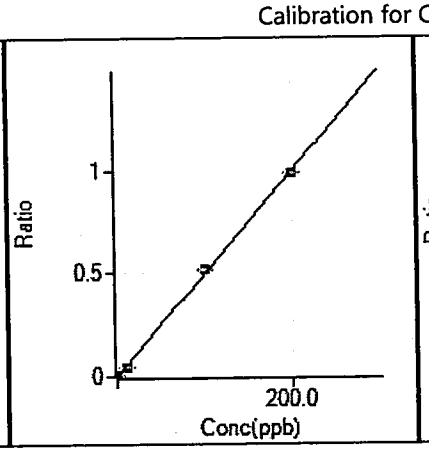
106 [Cd] [No Gas] / ISTD: 115 In

y =

R

DL

BEC



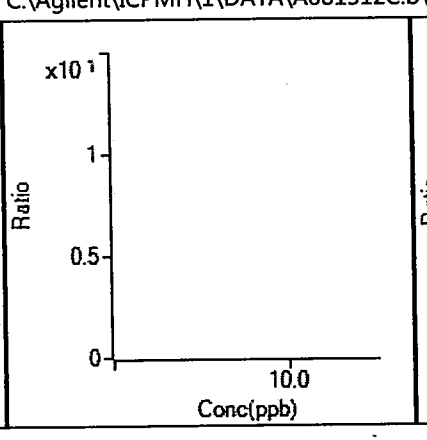
107 Ag [No Gas] / ISTD: 115 In

y = 4.983E-3 x + 1.008E-5

R 0.9997

DL 0.007648

BEC 0.002023



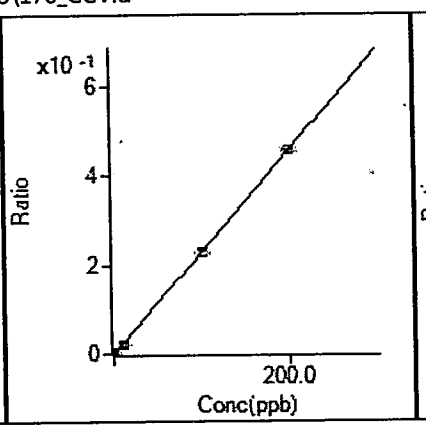
108 [Cd] [No Gas] / ISTD: 115 In

y =

R

DL

BEC



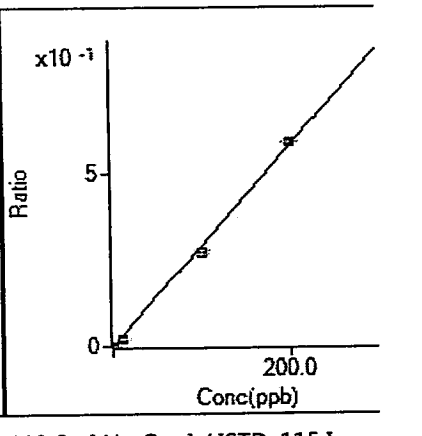
114 Cd [No Gas] / ISTD: 115 In

y = 2.281E-3 x + 1.336E-5

R 1.0000

DL 0.018

BEC 0.005859



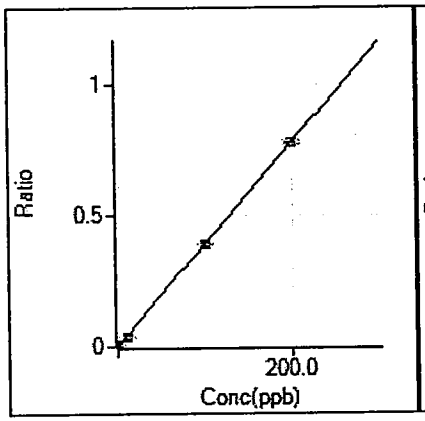
118 Sn [No Gas] / ISTD: 115 In

y = 2.905E-3 x + 5.207E-5

R 0.9993

DL 0.006195

BEC 0.01792



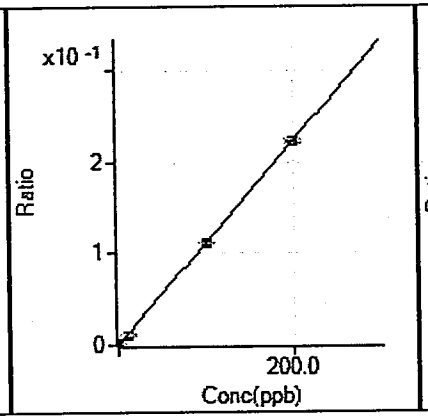
121 Sb [No Gas] / ISTD: 115 In

y = 3.911E-3 x + 3.410E-5

R 1.0000

DL 0.01061

BEC 0.008718



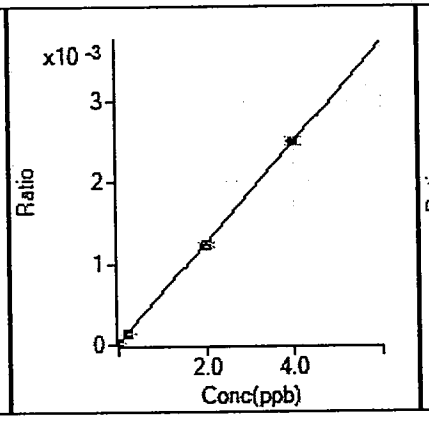
137 Ba [No Gas] / ISTD: 159 Tb

y = 1.112E-3 x + 1.129E-5

R 1.0000

DL 0.01568

BEC 0.01016



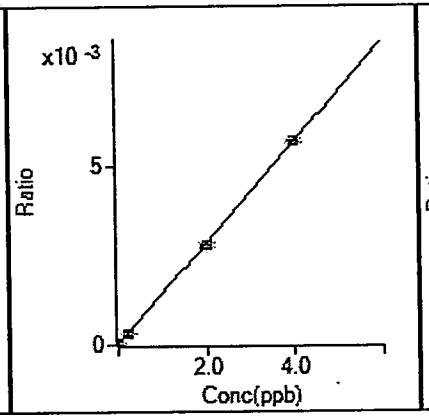
201 Hg [No Gas] / ISTD: 209 Bi

y = 6.191E-4 x + 1.681E-5

R 0.9999

DL 0.02511

BEC 0.02716



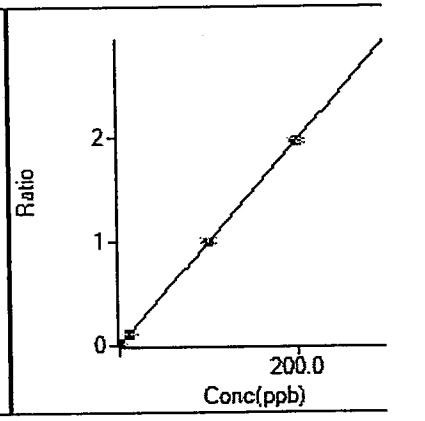
202 Hg [No Gas] / ISTD: 209 Bi

y = 1.413E-3 x + 1.890E-5

R 1.0000

DL 0.01015

BEC 0.01337



205 Tl [No Gas] / ISTD: 209 Bi

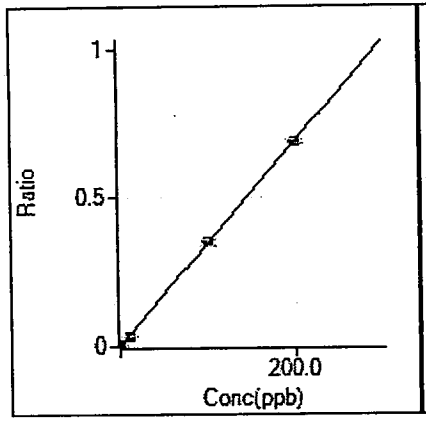
y = 9.832E-3 x + 1.279E-5

R 0.9999

DL 0.00676

BEC 0.001301

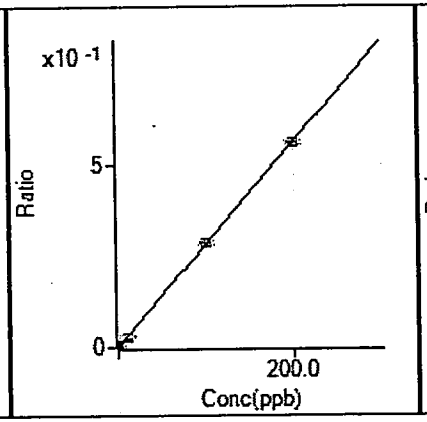
Calibration for C:\Agilent\ICPMH\1\DATA\A081312C.b\170_CCV.d



206 [Pb] [No Gas] / ISTD: 209 Bi

y = 3.452E-3 x + 2.751E-5

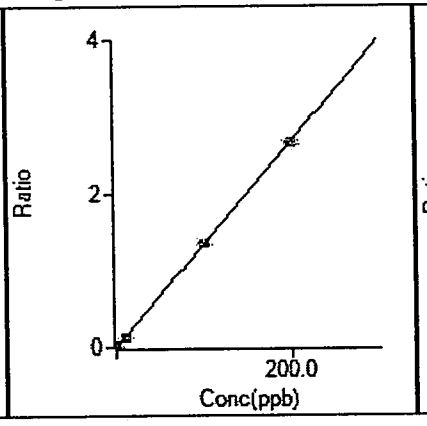
R	1.0000
DL	0.01696
BEC	0.00797



207 [Pb] [No Gas] / ISTD: 209 Bi

y = 2.838E-3 x + 2.212E-5

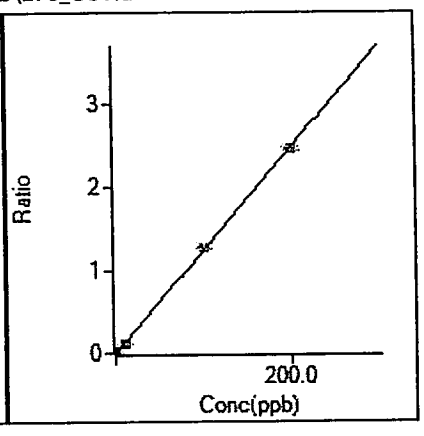
R	1.0000
DL	0.004877
BEC	0.007795



208 Pb [No Gas] / ISTD: 209 Bi

y = 1.340E-2 x + 1.450E-4

R	0.9999
DL	0.01306
BEC	0.01083



238 U [No Gas] / ISTD: 209 Bi

y = 1.243E-2 x + 1.804E-5

R	0.9998
DL	0.00397
BEC	0.001452

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	008_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:37:09-04:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	98.742	1.626	3245310	1.36	100	98.7	90	110	
Cr	52	1	No Gas	97.531	1.079	2895291	0.94	100	97.5	90	110	
Mn	55	1	No Gas	99.658	1.042	3623044	0.49	100	99.7	90	110	
Co	59	1	No Gas	97.852	0.975	3194700	1.50	100	97.9	90	110	
Ni	60	1	No Gas	96.889	1.045	734016	0.49	100	96.9	90	110	
Cu	63	1	No Gas	99.610	1.149	1752874	2.11	100	99.6	90	110	
Sr	88	1	No Gas	99.428	1.067	4104861	0.44	100	99.4	90	110	
Ag	107	1	No Gas	98.743	0.588	1805761	1.29	100	98.7	90	110	
Al	27	1	No Gas	99.447	2.057	1943613	1.74	100	99.4	90	110	
Sn	118	1	No Gas	103.632	0.816	1105279	1.98	100	103.6	90	110	
Tl	47	1	No Gas	89.870	1.572	243295	1.48	100	89.9	90	110	ICV Main CR1 Failed
Zn	66	1	No Gas	97.104	1.054	434159	0.47	100	97.1	90	110	
As	75	3	HeHe	98.358	1.316	35022	1.16	100	98.4	90	110	
As	75	1	No Gas	96.807	1.290	481574	0.51	100	96.8	90	110	
Sb	121	1	No Gas	99.039	0.731	1421867	2.12	100	99.0	90	110	
Hg	201	1	No Gas	1.960	2.785	2832	3.79	2	98.0	90	110	
Be	9	1	No Gas	96.075	0.565	327551	1.32	100	96.1	90	110	
Pb	208	1	No Gas	96.947	0.294	2990417	1.22	100	96.9	90	110	
Se	82	1	No Gas	97.671	1.676	23568	0.48	100	97.7	90	110	
Mo	98	1	No Gas	98.092	0.652	1132499	1.15	100	98.1	90	110	
Ba	137	1	No Gas	96.951	2.061	467348	1.65	100	97.0	90	110	
Tl	205	1	No Gas	96.006	2.060	2172954	2.24	100	96.0	90	110	
U	238	1	No Gas	107.911	0.514	3086981	0.64	100	107.9	90	110	
Na	23	2	he	1016.583	0.510	2782809	1.42	1000	101.7	90	110	
Mg	24	2	he	1031.757	0.765	1590388	0.37	1000	103.2	90	110	
K	39	2	he	993.630	0.651	2640040	0.42	1000	99.4	90	110	
Se	82	3	HeHe	96.572	1.756	1690	2.10	100	96.6	90	110	
Fe	57	3	HeHe	1054.143	1.763	84778	1.53	1000	105.4	90	110	
Cd	114	1	No Gas	96.656	0.453	809269	1.89	100	96.7	90	110	
Ca	44	1	No Gas	975.081	1.456	953715	0.30	1000	97.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6152674	1.51	5896472	104.35	70	120	
Sc	45	2	he	1296036	1.02	1271268	101.95	70	120	
Ge	72	1	No Gas	677632	0.92	682805	99.24	70	120	
In	115	1	No Gas	3670280	1.45	3697856	99.25	70	120	
Tb	159	1	No Gas	4336489	0.63	4404848	98.45	70	120	
Bi	209	1	No Gas	2302057	1.10	1997135	115.27	70	120	
Sc	45	3	HeHe	136339	1.09	132951	102.55	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	009_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:40:33-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.060	46.8	2984	28.2	9	
Cr	52	1	No Gas	-0.024	-100.7	9837	8.5	4	
Mn	55	1	No Gas	0.230	61.8	38897	13.7	25	
Co	59	1	No Gas	0.003	36.1	326	9.8	1	
Ni	60	1	No Gas	-0.970	-3.7	11748	1.2	25	
Cu	63	1	No Gas	0.016	17.0	843	3.8	25	
Sr	88	1	No Gas	0.002	47.7	163	21.9	25	
Ag	107	1	No Gas	0.003	30.2	100	19.2	9	
Al	27	1	No Gas	0.091	32.8	10100	4.3	1000000	
Sn	118	1	No Gas	0.273	9.0	3149	10.0	25	
Ti	47	1	No Gas	0.186	35.1	760	22.6	10000	
Zn	66	1	No Gas	-0.002	-1981.6	760	18.1	25	
As	75	3	HeHe	0.534	5.2	192	5.4	9	
As	75	1	No Gas	0.665	41.1	25663	4.1	9	
Sb	121	1	No Gas	0.317	27.9	4760	28.2	4	
Hg	201	1	No Gas	0.051	15.8	103	5.6	0.04	ICB Main CR1 Failed
Be	9	1	No Gas	0.009	48.8	51	28.0	1	
Pb	208	1	No Gas	0.041	38.8	1467	23.8	4	
Se	82	1	No Gas	1.216	31.7	185	46.4	25	
Mo	98	1	No Gas	0.870	17.2	11068	16.9	10000	
Ba	137	1	No Gas	0.012	45.1	107	23.6	25	
Tl	205	1	No Gas	0.058	16.2	1222	11.2	1	
U	238	1	No Gas	0.091	23.8	2452	28.0	25	
Na	23	2	he	0.911	105.6	86357	2.7	2500000	
Mg	24	2	he	0.022	179.4	185	33.0	2500000	
K	39	2	he	-1.460	-140.0	196775	1.6	5000000	
Se	82	3	HeHe	0.954	58.7	78	10.8	25	
Fe	57	3	HeHe	2.795	28.2	393	16.1	2500000	
Cd	114	1	No Gas	0.017	69.8	190	51.8	1	
Ca	44	1	No Gas	1.853	39.0	122116	1.5	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5755553	1.63	5896472	97.61	70	120	
Sc	45	2	he	1272979	1.57	1271268	100.13	70	120	
Ge	72	1	No Gas	678801	0.96	682805	99.41	70	120	
In	115	1	No Gas	3724033	1.61	3697856	100.71	70	120	

Initial Calibration Blank (ICB) Report

Tb	159	1	No Gas	4391649	2.36	4404848	99.70	70	120	
Bi	209	1	No Gas	2121785	6.49	1997135	106.24	70	120	
Sc	45	3	HeHe	132766	1.09	132951	99.86	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	010_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:44:04-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.060	23.2	2987	12.1	9	
Cr	52	1	No Gas	-0.020	-34.6	9970	2.9	4	
Mn	55	1	No Gas	-0.049	-139.3	29452	4.3	25	
Co	59	1	No Gas	0.001	231.9	282	32.1	1	
Ni	60	1	No Gas	-1.141	-6.8	10577	1.9	25	
Cu	63	1	No Gas	0.009	42.2	726	7.1	25	
Sr	88	1	No Gas	0.001	205.9	133	66.7	25	
Ag	107	1	No Gas	0.004	104.3	111	70.0	9	
Al	27	1	No Gas	0.097	68.0	10207	8.6	1000000	
Sn	118	1	No Gas	0.149	15.1	1756	13.3	25	
Ti	47	1	No Gas	0.097	27.4	537	16.1	10000	
Zn	66	1	No Gas	0.100	43.5	1183	13.1	25	
As	75	3	HeHe	0.233	13.5	86	12.7	9	
As	75	1	No Gas	0.497	37.8	24951	1.1	9	
Sb	121	1	No Gas	0.160	21.8	2389	20.5	4	
Hg	201	1	No Gas	0.021	58.8	60	23.1	0.04	
Be	9	1	No Gas	0.005	33.6	39	15.8	1	
Pb	208	1	No Gas	0.029	16.5	1096	10.2	4	
Se	82	1	No Gas	0.964	56.4	127	94.6	25	
Mo	98	1	No Gas	0.359	24.3	4943	19.9	10000	
Ba	137	1	No Gas	0.015	26.5	123	16.9	25	
Tl	205	1	No Gas	0.018	15.6	393	17.3	1	
U	238	1	No Gas	0.029	18.5	782	21.9	25	
Na	23	2	he	1.101	76.9	85432	2.0	2500000	
Mg	24	2	he	0.054	43.2	230	15.6	2500000	
K	39	2	he	-1.277	-156.7	193999	1.6	5000000	
Se	82	3	HeHe	-0.195	-280.4	58	13.9	25	
Fe	57	3	HeHe	1.010	11.2	248	5.2	2500000	
Cd	114	1	No Gas	0.001	229.3	60	44.1	1	
Ca	44	1	No Gas	-0.233	-2580.8	120570	0.6	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5765949	3.66	5896472	97.79	70	120	
Sc	45	2	he	1252133	0.83	1271268	98.49	70	120	
Ge	72	1	No Gas	672367	1.16	682805	98.47	70	120	

Initial Calibration Blank (ICB) Report

In	115	1	No Gas	3630295	0.40	3697856	98.17	70	120	
Tb	159	1	No Gas	4440065	1.55	4404848	100.80	70	120	
Bi	209	1	No Gas	2035819	5.74	1997135	101.94	70	120	
Sc	45	3	HeHe	130204	1.70	132951	97.93	70	120	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	LLICV
Data File Name	011LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:47:33-04:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.091	1.496	69306	1.16	2	104.6	70	130	
Cr	52	1	No Gas	2.203	0.635	75672	0.95	2	110.2	70	130	
Mn	55	1	No Gas	5.045	1.512	212993	1.07	5	100.9	70	130	
Co	59	1	No Gas	5.109	0.804	165513	1.18	5	102.2	70	130	
Ni	60	1	No Gas	3.934	3.998	48267	2.04	5	78.7	70	130	
Cu	63	1	No Gas	5.135	0.980	90105	1.31	5	102.7	70	130	
Sr	88	1	No Gas	4.703	0.815	192472	0.55	5	94.1	70	130	
Ag	107	1	No Gas	2.050	2.058	36540	1.72	2	102.5	70	130	
Al	27	1	No Gas	81.870	0.770	1587082	0.38	80	102.3	70	130	
Sn	118	1	No Gas	3.469	11.534	36237	12.68	2	173.4	70	130	LLICV Main CR1 Failed
Ti	47	1	No Gas	4.796	2.834	13156	3.17	5	95.9	70	130	
Zn	66	1	No Gas	5.054	1.676	23163	1.63	5	101.1	70	130	
As	75	3	HeHe	3.285	4.256	1152	4.98	3	109.5	70	130	
As	75	1	No Gas	3.625	8.318	41043	3.82	3	120.8	70	130	
Sb	121	1	No Gas	2.193	3.231	30770	3.86	2	109.6	70	130	
Hg	201	1	No Gas	0.220	6.167	341	7.00	0.2	110.0	70	130	
Be	9	1	No Gas	0.985	3.574	3352	3.17	1	98.5	70	130	
Pb	208	1	No Gas	2.061	3.918	61758	2.27	2	103.1	70	130	
Se	82	1	No Gas	5.592	26.926	1247	29.10	5	111.8	70	130	
Mo	98	1	No Gas	2.700	5.148	31185	6.35	2	135.0	70	130	LLICV Main CR1 Failed
Ba	137	1	No Gas	4.969	5.073	23564	5.89	5	99.4	70	130	
Tl	205	1	No Gas	1.024	3.850	22424	2.36	1	102.4	70	130	
U	238	1	No Gas	5.078	2.417	140424	0.90	5	101.6	70	130	
Na	23	2	he	106.819	2.456	376395	2.91	100	106.8	70	130	
Mg	24	2	he	102.005	0.843	160538	0.74	100	102.0	70	130	
K	39	2	he	111.098	2.411	485879	0.39	100	111.1	70	130	
Se	82	3	HeHe	6.391	3.045	168	1.15	5	127.8	70	130	
Fe	57	3	HeHe	60.742	8.525	4945	8.57	50	121.5	70	130	
Cd	114	1	No Gas	1.122	5.295	9203	6.69	1	112.2	70	130	
Ca	44	1	No Gas	105.838	0.870	216494	0.06	100	105.8	70	130	

NA

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QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6096014	0.41	5896472	103.38	70	120	
Sc	45	2	he	1322090	1.04	1271268	104.00	70	120	
Ge	72	1	No Gas	679695	1.35	682805	99.54	70	120	
In	115	1	No Gas	3573913	1.49	3697856	96.65	70	120	
Tb	159	1	No Gas	4256462	0.84	4404848	96.63	70	120	
Bi	209	1	No Gas	2225339	1.63	1997135	111.43	70	120	
Sc	45	3	HeHe	133391	0.99	132951	100.33	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	012ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T12:51:03-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.408	14.9	14217	13.4	9	
Cr	52	1	No Gas	1.305	5.1	48404	3.5	4	
Mn	55	1	No Gas	1.387	6.3	80819	2.6	25	
Co	59	1	No Gas	1.341	6.0	42760	4.7	1	ICSA Main CR1 Failed
Ni	60	1	No Gas	-0.521	-8.8	15424	3.4	5	
Cu	63	1	No Gas	1.138	6.5	20033	4.9	5	
Ag	107	1	No Gas	0.229	8.9	3919	8.4	9	
Al	27	1	No Gas	86238.701	2.3	1629911165	0.9	110000	
Sn	118	1	No Gas	0.745	20.8	7539	20.2	25	
Tl	47	1	No Gas	1706.488	1.7	4483115	0.6	2200	
Zn	66	1	No Gas	3.487	6.4	15910	4.7	5	
As	75	3	HeHe	0.607	16.0	209	14.4	9	
As	75	1	No Gas	1.066	33.9	28487	4.7	9	
Sb	121	1	No Gas	0.449	5.0	6094	5.2	4	
Hg	201	1	No Gas	0.031	39.3	76	20.9	0.04	
Be	9	1	No Gas	0.008	40.2	51	21.5	1	
Pb	208	1	No Gas	0.503	14.0	14655	14.6	4	
Se	82	1	No Gas	0.519	17.6	28	77.8	25	
Mo	98	1	No Gas	1978.830	1.3	21173724	0.9	2200	
Ba	137	1	No Gas	0.155	3.0	763	4.0	25	
Tl	205	1	No Gas	0.027	10.5	589	10.5	1	
U	238	1	No Gas	0.080	20.7	2141	21.1	25	
Na	23	2	he	88481.402	1.0	228143533	0.7	110000	
Mg	24	2	he	88791.717	1.2	132950658	0.3	110000	
K	39	2	he	90634.329	0.7	216072962	0.1	110000	
Se	82	3	HeHe	0.170	252.5	63	11.8	25	
Fe	57	3	HeHe	95975.268	1.0	7219717	0.1	110000	
Cd	114	1	No Gas	0.807	3.6	6315	4.1	1	
Ca	44	1	No Gas	83755.733	1.9	68956089	0.5	110000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	5978213	1.44	5896472	101.39	70	120	
Sc	45	2	he	1259096	0.87	1271268	99.04	70	120	
Ge	72	1	No Gas	652515	0.32	682805	95.56	70	120	
In	115	1	No Gas	3404061	0.52	3697856	92.05	70	120	
Tb	159	1	No Gas	4155147	1.57	4404848	94.33	70	120	
Bi	209	1	No Gas	2125630	0.86	1997135	106.43	70	120	
Sc	45	3	HeHe	127793	1.10	132951	96.12	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	013ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T13:00:47-04:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	39.560	1.314	1329992	0.73	40	98.9	80	120	
Cr	52	1	No Gas	19.750	2.876	608506	2.29	20	98.8	80	120	
Mn	55	1	No Gas	20.318	3.116	782143	2.19	20	101.6	80	120	
Co	59	1	No Gas	37.232	2.656	1242688	1.92	40	93.1	80	120	
Ni	60	1	No Gas	34.405	1.343	279478	1.08	40	86.0	80	120	
Cu	63	1	No Gas	19.315	2.159	347936	1.71	20	96.6	80	120	
Ag	107	1	No Gas	19.360	1.453	338694	1.83	20	96.8	80	120	
Al	27	1	No Gas	87401.980	1.778	1738225116	0.91	100000	87.4	90	110	ICSB Main CR1 Failed
Tl	47	1	No Gas	1734.566	1.843	4794854	1.45	2000	86.7	90	110	ICSB Main CR1 Failed
Zn	66	1	No Gas	23.932	2.902	110015	2.13	20	119.7	80	120	
As	75	3	HeHe	20.105	1.202	7128	1.50	20	100.5	80	120	
As	75	1	No Gas	20.392	2.981	123308	1.75	20	102.0	80	120	
Sb	121	1	No Gas	0.544	7.259	7595	7.45	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Hg	201	1	No Gas	0.019	59.638	61	24.91	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Be	9	1	No Gas	0.003	57.299	37	18.81	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Pb	208	1	No Gas	0.437	6.517	12858	6.46	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Se	82	1	No Gas	19.163	4.940	4647	4.00	20	95.8	80	120	
Mo	98	1	No Gas	2022.259	0.332	22316878	0.19	2000	101.1	90	110	
Ba	137	1	No Gas	0.221	7.541	1103	5.54	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Tl	205	1	No Gas	0.022	7.548	482	7.42	0	#DIV/0!	0	0	ICSB Main CR1 Failed
U	238	1	No Gas	0.066	15.781	1800	15.75	0	#DIV/0!	0	0	ICSB Main CR1 Failed
Na	23	2	he	87984.945	1.603	242410011	2.05	100000	88.0	90	110	ICSB Main CR1 Failed
Mg	24	2	he	89548.792	1.071	143263065	0.20	100000	89.5	90	110	ICSB Main CR1 Failed
K	39	2	he	90005.881	0.921	229262169	0.27	100000	90.0	90	110	
Se	82	3	HeHe	19.533	10.748	391	8.56	20	97.7	80	120	
Fe	57	3	HeHe	95616.436	1.635	7634400	0.88	100000	95.6	90	110	
Cd	114	1	No Gas	10.043	3.166	80478	3.55	10	100.4	80	120	
Ca	44	1	No Gas	84131.326	1.047	72885131	0.52	100000	84.1	90	110	ICSB Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6289971	1.06	5896472	106.67	70	120	
Sc	45	2	he	1345290	0.96	1271268	105.82	70	120	
Ge	72	1	No Gas	697499	1.87	682805	102.15	70	120	
In	115	1	No Gas	3510678	0.39	3697856	94.94	70	120	
Tb	159	1	No Gas	4306271	1.65	4404848	97.76	70	120	
Bi	209	1	No Gas	2142239	0.30	1997135	107.27	70	120	
Sc	45	3	HeHe	135647	1.32	132951	102.03	70	120	

Sample Report

Sample Table

Sample Name	1020191
Data File Name	034SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:38:58-04:00
Sample Type	Sample
Dilution	1
Comment	37996 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3205

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	0.323	0.323	11.79	12025	0.00	1000	
Cr	52	1	No Gas	0.273	0.273	4.69	19601	0.00	1000	
Mn	55	1	No Gas	0.210	0.210	5.65	41462	0.00	1000	
Co	59	1	No Gas	0.003	0.003	27.17	363	0.00	1000	
Ni	60	1	No Gas	-2.560	-2.560	-0.54	857	-0.30	1000	
Cu	63	1	No Gas	0.131	0.131	3.24	2964	0.00	1000	
Sr	88	1	No Gas	0.045	0.045	17.49	1971	0.00	1000	
Ag	107	1	No Gas	0.007	0.007	47.95	156	0.00	1000	
Al	27	1	No Gas	3.898	3.898	1.64	86265	0.00	100000	
Sn	118	1	No Gas	0.610	0.610	29.44	6568	0.01	100	
Ti	47	1	No Gas	0.378	0.378	25.81	1352	0.03	2000	
Zn	66	1	No Gas	0.381	0.381	24.82	2560	0.01	1000	
As	75	3	HeHe	0.402	0.402	11.57	158	0.25	1000	
As	75	1	No Gas	1.014	1.014	35.87	29563	0.00	1000	
Sb	121	1	No Gas	0.168	0.168	21.04	2485	0.01	100	
Hg	201	1	No Gas	0.031	0.031	62.63	77	0.04	4	
Be	9	1	No Gas	0.003	0.003	230.24	35	0.01	1000	
Pb	208	1	No Gas	0.020	0.020	9.53	870	0.00	1000	
Se	82	1	No Gas	1.086	1.086	45.19	169	0.64	1000	
Mo	98	1	No Gas	0.672	0.672	31.44	8453	0.01	2000	
Ba	137	1	No Gas	0.129	0.129	10.30	627	0.02	1000	
Tl	205	1	No Gas	0.016	0.016	25.30	370	0.00	1000	
U	238	1	No Gas	0.005	0.005	44.09	167	0.00	1000	
Na	23	2	he	12.652	12.652	10.29	127381	0.01	100000	
Mg	24	2	he	1.099	1.099	8.63	1978	0.06	100000	
K	39	2	he	5.460	5.460	8.71	232495	0.00	100000	
Se	82	3	HeHe	-1.105	-1.105	-49.58	47	-2.33	1000	
Fe	57	3	HeHe	11.964	11.964	11.61	1193	1.00	100000	
Cd	114	1	No Gas	0.036	0.036	31.25	340	0.01	1000	
Ca	44	1	No Gas	8.414	8.414	15.01	138334	0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6254038	0.30	5896472	106.06	70	120	
Sc	45	2	he	1386365	0.10	1271268	109.05	70	120	

Ge	72	1	No Gas	702221	1.77	682805	102.84	70	120	
In	115	1	No Gas	3590714	1.88	3697856	97.10	70	120	
Tb	159	1	No Gas	4053278	1.49	4404848	92.02	70	120	
Bi	209	1	No Gas	2127283	0.91	1997135	106.52	70	120	
Sc	45	3	HeHe	142820	0.54	132951	107.42	70	120	

Sample Report

Sample Table

Sample Name	1020192
Data File Name	035SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:42:28-04:00
Sample Type	Sample
Dilution	1
Comment	37996 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3206

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	40.289	40.289	0.77	1387954	0.00	1000	
Cr	52	1	No Gas	40.269	40.269	0.38	1259221	0.00	1000	
Mn	55	1	No Gas	41.587	41.587	0.39	1604236	0.00	1000	
Co	59	1	No Gas	40.167	40.167	1.56	1373780	0.00	1000	
Ni	60	1	No Gas	36.828	36.828	0.79	305082	0.01	1000	
Cu	63	1	No Gas	39.776	39.776	0.56	733580	0.01	1000	
Sr	88	1	No Gas	37.912	37.912	1.44	1639917	0.00	1000	
Ag	107	1	No Gas	16.060	16.060	0.85	290761	0.01	1000	
Al	27	1	No Gas	411.931	411.931	1.72	8405266	0.00	100000	
Sn	118	1	No Gas	39.061	39.061	0.22	412507	0.01	100	
Tl	47	1	No Gas	37.047	37.047	1.11	105255	0.04	2000	
Zn	66	1	No Gas	399.985	399.985	1.81	1870765	0.02	1000	
As	75	3	HeHe	37.855	37.855	1.44	14342	0.26	1000	
As	75	1	No Gas	38.512	38.512	1.20	216024	0.02	1000	
Sb	121	1	No Gas	40.291	40.291	1.35	572580	0.01	100	
Hg	201	1	No Gas	0.436	0.436	3.18	606	0.07	4	
Be	9	1	No Gas	37.446	37.446	1.07	133761	0.03	1000	
Pb	208	1	No Gas	40.363	40.363	1.34	1143827	0.00	1000	
Se	82	1	No Gas	37.676	37.676	0.66	9462	0.40	1000	
Mo	98	1	No Gas	40.612	40.612	1.41	464611	0.01	2000	
Ba	137	1	No Gas	418.805	418.805	1.94	1973844	0.02	1000	
Tl	205	1	No Gas	40.186	40.186	1.63	835542	0.00	1000	
U	238	1	No Gas	0.004	0.004	103.38	137	0.00	1000	
Na	23	2	he	446.515	446.515	0.44	1400013	0.03	100000	
Mg	24	2	he	415.040	415.040	0.26	705265	0.06	100000	
K	39	2	he	432.949	432.949	0.72	1394759	0.03	100000	
Se	82	3	HeHe	36.420	36.420	8.47	720	5.06	1000	
Fe	57	3	HeHe	426.307	426.307	2.54	36584	1.17	100000	
Cd	114	1	No Gas	39.431	39.431	1.78	326774	0.01	1000	
Ca	44	1	No Gas	413.179	413.179	1.54	501251	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6445081	0.91	5896472	109.30	70	120	
Sc	45	2	he	1428500	1.52	1271268	112.37	70	120	

Ge	72	1	No Gas	710043	1.57	682805	103.99	70	120	
In	115	1	No Gas	3633264	1.71	3697856	98.25	70	120	
Tb	159	1	No Gas	4240126	1.04	4404848	96.26	70	120	
Bi	209	1	No Gas	2114657	0.85	1997135	105.88	70	120	
Sc	45	3	HeHe	145003	0.88	132951	109.07	70	120	

Sample Report

Sample Table

Sample Name	1020195
Data File Name	036SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:45:54-04:00
Sample Type	Sample
Dilution	1
Comment	37996 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3207

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	0.265	0.265	15.15	10668	0.00	1000	
Cr	52	1	No Gas	0.266	0.266	7.39	20535	0.00	1000	
Mn	55	1	No Gas	0.268	0.268	14.87	46103	0.00	1000	
Co	59	1	No Gas	0.001	0.001	232.35	315	0.00	1000	
Ni	60	1	No Gas	-2.538	-2.538	-0.55	1077	-0.24	1000	
Cu	63	1	No Gas	0.160	0.160	6.46	3698	0.00	1000	
Sr	88	1	No Gas	0.020	0.020	15.53	982	0.00	1000	
Ag	107	1	No Gas	0.004	0.004	33.64	107	0.00	1000	
Al	27	1	No Gas	2.407	2.407	3.35	60056	0.00	100000	
Sn	118	1	No Gas	0.716	0.716	23.86	7999	0.01	100	
Ti	47	1	No Gas	0.345	0.345	30.20	1333	0.03	2000	
Zn	66	1	No Gas	0.382	0.382	16.27	2713	0.01	1000	
As	75	3	HeHe	0.418	0.418	8.61	172	0.24	1000	
As	75	1	No Gas	0.764	0.764	68.36	30003	0.00	1000	
Sb	121	1	No Gas	0.182	0.182	30.72	2800	0.01	100	
Hg	201	1	No Gas	0.036	0.036	56.67	87	0.04	4	
Be	9	1	No Gas	-0.002	-0.002	-74.18	21	-0.01	1000	
Pb	208	1	No Gas	0.033	0.033	16.76	1319	0.00	1000	
Se	82	1	No Gas	0.836	0.836	96.91	112	0.74	1000	
Mo	98	1	No Gas	0.662	0.662	31.79	8683	0.01	2000	
Ba	137	1	No Gas	0.102	0.102	25.06	543	0.02	1000	
Tl	205	1	No Gas	0.021	0.021	29.72	485	0.00	1000	
U	238	1	No Gas	0.005	0.005	43.86	189	0.00	1000	
Na	23	2	he	9.533	9.533	4.90	123341	0.01	100000	
Mg	24	2	he	1.084	1.084	13.94	2030	0.05	100000	
K	39	2	he	2.600	2.600	54.15	234113	0.00	100000	
Se	82	3	HeHe	-1.036	-1.036	-18.07	51	-2.03	1000	
Fe	57	3	HeHe	9.084	9.084	10.27	1000	0.91	100000	
Cd	114	1	No Gas	0.041	0.041	26.20	400	0.01	1000	
Ca	44	1	No Gas	-6.110	-6.110	-68.13	133122	0.00	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6617591	1.63	5896472	112.23	70	120	
Sc	45	2	he	1442739	1.19	1271268	113.49	70	120	

Ge	72	1	No Gas	718053	0.55	682805	105.16	70	120	
In	115	1	No Gas	3745766	1.07	3697856	101.30	70	120	
Tb	159	1	No Gas	4376834	2.39	4404848	99.36	70	120	
Bi	209	1	No Gas	2251289	2.22	1997135	112.73	70	120	
Sc	45	3	HeHe	150183	1.02	132951	112.96	70	120	

Sample Report

Sample Table

Sample Name	1020196
Data File Name	037SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:49:24-04:00
Sample Type	Sample
Dilution	1
Comment	37996 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	3208

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	41.997	41.997	1.54	1498920	0.00	1000	
Cr	52	1	No Gas	40.306	40.306	0.54	1305754	0.00	1000	
Mn	55	1	No Gas	42.472	42.472	1.39	1696159	0.00	1000	
Co	59	1	No Gas	40.968	40.968	2.15	1451390	0.00	1000	
Ni	60	1	No Gas	37.325	37.325	2.42	319915	0.01	1000	
Cu	63	1	No Gas	39.975	39.975	1.64	763551	0.01	1000	
Sr	88	1	No Gas	38.689	38.689	2.35	1733378	0.00	1000	
Ag	107	1	No Gas	15.817	15.817	0.81	305606	0.01	1000	
Al	27	1	No Gas	405.302	405.302	1.78	8567178	0.00	100000	
Sn	118	1	No Gas	39.092	39.092	1.07	440577	0.01	100	
Ti	47	1	No Gas	37.298	37.298	1.60	109763	0.03	2000	
Zn	66	1	No Gas	404.870	404.870	1.65	1961456	0.02	1000	
As	75	3	HeHe	39.010	39.010	1.04	15405	0.25	1000	
As	75	1	No Gas	38.851	38.851	1.31	225487	0.02	1000	
Sb	121	1	No Gas	40.066	40.066	1.23	607661	0.01	100	
Hg	201	1	No Gas	0.433	0.433	6.41	632	0.07	4	
Be	9	1	No Gas	37.498	37.498	0.51	138739	0.03	1000	
Pb	208	1	No Gas	40.512	40.512	1.56	1203705	0.00	1000	
Se	82	1	No Gas	38.085	38.085	0.37	9909	0.38	1000	
Mo	98	1	No Gas	40.433	40.433	1.37	493666	0.01	2000	
Ba	137	1	No Gas	428.823	428.823	2.65	2120662	0.02	1000	
Tl	205	1	No Gas	40.612	40.612	1.41	885319	0.00	1000	
U	238	1	No Gas	0.004	0.004	32.84	141	0.00	1000	
Na	23	2	he	466.124	466.124	1.08	1489767	0.03	100000	
Mg	24	2	he	421.506	421.506	1.75	732171	0.06	100000	
K	39	2	he	443.414	443.414	1.05	1454647	0.03	100000	
Se	82	3	HeHe	35.513	35.513	7.84	734	4.84	1000	
Fe	57	3	HeHe	454.826	454.826	1.70	40666	1.12	100000	
Cd	114	1	No Gas	38.939	38.939	1.02	344405	0.01	1000	
Ca	44	1	No Gas	406.066	406.066	1.40	512628	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6676471	2.34	5896472	113.23	70	120	
Sc	45	2	he	1460278	1.11	1271268	114.87	70	120	

Ge	72	1	No Gas	726166	1.54	682805	106.35	70	120	
In	115	1	No Gas	3877246	0.92	3697856	104.85	70	120	
Tb	159	1	No Gas	4449198	0.98	4404848	101.01	70	120	
Bi	209	1	No Gas	2217477	1.96	1997135	111.03	70	120	
Sc	45	3	HeHe	151170	1.43	132951	113.70	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	038_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:52:51-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	100.342	0.861	3607283	0.88	100	100.3	90	110	
Cr	52	1	No Gas	98.206	1.673	3188450	0.84	100	98.2	90	110	
Mn	55	1	No Gas	102.665	0.140	4081801	1.62	100	102.7	90	110	
Co	59	1	No Gas	97.691	2.070	3488283	1.72	100	97.7	90	110	
Ni	60	1	No Gas	95.621	1.296	792621	0.65	100	95.6	90	110	
Cu	63	1	No Gas	100.063	2.328	1925718	2.09	100	100.1	90	110	
Sr	88	1	No Gas	101.148	0.948	4567626	0.84	100	101.1	90	110	
Ag	107	1	No Gas	99.440	1.473	1949285	0.65	100	99.4	90	110	
Al	27	1	No Gas	101.775	2.134	2175255	0.90	100	101.8	90	110	
Sn	118	1	No Gas	98.236	1.799	1122983	0.86	100	98.2	90	110	
Tl	47	1	No Gas	89.161	1.635	264018	1.55	100	89.2	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	97.198	1.062	475366	1.47	100	97.2	90	110	
As	75	3	HeHe	93.041	2.372	37531	2.83	100	93.0	90	110	
As	75	1	No Gas	95.419	2.230	519516	0.45	100	95.4	90	110	
Sb	121	1	No Gas	99.710	1.543	1534440	1.72	100	99.7	90	110	
Hg	201	1	No Gas	1.988	3.343	2866	3.78	2	99.4	90	110	
Be	9	1	No Gas	92.661	1.055	345522	0.88	100	92.7	90	110	
Pb	208	1	No Gas	96.714	2.907	2976376	1.55	100	96.7	90	110	
Se	82	1	No Gas	94.700	1.740	24991	0.51	100	94.7	90	110	
Mo	98	1	No Gas	97.240	1.242	1203454	0.59	100	97.2	90	110	
Ba	137	1	No Gas	98.519	0.867	494076	0.19	100	98.5	90	110	
Tl	205	1	No Gas	96.547	0.675	2180762	1.40	100	96.5	90	110	
U	238	1	No Gas	103.411	0.916	2952826	2.73	100	103.4	90	110	
Na	23	2	he	1009.441	0.996	3153775	0.90	1000	100.9	90	110	
Mg	24	2	he	1023.870	2.192	1801121	2.53	1000	102.4	90	110	
K	39	2	he	995.257	1.211	3017136	0.36	1000	99.5	90	110	
Se	82	3	HeHe	91.168	1.627	1812	1.11	100	91.2	90	110	
Fe	57	3	HeHe	1014.418	1.032	92426	1.47	1000	101.4	90	110	
Cd	114	1	No Gas	95.639	1.179	858320	0.86	100	95.6	90	110	
Ca	44	1	No Gas	975.801	1.350	1043939	1.77	1000	97.6	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6729857	1.72	5896472	114.13	70	120	
Sc	45	2	he	1478963	0.94	1271268	116.34	70	120	
Ge	72	1	No Gas	751230	0.64	682805	110.02	70	120	
In	115	1	No Gas	3934751	1.69	3697856	106.41	70	120	
Tb	159	1	No Gas	4511436	0.78	4404848	102.42	70	120	
Bi	209	1	No Gas	2297520	1.88	1997135	115.04	70	120	
Sc	45	3	HeHe	154433	0.45	132951	116.16	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	039_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:56:14-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.174	1.0	7679	2.9	9	
Cr	52	1	No Gas	0.064	23.6	14473	2.3	4	
Mn	55	1	No Gas	0.315	12.0	49189	0.9	25	
Co	59	1	No Gas	0.002	104.2	359	19.9	1	
Ni	60	1	No Gas	-2.561	-0.5	923	12.6	25	
Cu	63	1	No Gas	0.219	3.3	4927	1.4	25	
Sr	88	1	No Gas	0.009	38.3	526	28.7	25	
Ag	107	1	No Gas	0.010	28.4	241	25.4	9	
Al	27	1	No Gas	0.878	2.8	28798	1.3	1000000	
Sn	118	1	No Gas	1.070	22.7	12598	21.3	25	
Ti	47	1	No Gas	0.380	22.4	1479	19.2	10000	
Zn	66	1	No Gas	0.642	5.8	4070	5.5	25	
As	75	3	HeHe	0.682	11.5	283	11.9	9	
As	75	1	No Gas	0.877	3.1	31391	2.1	9	
Sb	121	1	No Gas	0.326	29.4	5223	27.7	4	
Hg	201	1	No Gas	0.011	102.9	55	27.6	0.04	
Be	9	1	No Gas	0.006	95.0	49	39.9	1	
Pb	208	1	No Gas	0.049	10.9	1885	7.1	4	
Se	82	1	No Gas	0.928	133.5	146	229.6	25	
Mo	98	1	No Gas	1.111	27.7	14850	24.6	10000	
Ba	137	1	No Gas	0.050	11.8	303	10.1	25	
Tl	205	1	No Gas	0.039	30.6	933	27.7	1	
U	238	1	No Gas	0.195	20.3	5709	19.2	25	
Na	23	2	he	8.842	4.8	124345	2.4	2500000	
Mg	24	2	he	0.478	26.0	1015	20.3	2500000	
K	39	2	he	2.115	51.8	238599	0.8	5000000	
Se	82	3	HeHe	0.103	846.9	74	21.5	25	
Fe	57	3	HeHe	7.978	7.3	926	6.2	2500000	
Cd	114	1	No Gas	0.041	14.8	423	11.9	1	
Ca	44	1	No Gas	-6.992	-18.3	135814	1.3	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6791089	2.12	5896472	115.17	70	120	
Sc	45	2	he	1478720	1.50	1271268	116.32	70	120	
Ge	72	1	No Gas	763164	2.30	682805	111.77	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3992092	2.76	3697856	107.96	70	120	
Tb	159	1	No Gas	4554022	2.98	4404848	103.39	70	120	
Bi	209	1	No Gas	2337198	2.84	1997135	117.03	70	120	
Sc	45	3	HeHe	154133	0.82	132951	115.93	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	040LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T14:59:43-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	2.277	5.072	82954	5.53	2	113.8	70	130		
Cr	52	1	No Gas	2.144	2.412	81420	2.66	2	107.2	70	130		
Mn	55	1	No Gas	5.400	1.722	248458	0.66	5	108.0	70	130		
Co	59	1	No Gas	5.004	1.957	178473	2.08	5	100.1	70	130		
Ni	60	1	No Gas	2.301	2.532	40013	0.86	5	46.0	70	130	LLCCV Main CR1 Failed	N/A
Cu	63	1	No Gas	5.051	0.804	97588	0.97	5	101.0	70	130		
Sr	88	1	No Gas	4.695	1.416	211538	0.46	5	93.9	70	130		
Ag	107	1	No Gas	2.028	4.098	39306	3.14	2	101.4	70	130		
Al	27	1	No Gas	80.239	1.554	1712993	2.64	80	100.3	70	130		
Sn	118	1	No Gas	2.665	10.894	30311	11.43	2	133.2	70	130	LLCCV Main CR1 Failed	N/A
Tl	47	1	No Gas	4.875	2.731	14719	3.73	5	97.5	70	130		
Zn	66	1	No Gas	5.117	2.048	25809	2.04	5	102.3	70	130		
As	75	3	HeHe	3.196	1.675	1277	2.34	3	106.5	70	130		
As	75	1	No Gas	3.624	1.522	45181	1.76	3	120.8	70	130		
Sb	121	1	No Gas	2.142	3.901	32707	5.00	2	107.1	70	130		
Hg	201	1	No Gas	0.202	7.605	315	5.75	0.2	100.9	70	130		
Be	9	1	No Gas	0.931	2.046	3490	2.27	1	93.1	70	130		
Pb	208	1	No Gas	2.043	0.682	61231	1.61	2	102.2	70	130		
Se	82	1	No Gas	5.905	2.520	1455	2.37	5	118.1	70	130		
Mo	98	1	No Gas	2.507	5.975	31546	6.40	2	125.3	70	130		
Ba	137	1	No Gas	5.154	2.864	25207	1.80	5	103.1	70	130		
Tl	205	1	No Gas	0.975	4.456	21371	5.64	1	97.5	70	130		
U	238	1	No Gas	4.843	1.143	133946	1.08	5	96.9	70	130		
Na	23	2	he	111.962	2.312	424089	1.81	100	112.0	70	130		
Mg	24	2	he	102.011	0.878	174470	0.91	100	102.0	70	130		
K	39	2	he	112.325	0.830	531372	0.23	100	112.3	70	130		
Se	82	3	HeHe	3.306	2.874	133	2.21	5	66.1	70	130	LLCCV Main CR1 Failed	N/A
Fe	57	3	HeHe	54.935	6.887	5120	7.85	50	109.9	70	130		
Cd	114	1	No Gas	1.086	4.884	9680	3.82	1	108.6	70	130		
Ca	44	1	No Gas	91.211	3.520	224849	0.94	100	91.2	70	130		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6711721	1.15	5896472	113.83	70	120	
Sc	45	2	he	1436675	0.31	1271268	113.01	70	120	
Ge	72	1	No Gas	733028	1.78	682805	107.36	70	120	
In	115	1	No Gas	3887074	1.18	3697856	105.12	70	120	
Tb	159	1	No Gas	4393092	2.33	4404848	99.73	70	120	
Bi	209	1	No Gas	2225007	1.29	1997135	111.41	70	120	
Sc	45	3	HeHe	152061	1.55	132951	114.37	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	113_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T19:17:25-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag	
V	51	1	No Gas	99.259	2.513	3414829	2.01	100	99.3	90	110		
Cr	52	1	No Gas	96.814	3.400	3008294	2.86	100	96.8	90	110		
Mn	55	1	No Gas	101.100	2.405	3846794	1.74	100	101.1	90	110		
Co	59	1	No Gas	96.789	1.449	3307703	1.24	100	96.8	90	110		
Ni	60	1	No Gas	93.754	0.918	744219	1.26	100	93.8	90	110		
Cu	63	1	No Gas	98.845	1.196	1820770	1.90	100	98.8	90	110		
Sr	88	1	No Gas	99.718	1.668	4309672	1.65	100	99.7	90	110		
Ag	107	1	No Gas	102.550	2.145	1847952	2.36	100	102.6	90	110		
Al	27	1	No Gas	100.068	0.660	2047289	0.19	100	100.1	90	110		
Sn	118	1	No Gas	98.433	1.993	1034281	1.04	100	98.4	90	110		
Tl	47	1	No Gas	89.092	0.957	252477	0.39	100	89.1	90	110	CCV Main CR1 Failed	N/A
Zn	66	1	No Gas	96.609	2.722	452222	3.19	100	96.6	90	110		
As	75	3	HeHe	92.894	1.255	34512	0.47	100	92.9	90	110		
As	75	1	No Gas	94.986	1.861	495124	1.62	100	95.0	90	110		
Sb	121	1	No Gas	98.579	0.870	1394432	1.15	100	98.6	90	110		
Hg	201	1	No Gas	1.961	2.371	2632	1.01	2	98.1	90	110		
Be	9	1	No Gas	93.259	0.917	332814	0.66	100	93.3	90	110		
Pb	208	1	No Gas	95.242	0.157	2729030	1.56	100	95.2	90	110		
Se	82	1	No Gas	94.157	0.551	23783	1.23	100	94.2	90	110		
Mo	98	1	No Gas	98.369	1.381	1119004	0.56	100	98.4	90	110		
Ba	137	1	No Gas	99.011	0.236	462641	0.30	100	99.0	90	110		
Tl	205	1	No Gas	97.592	0.678	2051989	2.07	100	97.6	90	110		
U	238	1	No Gas	104.943	1.958	2788661	2.15	100	104.9	90	110		
Na	23	2	he	1013.811	1.629	3090664	1.03	1000	101.4	90	110		
Mg	24	2	he	1008.676	1.604	1731538	1.19	1000	100.9	90	110		
K	39	2	he	992.035	2.160	2935693	1.54	1000	99.2	90	110		
Se	82	3	HeHe	87.143	3.120	1598	3.52	100	87.1	90	110	CCV Main CR1 Failed	N/A
Fe	57	3	HeHe	1015.513	1.836	85239	2.93	1000	101.6	90	110		
Cd	114	1	No Gas	96.676	0.797	797566	1.58	100	96.7	90	110		
Ca	44	1	No Gas	967.727	0.727	991883	0.32	1000	96.8	90	110		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6440284	0.71	5896472	109.22	70	120	
Sc	45	2	he	1443349	0.60	1271268	113.54	70	120	
Ge	72	1	No Gas	704084	1.13	682805	103.12	70	120	
In	115	1	No Gas	3616519	1.00	3697856	97.80	70	120	
Tb	159	1	No Gas	4203274	0.32	4404848	95.42	70	120	
Bi	209	1	No Gas	2138425	1.41	1997135	107.07	70	120	
Sc	45	3	HeHe	142257	1.13	132951	107.00	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	114_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T19:20:50-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.107	37.4	4923	26.8	9	
Cr	52	1	No Gas	0.101	16.3	14788	2.9	4	
Mn	55	1	No Gas	0.269	17.6	44701	3.1	25	
Co	59	1	No Gas	0.006	52.7	474	21.8	1	
Ni	60	1	No Gas	-2.362	-0.6	2394	5.2	25	
Cu	63	1	No Gas	0.181	5.8	3967	3.9	25	
Sr	88	1	No Gas	0.011	39.1	563	31.2	25	
Ag	107	1	No Gas	0.015	35.1	326	30.9	9	
Al	27	1	No Gas	0.822	5.6	26053	4.5	1000000	
Sn	118	1	No Gas	1.138	21.8	12661	21.5	25	
Ti	47	1	No Gas	0.420	21.7	1506	18.0	10000	
Zn	66	1	No Gas	0.462	4.6	3000	2.8	25	
As	75	3	HeHe	0.517	18.0	200	17.1	9	
As	75	1	No Gas	0.895	27.3	29722	5.0	9	
Sb	121	1	No Gas	0.363	24.6	5486	24.4	4	
Hg	201	1	No Gas	0.017	81.9	59	29.5	0.04	
Be	9	1	No Gas	0.003	106.8	35	29.0	1	
Pb	208	1	No Gas	0.053	9.1	1889	8.8	4	
Se	82	1	No Gas	1.299	15.0	227	22.6	25	
Mo	98	1	No Gas	0.932	29.7	11928	27.6	10000	
Ba	137	1	No Gas	0.071	12.3	387	13.3	25	
Tl	205	1	No Gas	0.048	16.0	1067	15.8	1	
U	238	1	No Gas	0.192	24.1	5264	22.8	25	
Na	23	2	he	10.580	12.5	123079	1.9	2500000	
Mg	24	2	he	0.341	11.9	737	9.1	2500000	
K	39	2	he	5.586	22.7	235878	0.2	5000000	
Se	82	3	HeHe	0.584	73.8	77	9.4	25	
Fe	57	3	HeHe	8.699	20.1	919	17.5	2500000	
Cd	114	1	No Gas	0.040	17.2	397	13.9	1	
Ca	44	1	No Gas	-13.241	-9.9	122680	1.9	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6408508	0.96	5896472	108.68	70	120	
Sc	45	2	he	1404748	1.60	1271268	110.50	70	120	
Ge	72	1	No Gas	704976	0.46	682805	103.25	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3769349	1.56	3697856	101.93	70	120	
Tb	159	1	No Gas	4261300	2.64	4404848	96.74	70	120	
Bi	209	1	No Gas	2197583	2.18	1997135	110.04	70	120	
Sc	45	3	HeHe	142587	1.62	132951	107.25	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	115LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T19:24:20-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.223	3.107	78237	2.23	2	111.1	70	130	
Cr	52	1	No Gas	2.212	1.524	80759	2.48	2	110.6	70	130	
Mn	55	1	No Gas	5.275	1.138	235280	2.02	5	105.5	70	130	
Co	59	1	No Gas	4.952	0.888	170618	0.76	5	99.0	70	130	
Ni	60	1	No Gas	2.520	5.118	40347	2.02	5	50.4	70	130	LLCCV Main CR1 Failed
Cu	63	1	No Gas	5.027	1.084	93827	0.44	5	100.5	70	130	
Sr	88	1	No Gas	4.638	1.011	201846	0.30	5	92.8	70	130	
Ag	107	1	No Gas	2.099	4.975	38241	4.95	2	104.9	70	130	
Al	27	1	No Gas	82.779	1.757	1706737	2.75	80	103.5	70	130	
Sn	118	1	No Gas	2.515	7.056	26886	7.42	2	125.7	70	130	
Ti	47	1	No Gas	4.775	4.469	13935	5.62	5	95.5	70	130	
Zn	66	1	No Gas	5.326	1.619	25910	1.90	5	106.5	70	130	
As	75	3	HeHe	3.079	3.313	1162	3.64	3	102.6	70	130	
As	75	1	No Gas	3.688	12.282	43948	4.22	3	122.9	70	130	
Sb	121	1	No Gas	2.238	2.180	32098	2.40	2	111.9	70	130	
Hg	201	1	No Gas	0.179	17.300	273	15.51	0.2	89.4	70	130	
Be	9	1	No Gas	0.978	0.670	3540	0.85	1	97.8	70	130	
Pb	208	1	No Gas	2.032	1.882	58671	1.52	2	101.6	70	130	
Se	82	1	No Gas	5.773	5.361	1372	5.48	5	115.5	70	130	
Mo	98	1	No Gas	2.386	6.428	28253	6.66	2	119.3	70	130	
Ba	137	1	No Gas	5.270	2.760	24255	2.16	5	105.4	70	130	
Tl	205	1	No Gas	0.998	4.384	21063	4.52	1	99.8	70	130	
U	238	1	No Gas	4.836	1.526	128849	1.21	5	96.7	70	130	
Na	23	2	he	108.326	3.127	417157	1.45	100	108.3	70	130	
Mg	24	2	he	100.344	0.175	173216	1.52	100	100.3	70	130	
K	39	2	he	108.557	3.007	525886	0.07	100	108.6	70	130	
Se	82	3	HeHe	5.339	11.460	162	5.33	5	106.8	70	130	
Fe	57	3	HeHe	57.361	2.098	5038	3.96	50	114.7	70	130	
Cd	114	1	No Gas	1.069	0.237	8959	0.62	1	106.9	70	130	
Ca	44	1	No Gas	83.629	1.236	210446	0.97	100	83.6	70	130	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6483246	1.26	5896472	109.95	70	120	
Sc	45	2	he	1450055	1.70	1271268	114.06	70	120	
Ge	72	1	No Gas	705944	1.26	682805	103.39	70	120	
In	115	1	No Gas	3653091	0.42	3697856	98.79	70	120	
Tb	159	1	No Gas	4133487	2.07	4404848	93.84	70	120	
Bi	209	1	No Gas	2143604	0.53	1997135	107.33	70	120	
Sc	45	3	HeHe	143589	2.04	132951	108.00	70	120	

Sample Report

Sample Table

Sample Name	9980875001
Data File Name	124SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T19:55:44-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4207

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	1.812	1.812	0.70	61864	0.00	1000	
Cr	52	1	No Gas	1.170	1.170	2.42	46640	0.00	1000	
Mn	55	1	No Gas	3.270	3.270	0.57	153761	0.00	1000	
Co	59	1	No Gas	0.054	0.054	8.99	2048	0.00	1000	
Ni	60	1	No Gas	-2.103	-2.103	-2.79	4274	-0.05	1000	
Cu	63	1	No Gas	0.606	0.606	1.45	11487	0.01	1000	
Sr	88	1	No Gas	0.697	0.697	1.52	29393	0.00	1000	
Ag	107	1	No Gas	0.018	0.018	23.76	356	0.01	1000	
Al	27	1	No Gas	567.827	567.827	0.95	11253600	0.01	100000	
Sn	118	1	No Gas	1.024	1.024	9.01	10674	0.01	100	
Ti	47	1	No Gas	77.508	77.508	2.00	213671	0.04	2000	
Zn	66	1	No Gas	2.364	2.364	4.11	11571	0.02	1000	
As	75	3	HeHe	0.368	0.368	11.95	141	0.26	1000	
As	75	1	No Gas	1.011	1.011	7.78	29594	0.00	1000	
Sb	121	1	No Gas	0.141	0.141	12.15	2059	0.01	100	
Hg	201	1	No Gas	0.036	0.036	16.94	80	0.04	4	
Be	9	1	No Gas	0.014	0.014	40.80	74	0.02	1000	
Pb	208	1	No Gas	8.278	8.278	1.52	227650	0.00	1000	
Se	82	1	No Gas	0.465	0.465	149.17	18	2.59	1000	
Mo	98	1	No Gas	0.237	0.237	21.42	3454	0.01	2000	
Ba	137	1	No Gas	2.129	2.129	4.77	9617	0.02	1000	
Tl	205	1	No Gas	0.008	0.008	1.29	189	0.00	1000	
U	238	1	No Gas	0.182	0.182	5.23	4660	0.00	1000	
Na	23	2	he	16.912	16.912	6.70	138716	0.01	100000	
Mg	24	2	he	30.295	30.295	0.87	49851	0.06	100000	
K	39	2	he	40.425	40.425	3.18	322486	0.01	100000	
Se	82	3	HeHe	-0.826	-0.826	-125.23	50	-1.64	1000	
Fe	57	3	HeHe	326.169	326.169	2.58	26717	1.22	100000	
Cd	114	1	No Gas	0.057	0.057	14.11	503	0.01	1000	
Ca	44	1	No Gas	19.308	19.308	11.55	147893	0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6263349	2.63	5896472	106.22	70	120	
Sc	45	2	he	1379178	1.78	1271268	108.49	70	120	

Ge	72	1	No Gas	677969	1.39	682805	99.29	70	120	
In	115	1	No Gas	3523567	1.83	3697856	95.29	70	120	
Tb	159	1	No Gas	4043643	1.09	4404848	91.80	70	120	
Bi	209	1	No Gas	2049910	1.11	1997135	102.64	70	120	
Sc	45	3	HeHe	138214	2.34	132951	103.96	70	120	

Sample Report

Sample Table

Sample Name	1020193
Data File Name	125SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T19:59:17-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4208

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	40.747	40.747	1.51	1393378	0.00	1000	
Cr	52	1	No Gas	39.853	39.853	1.70	1237136	0.00	1000	
Mn	55	1	No Gas	42.817	42.817	0.55	1638390	0.00	1000	
Co	59	1	No Gas	39.639	39.639	2.97	1345859	0.00	1000	
Ni	60	1	No Gas	36.111	36.111	1.27	297344	0.01	1000	
Cu	63	1	No Gas	39.214	39.214	1.32	717875	0.01	1000	
Sr	88	1	No Gas	36.821	36.821	1.90	1580868	0.00	1000	
Ag	107	1	No Gas	15.177	15.177	0.80	271890	0.01	1000	
Al	27	1	No Gas	994.761	994.761	2.26	20133332	0.00	100000	
Sn	118	1	No Gas	37.140	37.140	1.02	388114	0.01	100	
Ti	47	1	No Gas	85.802	85.802	2.05	241558	0.04	2000	
Zn	66	1	No Gas	391.623	391.623	0.11	1818219	0.02	1000	
As	75	3	HeHe	35.724	35.724	0.93	13056	0.27	1000	
As	75	1	No Gas	36.201	36.201	0.47	203085	0.02	1000	
Sb	121	1	No Gas	36.202	36.202	1.72	509170	0.01	100	
Hg	201	1	No Gas	0.381	0.381	14.37	529	0.07	4	
Be	9	1	No Gas	37.358	37.358	1.70	132451	0.03	1000	
Pb	208	1	No Gas	46.403	46.403	0.72	1300935	0.00	1000	
Se	82	1	No Gas	36.598	36.598	3.00	9121	0.40	1000	
Mo	98	1	No Gas	37.623	37.623	1.45	425955	0.01	2000	
Ba	137	1	No Gas	421.795	421.795	1.31	1926374	0.02	1000	
Tl	205	1	No Gas	38.416	38.416	1.82	790210	0.00	1000	
U	238	1	No Gas	0.138	0.138	9.74	3619	0.00	1000	
Na	23	2	he	452.795	452.795	2.80	1380507	0.03	100000	
Mg	24	2	he	444.070	444.070	0.75	734514	0.06	100000	
K	39	2	he	479.165	479.165	1.81	1479185	0.03	100000	
Se	82	3	HeHe	36.223	36.223	4.01	692	5.24	1000	
Fe	57	3	HeHe	739.119	739.119	3.78	61055	1.21	100000	
Cd	114	1	No Gas	37.540	37.540	0.61	307885	0.01	1000	
Ca	44	1	No Gas	405.125	405.125	0.69	490448	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6397363	0.15	5896472	108.49	70	120	
Sc	45	2	he	1390492	0.76	1271268	109.38	70	120	

Ge	72	1	No Gas	681717	1.64	682805	99.84	70	120	
In	115	1	No Gas	3594967	1.10	3697856	97.22	70	120	
Tb	159	1	No Gas	4108618	1.59	4404848	93.27	70	120	
Bi	209	1	No Gas	2092125	1.13	1997135	104.76	70	120	
Sc	45	3	HeHe	139884	0.64	132951	105.21	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	126_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:02:44-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	98.276	0.942	3413244	2.12	100	98.3	90	110	
Cr	52	1	No Gas	96.380	2.155	3023709	3.23	100	96.4	90	110	
Mn	55	1	No Gas	99.665	1.572	3829026	2.75	100	99.7	90	110	
Co	59	1	No Gas	97.008	0.800	3346519	1.94	100	97.0	90	110	
Ni	60	1	No Gas	92.840	0.852	744104	2.03	100	92.8	90	110	
Cu	63	1	No Gas	97.621	1.155	1814919	1.48	100	97.6	90	110	
Sr	88	1	No Gas	98.746	0.879	4307427	0.72	100	98.7	90	110	
Ag	107	1	No Gas	100.773	1.570	1820075	0.55	100	100.8	90	110	
Al	27	1	No Gas	99.982	1.495	2064552	1.00	100	100.0	90	110	
Sn	118	1	No Gas	98.283	2.630	1035101	1.47	100	98.3	90	110	
Tl	47	1	No Gas	88.575	1.283	253400	2.45	100	88.6	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	94.322	0.664	445637	1.37	100	94.3	90	110	
As	75	3	HeHe	93.882	2.123	35127	2.96	100	93.9	90	110	
As	75	1	No Gas	93.653	0.419	493120	1.30	100	93.7	90	110	
Sb	121	1	No Gas	98.552	3.100	1397081	1.97	100	98.6	90	110	
Hg	201	1	No Gas	1.955	0.941	2582	1.25	2	97.8	90	110	
Be	9	1	No Gas	92.932	0.201	334756	1.12	100	92.9	90	110	
Pb	208	1	No Gas	95.676	1.072	2697622	1.17	100	95.7	90	110	
Se	82	1	No Gas	93.956	1.305	23952	0.98	100	94.0	90	110	
Mo	98	1	No Gas	97.441	1.788	1111051	0.62	100	97.4	90	110	
Ba	137	1	No Gas	100.248	1.046	458087	0.59	100	100.2	90	110	
Tl	205	1	No Gas	95.700	0.831	1980040	1.58	100	95.7	90	110	
U	238	1	No Gas	104.340	1.362	2728510	1.61	100	104.3	90	110	
Na	23	2	he	1028.065	1.924	3126082	0.75	1000	102.8	90	110	
Mg	24	2	he	1031.330	1.655	1766833	1.85	1000	103.1	90	110	
K	39	2	he	1023.482	2.474	3015071	1.39	1000	102.3	90	110	
Se	82	3	HeHe	90.911	2.748	1676	3.31	100	90.9	90	110	
Fe	57	3	HeHe	1011.687	0.505	85500	1.61	1000	101.2	90	110	
Cd	114	1	No Gas	95.372	1.337	788604	0.84	100	95.4	90	110	
Ca	44	1	No Gas	958.829	1.518	993212	1.55	1000	95.9	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6500541	1.20	5896472	110.24	70	120	
Sc	45	2	he	1440384	1.17	1271268	113.30	70	120	
Ge	72	1	No Gas	702990	0.73	682805	102.96	70	120	
In	115	1	No Gas	3625219	1.29	3697856	98.04	70	120	
Tb	159	1	No Gas	4110901	1.41	4404848	93.33	70	120	
Bi	209	1	No Gas	2104283	0.80	1997135	105.37	70	120	
Sc	45	3	HeHe	143243	1.12	132951	107.74	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	127_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:06:10-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.134	42.5	5931	33.2	9	
Cr	52	1	No Gas	0.099	19.5	14862	3.7	4	
Mn	55	1	No Gas	0.039	206.1	36389	7.9	25	
Co	59	1	No Gas	0.010	26.4	607	15.2	1	
Ni	60	1	No Gas	-2.329	-0.5	2670	4.3	25	
Cu	63	1	No Gas	0.176	1.8	3905	1.1	25	
Sr	88	1	No Gas	0.013	20.7	670	17.6	25	
Ag	107	1	No Gas	0.018	13.6	367	10.5	9	
Al	27	1	No Gas	0.847	2.9	26799	2.1	1000000	
Sn	118	1	No Gas	1.772	23.8	19617	23.9	25	
Ti	47	1	No Gas	0.561	25.8	1918	21.4	10000	
Zn	66	1	No Gas	0.470	10.7	3067	8.3	25	
As	75	3	HeHe	0.715	12.1	278	8.8	9	
As	75	1	No Gas	1.038	26.4	30683	5.0	9	
Sb	121	1	No Gas	0.359	24.4	5427	24.7	4	
Hg	201	1	No Gas	0.014	117.6	54	39.0	0.04	
Be	9	1	No Gas	0.012	38.8	71	24.1	1	
Pb	208	1	No Gas	0.047	18.8	1641	14.1	4	
Se	82	1	No Gas	1.278	70.1	223	102.1	25	
Mo	98	1	No Gas	1.436	25.9	17915	25.0	10000	
Ba	137	1	No Gas	0.068	43.1	370	38.1	25	
Tl	205	1	No Gas	0.040	23.7	856	24.3	1	
U	238	1	No Gas	0.266	20.7	7054	21.1	25	
Na	23	2	he	9.819	9.2	121807	2.6	2500000	
Mg	24	2	he	0.472	2.4	963	1.3	2500000	
K	39	2	he	6.751	6.4	240749	1.6	5000000	
Se	82	3	HeHe	0.749	81.9	81	11.2	25	
Fe	57	3	HeHe	11.783	20.1	1193	14.9	2500000	
Cd	114	1	No Gas	0.078	20.9	717	18.9	1	
Ca	44	1	No Gas	-15.802	-13.3	121443	1.5	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6463263	0.61	5896472	109.61	70	120	
Sc	45	2	he	1414962	1.40	1271268	111.30	70	120	
Ge	72	1	No Gas	720845	1.41	682805	105.57	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3771921	1.64	3697856	102.00	70	120	
Tb	159	1	No Gas	4249135	0.74	4404848	96.46	70	120	
Bi	209	1	No Gas	2121704	1.34	1997135	106.24	70	120	
Sc	45	3	HeHe	144953	3.05	132951	109.03	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	128LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:09:40-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	2.348	7.801	78788	1.12	2	117.4	70	130		
Cr	52	1	No Gas	2.350	8.792	81134	1.13	2	117.5	70	130		
Mn	55	1	No Gas	5.464	9.143	231210	1.32	5	109.3	70	130		
Co	59	1	No Gas	5.193	8.205	170622	1.69	5	103.9	70	130		
Ni	60	1	No Gas	2.857	11.879	41009	0.49	5	57.1	70	130	LLCCV Main CR1 Failed	N/A
Cu	63	1	No Gas	5.238	8.145	93213	1.56	5	104.8	70	130		
Sr	88	1	No Gas	4.808	5.451	199802	1.20	5	96.2	70	130		
Ag	107	1	No Gas	2.175	5.581	37598	2.20	2	108.8	70	130		
Al	27	1	No Gas	86.520	9.403	1699573	2.78	80	108.1	70	130		
Sn	118	1	No Gas	3.034	13.298	30648	8.63	2	151.7	70	130	LLCCV Main CR1 Failed	N/A
Tl	47	1	No Gas	5.236	8.457	14535	1.77	5	104.7	70	130		
Zn	66	1	No Gas	5.331	7.562	24746	2.89	5	106.6	70	130		
As	75	3	HeHe	3.210	5.021	1207	5.40	3	107.0	70	130		
As	75	1	No Gas	4.197	8.548	44423	2.89	3	139.9	70	130	LLCCV Main CR1 Failed	N/A
Sb	121	1	No Gas	2.302	9.320	31267	4.02	2	115.1	70	130		
Hg	201	1	No Gas	0.210	26.294	293	20.97	0.2	105.2	70	130		
Be	9	1	No Gas	1.006	11.366	3467	5.07	1	100.6	70	130		
Pb	208	1	No Gas	2.111	4.693	56873	0.70	2	105.6	70	130		
Se	82	1	No Gas	5.707	12.168	1303	18.06	5	114.1	70	130		
Mo	98	1	No Gas	2.726	10.044	30464	5.38	2	136.3	70	130	LLCCV Main CR1 Failed	N/A
Ba	137	1	No Gas	5.580	7.303	24606	3.59	5	111.6	70	130		
Tl	205	1	No Gas	1.018	4.578	20051	0.31	1	101.8	70	130		
U	238	1	No Gas	5.033	6.538	125082	2.34	5	100.7	70	130		
Na	23	2	he	113.700	2.426	418668	1.88	100	113.7	70	130		
Mg	24	2	he	102.905	1.037	171675	0.88	100	102.9	70	130		
K	39	2	he	115.292	3.414	526184	1.77	100	115.3	70	130		
Se	82	3	HeHe	4.090	24.098	139	12.11	5	81.8	70	130		
Fe	57	3	HeHe	56.576	7.102	4953	7.03	50	113.2	70	130		
Cd	114	1	No Gas	1.157	14.780	9156	9.61	1	115.7	70	130		
Ca	44	1	No Gas	95.809	19.245	211101	0.85	100	95.8	70	130		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6204101	6.49	5896472	105.22	70	120	
Sc	45	2	he	1401413	0.33	1271268	110.24	70	120	
Ge	72	1	No Gas	667705	4.90	682805	97.79	70	120	
In	115	1	No Gas	3472149	5.54	3697856	93.90	70	120	
Tb	159	1	No Gas	3969209	5.27	4404848	90.11	70	120	
Bi	209	1	No Gas	2003070	4.38	1997135	100.30	70	120	
Sc	45	3	HeHe	143070	0.66	132951	107.61	70	120	

Sample Report

Sample Table

Sample Name	1020194
Data File Name	129SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:13:10-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4209

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	44.146	44.146	3.09	1529243	0.00	1000	
Cr	52	1	No Gas	43.721	43.721	2.00	1374062	0.00	1000	
Mn	55	1	No Gas	46.554	46.554	2.93	1801526	0.00	1000	
Co	59	1	No Gas	42.915	42.915	1.64	1476339	0.00	1000	
Ni	60	1	No Gas	38.789	38.789	1.72	322033	0.01	1000	
Cu	63	1	No Gas	42.156	42.156	0.50	781899	0.01	1000	
Sr	88	1	No Gas	40.523	40.523	0.57	1762831	0.00	1000	
Ag	107	1	No Gas	16.282	16.282	0.65	294526	0.01	1000	
Al	27	1	No Gas	1129.260	1129.260	1.52	23156701	0.00	100000	
Sn	118	1	No Gas	40.814	40.814	0.92	430612	0.01	100	
Ti	47	1	No Gas	92.850	92.850	0.86	264812	0.04	2000	
Zn	66	1	No Gas	416.022	416.022	0.55	1956979	0.02	1000	
As	75	3	HeHe	39.465	39.465	1.79	14865	0.27	1000	
As	75	1	No Gas	39.198	39.198	0.52	220699	0.02	1000	
Sb	121	1	No Gas	39.486	39.486	0.89	560645	0.01	100	
Hg	201	1	No Gas	0.458	0.458	2.95	624	0.07	4	
Be	9	1	No Gas	39.540	39.540	1.17	142028	0.03	1000	
Pb	208	1	No Gas	50.446	50.446	1.79	1405156	0.00	1000	
Se	82	1	No Gas	38.137	38.137	3.69	9631	0.40	1000	
Mo	98	1	No Gas	41.158	41.158	0.79	470454	0.01	2000	
Ba	137	1	No Gas	447.080	447.080	1.50	2053514	0.02	1000	
Tl	205	1	No Gas	40.576	40.576	1.84	829207	0.00	1000	
U	238	1	No Gas	0.213	0.213	14.42	5553	0.00	1000	
Na	23	2	he	467.257	467.257	1.25	1473789	0.03	100000	
Mg	24	2	he	467.584	467.584	1.50	801593	0.06	100000	
K	39	2	he	488.636	488.636	2.70	1559136	0.03	100000	
Se	82	3	HeHe	38.968	38.968	4.08	762	5.12	1000	
Fe	57	3	HeHe	830.846	830.846	1.10	70698	1.18	100000	
Cd	114	1	No Gas	40.638	40.638	0.78	336535	0.01	1000	
Ca	44	1	No Gas	435.053	435.053	1.43	523612	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6482002	1.34	5896472	109.93	70	120	
Sc	45	2	he	1441289	0.87	1271268	113.37	70	120	
Ge	72	1	No Gas	692579	0.94	682805	101.43	70	120	

In	115	1	No Gas	3629876	1.39	3697856	98.16	70	120	
Tb	159	1	No Gas	4132995	2.33	4404848	93.83	70	120	
Bi	209	1	No Gas	2078847	1.48	1997135	104.09	70	120	
Sc	45	3	HeHe	144156	0.52	132951	108.43	70	120	

Sample Report

Sample Table

Sample Name	9980875002
Data File Name	131SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:20:00-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4211

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	1.675	1.675	7.94	58196	0.00	1000	
Cr	52	1	No Gas	1.055	1.055	4.57	43897	0.00	1000	
Mn	55	1	No Gas	2.428	2.428	1.34	124928	0.00	1000	
Co	59	1	No Gas	0.038	0.038	13.53	1541	0.00	1000	
Ni	60	1	No Gas	-2.186	-2.186	-1.68	3724	-0.06	1000	
Cu	63	1	No Gas	0.622	0.622	0.70	11966	0.01	1000	
Sr	88	1	No Gas	0.529	0.529	2.53	22723	0.00	1000	
Ag	107	1	No Gas	0.038	0.038	9.65	722	0.01	1000	
Al	27	1	No Gas	516.856	516.856	0.73	10418259	0.00	100000	
Sn	118	1	No Gas	1.616	1.616	11.34	17110	0.01	100	
Ti	47	1	No Gas	49.458	49.458	0.48	138747	0.04	2000	
Zn	66	1	No Gas	1.792	1.792	6.59	9130	0.02	1000	
As	75	3	HeHe	1.489	1.489	4.14	548	0.27	1000	
As	75	1	No Gas	1.424	1.424	47.11	32131	0.00	1000	
Sb	121	1	No Gas	3.295	3.295	11.88	46581	0.01	100	
Hg	201	1	No Gas	0.024	0.024	42.09	67	0.04	4	
Be	9	1	No Gas	0.021	0.021	19.65	99	0.02	1000	
Pb	208	1	No Gas	10.435	10.435	1.80	295410	0.00	1000	
Se	82	1	No Gas	1.695	1.695	58.25	327	0.52	1000	
Mo	98	1	No Gas	2.270	2.270	28.60	26580	0.01	2000	
Ba	137	1	No Gas	2.108	2.108	3.06	9507	0.02	1000	
Tl	205	1	No Gas	0.033	0.033	4.47	715	0.00	1000	
U	238	1	No Gas	0.562	0.562	16.32	14782	0.00	1000	
Na	23	2	he	15.139	15.139	12.87	134472	0.01	100000	
Mg	24	2	he	28.594	28.594	3.75	47326	0.06	100000	
K	39	2	he	35.029	35.029	4.85	310267	0.01	100000	
Se	82	3	HeHe	1.773	1.773	78.04	96	1.86	1000	
Fe	57	3	HeHe	350.454	350.454	2.00	28851	1.21	100000	
Cd	114	1	No Gas	0.066	0.066	1.72	593	0.01	1000	
Ca	44	1	No Gas	14.437	14.437	14.28	146125	0.01	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6368472	1.36	5896472	108.00	70	120	
Sc	45	2	he	1387716	2.75	1271268	109.16	70	120	

Ge	72	1	No Gas	685116	1.05	682805	100.34	70	120	
In	115	1	No Gas	3604965	1.33	3697856	97.49	70	120	
Tb	159	1	No Gas	4037388	0.99	4404848	91.66	70	120	
Bi	209	1	No Gas	2110971	1.04	1997135	105.70	70	120	
Sc	45	3	HeHe	138957	0.63	132951	104.52	70	120	

Sample Report

Sample Table

Sample Name	9980875003
Data File Name	132SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:23:28-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4212

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	17.449	17.449	1.45	601029	0.00	1000	
Cr	52	1	No Gas	15.474	15.474	0.62	490414	0.00	1000	
Mn	55	1	No Gas	7.186	7.186	1.16	305527	0.00	1000	
Co	59	1	No Gas	0.587	0.587	2.18	20312	0.00	1000	
Ni	60	1	No Gas	2.288	2.288	8.79	38256	0.01	1000	
Cu	63	1	No Gas	1.248	1.248	1.99	23618	0.01	1000	
Sr	88	1	No Gas	3.084	3.084	1.59	133267	0.00	1000	
Ag	107	1	No Gas	0.019	0.019	27.74	374	0.01	1000	
Al	27	1	No Gas	15491.757	15491.757	0.25	315324973	0.00	100000	
Sn	118	1	No Gas	0.673	0.673	17.13	7191	0.01	100	
Ti	47	1	No Gas	142.643	142.643	1.31	403733	0.04	2000	
Zn	66	1	No Gas	3.990	3.990	5.89	19474	0.02	1000	
As	75	3	HeHe	0.712	0.712	13.86	276	0.26	1000	
As	75	1	No Gas	0.865	0.865	18.59	29684	0.00	1000	
Sb	121	1	No Gas	1.460	1.460	8.10	20580	0.01	100	
Hg	201	1	No Gas	0.041	0.041	51.27	90	0.05	4	
Be	9	1	No Gas	0.130	0.130	6.13	491	0.03	1000	
Pb	208	1	No Gas	10.514	10.514	1.64	300507	0.00	1000	
Se	82	1	No Gas	2.202	2.202	44.44	460	0.48	1000	
Mo	98	1	No Gas	1.150	1.150	12.61	13793	0.01	2000	
Ba	137	1	No Gas	9.071	9.071	0.80	41867	0.02	1000	
Tl	205	1	No Gas	0.046	0.046	5.65	985	0.00	1000	
U	238	1	No Gas	0.880	0.880	5.56	23367	0.00	1000	
Na	23	2	he	22.823	22.823	2.59	159928	0.01	100000	
Mg	24	2	he	302.086	302.086	0.65	509981	0.06	100000	
K	39	2	he	475.934	475.934	1.86	1500854	0.03	100000	
Se	82	3	HeHe	2.363	2.363	6.42	110	2.16	1000	
Fe	57	3	HeHe	1558.758	1558.758	2.21	132388	1.18	100000	
Cd	114	1	No Gas	0.053	0.053	4.01	483	0.01	1000	
Ca	44	1	No Gas	40.305	40.305	7.12	170561	0.02	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6436461	2.51	5896472	109.16	70	120	
Sc	45	2	he	1419076	0.98	1271268	111.63	70	120	
Ge	72	1	No Gas	683143	1.19	682805	100.05	70	120	

In	115	1	No Gas	3575649	3.20	3697856	96.70	70	120	
Tb	159	1	No Gas	4148156	2.44	4404848	94.17	70	120	
Bi	209	1	No Gas	2131664	1.94	1997135	106.74	70	120	
Sc	45	3	HeHe	144127	2.65	132951	108.41	70	120	

Sample Report

Sample Table

Sample Name	9980875004
Data File Name	133SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:26:58-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4301

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	6.372	6.372	0.88	220081	0.00	1000	
Cr	52	1	No Gas	4.737	4.737	1.30	158112	0.00	1000	
Mn	55	1	No Gas	6.230	6.230	0.83	269195	0.00	1000	
Co	59	1	No Gas	0.203	0.203	5.92	7213	0.00	1000	
Ni	60	1	No Gas	-1.159	-1.159	-4.01	11668	-0.01	1000	
Cu	63	1	No Gas	0.842	0.842	2.20	16117	0.01	1000	
Sr	88	1	No Gas	2.474	2.474	0.60	106840	0.00	1000	
Ag	107	1	No Gas	0.020	0.020	31.35	389	0.01	1000	
Al	27	1	No Gas	4035.455	4035.455	1.74	82033625	0.00	100000	
Sn	118	1	No Gas	0.946	0.946	10.38	10126	0.01	100	
Ti	47	1	No Gas	110.768	110.768	0.49	313274	0.04	2000	
Zn	66	1	No Gas	4.193	4.193	2.71	20404	0.02	1000	
As	75	3	HeHe	1.057	1.057	5.47	364	0.29	1000	
As	75	1	No Gas	1.379	1.379	17.60	32192	0.00	1000	
Sb	121	1	No Gas	0.771	0.771	15.79	11026	0.01	100	
Hg	201	1	No Gas	0.068	0.068	3.82	124	0.05	4	
Be	9	1	No Gas	0.049	0.049	14.35	201	0.02	1000	
Pb	208	1	No Gas	16.737	16.737	0.78	473148	0.00	1000	
Se	82	1	No Gas	1.045	1.045	58.77	163	0.64	1000	
Mo	98	1	No Gas	0.632	0.632	16.36	8036	0.01	2000	
Ba	137	1	No Gas	6.829	6.829	1.68	31357	0.02	1000	
Tl	205	1	No Gas	0.029	0.029	10.23	630	0.00	1000	
U	238	1	No Gas	0.272	0.272	2.55	7169	0.00	1000	
Na	23	2	he	45.167	45.167	8.38	156907	0.03	100000	
Mg	24	2	he	247.898	247.898	4.72	292085	0.08	100000	
K	39	2	he	215.256	215.256	4.85	559252	0.04	100000	
Se	82	3	HeHe	0.740	0.740	44.14	72	1.02	1000	
Fe	57	3	HeHe	1677.248	1677.248	8.32	127128	1.32	100000	
Cd	114	1	No Gas	0.063	0.063	11.33	570	0.01	1000	
Ca	44	1	No Gas	55.253	55.253	5.39	183569	0.03	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6428595	1.64	5896472	109.02	70	120	
Sc	45	2	he	991156	2.71	1271268	77.97	70	120	
Ge	72	1	No Gas	688210	0.12	682805	100.79	70	120	

In	115	1	No Gas	3615172	0.81	3697856	97.76	70	120	
Tb	159	1	No Gas	4124633	1.74	4404848	93.64	70	120	
Bi	209	1	No Gas	2108645	0.53	1997135	105.58	70	120	
Sc	45	3	HeHe	129084	7.00	132951	97.09	70	120	

Sample Report

Sample Table

Sample Name	9980875005
Data File Name	134SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:30:28-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4302

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	18.507	18.507	1.06	647434	0.00	1000	
Cr	52	1	No Gas	25.934	25.934	0.58	826928	0.00	1000	
Mn	55	1	No Gas	6.358	6.358	1.56	278654	0.00	1000	
Co	59	1	No Gas	0.827	0.827	4.00	28969	0.00	1000	
Ni	60	1	No Gas	5.453	5.453	2.71	63662	0.01	1000	
Cu	63	1	No Gas	2.804	2.804	1.57	53079	0.01	1000	
Sr	88	1	No Gas	3.471	3.471	0.81	152371	0.00	1000	
Ag	107	1	No Gas	0.016	0.016	20.34	322	0.00	1000	
Al	27	1	No Gas	19984.570	19984.570	0.12	413218887	0.00	100000	
Sn	118	1	No Gas	0.576	0.576	19.56	6276	0.01	100	
Ti	47	1	No Gas	108.394	108.394	0.54	311784	0.03	2000	
Zn	66	1	No Gas	7.582	7.582	2.64	36833	0.02	1000	
As	75	3	HeHe	0.719	0.719	10.52	276	0.26	1000	
As	75	1	No Gas	0.928	0.928	39.92	30464	0.00	1000	
Sb	121	1	No Gas	0.634	0.634	13.54	9129	0.01	100	
Hg	201	1	No Gas	0.079	0.079	17.99	137	0.06	4	
Be	9	1	No Gas	0.194	0.194	9.30	729	0.03	1000	
Pb	208	1	No Gas	20.383	20.383	2.01	569456	0.00	1000	
Se	82	1	No Gas	7.108	7.108	9.18	1728	0.41	1000	
Mo	98	1	No Gas	0.755	0.755	12.65	9471	0.01	2000	
Ba	137	1	No Gas	9.043	9.043	0.45	41590	0.02	1000	
Tl	205	1	No Gas	0.040	0.040	16.99	837	0.00	1000	
U	238	1	No Gas	1.583	1.583	3.44	41008	0.00	1000	
Na	23	2	he	17.843	17.843	4.08	145982	0.01	100000	
Mg	24	2	he	256.674	256.674	2.17	434870	0.06	100000	
K	39	2	he	351.926	351.926	0.97	1172195	0.03	100000	
Se	82	3	HeHe	5.524	5.524	25.61	164	3.36	1000	
Fe	57	3	HeHe	1568.321	1568.321	0.79	132053	1.19	100000	
Cd	114	1	No Gas	0.046	0.046	15.08	433	0.01	1000	
Ca	44	1	No Gas	60.441	60.441	0.99	191406	0.03	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6538558	2.70	5896472	110.89	70	120	
Sc	45	2	he	1424105	0.62	1271268	112.02	70	120	
Ge	72	1	No Gas	679473	1.51	682805	99.51	70	120	

In	115	1	No Gas	3628220	2.10	3697856	98.12	70	120	
Tb	159	1	No Gas	4133026	1.66	4404848	93.83	70	120	
Bi	209	1	No Gas	2084823	3.57	1997135	104.39	70	120	
Sc	45	3	HeHe	142829	1.34	132951	107.43	70	120	

Sample Report

Sample Table

Sample Name	9980875006
Data File Name	135SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:33:56-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4303

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	16.244	16.244	1.49	578746	0.00	1000	
Cr	52	1	No Gas	21.635	21.635	0.75	704280	0.00	1000	
Mn	55	1	No Gas	5.854	5.854	1.44	264070	0.00	1000	
Co	59	1	No Gas	0.758	0.758	0.82	27063	0.00	1000	
Ni	60	1	No Gas	4.036	4.036	1.07	53516	0.01	1000	
Cu	63	1	No Gas	2.372	2.372	1.37	45808	0.01	1000	
Sr	88	1	No Gas	3.275	3.275	1.27	146400	0.00	1000	
Ag	107	1	No Gas	0.017	0.017	4.37	341	0.00	1000	
Al	27	1	No Gas	17760.244	17760.244	1.96	373814163	0.00	100000	
Sn	118	1	No Gas	0.561	0.561	17.12	6131	0.01	100	
Ti	47	1	No Gas	97.531	97.531	0.26	285609	0.03	2000	
Zn	66	1	No Gas	3.816	3.816	1.72	19309	0.02	1000	
As	75	3	HeHe	0.583	0.583	25.68	232	0.25	1000	
As	75	1	No Gas	0.521	0.521	43.67	28940	0.00	1000	
Sb	121	1	No Gas	0.513	0.513	9.39	7435	0.01	100	
Hg	201	1	No Gas	0.060	0.060	22.55	115	0.05	4	
Be	9	1	No Gas	0.168	0.168	9.70	647	0.03	1000	
Pb	208	1	No Gas	18.129	18.129	1.43	515802	0.00	1000	
Se	82	1	No Gas	6.258	6.258	9.81	1534	0.41	1000	
Mo	98	1	No Gas	0.659	0.659	20.17	8418	0.01	2000	
Ba	137	1	No Gas	7.869	7.869	1.97	36982	0.02	1000	
Tl	205	1	No Gas	0.034	0.034	25.14	726	0.00	1000	
U	238	1	No Gas	1.470	1.470	1.68	38813	0.00	1000	
Na	23	2	he	16.855	16.855	4.53	141818	0.01	100000	
Mg	24	2	he	218.278	218.278	1.26	366550	0.06	100000	
K	39	2	he	299.243	299.243	2.00	1021101	0.03	100000	
Se	82	3	HeHe	4.941	4.941	28.97	158	3.13	1000	
Fe	57	3	HeHe	1264.909	1264.909	1.08	109288	1.16	100000	
Cd	114	1	No Gas	0.051	0.051	16.05	470	0.01	1000	
Ca	44	1	No Gas	48.034	48.034	10.04	183421	0.03	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6655442	1.68	5896472	112.87	70	120	
Sc	45	2	he	1411551	1.69	1271268	111.03	70	120	
Ge	72	1	No Gas	693802	1.54	682805	101.61	70	120	

In	115	1	No Gas	3640275	2.20	3697856	98.44	70	120	
Tb	159	1	No Gas	4222838	0.47	4404848	95.87	70	120	
Bi	209	1	No Gas	2121942	1.95	1997135	106.25	70	120	
Sc	45	3	HeHe	146529	2.75	132951	110.21	70	120	

Sample Report

Sample Table

Sample Name	9980875007
Data File Name	136SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:37:26-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4304

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	7.811	7.811	3.64	271286	0.00	1000	
Cr	52	1	No Gas	5.598	5.598	1.49	185982	0.00	1000	
Mn	55	1	No Gas	11.755	11.755	2.91	480476	0.00	1000	
Co	59	1	No Gas	0.454	0.454	1.51	15878	0.00	1000	
Ni	60	1	No Gas	-0.565	-0.565	-13.21	16358	0.00	1000	
Cu	63	1	No Gas	4.280	4.280	1.69	79855	0.01	1000	
Sr	88	1	No Gas	4.427	4.427	3.26	192406	0.00	1000	
Ag	107	1	No Gas	0.082	0.082	8.90	1508	0.01	1000	
Al	27	1	No Gas	4142.763	4142.763	1.79	84808847	0.00	100000	
Sn	118	1	No Gas	1.206	1.206	3.79	12765	0.01	100	
Ti	47	1	No Gas	61.854	61.854	2.10	176290	0.04	2000	
Zn	66	1	No Gas	14.478	14.478	3.57	68843	0.02	1000	
As	75	3	HeHe	0.836	0.836	8.93	313	0.27	1000	
As	75	1	No Gas	0.948	0.948	31.16	30278	0.00	1000	
Sb	121	1	No Gas	0.518	0.518	4.75	7402	0.01	100	
Hg	201	1	No Gas	0.323	0.323	11.59	465	0.07	4	
Be	9	1	No Gas	0.097	0.097	12.22	375	0.03	1000	
Pb	208	1	No Gas	16.050	16.050	1.46	462019	0.00	1000	
Se	82	1	No Gas	0.790	0.790	65.87	100	0.79	1000	
Mo	98	1	No Gas	0.506	0.506	17.61	6546	0.01	2000	
Ba	137	1	No Gas	16.840	16.840	1.77	77692	0.02	1000	
Tl	205	1	No Gas	0.040	0.040	11.68	878	0.00	1000	
U	238	1	No Gas	0.344	0.344	6.92	9218	0.00	1000	
Na	23	2	he	21.891	21.891	3.91	155405	0.01	100000	
Mg	24	2	he	238.030	238.030	0.85	397211	0.06	100000	
K	39	2	he	279.069	279.069	1.72	961104	0.03	100000	
Se	82	3	HeHe	1.112	1.112	34.88	85	1.31	1000	
Fe	57	3	HeHe	2020.910	2020.910	1.89	166825	1.21	100000	
Cd	114	1	No Gas	0.118	0.118	3.53	1013	0.01	1000	
Ca	44	1	No Gas	334.091	334.091	4.11	433022	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6473621	0.57	5896472	109.79	70	120	
Sc	45	2	he	1402684	1.96	1271268	110.34	70	120	
Ge	72	1	No Gas	692154	2.46	682805	101.37	70	120	

In	115	1	No Gas	3589843	1.39	3697856	97.08	70	120	
Tb	159	1	No Gas	4148596	1.75	4404848	94.18	70	120	
Bi	209	1	No Gas	2147398	1.58	1997135	107.52	70	120	
Sc	45	3	HeHe	140094	1.37	132951	105.37	70	120	

Sample Report

Sample Table

Sample Name	9980875008
Data File Name	137SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:40:55-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4305

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	15.228	15.228	1.04	535695	0.00	1000	
Cr	52	1	No Gas	12.365	12.365	2.07	402582	0.00	1000	
Mn	55	1	No Gas	65.920	65.920	0.18	2571721	0.00	1000	
Co	59	1	No Gas	1.517	1.517	0.14	53174	0.00	1000	
Ni	60	1	No Gas	1.802	1.802	4.91	35250	0.01	1000	
Cu	63	1	No Gas	4.640	4.640	0.43	87833	0.01	1000	
Sr	88	1	No Gas	12.526	12.526	1.44	552487	0.00	1000	
Ag	107	1	No Gas	0.057	0.057	20.72	1078	0.01	1000	
Al	27	1	No Gas	8265.524	8265.524	0.73	171753519	0.00	100000	
Sn	118	1	No Gas	0.973	0.973	8.07	10559	0.01	100	
Ti	47	1	No Gas	64.979	64.979	1.20	187978	0.03	2000	
Zn	66	1	No Gas	38.615	38.615	0.37	184937	0.02	1000	
As	75	3	HeHe	1.296	1.296	5.87	494	0.26	1000	
As	75	1	No Gas	1.040	1.040	4.38	31193	0.00	1000	
Sb	121	1	No Gas	0.310	0.310	11.90	4567	0.01	100	
Hg	201	1	No Gas	0.131	0.131	6.95	212	0.06	4	
Be	9	1	No Gas	0.344	0.344	2.94	1278	0.03	1000	
Pb	208	1	No Gas	25.800	25.800	0.81	749586	0.00	1000	
Se	82	1	No Gas	0.993	0.993	46.73	154	0.64	1000	
Mo	98	1	No Gas	0.430	0.430	25.59	5825	0.01	2000	
Ba	137	1	No Gas	31.164	31.164	0.90	147405	0.02	1000	
Tl	205	1	No Gas	0.088	0.088	6.85	1908	0.00	1000	
U	238	1	No Gas	0.767	0.767	2.45	20685	0.00	1000	
Na	23	2	he	40.507	40.507	0.56	213845	0.02	100000	
Mg	24	2	he	814.478	814.478	1.87	1391126	0.06	100000	
K	39	2	he	871.626	871.626	0.98	2593998	0.03	100000	
Se	82	3	HeHe	1.922	1.922	38.03	101	1.89	1000	
Fe	57	3	HeHe	5163.089	5163.089	0.56	436975	1.18	100000	
Cd	114	1	No Gas	0.094	0.094	28.54	833	0.01	1000	
Ca	44	1	No Gas	1584.481	1584.481	0.30	1569181	0.10	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6570836	1.44	5896472	111.44	70	120	
Sc	45	2	he	1436111	0.84	1271268	112.97	70	120	
Ge	72	1	No Gas	696797	1.85	682805	102.05	70	120	

In	115	1	No Gas	3668680	1.91	3697856	99.21	70	120	
Tb	159	1	No Gas	4253487	2.17	4404848	96.56	70	120	
Bi	209	1	No Gas	2167714	2.22	1997135	108.54	70	120	
Sc	45	3	HeHe	143712	0.62	132951	108.09	70	120	

Sample Report

Sample Table

Sample Name	9980875009
Data File Name	138SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:44:25-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4306

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	23.871	23.871	0.68	849926	0.00	1000	
Cr	52	1	No Gas	69.361	69.361	0.63	2231459	0.00	1000	
Mn	55	1	No Gas	20.203	20.203	1.36	823371	0.00	1000	
Co	59	1	No Gas	1.775	1.775	2.28	62980	0.00	1000	
Ni	60	1	No Gas	31.355	31.355	0.90	271479	0.01	1000	
Cu	63	1	No Gas	4.035	4.035	0.14	77460	0.01	1000	
Sr	88	1	No Gas	6.301	6.301	0.92	281563	0.00	1000	
Ag	107	1	No Gas	0.018	0.018	19.10	363	0.01	1000	
Al	27	1	No Gas	33552.044	33552.044	0.29	706317216	0.00	100000	
Sn	118	1	No Gas	0.676	0.676	11.08	7269	0.01	100	
Ti	47	1	No Gas	234.049	234.049	1.25	685023	0.03	2000	
Zn	66	1	No Gas	46.189	46.189	1.96	223938	0.02	1000	
As	75	3	HeHe	0.698	0.698	12.58	269	0.26	1000	
As	75	1	No Gas	0.707	0.707	41.75	29911	0.00	1000	
Sb	121	1	No Gas	0.402	0.402	7.49	5801	0.01	100	
Hg	201	1	No Gas	0.051	0.051	15.85	103	0.05	4	
Be	9	1	No Gas	0.295	0.295	8.19	1115	0.03	1000	
Pb	208	1	No Gas	44.881	44.881	0.59	1276700	0.00	1000	
Se	82	1	No Gas	4.865	4.865	14.36	1170	0.42	1000	
Mo	98	1	No Gas	2.174	2.174	2.74	25508	0.01	2000	
Ba	137	1	No Gas	36.792	36.792	0.65	170863	0.02	1000	
Tl	205	1	No Gas	0.082	0.082	3.83	1734	0.00	1000	
U	238	1	No Gas	0.902	0.902	1.91	23831	0.00	1000	
Na	23	2	he	44.945	44.945	5.97	226132	0.02	100000	
Mg	24	2	he	744.465	744.465	3.47	1267566	0.06	100000	
K	39	2	he	1216.156	1216.156	1.54	3519130	0.03	100000	
Se	82	3	HeHe	5.347	5.347	25.71	161	3.31	1000	
Fe	57	3	HeHe	4191.084	4191.084	0.44	353460	1.19	100000	
Cd	114	1	No Gas	0.121	0.121	4.97	1043	0.01	1000	
Ca	44	1	No Gas	198.798	198.798	0.89	321498	0.06	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6657095	1.47	5896472	112.90	70	120	
Sc	45	2	he	1431711	1.28	1271268	112.62	70	120	
Ge	72	1	No Gas	696676	0.15	682805	102.03	70	120	

In	115	1	No Gas	3610097	1.66	3697856	97.63	70	120	
Tb	159	1	No Gas	4176631	1.11	4404848	94.82	70	120	
Bi	209	1	No Gas	2122758	1.07	1997135	106.29	70	120	
Sc	45	3	HeHe	143192	1.09	132951	107.70	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	139_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:47:54-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	97.020	2.638	3449386	2.14	100	97.0	90	110	
Cr	52	1	No Gas	95.099	1.277	3054214	0.76	100	95.1	90	110	
Mn	55	1	No Gas	99.998	2.156	3932659	1.92	100	100.0	90	110	
Co	59	1	No Gas	96.188	1.904	3396798	1.03	100	96.2	90	110	
Ni	60	1	No Gas	91.998	2.057	755019	1.42	100	92.0	90	110	
Cu	63	1	No Gas	97.193	1.382	1849989	0.98	100	97.2	90	110	
Sr	88	1	No Gas	98.460	1.910	4397167	1.14	100	98.5	90	110	
Ag	107	1	No Gas	101.377	0.138	1883798	0.71	100	101.4	90	110	
Al	27	1	No Gas	100.879	3.295	2132575	2.74	100	100.9	90	110	
Sn	118	1	No Gas	98.598	1.357	1068414	0.87	100	98.6	90	110	
Tl	47	1	No Gas	88.327	1.341	258677	0.85	100	88.3	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	94.152	2.272	455403	1.75	100	94.2	90	110	
As	75	3	HeHe	91.773	1.530	34768	1.03	100	91.8	90	110	
As	75	1	No Gas	93.326	0.973	503196	0.99	100	93.3	90	110	
Sb	121	1	No Gas	99.758	3.136	1455330	3.76	100	99.8	90	110	
Hg	201	1	No Gas	1.895	1.518	2560	1.32	2	94.7	90	110	
Be	9	1	No Gas	93.170	1.693	343593	1.06	100	93.2	90	110	
Pb	208	1	No Gas	95.653	2.891	2756947	2.70	100	95.7	90	110	
Se	82	1	No Gas	91.317	1.066	23834	1.72	100	91.3	90	110	
Mo	98	1	No Gas	97.339	0.684	1141902	0.43	100	97.3	90	110	
Ba	137	1	No Gas	98.643	1.348	468187	1.64	100	98.6	90	110	
Tl	205	1	No Gas	96.905	0.923	2049535	0.95	100	96.9	90	110	
U	238	1	No Gas	103.028	0.495	2754211	0.86	100	103.0	90	110	
Na	23	2	he	1046.301	0.600	3131610	1.02	1000	104.6	90	110	
Mg	24	2	he	1026.113	1.411	1730880	0.49	1000	102.6	90	110	
K	39	2	he	1035.370	2.913	3000735	1.64	1000	103.5	90	110	
Se	82	3	HeHe	90.772	3.631	1695	3.30	100	90.8	90	110	
Fe	57	3	HeHe	1029.229	1.194	88078	1.16	1000	102.9	90	110	
Cd	114	1	No Gas	95.278	0.652	810526	0.88	100	95.3	90	110	
Ca	44	1	No Gas	935.184	1.606	995246	1.16	1000	93.5	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6655609	0.93	5896472	112.87	70	120	
Sc	45	2	he	1418419	1.60	1271268	111.58	70	120	
Ge	72	1	No Gas	709310	0.80	682805	103.88	70	120	
In	115	1	No Gas	3729345	0.82	3697856	100.85	70	120	
Tb	159	1	No Gas	4269476	0.81	4404848	96.93	70	120	
Bi	209	1	No Gas	2151151	0.39	1997135	107.71	70	120	
Sc	45	3	HeHe	145060	0.58	132951	109.11	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	140_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:51:18-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.073	53.4	3830	37.2	9	
Cr	52	1	No Gas	0.090	9.1	14518	1.3	4	
Mn	55	1	No Gas	0.064	69.8	37128	1.7	25	
Co	59	1	No Gas	0.010	53.8	619	30.8	1	
Ni	60	1	No Gas	-2.328	-1.1	2667	5.4	25	
Cu	63	1	No Gas	0.196	8.9	4249	4.6	25	
Sr	88	1	No Gas	0.012	43.7	622	37.8	25	
Ag	107	1	No Gas	0.024	16.7	474	14.3	9	
Al	27	1	No Gas	0.930	5.9	28349	3.9	1000000	
Sn	118	1	No Gas	2.171	23.1	23003	24.0	25	
Tl	47	1	No Gas	0.726	22.7	2382	21.8	10000	
Zn	66	1	No Gas	0.457	1.6	2990	1.8	25	
As	75	3	HeHe	0.647	20.6	248	18.8	9	
As	75	1	No Gas	0.878	16.0	29763	5.0	9	
Sb	121	1	No Gas	0.428	29.3	6183	29.9	4	
Hg	201	1	No Gas	0.022	35.4	64	15.6	0.04	
Be	9	1	No Gas	0.011	26.9	67	18.3	1	
Pb	208	1	No Gas	0.047	12.4	1630	10.9	4	
Se	82	1	No Gas	1.323	61.8	232	88.5	25	
Mo	98	1	No Gas	1.819	29.0	21542	28.9	10000	
Ba	137	1	No Gas	0.057	20.8	307	18.8	25	
Tl	205	1	No Gas	0.049	8.3	1045	7.7	1	
U	238	1	No Gas	0.489	25.1	12836	25.2	25	
Na	23	2	he	11.808	19.9	128218	4.8	2500000	
Mg	24	2	he	0.390	9.7	830	7.4	2500000	
K	39	2	he	4.978	20.5	237233	0.3	5000000	
Se	82	3	HeHe	-0.133	-284.0	64	10.3	25	
Fe	57	3	HeHe	16.135	11.2	1541	9.6	2500000	
Cd	114	1	No Gas	0.078	28.3	693	27.0	1	
Ca	44	1	No Gas	-19.430	-15.1	117664	1.8	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6434950	2.88	5896472	109.13	70	120	
Sc	45	2	he	1422451	0.90	1271268	111.89	70	120	
Ge	72	1	No Gas	694946	0.90	682805	101.78	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3610899	1.20	3697856	97.65	70	120	
Tb	159	1	No Gas	4116856	1.82	4404848	93.46	70	120	
Bi	209	1	No Gas	2103391	0.76	1997135	105.32	70	120	
Sc	45	3	HeHe	142587	1.01	132951	107.25	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	141LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:54:47-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag	
V	51	1	No Gas	2.151	0.756	76838	1.20	2	107.5	70	130		
Cr	52	1	No Gas	2.152	1.590	80000	1.39	2	107.6	70	130		
Mn	55	1	No Gas	4.950	1.318	226087	1.09	5	99.0	70	130		
Co	59	1	No Gas	4.805	0.837	167924	0.46	5	96.1	70	130		
Ni	60	1	No Gas	2.390	3.331	39896	1.06	5	47.8	70	130	LLCCV Main CR1 Failed	N/A
Cu	63	1	No Gas	4.932	2.037	93369	1.76	5	98.6	70	130		
Sr	88	1	No Gas	4.492	0.794	198281	0.48	5	89.8	70	130		
Ag	107	1	No Gas	2.010	1.298	36459	1.76	2	100.5	70	130		
Al	27	1	No Gas	81.061	1.372	1694958	0.81	80	101.3	70	130		
Sn	118	1	No Gas	2.986	11.641	31743	11.87	2	149.3	70	130	LLCCV Main CR1 Failed	N/A
Tl	47	1	No Gas	4.917	3.332	14538	3.15	5	98.3	70	130		
Zn	66	1	No Gas	4.953	4.076	24499	3.64	5	99.1	70	130		
As	75	3	HeHe	2.956	7.685	1129	9.16	3	98.5	70	130		
As	75	1	No Gas	3.650	6.309	44390	2.33	3	121.7	70	130		
Sb	121	1	No Gas	2.188	6.650	31245	6.89	2	109.4	70	130		
Hg	201	1	No Gas	0.181	20.185	272	15.50	0.2	90.7	70	130		
Be	9	1	No Gas	0.945	5.076	3468	4.46	1	94.5	70	130		
Pb	208	1	No Gas	2.042	3.862	58045	1.78	2	102.1	70	130		
Se	82	1	No Gas	6.015	8.947	1454	8.99	5	120.3	70	130		
Mo	98	1	No Gas	2.805	10.222	32912	10.13	2	140.2	70	130	LLCCV Main CR1 Failed	N/A
Ba	137	1	No Gas	5.141	2.362	23681	1.59	5	102.8	70	130		
Tl	205	1	No Gas	0.959	2.731	19921	1.58	1	95.9	70	130		
U	238	1	No Gas	4.833	2.919	126784	0.86	5	96.7	70	130		
Na	23	2	he	114.032	1.060	421027	1.38	100	114.0	70	130		
Mg	24	2	he	104.525	1.055	174959	1.32	100	104.5	70	130		
K	39	2	he	115.343	1.360	528099	1.33	100	115.3	70	130		
Se	82	3	HeHe	4.659	20.492	152	13.54	5	93.2	70	130		
Fe	57	3	HeHe	60.813	4.575	5394	7.17	50	121.6	70	130		
Cd	114	1	No Gas	1.028	4.614	8579	5.46	1	102.8	70	130		
Ca	44	1	No Gas	76.584	3.644	207058	0.69	100	76.6	70	130		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6575161	0.58	5896472	111.51	70	120	
Sc	45	2	he	1406092	0.90	1271268	110.61	70	120	
Ge	72	1	No Gas	703711	1.53	682805	103.06	70	120	
In	115	1	No Gas	3636374	0.90	3697856	98.34	70	120	
Tb	159	1	No Gas	4136338	0.78	4404848	93.90	70	120	
Bi	209	1	No Gas	2111260	2.05	1997135	105.71	70	120	
Sc	45	3	HeHe	145232	2.80	132951	109.24	70	120	

Sample Report

Sample Table

Sample Name	9980875010
Data File Name	142SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T20:58:17-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4307

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	8.334	8.334	1.19	293004	0.00	1000	
Cr	52	1	No Gas	8.605	8.605	1.23	283019	0.00	1000	
Mn	55	1	No Gas	108.882	108.882	1.39	4213438	0.00	1000	
Co	59	1	No Gas	0.788	0.788	2.04	27678	0.00	1000	
Ni	60	1	No Gas	0.113	0.113	89.97	21881	0.00	1000	
Cu	63	1	No Gas	3.850	3.850	1.18	72782	0.01	1000	
Sr	88	1	No Gas	6.472	6.472	1.60	284712	0.00	1000	
Ag	107	1	No Gas	0.223	0.223	6.51	4119	0.01	1000	
Al	27	1	No Gas	6436.568	6436.568	2.23	133402917	0.00	100000	
Sn	118	1	No Gas	3.970	3.970	9.57	42633	0.01	100	
Ti	47	1	No Gas	65.459	65.459	0.72	188857	0.03	2000	
Zn	66	1	No Gas	28.590	28.590	3.05	136765	0.02	1000	
As	75	3	HeHe	1.099	1.099	3.11	414	0.27	1000	
As	75	1	No Gas	1.022	1.022	50.05	31034	0.00	1000	
Sb	121	1	No Gas	0.362	0.362	22.03	5342	0.01	100	
Hg	201	1	No Gas	0.267	0.267	12.63	395	0.07	4	
Be	9	1	No Gas	0.181	0.181	3.35	684	0.03	1000	
Pb	208	1	No Gas	18.311	18.311	0.88	531824	0.00	1000	
Se	82	1	No Gas	1.493	1.493	21.47	282	0.53	1000	
Mo	98	1	No Gas	0.827	0.827	21.30	10425	0.01	2000	
Ba	137	1	No Gas	20.151	20.151*	1.01	93262	0.02	1000	
Tl	205	1	No Gas	0.046	0.046	23.76	1000	0.00	1000	
U	238	1	No Gas	0.633	0.633	4.85	17073	0.00	1000	
Na	23	2	he	27.244	27.244	2.26	170844	0.02	100000	
Mg	24	2	he	325.340	325.340	1.42	542971	0.06	100000	
K	39	2	he	325.521	325.521	2.20	1084645	0.03	100000	
Se	82	3	HeHe	0.542	0.542	91.71	76	0.71	1000	
Fe	57	3	HeHe	2244.864	2244.864	2.66	187511	1.20	100000	
Cd	114	1	No Gas	0.245	0.245	7.58	2104	0.01	1000	
Ca	44	1	No Gas	632.964	632.964	0.59	707676	0.09	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6553027	1.17	5896472	111.13	70	120	
Sc	45	2	he	1403041	1.31	1271268	110.37	70	120	
Ge	72	1	No Gas	697369	0.23	682805	102.13	70	120	

In	115	1	No Gas	3678408	1.33	3697856	99.47	70	120	
Tb	159	1	No Gas	4161227	1.49	4404848	94.47	70	120	
Bi	209	1	No Gas	2166588	0.83	1997135	108.48	70	120	
Sc	45	3	HeHe	141794	1.97	132951	106.65	70	120	

Sample Report

Sample Table

Sample Name	9980875011
Data File Name	143SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T21:01:46-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4308

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	14.389	14.389	1.14	500041	0.00	1000	
Cr	52	1	No Gas	9.887	9.887	1.18	320284	0.00	1000	
Mn	55	1	No Gas	239.552	239.552	0.91	9137482	0.00	1000	
Co	59	1	No Gas	2.078	2.078	2.41	71836	0.00	1000	
Ni	60	1	No Gas	2.060	2.060	3.78	36813	0.01	1000	
Cu	63	1	No Gas	25.593	25.593	0.63	475536	0.01	1000	
Sr	88	1	No Gas	13.454	13.454	0.66	586018	0.00	1000	
Ag	107	1	No Gas	0.156	0.156	6.32	2786	0.01	1000	
Al	27	1	No Gas	8922.970	8922.970	0.75	183112108	0.00	100000	
Sn	118	1	No Gas	1.663	1.663	7.16	17232	0.01	100	
Ti	47	1	No Gas	123.028	123.028	0.95	351231	0.04	2000	
Zn	66	1	No Gas	102.756	102.756	1.36	484650	0.02	1000	
As	75	3	HeHe	1.369	1.369	4.76	520	0.26	1000	
As	75	1	No Gas	1.352	1.352	4.74	32363	0.00	1000	
Sb	121	1	No Gas	0.511	0.511	4.05	7172	0.01	100	
Hg	201	1	No Gas	0.155	0.155	10.31	237	0.07	4	
Be	9	1	No Gas	0.226	0.226	9.60	839	0.03	1000	
Pb	208	1	No Gas	39.540	39.540	0.99	1109434	0.00	1000	
Se	82	1	No Gas	1.225	1.225	5.14	211	0.58	1000	
Mo	98	1	No Gas	0.609	0.609	23.97	7581	0.01	2000	
Ba	137	1	No Gas	35.291	35.291	1.90	159236	0.02	1000	
Tl	205	1	No Gas	0.075	0.075	8.23	1578	0.00	1000	
U	238	1	No Gas	0.671	0.671	4.85	17481	0.00	1000	
Na	23	2	he	41.355	41.355	1.67	217924	0.02	100000	
Mg	24	2	he	494.358	494.358	1.42	850700	0.06	100000	
K	39	2	he	645.699	645.699	0.46	1994763	0.03	100000	
Se	82	3	HeHe	0.554	0.554	130.26	77	0.72	1000	
Fe	57	3	HeHe	7983.069	7983.069	1.22	674122	1.18	100000	
Cd	114	1	No Gas	0.410	0.410	4.49	3344	0.01	1000	
Ca	44	1	No Gas	1183.407	1183.407	3.01	1192119	0.10	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6489752	1.27	5896472	110.06	70	120	
Sc	45	2	he	1446653	0.44	1271268	113.80	70	120	
Ge	72	1	No Gas	686039	0.35	682805	100.47	70	120	

In	115	1	No Gas	3528865	0.57	3697856	95.43	70	120	
Tb	159	1	No Gas	4057707	0.76	4404848	92.12	70	120	
Bi	209	1	No Gas	2093853	1.84	1997135	104.84	70	120	
Sc	45	3	HeHe	143420	1.46	132951	107.87	70	120	

Sample Report

Sample Table

Sample Name	9980875012
Data File Name	144SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T21:05:15-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4309

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	5.542	5.542	0.97	191695	0.00	1000	
Cr	52	1	No Gas	3.319	3.319	0.91	114363	0.00	1000	
Mn	55	1	No Gas	4.565	4.565	2.05	206717	0.00	1000	
Co	59	1	No Gas	0.220	0.220	3.69	7776	0.00	1000	
Ni	60	1	No Gas	-1.389	-1.389	-2.55	9903	-0.01	1000	
Cu	63	1	No Gas	0.674	0.674	3.61	13049	0.01	1000	
Sr	88	1	No Gas	2.446	2.446	1.74	105682	0.00	1000	
Ag	107	1	No Gas	0.017	0.017	13.71	330	0.01	1000	
Al	27	1	No Gas	3030.120	3030.120	1.81	61648583	0.00	100000	
Sn	118	1	No Gas	0.916	0.916	14.41	9651	0.01	100	
Ti	47	1	No Gas	61.193	61.193	1.91	173328	0.04	2000	
Zn	66	1	No Gas	6.476	6.476	3.90	31083	0.02	1000	
As	75	3	HeHe	1.189	1.189	9.71	443	0.27	1000	
As	75	1	No Gas	1.279	1.279	8.76	31724	0.00	1000	
Sb	121	1	No Gas	0.248	0.248	16.07	3567	0.01	100	
Hg	201	1	No Gas	0.094	0.094	23.60	159	0.06	4	
Be	9	1	No Gas	0.044	0.044	5.80	183	0.02	1000	
Pb	208	1	No Gas	9.784	9.784	1.10	278109	0.00	1000	
Se	82	1	No Gas	0.900	0.900	26.54	127	0.71	1000	
Mo	98	1	No Gas	0.493	0.493	25.84	6345	0.01	2000	
Ba	137	1	No Gas	9.305	9.305	1.89	42429	0.02	1000	
Tl	205	1	No Gas	0.025	0.025	4.19	548	0.00	1000	
U	238	1	No Gas	0.302	0.302	7.59	7995	0.00	1000	
Na	23	2	he	45.549	45.549	2.12	226619	0.02	100000	
Mg	24	2	he	155.189	155.189	1.74	262828	0.06	100000	
K	39	2	he	165.185	165.185	3.50	668638	0.02	100000	
Se	82	3	HeHe	-0.797	-0.797	-67.58	52	-1.54	1000	
Fe	57	3	HeHe	1389.486	1389.486	3.70	114772	1.21	100000	
Cd	114	1	No Gas	0.063	0.063	19.76	560	0.01	1000	
Ca	44	1	No Gas	37.991	37.991	10.98	168462	0.02	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6433062	0.42	5896472	109.10	70	120	
Sc	45	2	he	1423298	1.14	1271268	111.96	70	120	
Ge	72	1	No Gas	686189	1.75	682805	100.50	70	120	

In	115	1	No Gas	3556064	0.65	3697856	96.17	70	120	
Tb	159	1	No Gas	4097732	1.08	4404848	93.03	70	120	
Bi	209	1	No Gas	2119283	0.69	1997135	106.12	70	120	
Sc	45	3	HeHe	140135	1.78	132951	105.40	70	120	

Sample Report

Sample Table

Sample Name	9980875013
Data File Name	145SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T21:08:46-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4310

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	14.038	14.038	0.75	490616	0.00	1000	
Cr	52	1	No Gas	9.876	9.876	0.40	321745	0.00	1000	
Mn	55	1	No Gas	32.217	32.217	2.29	1266690	0.00	1000	
Co	59	1	No Gas	1.058	1.058	1.99	36932	0.00	1000	
Ni	60	1	No Gas	0.945	0.945	13.29	28310	0.00	1000	
Cu	63	1	No Gas	3.686	3.686	0.77	69435	0.01	1000	
Sr	88	1	No Gas	16.104	16.104	0.52	705479	0.00	1000	
Ag	107	1	No Gas	0.034	0.034	26.47	652	0.01	1000	
Al	27	1	No Gas	8185.315	8185.315	0.57	168969486	0.00	100000	
Sn	118	1	No Gas	0.887	0.887	11.98	9429	0.01	100	
Ti	47	1	No Gas	64.131	64.131	0.40	184292	0.03	2000	
Zn	66	1	No Gas	20.657	20.657	0.43	98674	0.02	1000	
As	75	3	HeHe	1.491	1.491	16.58	559	0.27	1000	
As	75	1	No Gas	1.654	1.654	5.64	34066	0.00	1000	
Sb	121	1	No Gas	0.242	0.242	6.62	3508	0.01	100	
Hg	201	1	No Gas	0.098	0.098	5.45	162	0.06	4	
Be	9	1	No Gas	0.360	0.360	6.71	1330	0.03	1000	
Pb	208	1	No Gas	11.883	11.883	0.66	333462	0.00	1000	
Se	82	1	No Gas	1.748	1.748	34.48	346	0.51	1000	
Mo	98	1	No Gas	0.425	0.425	29.84	5643	0.01	2000	
Ba	137	1	No Gas	39.605	39.605	3.72	185203	0.02	1000	
Tl	205	1	No Gas	0.071	0.071	14.91	1482	0.00	1000	
U	238	1	No Gas	0.628	0.628	2.73	16365	0.00	1000	
Na	23	2	he	51.079	51.079	2.36	244737	0.02	100000	
Mg	24	2	he	725.298	725.298	0.45	1237968	0.06	100000	
K	39	2	he	740.838	740.838	0.96	2236954	0.03	100000	
Se	82	3	HeHe	2.622	2.622	9.68	112	2.34	1000	
Fe	57	3	HeHe	5140.202	5140.202	1.74	428790	1.20	100000	
Cd	114	1	No Gas	0.078	0.078	32.33	687	0.01	1000	
Ca	44	1	No Gas	3005.149	3005.149	0.82	2833925	0.11	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6527384	1.52	5896472	110.70	70	120	
Sc	45	2	he	1434979	0.09	1271268	112.88	70	120	
Ge	72	1	No Gas	690005	1.68	682805	101.05	70	120	

In	115	1	No Gas	3585088	2.28	3697856	96.95	70	120	
Tb	159	1	No Gas	4206689	1.04	4404848	95.50	70	120	
Bi	209	1	No Gas	2092897	2.10	1997135	104.79	70	120	
Sc	45	3	HeHe	141679	2.07	132951	106.57	70	120	

Sample Report

Sample Table

Sample Name	9980875013L
Data File Name	146SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T21:12:15-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF25
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4311

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	2.799	2.799	2.50	101403	0.00	1000	
Cr	52	1	No Gas	2.036	2.036	3.23	77730	0.00	1000	
Mn	55	1	No Gas	6.306	6.306	1.11	283305	0.00	1000	
Co	59	1	No Gas	0.221	0.221	3.00	8113	0.00	1000	
Ni	60	1	No Gas	-1.708	-1.708	-0.62	7749	-0.02	1000	
Cu	63	1	No Gas	0.778	0.778	2.39	15556	0.00	1000	
Sr	88	1	No Gas	3.153	3.153	0.95	141752	0.00	1000	
Ag	107	1	No Gas	0.014	0.014	24.48	300	0.00	1000	
Al	27	1	No Gas	1622.825	1622.825	1.39	34359063	0.00	100000	
Sn	118	1	No Gas	0.306	0.306	24.32	3489	0.01	100	
Ti	47	1	No Gas	12.901	12.901	1.76	38289	0.03	2000	
Zn	66	1	No Gas	4.225	4.225	2.53	21409	0.02	1000	
As	75	3	HeHe	0.302	0.302	21.73	122	0.25	1000	
As	75	1	No Gas	0.682	0.682	17.77	29936	0.00	1000	
Sb	121	1	No Gas	0.106	0.106	17.38	1659	0.01	100	
Hg	201	1	No Gas	0.035	0.035	61.19	81	0.04	4	
Be	9	1	No Gas	0.059	0.059	23.93	247	0.02	1000	
Pb	208	1	No Gas	2.365	2.365	0.72	67783	0.00	1000	
Se	82	1	No Gas	0.863	0.863	73.94	121	0.71	1000	
Mo	98	1	No Gas	0.154	0.154	40.93	2666	0.01	2000	
Ba	137	1	No Gas	8.193	8.193	1.19	38225	0.02	1000	
Tl	205	1	No Gas	0.012	0.012	28.72	270	0.00	1000	
U	238	1	No Gas	0.134	0.134	4.09	3593	0.00	1000	
Na	23	2	he	16.377	16.377	4.50	144700	0.01	100000	
Mg	24	2	he	139.655	139.655	1.76	241658	0.06	100000	
K	39	2	he	147.027	147.027	3.21	633156	0.02	100000	
Se	82	3	HeHe	-1.000	-1.000	-47.60	50	-2.00	1000	
Fe	57	3	HeHe	1059.467	1059.467	4.83	90268	1.17	100000	
Cd	114	1	No Gas	0.034	0.034	10.85	337	0.01	1000	
Ca	44	1	No Gas	573.427	573.427	0.83	668046	0.09	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6693321	1.37	5896472	113.51	70	120	
Sc	45	2	he	1454128	1.63	1271268	114.38	70	120	
Ge	72	1	No Gas	703349	1.87	682805	103.01	70	120	

In	115	1	No Gas	3698544	1.92	3697856	100.02	70	120	
Tb	159	1	No Gas	4192087	. 0.96	4404848	95.17	70	120	
Bi	209	1	No Gas	2129200	1.20	1997135	106.61	70	120	
Sc	45	3	HeHe	144610	3.88	132951	108.77	70	120	

Sample Report

Sample Table

Sample Name	9980875014
Data File Name	147SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T21:15:46-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF5
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4312

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	4.463	4.463	1.12	153783	0.00	1000	
Cr	52	1	No Gas	3.823	3.823	0.77	129263	0.00	1000	
Mn	55	1	No Gas	5.982	5.982	1.00	258687	0.00	1000	
Co	59	1	No Gas	0.182	0.182	8.40	6450	0.00	1000	
Ni	60	1	No Gas	-0.862	-0.862	-6.85	13896	-0.01	1000	
Cu	63	1	No Gas	2.275	2.275	0.54	42271	0.01	1000	
Sr	88	1	No Gas	7.191	7.191	0.71	308905	0.00	1000	
Ag	107	1	No Gas	0.014	0.014	33.45	285	0.00	1000	
Al	27	1	No Gas	3574.620	3574.620	1.55	72350738	0.00	100000	
Sn	118	1	No Gas	0.762	0.762	7.24	8113	0.01	100	
Ti	47	1	No Gas	33.745	33.745	0.68	95219	0.04	2000	
Zn	66	1	No Gas	3.452	3.452	5.98	16868	0.02	1000	
As	75	3	HeHe	1.338	1.338	37.34	385	0.35	1000	
As	75	1	No Gas	1.354	1.354	22.33	31939	0.00	1000	
Sb	121	1	No Gas	0.245	0.245	8.48	3552	0.01	100	
Hg	201	1	No Gas	0.084	0.084	29.38	145	0.06	4	
Be	9	1	No Gas	0.080	0.080	9.33	310	0.03	1000	
Pb	208	1	No Gas	15.442	15.442	1.46	435713	0.00	1000	
Se	82	1	No Gas	1.243	1.243	37.20	211	0.59	1000	
Mo	98	1	No Gas	0.493	0.493	24.73	6389	0.01	2000	
Ba	137	1	No Gas	24.272	24.272	0.38	111307	0.02	1000	
Tl	205	1	No Gas	0.020	0.020	29.21	441	0.00	1000	
U	238	1	No Gas	0.239	0.239	5.89	6294	0.00	1000	
Na	23	2	he	41.733	41.733	4.39	213821	0.02	100000	
Mg	24	2	he	143.523	143.523	2.41	241194	0.06	100000	
K	39	2	he	96.949	96.949	3.55	481205	0.02	100000	
Se	82	3	HeHe	0.922	0.922	130.70	65	1.42	1000	
Fe	57	3	HeHe	2198.247	2198.247	31.17	142382	1.54	100000	
Cd	114	1	No Gas	0.096	0.096	19.10	830	0.01	1000	
Ca	44	1	No Gas	318.785	318.785	1.17	414595	0.08	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6398938	1.69	5896472	108.52	70	120	
Sc	45	2	he	1412232	0.94	1271268	111.09	70	120	
Ge	72	1	No Gas	695062	0.32	682805	101.80	70	120	

In	115	1	No Gas	3579181	1.46	3697856	96.79	70	120	
Tb	159	1	No Gas	4123826	1.35	4404848	93.62	70	120	
Bi	209	1	No Gas	2104590	1.37	1997135	105.38	70	120	
Sc	45	3	HeHe	117541	31.45	132951	88.41	70	120	

Sample Report

Sample Table

Sample Name	9980875014L
Data File Name	148SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T21:19:15-04:00
Sample Type	Sample
Dilution	1
Comment	37991 LAMDF25
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4401

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
V	51	1	No Gas	0.847	0.847	11.25	30494	0.00	1000	
Cr	52	1	No Gas	0.795	0.795	6.43	36446	0.00	1000	
Mn	55	1	No Gas	1.092	1.092	0.62	76095	0.00	1000	
Co	59	1	No Gas	0.032	0.032	10.93	1363	0.00	1000	
Ni	60	1	No Gas	-2.079	-2.079	-2.20	4601	-0.05	1000	
Cu	63	1	No Gas	0.444	0.444	1.09	8834	0.01	1000	
Sr	88	1	No Gas	1.325	1.325	1.26	57456	0.00	1000	
Ag	107	1	No Gas	0.006	0.006	68.15	141	0.00	1000	
Al	27	1	No Gas	659.916	659.916	0.78	13474266	0.00	100000	
Sn	118	1	No Gas	0.260	0.260	19.89	2908	0.01	100	
Ti	47	1	No Gas	6.338	6.338	3.23	18300	0.03	2000	
Zn	66	1	No Gas	0.655	0.655	5.33	3927	0.02	1000	
As	75	3	HeHe	0.220	0.220	23.45	89	0.25	1000	
As	75	1	No Gas	0.834	0.834	30.33	29611	0.00	1000	
Sb	121	1	No Gas	0.088	0.088	16.28	1356	0.01	100	
Hg	201	1	No Gas	0.026	0.026	50.14	69	0.04	4	
Be	9	1	No Gas	0.016	0.016	65.03	82	0.02	1000	
Pb	208	1	No Gas	2.850	2.850	3.44	80683	0.00	1000	
Se	82	1	No Gas	0.858	0.858	105.17	117	0.73	1000	
Mo	98	1	No Gas	0.137	0.137	53.28	2397	0.01	2000	
Ba	137	1	No Gas	4.522	4.522	3.18	20657	0.02	1000	
Tl	205	1	No Gas	0.004	0.004	34.42	111	0.00	1000	
U	238	1	No Gas	0.051	0.051	5.45	1378	0.00	1000	
Na	23	2	he	16.202	16.202	4.59	140372	0.01	100000	
Mg	24	2	he	26.814	26.814	2.40	45321	0.06	100000	
K	39	2	he	21.130	21.130	7.33	279346	0.01	100000	
Se	82	3	HeHe	-0.720	-0.720	-64.95	54	-1.34	1000	
Fe	57	3	HeHe	319.464	319.464	4.76	26807	1.19	100000	
Cd	114	1	No Gas	0.028	0.028	2.21	277	0.01	1000	
Ca	44	1	No Gas	38.174	38.174	10.41	169144	0.02	100000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6452584	0.56	5896472	109.43	70	120	
Sc	45	2	he	1415654	0.95	1271268	111.36	70	120	

Ge	72	1	No Gas	691536	1.30	682805	101.28	70	120	
In	115	1	No Gas	3597897	1.01	3697856	97.30	70	120	
Tb	159	1	No Gas	4100200	1.50	4404848	93.08	70	120	
Bi	209	1	No Gas	2104622	0.45	1997135	105.38	70	120	
Sc	45	3	HeHe	141566	0.29	132951	106.48	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	152_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T21:33:15-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	99.051	0.585	3375727	1.25	100	99.1	90	110	
Cr	52	1	No Gas	97.038	0.982	2987003	1.30	100	97.0	90	110	
Mn	55	1	No Gas	100.753	2.896	3796873	1.56	100	100.8	90	110	
Co	59	1	No Gas	97.038	1.341	3285063	2.08	100	97.0	90	110	
Ni	60	1	No Gas	91.911	1.232	723152	2.44	100	91.9	90	110	
Cu	63	1	No Gas	99.011	0.645	1806416	1.09	100	99.0	90	110	
Sr	88	1	No Gas	99.238	1.220	4248037	0.53	100	99.2	90	110	
Ag	107	1	No Gas	99.889	0.887	1765858	1.90	100	99.9	90	110	
Al	27	1	No Gas	103.774	0.608	2102743	1.36	100	103.8	90	110	
Sn	118	1	No Gas	96.659	1.876	996324	1.01	100	96.7	90	110	
Tl	47	1	No Gas	88.871	0.692	249473	1.06	100	88.9	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	94.529	1.409	438242	0.67	100	94.5	90	110	
As	75	3	HeHe	92.717	2.188	33777	0.36	100	92.7	90	110	
As	75	1	No Gas	94.332	1.113	487219	0.85	100	94.3	90	110	
Sb	121	1	No Gas	98.401	0.737	1365483	1.56	100	98.4	90	110	
Hg	201	1	No Gas	1.943	1.917	2523	2.52	2	97.1	90	110	
Be	9	1	No Gas	93.881	0.528	331879	1.51	100	93.9	90	110	
Pb	208	1	No Gas	95.237	1.067	2639846	1.22	100	95.2	90	110	
Se	82	1	No Gas	93.079	0.325	23287	1.42	100	93.1	90	110	
Mo	98	1	No Gas	96.839	0.764	1080783	1.62	100	96.8	90	110	
Ba	137	1	No Gas	98.523	1.796	441336	0.71	100	98.5	90	110	
Tl	205	1	No Gas	95.242	1.049	1937182	1.40	100	95.2	90	110	
U	238	1	No Gas	103.294	2.320	2655183	1.69	100	103.3	90	110	
Na	23	2	he	1045.596	2.215	3157737	2.29	1000	104.6	90	110	
Mg	24	2	he	1027.915	1.692	1749549	1.18	1000	102.8	90	110	
K	39	2	he	1025.026	0.795	3000177	0.41	1000	102.5	90	110	
Se	82	3	HeHe	93.213	8.359	1670	6.32	100	93.2	90	110	
Fe	57	3	HeHe	1009.296	1.581	83077	2.40	1000	100.9	90	110	
Cd	114	1	No Gas	94.780	1.204	767063	1.99	100	94.8	90	110	
Ca	44	1	No Gas	969.797	0.237	984406	1.91	1000	97.0	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6379650	1.73	5896472	108.19	70	120	
Sc	45	2	he	1431096	0.79	1271268	112.57	70	120	
Ge	72	1	No Gas	687380	0.12	682805	100.67	70	120	
In	115	1	No Gas	3547694	1.02	3697856	95.94	70	120	
Tb	159	1	No Gas	4030273	1.64	4404848	91.50	70	120	
Bi	209	1	No Gas	2068695	0.69	1997135	103.58	70	120	
Sc	45	3	HeHe	139520	1.93	132951	104.94	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	153_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T21:36:41-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.044	66.8	2794	36.0	9	
Cr	52	1	No Gas	0.092	18.2	14507	3.2	4	
Mn	55	1	No Gas	0.024	113.2	35480	3.1	25	
Co	59	1	No Gas	0.012	14.1	678	8.2	1	
Ni	60	1	No Gas	-2.372	-0.9	2317	7.4	25	
Cu	63	1	No Gas	0.187	0.4	4070	0.7	25	
Sr	88	1	No Gas	0.017	29.4	852	26.1	25	
Ag	107	1	No Gas	0.024	16.4	459	15.7	9	
Al	27	1	No Gas	0.938	6.0	28386	3.8	1000000	
Sn	118	1	No Gas	2.160	22.7	22799	24.3	25	
Ti	47	1	No Gas	0.724	23.7	2358	20.5	10000	
Zn	66	1	No Gas	0.444	14.0	2914	9.6	25	
As	75	3	HeHe	0.615	8.9	229	8.9	9	
As	75	1	No Gas	0.931	38.3	29865	5.9	9	
Sb	121	1	No Gas	0.362	23.7	5231	24.9	4	
Hg	201	1	No Gas	0.022	33.3	63	14.6	0.04	
Be	9	1	No Gas	0.014	1.7	75	1.5	1	
Pb	208	1	No Gas	0.036	17.3	1311	13.6	4	
Se	82	1	No Gas	1.290	8.2	225	12.2	25	
Mo	98	1	No Gas	1.692	31.6	20025	32.0	10000	
Ba	137	1	No Gas	0.058	24.3	307	21.0	25	
Tl	205	1	No Gas	0.049	13.6	1037	13.6	1	
U	238	1	No Gas	0.623	31.9	16277	32.0	25	
Na	23	2	he	10.890	7.1	123740	2.3	2500000	
Mg	24	2	he	0.530	13.3	1052	12.7	2500000	
K	39	2	he	6.508	27.0	237811	0.8	5000000	
Se	82	3	HeHe	0.221	117.1	69	6.6	25	
Fe	57	3	HeHe	13.258	5.7	1259	4.0	2500000	
Cd	114	1	No Gas	0.090	15.7	790	16.6	1	
Ca	44	1	No Gas	-18.004	-10.8	118389	1.5	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6403857	0.65	5896472	108.60	70	120	
Sc	45	2	he	1401756	1.56	1271268	110.26	70	120	
Ge	72	1	No Gas	698028	0.58	682805	102.23	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3592760	1.99	3697856	97.16	70	120	
Tb	159	1	No Gas	4026982	0.46	4404848	91.42	70	120	
Bi	209	1	No Gas	2096990	0.30	1997135	105.00	70	120	
Sc	45	3	HeHe	138208	1.39	132951	103.95	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	154LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T21:40:10-04:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.119	2.057	73639	2.87	2	105.9	70	130	
Cr	52	1	No Gas	2.189	2.348	78942	0.51	2	109.5	70	130	
Mn	55	1	No Gas	5.106	2.105	225698	1.46	5	102.1	70	130	
Co	59	1	No Gas	4.853	0.728	164955	0.92	5	97.1	70	130	
Ni	60	1	No Gas	2.617	6.209	40544	2.44	5	52.3	70	130	LLCCV Main CR1 Failed
Cu	63	1	No Gas	5.034	0.258	92687	1.38	5	100.7	70	130	
Sr	88	1	No Gas	4.449	0.760	191039	1.72	5	89.0	70	130	
Ag	107	1	No Gas	2.012	0.130	35468	1.23	2	100.6	70	130	
Al	27	1	No Gas	82.401	0.834	1675664	1.14	80	103.0	70	130	
Sn	118	1	No Gas	3.119	9.308	32229	10.29	2	155.9	70	130	LLCCV Main CR1 Failed
Tl	47	1	No Gas	4.861	1.709	13986	3.13	5	97.2	70	130	
Zn	66	1	No Gas	5.524	1.659	26477	2.13	5	110.5	70	130	
As	75	3	HeHe	3.303	1.549	1204	1.88	3	110.1	70	130	
As	75	1	No Gas	3.427	9.176	42095	4.81	3	114.2	70	130	
Sb	121	1	No Gas	2.206	3.431	30599	2.19	2	110.3	70	130	
Hg	201	1	No Gas	0.181	13.352	267	11.21	0.2	90.4	70	130	
Be	9	1	No Gas	0.986	4.431	3520	3.86	1	98.6	70	130	
Pb	208	1	No Gas	1.997	2.656	55897	1.36	2	99.9	70	130	
Se	82	1	No Gas	4.922	10.174	1138	9.61	5	98.4	70	130	
Mo	98	1	No Gas	2.647	4.423	30244	5.40	2	132.4	70	130	LLCCV Main CR1 Failed
Ba	137	1	No Gas	5.192	2.226	23337	1.69	5	103.8	70	130	
Tl	205	1	No Gas	0.953	3.117	19506	3.02	1	95.3	70	130	
U	238	1	No Gas	4.858	2.686	125489	2.05	5	97.2	70	130	
Na	23	2	he	117.416	1.796	430492	0.73	100	117.4	70	130	
Mg	24	2	he	101.597	0.604	169975	1.45	100	101.6	70	130	
K	39	2	he	112.623	0.666	520560	0.64	100	112.6	70	130	
Se	82	3	HeHe	3.995	39.318	134	21.68	5	79.9	70	130	
Fe	57	3	HeHe	63.111	4.855	5334	3.80	50	126.2	70	130	
Cd	114	1	No Gas	1.091	5.261	8843	4.41	1	109.1	70	130	
Ca	44	1	No Gas	86.317	1.520	209947	0.97	100	86.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6395212	1.51	5896472	108.46	70	120	
Sc	45	2	he	1405313	0.85	1271268	110.54	70	120	
Ge	72	1	No Gas	680617	1.40	682805	99.68	70	120	
In	115	1	No Gas	3534069	1.31	3697856	95.57	70	120	
Tb	159	1	No Gas	4035918	0.88	4404848	91.62	70	120	
Bi	209	1	No Gas	2078358	1.55	1997135	104.07	70	120	
Sc	45	3	HeHe	138733	1.40	132951	104.35	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	170_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:35:44-04:00
Sample Type	CCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	97.951	1.155	3486349	0.51	100	98.0	90	110	
Cr	52	1	No Gas	95.873	1.509	3082667	2.24	100	95.9	90	110	
Mn	55	1	No Gas	100.453	1.055	3954785	1.23	100	100.5	90	110	
Co	59	1	No Gas	97.154	0.416	3435058	1.27	100	97.2	90	110	
Ni	60	1	No Gas	92.702	0.421	761514	0.89	100	92.7	90	110	
Cu	63	1	No Gas	96.244	0.279	1834031	1.06	100	96.2	90	110	
Sr	88	1	No Gas	99.913	0.871	4467544	1.71	100	99.9	90	110	
Ag	107	1	No Gas	101.835	1.635	1896100	0.61	100	101.8	90	110	
Al	27	1	No Gas	100.524	0.429	2127654	0.72	100	100.5	90	110	
Sn	118	1	No Gas	97.991	1.256	1064085	1.05	100	98.0	90	110	
Tl	47	1	No Gas	87.895	0.605	257712	1.37	100	87.9	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	94.285	0.770	456597	1.61	100	94.3	90	110	
As	75	3	HeHe	93.285	1.385	36012	1.89	100	93.3	90	110	
As	75	1	No Gas	93.800	0.758	506191	1.48	100	93.8	90	110	
Sb	121	1	No Gas	101.211	0.553	1479481	1.26	100	101.2	90	110	
Hg	201	1	No Gas	1.917	4.800	2569	3.06	2	95.8	90	110	
Be	9	1	No Gas	93.570	0.591	345477	1.34	100	93.6	90	110	
Pb	208	1	No Gas	96.007	0.333	2747629	1.76	100	96.0	90	110	
Se	82	1	No Gas	92.626	1.274	24203	2.01	100	92.6	90	110	
Mo	98	1	No Gas	96.782	1.747	1137659	0.37	100	96.8	90	110	
Ba	137	1	No Gas	99.897	0.471	471266	1.37	100	99.9	90	110	
Tl	205	1	No Gas	97.010	2.227	2036830	1.46	100	97.0	90	110	
U	238	1	No Gas	104.398	0.978	2770723	0.86	100	104.4	90	110	
Na	23	2	he	1030.576	2.352	3240430	1.15	1000	103.1	90	110	
Mg	24	2	he	1022.357	3.342	1811231	3.31	1000	102.2	90	110	
K	39	2	he	1025.564	2.452	3123985	1.52	1000	102.6	90	110	
Se	82	3	HeHe	90.465	2.321	1721	1.39	100	90.5	90	110	
Fe	57	3	HeHe	1026.911	0.457	89542	1.02	1000	102.7	90	110	
Cd	114	1	No Gas	94.669	1.367	807010	1.13	100	94.7	90	110	
Ca	44	1	No Gas	962.506	0.669	1021422	1.43	1000	96.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6662739	0.86	5896472	113.00	70	120	
Sc	45	2	he	1489897	2.73	1271268	117.20	70	120	
Ge	72	1	No Gas	717825	2.32	682805	105.13	70	120	
In	115	1	No Gas	3737385	1.51	3697856	101.07	70	120	
Tb	159	1	No Gas	4243515	0.91	4404848	96.34	70	120	
Bi	209	1	No Gas	2135894	1.77	1997135	106.95	70	120	
Sc	45	3	HeHe	147802	1.03	132951	111.17	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	171_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:39:09-04:00
Sample Type	CCB
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.105	33.9	4941	25.0	9	
Cr	52	1	No Gas	0.102	20.2	15070	2.9	4	
Mn	55	1	No Gas	0.290	22.1	46265	4.0	25	
Co	59	1	No Gas	0.015	39.9	793	24.7	1	
Ni	60	1	No Gas	-2.413	-0.7	2040	5.2	25	
Cu	63	1	No Gas	0.186	1.2	4117	2.2	25	
Sr	88	1	No Gas	0.018	21.8	885	17.8	25	
Ag	107	1	No Gas	0.020	41.4	411	35.8	9	
Al	27	1	No Gas	0.872	1.5	27522	1.8	1000000	
Sn	118	1	No Gas	1.320	21.0	14752	22.6	25	
Ti	47	1	No Gas	0.414	25.7	1513	21.0	10000	
Zn	66	1	No Gas	0.504	18.7	3247	12.3	25	
As	75	3	HeHe	0.476	0.4	186	2.8	9	
As	75	1	No Gas	0.787	13.2	29679	2.8	9	
Sb	121	1	No Gas	0.308	23.6	4708	25.4	4	
Hg	201	1	No Gas	0.021	32.5	66	13.9	0.04	
Be	9	1	No Gas	0.017	35.5	89	26.1	1	
Pb	208	1	No Gas	0.081	7.2	2734	5.7	4	
Se	82	1	No Gas	0.848	107.1	115	203.8	25	
Mo	98	1	No Gas	0.913	28.9	11788	28.9	10000	
Ba	137	1	No Gas	0.079	27.4	427	25.8	25	
Tl	205	1	No Gas	0.038	18.7	856	18.9	1	
U	238	1	No Gas	0.190	24.0	5312	24.5	25	
Na	23	2	he	9.537	3.1	122702	2.0	2500000	
Mg	24	2	he	0.423	23.0	893	17.8	2500000	
K	39	2	he	6.863	16.9	244434	1.5	5000000	
Se	82	3	HeHe	-0.765	-18.7	54	2.4	25	
Fe	57	3	HeHe	14.803	0.6	1441	2.9	2500000	
Cd	114	1	No Gas	0.051	43.0	490	41.3	1	
Ca	44	1	No Gas	-17.972	-8.4	120500	0.6	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6517073	1.38	5896472	110.52	70	120	
Sc	45	2	he	1434900	1.33	1271268	112.87	70	120	
Ge	72	1	No Gas	728329	0.40	682805	106.67	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3785985	2.64	3697856	102.38	70	120	
Tb	159	1	No Gas	4317763	1.61	4404848	98.02	70	120	
Bi	209	1	No Gas	2233380	0.92	1997135	111.83	70	120	
Sc	45	3	HeHe	143721	2.40	132951	108.10	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	172LCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081
Acq Date Time	2012-08-13T22:42:40-04:00
Sample Type	LLCCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.058	3.338	73217	3.15	2	102.9	70	130	
Cr	52	1	No Gas	2.147	1.622	79467	1.00	2	107.4	70	130	
Mn	55	1	No Gas	5.315	0.676	238951	0.25	5	106.3	70	130	
Co	59	1	No Gas	4.863	2.923	169098	2.73	5	97.3	70	130	
Ni	60	1	No Gas	2.329	1.489	39225	1.07	5	46.6	70	130	LLCCV Main CR1 Failed
Cu	63	1	No Gas	4.977	1.294	93750	1.13	5	99.5	70	130	
Sr	88	1	No Gas	4.586	2.243	201466	1.90	5	91.7	70	130	
Ag	107	1	No Gas	2.003	1.318	36366	1.78	2	100.2	70	130	
Al	27	1	No Gas	82.404	0.580	1714486	0.21	80	103.0	70	130	
Sn	118	1	No Gas	2.549	7.457	27145	8.00	2	127.4	70	130	
Tl	47	1	No Gas	4.726	3.164	13917	2.78	5	94.5	70	130	
Zn	66	1	No Gas	5.509	2.952	27017	2.55	5	110.2	70	130	
As	75	3	HeHe	3.125	1.340	1160	0.52	3	104.2	70	130	
As	75	1	No Gas	3.409	4.623	42965	1.88	3	113.6	70	130	
Sb	121	1	No Gas	2.202	4.642	31475	5.06	2	110.1	70	130	
Hg	201	1	No Gas	0.215	2.494	313	2.88	0.2	107.6	70	130	
Be	9	1	No Gas	0.955	1.235	3488	0.86	1	95.5	70	130	
Pb	208	1	No Gas	2.056	1.823	57677	0.39	2	102.8	70	130	
Se	82	1	No Gas	5.592	18.835	1338	20.30	5	111.8	70	130	
Mo	98	1	No Gas	2.415	2.116	28481	2.66	2	120.8	70	130	
Ba	137	1	No Gas	5.207	2.765	23945	2.80	5	104.1	70	130	
Tl	205	1	No Gas	0.989	4.596	20269	2.76	1	98.9	70	130	
U	238	1	No Gas	4.744	4.496	122804	2.88	5	94.9	70	130	
Na	23	2	he	114.936	2.401	428593	1.21	100	114.9	70	130	
Mg	24	2	he	101.831	0.568	172465	0.22	100	101.8	70	130	
K	39	2	he	113.647	2.373	529733	0.61	100	113.6	70	130	
Se	82	3	HeHe	4.891	16.873	151	9.85	5	97.8	70	130	
Fe	57	3	HeHe	57.291	6.256	4945	5.35	50	114.6	70	130	
Cd	114	1	No Gas	1.079	4.902	9006	4.33	1	107.9	70	130	
Ca	44	1	No Gas	84.364	7.153	213045	2.46	100	84.4	70	130	

PIR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6542879	0.38	5896472	110.96	70	120	
Sc	45	2	he	1422717	0.78	1271268	111.91	70	120	
Ge	72	1	No Gas	700131	1.31	682805	102.54	70	120	
In	115	1	No Gas	3639207	0.61	3697856	98.41	70	120	
Tb	159	1	No Gas	4129130	0.98	4404848	93.74	70	120	
Bi	209	1	No Gas	2083587	2.08	1997135	104.33	70	120	
Sc	45	3	HeHe	141190	0.86	132951	106.20	70	120	

Sample Report

Sample Table

Sample Name	30 PPM LDR
Data File Name	174SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081312C.b
Acq Date Time	2012-08-13T22:56:07-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass
Vial	4511

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag	
V	51	1	No Gas	0.085	0.085	130.10	4416	0.00	1000		
Cr	52	1	No Gas	0.345	0.345	3.99	23583	0.00	1000		
Mn	55	1	No Gas	-0.011	-0.011	-180.30	36151	0.00	1000		
Co	59	1	No Gas	0.007	0.007	31.29	544	0.00	1000		
Ni	60	1	No Gas	-2.495	-2.495	-0.50	1453	-0.17	1000		
Cu	63	1	No Gas	0.095	0.095	5.43	2522	0.00	1000		
Sr	88	1	No Gas	0.015	0.015	7.25	785	0.00	1000		
Ag	107	1	No Gas	0.016	0.016	33.56	326	0.00	1000		
Al	27	1	No Gas	28283.977	28283.977	0.58	605851843	0.00	100000		94%
Sn	118	1	No Gas	0.341	0.341	33.79	3897	0.01	100		
Ti	47	1	No Gas	0.122	0.122	20.40	704	0.02	2000		
Zn	66	1	No Gas	0.616	0.616	5.73	3929	0.02	1000		
As	75	3	HeHe	0.062	0.062	61.23	32	0.19	1000		
As	75	1	No Gas	0.909	0.909	7.94	31477	0.00	1000		
Sb	121	1	No Gas	0.063	0.063	29.36	1048	0.01	100		
Hg	201	1	No Gas	0.006	0.006	160.42	44	0.01	4		
Be	9	1	No Gas	0.001	0.001	276.27	31	0.00	1000		
Pb	208	1	No Gas	0.043	0.043	29.41	1559	0.00	1000		
Se	82	1	No Gas	0.678	0.678	44.52	75	0.91	1000		
Mo	98	1	No Gas	0.148	0.148	46.68	2603	0.01	2000		
Ba	137	1	No Gas	0.232	0.232	11.22	1137	0.02	1000		
Tl	205	1	No Gas	0.002	0.002	78.44	70	0.00	1000		
U	238	1	No Gas	0.014	0.014	27.61	426	0.00	1000		
Na	23	2	he	9.297	9.297	7.91	123653	0.01	100000		
Mg	24	2	he	0.448	0.448	16.61	948	0.05	100000		
K	39	2	he	2.656	2.656	37.26	236210	0.00	100000		
Se	82	3	HeHe	-0.050	-0.050	-980.66	69	-0.07	1000		
Fe	57	3	HeHe	43.578	43.578	3.90	3997	1.09	100000		
Cd	114	1	No Gas	0.015	0.015	45.70	173	0.01	1000		
Ca	44	1	No Gas	-38.180	-38.180	-6.41	106426	-0.04	100000		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6773953	1.32	5896472	114.88	70	120	
Sc	45	2	he	1454676	1.33	1271268	114.43	70	120	
Ge	72	1	No Gas	707192	1.08	682805	103.57	70	120	

In	115	1	No Gas	3736186	1.13	3697856	101.04	70	120	
Tb	159	1	No Gas	4221245	1.56	4404848	95.83	70	120	
Bi	209	1	No Gas	2152041	0.92	1997135	107.76	70	120	
Sc	45	3	HeHe	148272	1.34	132951	111.52	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	176_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081312C.b
Acq Date Time	2012-08-13T23:11:53-04:00
Sample Type	CCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
V	51	1	No Gas	98.980	2.302	3555900	1.02	100	99.0	90	110	
Cr	52	1	No Gas	96.886	0.774	3144266	0.60	100	96.9	90	110	
Mn	55	1	No Gas	100.547	1.620	3995914	1.79	100	100.5	90	110	
Co	59	1	No Gas	95.565	1.648	3410828	2.04	100	95.6	90	110	
Ni	60	1	No Gas	91.888	2.193	762049	1.02	100	91.9	90	110	
Cu	63	1	No Gas	96.307	2.189	1852437	1.86	100	96.3	90	110	
Sr	88	1	No Gas	97.963	2.006	4421129	1.37	100	98.0	90	110	
Ag	107	1	No Gas	100.244	1.943	1864812	2.65	100	100.2	90	110	
Al	27	1	No Gas	99.326	0.814	2122333	1.24	100	99.3	90	110	
Sn	118	1	No Gas	96.711	1.178	1049045	0.69	100	96.7	90	110	
Tl	47	1	No Gas	88.195	1.484	261010	0.81	100	88.2	90	110	CCV Main CR1 Failed
Zn	66	1	No Gas	93.657	1.646	457783	0.49	100	93.7	90	110	
As	75	3	HeHe	92.592	1.736	35134	0.75	100	92.6	90	110	
As	75	1	No Gas	92.152	0.982	502427	0.60	100	92.2	90	110	
Sb	121	1	No Gas	99.121	1.267	1447259	0.87	100	99.1	90	110	
Hg	201	1	No Gas	1.869	4.928	2512	4.60	2	93.4	90	110	
Be	9	1	No Gas	92.851	1.855	346023	1.14	100	92.9	90	110	
Pb	208	1	No Gas	93.178	0.223	2671481	0.65	100	93.2	90	110	
Se	82	1	No Gas	90.630	2.985	23897	1.72	100	90.6	90	110	
Mo	98	1	No Gas	96.013	1.161	1127482	0.49	100	96.0	90	110	
Ba	137	1	No Gas	100.003	1.969	464237	2.00	100	100.0	90	110	
Tl	205	1	No Gas	96.100	0.999	2021863	1.82	100	96.1	90	110	
U	238	1	No Gas	102.287	1.084	2719961	1.58	100	102.3	90	110	
Na	23	2	he	1055.023	2.205	3265449	2.25	1000	105.5	90	110	
Mg	24	2	he	1031.410	1.861	1799536	0.46	1000	103.1	90	110	
K	39	2	he	1029.143	0.957	3087070	0.77	1000	102.9	90	110	
Se	82	3	HeHe	90.773	2.133	1697	2.46	100	90.8	90	110	
Fe	57	3	HeHe	1016.582	1.989	87152	2.86	1000	101.7	90	110	
Cd	114	1	No Gas	92.902	0.379	791116	0.41	100	92.9	90	110	
Ca	44	1	No Gas	938.083	1.138	1008411	0.43	1000	93.8	90	110	

N/A

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6725963	1.33	5896472	114.07	70	120	
Sc	45	2	he	1467190	1.66	1271268	115.41	70	120	
Ge	72	1	No Gas	717091	0.51	682805	105.02	70	120	
In	115	1	No Gas	3733156	0.78	3697856	100.95	70	120	
Tb	159	1	No Gas	4176703	2.43	4404848	94.82	70	120	
Bi	209	1	No Gas	2139762	0.87	1997135	107.14	70	120	
Sc	45	3	HeHe	145315	2.03	132951	109.30	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	177_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081312C.b
Acq Date Time	2012-08-13T23:15:17-04:00
Sample Type	CCB
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
V	51	1	No Gas	0.125	50.6	5645	36.9	9	
Cr	52	1	No Gas	0.172	16.4	17369	3.6	4	
Mn	55	1	No Gas	-0.010	-325.3	35042	1.4	25	
Co	59	1	No Gas	0.016	2.3	837	1.5	1	
Ni	60	1	No Gas	-2.451	-0.7	1754	7.3	25	
Cu	63	1	No Gas	0.199	3.8	4392	0.6	25	
Sr	88	1	No Gas	0.021	21.2	1030	19.1	25	
Ag	107	1	No Gas	0.025	6.2	500	3.8	9	
Al	27	1	No Gas	0.932	4.7	28935	3.1	1000000	
Sn	118	1	No Gas	1.401	23.8	15441	24.6	25	
Ti	47	1	No Gas	0.386	28.2	1447	24.3	10000	
Zn	66	1	No Gas	0.579	4.7	3630	3.6	25	
As	75	3	HeHe	0.442	28.3	176	23.0	9	
As	75	1	No Gas	0.912	26.7	30513	5.9	9	
Sb	121	1	No Gas	0.302	29.9	4549	29.6	4	
Hg	201	1	No Gas	0.019	95.2	61	40.8	0.04	
Be	9	1	No Gas	0.018	21.0	91	13.4	1	
Pb	208	1	No Gas	0.049	21.4	1708	18.7	4	
Se	82	1	No Gas	1.553	26.4	298	36.7	25	
Mo	98	1	No Gas	0.926	29.4	11773	27.8	10000	
Ba	137	1	No Gas	0.101	0.5	523	1.1	25	
Tl	205	1	No Gas	0.046	23.3	982	21.5	1	
U	238	1	No Gas	0.224	29.5	5946	28.5	25	
Na	23	2	he	9.768	5.4	124179	1.8	2500000	
Mg	24	2	he	0.548	12.9	1115	12.0	2500000	
K	39	2	he	5.797	7.9	243129	1.3	5000000	
Se	82	3	HeHe	-1.125	-20.0	49	10.8	25	
Fe	57	3	HeHe	12.057	11.3	1237	10.2	2500000	
Cd	114	1	No Gas	0.069	17.2	640	16.9	1	
Ca	44	1	No Gas	-31.978	-10.4	108621	1.3	5000000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6559872	2.79	5896472	111.25	70	120	
Sc	45	2	he	1444279	1.07	1271268	113.61	70	120	
Ge	72	1	No Gas	708080	2.44	682805	103.70	70	120	

Continuing Calibration Blank (CCB) Report

In	115	1	No Gas	3736818	2.10	3697856	101.05	70	120	
Tb	159	1	No Gas	4232484	0.68	4404848	96.09	70	120	
Bi	209	1	No Gas	2122934	1.34	1997135	106.30	70	120	
Sc	45	3	HeHe	147150	4.06	132951	110.68	70	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	LLCCV
Data File Name	178LLCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\A081312C.b
Acq Date Time	2012-08-13T23:18:46-04:00
Sample Type	LLCCV
Dilution	1
Comment	37991 LAMDF5
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
V	51	1	No Gas	2.107	1.389	75854	1.83	2	105.4	70	130	
Cr	52	1	No Gas	2.232	4.820	83121	4.58	2	111.6	70	130	
Mn	55	1	No Gas	5.175	1.564	236460	2.44	5	103.5	70	130	
Co	59	1	No Gas	4.889	0.495	172046	0.82	5	97.8	70	130	
Ni	60	1	No Gas	2.476	0.619	40865	1.33	5	49.5	70	130	LLCCV Main CR1 Failed
Cu	63	1	No Gas	4.932	0.618	94041	1.24	5	98.6	70	130	
Sr	88	1	No Gas	4.526	0.339	201253	1.53	5	90.5	70	130	
Ag	107	1	No Gas	2.020	1.031	37064	0.25	2	101.0	70	130	
Al	27	1	No Gas	82.789	0.920	1743261	0.99	80	103.5	70	130	
Sn	118	1	No Gas	2.541	5.892	27360	7.15	2	127.0	70	130	
Tl	47	1	No Gas	4.675	3.379	13940	4.24	5	93.5	70	130	
Zn	66	1	No Gas	5.408	1.373	26863	2.62	5	108.2	70	130	
As	75	3	HeHe	3.140	3.029	1224	3.85	3	104.7	70	130	
As	75	1	No Gas	3.879	7.104	45864	1.82	3	129.3	70	130	
Sb	121	1	No Gas	2.110	2.905	30499	4.16	2	105.5	70	130	
Hg	201	1	No Gas	0.186	22.296	274	19.36	0.2	93.2	70	130	
Be	9	1	No Gas	0.970	0.766	3585	1.03	1	97.0	70	130	
Pb	208	1	No Gas	1.970	3.501	55004	3.02	2	98.5	70	130	
Se	82	1	No Gas	5.787	5.600	1405	5.39	5	115.7	70	130	
Mo	98	1	No Gas	2.300	1.599	27459	2.76	2	115.0	70	130	
Ba	137	1	No Gas	5.147	3.107	23731	3.63	5	102.9	70	130	
Tl	205	1	No Gas	0.977	3.156	19928	2.12	1	97.7	70	130	
U	238	1	No Gas	4.762	1.645	122725	1.90	5	95.2	70	130	
Na	23	2	he	116.631	2.401	445813	0.29	100	116.6	70	130	
Mg	24	2	he	102.185	1.556	177968	0.92	100	102.2	70	130	
K	39	2	he	117.418	1.999	555210	0.45	100	117.4	70	130	
Se	82	3	HeHe	4.154	9.202	146	3.97	5	83.1	70	130	
Fe	57	3	HeHe	55.573	11.818	5049	11.99	50	111.1	70	130	
Cd	114	1	No Gas	1.009	0.558	8516	1.37	1	100.9	70	130	
Ca	44	1	No Gas	70.394	5.118	202913	2.11	100	70.4	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Sc	45	1	No Gas	6622192	1.31	5896472	112.31	70	120	
Sc	45	2	he	1463181	1.59	1271268	115.10	70	120	
Ge	72	1	No Gas	714673	1.65	682805	104.67	70	120	
In	115	1	No Gas	3679167	1.27	3697856	99.49	70	120	
Tb	159	1	No Gas	4139629	1.18	4404848	93.98	70	120	
Bi	209	1	No Gas	2073101	1.30	1997135	103.80	70	120	
Sc	45	3	HeHe	148320	1.01	132951	111.56	70	120	

Digestion Logbook

Microwave 3051 Prep (Soil) (Version 1 - 6/1/2010)

Batch: 37421	Queue: MDIG	HBN: 475032	RULE: D3051/6020	ALSI SOP: 09-3051
File Name: 37421_120808-122837			METHOD: SW3051	Microwave ID: MARS

COMMENTS:	Comment Codes:	Reagents:		Pipettes:		Start	Finish
	1. Sample failed initial digestion due to a weight loss >5g	HNO3:	L02030 JT BAKER		Date:	08/08/2012	08/08/2012
	2. Sample reacts with reagent	HCl:	K25031 MALLINCKRODT		Time:	14:13:00	14:42:00
	3. Less sample used due to high metal conten	Boiling Stones:	D1069103		Tech:	KMK	KMK
	4. Less sample used to result in successful microwave digestion				Reviewed/Approved By:		N/A
	5. Sample does not digest by microwave, digest by method 3050				Date:		

Sample ID	Cont ID	Samp Type	Vessel Initial WT, grams	Vessel Final WT, grams	Difference grams	Spike Amt uL of Each	Spike Lot#	Sample Size, grams	Final Vol mL	Parent Sample ID	Comment Code
1020191		MB	107.41	106.10	1.31			0.50	50		
1020192		LCS	109.23	107.11	2.12	40/50/500/500	/MS0360/MS0359/	0.50	50		
9980614016	A	S	107.88	105.73	2.15			0.55	50		
9980614017	A	S	107.45	104.93	2.52			0.52	50		
9980614018	A	S	107.02	105.49	1.53			0.59	50		
9980614019	A	S	106.69	104.83	1.86			0.55	50		
9980614020	A	S	107.80	105.30	2.50			0.52	50		
9980614021	A	S	106.65	104.81	1.84			0.51	50		
9980614022	A	S	106.58	104.50	2.08			0.60	50		
9980875001	A	S	108.19	105.59	2.60			0.54	50		
1020193		MS	107.23	104.78	2.45	40/50/500/500	/MS0360/MS0359/	0.55	50	9980875001	
1020194		MSD	107.46	105.10	2.36	40/50/500/500	/MS0360/MS0359/	0.54	50	9980875001	
9980875002	A	S	106.42	104.64	1.78			0.52	50		
9980875003	A	S	106.78	104.73	2.05			0.55	50		
9980875004	A	S	106.12	104.08	2.04			0.51	50		
9980875005	A	S	106.58	104.67	1.91			0.60	50		
9980875006	A	S	106.39	104.65	1.74			0.57	50		
9980875007	A	S	107.09	105.22	1.87			0.57	50		
9980875008	A	S	105.78	104.82	0.96			0.52	50		
9980875009	A	S	106.92	104.32	2.60			0.54	50		
9980875010	A	S	107.04	104.96	2.08			0.52	50		
9980875011	A	S	107.27	104.55	2.72			0.51	50		
9980875012	A	S	107.59	105.94	1.65			0.53	50		
9980875013	A	S	107.24	105.09	2.15			0.53	50		

End

Microwave 3051 Prep (Soil) (Version 1 - 6/1/2010)

Batch: 37422	Queue: MDIG	HBN: 475033	RULE: D3051/6020	ALSI SOP: 09-3051
File Name: 37422_120808-123026			METHOD: SW3051	Microwave ID: MARS

COMMENTS:	Comment Codes:	Reagents:		Pipettes:		Start	Finish
	1. Sample failed initial digestion due to a weight loss >5g	HNO3:	L02030 JT BAKER		Date:	08/08/2012	08/08/2012
	2. Sample reacts with reagent	HCl:	K25031 MALLINCKRODT		Time:	14:44:00	15:08:00
	3. Less sample used due to high metal conten	Boiling Stones:	D1069103		Tech:	KMK	KMK
	4. Less sample used to result in successful microwave digestion				Reviewed/Approved By:		N/A
	5. Sample does not digest by microwave, digest by method 3050				Date:		

Sample ID	Cont ID	Samp Type	Vessel Initial WT, grams	Vessel Final WT, grams	Difference grams	Spike Amt uL of Each	Spike Lot#	Sample Size, grams	Final Vol mL	Parent Sample ID	Comment Code
1020195		MB	107.14	105.83	1.31			0.50	50		
1020196		LCS	108.74	107.49	1.25	40/50/500/500	/MS0360/MS0359/	0.50	50		
9980875014	A	S	106.31	104.64	1.67			0.57	50		
9981198001	A	S	106.85	105.69	1.16			0.54	50		
9981198002	A	S	106.74	105.34	1.40			0.53	50		
9981198003	A	S	107.34	105.20	2.14			0.52	50		
1020197		MS	107.45	106.46	0.99	40/50/500/500	/MS0360/MS0359/	0.50	50	9981198003	
1020198		MSD	107.32	105.24	2.08	40/50/500/500	/MS0360/MS0359/	0.52	50	9981198003	
9981198004	A	S	104.92	103.01	1.91			0.57	50		
9981198005	A	S	106.66	105.69	0.97			0.52	50		
9981198006	A	S	105.16	103.89	1.27			0.51	50		
9981198007	A	S	106.62	105.37	1.25			0.53	50		
9981198008	A	S	107.18	105.98	1.20			0.59	50		
9981198009	A	S	105.64	104.81	0.83			0.55	50		
9981198010	A	S	105.64	104.24	1.40			0.55	50		
9981198011	A	S	105.70	104.44	1.26			0.54	50		

End

Analytical Logbook

Batch Log

#	Acquired Date and Time	Sample Type	Sample Name	File Name	Comment	Vial#	Dilution Result	Operator
1	8/13/2012 12:11	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A081312C.b\001CALB.d		1101	1	Matthew Olley
2	8/13/2012 12:14	CalBlk	blk	C:\Agilent\ICPMH\1\DATA\A081312C.b\002CALB.d		1101	1	Matthew Olley
3	8/13/2012 12:18	CalStd	Standard 1	C:\Agilent\ICPMH\1\DATA\A081312C.b\003CALS.d		2101	1	Matthew Olley
4	8/13/2012 12:22	CalStd	Standard 2	C:\Agilent\ICPMH\1\DATA\A081312C.b\004CALS.d		2102	1	Matthew Olley
5	8/13/2012 12:25	CalStd	Standard 3	C:\Agilent\ICPMH\1\DATA\A081312C.b\005CALS.d		2103	1	Matthew Olley
6	8/13/2012 12:29	CalStd	Standard 4	C:\Agilent\ICPMH\1\DATA\A081312C.b\006CALS.d		2104	1	Matthew Olley
7	8/13/2012 12:32	CalStd	Standard 5	C:\Agilent\ICPMH\1\DATA\A081312C.b\007CALS.d		2105	1	Matthew Olley
8	8/13/2012 12:35	ICV	ICV	C:\Agilent\ICPMH\1\DATA\A081312C.b\008_ICV.d		1307	1	Matthew Olley
9	8/13/2012 12:39	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A081312C.b\009_ICB.d		1101	1	Matthew Olley
10	8/13/2012 12:42	ICB	ICB	C:\Agilent\ICPMH\1\DATA\A081312C.b\010_ICB.d		1101	1	Matthew Olley
11	8/13/2012 12:46	LLICV	LLICV	C:\Agilent\ICPMH\1\DATA\A081312C.b\011LICV.d		1305	1	Matthew Olley
12	8/13/2012 12:49	ICSA	ICSA	C:\Agilent\ICPMH\1\DATA\A081312C.b\012ICSA.d		2111	1	Matthew Olley
13	8/13/2012 12:49							Matthew Olley
14	8/13/2012 12:59	ICSB	ICSAB	C:\Agilent\ICPMH\1\DATA\A081312C.b\013ICSB.d		2112	1	Matthew Olley
15	8/13/2012 13:02	Sample	1020719	C:\Agilent\ICPMH\1\DATA\A081312C.b\014SMPL.d	37991 LAMDF5	3101	1	Matthew Olley
16	8/13/2012 13:06	Sample	1020720	C:\Agilent\ICPMH\1\DATA\A081312C.b\015SMPL.d	37991 LAMDF5	3102	1	Matthew Olley
17	8/13/2012 13:09	Sample	9981408002	C:\Agilent\ICPMH\1\DATA\A081312C.b\016SMPL.d	37991 LAMDF5	3103	1	Matthew Olley
18	8/13/2012 13:13	Sample	9981430001	C:\Agilent\ICPMH\1\DATA\A081312C.b\017SMPL.d	37991 LAMDF5	3104	1	Matthew Olley
19	8/13/2012 13:16	Sample	1020721	C:\Agilent\ICPMH\1\DATA\A081312C.b\018SMPL.d	37991 LAMDF5	3105	1	Matthew Olley
20	8/13/2012 13:20	Sample	1020722	C:\Agilent\ICPMH\1\DATA\A081312C.b\019SMPL.d	37991 LAMDF5	3106	1	Matthew Olley

Batch Log

21	8/13/2012 13:23	Sample	9981430001PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\020SMPL.d	3107	1	Matthew Olley
22	8/13/2012 13:26	Sample	9981517002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\021SMPL.d	3108	1	Matthew Olley
23	8/13/2012 13:30	Sample	9981517003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\022SMPL.d	3109	1	Matthew Olley
24	8/13/2012 13:33	Sample	9981517003L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\023SMPL.d	3110	1	Matthew Olley
25	8/13/2012 13:37						Matthew Olley
26	8/13/2012 13:37	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\024_CCV.d	1307	1	Matthew Olley
27	8/13/2012 13:37						Matthew Olley
28	8/13/2012 13:49	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\025_CCB.d	1101	1	Matthew Olley
29	8/13/2012 13:53	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\026LCCV.d	1305	1	Matthew Olley
30	8/13/2012 13:56	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\027_CCV.d	1307	1	Matthew Olley
31	8/13/2012 14:00	Sample	1021781	C:\Agilent\ICPMH\1\DAT 37995 LAMDF5 A\A081312C.b\028SMPL.d	3111	1	Matthew Olley
32	8/13/2012 14:03						Matthew Olley
33	8/13/2012 14:03	Sample	1021782	C:\Agilent\ICPMH\1\DAT 37995 LAMDF5 A\A081312C.b\029SMPL.d	3112	1	Matthew Olley
34	8/13/2012 14:07						Matthew Olley
35	8/13/2012 14:07	Sample	1020183	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\030SMPL.d	3201	1	Matthew Olley
36	8/13/2012 14:10						Matthew Olley
37	8/13/2012 14:10	Sample	1020184	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\031SMPL.d	3202	1	Matthew Olley
38	8/13/2012 14:10						Matthew Olley
39	8/13/2012 14:14						Matthew Olley
40	8/13/2012 14:30	Sample	1020187	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\032SMPL.d	3203	1	Matthew Olley
41	8/13/2012 14:34						Matthew Olley
42	8/13/2012 14:34	Sample	1020188	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\033SMPL.d	3204	1	Matthew Olley
43	8/13/2012 14:37						Matthew Olley
44	8/13/2012 14:37	Sample	1020191	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\034SMPL.d	3205	1	Matthew Olley

Batch Log

45	8/13/2012 14:41						Matthew Olley
46	8/13/2012 14:41	Sample	1020192	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\035SMPL.d	3206	1	Matthew Olley
47	8/13/2012 14:44						Matthew Olley
48	8/13/2012 14:44	Sample	1020195	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\036SMPL.d	3207	1	Matthew Olley
49	8/13/2012 14:48						Matthew Olley
50	8/13/2012 14:48	Sample	1020196	C:\Agilent\ICPMH\1\DAT 37996 LAMDF5 A\A081312C.b\037SMPL.d	3208	1	Matthew Olley
51	8/13/2012 14:51						Matthew Olley
52	8/13/2012 14:51	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\038_CCV.d	1307	1	Matthew Olley
53	8/13/2012 14:54	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\039_CCB.d	1101	1	Matthew Olley
54	8/13/2012 14:58	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\040LCCV.d	1305	1	Matthew Olley
55	8/13/2012 15:01	Sample	9980394001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\041SMPL.d	3209	1	Matthew Olley
56	8/13/2012 15:05						Matthew Olley
57	8/13/2012 15:05	Sample	9980394002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\042SMPL.d	3210	1	Matthew Olley
58	8/13/2012 15:08						Matthew Olley
59	8/13/2012 15:08	Sample	9980394003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\043SMPL.d	3211	1	Matthew Olley
60	8/13/2012 15:12						Matthew Olley
61	8/13/2012 15:12	Sample	9980394004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\044SMPL.d	3212	1	Matthew Olley
62	8/13/2012 15:15						Matthew Olley
63	8/13/2012 15:15	Sample	9980394005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\045SMPL.d	3301	1	Matthew Olley
64	8/13/2012 15:19						Matthew Olley
65	8/13/2012 15:19	Sample	9980394007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\046SMPL.d	3302	1	Matthew Olley
66	8/13/2012 15:22						Matthew Olley
67	8/13/2012 15:22	Sample	9980394008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\047SMPL.d	3303	1	Matthew Olley
68	8/13/2012 15:26						Matthew Olley

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69	8/13/2012 15:26	Sample	9980394009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\048SMPL.d	3304	1	Matthew Olley
70	8/13/2012 15:29						Matthew Olley
71	8/13/2012 15:29	Sample	9980394010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\049SMPL.d	3305	1	Matthew Olley
72	8/13/2012 15:33						Matthew Olley
73	8/13/2012 15:33	Sample	9980394011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\050SMPL.d	3306	1	Matthew Olley
74	8/13/2012 15:36						Matthew Olley
75	8/13/2012 15:36	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\051_CCV.d	1307	1	Matthew Olley
76	8/13/2012 15:40	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\052_CCB.d	1101	1	Matthew Olley
77	8/13/2012 15:43	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\053LCCV.d	1305	1	Matthew Olley
78	8/13/2012 15:43						Matthew Olley
79	8/13/2012 15:49	Sample	1020719	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\054SMPL.d	3101	1	Matthew Olley
80	8/13/2012 15:52						Matthew Olley
81	8/13/2012 15:52	Sample	1020720	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\055SMPL.d	3102	1	Matthew Olley
82	8/13/2012 15:56						Matthew Olley
83	8/13/2012 15:56	Sample	9981430001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\056SMPL.d	3104	1	Matthew Olley
84	8/13/2012 15:59						Matthew Olley
85	8/13/2012 15:59	Sample	1020721	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\057SMPL.d	3105	1	Matthew Olley
86	8/13/2012 16:02						Matthew Olley
87	8/13/2012 16:02	Sample	1020722	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\058SMPL.d	3106	1	Matthew Olley
88	8/13/2012 16:06						Matthew Olley
89	8/13/2012 16:06	Sample	9981430001PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\059SMPL.d	3107	1	Matthew Olley
90	8/13/2012 16:09						Matthew Olley
91	8/13/2012 16:09	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\060_CCV.d	1307	1	Matthew Olley
92	8/13/2012 16:13	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\061_CCB.d	1101	1	Matthew Olley

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93	8/13/2012 16:16	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\062LCCV.d	1305	1	Matthew Olley
94	8/13/2012 16:20	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\063_CCV.d	1307	1	Matthew Olley
95	8/13/2012 16:23	Sample	9980394012	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\064SMPL.d	3307	1	Matthew Olley
96	8/13/2012 16:26						Matthew Olley
97	8/13/2012 16:26	Sample	9980394013	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\065SMPL.d	3308	1	Matthew Olley
98	8/13/2012 16:30						Matthew Olley
99	8/13/2012 16:30	Sample	9980394013L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\066SMPL.d	3309	1	Matthew Olley
100	8/13/2012 16:33						Matthew Olley
101	8/13/2012 16:33	Sample	9980395001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\067SMPL.d	3310	1	Matthew Olley
102	8/13/2012 16:37						Matthew Olley
103	8/13/2012 16:37	Sample	9980395002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\068SMPL.d	3311	1	Matthew Olley
104	8/13/2012 16:40						Matthew Olley
105	8/13/2012 16:40	Sample	9980395003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\069SMPL.d	3312	1	Matthew Olley
106	8/13/2012 16:44						Matthew Olley
107	8/13/2012 16:44	Sample	1020185	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\070SMPL.d	3401	1	Matthew Olley
108	8/13/2012 16:47						Matthew Olley
109	8/13/2012 16:47	Sample	1020186	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\071SMPL.d	3402	1	Matthew Olley
110	8/13/2012 16:51						Matthew Olley
111	8/13/2012 16:51	Sample	9980395003PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\072SMPL.d	3403	1	Matthew Olley
112	8/13/2012 16:54						Matthew Olley
113	8/13/2012 16:54	Sample	9980395004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\073SMPL.d	3404	1	Matthew Olley
114	8/13/2012 16:58						Matthew Olley
115	8/13/2012 16:58	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\074_CCV.d	1307	1	Matthew Olley
116	8/13/2012 16:58						Matthew Olley

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117	8/13/2012 17:03	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A081312C.b\075_CCB.d	1101	1	Matthew Olley
118	8/13/2012 17:07	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DATA\A081312C.b\076LCCV.d	1305	1	Matthew Olley
119	8/13/2012 17:10	Sample	9980395005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\077SMPL.d	3405	1	Matthew Olley
120	8/13/2012 17:14						Matthew Olley
121	8/13/2012 17:14	Sample	9980395007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\078SMPL.d	3406	1	Matthew Olley
122	8/13/2012 17:17						Matthew Olley
123	8/13/2012 17:17	Sample	9980395008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\079SMPL.d	3407	1	Matthew Olley
124	8/13/2012 17:21						Matthew Olley
125	8/13/2012 17:21	Sample	9980395009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\080SMPL.d	3408	1	Matthew Olley
126	8/13/2012 17:24						Matthew Olley
127	8/13/2012 17:24	Sample	9980395009L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25A\A081312C.b\081SMPL.d	3409	1	Matthew Olley
128	8/13/2012 17:28						Matthew Olley
129	8/13/2012 17:28	Sample	9980395010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\082SMPL.d	3410	1	Matthew Olley
130	8/13/2012 17:31						Matthew Olley
131	8/13/2012 17:31	Sample	9980395011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\083SMPL.d	3411	1	Matthew Olley
132	8/13/2012 17:35						Matthew Olley
133	8/13/2012 17:35	Sample	9980395012	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\084SMPL.d	3412	1	Matthew Olley
134	8/13/2012 17:38						Matthew Olley
135	8/13/2012 17:38	Sample	9980395013	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\085SMPL.d	3501	1	Matthew Olley
136	8/13/2012 17:42						Matthew Olley
137	8/13/2012 17:42	Sample	9980395014	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5A\A081312C.b\086SMPL.d	3502	1	Matthew Olley
138	8/13/2012 17:45						Matthew Olley
139	8/13/2012 17:45	CCV	CCV	C:\Agilent\ICPMH\1\DATA\A081312C.b\087_CCV.d	1307	1	Matthew Olley
140	8/13/2012 17:49	CCB	CCB	C:\Agilent\ICPMH\1\DATA\A081312C.b\088_CCB.d	1101	1	Matthew Olley

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141	8/13/2012 17:52	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\089LCCV.d	1305	1	Matthew Olley
142	8/13/2012 17:56	Sample	9980395014L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\090SMPL.d	3503	1	Matthew Olley
143	8/13/2012 17:59						Matthew Olley
144	8/13/2012 17:59	Sample	9980614001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\091SMPL.d	3504	1	Matthew Olley
145	8/13/2012 18:02						Matthew Olley
146	8/13/2012 18:02	Sample	9980614002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\092SMPL.d	3505	1	Matthew Olley
147	8/13/2012 18:06						Matthew Olley
148	8/13/2012 18:06	Sample	9980614003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\093SMPL.d	3506	1	Matthew Olley
149	8/13/2012 18:09						Matthew Olley
150	8/13/2012 18:09	Sample	9980614004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\094SMPL.d	3507	1	Matthew Olley
151	8/13/2012 18:13						Matthew Olley
152	8/13/2012 18:13	Sample	9980614005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\095SMPL.d	3508	1	Matthew Olley
153	8/13/2012 18:16						Matthew Olley
154	8/13/2012 18:16	Sample	9980614006	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\096SMPL.d	3509	1	Matthew Olley
155	8/13/2012 18:20						Matthew Olley
156	8/13/2012 18:20	Sample	9980614007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\097SMPL.d	3510	1	Matthew Olley
157	8/13/2012 18:23						Matthew Olley
158	8/13/2012 18:23	Sample	9980614008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\098SMPL.d	3511	1	Matthew Olley
159	8/13/2012 18:27						Matthew Olley
160	8/13/2012 18:27	Sample	9980614009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\099SMPL.d	3512	1	Matthew Olley
161	8/13/2012 18:30						Matthew Olley
162	8/13/2012 18:30	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\100_CCV.d	1307	1	Matthew Olley
163	8/13/2012 18:34	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\101_CCB.d	1101	1	Matthew Olley
164	8/13/2012 18:37	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\102LCCV.d	1305	1	Matthew Olley

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165	8/13/2012 18:41	Sample	9980614010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\103SMPL.d	4101	1	Matthew Olley
166	8/13/2012 18:44						Matthew Olley
167	8/13/2012 18:44	Sample	9980614011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\104SMPL.d	4102	1	Matthew Olley
168	8/13/2012 18:48						Matthew Olley
169	8/13/2012 18:48	Sample	9980614012	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\105SMPL.d	4103	1	Matthew Olley
170	8/13/2012 18:51						Matthew Olley
171	8/13/2012 18:51	Sample	9980614013	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\106SMPL.d	4104	1	Matthew Olley
172	8/13/2012 18:55						Matthew Olley
173	8/13/2012 18:55	Sample	1020189	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\107SMPL.d	4105	1	Matthew Olley
174	8/13/2012 18:58						Matthew Olley
175	8/13/2012 18:58	Sample	1020190	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\108SMPL.d	4106	1	Matthew Olley
176	8/13/2012 19:02						Matthew Olley
177	8/13/2012 19:02	Sample	9980614013PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\109SMPL.d	4107	1	Matthew Olley
178	8/13/2012 19:05						Matthew Olley
179	8/13/2012 19:05	Sample	9980614014	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\110SMPL.d	4108	1	Matthew Olley
180	8/13/2012 19:09						Matthew Olley
181	8/13/2012 19:09	Sample	9980614015	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\111SMPL.d	4109	1	Matthew Olley
182	8/13/2012 19:12						Matthew Olley
183	8/13/2012 19:12	Sample	9980614015L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\112SMPL.d	4110	1	Matthew Olley
184	8/13/2012 19:16						Matthew Olley
185	8/13/2012 19:16	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\113_CCV.d	1307	1	Matthew Olley
186	8/13/2012 19:19	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\114_CCB.d	1101	1	Matthew Olley
187	8/13/2012 19:22	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\115LCCV.d	1305	1	Matthew Olley
188	8/13/2012 19:26	Sample	9980614016	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\116SMPL.d	4111	1	Matthew Olley

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189	8/13/2012 19:29						Matthew Olley
190	8/13/2012 19:29	Sample	9980614017	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\117SMPL.d	4112	1	Matthew Olley
191	8/13/2012 19:33						Matthew Olley
192	8/13/2012 19:33	Sample	9980614018	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\118SMPL.d	4201	1	Matthew Olley
193	8/13/2012 19:36						Matthew Olley
194	8/13/2012 19:36	Sample	9980614019	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\119SMPL.d	4202	1	Matthew Olley
195	8/13/2012 19:40						Matthew Olley
196	8/13/2012 19:40	Sample	9980614020	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\120SMPL.d	4203	1	Matthew Olley
197	8/13/2012 19:43						Matthew Olley
198	8/13/2012 19:43	Sample	9980614021	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\121SMPL.d	4204	1	Matthew Olley
199	8/13/2012 19:47						Matthew Olley
200	8/13/2012 19:47	Sample	9980614022	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\122SMPL.d	4205	1	Matthew Olley
201	8/13/2012 19:50						Matthew Olley
202	8/13/2012 19:50	Sample	9980614022L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\123SMPL.d	4206	1	Matthew Olley
203	8/13/2012 19:54						Matthew Olley
204	8/13/2012 19:54	Sample	9980875001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\124SMPL.d	4207	1	Matthew Olley
205	8/13/2012 19:57						Matthew Olley
206	8/13/2012 19:57	Sample	1020193	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\125SMPL.d	4208	1	Matthew Olley
207	8/13/2012 20:01						Matthew Olley
208	8/13/2012 20:01	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\126_CCV.d	1307	1	Matthew Olley
209	8/13/2012 20:04	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\127_CCB.d	1101	1	Matthew Olley
210	8/13/2012 20:08	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\128LCCV.d	1305	1	Matthew Olley
211	8/13/2012 20:11	Sample	1020194	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\129SMPL.d	4209	1	Matthew Olley
212	8/13/2012 20:15						Matthew Olley

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213	8/13/2012 20:15	Sample	9980875001PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\130SMPL.d	4210	1	Matthew Olley
214	8/13/2012 20:18						Matthew Olley
215	8/13/2012 20:18	Sample	9980875002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\131SMPL.d	4211	1	Matthew Olley
216	8/13/2012 20:22						Matthew Olley
217	8/13/2012 20:22	Sample	9980875003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\132SMPL.d	4212	1	Matthew Olley
218	8/13/2012 20:25						Matthew Olley
219	8/13/2012 20:25	Sample	9980875004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\133SMPL.d	4301	1	Matthew Olley
220	8/13/2012 20:29						Matthew Olley
221	8/13/2012 20:29	Sample	9980875005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\134SMPL.d	4302	1	Matthew Olley
222	8/13/2012 20:32						Matthew Olley
223	8/13/2012 20:32	Sample	9980875006	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\135SMPL.d	4303	1	Matthew Olley
224	8/13/2012 20:36						Matthew Olley
225	8/13/2012 20:36	Sample	9980875007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\136SMPL.d	4304	1	Matthew Olley
226	8/13/2012 20:39						Matthew Olley
227	8/13/2012 20:39	Sample	9980875008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\137SMPL.d	4305	1	Matthew Olley
228	8/13/2012 20:43						Matthew Olley
229	8/13/2012 20:43	Sample	9980875009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\138SMPL.d	4306	1	Matthew Olley
230	8/13/2012 20:46						Matthew Olley
231	8/13/2012 20:46	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\139_CCV.d	1307	1	Matthew Olley
232	8/13/2012 20:49	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\140_CCB.d	1101	1	Matthew Olley
233	8/13/2012 20:53	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\141LCCV.d	1305	1	Matthew Olley
234	8/13/2012 20:56	Sample	9980875010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\142SMPL.d	4307	1	Matthew Olley
235	8/13/2012 21:00						Matthew Olley
236	8/13/2012 21:00	Sample	9980875011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\143SMPL.d	4308	1	Matthew Olley

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237	8/13/2012 21:03						Matthew Olley
238	8/13/2012 21:03	Sample	9980875012	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\144SMPL.d	4309	1	Matthew Olley
239	8/13/2012 21:07						Matthew Olley
240	8/13/2012 21:07	Sample	9980875013	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\145SMPL.d	4310	1	Matthew Olley
241	8/13/2012 21:10						Matthew Olley
242	8/13/2012 21:10	Sample	9980875013L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\146SMPL.d	4311	1	Matthew Olley
243	8/13/2012 21:14						Matthew Olley
244	8/13/2012 21:14	Sample	9980875014	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\147SMPL.d	4312	1	Matthew Olley
245	8/13/2012 21:17						Matthew Olley
246	8/13/2012 21:17	Sample	9980875014L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\148SMPL.d	4401	1	Matthew Olley
247	8/13/2012 21:21						Matthew Olley
248	8/13/2012 21:21	Sample	9981198001	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\149SMPL.d	4402	1	Matthew Olley
249	8/13/2012 21:24						Matthew Olley
250	8/13/2012 21:24	Sample	9981198002	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\150SMPL.d	4403	1	Matthew Olley
251	8/13/2012 21:28						Matthew Olley
252	8/13/2012 21:28	Sample	9981198003	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\151SMPL.d	4404	1	Matthew Olley
253	8/13/2012 21:31						Matthew Olley
254	8/13/2012 21:31	CCV	CCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\152_CCV.d	1306	1	Matthew Olley
255	8/13/2012 21:35	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\153_CCB.d	1101	1	Matthew Olley
256	8/13/2012 21:38	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\154LCCV.d	1304	1	Matthew Olley
257	8/13/2012 21:42	Sample	1020197	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\155SMPL.d	4405	1	Matthew Olley
258	8/13/2012 21:45						Matthew Olley
259	8/13/2012 21:45	Sample	1020198	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\156SMPL.d	4406	1	Matthew Olley
260	8/13/2012 21:49						Matthew Olley

Batch Log

261	8/13/2012 21:49	Sample	9981198003PS	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\157SMPL.d	4407	1	Matthew Olley
262	8/13/2012 21:52						Matthew Olley
263	8/13/2012 21:52	Sample	9981198004	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\158SMPL.d	4408	1	Matthew Olley
264	8/13/2012 21:55						Matthew Olley
265	8/13/2012 21:55	Sample	9981198005	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\159SMPL.d	4409	1	Matthew Olley
266	8/13/2012 21:59						Matthew Olley
267	8/13/2012 21:59	Sample	9981198006	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\160SMPL.d	4410	1	Matthew Olley
268	8/13/2012 22:02						Matthew Olley
269	8/13/2012 22:02	Sample	9981198007	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\161SMPL.d	4411	1	Matthew Olley
270	8/13/2012 22:06						Matthew Olley
271	8/13/2012 22:06	Sample	9981198008	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\162SMPL.d	4412	1	Matthew Olley
272	8/13/2012 22:09						Matthew Olley
273	8/13/2012 22:09	Sample	9981198009	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\163SMPL.d	4501	1	Matthew Olley
274	8/13/2012 22:13						Matthew Olley
275	8/13/2012 22:13	Sample	9981198010	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\164SMPL.d	4502	1	Matthew Olley
276	8/13/2012 22:16						Matthew Olley
277	8/13/2012 22:16	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\165_CCV.d	1306	1	Matthew Olley
278	8/13/2012 22:20	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\166_CCB.d	1101	1	Matthew Olley
279	8/13/2012 22:23	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\167LCCV.d	1304	1	Matthew Olley
280	8/13/2012 22:27	Sample	9981198011	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\168SMPL.d	4503	1	Matthew Olley
281	8/13/2012 22:30						Matthew Olley
282	8/13/2012 22:30	Sample	9981198011L	C:\Agilent\ICPMH\1\DAT 37991 LAMDF25 A\A081312C.b\169SMPL.d	4504	1	Matthew Olley
283	8/13/2012 22:34						Matthew Olley
284	8/13/2012 22:34	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\170_CCV.d	1306	1	Matthew Olley

Batch Log

285	8/13/2012 22:37	CCB	CCB	C:\Agilent\ICPMH\1\DAT A\A081312C.b\171_CCB.d	37991 LAMDF5	1101	1	Matthew Olley
286	8/13/2012 22:41	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT A\A081312C.b\172LCCV.d	37991 LAMDF5	1304	1	Matthew Olley
287	8/13/2012 22:44	Sample	50 PPM LDR	C:\Agilent\ICPMH\1\DAT A\A081312C.b\173SMPL.d		4512	1	Matthew Olley
288	8/13/2012 22:48							Matthew Olley
289	8/13/2012 22:54	CalBlk	blk			1101		Matthew Olley
290	8/13/2012 22:54	CalBlk	blk			1101		Matthew Olley
291	8/13/2012 22:54	CalStd	Standard 1			2101		Matthew Olley
292	8/13/2012 22:54	CalStd	Standard 2			2102		Matthew Olley
293	8/13/2012 22:54	CalStd	Standard 3			2103		Matthew Olley
294	8/13/2012 22:54	CalStd	Standard 4			2104		Matthew Olley
295	8/13/2012 22:54	CalStd	Standard 5			2105		Matthew Olley
296	8/13/2012 22:54	ICV	ICV			1307		Matthew Olley
297	8/13/2012 22:54	ICB	ICB			1101		Matthew Olley
298	8/13/2012 22:54	ICB	ICB			1101		Matthew Olley
299	8/13/2012 22:54	LLICV	LLICV			1305		Matthew Olley
300	8/13/2012 22:54	ICSA	ICSA			2111		Matthew Olley
301	8/13/2012 22:54	ICSB	ICSAB			2112		Matthew Olley
302	8/13/2012 22:54	Sample	30 PPM LDR	C:\Agilent\ICPMH\1\DAT A\A081312C.b\174SMPL.d		4511	1	Matthew Olley
303	8/13/2012 22:58	Sample	1020719	C:\Agilent\ICPMH\1\DAT A\A081312C.b\175SMPL.d	37991 LAMDF5	3101	1	Matthew Olley
304	8/13/2012 22:58							Matthew Olley
305	8/13/2012 22:58	Sample	1020720		37991 LAMDF5	3102		Matthew Olley
306	8/13/2012 22:58	Sample	9981408002		37991 LAMDF5	3103		Matthew Olley
307	8/13/2012 22:58	Sample	9981430001		37991 LAMDF5	3104		Matthew Olley
308	8/13/2012 22:58	Sample	1020721		37991 LAMDF5	3105		Matthew Olley
309	8/13/2012 22:58	Sample	1020722		37991 LAMDF5	3106		Matthew Olley
310	8/13/2012 22:58	Sample	9981430001PS		37991 LAMDF5	3107		Matthew Olley
311	8/13/2012 22:58	Sample	9981517002		37991 LAMDF5	3108		Matthew Olley
312	8/13/2012 22:58	Sample	9981517003		37991 LAMDF5	3109		Matthew Olley
313	8/13/2012 22:58	Sample	9981517003L		37991 LAMDF5	3110		Matthew Olley

Batch Log

314	8/13/2012 23:10	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\176_CCV.d	1306	1	Matthew Olley
315	8/13/2012 23:13	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\177_CCB.d	1101	1	Matthew Olley
316	8/13/2012 23:17	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\178LCCV.d	1304	1	Matthew Olley
317	8/13/2012 23:17						Matthew Olley
318	8/13/2012 23:26	Sample	9980875009	C:\Agilent\ICPMH\1\DAT 37996 LAMDF25 A\A081312C.b\179SMPL.d	2501	1	Matthew Olley
319	8/13/2012 23:29	Sample	1021781	C:\Agilent\ICPMH\1\DAT 37995 LAMDF5 A\A081312C.b\180SMPL.d	2502	1	Matthew Olley
320	8/13/2012 23:29						Matthew Olley
321	8/13/2012 23:38	CCV	CCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\181_CCV.d	1306	1	Matthew Olley
322	8/13/2012 23:41	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\182_CCB.d	1101	1	Matthew Olley
323	8/13/2012 23:45	LLCCV	LLCCV	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\183LCCV.d	1304	1	Matthew Olley
324	8/13/2012 23:45						Matthew Olley
325	8/14/2012 0:01	CCB	CCB	C:\Agilent\ICPMH\1\DAT 37991 LAMDF5 A\A081312C.b\184_CCB.d	1101	1	Matthew Olley

Total Solids Summary Forms

Sample Description
FTSW-HR-SO-39

Form 7
Duplicate Summary

Analysis Method:	2540G	SDG No.:	ERT-005
Matrix (soil/water):	soil	Lab Sample ID:	9980875011
Units:	%	Lab File ID:	N/A
Instrument ID:	N/A	Lab Sample Dup. ID:	1018298
GC Column:	N/A	Dup. Lab File ID:	N/A
Sample % Moisture:	N/A	Dup. % Moisture:	N/A

Analyte	Sample Concentration	Duplicate Concentration	Relative Percent Difference (RPD)	(1)	Acceptable Limit
Total Solids	91.4	91.6	0.2		5%

(1) The following qualifiers are used:
* : Values outside of acceptable limits

Comments:

Total Solids Raw Data

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Total Solids

Batch: 113916

Queue: WETC

Analyst: KED

File Name: 113916_120802-143925

Date/Time: 08/02/12 15:00

Misc:		1st Time In	15:00	2nd Time In	9:20	3rd Time In		4th Time In	
		1st Temp In °C	104	2nd Temp In °C	104	3rd Temp In °C		4th Temp In °C	
		1st Time Out	9:10	2nd Time Out	10:20	3rd Time Out		4th Time Out	
		1st Temp Out °C	104	2nd Temp Out °C	104	3rd Temp Out °C		4th Temp Out °C	

Sample ID	Cont ID	Samp Type	TVS	Weight of dish and sample (g) or Volume of sample (ml)	Dish Wt. (g)	1st Dish + Sample Wt (g)	2nd Dish + Sample Wt (g)	3rd Dish + Sample Wt (g)	4th Dish + Sample Wt (g)	TS (%) or (mg/l)	Result1 TARE (g)	Result2 IWT (g)	Result3 FWT (g)
1018296	BALCHK			0.1000	0.1000	0.1000	0.1000			#DIV/0!	0.1000	0.1000	0.1000
1018297	A	DUP	1.7	18.0285	1.1679	16.4449	16.4366			90.5585	1.1679	18.0285	16.4366
9980875001	A	S		19.3811	1.1424	17.3861	17.3769			89.0113	1.1424	19.3811	17.3769
9980875002	A	S		18.9156	1.1823	16.7543	16.7363			87.7107	1.1823	18.9156	16.7363
9980875003	A	S		19.9706	1.1461	16.3789	16.3581			80.8096	1.1461	19.9706	16.3581
9980875004	A	S		12.5837	1.1667	11.9071	11.8953			93.9704	1.1667	12.5837	11.8953
9980875005	A	S		21.1535	1.1721	16.6979	16.6727			77.5751	1.1721	21.1535	16.6727
9980875006	A	S		18.0608	1.1428	14.2739	14.2465			77.4542	1.1428	18.0608	14.2465
9980875007	A	S		15.6906	1.1571	14.0648	14.0509			88.7178	1.1571	15.6906	14.0509
9980875008	A	S		9.1448	1.1815	7.6764	7.6618			81.3771	1.1815	9.1448	7.6618
9980875009	A	S		24.9841	1.2036	19.6855	19.6600			77.6115	1.2036	24.9841	19.6600
9980875010	A	S		13.5772	1.1840	12.5693	12.5533			91.7382	1.1840	13.5772	12.5533
1018298	A	DUP	0.2	15.1132	1.1762	13.9582	13.9437			91.6087	1.1762	15.1132	13.9437
9980875011	A	S		13.9989	1.1443	12.9127	12.8983			91.4381	1.1443	13.9989	12.8983
9980875012	A	S		12.4296	1.1846	10.7015	10.6858			84.4927	1.1846	12.4296	10.6858
9980875013	A	S		10.6332	1.1870	8.9678	8.9489			82.1695	1.1870	10.6332	8.9489
9980875014	A	S		12.9111	1.1864	11.1699	11.1488			84.9693	1.1864	12.9111	11.1488
9980882001	A	S		24.6289	1.1813	22.0527	22.0354			88.9392	1.1813	24.6289	22.0354
9980883001	A	S		32.2560	1.1723	26.7115	26.6904			82.0948	1.1723	32.2560	26.6904
9980884001	A	S		45.2064	1.1533	36.2919	36.2725			79.7202	1.1533	45.2064	36.2725
1018299	BALCHK			0.1000	0.1000	0.1000	0.1000			#DIV/0!	0.1000	0.1000	0.1000

End

ENTERED KK
SECOND REVIEW 8-3-12
APPROVED 8-3-12

ALMDT.NOUSER

Subcontracting Data

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL REPORT

Report Date: August 28, 2012

Vicki Forney
ALS Environmental-Middletown
34 Dogwood Lane
Middletown, PA 17057

Phone: (717) 944-5541 x 3162
Fax: (717) 944-1430
E-mail: vicki.forney@ALSglobal.com

Workorder: 34-1221656
Project ID: ALS Middletown 080312
Purchase Order: NA

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
FTSW-HR-SO-31	1221656001	08/01/12	08/03/12	ERT
FTSW-HR-SO-31 Dup	1221656004	08/01/12	08/03/12	ERT
FTSW-HR-SO-32(10)	1221656005	08/01/12	08/03/12	ERT
FTSW-HR-SO-33	1221656006	08/01/12	08/03/12	ERT
FTSW-HR-SO-34(10)	1221656007	08/01/12	08/03/12	ERT
FTSW-HR-SO-34(10)Dup	1221656008	08/01/12	08/03/12	ERT
FTSW-HR-SO-35	1221656009	08/01/12	08/03/12	ERT
FTSW-HR-SO-36	1221656010	08/01/12	08/03/12	ERT
FTSW-HR-SO-37(09.5)	1221656011	08/01/12	08/03/12	ERT
FTSW-HR-SO-38	1221656012	08/01/12	08/03/12	ERT
FTSW-HR-SO-39	1221656013	08/01/12	08/03/12	ERT
FTSW-HR-SO-40	1221656014	08/01/12	08/03/12	ERT
FTSW-HR-SO-41	1221656015	08/01/12	08/03/12	ERT
FTSW-HR-SO-42	1221656016	08/01/12	08/03/12	ERT
FTSW-HR-SO-37(09.5)ERB	1221656017	08/01/12	08/03/12	ERT

Client QC ID	Lab ID	Collect Date	Receive Date	Sampling Site
FTSW-HR-SO-31 MS	1221656002	08/01/12	08/03/12	ERT
FTSW-HR-SO-31 MSD	1221656003	08/01/12	08/03/12	ERT

*Client QC is reported as part of the Quality Control results report, if requested.

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ANALYTICAL REPORT

Workorder: 34-1221656
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-31 9980875001 Sampling Site: ERT Collected: 08/01/2012
Lab ID: 1221656001 Media: 8 oz Glass Jar Wide Mouth Received: 08/03/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1293 (HBN: 91784)	Initial: 1.06 grams	Batch: ELMS/1295 (HBN: 91861)	Percent Solid: 92.1
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/15/2012 20:31	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.027	0.027	0.51	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15752 (HBN: 91130)	Initial: 30.14 grams	Batch: ESVO/3820 (HBN: 91737)	Percent Solid: 92.1
Prepared: 08/07/2012	Final: 1 mL	Analyzed: 08/09/2012 14:01	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.8	6.8	180	1	U
1,4-Dithiane	5.1	5.1	180	1	U

Sample ID: FTSW-HR-SO-31 Dup 9980875002 Sampling Site: ERT Collected: 08/01/2012
Lab ID: 1221656004 Media: 8 oz Glass Jar Wide Mouth Received: 08/03/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1293 (HBN: 91784)	Initial: 1.01 grams	Batch: ELMS/1295 (HBN: 91861)	Percent Solid: 91.1
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/15/2012 22:20	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.54	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15752 (HBN: 91130)	Initial: 30.07 grams	Batch: ESVO/3820 (HBN: 91737)	Percent Solid: 91.1
Prepared: 08/07/2012	Final: 1 mL	Analyzed: 08/09/2012 15:31	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: FTSW-HR-SO-32(10) 9980875003 Sampling Site: ERT Collected: 08/01/2012
Lab ID: 1221656005 Media: 8 oz Glass Jar Wide Mouth Received: 08/03/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1293 (HBN: 91784)	Initial: 1 grams	Batch: ELMS/1295 (HBN: 91861)	Percent Solid: 84.7
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/15/2012 22:57	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.031	0.031	0.59	1	U

Results Continued on Next Page

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ALS Environmental

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL REPORT

Workorder: 34-1221656
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-32(10) | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656005 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil		Instrument ID: 5975-H	
Batch: ENVX/15752 (HBN: 91130)	Initial: 30.13 grams	Batch: ESVO/3820 (HBN: 91737)		Percent Solid: 84.7	
Prepared: 08/07/2012	Final: 1 mL	Analyzed: 08/09/2012 16:01		Report Basis: Dry	
Analyte	**ug/Kg**	**LOD (ug/Kg)**	**LOQ (ug/Kg)**	**Dilution**	**Qual.**
1,4-Oxathiane	7.4	7.4	200	1	U
1,4-Dithiane	5.6	5.6	200	1	U

Sample ID: FTSW-HR-SO-33 9980875 004 | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656006 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil		Instrument ID: LCMS03	
Batch: ELMS/1293 (HBN: 91784)	Initial: 1.03 grams	Batch: ELMS/1295 (HBN: 91861)		Percent Solid: 92.8	
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/15/2012 23:33		Report Basis: Dry	
Analyte	**ug/g**	**LOD (ug/g)**	**LOQ (ug/g)**	**Dilution**	**Qual.**
Thiodiglycol	0.027	0.027	0.52	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil		Instrument ID: 5975-H	
Batch: ENVX/15752 (HBN: 91130)	Initial: 30.04 grams	Batch: ESVO/3820 (HBN: 91737)		Percent Solid: 92.8	
Prepared: 08/07/2012	Final: 1 mL	Analyzed: 08/09/2012 16:30		Report Basis: Dry	
Analyte	**ug/Kg**	**LOD (ug/Kg)**	**LOQ (ug/Kg)**	**Dilution**	**Qual.**
1,4-Oxathiane	6.8	6.8	180	1	U
1,4-Dithiane	5.1	5.1	180	1	U

Sample ID: FTSW-HR-SO-34(10) 9980875 005 | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656007 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil		Instrument ID: LCMS03	
Batch: ELMS/1293 (HBN: 91784)	Initial: 1.02 grams	Batch: ELMS/1295 (HBN: 91861)		Percent Solid: 81.7	
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/16/2012 00:10		Report Basis: Dry	
Analyte	**ug/g**	**LOD (ug/g)**	**LOQ (ug/g)**	**Dilution**	**Qual.**
Thiodiglycol	0.031	0.031	0.60	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil		Instrument ID: 5975-H	
Batch: ENVX/15752 (HBN: 91130)	Initial: 30.01 grams	Batch: ESVO/3820 (HBN: 91737)		Percent Solid: 81.7	
Prepared: 08/07/2012	Final: 1 mL	Analyzed: 08/09/2012 21:22		Report Basis: Dry	
Analyte	**ug/Kg**	**LOD (ug/Kg)**	**LOQ (ug/Kg)**	**Dilution**	**Qual.**
1,4-Oxathiane	7.7	7.7	200	1	U

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ANALYTICAL REPORT

Workorder: 34-1221656
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-34(10) Sampling Site: ERT Collected: 08/01/2012
Lab ID: 1221656007 Media: 8 oz Glass Jar Wide Mouth Received: 08/03/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15752 (HBN: 91130)	Initial: 30.01 grams	Batch: ESVO/3820 (HBN: 91737)	Percent Solid: 81.7
Prepared: 08/07/2012	Final: 1 mL	Analyzed: 08/09/2012 21:22	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Dithiane	5.8	5.8	200	1	U

Sample ID: FTSW-HR-SO-34(10)Dup 9980875 006 Sampling Site: ERT Collected: 08/01/2012
Lab ID: 1221656008 Media: 8 oz Glass Jar Wide Mouth Received: 08/03/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1293 (HBN: 91784)	Initial: 1 grams	Batch: ELMS/1295 (HBN: 91861)	Percent Solid: 78.8
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/16/2012 01:22	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.033	0.033	0.63	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15752 (HBN: 91130)	Initial: 30.08 grams	Batch: ESVO/3820 (HBN: 91737)	Percent Solid: 78.8
Prepared: 08/07/2012	Final: 1 mL	Analyzed: 08/09/2012 17:00	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	8.0	8.0	210	1	U
1,4-Dithiane	6.0	6.0	210	1	U

Sample ID: FTSW-HR-SO-35 9980875 007 Sampling Site: ERT Collected: 08/01/2012
Lab ID: 1221656009 Media: 8 oz Glass Jar Wide Mouth Received: 08/03/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1293 (HBN: 91784)	Initial: 1.05 grams	Batch: ELMS/1295 (HBN: 91861)	Percent Solid: 89.3
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/16/2012 01:59	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.53	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15752 (HBN: 91130)	Initial: 30.09 grams	Batch: ESVO/3820 (HBN: 91737)	Percent Solid: 89.3
Prepared: 08/07/2012	Final: 1 mL	Analyzed: 08/09/2012 17:29	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.0	7.0	190	1	U
1,4-Dithiane	5.3	5.3	190	1	U

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ANALYTICAL REPORT

Workorder: 34-1221656
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-36 9980875 008 | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656010 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1293 (HBN: 91784)	Initial: 1.01 grams	Batch: ELMS/1295 (HBN: 91861)	Percent Solid: 82.4
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/16/2012 02:35	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.031	0.031	0.60	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15752 (HBN: 91130)	Initial: 30.13 grams	Batch: ESVO/3820 (HBN: 91737)	Percent Solid: 82.4
Prepared: 08/07/2012	Final: 1 mL	Analyzed: 08/09/2012 17:58	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.6	7.6	200	1	U
1,4-Dithiane	5.8	5.8	200	1	U

Sample ID: FTSW-HR-SO-37(09.5) 9980875 009 | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656011 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1293 (HBN: 91784)	Initial: 1.01 grams	Batch: ELMS/1295 (HBN: 91861)	Percent Solid: 75.5
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/16/2012 03:11	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.034	0.034	0.66	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15752 (HBN: 91130)	Initial: 30.05 grams	Batch: ESVO/3820 (HBN: 91737)	Percent Solid: 76.5
Prepared: 08/07/2012	Final: 1 mL	Analyzed: 08/09/2012 19:54	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	8.3	8.3	220	1	U
1,4-Dithiane	6.3	6.3	220	1	U

Sample ID: FTSW-HR-SO-38 9980875 010 | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656012 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1293 (HBN: 91784)	Initial: 1.03 grams	Batch: ELMS/1295 (HBN: 91861)	Percent Solid: 91.1
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/16/2012 03:48	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.53	1	U

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ANALYTICAL REPORT

Workorder: 34-1221656
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-38 | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656012 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15752 (HBN: 91130)	Initial: 30.06 grams	Batch: ESVO/3820 (HBN: 91737)	Percent Solid: 91.1
Prepared: 08/07/2012	Final: 1 mL	Analyzed: 08/09/2012 18:27	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: FTSW-HR-SO-39 9980815011 | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656013 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1293 (HBN: 91784)	Initial: 1.04 grams	Batch: ELMS/1295 (HBN: 91881)	Percent Solid: 90.5
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/16/2012 04:24	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.53	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15752 (HBN: 91130)	Initial: 30.04 grams	Batch: ESVO/3820 (HBN: 91737)	Percent Solid: 90.5
Prepared: 08/07/2012	Final: 1 mL	Analyzed: 08/09/2012 18:56	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.0	7.0	180	1	U
1,4-Dithiane	5.3	5.3	180	1	U

Sample ID: FTSW-HR-SO-40 9980815012 | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656014 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1293 (HBN: 91784)	Initial: 1.04 grams	Batch: ELMS/1295 (HBN: 91881)	Percent Solid: 74.4
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/16/2012 05:00	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.034	0.034	0.65	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15752 (HBN: 91130)	Initial: 30 grams	Batch: ESVO/3820 (HBN: 91737)	Percent Solid: 74.4
Prepared: 08/07/2012	Final: 1 mL	Analyzed: 08/09/2012 20:24	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	8.5	8.5	220	1	U

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ANALYTICAL REPORT

Workorder: 34-1221656
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-40 | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656014 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15752 (HBN: 91130)	Initial: 30 grams	Batch: ESVO/3820 (HBN: 91737)	Percent Solid: 74.4
Prepared: 08/07/2012	Final: 1 mL	Analyzed: 08/09/2012 20:24	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Dithiane	6.4	6.4	220	1	U

Sample ID: FTSW-HR-SO-41 9980875 013 | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656015 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1293 (HBN: 91784)	Initial: 1.05 grams	Batch: ELMS/1295 (HBN: 91861)	Percent Solid: 83.2
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/16/2012 05:37	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.030	0.030	0.57	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15752 (HBN: 91130)	Initial: 30.04 grams	Batch: ESVO/3820 (HBN: 91737)	Percent Solid: 83.2
Prepared: 08/07/2012	Final: 1 mL	Analyzed: 08/09/2012 20:53	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.6	7.6	200	1	U
1,4-Dithiane	5.7	5.7	200	1	U

Sample ID: FTSW-HR-SO-42 9980875 014 | Sampling Site: ERT | Collected: 08/01/2012
Lab ID: 1221656016 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/03/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Chemical Agent Breakdown, Soil Prep	Weight/Volume	Analysis: Chemical Agent Breakdown, Soil	Instrument ID: LCMS03
Batch: ELMS/1293 (HBN: 91784)	Initial: 1.08 grams	Batch: ELMS/1295 (HBN: 91861)	Percent Solid: 83.1
Prepared: 08/06/2012	Final: 10 mL	Analyzed: 08/16/2012 06:13	Report Basis: Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.030	0.030	0.57	1	U

Analysis Method - SW 8270

Preparation: EPA 3550, Sonic Ext, SVOA Soil	Weight/Volume	Analysis: SW 8270D, Soil	Instrument ID: 5975-H
Batch: ENVX/15752 (HBN: 91130)	Initial: 30.11 grams	Batch: ESVO/3820 (HBN: 91737)	Percent Solid: 83.1
Prepared: 08/07/2012	Final: 1 mL	Analyzed: 08/09/2012 19:25	Report Basis: Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.6	7.6	200	1	U
1,4-Dithiane	5.7	5.7	200	1	U

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ANALYTICAL REPORT

Workorder: 34-1221656
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: FTSW-HR-SO-37(09.5)ERB 9980875 Sampling Site: ERT Collected: 08/01/2012
Lab ID: 1221656017 Media: 1000 mL Amber Glass Received: 08/03/2012
Matrix: Water Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation: Not Applicable
Analysis: Chemical Agent Breakdown, Water
Batch: ELMS/1288 (HBN: 91545)
Analyzed: 08/13/2012 15:56
Instrument ID: LCMS03
Percent Solid: NA
Report Basis: Wet

Analyte	ug/L	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual.
Thiodiglycol	2.6	2.6	50	1	U

Analysis Method - SW 8270

Preparation: EPA 3510, Sep Funnel SVOA
Batch: ENVX/15783 (HBN: 91345)
Prepared: 08/08/2012
Weight/Volume
Initial: 1000 mL
Final: 1 mL
Analysis: SW 8270D, Water
Batch: ESVO/3811 (HBN: 91473)
Analyzed: 08/09/2012 12:33
Instrument ID: 5975-H
Percent Solid: NA
Report Basis: Wet

Analyte	ug/L	LOD (ug/L)	LOQ (ug/L)	Dilution	Qual.
1,4-Oxathiane	1.5	1.5	5.0	1	U
1,4-Dithiane	1.5	1.5	5.0	1	U

Comments

Quality Control: SW 8270 - (HBN: 91473)

Surrogate terphenyl-d14 was above the QC limits in some samples. With the large number of analytes reported by Method 8270, it is to be expected that occasional outliers will occur. Based on the rule of marginal exceedences, the ALS SOP makes allowances for the data to be considered acceptable with one base/neutral surrogate and one acid surrogate outside control limits.

Quality Control: SW 8270 - (HBN: 91737)

Recovery of surrogate 2,4,6-tribromophenol was below the QC limit in sample 1221656007. With the large number of analytes reported by Method 8270, it is to be expected that occasional outliers will occur. Based on the rule of marginal exceedences, the ALS SOP makes allowances for the data to be considered acceptable with one base/neutral surrogate and one acid surrogate outside control limits.

Report Authorization

Method	Analyst	Peer Review
Chemical Agent Breakdown	Thomas T. McKay	Thomas J. Masolan
SW 8270	Reed A. Hendricks	Guy Barker
Solids/Moisture Determination	Ilse J. Ovalle	Ashley Waganheim

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ANALYTICAL REPORT

Workorder: 34-1221656
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025; CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint, Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.
RL = Reporting Limit, a verified value of method/media/instrument sensitivity.
CRDL = Contract Required Detection Limit.
Reg. Limit = Regulatory Limit.
ND = Not Detected, testing result not detected above the MDL or RL.
< This testing result is less than the numerical value.
** No result could be reported, see sample comments for details.

Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.
J = Qualifier indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds calibration range.
P = Qualifier indicates that the RPD between the two columns is greater than 40%.

ALS Environmental Laboratory Locations Across North America

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · Mexico: Monterrey

Report ID: 9980875 - 8/31/2012

Case Narrative

Method: ALS-LC/MS
Analysis: Agent Breakdown Products
ALS WO ID(s): 1221564

Client: ALS Laboratory Group
Account: 08001
Matrix: Soil
HBN #: 91854

General Set Information: There were 22 field samples in this workorder. The samples were analyzed for thiodiglycol (TDG).

Method Summary: Each sample was prepared as noted below and analyzed using an Agilent 1200 LC/MSD system in select ion monitoring (SIM) mode at m/z 97, 125, 139, 146, 181, 105 and 113. ChemStation software was used for instrument control and data analysis.

Sample Preparation: Approximately 1.00g of each sample was weighed into a 15-mL centrifuge tube, and 9.9mL of ASTM Type II water was added to each tube. 100µL of internal standard solution was then added to each sample, bringing the total extract volume to 10mL. The samples were capped, vortexed, rotated for at least 30 minutes, and filtered with Phenomenex Phenex 0.45µm PES syringe filters.

Holding Times: Holding times were met for all samples.

Dilutions: No dilutions were necessary.

Method QC data: The method blank criteria were met. The method blanks (LMB 290090 & 290095) were less than 1/2 the RL of 0.5ug/g for all analytes. The recoveries for LCS 290091 & 290096 were within acceptable parameters.

MS/MSD Analysis: The matrix spikes and matrix spike duplicates were performed on parent samples 1221564001 & 1221564013. Recoveries and RPDs were within acceptable limits for all analytes.

Instrument QC: Instrument initial and continuing calibrations were performed in accordance with established procedures.

NC/CAR(s): NC/CAR #s 497 & 498 were issued for this workorder. (See Misc. Comments.)

Sample Calculation: Samples were reported in µg/g. Results were calculated in µg/g by the equation (A)x(B)x(C)/(D),

where: A = Analyte concentration from the standard curve (µg/mL)
B = Dilution performed at time of analysis
C = Volume of extract (10mL)
D = Actual weight of sample aliquot (g)

Miscellaneous Comments: Sample 1221564023 was extracted without the addition of the internal standard. NC/CAR #498 was issued to address this. Additionally, the final CCV of the analytical batch was not reportable due to a software error. NC/CAR #497 was issued to address this.

Thomas T. McKay — August 16, 2012
Date

Case Narrative

Method: 8270D
Analysis: Semivolatiles by GC/MS
SOP ref: OE-SW-3550, OE-SW-3510, OS-SW-8270D

Set ID: 1221564
Client: ALS Laboratory Group
Matrix: Soil and Water

General Set Information: There are twenty-two field samples plus MS/MSD in this reporting group.

Method Summary: This is a GC/MS method for determination of semivolatile organic compounds in soil and water according to the SW-846 Guidelines. Thirty grams of soil were extracted by sonication and then concentrated to final volume of 1.0 mL. One liter of water is extracted by separatory funnel and then concentrated to a final volume of 1.0 mL. The resulting extract is analyzed using an Agilent model 5975 GC/MS system with an electron impact ionization source and a quadrapole mass-filter detector.

Sample Preparation: All samples were prepared in accordance with method 3550 or 3510.

Holding Times: All preparation and analysis holding times were met for all samples.

Dilutions: None.

Method and Sample QC data: All target compounds were within recovery limits for the laboratory control sample. The method blank met the acceptance criteria with no target compounds detected above the reporting limit. All samples met pertinent internal standard area criteria. In some instances the latter-eluting internal standard areas were low due to a likely matrix effect, but the requested target analytes do not reference those internal standards. Most surrogate recoveries were within QC limits. Recovery of surrogate 2,4,6-tribromophenol was below the QC limit in sample 1221564011. With the large number of analytes reported by Method 8270, it is to be expected that occasional outliers will occur. Based on the rule of marginal exceedences, the ALS SOP makes allowances for the data to be considered acceptable with one base/neutral surrogate and one acid surrogate outside control limits. Of the six surrogates used in Method 8270, the two eluting closest to oxathiane and dithiane are 2-fluorophenol and phenol-d6, both of which were within limits in all samples.

MS/MSD Analysis: Matrix spiking was performed on Sample 1221564013 (FTSW-HR-SO-22(04). Percent recovery and reproducibility outliers in the MS/MSD are attributed to matrix effect. Acceptable recovery of all analytes in the laboratory control sample validate that the method is in control for this batch.

Instrument QC: The instrument was tuned with 50 ng DFTPP. A six-point initial calibration curve was analyzed prior to sample analysis. The concentrations of the standards were: 5, 20, 35, 50, 65 and 80 µg/mL. A calibration verification standard at a concentration of 50 ug/mL was analyzed to verify instrument response against the initial calibration. The initial calibration and continuing calibration verification passed all method criteria.

Miscellaneous Comments: None.

8-14-12

Reed A. Hendricks August 14, 2012

ANALYTICAL REPORT

Report Date: August 16, 2012

Vicki Forney
ALS Environmental-Middletown
34 Dogwood Lane
Middletown, PA 17057

Phone: (717) 944-5541 x 3162
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Workorder: **34-1221564**
Project ID: ALS Middletown 080212
Purchase Order: NA

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
FTSW-HR-SO-11	1221564001	07/31/12	08/02/12	
FTSW-HR-SO-12 (01.5)	1221564002	07/31/12	08/02/12	
FTSW-HR-SO-13	1221564003	07/31/12	08/02/12	
FTSW-HR-SO-14 (01.5)	1221564004	07/31/12	08/02/12	
FTSW-HR-SO-14 (01.5) Dup	1221564005	07/31/12	08/02/12	
FTSW-HR-SO-15	1221564006	07/31/12	08/02/12	
FTSW-HR-SO-16 (01.5)	1221564007	07/31/12	08/02/12	
FTSW-HR-SO-17	1221564008	07/31/12	08/02/12	
FTSW-HR-SO-18 (02)	1221564009	07/31/12	08/02/12	
FTSW-HR-SO-19	1221564010	07/31/12	08/02/12	
FTSW-HR-SO-20 (01.5)	1221564011	07/31/12	08/02/12	
FTSW-HR-SO-21	1221564012	07/31/12	08/02/12	
FTSW-HR-SO-22(04)	1221564013	07/31/12	08/02/12	
FTSW-HR-SO-22(04) Dup	1221564016	07/31/12	08/02/12	
FTSW-HR-SO-23	1221564017	07/31/12	08/02/12	
FTSW-HR-SO-24 (06)	1221564018	07/31/12	08/02/12	
FTSW-HR-SO-25	1221564019	07/31/12	08/02/12	
FTSW-HR-SO-26 (04)	1221564020	07/31/12	08/02/12	
FTSW-HR-SO-27	1221564021	07/31/12	08/02/12	
FTSW-HR-SO-28 (05)	1221564022	07/31/12	08/02/12	
FTSW-HR-SO-29	1221564023	07/31/12	08/02/12	
FTSW-HR-SO-30 (05)	1221564024	07/31/12	08/02/12	

Client QC ID *	Lab ID	Collect Date	Receive Date	Sampling Site
FTSW-HR-SO-22(04) MS	1221564014	07/31/12	08/02/12	
FTSW-HR-SO-22(04) MSD	1221564015	07/31/12	08/02/12	

***Client QC is reported as part of the Quality Control results report, if requested.**

ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-11** | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564001 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1.04 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** 78.7
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/14/2012 20:32	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.032	0.032	0.61	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.38 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 78.7
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/13/2012 13:11	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.9	7.9	210	1	U
1,4-Dithiane	6.0	6.0	210	1	U

Sample ID: **FTSW-HR-SO-12 (01.5)** | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564002 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** 91.3
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/14/2012 22:21	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.55	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 91.3
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/10/2012 12:22	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: **FTSW-HR-SO-13** | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564003 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1.01 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** 91.1
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/14/2012 22:57	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.54	1	U

Results Continued on Next Page

ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-13** | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564003 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.04 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 91.1
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/10/2012 12:51	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: **FTSW-HR-SO-14 (01.5)** | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564004 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1.06 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** 92.3
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/14/2012 23:33	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.027	0.027	0.51	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.16 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 92.3
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/13/2012 13:41	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.8	6.8	180	1	U
1,4-Dithiane	5.1	5.1	180	1	U

Sample ID: **FTSW-HR-SO-14 (01.5) Dup** | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564005 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1.01 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** NA
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 00:10	**Report Basis:** Wet

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.54	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.02 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** NA
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/13/2012 14:10	**Report Basis:** Wet

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.8	6.8	180	1	U

Results Continued on Next Page

ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-14 (01.5) Dup** Sampling Site: NA Collected: 07/31/2012
Lab ID: 1221564005 Media: 8 oz Glass Jar Wide Mouth Received: 08/02/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.02 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** NA
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/13/2012 14:10	**Report Basis:** Wet

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: **FTSW-HR-SO-15** Sampling Site: NA Collected: 07/31/2012
Lab ID: 1221564006 Media: 8 oz Glass Jar Wide Mouth Received: 08/02/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1.02 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** 88.5
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 00:46	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.029	0.029	0.55	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.61 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 88.5
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/10/2012 13:20	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.0	7.0	180	1	U
1,4-Dithiane	5.3	5.3	180	1	U

Sample ID: **FTSW-HR-SO-16 (01.5)** Sampling Site: NA Collected: 07/31/2012
Lab ID: 1221564007 Media: 8 oz Glass Jar Wide Mouth Received: 08/02/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1.06 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** 93.4
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 01:59	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.026	0.026	0.50	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.46 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 93.4
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/13/2012 14:40	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.6	6.6	180	1	U
1,4-Dithiane	5.0	5.0	180	1	U

ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-17** | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564008 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1.02 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** 89.9
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 02:35	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.55	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.38 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 89.9
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/10/2012 13:50	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: **FTSW-HR-SO-18 (02)** | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564009 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1.05 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** 82.2
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 03:12	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.030	0.030	0.58	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.17 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 82.2
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/10/2012 14:20	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.6	7.6	200	1	U
1,4-Dithiane	5.8	5.8	200	1	U

Sample ID: **FTSW-HR-SO-19** | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564010 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1.04 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** 90.9
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 03:48	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.027	0.027	0.53	1	U

Results Continued on Next Page

ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-19** | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564010 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.22 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 90.9
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/10/2012 14:49	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: **FTSW-HR-SO-20 (01.5)** | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564011 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1.02 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** 97
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 04:24	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.026	0.026	0.51	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.11 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 97
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/13/2012 15:10	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.5	6.5	170	1	U
1,4-Dithiane	4.9	4.9	170	1	U

Sample ID: **FTSW-HR-SO-21** | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564012 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1.03 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** 87.1
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 05:01	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.029	0.029	0.56	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.15 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 87.1
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/10/2012 15:19	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.2	7.2	190	1	U

Results Continued on Next Page

ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-21** Sampling Site: NA Collected: 07/31/2012
Lab ID: 1221564012 Media: 8 oz Glass Jar Wide Mouth Received: 08/02/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.15 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 87.1
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/10/2012 15:19	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Dithiane	5.4	5.4	190	1	U

Sample ID: **FTSW-HR-SO-22(04)** Sampling Site: NA Collected: 07/31/2012
Lab ID: 1221564013 Media: 8 oz Glass Jar Wide Mouth Received: 08/02/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1.05 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** 90.4
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 06:50	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.027	0.027	0.53	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.35 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 90.4
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/10/2012 15:48	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: **FTSW-HR-SO-22(04) Dup** Sampling Site: NA Collected: 07/31/2012
Lab ID: 1221564016 Media: 8 oz Glass Jar Wide Mouth Received: 08/02/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1.03 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** 89.4
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 09:15	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.54	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.36 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 89.4
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/10/2012 17:16	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.0	7.0	180	1	U
1,4-Dithiane	5.3	5.3	180	1	U

ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-23** | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564017 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1.05 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** 84.6
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 09:52	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.029	0.029	0.56	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.21 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 84.6
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/10/2012 17:45	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.4	7.4	200	1	U
1,4-Dithiane	5.6	5.6	200	1	U

Sample ID: **FTSW-HR-SO-24 (06)** | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564018 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1.03 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** 88.6
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 10:28	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.029	0.029	0.55	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.22 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 88.6
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/10/2012 18:15	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.1	7.1	190	1	U
1,4-Dithiane	5.3	5.3	190	1	U

Sample ID: **FTSW-HR-SO-25** | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564019 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1.05 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** 81
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 11:05	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.031	0.031	0.59	1	U

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ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-25** | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564019 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.5 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 81
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/10/2012 18:44	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.7	7.7	200	1	U
1,4-Dithiane	5.8	5.8	200	1	U

Sample ID: **FTSW-HR-SO-26 (04)** | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564020 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1.05 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** 92.5
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 11:41	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.027	0.027	0.51	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.09 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 92.5
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/10/2012 19:14	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.8	6.8	180	1	U
1,4-Dithiane	5.1	5.1	180	1	U

Sample ID: **FTSW-HR-SO-27** | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564021 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1.04 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** 84.9
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 12:17	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.029	0.029	0.57	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.17 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 84.9
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/10/2012 19:43	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	7.4	7.4	200	1	U

Results Continued on Next Page

ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-27** Sampling Site: NA Collected: 07/31/2012
Lab ID: 1221564021 Media: 8 oz Glass Jar Wide Mouth Received: 08/02/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.17 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 84.9
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/10/2012 19:43	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Dithiane	5.6	5.6	200	1	U

Sample ID: **FTSW-HR-SO-28 (05)** Sampling Site: NA Collected: 07/31/2012
Lab ID: 1221564022 Media: 8 oz Glass Jar Wide Mouth Received: 08/02/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1.02 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** 91.9
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 12:54	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.53	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.01 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 91.9
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/10/2012 20:13	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.9	6.9	180	1	U
1,4-Dithiane	5.2	5.2	180	1	U

Sample ID: **FTSW-HR-SO-29** Sampling Site: NA Collected: 07/31/2012
Lab ID: 1221564023 Media: 8 oz Glass Jar Wide Mouth Received: 08/02/2012
Matrix: Soil/Solid/Sediment Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1.01 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** 91.4
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 13:30	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.028	0.028	0.54	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.62 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 91.4
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/10/2012 20:42	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.8	6.8	180	1	U
1,4-Dithiane	5.1	5.1	180	1	U

ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

Analytical Results

Sample ID: **FTSW-HR-SO-30 (05)** | Sampling Site: NA | Collected: 07/31/2012
Lab ID: 1221564024 | Media: 8 oz Glass Jar Wide Mouth | Received: 08/02/2012
Matrix: Soil/Solid/Sediment | Sampling Parameter: NA

Analysis Method - Chemical Agent Breakdown

Preparation:	Chemical Agent Breakdown, Soil Prep	**Weight/Volume**	**Analysis:**	Chemical Agent Breakdown, Soil	**Instrument ID:** LCMS03
Batch:	ELMS/1292 (HBN: 91709)	**Initial:** 1.08 grams	**Batch:**	ELMS/1294 (HBN: 91854)	**Percent Solid:** 93.3
Prepared:	08/13/2012	**Final:** 10 mL	**Analyzed:**	08/15/2012 14:07	**Report Basis:** Dry

Analyte	ug/g	LOD (ug/g)	LOQ (ug/g)	Dilution	Qual.
Thiodiglycol	0.026	0.026	0.50	1	U

Analysis Method - SW 8270

Preparation:	EPA 3550, Sonic Ext, SVOA Soil	**Weight/Volume**	**Analysis:**	SW 8270D, Soil	**Instrument ID:** 5975-H
Batch:	ENVX/15741 (HBN: 91073)	**Initial:** 30.47 grams	**Batch:**	ESVO/3816 (HBN: 91657)	**Percent Solid:** 93.3
Prepared:	08/06/2012	**Final:** 1 mL	**Analyzed:**	08/10/2012 21:11	**Report Basis:** Dry

Analyte	ug/Kg	LOD (ug/Kg)	LOQ (ug/Kg)	Dilution	Qual.
1,4-Oxathiane	6.6	6.6	180	1	U
1,4-Dithiane	5.0	5.0	180	1	U

Comments

Quality Control: SW 8270 - (HBN: 91657)

Outliers in the MS/MSD are attributed to matrix effect. Since recoveries are within limits in the LCS, the method is deemed to be in control for this batch.

Recovery of surrogate 2,4,6-tribromophenol was below QC limits in Sample 1221564011. With the large number of analytes reported by Method 8270, it is to be expected that occasional outliers will occur. Based on the rule of marginal exceedences, the ALS SOP makes allowances for the data to be considered acceptable with one base/neutral surrogate and one acid surrogate outside control limits.

Report Authorization

Method	Analyst	Peer Review
Chemical Agent Breakdown	Thomas T. McKay	Thomas J. Masoian
SW 8270	Reed A. Hendricks	Matt Garvin
Solids/Moisture Determination	Ilse J. Ovalle	Ashley Waganheim

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ANALYTICAL REPORT

Workorder: 34-1221564
Client: ALS Laboratory Group
Project Manager: Kevin W. Griffiths

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint ,Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.
RL = Reporting Limit, a verified value of method/media/instrument sensitivity.
CRDL = Contract Required Detection Limit
Reg. Limit = Regulatory Limit.
ND = Not Detected, testing result not detected above the MDL or RL.
< This testing result is less than the numerical value.
** No result could be reported, see sample comments for details.

Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.
J = Qualifier Indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds calibration range.
P = Qualifier indicates that the RPD between the two columns is greater than 40%.

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1221564**

Limits: Historical/Performance	**Preparation:** Chemical Agent Breakdown, Soil Prep	**Analysis:** Chemical Agent Breakdown
Basis: ALS Laboratory Group	**Batch:** ELMS/1292 (HBN: 91709)	**Batch:** ELMS/1294 (HBN: 91854)
	Prepared By: Thomas T. McKay	**Analyzed By:** Thomas T. McKay

Blank

LMB: 290090
Analyzed: 08/14/2012 18:43
Units: ug/g

Analyte	Result	RL
Thiodiglycol	ND	0.5

LMB: 290095
Analyzed: 08/15/2012 05:37
Units: ug/g

Analyte	Result	RL
Thiodiglycol	ND	0.5

Laboratory Control Sample

LCS: 290091
Analyzed: 08/14/2012 19:19
Units: ug/g

Analyte	Result	Target	% Recovery	QC Limits	
Thiodiglycol	20.9	20	104	80	120

LCS: 290096
Analyzed: 08/15/2012 06:14
Units: ug/g

Analyte	Result	Target	% Recovery	QC Limits	
Thiodiglycol	21	20	105	80	120

Matrix Spike - Matrix Spike Duplicate

Sample: 1221564001 | **MS:** 290092 | **MSD:** 290093
Analyzed: 08/14/2012 20:32 | **Analyzed:** 08/14/2012 21:08 | **Analyzed:** 08/14/2012 21:44
Units: ug/g

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
Thiodiglycol	ND	48	48.5	98.9	80	120	48.5	98	1.07	0	20

Sample: 1221564013 | **MS:** 1221564014 | **MSD:** 1221564015
Analyzed: 08/15/2012 06:50 | **Analyzed:** 08/15/2012 07:26 | **Analyzed:** 08/15/2012 08:39
Units: ug/g

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
Thiodiglycol	ND	45.8	47.2	97.1	80	120	47.6	99.9	3.73	0	20

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1221564**

Limits: Historical/Performance	**Preparation:** Chemical Agent Breakdown, Soil Prep	**Analysis:** Chemical Agent Breakdown
Basis: ALS Laboratory Group	**Batch:** ELMS/1292 (HBN: 91709)	**Batch:** ELMS/1294 (HBN: 91854)
	Prepared By: Thomas T. McKay	**Analyzed By:** Thomas T. McKay

QC Data Approved and Reviewed by

Thomas T. McKay	Thomas J. Masoian	8/16/2012
Analyst	**Peer Review**	**Date**

Symbols and Definitions

* - Analyte above reporting limit or outside of control limits
▲ - Sample result is greater than 4 times the spike added
◓ - Sample and Matrix Duplicate less than 5 times the reporting limit

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable

Quality Control Sample
Batch Report

Analysis Information

Workorder: 1221564

Limits:	Historical/Performance	**Preparation:**	EPA 3550, Sonic Ext, SVOA Soil	**Analysis:**	SW 8270
Basis:	ALS Laboratory Group	**Batch:**	ENVX/15741 (HBN: 91073)	**Batch:**	ESVO/3816 (HBN: 91657)
		Prepared By:	Dustin Calder	**Analyzed By:**	Reed A. Hendricks

Blank

MB: 288164
Analyzed: 08/10/2012 10:54
Units: ug/Kg

Analyte	Result	RL
1,4-Oxathiane	ND	167
1,4-Dithiane	ND	167

Laboratory Control Sample

LCS: 288165
Analyzed: 08/10/2012 11:23
Units: ug/Kg

Analyte	Result	Target	% Recovery	QC Limits	
1,4-Oxathiane	776	1330	58.2	30	170
1,4-Dithiane	952	1330	71.4	30	170

Matrix Spike - Matrix Spike Duplicate

Sample: 1221564013
Analyzed: 08/10/2012 15:48
Units: ug/Kg

MS: 1221564014
Analyzed: 08/10/2012 16:17

MSD: 1221564015
Analyzed: 08/10/2012 16:47

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
1,4-Oxathiane	ND	313	1320	*23.6	30	170	446	34.1	35.1	0	50
1,4-Dithiane	ND	372	1320	*28.1	30	170	536	41	36.3	0	50

Surrogate Recoveries

Surrogate	2-Fluorobiphenyl			2-Fluorophenol			Phenol-d5		
QC Limits	38.1	125.1		15.3	128.2		14.5	131.9	
Units	ug/Kg			ug/Kg			ug/Kg		
Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
288164-MB	1330	1670	79.8	1150	1670	68.8	1510	1670	90.9
288165-LCS	1550	1670	93.2	1330	1670	79.8	1780	1670	107
1221564001	1610	1650	97.6	1340	1650	81.4	1700	1650	104
1221564002	1640	1670	98.5	1230	1670	73.9	1660	1670	99.8
1221564003	1470	1660	88.3	1140	1660	68.4	1510	1660	90.7
1221564004	1400	1660	84.2	1090	1660	65.7	1420	1660	85.8
1221564005-DUP	1230	1670	73.6	900	1670	54.1	994	1670	59.7
1221564006	1270	1630	77.9	1060	1630	64.9	1370	1630	84
1221564007	1220	1640	74.4	964	1640	58.7	1160	1640	70.4
1221564008	1310	1650	79.4	1100	1650	66.9	1410	1650	85.8
1221564009	1260	1660	76	1030	1660	61.9	1300	1660	78.5
1221564010	1420	1650	85.6	1090	1650	66	1450	1650	87.3
1221564011	1230	1660	74.4	682	1660	41.1	791	1660	47.6
1221564012	1320	1660	79.4	1070	1660	64.2	1380	1660	83

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1221564**

Limits: Historical/Performance
Basis: ALS Laboratory Group

Preparation: EPA 3550, Sonic Ext, SVOA Soil
Batch: ENVX/15741 (HBN: 91073)
Prepared By: Dustin Calder

Analysis: SW 8270
Batch: ESVO/3816 (HBN: 91657)
Analyzed By: Reed A. Hendricks

Surrogate Recoveries

Surrogate	2-Fluorobiphenyl			2-Fluorophenol			Phenol-d5		
QC Limits	38.1	125.1		15.3	128.2		14.5	131.9	
Units	ug/Kg			ug/Kg			ug/Kg		
Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
1221564013	1280	1650	77.8	1100	1650	66.6	1410	1650	85.7
1221564014-MS	649	1650	39.2	547	1650	33.1	690	1650	41.7
1221564015-MSD	860	1640	52.6	680	1640	41.6	893	1640	54.6
1221564016-DUP	1100	1650	66.7	872	1650	53	1150	1650	70.1
1221564017	1080	1660	65	829	1660	50.1	1120	1660	67.5
1221564018	1160	1650	70	956	1650	57.8	1260	1650	75.9
1221564019	956	1640	58.3	961	1640	58.6	1090	1640	66.6
1221564020	793	1660	47.7	669	1660	40.3	849	1660	51.1
1221564021	1080	1660	65.1	824	1660	49.7	1090	1660	66
1221564022	1410	1670	84.8	1200	1670	72.1	1550	1670	92.9
1221564023	1190	1630	72.8	1030	1630	63.4	1330	1630	81.3
1221564024	989	1640	60.3	901	1640	54.9	1190	1640	72.7

Surrogate	Terphenyl-d14			Nitrobenzene-d5			2,4,6-Tribromophenol		
QC Limits	17.7	171.2		17.4	135.5		22.1	146.8	
Units	ug/Kg			ug/Kg			ug/Kg		
Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
288164-MB	2000	1670	120	1190	1670	71.5	1670	1670	100
288165-LCS	2200	1670	132	1380	1670	82.7	1850	1670	111
1221564001	2010	1650	122	1420	1650	86.4	1790	1650	109
1221564002	1990	1670	119	1430	1670	85.7	1880	1670	113
1221564003	1770	1660	106	1290	1660	77.5	1570	1660	94.3
1221564004	2020	1660	122	1120	1660	67.8	1370	1660	82.5
1221564005-DUP	1640	1670	98.5	995	1670	59.8	864	1670	51.9
1221564006	823	1630	50.4	1190	1630	72.7	1320	1630	80.8
1221564007	1100	1640	66.9	982	1640	59.9	973	1640	59.3
1221564008	877	1650	53.3	1220	1650	74	1370	1650	83.4
1221564009	442	1660	26.7	1190	1660	71.7	1280	1660	77.2
1221564010	982	1650	59.3	1230	1650	74.3	1510	1650	91.1
1221564011	1130	1660	68.2	991	1660	59.7	146	1660	*8.77
1221564012	921	1660	55.5	1160	1660	69.8	1370	1660	82.7
1221564013	910	1650	55.2	1180	1650	71.7	1310	1650	79.5
1221564014-MS	417	1650	25.2	598	1650	36.1	598	1650	36.2
1221564015-MSD	566	1640	34.6	755	1640	46.2	803	1640	49.1
1221564016-DUP	791	1650	48	957	1650	58.1	1110	1650	67.1
1221564017	817	1660	49.4	937	1660	56.6	1190	1660	71.8
1221564018	908	1650	54.9	1040	1650	63.1	1270	1650	76.9
1221564019	542	1640	33.1	913	1640	55.7	958	1640	58.5

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1221564**

Limits: Historical/Performance
Basis: ALS Laboratory Group

Preparation: EPA 3550, Sonic Ext, SVOA Soil
Batch: ENVX/15741 (HBN: 91073)
Prepared By: Dustin Calder

Analysis: SW 8270
Batch: ESVO/3816 (HBN: 91657)
Analyzed By: Reed A. Hendricks

Surrogate Recoveries

Surrogate	Terphenyl-d14			Nitrobenzene-d5			2,4,6-Tribromophenol		
QC Limits	17.7	171.2		17.4	135.5		22.1	146.8	
Units	ug/Kg			ug/Kg			ug/Kg		
Lab ID	Result	Target	% Recovery	Result	Target	% Recovery	Result	Target	% Recovery
1221564020	586	1660	35.3	710	1660	42.7	762	1660	45.9
1221564021	840	1660	50.7	927	1660	55.9	1110	1660	67.2
1221564022	1070	1670	64.4	1280	1670	76.9	1440	1670	86.5
1221564023	913	1630	55.9	1100	1630	67.4	1230	1630	75
1221564024	868	1640	52.9	902	1640	54.9	1090	1640	66.7

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1221564**

Limits: Historical/Performance	**Preparation:** EPA 3550, Sonic Ext, SVOA Soil	**Analysis:** SW 8270
Basis: ALS Laboratory Group	**Batch:** ENVX/15741 (HBN: 91073)	**Batch:** ESVO/3816 (HBN: 91657)
	Prepared By: Dustin Calder	**Analyzed By:** Reed A. Hendricks

Comments

Outliers in the MS/MSD are attributed to matrix effect. Since recoveries are within limits in the LCS, the method is deemed to be in control for this batch.

Recovery of surrogate 2,4,6-tribromophenol was below QC limits in Sample 1221564011. With the large number of analytes reported by Method 8270, it is to be expected that occasional outliers will occur. Based on the rule of marginal exceedences, the ALS SOP makes allowances for the data to be considered acceptable with one base/neutral surrogate and one acid surrogate outside control limits.

QC Data Approved and Reviewed by

Reed A. Hendricks	Matt Garvin	8/14/2012
Analyst	**Peer Review**	**Date**

Symbols and Definitions

* - Analyte above reporting limit or outside of control limits
▲ - Sample result is greater than 4 times the spike added
◓ - Sample and Matrix Duplicate less than 5 times the reporting limit

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable

SUBCONTRACT TO ALS SALT LAKE CITY

1221564

ALS Environmental

Ship to: 34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

9855 1/2

Page 1 of 3

Courier:

Tracking #:

9980614

1221564

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Co. Name: ERT, inc

Contact (Report to): Mike Gearheart

Phone: 301-323-1403

Address: 6100 Frost PL
Suite A
Laurel MD 20707

Bill to (if different than Report to): ALS MIDDLETOWN

PO#:

Project Name/#: Ft. Steward 3153-004

ALS Quote #:

TAT: ☐ Normal-Standard TAT is 10 business days. ☐ Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? ☑-Y Mike.Gearheart@ertcorp.com

Fax? ☐-Y No.:

	***Container Type	***Container Size	*** Preservative	ANALYSES/METHOD REQUESTED													
				*G or C	**Matrix	SW-846 6020	SW-846 9320D/5321										
	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time				Enter Number of Containers Per Analysis									
1	FTSW-HR-SO-11		7/31/12	0911	G	SO	1	1									
2	FTSW-HR-SO-12 (0.5)		7/31/12	0918	G	SO	1	1									
3	FTSW-HR-SO-13		7/31/12	827	G	SO	1	1									
4	FTSW-HR-SO-14 (0-0.5)		7/31/12	833	G	SO	1	1									
5	FTSW-HR-SO-14 (0-0.5) DUP		7/31/12	835	G	SO	1	1									
6	FTSW-HR-SO-15		7/31/12	915	G	SO	1	1									
7	FTSW-HR-SO-16 (0-0.5)		7/31/12	921	G	SO	1	1									
8	FTSW-HR-SO-17		7/31/12	943	G	SO	1	1									

	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
	N	N	N	N	
	Y	Y	Y	Y	
	N	N	N	N	
	Y	Y	Y	Y	
	Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?

Receipt Information (completed by Sample Receiving)

Performed by: [illegible]

Cooler Temp: 3

Therm. ID: PH15

No. of Coolers:

Notes:

SAMPLED BY (Please Print): Rebekah McCoy

LOGGED BY(signature): [signature] DATE: 8/1/12 TIME: 1417

REVIEWED BY(signature): DATE: TIME:

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature] ERT	7/31/12	1600	2	[signature]	8/1	0900
3	[signature]	8/1/12	1715	4	Merrell Steward/ALS	8/2	1001
5				6			
7				8			
9				10			

Data Deliverables: ☐ Standard ☒ CLP-like ☐ NJ-Reduced ☐ NJ-Full ☒ DOD (other)

EDDs Required? ☒ If yes, format type: SEDD

DOD Criteria Required? YES - for QAPP

SDWA Forms?⇨ yes ☐ yes ☐ yes ☐ yes ☐

State Samples Collected In? MD ☐ NJ ☐ NY ☐ PA ☐

Other GA

ALS FIELD SERVICES

☐ Pickup
☐ Labor
☐ Composite Sampling
☐ Rental Equipment
☐ Other:

* G=Grab; C=Composite

**Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; Ol=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 6/2011

ALS Environmental

Ship to: 34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier:

Tracking #:

9980614

Co. Name: ERT, inc

Contact (Report to): Mike Gearheart

Phone: 301-323-1403

Address: 6100 Frost PL
Suite A
Laurel MD 20707

Bill to (if different than Report to):

PO#:

Project Name/#: Ft Stewart 3153-004

ALS Quote #:

TAT: ☐ Normal-Standard TAT is 10 business days. ☐ Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? ✓ -Y Mike.Gearheart@ertcorp.com

Fax? ☐ -Y No.:

***Container Type						GG	AG									
***Container Size						4oz	8oz									
*** Preservative						N/A	N/A									
ANALYSES/METHOD REQUESTED						SW-846 6020	SW-846 8270D/8321									
Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	Enter Number of Containers Per Analysis										
1 FTSW-HR-SO-18(02)		7/31/12	1016	G	So	1	1									
2 FTSW-HR-SO-19		7/31/12	1058	G	So	1	1									
3 FTSW-HR-SO-20(01.5)		7/31/12	1104	G	So	1	1									
4 FTSW-HR-SO-21		7/31/12	1200	C	So	1	1									
5 FTSW-HR-SO-22(04)		7/31/12	1204	C	So	1	1									
6 FTSW-HR-SO-22(04) Dup		7/31/12	1207	C	So	1	1									
7 FTSW-HR-SO-22(04) MS		7/31/12	1210	C	So	1	1									
8 FTSW-HR-SO-22(04) MSD		7/31/12	1213	C	So	1	1									

Receipt Information (completed by Sample Receiving)

Performed by: [illegible]

Cooler Temp: 3

Therm. ID: 7H2 T

No. of Coolers:

Notes:

Sample Description/Location	Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
1 FTSW-HR-SO-18(02)	Y	Y	Y	Y	Y
2 FTSW-HR-SO-19	N	N	N	N	N
3 FTSW-HR-SO-20(01.5)	Y	Y	Y	Y	Y
4 FTSW-HR-SO-21	N	N	N	N	N
5 FTSW-HR-SO-22(04)	Y	Y	Y	Y	Y
6 FTSW-HR-SO-22(04) Dup	N	N	N	N	N
7 FTSW-HR-SO-22(04) MS	Y	Y	Y	Y	Y
8 FTSW-HR-SO-22(04) MSD	N	N	N	N	N

SAMPLED BY (Please Print): Rebekah McCoy

LOGGED BY(signature): K. Snow DATE: 8/1/12 TIME: 1417

REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Rebekah McCoy	7/31/12	1600	2 Kelli Snow	8/1	0900
3 [signature]	8/1/12	1725	4 Merrill Elwood / ALS	8/2/12	1014
5			6		
7			8		
9			10		

Data Deliverables: ☐ Standard ☐ CLP-like ☐ NJ-Reduced ☐ NJ-Full ☐ (other)

SDWA Forms? yes ☐ yes ☐ yes ☐ yes ☐

State Samples Collected In? MD ☐ NJ ☐ NY ☐ PA ☐

EDDs Required? ☐ If yes, format type: Other G-A

DOD Criteria Required?

ALS FIELD SERVICES: ☐ Pickup ☐ Labor ☐ Composite Sampling ☐ Rental Equipment ☐ Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 6/2011

ALS Environmental

Ship to: 34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier:

Tracking #:

9980614

Co. Name: ERT, inc

Contact (Report to): Mike Gearheart

Phone: 301-323-1403

Address: 6100 Frost PL
Suite A
Laurel MD 20707

Bill to (if different than Report to):

PO#:

Project Name/#: Ft. Stewart 3153-004

ALS Quote #:

TAT: [ ] Normal-Standard TAT is 10 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? [X] -Y Mike.Gearheart@ertcorp.com

Fax? [ ] -Y No.:

***Container Type	CG	AG														
***Container Size	4oz	8oz														
*** Preservative	N/A	N/A														

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	SW-846 6020	SW-846 8270D/8321								
1 FTSW-HR-SO-23		7/31/12	1239	G	So	1	1								
2 FTSW-HR-SO-24(05)		7/31/12	1244	C	So	1	1								
3 FTSW-HR-SO-25		7/31/12	1319	C	So	1	1								
4 FTSW-HR-SO-26(04)		7/31/12	1322	C	So	1	1								
5 FTSW-HR-SO-27		7/31/12	1340	C	So	1	1								
6 FTSW-HR-SO-28(05)		7/31/12	1343	C	So	1	1								
7 FTSW-HR-SO-29		7/31/12	1414	C	So	1	1								
8 FTSW-HR-SO-30(05)		7/31/12	1418	C	So	1	1								

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)

Performed by: [signature]

Cooler Temp: 3

Therm. ID: TH2

No. of Coolers:

Notes:

Sample Description/Location	Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
1 FTSW-HR-SO-23	Y	Y	Y	Y	Y
2 FTSW-HR-SO-24(05)	N	N	N	N	N
3 FTSW-HR-SO-25	Y	Y	Y	Y	Y
4 FTSW-HR-SO-26(04)	N	N	N	N	N
5 FTSW-HR-SO-27	Y	Y	Y	Y	Y
6 FTSW-HR-SO-28(05)	N	N	N	N	N
7 FTSW-HR-SO-29	Y	Y	Y	Y	Y
8 FTSW-HR-SO-30(05)	N	N	N	N	N

SAMPLED BY (Please Print): Rebekah McCoy

LOGGED BY(signature): K. Snow DATE: 8/1/12 TIME: 1417

REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] ERT	7/31/12	1600	2 [signature]	8/1	0900
3 [signature]	8/1/12	1725	4 [signature] ALS	8/2/12	1001
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] (other)

EDDs Required? [ ] If yes, format type:

SDWA Forms?⇨ yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

Other GA

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 6/2011

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task:	Split:	Workorder ID: 1221564
Client: ALS Laboratory Group		Account: 8001
Comments:		

Type: 8ozGWM

Preservatives: COOL

Containers: ID(s), Count

Requested Analysis: Chemical Agent Breakdown, SW8270

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	ID(s)	Count	Chemical Agent Breakdown	SW8270
1	07/31/2012 08:11	FTSW-HR-SO-11	1221564001		Soil/Solid/Sediment	A	1	A	A
2	07/31/2012 08:18	FTSW-HR-SO-12 (01.5)	1221564002		Soil/Solid/Sediment	A	1	A	A
3	07/31/2012 08:27	FTSW-HR-SO-13	1221564003		Soil/Solid/Sediment	A	1	A	A
4	07/31/2012 08:33	FTSW-HR-SO-14 (01.5)	1221564004		Soil/Solid/Sediment	A	1	A	A
5	07/31/2012 08:35	FTSW-HR-SO-14 (01.5) Dup	1221564005	DUP	Soil/Solid/Sediment	A	1	A	A
6	07/31/2012 09:15	FTSW-HR-SO-15	1221564006		Soil/Solid/Sediment	A	1	A	A
7	07/31/2012 09:21	FTSW-HR-SO-16 (01.5)	1221564007		Soil/Solid/Sediment	A	1	A	A
8	07/31/2012 09:43	FTSW-HR-SO-17	1221564008		Soil/Solid/Sediment	A	1	A	A
9	07/31/2012 10:16	FTSW-HR-SO-18 (02)	1221564009		Soil/Solid/Sediment	A	1	A	A
10	07/31/2012 10:58	FTSW-HR-SO-19	1221564010		Soil/Solid/Sediment	A	1	A	A

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Edwards, Meredith D.	08/02/2012 10:01	ALS Sample Receiving	Sample Login
[signature]	8/2/12 1033	R33.1 CAT	Storage
R_33_1 Cart	8/6/12 9:00	[signature] Solid	

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: SV

Lab Notebook No.:

Prepared / Analyzed by:

Date / Time:

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
[signature]	8/6/12 1530	[signature]	cont
[signature]	8/6/12 17:30	[signature]	Storage

ALS Environmental
CHAIN-OF-CUSTODY

Project / Job / Task: | **Split:** | **Workorder ID:** 1221564

Client: ALS Laboratory Group | **Account:** 8001 | **Type:** 8ozGWM

Comments:

Preservatives: COOL

Containers

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	ID(s)	Count	Chemical Agent Breakdown	SW8270
11	07/31/2012 11:04	FTSW-HR-SO-20 (01.5)	1221564011		Soil/Solid/Sediment	A	1	A	A
12	07/31/2012 12:00	FTSW-HR-SO-21	1221564012		Soil/Solid/Sediment	A	1	A	A
13	07/31/2012 12:04	FTSW-HR-SO-22(04)	1221564013		Soil/Solid/Sediment	A	1	A	A
14	07/31/2012 12:10	FTSW-HR-SO-22(04) MS	1221564014	MS	Soil/Solid/Sediment	A	1	A	A
15	07/31/2012 12:13	FTSW-HR-SO-22(04) MSD	1221564015	MSD	Soil/Solid/Sediment	A	1	A	A
16	07/31/2012 12:07	FTSW-HR-SO-22(04) Dup	1221564016	DUP	Soil/Solid/Sediment	A	1	A	A
17	07/31/2012 12:39	FTSW-HR-SO-23	1221564017		Soil/Solid/Sediment	A	1	A	A
18	07/31/2012 12:44	FTSW-HR-SO-24 (06)	1221564018		Soil/Solid/Sediment	A	1	A	A
19	07/31/2012 13:19	FTSW-HR-SO-25	1221564019		Soil/Solid/Sediment	A	1	A	A
20	07/31/2012 13:22	FTSW-HR-SO-26 (04)	1221564020		Soil/Solid/Sediment	A	1	A	A

Requested Analysis

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Edwards, Meredith D.	08/02/2012 10:01	ALS Sample Receiving	Sample Login
Meredith Edwards	8/2/12 1033		Storage
R-33-1 Cart	8/6/12 9:00	Jane J Ovalle	solid

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: SV | Lab Notebook No.:

Prepared / Analyzed by: | Date / Time:

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
[signature]	8/6/12 1530	[signature]	[illegible]
[signature]	8/6/12 17:30	[signature]	STOR

Thu, 08/02/12 4:29 PM

ALSCOCV2.4

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task: | ***Split:*** | **Workorder ID:** 1221564

Client: ALS Laboratory Group | **Account:** 8001 | **Type:** 8ozGWM

Comments:

Preservatives: COOL

Containers: ID(s): A | Count: 1

Requested Analysis: Chemical Agent Breakdown: A | SW8270: A

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	ID(s)	Count	Chemical Agent Breakdown	SW8270
21	07/31/2012 13:40	FTSW-HR-SO-27	1221564021		Soil/Solid/Sediment	A	1	A	A
22	07/31/2012 13:43	FTSW-HR-SO-28 (05)	1221564022		Soil/Solid/Sediment	A	1	A	A
23	07/31/2012 14:14	FTSW-HR-SO-29	1221564023		Soil/Solid/Sediment	A	1	A	A
24	07/31/2012 14:18	FTSW-HR-SO-30 (05)	1221564024		Soil/Solid/Sediment	A	1	A	A
25									
26									
27									
28									
29									
30									

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Edwards, Meredith D.	08/02/2012 10:01	ALS Sample Receiving	Sample Login
Meredith Edwards	8/2/12 11:03		Storage
R_33_1 cart	8/6/12 9:00	Steve Ovalle	solid

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: SV

Prepared / Analyzed by: _____

Lab Notebook No.: _____

Date / Time: _____

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Yale Edwards	8/6/12 1630	[illegible]	cont
[illegible]	8/6/12 17:30	[illegible]	Storage

From: (717) 944-5541
Steve Smith

34 DOGWOOD LANE

MIDDLETOWN, PA 17057

Origin ID: MDTA

FedEx Express

J12201207160325

Ship Date: 01AUG12
ActWgt: 63.0 LB
CAD: 7121996/INET3300

Delivery Address Bar Code

SHIP TO: (000) 000-0000

BILL SENDER

ALS - UT
ALS - UT
960 LEVOY DR

SALT LAKE CITY, UT 84123

Ref # Summa's
Invoice #
PO #
Dept #

THU - 02 AUG A1
PRIORITY OVERNIGHT

TRK# 7938 5798 6155
0201

84123
UT-US
SLC

XH NPHA

515G1/A270/AA44

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ALS LABORATORY GROUP SALT LAKE CITY-RELATED INFORMATION REPORT (CRIR)

COOLER OR CONTAINER INFORMATION CHECKLIST (Fill In or Circle)

Client Name: ALS Middletown Project/Task/Site: 1221504

Date/Time of Receipt: 8/2/12 1001 Number of Coolers Received: 1

Condition of Coolers:	Acceptable/Unacceptable	Temperature Control:	Present/Not Included
Custody Seals:	Present/Absent/NA	Location Temp Taken:	Control/Between Samples
	Intact/Broken/NA	Are all temperatures within	
Tamper Evident:	Yes/No/NA	project specific guidelines?	Yes/No/NA
Ice Present:	Yes/No/NA	Are all applicable pHs within	
	Frozen/Melted/NA	specific guidelines?	Yes/No/NA

pH Check Performed:	Metals	Yes/No/NA	Total Phenolics	Yes/No/NA	NO3/NO2	Yes/No/NA
	Cyanide	Yes/No/NA	TPH – 418.1	Yes/No/NA	Oil & Grease	Yes/No/NA
	Sulfide	Yes/No/NA	COD	Yes/No/NA	Total Phosphorous	Yes/No/NA
	Ammonia	Yes/No/NA	TKN	Yes/No/NA	Gross A.B, Gamma Spec	Yes/No/NA
Residual Chlorine Check Performed:	8270	Yes/No/NA	8310	Yes/No/NA	8330	Yes/No/NA
	8081	Yes/No/NA	8151	Yes/No/NA		

Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.
1	C12-8407	8 °C	4	C12-	°C	7	C12-	°C
2	C12-	°C	5	C12-	°C	8	C12-	°C
3	C12-	°C	6	C12-	°C	9	C12-	°C

Taken By: Meredith Lewis (Signature) Meredith Lewis (Printed Name) 8/2/12 (Date)

CLIENT-RELATED INFORMATION

☐ Missing Cooler	☐ Missing Samples/Bottles	☐ Incorrect Preservation	☐ Insufficient Sample Volume
☐ Cooler Conditions	☐ Broken/Leaking Samples	☐ pH Criteria Not Met	☐ Chain of Custody Problems
☐ Missing Paperwork	☐ Incorrect Bottle Type	☐ Residual Chlorine Present	☐ Other:
☐ Missing/Incorrect Bottle Labels	☐ Cooler Temperatures Out of Range	☐ Head Space in Bottles	EPA Custody Seal:

BRIEFLY DESCRIBE THE PROBLEM AND THE ACTION TAKEN:

Faxed to Client? YES ☐ NO ☐ (if yes, attach Fax Cover Sheet)

Response Required Within 24 Hours

PROJECT MANAGEMENT

PROJECT MANAGER COMMENTS:

ALS Project Manager: _____ (Printed Name) Returned to Sample Receipt by: _____ (Signature) Date: _____



ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Analytical Documentation

Batch Worklist

Batch: ELMS/ 1294 Created: 8/16/2012 12:56 Instrument: HBN: 91854

Rule: Chemical Agent BD, Soil Analyst: T. McKay Status: WP

Workorder: 1221564

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	290090	LMB for HBN 91709 [ELMS/1292]	1 grams	10 mL	4	LMB		DCAB....4Q	5948	9/22/2012	8/15/2012	
2	290091	LCS for HBN 91709 [ELMS/1292]	1 grams	10 mL	4	LCS		DCAB....4Q	5948	9/22/2012	8/15/2012	
3	290092	FTSW-HR-SO-11(1221564001MS)	1.03 grams	10 mL	4	MS		DCAB....4Q	5948	9/22/2012	8/15/2012	
4	290093	FTSW-HR-SO-11(1221564001MSD)	1.01 grams	10 mL	4	MSD		DCAB....4Q	5948	9/22/2012	8/15/2012	
5	290094	RLVS for HBN 91709 [ELMS/1292]	1 grams	10 mL	3	RLVS		DCAB...C4Q	5948		8/15/2012	
6	1221564001	FTSW-HR-SO-11	1.04 grams	10 mL	4	SAMPLE	1221564001-A	DCAB.....4	5480	9/22/2012	8/15/2012	
7	1221564002	FTSW-HR-SO-12 (01.5)	1 grams	10 mL	4	SAMPLE	1221564002-A	DCAB.....4	5480	9/22/2012	8/15/2012	
8	1221564003	FTSW-HR-SO-13	1.01 grams	10 mL	4	SAMPLE	1221564003-A	DCAB.....4	5480	9/22/2012	8/15/2012	
9	1221564004	FTSW-HR-SO-14 (01.5)	1.06 grams	10 mL	4	SAMPLE	1221564004-A	DCAB.....4	5480	9/22/2012	8/15/2012	
10	1221564005	FTSW-HR-SO-14 (01.5) Dup	1.01 grams	10 mL	4	DUP	1221564005-A	DCAB.....4	5480	9/22/2012	8/15/2012	
11	1221564006	FTSW-HR-SO-15	1.02 grams	10 mL	4	SAMPLE	1221564006-A	DCAB.....4	5480	9/22/2012	8/15/2012	
12	1221564007	FTSW-HR-SO-16 (01.5)	1.06 grams	10 mL	4	SAMPLE	1221564007-A	DCAB.....4	5480	9/22/2012	8/15/2012	
13	1221564008	FTSW-HR-SO-17	1.02 grams	10 mL	4	SAMPLE	1221564008-A	DCAB.....4	5480	9/22/2012	8/15/2012	
14	1221564009	FTSW-HR-SO-18 (02)	1.05 grams	10 mL	4	SAMPLE	1221564009-A	DCAB.....4	5480	9/22/2012	8/15/2012	
15	1221564010	FTSW-HR-SO-19	1.04 grams	10 mL	4	SAMPLE	1221564010-A	DCAB.....4	5480	9/22/2012	8/15/2012	
16	1221564011	FTSW-HR-SO-20 (01.5)	1.02 grams	10 mL	4	SAMPLE	1221564011-A	DCAB.....4	5480	9/22/2012	8/15/2012	
17	1221564012	FTSW-HR-SO-21	1.03 grams	10 mL	4	SAMPLE	1221564012-A	DCAB.....4	5480	9/22/2012	8/15/2012	
18	1221564013	FTSW-HR-SO-22(04)	1.05 grams	10 mL	4	SAMPLE	1221564013-A	DCAB.....4	5480	9/22/2012	8/15/2012	
19	1221564014	FTSW-HR-SO-22(04) MS	1.06 grams	10 mL	4	MS	1221564014-A	DCAB....4Q	5480	9/22/2012	8/15/2012	
20	1221564015	FTSW-HR-SO-22(04) MSD	1.05 grams	10 mL	4	MSD	1221564015-A	DCAB....4Q	5480	9/22/2012	8/15/2012	
21	1221564016	FTSW-HR-SO-22(04) Dup	1.03 grams	10 mL	4	DUP	1221564016-A	DCAB.....4	5480	9/22/2012	8/15/2012	
22	1221564017	FTSW-HR-SO-23	1.05 grams	10 mL	4	SAMPLE	1221564017-A	DCAB.....4	5480	9/22/2012	8/15/2012	
23	1221564018	FTSW-HR-SO-24 (06)	1.03 grams	10 mL	4	SAMPLE	1221564018-A	DCAB.....4	5480	9/22/2012	8/15/2012	
24	1221564019	FTSW-HR-SO-25	1.05 grams	10 mL	4	SAMPLE	1221564019-A	DCAB.....4	5480	9/22/2012	8/15/2012	
25	1221564020	FTSW-HR-SO-26 (04)	1.05 grams	10 mL	4	SAMPLE	1221564020-A	DCAB.....4	5480	9/22/2012	8/15/2012	
26	1221564021	FTSW-HR-SO-27	1.04 grams	10 mL	4	SAMPLE	1221564021-A	DCAB.....4	5480	9/22/2012	8/15/2012	
27	1221564022	FTSW-HR-SO-28 (05)	1.02 grams	10 mL	4	SAMPLE	1221564022-A	DCAB.....4	5480	9/22/2012	8/15/2012	
28	1221564023	FTSW-HR-SO-29	1.01 grams	10 mL	4	SAMPLE	1221564023-A	DCAB.....4	5480	9/22/2012	8/15/2012	
29	1221564024	FTSW-HR-SO-30 (05)	1.08 grams	10 mL	4	SAMPLE	1221564024-A	DCAB.....4	5480	9/22/2012	8/15/2012	

Batch Worklist

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
30	290095	LMB for HBN 91709 [ELMS/1292]	1 grams	10 mL	4	LMB		DCAB....4Q	5948	9/22/2012	8/15/2012	
31	290096	LCS for HBN 91709 [ELMS/1292]	1 grams	10 mL	4	LCS		DCAB....4Q	5948	9/22/2012	8/15/2012	

Batch Worklist

Batch: ELMS/ 1292 Created: 8/14/2012 17:16 Instrument: HBN: 91709

Rule: Chemical Agent BD, Soil Prep Analyst: T. McKay Status: NA

Workorder: 1221564

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	290090	LMB for HBN 91709 [ELMS/1292]			4	LMB		DCAB....4P	5948	8/28/2012	8/7/2012	
2	290091	LCS for HBN 91709 [ELMS/1292]			4	LCS		DCAB....4P	5948	8/28/2012	8/7/2012	
3	290092	FTSW-HR-SO-11(1221564001MS)			4	MS		DCAB....4P	5948	8/14/2012	8/7/2012	
4	290093	FTSW-HR-SO-11(1221564001MSD)			4	MSD		DCAB....4P	5948	8/14/2012	8/7/2012	
5	290094	RLVS for HBN 91709 [ELMS/1292]			3	RLVS		DCAB....4P	5948	8/28/2012	8/7/2012	
6	1221564001	FTSW-HR-SO-11			4	SAMPLE	1221564001-A	DCAB....4P	5480	8/14/2012	8/7/2012	
7	1221564002	FTSW-HR-SO-12 (01.5)			4	SAMPLE	1221564002-A	DCAB....4P	5480	8/14/2012	8/7/2012	
8	1221564003	FTSW-HR-SO-13			4	SAMPLE	1221564003-A	DCAB....4P	5480	8/14/2012	8/7/2012	
9	1221564004	FTSW-HR-SO-14 (01.5)			4	SAMPLE	1221564004-A	DCAB....4P	5480	8/14/2012	8/7/2012	
10	1221564005	FTSW-HR-SO-14 (01.5) Dup			4	DUP	1221564005-A	DCAB....4P	5480	8/14/2012	8/7/2012	
11	1221564006	FTSW-HR-SO-15			4	SAMPLE	1221564006-A	DCAB....4P	5480	8/14/2012	8/7/2012	
12	1221564007	FTSW-HR-SO-16 (01.5)			4	SAMPLE	1221564007-A	DCAB....4P	5480	8/14/2012	8/7/2012	
13	1221564008	FTSW-HR-SO-17			4	SAMPLE	1221564008-A	DCAB....4P	5480	8/14/2012	8/7/2012	
14	1221564009	FTSW-HR-SO-18 (02)			4	SAMPLE	1221564009-A	DCAB....4P	5480	8/14/2012	8/7/2012	
15	1221564010	FTSW-HR-SO-19			4	SAMPLE	1221564010-A	DCAB....4P	5480	8/14/2012	8/7/2012	
16	1221564011	FTSW-HR-SO-20 (01.5)			4	SAMPLE	1221564011-A	DCAB....4P	5480	8/14/2012	8/7/2012	
17	1221564012	FTSW-HR-SO-21			4	SAMPLE	1221564012-A	DCAB....4P	5480	8/14/2012	8/7/2012	
18	1221564013	FTSW-HR-SO-22(04)			4	SAMPLE	1221564013-A	DCAB....4P	5480	8/14/2012	8/7/2012	
19	1221564014	FTSW-HR-SO-22(04) MS			4	MS	1221564014-A	DCAB....4P	5480	8/14/2012	8/7/2012	
20	1221564015	FTSW-HR-SO-22(04) MSD			4	MSD	1221564015-A	DCAB....4P	5480	8/14/2012	8/7/2012	
21	1221564016	FTSW-HR-SO-22(04) Dup			4	DUP	1221564016-A	DCAB....4P	5480	8/14/2012	8/7/2012	
22	1221564017	FTSW-HR-SO-23			4	SAMPLE	1221564017-A	DCAB....4P	5480	8/14/2012	8/7/2012	
23	1221564018	FTSW-HR-SO-24 (06)			4	SAMPLE	1221564018-A	DCAB....4P	5480	8/14/2012	8/7/2012	
24	1221564019	FTSW-HR-SO-25			4	SAMPLE	1221564019-A	DCAB....4P	5480	8/14/2012	8/7/2012	
25	1221564020	FTSW-HR-SO-26 (04)			4	SAMPLE	1221564020-A	DCAB....4P	5480	8/14/2012	8/7/2012	
26	1221564021	FTSW-HR-SO-27			4	SAMPLE	1221564021-A	DCAB....4P	5480	8/14/2012	8/7/2012	
27	1221564022	FTSW-HR-SO-28 (05)			4	SAMPLE	1221564022-A	DCAB....4P	5480	8/14/2012	8/7/2012	
28	1221564023	FTSW-HR-SO-29			4	SAMPLE	1221564023-A	DCAB....4P	5480	8/14/2012	8/7/2012	
29	1221564024	FTSW-HR-SO-30 (05)			4	SAMPLE	1221564024-A	DCAB....4P	5480	8/14/2012	8/7/2012	

Batch Worklist

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
30	290095	LMB for HBN 91709 [ELMS/1292]			4	LMB		DCAB....4P	5948	8/28/2012	8/7/2012	
31	290096	LCS for HBN 91709 [ELMS/1292]			4	LCS		DCAB....4P	5948	8/28/2012	8/7/2012	

ALS WO ID #(S):1221564
ALS Sample #(S):1221564001-024
ALS Account #(s): 8001 Method: ALS LC/MS Matrix: Soil
Sequence: \\CHEM32\1\SEQUENCE\14AUG12-ABP.S
Prep Date: 08/13/2012 Analysis Date: 08/14/12 - 08/15/12
Prep/Analysis HBN #s: 91709/91854 Instrument LOD: 0.050µg/mL
Analyte: **Thiodiglycol (TDG)**
Reported MDL: See Report Reported LOD: See Report

SAMPLE PREPARATION: All ALS sample #'s agreed with field ID #'s. Approximately 1.00g of each sample was weighed into a 15-mL centrifuge tube, and 9.9mL of ASTM Type II water was added to each tube. 100µL of internal standard solution was then added to each sample, bringing the total extraction volume to 10.0mL. The samples were capped, vortexed, rotated for at least 30 minutes, and filtered with Pall 0.45µm Ion Chromatography Acrodiscs prior to analysis.

REAGENTS: Eluent A: 100% ASTM Type II water/0.1% glacial acetic acid.
Eluent B: 95% ACN/ 5% ASTM Type II water/0.1% glacial acetic acid.

HORIZON STANDARD(S): TDG (14169); MPA (14170); IMPA (14172); EMPA (14174); DIMP (14179)
All standards are at 1000µg/mL. Standards used to create calibration standards and those used for CCVs (target = 5.00µg/mL) and RLVS (target = 0.050µg/mL).
Internal Standard Solution: TDG-D8 (14177) at 100ug/mL.

CALIBRATION CURVE: Run 05/01/2012.
Raw data can be found in \\Alsltws013\DataReview\85766.

INSTRUMENT CONDITIONS: Samples were analyzed with an Agilent 1200 LC/MSD system, in positive SIM mode, monitoring m/z 97, 125, 139, 146, 181, 105 and 113.
Instrument ID: LCMS03 Run Time: 35.00 min. Flow Rate: 0.8mL/min Temp: 30°C
Output Gain: 3 Injection Volume: 10µL Fragmentor Voltage: 75 & 125
Column: Phenomenex Synergi Hydro-RP 4 micron (4.6 x 250mm) s/n: 245485-24

GRADIENT:

Time(min)	%Eluent A	%Eluent B
0.00	100.0	0.0
15.00	100.0	0.0
17.00	50.0	50.0
25.00	50.0	50.0
25.01	100.0	0.0

QC DATA: LMB/LCS **290090/91** & **290095/96** were run with the batch. 1.00g of washed sand (EMD Lot# 36211706) was prepared in the same manner as the samples. 20µl of Horizon QC standard 13383 was added to 10.0mL of sample preparation for the LCS samples. Target = 20.0ug/g. ASTM Type II water was used for LMB extractions.

MS/MSD: MS/MSDs were performed on samples 1221564001 & 122564013. 50µl of Horizon standard 14169 was added to 10.0mL of each sample preparation. Spike target = 50.0µg/g.

COMMENTS: 1) Quantitation was done using m/z 105 for TDG. No confirmation ions were available for TDG. Results are reported in ug/g.
2) All CCV, LMB, LCS and MS/MSD results were within acceptable limits.

STANDARD REPORT

Working Standard - TDG WRK

TDG WRK — Description - Thiodiglycol Working Std.

Standard:	14169	Expires:	01/31/2013	Usable:	Yes
Lab Lot:	TDG WRK	Created By:	T. McKay	Amount:	12.15 mL
Part ID:		Create Date:	01/31/2012	Validated By:	
MFG:		MFG Lot:		Validated Date:	

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume Added	Expires
3824	TDG STOCK		TDG STK	12.15 mg	1/1/2025

Stock Standard - TDG STOCK

TDG STOCK					Description - (Thiodiglycol Stock Std.)
Standard:	3824	Expires:	1/1/2025	Usable:	Yes
Lab Lot:	TDG STK	Created By:	T. McKay	Amount:	100 grams
Part ID:	166782	Create Date:	4/1/2009	Validated By:	T. Bosch
MFG:	Aldrich	MFG Lot:	11613AR	Validated Date:	4/19/2009

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 mg/g

S 3824

Certificate of Analysis

SIGMA-ALDRICH

Product Name	2,2'-Thiodiethanol, ≥99%
Product Number	166782
Product Brand	Aldrich
CAS Number	111-48-8
Molecular Formula	$S(CH_2CH_2OH)_2$
Molecular Weight	122.19

TEST	SPECIFICATION	LOT 11613AR RESULTS
APPEARANCE	COLORLESS LIQUID	COLORLESS LIQUID
INFRARED SPECTRUM	CONFORMS TO STRUCTURE.	CONFORMS TO STRUCTURE AND STANDARD AS ILLUSTRATED ON PAGE 276B OF EDITION I, VOLUME 1 OF "THE ALDRICH LIBRARY OF FT-IR SPECTRA".
GAS LIQUID CHROMATOGRAPHY	99.0% (MINIMUM)	99.6 %
QUALITY CONTROL ACCEPTANCE DATE		JANUARY 1997

Barbara Rajzer

Barbara Rajzer, Supervisor
Quality Control
Milwaukee, Wisconsin USA

STANDARD REPORT

Working Standard - TDG QC WRK

TDG QC WRK — Description - Thiodiglycol QC Wrk

Standard:	13383	Expires:	11/21/2012	Usable:	Yes
Lab Lot:	TDG QC WRK	Created By:	T. McKay	Amount:	8.44 mL
Part ID:		Create Date:	11/21/2011	Validated By:	
MFG:		MFG Lot:		Validated Date:	

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume Added	Expires
5844	TDG QC STK	Thiodiglycol QC Stock	TDG QC STK	8.44 mg	1/1/2025

STANDARD REPORT

Constituent

Stock Standard - TDG QC STK

TDG QC STK					Description - Thiodiglycol QC Stock
Standard:	5844	Expires:	1/1/2025	Usable:	Yes
Lab Lot:	TDG QC STK	Created By:	T. McKay	Amount:	50 grams
Part ID:	88559	Create Date:	10/7/2009	Validated By:	T. Bosch
MFG:	Fluka	MFG Lot:	1410377	Validated Date:	10/7/2009

Pos.	Analyte	Name	Concentration
1	111-48-8	Thiodiglycol	1000 mg/g

5844

SIGMA-ALDRICH

Fluka

Sigma-Aldrich Production GmbH
CH-9471 Buchs/Schweiz
www.sigma-aldrich.com

Telefon +41 81 755 2511
Telefax +41 81 755 2272
Email fluka@sial.com

Certificate of Analysis

Product Brand	Fluka
PRODUCT-NO	88559
PRODUCT	2,2'-THIODIETHANOL
	BioChemika
FORMULA	$C_4H_{10}O_2S$
MOLECULAR MASS	122.19
CAS NUMBER	111-48-8
LOT	1410377

Test	Specification	Result
APPEARANCE (COLOR)	COLORLESS	COLORLESS
APPEARANCE (FORM)	CLEAR TO CLEAR VISCOUS LIQUID	CLEAR VISCOUS LIQUID
PURITY (GC AREA %)	≥ 99.0 % REL	99.9 % REL
GC (METHOD)	–	100% POLYETHYLENEGLYCOL (30 M X 0.32 MM X 0.25 UM), IN DICHLORMETHANE
REFRACTIVE INDEX N20/D	1.520 - 1.522	1.522
RESIDUE ON IGNITION	≤ 0.1 %	< 0.05 %
CARBON CONTENT	39.32 % (THEORY)	38.90 %
HYDROGEN CONTENT	8.25 % (THEORY)	8.49 %
INFRARED SPECTRUM	CONFORMS TO STRUCTURE	CONFORMS
QC RELEASE DATE	28/OCT/08	

Edeltraud Schwärzler, Manager
Quality Control
Buchs, Switzerland

Sigma-Aldrich guarantees the 'Sales-Specification' values only, additional lot specific tests may be included for further information. The current 'Sales-Specifications' sheet is available on request. For further inquiries, please contact our Technical Service.Sigma-Aldrich warrants, that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice for additional terms and conditions of sale. The values given on the 'Certificate of Analysis' are the results determined at the time of analysis.



ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

Batch Report: C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG12-ABP.B

Batch Review Method: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M

['#' ==> Run has not been reprocessed with Batch Review Method
'*' ==> Run has been saved with batch file]

#	*	Sample	Location	Inj	Dilution	Thiodiglycol-D8 RT	Thiodiglycol-D8 Area	Thiodiglycol-D8 Amount
	*	PRIME	Vial 51	1	1	0.000	0.00000	0.00000
	*	CCV1	Vial 51	1	1	13.040	2.39131e6	10.00000
	*	290090 LMB	Vial 52	1	1	13.033	2.20144e6	100.00000
	*	290091 LCS	Vial 53	1	1	13.013	2.11239e6	100.00000
	*	290094 RLVS	Vial 54	1	1	13.001	1.97023e6	10.00000
	*	1221564001	Vial 55	1	1	13.030	1.52941e6	100.00000
	*	290092 MS	Vial 56	1	1	13.037	1.91341e6	100.00000
	*	290093 MSD	Vial 57	1	1	13.017	1.86188e6	100.00000
	*	1221564002	Vial 58	1	1	13.021	1.77013e6	100.00000
	*	1221564003	Vial 59	1	1	13.031	1.73436e6	100.00000
	*	1221564004	Vial 60	1	1	13.027	1.84245e6	100.00000
	*	1221564005	Vial 61	1	1	13.017	1.92512e6	100.00000
	*	1221564006	Vial 62	1	1	13.032	1.10474e6	100.00000
	*	CCV2	Vial 51	1	1	13.021	2.55355e6	10.00000
	*	1221564007	Vial 63	1	1	13.027	1.92986e6	100.00000
	*	1221564008	Vial 64	1	1	13.026	1.31042e6	100.00000
	*	1221564009	Vial 65	1	1	13.048	1.89919e6	100.00000
	*	1221564010	Vial 66	1	1	13.029	1.46058e6	100.00000
	*	1221564011	Vial 67	1	1	13.019	1.90037e6	100.00000
	*	1221564012	Vial 68	1	1	13.032	1.83874e6	100.00000
	*	290090 LMB	Vial 69	1	1	13.051	1.73396e6	100.00000
	*	290091 LCS	Vial 70	1	1	13.043	1.75064e6	100.00000
	*	1221564013	Vial 71	1	1	13.072	1.91869e6	100.00000
	*	1221564014 MS	Vial 72	1	1	13.079	1.90002e6	100.00000
	*	CCV3	Vial 51	1	1	13.047	2.32731e6	10.00000
	*	1221564015 MSD	Vial 73	1	1	13.067	1.84264e6	100.00000
	*	1221564016	Vial 74	1	1	13.055	1.84030e6	100.00000
	*	1221564017	Vial 75	1	1	13.041	1.72059e6	100.00000
	*	1221564018	Vial 76	1	1	13.043	2.01435e6	100.00000
	*	1221564019	Vial 77	1	1	13.059	1.82964e6	100.00000
	*	1221564020	Vial 78	1	1	13.037	1.93079e6	100.00000
	*	1221564021	Vial 79	1	1	13.037	1.87288e6	100.00000
	*	1221564022	Vial 80	1	1	13.027	1.93739e6	100.00000
	*	1221564023	Vial 81	1	1	0.000	0.00000	0.00000
	*	1221564024	Vial 82	1	1	13.026	1.93486e6	100.00000
	*	CCV4	Vial 51	1	1	0.000	0.00000	0.00000

#	*	Sample	Location	Inj	Dilution	Thiodiglycol RT	Thiodiglycol Area	Thiodiglycol Amount
	*	PRIME	Vial 51	1	1	0.000	0.00000	0.00000
	*	CCV1	Vial 51	1	1	13.630	1.08863e7	5.42517
	*	290090 LMB	Vial 52	1	1	0.000	0.00000	0.00000

#	*	Sample	Location	Inj	Dilution	Thiodiglycol RT	Thiodiglycol Area	Thiodiglycol Amount
	*	290091 LCS	Vial 53	1	1	13.595	3.82872e6	20.87314
	*	290094 RLVS	Vial 54	1	1	13.597	7.15226e4	5.01620e-2
	*	1221564001	Vial 55	1	1	0.000	0.00000	0.00000
	*	290092 MS	Vial 56	1	1	13.614	7.97768e6	49.42567
	*	290093 MSD	Vial 57	1	1	13.599	7.69762e6	48.98704
	*	1221564002	Vial 58	1	1	0.000	0.00000	0.00000
	*	1221564003	Vial 59	1	1	0.000	0.00000	0.00000
	*	1221564004	Vial 60	1	1	0.000	0.00000	0.00000
	*	1221564005	Vial 61	1	1	0.000	0.00000	0.00000
	*	1221564006	Vial 62	1	1	0.000	0.00000	0.00000
	*	CCV2	Vial 51	1	1	13.612	1.04312e7	4.83699
	*	1221564007	Vial 63	1	1	0.000	0.00000	0.00000
	*	1221564008	Vial 64	1	1	0.000	0.00000	0.00000
	*	1221564009	Vial 65	1	1	0.000	0.00000	0.00000
	*	1221564010	Vial 66	1	1	0.000	0.00000	0.00000
	*	1221564011	Vial 67	1	1	0.000	0.00000	0.00000
	*	1221564012	Vial 68	1	1	0.000	0.00000	0.00000
	*	290090 LMB	Vial 69	1	1	0.000	0.00000	0.00000
	*	290091 LCS	Vial 70	1	1	13.631	3.18977e6	20.98517
	*	1221564013	Vial 71	1	1	0.000	0.00000	0.00000
	*	1221564014 MS	Vial 72	1	1	13.675	7.79060e6	48.56121
	*	CCV3	Vial 51	1	1	13.641	9.84465e6	5.01865
	*	1221564015 MSD	Vial 73	1	1	13.662	7.75718e6	49.93273
	*	1221564016	Vial 74	1	1	0.000	0.00000	0.00000
	*	1221564017	Vial 75	1	1	0.000	0.00000	0.00000
	*	1221564018	Vial 76	1	1	0.000	0.00000	0.00000
	*	1221564019	Vial 77	1	1	0.000	0.00000	0.00000
	*	1221564020	Vial 78	1	1	0.000	0.00000	0.00000
	*	1221564021	Vial 79	1	1	0.000	0.00000	0.00000
	*	1221564022	Vial 80	1	1	0.000	0.00000	0.00000
	*	1221564023	Vial 81	1	1	0.000	0.00000	0.00000
	*	1221564024	Vial 82	1	1	0.000	0.00000	0.00000
	*	CCV4	Vial 51	1	1	0.000	0.00000	0.00000

*** End of Report ***

Sequence Table:

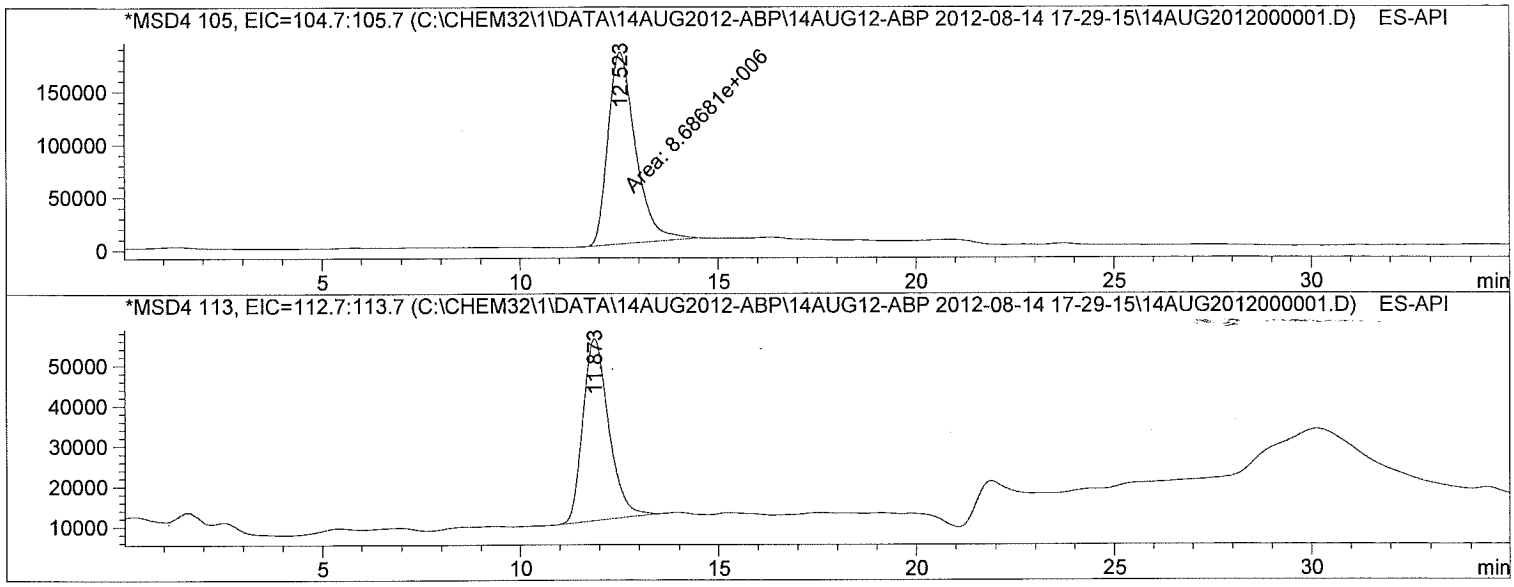
Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 51	PRIME	ABP-ON	1	Ctrl Samp	
2	Vial 51	CCV1	ABP-ON	1	Ctrl Samp	
3	Vial 52	290090 LMB	ABP-ON	1	Ctrl Samp	
4	Vial 53	290091 LCS	ABP-ON	1	Ctrl Samp	
5	Vial 54	290094 RLVS	ABP-ON	1	Ctrl Samp	
6	Vial 55	1221564001	ABP-ON	1	Sample	
7	Vial 56	290092 MS	ABP-ON	1	Ctrl Samp	
8	Vial 57	290093 MSD	ABP-ON	1	Ctrl Samp	
9	Vial 58	1221564002	ABP-ON	1	Sample	
10	Vial 59	1221564003	ABP-ON	1	Sample	
11	Vial 60	1221564004	ABP-ON	1	Sample	
12	Vial 61	1221564005	ABP-ON	1	Sample	
13	Vial 62	1221564006	ABP-ON	1	Sample	
14	Vial 51	CCV2	ABP-ON	1	Ctrl Samp	
15	Vial 63	1221564007	ABP-ON	1	Sample	
16	Vial 64	1221564008	ABP-ON	1	Sample	
17	Vial 65	1221564009	ABP-ON	1	Sample	
18	Vial 66	1221564010	ABP-ON	1	Sample	
19	Vial 67	1221564011	ABP-ON	1	Sample	
20	Vial 68	1221564012	ABP-ON	1	Sample	
21	Vial 69	290090 LMB	ABP-ON	1	Ctrl Samp	

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
22	Vial 70	290091 LCS	ABP-ON	1	Ctrl Samp	
23	Vial 71	1221564013	ABP-ON	1	Sample	
24	Vial 72	1221564014 MS	ABP-ON	1	Ctrl Samp	
25	Vial 51	CCV3	ABP-ON	1	Ctrl Samp	
26	Vial 73	1221564015 MSD	ABP-ON	1	Ctrl Samp	
27	Vial 74	1221564016	ABP-ON	1	Sample	
28	Vial 75	1221564017	ABP-ON	1	Sample	
29	Vial 76	1221564018	ABP-ON	1	Sample	
30	Vial 77	1221564019	ABP-ON	1	Sample	
31	Vial 78	1221564020	ABP-ON	1	Sample	
32	Vial 79	1221564021	ABP-ON	1	Sample	
33	Vial 80	1221564022	ABP-ON	1	Sample	
34	Vial 81	1221564023	ABP-ON	1	Sample	
35	Vial 82	1221564024	ABP-ON	1	Sample	
36	Vial 51	CCV4	ABP-ON	1	Ctrl Samp	

Batch Run # 1 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000001.D
Sample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/14/2012 5:29:51 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Batch Run # 1 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000001.D
Sample Name: PRIME

```
Acq. Operator    : TTM                                  Seq. Line :   1
Acq. Instrument  : LCMS3                                 Location : Vial 51
Injection Date   : 8/14/2012 5:29:51 PM                      Inj :   1
                                                       Inj Volume : 10 µl
Acq. Method      : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed     : 8/14/2012 7:45:11 AM by TTM
Analysis Method  : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed     : 8/13/2012 12:58:03 PM by TTM
                   (Results are from a previously saved Batch)
Method Info      : Agent Breakdown Products
```

Totals without ISTD(s) : 0.00000

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.890		1	-	-	-		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

1 Warnings or Errors :

Warning : ISTD compound(s) not found

Area Percent Report

```
Sorted By             :      Signal
Calib. Data Modified  :      7/9/2012 11:13:05 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      5.00000  []   (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

Peak #	RetTime [min]	Type	Width [min]	Area	Area %	Name
1	13.460		0.0000	0.00000	0.0000	Thiodiglycol

Totals : 0.00000 0.0000

Batch Run # 1 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000001.D
Sample Name: PRIME

Acq. Operator : TTM
Seq. Line : 1
Acq. Instrument : LCMS3
Location : Vial 51
Injection Date : 8/14/2012 5:29:51 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

Peak #	RetTime [min]	Type	Width [min]	Area	Area %	Name
1	12.890	I	0.0000	0.00000	0.0000	Thiodiglycol-D8
Totals :				0.00000	0.0000	

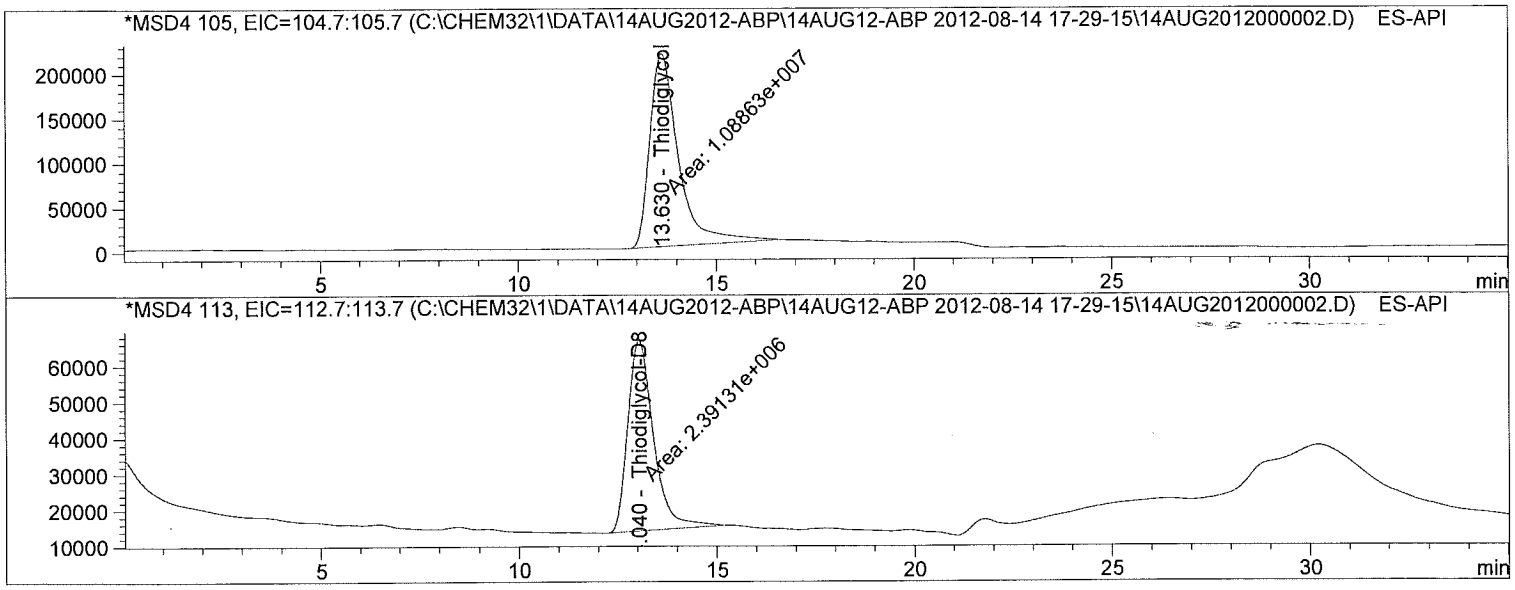
1 Warnings or Errors :

Warning : ISTD compound(s) not found

*** End of Report ***

Batch Run # 2 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000002.D
Sample Name: CCV1

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/14/2012 6:06:40 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	7/9/2012 11:13:05 AM
Multiplier	:	1.0000
Dilution	:	1.0000
Sample Amount	:	5.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.630	MM	1	1.08863e7	1.19171e-1	5.42517		Thiodiglycol

Batch Run # 2 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000002.D
Sample Name: CCV1

Acq. Operator : TTM
Seq. Line : 2
Acq. Instrument : LCMS3
Location : Vial 51
Injection Date : 8/14/2012 6:06:40 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 5.42517

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

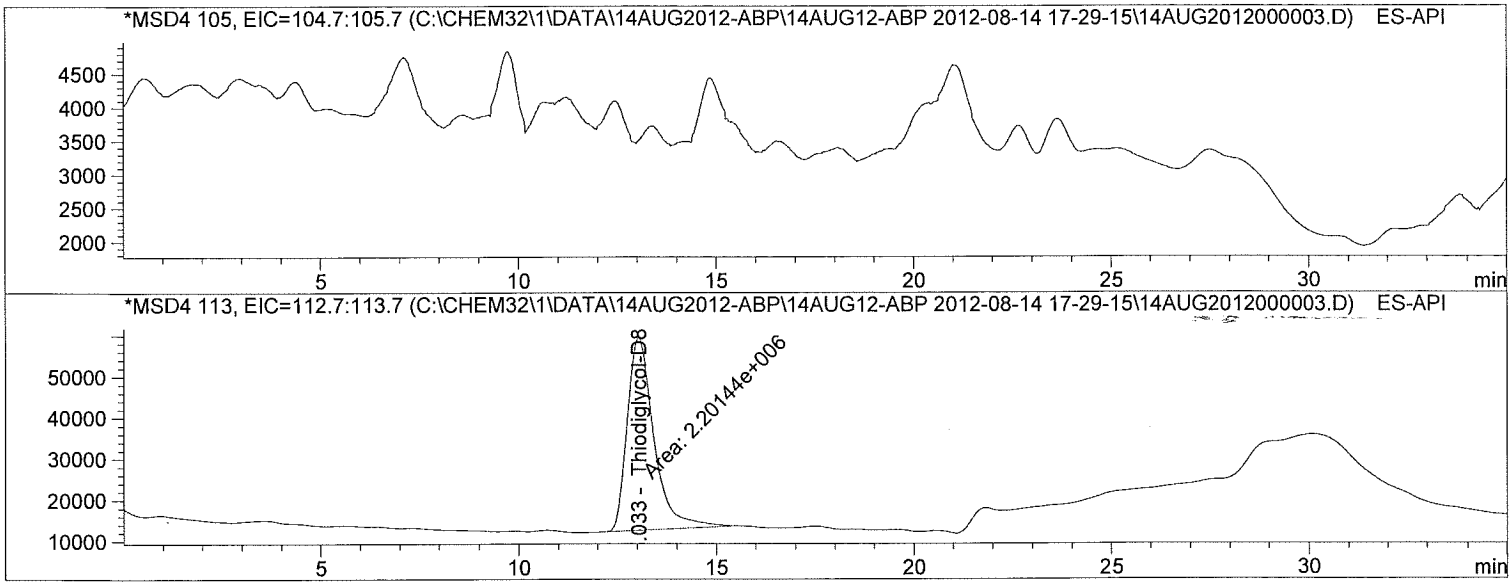
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.040	MM	I	1 2.39131e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 3 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000003.D
Sample Name: 290090 LMB

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 52
Injection Date	: 8/14/2012 6:43:03 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 3 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000003.D
Sample Name: 290090 LMB

Acq. Operator : TTM
Seq. Line : 3
Acq. Instrument : LCMS3
Location : Vial 52
Injection Date : 8/14/2012 6:43:03 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.033	MM	I	1 2.20144e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

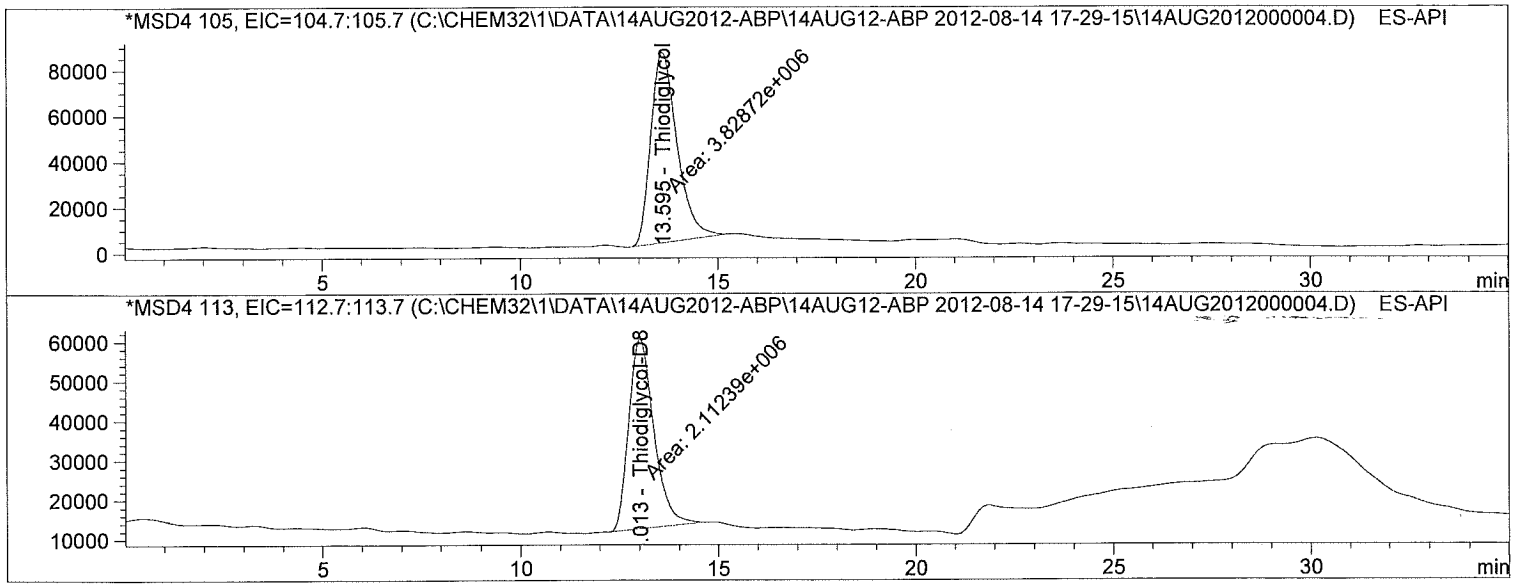
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 4 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000004.D
Sample Name: 290091 LCS

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 53
Injection Date	: 8/14/2012 7:19:25 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000
Sample Amount	: 20.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.595	MM	1	3.82872e6	1.15162e-1	20.87314		Thiodiglycol

Batch Run # 4 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000004.D
Sample Name: 290091 LCS

Acq. Operator : TTM
Seq. Line : 4
Acq. Instrument : LCMS3
Location : Vial 53
Injection Date : 8/14/2012 7:19:25 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 20.87314

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

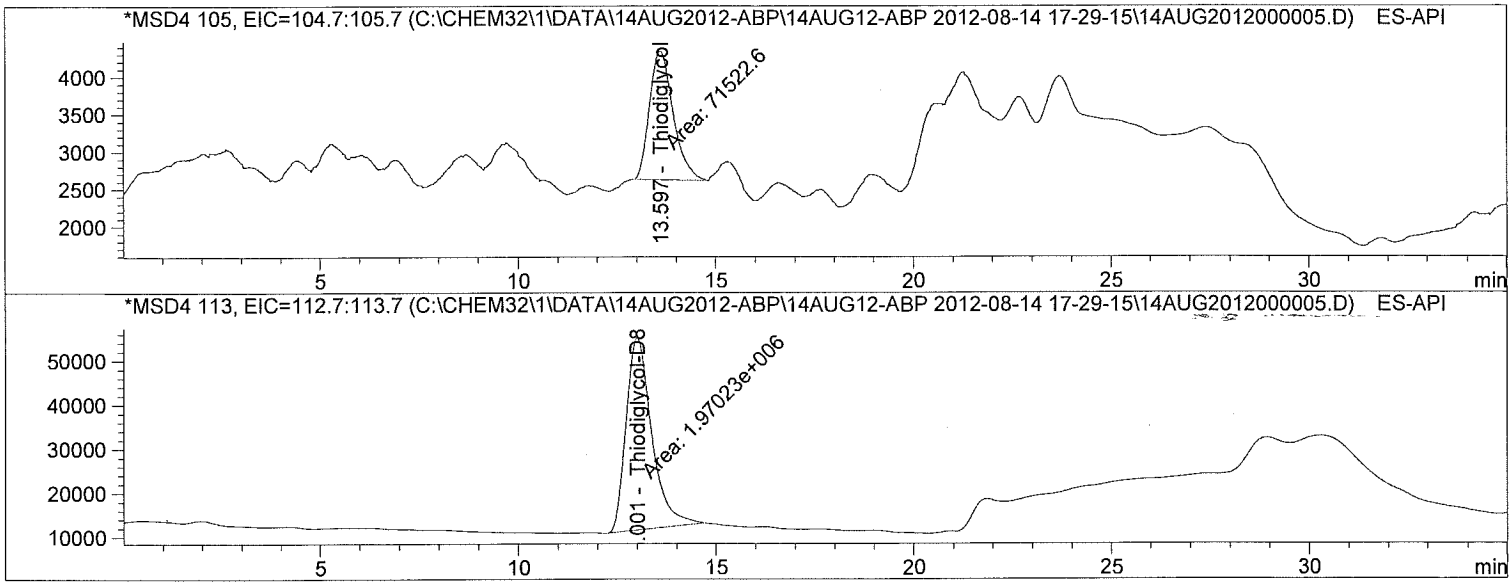
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.013	MM	I	1 2.11239e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 5 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000005.D
Sample Name: 290094 RLVS

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 54
Injection Date	: 8/14/2012 7:55:47 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 1.0000
Dilution	: 1.0000
Sample Amount	: 5.00000e-1 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.597	MM	1	7.15226e4	1.38181e-1	5.01620e-2		Thiodiglycol

Batch Run # 5 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000005.D
Sample Name: 290094 RLVS

Acq. Operator : TTM Seq. Line : 5
Acq. Instrument : LCMS3 Location : Vial 54
Injection Date : 8/14/2012 7:55:47 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 5.01620e-2

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

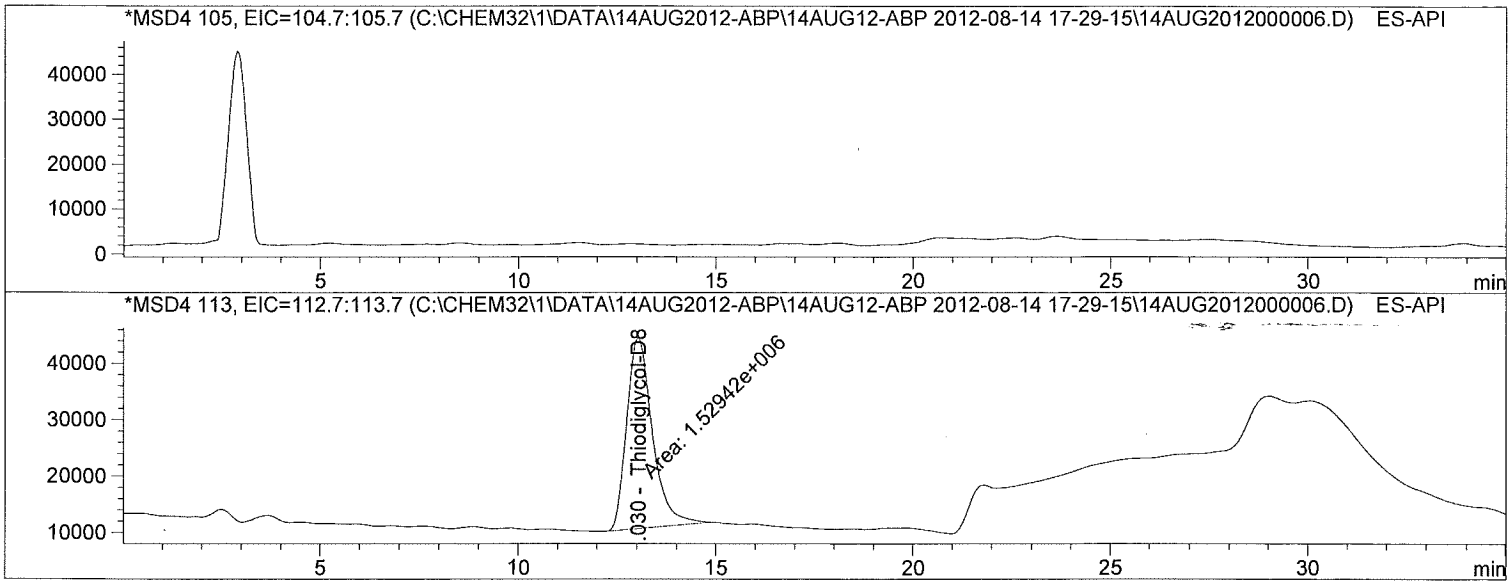
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.001	MM	I	1 1.97023e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 6 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000006.D
Sample Name: 1221564001

Acq. Operator : TTM Seq. Line : 6
Acq. Instrument : LCMS3 Location : Vial 55
Injection Date : 8/14/2012 8:32:09 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 6 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000006.D
Sample Name: 1221564001

==========

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 8/14/2012 8:32:09 PM

Seq. Line : 6
Location : Vial 55
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

==========

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.030	MM	I	1 1.52941e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

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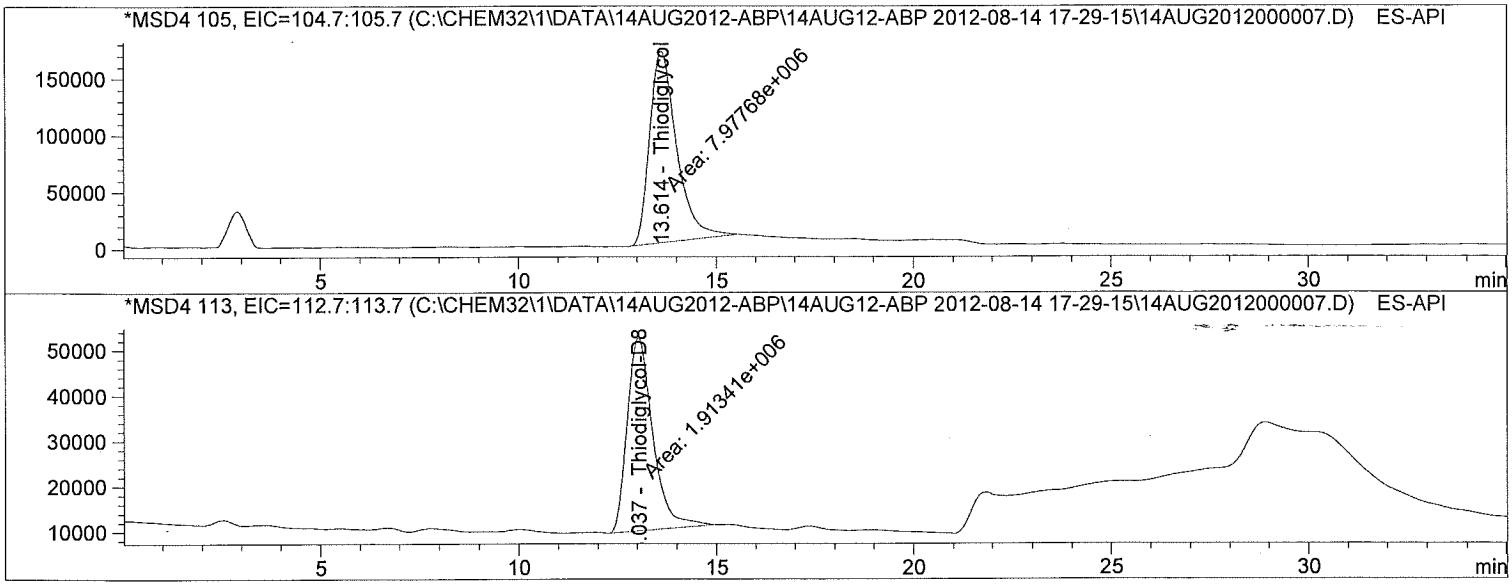
*** End of Report ***

Batch Run # 7 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000007.D
Sample Name: 290092 MS

Acq. Operator : TTM Seq. Line : 7
Acq. Instrument : LCMS3 Location : Vial 56
Injection Date : 8/14/2012 9:08:30 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.614	MM	1	7.97768e6	1.18545e-1	49.42567		Thiodiglycol

Totals without ISTD(s) : 49.42567

Batch Run # 7 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000007.D
Sample Name: 290092 MS

Acq. Operator : TTM Seq. Line : 7
Acq. Instrument : LCMS3 Location : Vial 56
Injection Date : 8/14/2012 9:08:30 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

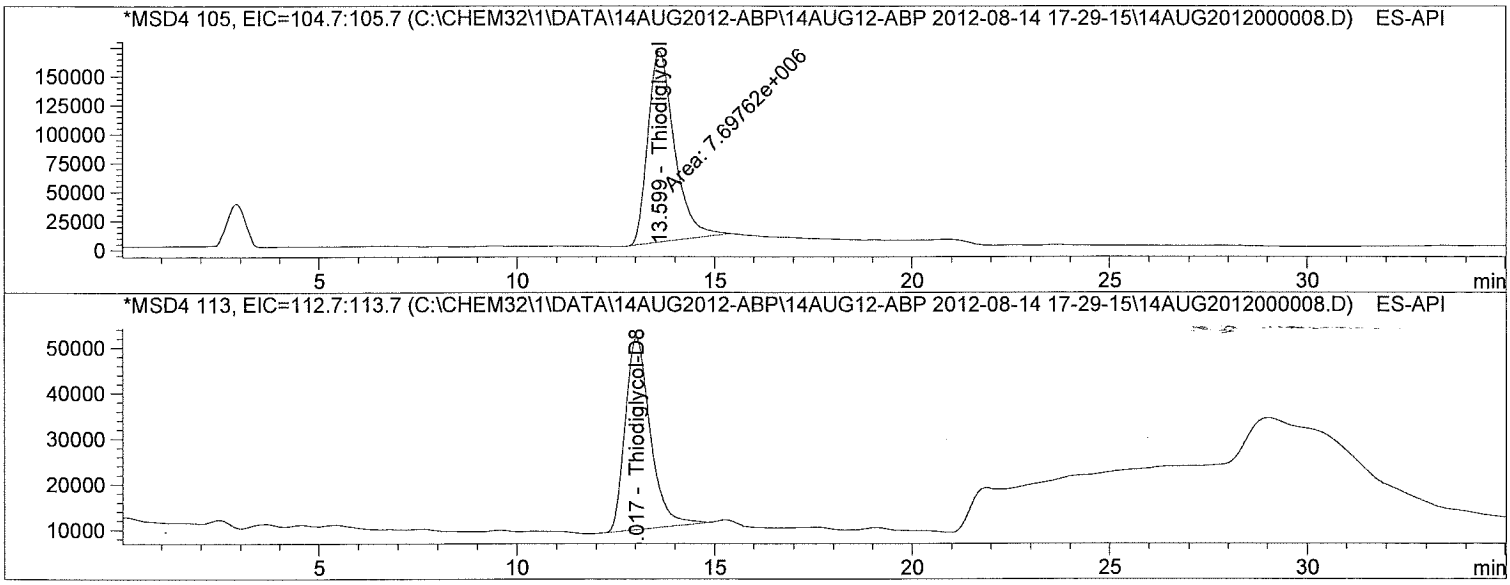
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.037	MM	I	1 1.91341e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 8 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000008.D
Sample Name: 290093 MSD

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 57
Injection Date	: 8/14/2012 9:44:54 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.599	MM	1	7.69762e6	1.18488e-1	48.98704		Thiodiglycol

Totals without ISTD(s) : 48.98704

Batch Run # 8 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000008.D
Sample Name: 290093 MSD

Acq. Operator : TTM Seq. Line : 8
Acq. Instrument : LCMS3 Location : Vial 57
Injection Date : 8/14/2012 9:44:54 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

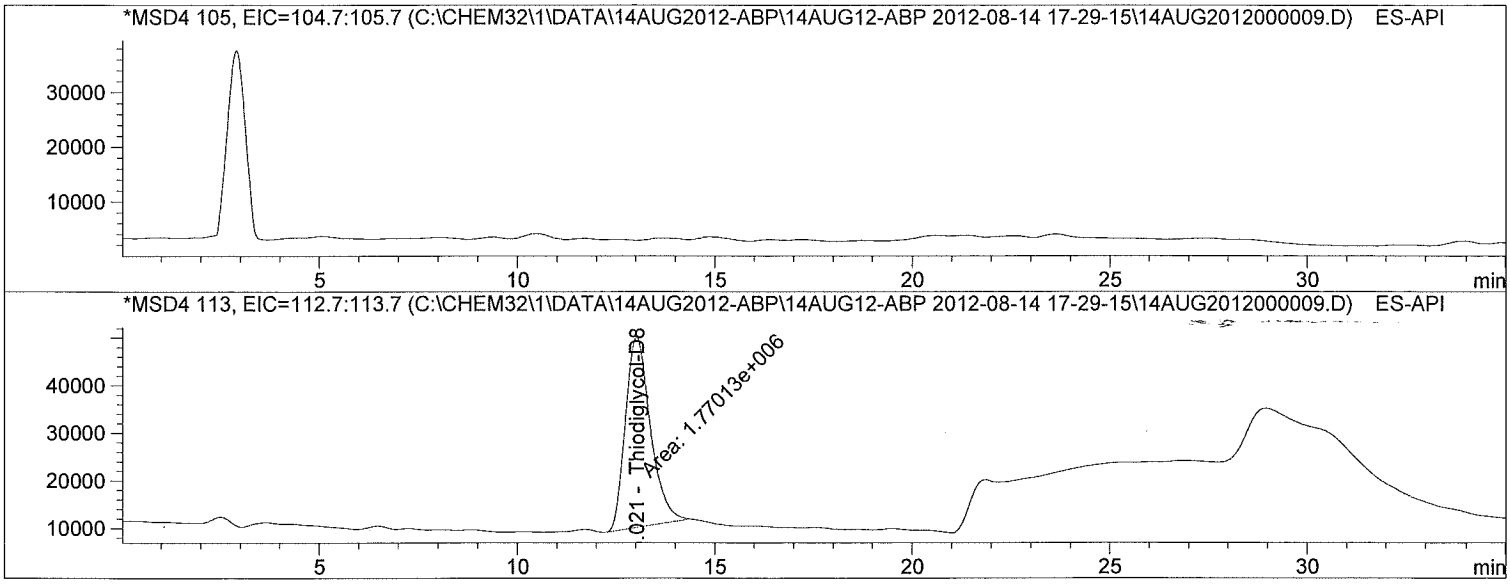
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.017	BB	I	1 1.86188e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 9 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000009.D
Sample Name: 1221564002

Acq. Operator	: TTM	Seq. Line	: 9
Acq. Instrument	: LCMS3	Location	: Vial 58
Injection Date	: 8/14/2012 10:21:16 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM (Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 9 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000009.D
Sample Name: 1221564002

Acq. Operator : TTM Seq. Line : 9
Acq. Instrument : LCMS3 Location : Vial 58
Injection Date : 8/14/2012 10:21:16 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.021	MM	I	1 1.77013e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

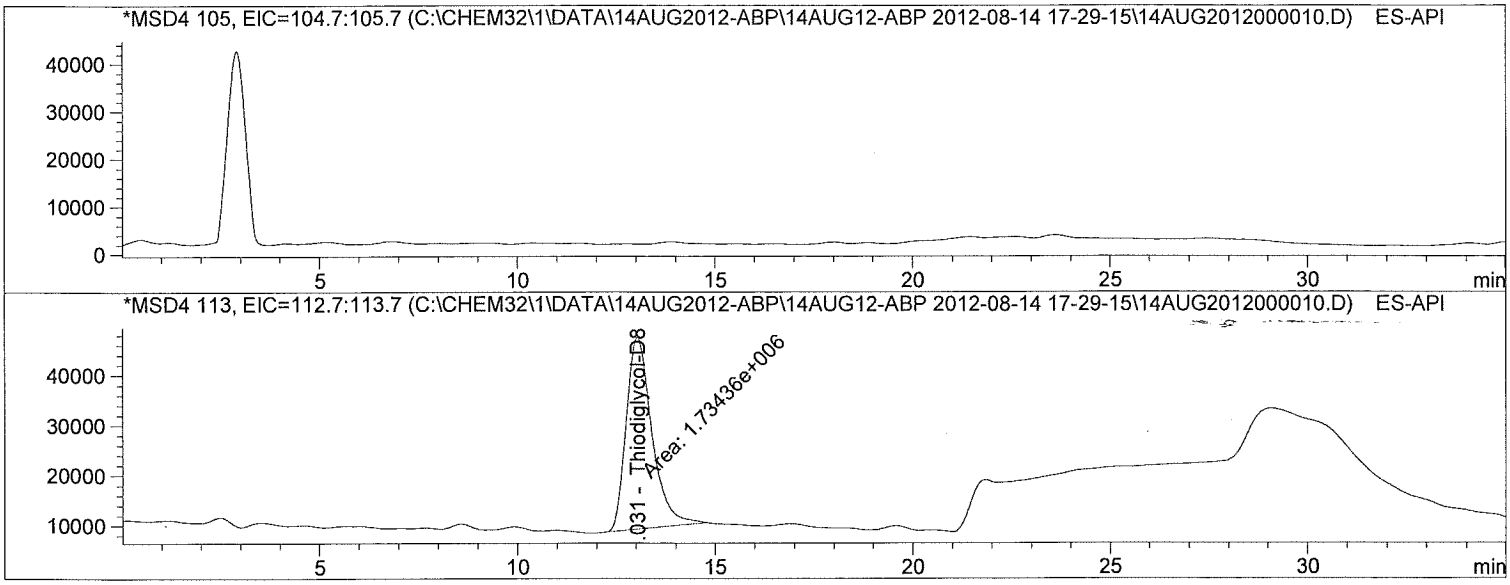
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 10 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000010.D
Sample Name: 1221564003

Acq. Operator	: TTM	Seq. Line	: 10
Acq. Instrument	: LCMS3	Location	: Vial 59
Injection Date	: 8/14/2012 10:57:37 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	7/9/2012 11:13:05 AM	
Multiplier	:	10.0000	
Dilution	:	1.0000	

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 10 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000010.D
Sample Name: 1221564003

Acq. Operator : TTM
Seq. Line : 10
Acq. Instrument : LCMS3
Location : Vial 59
Injection Date : 8/14/2012 10:57:37 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.031	MM	I	1 1.73436e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

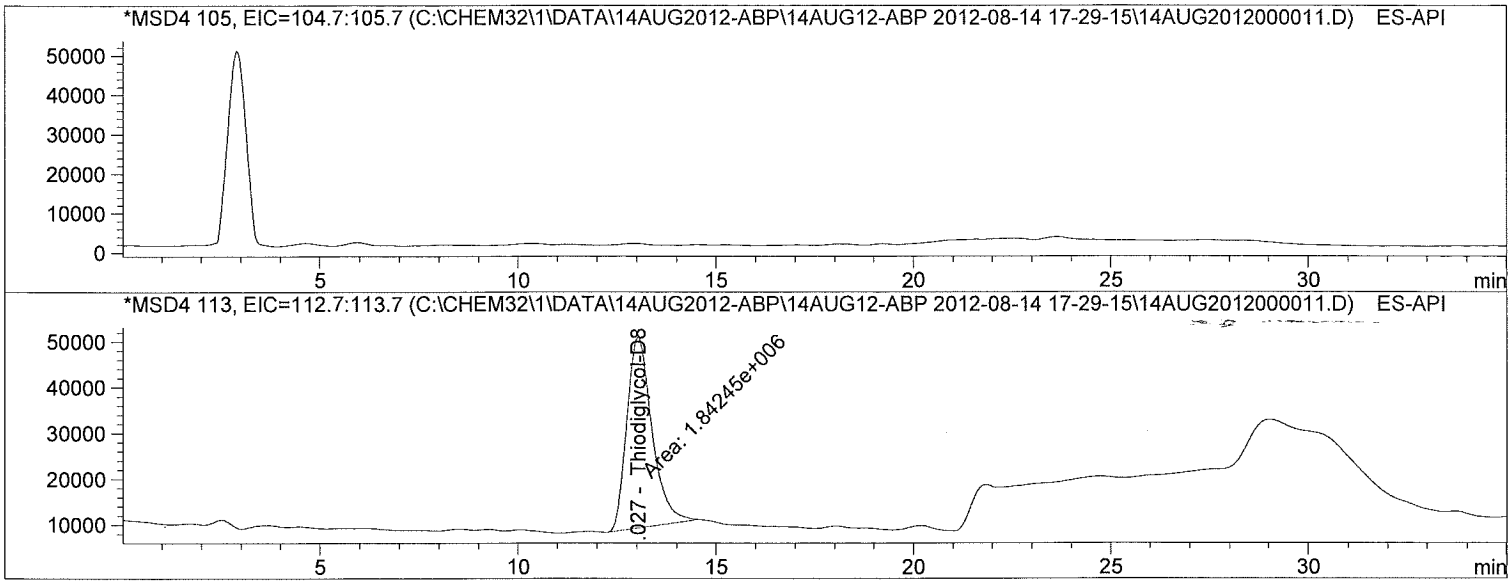
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 11 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000011.D
Sample Name: 1221564004

```
Acq. Operator    : TTM                                  Seq. Line :  11
Acq. Instrument  : LCMS3                                 Location : Vial 60
Injection Date   : 8/14/2012 11:33:59 PM                      Inj :   1
                                                       Inj Volume : 10 µl
Acq. Method      : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed     : 8/14/2012 7:45:11 AM by TTM
Analysis Method  : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed     : 8/13/2012 12:58:03 PM by TTM
                   (Results are from a previously saved Batch)
Method Info      : Agent Breakdown Products
```



Internal Standard Report

```
Sorted By             :      Signal
Calib. Data Modified  :      7/9/2012 11:13:05 AM
Multiplier            :     10.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:
```

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 11 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000011.D
Sample Name: 1221564004

```
Acq. Operator    : TTM                                  Seq. Line :  11
Acq. Instrument  : LCMS3                                 Location : Vial 60
Injection Date   : 8/14/2012 11:33:59 PM                      Inj :   1
                                                       Inj Volume : 10 µl
Acq. Method      : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed     : 8/14/2012 7:45:11 AM by TTM
Analysis Method  : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed     : 8/13/2012 12:58:03 PM by TTM
                   (Results are from a previously saved Batch)
Method Info      : Agent Breakdown Products
```

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.027	MM	I	1 1.84245e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

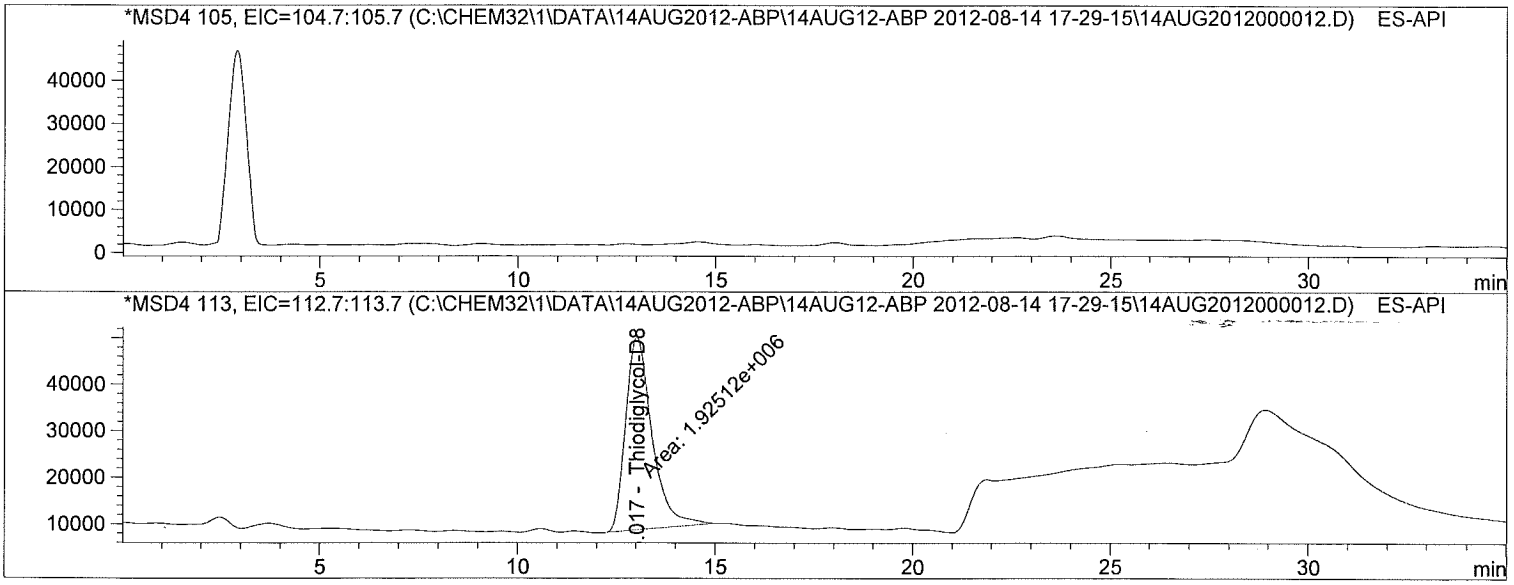
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 12 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000012.D
Sample Name: 1221564005

Acq. Operator	: TTM	Seq. Line	: 12
Acq. Instrument	: LCMS3	Location	: Vial 61
Injection Date	: 8/15/2012 12:10:21 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 12 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000012.D
Sample Name: 1221564005

Acq. Operator : TTM Seq. Line : 12
Acq. Instrument : LCMS3 Location : Vial 61
Injection Date : 8/15/2012 12:10:21 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.017	MM	I	1 1.92512e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

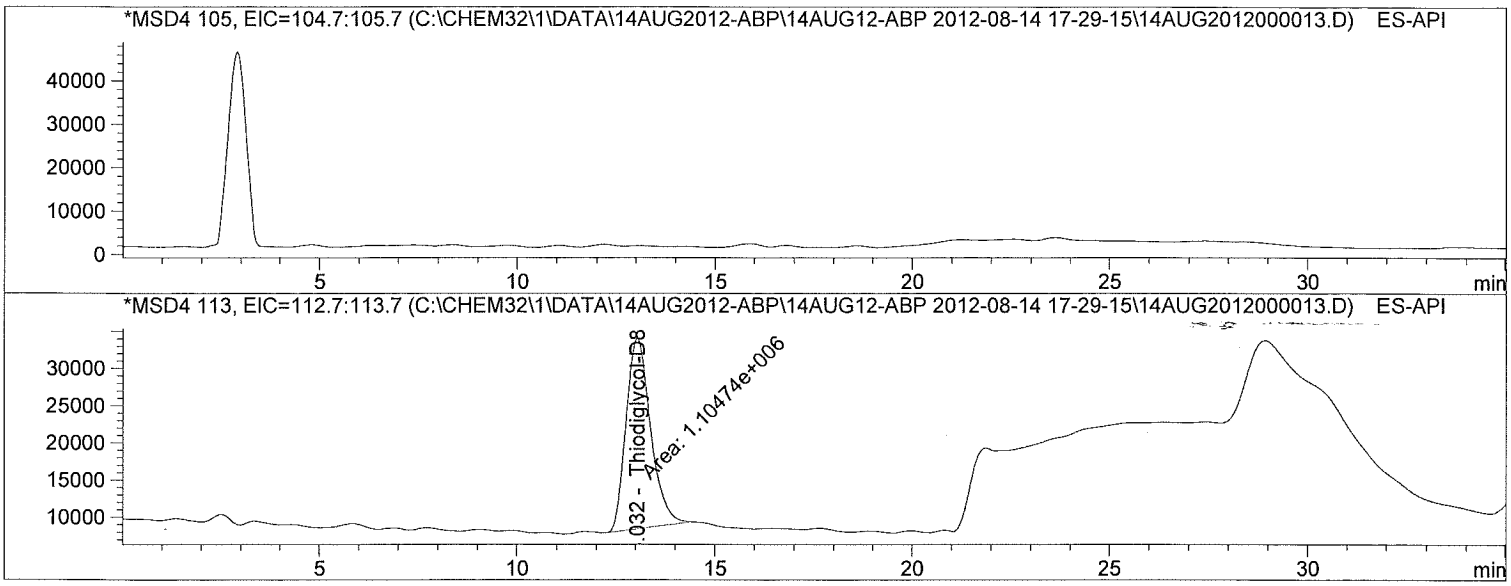
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 13 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000013.D
Sample Name: 1221564006

Acq. Operator	: TTM	Seq. Line	: 13
Acq. Instrument	: LCMS3	Location	: Vial 62
Injection Date	: 8/15/2012 12:46:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 13 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000013.D
Sample Name: 1221564006

Acq. Operator : TTM Seq. Line : 13
Acq. Instrument : LCMS3 Location : Vial 62
Injection Date : 8/15/2012 12:46:43 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.032	MM	I	1 1.10474e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

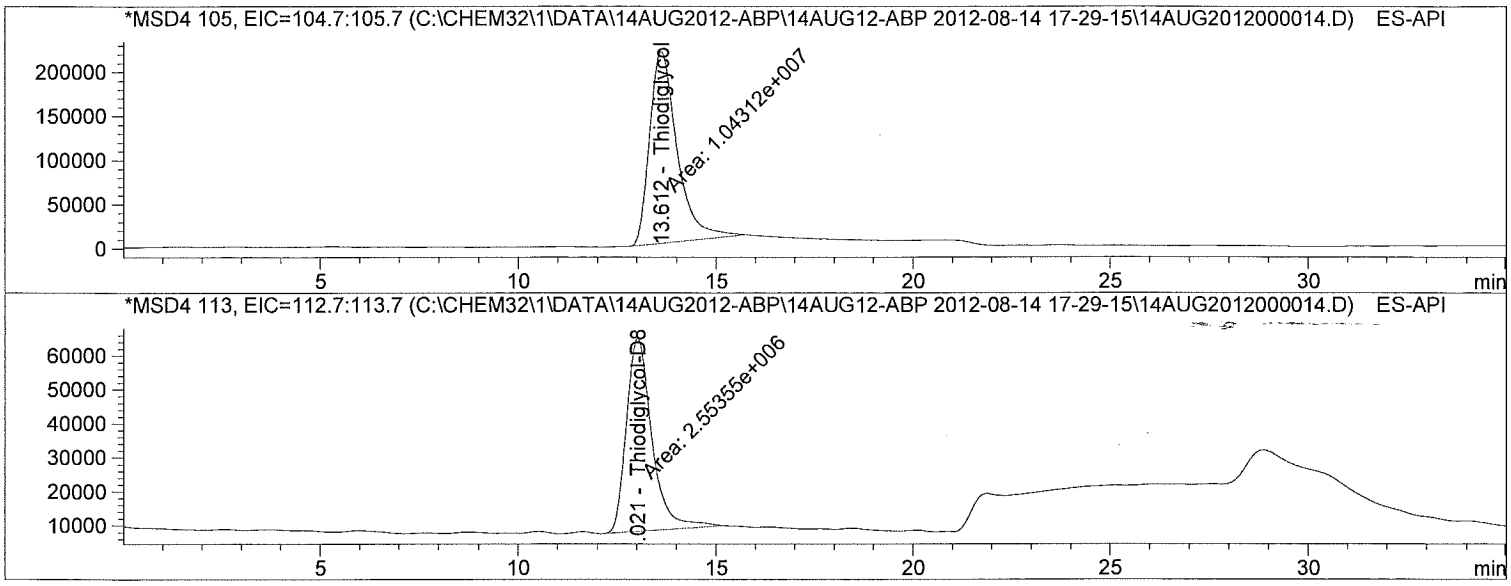
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 14 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000014.D
Sample Name: CCV2

Acq. Operator	: TTM	Seq. Line	: 14
Acq. Instrument	: LCMS3	Location	: Vial 51
Injection Date	: 8/15/2012 1:23:05 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	7/9/2012 11:13:05 AM
Multiplier	:	1.0000
Dilution	:	1.0000
Sample Amount	:	5.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.612	MM	1	1.04312e7	1.18409e-1	4.83699		Thiodiglycol

Batch Run # 14 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000014.D
Sample Name: CCV2

Acq. Operator : TTM Seq. Line : 14
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/15/2012 1:23:05 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 4.83699

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

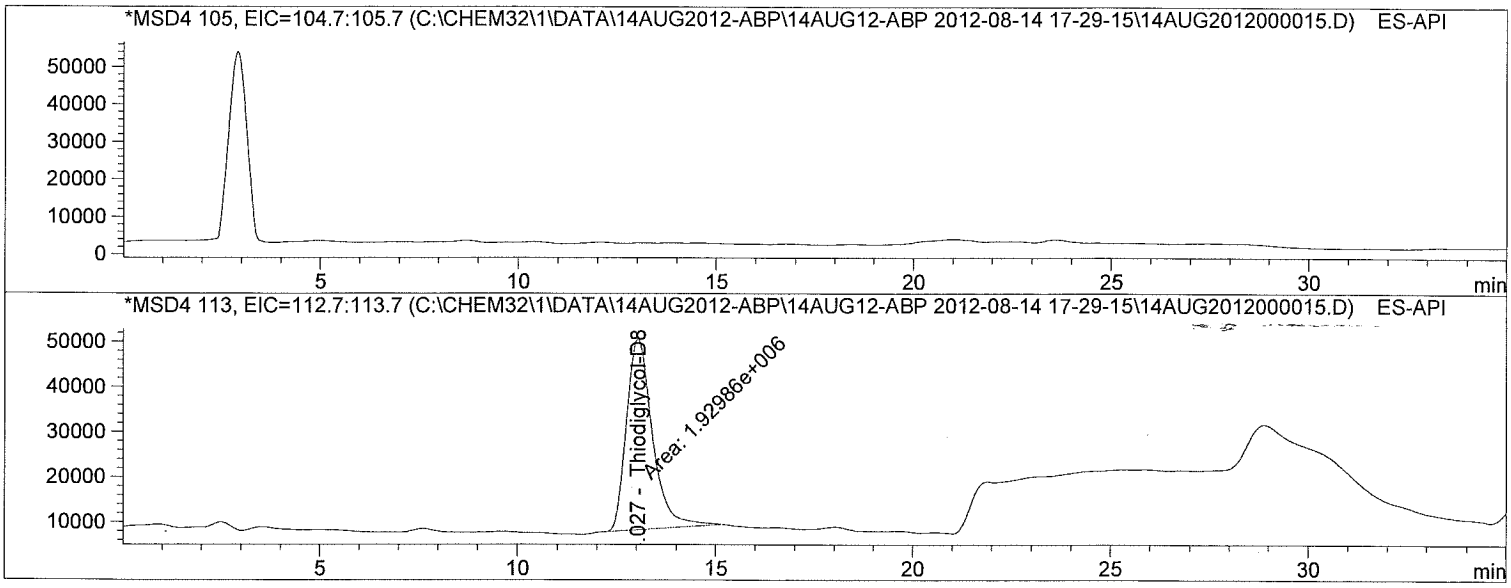
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.021	MM	I	1 2.55355e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 15 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000015.D
Sample Name: 1221564007

Acq. Operator : TTM Seq. Line : 15
Acq. Instrument : LCMS3 Location : Vial 63
Injection Date : 8/15/2012 1:59:29 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 15 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000015.D
Sample Name: 1221564007

Acq. Operator : TTM Seq. Line : 15
Acq. Instrument : LCMS3 Location : Vial 63
Injection Date : 8/15/2012 1:59:29 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.027	MM	I	1 1.92986e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

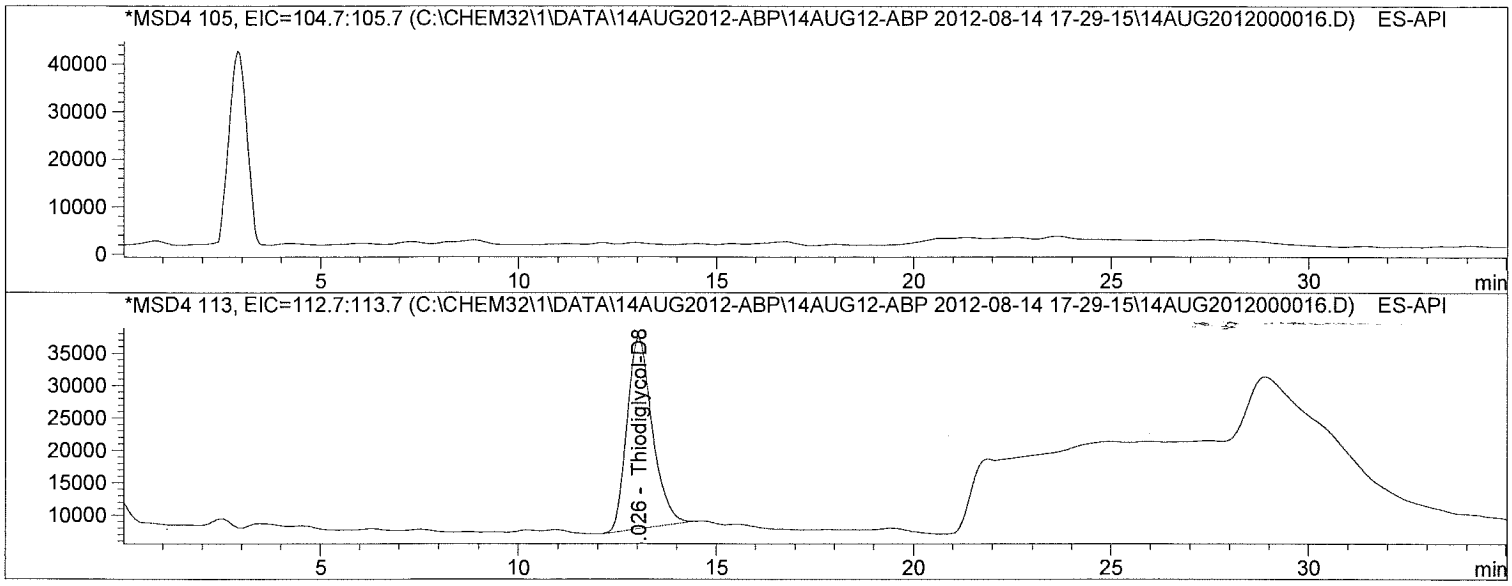
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 16 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000016.D
Sample Name: 1221564008

Acq. Operator	: TTM	Seq. Line	: 16
Acq. Instrument	: LCMS3	Location	: Vial 64
Injection Date	: 8/15/2012 2:35:51 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 16 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000016.D
Sample Name: 1221564008

```
================================================================================
Acq. Operator   : TTM                                  Seq. Line :  16
Acq. Instrument : LCMS3                                 Location : Vial 64
Injection Date  : 8/15/2012 2:35:51 AM                       Inj :   1
                                                      Inj Volume : 10 µl
Acq. Method     : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed    : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed    : 8/13/2012 12:58:03 PM by TTM
                  (Results are from a previously saved Batch)
Method Info     : Agent Breakdown Products

================================================================================



Signal 2: MSD4 113, EIC=112.7:113.7
 Signal has been modified after loading from rawdata file!

RetTime  Type  ISTD    Area     Amt/Area    Amount   Grp   Name
 [min]         used              ratio
-------|------|----|----------|----------|----------|--|------------------
 13.026 BB    I    1 1.31042e6     1.00000  100.00000    Thiodiglycol-D8

Totals without ISTD(s) :                0.00000

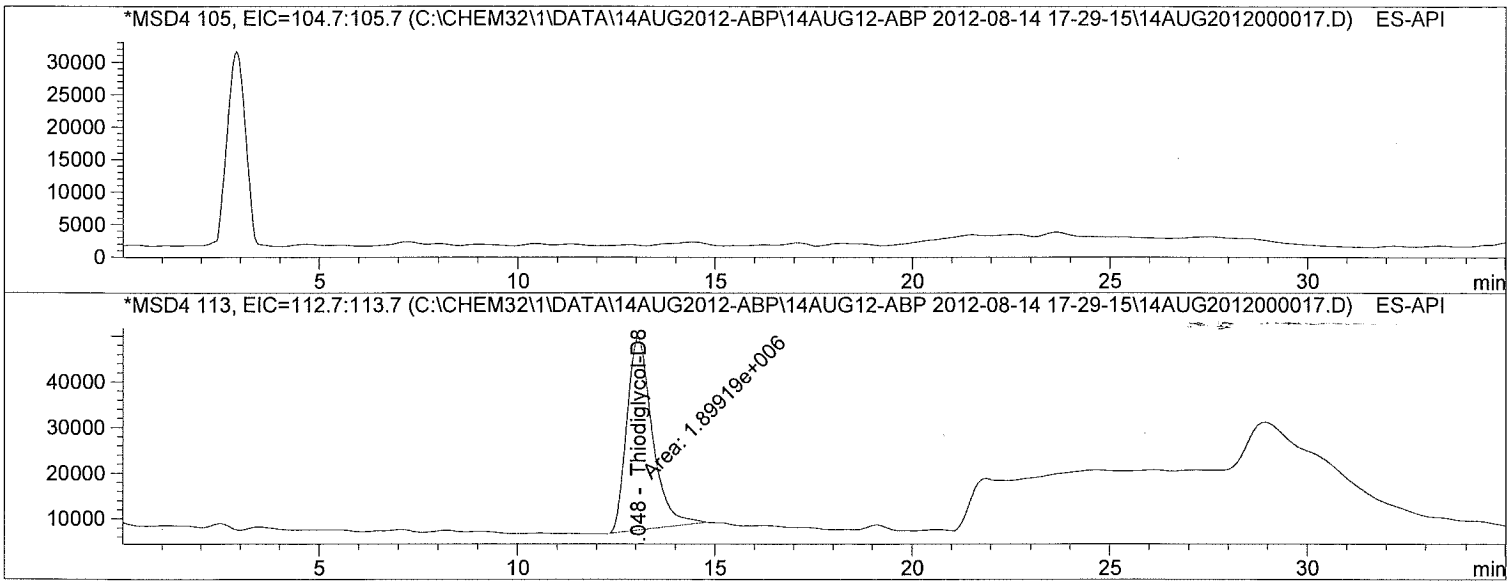

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

================================================================================
                           *** End of Report ***
```

Batch Run # 17 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000017.D
Sample Name: 1221564009

Acq. Operator : TTM Seq. Line : 17
Acq. Instrument : LCMS3 Location : Vial 65
Injection Date : 8/15/2012 3:12:13 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 17 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000017.D
Sample Name: 1221564009

Acq. Operator : TTM Seq. Line : 17
Acq. Instrument : LCMS3 Location : Vial 65
Injection Date : 8/15/2012 3:12:13 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.048	MM	I	1 1.89919e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

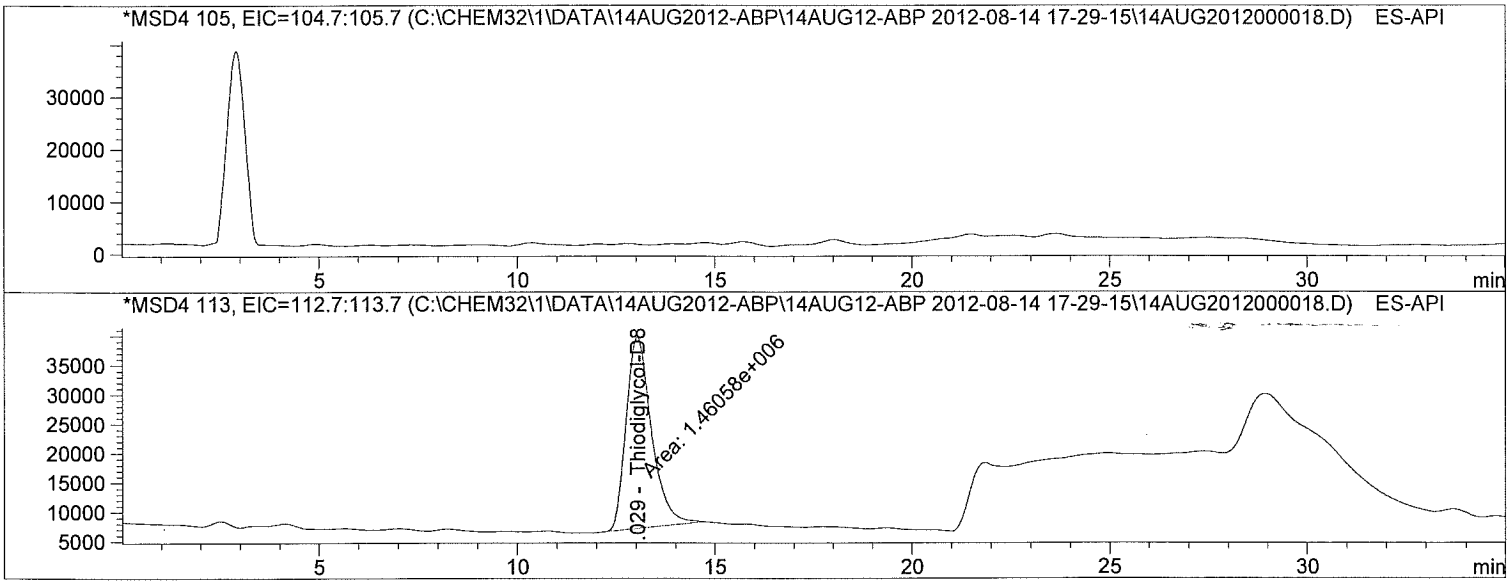
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 18 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000018.D
Sample Name: 1221564010

Acq. Operator	: TTM	Seq. Line	: 18
Acq. Instrument	: LCMS3	Location	: Vial 66
Injection Date	: 8/15/2012 3:48:34 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 18 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000018.D
Sample Name: 1221564010

Acq. Operator : TTM Seq. Line : 18
Acq. Instrument : LCMS3 Location : Vial 66
Injection Date : 8/15/2012 3:48:34 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.029	MM	I	1 1.46058e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

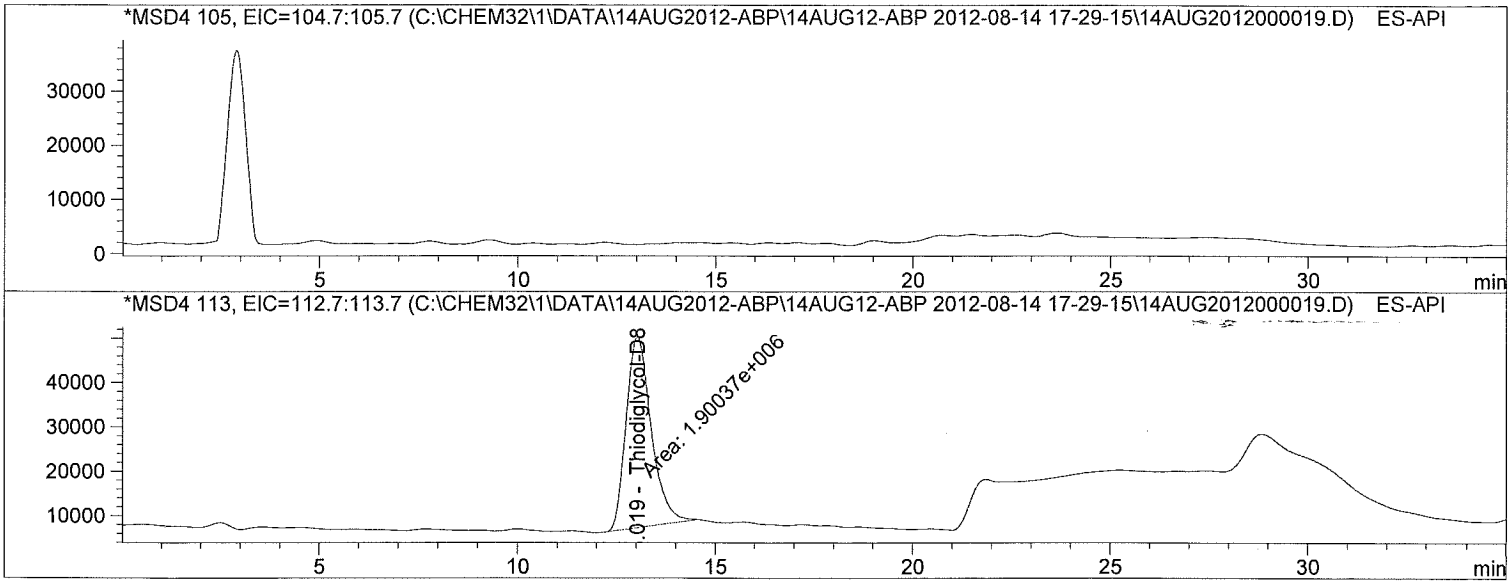
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 19 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000019.D
Sample Name: 1221564011

Acq. Operator	: TTM	Seq. Line	: 19
Acq. Instrument	: LCMS3	Location	: Vial 67
Injection Date	: 8/15/2012 4:24:55 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 19 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000019.D
Sample Name: 1221564011

Acq. Operator : TTM Seq. Line : 19
Acq. Instrument : LCMS3 Location : Vial 67
Injection Date : 8/15/2012 4:24:55 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.019	MM	I	1 1.90037e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

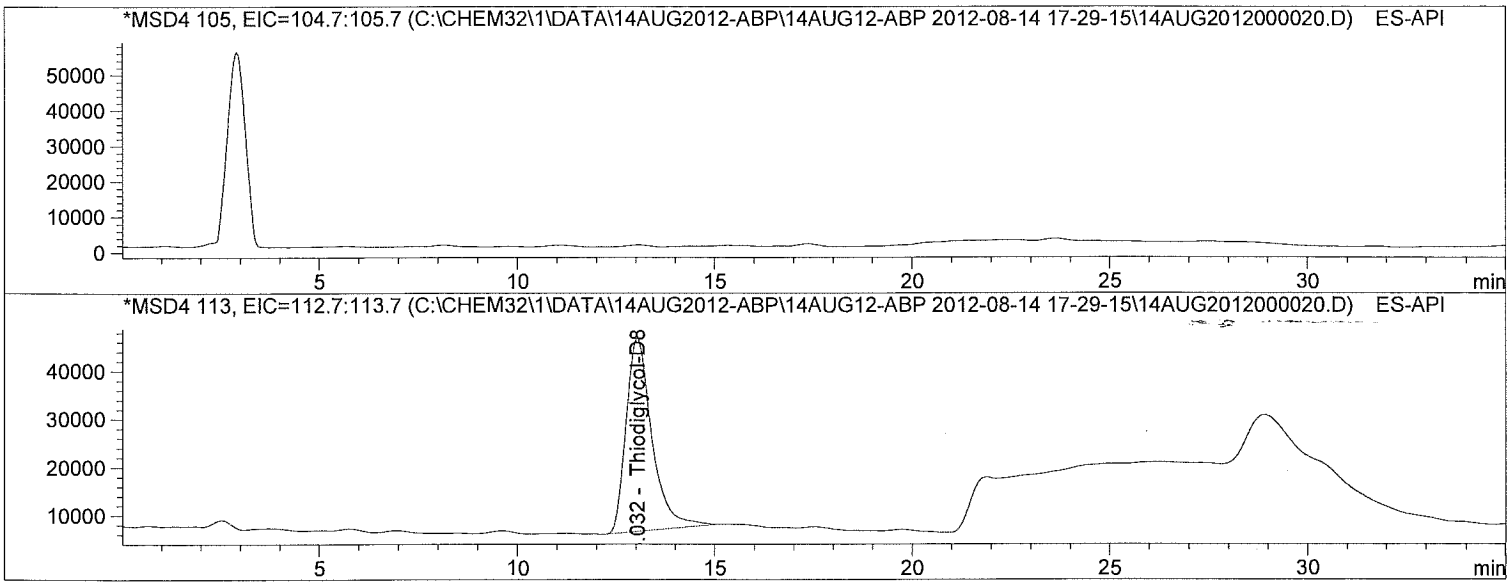
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 20 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000020.D
Sample Name: 1221564012

Acq. Operator	: TTM	Seq. Line	: 20
Acq. Instrument	: LCMS3	Location	: Vial 68
Injection Date	: 8/15/2012 5:01:20 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 20 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000020.D
Sample Name: 1221564012

Acq. Operator : TTM
Seq. Line : 20
Acq. Instrument : LCMS3
Location : Vial 68
Injection Date : 8/15/2012 5:01:20 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.032	BB	I	1 1.83874e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

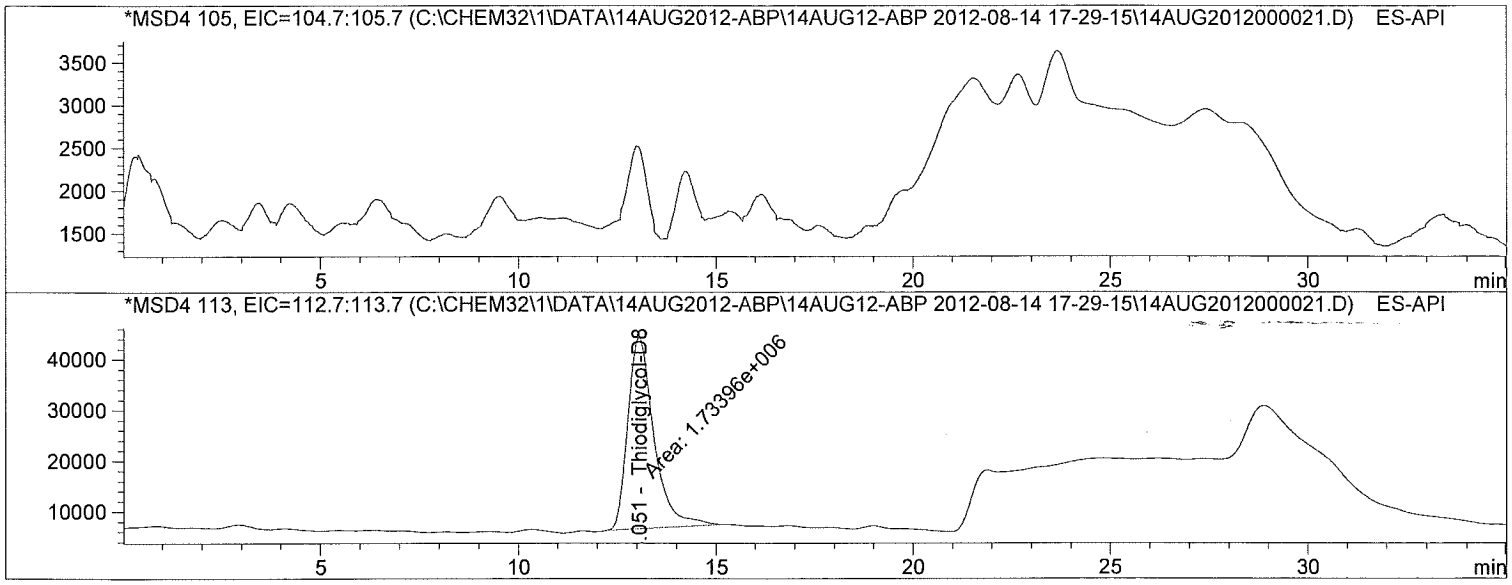
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 21 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000021.D
Sample Name: 290090 LMB

Acq. Operator	: TTM	Seq. Line	: 21
Acq. Instrument	: LCMS3	Location	: Vial 69
Injection Date	: 8/15/2012 5:37:40 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 21 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000021.D
Sample Name: 290090 LMB

Acq. Operator : TTM Seq. Line : 21
Acq. Instrument : LCMS3 Location : Vial 69
Injection Date : 8/15/2012 5:37:40 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.051	MM	I	1 1.73396e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

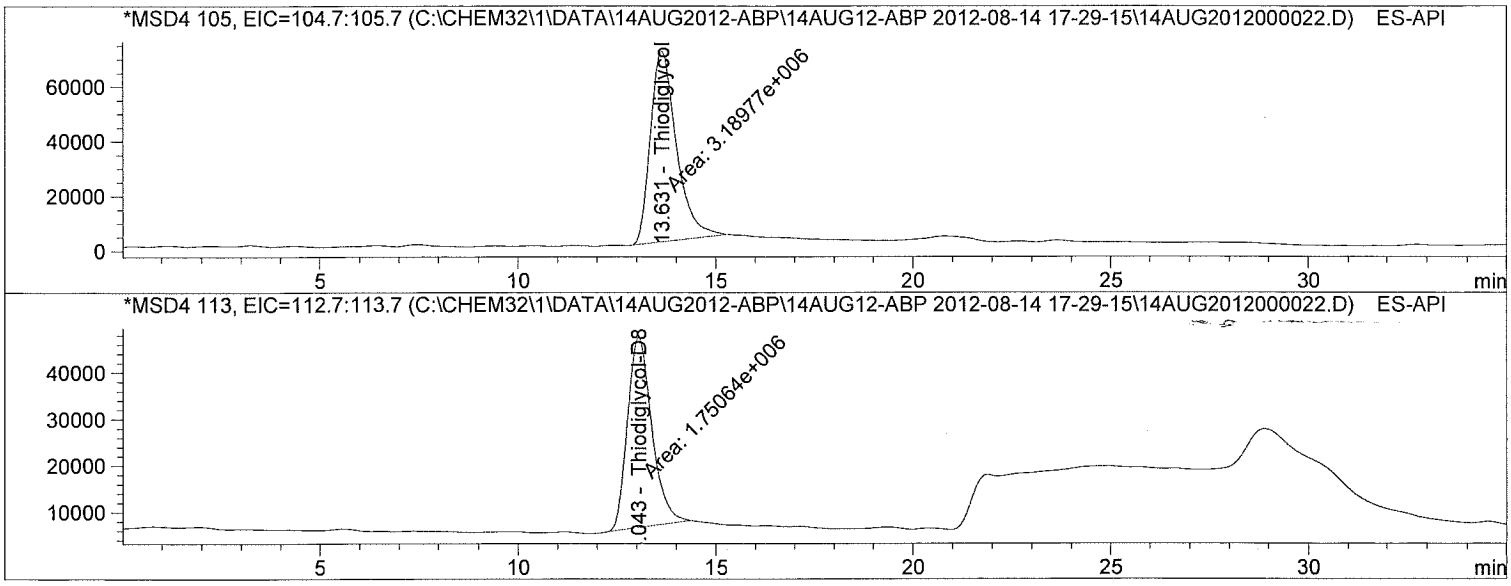
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 22 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000022.D
Sample Name: 290091 LCS

Acq. Operator : TTM Seq. Line : 22
Acq. Instrument : LCMS3 Location : Vial 70
Injection Date : 8/15/2012 6:14:06 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Sample Amount : 20.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.631	MM	1	3.18977e6	1.15173e-1	20.98517		Thiodiglycol

Batch Run # 22 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000022.D
Sample Name: 290091 LCS

Acq. Operator : TTM Seq. Line : 22
Acq. Instrument : LCMS3 Location : Vial 70
Injection Date : 8/15/2012 6:14:06 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 20.98517

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

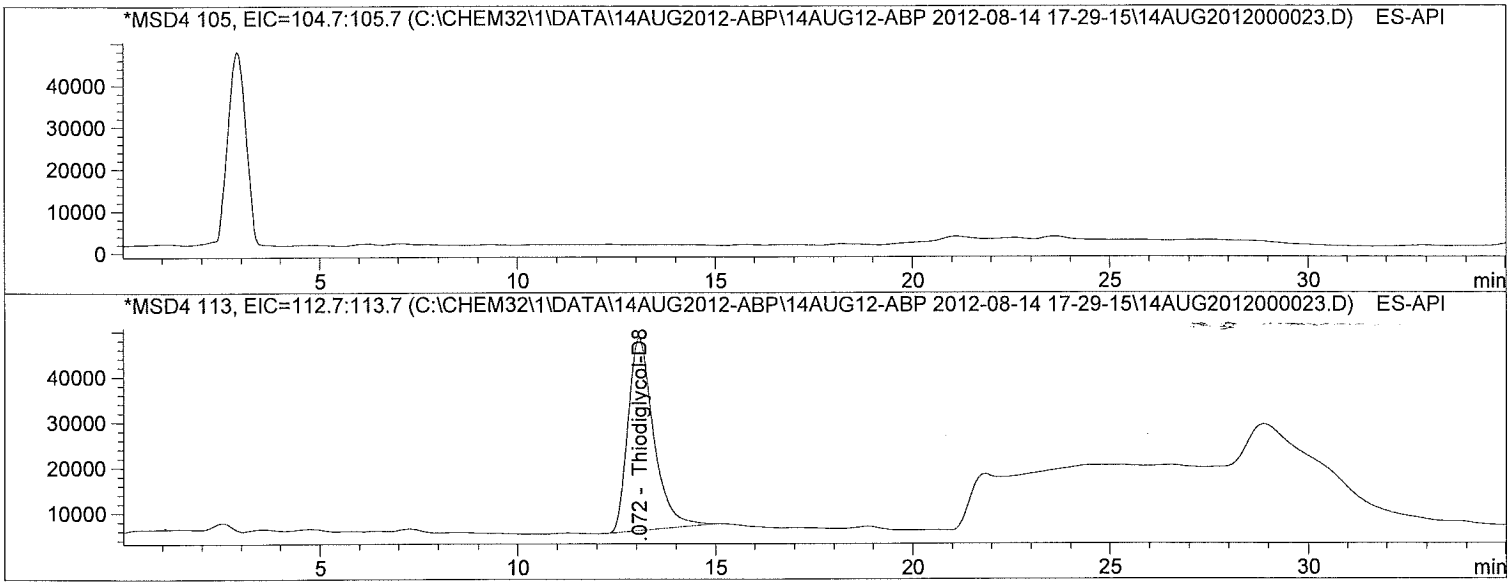
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.043	MM	I	1 1.75064e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 23 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000023.D
Sample Name: 1221564013

```
Acq. Operator    : TTM                                  Seq. Line :  23
Acq. Instrument  : LCMS3                                 Location : Vial 71
Injection Date   : 8/15/2012 6:50:29 AM                      Inj :   1
                                                       Inj Volume : 10 µl
Acq. Method      : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed     : 8/14/2012 7:45:11 AM by TTM
Analysis Method  : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed     : 8/13/2012 12:58:03 PM by TTM
                   (Results are from a previously saved Batch)
Method Info      : Agent Breakdown Products
```



Internal Standard Report

```
Sorted By             :      Signal
Calib. Data Modified  :      7/9/2012 11:13:05 AM
Multiplier            :     10.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:
ISTD  ISTD Amount   Name
  #
----|-------------|-------------------------
  2     10.00000   Thiodiglycol-D8


Signal 1: MSD4 105, EIC=104.7:105.7
 Signal has been modified after loading from rawdata file!

RetTime  Type  ISTD    Area      Amt/Area    Amount   Grp   Name
 [min]         used              ratio
-------|------|----|----------|----------|----------|--|------------------
 13.460          1     -          -          -         Thiodiglycol

Totals without ISTD(s) :                0.00000
```

Batch Run # 23 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000023.D
Sample Name: 1221564013

Acq. Operator : TTM
Seq. Line : 23
Acq. Instrument : LCMS3
Location : Vial 71
Injection Date : 8/15/2012 6:50:29 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.072	BB	I	1 1.91869e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

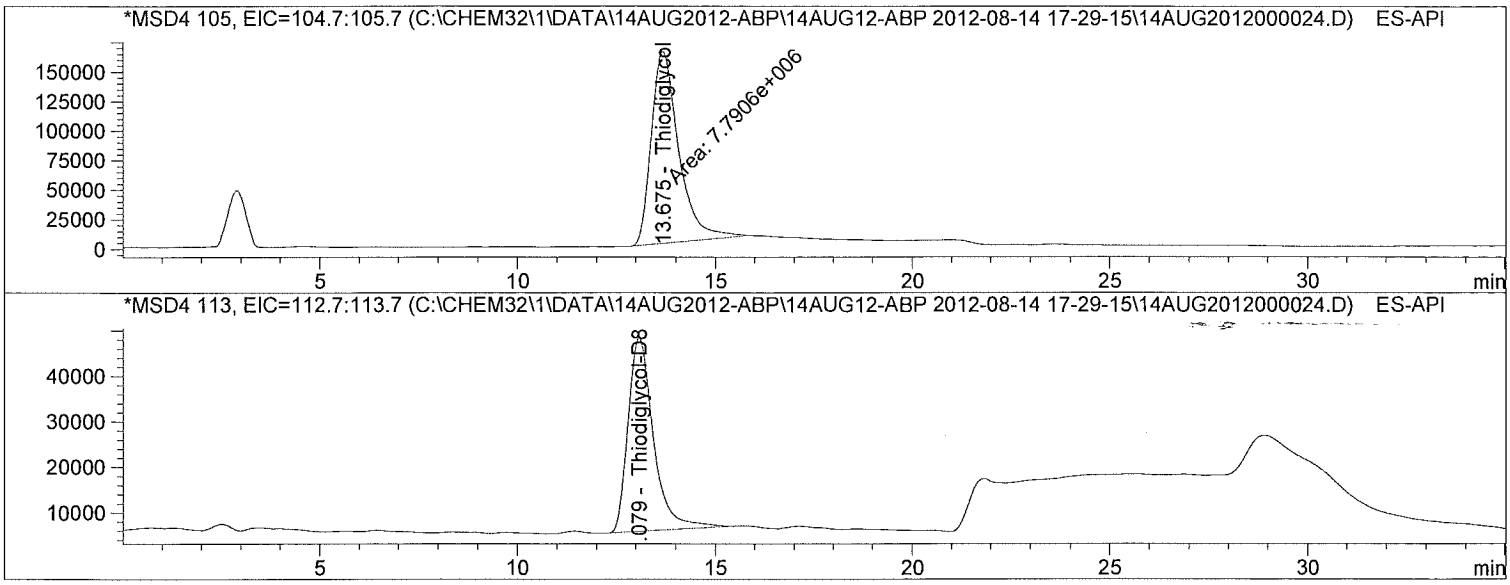
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 24 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000024.D
Sample Name: 1221564014 MS

Acq. Operator	: TTM	Seq. Line	: 24
Acq. Instrument	: LCMS3	Location	: Vial 72
Injection Date	: 8/15/2012 7:26:53 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	7/9/2012 11:13:05 AM	
Multiplier	:	10.0000	
Dilution	:	1.0000	

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.675	MM	1	7.79060e6	1.18434e-1	48.56121		Thiodiglycol

Totals without ISTD(s) : 48.56121

Batch Run # 24 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000024.D
Sample Name: 1221564014 MS

Acq. Operator	: TTM	Seq. Line	: 24
Acq. Instrument	: LCMS3	Location	: Vial 72
Injection Date	: 8/15/2012 7:26:53 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

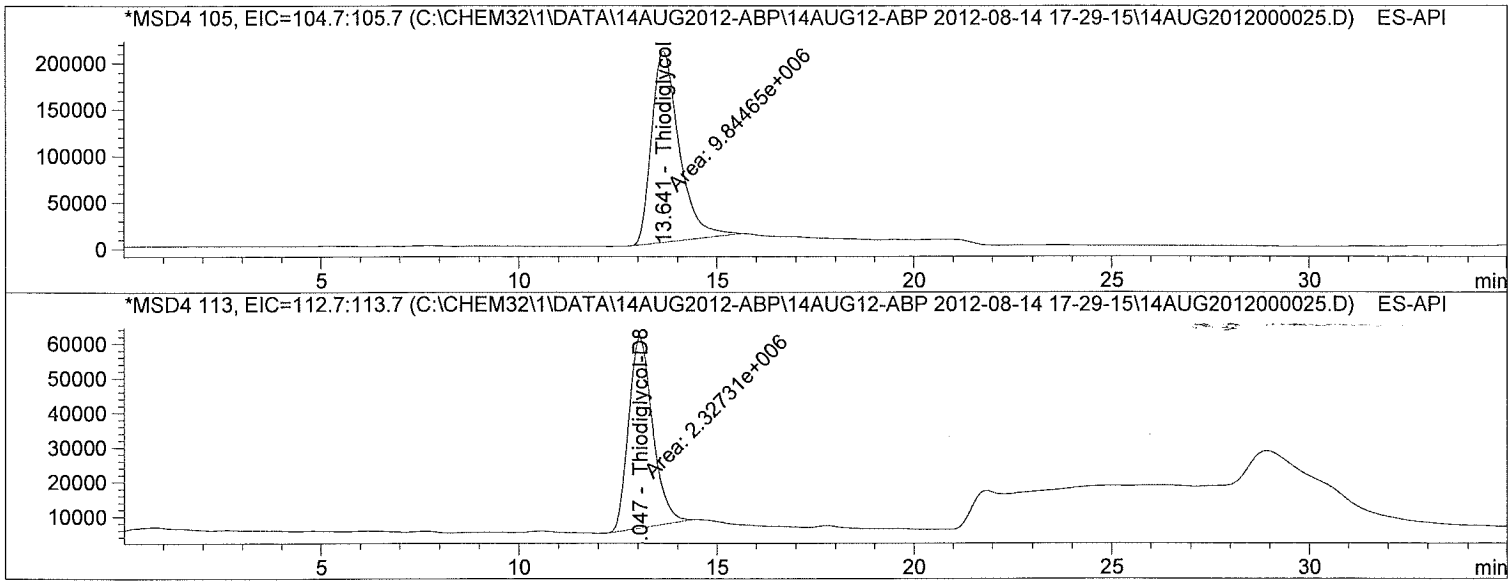
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.079	BB	I	1 1.90002e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 25 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000025.D
Sample Name: CCV3

```
Acq. Operator    : TTM                                  Seq. Line :  25
Acq. Instrument  : LCMS3                                 Location : Vial 51
Injection Date   : 8/15/2012 8:03:13 AM                      Inj :   1
                                                      Inj Volume : 10 µl
Acq. Method      : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed     : 8/14/2012 7:45:11 AM by TTM
Analysis Method  : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed     : 8/13/2012 12:58:03 PM by TTM
                   (Results are from a previously saved Batch)
Method Info      : Agent Breakdown Products
```



Internal Standard Report

```
Sorted By             :      Signal
Calib. Data Modified  :      7/9/2012 11:13:05 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      5.00000  []   (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:
```

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.641	MM	1	9.84465e6	1.18643e-1	5.01865		Thiodiglycol

Batch Run # 25 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000025.D
Sample Name: CCV3

Acq. Operator : TTM Seq. Line : 25
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/15/2012 8:03:13 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 5.01865

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

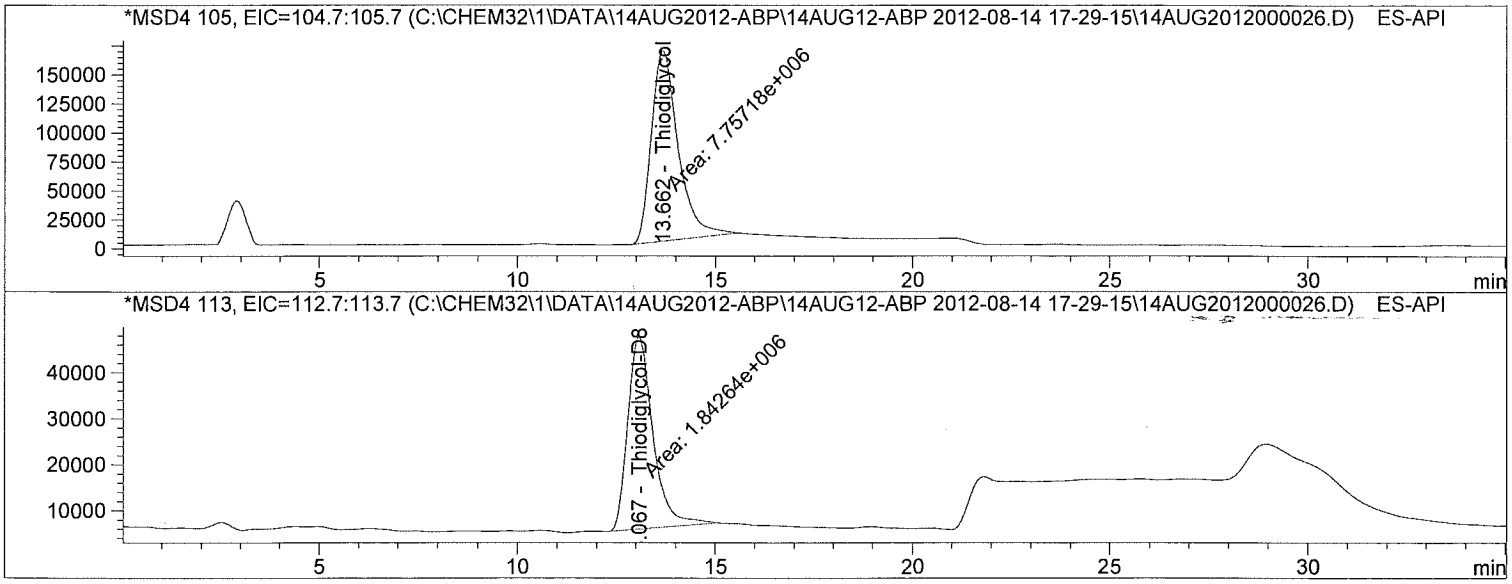
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.047	MM	I	1 2.32731e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 26 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000026.D
Sample Name: 1221564015 MSD

Acq. Operator	: TTM	Seq. Line	: 26
Acq. Instrument	: LCMS3	Location	: Vial 73
Injection Date	: 8/15/2012 8:39:37 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.662	MM	1	7.75718e6	1.18610e-1	49.93273		Thiodiglycol

Totals without ISTD(s) : 49.93273

Batch Run # 26 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000026.D
Sample Name: 1221564015 MSD

Acq. Operator : TTM Seq. Line : 26
Acq. Instrument : LCMS3 Location : Vial 73
Injection Date : 8/15/2012 8:39:37 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

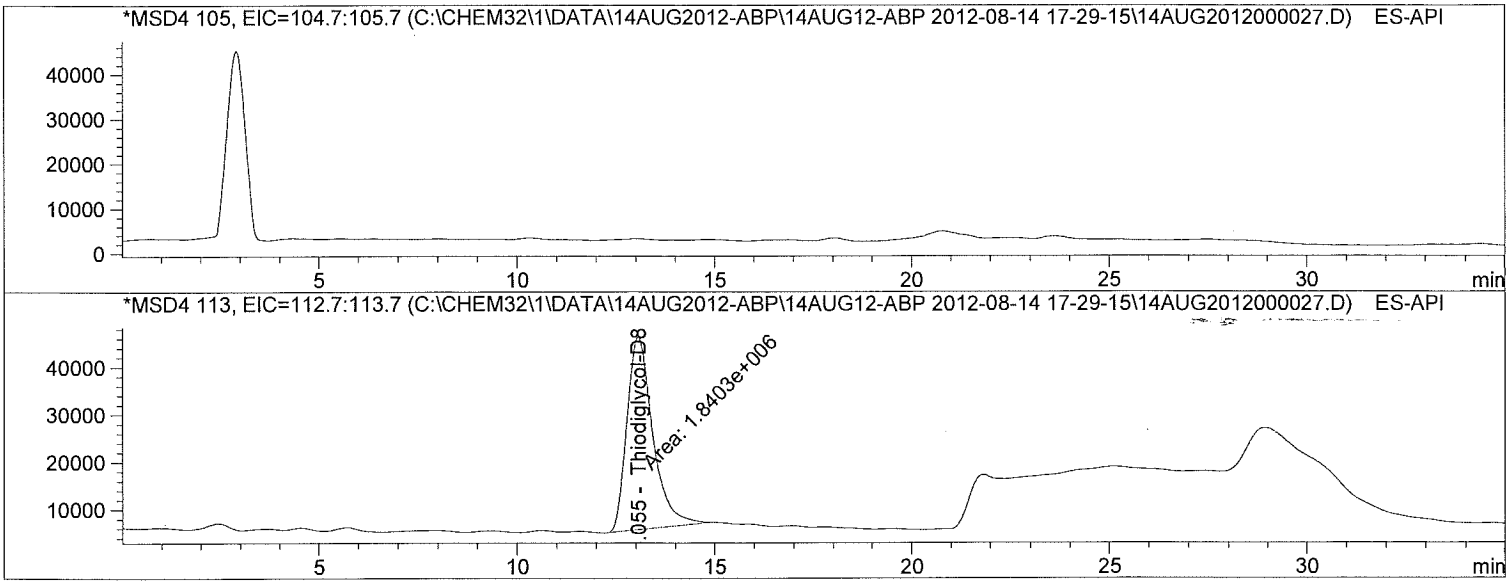
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.067	MM	I	1 1.84264e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 27 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000027.D
Sample Name: 1221564016

Acq. Operator	: TTM	Seq. Line	: 27
Acq. Instrument	: LCMS3	Location	: Vial 74
Injection Date	: 8/15/2012 9:15:59 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 27 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000027.D
Sample Name: 1221564016

Acq. Operator : TTM
Seq. Line : 27
Acq. Instrument : LCMS3
Location : Vial 74
Injection Date : 8/15/2012 9:15:59 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.055	MM	I	1 1.84030e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

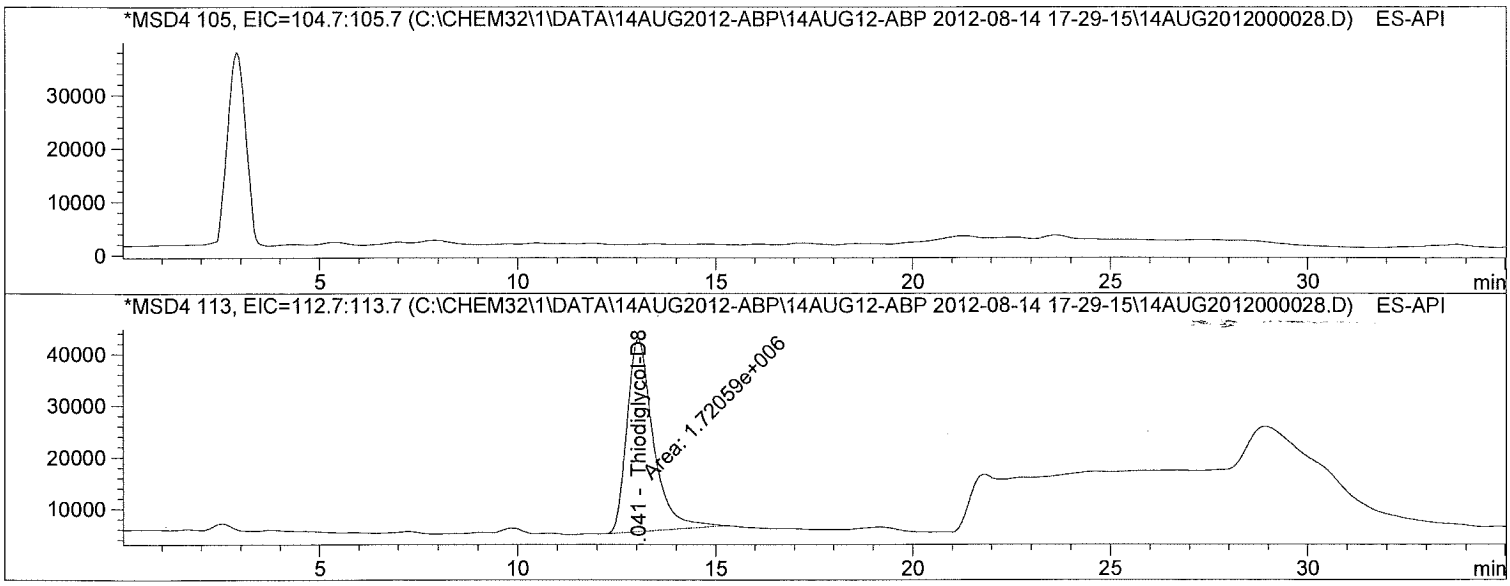
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 28 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000028.D
Sample Name: 1221564017

Acq. Operator	: TTM	Seq. Line	: 28
Acq. Instrument	: LCMS3	Location	: Vial 75
Injection Date	: 8/15/2012 9:52:22 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 28 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000028.D
Sample Name: 1221564017

Acq. Operator	: TTM	Seq. Line	: 28
Acq. Instrument	: LCMS3	Location	: Vial 75
Injection Date	: 8/15/2012 9:52:22 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.041	MM	I	1 1.72059e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

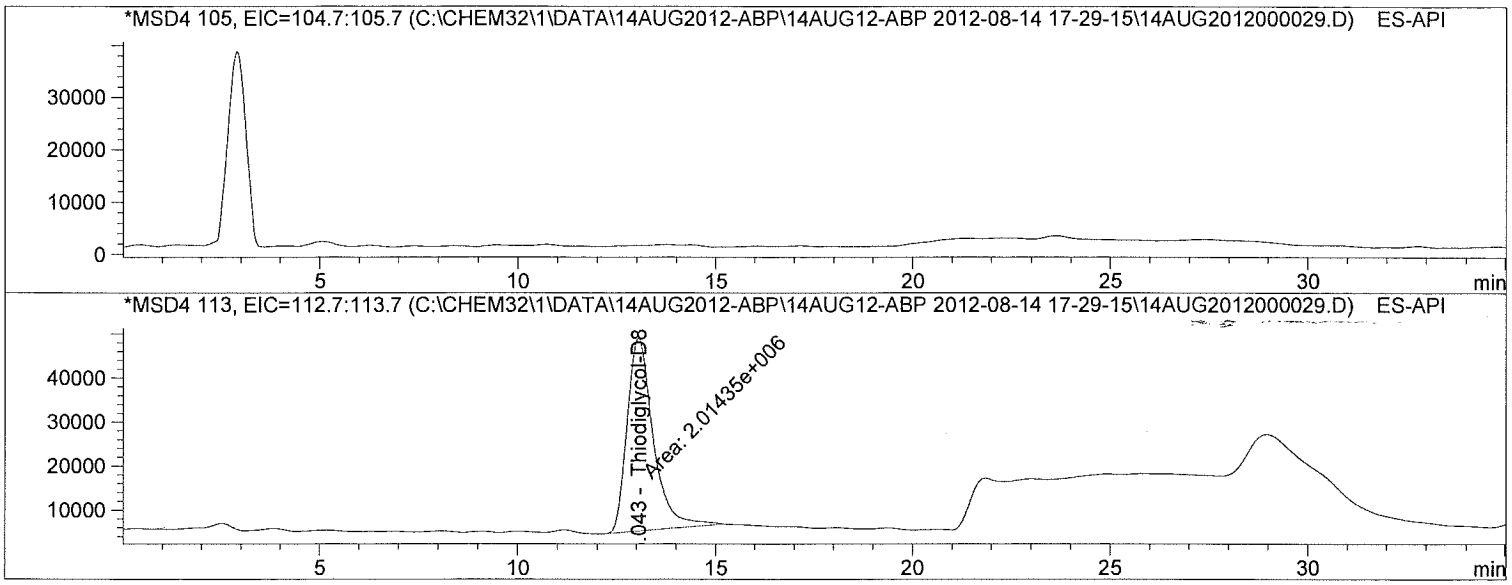
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 29 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000029.D
Sample Name: 1221564018

Acq. Operator	: TTM	Seq. Line	: 29
Acq. Instrument	: LCMS3	Location	: Vial 76
Injection Date	: 8/15/2012 10:28:45 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 29 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000029.D
Sample Name: 1221564018

```
Acq. Operator   : TTM                                  Seq. Line :  29
Acq. Instrument : LCMS3                                 Location : Vial 76
Injection Date  : 8/15/2012 10:28:45 AM                      Inj :   1
                                                      Inj Volume : 10 µl
Acq. Method     : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed    : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed    : 8/13/2012 12:58:03 PM by TTM
                  (Results are from a previously saved Batch)
Method Info     : Agent Breakdown Products
```

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.043	MM	I	1 2.01435e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

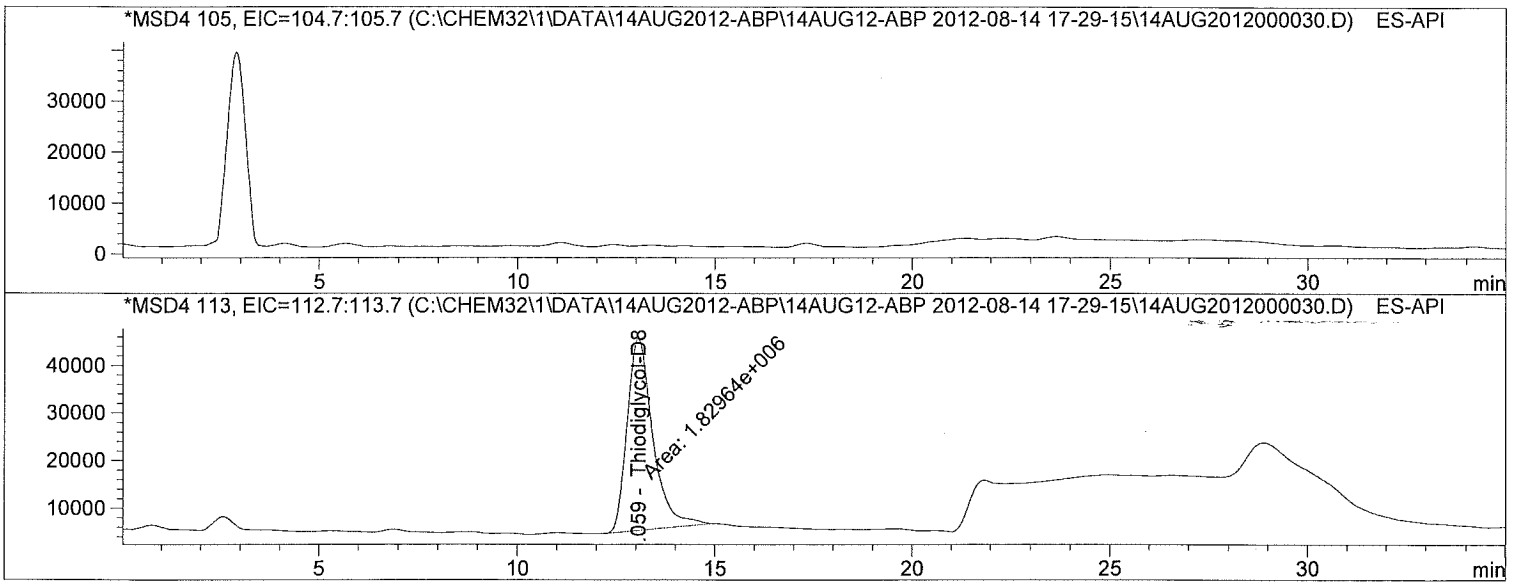
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 30 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000030.D
Sample Name: 1221564019

Acq. Operator	: TTM	Seq. Line	: 30
Acq. Instrument	: LCMS3	Location	: Vial 77
Injection Date	: 8/15/2012 11:05:10 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 30 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000030.D
Sample Name: 1221564019

Acq. Operator : TTM
Seq. Line : 30
Acq. Instrument : LCMS3
Location : Vial 77
Injection Date : 8/15/2012 11:05:10 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.059	MM	I	1 1.82964e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

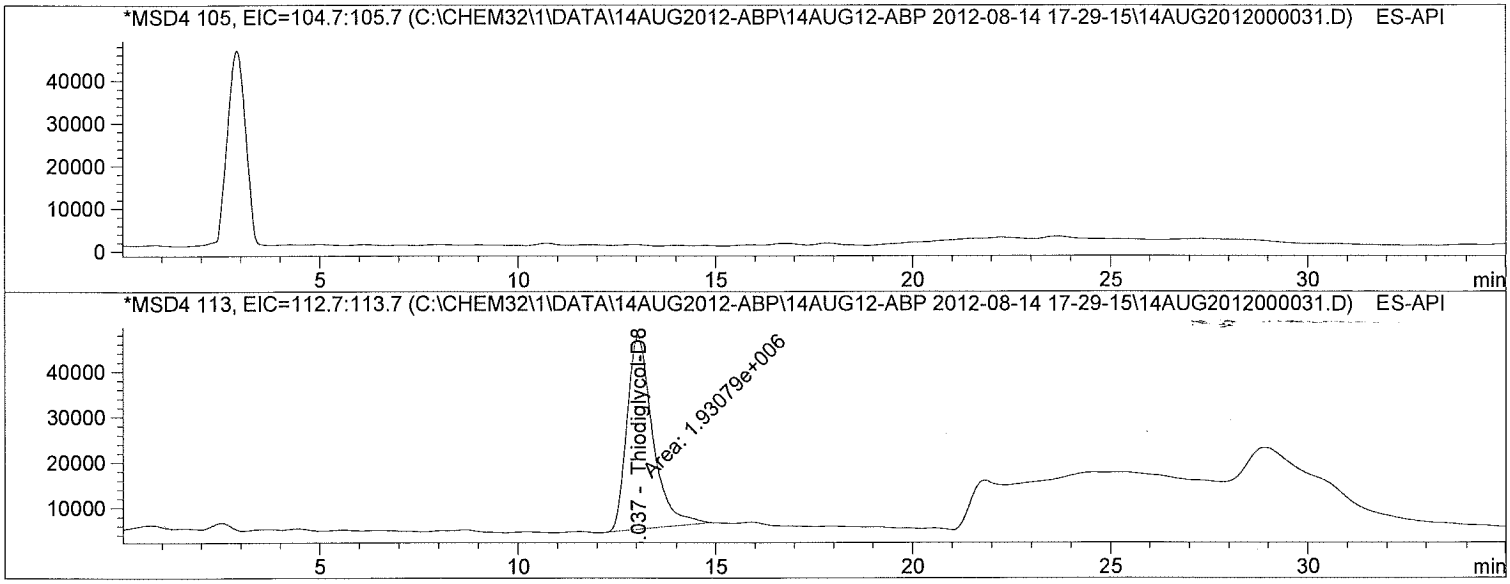
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 31 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000031.D
Sample Name: 1221564020

Acq. Operator	: TTM	Seq. Line	: 31
Acq. Instrument	: LCMS3	Location	: Vial 78
Injection Date	: 8/15/2012 11:41:33 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	: Signal
Calib. Data Modified	: 7/9/2012 11:13:05 AM
Multiplier	: 10.0000
Dilution	: 1.0000

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 31 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000031.D
Sample Name: 1221564020

```
Acq. Operator    : TTM                                  Seq. Line :  31
Acq. Instrument  : LCMS3                                 Location : Vial 78
Injection Date   : 8/15/2012 11:41:33 AM                      Inj :   1
                                                       Inj Volume : 10 µl
Acq. Method      : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed     : 8/14/2012 7:45:11 AM by TTM
Analysis Method  : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed     : 8/13/2012 12:58:03 PM by TTM
                   (Results are from a previously saved Batch)
Method Info      : Agent Breakdown Products
```

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.037	MM	I	1 1.93079e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

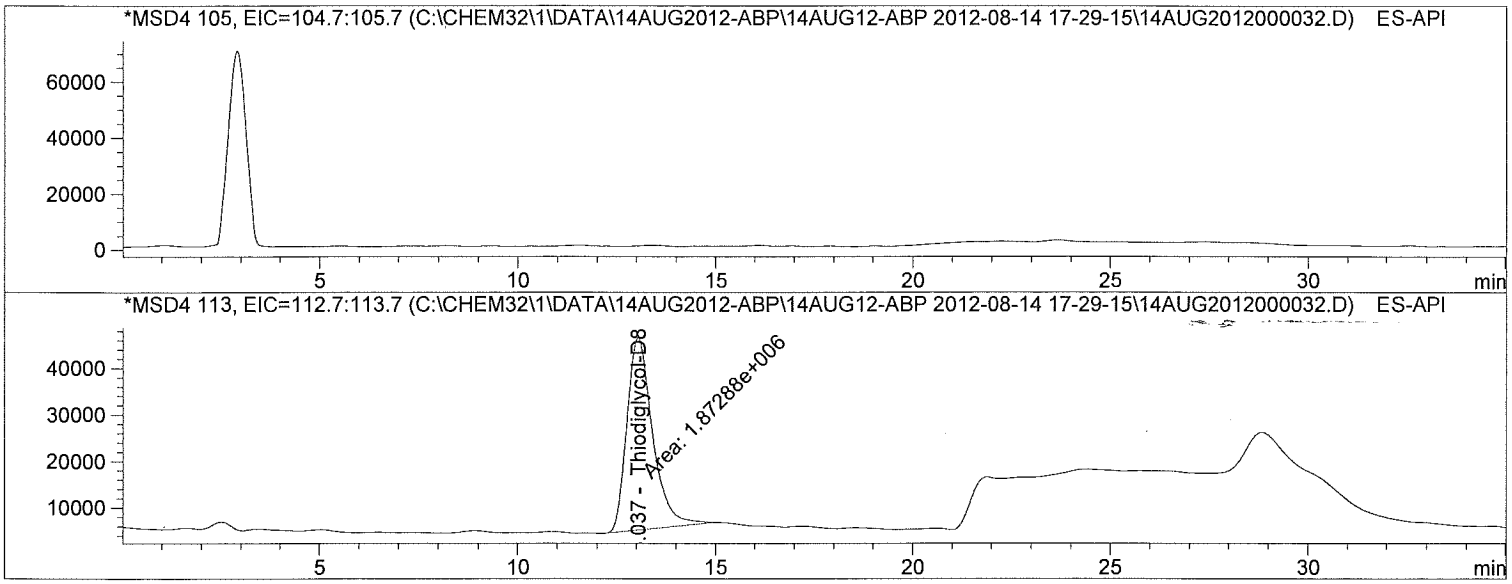
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 32 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000032.D
Sample Name: 1221564021

```
Acq. Operator    : TTM                                  Seq. Line :  32
Acq. Instrument  : LCMS3                                 Location : Vial 79
Injection Date   : 8/15/2012 12:17:55 PM                      Inj :   1
                                                       Inj Volume : 10 µl
Acq. Method      : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed     : 8/14/2012 7:45:11 AM by TTM
Analysis Method  : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed     : 8/13/2012 12:58:03 PM by TTM
                   (Results are from a previously saved Batch)
Method Info      : Agent Breakdown Products
```



Internal Standard Report

```
Sorted By             :      Signal
Calib. Data Modified  :      7/9/2012 11:13:05 AM
Multiplier            :     10.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:
```

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 32 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000032.D
Sample Name: 1221564021

Acq. Operator : TTM
Seq. Line : 32
Acq. Instrument : LCMS3
Location : Vial 79
Injection Date : 8/15/2012 12:17:55 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.037	MM	I	1 1.87288e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

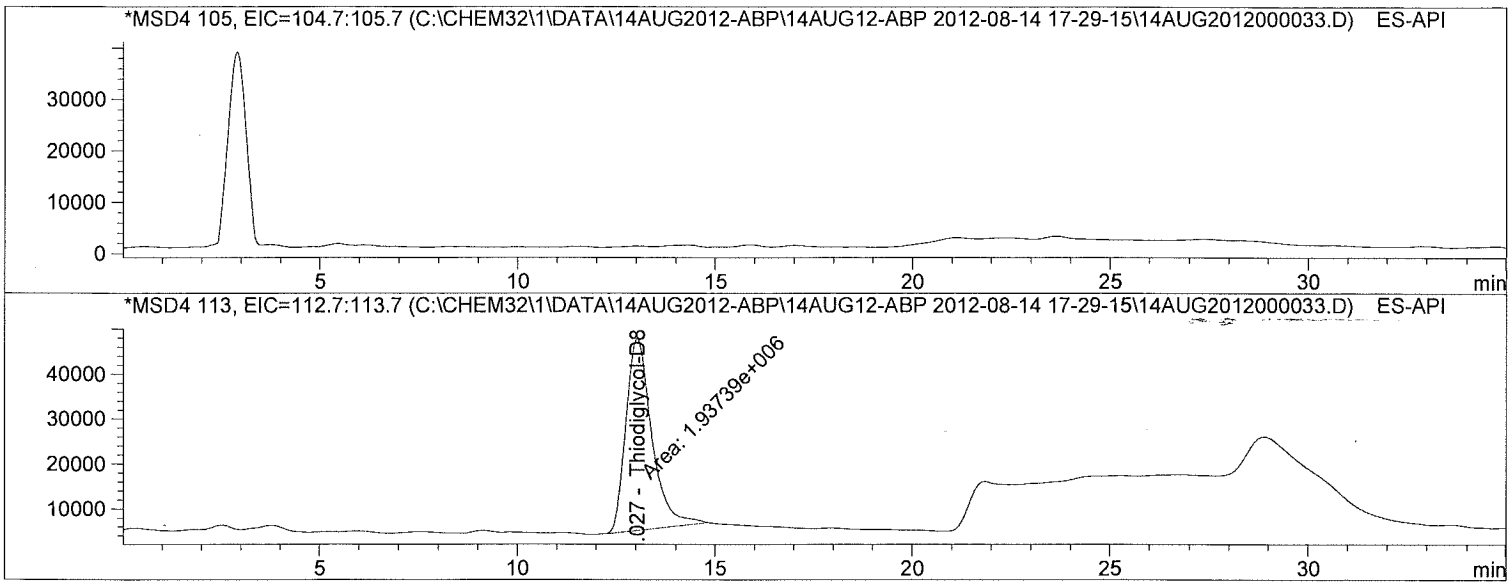
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 33 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000033.D
Sample Name: 1221564022

Acq. Operator	: TTM	Seq. Line	: 33
Acq. Instrument	: LCMS3	Location	: Vial 80
Injection Date	: 8/15/2012 12:54:18 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 33 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000033.D
Sample Name: 1221564022

Acq. Operator : TTM
Seq. Line : 33
Acq. Instrument : LCMS3
Location : Vial 80
Injection Date : 8/15/2012 12:54:18 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.027	MM	I	1 1.93739e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

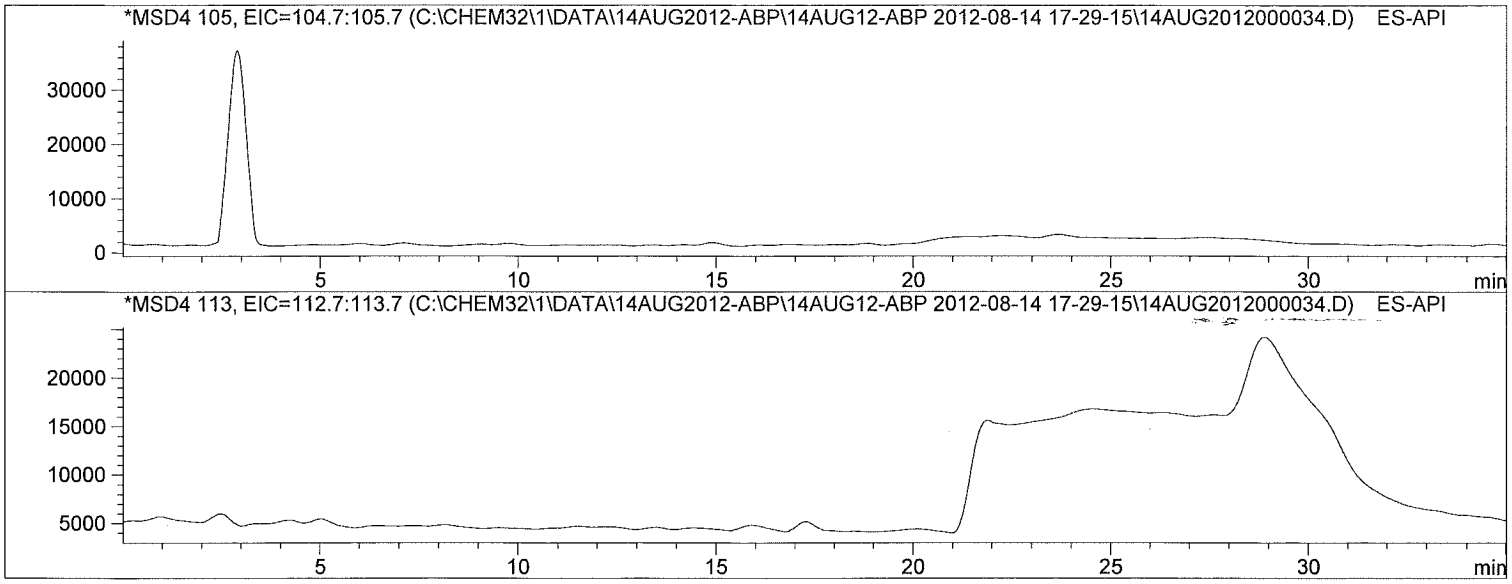
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Batch Run # 34 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000034.D
Sample Name: 1221564023

Acq. Operator : TTM
Seq. Line : 34
Acq. Instrument : LCMS3
Location : Vial 81
Injection Date : 8/15/2012 1:30:39 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 34 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000034.D
Sample Name: 1221564023

```
Acq. Operator    : TTM                                  Seq. Line :  34
Acq. Instrument  : LCMS3                                 Location : Vial 81
Injection Date   : 8/15/2012 1:30:39 PM                      Inj :   1
                                                       Inj Volume : 10 µl
Acq. Method      : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed     : 8/14/2012 7:45:11 AM by TTM
Analysis Method  : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed     : 8/13/2012 12:58:03 PM by TTM
                   (Results are from a previously saved Batch)
Method Info      : Agent Breakdown Products
```

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.890		1	-	-	-		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

1 Warnings or Errors :

Warning : ISTD compound(s) not found

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

Peak #	RetTime [min]	Type	Width [min]	Area	Area %	Name
1	13.460		0.0000	0.00000	0.0000	Thiodiglycol

Totals : 0.00000 0.0000

Batch Run # 34 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000034.D
Sample Name: 1221564023

Acq. Operator : TTM
Seq. Line : 34
Acq. Instrument : LCMS3
Location : Vial 81
Injection Date : 8/15/2012 1:30:39 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

Peak #	RetTime [min]	Type	Width [min]	Area	Area %	Name
1	12.890	I	0.0000	0.00000	0.0000	Thiodiglycol-D8
Totals :				0.00000	0.0000	

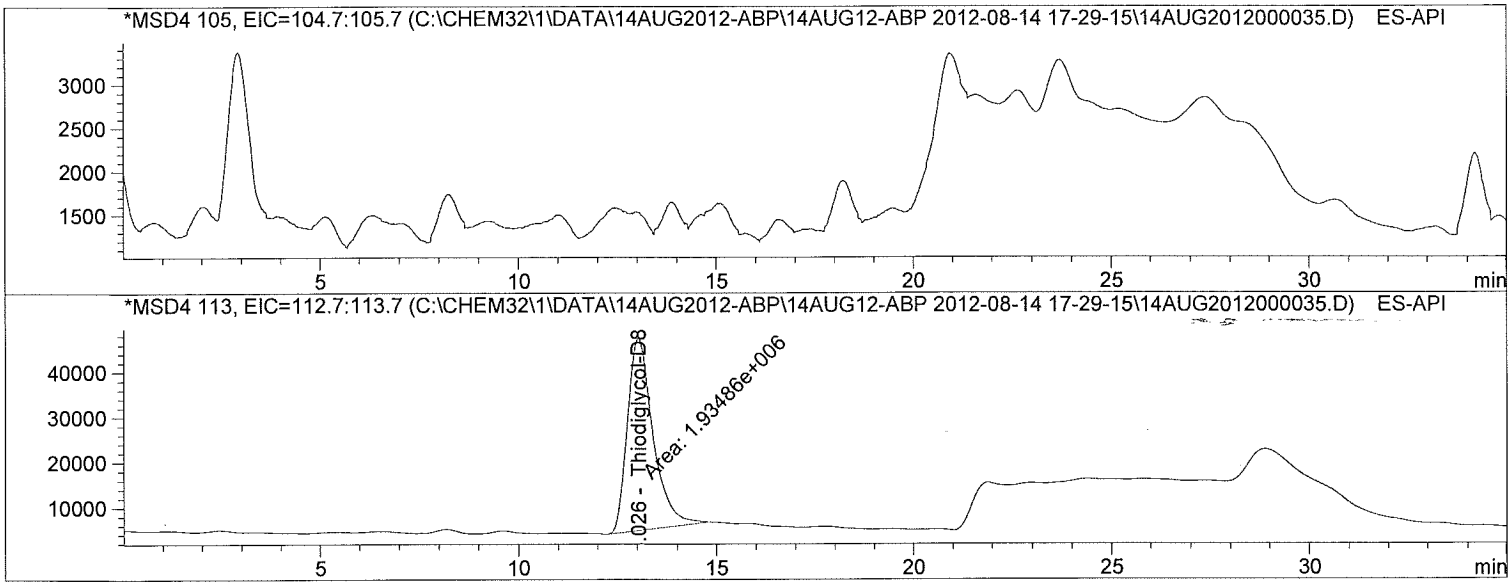
1 Warnings or Errors :

Warning : ISTD compound(s) not found

*** End of Report ***

Batch Run # 35 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000035.D
Sample Name: 1221564024

Acq. Operator	: TTM	Seq. Line	: 35
Acq. Instrument	: LCMS3	Location	: Vial 82
Injection Date	: 8/15/2012 2:07:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M		
Last changed	: 8/14/2012 7:45:11 AM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M		
Last changed	: 8/13/2012 12:58:03 PM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 10.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Batch Run # 35 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000035.D
Sample Name: 1221564024

==========

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 8/15/2012 2:07:02 PM

Seq. Line : 35
Location : Vial 82
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

==========

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.026	MM I	1	1.93486e6	1.00000	100.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

1 Warnings or Errors :

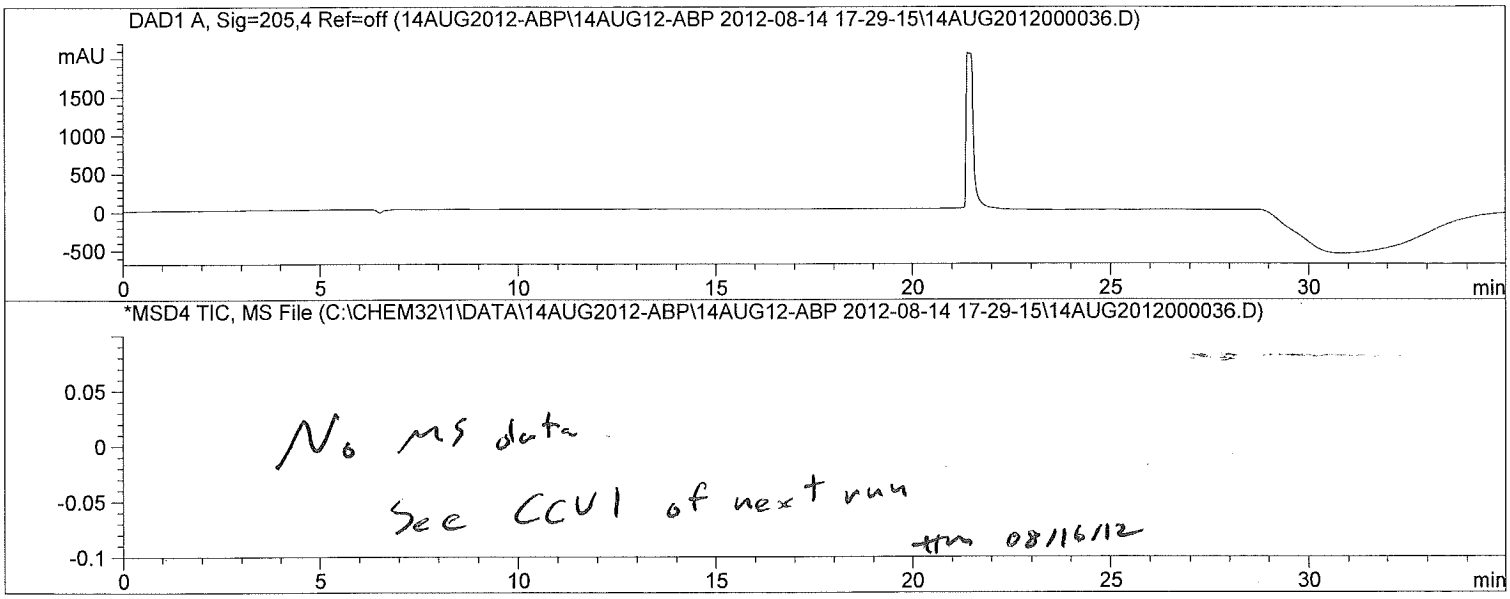
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Batch Run # 36 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000036.D
Sample Name: CCV4

Acq. Operator : TTM
Seq. Line : 36
Location : Vial 51
Injection Date : 15-Aug-12, 14:43:21
Inj : 1
Inj Volume : 10 µl
Acq. Method : ABP-ON.M
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 3: MSD4 105, EIC=104.7:105.7 not found

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460		1	-	-	-		Thiodiglycol

Totals without ISTD(s) : 0.00000

Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000036.D
Sample Name: CCV4

Acq. Operator : TTM
Seq. Line : 36
Location : Vial 51
Injection Date : 15-Aug-12, 14:43:21
Inj : 1
Inj Volume : 10 µl
Acq. Method : ABP-ON.M
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 4: MSD4 113, EIC=112.7:113.7 not found

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.890		1	-	-	-		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

1 Warnings or Errors :

Warning : ISTD compound(s) not found

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=205,4 Ref=off

Signal 2: MSD4 TIC, MS File
Signal has been modified after loading from rawdata file!

Signal 3: MSD4 105, EIC=104.7:105.7 not found

Peak #	RetTime [min]	Type	Width [min]	Area	Area %	Name
1	13.460		0.0000	0.00000	0.0000	Thiodiglycol

Totals : 0.00000 0.0000

Batch Run # 36 of 36
Data File C:\CHEM32\1\DATA\14AUG2012-ABP\14AUG12-ABP 2012-08-14 17-29-15\14AUG2012000036.D
Sample Name: CCV4

Acq. Operator : TTM
Seq. Line : 36
Location : Vial 51
Injection Date : 15-Aug-12, 14:43:21
Inj : 1
Inj Volume : 10 µl
Acq. Method : ABP-ON.M
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 4: MSD4 113, EIC=112.7:113.7 not found

Peak #	RetTime [min]	Type	Width [min]	Area	Area %	Name
1	12.890	I	0.0000	0.00000	0.0000	Thiodiglycol-D8
Totals :				0.00000	0.0000	

1 Warnings or Errors :

Warning : ISTD compound(s) not found

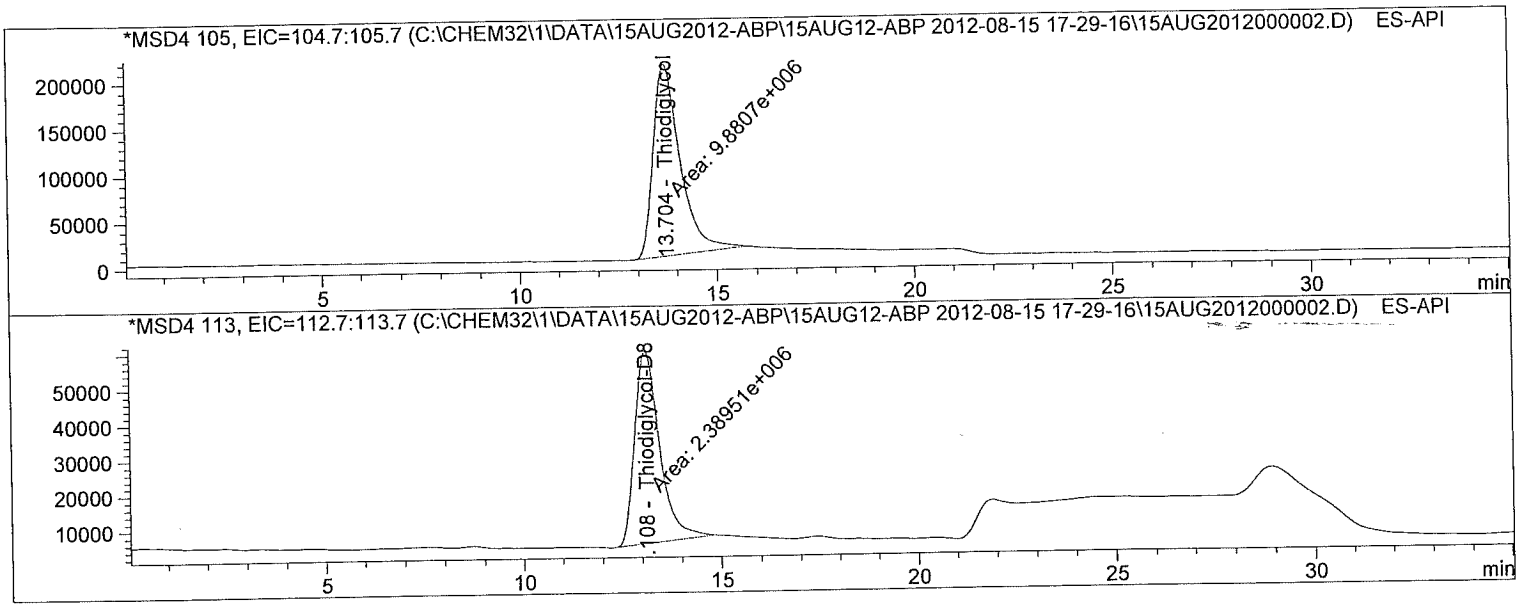
*** End of Report ***

atch Run # 2 of 23
ata File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000002.D
ample Name: CCV1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 8/15/2012 6:06:08 PM

Seq. Line : 2
Location : Vial 51
Inj : 1
Inj Volume : 10 µl

Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.704	MM	1	9.88070e6	1.18490e-1	4.89958		Thiodiglycol

Batch Run # 2 of 23
Data File C:\CHEM32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\15AUG2012000002.D
Sample Name: CCV1

Acq. Operator : TTM Seq. Line : 2
Acq. Instrument : LCMS3 Location : Vial 51
Injection Date : 8/15/2012 6:06:08 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\15AUG2012-ABP\15AUG12-ABP 2012-08-15 17-29-16\ABP-ON.M
Last changed : 8/14/2012 7:45:11 AM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-TDG-OFF.M
Last changed : 8/13/2012 12:58:03 PM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Totals without ISTD(s) : 4.89958

Signal 2: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.108	MM	I	1 2.38951e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Calibration

Raw Data

Calibration Table

Agent Breakdown Products

Calib. Data Modified : 7/9/2012 11:13:05 AM

Calculate : Internal Standard
Based on : Peak Area

Rel. Reference Window : 10.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 10.000 %
Abs. Non-ref. Window : 0.000 min
Use Multiplier & Dilution Factor with ISTDs
Uncalibrated Peaks : not reported
Partial Calibration : No recalibration if peaks missing

Curve Type : Quadratic (some peaks differ, see below)
Origin : Ignored (some peaks differ, see below)
Weight : Linear (Amnt) (some peaks differ, see below)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Default Sample ISTD Information (if not set in sample table):

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 105, EIC=104.7:105.7
Signal 2: MSD4 113, EIC=112.7:113.7

RetTime [min]	Sig	Lvl	Amount	Area	Amt/Area	Ref	Grp	Name
12.890	2	1	10.00000	2.44245e6	4.09425e-6	I2		Thiodiglycol-D8
		2	10.00000	2.37259e6	4.21481e-6			
		3	10.00000	2.75981e6	3.62344e-6			
		4	10.00000	2.61922e6	3.81792e-6			
		5	10.00000	2.65549e6	3.76579e-6			
		6	10.00000	2.67017e6	3.74508e-6			
13.460	1	6	5.00000e-2	1.14698e5	4.35926e-7	2		Thiodiglycol
		5	1.00000e-1	2.17683e5	4.59383e-7			
		4	5.00000e-1	1.04468e6	4.78617e-7			
		3	1.00000	2.09084e6	4.78276e-7			
		2	5.00000	1.06254e7	4.70571e-7			
		1	10.00000	1.91630e7	5.21840e-7			

More compound-specific settings:

Compound: Thiodiglycol-D8
  Curve Type : Linear
  Origin : Included
  Calibration Level Weights:/
    Level 1 : 1
    Level 2 : 1
    Level 3 : 1
    Level 4 : 1
    Level 5 : 1
    Level 6 : 1

==========

Peak Sum Table

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No Entries in table

==========

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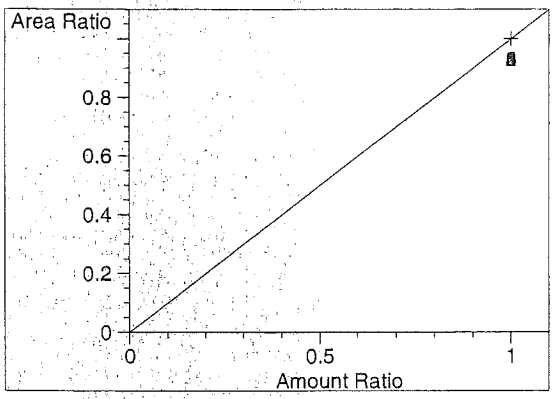
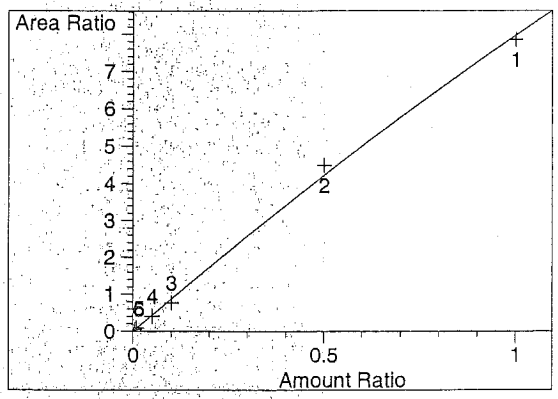
Calibration Curves

==========



Thiodiglycol-D8 at exp. RT: 12.890
MSD4 113, EIC=112.7:113.7
Correlation: 1.00000
Residual Std. Dev.: 0.00000
Formula: y = mx + b
  m: 1.00000
  b: 0.00000
  x: Amount
  y: Area
Calibration Level Weights:
  Level 1 : 1
  Level 2 : 1
  Level 3 : 1
  Level 4 : 1
  Level 5 : 1
  Level 6 : 1



Thiodiglycol at exp. RT: 13.460
MSD4 105, EIC=104.7:105.7
Correlation: 0.99844
Residual Std. Dev.: 0.15671
Formula: y = ax² + bx + c
  a: -9.49682e-1
  b: 8.92207
  c: -8.42930e-3
  x: Amount
  y: Area
Calibration Level Weights:
  Level 6 : 1
  Level 5 : 0.5
  Level 4 : 0.1
  Level 3 : 0.05
  Level 2 : 0.01
  Level 1 : 0.005

==========

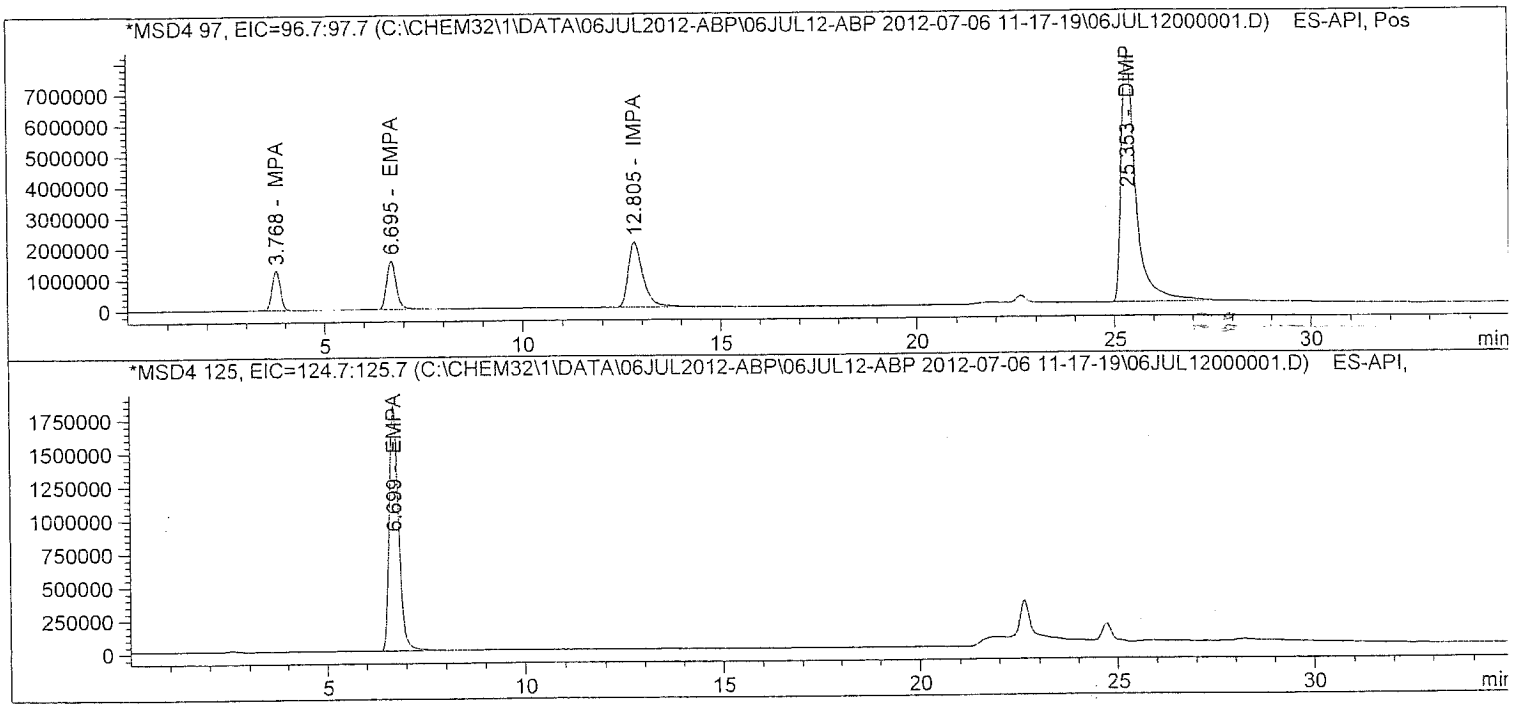
Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName DataFile	Method AutoBalance	Inj LimsID	SampleType	InjVolume
1	Vial 1	PRIME	ABP-ON	1	Ctrl Samp	
2	Vial 1	$10	ABP-ON	1	Ctrl Samp	
3	Vial 2	$5	ABP-ON	1	Ctrl Samp	
4	Vial 3	$1	ABP-ON	1	Ctrl Samp	
5	Vial 4	$05	ABP-ON	1	Ctrl Samp	
6	Vial 5	$0.1	ABP-ON	1	Ctrl Samp	
7	Vial 6	$0.05	ABP-ON	1	Ctrl Samp	
8	Vial 7	ICV	ABP-ON	1	Ctrl Samp	
9	Vial 8	283055 LMB	ABP-ON	1	Ctrl Samp	
10	Vial 9	283056 LCS	ABP-ON	1	Ctrl Samp	
11	Vial 10	283057 RLVS	ABP-ON	1	Ctrl Samp	
12	Vial 11	1217861001	ABP-ON	1	Sample	
13	Vial 12	1217861002 MS	ABP-ON	1	Ctrl Samp	
14	Vial 13	1217861003 MSD	ABP-ON	1	Ctrl Samp	
15	Vial 2	CCV	ABP-ON	1	Ctrl Samp	

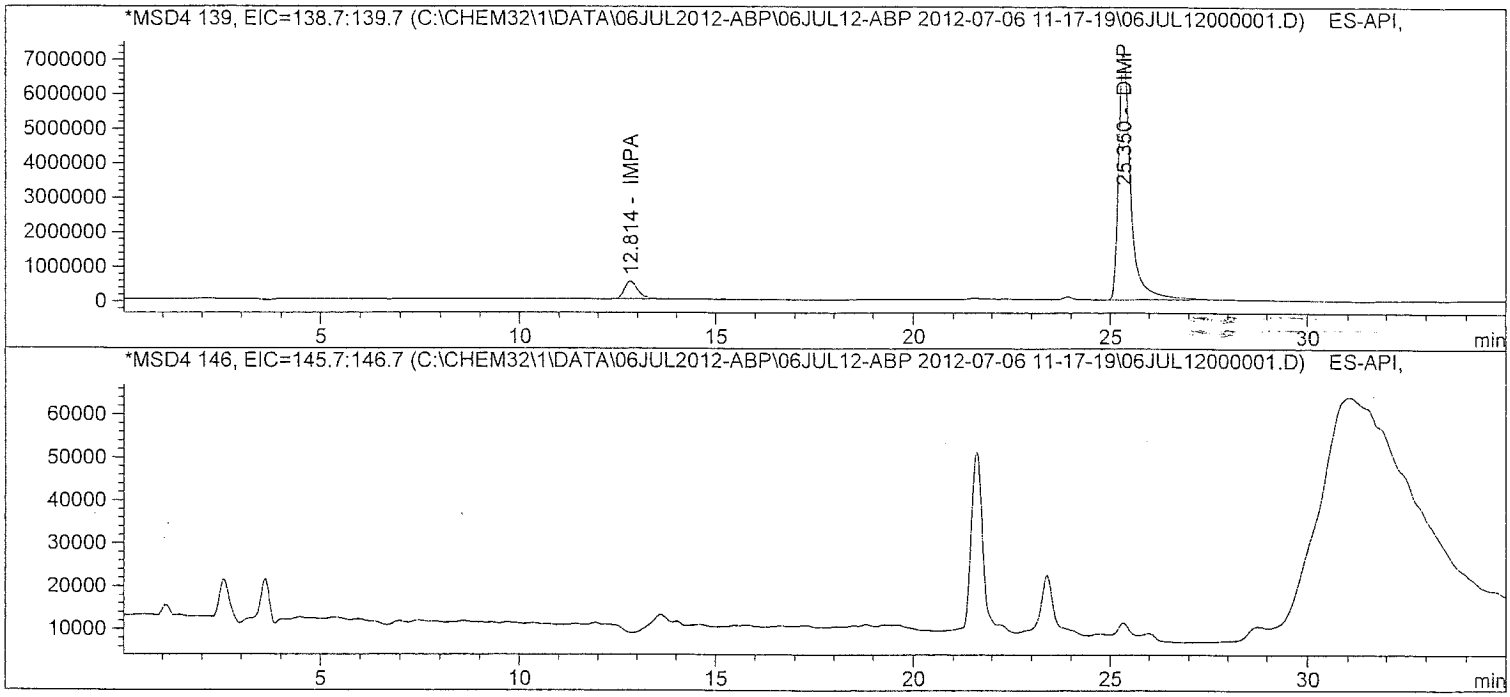
atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



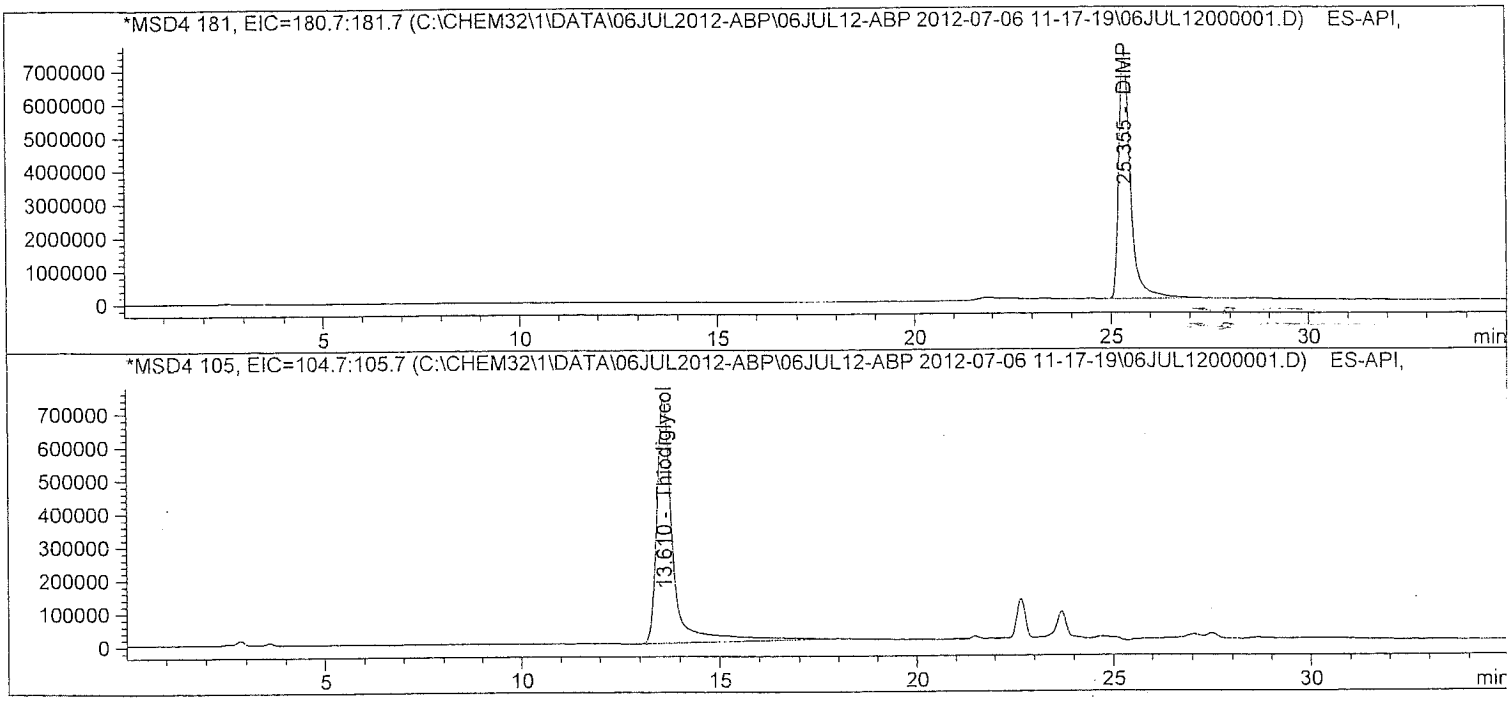
Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



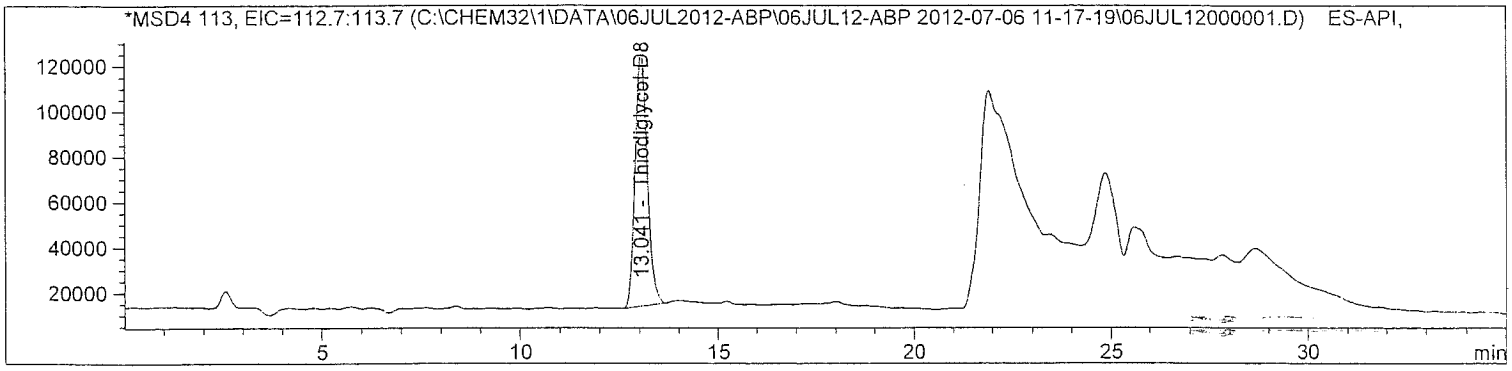
atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

Acq. Operator	: TTM	Seq. Line	: 1
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:17:43 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	7/9/2012 11:13:05 AM
Multiplier	:	1.0000
Dilution	:	1.0000
Sample Amount	:	10.00000 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.768	BB	1	1.91978e7	1.32528e-1	10.64848		MPA
12.805	BBA	1	5.64639e7	4.37087e-2	10.32924		IMPA

Totals without ISTD(s) : 20.97773

atch Run # 1 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
ample Name: PRIME

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 11:17:43 AM
Seq. Line : 1
Location : Vial 1
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.699	BB	1	3.05963e7	7.98724e-2	10.22810		EMPA

Totals without ISTD(s) : 10.22810

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.355	BBA	1	1.54432e8	1.54383e-2	9.97853		DIMP

Totals without ISTD(s) : 9.97853

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.610	BBA	1	2.03461e7	1.26756e-1	10.79391		Thiodiglycol

Totals without ISTD(s) : 10.79391

Batch Run # 1 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000001.D
Sample Name: PRIME

Acq. Operator : TTM
Seq. Line : 1
Acq. Instrument : LCMS3
Location : Vial 1
Injection Date : 7/6/2012 11:17:43 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

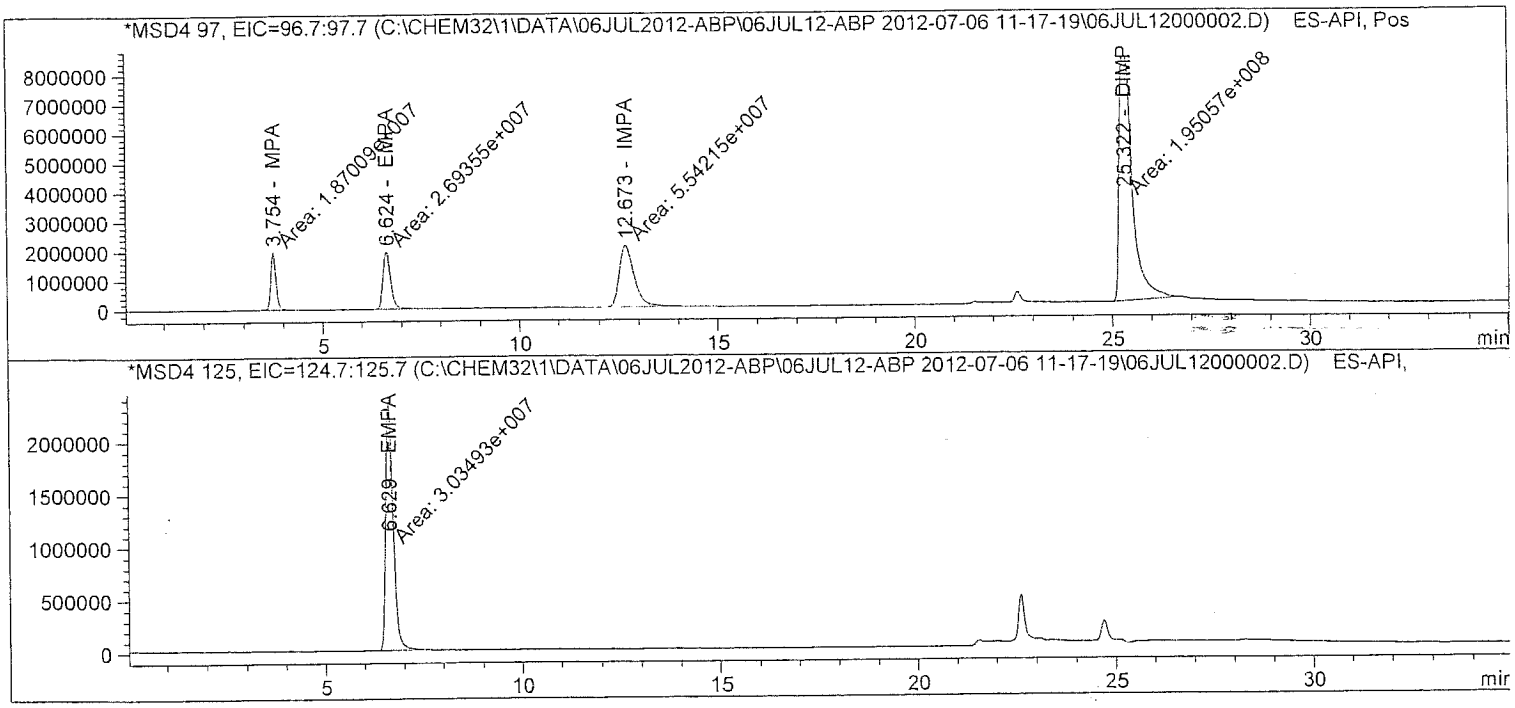
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.041	BB	I	1 2.38930e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

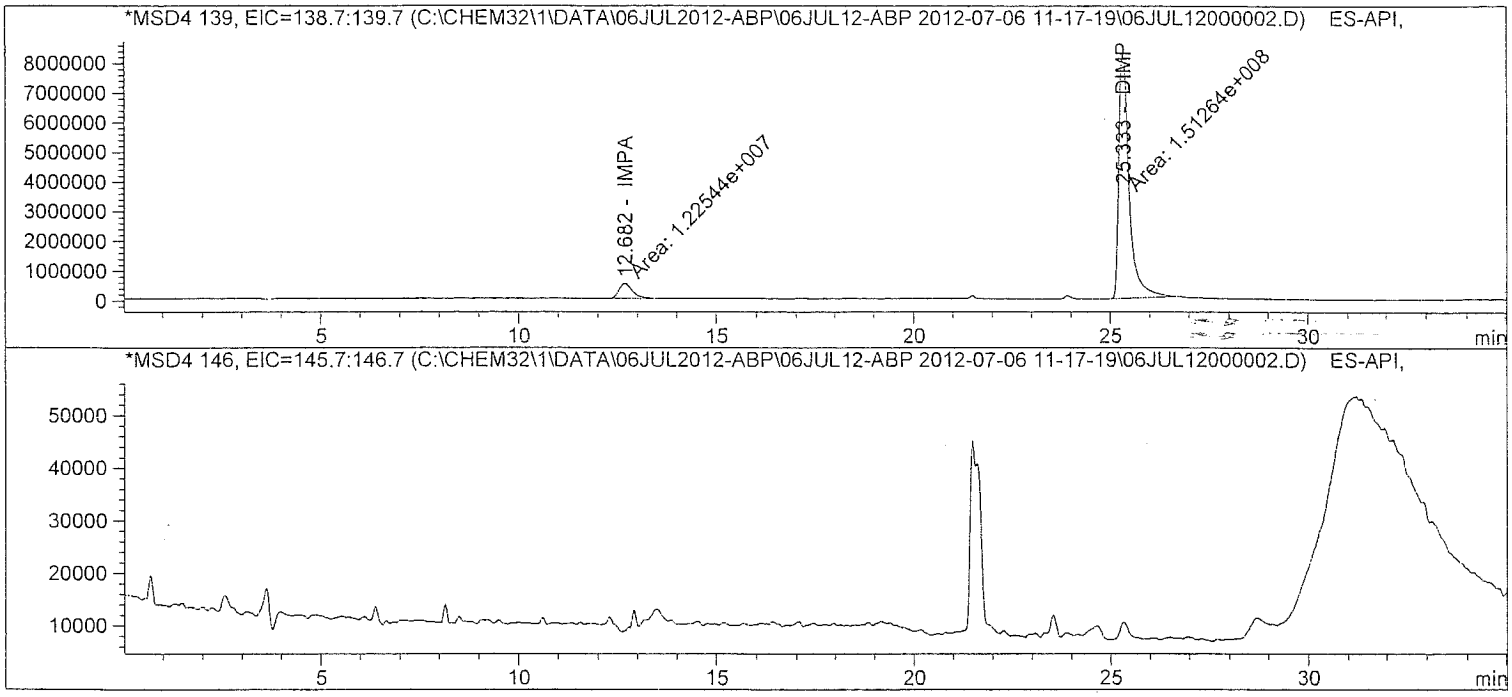
Batch Run # 2 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
Sample Name: S10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



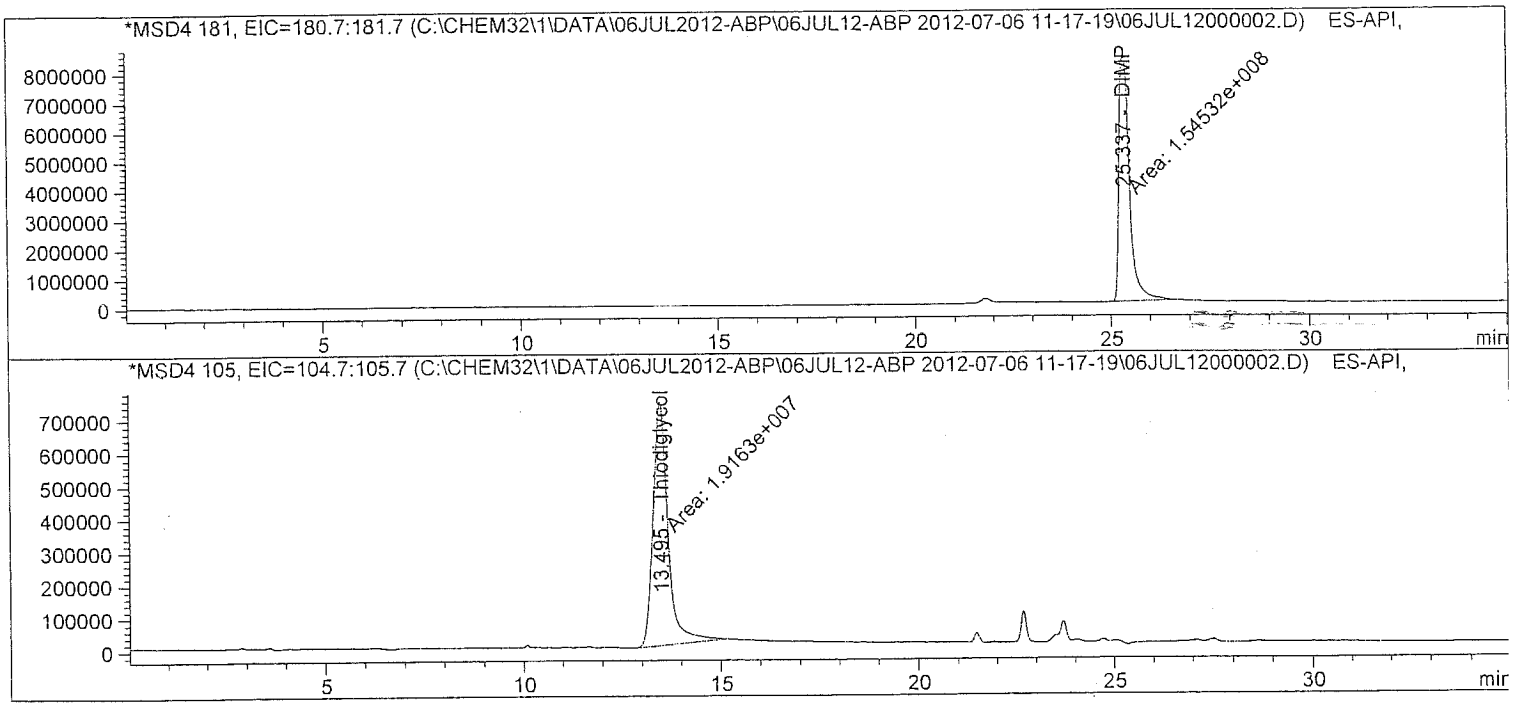
Batch Run # 2 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
Sample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator	: TTM	Seq. Line	: 2
Acq. Instrument	: LCMS3	Location	: Vial 1
Injection Date	: 7/6/2012 11:54:02 AM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 2 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
Sample Name: $10

==========

Acq. Operator : TTM Seq. Line : 2
Acq. Instrument : LCMS3 Location : Vial 1
Injection Date : 7/6/2012 11:54:02 AM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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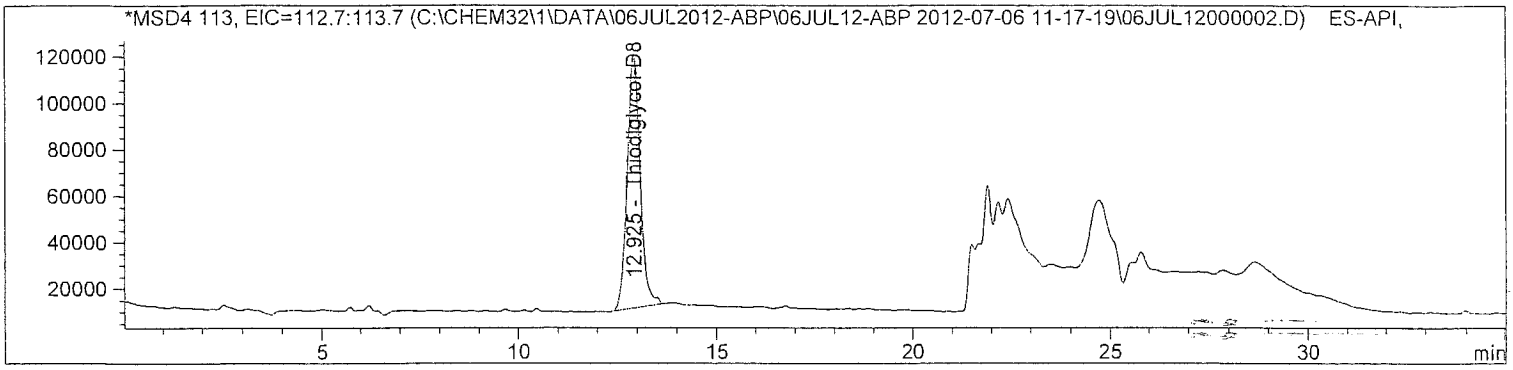

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Internal Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 10.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.754	MM	1	1.87009e7	1.29739e-1	9.93363		MPA
12.673	MM	1	5.54215e7	4.36500e-2	9.90458		IMPA

Totals without ISTD(s) : 19.83821

atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator : TTM
Seq. Line : 2
Acq. Instrument : LCMS3
Location : Vial 1
Injection Date : 7/6/2012 11:54:02 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.629	MM	1	3.03493e7	7.97357e-2	9.90775		EMPA

Totals without ISTD(s) : 9.90775

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.337	MM	1	1.54532e8	1.48417e-2	9.39024		DIMP

Totals without ISTD(s) : 9.39024

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.495	MM	1	1.91630e7	1.25317e-1	9.83212		Thiodiglycol

Totals without ISTD(s) : 9.83212

atch Run # 2 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000002.D
ample Name: $10

Acq. Operator : TTM
Seq. Line : 2
Acq. Instrument : LCMS3
Location : Vial 1
Injection Date : 7/6/2012 11:54:02 AM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.925	BB	I	1 2.44245e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

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Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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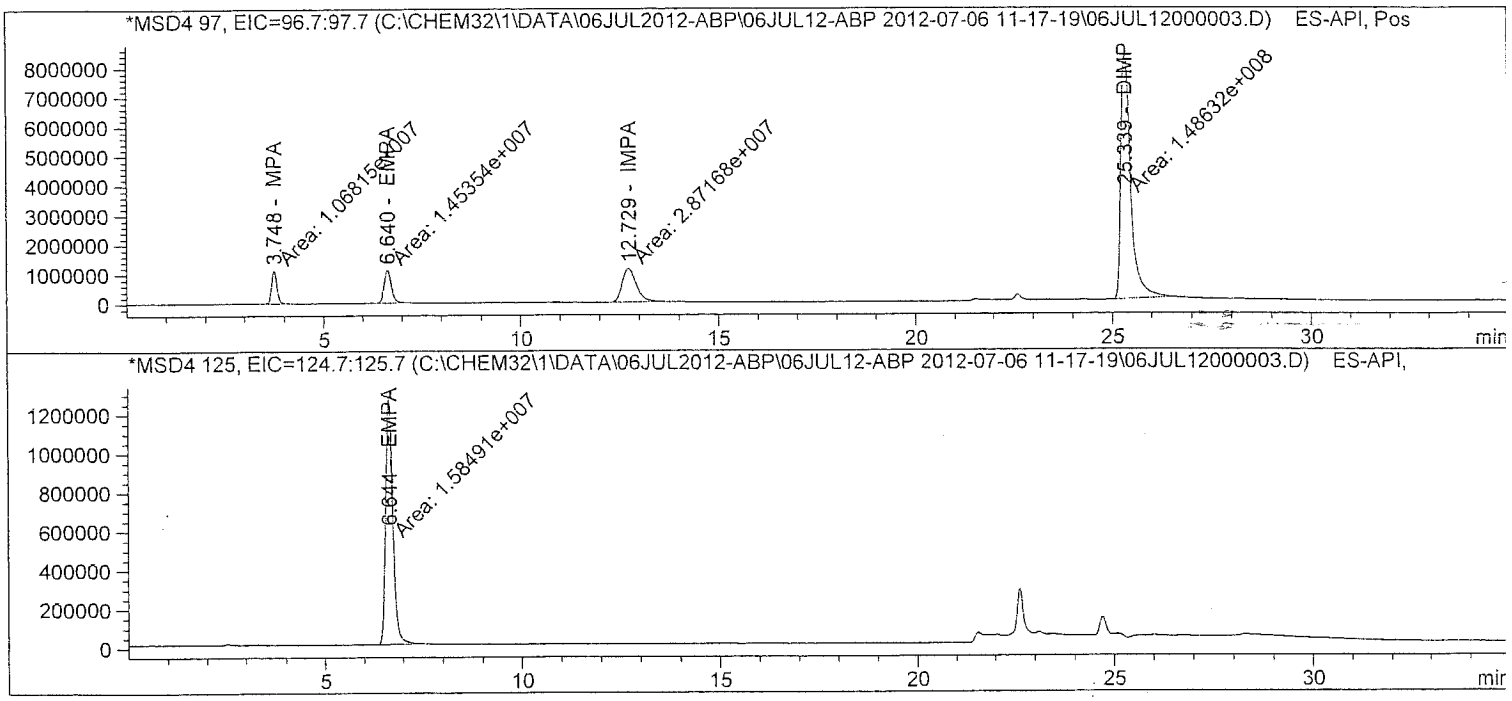
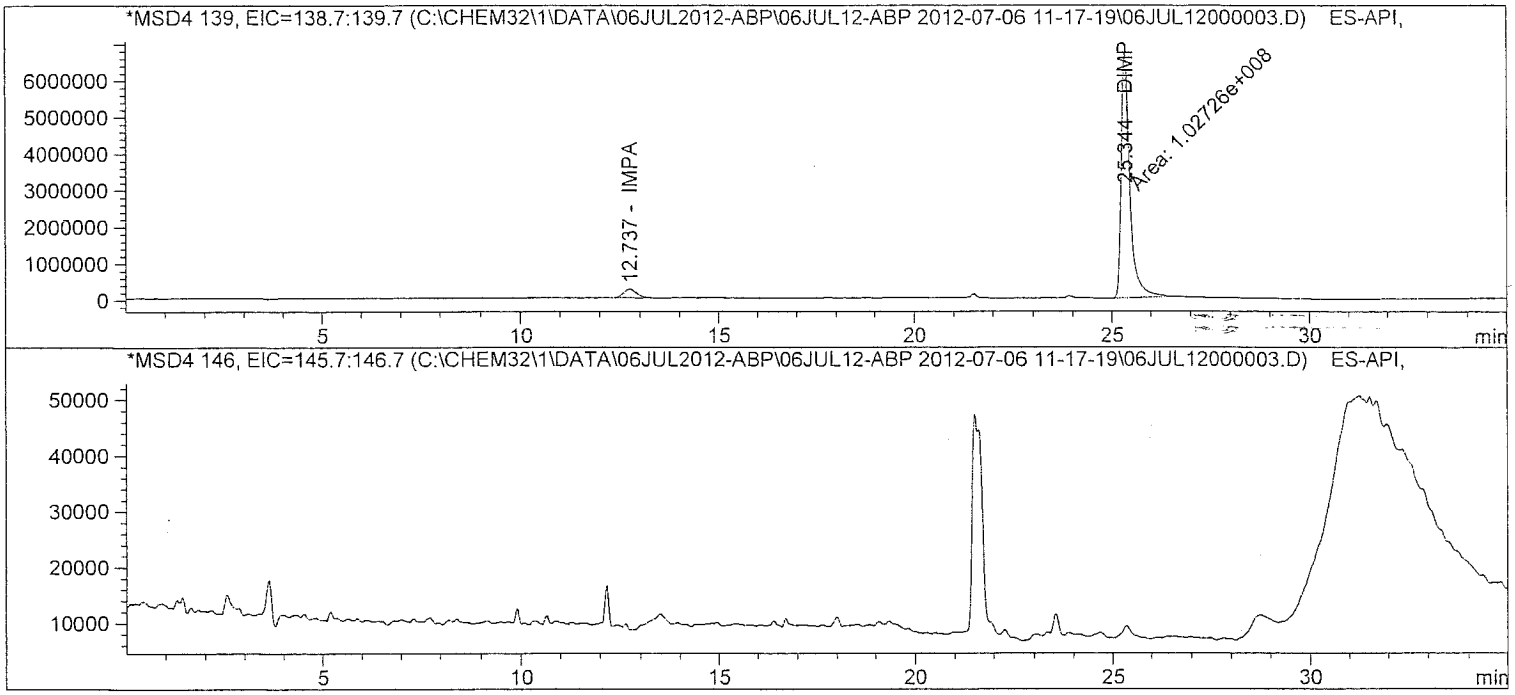


Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

==========

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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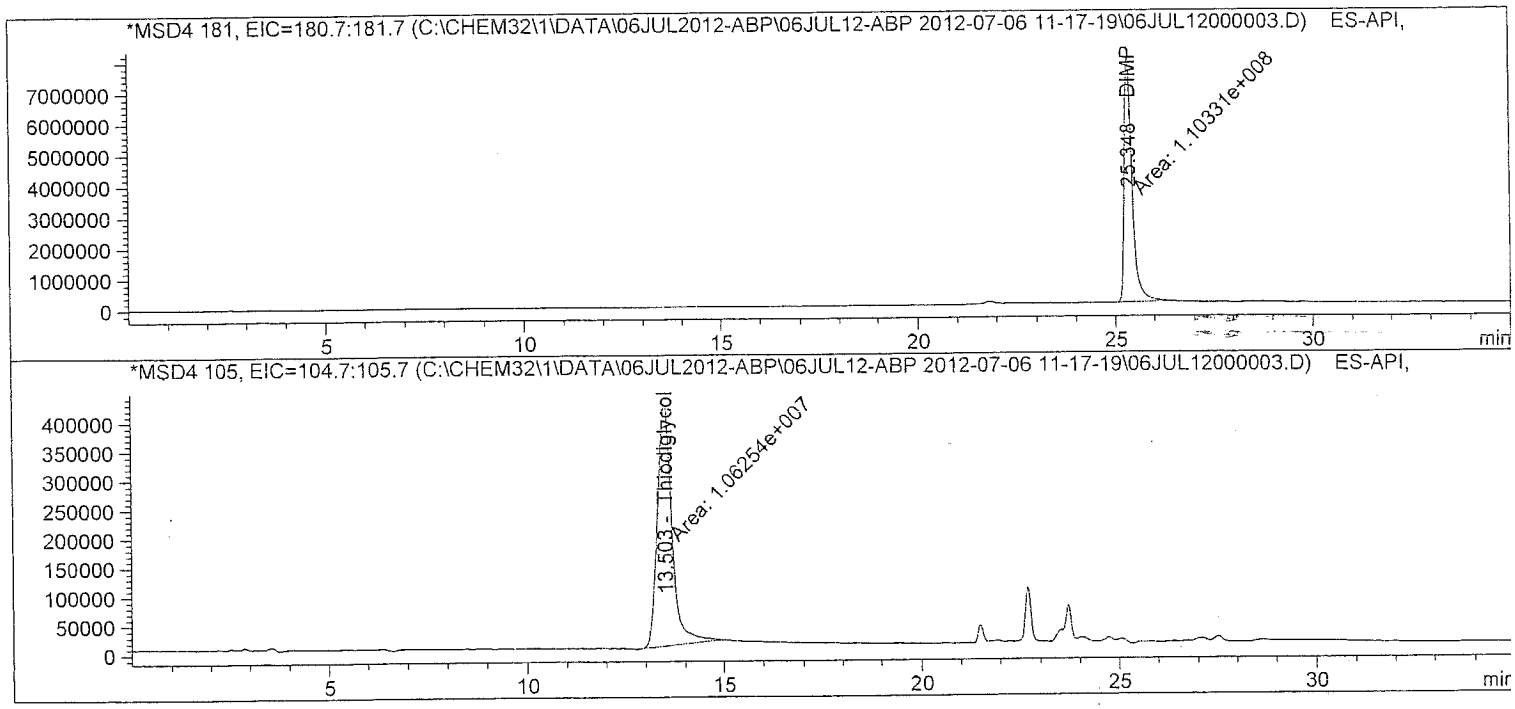

Batch Run # 3 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
Sample Name: $5

==========

Acq. Operator : TTM Seq. Line : 3
Acq. Instrument : LCMS3 Location : Vial 2
Injection Date : 7/6/2012 12:30:22 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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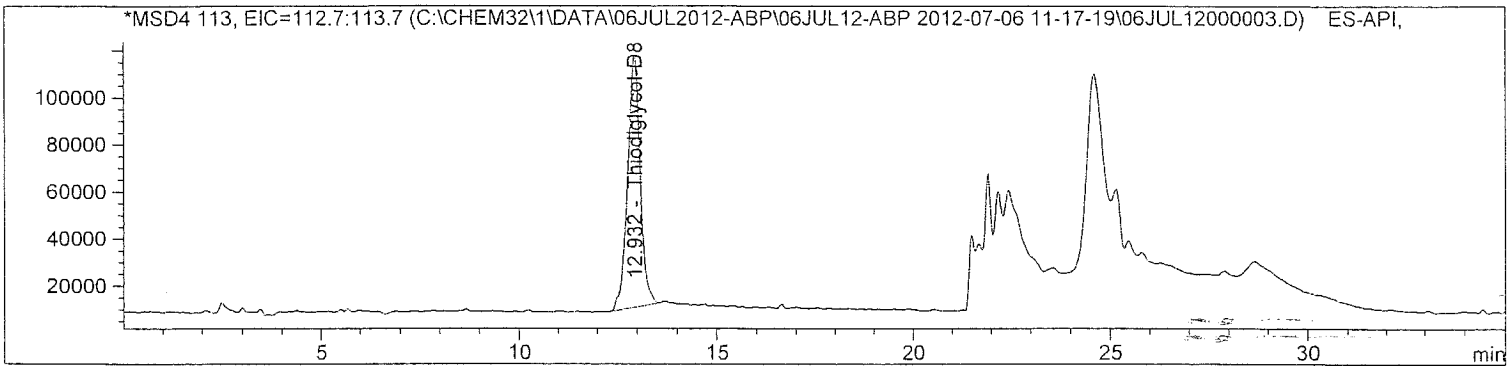

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Internal Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.748	MM	1	1.06815e7	1.13483e-1	5.10907		MPA
12.729	MM	1	2.87168e7	4.30231e-2	5.20733		IMPA

Totals without ISTD(s) : 10.31641

Acq. Operator : TTM
Seq. Line : 3
Acq. Instrument : LCMS3
Location : Vial 2
Injection Date : 7/6/2012 12:30:22 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.644	MM	1	1.58491e7	7.77744e-2	5.19540		EMPA

Totals without ISTD(s) : 5.19540

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	MM	1	1.10331e8	1.18266e-2	5.49964		DIMP

Totals without ISTD(s) : 5.49964

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.503	MM	1	1.06254e7	1.19049e-1	5.33146		Thiodiglycol

Totals without ISTD(s) : 5.33146

atch Run # 3 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000003.D
ample Name: $5

Acq. Operator	: TTM	Seq. Line	: 3
Acq. Instrument	: LCMS3	Location	: Vial 2
Injection Date	: 7/6/2012 12:30:22 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.932	BB	I	1 2.37259e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

atch Run # 4 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
ample Name: $1

==========

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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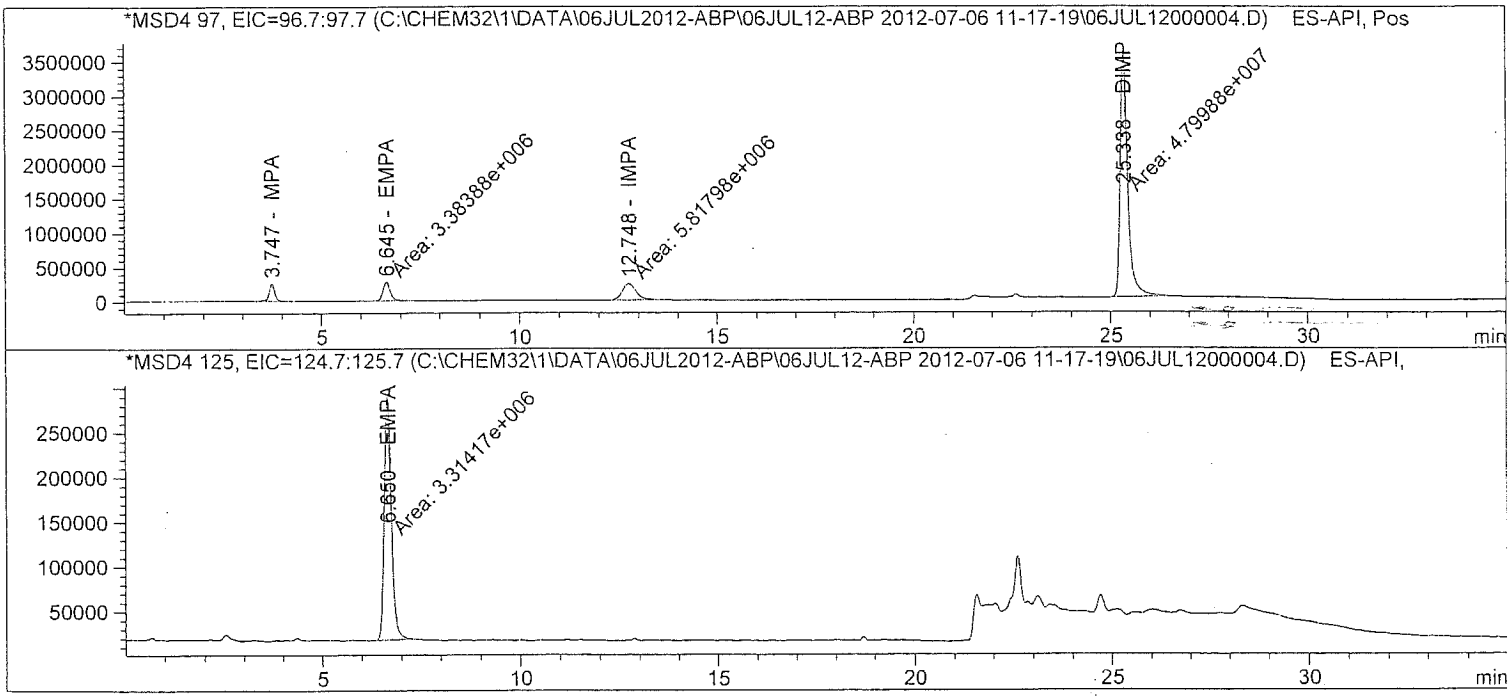
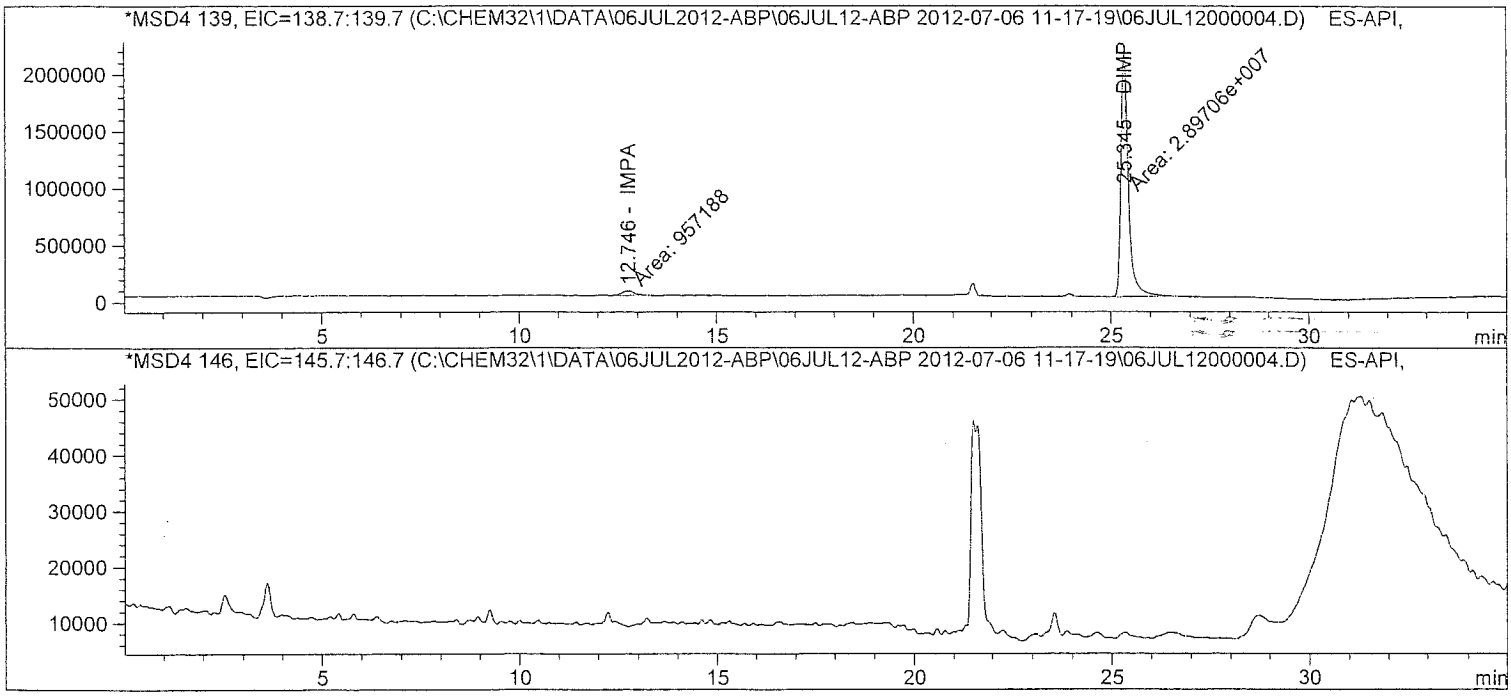


Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: S1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

==========

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

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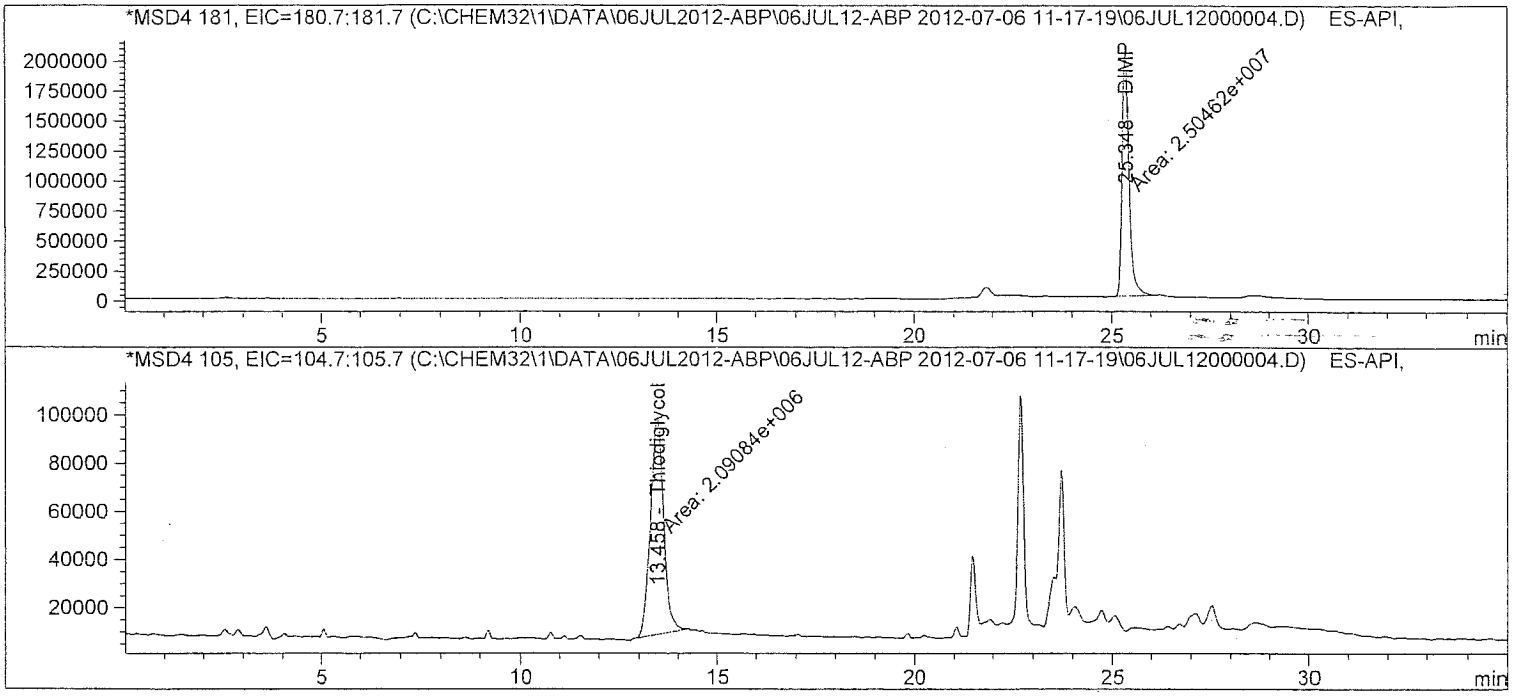

Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

==========

Acq. Operator : TTM Seq. Line : 4
Acq. Instrument : LCMS3 Location : Vial 3
Injection Date : 7/6/2012 1:06:42 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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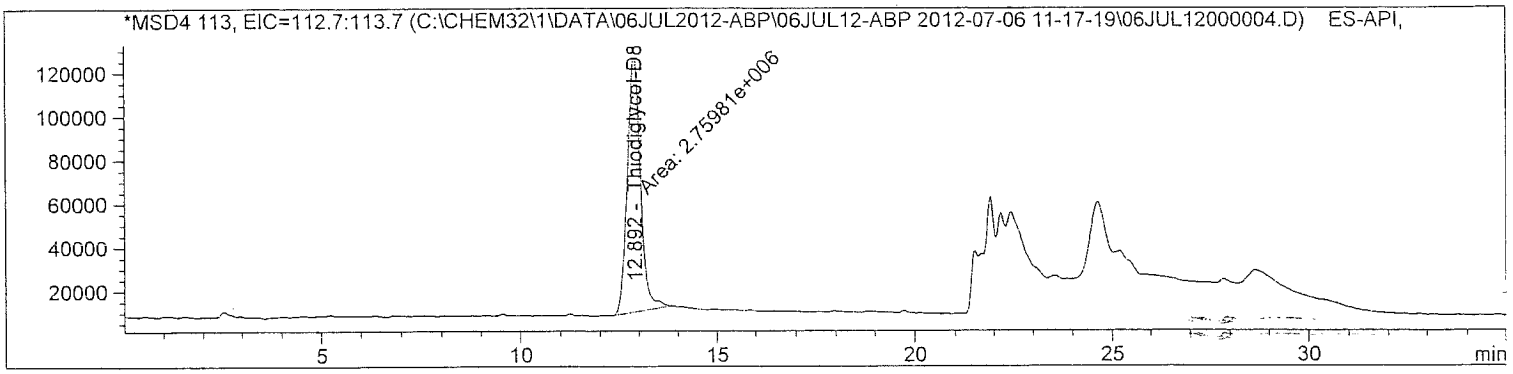

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Internal Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 1.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.747	BB	1	2.56450e6	1.00803e-1	9.36694e-1		MPA
12.748	MM	1	5.81798e6	4.26904e-2	8.99961e-1		IMPA

Totals without ISTD(s) : 1.83665

atch Run # 4 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
ample Name: $1

Acq. Operator	: TTM	Seq. Line	: 4
Acq. Instrument	: LCMS3	Location	: Vial 3
Injection Date	: 7/6/2012 1:06:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.650	MM	1	3.31417e6	7.60313e-2	9.13037e-1		EMPA

Totals without ISTD(s) : 9.13037e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	MM	1	2.50462e7	9.62641e-3	8.73631e-1		DIMP

Totals without ISTD(s) : 8.73631e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.458	MM	1	2.09084e6	1.14384e-1	8.66577e-1		Thiodiglycol

Totals without ISTD(s) : 8.66577e-1

Batch Run # 4 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000004.D
Sample Name: $1

==========

Acq. Operator : TTM
Seq. Line : 4
Acq. Instrument : LCMS3
Location : Vial 3
Injection Date : 7/6/2012 1:06:42 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.892	MM	I	1 2.75981e6	1.00000	10.00000		Thiodiglycol-D8

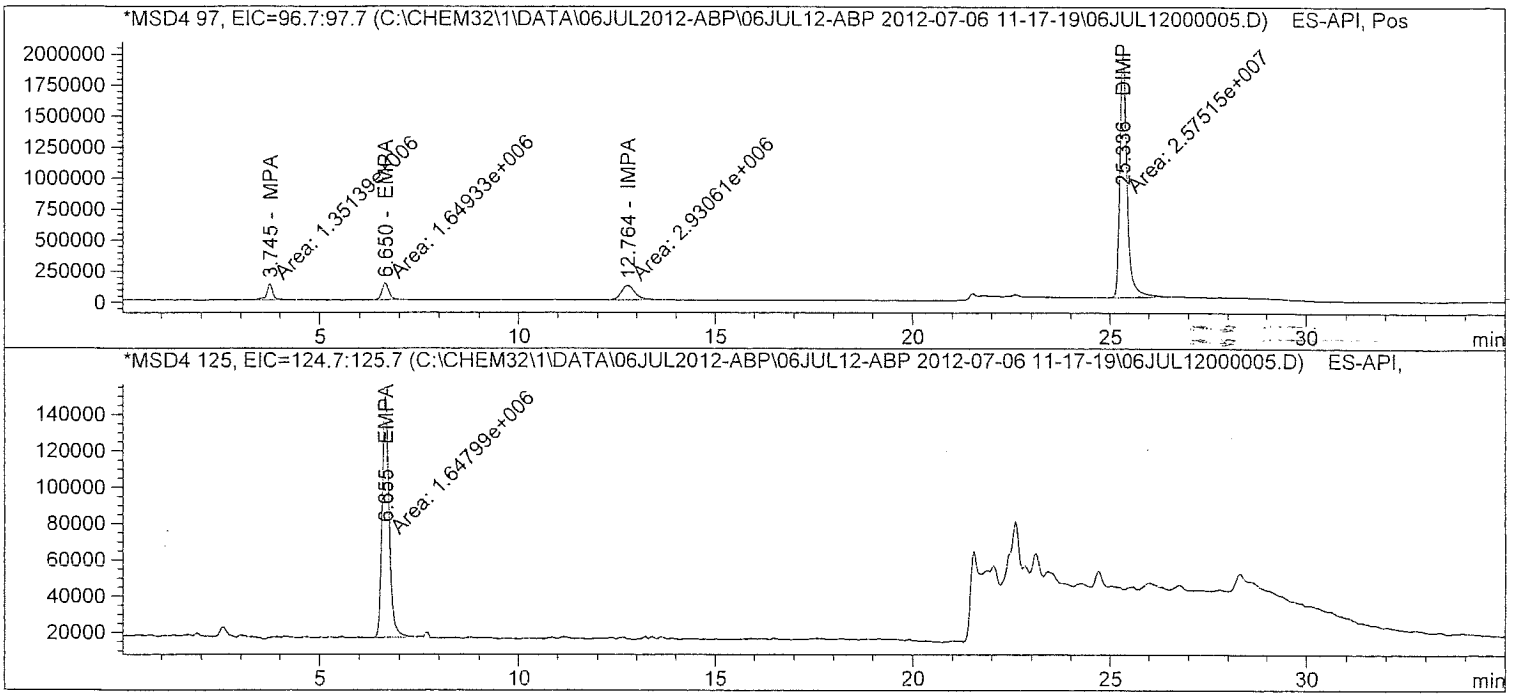
Totals without ISTD(s) : 0.00000

==========

*** End of Report ***

Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



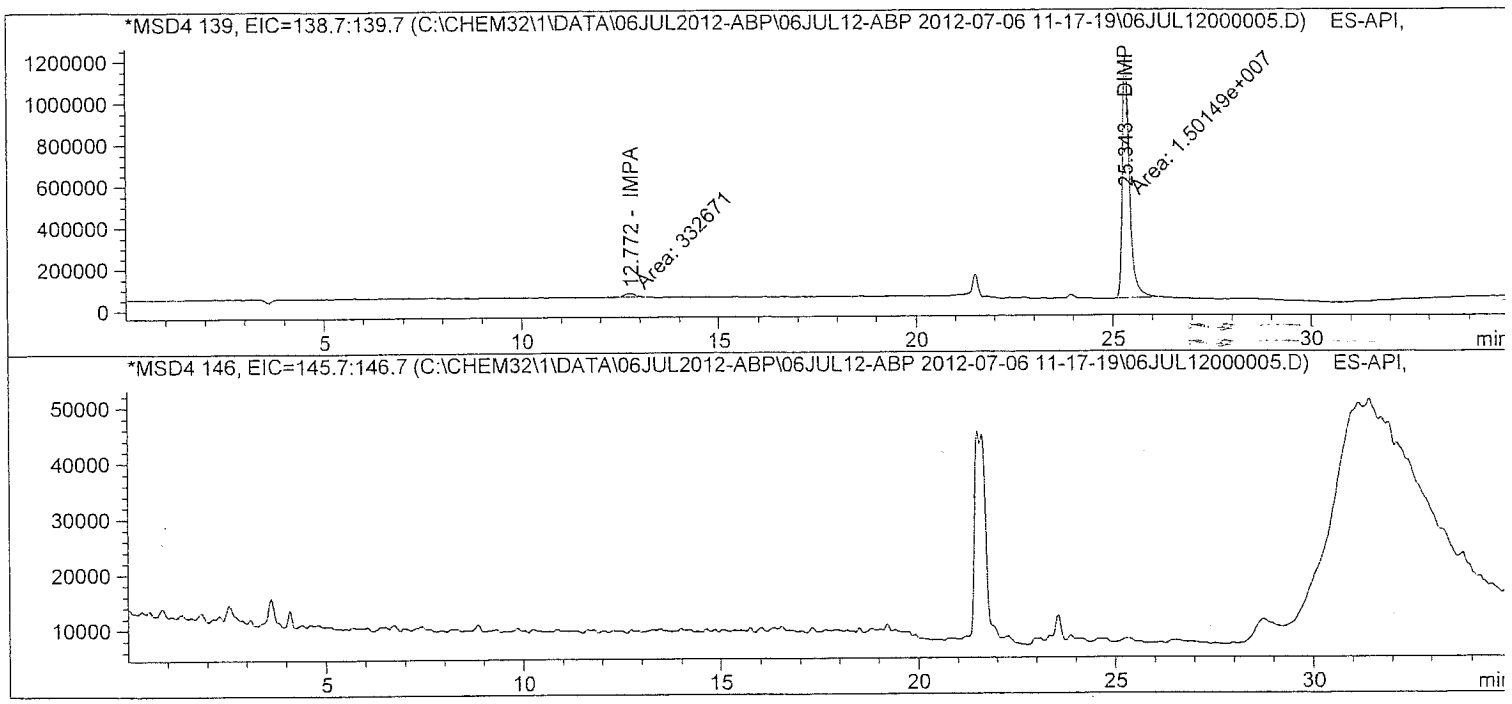
Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

==========

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

==========



Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

==========

Acq. Operator	: TTM	Seq. Line	: 5
Acq. Instrument	: LCMS3	Location	: Vial 4
Injection Date	: 7/6/2012 1:43:01 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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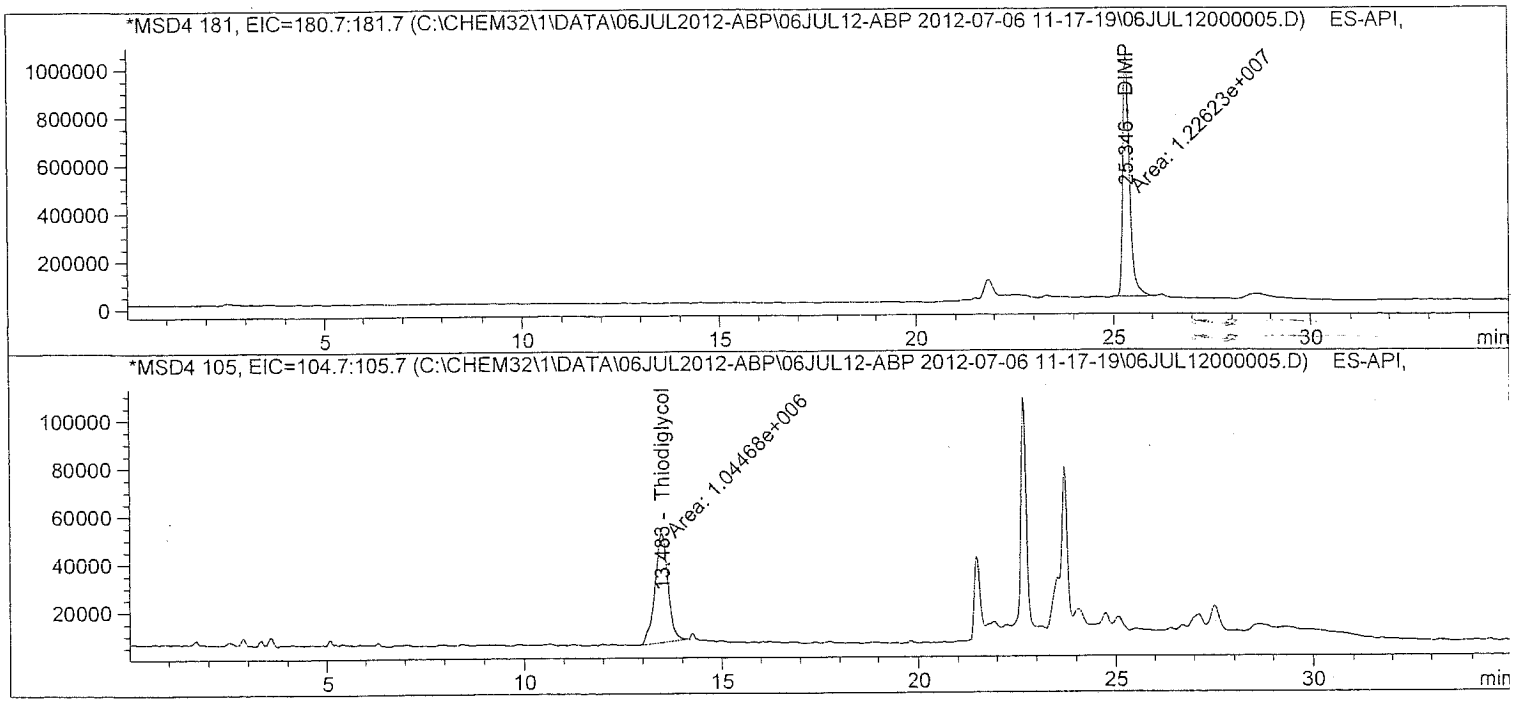

Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

==========

Acq. Operator : TTM
Seq. Line : 5
Acq. Instrument : LCMS3
Location : Vial 4
Injection Date : 7/6/2012 1:43:01 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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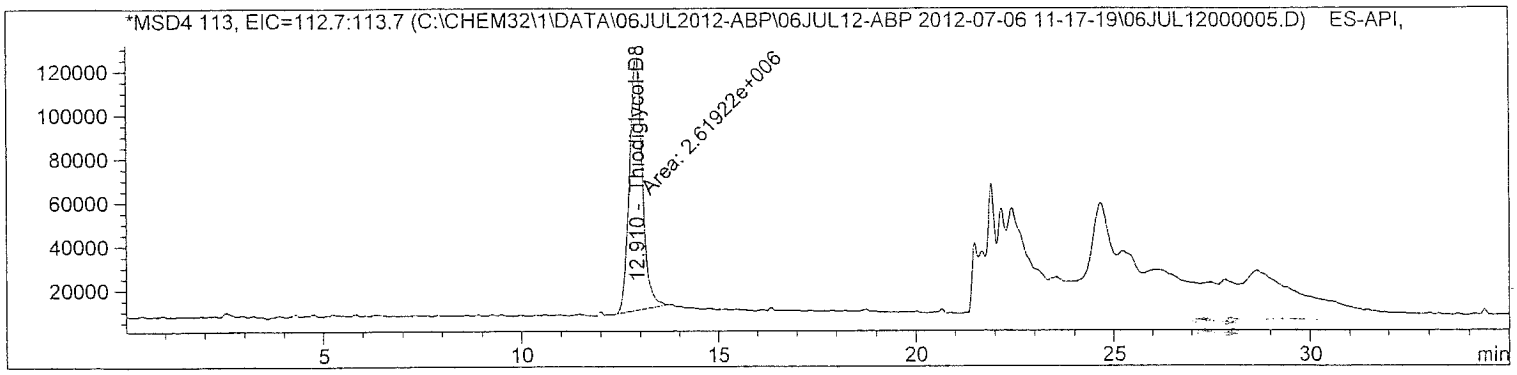

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Internal Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 5.00000e-1 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.745	MM	1	1.35139e6	9.80980e-2	5.06138e-1		MPA
12.764	MM	1	2.93061e6	4.28998e-2	4.79999e-1		IMPA

Totals without ISTD(s) : 9.86138e-1

atch Run # 5 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
ample Name: $05

```
==================================================================
Acq. Operator   : TTM                          Seq. Line :   5
Acq. Instrument : LCMS3                         Location : Vial 4
Injection Date  : 7/6/2012 1:43:01 PM                Inj :   1
                                              Inj Volume : 10 µl
Acq. Method     : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed    : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed    : 7/9/2012 11:13:23 AM by TTM
                  (Results are from a previously saved Batch)
Method Info     : Agent Breakdown Products

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Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.655	MM	1	1.64799e6	7.58113e-2	4.76997e-1		EMPA

Totals without ISTD(s) : 4.76997e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.346	MM	1	1.22623e7	9.57834e-3	4.48425e-1		DIMP

Totals without ISTD(s) : 4.48425e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.483	MM	1	1.04468e6	1.15012e-1	4.58725e-1		Thiodiglycol

Totals without ISTD(s) : 4.58725e-1

Batch Run # 5 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000005.D
Sample Name: $05

==========

Acq. Operator : TTM Seq. Line : 5
Acq. Instrument : LCMS3 Location : Vial 4
Injection Date : 7/6/2012 1:43:01 PM Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.910	MM	I	1 2.61922e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

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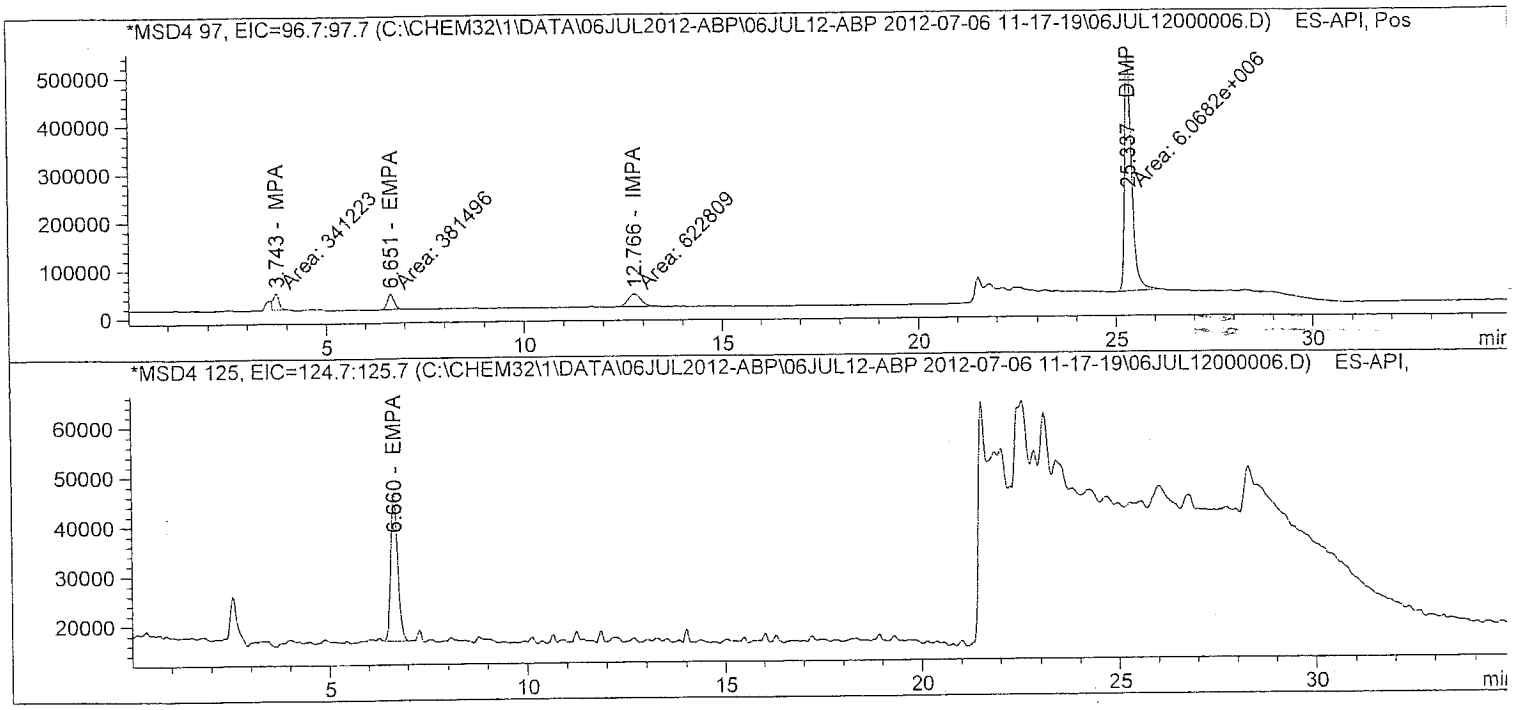
*** End of Report ***

Batch Run # 6 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 6 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

==========

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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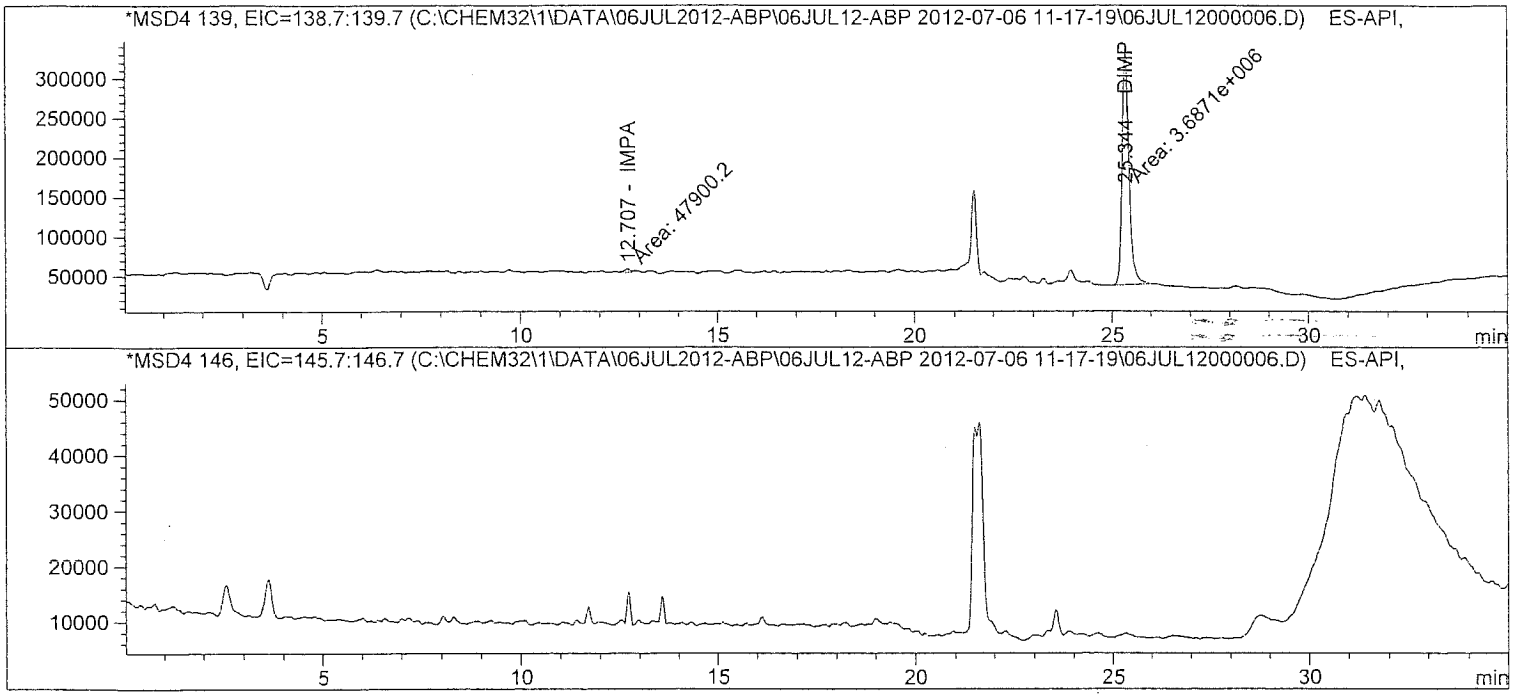
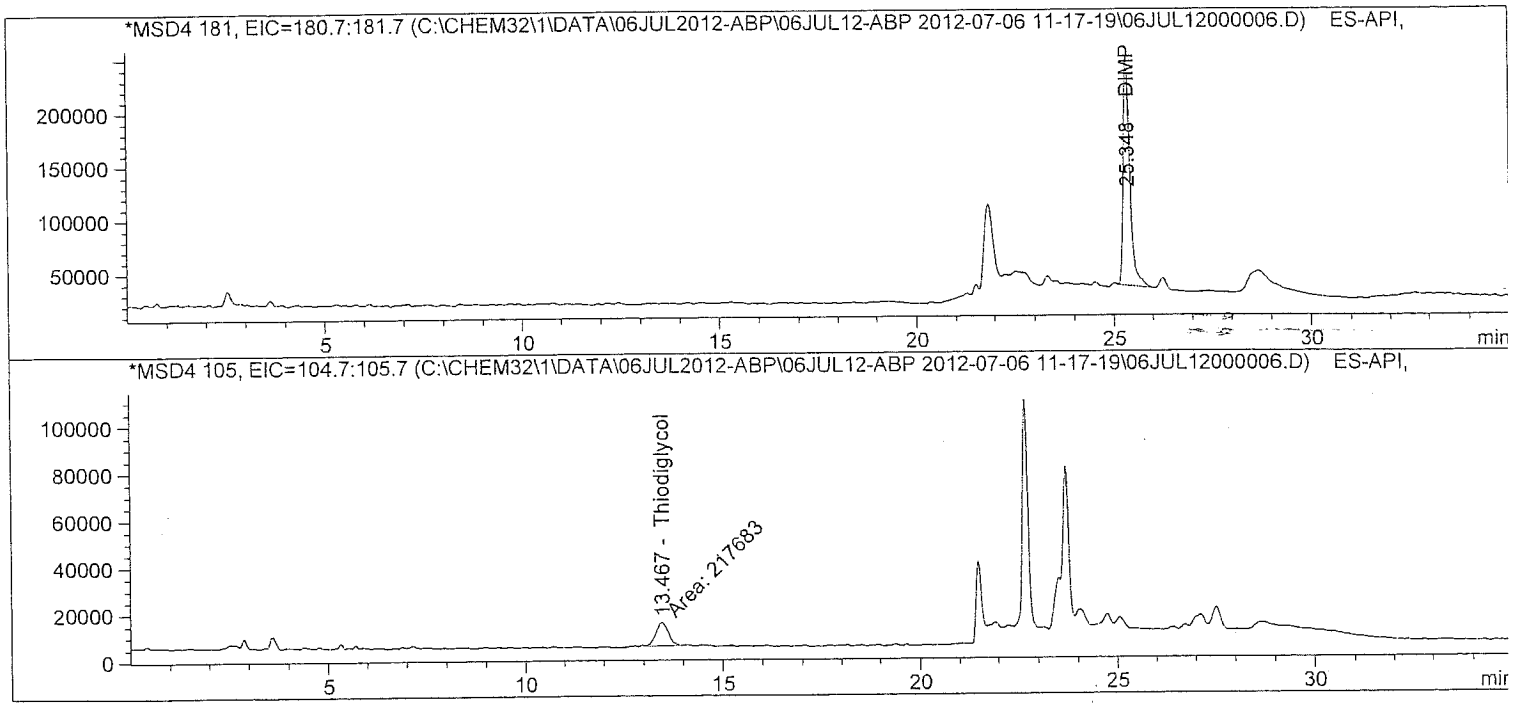


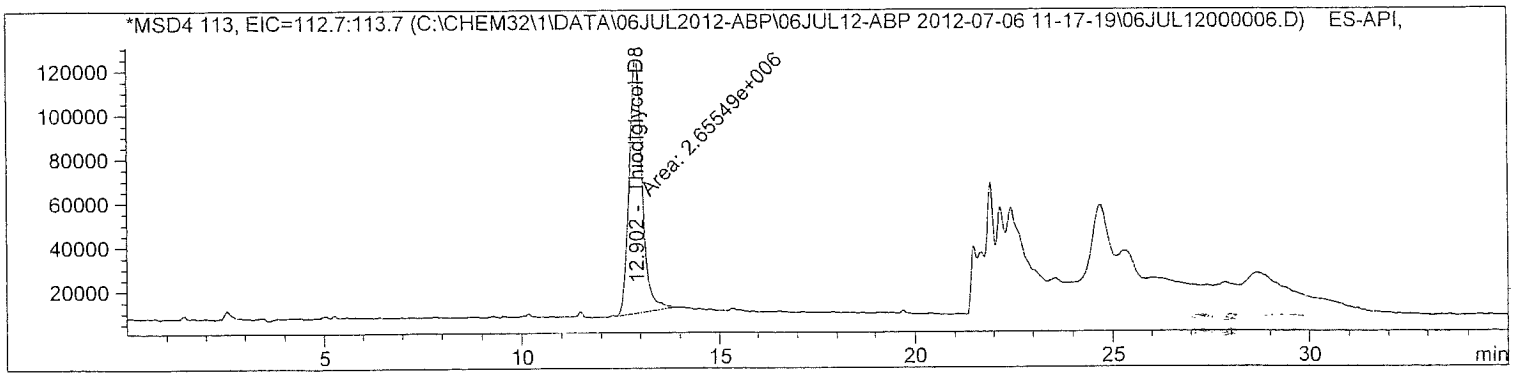
atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator	: TTM	Seq. Line	: 6
Acq. Instrument	: LCMS3	Location	: Vial 5
Injection Date	: 7/6/2012 2:19:21 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:19:21 PM
Seq. Line : 6
Location : Vial 5
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 1.00000e-1 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.743	FM	1	3.41223e5	8.57299e-2	1.10161e-1		MPA
12.766	MM	1	6.22808e5	4.49809e-2	1.05497e-1		IMPA

Totals without ISTD(s) : 2.15657e-1

Batch Run # 6 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
Sample Name: $0.1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:19:21 PM
Seq. Line : 6
Location : Vial 5
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.660	BB	1	3.63294e5	7.52785e-2	1.02988e-1		EMPA

Totals without ISTD(s) : 1.02988e-1

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.348	BB	1	2.58087e6	1.03862e-2	1.00944e-1		DIMP

Totals without ISTD(s) : 1.00944e-1

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.467	MM	1	2.17683e5	1.23740e-1	1.01436e-1		Thiodiglycol

Totals without ISTD(s) : 1.01436e-1

atch Run # 6 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000006.D
ample Name: $0.1

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 2:19:21 PM
Seq. Line : 6
Location : Vial 5
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

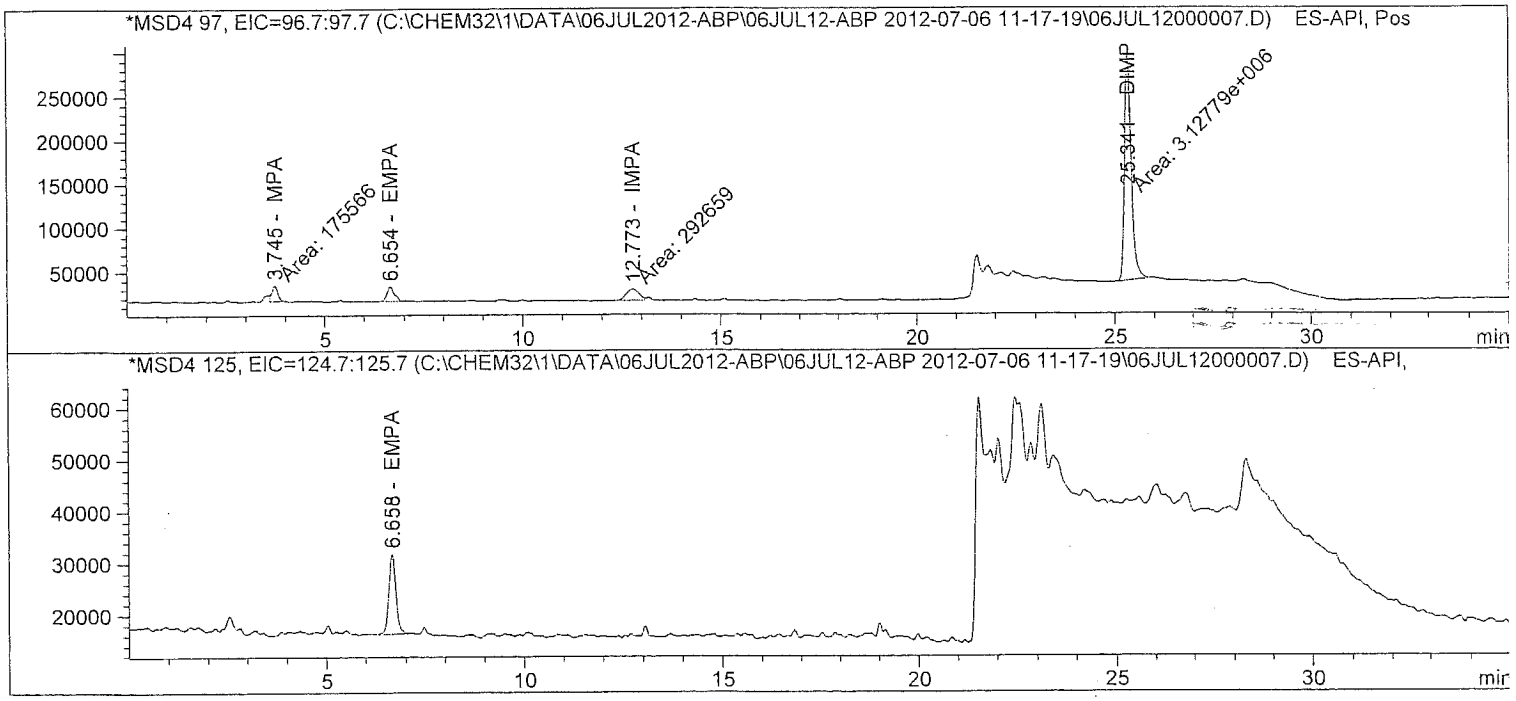
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.902	MM	I	1 2.65549e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

==========

Acq. Operator : TTM
Seq. Line : 7
Acq. Instrument : LCMS3
Location : Vial 6
Injection Date : 7/6/2012 2:55:42 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

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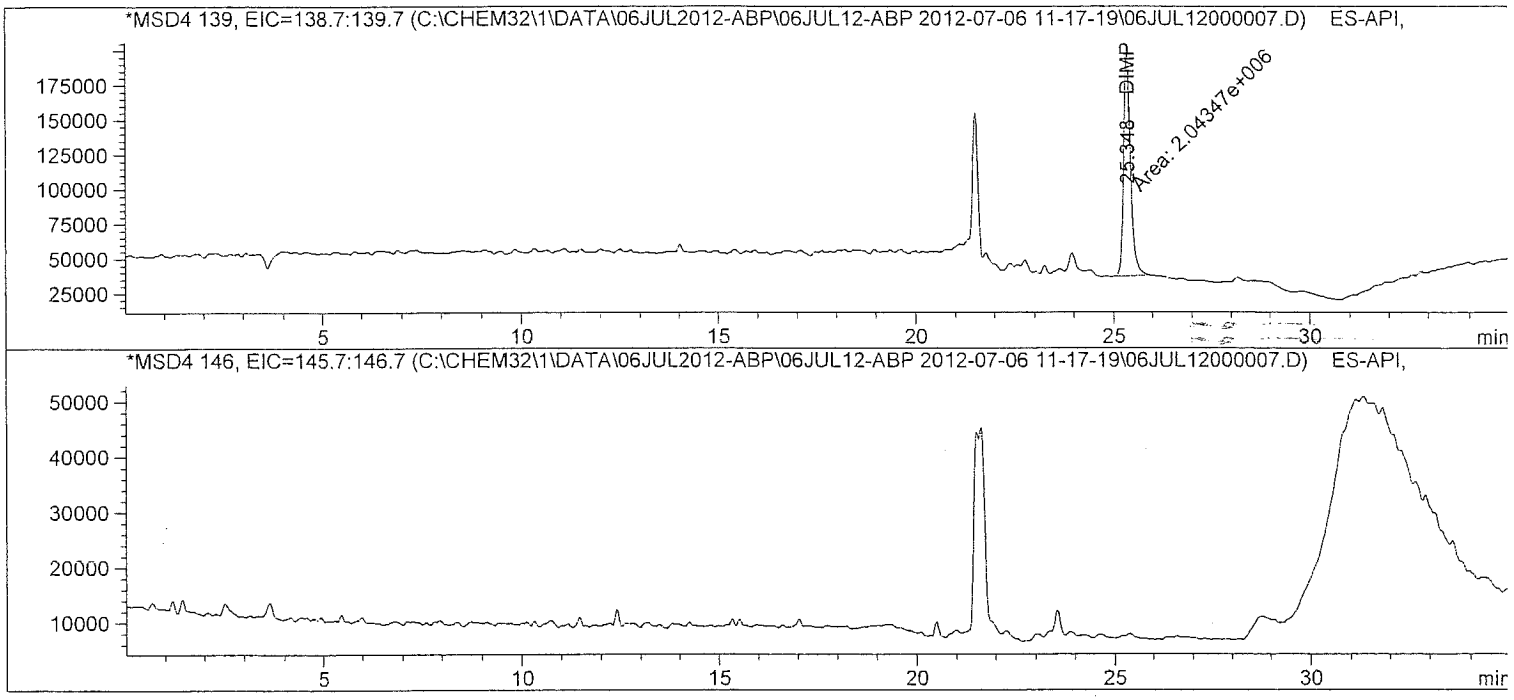
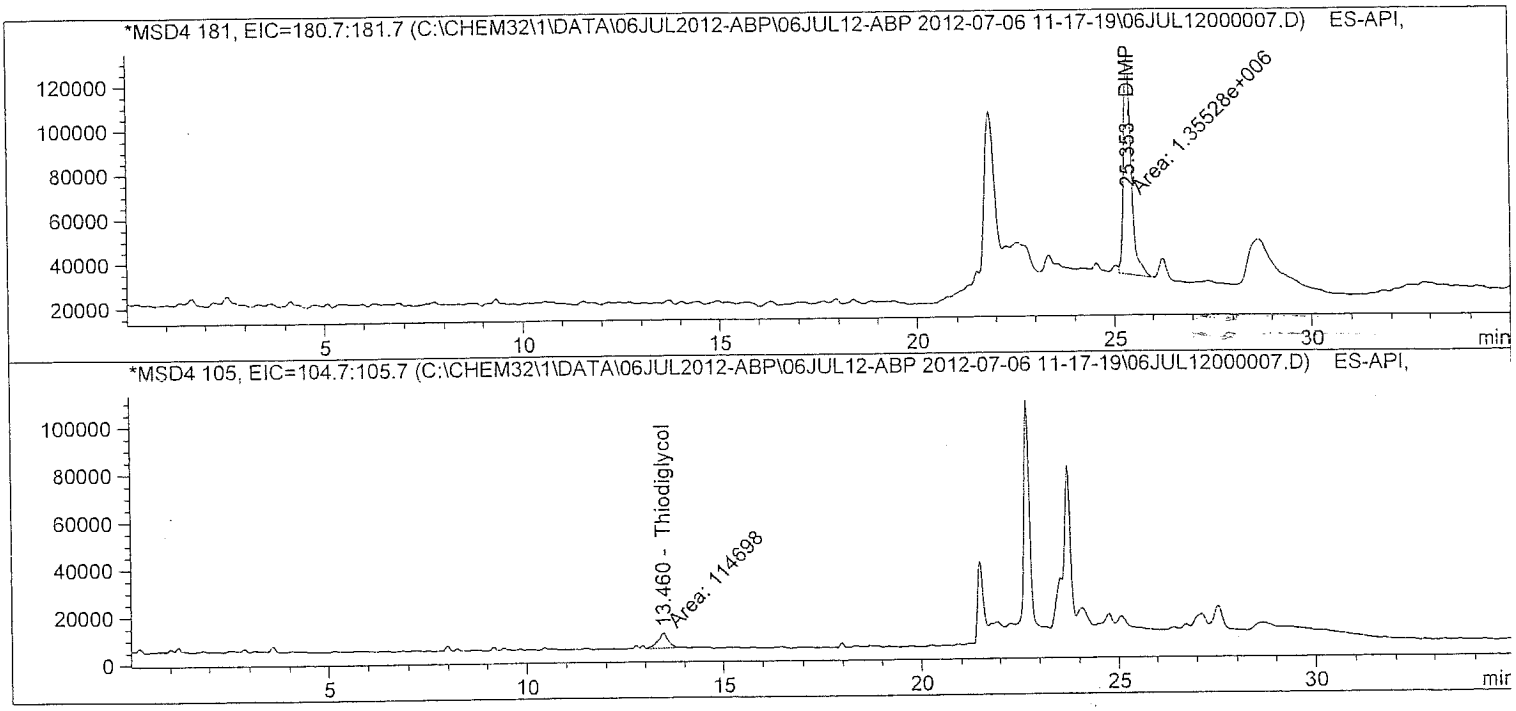


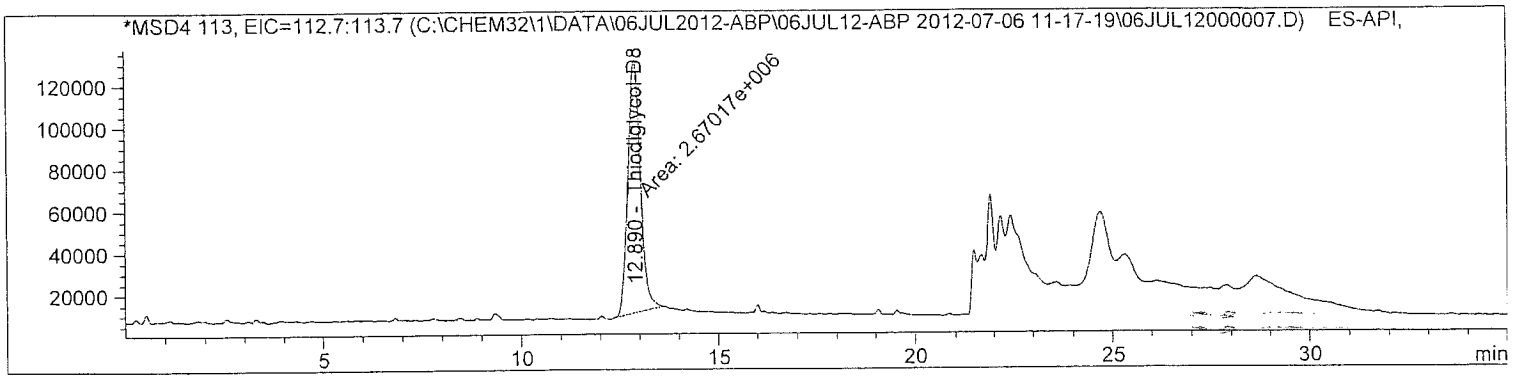
atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	7/9/2012 11:13:05 AM
Multiplier	:	1.0000
Dilution	:	1.0000
Sample Amount	:	5.00000e-2 [] (not used in calc.)

Use Multiplier & Dilution Factor with ISTDs

Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.745	FM	1	1.75566e5	7.10322e-2	4.67042e-2		MPA
12.773	MF	1	2.92659e5	4.80467e-2	5.26608e-2		IMPA

Totals without ISTD(s) : 9.93650e-2

atch Run # 7 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
ample Name: $0.05

Acq. Operator : TTM
Seq. Line : 7
Acq. Instrument : LCMS3
Location : Vial 6
Injection Date : 7/6/2012 2:55:42 PM
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.658	BB	1	1.91552e5	7.48089e-2	5.36662e-2		EMPA

Totals without ISTD(s) : 5.36662e-2

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.353	FM	1	1.35528e6	1.14558e-2	5.81454e-2		DIMP

Totals without ISTD(s) : 5.81454e-2

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.460	MM	1	1.14698e5	1.34158e-1	5.76283e-2		Thiodiglycol

Totals without ISTD(s) : 5.76283e-2

Batch Run # 7 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000007.D
Sample Name: $0.05

Acq. Operator	: TTM	Seq. Line	: 7
Acq. Instrument	: LCMS3	Location	: Vial 6
Injection Date	: 7/6/2012 2:55:42 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

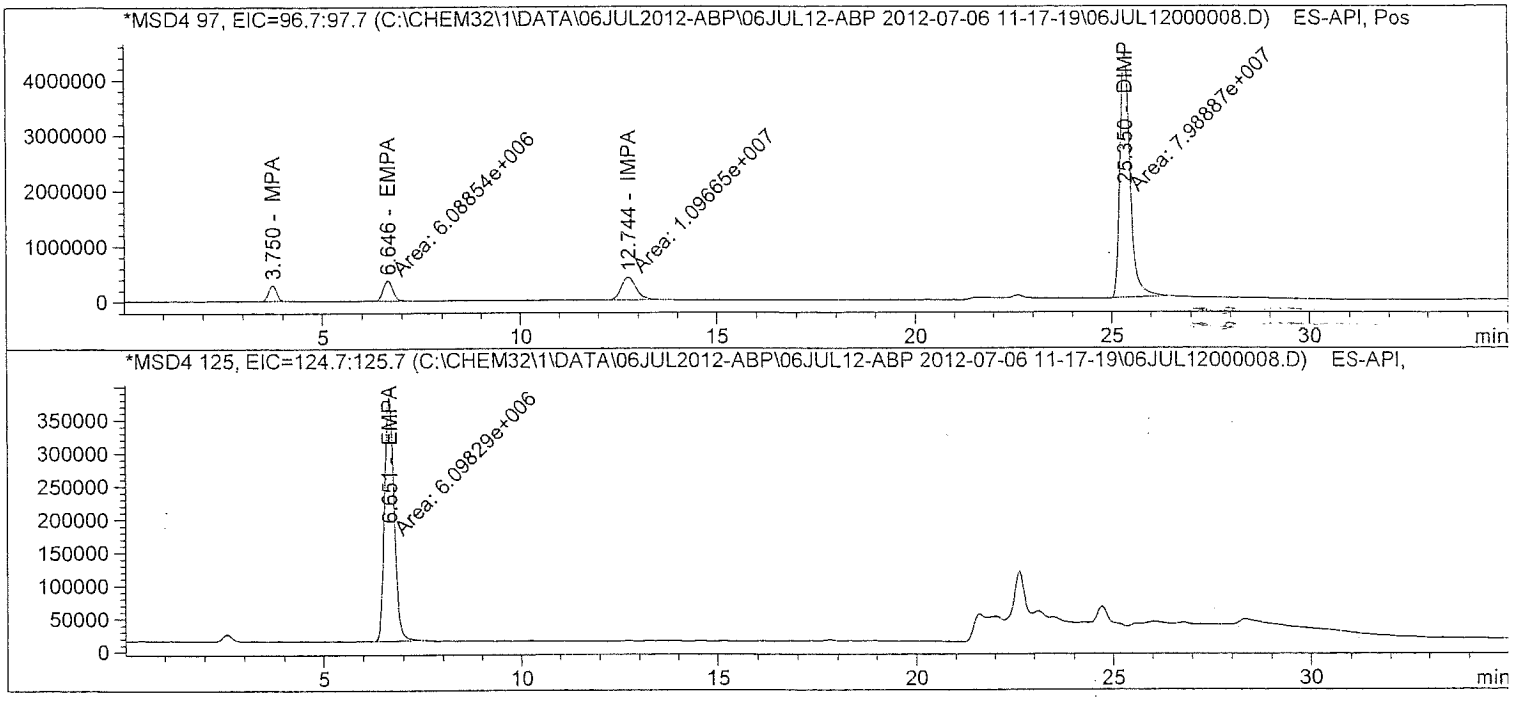
RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.890	MM	I 1	2.67017e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***

Batch Run # 8 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
Sample Name: ICV

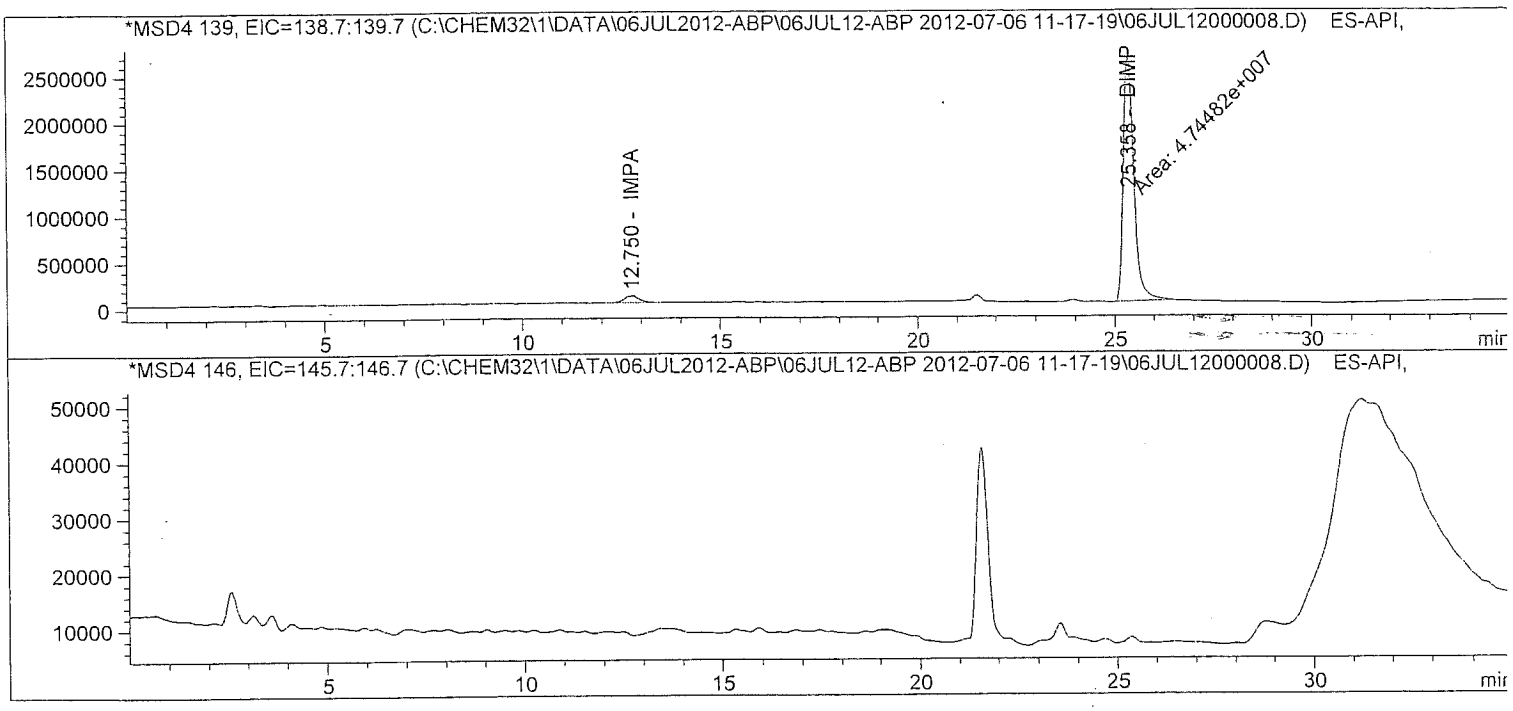
Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

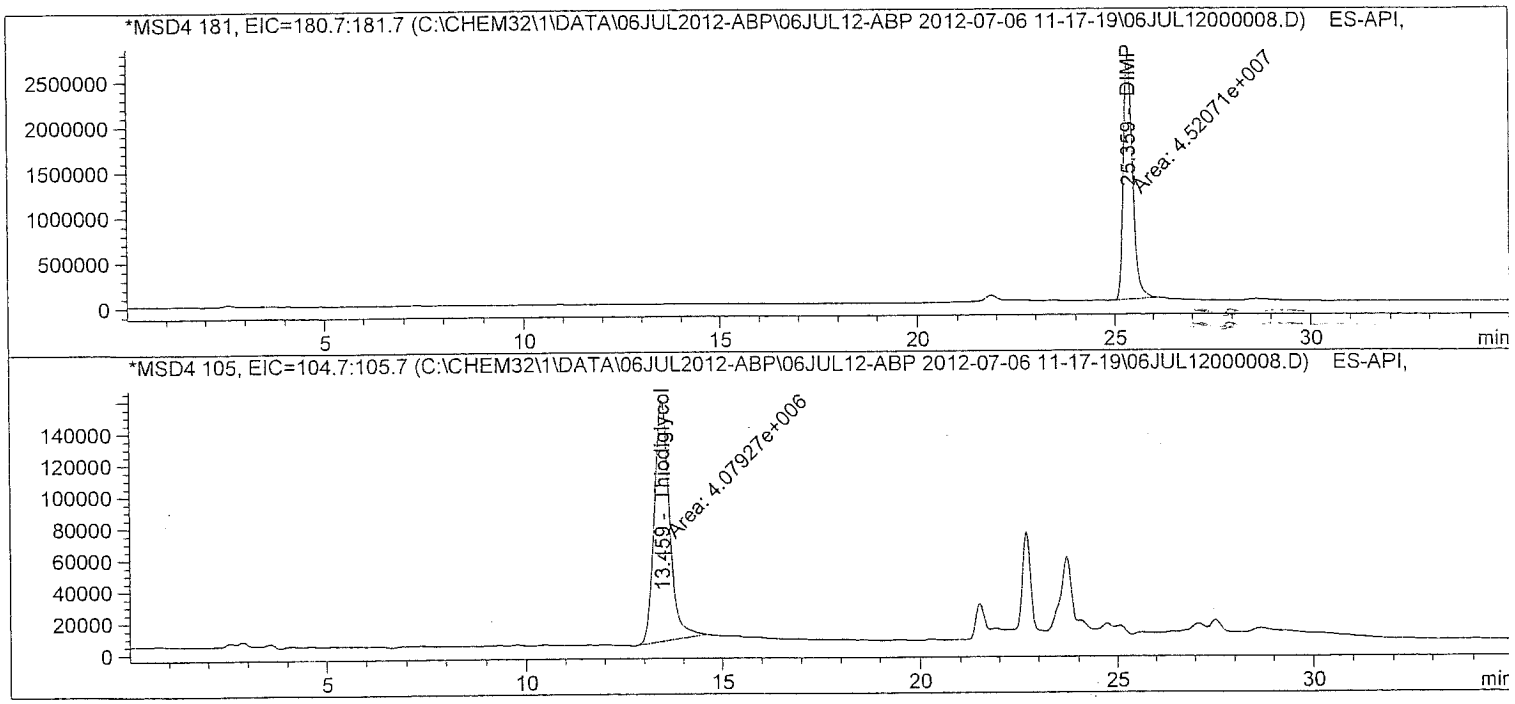
Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl

Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products



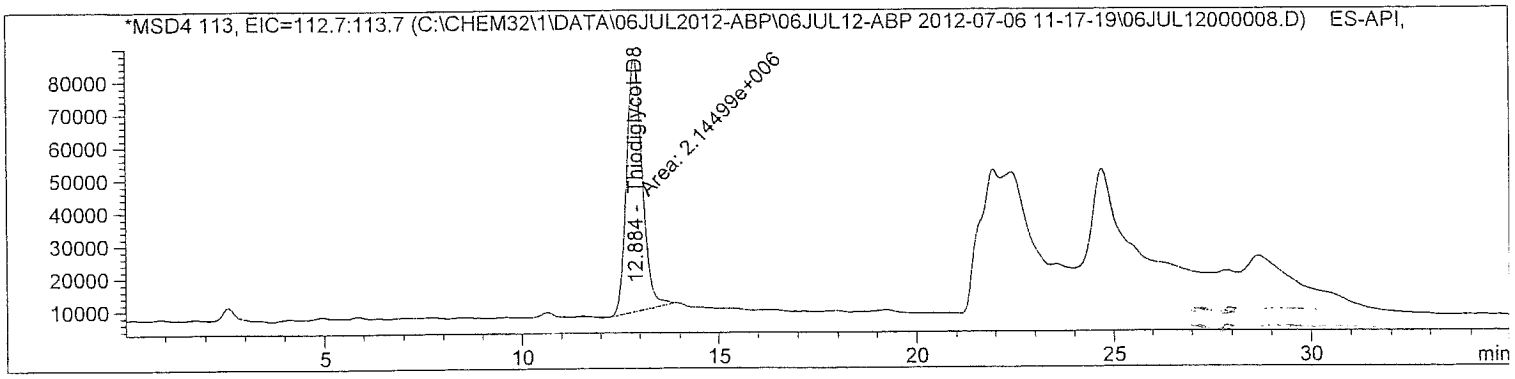
atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		



Internal Standard Report

Sorted By : Signal
Calib. Data Modified : 7/9/2012 11:13:05 AM
Multiplier : 1.0000
Dilution : 1.0000
Sample Amount : 2.00000 [] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:

ISTD #	ISTD Amount	Name
2	10.00000	Thiodiglycol-D8

Signal 1: MSD4 97, EIC=96.7:97.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
3.750	BB	1	4.04355e6	1.04390e-1	1.96787		MPA
12.744	MM	1	1.09665e7	4.26853e-2	2.18233		IMPA

Totals without ISTD(s) : 4.15020

atch Run # 8 of 15
ata File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
ample Name: ICV

Acq. Operator : TTM
Acq. Instrument : LCMS3
Injection Date : 7/6/2012 3:32:02 PM
Seq. Line : 8
Location : Vial 7
Inj : 1
Inj Volume : 10 µl
Acq. Method : C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M
Last changed : 7/3/2012 3:32:22 PM by TTM
Analysis Method : C:\Chem32\1\METHODS\Dietary\ABP-OFF.M
Last changed : 7/9/2012 11:13:23 AM by TTM
(Results are from a previously saved Batch)
Method Info : Agent Breakdown Products

Signal 2: MSD4 125, EIC=124.7:125.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
6.651	MM	1	6.09829e6	7.65569e-2	2.17655		EMPA

Totals without ISTD(s) : 2.17655

Signal 3: MSD4 139, EIC=138.7:139.7
Signal has been modified after loading from rawdata file!

Signal 4: MSD4 146, EIC=145.7:146.7
Signal has been modified after loading from rawdata file!

Signal 5: MSD4 181, EIC=180.7:181.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
25.359	MM	1	4.52071e7	1.00834e-2	2.12514		DIMP

Totals without ISTD(s) : 2.12514

Signal 6: MSD4 105, EIC=104.7:105.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
13.459	MM	1	4.07927e6	1.15268e-1	2.19214		Thiodiglycol

Totals without ISTD(s) : 2.19214

Batch Run # 8 of 15
Data File C:\CHEM32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\06JUL12000008.D
Sample Name: ICV

Acq. Operator	: TTM	Seq. Line	: 8
Acq. Instrument	: LCMS3	Location	: Vial 7
Injection Date	: 7/6/2012 3:32:02 PM	Inj	: 1
		Inj Volume	: 10 µl
Acq. Method	: C:\Chem32\1\DATA\06JUL2012-ABP\06JUL12-ABP 2012-07-06 11-17-19\ABP-ON.M		
Last changed	: 7/3/2012 3:32:22 PM by TTM		
Analysis Method	: C:\Chem32\1\METHODS\Dietary\ABP-OFF.M		
Last changed	: 7/9/2012 11:13:23 AM by TTM		
	(Results are from a previously saved Batch)		
Method Info	: Agent Breakdown Products		

Signal 7: MSD4 113, EIC=112.7:113.7
Signal has been modified after loading from rawdata file!

RetTime [min]	Type	ISTD used	Area	Amt/Area ratio	Amount	Grp	Name
12.884	MM	I	1 2.14499e6	1.00000	10.00000		Thiodiglycol-D8

Totals without ISTD(s) : 0.00000

*** End of Report ***



ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

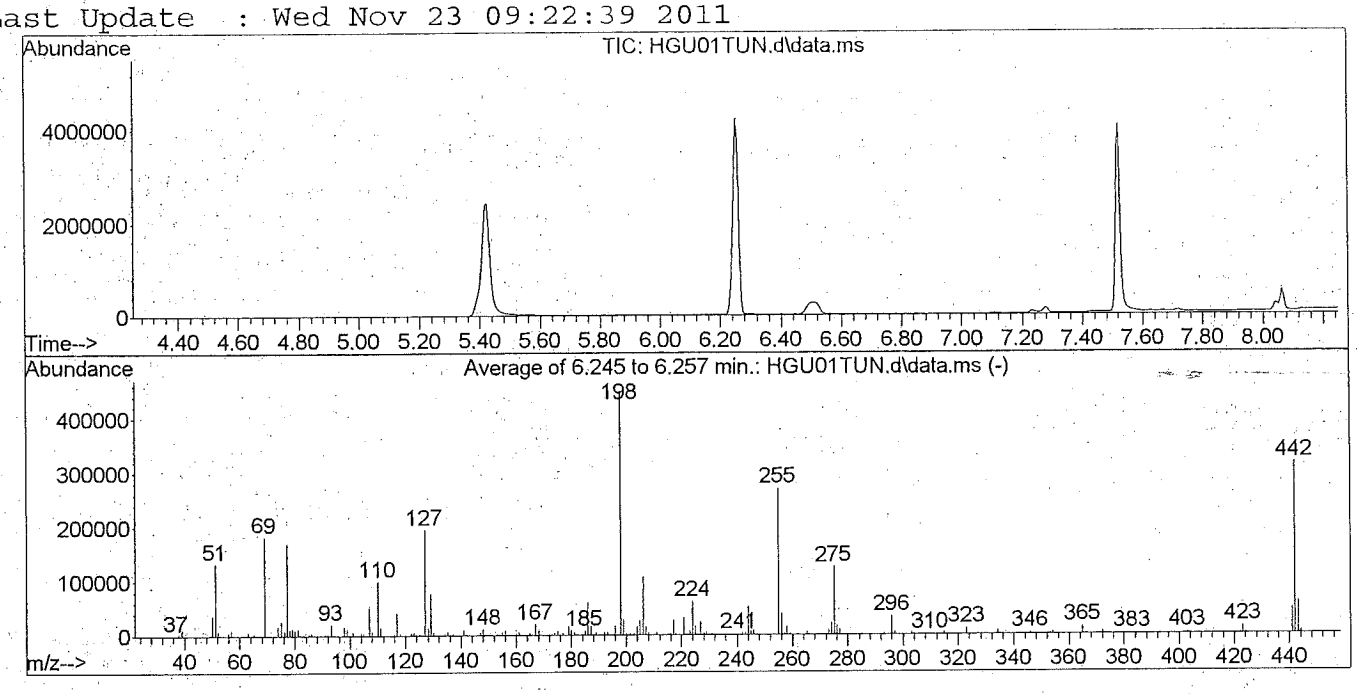
Environmental Division

Analytical Documentation

Data Path : D:\1\DATA\2012\AUG12\08AUG12H\
Data File : HGU01TUN.d
Acq On : 08/08/2012 10:06
Operator : RAH
Sample : 8270 DFTPP 13808
Inst : 5975-H
Misc : X:1/11/13
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : D:\1\METHODS\8270DTUN.M
Title : EPA/CLP SOM01
Last Update : Wed Nov 23 09:22:39 2011



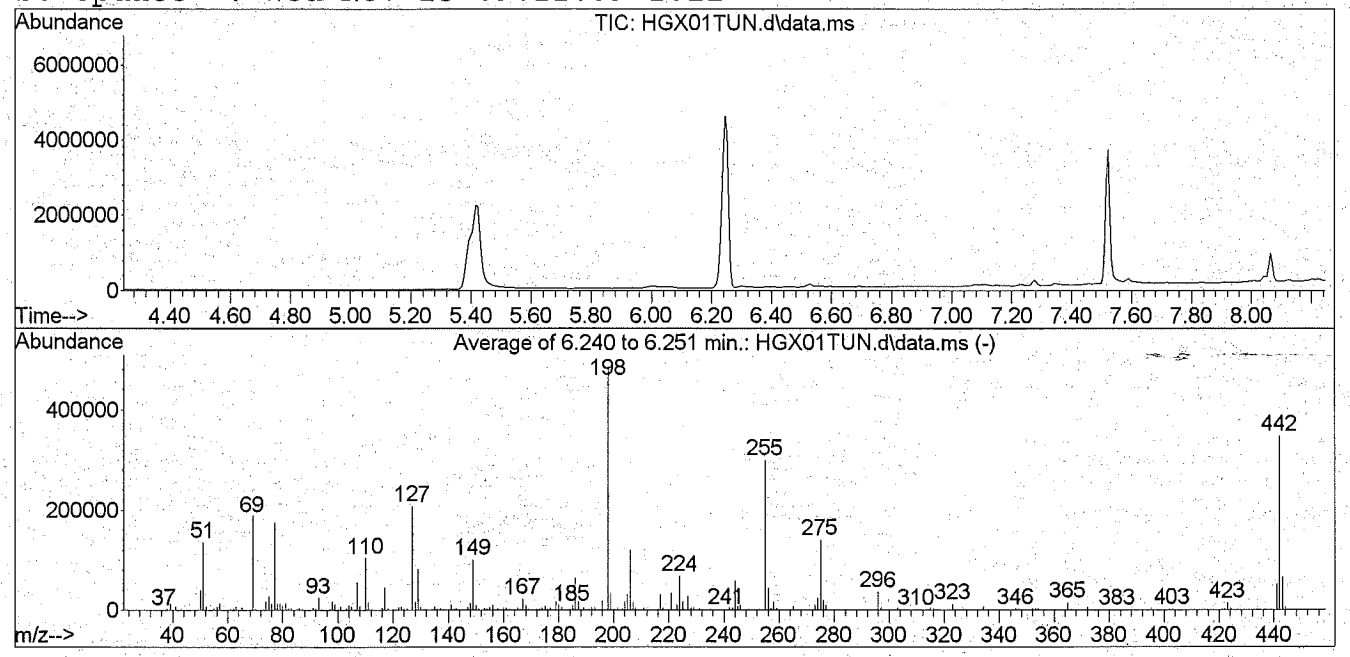
AutoFind: Scans 775, 776, 777; Background Corrected with Scan 767

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.6	133016	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	40.5	182007	PASS
70	69	0.00	2	0.5	863	PASS
127	198	10	80	43.3	194795	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	449451	PASS
199	198	5	9	6.7	30245	PASS
275	198	10	60	27.8	124987	PASS
365	198	1	100	3.0	13675	PASS
441	443	0.01	100	78.8	47803	PASS
442	198	50	100	70.3	315904	PASS
443	442	15	24	19.2	60693	PASS

Data Path : D:\1\DATA\2012\AUG12\10AUG12H\
Data File : HGX01TUN.d
Acq On : 08/10/2012 10:06
Operator : RAH
Sample : 8270 DFTPP 13808
Inst : 5975-H
Misc : X:1/11/13
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : D:\1\METHODS\8270DTUN.M
Title : EPA/CLP SOM01
Last Update : Wed Nov 23 09:22:39 2011



AutoFind: Scans 774, 775, 776; Background Corrected with Scan 762

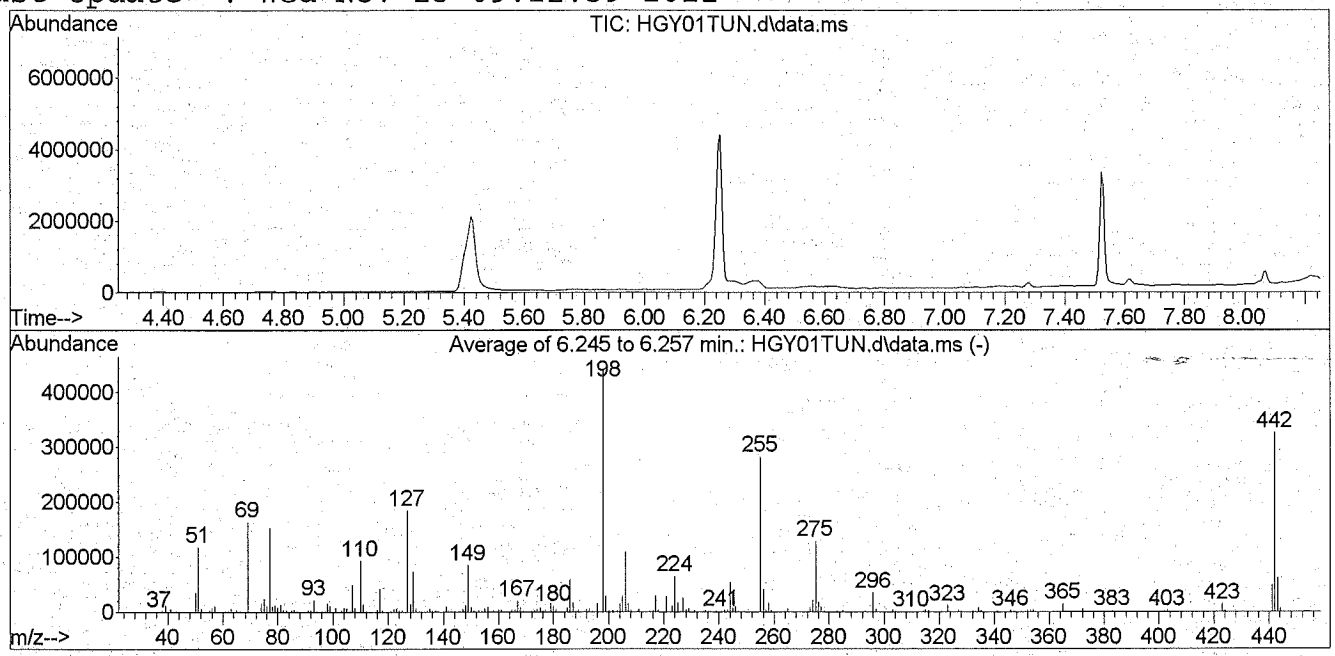
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	28.0	135657	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	38.5	186765	PASS
70	69	0.00	2	0.6	1164	PASS
127	198	10	80	42.8	207633	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	485099	PASS
199	198	5	9	6.8	33123	PASS
275	198	10	60	29.0	140616	PASS
365	198	1	100	3.1	15034	PASS
441	443	0.01	100	78.9	52696	PASS
442	198	50	100	71.8	348203	PASS
443	442	15	24	19.2	66765	PASS

DFTPP

Data Path : D:\1\DATA\2012\AUG12\13AUG12H\
Data File : HGY01TUN.d
Acq On : 08/13/2012 09:23
Operator : RAH
Sample : 8270 DFTPP 13808
Inst : 5975-H
Misc : X:1/11/13
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : D:\1\METHODS\8270DTUN.M
Title : EPA/CLP SOM01
Last Update : Wed Nov 23 09:22:39 2011



AutoFind: Scans 775, 776, 777; Background Corrected with Scan 766

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	26.6	117621	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	36.9	163289	PASS
70	69	0.00	2	0.7	1104	PASS
127	198	10	80	41.6	184344	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	442901	PASS
199	198	5	9	6.6	29280	PASS
275	198	10	60	28.9	127923	PASS
365	198	1	100	3.2	14188	PASS
441	443	0.01	100	79.5	49352	PASS
442	198	50	100	73.5	325568	PASS
443	442	15	24	19.1	62096	PASS

Form 6 Equivalent

Initial Calibration Report

EPA Method 8270D

90 percent must meet criteria -- min RF and [RSD<15% or correllation coefficient > 0.990]

SSTD005 = HGU07S05.D
SSTD020 = HGU06S20.D
SSTD035 = HGU05S35.D
SSTD050 = HGU02S50.D
SSTD065 = HGU04S65.D
SSTD080 = HGU03S80.D

percent meeting criteria: **100.0**
PASSED

	RRF005	RRF020	RRF035	RRF050	RRF065	RRF080	RF-AVE	RSD	MIN RF	use quad regression?	correlation coefficient	meets criteria?
2) 2-Fluorophenol	1.161	1.359	1.371	1.386	1.399	1.387	1.344	6.7	0.001			ok
3) 1,4-Oxathiane	0.735	0.667	0.673	0.695	0.687	0.710	0.694	3.6	0.001			ok
4) Phenol-d5	1.548	1.771	1.805	1.792	1.838	1.821	1.762	6.1	0.001			ok
5) 1,4-Dithiane	1.194	1.078	1.092	1.125	1.117	1.144	1.125	3.7	0.001			ok
7) Nitrobenzene-d5	0.303	0.345	0.355	0.350	0.356	0.349	0.343	5.7	0.001			ok
9) 2-Fluorobiphenyl	1.357	1.493	1.522	1.504	1.512	1.514	1.484	4.2	0.001			ok
11) 2,4,6-Tribromophenol	0.109	0.132	0.140	0.141	0.143	0.143	0.135	9.7	0.001			ok
13) Terphenyl-d14	0.706	0.771	0.809	0.779	0.789	0.779	0.772	4.5	0.001			ok

Form 7 Equivalent

8270D Calibration Verification Report

Calibration Verification File: **HGX02S50.D** Initial Calibration: **HGU**

80 percent must meet criteria (%D<20 and min RF)
percent meeting criteria: **100.0** **PASSED**

	AVG RF	CCV RF	MIN RF	CCV conc	target conc	%difference *	%drift *	flag
2-Fluorophenol	1.343	1.336	0.001			**0.6**		ok
1,4-Oxathiane	0.694	0.638	0.001			**8.1**		ok
Phenol-d5	1.762	1.802	0.001			**2.2**		ok
1,4-Dithiane	1.125	1.078	0.001			**4.2**		ok
Nitrobenzene-d5	0.343	0.356	0.001			**3.7**		ok
2-Fluorobiphenyl	1.484	1.527	0.001			**2.9**		ok
2,4,6-Tribromophenol	0.135	0.140	0.001			**3.7**		ok
Terphenyl-d14	0.772	0.780	0.001			**1.0**		ok

* Percent difference is used for compounds quantitated by average response factor.
Percent drift is used for compounds quantitated by regression fits

Form 7 Equivalent

8270D Calibration Verification Report

Calibration Verification File: **HGY02S50.D** Initial Calibration: **HGU**

80 percent must meet criteria (%D<20 and min RF)
percent meeting criteria: **100.0** **PASSED**

	AVG RF	CCV RF	MIN RF	CCV conc	target conc	%difference *	%drift *	flag
2-Fluorophenol	1.343	1.312	0.001			**2.3**		ok
1,4-Oxathiane	0.694	0.646	0.001			**6.9**		ok
Phenol-d5	1.762	1.799	0.001			**2.1**		ok
1,4-Dithiane	1.125	1.099	0.001			**2.3**		ok
Nitrobenzene-d5	0.343	0.351	0.001			**2.3**		ok
2-Fluorobiphenyl	1.484	1.527	0.001			**2.9**		ok
2,4,6-Tribromophenol	0.135	0.138	0.001			**2.4**		ok
Terphenyl-d14	0.772	0.756	0.001			**2.1**		ok

* Percent difference is used for compounds quantitated by average response factor.
Percent drift is used for compounds quantitated by regression fits

INTERNAL STANDARD AREA SUMMARY

Form 8 equivalent

Continuing Standard Filename	HGX02S50.D	Area 1,4-dcb	Area nap-d8	Area ace-d10	Area phe-d10	Area chry-d12	Area per-d12
8270 50 std 15952		534966	2324460	1369595	2646661	3243210	2704558
	Upper Limit	1069932	4648920	2739190	5293322	6486420	5409116
	Lower limit	267483	1162230	684798	1323331	1621605	1352279

CLIENT Sample No.	DCL Sample No.	Area 1,4-dcb	Area nap-d8	Area ace-d10	Area phe-d10	Area chry-d12	Area per-d12
BLANK	288164	603274	2737338	1646769	3166872	3626506	3096099
LCS	288165	609063	2776799	1649063	3172211	3580000	3035244
SO-12(01.5)	1221564002	580438	2522808	1506009	2954686	3423112	2397493
SO-13	1221564003	556827	2479482	1465412	2874585	3309251	2205146
SO-15	1221564006	592167	2629379	1563961	3019463	3320585	2034374
SO-17	1221564008	598384	2687563	1585834	3104692	3445818	2245264
SO-18	1221564009	583131	2534848	1480544	2824892	3537537	1963663
SO-19	1221564010	563714	2497365	1447251	2796780	2962734	1712614
SO-21	1221564012	576205	2592875	1496381	2891563	3165549	1916151
SO-22(04)	1221564013	596178	2653467	1539256	2961699	3291702	1989950
SO-22(04)	1221564014	583465	2605379	1539392	2998462	3315288	1943512
SO-22(04)	1221564015	593461	2662432	1541978	2997571	3273339	1898684
SO-22(04)Dup	1221564016	574140	2546010	1480539	2858685	3146622	1829737
SO-23	1221564017	594995	2630799	1546018	2946790	3100092	1644552
SO-24(06)	1221564018	580210	2573479	1486773	2891108	3194874	1789303
SO-25	1221564019	659024	2954362	1597827	2953372	2938907	1427735
SO-26(04)	1221564020	569588	2494732	1437766	2773479	2989495	1650124
SO-27	1221564021	574407	2541256	1492993	2871501	2958047	1506233
SO-28(05)	1221564022	585671	2580482	1507137	2892652	3071876	1524487
SO-29	1221564023	576722	2582759	1526767	2960088	3131203	1562513
SO-30(05)	1221564024	569347	2542699	1470591	2859410	3000365	1552965

LIMITS: Areas should be within 50 to 200 percent of the corresponding area in the calibration standard.

INTERNAL STANDARD RETENTION-TIME SUMMARY

Form 8 equivalent

Continuing Standard Filename	HGX02S50.D	RT 1,4-dcb	RT nap-d8	RT ace-d10	RT phe-d10	RT chry-d12	RT per-d12
8270 50 std 15952		4.03	5.34	7.86	10.45	14.93	16.99
	Upper Limit	4.53	5.84	8.36	10.95	15.43	17.49
	Lower limit	3.53	4.84	7.36	9.95	14.43	16.49
CLIENT Sample No.	**DCL Sample No.**	**RT 1,4-dcb**	**RT nap-d8**	**RT ace-d10**	**RT phe-d10**	**RT chry-d12**	**RT per-d12**
BLANK	288164	4.03	5.34	7.86	10.45	14.92	16.99
LCS	288165	4.04	5.34	7.86	10.45	14.92	16.99
SO-12(01.5)	1221564002	4.04	5.34	7.86	10.45	14.93	17.00
SO-13	1221564003	4.04	5.34	7.86	10.45	14.93	16.99
SO-15	1221564006	4.04	5.34	7.86	10.45	14.93	16.99
SO-17	1221564008	4.04	5.34	7.86	10.45	14.93	16.99
SO-18	1221564009	4.04	5.34	7.86	10.47	14.95	17.00
SO-19	1221564010	4.04	5.35	7.86	10.45	14.93	17.00
SO-21	1221564012	4.04	5.35	7.86	10.45	14.93	16.99
SO-22(04)	1221564013	4.04	5.34	7.86	10.45	14.93	16.99
SO-22(04)	1221564014	4.04	5.34	7.86	10.45	14.93	16.99
SO-22(04)	1221564015	4.04	5.34	7.86	10.45	14.93	16.99
SO-22(04)Dup	1221564016	4.04	5.34	7.86	10.45	14.92	16.99
SO-23	1221564017	4.04	5.34	7.86	10.45	14.93	16.99
SO-24(06)	1221564018	4.04	5.34	7.86	10.45	14.93	16.99
SO-25	1221564019	4.03	5.34	7.86	10.45	14.93	17.00
SO-26(04)	1221564020	4.04	5.34	7.86	10.45	14.92	16.99
SO-27	1221564021	4.04	5.34	7.86	10.45	14.93	16.99
SO-28(05)	1221564022	4.04	5.34	7.86	10.45	14.92	16.99
SO-29	1221564023	4.04	5.34	7.86	10.45	14.92	16.99
SO-30(05)	1221564024	4.04	5.34	7.86	10.45	14.92	16.99

LIMITS: Retention times should be within 30 seconds of the corresponding time in the calibration standard.

INTERNAL STANDARD AREA SUMMARY

Form 8 equivalent

Continuing Standard Filename	HGY02S50 D	Area 1,4-dcb	Area nap-d8	Area ace-d10	Area phe-d10	Area chry-d12	Area per-d12	
8270 50 std 15952		493722	2195754	1317894	2586615	3267187	2660460	
	Upper Limit	987444	4391508	2635788	5173230	6534374	5320920	
	Lower limit	246861	1097877	658947	1293308	1633594	1330230	
CLIENT Sample No.	**DCL Sample No.**	**Area 1,4-dcb**	**Area nap-d8**	**Area ace-d10**	**Area phe-d10**	**Area chry-d12**	**Area per-d12**	
SO-11	1221564001	513942	2350138	1416917	2781378	2937526	1514618	
SO-14(01.5)	1221564004	532416	2422863	1440373	2750335	2790520	1660939	
SO-14(01.5)Dup	1221564005	572632	2576735	1480958	2689587	2320040	948837	*
SO-16(01.5)	1221564007	534705	2452359	1449547	2762581	2471511	1250517	*
SO-20(01.5)	1221564011	555578	2541915	1509968	2858038	2304189	818425	*

* This internal standard is not pertinent to the analysis. It does not reference the requested analtyes.

LIMITS: Areas should be within 50 to 200 percent of the corresponding area in the calibration standard.

INTERNAL STANDARD RETENTION-TIME SUMMARY

Form 8 equivalent

Continuing Standard		RT	RT	RT	RT	RT	RT
Filename	HGY02S50.D	1,4-dcb	nap-d8	ace-d10	phe-d10	chry-d12	per-d12
8270 50 std 15952		4.03	5.35	7.86	10.45	14.93	17.00
	Upper Limit	4.53	5.85	8.36	10.95	15.43	17.50
	Lower limit	3.53	4.85	7.36	9.95	14.43	16.50
CLIENT	**DCL**	**RT**	**RT**	**RT**	**RT**	**RT**	**RT**
Sample No.	**Sample No.**	**1,4-dcb**	**nap-d8**	**ace-d10**	**phe-d10**	**chry-d12**	**per-d12**
SO-11	1221564001	4.04	5.34	7.86	10.45	14.93	17.00
SO-14(01.5)	1221564004	4.04	5.34	7.86	10.45	14.92	16.99
SO-14(01.5)Dup	1221564005	4.04	5.34	7.86	10.45	14.92	16.99
SO-16(01.5)	1221564007	4.04	5.34	7.86	10.45	14.92	16.99
SO-20(01.5)	1221564011	4.04	5.34	7.86	10.45	14.92	16.99

LIMITS: Retention times should be within 30 seconds of the corresponding time in the calibration standard.

ONP

ESVO: 91657

Batch Worklist

Batch: ENVX/ 15741
Rule: EPA 3550, Sonic SVOA Soil

Created: 8/6/2012 09:46
Analyst: L. Edwards

Instrument:
Status: NA

HBN: 91073

Workorder: 1221564

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	288164	MB for HBN 91073 [ENVX/15741]			4	MB		E3550SV.4P	6158	8/20/2012	8/7/2012	
2	288165	LCS for HBN 91073 [ENVX/15741]			4	LCS		E3550SV.4P	6158	8/20/2012	8/7/2012	
3	288166	RLVS for HBN 91073 [ENVX/15741			4	RLVS		E3550SV.4P	6158	8/20/2012	8/7/2012	
4	1221564001	FTSW-HR-SO-11			4	SAMPLE	1221564001-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
5	1221564002	FTSW-HR-SO-12 (01.5)			4	SAMPLE	1221564002-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
6	1221564003	FTSW-HR-SO-13			4	SAMPLE	1221564003-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
7	1221564004	FTSW-HR-SO-14 (01.5)			4	SAMPLE	1221564004-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
8	1221564005 IS	FTSW-HR-SO-14 (01.5) Dup			4	DUP	1221564005-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
9	1221564006	FTSW-HR-SO-15			4	SAMPLE	1221564006-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
10	1221564007 IS	FTSW-HR-SO-16 (01.5)			4	SAMPLE	1221564007-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
11	1221564008	FTSW-HR-SO-17			4	SAMPLE	1221564008-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
12	1221564009	FTSW-HR-SO-18 (02)			4	SAMPLE	1221564009-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
13	1221564010	FTSW-HR-SO-19			4	SAMPLE	1221564010-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
14	1221564011 IS,TDP	FTSW-HR-SO-20 (01.5)			4	SAMPLE	1221564011-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
15	1221564012	FTSW-HR-SO-21			4	SAMPLE	1221564012-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
16	1221564013	FTSW-HR-SO-22(04)			4	SAMPLE	1221564013-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
17	1221564014	FTSW-HR-SO-22(04) MS			4	MS	1221564014-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
18	1221564015	FTSW-HR-SO-22(04) MSD			4	MSD	1221564015-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
19	1221564016	FTSW-HR-SO-22(04) Dup			4	DUP	1221564016-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
20	1221564017	FTSW-HR-SO-23			4	SAMPLE	1221564017-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
21	1221564018	FTSW-HR-SO-24 (06)			4	SAMPLE	1221564018-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
22	1221564019	FTSW-HR-SO-25			4	SAMPLE	1221564019-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
23	1221564020	FTSW-HR-SO-26 (04)			4	SAMPLE	1221564020-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
24	1221564021	FTSW-HR-SO-27			4	SAMPLE	1221564021-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
25	1221564022	FTSW-HR-SO-28 (05)			4	SAMPLE	1221564022-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
26	1221564023	FTSW-HR-SO-29			4	SAMPLE	1221564023-A	E3550SV.4P	5480	8/14/2012	8/7/2012	
27	1221564024	FTSW-HR-SO-30 (05)			4	SAMPLE	1221564024-A	E3550SV.4P	5480	8/14/2012	8/7/2012	

8270 SV

Batch Worklist

Batch: ESVO/ 3816 | Created: 8/14/2012 11:11 | Instrument: | HBN: 91657

Rule: SW 8270, Soil | Analyst: R. Hendricks | Status: WP

Workorder: 1221564

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	288164	MB for HBN 91073 [ENVX/15741]	30 grams	1 mL	4	MB		S827050.4Q	6158		8/13/2012	
2	288165	LCS for HBN 91073 [ENVX/15741]	30 grams	1 mL	4	LCS		S827050.4Q	6158		8/13/2012	
3	288166	RLVS for HBN 91073 [ENVX/15741	30 grams	1 mL	4	RLVS		S827050.4Q	6158		8/13/2012	
4	1221564001	FTSW-HR-SO-11	30.38 grams	1 mL	4	SAMPLE	1221564001-A	S8270D...4	5480	9/15/2012	8/15/2012	
5	1221564002	FTSW-HR-SO-12 (01.5)	30 grams	1 mL	4	SAMPLE	1221564002-A	S8270D...4	5480	9/15/2012	8/15/2012	
6	1221564003	FTSW-HR-SO-13	30.04 grams	1 mL	4	SAMPLE	1221564003-A	S8270D...4	5480	9/15/2012	8/15/2012	
7	1221564004	FTSW-HR-SO-14 (01.5)	30.16 grams	1 mL	4	SAMPLE	1221564004-A	S8270D...4	5480	9/15/2012	8/15/2012	
8	1221564005	FTSW-HR-SO-14 (01.5) Dup	30.02 grams	1 mL	4	DUP	1221564005-A	S8270D...4	5480	9/15/2012	8/15/2012	
9	1221564006	FTSW-HR-SO-15	30.61 grams	1 mL	4	SAMPLE	1221564006-A	S8270D...4	5480	9/15/2012	8/15/2012	
10	1221564007	FTSW-HR-SO-16 (01.5)	30.46 grams	1 mL	4	SAMPLE	1221564007-A	S8270D...4	5480	9/15/2012	8/15/2012	
11	1221564008	FTSW-HR-SO-17	30.38 grams	1 mL	4	SAMPLE	1221564008-A	S8270D...4	5480	9/15/2012	8/15/2012	
12	1221564009	FTSW-HR-SO-18 (02)	30.17 grams	1 mL	4	SAMPLE	1221564009-A	S8270D...4	5480	9/15/2012	8/15/2012	
13	1221564010	FTSW-HR-SO-19	30.22 grams	1 mL	4	SAMPLE	1221564010-A	S8270D...4	5480	9/15/2012	8/15/2012	
14	1221564011	FTSW-HR-SO-20 (01.5)	30.11 grams	1 mL	4	SAMPLE	1221564011-A	S8270D...4	5480	9/15/2012	8/15/2012	
15	1221564012	FTSW-HR-SO-21	30.15 grams	1 mL	4	SAMPLE	1221564012-A	S8270D...4	5480	9/15/2012	8/15/2012	
16	1221564013	FTSW-HR-SO-22(04)	30.35 grams	1 mL	4	SAMPLE	1221564013-A	S8270D...4	5480	9/15/2012	8/15/2012	
17	1221564014	FTSW-HR-SO-22(04) MS	30.24 grams	1 mL	4	MS	1221564014-A	S827050.4Q	5480		8/15/2012	
18	1221564015	FTSW-HR-SO-22(04) MSD	30.58 grams	1 mL	4	MSD	1221564015-A	S827050.4Q	5480		8/15/2012	
19	1221564016	FTSW-HR-SO-22(04) Dup	30.36 grams	1 mL	4	DUP	1221564016-A	S8270D...4	5480	9/15/2012	8/15/2012	
20	1221564017	FTSW-HR-SO-23	30.21 grams	1 mL	4	SAMPLE	1221564017-A	S8270D...4	5480	9/15/2012	8/15/2012	
21	1221564018	FTSW-HR-SO-24 (06)	30.22 grams	1 mL	4	SAMPLE	1221564018-A	S8270D...4	5480	9/15/2012	8/15/2012	
22	1221564019	FTSW-HR-SO-25	30.5 grams	1 mL	4	SAMPLE	1221564019-A	S8270D...4	5480	9/15/2012	8/15/2012	
23	1221564020	FTSW-HR-SO-26 (04)	30.09 grams	1 mL	4	SAMPLE	1221564020-A	S8270D...4	5480	9/15/2012	8/15/2012	
24	1221564021	FTSW-HR-SO-27	30.17 grams	1 mL	4	SAMPLE	1221564021-A	S8270D...4	5480	9/15/2012	8/15/2012	
25	1221564022	FTSW-HR-SO-28 (05)	30.01 grams	1 mL	4	SAMPLE	1221564022-A	S8270D...4	5480	9/15/2012	8/15/2012	
26	1221564023	FTSW-HR-SO-29	30.62 grams	1 mL	4	SAMPLE	1221564023-A	S8270D...4	5480	9/15/2012	8/15/2012	
27	1221564024	FTSW-HR-SO-30 (05)	30.47 grams	1 mL	4	SAMPLE	1221564024-A	S8270D...4	5480	9/15/2012	8/15/2012	

DATACHEM LABORATORIES - GC\MS SEMIVOLATILE ANALYSIS
INJECTION LOGBOOK
INSTRUMENT 5975-H

File Name	Date and Time Injected	OP	Method	ALS BOT	Run Length	Dil Fac	Sample name	Misc info
HGU01TUN	08/08/2012 10:06	RAH	8270DTUN	1	11.53	1	8270 DFTPP 13808	1/11/13
HGU02S50	08/08/2012 10:26	RAH	8270D07	2	20.49	1	8270 50 std 15952	X:1/9/13
HGU03S80	08/08/2012 11:01	RAH	8270D07	3	20.49	1	8270 80 std 15970	X:1/9/13
HGU04S65	08/08/2012 11:30	RAH	8270D07	4	20.49	1	8270 65 std 15971	X:1/9/13
HGU05S35	08/08/2012 12:00	RAH	8270D07	5	20.49	1	8270 35 std 15972	X:1/9/13
HGU06S20	08/08/2012 12:29	RAH	8270D07	6	20.49	1	8270 20 std 15973	X:1/9/13
HGU07S05	08/08/2012 12:59	RAH	8270D07	7	20.49	1	8270 5 std 15974	X:1/9/13
HGU08ICV	08/08/2012 13:29	RAH	8270D07	8	20.49	1	8270 ICV 15975	X:1/9/13
HGV01TUN	08/08/2012 14:07	RAH	8270DTUN	1	11.53	1	8270 DFTPP 13808	1/11/13
HGV02S50	08/08/2012 14:28	RAH	8270DOND	2	20.49	1	8270 50 std 15952	X:1/9/13
HGV03LCS	08/08/2012 14:58	RAH	8270DOND	3	20.49	1	288219	WATER 8270
HGV04LCS	08/08/2012 15:28	RAH	8270DOND	4	20.49	1	288239	SOIL 8270
HGV05BLK	08/08/2012 15:58	RAH	8270DOND	5	20.49	1	288238	SOIL 8270
HGV06RLV	08/08/2012 16:29	RAH	8270DOND	6	20.49	1	288240	SOIL 8270
HGV07C01	08/08/2012 16:58	RAH	8270DOND	7	20.49	1	1221555001	SOIL 8270
HGV08M02	08/08/2012 17:28	RAH	8270DOND	8	20.49	1	1221555002	SOIL 8270
HGV09M03	08/08/2012 17:56	RAH	8270DOND	9	20.49	1	1221555003	SOIL 8270
HGV10C04	08/08/2012 18:26	RAH	8270DOND	10	20.49	1	1221555004	SOIL 8270
HGV11C05	08/08/2012 18:55	RAH	8270DOND	11	20.49	1	1221555005	SOIL 8270
HGV12C07	08/08/2012 19:24	RAH	8270DOND	12	20.49	1	1221555007	SOIL 8270
HGV13C08	08/08/2012 19:54	RAH	8270DOND	13	20.49	1	1221555008	SOIL 8270
HGV14C09	08/08/2012 20:24	RAH	8270DOND	14	20.49	1	1221555009	SOIL 8270
HGV15C10	08/08/2012 20:53	RAH	8270DOND	15	20.49	1	1221555010	SOIL 8270
HGV16C11	08/08/2012 21:23	RAH	8270DOND	16	20.49	1	1221555011	SOIL 8270
HGV17C12	08/08/2012 21:52	RAH	8270DOND	17	20.49	1	1221555012	SOIL 8270
HGV18C13	08/08/2012 22:22	RAH	8270DOND	18	20.49	1	1221555013	SOIL 8270
HGV19C14	08/08/2012 22:51	RAH	8270DOND	19	20.49	1	1221555014	SOIL 8270

DATACHEM LABORATORIES - GC\MS SEMIVOLATILE ANALYSIS
INJECTION LOGBOOK
INSTRUMENT 5975-H

File Name	Date and Time Injected	OP	Method	ALS BOT	Run Length	Dil Fac	Sample name	Misc info
HGX01TUN	08/10/2012 10:06	RAH	8270DTUN	1	11.53	1	8270 DFTPP 13808	1/11/13
HGX02S50	08/10/2012 10:26	RAH	8270DOND	2	20.49	1	8270 50 std 15952	X:1/9/13
HGX03BLK	08/10/2012 10:54	RAH	8270DOND	3	20.49	1	288164	SOIL 8270
HGX04LCS	08/10/2012 11:23	RAH	8270DOND	4	20.49	1	288165	SOIL 8270
HGX05RLV	08/10/2012 11:52	RAH	8270DOND	5	20.49	1	288166	SOIL 8270
HGX06C02	08/10/2012 12:22	RAH	8270DOND	6	20.49	1	1221564002	SOIL 8270
HGX07C03	08/10/2012 12:51	RAH	8270DOND	7	20.49	1	1221564003	SOIL 8270
HGX08C06	08/10/2012 13:20	RAH	8270DOND	8	20.49	1	1221564006	SOIL 8270
HGX09C08	08/10/2012 13:50	RAH	8270DOND	9	20.49	1	1221564008	SOIL 8270
HGX10C09	08/10/2012 14:20	RAH	8270DOND	10	20.49	1	1221564009	SOIL 8270
HGX11C10	08/10/2012 14:49	RAH	8270DOND	11	20.49	1	1221564010	SOIL 8270
HGX12C12	08/10/2012 15:19	RAH	8270DOND	12	20.49	1	1221564012	SOIL 8270
HGX13C13	08/10/2012 15:48	RAH	8270DOND	13	20.49	1	1221564013	SOIL 8270
HGX14C14	08/10/2012 16:17	RAH	8270DOND	14	20.49	1	1221564014	SOIL 8270
HGX15C15	08/10/2012 16:47	RAH	8270DOND	15	20.49	1	1221564015	SOIL 8270
HGX16C16	08/10/2012 17:16	RAH	8270DOND	16	20.49	1	1221564016	SOIL 8270
HGX17C17	08/10/2012 17:45	RAH	8270DOND	17	20.49	1	1221564017	SOIL 8270
HGX18C18	08/10/2012 18:15	RAH	8270DOND	18	20.49	1	1221564018	SOIL 8270
HGX19C19	08/10/2012 18:44	RAH	8270DOND	19	20.49	1	1221564019	SOIL 8270
HGX20C20	08/10/2012 19:14	RAH	8270DOND	20	20.49	1	1221564020	SOIL 8270
HGX21C21	08/10/2012 19:43	RAH	8270DOND	21	20.49	1	1221564021	SOIL 8270
HGX22C22	08/10/2012 20:13	RAH	8270DOND	22	20.49	1	1221564022	SOIL 8270
HGX23C23	08/10/2012 20:42	RAH	8270DOND	23	20.49	1	1221564023	SOIL 8270
HGX24C24	08/10/2012 21:11	RAH	8270DOND	24	20.49	1	1221564024	SOIL 8270

DATACHEM LABORATORIES - GC\MS SEMIVOLATILE ANALYSIS
INJECTION LOGBOOK
INSTRUMENT 5975-H

File Name	Date and Time Injected	OP	Method	ALS BOT	Run Length	Dil Fac	Sample name	Misc info
HGY01TUN	08/13/2012 09:23	RAH	8270DTUN	1	9.09	1	8270 DFTPP 13808	1/11/13
HGY02S50	08/13/2012 09:39	RAH	8270D07	2	20.49	1	8270 50 std 15952	X:1/9/13
HGY03BLK	08/13/2012 10:15	RAH	8270D07	3	20.49	1	289066	WATER 8270
HGY04LCS	08/13/2012 10:44	RAH	8270D07	4	20.49	1	289067	WATER 8270
HGY05RLV	08/13/2012 11:14	RAH	8270D07	5	20.49	1	289068	WATER 8270
HGY06C01	08/13/2012 11:43	RAH	8270D07	6	20.49	1	1221653001	WATER 8270
HGY07AMS	08/13/2012 12:13	RAH	8270D07	7	20.49	1	289069	WATER 8270
HGY08MSD	08/13/2012 12:42	RAH	8270D07	8	20.49	1	289070	WATER 8270
HGY09C01	08/13/2012 13:11	RAH	8270DOND	9	20.49	1	1221564001	SOIL 8270
HGY10C04	08/13/2012 13:41	RAH	8270DOND	10	20.49	1	1221564004	SOIL 8270
HGY11C05	08/13/2012 14:10	RAH	8270DOND	11	20.49	1	1221564005	SOIL 8270
HGY12C07	08/13/2012 14:40	RAH	8270DOND	12	20.49	1	1221564007	SOIL 8270
HGY13C11	08/13/2012 15:10	RAH	8270DOND	13	20.49	1	1221564011	SOIL 8270

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

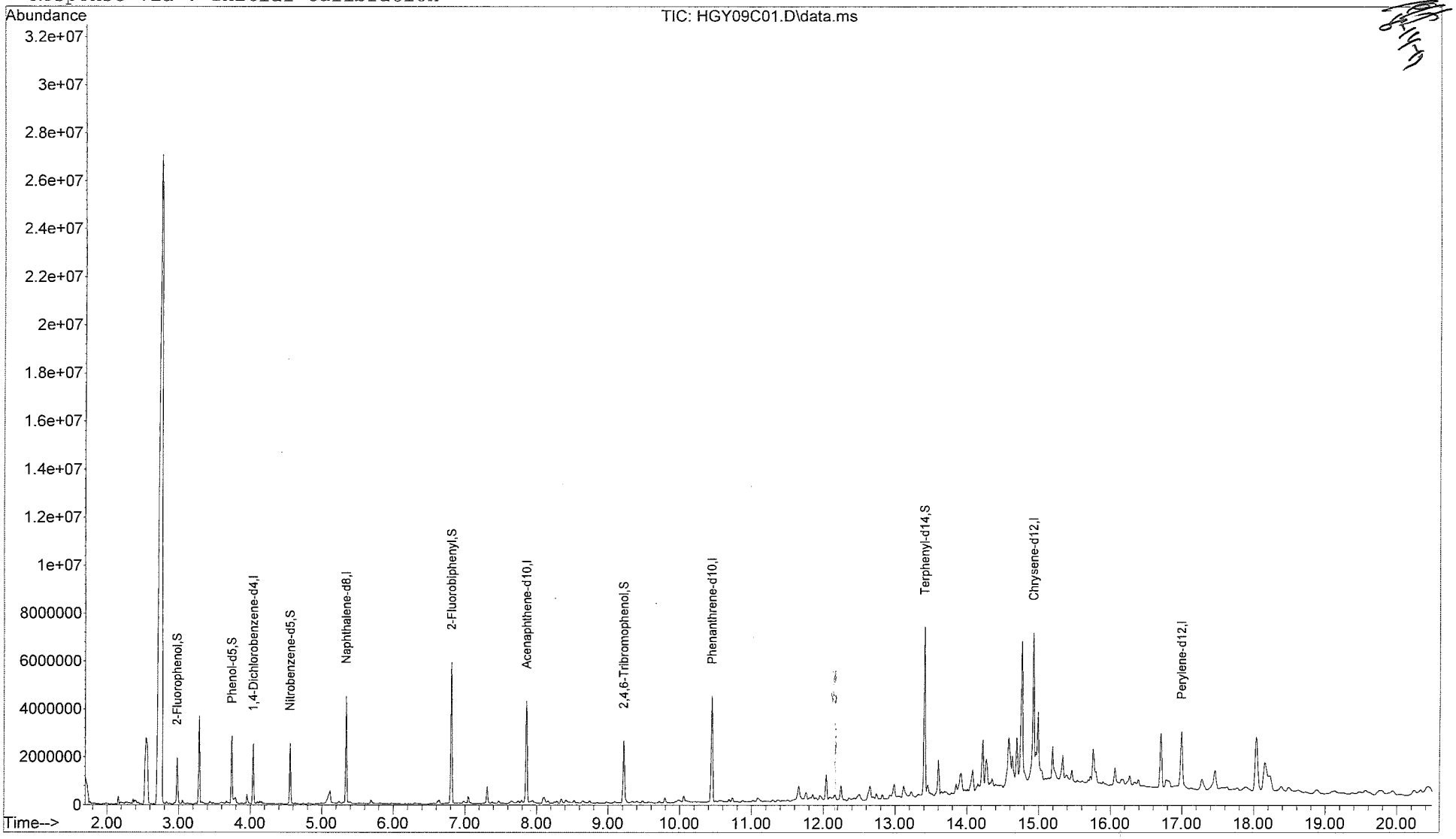
Raw Data

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGY09C01.D Vial: 9
Acq On : 08/13/2012 13:11 Operator: RAH
Sample : 1221564001 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 13 15:25:23 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGY09C01.D Vial: 9
Acq On : 08/13/2012 13:11 Operator: RAH
Sample : 1221564001 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 13 15:25:23 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	513942	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2350138	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1416917	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2781378	40.00 ug/mL
12) Chrysene-d12	14.93	240	2937526	40.00 ug/mL
14) Perylene-d12	17.00	264	1514618	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	702205	40.682ug/mL
4) Phenol-d5	3.74	99	1172390	51.774ug/mL
7) Nitrobenzene-d5	4.56	82	869966	43.183ug/mL
9) 2-Fluorobiphenyl	6.81	172	2564727	48.802ug/mL
11) 2,4,6-Tribromophenol	9.22	330	509468	54.409ug/mL
13) Terphenyl-d14	13.41	244	3458886	60.990ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104	Not Detected	
5) 1,4-Dithiane	0.00	120	Not Detected	

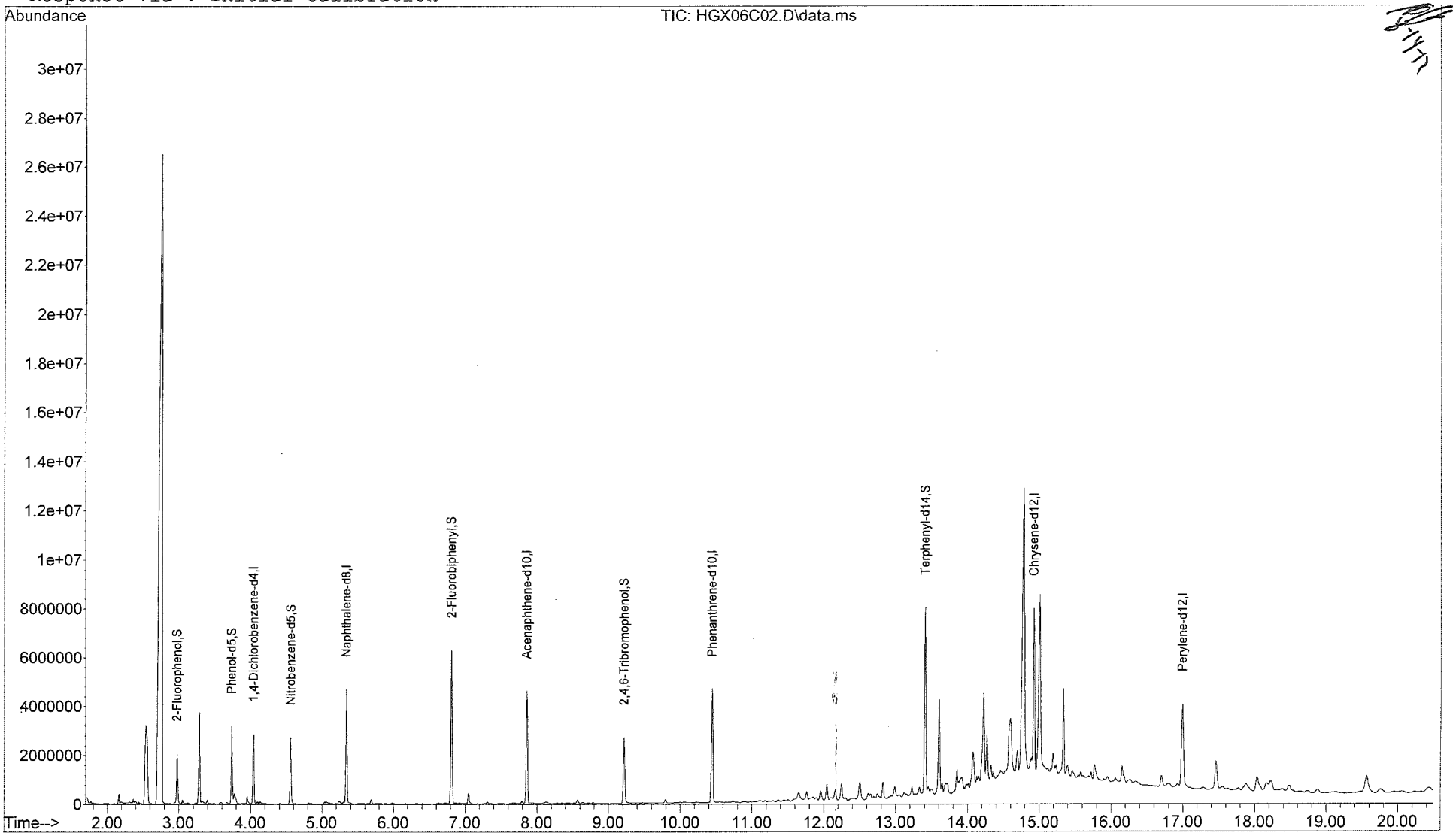
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX06C02.D Vial: 6
Acq On : 08/10/2012 12:22 Operator: RAH
Sample : 1221564002 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 13:03:45 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX06C02.D Vial: 6
Acq On : 08/10/2012 12:22 Operator: RAH
Sample : 1221564002 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 13:03:45 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	580438	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2522808	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1506009	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2954686	40.00 ug/mL
12) Chrysene-d12	14.93	240	3423112	40.00 ug/mL
14) Perylene-d12	17.00	264	2397493	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	720141	36.941ug/mL
4) Phenol-d5	3.73	99	1275541	49.876ug/mL
7) Nitrobenzene-d5	4.56	82	926347	42.835ug/mL
9) 2-Fluorobiphenyl	6.81	172	2751779	49.264ug/mL
11) 2,4,6-Tribromophenol	9.22	330	561685	56.467ug/mL
13) Terphenyl-d14	13.41	244	3940442	59.625ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104	Not Detected	
5) 1,4-Dithiane	0.00	120	Not Detected	

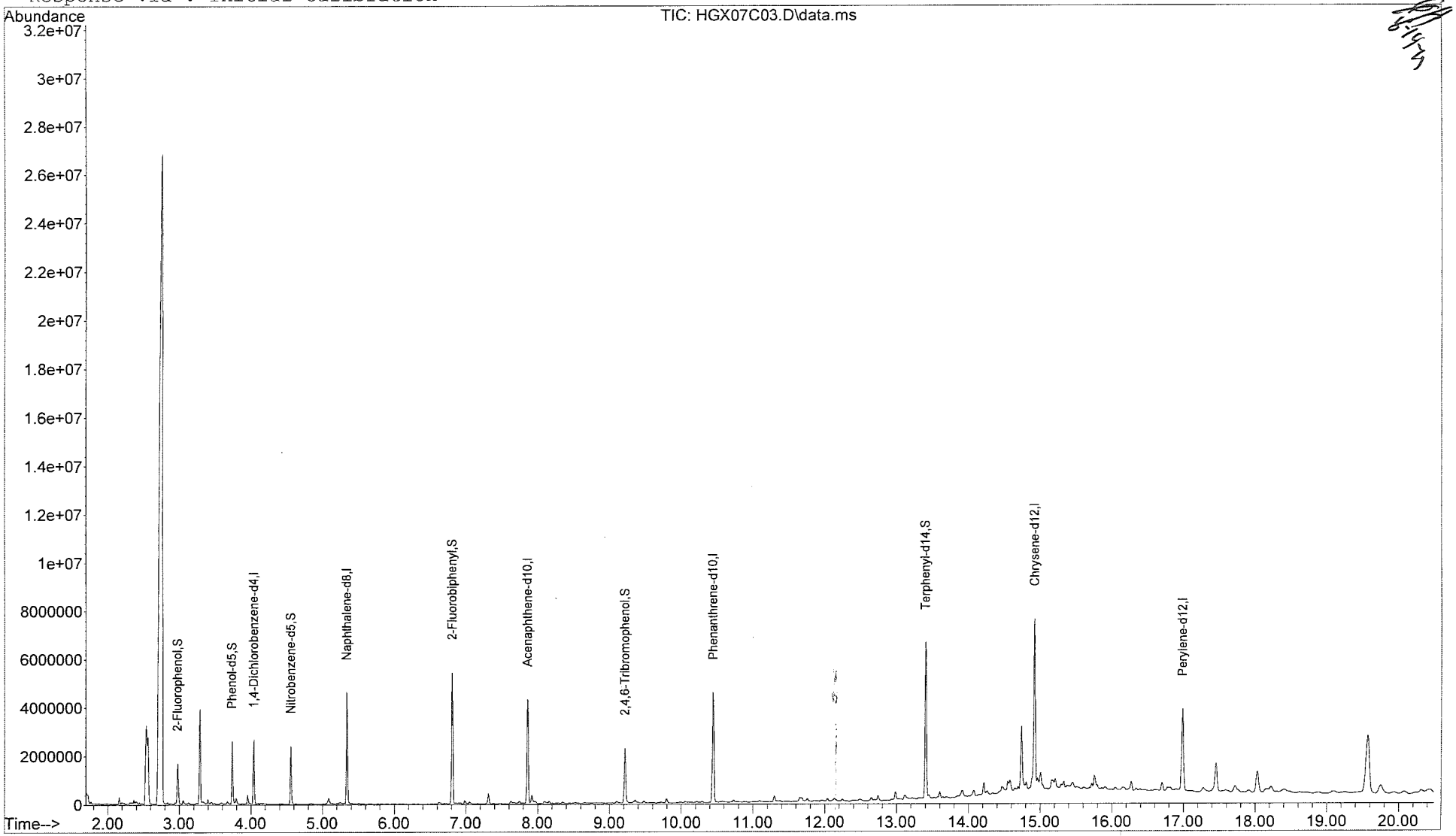
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX07C03.D Vial: 7
Acq On : 08/10/2012 12:51 Operator: RAH
Sample : 1221564003 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 13:26:23 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX07C03.D Vial: 7
Acq On : 08/10/2012 12:51 Operator: RAH
Sample : 1221564003 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 13:26:23 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	556827	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2479482	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1465412	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2874585	40.00 ug/mL
12) Chrysene-d12	14.93	240	3309251	40.00 ug/mL
14) Perylene-d12	16.99	264	2205146	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	640015	34.223ug/mL
4) Phenol-d5	3.73	99	1112463	45.344ug/mL
7) Nitrobenzene-d5	4.56	82	823747	38.756ug/mL
9) 2-Fluorobiphenyl	6.81	172	2400436	44.165ug/mL
11) 2,4,6-Tribromophenol	9.22	330	456469	47.168ug/mL
13) Terphenyl-d14	13.40	244	3400891	53.232ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

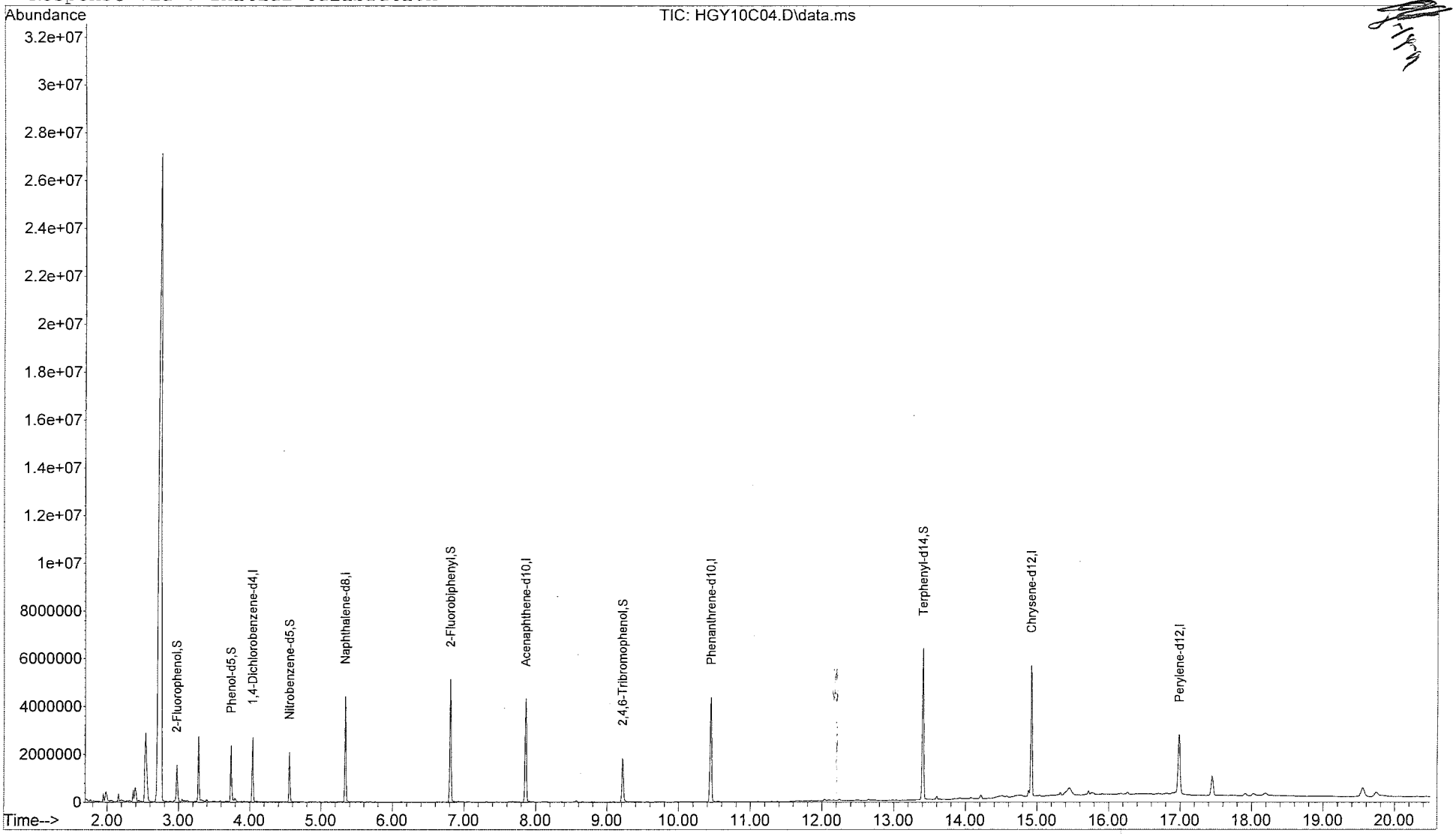
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGY10C04.D Vial: 10
Acq On : 08/13/2012 13:41 Operator: RAH
Sample : 1221564004 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 13 15:26:32 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGY10C04.D Vial: 10
Acq On : 08/13/2012 13:41 Operator: RAH
Sample : 1221564004 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 13 15:26:32 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	532416	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2422863	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1440373	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2750335	40.00 ug/mL
12) Chrysene-d12	14.92	240	2790520	40.00 ug/mL
14) Perylene-d12	16.99	264	1660939	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	587756	32.870ug/mL
4) Phenol-d5	3.74	99	1006347	42.899ug/mL
7) Nitrobenzene-d5	4.56	82	704215	33.906ug/mL
9) 2-Fluorobiphenyl	6.81	172	2249450	42.106ug/mL
11) 2,4,6-Tribromophenol	9.22	330	381734	41.228ug/mL
13) Terphenyl-d14	13.41	244	3275119	60.792ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

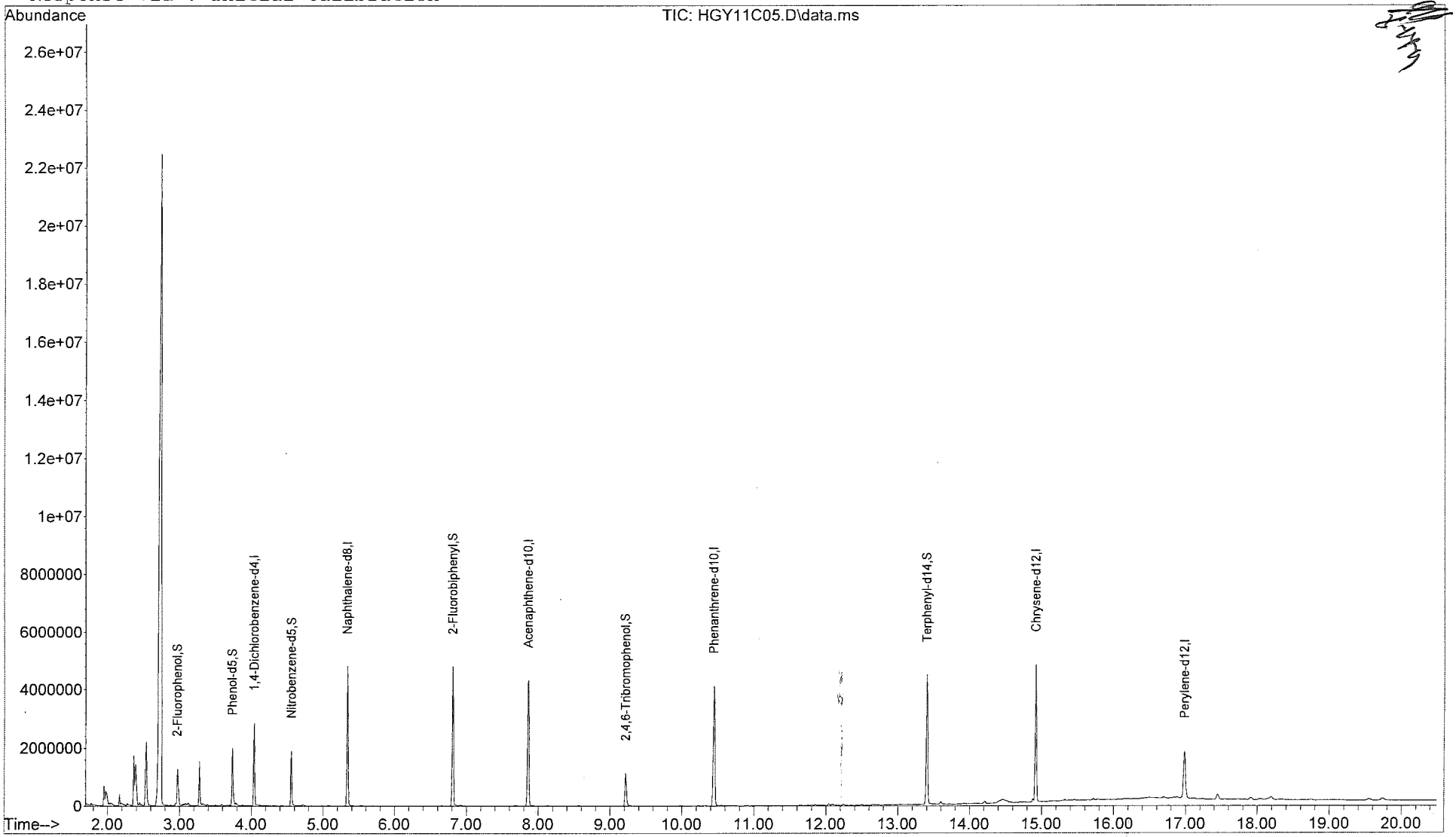
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGY11C05.D Vial: 11
Acq On : 08/13/2012 14:10 Operator: RAH
Sample : 1221564005 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 13 15:26:45 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGY11C05.D Vial: 11
Acq On : 08/13/2012 14:10 Operator: RAH
Sample : 1221564005 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 13 15:26:45 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	572632	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2576735	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1480958	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2689587	40.00 ug/mL
12) Chrysene-d12	14.92	240	2320040	40.00 ug/mL
14) Perylene-d12	16.99	264	948837	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	519773	27.026ug/mL
4) Phenol-d5	3.73	99	752567	29.828ug/mL
7) Nitrobenzene-d5	4.56	82	659921	29.876ug/mL
9) 2-Fluorobiphenyl	6.81	172	2020016	36.775ug/mL
11) 2,4,6-Tribromophenol	9.22	330	234825	25.934ug/mL
13) Terphenyl-d14	13.40	244	2205643	49.243ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

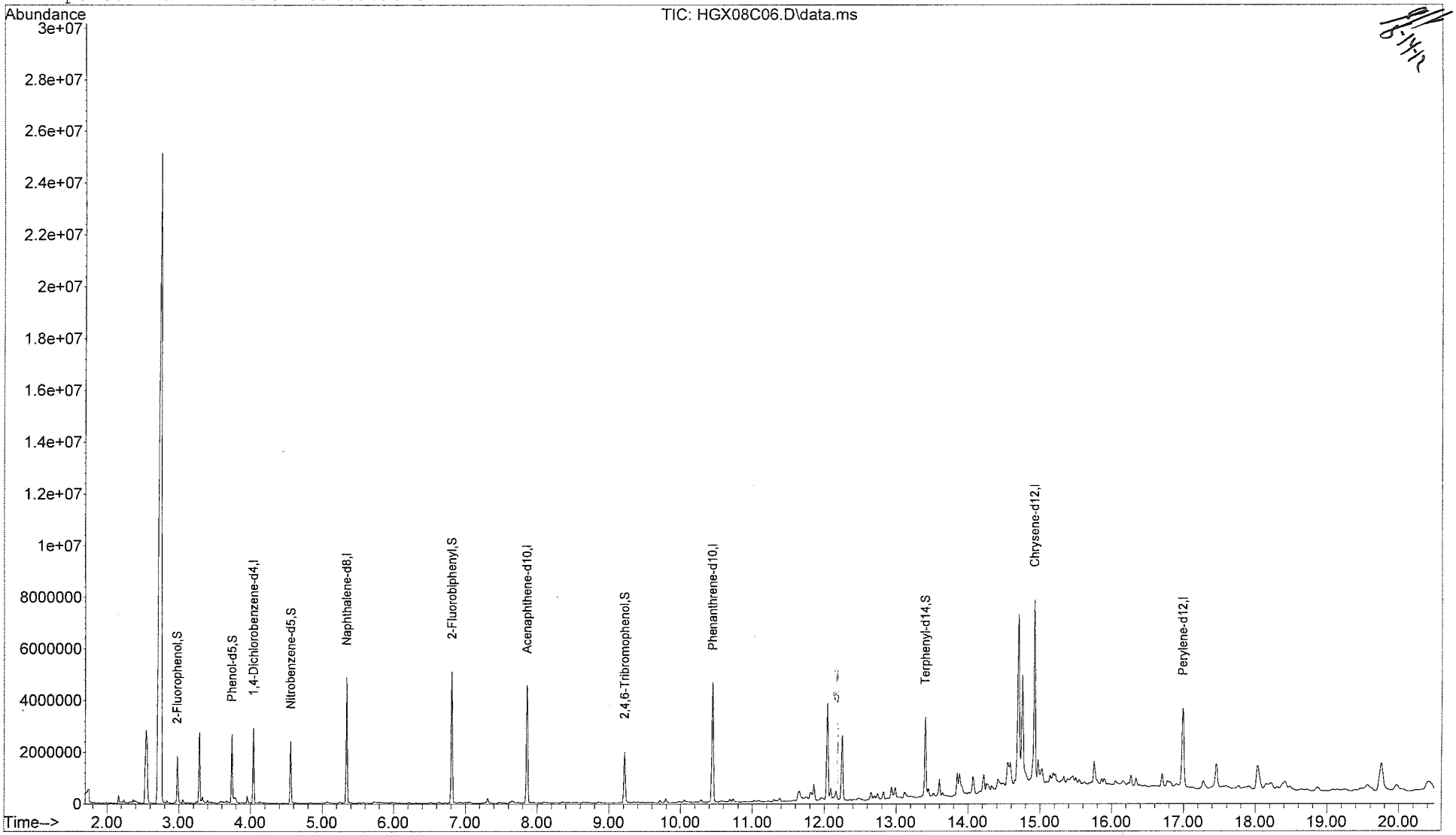
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX08C06.D Vial: 8
Acq On : 08/10/2012 13:20 Operator: RAH
Sample : 1221564006 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 14:06:57 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX08C06.D Vial: 8
Acq On : 08/10/2012 13:20 Operator: RAH
Sample : 1221564006 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 14:06:57 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	592167	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2629379	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1563961	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3019463	40.00 ug/mL
12) Chrysene-d12	14.93	240	3320585	40.00 ug/mL
14) Perylene-d12	16.99	264	2034374	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	645217	32.442ug/mL
4) Phenol-d5	3.74	99	1096304	42.018ug/mL
7) Nitrobenzene-d5	4.56	82	819381	36.353ug/mL
9) 2-Fluorobiphenyl	6.81	172	2258351	38.932ug/mL
11) 2,4,6-Tribromophenol	9.22	330	410622	40.395ug/mL
13) Terphenyl-d14	13.40	244	1614823	25.189ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

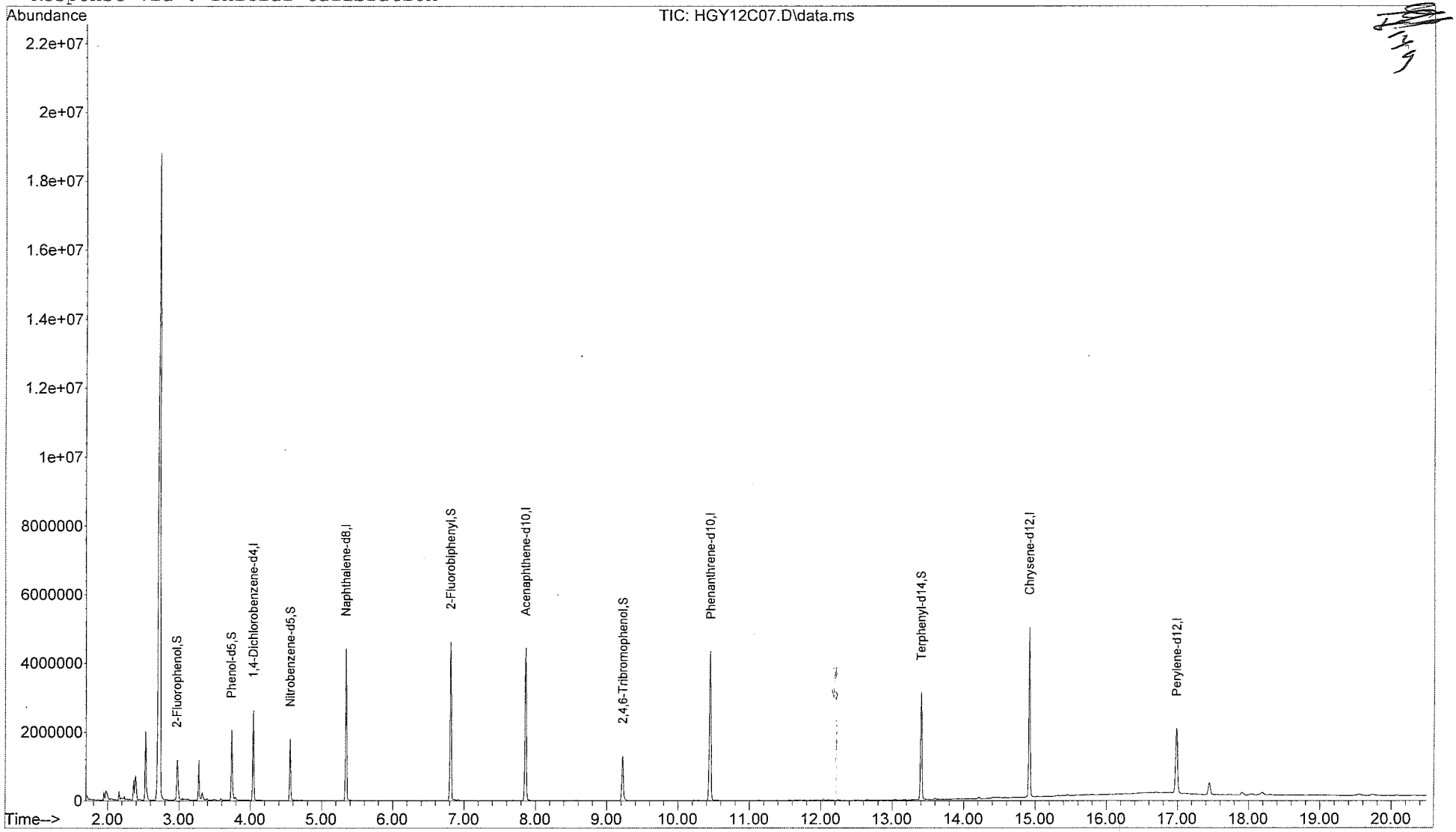
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGY12C07.D Vial: 12
Acq On : 08/13/2012 14:40 Operator: RAH
Sample : 1221564007 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 13 15:27:27 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGY12C07.D Vial: 12
Acq On : 08/13/2012 14:40 Operator: RAH
Sample : 1221564007 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 13 15:27:27 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	534705	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2452359	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1449547	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2762581	40.00 ug/mL
12) Chrysene-d12	14.92	240	2471511	40.00 ug/mL
14) Perylene-d12	16.99	264	1250517	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	527381	29.367ug/mL
4) Phenol-d5	3.73	99	829035	35.189ug/mL
7) Nitrobenzene-d5	4.56	82	629095	29.925ug/mL
9) 2-Fluorobiphenyl	6.81	172	1999294	37.187ug/mL
11) 2,4,6-Tribromophenol	9.22	330	275631	29.636ug/mL
13) Terphenyl-d14	13.40	244	1595959	33.448ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

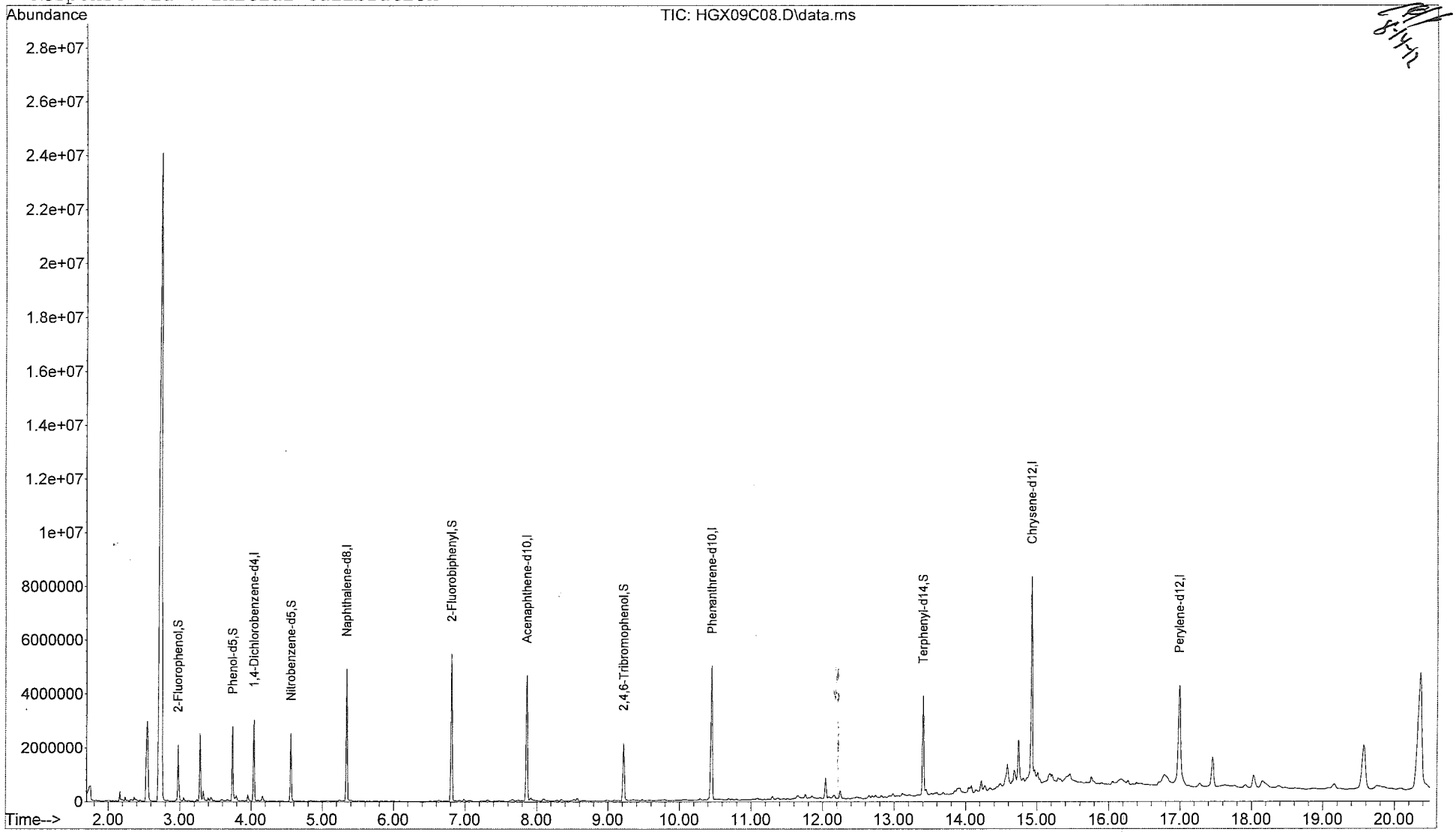
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX09C08.D Vial: 9
Acq On : 08/10/2012 13:50 Operator: RAH
Sample : 1221564008 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 14:16:35 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX09C08.D Vial: 9
Acq On : 08/10/2012 13:50 Operator: RAH
Sample : 1221564008 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 14:16:35 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	598384	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2687563	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1585834	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3104692	40.00 ug/mL
12) Chrysene-d12	14.93	240	3445818	40.00 ug/mL
14) Perylene-d12	16.99	264	2245264	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	671998	33.438ug/mL
4) Phenol-d5	3.74	99	1130860	42.892ug/mL
7) Nitrobenzene-d5	4.56	82	852024	36.983ug/mL
9) 2-Fluorobiphenyl	6.81	172	2335479	39.707ug/mL
11) 2,4,6-Tribromophenol	9.22	330	435771	41.692ug/mL
13) Terphenyl-d14	13.40	244	1772805	26.649ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104	Not Detected	
5) 1,4-Dithiane	0.00	120	Not Detected	

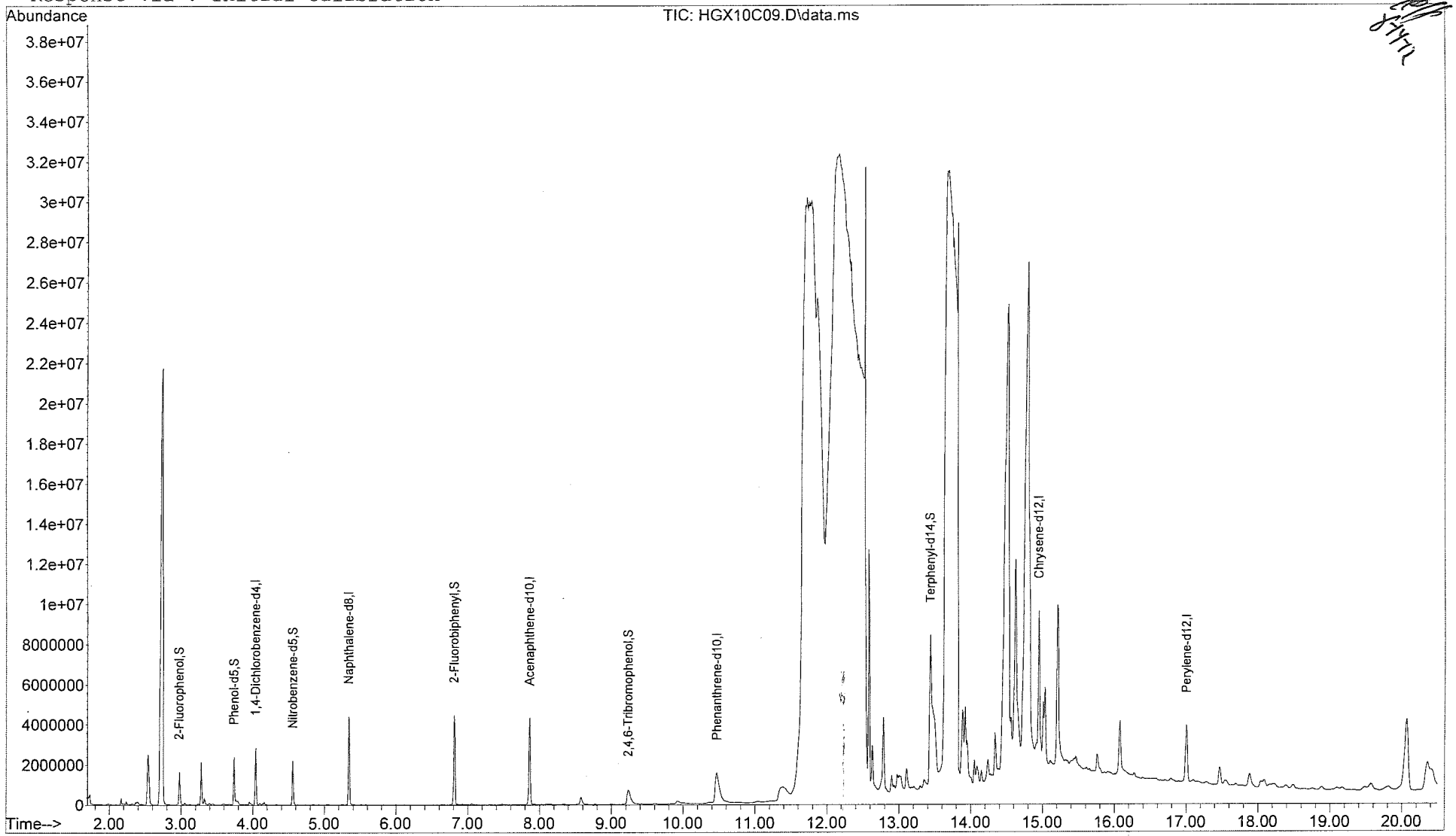
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX10C09.D Vial: 10
Acq On : 08/10/2012 14:20 Operator: RAH
Sample : 1221564009 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 14:52:40 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX10C09.D Vial: 10
Acq On : 08/10/2012 14:20 Operator: RAH
Sample : 1221564009 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 14:52:40 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	583131	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2534848	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1480544	40.00 ug/mL
10) Phenanthrene-d10	10.47	188	2824892	40.00 ug/mL
12) Chrysene-d12	14.95	240	3537537	40.00 ug/mL
14) Perylene-d12	17.00	264	1963663	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	605897	30.937ug/mL
4) Phenol-d5	3.74	99	1008054	39.235ug/mL
7) Nitrobenzene-d5	4.56	82	778484	35.826ug/mL
9) 2-Fluorobiphenyl	6.81	172	2085992	37.987ug/mL
11) 2,4,6-Tribromophenol	9.24	330	367089	38.600ug/mL
13) Terphenyl-d14	13.44	244	911071	13.340ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

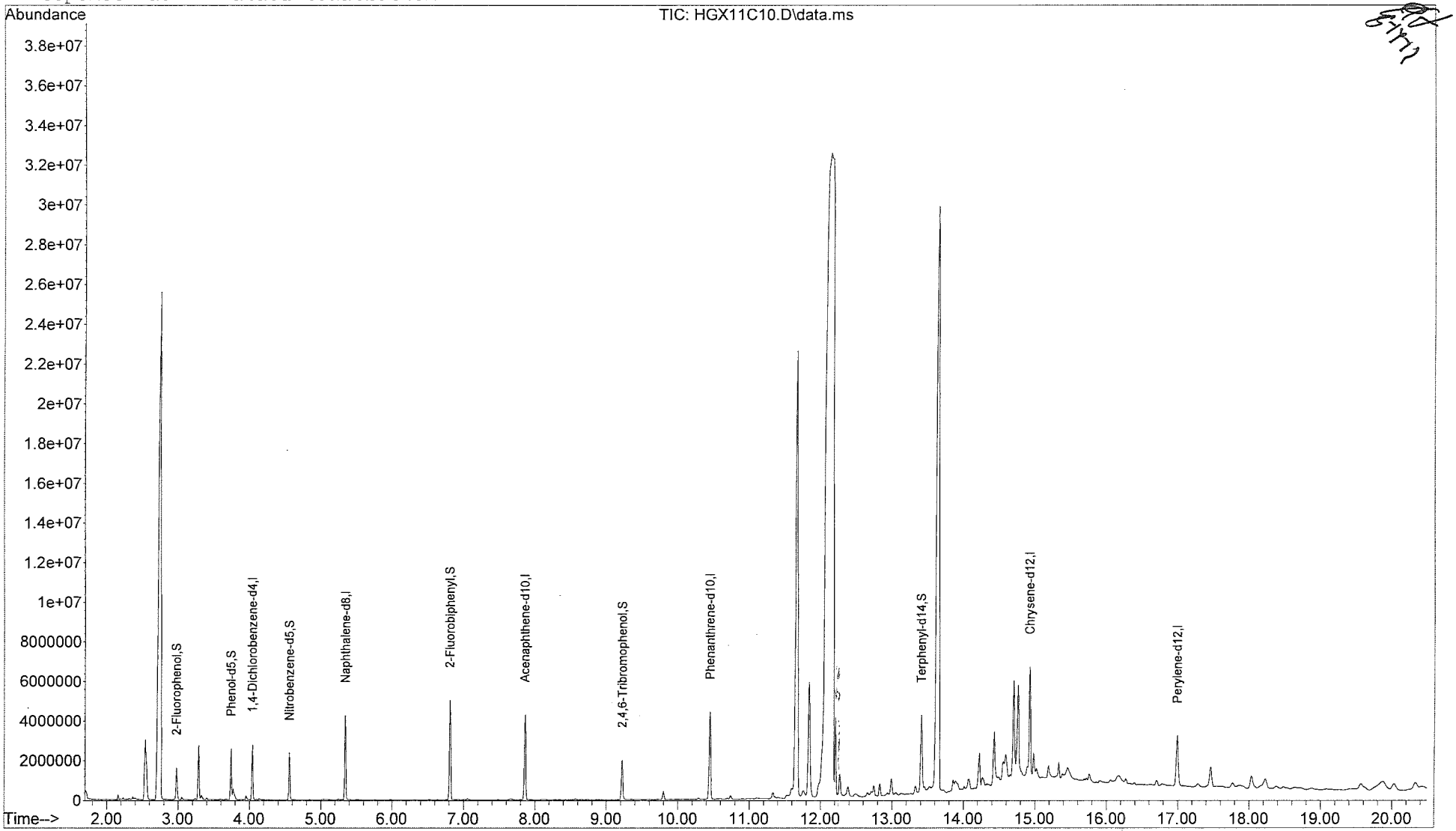
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX11C10.D Vial: 11
Acq On : 08/10/2012 14:49 Operator: RAH
Sample : 1221564010 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 15:10:44 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX11C10.D Vial: 11
Acq On : 08/10/2012 14:49 Operator: RAH
Sample : 1221564010 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 15:10:44 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	563714	40.00 ug/mL
6) Naphthalene-d8	5.35	136	2497365	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1447251	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2796780	40.00 ug/mL
12) Chrysene-d12	14.93	240	2962734	40.00 ug/mL
14) Perylene-d12	17.00	264	1712614	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	625123	33.018ug/mL
4) Phenol-d5	3.74	99	1084640	43.670ug/mL
7) Nitrobenzene-d5	4.56	82	795659	37.166ug/mL
9) 2-Fluorobiphenyl	6.81	172	2298292	42.816ug/mL
11) 2,4,6-Tribromophenol	9.22	330	428690	45.530ug/mL
13) Terphenyl-d14	13.41	244	1696764	29.664ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

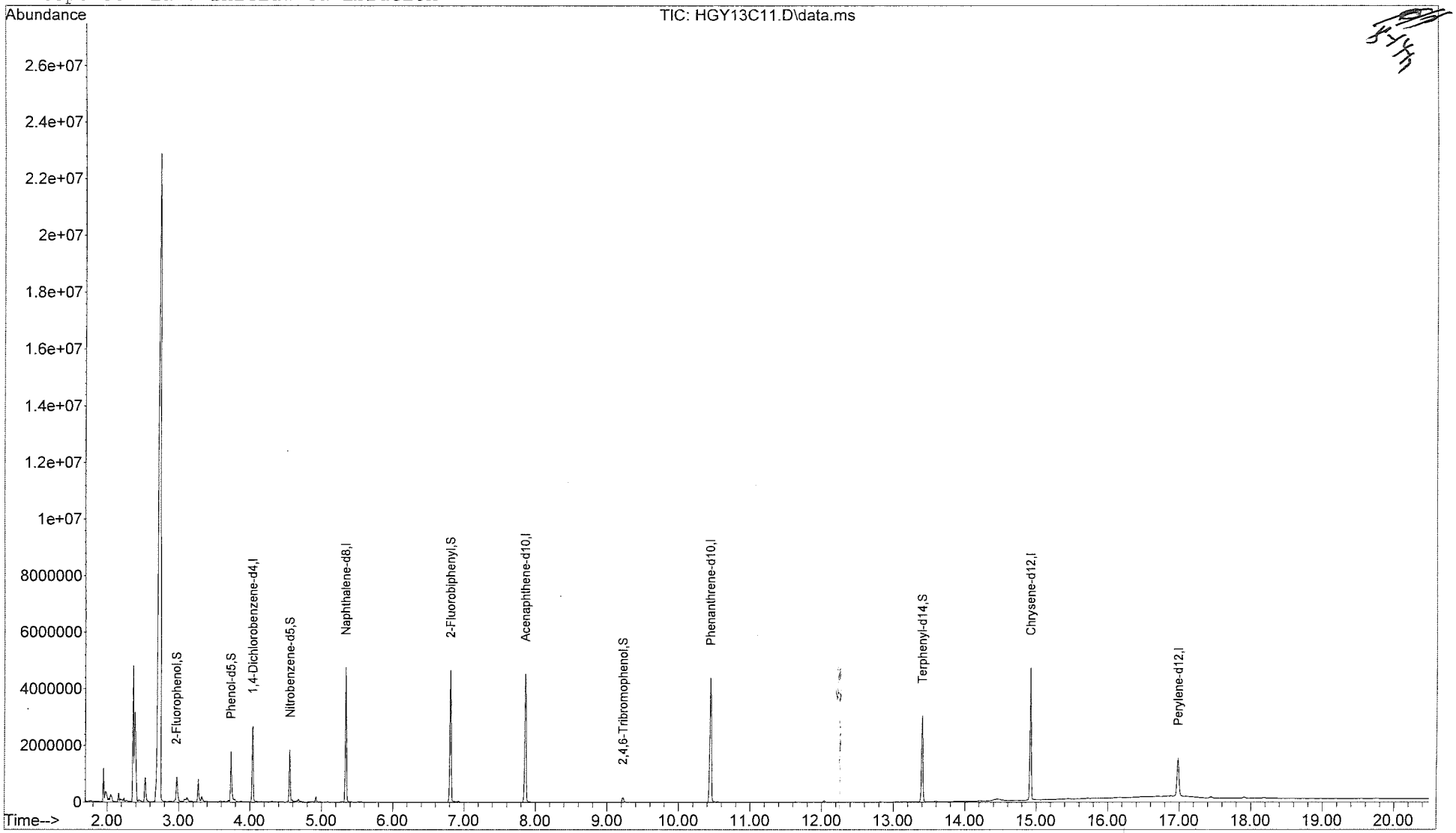
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGY13C11.D Vial: 13
Acq On : 08/13/2012 15:10 Operator: RAH
Sample : 1221564011 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 13 17:20:11 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGY13C11.D Vial: 13
Acq On : 08/13/2012 15:10 Operator: RAH
Sample : 1221564011 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 13 17:20:11 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	555578	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2541915	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1509968	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2858038	40.00 ug/mL
12) Chrysene-d12	14.92	240	2304189	40.00 ug/mL
14) Perylene-d12	16.99	264	818425	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	383282	20.541ug/mL
4) Phenol-d5	3.73	99	582762	23.807ug/mL
7) Nitrobenzene-d5	4.56	82	649941	29.828ug/mL
9) 2-Fluorobiphenyl	6.81	172	2082198	37.179ug/mL
11) 2,4,6-Tribromophenol	9.22	330	42215	4.387ug/mL
13) Terphenyl-d14	13.40	244	1517850	34.121ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

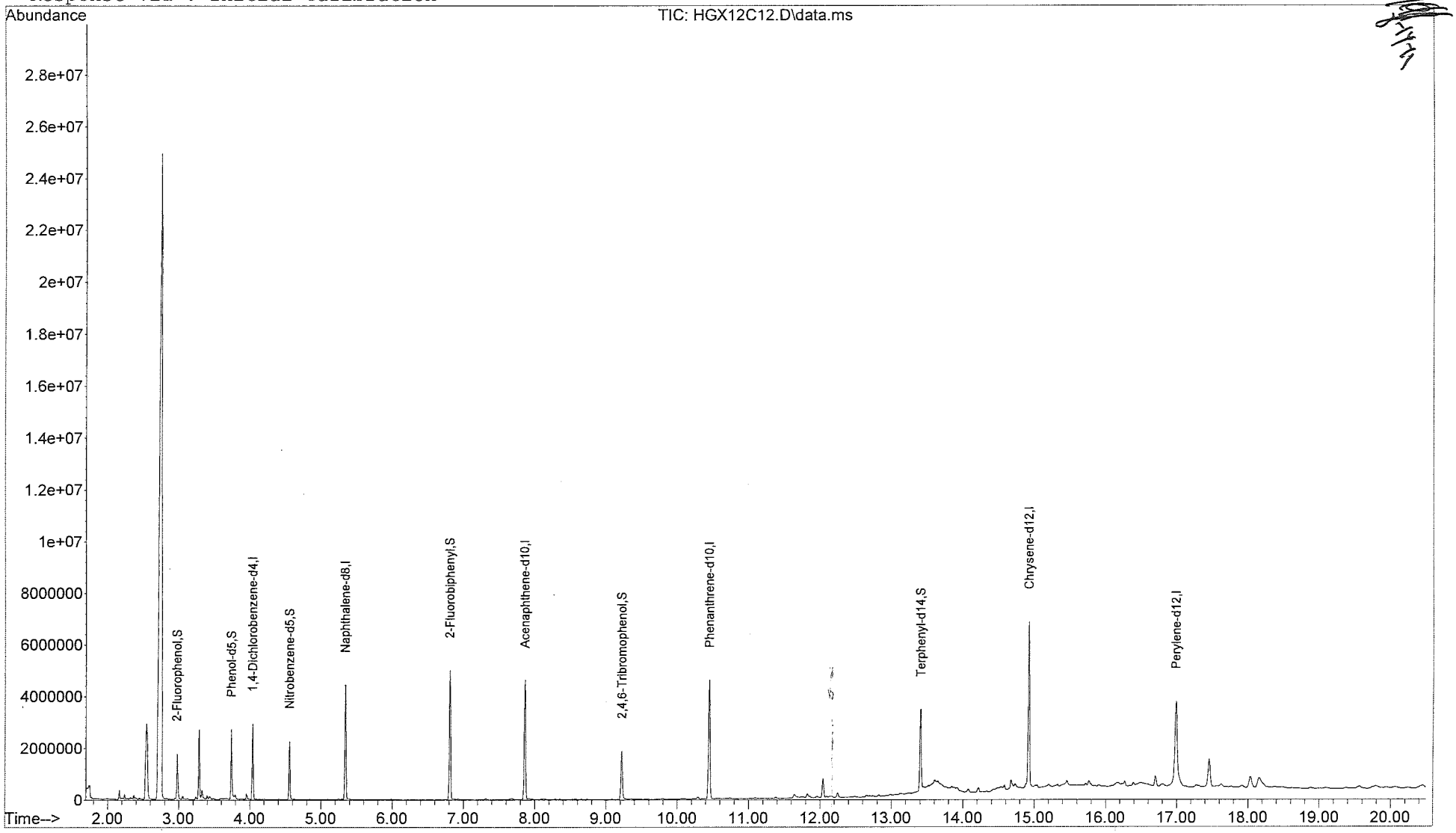
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX12C12.D Vial: 12
Acq On : 08/10/2012 15:19 Operator: RAH
Sample : 1221564012 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 15:51:50 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX12C12.D Vial: 12
Acq On : 08/10/2012 15:19 Operator: RAH
Sample : 1221564012 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 15:51:50 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	576205	40.00 ug/mL
6) Naphthalene-d8	5.35	136	2592875	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1496381	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2891563	40.00 ug/mL
12) Chrysene-d12	14.93	240	3165549	40.00 ug/mL
14) Perylene-d12	16.99	264	1916151	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	621613	32.121ug/mL
4) Phenol-d5	3.74	99	1053030	41.478ug/mL
7) Nitrobenzene-d5	4.56	82	775792	34.903ug/mL
9) 2-Fluorobiphenyl	6.81	172	2204232	39.715ug/mL
11) 2,4,6-Tribromophenol	9.22	330	402585	41.356ug/mL
13) Terphenyl-d14	13.41	244	1696375	27.758ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

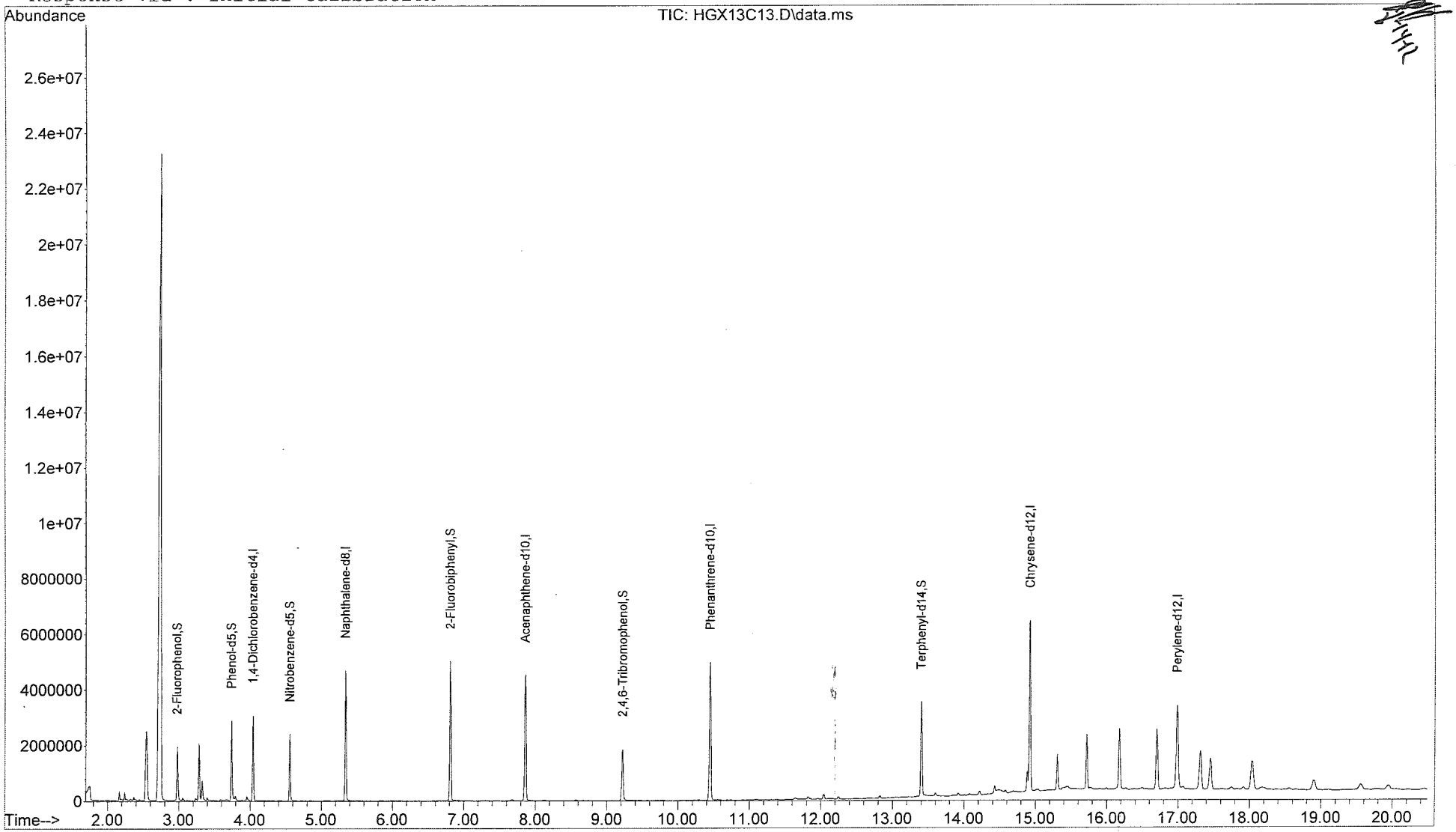
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX13C13.D Vial: 13
Acq On : 08/10/2012 15:48 Operator: RAH
Sample : 1221564013 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 16:09:59 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX13C13.D Vial: 13
Acq On : 08/10/2012 15:48 Operator: RAH
Sample : 1221564013 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 16:09:59 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	596178	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2653467	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1539256	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2961699	40.00 ug/mL
12) Chrysene-d12	14.93	240	3291702	40.00 ug/mL
14) Perylene-d12	16.99	264	1989950	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	666851	33.304ug/mL
4) Phenol-d5	3.74	99	1125568	42.850ug/mL
7) Nitrobenzene-d5	4.56	82	815908	35.870ug/mL
9) 2-Fluorobiphenyl	6.81	172	2221061	38.904ug/mL
11) 2,4,6-Tribromophenol	9.22	330	396570	39.773ug/mL
13) Terphenyl-d14	13.40	244	1754857	27.614ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104	Not Detected	
5) 1,4-Dithiane	0.00	120	Not Detected	

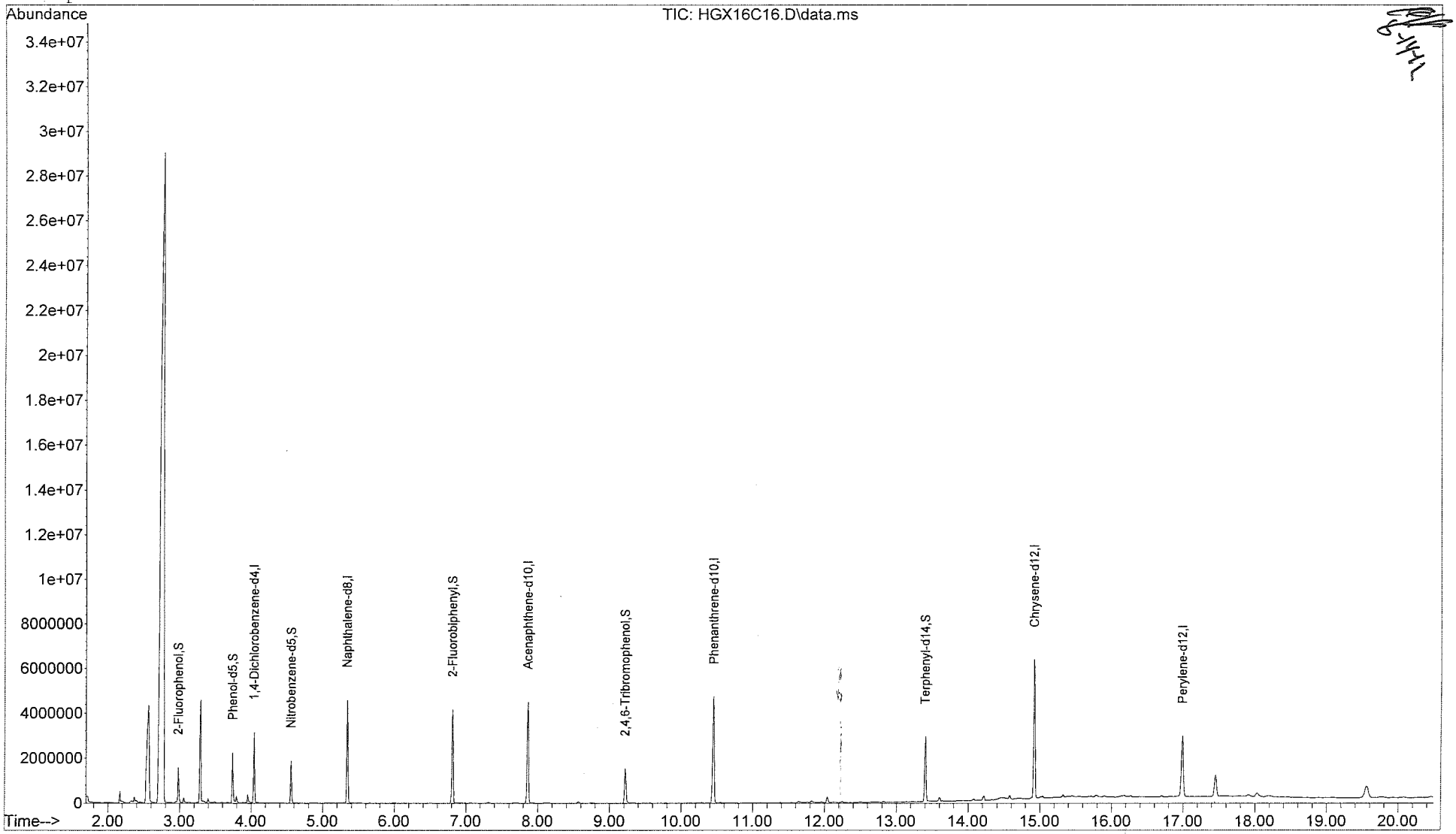
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX16C16.D Vial: 16
Acq On : 08/10/2012 17:16 Operator: RAH
Sample : 1221564016 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 13 08:50:26 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX16C16.D Vial: 16
Acq On : 08/10/2012 17:16 Operator: RAH
Sample : 1221564016 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 13 08:50:26 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	574140	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2546010	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1480539	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2858685	40.00 ug/mL
12) Chrysene-d12	14.92	240	3146622	40.00 ug/mL
14) Perylene-d12	16.99	264	1829737	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	510753	26.488ug/mL
4) Phenol-d5	3.74	99	886911	35.060ug/mL
7) Nitrobenzene-d5	4.56	82	634301	29.063ug/mL
9) 2-Fluorobiphenyl	6.81	172	1832533	33.372ug/mL
11) 2,4,6-Tribromophenol	9.22	330	323021	33.564ug/mL
13) Terphenyl-d14	13.40	244	1457946	24.000ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

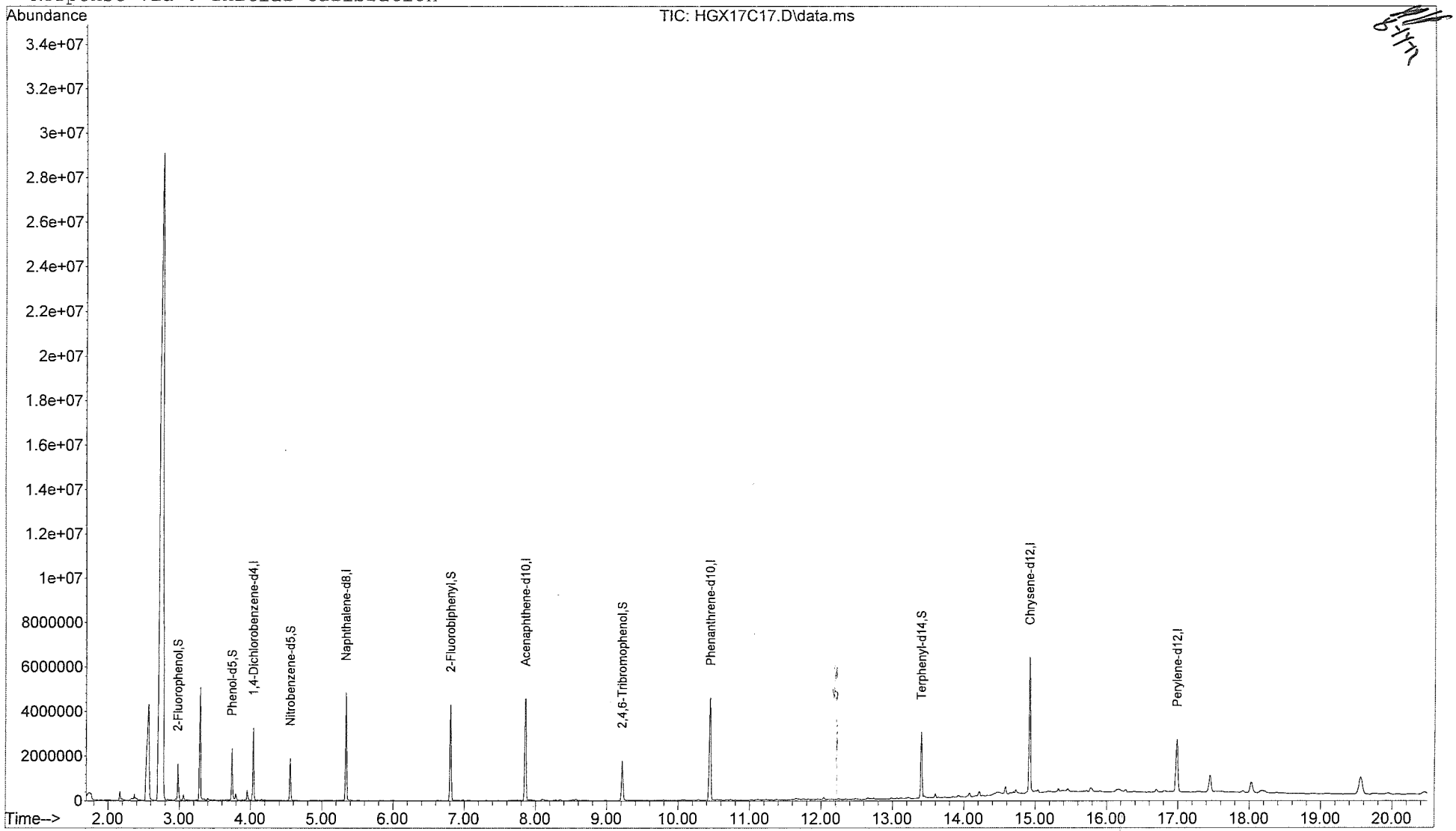
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX17C17.D Vial: 17
Acq On : 08/10/2012 17:45 Operator: RAH
Sample : 1221564017 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 13 08:51:03 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX17C17.D Vial: 17
Acq On : 08/10/2012 17:45 Operator: RAH
Sample : 1221564017 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 13 08:51:03 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	594995	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2630799	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1546018	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2946790	40.00 ug/mL
12) Chrysene-d12	14.93	240	3100092	40.00 ug/mL
14) Perylene-d12	16.99	264	1644552	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	500556	25.049ug/mL
4) Phenol-d5	3.74	99	884271	33.731ug/mL
7) Nitrobenzene-d5	4.56	82	638678	28.320ug/mL
9) 2-Fluorobiphenyl	6.81	172	1863330	32.495ug/mL
11) 2,4,6-Tribromophenol	9.22	330	356149	35.900ug/mL
13) Terphenyl-d14	13.40	244	1477092	24.680ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

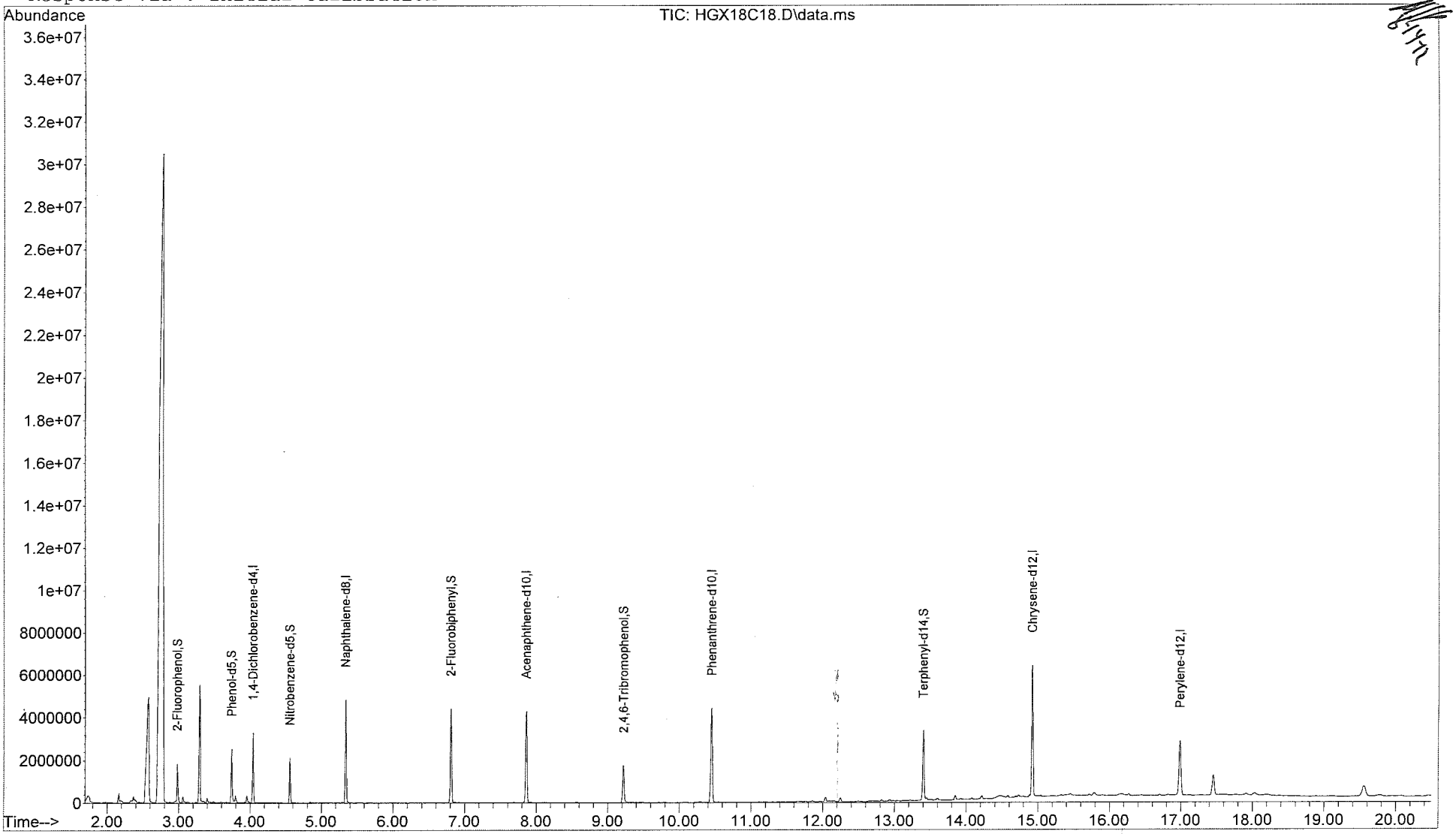
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX18C18.D Vial: 18
Acq On : 08/10/2012 18:15 Operator: RAH
Sample : 1221564018 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 13 08:51:54 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX18C18.D Vial: 18
Acq On : 08/10/2012 18:15 Operator: RAH
Sample : 1221564018 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 13 08:51:54 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	580210	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2573479	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1486773	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2891108	40.00 ug/mL
12) Chrysene-d12	14.93	240	3194874	40.00 ug/mL
14) Perylene-d12	16.99	264	1789303	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	563177	28.901ug/mL
4) Phenol-d5	3.74	99	970784	37.974ug/mL
7) Nitrobenzene-d5	4.56	82	696365	31.566ug/mL
9) 2-Fluorobiphenyl	6.81	172	1929272	34.986ug/mL
11) 2,4,6-Tribromophenol	9.22	330	374259	38.452ug/mL
13) Terphenyl-d14	13.40	244	1692104	27.433ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

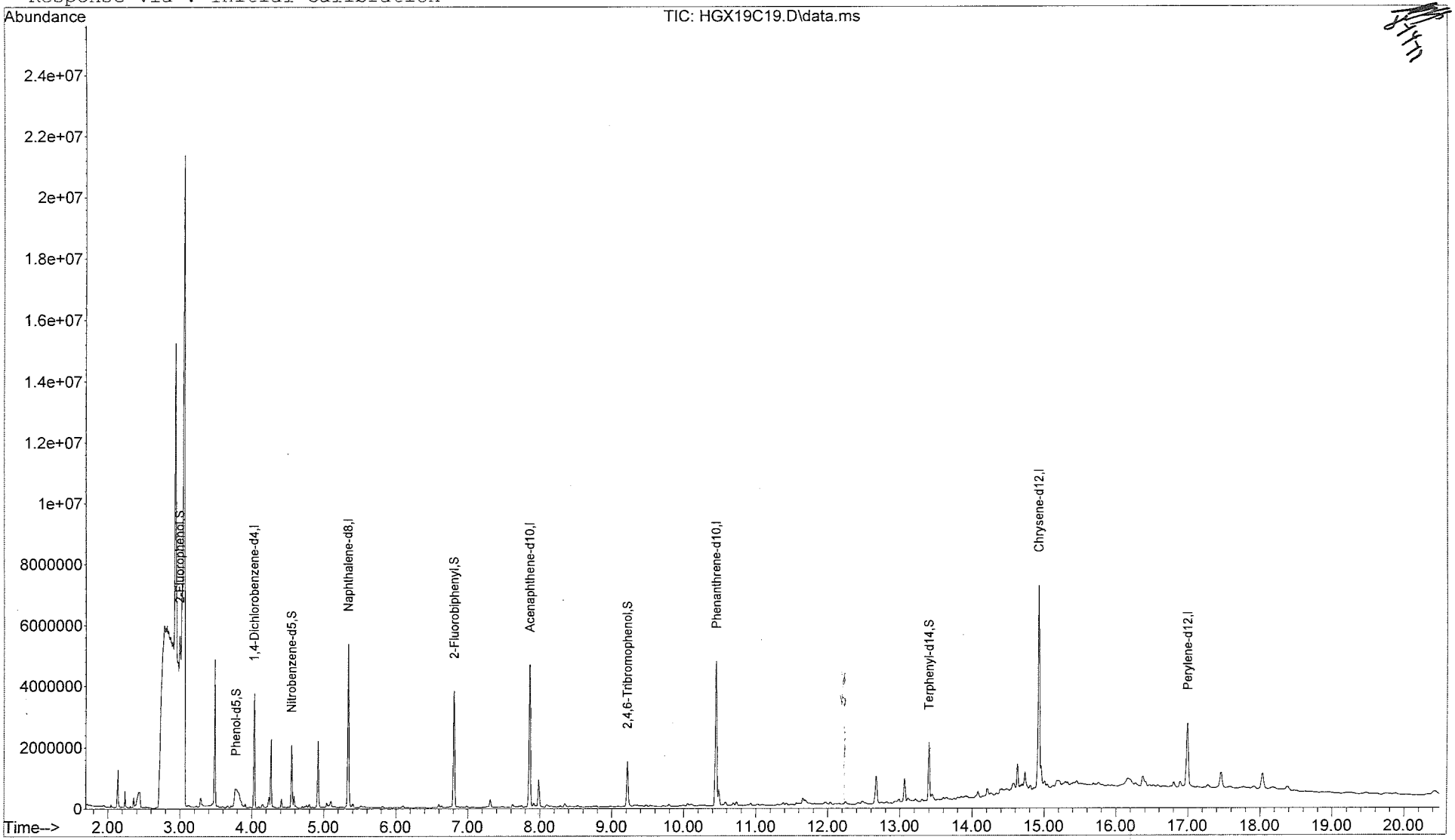
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX19C19.D Vial: 19
Acq On : 08/10/2012 18:44 Operator: RAH
Sample : 1221564019 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 13 08:53:32 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX19C19.D Vial: 19
Acq On : 08/10/2012 18:44 Operator: RAH
Sample : 1221564019 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : luL
MS Integration Params: rteint.p
Quant Time: Aug 13 08:53:32 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	659024	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2954362	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1597827	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2953372	40.00 ug/mL
12) Chrysene-d12	14.93	240	2938907	40.00 ug/mL
14) Perylene-d12	17.00	264	1427735	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	3.00	112	648761	29.311ug/mL
4) Phenol-d5	3.78	99	967021	33.303ug/mL
7) Nitrobenzene-d5	4.55	82	704917	27.834ug/mL
9) 2-Fluorobiphenyl	6.81	172	1727226	29.145ug/mL
11) 2,4,6-Tribromophenol	9.22	330	290597	29.227ug/mL
13) Terphenyl-d14	13.40	244	937703	16.527ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

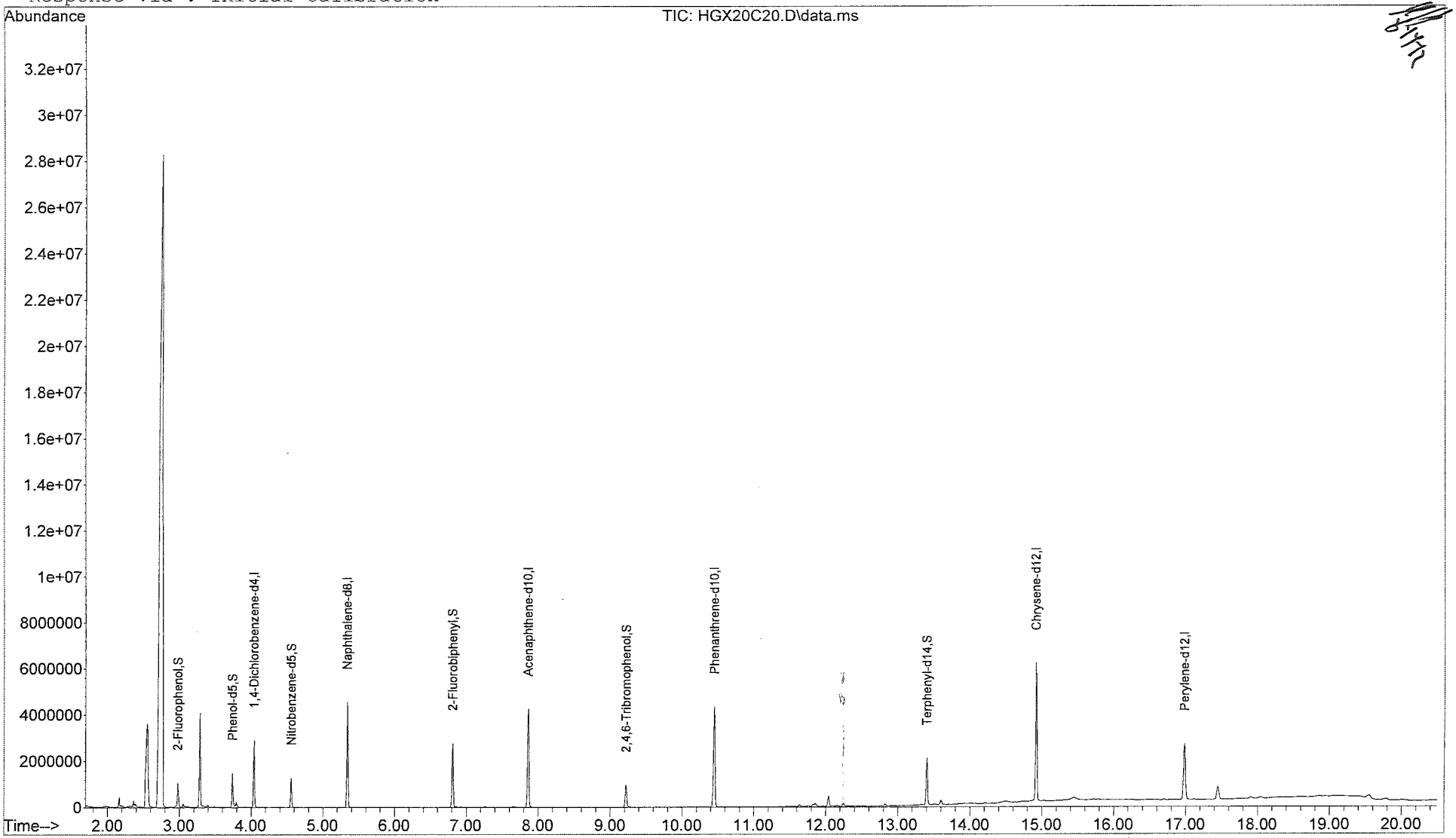
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX20C20.D Vial: 20
Acq On : 08/10/2012 19:14 Operator: RAH
Sample : 1221564020 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 13 08:54:12 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX20C20.D Vial: 20
Acq On : 08/10/2012 19:14 Operator: RAH
Sample : 1221564020 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 13 08:54:12 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	569588	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2494732	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1437766	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2773479	40.00 ug/mL
12) Chrysene-d12	14.92	240	2989495	40.00 ug/mL
14) Perylene-d12	16.99	264	1650124	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	385329	20.143ug/mL
4) Phenol-d5	3.74	99	641407	25.558ug/mL
7) Nitrobenzene-d5	4.56	82	456812	21.361ug/mL
9) 2-Fluorobiphenyl	6.81	172	1271899	23.851ug/mL
11) 2,4,6-Tribromophenol	9.22	330	214152	22.936ug/mL
13) Terphenyl-d14	13.40	244	1017374	17.627ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

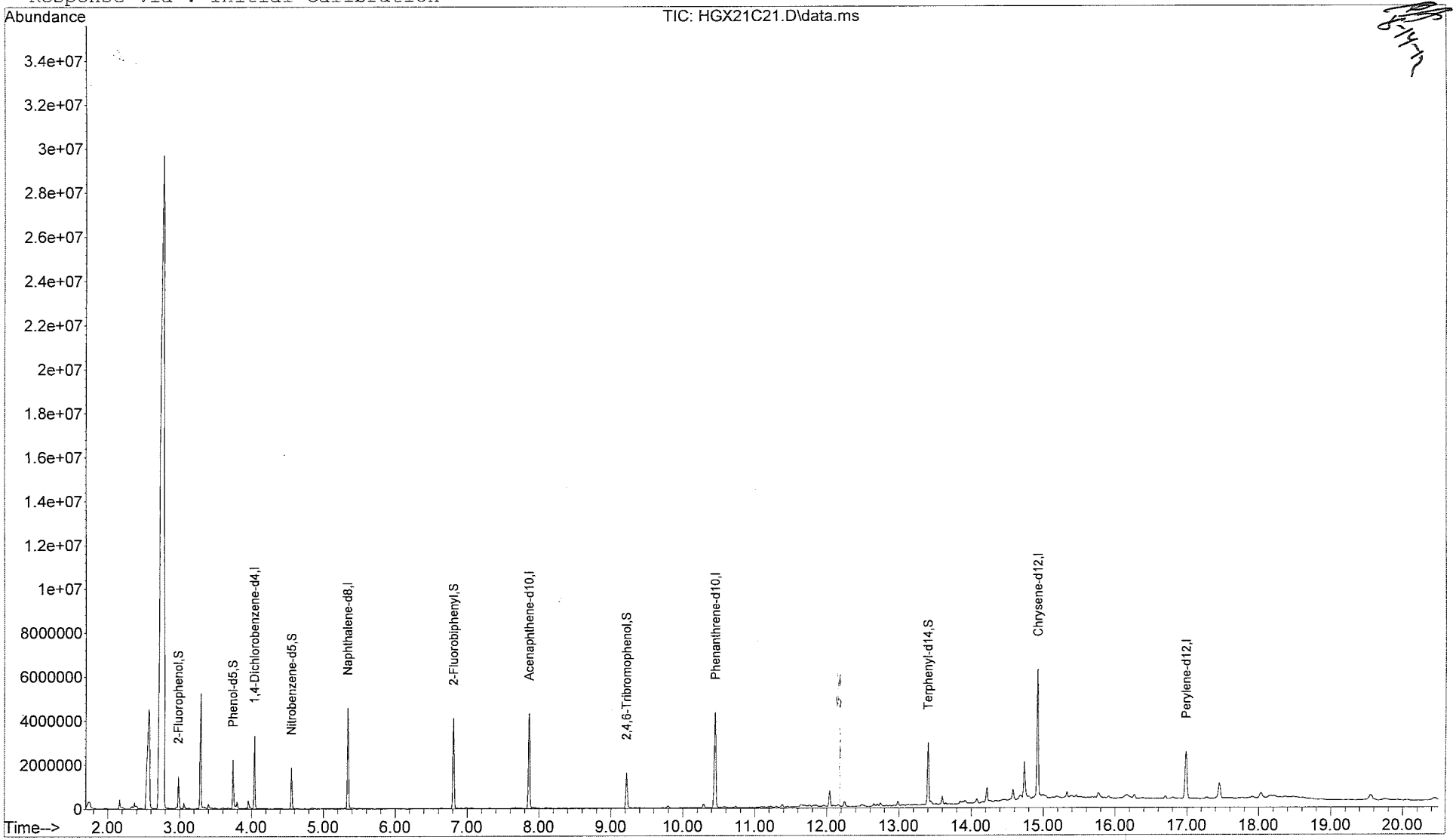
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX21C21.D Vial: 21
Acq On : 08/10/2012 19:43 Operator: RAH
Sample : 1221564021 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 13 08:56:54 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX21C21.D Vial: 21
Acq On : 08/10/2012 19:43 Operator: RAH
Sample : 1221564021 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 13 08:56:54 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	574407	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2541256	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1492993	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2871501	40.00 ug/mL
12) Chrysene-d12	14.93	240	2958047	40.00 ug/mL
14) Perylene-d12	16.99	264	1506233	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	479313	24.846ug/mL
4) Phenol-d5	3.74	99	834813	32.985ug/mL
7) Nitrobenzene-d5	4.56	82	609111	27.961ug/mL
9) 2-Fluorobiphenyl	6.81	172	1803050	32.561ug/mL
11) 2,4,6-Tribromophenol	9.22	330	324788	33.597ug/mL
13) Terphenyl-d14	13.40	244	1446481	25.329ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

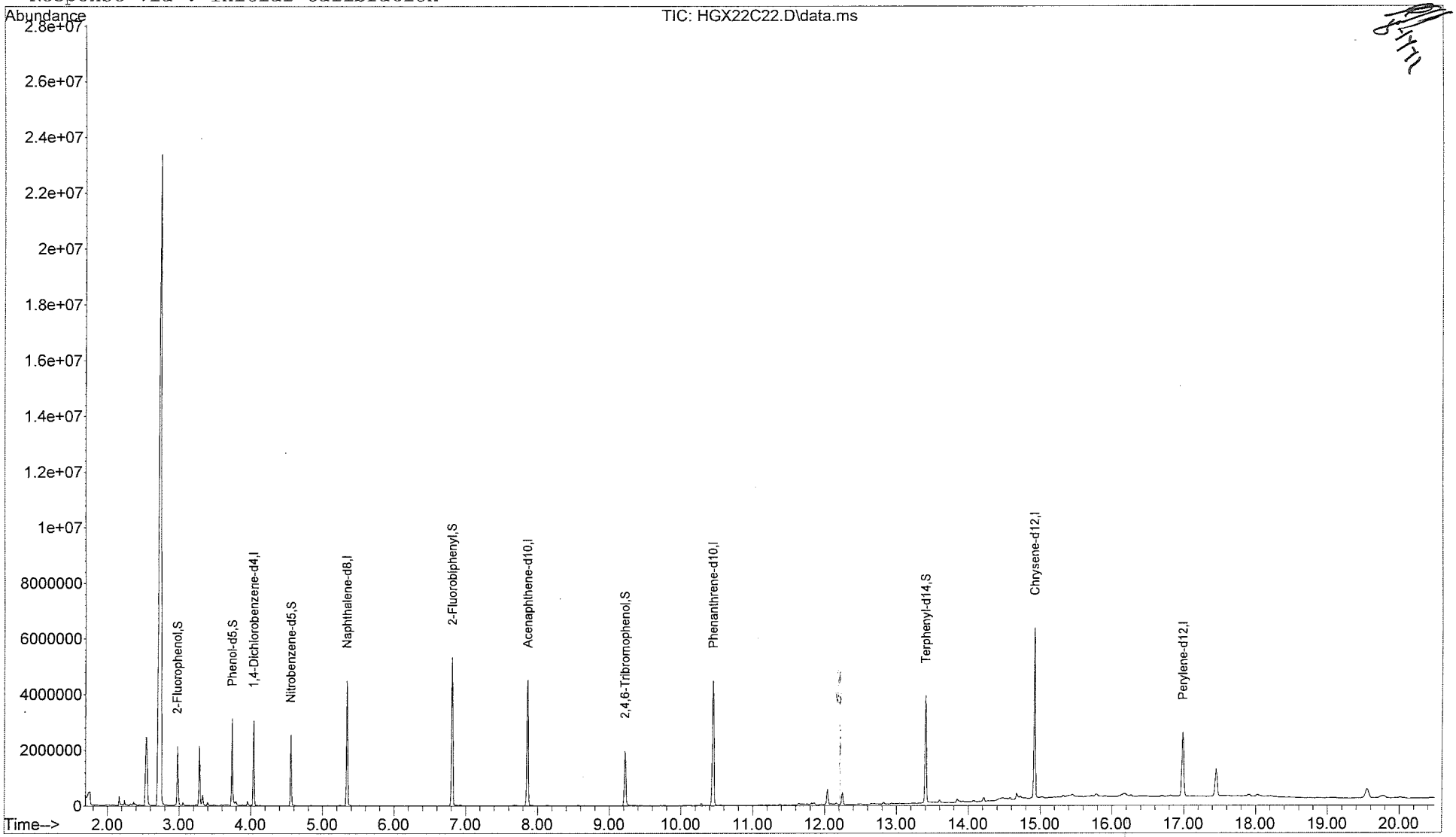
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX22C22.D Vial: 22
Acq On : 08/10/2012 20:13 Operator: RAH
Sample : 1221564022 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 13 08:58:24 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX22C22.D Vial: 22
Acq On : 08/10/2012 20:13 Operator: RAH
Sample : 1221564022 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 13 08:58:24 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	585671	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2580482	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1507137	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2892652	40.00 ug/mL
12) Chrysene-d12	14.92	240	3071876	40.00 ug/mL
14) Perylene-d12	16.99	264	1524487	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	709348	36.062ug/mL
4) Phenol-d5	3.74	99	1198095	46.429ug/mL
7) Nitrobenzene-d5	4.56	82	850613	38.453ug/mL
9) 2-Fluorobiphenyl	6.81	172	2369831	42.394ug/mL
11) 2,4,6-Tribromophenol	9.22	330	421369	43.269ug/mL
13) Terphenyl-d14	13.40	244	1909656	32.200ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

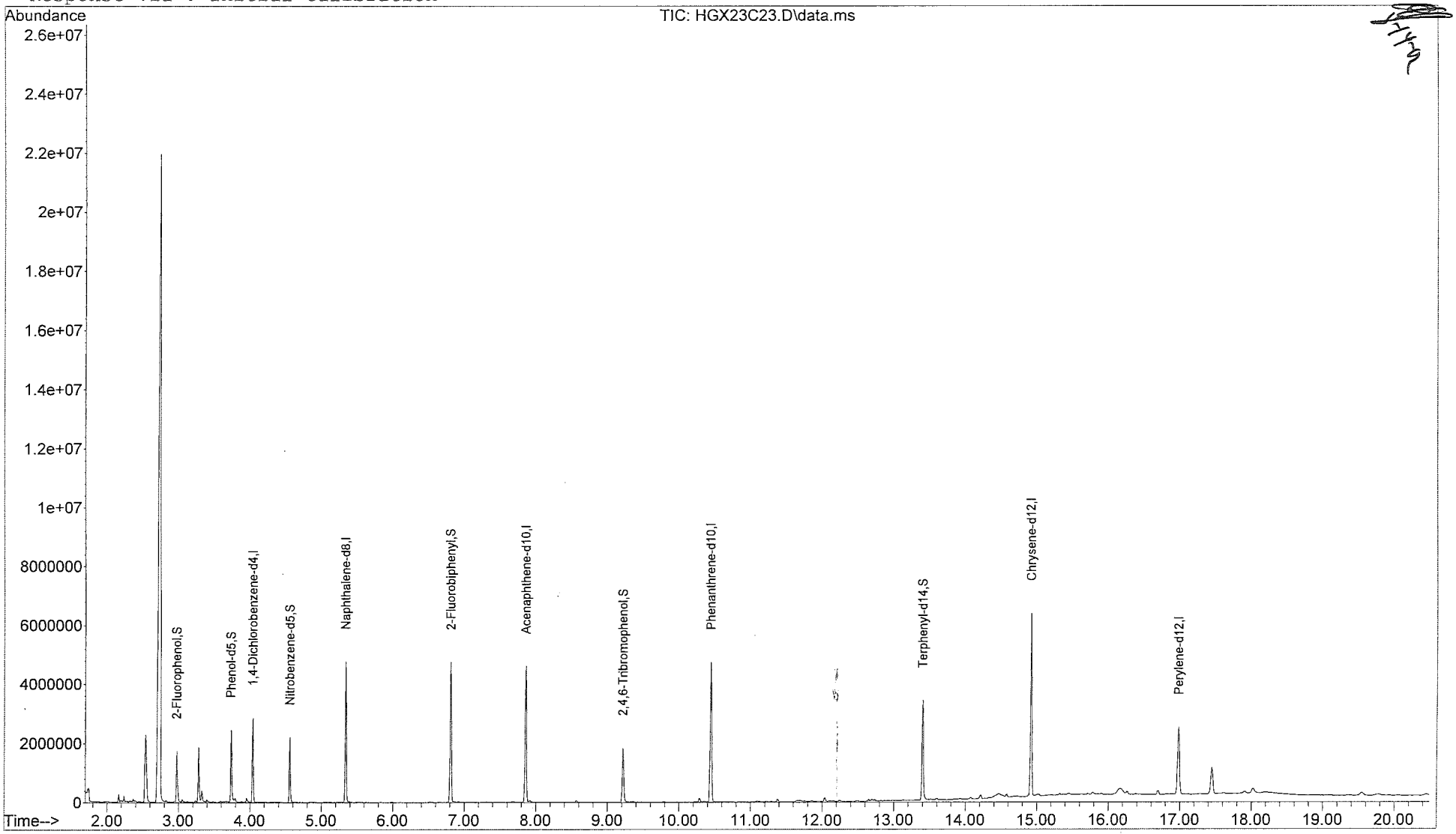
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX23C23.D Vial: 23
Acq On : 08/10/2012 20:42 Operator: RAH
Sample : 1221564023 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 13 08:59:32 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX23C23.D Vial: 23
Acq On : 08/10/2012 20:42 Operator: RAH
Sample : 1221564023 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 13 08:59:32 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	576722	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2582759	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1526767	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2960088	40.00 ug/mL
12) Chrysene-d12	14.92	240	3131203	40.00 ug/mL
14) Perylene-d12	16.99	264	1562513	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	613686	31.683ug/mL
4) Phenol-d5	3.74	99	1032449	40.631ug/mL
7) Nitrobenzene-d5	4.56	82	745893	33.690ug/mL
9) 2-Fluorobiphenyl	6.81	172	2061563	36.406ug/mL
11) 2,4,6-Tribromophenol	9.22	330	373889	37.519ug/mL
13) Terphenyl-d14	13.40	244	1689394	27.946ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

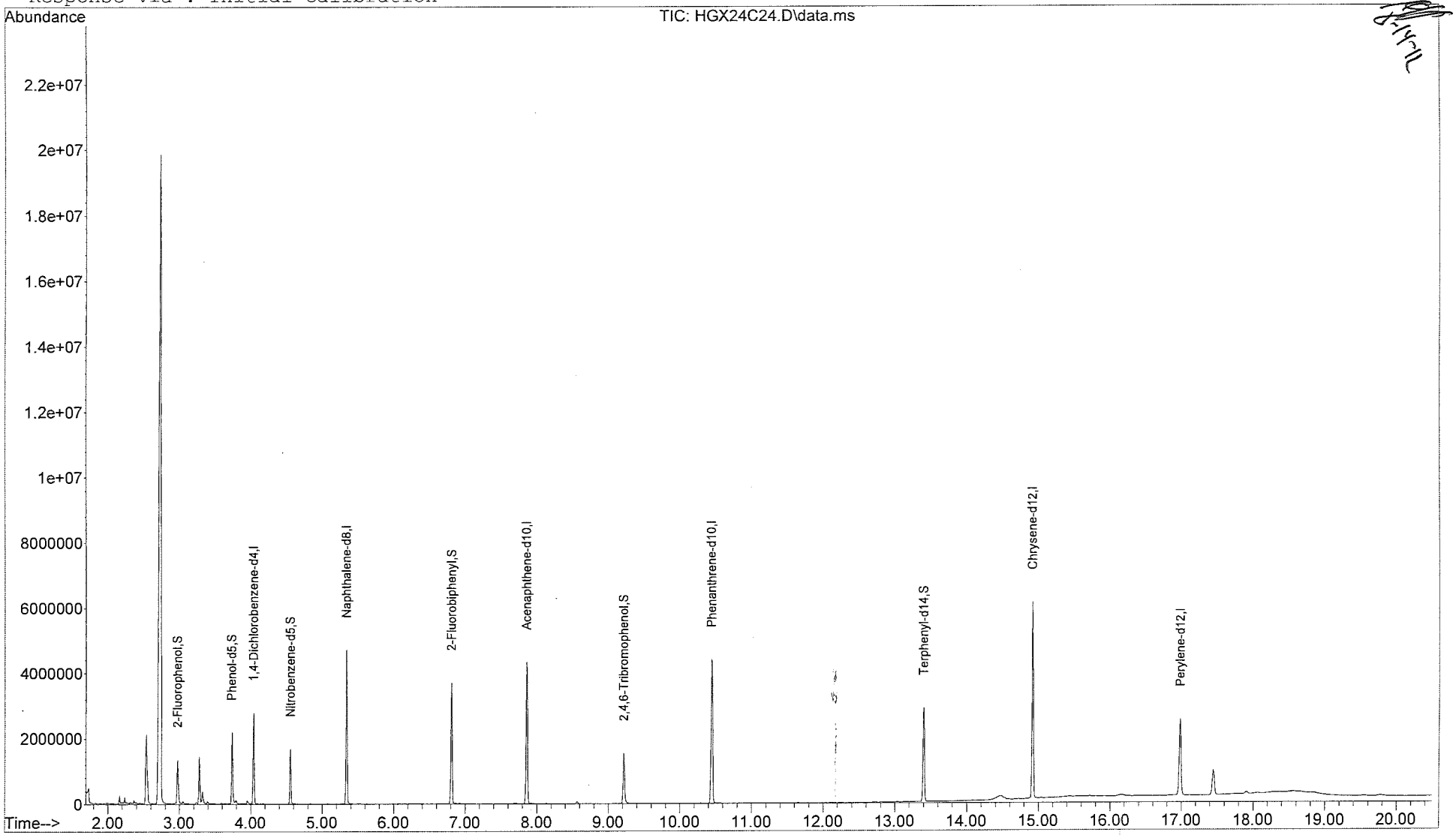
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX24C24.D Vial: 24
Acq On : 08/10/2012 21:11 Operator: PAH
Sample : 1221564024 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 13 09:00:32 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX24C24.D Vial: 24
Acq On : 08/10/2012 21:11 Operator: RAH
Sample : 1221564024 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 13 09:00:32 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	569347	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2542699	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1470591	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2859410	40.00 ug/mL
12) Chrysene-d12	14.92	240	3000365	40.00 ug/mL
14) Perylene-d12	16.99	264	1552965	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	525170	27.465ug/mL
4) Phenol-d5	3.73	99	911288	36.327ug/mL
7) Nitrobenzene-d5	4.56	82	598783	27.471ug/mL
9) 2-Fluorobiphenyl	6.81	172	1643517	30.132ug/mL
11) 2,4,6-Tribromophenol	9.22	330	320854	33.331ug/mL
13) Terphenyl-d14	13.40	244	1532422	26.455ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

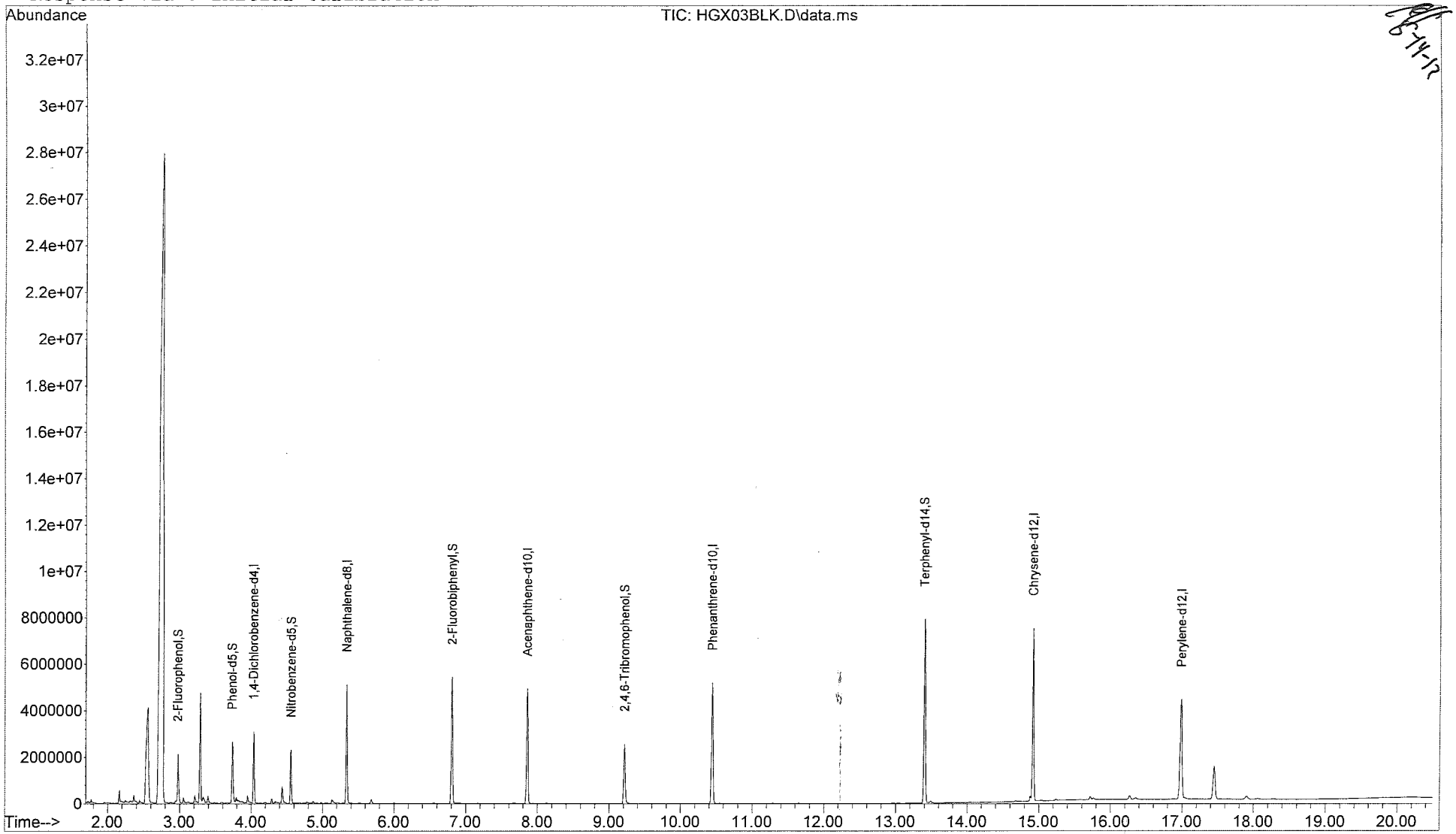
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX03BLK.D Vial: 3
Acq On : 08/10/2012 10:54 Operator: RAH
Sample : 288164 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 11:49:08 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX03BLK.D Vial: 3
Acq On : 08/10/2012 10:54 Operator: RAH
Sample : 288164 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 11:49:08 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	603274	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2737338	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1646769	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	3166872	40.00 ug/mL
12) Chrysene-d12	14.92	240	3626506	40.00 ug/mL
14) Perylene-d12	16.99	264	3096099	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	696917	34.397ug/mL
4) Phenol-d5	3.73	99	1207872	45.442ug/mL
7) Nitrobenzene-d5	4.56	82	838861	35.749ug/mL
9) 2-Fluorobiphenyl	6.81	172	2435721	39.879ug/mL
11) 2,4,6-Tribromophenol	9.22	330	535311	50.210ug/mL
13) Terphenyl-d14	13.40	244	4210068	60.132ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	0.00	104		Not Detected
5) 1,4-Dithiane	0.00	120		Not Detected

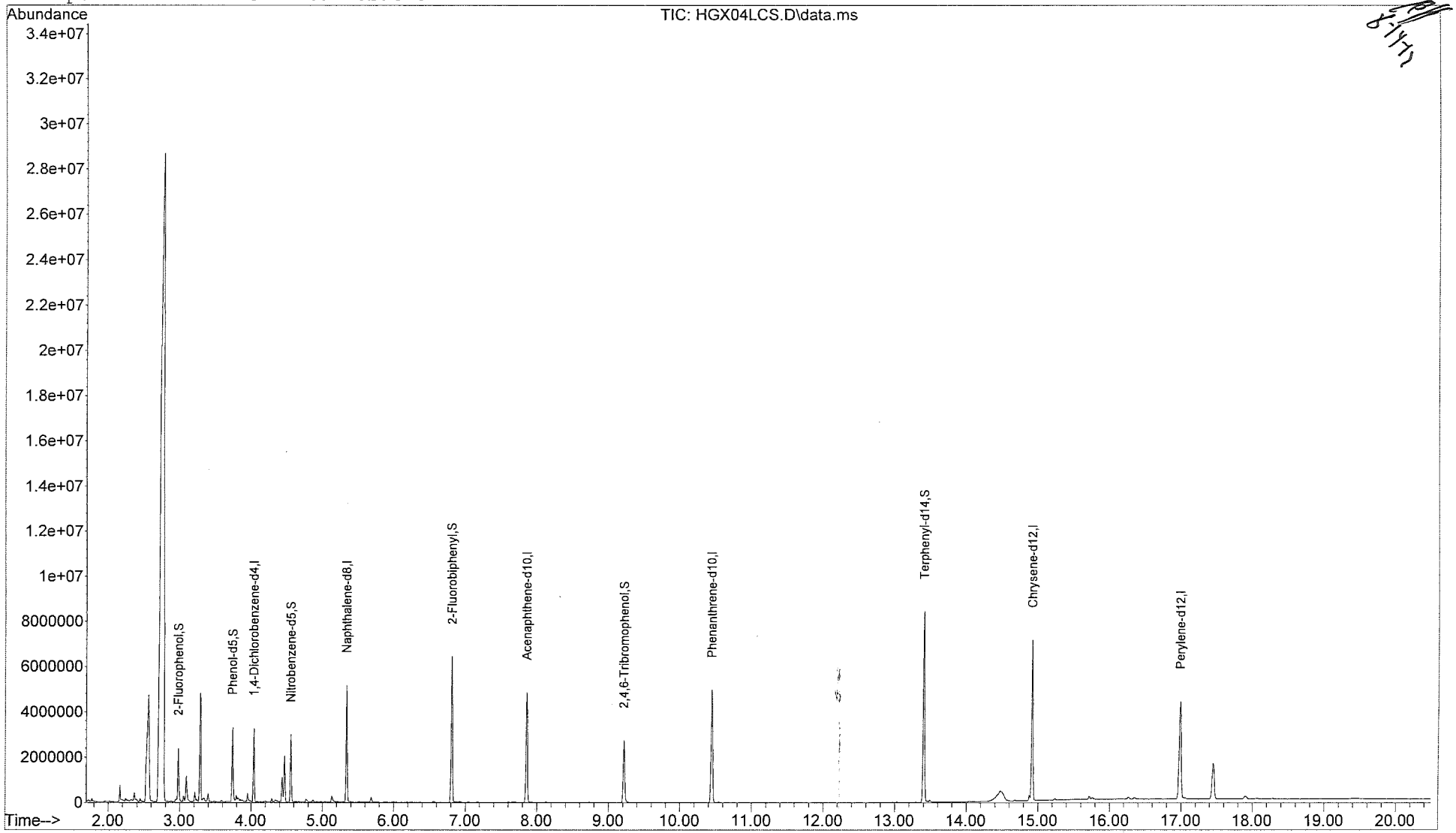
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX04LCS.D Vial: 4
Acq On : 08/10/2012 11:23 Operator: RAH
Sample : 288165 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 11:44:10 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX04LCS.D Vial: 4
Acq On : 08/10/2012 11:23 Operator: RAH
Sample : 288165 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 11:44:10 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	
1) 1,4-Dichlorobenzene-d4	4.04	152	609063	40.00 ug/mL	
6) Naphthalene-d8	5.34	136	2776799	40.00 ug/mL	
8) Acenaphthene-d10	7.86	164	1649063	40.00 ug/mL	
10) Phenanthrene-d10	10.45	188	3172211	40.00 ug/mL	
12) Chrysene-d12	14.92	240	3580000	40.00 ug/mL	
14) Perylene-d12	16.99	264	3035244	40.00 ug/mL	
System Monitoring Compounds					
2) 2-Fluorophenol	2.98	112	816224	39.902ug/mL	
4) Phenol-d5	3.74	99	1430728	53.315ug/mL	
7) Nitrobenzene-d5	4.56	82	984304	41.351ug/mL	
9) 2-Fluorobiphenyl	6.81	172	2851509	46.621ug/mL	
11) 2,4,6-Tribromophenol	9.22	330	593751	55.597ug/mL	
13) Terphenyl-d14	13.41	244	4558451	65.954ug/mL	
Target Compounds					Qvalue
3) 1,4-Oxathiane	3.09	104	246049	23.274ug/mL	98
5) 1,4-Dithiane	4.47	120	489317	28.563ug/mL	97

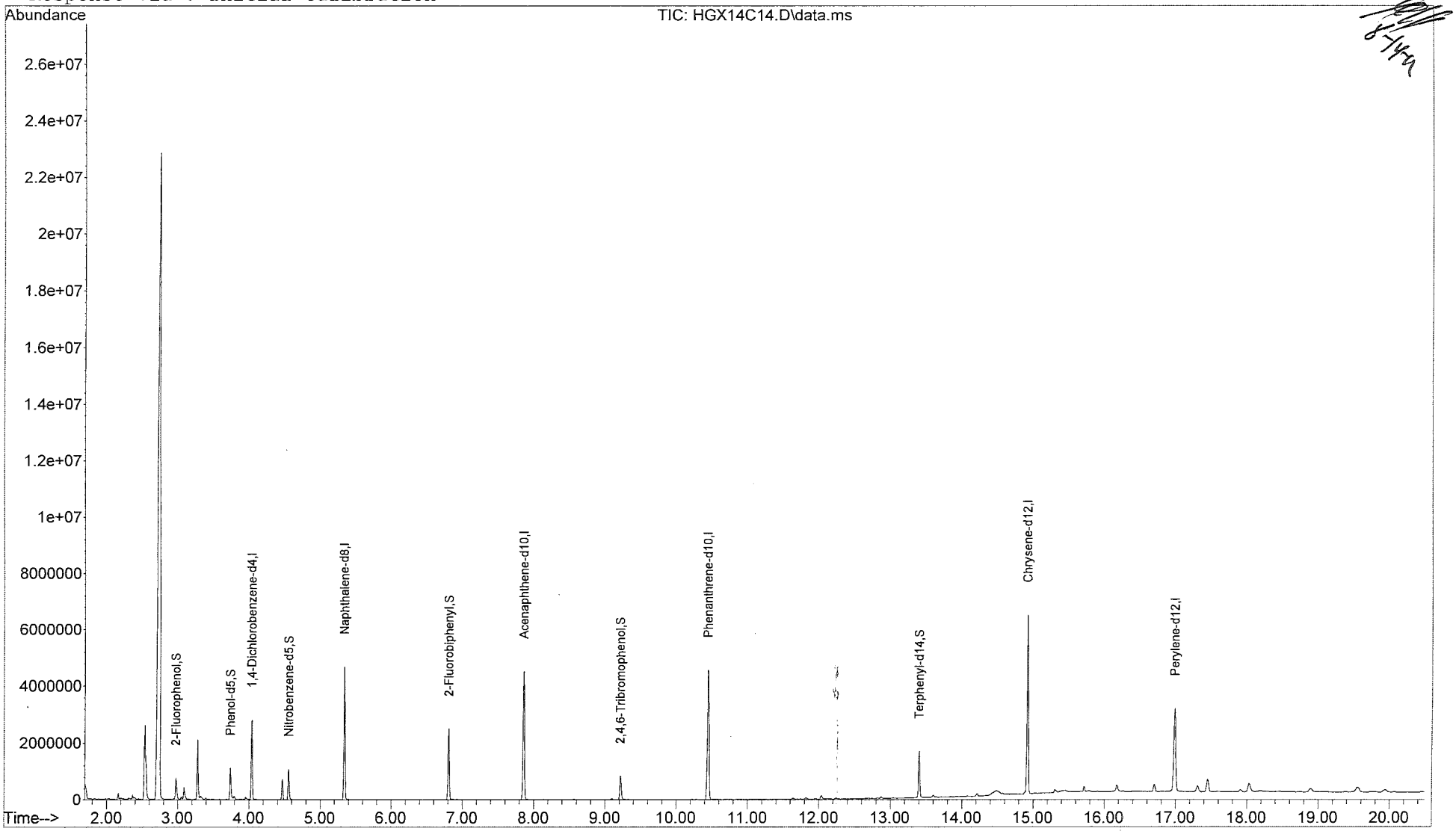
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX14C14.D Vial: 14
Acq On : 08/10/2012 16:17 Operator: RAH
Sample : 1221564014 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 16:38:18 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX14C14.D Vial: 14
Acq On : 08/10/2012 16:17 Operator: RAH
Sample : 1221564014 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 16:38:18 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	583465	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2605379	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1539392	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2998462	40.00 ug/mL
12) Chrysene-d12	14.93	240	3315288	40.00 ug/mL
14) Perylene-d12	16.99	264	1943512	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.98	112	324285	16.549ug/mL
4) Phenol-d5	3.74	99	536533	20.871ug/mL
7) Nitrobenzene-d5	4.56	82	403589	18.071ug/mL
9) 2-Fluorobiphenyl	6.81	172	1120381	19.623ug/mL
11) 2,4,6-Tribromophenol	9.22	330	182491	18.078ug/mL
13) Terphenyl-d14	13.40	244	806551	12.601ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.09	104	95724	9.452ug/mL 97
5) 1,4-Dithiane	4.47	120	184446	11.239ug/mL 96

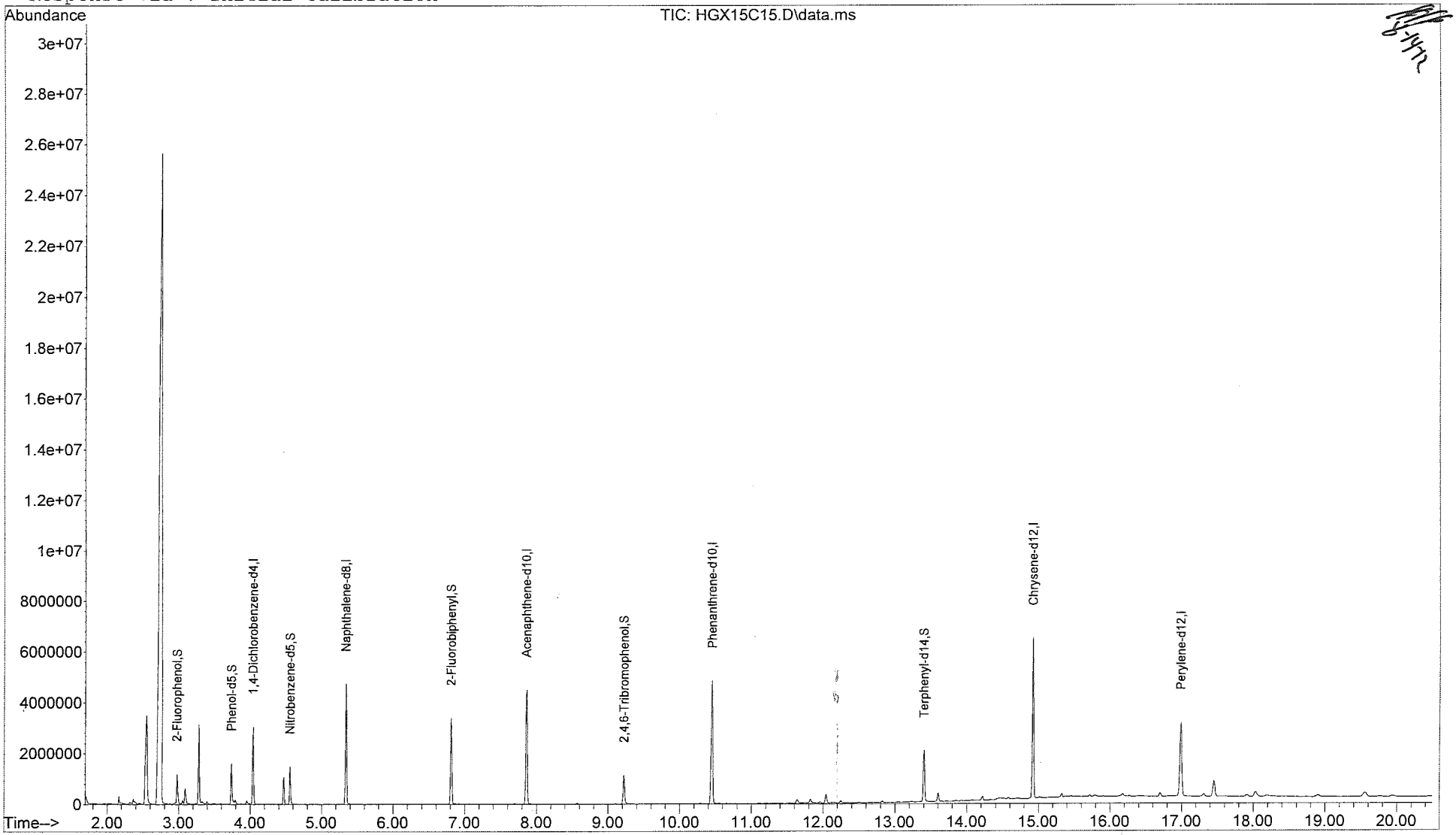
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX15C15.D Vial: 15
Acq On : 08/10/2012 16:47 Operator: RAH
Sample : 1221564015 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 17:07:40 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\1221564\HGX15C15.D Vial: 15
Acq On : 08/10/2012 16:47 Operator: RAH
Sample : 1221564015 Inst : 5975-H
Misc : . SOIL 8270 Injection volume : 1uL
MS Integration Params: rteint.p
Quant Time: Aug 10 17:07:40 2012 Results File: 8270DOND.RES

Method : C:\msdchem\1\methods\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.04	152	593461	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2662432	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1541978	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2997571	40.00 ug/mL
12) Chrysene-d12	14.93	240	3273339	40.00 ug/mL
14) Perylene-d12	16.99	264	1898684	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.97	112	414391	20.791ug/mL
4) Phenol-d5	3.74	99	714209	27.314ug/mL
7) Nitrobenzene-d5	4.56	82	527268	23.102ug/mL
9) 2-Fluorobiphenyl	6.81	172	1503832	26.295ug/mL
11) 2,4,6-Tribromophenol	9.22	330	247867	24.562ug/mL
13) Terphenyl-d14	13.40	244	1093302	17.300ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.09	104	140369	13.627ug/mL 97
5) 1,4-Dithiane	4.47	120	273822	16.404ug/mL 96

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.90	210	47.95	110	60.00	204	73.00	1416
37.00	789	49.10	1366	61.00	2048	74.00	16658
38.00	2065	50.10	37069	62.00	2129	75.00	26072
39.05	11447	51.10	133016	63.05	5870	76.10	8806
40.00	553	52.05	6888	64.05	797	77.10	169557
41.00	409	53.00	317	65.10	2951	78.10	11912
41.95	8	55.00	774	66.00	245	79.00	12159
43.00	174	56.00	4604	67.00	41	80.00	9544
43.95	213	56.95	9649	69.00	182007	80.95	12627
44.95	498	57.95	474	69.95	863	82.05	2981
46.90	50	59.05	212	71.00	84	83.00	2757

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
83.95	505	96.00	1100	107.00	51061	119.05	580
85.00	2076	96.95	164	108.00	7952	119.95	624
86.00	3686	98.00	15285	110.00	99453	120.90	137
86.95	1503	99.00	11947	111.00	14899	121.10	236
88.00	668	100.00	1055	112.00	1808	122.00	3851
88.95	332	100.95	6366	113.00	564	123.00	5511
91.00	2779	101.95	411	113.95	125	124.00	2550
92.00	3243	102.95	2332	115.00	255	125.00	2380
93.00	20146	104.00	4550	116.05	3193	127.00	194795
93.95	1286	105.00	4189	117.00	41283	128.00	14880
95.00	369	106.10	1215	118.00	2979	129.00	77256

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
130.00	6368	139.95	881	150.95	941	160.00	3180
130.95	1208	141.00	9687	151.20	517	161.00	4674
132.05	708	142.00	3150	151.70	439	161.95	1330
132.80	252	143.00	2120	152.00	274	162.80	161
133.00	135	143.95	625	153.00	3192	163.05	274
134.00	2181	145.00	646	154.00	2288	164.00	668
134.95	5754	146.05	1877	155.00	5190	164.95	3521
136.00	2380	147.00	4767	156.05	8000	166.05	2851
137.05	2966	148.00	10934	157.05	1896	166.95	19745
137.95	736	148.95	2140	157.95	1883	168.00	8501
138.95	478	150.05	661	159.00	1302	169.05	1743

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
170.05	659	181.00	5020	192.00	5090	205.00	26323
170.95	942	182.00	946	193.00	5198	206.00	108360
171.95	1888	183.00	572	194.00	1397	207.00	14246
173.00	2312	184.00	1287	195.05	970	208.00	3479
174.00	4313	185.00	7511	196.00	16758	208.95	1198
175.00	7834	186.00	59352	198.00	449451	210.30	703
176.05	2966	187.00	15865	199.00	30245	210.95	4542
177.00	3955	188.05	1696	200.00	2429	212.95	335
178.00	859	189.00	3403	201.45	3070	215.00	1191
179.00	15556	189.95	600	202.95	2845	216.05	2349
180.00	10462	191.00	1758	204.00	15477	217.00	27032

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
218.00	3469	230.00	769	240.95	1460	252.00	534
218.95	280	231.00	2262	242.00	3478	253.05	1166
219.20	106	231.95	384	243.10	4047	255.00	269404
221.00	32173	232.95	580	244.00	51989	256.00	38803
223.00	6700	234.00	1735	245.05	7448	257.00	3231
224.00	61472	234.95	1711	246.00	9407	258.00	14382
225.00	15875	235.95	1100	246.95	2002	259.00	2277
226.05	1856	237.00	2076	248.05	411	259.95	452
227.00	24363	238.05	341	249.00	1736	260.95	518
228.00	3479	238.95	964	250.00	378	263.00	155
229.00	5244	240.00	804	251.05	421	263.80	387

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
264.10	160	276.00	16781	288.00	125	299.00	58
265.00	5592	277.00	9464	288.90	438	300.95	468
265.90	1371	278.00	1550	289.95	375	301.95	650
266.90	202	278.80	76	291.05	236	303.05	4040
267.85	19	278.95	278	291.90	98	304.05	968
269.90	381	281.00	201	292.10	306	305.00	88
270.95	583	282.05	293	293.05	2240	308.00	529
272.05	745	283.00	1149	293.95	535	308.95	363
273.00	8812	284.00	800	296.00	33656	309.95	517
274.00	21501	285.00	1731	297.00	4977	311.00	52
275.00	124987	285.95	376	297.90	387	312.20	67

Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
312.95	387	326.05	153	341.00	1397	365.95	2022
314.00	1732	327.00	2246	342.00	324	366.90	53
315.00	3856	328.00	1118	346.00	2412	369.95	327
316.00	2135	329.10	116	347.00	412	371.10	748
317.00	363	331.95	909	351.00	86	372.05	5254
319.90	179	333.00	1200	352.05	3088	373.00	1217
321.05	1110	334.05	7150	353.05	2118	374.05	166
322.05	618	335.05	1830	354.05	3337	383.05	1223
323.05	11178	336.05	286	355.05	607	383.95	469
324.05	2118	339.00	115	358.95	270	384.90	58
325.05	158	340.00	124	365.00	13675	390.00	645

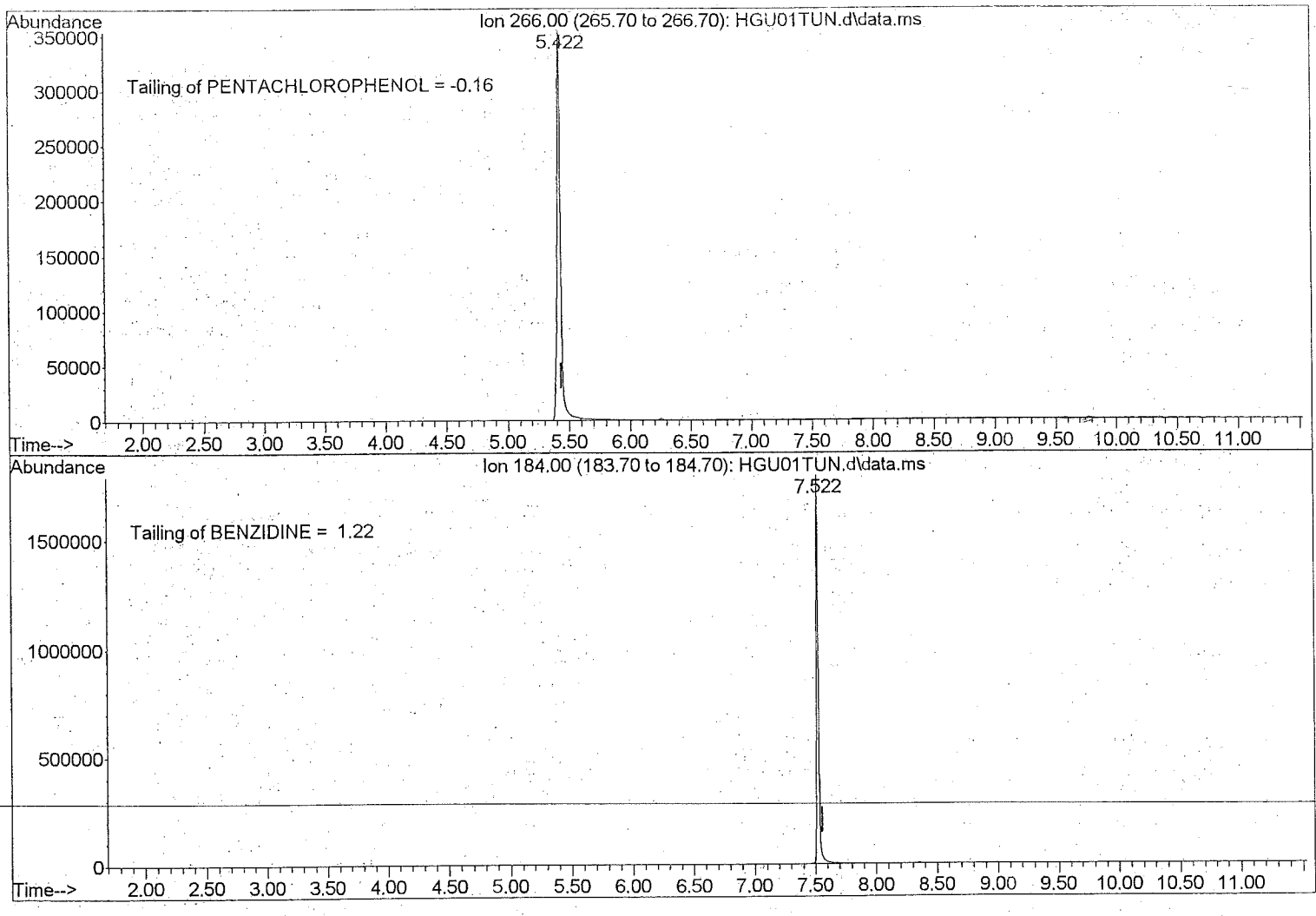
Average of 6.245 to 6.257 min.: HGU01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
391.05	452	425.05	302	444.10	5675		
392.05	336	435.45	112	445.00	368		
400.90	274	436.10	52				
402.00	1684	437.00	72				
403.00	2553	437.50	61				
404.00	801	437.70	106				
410.10	50	438.10	252				
421.00	1998	438.85	543				
422.05	1989	441.10	47803				
423.10	13843	442.10	315904				
424.05	2863	443.10	60693				

Data File: HGU01TUN.d
Date Acquired: 08/08/2012 10:06
Operator ID: RAH
Name: 8270 DFTPP 13808
Misc: X:1/11/13

Instrument: 5975-H
Acq Method: 8270DTUN.M
DA Method: 8270DTUN.M

Cal Title: EPA/CLP SOM01
Last Cal Update: Wed Nov 23 09:22:39 2011
X:1/11/13

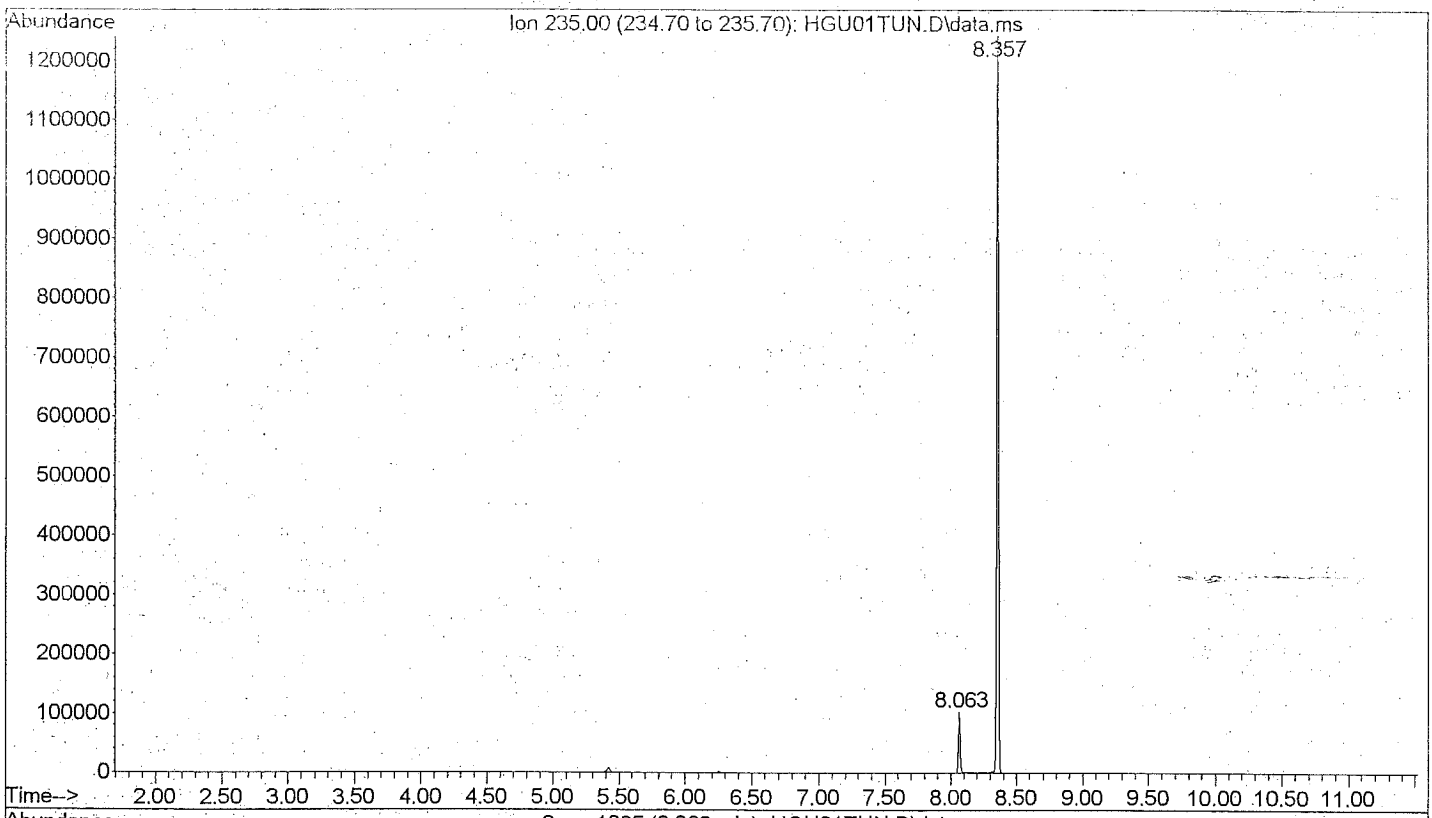


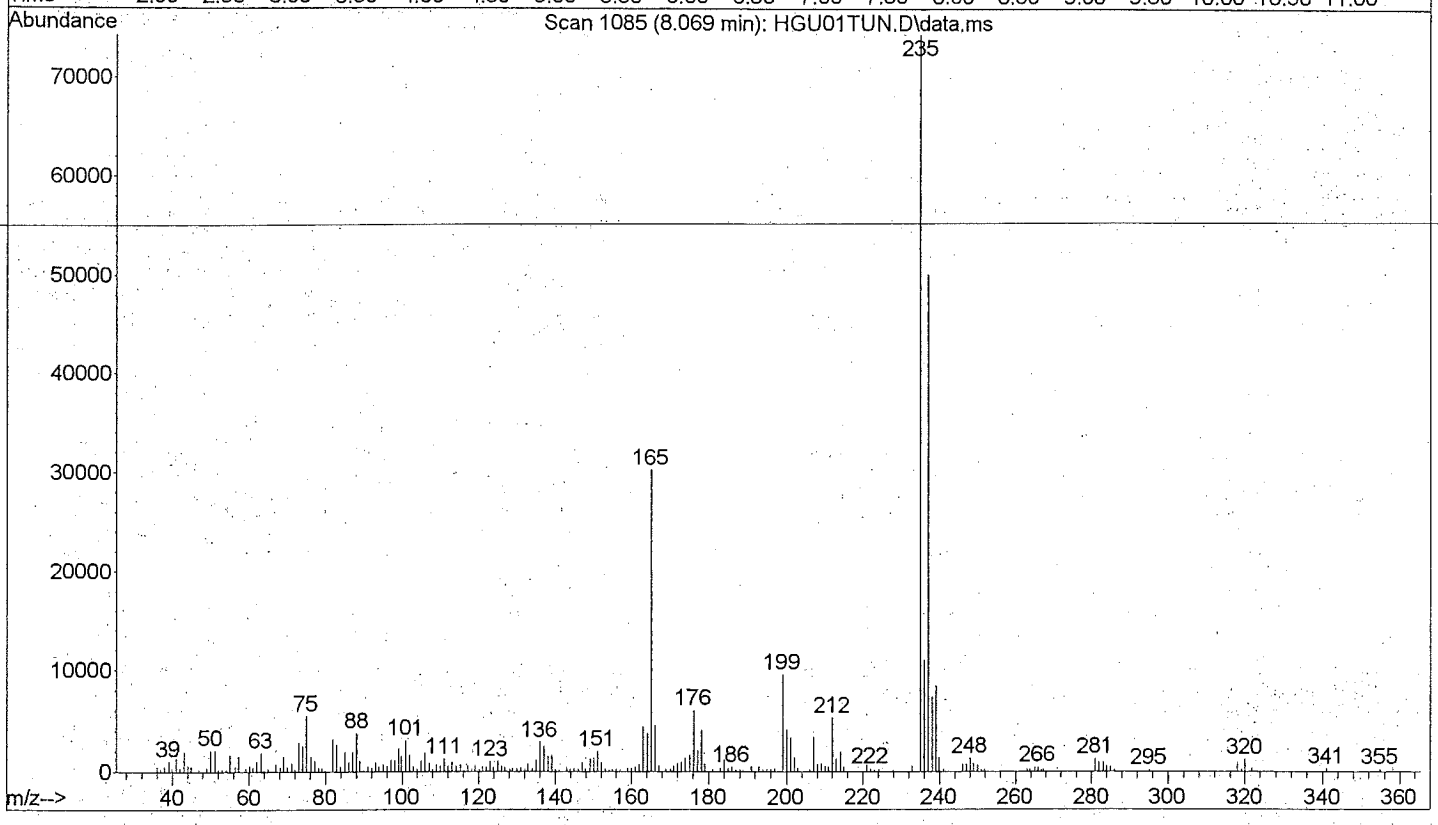
Io: 235.00 (234.70 to 235.70): HGU01TUN.D\data.ms
8270 DFTPP 13808

Peak #	Ret Time	Type	Width	Area	Start Time	End Time
1	8.063	rBV	0.082	94255	8.027	8.110
2	8.357	rVB	0.112	1143185	8.286	8.398

$$\text{DDT degradation} = \frac{94255}{94255 + 1143185} = 7.6\%$$

Data File :D:\1\DATA\2012\AUG12\08AUG12H\HGU01TUN.D
Operator : RAH
Acquired : 8 Aug 2012 10:06 am using AcqMethod 8270DTUN.M
Instrument : 5975-H
Sample Name: 8270 DFTPP 13808
Misc Info : X:1/11/13
Vial Number: 1



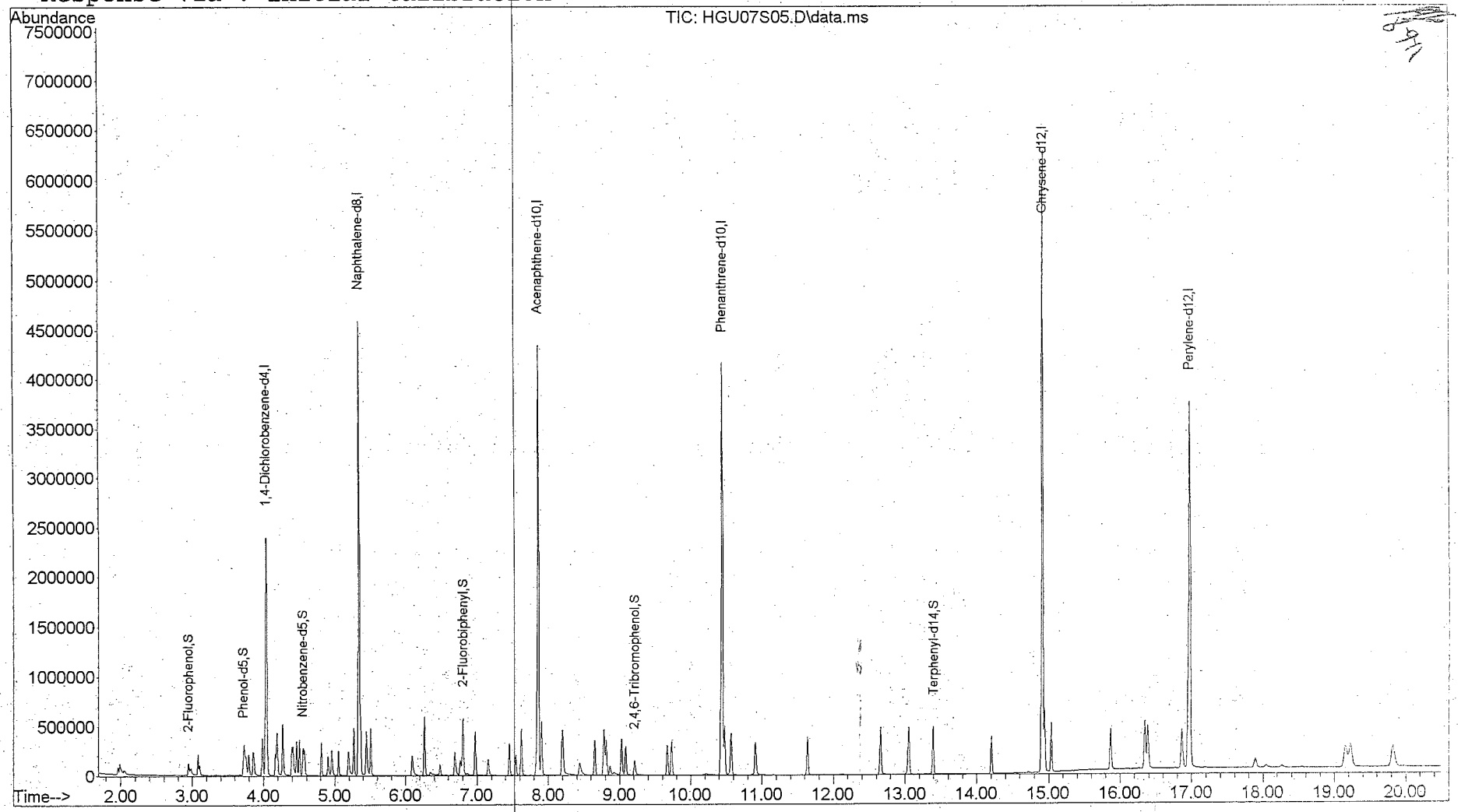


Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU07S05.D Vial: 7
Acq On : 08/08/2012 12:59 Operator: RAH
Sample : 8270 5 std 15974 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:23:28 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

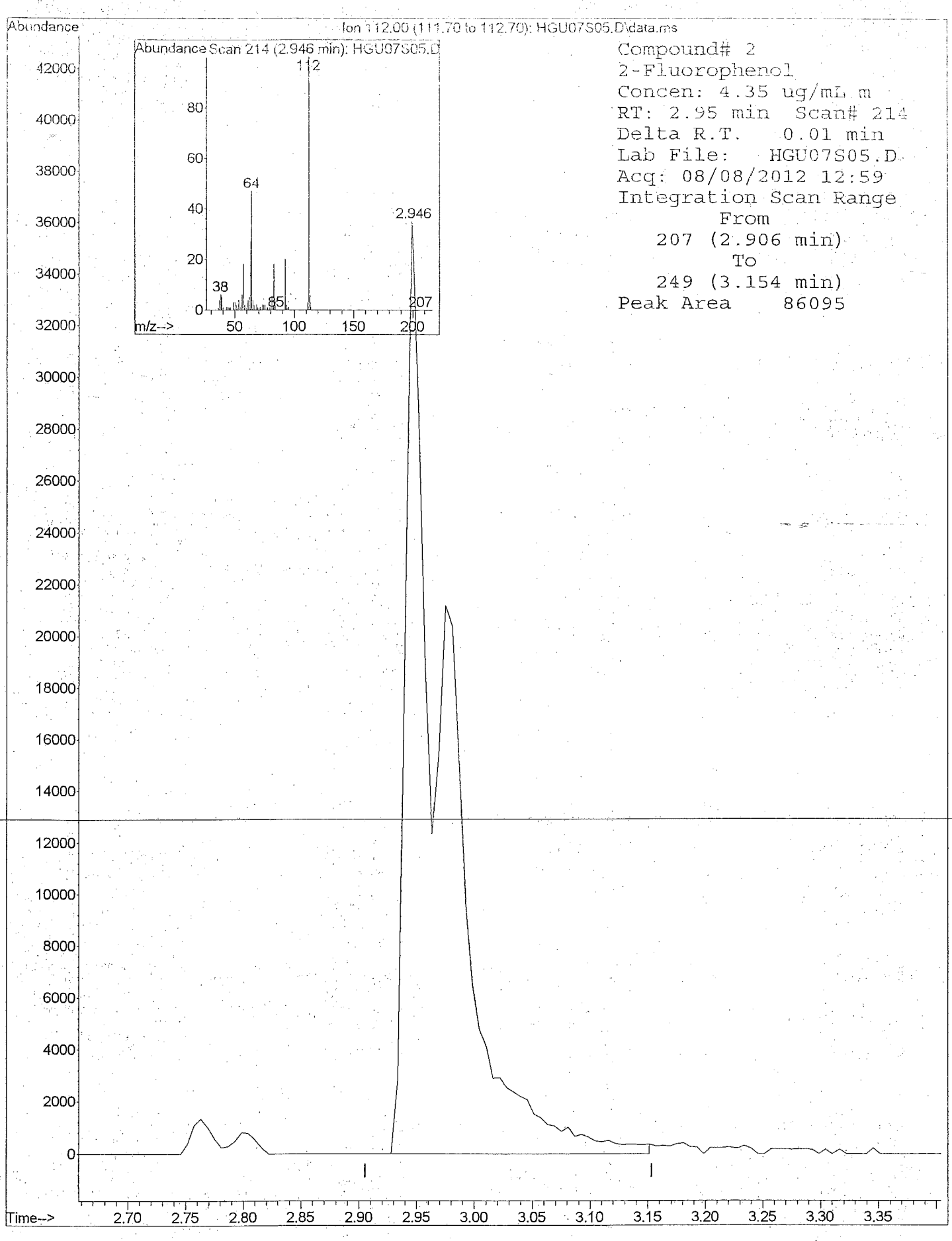
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU07S05.D Vial: 7
Acq On : 08/08/2012 12:59 Operator: RAH
Sample : 8270 5 std 15974 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:23:28 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	588867	40.00 ug/mL
6) Naphthalene-d8	5.33	136	2620860	40.00 ug/mL
8) Acenaphthene-d10	7.85	164	1436514	40.00 ug/mL
10) Phenanthrene-d10	10.43	188	2595047	40.00 ug/mL
12) Chrysene-d12	14.91	240	2776807	40.00 ug/mL
14) Perylene-d12	16.97	264	2442971	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	86095	4.352ug/mL m
4) Phenol-d5	3.72	99	113950	4.392ug/mL
7) Nitrobenzene-d5	4.55	82	99427	4.426ug/mL
9) 2-Fluorobiphenyl	6.80	172	243673	4.573ug/mL
11) 2,4,6-Tribromophenol	9.21	330	35477	4.061ug/mL
13) Terphenyl-d14	13.39	244	245085	4.572ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	54091	5.291ug/mL 99
5) 1,4-Dithiane	4.46	120	87903	5.307ug/mL 98

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



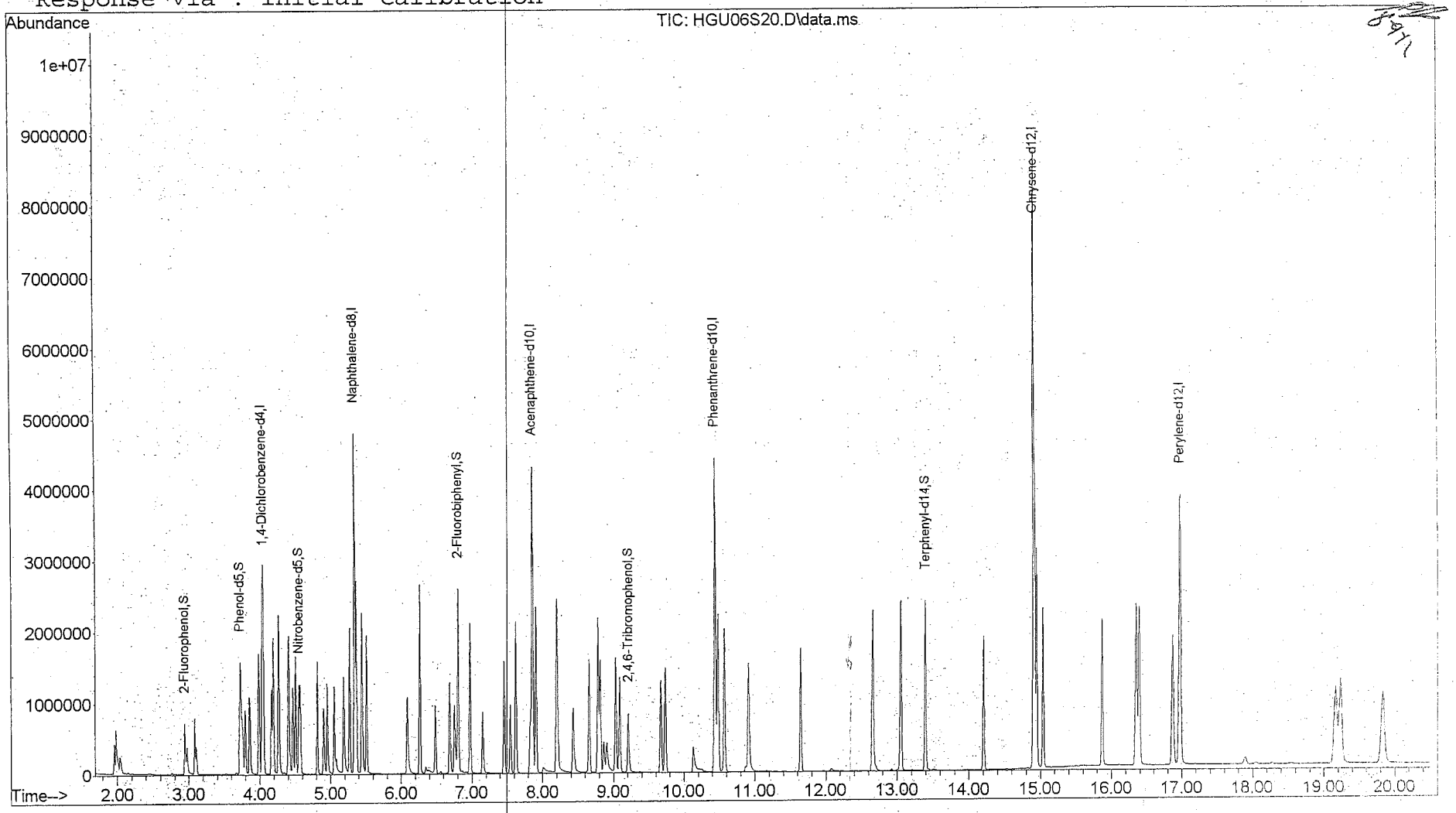
8270DOND.M 5975-H 8270DOND.M 8270 5 std 15974 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU06S20.D Vial: 6
Acq On : 08/08/2012 12:29 Operator: RAH
Sample : 8270 20 std 15973 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:23:14 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

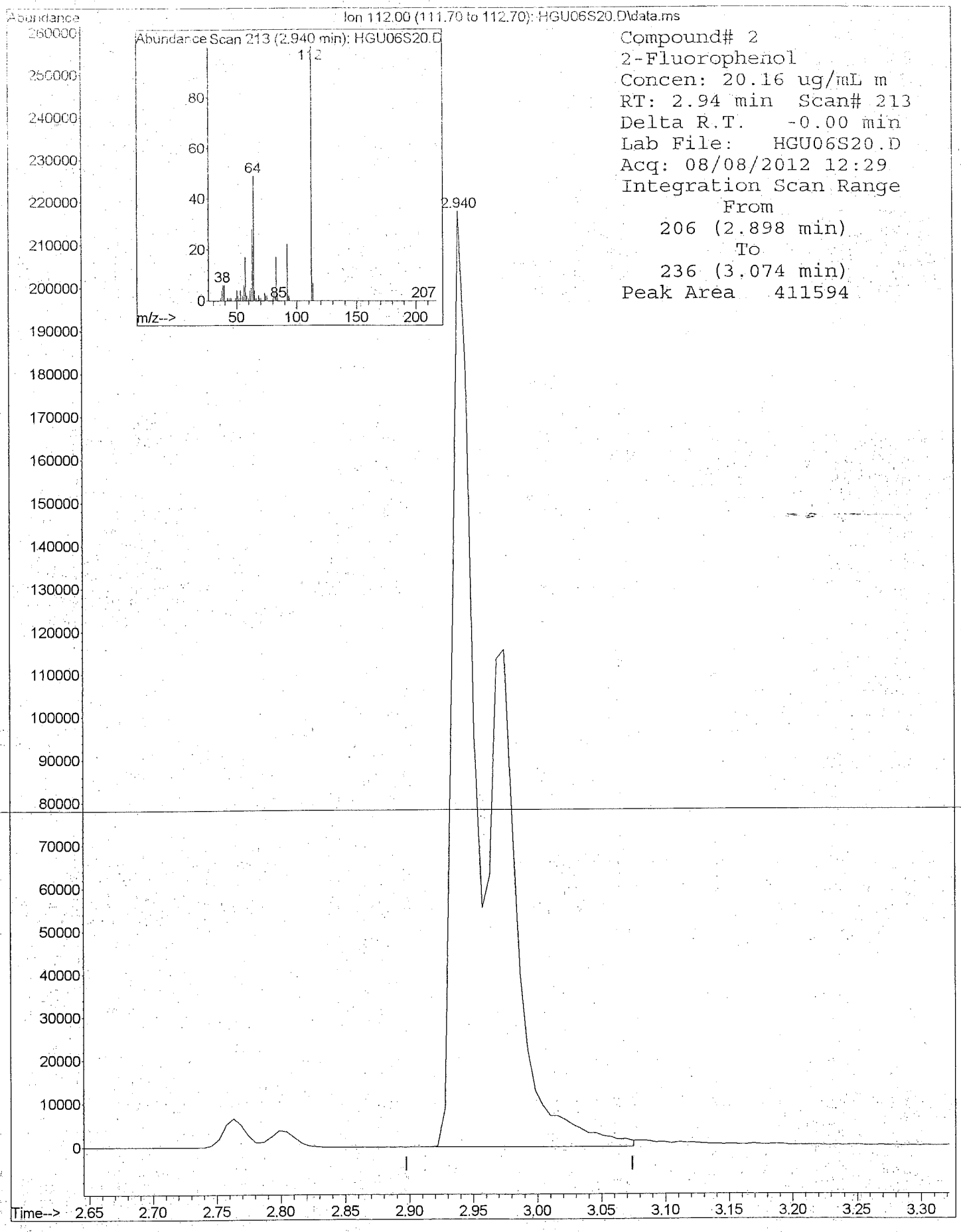
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU06S20.D Vial: 6
Acq On : 08/08/2012 12:29 Operator: RAH
Sample : 8270 20 std 15973 Inst : 5975 H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:23:14 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	
1) 1,4-Dichlorobenzene-d4	4.03	152	607773	40.00 ug/mL	
6) Naphthalene-d8	5.34	136	2617015	40.00 ug/mL	
8) Acenaphthene-d10	7.86	164	1459213	40.00 ug/mL	
10) Phenanthrene-d10	10.44	188	2715173	40.00 ug/mL	
12) Chrysene-d12	14.92	240	3091127	40.00 ug/mL	
14) Perylene-d12	16.97	264	2675827	40.00 ug/mL	
System Monitoring Compounds					
2) 2-Fluorophenol	2.94	112	411594	20.158ug/mL	m
4) Phenol-d5	3.72	99	538093	20.094ug/mL	
7) Nitrobenzene-d5	4.55	82	451447	20.124ug/mL	
9) 2-Fluorobiphenyl	6.80	172	1088983	20.121ug/mL	
11) 2,4,6-Tribromophenol	9.21	330	178946	19.577ug/mL	
13) Terphenyl-d14	13.39	244	1191516	19.966ug/mL	
Target Compounds					Qvalue
3) 1,4-Oxathiane	3.08	104	202599	19.200ug/mL	m 99
5) 1,4-Dithiane	4.46	120	327670	19.168ug/mL	99

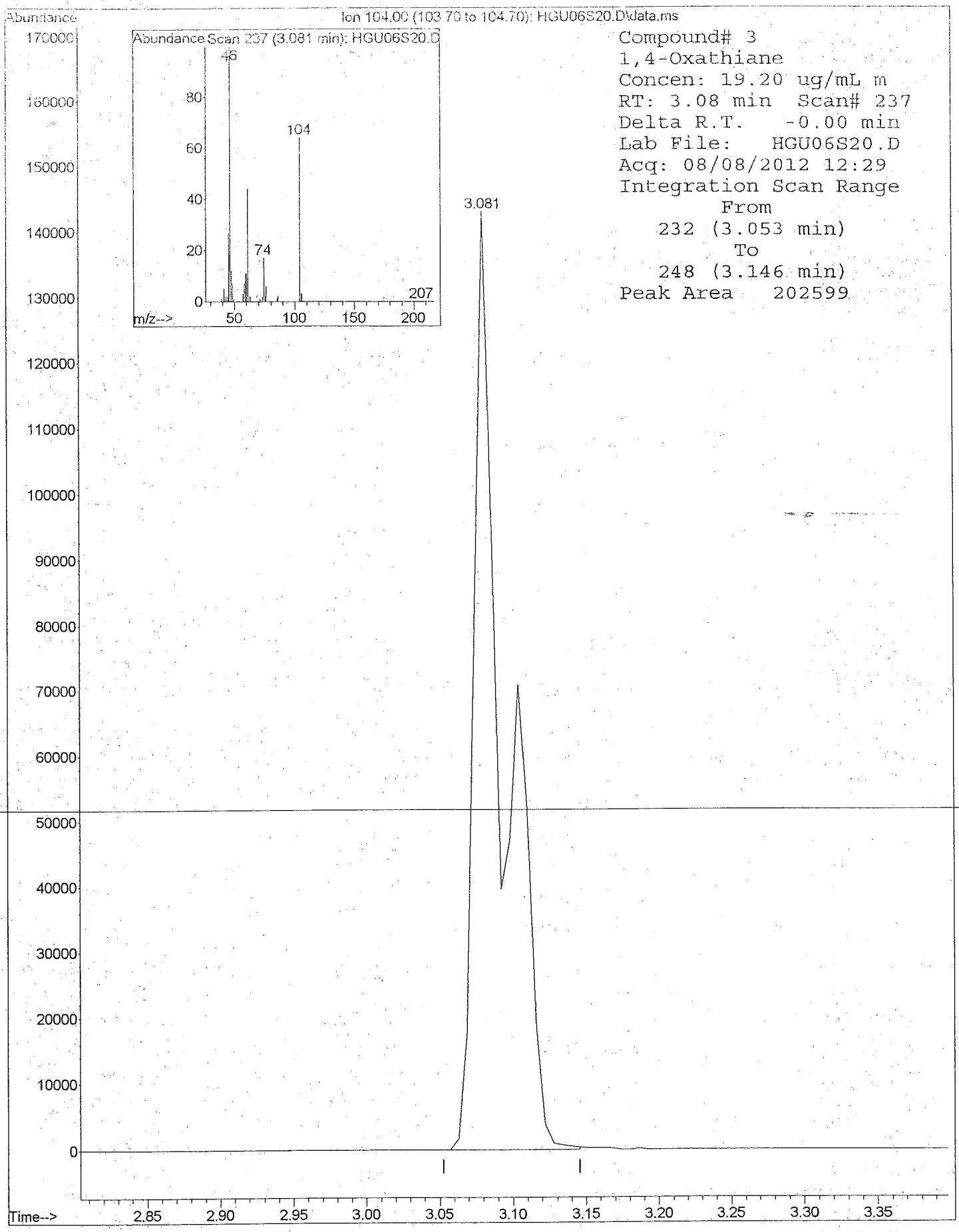
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 20 std 15973 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



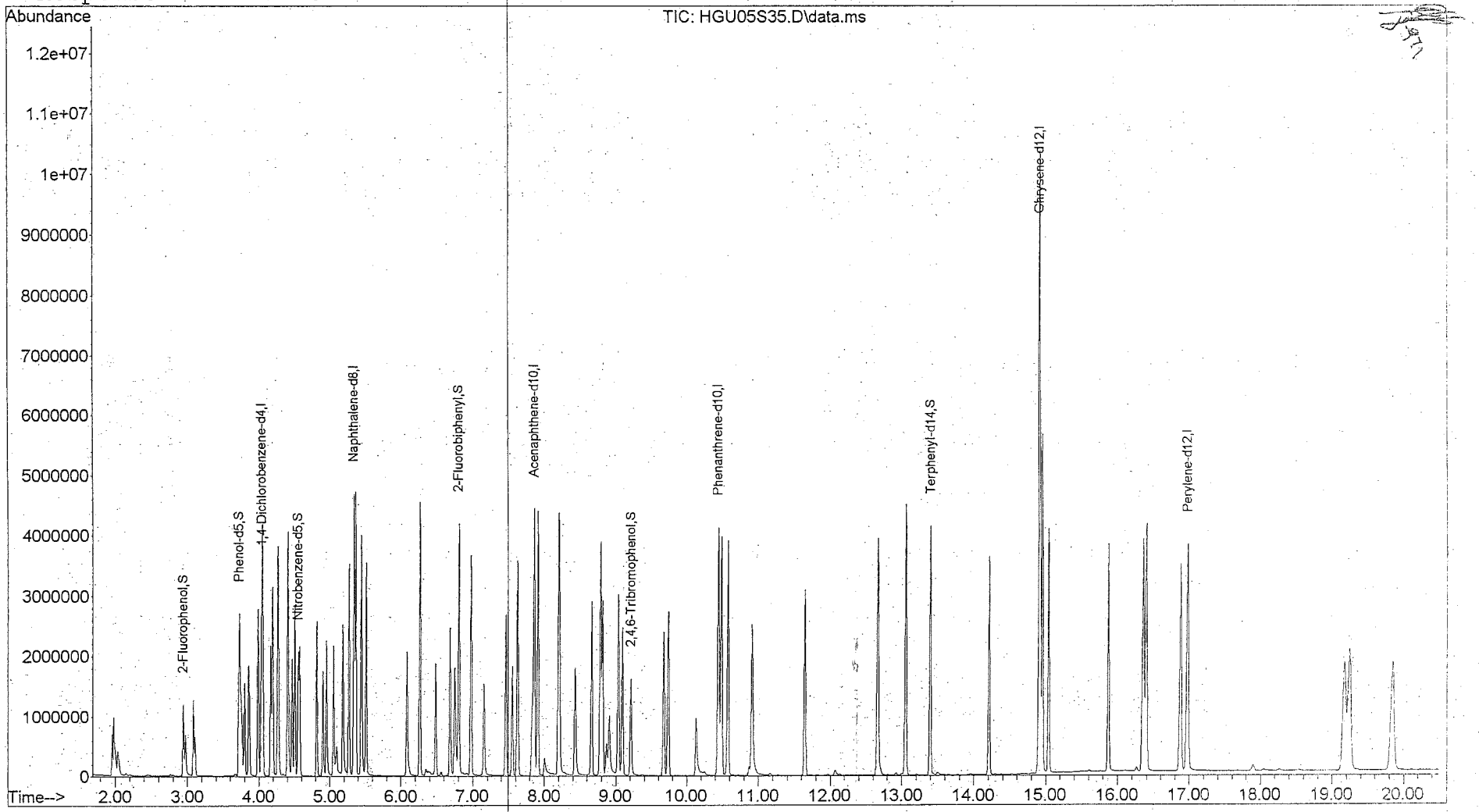
8270DOND.M 5975-H 8270DOND.M 8270 20 std 15973 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU05S35.D Vial: 5
Acq On : 08/08/2012 12:00 Operator: RAH
Sample : 8270 35 std 15972 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:57 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

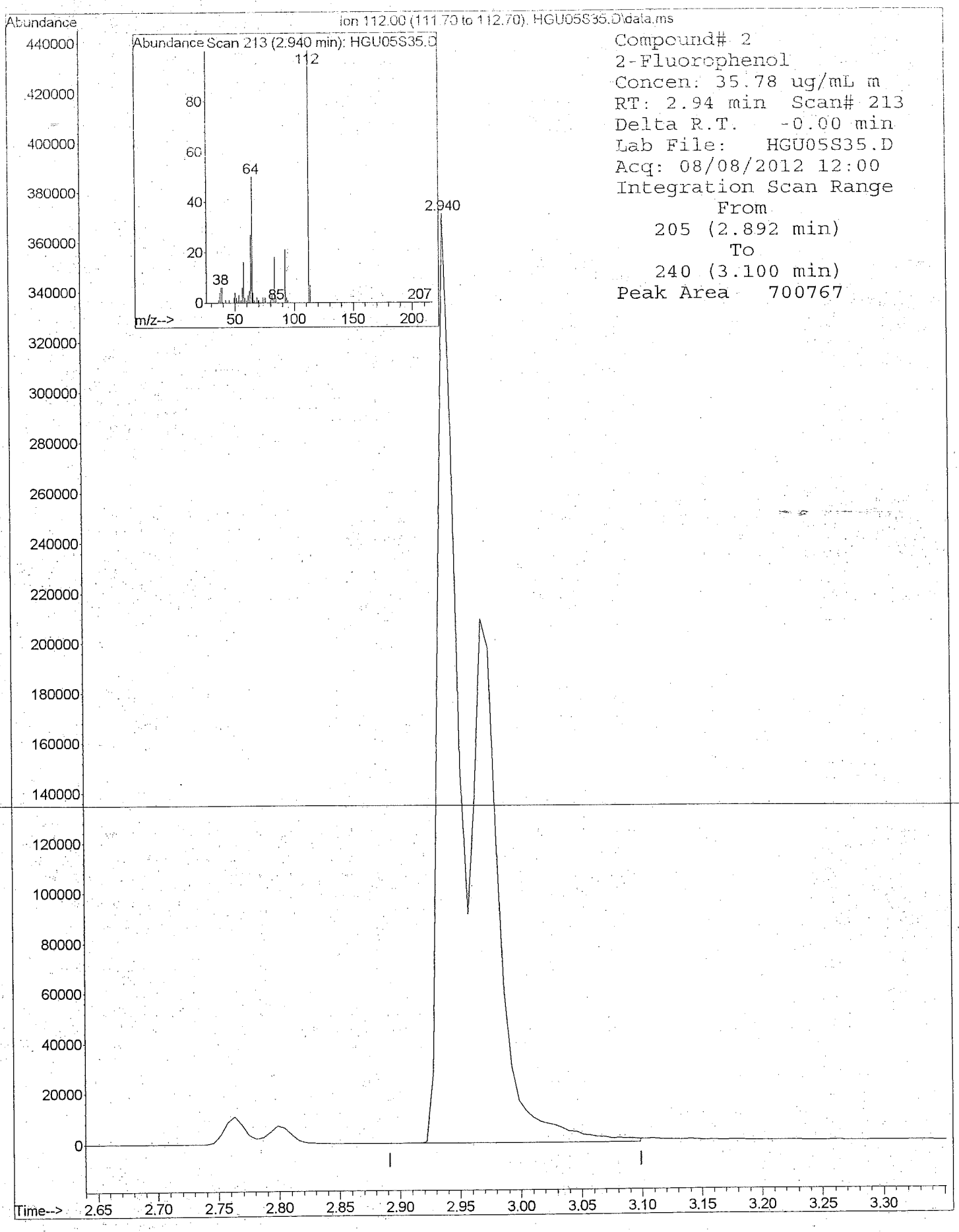
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU05S35.D Vial: 5
Acq On : 08/08/2012 12:00 Operator: RAH
Sample : 8270 35 std 15972 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:57 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	582911	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2556097	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1465004	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2738820	40.00 ug/mL
12) Chrysene-d12	14.92	240	3035266	40.00 ug/mL
14) Perylene-d12	16.97	264	2627498	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	700767	35.784ug/mL m
4) Phenol-d5	3.72	99	920516	35.841ug/mL
7) Nitrobenzene-d5	4.55	82	793614	36.219ug/mL
9) 2-Fluorobiphenyl	6.81	172	1951088	35.907ug/mL
11) 2,4,6-Tribromophenol	9.21	330	335739	36.413ug/mL
13) Terphenyl-d14	13.40	244	2149311	36.678ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	343846	33.975ug/mL m 99
5) 1,4-Dithiane	4.47	120	556869	33.965ug/mL 98

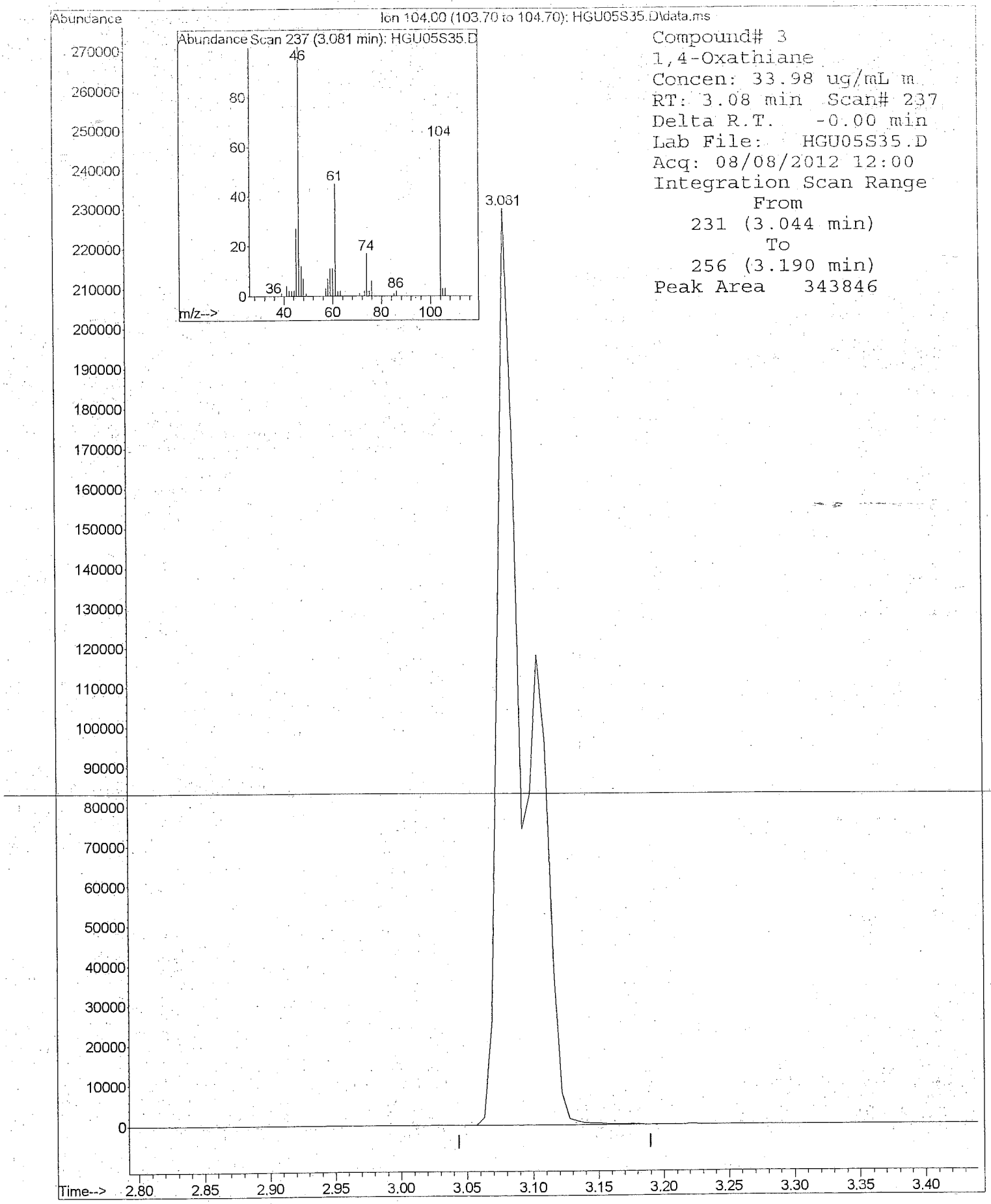
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 35 std 15972 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



Compound# 3
1,4-Oxathiane
Concen: 33.98 ug/mL m
RT: 3.08 min Scan# 237
Delta R.T. -0.00 min
Lab File: HGU05S35.D
Acq: 08/08/2012 12:00
Integration Scan Range
From
231 (3.044 min)
To
256 (3.190 min)
Peak Area 343846

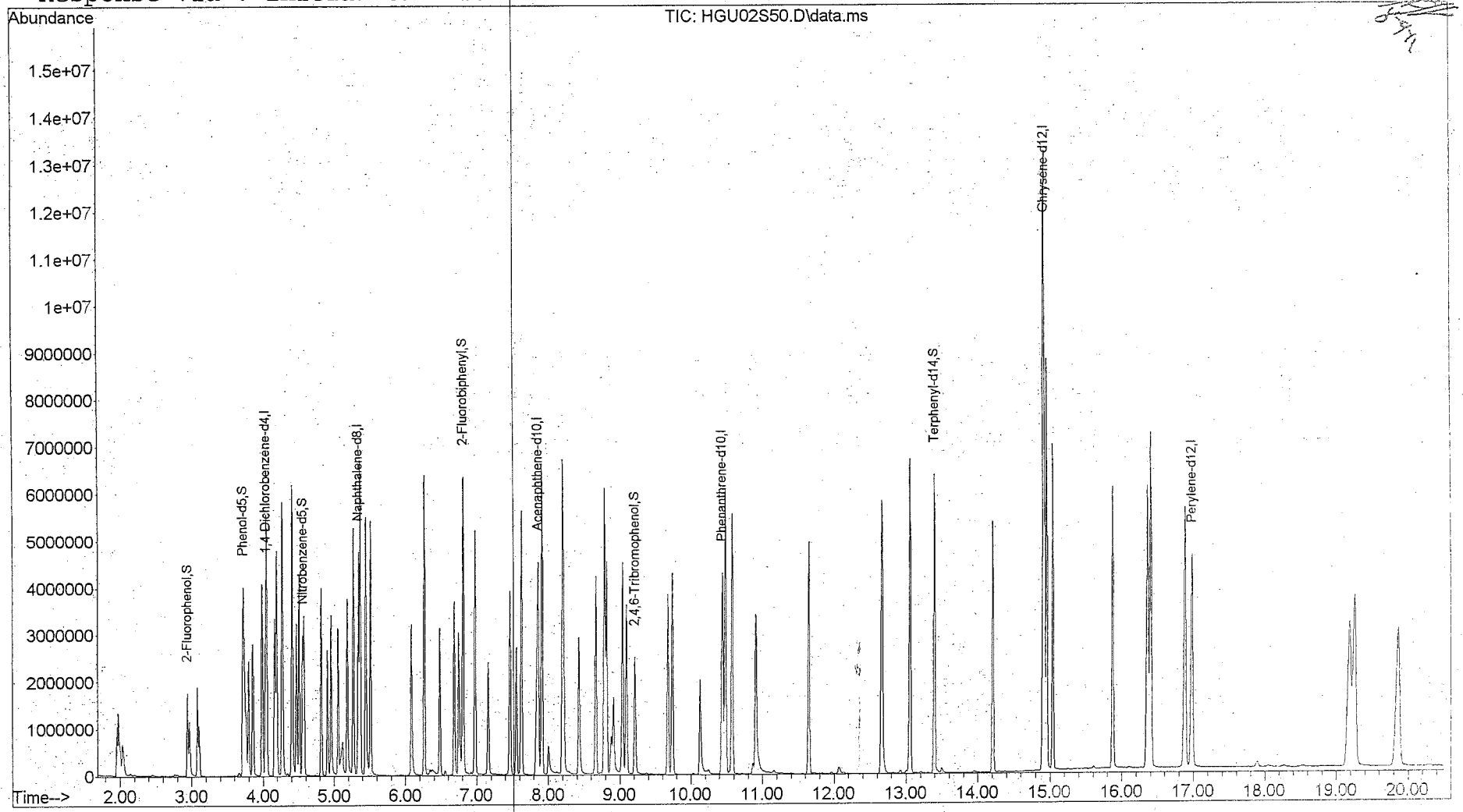
8270DOND.M 5975-H 8270DOND.M 8270 35 std 15972 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU02S50.D Vial: 2
Acq On : 08/08/2012 10:26 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:00 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

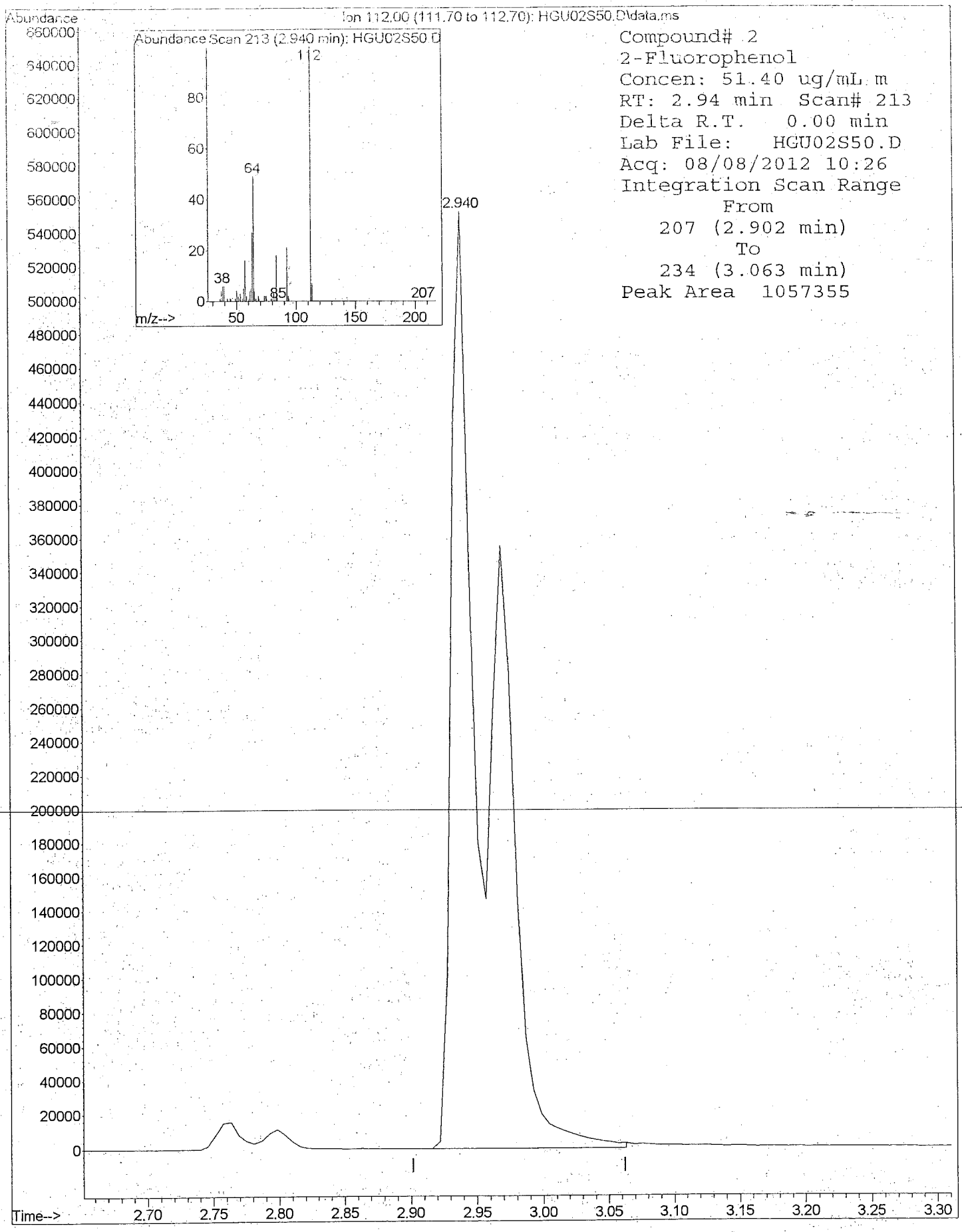
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU02S50.D Vial: 2
Acq On : 08/08/2012 10:26 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:00 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	612345	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2685634	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1537458	40.00 ug/mL
10) Phenanthrene-d10	10.44	188	2905275	40.00 ug/mL
12) Chrysene-d12	14.92	240	3449311	40.00 ug/mL
14) Perylene-d12	16.98	264	3127477	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	1057355	51.398ug/mL m
4) Phenol-d5	3.72	99	1371889	50.848ug/mL
7) Nitrobenzene-d5	4.56	82	1173697	50.982ug/mL
9) 2-Fluorobiphenyl	6.81	172	2890739	50.693ug/mL
11) 2,4,6-Tribromophenol	9.21	330	511120	52.257ug/mL
13) Terphenyl-d14	13.40	244	3359400	50.447ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	531164	49.961ug/mL m 98
5) 1,4-Dithiane	4.47	120	861261	50.006ug/mL 99

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

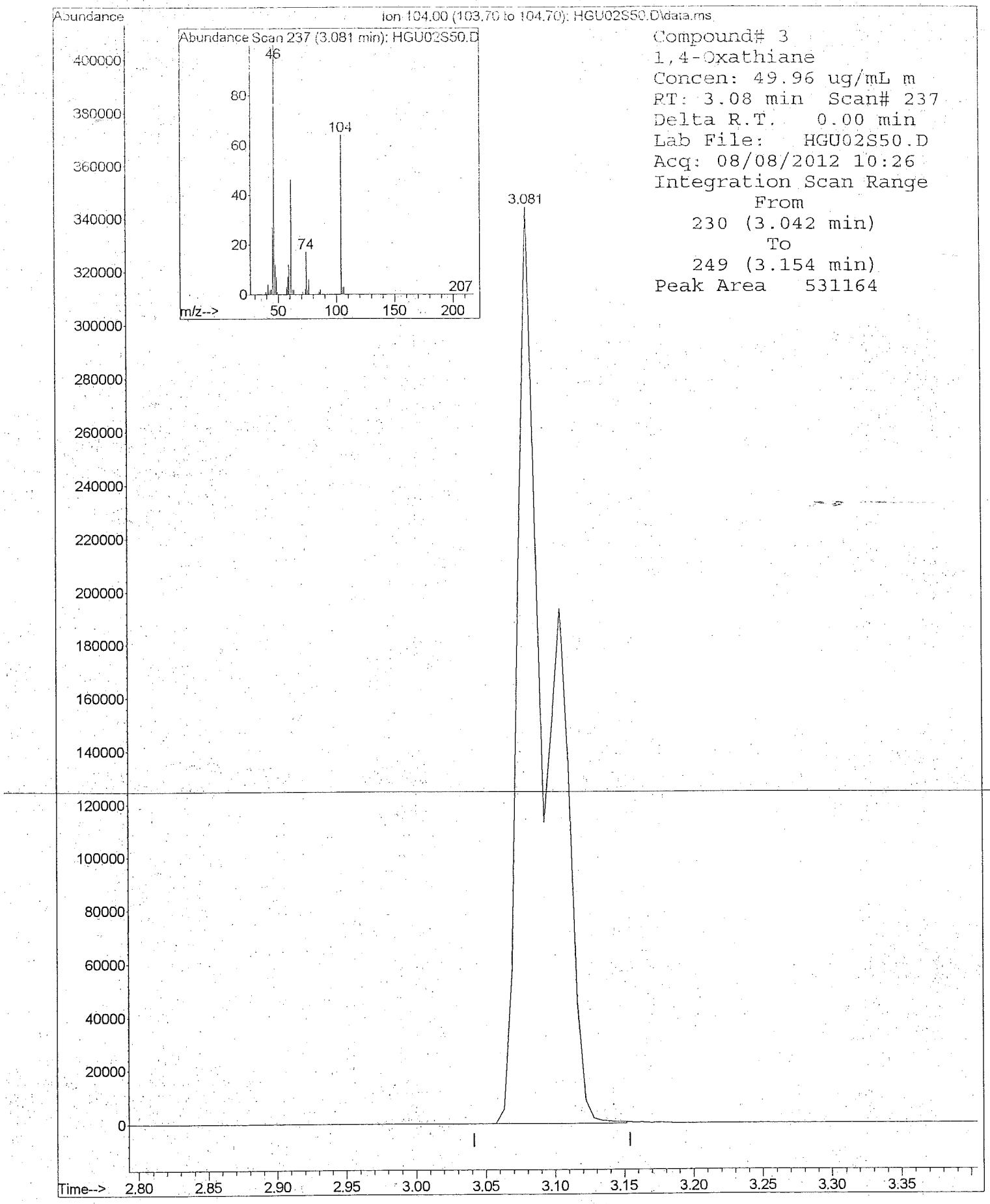
MANUAL INTEGRATION FOR 2-Fluorophenol



Compound# 2
2-Fluorophenol
Concen: 51.40 ug/mL m
RT: 2.94 min Scan# 213
Delta R.T. 0.00 min
Lab File: HGU02S50.D
Acq: 08/08/2012 10:26
Integration Scan Range
From
207 (2.902 min)
To
234 (3.063 min)
Peak Area 1057355

8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



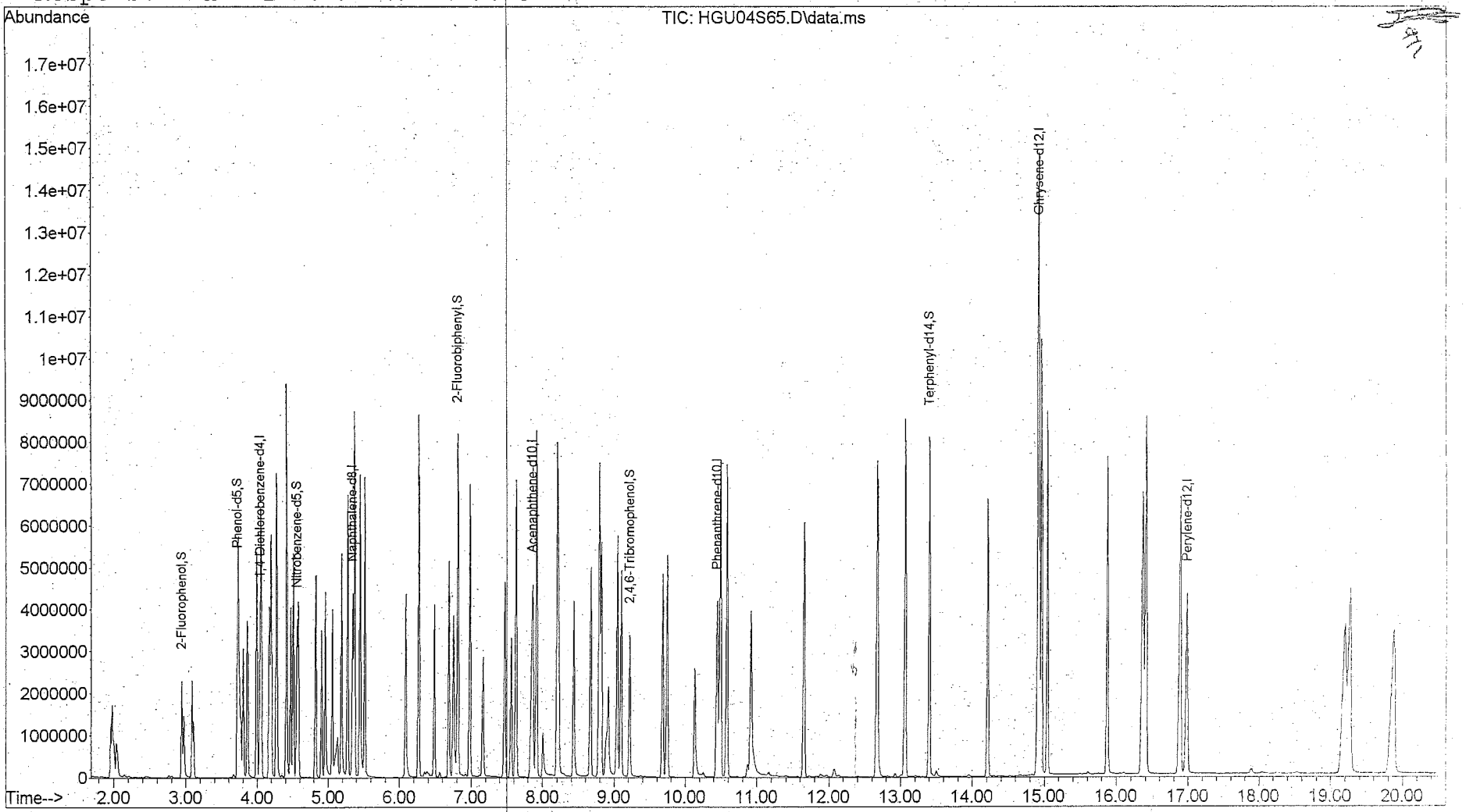
8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU04S65.D Vial: 4
Acq On : 08/08/2012 11:30 Operator: RAH
Sample : 8270 65 std 15971 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:39 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

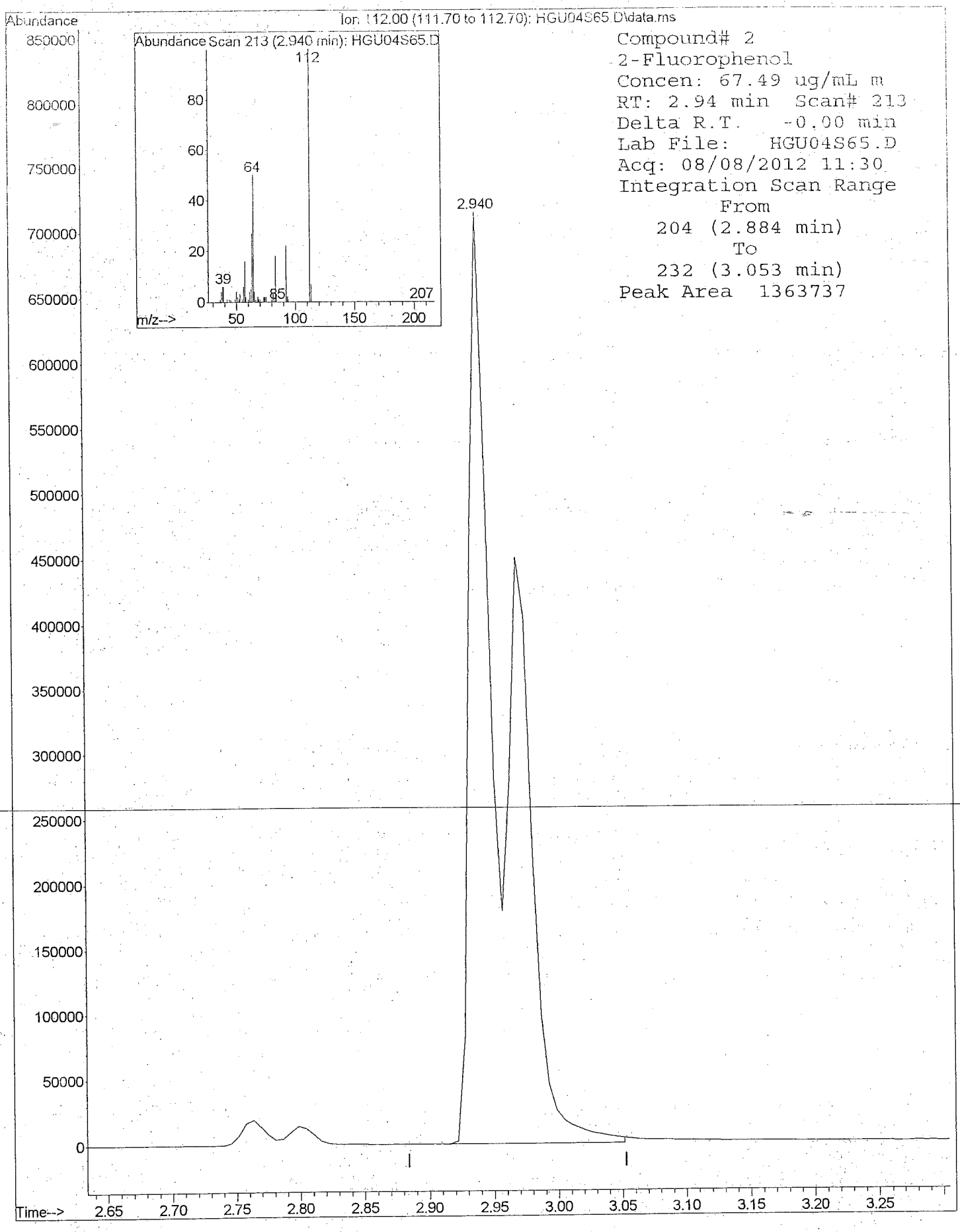
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU04S65.D Vial: 4
Acq On : 08/08/2012 11:30 Operator: RAH
Sample : 8270 65 std 15971 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:39 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	601456	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2621070	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1527619	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2869288	40.00 ug/mL
12) Chrysene-d12	14.92	240	3336798	40.00 ug/mL
14) Perylene-d12	16.98	264	2949965	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	1363737	67.491ug/mL m
4) Phenol-d5	3.72	99	1796093	67.776ug/mL
7) Nitrobenzene-d5	4.56	82	1514769	67.417ug/mL
9) 2-Fluorobiphenyl	6.81	172	3752969	66.238ug/mL
11) 2,4,6-Tribromophenol	9.22	330	665537	68.899ug/mL
13) Terphenyl-d14	13.40	244	4279647	66.433ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	671622	64.317ug/mL m 98
5) 1,4-Dithiane	4.47	120	1091903	64.545ug/mL 99

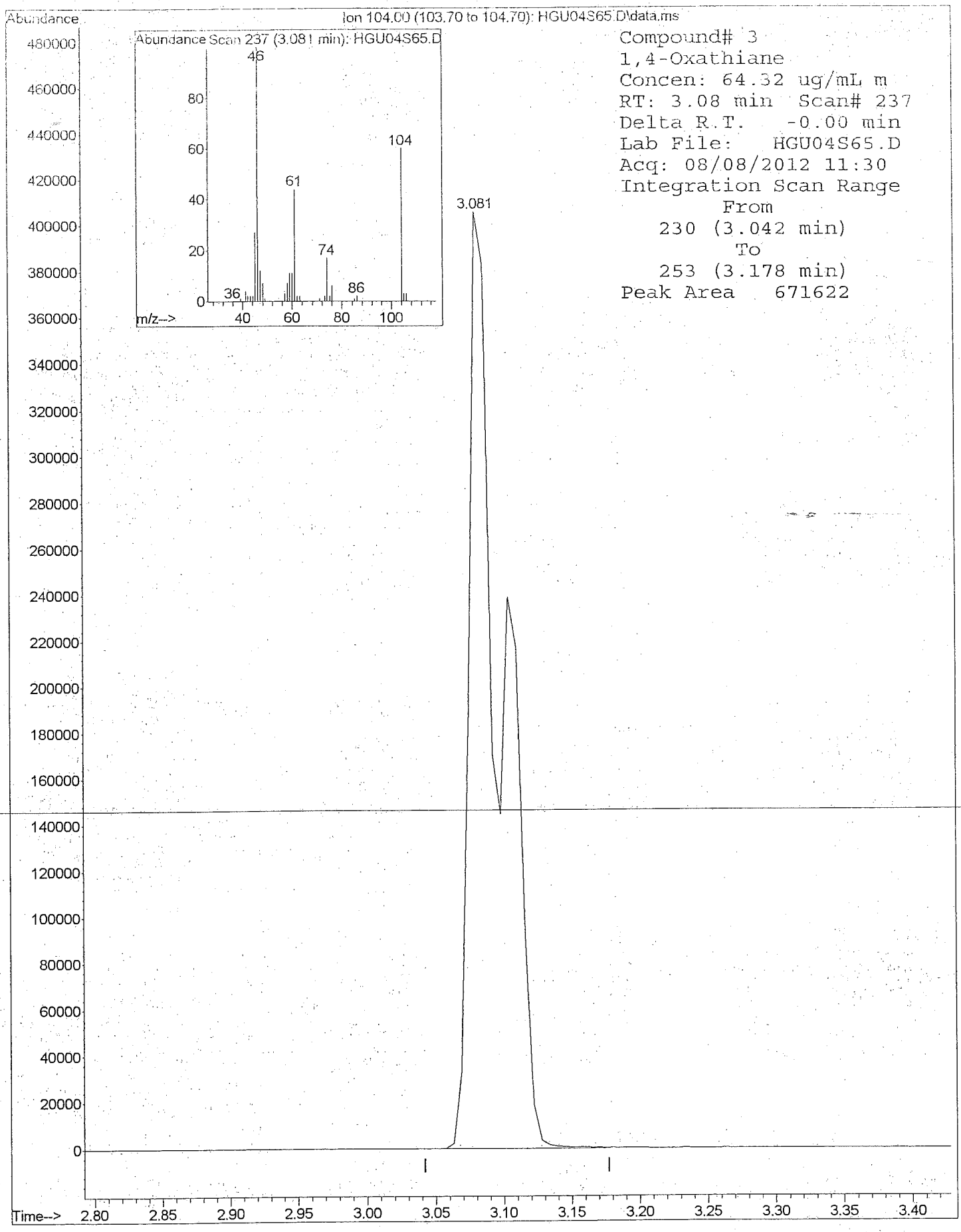
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

MANUAL INTEGRATION FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 65 std 15971 . X:1/9/13

MANUAL INTEGRATION FOR 1,4-Oxathiane



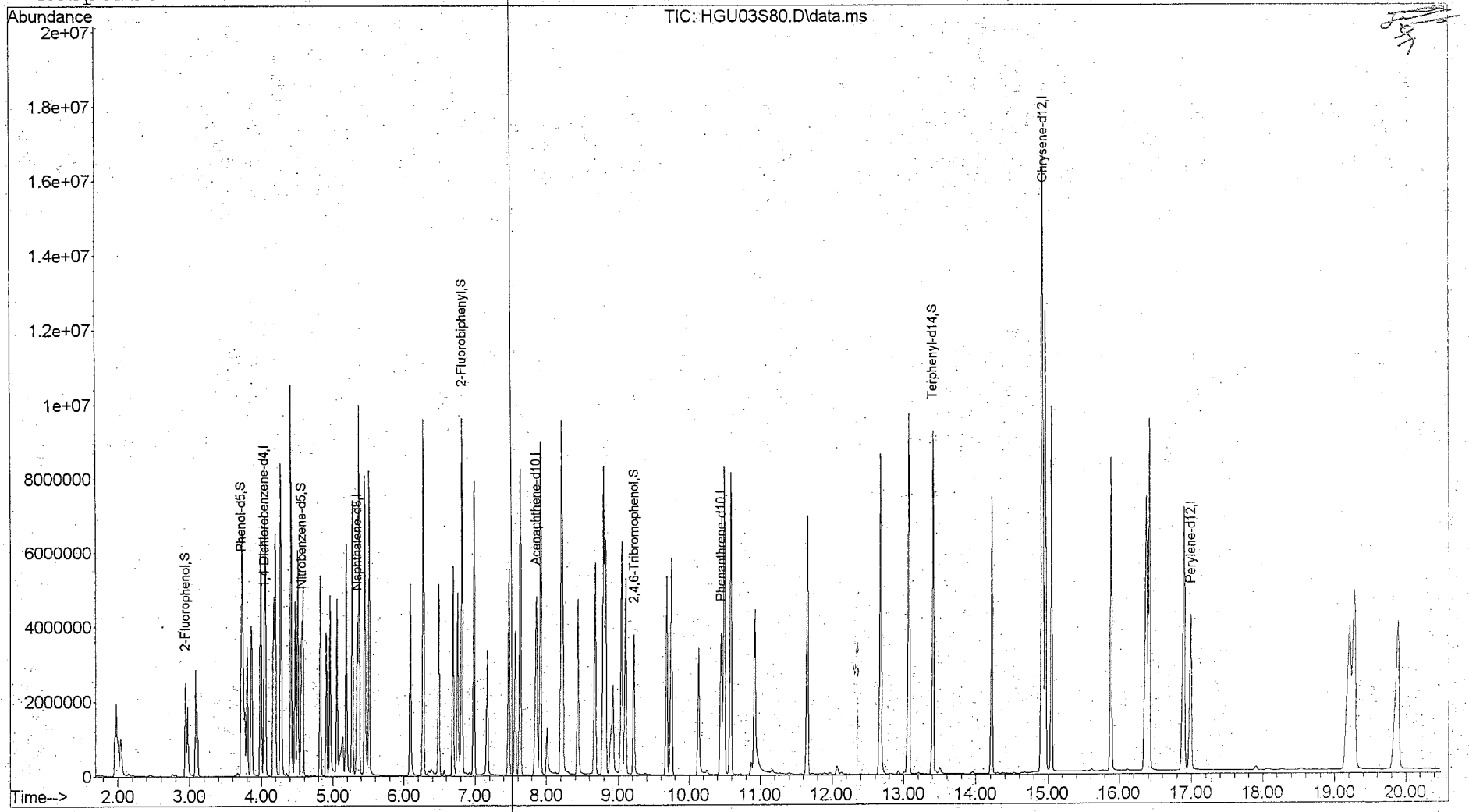
8270DOND.M 5975-H 8270DOND.M 8270 65 std 15971 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU03S80.D Vial: 3
Acq On : 08/08/2012 11:01 Operator: RAH
Sample : 8270 80 std 15970 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 13:22:20 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

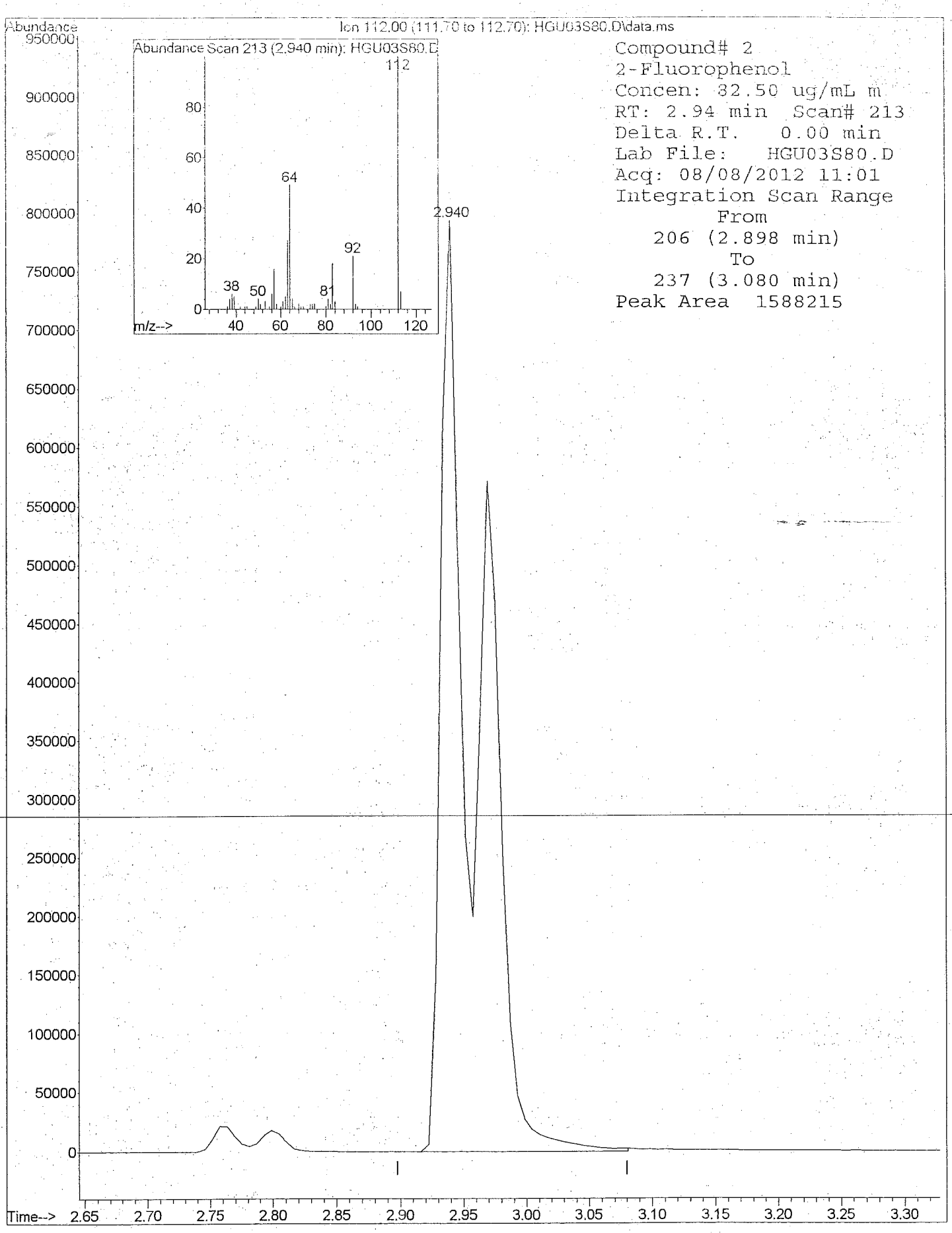
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU03S80.D Vial: 3
Acq On : 08/08/2012 11:01 Operator: RAH
Sample : 8270 80 std 15970 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 13:22:20 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	573029	40.00 ug/mL
6) Naphthalene-d8	5.35	136	2477577	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1435287	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2700617	40.00 ug/mL
12) Chrysene-d12	14.93	240	3115162	40.00 ug/mL
14) Perylene-d12	16.99	264	2729963	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	1588215	82.500ug/mL m
4) Phenol-d5	3.72	99	2086917	82.657ug/mL
7) Nitrobenzene-d5	4.56	82	1728073	81.365ug/mL
9) 2-Fluorobiphenyl	6.82	172	4345820	81.635ug/mL
11) 2,4,6-Tribromophenol	9.22	330	773542	85.081ug/mL
13) Terphenyl-d14	13.40	244	4851775	80.673ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	812617	81.679ug/mL m 92
5) 1,4-Dithiane	4.47	120	1310784	81.328ug/mL 99

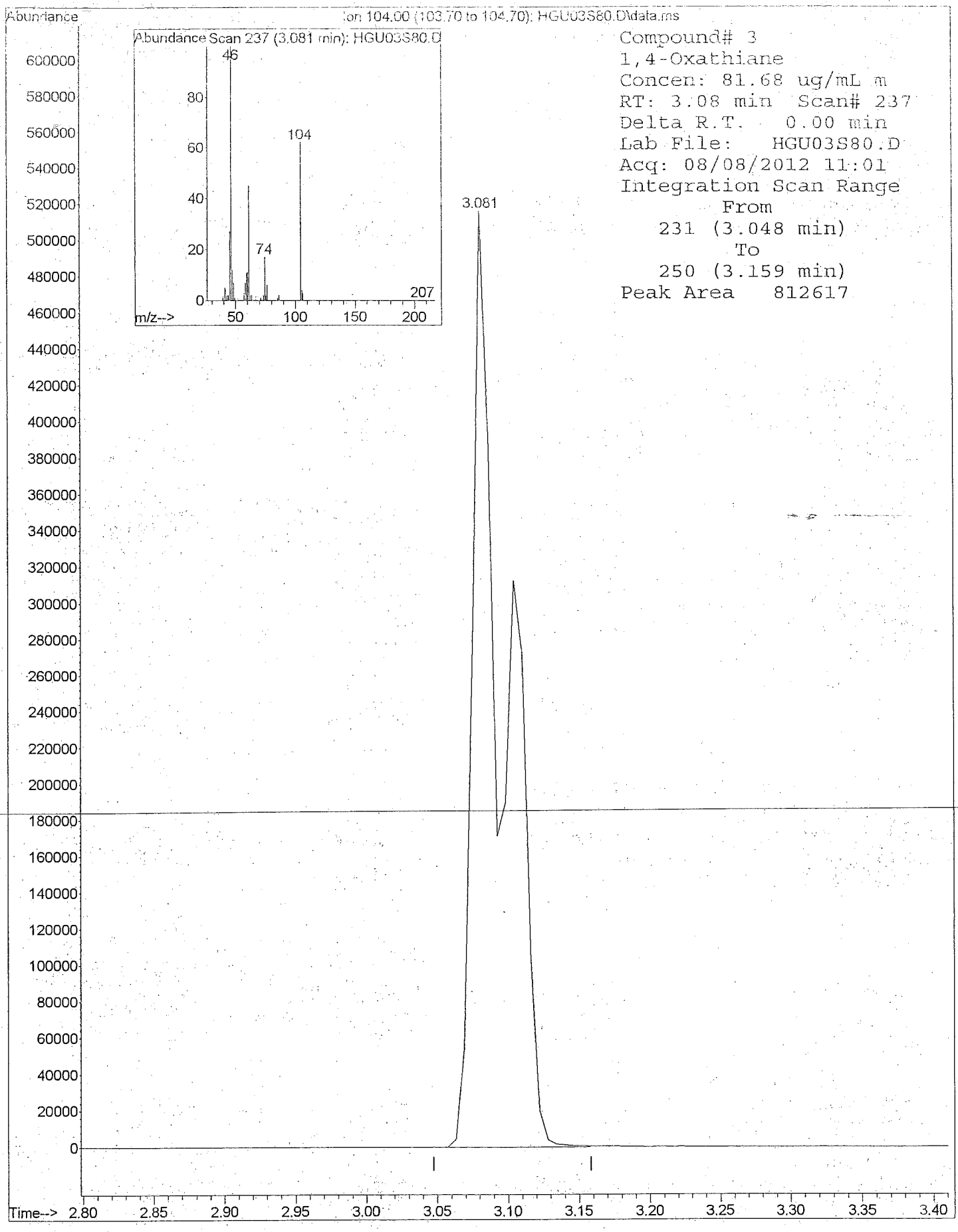
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

MANUAL INTEGRATION FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 80 std 15970 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



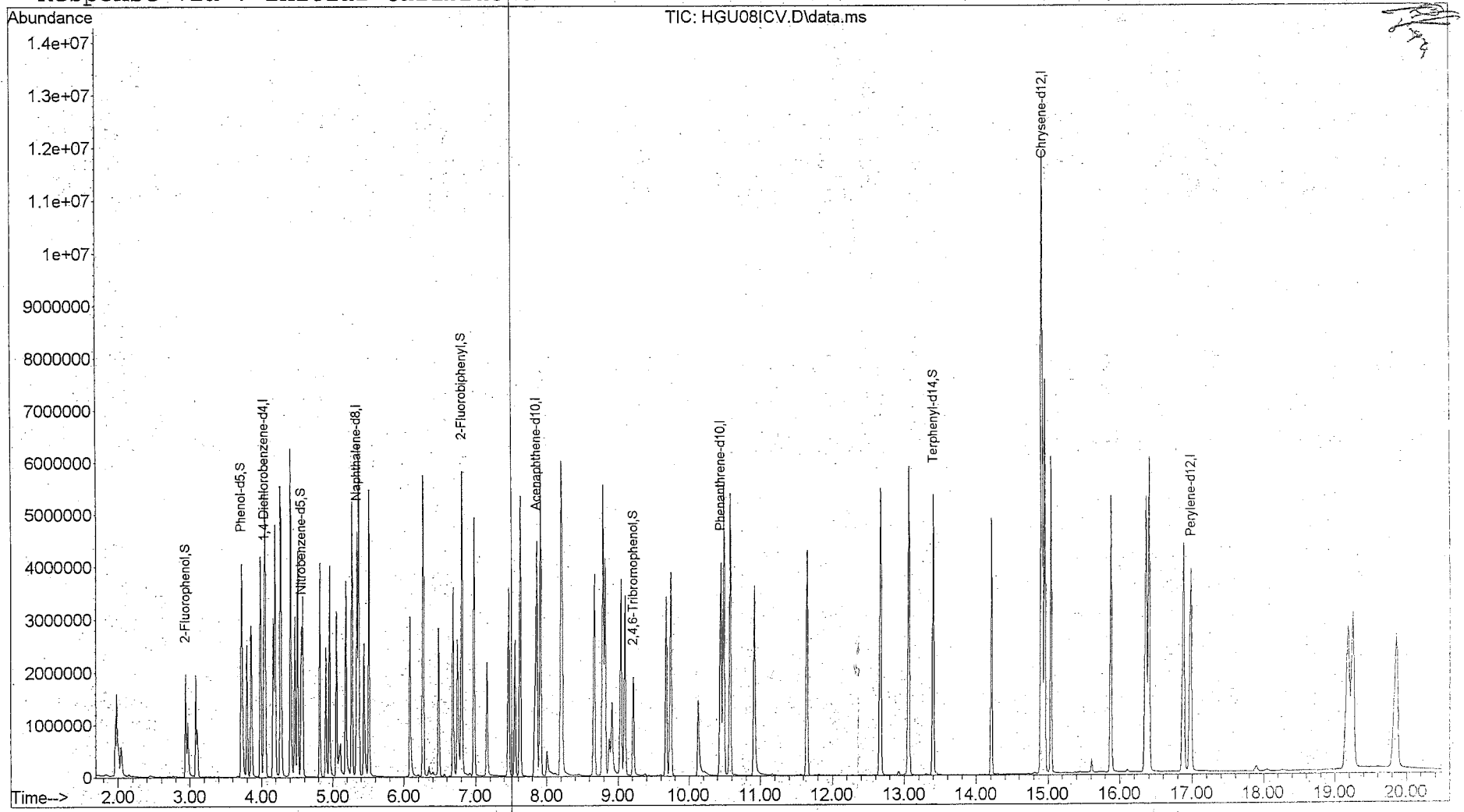
8270DOND.M 5975-H 8270DOND.M 8270 80 std 15970 . X:1/9/13

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU08ICV.D Vial: 8
Acq On : 08/08/2012 13:29 Operator: RAH
Sample : 8270 ICV 15975 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 08 14:02:13 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

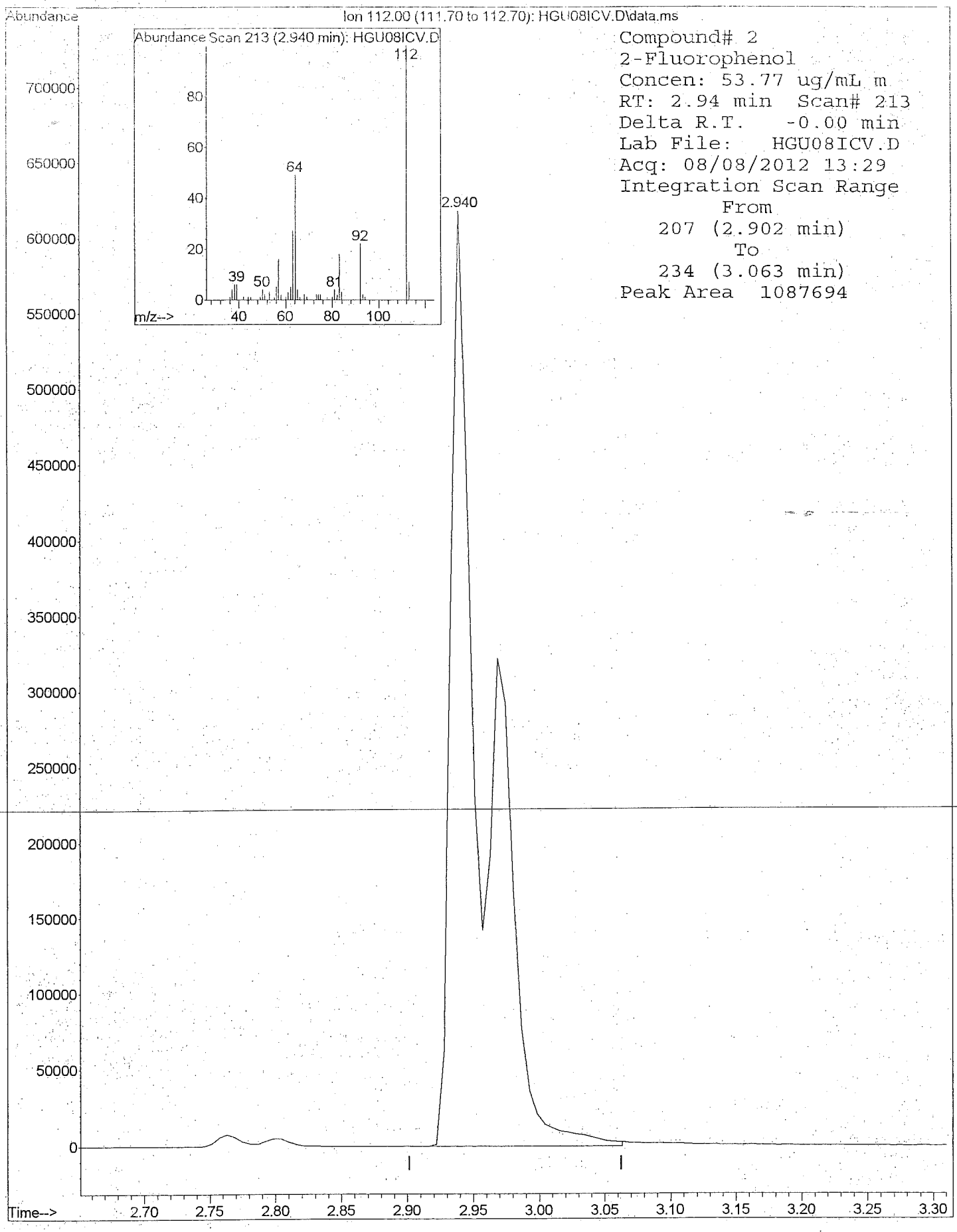
Data File : D:\1\DATA\2012\AUG12\08AUG12H\HGU08ICV.D Vial: 8
Acq On : 08/08/2012 13:29 Operator: RAH
Sample : 8270 ICV 15975 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 08 14:02:13 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	602341	40.00 ug/mL
6) Naphthalene-d8	5.34	136	2573963	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1459085	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2725972	40.00 ug/mL
12) Chrysene-d12	14.92	240	3150498	40.00 ug/mL
14) Perylene-d12	16.98	264	2694862	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.94	112	1087694	53.767ug/mL m
4) Phenol-d5	3.72	99	1280207	48.238ug/mL
7) Nitrobenzene-d5	4.56	82	1077669	48.841ug/mL
9) 2-Fluorobiphenyl	6.81	172	2644191	48.860ug/mL
11) 2,4,6-Tribromophenol	9.22	330	397803	43.347ug/mL
13) Terphenyl-d14	13.40	244	2731708	44.912ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	517926	49.537ug/mL m 99
5) 1,4-Dithiane	4.47	120	833107	49.175ug/mL 98

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

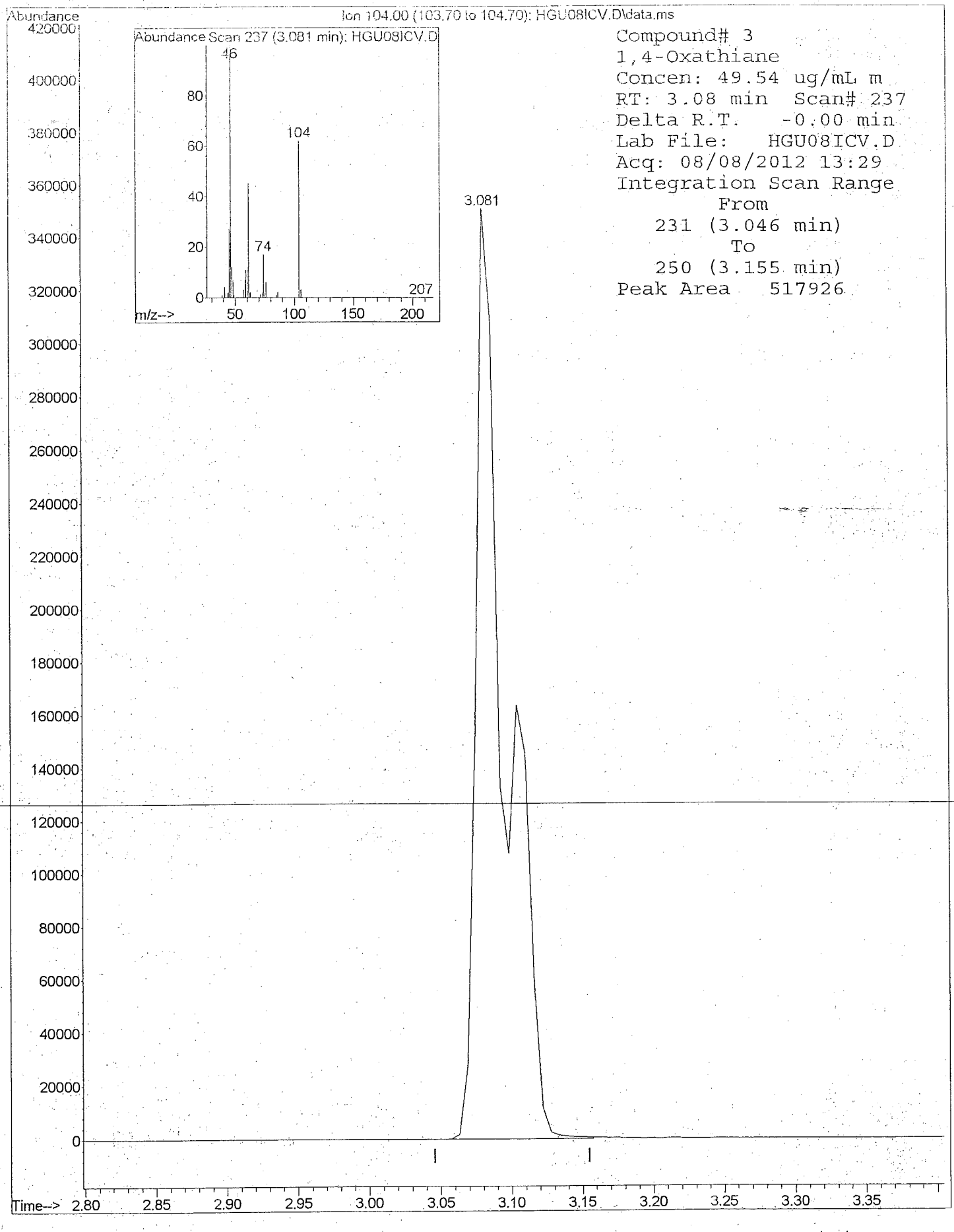
M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



Compound# 2
2-Fluorophenol
Concen: 53.77 ug/mL m
RT: 2.94 min Scan# 213
Delta R.T. -0.00 min
Lab File: HGU08ICV.D
Acq: 08/08/2012 13:29
Integration Scan Range
From
207 (2.902 min)
To
234 (3.063 min)
Peak Area 1087694

8270DOND.M 5975-H 8270DOND.M 8270 ICV 15975 . X:1/9/13

M A N U A L I N T E G R A T I O N FOR 1,4-Oxathiane



8270DOND.M 5975-H 8270DOND.M 8270 ICV 15975 . X:1/9/13

Average of 6.240 to 6.251 min.: HGX01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.90	189	48.00	57	59.00	381	70.95	386
37.00	697	49.00	1389	59.95	254	71.90	95
38.05	2463	50.00	39589	61.00	2186	72.10	67
39.05	13246	51.00	135657	62.05	2272	73.00	1872
40.00	898	52.05	6916	63.00	5895	73.95	17421
41.10	6678	53.00	602	64.00	1033	75.00	27192
42.10	445	54.00	223	65.00	5148	76.05	12953
43.10	1203	55.00	2778	66.05	641	77.05	175340
43.95	254	56.05	6881	67.00	623	78.05	12601
44.95	376	57.00	12632	69.00	186765	79.00	13006
46.95	93	58.00	532	70.00	1164	80.00	9773

Average of 6.240 to 6.251 min.: HGX01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
81.00	13019	92.00	3535	103.00	2506	114.20	94
81.95	3336	93.00	24111	104.00	8909	115.00	388
83.00	3284	94.00	1650	105.00	6692	116.00	3395
83.95	628	95.00	541	106.05	1304	117.00	45278
85.00	1788	96.00	1234	107.00	55137	118.00	3488
85.95	3688	97.05	1155	107.95	8481	119.05	423
87.00	1545	98.00	17017	110.00	103952	119.95	843
87.95	644	99.00	12231	111.00	15457	121.00	2173
88.95	342	100.05	1254	112.00	1917	122.00	5316
90.05	270	101.00	6814	112.95	684	123.00	6719
91.00	3401	101.95	319	114.00	229	124.00	2801

Average of 6.240 to 6.251 min.: HGX01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
125.00	2416	137.00	3320	147.00	5083	157.00	1847
127.00	207633	137.90	561	148.00	12432	157.95	2227
128.00	16409	138.10	302	148.95	101005	159.00	1539
129.00	82086	139.00	437	150.00	9829	160.00	4012
129.95	6770	140.00	1149	151.00	2199	161.00	4651
131.00	1091	141.00	10494	151.70	414	162.00	1716
132.05	1174	142.00	3498	152.05	924	163.00	460
132.95	442	142.95	2515	153.00	3057	164.05	863
134.00	2335	144.00	742	153.95	2589	165.00	4328
135.00	6047	145.00	788	154.95	5776	166.00	3309
136.00	2641	146.00	1800	156.05	8436	167.00	21871

Average of 6.240 to 6.251 min.: HGX01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
168.00	9725	179.00	16552	189.00	3738	201.45	3450
169.00	1759	180.00	11171	189.95	557	203.00	3081
170.00	832	181.05	5025	191.00	1770	203.95	16656
171.00	1104	181.90	300	192.00	5448	205.00	31211
172.00	2117	182.05	694	193.00	5805	206.00	120579
173.00	2747	182.95	706	193.90	1190	207.00	15271
174.00	4581	184.00	1403	194.95	1184	208.00	3916
175.00	8420	185.00	8503	196.00	18147	209.00	1135
176.05	3368	186.00	63931	198.00	485099	210.20	746
177.00	4125	187.00	16998	199.00	33123	211.00	4831
178.00	1247	188.05	1997	199.95	2491	213.05	410

Average of 6.240 to 6.251 min.: HGX01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
214.00	260	227.00	26976	238.05	420	248.00	538
215.00	1471	228.00	3778	238.90	385	249.00	2184
216.00	2844	229.00	5638	239.00	800	249.95	413
217.00	30253	229.90	753	239.95	788	250.95	534
218.00	3896	231.00	2752	241.00	1799	252.00	591
219.05	452	231.95	505	242.00	3778	252.90	1290
221.00	33212	233.05	753	243.10	4434	255.00	299821
223.05	11082	233.95	1826	244.00	58264	256.00	43360
224.00	68667	235.00	2024	245.00	8006	257.00	3587
225.00	17306	236.00	1348	246.00	10219	258.00	15721
226.10	1357	237.00	2316	246.95	2186	259.00	2775

Average of 6.240 to 6.251 min.: HGX01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
259.95	493	270.95	677	280.00	54	290.05	475
261.00	460	272.00	593	280.90	93	290.95	340
262.00	60	272.20	375	282.00	456	291.95	528
263.05	216	273.00	9562	282.90	394	293.00	2446
263.90	488	274.00	23507	283.00	690	293.95	622
265.00	6476	275.00	140616	283.95	949	296.00	35915
265.90	930	276.00	18693	285.00	1803	297.00	5005
267.20	126	277.00	10622	286.05	397	297.95	440
267.85	32	278.00	1912	287.90	57	299.10	54
268.85	207	278.80	121	288.10	65	300.00	51
269.95	567	279.00	386	288.95	443	301.00	481

Average of 6.240 to 6.251 min.: HGX01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
302.05	797	315.00	4139	327.95	1262	342.05	406
303.00	4571	316.00	2276	329.00	313	346.00	2530
304.00	1210	317.00	558	332.05	880	346.95	448
304.95	183	319.95	158	333.00	1224	351.00	191
307.95	557	321.00	1219	334.00	7298	352.00	3535
308.95	398	322.00	724	335.05	1853	353.05	2385
310.00	570	323.05	12300	336.00	238	354.05	3317
311.05	127	324.00	2262	339.00	195	355.05	790
312.00	131	325.00	266	339.80	66	358.00	56
312.95	365	325.95	265	340.10	79	358.95	279
314.05	1917	327.00	2299	341.00	1527	365.00	15034

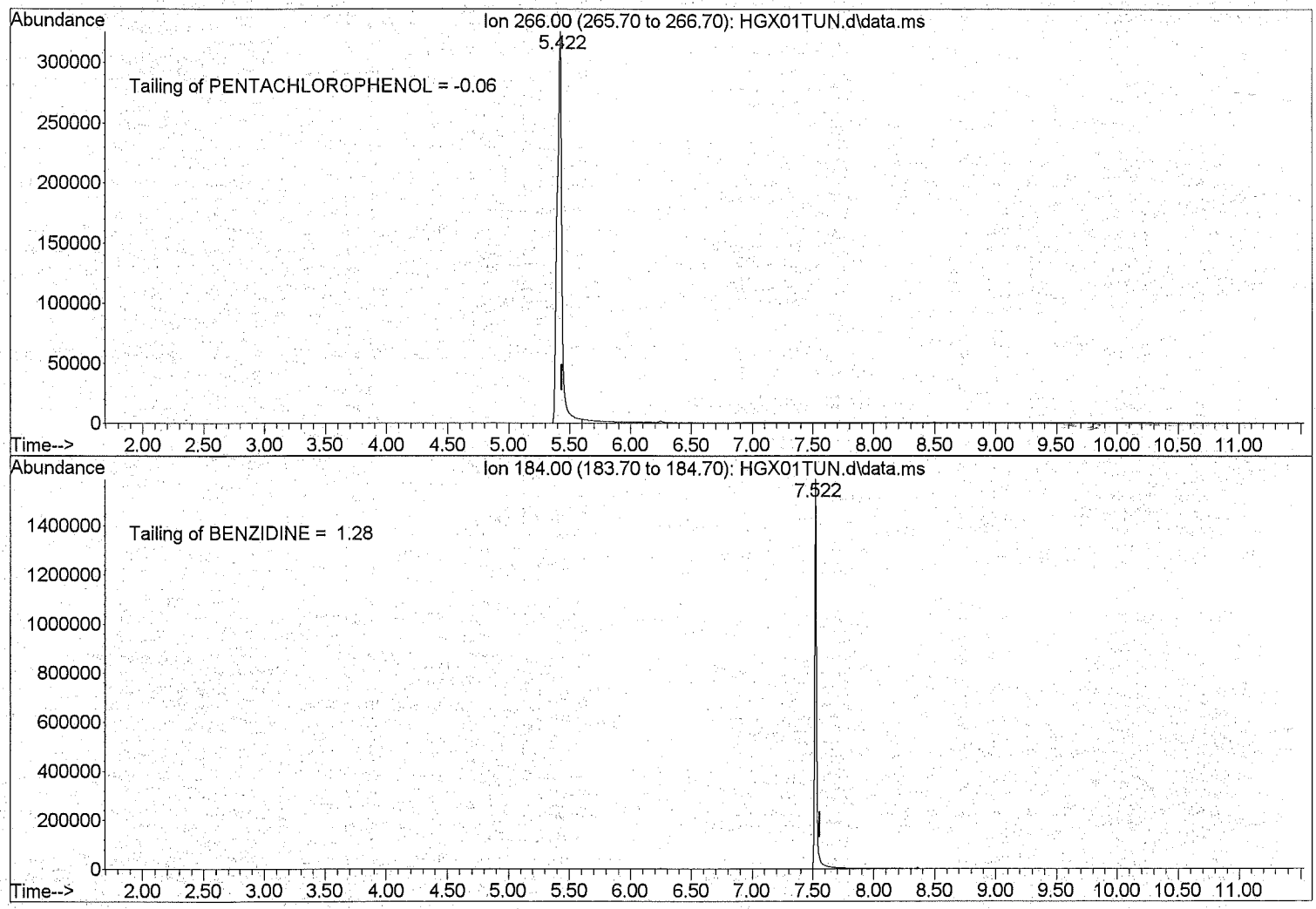
Average of 6.240 to 6.251 min.: HGX01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
366.00	2139	385.10	61	423.05	14801	442.10	348203
367.10	70	390.05	590	424.05	2835	443.10	66765
369.95	342	391.05	458	424.95	371	444.10	6118
371.00	897	392.00	354	436.30	79	445.00	347
372.05	5645	400.95	261	437.00	74		
373.10	1443	402.00	1692	437.25	171		
374.00	65	403.00	2430	437.60	93		
376.90	54	404.05	848	438.60	200		
382.90	338	415.00	55	438.90	455		
383.05	1044	421.00	2211	439.20	259		
384.05	400	422.05	2151	441.10	52696		

Data File: HGX01TUN.d
Date Acquired: 08/10/2012 10:06
Operator ID: RAH
Name: 8270 DFTPP 13808
Misc: X:1/11/13

Instrument: 5975-H
Acq Method: 8270DTUN.M
DA Method: 8270DTUN.M

Cal Title: EPA/CLP SOM01
Last Cal Update: Wed Nov 23 09:22:39 2011
X:1/11/13

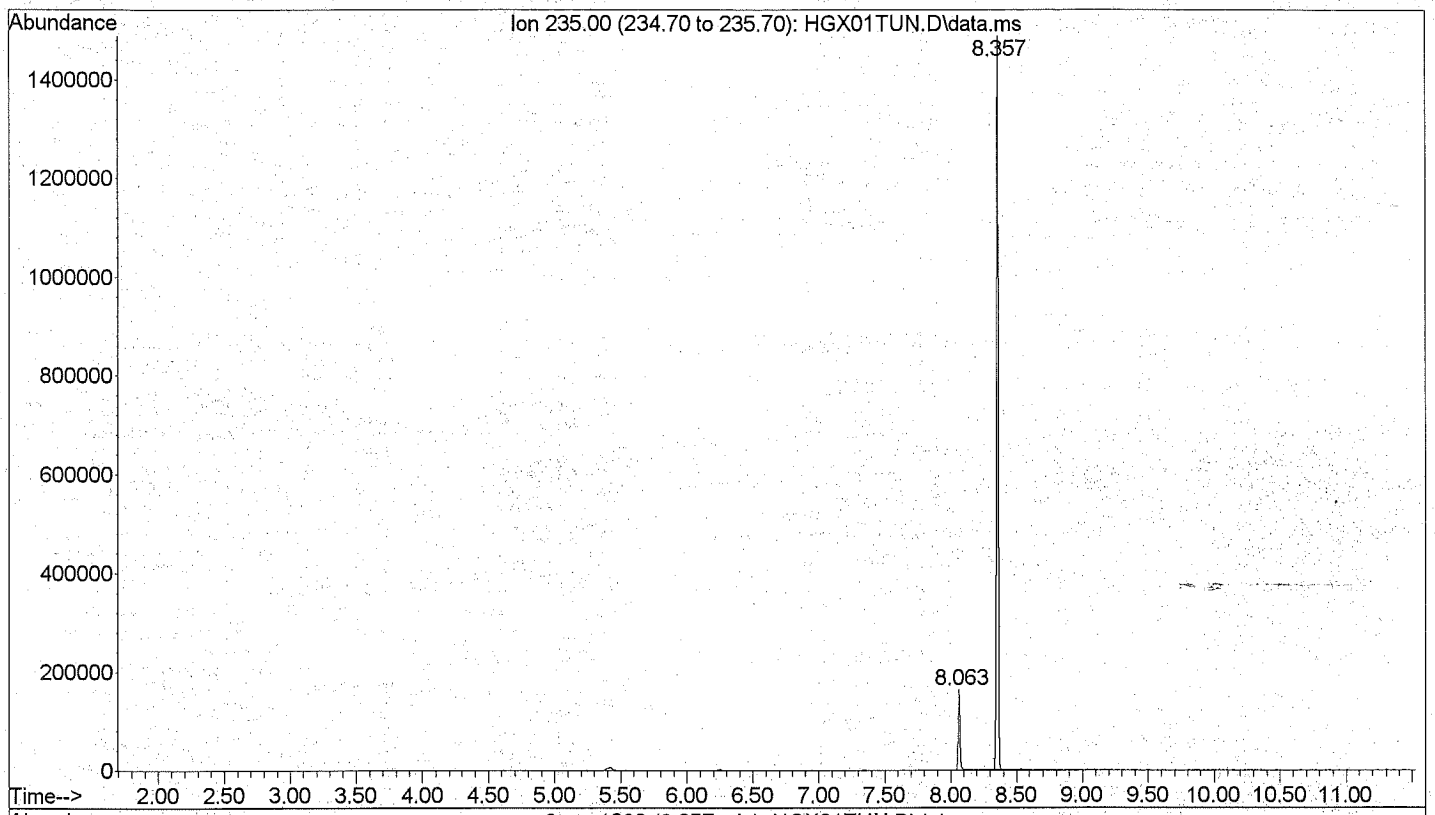


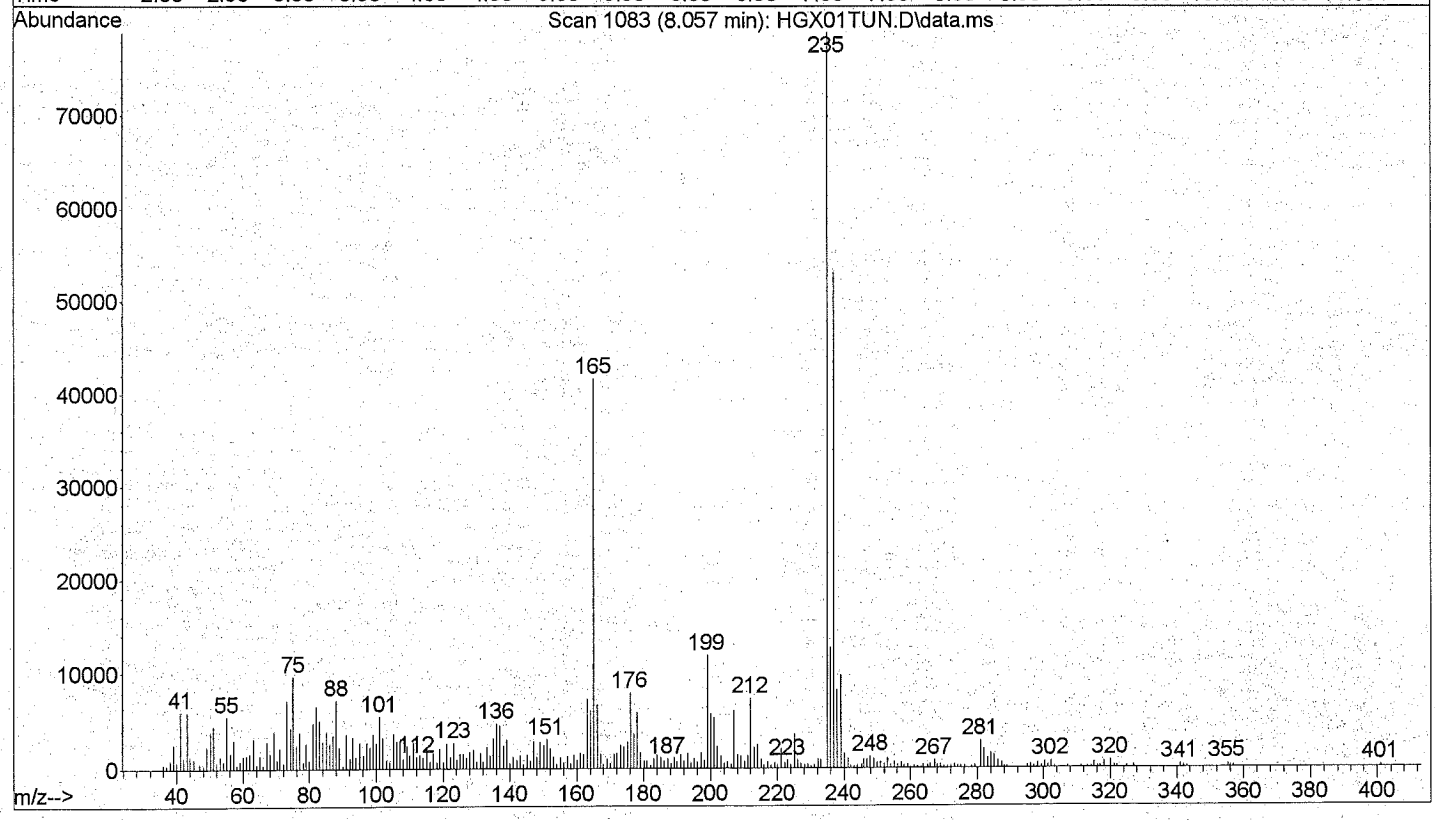
Ion 235.00 (234.70 to 235.70): HGX01TUN.D\data.ms
8270 DFTPP 13808

Peak #	Ret Time	Type	Width	Area	Start Time	End Time
1	8.063	rBV	0.100	153431	8.028	8.128
2	8.357	rVB	0.118	1348291	8.287	8.404

$$\text{DDT degradation} = \frac{153431}{1348291 + 153431} = 10.2\%$$

File :D:\1\DATA\2012\AUG12\10AUG12H\HGX01TUN.D
Operator : RAH
Acquired : 10 Aug 2012 10:06 am using AcqMethod 8270DTUN.M
Instrument : 5975-H
Sample Name: 8270 DFTPP 13808
Misc Info : X:1/11/13
Vial Number: 1



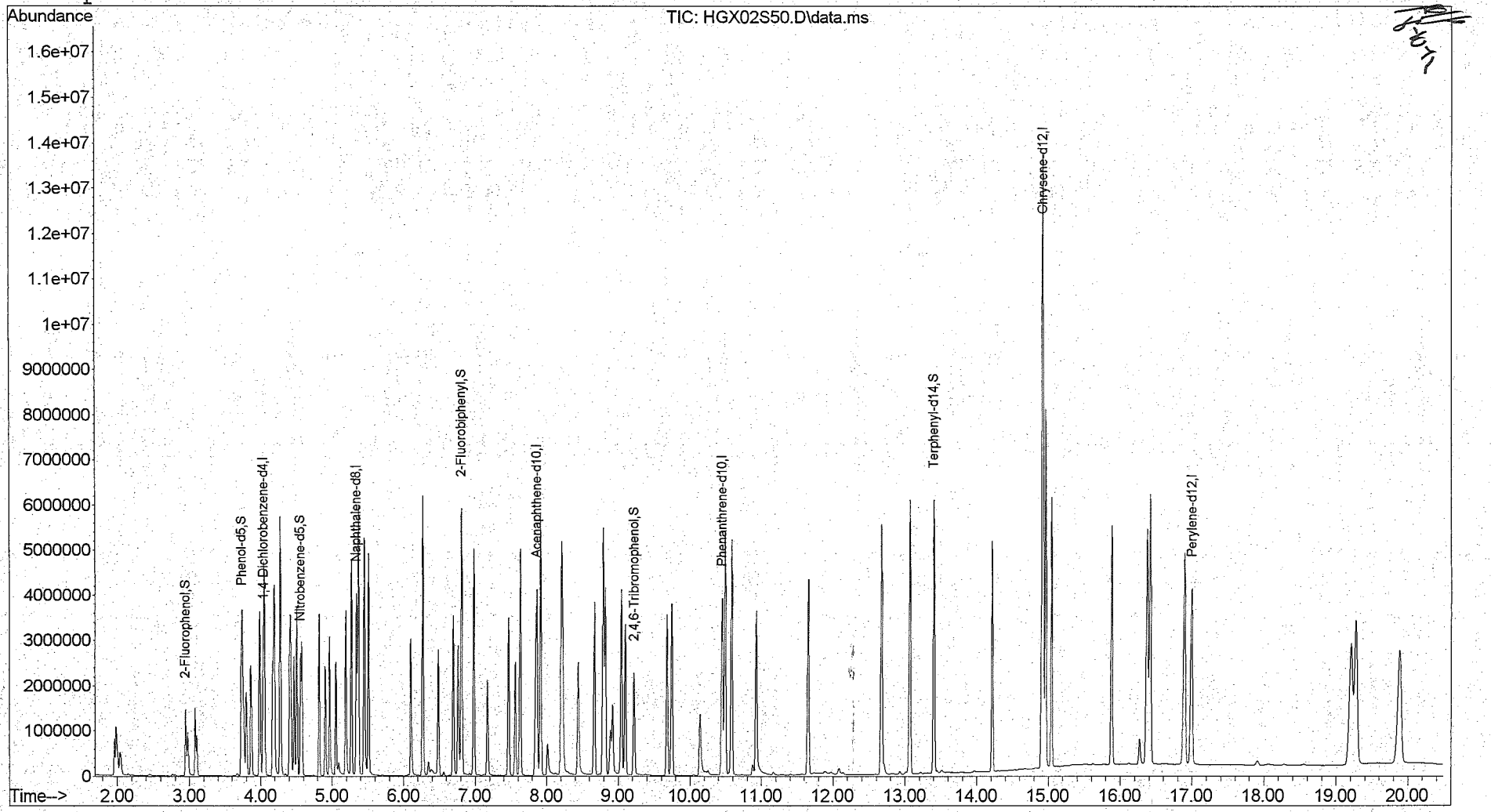


Quantitation Report

Data File : D:\1\DATA\2012\AUG12\10AUG12H\HGX02S50.D Vial: 2
Acq On : 08/10/2012 10:26 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 10 10:49:37 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

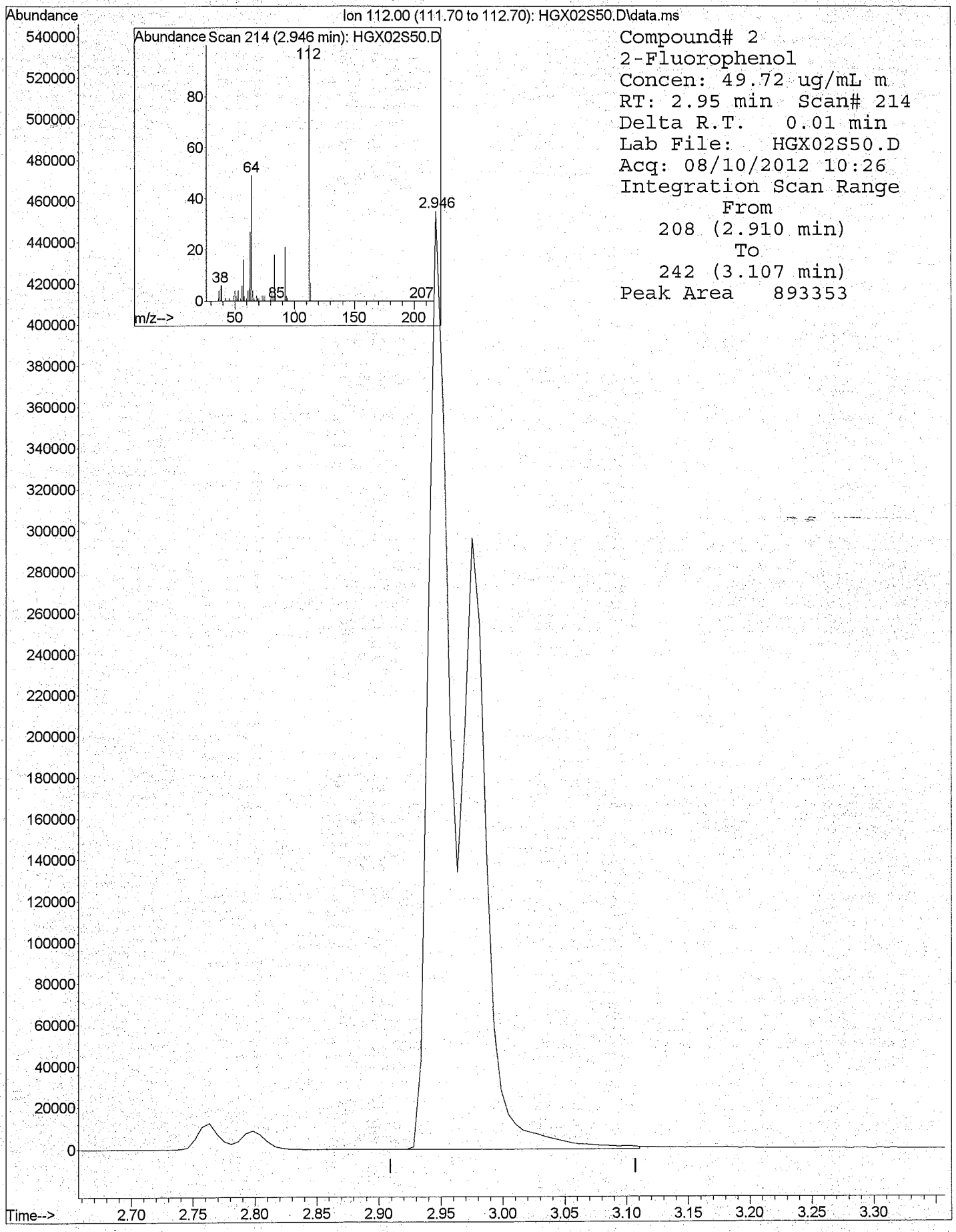
Data File : D:\1\DATA\2012\AUG12\10AUG12H\HGX02S50.D Vial: 2
Acq On : 08/10/2012 10:26 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 10 10:49:37 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	
1) 1,4-Dichlorobenzene-d4	4.03	152	534966	40.00 ug/mL	
6) Naphthalene-d8	5.34	136	2324460	40.00 ug/mL	
8) Acenaphthene-d10	7.86	164	1369595	40.00 ug/mL	
10) Phenanthrene-d10	10.45	188	2646661	40.00 ug/mL	
12) Chrysene-d12	14.93	240	3243210	40.00 ug/mL	
14) Perylene-d12	16.99	264	2704558	40.00 ug/mL	
System Monitoring Compounds					
2) 2-Fluorophenol	2.95	112	893353	49.722ug/mL	m 8-10-12
4) Phenol-d5	3.73	99	1205031	51.124ug/mL	
7) Nitrobenzene-d5	4.56	82	1033546	51.869ug/mL	
9) 2-Fluorobiphenyl	6.81	172	2614554	51.470ug/mL	
11) 2,4,6-Tribromophenol	9.22	330	462032	51.855ug/mL	
13) Terphenyl-d14	13.40	244	3163122	50.518ug/mL	
Target Compounds					Qvalue
3) 1,4-Oxathiane	3.08	104	426740	45.956ug/mL	m 8/10/12 100
5) 1,4-Dithiane	4.47	120	720846	47.907ug/mL	97

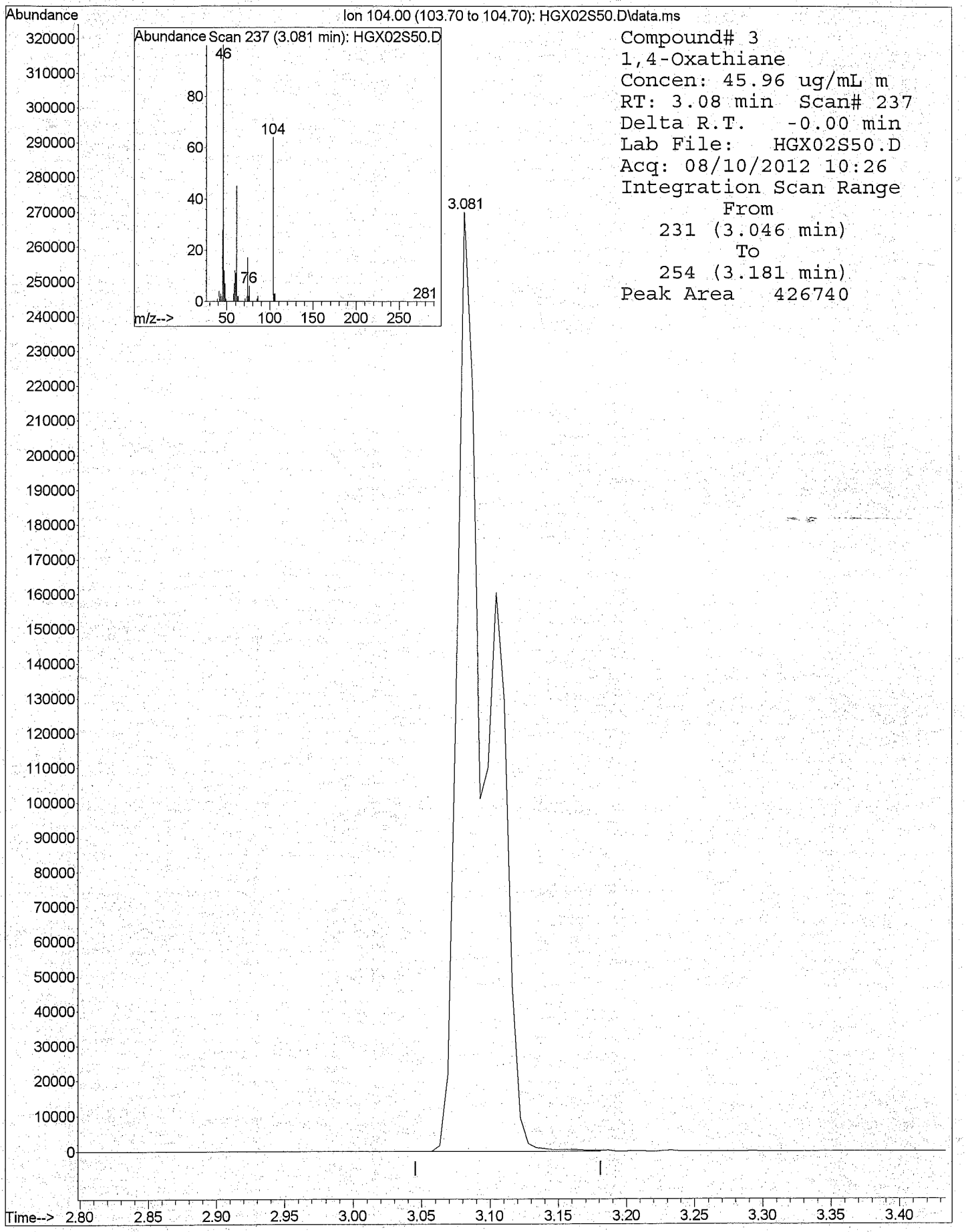
(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

MANUAL INTEGRATION FOR 1,4-Oxathiane



8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

Average of 6.245 to 6.257 min.: HGY01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.90	197	48.00	106	59.00	147	71.05	151
36.95	723	49.00	1358	60.00	83	72.05	172
38.00	1994	50.05	34473	60.95	1864	73.00	1434
39.05	11788	51.05	117621	62.00	2071	74.00	15283
40.00	572	52.05	6392	63.00	5248	75.00	23914
41.10	5206	53.00	472	64.00	1010	76.05	11320
42.05	274	54.05	187	64.95	4552	77.05	152246
43.05	851	55.05	2229	65.95	307	78.10	10710
43.95	401	56.00	6135	67.10	776	79.00	11734
44.95	297	57.00	10526	69.00	163289	80.00	8729
46.90	170	58.00	652	70.00	1104	81.00	12643

Average of 6.245 to 6.257 min.: HGY01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
82.00	3268	93.00	21619	104.00	7576	116.00	3313
83.05	2833	94.00	1572	105.00	6156	116.95	41831
83.90	459	95.10	911	106.10	1787	117.95	3017
85.00	2536	96.05	1194	107.00	49320	119.00	404
85.95	3270	97.05	815	108.00	7655	120.05	720
86.95	1762	98.00	15041	110.00	92523	121.00	1845
87.95	855	99.00	10651	111.00	14197	122.00	4663
88.95	171	99.95	871	112.00	1779	123.00	6191
90.05	136	100.95	6629	112.95	757	124.00	2825
91.05	2764	101.90	395	113.95	294	125.00	2386
92.05	3243	103.00	2760	115.05	298	127.00	184344

Average of 6.245 to 6.257 min.: HGY01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
128.00	14409	139.00	432	150.00	8285	160.00	3162
129.00	73491	140.00	1153	151.00	2797	161.00	4326
130.00	6302	141.00	9793	151.80	429	161.95	1455
131.00	1562	142.00	3165	152.00	903	163.05	932
131.95	983	142.95	2136	152.95	3259	164.00	675
132.95	461	144.05	748	154.00	2230	165.00	3729
134.00	2414	144.95	646	154.95	5499	166.00	3116
134.95	6630	146.00	1850	156.00	8095	166.95	20406
135.95	2262	146.95	5345	157.00	1600	168.00	9098
137.00	3040	148.00	11446	158.00	1983	169.00	1802
138.00	850	149.00	85619	159.00	1366	170.05	834

Average of 6.245 to 6.257 min.: HGY01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
171.00	958	182.00	777	193.00	5556	206.00	109345
172.00	1989	183.05	753	194.05	731	207.05	15053
173.05	2578	184.00	1442	195.05	767	208.00	3493
174.00	4639	185.00	7445	196.00	15514	209.00	1074
175.00	7869	186.00	58317	198.00	442901	210.20	1511
176.05	2722	187.00	16257	199.00	29280	211.00	4348
177.00	3943	188.05	1749	200.00	2550	213.00	473
178.00	1538	189.00	3321	201.45	2613	213.95	171
179.00	15628	190.00	610	203.00	3112	215.00	1190
180.00	10516	191.00	1864	204.00	14985	216.05	2603
180.95	4962	191.95	4706	205.00	28709	216.95	28811

Average of 6.245 to 6.257 min.: HGY01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
218.00	3710	229.00	5513	239.00	1295	249.95	416
218.90	247	230.00	860	240.00	770	250.90	644
219.20	410	231.00	2460	240.95	1640	251.95	587
219.50	172	232.00	584	242.00	3833	253.00	970
221.00	28867	233.05	792	243.10	4056	255.00	281505
223.00	10359	234.00	1535	244.05	54053	256.00	41528
224.00	64268	235.00	2117	245.05	7318	257.00	3391
225.00	16494	236.00	1383	246.00	9458	258.00	15640
226.05	1729	237.00	1972	246.95	1966	258.95	2551
227.00	25200	237.90	136	247.90	521	260.00	495
228.00	3582	238.05	273	249.00	1922	261.00	518

Average of 6.245 to 6.257 min.: HGY01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
262.10	104	272.05	838	284.00	906	294.05	594
262.25	380	273.00	8427	285.05	2166	296.00	34763
263.05	312	274.00	21808	285.95	363	297.00	4614
263.95	798	275.00	127923	288.00	64	298.00	512
265.00	6149	276.00	17279	288.90	316	299.00	58
265.90	990	277.00	10201	289.10	124	299.90	55
266.90	44	278.05	1888	289.95	490	300.30	53
267.80	181	279.00	504	290.80	91	300.95	483
268.95	340	281.10	289	291.05	177	302.00	710
270.05	410	282.00	394	292.05	627	303.05	4274
270.95	658	283.00	1347	293.00	2194	304.00	1163

Average of 6.245 to 6.257 min.: HGY01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
305.10	75	319.90	56	329.10	55	346.95	437
307.95	495	321.05	1188	332.00	999	350.95	155
308.80	104	322.10	632	333.05	1189	352.05	3060
309.00	244	323.05	11541	334.05	7061	353.05	2300
309.95	461	324.05	2026	335.05	1860	354.05	3295
312.00	62	324.95	176	335.95	188	355.00	690
313.05	352	325.70	63	339.05	169	358.95	209
314.05	1612	325.95	267	339.90	144	363.80	61
315.00	4014	327.00	2127	341.00	1464	365.00	14188
316.05	2105	327.95	1188	342.00	413	366.00	1977
316.95	494	328.90	166	345.95	2290	366.95	200

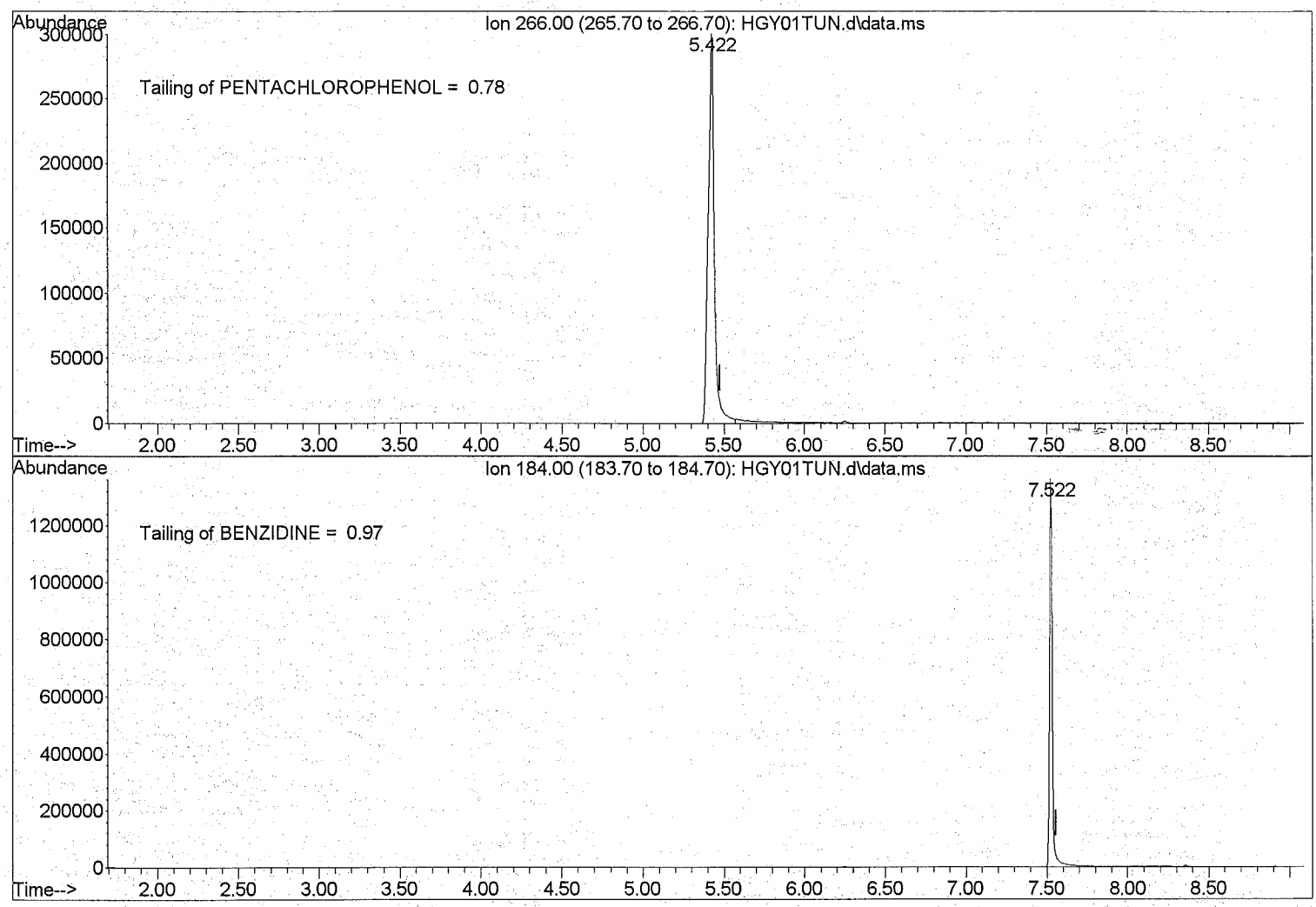
Average of 6.245 to 6.257 min.: HGY01TUN.d\data.ms
8270 DFTPP 13808
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
369.70	102	400.95	242	435.30	104	445.05	351
369.90	139	402.00	1840	435.70	59		
371.05	781	403.05	2284	437.35	176		
372.05	5107	404.00	720	438.20	134		
373.05	1302	404.90	60	438.40	207		
376.95	111	415.10	62	438.90	232		
383.00	1232	421.05	1952	439.10	289		
383.95	397	422.05	1913	441.10	49352		
390.00	513	423.10	13717	442.10	325568		
391.05	374	424.05	2726	443.10	62096		
392.05	280	425.05	291	444.10	5838		

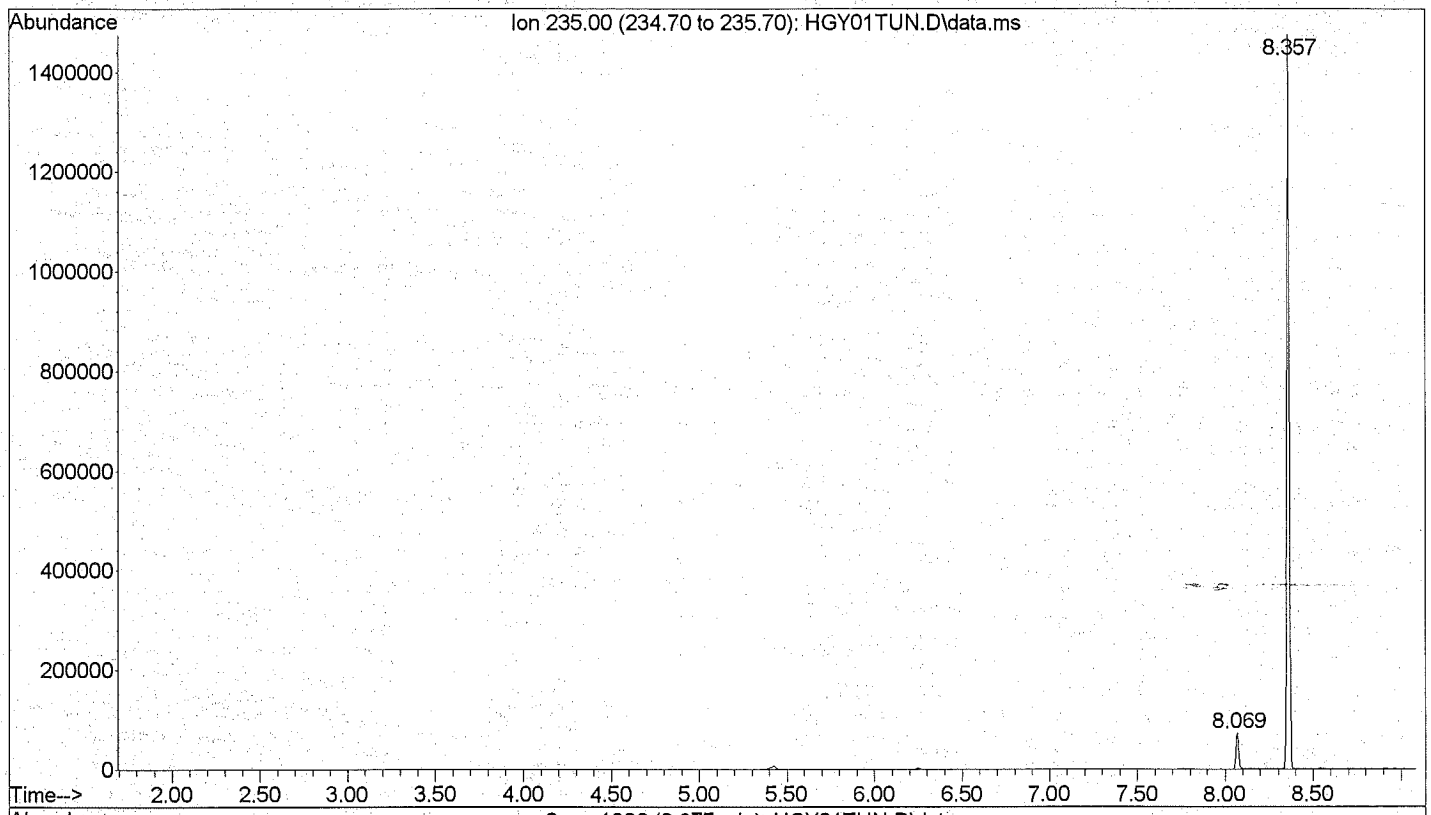
Data File: HGY01TUN.d
Date Acquired: 08/13/2012 09:23
Operator ID: RAH
Name: 8270 DFTPP 13808
Misc: X:1/11/13

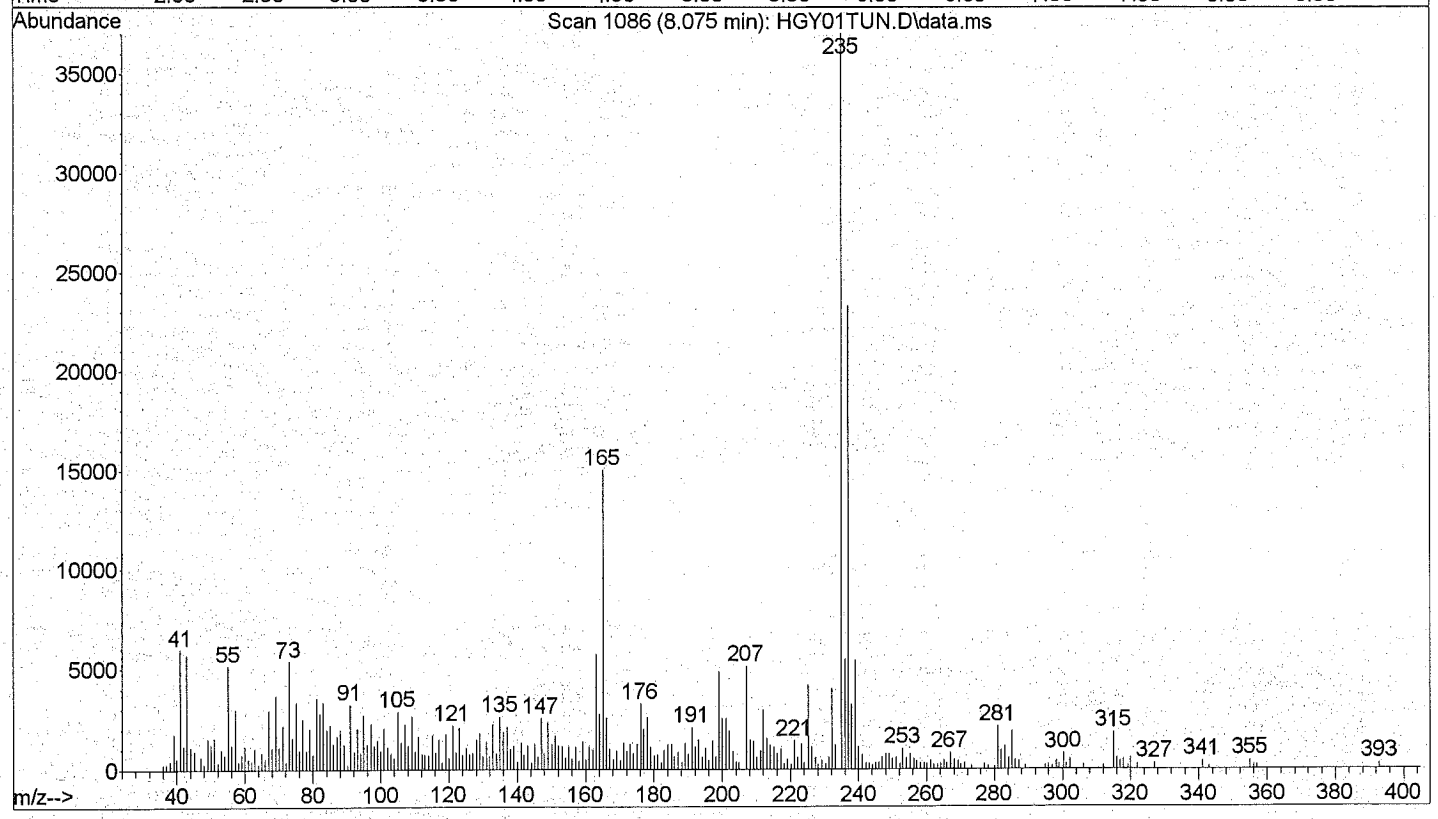
Instrument: 5975-H
Acq Method: 8270DTUN.M
DA Method: 8270DTUN.M

Cal Title: EPA/CLP SOM01
Last Cal Update: Wed Nov 23 09:22:39 2011
X:1/11/13



File :D:\1\DATA\2012\AUG12\13AUG12H\HGY01TUN.D
Operator : RAH
Acquired : 13 Aug 2012 9:23 am using AcqMethod 8270DTUN.M
Instrument : 5975-H
Sample Name: 8270 DFTPP 13808
Misc Info : X:1/11/13
Vial Number: 1





Ion 235.00 (234.70 to 235.70): HGY01TUN.D\data.ms
8270 DFTPP 13808

Peak #	Ret Time	Type	Width	Area	Start Time	End Time
1	8.069	rBV	0.088	77290	8.039	8.128
2	8.357	rVB	0.106	1333953	8.328	8.433

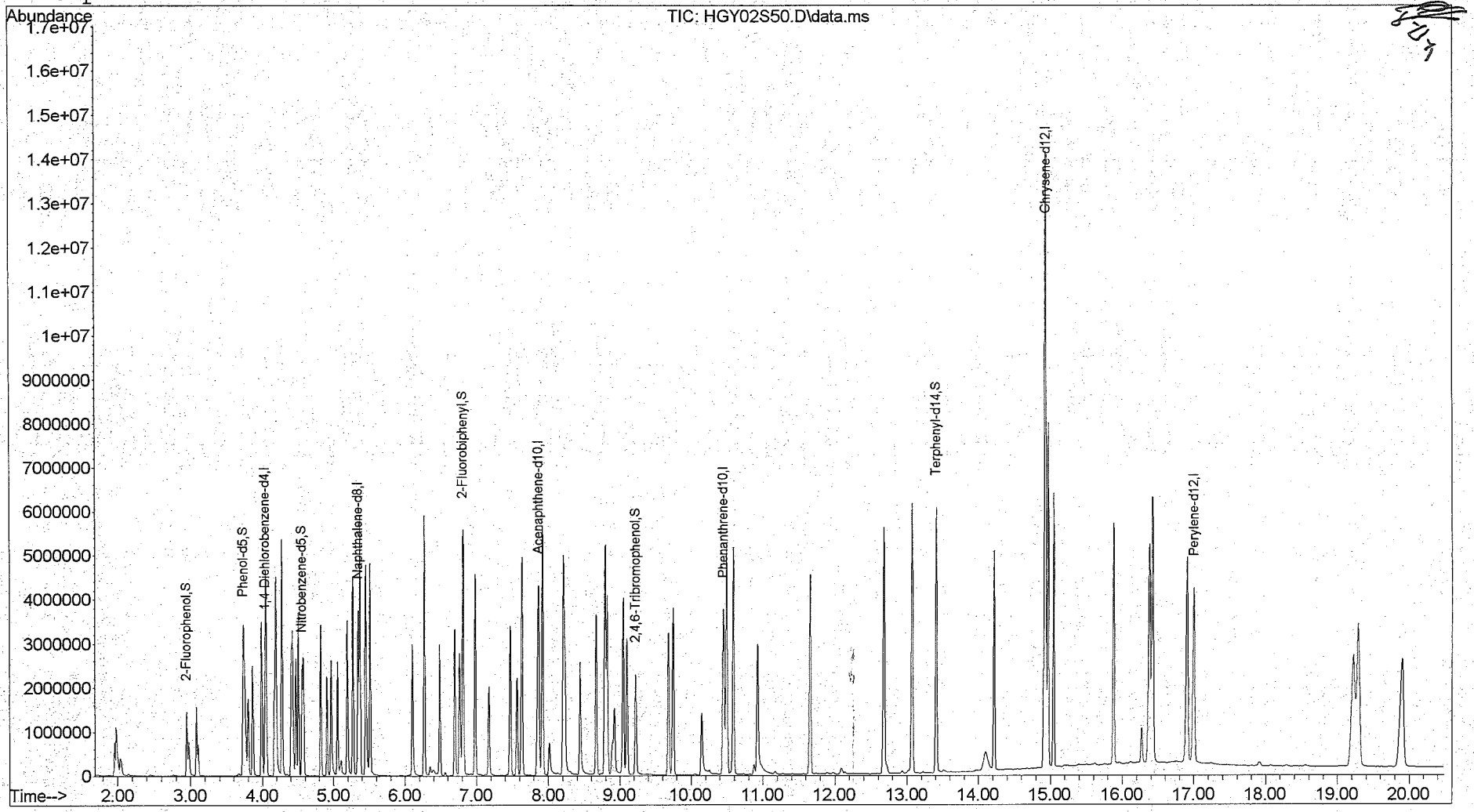
$$\frac{77290}{77290 + 1333953} = 5.5\%$$

Quantitation Report

Data File : D:\1\DATA\2012\AUG12\13AUG12H\HGY02S50.D Vial: 2
Acq On : 08/13/2012 09:39 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1uL
MS Integration Params: rteint.p

Quant Time: Aug 13 10:06:43 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration



Quantitation Report

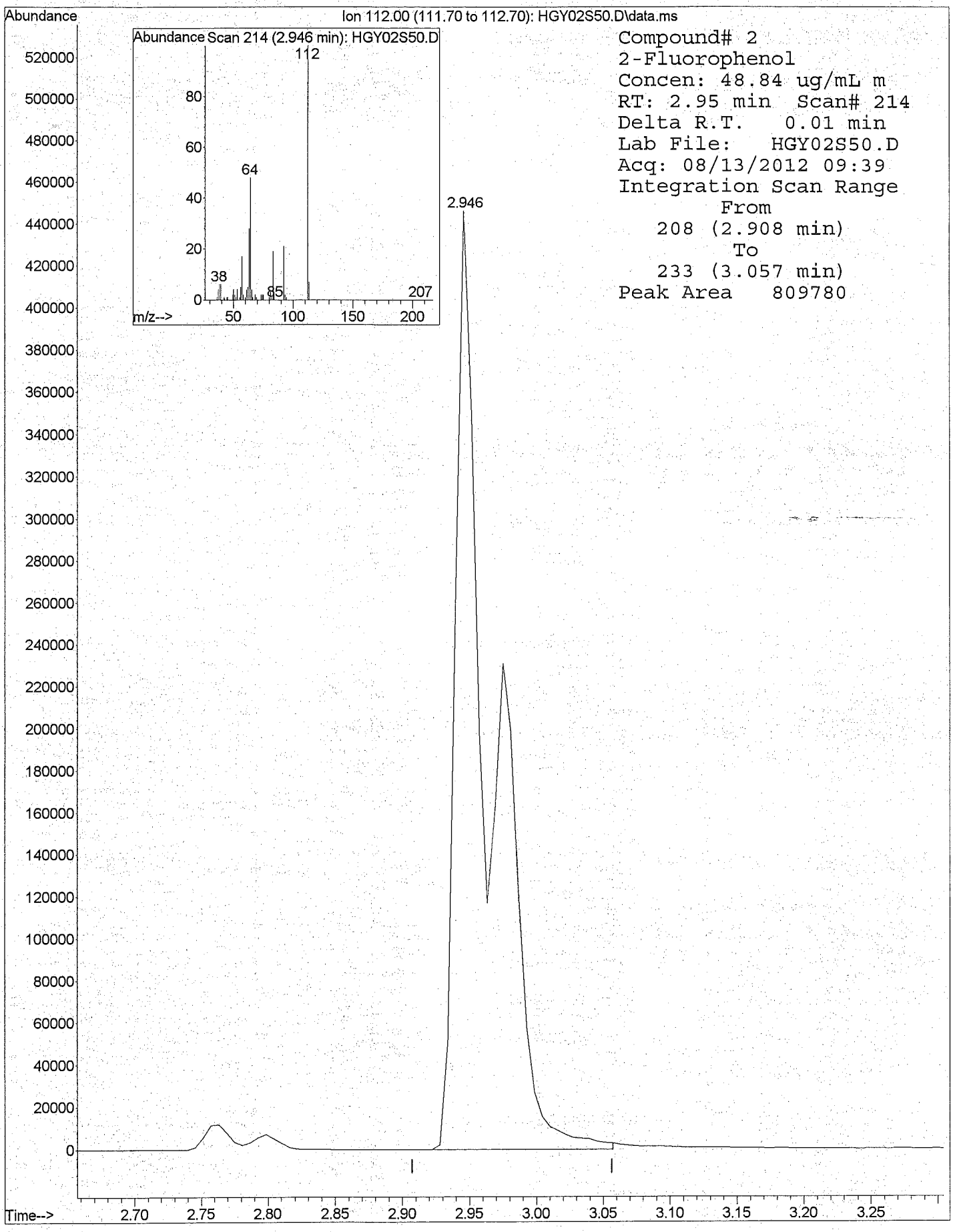
Data File : D:\1\DATA\2012\AUG12\13AUG12H\HGY02S50.D Vial: 2
Acq On : 08/13/2012 09:39 Operator: RAH
Sample : 8270 50 std 15952 Inst : 5975-H
Misc : . X:1/9/13 Injection volume : 1
MS Integration Params: rteint.p
Quant Time: Aug 13 10:06:43 2012 Results File: 8270DOND.RES

Method : D:\1\METHODS\8270DOND.M (RTE Integrator)
Title : SW-846 8270D
Last Update : Wed Aug 08 13:24:11 2012
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units
1) 1,4-Dichlorobenzene-d4	4.03	152	493722	40.00 ug/mL
6) Naphthalene-d8	5.35	136	2195754	40.00 ug/mL
8) Acenaphthene-d10	7.86	164	1317894	40.00 ug/mL
10) Phenanthrene-d10	10.45	188	2586615	40.00 ug/mL
12) Chrysene-d12	14.93	240	3267187	40.00 ug/mL
14) Perylene-d12	17.00	264	2660460	40.00 ug/mL
System Monitoring Compounds				
2) 2-Fluorophenol	2.95	112	809780	48.835ug/mL m
4) Phenol-d5	3.73	99	1110489	51.049ug/mL
7) Nitrobenzene-d5	4.56	82	962444	51.132ug/mL
9) 2-Fluorobiphenyl	6.81	172	2515187	51.456ug/mL
11) 2,4,6-Tribromophenol	9.23	330	445708	51.184ug/mL
13) Terphenyl-d14	13.41	244	3089122	48.974ug/mL
Target Compounds				Qvalue
3) 1,4-Oxathiane	3.08	104	398920	46.549ug/mL 98
5) 1,4-Dithiane	4.47	120	678540	48.863ug/mL 96

(m) = manual integration
(*) Does not meet EPA spectral criteria (False Hit)

M A N U A L I N T E G R A T I O N FOR 2-Fluorophenol



8270DOND.M 5975-H 8270DOND.M 8270 50 std 15952 . X:1/9/13

Fort Stewart RFI Report
Appendix E-3: Data Quality Assessment

1.0 INTRODUCTION

The analytical data provided by ALS Laboratory Group (ALS) of Middletown, Pennsylvania and the sample procedures followed by ERT, Inc. (ERT) have been reviewed by the ERT Project Chemist and validated by the Meridian Consultant Group, Inc. (MCGI) Senior Chemist. This data quality assessment (DQA) section is prepared to summarize those findings in accordance with the approved Quality Assurance Project Plan (QAPP) (ERT, 2012), and specifically evaluates the data quality indicators (DQIs) of precision, accuracy, reproducibility, comparability, completeness, and sensitivity (PARCCS) with respect to the project data quality objectives (DQOs). Overall, the data were considered to be of an acceptable quality to be used to perform further evaluations.

1.1 Analytical Program

Environmental and field quality control (QC) samples were analyzed by ALS. The laboratory analyzed all environmental samples and field QC samples (i.e. trip blanks, equipment rinsate blanks [ERBs], field duplicates, matrix spikes [MS], and matrix spike duplicates [MSD]) using accepted laboratory standard operating procedures (SOPs) based on the *SW-846 Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*; specifically United States Environmental Protection Agency (USEPA) Methods 6020A, 8330B, 8270D, and 8321 (USEPA, 2007).

The analytical data packages included the following list of ALS sample delivery groups (SDGs), plus subcontracted SDGs to other laboratories within the ALS network (i.e. ALS – Salt Lake City, Utah):

- 9980109
- 9980394
- 9980395
- 9980614
- 9980875
- 9981198
- 9981496
- 9981774

All samples were collected, shipped, handled, and analyzed in compliance with the approved QAPP (ERT, 2012).

1.2 Field and Quality Control Sample Summary

The project utilized both field and analytical laboratory QC measures to meet the DQOs. The sampling program during the RFI field activities consisted of 92 regular soils samples, one surface water sample, and two sediment samples. ALS was also provided with all corresponding field QC samples, which included: 5 ERBs, 9 field duplicates, and 5 MS/MSD pairs.

1.3 Data Deliverables

Complete analytical data packages, including raw data and appropriate electronic data deliverables (EDDs), were submitted by ALS to ERT. The data packages were provided in an error-free electronic format.

ALS prepared USEPA Contract Laboratory Program (CLP) Level IV data packages to include a cover sheet, table of contents, case narrative, the analytical results, sample receipt and data

management records, internal laboratory QA/QC information, and raw data. The laboratory data packages were organized so that the analytical results were reported on a per batch basis. Full data packages and EDDs are available in Appendix E-2.

1.4 Data Quality Objectives

The DQOs for this task included:

- Characterizing media in each MRS that could have been impacted from historical Department of Defense (DoD) activities.
- Identifying chemicals of potential concern (COPCs) and chemicals of potential ecological concern (COPECs).
- Determining if there is a potential current risk to human and ecological health from contaminants exceeding specified screening levels.
- Determining if corrective measures are warranted at each MRS.

The project DQOs were identified in the approved QAPP (ERT, 2012), and were developed based on the investigation needs. Quality assurance objectives were also developed to support the project DQOs and to ensure the collected data would be defensible and support the conclusions of the investigation.

Performance and acceptance criteria were developed in order to minimize the potential for study error rates. Quantitative project specific objectives for the DQIs of precision, accuracy, completeness, and sensitivity were developed in order to define acceptable measurement error and to assess the overall quality of the analytical data collected. Quantitative objectives for precision and accuracy were established to be in accordance with the specific analytical methodologies and laboratory control limits, which are also identified in the approved QAPP (ERT, 2012). Precision between field duplicate samples was set at a relative percent difference (RPD) of 30 percent. The objective of the percentage of data to be within established accuracy and precision limits was 90 percent. Completeness, which was defined in the approved QAPP as the difference between planned data and the actual amount of data collected, was established at 95 percent.

1.5 Data Evaluation

Numerical DQOs for accuracy, precision, and completeness were calculated for the RFI data. These DQOs provide the main point of reference for an assessment of environmental data as a whole. A detailed assessment of the data quality results, including quantitative and qualitative evaluations, is presented in the following sections.

1.5.1 Precision

Precision is defined as the reproducibility, or degree of agreement, among replicate measurements of the same compound analyzed under identical conditions. For samples collected and analyzed as field duplicates, precision was expressed as the RPD of the concentration of elements detected in the sample and associated duplicate. As with MS/MSDs, the field duplicate data served as indications of the matrix sampled and precision in the analytical system. An MS/MSD analysis was required for every 20 samples in a laboratory batch. Field duplicates were required at a 10 percent frequency. Data validation indicated that the number and magnitude of field duplicate and spike failures were within acceptable validation guidelines such

that all data were usable. A detailed assessment of the data quality results for precision is presented below.

1.5.1.1 Field Duplicates

Duplicate environmental field samples were collected at selected locations at a frequency of 1 per 10 regular samples collected (10 percent frequency), in order to evaluate the precision of the sampling techniques. The RPD value of each detected compound or element was reviewed to assess the sample collection reproducibility and matrix variability. When good field techniques are consistently implemented and matrix effects are minimal, the RPDs are expected to be low. For all soil parameters, 94 percent of the RPDs were within the established precision limit for field duplicate analyses; 4 of 62 individual parameter results were greater than 30% RPD. No qualifying action was taken based on field duplicate results. Field duplicate analyses greater than 30% RPD were limited to select metals, and are presented in Table E-3-1.

1.5.1.2 Matrix Spike Duplicates

MSD samples were collected at the correct frequency (1 per 20 regular samples collected, or 5 percent), and the precision control limits used to evaluate the data were taken from the approved QAPP (ERT, 2012). MSD evaluation was performed on MS/MSD samples collected in the field with the batch of regular environmental samples. 100 percent of the RPDs for the MS/MSD samples evaluated were within the established control limits.

1.5.2 Accuracy

Accuracy is defined as the extent of agreement between a measured or calculated value and the true value. Accuracy was determined using spike percent recovery (%R) data from MS and MSD samples that were collected in the field with the batch of regular environmental samples to identify matrix effects. ERBs were collected to also serve to identify contamination effects. MS and MSD analyses were required for every 20 samples per matrix. ERBs were required for every 20 samples collected using non-disposable sampling equipment. Data validation indicated that the number and magnitude of blank and spike failures were within acceptable validation guidelines such that all data were usable. A detailed assessment of the data quality results for accuracy is presented below.

1.5.2.1 Equipment Rinsate Blanks

ERBs were collected to evaluate the decontamination technique used for non-disposable sampling equipment. ERBs were collected by pouring distilled water through a recently decontaminated piece of equipment into a prepared sample container appropriate for the required analysis.

ERBs were analyzed at the correct frequency (1 per 20 regular samples collected, or 5 percent, when non-disposable sampling equipment was employed). Arsenic was detected at low levels in two ERB samples collected; and 2,4,6-trinitrotoluene (TNT) was detected in one ERB sample collected during soil sampling, as presented in Table E-3-2. Arsenic and TNT were not detected in the respective, associated regular samples; no qualifying action was taken.

1.5.2.2 Matrix Spikes

MS samples were collected at the correct frequency (1 per 20 regular samples collected per matrix, or 5 percent), and the accuracy control limits used to evaluate the data were taken from the approved QAPP (ERT, 2012). MS evaluation was performed on MS and MSD samples collected in the field with the batch of regular environmental samples. Greater than 96 percent

of the %R for the MS and MSD samples evaluated were within the established control limits; 4 of 102 of individual, relevant parameter MS and MSD %R results were outside of control limits. %R results for the MS and MSD samples in SDG 9980394 displayed high recoveries for aluminum and lead, as presented in Table E-3-3. Positive results for these two elements in the regular soil samples in this SDG were qualified "J" to indicate that the reported results are an estimate.

1.5.3 Representativeness

Representativeness was evaluated by comparing preservation and analytical procedures to those described in the approved QAPP (ERT, 2012), by evaluating holding times, and by examining blanks for possible contamination of samples during collection and analysis.

All samples were preserved, prepared, and analyzed following methods specified in the approved QAPP (ERT, 2012). ERBs were found to be free of target analytes, except for those discussed in Section 1.5.2 above and presented in Table E-3-2.

Holding times are defined as the maximum amount of time allowed to lapse between the date and time of sample collection and the date and time of sample analysis. All samples were analyzed within the recommended method holding times, except for the aqueous sample, FTSW-HR-SO-02(01.5) ERB, which was extracted for 1,4-dithiane and 1,4-oxathiane two days outside the technical holding time. All other QC samples and all regular samples were analyzed within standard holding time of 6 months for metals, 40 days for explosives, and 40 days for 1,4-dithiane and 1,4-oxathiane, and 14 days for thiodiglycol.

Representativeness, in part, was also accomplished by the consistent use of approved sampling techniques, environmental sample collection methods, equipment, decontamination methods, and sample containers for the field work according to the guidelines and specifications described in the approved QAPP (ERT, 2012), which included ERT standard operating procedures. The approved QAPP also identified that an audit plan would be developed. However, instead of developing an official audit plan that may have included a field audit, the Quality Control Manager reviewed all of the daily reports and received numerous daily updates on the field effort to ensure the work was conducted as planned. Adherence to the procedures outlined in the approved QAPP is well documented within the field notes (included in Appendix M) and all field work was overseen by onsite USACE personnel who ensured compliance with the Work Plan on a daily basis.

As noted in Section 4.2.1 of the RFI, due to soil conditions a knife and/or pick was used at some of the Anti-Aircraft Range sampling locations to assist with accessing the sampling locations. As neither of these came into contact with soil that was collected, there was no cross-contamination. Additionally, Section 4.2.2 of the RFI details the use of the excavator to access some of the subsurface sample locations due to the high clay content of some of the sampling locations. When this occurred, the excavator was used to excavate subsurface material after collection of the surface sample and the GPS unit was utilized to reacquire the subsurface sampling location so that the surface and subsurface samples were still co-located. No soil cross-contamination was introduced by utilizing the excavator as a 1 foot soil buffer was utilized between the depth excavated with the excavator and the top of the subsurface sample.

The data are considered representative of site conditions for the purpose of the RFI; the sampling team followed approved standard operating procedures for sample collection and handling, and the laboratory followed approved standard operating procedures for sample handling, preparation, and analysis.

1.5.4 Completeness

Completeness determinations were made separately for samples obtained from the field collection effort and data obtained from the analytical measurement system. As identified above, [field] completeness is the difference between planned data and the actual amount of data collected. Completeness also refers to the fraction of valid data obtained (i.e. not rejected) compared to that which was planned. Analytical completeness is calculated as follows:

$$\text{Completeness (\%)} = \frac{\text{Number of Valid Measurements Made}}{\text{Number of Measurements Planned}}$$

Field completeness was 100 percent; all proposed regular and QC samples were collected. Analytical completeness was 100 percent (no data were rejected), indicating that the DQOs for completeness were met.

1.5.5 Comparability

Comparability refers to the confidence with which one data set can be compared to another. To improve data comparability, the data set used for this RFI was generated by employing standardized analytical methods and standardized data validation procedures. Project planning, including lab selection, incorporated various appropriate USEPA guidance documents, as well as direct input from USACE on field and laboratory issues to ensure the comparability of the data. Because of the implementation of standard planning, field, analytical, and validation procedures during this investigation; the data can be compared with confidence to others of acceptable data quality.

1.5.6 Sensitivity

Sensitivity was evaluated as a function of the laboratory limit of detection (LOD) with respect to chemical specific screening level (SL) benchmarks. Typically, LODs should be less than the screening levels, but this does not always occur (i.e. because of dilutions or extremely sensitive screening criteria). The analytical methods and the resultant LODs used in this investigation resulted in most LODs for explosives to be greater than current USEPA Risk-based Protection of Groundwater Soil SLs (USEPA, 2012). No explosives were detected in any sample collected, which increases the certainty that explosives were not present in concentrations at or below the SLs. Sample LODs greater than the project SLs are identified in Table E-3-4.

Table E-3-1. Field Duplicate Precision Greater than 30%						
Sample ID **Parent ID** **Sample Date**	FTSW-AA-SO-03 7/26/2012	FTSW-AA-SO-03 DUP FTSW-AA-SO-03 7/26/2012	**RPD**	FTSW-AA-SO-08 [02] 7/26/2012	FTSW-AA-SO-08 [02] DUP FTSW-AA-SO-08 [02] 7/26/2012	**RPD**
Parameter						
Select Metals by SW6020A (mg/kg)						
Aluminum	5750	4370	27.3	20600	30200	**37.8**
Arsenic						
Copper	2	3.2	**46.2**			
Zinc	6.5	7.6	15.6	4.5	5.3	16.3

Sample ID **Parent ID** **Sample Date**	FTSW-AA-SO-25 7/27/2012	FTSW-AA-SO-25 DUP FTSW-AA-SO-25 7/27/2012	**RPD**	FTSW-HR-SO-22 [04] 7/31/2012	FTSW-HR-SO-22 [04] DUP FTSW-HR-SO-22 [04] 7/31/2012	**RPD**
Parameter						
Select Metals by SW6020A (mg/kg)						
Aluminum	2080	2530	19.5			
Arsenic				0.89	0.75	17.1
Copper	1.6	2.3	**35.9**			
Zinc	1.8	6.5	**113.3**			

Legend

RPD	relative percent difference (%)
mg/kg	milligrams per kilogram
blank cell	not analyzed, or one or both analyses resulted in a non-detect
value	bold RPD value exceeds 30%

Table E-3-2. Detections in Equipment Rinsate Blanks			
Sample ID **Sample Date**	FTSW-AA-SO-22 ERB 7/27/2012	FTSW-HR-SO-02 (01.5) ERB 7/30/2012	FTSW-HR-SO-37 (09.5) ERB 8/1/2012
Parameter			
Select Metals by SW6020A (mg/L)			
Arsenic		0.0019	0.0011
Explosives by SW8330B (µg/L)			
2,4,6-Trinitrotoluene	0.2		

Legend

mg/L	milligrams per liter
µg/L	micrograms per liter
blank cell	not analyzed, or not detected

Table E-3-3. Spike Recoveries Outside of Control Limits			
	Sample ID **Sample Date**	FTSW-HR-SO-01 MS 7/30/2012	FTSW-HR-SO-01 MSD 7/30/2012
Parameter	**Control Limits**	%R	
Select Metals by 6020A (%R)			
Aluminum	80-120	1368	1373
Lead	80-120	131	137

Legend

%R	percent recovery

Table E-3-4. Laboratory Limits Above Project Screening Levels

			Sample ID Parent ID Sample Date	FTSW-AA-SO-01 7/26/2012	FTSW-AA-SO-02 [01.5] 7/26/2012	FTSW-AA-SO-03 7/26/2012	FTSW-AA-SO-03 DUP FTSW-AA-SO-03 7/26/2012	FTSW-AA-SO-04 [01.5] 7/26/2012
Parameter	**RES**	**IND**	**GW**					
Explosives by SW8330B (mg/kg)								
1,3-Dinitrobenzene	0.62	8.2	1.80E-04	0.093 U	0.093 U	0.094 U	0.093 U	0.097 U
2,4,6-Trinitrotoluene	3.6	52	5.70E-03	0.093 U	0.093 U	0.094 U	0.093 U	0.097 U
2,4-Dinitrotoluene	1.7	7.4	3.20E-04	0.093 U	0.093 U	0.094 U	0.093 U	0.097 U
2,6-Dinitrotoluene	0.36	1.5	6.70E-05	0.093 U	0.093 U	0.094 U	0.093 U	0.097 U
2-Amino-4,6-DNT	15	230	3.00E-03	0.093 U	0.093 U	0.094 U	0.093 U	0.097 U
2-Nitrotoluene	3.2	15	2.90E-04	0.093 U	0.093 U	0.094 U	0.093 U	0.097 U
3-Nitrotoluene	0.62	8.3	1.60E-04	0.093 U	0.093 U	0.094 U	0.093 U	0.097 U
4-Nitrotoluene	24	140	3.90E-03	0.093 U	0.093 U	0.094 U	0.093 U	0.097 U
Nitrobenzene	5.1	22	9.20E-05	0.093 U	0.093 U	0.094 U	0.093 U	0.097 U
Nitroglycerin	0.62	8.2	8.50E-05	0.93 U	0.93 U	0.94 U	0.93 U	0.97 U
PETN	12	160	5.80E-03	0.93 U	0.93 U	0.94 U	0.93 U	0.97 U
RDX	6	28	2.70E-04	0.093 U	0.093 U	0.094 U	0.093 U	0.097 U

			Sample ID Parent ID Sample Date	FTSW-AA-SO-05 7/26/2012	FTSW-AA-SO-06 [01.5] 7/26/2012	FTSW-AA-SO-07 7/26/2012	FTSW-AA-SO-08 [02] 7/26/2012	FTSW-AA-SO-08 [02] DUP FTSW-AA-SO-08 [02] 7/26/2012
Parameter	**RES**	**IND**	**GW**					
Explosives by SW8330B (mg/kg)								
1,3-Dinitrobenzene	0.62	8.2	1.80E-04	0.094 U	0.095 U	0.093 U	0.097 U	0.094 U
2,4,6-Trinitrotoluene	3.6	52	5.70E-03	0.094 U	0.095 U	0.093 U	0.097 U	0.094 U
2,4-Dinitrotoluene	1.7	7.4	3.20E-04	0.094 U	0.095 U	0.093 U	0.097 U	0.094 U
2,6-Dinitrotoluene	0.36	1.5	6.70E-05	0.094 U	0.095 U	0.093 U	0.097 U	0.094 U
2-Amino-4,6-DNT	15	230	3.00E-03	0.094 U	0.095 U	0.093 U	0.097 U	0.094 U
2-Nitrotoluene	3.2	15	2.90E-04	0.094 U	0.095 U	0.093 U	0.097 U	0.094 U
3-Nitrotoluene	0.62	8.3	1.60E-04	0.094 U	0.095 U	0.093 U	0.097 U	0.094 U
4-Nitrotoluene	24	140	3.90E-03	0.094 U	0.095 U	0.093 U	0.097 U	0.094 U
Nitrobenzene	5.1	22	9.20E-05	0.094 U	0.095 U	0.093 U	0.097 U	0.094 U
Nitroglycerin	0.62	8.2	8.50E-05	0.94 U	0.95 U	0.93 U	0.97 U	0.94 U
PETN	12	160	5.80E-03	0.94 U	0.95 U	0.93 U	0.97 U	0.94 U
RDX	6	28	2.70E-04	0.094 U	0.095 U	0.093 U	0.097 U	0.094 U

Table E-3-4. Laboratory Limits Above Project Screening Levels (continued)

				Sample ID	FTSW-AA-SO-09	FTSW-AA-SO-10 [02]	FTSW-AA-SO-11	FTSW-AA-SO-12 [01.5]	FTSW-AA-SO-13
				Parent ID					
				Sample Date	7/26/2012		7/26/2012	7/26/2012	7/26/2012
Parameter	**RES**	**IND**	**GW**						
Explosives by SW8330B (mg/kg)									
1,3-Dinitrobenzene	0.62	8.2	1.80E-04		0.099 U	0.1 U	0.096 U	0.096 U	
2,4,6-Trinitrotoluene	3.6	52	5.70E-03		0.099 U	0.099 U	0.1 U	0.096 U	0.096 U
2,4-Dinitrotoluene	1.7	7.4	3.20E-04		0.099 U	0.099 U	0.1 U	0.096 U	0.096 U
2,6-Dinitrotoluene	0.36	1.5	6.70E-05		0.099 U	0.099 U	0.1 U	0.096 U	0.096 U
2-Amino-4,6-DNT	15	230	3.00E-03		0.099 U	0.099 U	0.1 U	0.096 U	0.096 U
2-Nitrotoluene	3.2	15	2.90E-04		0.099 U	0.099 U	0.1 U	0.096 U	0.096 U
3-Nitrotoluene	0.62	8.3	1.60E-04		0.099 U	0.099 U	0.1 U	0.096 U	0.096 U
4-Nitrotoluene	24	140	3.90E-03		0.099 U	0.099 U	0.1 U	0.096 U	0.096 U
Nitrobenzene	5.1	22	9.20E-05		0.099 U	0.099 U	0.1 U	0.096 U	0.096 U
Nitroglycerin	0.62	8.2	8.50E-05		0.99 U	0.99 U	1 U	0.96 U	0.96 U
PETN	12	160	5.80E-03		0.99 U	0.99 U	1 U	0.96 U	0.96 U
RDX	6	28	2.70E-04		0.099 U	0.099 U	0.1 U	0.096 U	0.096 U

				Sample ID	FTSW-AA-SO-14 [02]	FTSW-AA-SO-15	FTSW-AA-SO-16 [01.5]	FTSW-AA-SO-17	FTSW-AA-SO-18 [01.5]
				Parent ID					
				Sample Date	7/26/2012	7/26/2012	7/26/2012	7/27/2012	7/27/2012
Parameter	**RES**	**IND**	**GW**						
Explosives by SW8330B (mg/kg)									
1,3-Dinitrobenzene	0.62	8.2	1.80E-04		0.097 U	0.098 U	0.094 U	0.097 U	0.093 U
2,4,6-Trinitrotoluene	3.6	52	5.70E-03		0.097 U	0.098 U	0.094 U	0.097 U	0.093 U
2,4-Dinitrotoluene	1.7	7.4	3.20E-04		0.097 U	0.098 U	0.094 U	0.097 U	0.093 U
2,6-Dinitrotoluene	0.36	1.5	6.70E-05		0.097 U	0.098 U	0.094 U	0.097 U	0.093 U
2-Amino-4,6-DNT	15	230	3.00E-03		0.097 U	0.098 U	0.094 U	0.097 U	0.093 U
2-Nitrotoluene	3.2	15	2.90E-04		0.097 U	0.098 U	0.094 U	0.097 U	0.093 U
3-Nitrotoluene	0.62	8.3	1.60E-04		0.097 U	0.098 U	0.094 U	0.097 U	0.093 U
4-Nitrotoluene	24	140	3.90E-03		0.097 U	0.098 U	0.094 U	0.097 U	0.093 U
Nitrobenzene	5.1	22	9.20E-05		0.097 U	0.098 U	0.094 U	0.097 U	0.093 U
Nitroglycerin	0.62	8.2	8.50E-05		0.97 U	0.98 U	0.94 U	0.97 U	0.93 U
PETN	12	160	5.80E-03		0.97 U	0.98 U	0.94 U	0.97 U	0.93 U
RDX	6	28	2.70E-04		0.097 U	0.098 U	0.094 U	0.097 U	0.093 U

Table E-3-4. Laboratory Limits Above Project Screening Levels (continued)

			Sample ID	FTSW-AA-SO-19	FTSW-AA-SO-20 [01.5]
			Parent ID		
			Sample Date	7/27/2012	7/27/2012
Parameter	**RES**	**IND**	**GW**		
Explosives by SW8330B (mg/kg)					
1,3-Dinitrobenzene	0.62	8.2	1.80E-04	0.097 U	0.1 U
2,4,6-Trinitrotoluene	3.6	52	5.70E-03	0.097 U	0.1 U
2,4-Dinitrotoluene	1.7	7.4	3.20E-04	0.097 U	0.1 U
2,6-Dinitrotoluene	0.36	1.5	6.70E-05	0.097 U	0.1 U
2-Amino-4,6-DNT	15	230	3.00E-03	0.097 U	0.1 U
2-Nitrotoluene	3.2	15	2.90E-04	0.097 U	0.1 U
3-Nitrotoluene	0.62	8.3	1.60E-04	0.097 U	0.1 U
4-Nitrotoluene	24	140	3.90E-03	0.097 U	0.1 U
Nitrobenzene	5.1	22	9.20E-05	0.097 U	0.1 U
Nitroglycerin	0.62	8.2	8.50E-05	0.97 U	1 U
PETN	12	160	5.80E-03	0.97 U	1 U
RDX	6	28	2.70E-04	0.097 U	0.1 U

Legend

mg/kg	milligrams per kilogram
BKGD	Fort Stewart background soil data from Phase II RFI (SAIC, 1999)
RES	RSL for Residential Soil (May 2014)
IND	RSL for Industrial Soil (May 2014)
GW	Risk-based Protection of Groundwater Soil Criteria (May 2014)
ECO	Region IV Ecological Screening Values
NS	none specified
U	not detected, associated value is limit of detection (LOD)
value	underlined LOD above GW Soil Criteria

MCGI

USEPA
Inorganic
Data Validation Report

Fort Stewart
GA

ALS Lab Report # ERT-001
MCGI Project No. ER121201-001-I

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GLOSSARY OF ACRONYMS & TERMS

GLOSSARY OF ACRONYMS & TERMS

One or more of the following acronyms and terms may have been used in the descriptive process of the Inorganic Data Validation.

Acronyms:

AA	Atomic Absorption
CARD	CLP Analytical Results Database
CCB	Continuing Calibration Blank
CCS	Contract Compliance Screening
CCV	Continuing Calibration Verification
CF	Calibration Factor
CLP	Contract Laboratory Program
COC	Chain of Custody
CRDL	Contract Required Detection Limit
CSF	Complete SDG File
CV	Cold Vapor
%D	Percent Difference
DAS	Delivery of Analytical Services
DSF	Data Summary Form
EMSL-LV	Environmental Monitoring Support Laboratory - Las Vegas
EPA	United States Environmental Protection Agency
ICAL	Initial Calibration
ICB	Initial Calibration Blank
ICP	Inductively Coupled Plasma
ICS	Interference Check Sample
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
IRDA	Inorganic Regional Data Assessment
LCS	Laboratory Control Sample
LCL	Lower Control Limit
MCL	Maximum Contamination Level
MDC	Minimum Detectable Concentration
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
MSA	Method of Standard Addition
PB	Preparation Blank
PCB	Poly Chlorinated Biphenyl
PRP	Potential Responsible Party
QA/QC	Quality Assurance/Quality Control
QAPjP	Quality Assurance Project Plan
QC	Quality Control

%R	Percent Recovery of spiked amount
RAS	Routine Analytical Services
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
SDG	Sample Delivery Group
SMO	Sample Management Office
SOP	Standard Operation Procedures
SOW	Statement of Work
SSL	Samples Shipping Log
TAL	Target Analyte List
TR	Traffic Report
UCL	Upper Control Limit
VTSR	Validated Time of Sample Receipt

Terms:

Associated Samples

Any sample related to a particular QC analysis. For Example:
- For ICV, all samples run under the same calibration curve.
- For duplicate RPD, all SDG samples digested/distilled of the same matrix.

Case A finite, usually predetermined number of samples collected over a given time period for a particular site. A Case consists of one or more Sample Delivery Group(s).

Continuing Calibration Blank (CCB)

A deionized water sample run every ten (10) samples designed to detect any carryover contamination.

Continuing Calibration Verification (CCV)

A deionized water sample run every ten (10) samples designed to detect any carryover contamination.

Contract Compliance Screening (CCS)

A process in which the SMO inspects the data for contractual compliance and provides EMSL-LV laboratories and the Regions with their findings.

Contractual Holding Time

The time from VTSR (validated time of sample receipt) to laboratory extraction and /or analysis.

Data Validation Qualifier (DVQ)

This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

Data Validation Result (DVR)

This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit.

Field Blank Field blanks are intended to identify contaminants that may have been introduced in the field. Examples are rinsate blank (RB), field blanks (FB) and trip blank (TB).

Field Duplicate

A duplicate sample generated in the field; not in the laboratory.

Initial Calibration (ICAL)

The establishment of a calibration curve with the appropriate number of standards and concentration ranges. The calibration curve plots absorbancies and/or emissions versus concentration of the standards.

.

Initial Calibration Blank (ICB)

First blank run after the calibration curve .

Initial Calibration Verification (ICV)

First standard run after the calibration curve .

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Introduction of a known concentration of a compound into a sample to provide information about the effect of sample matrix on the extraction and/or measurement methodology.

Post Digestion Spike

The addition of known amount of standard after digestion. (Also identified as analytical spike, or spike, for furnace analyses.)

Preparation Blank (PB)

Blank taken through the digestion process to detect internal laboratory contamination.

Sample Delivery Group (SDG)

Defined by one of the following, whichever occurs first:

- case of sample
- each twenty field samples in a case or
- each 14-day calendar period during which field samples in a case are received, beginning with the receipt of the first sample in the SDG.

Serial Dilution

A sample run at a specific dilution to determine whether any significant chemical or physical interferences exist due to sample matrix effect, for ICP only.

Technical Holding Time

The time from sample collection to laboratory extraction and /or analysis.

COMMUNICATION RECORDS

N/A

GLOSSARY OF DATA VALIDATION QUALIFIERS

GLOSSARY OF DATA QUALIFIER CODES (INORGANIC)

CODES RELATED TO IDENTIFICATION:

(Confidence concerning presence or absence of analytes).

U	=	Not detected above the level of the associated value. The associated value is either the approximate sample quantitation or detection limit.
NO CODE	=	Confirmed identification
B	=	Not detected substantially above the level reported in laboratory or field blanks.
R	=	Unusable results. Analyte may or may not be present in the sample.
N	=	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION:

(Can be used for both positive results and sample detection limits)

J	=	Analyte present. Reported value may not be accurate or precise (estimated value).
K	=	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	=	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
[ ]	=	Analyte present. Value approaches the IDL, but less than the quantitation limit. The quantitation may not be accurate.
UJ	=	Not detected. Quantitation limit may be inaccurate or impresice.
UL	=	Not detected. Quantitation limit is probably higher.

OTHER CODES:

NJ	=	Qualitative identification questionable. Presumptively present at approximate quantity.
Q	=	No analytical Result.
X	=	Data not validated.

DATA VALIDATION REPORT NARRATIVE

MCGI

Meridian Consultant Group, Inc.
Environmental Services & Data Validation
1997 Annapolis Exchange Pkwy., Suite 300
Annapolis, MD 21401

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DATE: September 14, 2012

SUBJECT: USEPA Inorganic Data Validation Report
Metals
ALS Lab SDG No. ERT-001
Site: Fort Stewart, GA
MCGI Project No. ER121201-001-I

FROM: Sherif N. Mina
Meridian Consultant Group, Inc.

TO: Mr. Mike Gearheart
Earth Resources Technology, Inc.

OVERVIEW

This Sample Delivery Group (SDG) consisted of eighteen (18) soil and one (1) aqueous samples submitted to ALS Laboratories, Middletown, PA, for Metals analysis according to SW-846, Methods 6020A. The sample set included one (1) equipment blank, and two (2) soil field duplicate pairs. The samples were analyzed in accordance with the Chain-of-Custody (COC), see Sample Identification Summary.

Sample Identification Summary

SAMPLE INFORMATION			Analysis
Field ID	Lab ID	Matrix	M
FTSW-AA-SO-10[02]	9980109001	Soil	x
FTSW-AA-SO-10[02] ERB	9980109002	Aqueous	x
FTSW-AA-SO-11	9980109003	Soil	x
FTSW-AA-SO-12 [01.5]	9980109004	Soil	x
FTSW-AA-SO-13	9980109005	Soil	x
FTSW-AA-SO-14 [02]	9980109006	Soil	x
FTSW-AA-SO-15	9980109007	Soil	x
FTSW-AA-SO-16 [01.5]	9980109008	Soil	x
FTSW-AA-SO-01	9980109009	Soil	x
FTSW-AA-SO-02 [01.5]	9980109010	Soil	x
FTSW-AA-SO-03	9980109011	Soil	x

SAMPLE INFORMATION			Analysis
Field ID	Lab ID	Matrix	M
FTSW-AA-SO-03 DUP	9980109012	Soil	x
FTSW-AA-SO-04 [01.5]	9980109013	Soil	x
FTSW-AA-SO-05	9980109014	Soil	x
FTSW-AA-SO-07	9980109015	Soil	x
FTSW-AA-SO-06 [01.5]	9980109016	Soil	x
FTSW-AA-SO-08 [02]	9980109017	Soil	x
FTSW-AA-SO-08 [02] DUP	9980109018	Soil	x
FTSW-AA-SO-09	9980109019	Soil	x

M=Metals

The analytical results were validated according to the pertinent parts of U.S. Environmental Protection Agency (USEPA) National Functional for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The validation was based on the following parameters:

Data Validation Summary

	Parameters	M q	M t	M a
*	Data Completeness		19	0
*	Holding Time		19	0
*	Calibration Verification		19	0
*	Laboratory and Field Blanks analyses		19	0
*	ICP Interference Check Sample results		19	0
*	Matrix Spike recoveries (MS)		19	0
	Laboratory and Field Duplicates	*	19	18
*	Laboratory Control Sample(LCS)		19	0
*	Serial Dilution results		19	0
*	Furnace Atomic Absorption results (FAA)		19	0
*	Analyte Identification		19	0
*	Analyte Quantitation		19	0
* All Criteria were met for that Parameter, M=Metals				

q=qualified; t=total number of samples analyzed; a=number of samples affected

SUMMARY

All samples were successfully analyzed for all target analytes according to U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. All instruments and method sensitivities were according to the specified analytical methods. Refer to Minor Problems for information regarding biases identified during data validation.

Deviation from USEPA NFG: The "U" qualifier recommended by USEPA NFG for blank contamination was replaced by the "B" qualifier to clearly indicate blank contamination on the EDDs.

MAJOR ISSUES

- None noted.

MINOR ISSUES

- Laboratory and Field Blanks analyses: Analytes detected in the laboratory and/or equipment blanks, that affect sample results, with concentration above the instrument detection limit (IDL) are listed below. Analytes in the samples with concentration less than five (5) times the blank concentration have been reported on the EDD and qualified "B".

Analyte	Blank Type

PB = Preparation Blank
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank
CB = Container Blank
EB = Equipment Blank

- Laboratory Duplicate: The laboratory duplicate of sample FTSW-AA-SO-08 [02] displayed a Relative Percent Difference (RPD) outside the QC limits (greater than ±35 percent for values >5xCRDL, and ±2X CRDL for values <5xCRDL) for Al analyte. Positive results for Al in all soil samples were qualified "J".

NOTES

- Electronic Data Deliverable (EDD): Several rows in an electronic data deliverable (EDD) are marked with an "X" and hidden before printing a data summary form. These rows may include quality control samples such as Method Blanks, Laboratory Control Samples, Matrix Spikes, or Matrix Spike Duplicates which are not validated. Additionally, some field sample results may not be used since only one (1) result for each compound is reported after validation. The following list indicates some instances in which an "X" may be placed in the DVQ column:
  1. The compounds in an analysis that have exceeded the instrument calibration range.
  2. All compounds in a diluted analysis that were within the calibration range in the initial analysis.
  3. All compounds in either the initial analysis or re-analysis of a sample, depending on which analysis is not reported on the EDD.

  Although QC samples and some field samples results may not be used, all data were reviewed and considered in the overall assessment.

- Data Validation Qualifier (DVQ): This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

- Data Validation Result (DVR): This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column

that is qualified "U" indicates a modification of the reporting limit. Results in the DVR column supersede those reported by the laboratory.

- Compound Quantitation: Positive results for compounds which are below the CRQL were qualified as estimated "J" on the EDD.

REPORT CONTENT STATEMENT

All data for this project were reviewed in accordance with the pertinent parts of the U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The text of the report addresses only those problems affecting data usability.

ATTACHMENTS

l) Glossary of Data Qualifiers
2) Electronic Data Deliverable (EDD). These include:
   (a) All results for target analytes with qualifier codes where applicable.
   (b) All unusable detection limits (qualified "R"), where applicable.
3) Electronic Data Package (.pdf file) as Support Documentation

DCN: ER121201-001-I

Respectfully Submitted,

Sherif N. Mina Date: September 14, 2012
Sherif N. Mina

QA/Review: SM

MCGI

USEPA
Organic
Data Validation Report

Fort Stewart
GA

ALS Lab Report # ERT-001
MCGI Project No. ER121201-001-O

Prepared for:

Earth Resources Technology, Inc.
Laurel, MD

Prepared by:

"MCGI"
Meridian Consultant Group, Inc.
Environmental Services & Data Validation

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September 2012

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- COMMUNICATION RECORDS
- GLOSSARY OF DATA VALIDATION QUALIFIERS
- DATA VALIDATION REPORT NARRATIVE
- ELECTRONIC DATA DELIVERABLE (EDD) with applicable qualifiers, Refer to the EDD Excel file.
- SUPPORT DOCUMENTATION, Refer to the electronic Data Package PDF file.

GLOSSARY OF ACRONYMS & TERMS

GLOSSARY OF ACRONYMS & TERMS

One or more of the following acronyms and terms may have been used in the descriptive process of the Organic Data Validation.

Acronyms:

BFB	Bromofluorobenzene (volatile instrument performance check)
BNA	Base/Neutral/Acid
CARD	CLP Analytical Results Database
CCCs	Calibration Check Compounds
CCS	Contract Compliance Screening
CF	Calibration Factor
CLP	Contract Laboratory Program
COC	Chain of Custody
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
%D	Percent Difference
DAS	Delivery of Analytical Services
DCB	Decachlorobiphenyl (Pesticide/PCB/ surrogate compound)
DFTPP	Decafluorotriphenylphosphine (semivolatile instrument performance check)
DSF	Data Summary Form
ECD	Electron-Capture Detector
EICP	Extended Ion Current Profile
EMSL-LV	Environmental Monitoring Support Laboratory - Las Vegas
EPA	United States Environmental Protection Agency
GC	Gas Chromatography
GC/EC	Gas Chromatography/Electron Capture
GC/MS	Gas Chromatography/Mass Spectra
GPC	Gel Permeation Chromatography (Clean Up)
ICAL	Initial Calibration
IS	Internal Standard
LCS	Laboratory Control Sample
LCL	Lower Control Limit
MCL	Maximum Contamination Level
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
m/z	The ratio of mass (m) to charge (z) of ions measured by GC/MS
OADS	Organic Analysis Data Sheet (Form 1)
ORDA	Organic Regional Data Assessment
PCB	Poly Chlorinated Biphenyl
PEM	Performance Evaluation Mixture
PRP	Potential Responsible Party

QA/QC	Quality Assurance/Quality Control
QAPjP	Quality Assurance Project Plan
QC	Quality Control
%R	Percent Recovery of spiked amount
RAS	Routine Analytical Services
RF	Response Factor
RIC	Reconstructed Ion Chromatogram
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
RT	Retention Time
RTW	Retention Time Window
SDG	Sample Delivery Group
SMC	System Monitoring Compound
SMO	Sample Management Office
SOP	Standard Operation Procedures
SOW	Statement of Work
SPCCs	System Performance Check Compounds
SSL	Samples Shipping Log
SVOA	Semivolatile Organic Analyte
TCL	Target Compound List
TCX	Tetrachloro-m-Xylene (Pesticide/PCB surrogate compound)
TIC	Tentatively Identified Compound
TPH	Total Petroleum Hydrocarbons
TR	Traffic Report
UCL	Upper Control Limit
VOA	Volatile Organic Analyte
VTSR	Validated Time of Sample Receipt

Terms:

Associated Samples
: Any sample related to a particular QC analysis.

Case
: A finite, usually predetermined number of samples collected over a given time period for a particular site. A Case consists of one or more Sample Delivery Group(s).

Contract Compliance Screening (CCS)
: A process in which the SMO inspects the data for contractual compliance and provides EMSL-LV laboratories and the Regions with their findings.

Contractual Holding Time

The time from VTSR (validated time of sample receipt) to laboratory extraction and /or analysis.

Data Validation Qualifier (DVQ)

This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

Data Validation Result (DVR)

This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit.

Field Blank Field blanks are intended to identify contaminants that may have been introduced in the field. Examples are rinsate blank (RB), field blanks (FB) and trip blank (TB).

Field Duplicate

A duplicate sample generated in the field; not in the laboratory.

Initial Calibration (ICAL)

The establishment of a calibration curve with the appropriate number of standards and concentration ranges. The calibration curve plots absorbances and/or emissions versus concentration of the standards. .

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Introduction of a known concentration of a compound into a sample to provide information about the effect of sample matrix on the extraction and/or measurement methodology.

Perform ance Evaluation Mixture

A standard used to verify that the ICAL sequence is stable throughout the GC or GC/MS analyses.

Sample Delivery Group (SDG)

Defined by one of the following, whichever occurs first:

- case of sample
- each twenty field samples in a case or
- each 14-day calendar period during which field samples in a case are received, beginning with the receipt of the first sample in the SDG.

Technical Holding Time

The time from sample collection to laboratory extraction and /or analysis

COMMUNICATION RECORDS

“N/A”

GLOSSARY OF DATA VALIDATION QUALIFIERS

GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATED TO IDENTIFICATION:

(Confidence concerning presence or absence of compounds)

U	=	Not detected above the level of the associated value. The associated value is either the approximate sample quantitation or detection limit.
NO CODE	=	Confirmed identification
B	=	Not detected substantially above the level reported in laboratory or field blanks.
R	=	Unusable results. Analyte may or may not be present in the sample.
N	=	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION:

(Can be used for both positive results and sample quantitation limits)

J	=	Analyte present. Reported value may not be accurate or precise (estimated value).
K	=	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	=	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
UJ	=	Not detected. Quantitation limit may be inaccurate or imprecise.
UL	=	Not detected. Quantitation limit is probably higher.

OTHER CODES:

NJ	=	Qualitative identification questionable. Presumptively present at approximate quantity.
Q	=	No analytical result.
X	=	Data not Validated.

DATA VALIDATION REPORT NARRATIVE

MCGI

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DATE: September 14, 2012

SUBJECT: USEPA Organic Data Validation Report
Explosives
ALS Lab SDG No. ERT-001
Site: Fort Stewart, GA
MCGI Project No. ER121201-001-O

FROM: Sherif N. Mina
Meridian Consultant Group, Inc.

TO: Mr. Mike Gearheart
Earth Resources Technology, Inc.

OVERVIEW

This Sample Delivery Group (SDG) consisted of eighteen (18) soil and one (1) aqueous samples submitted to ALS Laboratories, Middletown, PA, for Explosives analysis according to SW-846, Method 8330. The sample set included one (1) equipment blank, and two (2) soil field duplicate pairs. The samples were analyzed in accordance with the Chain-of-Custody (COC), see Sample Identification Summary.

Sample Identification Summary

SAMPLE INFORMATION			Analysis
Field ID	Lab ID	Matrix	X
FTSW-AA-SO-10[02]	9980109001	Soil	x
FTSW-AA-SO-10[02] ERB	9980109002	Aqueous	x
FTSW-AA-SO-11	9980109003	Soil	x
FTSW-AA-SO-12 [01.5]	9980109004	Soil	x
FTSW-AA-SO-13	9980109005	Soil	x
FTSW-AA-SO-14 [02]	9980109006	Soil	x
FTSW-AA-SO-15	9980109007	Soil	x
FTSW-AA-SO-16 [01.5]	9980109008	Soil	x
FTSW-AA-SO-01	9980109009	Soil	x

SAMPLE INFORMATION			Analysis
Field ID	Lab ID	Matrix	X
FTSW-AA-SO-02 [01.5]	9980109010	Soil	x
FTSW-AA-SO-03	9980109011	Soil	x
FTSW-AA-SO-03 DUP	9980109012	Soil	x
FTSW-AA-SO-04 [01.5]	9980109013	Soil	x
FTSW-AA-SO-05	9980109014	Soil	x
FTSW-AA-SO-07	9980109015	Soil	x
FTSW-AA-SO-06 [01.5]	9980109016	Soil	x
FTSW-AA-SO-08 [02]	9980109017	Soil	x
FTSW-AA-SO-08 [02] DUP	9980109018	Soil	x
FTSW-AA-SO-10[02]	9980109019	Soil	x

X=Explosives

The analytical results were validated according to the pertinent parts of U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The validation was based on the following parameters:

Data Validation Summary

Parameters		X		
		q	t	a
*	Data Completeness		19	0
*	Holding Time		19	0
*	Calibrations		19	0
*	Laboratory and Field Blanks analyses		19	0
*	Surrogate Recoveries		19	0
*	Matrix Spike/Matrix Spike Duplicate		19	0
*	Laboratory Control Sample(LCS)		19	0
*	Laboratory and/or Field Duplicates		19	0
*	Internal Standards		19	0
*	Pesticide Instrument Performance		19	0
*	Sample Cleanup		19	0
*	Compound Identification		19	0
*	Compound Quantitation		19	0
*	Sample Preservation		19	0
* All Criteria were met for that Parameter, X=Explosives				

q=qualified; t=total number of samples analyzed; a=number of samples affected

SUMMARY

All samples were successfully analyzed for all target compounds according to U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. All instruments and method sensitivities were according to the specified analytical methods. Refer to Minor Problems for information regarding biases identified during data validation.

Deviation from USEPA NFG: The "U" qualifier recommended by USEPA NFG for blank contamination was replaced by the "B" qualifier to clearly indicate blank contamination on the EDDs.

MAJOR PROBLEMS

- None noted.

MINOR PROBLEMS

- None noted.

NOTES

- Electronic Data Deliverable (EDD): Several rows in an electronic data deliverable (EDD) are marked with an "X" and hidden before printing a data summary form. These rows may include quality control samples such as Method Blanks, Laboratory Control Samples, Matrix Spikes, or Matrix Spike Duplicates which are not validated. Additionally, some field sample results may not be used since only one (1) result for each compound is reported after validation. The following list indicates some instances in which an "X" may be placed in the DVQ column:
  1. The compounds in an analysis that have exceeded the instrument calibration range.
  2. All compounds in a diluted analysis that were within the calibration range in the initial analysis.
  3. All compounds in either the initial analysis or re-analysis of a sample, depending on which analysis is not reported on the EDD.

  Although QC samples and some field samples results may not be used, all data were reviewed and considered in the overall assessment.

- Data Validation Qualifier (DVQ):This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

- Data Validation Result (DVR):This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit. Results in the DVR column supersede those reported by the laboratory.

- Tentatively Identified Compounds (TICs): The TICs, if applicable, were reviewed during data validation.

- Compound Quantitation: Positive results for compounds which are below the CRQL were qualified as estimated "J" on the EDD.

- Blank Contaminants: The maximum concentration of all compounds found in the analyses of the trip, field or laboratory method blanks are listed in the following table. Associated samples with positive results of common laboratory contaminants less than ten times (<10X) the blank concentration, or positive results of other contaminants less than five times (<5X) the blank concentration, found in the associated samples were qualified as "B" on the DSFs.

Analytical Fraction	Compound	Maximum Concentration	Units	Blank Type
	None			

*Common lab contaminant

REPORT CONTENT STATEMENT

All data for this project were reviewed in accordance with the pertinent parts of the U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The text of the report addresses only those problems affecting data usability.

ATTACHMENTS

l) Glossary of Data Qualifiers
2) Electronic Data Deliverable (EDD). These include:
   (a) All results for target compounds with qualifier codes where applicable.
   (b) All unusable detection limits (qualified "R"), where applicable.
3) Electronic Data Package (.pdf file) as Support Documentation

DCN: ER121201-001-O

Respectfully Submitted,

Sherif N. Mina Date: September 14, 2012
Sherif N. Mina

QA/Review: SM

MCGI

USEPA
Inorganic
Data Validation Report

Fort Stewart
GA

ALS Lab Report # ERT-002
MCGI Project No. ER121201-002-I

Prepared for:
Earth Resources Technology, Inc.
Laurel, MD

Prepared by:
"MCGI"
Meridian Consultant Group, Inc.
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September 2012

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- ELECTRONIC DATA DELIVERABLE (EDD) with applicable qualifiers, Refer to the EDD Excel file.
- SUPPORT DOCUMENTATION, Refer to the electronic Data Package PDF file.

GLOSSARY OF ACRONYMS & TERMS

GLOSSARY OF ACRONYMS & TERMS

One or more of the following acronyms and terms may have been used in the descriptive process of the Inorganic Data Validation.

Acronyms:

AA	Atomic Absorption
CARD	CLP Analytical Results Database
CCB	Continuing Calibration Blank
CCS	Contract Compliance Screening
CCV	Continuing Calibration Verification
CF	Calibration Factor
CLP	Contract Laboratory Program
COC	Chain of Custody
CRDL	Contract Required Detection Limit
CSF	Complete SDG File
CV	Cold Vapor
%D	Percent Difference
DAS	Delivery of Analytical Services
DSF	Data Summary Form
EMSL-LV	Environmental Monitoring Support Laboratory - Las Vegas
EPA	United States Environmental Protection Agency
ICAL	Initial Calibration
ICB	Initial Calibration Blank
ICP	Inductively Coupled Plasma
ICS	Interference Check Sample
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
IRDA	Inorganic Regional Data Assessment
LCS	Laboratory Control Sample
LCL	Lower Control Limit
MCL	Maximum Contamination Level
MDC	Minimum Detectable Concentration
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
MSA	Method of Standard Addition
PB	Preparation Blank
PCB	Poly Chlorinated Biphenyl
PRP	Potential Responsible Party
QA/QC	Quality Assurance/Quality Control
QAPjP	Quality Assurance Project Plan
QC	Quality Control

%R	Percent Recovery of spiked amount
RAS	Routine Analytical Services
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
SDG	Sample Delivery Group
SMO	Sample Management Office
SOP	Standard Operation Procedures
SOW	Statement of Work
SSL	Samples Shipping Log
TAL	Target Analyte List
TR	Traffic Report
UCL	Upper Control Limit
VTSR	Validated Time of Sample Receipt

Terms:

Associated Samples

Any sample related to a particular QC analysis. For Example:
- For ICV, all samples run under the same calibration curve.
- For duplicate RPD, all SDG samples digested/distilled of the same matrix.

Case A finite, usually predetermined number of samples collected over a given time period for a particular site. A Case consists of one or more Sample Delivery Group(s).

Continuing Calibration Blank (CCB)

A deionized water sample run every ten (10) samples designed to detect any carryover contamination.

Continuing Calibration Verification (CCV)

A deionized water sample run every ten (10) samples designed to detect any carryover contamination.

Contract Compliance Screening (CCS)

A process in which the SMO inspects the data for contractual compliance and provides EMSL-LV laboratories and the Regions with their findings.

Contractual Holding Time

The time from VTSR (validated time of sample receipt) to laboratory extraction and /or analysis.

Data Validation Qualifier (DVQ)

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Field Blank Field blanks are intended to identify contaminants that may have been introduced in the field. Examples are rinsate blank (RB), field blanks (FB) and trip blank (TB).

Field Duplicate

A duplicate sample generated in the field; not in the laboratory.

Initial Calibration (ICAL)

The establishment of a calibration curve with the appropriate number of standards and concentration ranges. The calibration curve plots absorbancies and/or emissions versus concentration of the standards.

.

Initial Calibration Blank (ICB)

First blank run after the calibration curve .

Initial Calibration Verification (ICV)

First standard run after the calibration curve .

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Introduction of a known concentration of a compound into a sample to provide information about the effect of sample matrix on the extraction and/or measurement methodology.

Post Digestion Spike

The addition of known amount of standard after digestion. (Also identified as analytical spike, or spike, for furnace analyses.)

Preparation Blank (PB)

Blank taken through the digestion process to detect internal laboratory contamination.

Sample Delivery Group (SDG)

Defined by one of the following, whichever occurs first:

- case of sample
- each twenty field samples in a case or
- each 14-day calendar period during which field samples in a case are received, beginning with the receipt of the first sample in the SDG.

Serial Dilution

A sample run at a specific dilution to determine whether any significant chemical or physical interferences exist due to sample matrix effect, for ICP only.

Technical Holding Time

The time from sample collection to laboratory extraction and /or analysis.

COMMUNICATION RECORDS

N/A

GLOSSARY OF DATA VALIDATION QUALIFIERS

GLOSSARY OF DATA QUALIFIER CODES (INORGANIC)

CODES RELATED TO IDENTIFICATION:

(Confidence concerning presence or absence of analytes).

U	=	Not detected above the level of the associated value. The associated value is either the approximate sample quantitation or detection limit.
NO CODE	=	Confirmed identification
B	=	Not detected substantially above the level reported in laboratory or field blanks.
R	=	Unusable results. Analyte may or may not be present in the sample.
N	=	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION:

(Can be used for both positive results and sample detection limits)

J	=	Analyte present. Reported value may not be accurate or precise (estimated value).
K	=	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	=	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
[ ]	=	Analyte present. Value approaches the IDL, but less than the quantitation limit. The quantitation may not be accurate.
UJ	=	Not detected. Quantitation limit may be inaccurate or impresice.
UL	=	Not detected. Quantitation limit is probably higher.

OTHER CODES:

NJ	=	Qualitative identification questionable. Presumptively present at approximate quantity.
Q	=	No analytical Result.
X	=	Data not validated.

DATA VALIDATION REPORT NARRATIVE

MCGI

Meridian Consultant Group, Inc.
Environmental Services & Data Validation
1997 Annapolis Exchange Pkwy., Suite 300
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DATE: September 14, 2012

SUBJECT: USEPA Inorganic Data Validation Report
Metals
ALS Lab SDG No. ERT-002
Site: Fort Stewart, GA
MCGI Project No. ER121201-002-I

FROM: Sherif N. Mina
Meridian Consultant Group, Inc.

TO: Mr. Mike Gearheart
Earth Resources Technology, Inc.

OVERVIEW

This Sample Delivery Group (SDG) consisted of twelve (12) soil and two (2) aqueous samples submitted to ALS Laboratories, Middletown, PA, for Metals analysis according to SW-846, Methods 6020A. The sample set included one (1) equipment blank, and one (1) soil field duplicate pair. The samples were analyzed in accordance with the Chain-of-Custody (COC), see Sample Identification Summary.

Sample Identification Summary

SAMPLE INFORMATION			Analysis
Field ID	Lab ID	Matrix	M
FTSW-AA-SO-17	9980394001	Soil	x
FTSW-AA-SO-18 (01.5)	9980394002	Soil	x
FTSW-AA-SO-19	9980394003	Soil	x
FTSW-AA-SO-20 (01.5)	9980394004	Soil	x
FTSW-AA-SO-21	9980394005	Soil	x
FTSW-AA-SW-21	9980394006	Aqueous	x
FTSW-AA-SO-22	9980394007	Soil	x
FTSW-AA-SO-23	9980394008	Soil	x
FTSW-AA-SO-24	9980394009	Soil	x
FTSW-AA-SO-25	9980394010	Soil	x
FTSW-AA-SO-25 DUP	9980394011	Soil	x

SAMPLE INFORMATION			Analysis
Field ID	Lab ID	Matrix	M
FTSW-AA-SO-26	9980394012	Soil	x
FTSW-AA-SO-27	9980394013	Soil	x
FTSW-AA-SO-22 ERB	9980394014	Aqueous	x

M=Metals

The analytical results were validated according to the pertinent parts of U.S. Environmental Protection Agency (USEPA) National Functional for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The validation was based on the following parameters:

Data Validation Summary

	Parameters	M		
		q	t	a
*	Data Completeness		14	0
*	Holding Time		14	0
*	Calibration Verification		14	0
*	Laboratory and Field Blanks analyses		14	0
*	ICP Interference Check Sample results		14	0
	Matrix Spike recoveries (MS)	*	14	12
*	Laboratory and Field Duplicates		14	0
*	Laboratory Control Sample(LCS)		14	0
*	Serial Dilution results		14	0
*	Furnace Atomic Absorption results (FAA)		14	0
*	Analyte Identification		14	0
*	Analyte Quantitation		14	0
* All Criteria were met for that Parameter, M=Metals				

q=qualified; t=total number of samples analyzed; a=number of samples affected

SUMMARY

All samples were successfully analyzed for all target analytes according to U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. All instruments and method sensitivities were according to the specified analytical methods. Refer to Minor Problems for information regarding biases identified during data validation.

Deviation from USEPA NFG: The "U" qualifier recommended by USEPA NFG for blank contamination was replaced by the "B" qualifier to clearly indicate blank contamination on the EDDs.

MAJOR ISSUES

- None noted.

MINOR ISSUES

- Laboratory and Field Blanks analyses: Analytes detected in the laboratory and/or equipment blanks, that affect sample results, with concentration above the instrument detection limit (IDL) are listed below. Analytes in the samples with concentration less than five (5) times the blank concentration have been reported on the EDD and qualified "B".

Analyte	Blank Type

PB = Preparation Blank
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank
CB = Container Blank
EB = Equipment Blank

- Matrix Spike/matrix spike duplicate (MS/MSD): The soil MS/SD displayed high recoveries for Al & Pb analytes. Positive results for these two (2) analytes were qualified "J".

NOTES

- Electronic Data Deliverable (EDD): Several rows in an electronic data deliverable (EDD) are marked with an "X" and hidden before printing a data summary form. These rows may include quality control samples such as Method Blanks, Laboratory Control Samples, Matrix Spikes, or Matrix Spike Duplicates which are not validated. Additionally, some field sample results may not be used since only one (1) result for each compound is reported after validation. The following list indicates some instances in which an "X" may be placed in the DVQ column:
  1. The compounds in an analysis that have exceeded the instrument calibration range.
  2. All compounds in a diluted analysis that were within the calibration range in the initial analysis.
  3. All compounds in either the initial analysis or re-analysis of a sample, depending on which analysis is not reported on the EDD.

  Although QC samples and some field samples results may not be used, all data were reviewed and considered in the overall assessment.

- Data Validation Qualifier (DVQ): This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

- Data Validation Result (DVR): This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit. Results in the DVR column supersede those reported by the laboratory.

- Compound Quantitation: Positive results for compounds which are below the CRQL were qualified as estimated "J" on the EDD.

REPORT CONTENT STATEMENT

All data for this project were reviewed in accordance with the pertinent parts of the U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The text of the report addresses only those problems affecting data usability.

ATTACHMENTS

l) Glossary of Data Qualifiers
2) Electronic Data Deliverable (EDD). These include:
   (a) All results for target analytes with qualifier codes where applicable.
   (b) All unusable detection limits (qualified "R"), where applicable.
3) Electronic Data Package (.pdf file) as Support Documentation

DCN: ER121201-002-I

Respectfully Submitted,

Sherif N. Mina Date: September 14, 2012
Sherif N. Mina

QA/Review: SM

MCGI

USEPA
Organic
Data Validation Report

Fort Stewart
GA

ALS Lab Report # ERT-002
MCGI Project No. ER121201-002-O

Prepared for:

Earth Resources Technology, Inc.
Laurel, MD

Prepared by:

"MCGI"
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September 2012

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- GLOSSARY OF DATA VALIDATION QUALIFIERS
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- SUPPORT DOCUMENTATION, Refer to the electronic Data Package PDF file.

GLOSSARY OF ACRONYMS & TERMS

GLOSSARY OF ACRONYMS & TERMS

One or more of the following acronyms and terms may have been used in the descriptive process of the Organic Data Validation.

Acronyms:

BFB	Bromofluorobenzene (volatile instrument performance check)
BNA	Base/Neutral/Acid
CARD	CLP Analytical Results Database
CCCs	Calibration Check Compounds
CCS	Contract Compliance Screening
CF	Calibration Factor
CLP	Contract Laboratory Program
COC	Chain of Custody
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
%D	Percent Difference
DAS	Delivery of Analytical Services
DCB	Decachlorobiphenyl (Pesticide/PCB/ surrogate compound)
DFTPP	Decafluorotriphenylphosphine (semivolatile instrument performance check)
DSF	Data Summary Form
ECD	Electron-Capture Detector
EICP	Extended Ion Current Profile
EMSL-LV	Environmental Monitoring Support Laboratory - Las Vegas
EPA	United States Environmental Protection Agency
GC	Gas Chromatography
GC/EC	Gas Chromatography/Electron Capture
GC/MS	Gas Chromatography/Mass Spectra
GPC	Gel Permeation Chromatography (Clean Up)
ICAL	Initial Calibration
IS	Internal Standard
LCS	Laboratory Control Sample
LCL	Lower Control Limit
MCL	Maximum Contamination Level
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
m/z	The ratio of mass (m) to charge (z) of ions measured by GC/MS
OADS	Organic Analysis Data Sheet (Form 1)
ORDA	Organic Regional Data Assessment
PCB	Poly Chlorinated Biphenyl
PEM	Performance Evaluation Mixture
PRP	Potential Responsible Party

QA/QC	Quality Assurance/Quality Control
QAPjP	Quality Assurance Project Plan
QC	Quality Control
%R	Percent Recovery of spiked amount
RAS	Routine Analytical Services
RF	Response Factor
RIC	Reconstructed Ion Chromatogram
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
RT	Retention Time
RTW	Retention Time Window
SDG	Sample Delivery Group
SMC	System Monitoring Compound
SMO	Sample Management Office
SOP	Standard Operation Procedures
SOW	Statement of Work
SPCCs	System Performance Check Compounds
SSL	Samples Shipping Log
SVOA	Semivolatile Organic Analyte
TCL	Target Compound List
TCX	Tetrachloro-m-Xylene (Pesticide/PCB surrogate compound)
TIC	Tentatively Identified Compound
TPH	Total Petroleum Hydrocarbons
TR	Traffic Report
UCL	Upper Control Limit
VOA	Volatile Organic Analyte
VTSR	Validated Time of Sample Receipt

Terms:

Associated Samples
: Any sample related to a particular QC analysis.

Case
: A finite, usually predetermined number of samples collected over a given time period for a particular site. A Case consists of one or more Sample Delivery Group(s).

Contract Compliance Screening (CCS)
: A process in which the SMO inspects the data for contractual compliance and provides EMSL-LV laboratories and the Regions with their findings.

Contractual Holding Time

The time from VTSR (validated time of sample receipt) to laboratory extraction and /or analysis.

Data Validation Qualifier (DVQ)

This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

Data Validation Result (DVR)

This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit.

Field Blank Field blanks are intended to identify contaminants that may have been introduced in the field. Examples are rinsate blank (RB), field blanks (FB) and trip blank (TB).

Field Duplicate

A duplicate sample generated in the field; not in the laboratory.

Initial Calibration (ICAL)

The establishment of a calibration curve with the appropriate number of standards and concentration ranges. The calibration curve plots absorbances and/or emissions versus concentration of the standards. .

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Introduction of a known concentration of a compound into a sample to provide information about the effect of sample matrix on the extraction and/or measurement methodology.

Perform ance Evaluation Mixture

A standard used to verify that the ICAL sequence is stable throughout the GC or GC/MS analyses.

Sample Delivery Group (SDG)

Defined by one of the following, whichever occurs first:

- case of sample
- each twenty field samples in a case or
- each 14-day calendar period during which field samples in a case are received, beginning with the receipt of the first sample in the SDG.

Technical Holding Time

The time from sample collection to laboratory extraction and /or analysis

COMMUNICATION RECORDS

“N/A”

GLOSSARY OF DATA VALIDATION QUALIFIERS

GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATED TO IDENTIFICATION:

(Confidence concerning presence or absence of compounds)

U	=	Not detected above the level of the associated value. The associated value is either the approximate sample quantitation or detection limit.
NO CODE	=	Confirmed identification
B	=	Not detected substantially above the level reported in laboratory or field blanks.
R	=	Unusable results. Analyte may or may not be present in the sample.
N	=	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION:

(Can be used for both positive results and sample quantitation limits)

J	=	Analyte present. Reported value may not be accurate or precise (estimated value).
K	=	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	=	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
UJ	=	Not detected. Quantitation limit may be inaccurate or imprecise.
UL	=	Not detected. Quantitation limit is probably higher.

OTHER CODES:

NJ	=	Qualitative identification questionable. Presumptively present at approximate quantity.
Q	=	No analytical result.
X	=	Data not Validated.

DATA VALIDATION REPORT NARRATIVE

MCGI

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DATE: September 14, 2012

SUBJECT: USEPA Organic Data Validation Report
Explosives
ALS Lab SDG No. ERT-002
Site: Fort Stewart, GA
MCGI Project No. ER121201-002-O

FROM: Sherif N. Mina
Meridian Consultant Group, Inc.

TO: Mr. Mike Gearheart
Earth Resources Technology, Inc.

OVERVIEW

This Sample Delivery Group (SDG) consisted of six (6) soil and two (2) aqueous samples submitted to ALS Laboratories, Middletown, PA, for Explosives analysis according to SW-846, Method 8330. The sample set included one (1) equipment blank. No field duplicate pairs were identified in this sample set. The samples were analyzed in accordance with the Chain-of-Custody (COC), see Sample Identification Summary.

Sample Identification Summary

SAMPLE INFORMATION			Analysis
Field ID	Lab ID	Matrix	X
FTSW-AA-SO-17	9980394001	Soil	x
FTSW-AA-SO-18 (01.5)	9980394002	Soil	x
FTSW-AA-SO-19	9980394003	Soil	x
FTSW-AA-SO-20 (01.5)	9980394004	Soil	x
FTSW-AA-SO-21	9980394005	Soil	x
FTSW-AA-SW-21	9980394006	Aqueous	x
FTSW-AA-SO-22	9980394007	Soil	x
FTSW-AA-SO-22 ERB	9980394014	Aqueous	x

X=Explosives

The analytical results were validated according to the pertinent parts of U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The validation was based on the following parameters:

Data Validation Summary

Parameters		X		
		q	t	a
*	Data Completeness		8	0
*	Holding Time		8	0
*	Calibrations		8	0
*	Laboratory and Field Blanks analyses		8	0
	Surrogate Recoveries	*	8	1
*	Matrix Spike/Matrix Spike Duplicate		8	0
*	Laboratory Control Sample(LCS)		8	0
*	Laboratory and/or Field Duplicates		8	0
*	Internal Standards		8	0
*	Pesticide Instrument Performance		8	0
*	Sample Cleanup		8	0
*	Compound Identification		8	0
*	Compound Quantitation		8	0
*	Sample Preservation		8	0
* All Criteria were met for that Parameter, X=Explosives				

q=qualified; t=total number of samples analyzed; a=number of samples affected

SUMMARY

All samples were successfully analyzed for all target compounds according to U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. All instruments and method sensitivities were according to the specified analytical methods. Refer to Minor Problems for information regarding biases identified during data validation.

Deviation from USEPA NFG: The "U" qualifier recommended by USEPA NFG for blank contamination was replaced by the "B" qualifier to clearly indicate blank contamination on the EDDs.

MAJOR PROBLEMS

- None noted.

MINOR PROBLEMS

- Surrogate Recoveries & Holding Time: The analysis of sample FTSW-AA-SW-21 displayed low surrogate recoveries. The sample was not re-analyzed due to holding time. No positive results were detected. Quantitation limits were qualified "UJ".

NOTES

- Electronic Data Deliverable (EDD): Several rows in an electronic data deliverable (EDD) are marked with an "X" and hidden before printing a data summary form. These rows may include quality control samples such as Method Blanks, Laboratory Control Samples, Matrix Spikes, or Matrix Spike Duplicates which are not validated. Additionally, some field sample results may not be used since only one (1) result for each compound is reported after validation. The following list indicates some instances in which an "X" may be placed in the DVQ column:
  1. The compounds in an analysis that have exceeded the instrument calibration range.
  2. All compounds in a diluted analysis that were within the calibration range in the initial analysis.
  3. All compounds in either the initial analysis or re-analysis of a sample, depending on which analysis is not reported on the EDD.

  Although QC samples and some field samples results may not be used, all data were reviewed and considered in the overall assessment.

- Data Validation Qualifier (DVQ):This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

- Data Validation Result (DVR):This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit. Results in the DVR column supersede those reported by the laboratory.

- Tentatively Identified Compounds (TICs): The TICs, if applicable, were reviewed during data validation.

- Compound Quantitation: Positive results for compounds which are below the CRQL were qualified as estimated "J" on the EDD.

- Blank Contaminants: The maximum concentration of all compounds found in the analyses of the trip, field or laboratory method blanks are listed in the following table. Associated samples with positive results of common laboratory contaminants less than ten times (<10X) the blank concentration, or positive results of other contaminants less than five times (<5X) the blank concentration, found in the associated samples were qualified as "B" on the DSFs.

Analytical Fraction	Compound	Maximum Concentration	Units	Blank Type
	None			

*Common lab contaminant

REPORT CONTENT STATEMENT

All data for this project were reviewed in accordance with the pertinent parts of the U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The text of the report addresses only those problems affecting data usability.

ATTACHMENTS

l) Glossary of Data Qualifiers
2) Electronic Data Deliverable (EDD). These include:
   (a) All results for target compounds with qualifier codes where applicable.
   (b) All unusable detection limits (qualified "R"), where applicable.
3) Electronic Data Package (.pdf file) as Support Documentation

DCN: ER121201-002-O

Respectfully Submitted,

Sherif N. Mina Date: September 14, 2012
Sherif N. Mina

QA/Review: SM

MCGI

USEPA
Inorganic
Data Validation Report

Fort Stewart
GA

ALS Lab Report # ERT-003
MCGI Project No. ER121201-003-I

Prepared for:
Earth Resources Technology, Inc.
Laurel, MD

Prepared by:
"MCGI"
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September 2012

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- SUPPORT DOCUMENTATION, Refer to the electronic Data Package PDF file.

GLOSSARY OF ACRONYMS & TERMS

GLOSSARY OF ACRONYMS & TERMS

One or more of the following acronyms and terms may have been used in the descriptive process of the Inorganic Data Validation.

Acronyms:

AA	Atomic Absorption
CARD	CLP Analytical Results Database
CCB	Continuing Calibration Blank
CCS	Contract Compliance Screening
CCV	Continuing Calibration Verification
CF	Calibration Factor
CLP	Contract Laboratory Program
COC	Chain of Custody
CRDL	Contract Required Detection Limit
CSF	Complete SDG File
CV	Cold Vapor
%D	Percent Difference
DAS	Delivery of Analytical Services
DSF	Data Summary Form
EMSL-LV	Environmental Monitoring Support Laboratory - Las Vegas
EPA	United States Environmental Protection Agency
ICAL	Initial Calibration
ICB	Initial Calibration Blank
ICP	Inductively Coupled Plasma
ICS	Interference Check Sample
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
IRDA	Inorganic Regional Data Assessment
LCS	Laboratory Control Sample
LCL	Lower Control Limit
MCL	Maximum Contamination Level
MDC	Minimum Detectable Concentration
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
MSA	Method of Standard Addition
PB	Preparation Blank
PCB	Poly Chlorinated Biphenyl
PRP	Potential Responsible Party
QA/QC	Quality Assurance/Quality Control
QAPjP	Quality Assurance Project Plan
QC	Quality Control

%R	Percent Recovery of spiked amount
RAS	Routine Analytical Services
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
SDG	Sample Delivery Group
SMO	Sample Management Office
SOP	Standard Operation Procedures
SOW	Statement of Work
SSL	Samples Shipping Log
TAL	Target Analyte List
TR	Traffic Report
UCL	Upper Control Limit
VTSR	Validated Time of Sample Receipt

Terms:

Associated Samples

Any sample related to a particular QC analysis. For Example:
- For ICV, all samples run under the same calibration curve.
- For duplicate RPD, all SDG samples digested/distilled of the same matrix.

Case A finite, usually predetermined number of samples collected over a given time period for a particular site. A Case consists of one or more Sample Delivery Group(s).

Continuing Calibration Blank (CCB)

A deionized water sample run every ten (10) samples designed to detect any carryover contamination.

Continuing Calibration Verification (CCV)

A deionized water sample run every ten (10) samples designed to detect any carryover contamination.

Contract Compliance Screening (CCS)

A process in which the SMO inspects the data for contractual compliance and provides EMSL-LV laboratories and the Regions with their findings.

Contractual Holding Time

The time from VTSR (validated time of sample receipt) to laboratory extraction and /or analysis.

Data Validation Qualifier (DVQ)

This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

Data Validation Result (DVR)

This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit.

Field Blank Field blanks are intended to identify contaminants that may have been introduced in the field. Examples are rinsate blank (RB), field blanks (FB) and trip blank (TB).

Field Duplicate

A duplicate sample generated in the field; not in the laboratory.

Initial Calibration (ICAL)

The establishment of a calibration curve with the appropriate number of standards and concentration ranges. The calibration curve plots absorbancies and/or emissions versus concentration of the standards.

.

Initial Calibration Blank (ICB)

First blank run after the calibration curve .

Initial Calibration Verification (ICV)

First standard run after the calibration curve .

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Introduction of a known concentration of a compound into a sample to provide information about the effect of sample matrix on the extraction and/or measurement methodology.

Post Digestion Spike

The addition of known amount of standard after digestion. (Also identified as analytical spike, or spike, for furnace analyses.)

Preparation Blank (PB)

Blank taken through the digestion process to detect internal laboratory contamination.

Sample Delivery Group (SDG)

Defined by one of the following, whichever occurs first:

- case of sample
- each twenty field samples in a case or
- each 14-day calendar period during which field samples in a case are received, beginning with the receipt of the first sample in the SDG.

Serial Dilution

A sample run at a specific dilution to determine whether any significant chemical or physical interferences exist due to sample matrix effect, for ICP only.

Technical Holding Time

The time from sample collection to laboratory extraction and /or analysis.

COMMUNICATION RECORDS

N/A

GLOSSARY OF DATA VALIDATION QUALIFIERS

GLOSSARY OF DATA QUALIFIER CODES (INORGANIC)

CODES RELATED TO IDENTIFICATION:

(Confidence concerning presence or absence of analytes).

U	=	Not detected above the level of the associated value. The associated value is either the approximate sample quantitation or detection limit.
NO CODE	=	Confirmed identification
B	=	Not detected substantially above the level reported in laboratory or field blanks.
R	=	Unusable results. Analyte may or may not be present in the sample.
N	=	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION:

(Can be used for both positive results and sample detection limits)

J	=	Analyte present. Reported value may not be accurate or precise (estimated value).
K	=	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	=	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
[ ]	=	Analyte present. Value approaches the IDL, but less than the quantitation limit. The quantitation may not be accurate.
UJ	=	Not detected. Quantitation limit may be inaccurate or impresice.
UL	=	Not detected. Quantitation limit is probably higher.

OTHER CODES:

NJ	=	Qualitative identification questionable. Presumptively present at approximate quantity.
Q	=	No analytical Result.
X	=	Data not validated.

DATA VALIDATION REPORT NARRATIVE

MCGI

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DATE: September 17, 2012

SUBJECT: USEPA Inorganic Data Validation Report
Metals & Arsenic
ALS Lab SDG No. ERT-003
Site: Fort Stewart, GA
MCGI Project No. ER121201-003-I

FROM: Sherif N. Mina
Meridian Consultant Group, Inc.

TO: Mr. Mike Gearheart
Earth Resources Technology, Inc.

OVERVIEW

This Sample Delivery Group (SDG) consisted of thirteen (13) soil and one (1) aqueous samples submitted to ALS Laboratories, Middletown, PA, for Metals & Arsenic (As) analysis according to SW-846, Methods 6020A. The sample set included one (1) equipment blank, and one (1) soil field duplicate pair. The samples were analyzed in accordance with the Chain-of-Custody (COC), see Sample Identification Summary.

Sample Identification Summary

SAMPLE INFORMATION			Analysis	
Field ID	Lab ID	Matrix	M	A
FTSW-AA-SO-28	9980395001	Soil	x	
FTSW-AA-SO-29	9980395002	Soil	x	
FTSW-HR-SO-01	9980395003	Soil		x
FTSW-HR-SO-01 DUP	9980395004	Soil		x
FTSW-HR-SO-02 (01.5)	9980395005	Soil		x
FTSW-HR-SO-02 (01.5) ERB	9980395006	Aqueous		x
FTSW-HR-SO-03	9980395007	Soil		x
FTSW-HR-SO-04 (02)	9980395008	Soil		x
FTSW-HR-SO-05	9980395009	Soil		x
FTSW-HR-SO-06	9980395010	Soil		x

SAMPLE INFORMATION			Analysis	
Field ID	Lab ID	Matrix	M	A
FTSW-HR-SO-07	9980395011	Soil		x
FTSW-HR-SO-08 (02)	9980395012	Soil		x
FTSW-HR-SO-09	9980395013	Soil		x
FTSW-HR-SO-10 (01.5)	9980395014	Soil		x

M=Metals, A=As

The analytical results were validated according to the pertinent parts of U.S. Environmental Protection Agency (USEPA) National Functional for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The validation was based on the following parameters:

Data Validation Summary

	Parameters	M			A		
		q	t	a	q	t	a
*	Data Completeness		2	0		12	0
*	Holding Time		2	0		12	0
*	Calibration Verification		2	0		12	0
	Laboratory and Field Blanks analyses		2	0	*	12	1
*	ICP Interference Check Sample results		2	0		12	0
*	Matrix Spike recoveries (MS)		2	0		12	0
*	Laboratory and Field Duplicates		2	0		12	0
*	Laboratory Control Sample(LCS)		2	0		12	0
*	Serial Dilution results		2	0		12	0
*	Furnace Atomic Absorption results (FAA)		2	0		12	0
*	Analyte Identification		2	0		12	0
*	Analyte Quantitation		2	0		12	0
* All Criteria were met for that Parameter, M=Metals, A=As							

q=qualified; t=total number of samples analyzed; a=number of samples affected

SUMMARY

All samples were successfully analyzed for all target analytes according to U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. All instruments and method sensitivities were according to the specified analytical methods. Refer to Minor Problems for information regarding biases identified during data validation.

Deviation from USEPA NFG: The "U" qualifier recommended by USEPA NFG for blank contamination was replaced by the "B" qualifier to clearly indicate blank contamination on the EDDs.

MAJOR ISSUES

- None noted.

MINOR ISSUES

- Laboratory and Field Blanks analyses: Analytes detected in the laboratory and/or equipment blanks, that affect sample results, with concentration above the instrument detection limit (IDL) are listed below. Analytes in the samples with concentration less than five (5) times the blank concentration have been reported on the EDD and qualified "B".

Analyte	Blank Type
As	PB

PB = Preparation Blank
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank
CB = Container Blank
EB = Equipment Blank

NOTES

- Electronic Data Deliverable (EDD): Several rows in an electronic data deliverable (EDD) are marked with an "X" and hidden before printing a data summary form. These rows may include quality control samples such as Method Blanks, Laboratory Control Samples, Matrix Spikes, or Matrix Spike Duplicates which are not validated. Additionally, some field sample results may not be used since only one (1) result for each compound is reported after validation. The following list indicates some instances in which an "X" may be placed in the DVQ column:
  1. The compounds in an analysis that have exceeded the instrument calibration range.
  2. All compounds in a diluted analysis that were within the calibration range in the initial analysis.
  3. All compounds in either the initial analysis or re-analysis of a sample, depending on which analysis is not reported on the EDD.

  Although QC samples and some field samples results may not be used, all data were reviewed and considered in the overall assessment.

- Data Validation Qualifier (DVQ): This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

- Data Validation Result (DVR): This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit. Results in the DVR column supersede those reported by the laboratory.

- Compound Quantitation: Positive results for compounds which are below the CRQL were qualified as estimated "J" on the EDD.

REPORT CONTENT STATEMENT

All data for this project were reviewed in accordance with the pertinent parts of the U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The text of the report addresses only those problems affecting data usability.

ATTACHMENTS

l) Glossary of Data Qualifiers
2) Electronic Data Deliverable (EDD). These include:
   (a) All results for target analytes with qualifier codes where applicable.
   (b) All unusable detection limits (qualified "R"), where applicable.
3) Electronic Data Package (.pdf file) as Support Documentation

DCN: ER121201-003-I

Respectfully Submitted,

Sherif N. Mina Date: September 17, 2012
Sherif N. Mina

QA/Review: SM

MCGI

USEPA
Organic
Data Validation Report

Fort Stewart
GA

ALS Lab Report # ERT-003
MCGI Project No. ER121201-003-O

Prepared for:

Earth Resources Technology, Inc.
Laurel, MD

Prepared by:

"MCGI"
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September 2012

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- GLOSSARY OF ACRONYMS & TERMS
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- SUPPORT DOCUMENTATION, Refer to the electronic Data Package PDF file.

GLOSSARY OF ACRONYMS & TERMS

GLOSSARY OF ACRONYMS & TERMS

One or more of the following acronyms and terms may have been used in the descriptive process of the Organic Data Validation.

Acronyms:

BFB	Bromofluorobenzene (volatile instrument performance check)
BNA	Base/Neutral/Acid
CARD	CLP Analytical Results Database
CCCs	Calibration Check Compounds
CCS	Contract Compliance Screening
CF	Calibration Factor
CLP	Contract Laboratory Program
COC	Chain of Custody
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
%D	Percent Difference
DAS	Delivery of Analytical Services
DCB	Decachlorobiphenyl (Pesticide/PCB/ surrogate compound)
DFTPP	Decafluorotriphenylphosphine (semivolatile instrument performance check)
DSF	Data Summary Form
ECD	Electron-Capture Detector
EICP	Extended Ion Current Profile
EMSL-LV	Environmental Monitoring Support Laboratory - Las Vegas
EPA	United States Environmental Protection Agency
GC	Gas Chromatography
GC/EC	Gas Chromatography/Electron Capture
GC/MS	Gas Chromatography/Mass Spectra
GPC	Gel Permeation Chromatography (Clean Up)
ICAL	Initial Calibration
IS	Internal Standard
LCS	Laboratory Control Sample
LCL	Lower Control Limit
MCL	Maximum Contamination Level
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
m/z	The ratio of mass (m) to charge (z) of ions measured by GC/MS
OADS	Organic Analysis Data Sheet (Form 1)
ORDA	Organic Regional Data Assessment
PCB	Poly Chlorinated Biphenyl
PEM	Performance Evaluation Mixture
PRP	Potential Responsible Party

QA/QC	Quality Assurance/Quality Control
QAPjP	Quality Assurance Project Plan
QC	Quality Control
%R	Percent Recovery of spiked amount
RAS	Routine Analytical Services
RF	Response Factor
RIC	Reconstructed Ion Chromatogram
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
RT	Retention Time
RTW	Retention Time Window
SDG	Sample Delivery Group
SMC	System Monitoring Compound
SMO	Sample Management Office
SOP	Standard Operation Procedures
SOW	Statement of Work
SPCCs	System Performance Check Compounds
SSL	Samples Shipping Log
SVOA	Semivolatile Organic Analyte
TCL	Target Compound List
TCX	Tetrachloro-m-Xylene (Pesticide/PCB surrogate compound)
TIC	Tentatively Identified Compound
TPH	Total Petroleum Hydrocarbons
TR	Traffic Report
UCL	Upper Control Limit
VOA	Volatile Organic Analyte
VTSR	Validated Time of Sample Receipt

Terms:

Associated Samples
: Any sample related to a particular QC analysis.

Case
: A finite, usually predetermined number of samples collected over a given time period for a particular site. A Case consists of one or more Sample Delivery Group(s).

Contract Compliance Screening (CCS)
: A process in which the SMO inspects the data for contractual compliance and provides EMSL-LV laboratories and the Regions with their findings.

Contractual Holding Time

The time from VTSR (validated time of sample receipt) to laboratory extraction and /or analysis.

Data Validation Qualifier (DVQ)

This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

Data Validation Result (DVR)

This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit.

Field Blank Field blanks are intended to identify contaminants that may have been introduced in the field. Examples are rinsate blank (RB), field blanks (FB) and trip blank (TB).

Field Duplicate

A duplicate sample generated in the field; not in the laboratory.

Initial Calibration (ICAL)

The establishment of a calibration curve with the appropriate number of standards and concentration ranges. The calibration curve plots absorbances and/or emissions versus concentration of the standards. .

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Introduction of a known concentration of a compound into a sample to provide information about the effect of sample matrix on the extraction and/or measurement methodology.

Perform ance Evaluation Mixture

A standard used to verify that the ICAL sequence is stable throughout the GC or GC/MS analyses.

Sample Delivery Group (SDG)

Defined by one of the following, whichever occurs first:

- case of sample
- each twenty field samples in a case or
- each 14-day calendar period during which field samples in a case are received, beginning with the receipt of the first sample in the SDG.

Technical Holding Time

The time from sample collection to laboratory extraction and /or analysis

COMMUNICATION RECORDS

“N/A”

GLOSSARY OF DATA VALIDATION QUALIFIERS

GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATED TO IDENTIFICATION:

(Confidence concerning presence or absence of compounds)

U	=	Not detected above the level of the associated value. The associated value is either the approximate sample quantitation or detection limit.
NO CODE	=	Confirmed identification
B	=	Not detected substantially above the level reported in laboratory or field blanks.
R	=	Unusable results. Analyte may or may not be present in the sample.
N	=	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION:

(Can be used for both positive results and sample quantitation limits)

J	=	Analyte present. Reported value may not be accurate or precise (estimated value).
K	=	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	=	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
UJ	=	Not detected. Quantitation limit may be inaccurate or imprecise.
UL	=	Not detected. Quantitation limit is probably higher.

OTHER CODES:

NJ	=	Qualitative identification questionable. Presumptively present at approximate quantity.
Q	=	No analytical result.
X	=	Data not Validated.

DATA VALIDATION REPORT NARRATIVE

MCGI

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DATE: September 17, 2012

SUBJECT: USEPA Organic Data Validation Report
1,4-Dithane, 1,4-Oxathiane & Thiodiglycol
ALS Lab SDG No. ERT-003
Site: Fort Stewart, GA
MCGI Project No. ER121201-003-O

FROM: Sherif N. Mina
Meridian Consultant Group, Inc.

TO: Mr. Mike Gearheart
Earth Resources Technology, Inc.

OVERVIEW

This Sample Delivery Group (SDG) consisted of eleven (11) soil and one (1) aqueous samples submitted to ALS Laboratories, Salt Lake City, Utah, for 1,4-Dithane, 1,4-Oxathiane & Thiodiglycol analyses according to SW-846, Method 8270 & 8321, respectively. The sample set included one (1) equipment blank, and one (1) soil field duplicate pair. The samples were analyzed in accordance with the Chain-of-Custody (COC), see Sample Identification Summary.

Sample Identification Summary

SAMPLE INFORMATION			Analysis	
Field ID	Lab ID	Matrix	DO	T
FTSW-HR-SO-01	ERT003001	Soil	x	x
FTSW-HR-SO-01 DUP	ERT003004	Soil	x	x
FTSW-HR-SO-02(01.5)	ERT003005	Soil	x	x
FTSW-HR-SO-02(01.5)ERB	ERT003006	Aqueous	x	x
FTSW-HR-SO-03	ERT003007	Soil	x	x
FTSW-HR-SO-04 (02)	ERT003008	Soil	x	x
FTSW-HR-SO-05	ERT003009	Soil	x	x
FTSW-HR-SO-06	ERT003010	Soil	x	x
FTSW-HR-SO-07	ERT003011	Soil	x	x

SAMPLE INFORMATION			Analysis	
Field ID	Lab ID	Matrix	DO	T
FTSW-HR-SO-08 (02)	ERT003012	Soil	x	x
FTSW-HR-SO-09	ERT003013	Soil	x	x
FTSW-HR-SO-10 (01.5)	ERT003014	Soil	x	x

DO=1,4-Dithane & 1,4-Oxathiane, T=Thiodiglycol

The analytical results were validated according to the pertinent parts of U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The validation was based on the following parameters:

Data Validation Summary

Parameters		DO			T		
		q	t	a	q	t	a
*	Data Completeness		12	0		12	0
	Holding Time	*	12	1		12	0
*	Calibrations		12	0		12	0
*	Laboratory and Field Blanks analyses		12	0		12	0
*	Surrogate Recoveries		12	0		12	0
*	Matrix Spike/Matrix Spike Duplicate		12	0		12	0
*	Laboratory Control Sample(LCS)		12	0		12	0
*	Laboratory and/or Field Duplicates		12	0		12	0
*	Internal Standards		12	0		12	0
*	Pesticide Instrument Performance		12	0		12	0
*	Sample Cleanup		12	0		12	0
*	Compound Identification		12	0		12	0
*	Compound Quantitation		12	0		12	0
*	Sample Preservation		12	0		12	0
* All Criteria were met for that Parameter, DO=1,4-Dithane & 1,4-Oxathiane, T=Thiodiglycol							

q=qualified; t=total number of samples analyzed; a=number of samples affected

SUMMARY

All samples were successfully analyzed for all target compounds according to U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. All instruments and method sensitivities were according to the specified analytical methods. Refer to Minor Problems for information regarding biases identified during data validation.

Deviation from USEPA NFG: The "U" qualifier recommended by USEPA NFG for blank contamination was replaced by the "B" qualifier to clearly indicate blank contamination on the EDDs.

MAJOR PROBLEMS

- None noted.

MINOR PROBLEMS

- Holding Time: The aqueous sample FTSW-HR-SO-02(01.5)ERB was extracted for 1,4-Dithane, 1,4-Oxathiane two (2) days outside the technical holding time. Quantitation limits were qualified "UJ".

NOTES

- Electronic Data Deliverable (EDD): Several rows in an electronic data deliverable (EDD) are marked with an "X" and hidden before printing a data summary form. These rows may include quality control samples such as Method Blanks, Laboratory Control Samples, Matrix Spikes, or Matrix Spike Duplicates which are not validated. Additionally, some field sample results may not be used since only one (1) result for each compound is reported after validation. The following list indicates some instances in which an "X" may be placed in the DVQ column:
  1. The compounds in an analysis that have exceeded the instrument calibration range.
  2. All compounds in a diluted analysis that were within the calibration range in the initial analysis.
  3. All compounds in either the initial analysis or re-analysis of a sample, depending on which analysis is not reported on the EDD.

  Although QC samples and some field samples results may not be used, all data were reviewed and considered in the overall assessment.

- Data Validation Qualifier (DVQ):This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

- Data Validation Result (DVR):This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit. Results in the DVR column supersede those reported by the laboratory.

- Tentatively Identified Compounds (TICs): The TICs, if applicable, were reviewed during data validation.

- Compound Quantitation: Positive results for compounds which are below the CRQL were qualified as estimated "J" on the EDD.

- Blank Contaminants: The maximum concentration of all compounds found in the analyses

of the trip, field or laboratory method blanks are listed in the following table. Associated samples with positive results of common laboratory contaminants less than ten times (<10X) the blank concentration, or positive results of other contaminants less than five times (<5X) the blank concentration, found in the associated samples were qualified as "B" on the DSFs.

Analytical Fraction	Compound	Maximum Concentration	Units	Blank Type
	None			

*Common lab contaminant

- Surrogate Recoveries: The base/neutral surrogate terphenyl-d14 displayed recovery above the QC limit in soil sample FTSW-HR-SO-06. No action was taken.

  The base/neutral surrogate Nitrobenzene-d5 displayed recovery above the QC limits in aqueous sample FTSW-HR-SO-02(01.5)ERB, and also in the Method Blank & LCS. No action was taken.

REPORT CONTENT STATEMENT

All data for this project were reviewed in accordance with the pertinent parts of the U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The text of the report addresses only those problems affecting data usability.

ATTACHMENTS

l) Glossary of Data Qualifiers
2) Electronic Data Deliverable (EDD). These include:
   (a) All results for target compounds with qualifier codes where applicable.
   (b) All unusable detection limits (qualified "R"), where applicable.
3) Electronic Data Package (.pdf file) as Support Documentation

DCN: ER121201-003-O

Respectfully Submitted,

Sherif N. Mina Date: September 17, 2012
Sherif N. Mina

QA/Review: SM

MCGI

USEPA
Inorganic
Data Validation Report

Fort Stewart
GA

ALS Lab Report # ERT-004
MCGI Project No. ER121201-004-I

Prepared for:
Earth Resources Technology, Inc.
Laurel, MD

Prepared by:
"MCGI"
Meridian Consultant Group, Inc.
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September 2012

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- SUPPORT DOCUMENTATION, Refer to the electronic Data Package PDF file.

GLOSSARY OF ACRONYMS & TERMS

GLOSSARY OF ACRONYMS & TERMS

One or more of the following acronyms and terms may have been used in the descriptive process of the Inorganic Data Validation.

Acronyms:

AA	Atomic Absorption
CARD	CLP Analytical Results Database
CCB	Continuing Calibration Blank
CCS	Contract Compliance Screening
CCV	Continuing Calibration Verification
CF	Calibration Factor
CLP	Contract Laboratory Program
COC	Chain of Custody
CRDL	Contract Required Detection Limit
CSF	Complete SDG File
CV	Cold Vapor
%D	Percent Difference
DAS	Delivery of Analytical Services
DSF	Data Summary Form
EMSL-LV	Environmental Monitoring Support Laboratory - Las Vegas
EPA	United States Environmental Protection Agency
ICAL	Initial Calibration
ICB	Initial Calibration Blank
ICP	Inductively Coupled Plasma
ICS	Interference Check Sample
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
IRDA	Inorganic Regional Data Assessment
LCS	Laboratory Control Sample
LCL	Lower Control Limit
MCL	Maximum Contamination Level
MDC	Minimum Detectable Concentration
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
MSA	Method of Standard Addition
PB	Preparation Blank
PCB	Poly Chlorinated Biphenyl
PRP	Potential Responsible Party
QA/QC	Quality Assurance/Quality Control
QAPjP	Quality Assurance Project Plan
QC	Quality Control

%R	Percent Recovery of spiked amount
RAS	Routine Analytical Services
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
SDG	Sample Delivery Group
SMO	Sample Management Office
SOP	Standard Operation Procedures
SOW	Statement of Work
SSL	Samples Shipping Log
TAL	Target Analyte List
TR	Traffic Report
UCL	Upper Control Limit
VTSR	Validated Time of Sample Receipt

Terms:

Associated Samples

Any sample related to a particular QC analysis. For Example:
- For ICV, all samples run under the same calibration curve.
- For duplicate RPD, all SDG samples digested/distilled of the same matrix.

Case A finite, usually predetermined number of samples collected over a given time period for a particular site. A Case consists of one or more Sample Delivery Group(s).

Continuing Calibration Blank (CCB)

A deionized water sample run every ten (10) samples designed to detect any carryover contamination.

Continuing Calibration Verification (CCV)

A deionized water sample run every ten (10) samples designed to detect any carryover contamination.

Contract Compliance Screening (CCS)

A process in which the SMO inspects the data for contractual compliance and provides EMSL-LV laboratories and the Regions with their findings.

Contractual Holding Time

The time from VTSR (validated time of sample receipt) to laboratory extraction and /or analysis.

Data Validation Qualifier (DVQ)

This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

Data Validation Result (DVR)

This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit.

Field Blank Field blanks are intended to identify contaminants that may have been introduced in the field. Examples are rinsate blank (RB), field blanks (FB) and trip blank (TB).

Field Duplicate

A duplicate sample generated in the field; not in the laboratory.

Initial Calibration (ICAL)

The establishment of a calibration curve with the appropriate number of standards and concentration ranges. The calibration curve plots absorbancies and/or emissions versus concentration of the standards.

.

Initial Calibration Blank (ICB)

First blank run after the calibration curve .

Initial Calibration Verification (ICV)

First standard run after the calibration curve .

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Introduction of a known concentration of a compound into a sample to provide information about the effect of sample matrix on the extraction and/or measurement methodology.

Post Digestion Spike

The addition of known amount of standard after digestion. (Also identified as analytical spike, or spike, for furnace analyses.)

Preparation Blank (PB)

Blank taken through the digestion process to detect internal laboratory contamination.

Sample Delivery Group (SDG)

Defined by one of the following, whichever occurs first:

- case of sample
- each twenty field samples in a case or
- each 14-day calendar period during which field samples in a case are received, beginning with the receipt of the first sample in the SDG.

Serial Dilution

A sample run at a specific dilution to determine whether any significant chemical or physical interferences exist due to sample matrix effect, for ICP only.

Technical Holding Time

The time from sample collection to laboratory extraction and /or analysis.

COMMUNICATION RECORDS

N/A

GLOSSARY OF DATA VALIDATION QUALIFIERS

GLOSSARY OF DATA QUALIFIER CODES (INORGANIC)

CODES RELATED TO IDENTIFICATION:

(Confidence concerning presence or absence of analytes).

U	=	Not detected above the level of the associated value. The associated value is either the approximate sample quantitation or detection limit.
NO CODE	=	Confirmed identification
B	=	Not detected substantially above the level reported in laboratory or field blanks.
R	=	Unusable results. Analyte may or may not be present in the sample.
N	=	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION:

(Can be used for both positive results and sample detection limits)

J	=	Analyte present. Reported value may not be accurate or precise (estimated value).
K	=	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	=	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
[ ]	=	Analyte present. Value approaches the IDL, but less than the quantitation limit. The quantitation may not be accurate.
UJ	=	Not detected. Quantitation limit may be inaccurate or impresice.
UL	=	Not detected. Quantitation limit is probably higher.

OTHER CODES:

NJ	=	Qualitative identification questionable. Presumptively present at approximate quantity.
Q	=	No analytical Result.
X	=	Data not validated.

DATA VALIDATION REPORT NARRATIVE

MCGI

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DATE: September 18, 2012

SUBJECT: USEPA Inorganic Data Validation Report
Arsenic
ALS Lab SDG No. ERT-004
Site: Fort Stewart, GA
MCGI Project No. ER121201-004-I

FROM: Sherif N. Mina
Meridian Consultant Group, Inc.

TO: Mr. Mike Gearheart
Earth Resources Technology, Inc.

OVERVIEW

This Sample Delivery Group (SDG) consisted of twenty-two (22) soil samples submitted to ALS Laboratories, Middletown, PA, for Arsenic (As) analysis according to SW-846, Methods 6020A. The sample set included two (2) soil field duplicate pairs. The samples were analyzed in accordance with the Chain-of-Custody (COC), see Sample Identification Summary.

Sample Identification Summary

SAMPLE INFORMATION			Analysis	
Field ID	Lab ID	Matrix	A	
FTSW-HR-SO-11	9980614001	Soil	x	
FTSW-HR-SO-12 (01.5)	9980614002	Soil	x	
FTSW-HR-SO-13	9980614003	Soil	x	
FTSW-HR-SO-14 (01.5)	9980614004	Soil	x	
FTSW-HR-SO-14 (01.5) DUP	9980614005	Soil	x	
FTSW-HR-SO-15	9980614006	Soil	x	
FTSW-HR-SO-16 (01.5)	9980614007	Soil	x	
FTSW-HR-SO-17	9980614008	Soil	x	
FTSW-HR-SO-18 (02)	9980614009	Soil	x	
FTSW-HR-SO-19	9980614010	Soil	x	
FTSW-HR-SO-20 (01.5)	9980614011	Soil	x	

SAMPLE INFORMATION			Analysis	
Field ID	Lab ID	Matrix	A	
FTSW-HR-SO-21	9980614012	Soil	x	
FTSW-HR-SO-22 (04)	9980614013	Soil	x	
FTSW-HR-SO-22 (04) DUP	9980614014	Soil	x	
FTSW-HR-SO-23	9980614015	Soil	x	
FTSW-HR-SO-24 (06)	9980614016	Soil	x	
FTSW-HR-SO-25	9980614017	Soil	x	
FTSW-HR-SO-26 (04)	9980614018	Soil	x	
FTSW-HR-SO-27	9980614019	Soil	x	
FTSW-HR-SO-28 (05)	9980614020	Soil	x	
FTSW-HR-SO-29	9980614021	Soil	x	
FTSW-HR-SO-30 (05)	9980614022	Soil	x	

A=As

The analytical results were validated according to the pertinent parts of U.S. Environmental Protection Agency (USEPA) National Functional for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The validation was based on the following parameters:

Data Validation Summary

	Parameters	A		
		q	t	a
*	Data Completeness		22	0
*	Holding Time		22	0
*	Calibration Verification		22	0
*	Laboratory and Field Blanks analyses		22	0
*	ICP Interference Check Sample results		22	0
*	Matrix Spike recoveries (MS)		22	0
*	Laboratory and Field Duplicates		22	0
*	Laboratory Control Sample(LCS)		22	0
*	Serial Dilution results		22	0
*	Furnace Atomic Absorption results (FAA)		22	0
*	Analyte Identification		22	0
*	Analyte Quantitation		22	0
* All Criteria were met for that Parameter, A=As				

q=qualified; t=total number of samples analyzed; a=number of samples affected

SUMMARY

All samples were successfully analyzed for all target analytes according to U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. All instruments and method sensitivities were according to the specified analytical methods. Refer to Minor Problems for information regarding biases identified during data validation.

Deviation from USEPA NFG: The "U" qualifier recommended by USEPA NFG for blank contamination was replaced by the "B" qualifier to clearly indicate blank contamination on the

EDDs.

MAJOR ISSUES

- None noted.

MINOR ISSUES

- Laboratory and Field Blanks analyses: Analytes detected in the laboratory and/or equipment blanks, that affect sample results, with concentration above the instrument detection limit (IDL) are listed below. Analytes in the samples with concentration less than five (5) times the blank concentration have been reported on the EDD and qualified "B".

Analyte	Blank Type

PB = Preparation Blank
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank
CB = Container Blank
EB = Equipment Blank

NOTES

- Electronic Data Deliverable (EDD): Several rows in an electronic data deliverable (EDD) are marked with an "X" and hidden before printing a data summary form. These rows may include quality control samples such as Method Blanks, Laboratory Control Samples, Matrix Spikes, or Matrix Spike Duplicates which are not validated. Additionally, some field sample results may not be used since only one (1) result for each compound is reported after validation. The following list indicates some instances in which an "X" may be placed in the DVQ column:
  1. The compounds in an analysis that have exceeded the instrument calibration range.
  2. All compounds in a diluted analysis that were within the calibration range in the initial analysis.
  3. All compounds in either the initial analysis or re-analysis of a sample, depending on which analysis is not reported on the EDD.

  Although QC samples and some field samples results may not be used, all data were reviewed and considered in the overall assessment.

- Data Validation Qualifier (DVQ): This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

- Data Validation Result (DVR): This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit. Results in the DVR column supersede those reported by the laboratory.

- Compound Quantitation: Positive results for compounds which are below the CRQL were qualified as estimated "J" on the EDD.

REPORT CONTENT STATEMENT

All data for this project were reviewed in accordance with the pertinent parts of the U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The text of the report addresses only those problems affecting data usability.

ATTACHMENTS

l) Glossary of Data Qualifiers
2) Electronic Data Deliverable (EDD). These include:
   (a) All results for target analytes with qualifier codes where applicable.
   (b) All unusable detection limits (qualified "R"), where applicable.
3) Electronic Data Package (.pdf file) as Support Documentation

DCN: ER121201-004-I

Respectfully Submitted,

Sherif N. Mina Date: September 18, 2012
Sherif N. Mina

QA/Review: SM

MCGI

USEPA
Organic
Data Validation Report

Fort Stewart
GA

ALS Lab Report # ERT-004
MCGI Project No. ER121201-004-O

Prepared for:

Earth Resources Technology, Inc.
Laurel, MD

Prepared by:

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September 2012

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- SUPPORT DOCUMENTATION, Refer to the electronic Data Package PDF file.

GLOSSARY OF ACRONYMS & TERMS

GLOSSARY OF ACRONYMS & TERMS

One or more of the following acronyms and terms may have been used in the descriptive process of the Organic Data Validation.

Acronyms:

BFB	Bromofluorobenzene (volatile instrument performance check)
BNA	Base/Neutral/Acid
CARD	CLP Analytical Results Database
CCCs	Calibration Check Compounds
CCS	Contract Compliance Screening
CF	Calibration Factor
CLP	Contract Laboratory Program
COC	Chain of Custody
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
%D	Percent Difference
DAS	Delivery of Analytical Services
DCB	Decachlorobiphenyl (Pesticide/PCB/ surrogate compound)
DFTPP	Decafluorotriphenylphosphine (semivolatile instrument performance check)
DSF	Data Summary Form
ECD	Electron-Capture Detector
EICP	Extended Ion Current Profile
EMSL-LV	Environmental Monitoring Support Laboratory - Las Vegas
EPA	United States Environmental Protection Agency
GC	Gas Chromatography
GC/EC	Gas Chromatography/Electron Capture
GC/MS	Gas Chromatography/Mass Spectra
GPC	Gel Permeation Chromatography (Clean Up)
ICAL	Initial Calibration
IS	Internal Standard
LCS	Laboratory Control Sample
LCL	Lower Control Limit
MCL	Maximum Contamination Level
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
m/z	The ratio of mass (m) to charge (z) of ions measured by GC/MS
OADS	Organic Analysis Data Sheet (Form 1)
ORDA	Organic Regional Data Assessment
PCB	Poly Chlorinated Biphenyl
PEM	Performance Evaluation Mixture
PRP	Potential Responsible Party

QA/QC	Quality Assurance/Quality Control
QAPjP	Quality Assurance Project Plan
QC	Quality Control
%R	Percent Recovery of spiked amount
RAS	Routine Analytical Services
RF	Response Factor
RIC	Reconstructed Ion Chromatogram
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
RT	Retention Time
RTW	Retention Time Window
SDG	Sample Delivery Group
SMC	System Monitoring Compound
SMO	Sample Management Office
SOP	Standard Operation Procedures
SOW	Statement of Work
SPCCs	System Performance Check Compounds
SSL	Samples Shipping Log
SVOA	Semivolatile Organic Analyte
TCL	Target Compound List
TCX	Tetrachloro-m-Xylene (Pesticide/PCB surrogate compound)
TIC	Tentatively Identified Compound
TPH	Total Petroleum Hydrocarbons
TR	Traffic Report
UCL	Upper Control Limit
VOA	Volatile Organic Analyte
VTSR	Validated Time of Sample Receipt

Terms:

Associated Samples
: Any sample related to a particular QC analysis.

Case
: A finite, usually predetermined number of samples collected over a given time period for a particular site. A Case consists of one or more Sample Delivery Group(s).

Contract Compliance Screening (CCS)
: A process in which the SMO inspects the data for contractual compliance and provides EMSL-LV laboratories and the Regions with their findings.

Contractual Holding Time

The time from VTSR (validated time of sample receipt) to laboratory extraction and /or analysis.

Data Validation Qualifier (DVQ)

This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

Data Validation Result (DVR)

This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit.

Field Blank Field blanks are intended to identify contaminants that may have been introduced in the field. Examples are rinsate blank (RB), field blanks (FB) and trip blank (TB).

Field Duplicate

A duplicate sample generated in the field; not in the laboratory.

Initial Calibration (ICAL)

The establishment of a calibration curve with the appropriate number of standards and concentration ranges. The calibration curve plots absorbances and/or emissions versus concentration of the standards. .

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Introduction of a known concentration of a compound into a sample to provide information about the effect of sample matrix on the extraction and/or measurement methodology.

Perform ance Evaluation Mixture

A standard used to verify that the ICAL sequence is stable throughout the GC or GC/MS analyses.

Sample Delivery Group (SDG)

Defined by one of the following, whichever occurs first:

- case of sample
- each twenty field samples in a case or
- each 14-day calendar period during which field samples in a case are received, beginning with the receipt of the first sample in the SDG.

Technical Holding Time

The time from sample collection to laboratory extraction and /or analysis

COMMUNICATION RECORDS

“N/A”

GLOSSARY OF DATA VALIDATION QUALIFIERS

GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATED TO IDENTIFICATION:

(Confidence concerning presence or absence of compounds)

U	=	Not detected above the level of the associated value. The associated value is either the approximate sample quantitation or detection limit.
NO CODE	=	Confirmed identification
B	=	Not detected substantially above the level reported in laboratory or field blanks.
R	=	Unusable results. Analyte may or may not be present in the sample.
N	=	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION:

(Can be used for both positive results and sample quantitation limits)

J	=	Analyte present. Reported value may not be accurate or precise (estimated value).
K	=	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	=	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
UJ	=	Not detected. Quantitation limit may be inaccurate or imprecise.
UL	=	Not detected. Quantitation limit is probably higher.

OTHER CODES:

NJ	=	Qualitative identification questionable. Presumptively present at approximate quantity.
Q	=	No analytical result.
X	=	Data not Validated.

DATA VALIDATION REPORT NARRATIVE

MCGI

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DATE: September 18, 2012

SUBJECT: USEPA Organic Data Validation Report
1,4-Dithane, 1,4-Oxathiane & Thiodiglycol
ALS Lab SDG No. ERT-004
Site: Fort Stewart, GA
MCGI Project No. ER121201-004-O

FROM: Sherif N. Mina
Meridian Consultant Group, Inc.

TO: Mr. Mike Gearheart
Earth Resources Technology, Inc.

OVERVIEW

This Sample Delivery Group (SDG) consisted of twenty-two (22) soil samples submitted to ALS Laboratories, Salt Lake City, Utah, for 1,4-Dithane, 1,4-Oxathiane & Thiodiglycol analyses according to SW-846, Method 8270 & 8321, respectively. The sample set included two (2) soil field duplicate pairs. The samples were analyzed in accordance with the Chain-of-Custody (COC), see Sample Identification Summary.

Sample Identification Summary

SAMPLE INFORMATION			Analysis	
Field ID	Lab ID	Matrix	DO	T
FTSW-HR-SO-11	1221564001	Soil	x	x
FTSW-HR-SO-12 (01.5)	1221564002	Soil	x	x
FTSW-HR-SO-13	1221564003	Soil	x	x
FTSW-HR-SO-14 (01.5)	1221564004	Soil	x	x
FTSW-HR-SO-14 (01.5) DUP	1221564005	Soil	x	x
FTSW-HR-SO-15	1221564006	Soil	x	x
FTSW-HR-SO-16 (01.5)	1221564007	Soil	x	x
FTSW-HR-SO-17	1221564008	Soil	x	x
FTSW-HR-SO-18 (02)	1221564009	Soil	x	x

SAMPLE INFORMATION			Analysis	
Field ID	Lab ID	Matrix	DO	T
FTSW-HR-SO-19	1221564010	Soil	x	x
FTSW-HR-SO-20 (01.5)	1221564011	Soil	x	x
FTSW-HR-SO-21	1221564012	Soil	x	x
FTSW-HR-SO-22(04)	1221564013	Soil	x	x
FTSW-HR-SO-22(04) DUP	1221564016	Soil	x	x
FTSW-HR-SO-23	1221564017	Soil	x	x
FTSW-HR-SO-24 (06)	1221564018	Soil	x	x
FTSW-HR-SO-25	1221564019	Soil	x	x
FTSW-HR-SO-26 (04)	1221564020	Soil	x	x
FTSW-HR-SO-27	1221564021	Soil	x	x
FTSW-HR-SO-28 (05)	1221564022	Soil	x	x
FTSW-HR-SO-29	1221564023	Soil	x	x
FTSW-HR-SO-30 (05)	1221564024	Soil	x	x

DO=1,4-Dithane & 1,4-Oxathiane, T=Thiodiglycol

The analytical results were validated according to the pertinent parts of U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The validation was based on the following parameters:

Data Validation Summary

Parameters		DO			T		
		q	t	a	q	t	a
*	Data Completeness		22	0		22	0
*	Holding Time		22	0		22	0
*	Calibrations		22	0		22	0
*	Laboratory and Field Blanks analyses		22	0		22	0
*	Surrogate Recoveries		22	0		22	0
*	Matrix Spike/Matrix Spike Duplicate		22	0		22	0
*	Laboratory Control Sample(LCS)		22	0		22	0
*	Laboratory and/or Field Duplicates		22	0		22	0
*	Internal Standards		22	0		22	0
*	Pesticide Instrument Performance		22	0		22	0
*	Sample Cleanup		22	0		22	0
*	Compound Identification		22	0		22	0
*	Compound Quantitation		22	0		22	0
*	Sample Preservation		22	0		22	0

* All Criteria were met for that Parameter, DO=1,4-Dithane & 1,4-Oxathiane, T=Thiodiglycol

q=qualified; t=total number of samples analyzed; a=number of samples affected

SUMMARY

All samples were successfully analyzed for all target compounds according to U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. All instruments and method sensitivities were according to the

specified analytical methods. Refer to Minor Problems for information regarding biases identified during data validation.

Deviation from USEPA NFG: The "U" qualifier recommended by USEPA NFG for blank contamination was replaced by the "B" qualifier to clearly indicate blank contamination on the EDDs.

MAJOR PROBLEMS

- None noted.

MINOR PROBLEMS

- None noted.

NOTES

- Electronic Data Deliverable (EDD): Several rows in an electronic data deliverable (EDD) are marked with an "X" and hidden before printing a data summary form. These rows may include quality control samples such as Method Blanks, Laboratory Control Samples, Matrix Spikes, or Matrix Spike Duplicates which are not validated. Additionally, some field sample results may not be used since only one (1) result for each compound is reported after validation. The following list indicates some instances in which an "X" may be placed in the DVQ column:
  1. The compounds in an analysis that have exceeded the instrument calibration range.
  2. All compounds in a diluted analysis that were within the calibration range in the initial analysis.
  3. All compounds in either the initial analysis or re-analysis of a sample, depending on which analysis is not reported on the EDD.

  Although QC samples and some field samples results may not be used, all data were reviewed and considered in the overall assessment.

- Data Validation Qualifier (DVQ):This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

- Data Validation Result (DVR):This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit. Results in the DVR column supersede those reported by the laboratory.

- Tentatively Identified Compounds (TICs): The TICs, if applicable, were reviewed during data validation.

- Compound Quantitation: Positive results for compounds which are below the CRQL were qualified as estimated "J" on the EDD.

- Blank Contaminants: The maximum concentration of all compounds found in the analyses of the trip, field or laboratory method blanks are listed in the following table. Associated samples with positive results of common laboratory contaminants less than ten times (<10X) the blank concentration, or positive results of other contaminants less than five times (<5X) the blank concentration, found in the associated samples were qualified as "B" on the DSFs.

Analytical Fraction	Compound	Maximum Concentration	Units	Blank Type
	None			

*Common lab contaminant

- Matrix Spike/Matrix Spike Duplicate (MS/MSD): The MS displayed low recoveries for 1,4-Dithane & 1,4-Oxathiane outside the QC limits. The MSD & LCS displayed all recoveries within the QC limits. No action was taken.

REPORT CONTENT STATEMENT

All data for this project were reviewed in accordance with the pertinent parts of the U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The text of the report addresses only those problems affecting data usability.

ATTACHMENTS

l) Glossary of Data Qualifiers
2) Electronic Data Deliverable (EDD). These include:
   (a) All results for target compounds with qualifier codes where applicable.
   (b) All unusable detection limits (qualified "R"), where applicable.
3) Electronic Data Package (.pdf file) as Support Documentation

DCN: ER121201-004-O

Respectfully Submitted,

Sherif N. Mina Date: September 18, 2012
Sherif N. Mina

QA/Review: SM

MCGI

USEPA
Inorganic
Data Validation Report

Fort Stewart
GA

ALS Lab Report # ERT-005
MCGI Project No. ER121201-005-I

Prepared for:
Earth Resources Technology, Inc.
Laurel, MD

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September 2012

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- SUPPORT DOCUMENTATION, Refer to the electronic Data Package PDF file.

GLOSSARY OF ACRONYMS & TERMS

GLOSSARY OF ACRONYMS & TERMS

One or more of the following acronyms and terms may have been used in the descriptive process of the Inorganic Data Validation.

Acronyms:

AA	Atomic Absorption
CARD	CLP Analytical Results Database
CCB	Continuing Calibration Blank
CCS	Contract Compliance Screening
CCV	Continuing Calibration Verification
CF	Calibration Factor
CLP	Contract Laboratory Program
COC	Chain of Custody
CRDL	Contract Required Detection Limit
CSF	Complete SDG File
CV	Cold Vapor
%D	Percent Difference
DAS	Delivery of Analytical Services
DSF	Data Summary Form
EMSL-LV	Environmental Monitoring Support Laboratory - Las Vegas
EPA	United States Environmental Protection Agency
ICAL	Initial Calibration
ICB	Initial Calibration Blank
ICP	Inductively Coupled Plasma
ICS	Interference Check Sample
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
IRDA	Inorganic Regional Data Assessment
LCS	Laboratory Control Sample
LCL	Lower Control Limit
MCL	Maximum Contamination Level
MDC	Minimum Detectable Concentration
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
MSA	Method of Standard Addition
PB	Preparation Blank
PCB	Poly Chlorinated Biphenyl
PRP	Potential Responsible Party
QA/QC	Quality Assurance/Quality Control
QAPjP	Quality Assurance Project Plan
QC	Quality Control

%R	Percent Recovery of spiked amount
RAS	Routine Analytical Services
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
SDG	Sample Delivery Group
SMO	Sample Management Office
SOP	Standard Operation Procedures
SOW	Statement of Work
SSL	Samples Shipping Log
TAL	Target Analyte List
TR	Traffic Report
UCL	Upper Control Limit
VTSR	Validated Time of Sample Receipt

Terms:

Associated Samples

Any sample related to a particular QC analysis. For Example:
- For ICV, all samples run under the same calibration curve.
- For duplicate RPD, all SDG samples digested/distilled of the same matrix.

Case A finite, usually predetermined number of samples collected over a given time period for a particular site. A Case consists of one or more Sample Delivery Group(s).

Continuing Calibration Blank (CCB)

A deionized water sample run every ten (10) samples designed to detect any carryover contamination.

Continuing Calibration Verification (CCV)

A deionized water sample run every ten (10) samples designed to detect any carryover contamination.

Contract Compliance Screening (CCS)

A process in which the SMO inspects the data for contractual compliance and provides EMSL-LV laboratories and the Regions with their findings.

Contractual Holding Time

The time from VTSR (validated time of sample receipt) to laboratory extraction and /or analysis.

Data Validation Qualifier (DVQ)

This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

Data Validation Result (DVR)

This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit.

Field Blank Field blanks are intended to identify contaminants that may have been introduced in the field. Examples are rinsate blank (RB), field blanks (FB) and trip blank (TB).

Field Duplicate

A duplicate sample generated in the field; not in the laboratory.

Initial Calibration (ICAL)

The establishment of a calibration curve with the appropriate number of standards and concentration ranges. The calibration curve plots absorbancies and/or emissions versus concentration of the standards.

.

Initial Calibration Blank (ICB)

First blank run after the calibration curve .

Initial Calibration Verification (ICV)

First standard run after the calibration curve .

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Introduction of a known concentration of a compound into a sample to provide information about the effect of sample matrix on the extraction and/or measurement methodology.

Post Digestion Spike

The addition of known amount of standard after digestion. (Also identified as analytical spike, or spike, for furnace analyses.)

Preparation Blank (PB)

Blank taken through the digestion process to detect internal laboratory contamination.

Sample Delivery Group (SDG)

Defined by one of the following, whichever occurs first:

- case of sample
- each twenty field samples in a case or
- each 14-day calendar period during which field samples in a case are received, beginning with the receipt of the first sample in the SDG.

Serial Dilution

A sample run at a specific dilution to determine whether any significant chemical or physical interferences exist due to sample matrix effect, for ICP only.

Technical Holding Time

The time from sample collection to laboratory extraction and /or analysis.

COMMUNICATION RECORDS

N/A

GLOSSARY OF DATA VALIDATION QUALIFIERS

GLOSSARY OF DATA QUALIFIER CODES (INORGANIC)

CODES RELATED TO IDENTIFICATION:

(Confidence concerning presence or absence of analytes).

U	=	Not detected above the level of the associated value. The associated value is either the approximate sample quantitation or detection limit.
NO CODE	=	Confirmed identification
B	=	Not detected substantially above the level reported in laboratory or field blanks.
R	=	Unusable results. Analyte may or may not be present in the sample.
N	=	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION:

(Can be used for both positive results and sample detection limits)

J	=	Analyte present. Reported value may not be accurate or precise (estimated value).
K	=	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	=	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
[ ]	=	Analyte present. Value approaches the IDL, but less than the quantitation limit. The quantitation may not be accurate.
UJ	=	Not detected. Quantitation limit may be inaccurate or impresice.
UL	=	Not detected. Quantitation limit is probably higher.

OTHER CODES:

NJ	=	Qualitative identification questionable. Presumptively present at approximate quantity.
Q	=	No analytical Result.
X	=	Data not validated.

DATA VALIDATION REPORT NARRATIVE

MCGI

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DATE: September 20, 2012

SUBJECT: USEPA Inorganic Data Validation Report
Arsenic
ALS Lab SDG No. ERT-005
Site: Fort Stewart, GA
MCGI Project No. ER121201-005-I

FROM: Sherif N. Mina
Meridian Consultant Group, Inc.

TO: Mr. Mike Gearheart
Earth Resources Technology, Inc.

OVERVIEW

This Sample Delivery Group (SDG) consisted of fourteen (14) soil and one (1) aqueous samples submitted to ALS Laboratories, Middletown, PA, for Arsenic (As) analysis according to SW-846, Methods 6020A. The sample set included one (1) equipment blank, and two (2) soil field duplicate pairs. The samples were analyzed in accordance with the Chain-of-Custody (COC), see Sample Identification Summary.

Sample Identification Summary

SAMPLE INFORMATION			Analysis	
Field ID	Lab ID	Matrix	A	
FTSW-HR-SO-31	9980875001	Soil	x	
FTSW-HR-SO-31DUP	9980875002	Soil	x	
FTSW-HR-SO-32 (10)	9980875003	Soil	x	
FTSW-HR-SO-33	9980875004	Soil	x	
FTSW-HR-SO-34 (10)	9980875005	Soil	x	
FTSW-HR-SO-34 (10) DUP	9980875006	Soil	x	
FTSW-HR-SO-35	9980875007	Soil	x	
FTSW-HR-SO-36	9980875008	Soil	x	
FTSW-HR-SO-37 (09.5)	9980875009	Soil	x	
FTSW-HR-SO-38	9980875010	Soil	x	

SAMPLE INFORMATION			Analysis	
Field ID	Lab ID	Matrix	A	
FTSW-HR-SO-39	9980875011	Soil	x	
FTSW-HR-SO-40	9980875012	Soil	x	
FTSW-HR-SO-41	9980875013	Soil	x	
FTSW-HR-SO-42	9980875014	Soil	x	
FTSW-HR-SO-37 (09.5) ERB	9980875015	Aqueous	x	

A=As

The analytical results were validated according to the pertinent parts of U.S. Environmental Protection Agency (USEPA) National Functional for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The validation was based on the following parameters:

Data Validation Summary

	Parameters	A		
		q	t	a
*	Data Completeness		15	0
*	Holding Time		15	0
*	Calibration Verification		15	0
*	Laboratory and Field Blanks analyses		15	0
*	ICP Interference Check Sample results		15	0
*	Matrix Spike recoveries (MS)		15	0
*	Laboratory and Field Duplicates		15	0
*	Laboratory Control Sample(LCS)		15	0
*	Serial Dilution results		15	0
*	Furnace Atomic Absorption results (FAA)		15	0
*	Analyte Identification		15	0
*	Analyte Quantitation		15	0
* All Criteria were met for that Parameter, A=As				

q=qualified; t=total number of samples analyzed; a=number of samples affected

SUMMARY

All samples were successfully analyzed for all target analytes according to U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. All instruments and method sensitivities were according to the specified analytical methods. Refer to Minor Problems for information regarding biases identified during data validation.

Deviation from USEPA NFG: The "U" qualifier recommended by USEPA NFG for blank contamination was replaced by the "B" qualifier to clearly indicate blank contamination on the EDDs.

MAJOR ISSUES

- None noted.

MINOR ISSUES

- Laboratory and Field Blanks analyses: Analytes detected in the laboratory and/or equipment blanks, that affect sample results, with concentration above the instrument detection limit (IDL) are listed below. Analytes in the samples with concentration less than five (5) times the blank concentration have been reported on the EDD and qualified "B".

Analyte	Blank Type

PB = Preparation Blank
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank
CB = Container Blank
EB = Equipment Blank

NOTES

- Electronic Data Deliverable (EDD): Several rows in an electronic data deliverable (EDD) are marked with an "X" and hidden before printing a data summary form. These rows may include quality control samples such as Method Blanks, Laboratory Control Samples, Matrix Spikes, or Matrix Spike Duplicates which are not validated. Additionally, some field sample results may not be used since only one (1) result for each compound is reported after validation. The following list indicates some instances in which an "X" may be placed in the DVQ column:
  1. The compounds in an analysis that have exceeded the instrument calibration range.
  2. All compounds in a diluted analysis that were within the calibration range in the initial analysis.
  3. All compounds in either the initial analysis or re-analysis of a sample, depending on which analysis is not reported on the EDD.

  Although QC samples and some field samples results may not be used, all data were reviewed and considered in the overall assessment.

- Data Validation Qualifier (DVQ): This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

- Data Validation Result (DVR): This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit. Results in the DVR column supersede those reported by the laboratory.

- Compound Quantitation: Positive results for compounds which are below the CRQL were qualified as estimated "J" on the EDD.

REPORT CONTENT STATEMENT

All data for this project were reviewed in accordance with the pertinent parts of the U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The text of the report addresses only those problems affecting data usability.

ATTACHMENTS

l) Glossary of Data Qualifiers
2) Electronic Data Deliverable (EDD). These include:
   (a) All results for target analytes with qualifier codes where applicable.
   (b) All unusable detection limits (qualified "R"), where applicable.
3) Electronic Data Package (.pdf file) as Support Documentation

DCN: ER121201-005-I

Respectfully Submitted,

Sherif N. Mina Date: September 20, 2012
Sherif N. Mina

QA/Review: SM

MCGI

USEPA
Organic
Data Validation Report

Fort Stewart
GA

ALS Lab Report # ERT-005
MCGI Project No. ER121201-005-O

Prepared for:

Earth Resources Technology, Inc.
Laurel, MD

Prepared by:

"MCGI"
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September 2012

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- SUPPORT DOCUMENTATION, Refer to the electronic Data Package PDF file.

GLOSSARY OF ACRONYMS & TERMS

GLOSSARY OF ACRONYMS & TERMS

One or more of the following acronyms and terms may have been used in the descriptive process of the Organic Data Validation.

Acronyms:

BFB	Bromofluorobenzene (volatile instrument performance check)
BNA	Base/Neutral/Acid
CARD	CLP Analytical Results Database
CCCs	Calibration Check Compounds
CCS	Contract Compliance Screening
CF	Calibration Factor
CLP	Contract Laboratory Program
COC	Chain of Custody
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
%D	Percent Difference
DAS	Delivery of Analytical Services
DCB	Decachlorobiphenyl (Pesticide/PCB/ surrogate compound)
DFTPP	Decafluorotriphenylphosphine (semivolatile instrument performance check)
DSF	Data Summary Form
ECD	Electron-Capture Detector
EICP	Extended Ion Current Profile
EMSL-LV	Environmental Monitoring Support Laboratory - Las Vegas
EPA	United States Environmental Protection Agency
GC	Gas Chromatography
GC/EC	Gas Chromatography/Electron Capture
GC/MS	Gas Chromatography/Mass Spectra
GPC	Gel Permeation Chromatography (Clean Up)
ICAL	Initial Calibration
IS	Internal Standard
LCS	Laboratory Control Sample
LCL	Lower Control Limit
MCL	Maximum Contamination Level
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
m/z	The ratio of mass (m) to charge (z) of ions measured by GC/MS
OADS	Organic Analysis Data Sheet (Form 1)
ORDA	Organic Regional Data Assessment
PCB	Poly Chlorinated Biphenyl
PEM	Performance Evaluation Mixture
PRP	Potential Responsible Party

QA/QC	Quality Assurance/Quality Control
QAPjP	Quality Assurance Project Plan
QC	Quality Control
%R	Percent Recovery of spiked amount
RAS	Routine Analytical Services
RF	Response Factor
RIC	Reconstructed Ion Chromatogram
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
RT	Retention Time
RTW	Retention Time Window
SDG	Sample Delivery Group
SMC	System Monitoring Compound
SMO	Sample Management Office
SOP	Standard Operation Procedures
SOW	Statement of Work
SPCCs	System Performance Check Compounds
SSL	Samples Shipping Log
SVOA	Semivolatile Organic Analyte
TCL	Target Compound List
TCX	Tetrachloro-m-Xylene (Pesticide/PCB surrogate compound)
TIC	Tentatively Identified Compound
TPH	Total Petroleum Hydrocarbons
TR	Traffic Report
UCL	Upper Control Limit
VOA	Volatile Organic Analyte
VTSR	Validated Time of Sample Receipt

Terms:

Associated Samples
: Any sample related to a particular QC analysis.

Case
: A finite, usually predetermined number of samples collected over a given time period for a particular site. A Case consists of one or more Sample Delivery Group(s).

Contract Compliance Screening (CCS)
: A process in which the SMO inspects the data for contractual compliance and provides EMSL-LV laboratories and the Regions with their findings.

Contractual Holding Time

The time from VTSR (validated time of sample receipt) to laboratory extraction and /or analysis.

Data Validation Qualifier (DVQ)

This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

Data Validation Result (DVR)

This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit.

Field Blank Field blanks are intended to identify contaminants that may have been introduced in the field. Examples are rinsate blank (RB), field blanks (FB) and trip blank (TB).

Field Duplicate

A duplicate sample generated in the field; not in the laboratory.

Initial Calibration (ICAL)

The establishment of a calibration curve with the appropriate number of standards and concentration ranges. The calibration curve plots absorbances and/or emissions versus concentration of the standards. .

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Introduction of a known concentration of a compound into a sample to provide information about the effect of sample matrix on the extraction and/or measurement methodology.

Perform ance Evaluation Mixture

A standard used to verify that the ICAL sequence is stable throughout the GC or GC/MS analyses.

Sample Delivery Group (SDG)

Defined by one of the following, whichever occurs first:

- case of sample
- each twenty field samples in a case or
- each 14-day calendar period during which field samples in a case are received, beginning with the receipt of the first sample in the SDG.

Technical Holding Time

The time from sample collection to laboratory extraction and /or analysis

COMMUNICATION RECORDS

“N/A”

GLOSSARY OF DATA VALIDATION QUALIFIERS

GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATED TO IDENTIFICATION:

(Confidence concerning presence or absence of compounds)

U	=	Not detected above the level of the associated value. The associated value is either the approximate sample quantitation or detection limit.
NO CODE	=	Confirmed identification
B	=	Not detected substantially above the level reported in laboratory or field blanks.
R	=	Unusable results. Analyte may or may not be present in the sample.
N	=	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION:

(Can be used for both positive results and sample quantitation limits)

J	=	Analyte present. Reported value may not be accurate or precise (estimated value).
K	=	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	=	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
UJ	=	Not detected. Quantitation limit may be inaccurate or imprecise.
UL	=	Not detected. Quantitation limit is probably higher.

OTHER CODES:

NJ	=	Qualitative identification questionable. Presumptively present at approximate quantity.
Q	=	No analytical result.
X	=	Data not Validated.

DATA VALIDATION REPORT NARRATIVE

MCGI

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DATE: September 18, 2012

SUBJECT: USEPA Organic Data Validation Report
1,4-Dithane, 1,4-Oxathiane & Thiodiglycol
ALS Lab SDG No. ERT-005
Site: Fort Stewart, GA
MCGI Project No. ER121201-005-O

FROM: Sherif N. Mina
Meridian Consultant Group, Inc.

TO: Mr. Mike Gearheart
Earth Resources Technology, Inc.

OVERVIEW

This Sample Delivery Group (SDG) consisted of fourteen (14) soil and one (1) aqueous samples submitted to ALS Laboratories, Salt Lake City, Utah, for 1,4-Dithane, 1,4-Oxathiane & Thiodiglycol analyses according to SW-846, Method 8270 & 8321, respectively. The sample set included one (1) equipment blank, and two (2) soil field duplicate pairs. The samples were analyzed in accordance with the Chain-of-Custody (COC), see Sample Identification Summary.

Sample Identification Summary

SAMPLE INFORMATION			Analysis	
Field ID	Lab ID	Matrix	DO	T
FTSW-HR-SO-31	1221656001	Soil	x	x
FTSW-HR-SO-31 Dup	1221656004	Soil	x	x
FTSW-HR-SO-32(10)	1221656005	Soil	x	x
FTSW-HR-SO-33	1221656006	Soil	x	x
FTSW-HR-SO-34(10)	1221656007	Soil	x	x
FTSW-HR-SO-34(10)Dup	1221656008	Soil	x	x
FTSW-HR-SO-35	1221656009	Soil	x	x
FTSW-HR-SO-36	1221656010	Soil	x	x
FTSW-HR-SO-37(09.5)	1221656011	Soil	x	x

SAMPLE INFORMATION			Analysis	
Field ID	Lab ID	Matrix	DO	T
FTSW-HR-SO-38	1221656012	Soil	x	x
FTSW-HR-SO-39	1221656013	Soil	x	x
FTSW-HR-SO-40	1221656014	Soil	x	x
FTSW-HR-SO-41	1221656015	Soil	x	x
FTSW-HR-SO-42	1221656016	Soil	x	x
FTSW-HR-SO-37(09.5)ERB	1221656017	Aqueous	x	x

DO=1,4-Dithane & 1,4-Oxathiane, T=Thiodiglycol

The analytical results were validated according to the pertinent parts of U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The validation was based on the following parameters:

Data Validation Summary

Parameters		DO			T		
		q	t	a	q	t	a
*	Data Completeness		15	0		15	0
*	Holding Time		15	0		15	0
*	Calibrations		15	0		15	0
*	Laboratory and Field Blanks analyses		15	0		15	0
*	Surrogate Recoveries		15	0		15	0
*	Matrix Spike/Matrix Spike Duplicate		15	0		15	0
*	Laboratory Control Sample(LCS)		15	0		15	0
*	Laboratory and/or Field Duplicates		15	0		15	0
*	Internal Standards		15	0		15	0
*	Pesticide Instrument Performance		15	0		15	0
*	Sample Cleanup		15	0		15	0
*	Compound Identification		15	0		15	0
*	Compound Quantitation		15	0		15	0
*	Sample Preservation		15	0		15	0
* All Criteria were met for that Parameter, DO=1,4-Dithane & 1,4-Oxathiane, T=Thiodiglycol							

q=qualified; t=total number of samples analyzed; a=number of samples affected

SUMMARY

All samples were successfully analyzed for all target compounds according to U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. All instruments and method sensitivities were according to the specified analytical methods. Refer to Minor Problems for information regarding biases identified during data validation.

Deviation from USEPA NFG: The "U" qualifier recommended by USEPA NFG for blank contamination was replaced by the "B" qualifier to clearly indicate blank contamination on the EDDs.

MAJOR PROBLEMS

- None noted.

MINOR PROBLEMS

- None noted.

NOTES

- Electronic Data Deliverable (EDD): Several rows in an electronic data deliverable (EDD) are marked with an "X" and hidden before printing a data summary form. These rows may include quality control samples such as Method Blanks, Laboratory Control Samples, Matrix Spikes, or Matrix Spike Duplicates which are not validated. Additionally, some field sample results may not be used since only one (1) result for each compound is reported after validation. The following list indicates some instances in which an "X" may be placed in the DVQ column:
  1. The compounds in an analysis that have exceeded the instrument calibration range.
  2. All compounds in a diluted analysis that were within the calibration range in the initial analysis.
  3. All compounds in either the initial analysis or re-analysis of a sample, depending on which analysis is not reported on the EDD.

  Although QC samples and some field samples results may not be used, all data were reviewed and considered in the overall assessment.

- Data Validation Qualifier (DVQ):This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

- Data Validation Result (DVR):This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit. Results in the DVR column supersede those reported by the laboratory.

- Tentatively Identified Compounds (TICs): The TICs, if applicable, were reviewed during data validation.

- Compound Quantitation: Positive results for compounds which are below the CRQL were qualified as estimated "J" on the EDD.

- Blank Contaminants: The maximum concentration of all compounds found in the analyses of the trip, field or laboratory method blanks are listed in the following table. Associated samples with positive results of common laboratory contaminants less than ten times (<10X)

the blank concentration, or positive results of other contaminants less than five times (<5X) the blank concentration, found in the associated samples were qualified as "B" on the DSFs.

Analytical Fraction	Compound	Maximum Concentration	Units	Blank Type
	None			

*Common lab contaminant

REPORT CONTENT STATEMENT

All data for this project were reviewed in accordance with the pertinent parts of the U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The text of the report addresses only those problems affecting data usability.

ATTACHMENTS

l) Glossary of Data Qualifiers
2) Electronic Data Deliverable (EDD). These include:
   (a) All results for target compounds with qualifier codes where applicable.
   (b) All unusable detection limits (qualified "R"), where applicable.
3) Electronic Data Package (.pdf file) as Support Documentation

DCN: ER121201-005-O

Respectfully Submitted,

Sherif N. Mina Date: September 18, 2012
Sherif N. Mina

QA/Review: SM

MCGI

USEPA
Inorganic
Data Validation Report

Fort Stewart
GA

ALS Lab Report # ERT-006
MCGI Project No. ER121201-006-I

Prepared for:
Earth Resources Technology, Inc.
Laurel, MD

Prepared by:
"MCGI"
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September 2012

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- ELECTRONIC DATA DELIVERABLE (EDD) with applicable qualifiers, Refer to the EDD Excel file.
- SUPPORT DOCUMENTATION, Refer to the electronic Data Package PDF file.

GLOSSARY OF ACRONYMS & TERMS

GLOSSARY OF ACRONYMS & TERMS

One or more of the following acronyms and terms may have been used in the descriptive process of the Inorganic Data Validation.

Acronyms:

AA	Atomic Absorption
CARD	CLP Analytical Results Database
CCB	Continuing Calibration Blank
CCS	Contract Compliance Screening
CCV	Continuing Calibration Verification
CF	Calibration Factor
CLP	Contract Laboratory Program
COC	Chain of Custody
CRDL	Contract Required Detection Limit
CSF	Complete SDG File
CV	Cold Vapor
%D	Percent Difference
DAS	Delivery of Analytical Services
DSF	Data Summary Form
EMSL-LV	Environmental Monitoring Support Laboratory - Las Vegas
EPA	United States Environmental Protection Agency
ICAL	Initial Calibration
ICB	Initial Calibration Blank
ICP	Inductively Coupled Plasma
ICS	Interference Check Sample
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
IRDA	Inorganic Regional Data Assessment
LCS	Laboratory Control Sample
LCL	Lower Control Limit
MCL	Maximum Contamination Level
MDC	Minimum Detectable Concentration
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
MSA	Method of Standard Addition
PB	Preparation Blank
PCB	Poly Chlorinated Biphenyl
PRP	Potential Responsible Party
QA/QC	Quality Assurance/Quality Control
QAPjP	Quality Assurance Project Plan
QC	Quality Control

%R	Percent Recovery of spiked amount
RAS	Routine Analytical Services
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
SDG	Sample Delivery Group
SMO	Sample Management Office
SOP	Standard Operation Procedures
SOW	Statement of Work
SSL	Samples Shipping Log
TAL	Target Analyte List
TR	Traffic Report
UCL	Upper Control Limit
VTSR	Validated Time of Sample Receipt

Terms:

Associated Samples

Any sample related to a particular QC analysis. For Example:
- For ICV, all samples run under the same calibration curve.
- For duplicate RPD, all SDG samples digested/distilled of the same matrix.

Case A finite, usually predetermined number of samples collected over a given time period for a particular site. A Case consists of one or more Sample Delivery Group(s).

Continuing Calibration Blank (CCB)

A deionized water sample run every ten (10) samples designed to detect any carryover contamination.

Continuing Calibration Verification (CCV)

A deionized water sample run every ten (10) samples designed to detect any carryover contamination.

Contract Compliance Screening (CCS)

A process in which the SMO inspects the data for contractual compliance and provides EMSL-LV laboratories and the Regions with their findings.

Contractual Holding Time

The time from VTSR (validated time of sample receipt) to laboratory extraction and /or analysis.

Data Validation Qualifier (DVQ)

This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

Data Validation Result (DVR)

This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit.

Field Blank Field blanks are intended to identify contaminants that may have been introduced in the field. Examples are rinsate blank (RB), field blanks (FB) and trip blank (TB).

Field Duplicate

A duplicate sample generated in the field; not in the laboratory.

Initial Calibration (ICAL)

The establishment of a calibration curve with the appropriate number of standards and concentration ranges. The calibration curve plots absorbancies and/or emissions versus concentration of the standards.

.

Initial Calibration Blank (ICB)

First blank run after the calibration curve .

Initial Calibration Verification (ICV)

First standard run after the calibration curve .

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Introduction of a known concentration of a compound into a sample to provide information about the effect of sample matrix on the extraction and/or measurement methodology.

Post Digestion Spike

The addition of known amount of standard after digestion. (Also identified as analytical spike, or spike, for furnace analyses.)

Preparation Blank (PB)

Blank taken through the digestion process to detect internal laboratory contamination.

Sample Delivery Group (SDG)

Defined by one of the following, whichever occurs first:

- case of sample
- each twenty field samples in a case or
- each 14-day calendar period during which field samples in a case are received, beginning with the receipt of the first sample in the SDG.

Serial Dilution

A sample run at a specific dilution to determine whether any significant chemical or physical interferences exist due to sample matrix effect, for ICP only.

Technical Holding Time

The time from sample collection to laboratory extraction and /or analysis.

COMMUNICATION RECORDS

N/A

GLOSSARY OF DATA VALIDATION QUALIFIERS

GLOSSARY OF DATA QUALIFIER CODES (INORGANIC)

CODES RELATED TO IDENTIFICATION:

(Confidence concerning presence or absence of analytes).

U	=	Not detected above the level of the associated value. The associated value is either the approximate sample quantitation or detection limit.
NO CODE	=	Confirmed identification
B	=	Not detected substantially above the level reported in laboratory or field blanks.
R	=	Unusable results. Analyte may or may not be present in the sample.
N	=	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION:

(Can be used for both positive results and sample detection limits)

J	=	Analyte present. Reported value may not be accurate or precise (estimated value).
K	=	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	=	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
[ ]	=	Analyte present. Value approaches the IDL, but less than the quantitation limit. The quantitation may not be accurate.
UJ	=	Not detected. Quantitation limit may be inaccurate or impresice.
UL	=	Not detected. Quantitation limit is probably higher.

OTHER CODES:

NJ	=	Qualitative identification questionable. Presumptively present at approximate quantity.
Q	=	No analytical Result.
X	=	Data not validated.

DATA VALIDATION REPORT NARRATIVE

MCGI

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DATE: September 22, 2012

SUBJECT: USEPA Inorganic Data Validation Report
Metals & Arsenic
ALS Lab SDG No. ERT-006
Site: Fort Stewart, GA
MCGI Project No. ER121201-006-I

FROM: Sherif N. Mina
Meridian Consultant Group, Inc.

TO: Mr. Mike Gearheart
Earth Resources Technology, Inc.

OVERVIEW

This Sample Delivery Group (SDG) consisted of eleven (11) soil samples submitted to ALS Laboratories, Middletown, PA, for Metals & Arsenic (As) analysis according to SW-846, Methods 6020A. The sample set included one (1) soil field duplicate pair. The samples were analyzed in accordance with the Chain-of-Custody (COC), see Sample Identification Summary.

Sample Identification Summary

SAMPLE INFORMATION			Analysis	
Field ID	Lab ID	Matrix	M	A
FTSW-HR-SO-43	9981198001	Soil		x
FTSW-HR-SO-44	9981198002	Soil		x
FTSW-HR-SO-45	9981198003	Soil		x
FTSW-HR-SO-46	9981198004	Soil		x
FTSW-HR-SO-46 DUP	9981198005	Soil		x
FTSW-HR-SO-47	9981198006	Soil		x
FTSW-HR-SO-48	9981198007	Soil		x
FTSW-HR-SO-49	9981198008	Soil		x
FTSW-AA-SO-30	9981198009	Soil	x	
FTSW-AA-SO-31	9981198010	Soil	x	
FTSW-AA-SO-32	9981198011	Soil	x	

M=Metals, A=As

The analytical results were validated according to the pertinent parts of U.S. Environmental Protection Agency (USEPA) National Functional for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The validation was based on the following parameters:

Data Validation Summary

	Parameters	M			A		
		q	t	a	q	t	a
*	Data Completeness		3	0		8	0
*	Holding Time		3	0		8	0
*	Calibration Verification		3	0		8	0
*	Laboratory and Field Blanks analyses		3	0		8	0
*	ICP Interference Check Sample results		3	0		8	0
*	Matrix Spike recoveries (MS)		3	0		8	0
*	Laboratory and Field Duplicates		3	0		8	0
*	Laboratory Control Sample(LCS)		3	0		8	0
*	Serial Dilution results		3	0		8	0
*	Furnace Atomic Absorption results (FAA)		3	0		8	0
*	Analyte Identification		3	0		8	0
*	Analyte Quantitation		3	0		8	0
* All Criteria were met for that Parameter, M=Metals, A=As							

q=qualified; t=total number of samples analyzed; a=number of samples affected

SUMMARY

All samples were successfully analyzed for all target analytes according to U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. All instruments and method sensitivities were according to the specified analytical methods. Refer to Minor Problems for information regarding biases identified during data validation.

Deviation from USEPA NFG: The "U" qualifier recommended by USEPA NFG for blank contamination was replaced by the "B" qualifier to clearly indicate blank contamination on the EDDs.

MAJOR ISSUES

- None noted.

MINOR ISSUES

- Laboratory and Field Blanks analyses: Analytes detected in the laboratory and/or equipment blanks, that affect sample results, with concentration above the instrument detection limit (IDL) are listed below. Analytes in the samples with concentration less than five (5) times the blank concentration have been reported on the EDD and qualified "B".

Analyte	Blank Type

PB = Preparation Blank
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank
CB = Container Blank
EB = Equipment Blank

NOTES

- Electronic Data Deliverable (EDD): Several rows in an electronic data deliverable (EDD) are marked with an "X" and hidden before printing a data summary form. These rows may include quality control samples such as Method Blanks, Laboratory Control Samples, Matrix Spikes, or Matrix Spike Duplicates which are not validated. Additionally, some field sample results may not be used since only one (1) result for each compound is reported after validation. The following list indicates some instances in which an "X" may be placed in the DVQ column:
  1. The compounds in an analysis that have exceeded the instrument calibration range.
  2. All compounds in a diluted analysis that were within the calibration range in the initial analysis.
  3. All compounds in either the initial analysis or re-analysis of a sample, depending on which analysis is not reported on the EDD.

  Although QC samples and some field samples results may not be used, all data were reviewed and considered in the overall assessment.

- Data Validation Qualifier (DVQ): This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

- Data Validation Result (DVR): This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit. Results in the DVR column supersede those reported by the laboratory.

- Compound Quantitation: Positive results for compounds which are below the CRQL were qualified as estimated "J" on the EDD.

- Laboratory Duplicate: The laboratory flagged the Al analyte in the soil laboratory duplicate as being outside the QC limits. However, this analyte displayed a Relative Percent Difference (RPD) less than ±35 percent for values >5xCRDL, and ±2X CRDL for values <5xCRDL, no action was taken.

REPORT CONTENT STATEMENT

All data for this project were reviewed in accordance with the pertinent parts of the U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The text of the report addresses only those problems affecting data usability.

ATTACHMENTS

l) Glossary of Data Qualifiers
2) Electronic Data Deliverable (EDD). These include:
   (a) All results for target analytes with qualifier codes where applicable.
   (b) All unusable detection limits (qualified "R"), where applicable.
3) Electronic Data Package (.pdf file) as Support Documentation

DCN: ER121201-006-I

Respectfully Submitted,

Sherif N. Mina Date: September 22, 2012
Sherif N. Mina

QA/Review: SM

MCGI

USEPA
Organic
Data Validation Report

Fort Stewart
GA

ALS Lab Report # ERT-006
MCGI Project No. ER121201-006-O

Prepared for:

Earth Resources Technology, Inc.
Laurel, MD

Prepared by:

"MCGI"
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September 2012

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- SUPPORT DOCUMENTATION, Refer to the electronic Data Package PDF file.

GLOSSARY OF ACRONYMS & TERMS

GLOSSARY OF ACRONYMS & TERMS

One or more of the following acronyms and terms may have been used in the descriptive process of the Organic Data Validation.

Acronyms:

BFB	Bromofluorobenzene (volatile instrument performance check)
BNA	Base/Neutral/Acid
CARD	CLP Analytical Results Database
CCCs	Calibration Check Compounds
CCS	Contract Compliance Screening
CF	Calibration Factor
CLP	Contract Laboratory Program
COC	Chain of Custody
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
%D	Percent Difference
DAS	Delivery of Analytical Services
DCB	Decachlorobiphenyl (Pesticide/PCB/ surrogate compound)
DFTPP	Decafluorotriphenylphosphine (semivolatile instrument performance check)
DSF	Data Summary Form
ECD	Electron-Capture Detector
EICP	Extended Ion Current Profile
EMSL-LV	Environmental Monitoring Support Laboratory - Las Vegas
EPA	United States Environmental Protection Agency
GC	Gas Chromatography
GC/EC	Gas Chromatography/Electron Capture
GC/MS	Gas Chromatography/Mass Spectra
GPC	Gel Permeation Chromatography (Clean Up)
ICAL	Initial Calibration
IS	Internal Standard
LCS	Laboratory Control Sample
LCL	Lower Control Limit
MCL	Maximum Contamination Level
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
m/z	The ratio of mass (m) to charge (z) of ions measured by GC/MS
OADS	Organic Analysis Data Sheet (Form 1)
ORDA	Organic Regional Data Assessment
PCB	Poly Chlorinated Biphenyl
PEM	Performance Evaluation Mixture
PRP	Potential Responsible Party

QA/QC	Quality Assurance/Quality Control
QAPjP	Quality Assurance Project Plan
QC	Quality Control
%R	Percent Recovery of spiked amount
RAS	Routine Analytical Services
RF	Response Factor
RIC	Reconstructed Ion Chromatogram
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
RT	Retention Time
RTW	Retention Time Window
SDG	Sample Delivery Group
SMC	System Monitoring Compound
SMO	Sample Management Office
SOP	Standard Operation Procedures
SOW	Statement of Work
SPCCs	System Performance Check Compounds
SSL	Samples Shipping Log
SVOA	Semivolatile Organic Analyte
TCL	Target Compound List
TCX	Tetrachloro-m-Xylene (Pesticide/PCB surrogate compound)
TIC	Tentatively Identified Compound
TPH	Total Petroleum Hydrocarbons
TR	Traffic Report
UCL	Upper Control Limit
VOA	Volatile Organic Analyte
VTSR	Validated Time of Sample Receipt

Terms:

Associated Samples
: Any sample related to a particular QC analysis.

Case
: A finite, usually predetermined number of samples collected over a given time period for a particular site. A Case consists of one or more Sample Delivery Group(s).

Contract Compliance Screening (CCS)
: A process in which the SMO inspects the data for contractual compliance and provides EMSL-LV laboratories and the Regions with their findings.

Contractual Holding Time

The time from VTSR (validated time of sample receipt) to laboratory extraction and /or analysis.

Data Validation Qualifier (DVQ)

This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

Data Validation Result (DVR)

This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit.

Field Blank Field blanks are intended to identify contaminants that may have been introduced in the field. Examples are rinsate blank (RB), field blanks (FB) and trip blank (TB).

Field Duplicate

A duplicate sample generated in the field; not in the laboratory.

Initial Calibration (ICAL)

The establishment of a calibration curve with the appropriate number of standards and concentration ranges. The calibration curve plots absorbances and/or emissions versus concentration of the standards. .

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Introduction of a known concentration of a compound into a sample to provide information about the effect of sample matrix on the extraction and/or measurement methodology.

Perform ance Evaluation Mixture

A standard used to verify that the ICAL sequence is stable throughout the GC or GC/MS analyses.

Sample Delivery Group (SDG)

Defined by one of the following, whichever occurs first:

- case of sample
- each twenty field samples in a case or
- each 14-day calendar period during which field samples in a case are received, beginning with the receipt of the first sample in the SDG.

Technical Holding Time

The time from sample collection to laboratory extraction and /or analysis

COMMUNICATION RECORDS

“N/A”

GLOSSARY OF DATA VALIDATION QUALIFIERS

GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATED TO IDENTIFICATION:

(Confidence concerning presence or absence of compounds)

U	=	Not detected above the level of the associated value. The associated value is either the approximate sample quantitation or detection limit.
NO CODE	=	Confirmed identification
B	=	Not detected substantially above the level reported in laboratory or field blanks.
R	=	Unusable results. Analyte may or may not be present in the sample.
N	=	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION:

(Can be used for both positive results and sample quantitation limits)

J	=	Analyte present. Reported value may not be accurate or precise (estimated value).
K	=	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	=	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
UJ	=	Not detected. Quantitation limit may be inaccurate or imprecise.
UL	=	Not detected. Quantitation limit is probably higher.

OTHER CODES:

NJ	=	Qualitative identification questionable. Presumptively present at approximate quantity.
Q	=	No analytical result.
X	=	Data not Validated.

DATA VALIDATION REPORT NARRATIVE

MCGI

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DATE: September 22, 2012

SUBJECT: USEPA Organic Data Validation Report
1,4-Dithane, 1,4-Oxathiane & Thiodiglycol
ALS Lab SDG No. ERT-006
Site: Fort Stewart, GA
MCGI Project No. ER121201-006-O

FROM: Sherif N. Mina
Meridian Consultant Group, Inc.

TO: Mr. Mike Gearheart
Earth Resources Technology, Inc.

OVERVIEW

This Sample Delivery Group (SDG) consisted of eight (8) soil samples submitted to ALS Laboratories, Salt Lake City, Utah, for 1,4-Dithane, 1,4-Oxathiane & Thiodiglycol analyses according to SW-846, Method 8270 & 8321, respectively. The sample set included one (1) soil field duplicate pair. The samples were analyzed in accordance with the Chain-of-Custody (COC), see Sample Identification Summary.

Sample Identification Summary

SAMPLE INFORMATION			Analysis	
Field ID	Lab ID	Matrix	DO	T
FTSW-HR-SO-43	1222167001	Soil	x	x
FTSW-HR-SO-44	1222167002	Soil	x	x
FTSW-HR-SO-45	1222167003	Soil	x	x
FTSW-HR-SO-46	1222167004	Soil	x	x
FTSW-HR-SO-46 DUP	1222167005	Soil	x	x
FTSW-HR-SO-47	1222167006	Soil	x	x
FTSW-HR-SO-48	1222167007	Soil	x	x
FTSW-HR-SO-49	1222167008	Soil	x	x

DO=1,4-Dithane & 1,4-Oxathiane, T=Thiodiglycol

The analytical results were validated according to the pertinent parts of U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The validation was based on the following parameters:

Data Validation Summary

Parameters		DO			T		
		q	t	a	q	t	a
*	Data Completeness		8	0		8	0
*	Holding Time		8	0		8	0
*	Calibrations		8	0		8	0
*	Laboratory and Field Blanks analyses		8	0		8	0
*	Surrogate Recoveries		8	0		8	0
*	Matrix Spike/Matrix Spike Duplicate		8	0		8	0
*	Laboratory Control Sample(LCS)		8	0		8	0
*	Laboratory and/or Field Duplicates		8	0		8	0
*	Internal Standards		8	0		8	0
*	Pesticide Instrument Performance		8	0		8	0
*	Sample Cleanup		8	0		8	0
*	Compound Identification		8	0		8	0
*	Compound Quantitation		8	0		8	0
*	Sample Preservation		8	0		8	0
* All Criteria were met for that Parameter, DO=1,4-Dithane & 1,4-Oxathiane, T=Thiodiglycol							

q=qualified; t=total number of samples analyzed; a=number of samples affected

SUMMARY

All samples were successfully analyzed for all target compounds according to U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. All instruments and method sensitivities were according to the specified analytical methods. Refer to Minor Problems for information regarding biases identified during data validation.

Deviation from USEPA NFG: The "U" qualifier recommended by USEPA NFG for blank contamination was replaced by the "B" qualifier to clearly indicate blank contamination on the EDDs.

MAJOR PROBLEMS

- None noted.

MINOR PROBLEMS

- None noted.

NOTES

- Electronic Data Deliverable (EDD): Several rows in an electronic data deliverable (EDD) are marked with an "X" and hidden before printing a data summary form. These rows may include quality control samples such as Method Blanks, Laboratory Control Samples, Matrix Spikes, or Matrix Spike Duplicates which are not validated. Additionally, some field sample results may not be used since only one (1) result for each compound is reported after validation. The following list indicates some instances in which an "X" may be placed in the DVQ column:
  1. The compounds in an analysis that have exceeded the instrument calibration range.
  2. All compounds in a diluted analysis that were within the calibration range in the initial analysis.
  3. All compounds in either the initial analysis or re-analysis of a sample, depending on which analysis is not reported on the EDD.

  Although QC samples and some field samples results may not be used, all data were reviewed and considered in the overall assessment.

- Data Validation Qualifier (DVQ):This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

- Data Validation Result (DVR):This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit. Results in the DVR column supersede those reported by the laboratory.

- Tentatively Identified Compounds (TICs): The TICs, if applicable, were reviewed during data validation.

- Compound Quantitation: Positive results for compounds which are below the CRQL were qualified as estimated "J" on the EDD.

- Blank Contaminants: The maximum concentration of all compounds found in the analyses of the trip, field or laboratory method blanks are listed in the following table. Associated samples with positive results of common laboratory contaminants less than ten times (<10X) the blank concentration, or positive results of other contaminants less than five times (<5X) the blank concentration, found in the associated samples were qualified as "B" on the DSFs.

Analytical Fraction	Compound	Maximum Concentration	Units	Blank Type
	None			

*Common lab contaminant

REPORT CONTENT STATEMENT

All data for this project were reviewed in accordance with the pertinent parts of the U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The text of the report addresses only those problems affecting data usability.

ATTACHMENTS

l) Glossary of Data Qualifiers
2) Electronic Data Deliverable (EDD). These include:
   (a) All results for target compounds with qualifier codes where applicable.
   (b) All unusable detection limits (qualified "R"), where applicable.
3) Electronic Data Package (.pdf file) as Support Documentation

DCN: ER121201-006-O

Respectfully Submitted,

Sherif N. Mina Date: September 22, 2012
Sherif N. Mina

QA/Review: SM

MCGI

USEPA
Inorganic
Data Validation Report

Fort Stewart
GA

ALS Lab Report # ERT-007
MCGI Project No. ER121201-007-I

Prepared for:
Earth Resources Technology, Inc.
Laurel, MD

Prepared by:
"MCGI"
Meridian Consultant Group, Inc.
Environmental Services & Data Validation

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September 2012

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- SUPPORT DOCUMENTATION, Refer to the electronic Data Package PDF file.

GLOSSARY OF ACRONYMS & TERMS

GLOSSARY OF ACRONYMS & TERMS

One or more of the following acronyms and terms may have been used in the descriptive process of the Inorganic Data Validation.

Acronyms:

AA	Atomic Absorption
CARD	CLP Analytical Results Database
CCB	Continuing Calibration Blank
CCS	Contract Compliance Screening
CCV	Continuing Calibration Verification
CF	Calibration Factor
CLP	Contract Laboratory Program
COC	Chain of Custody
CRDL	Contract Required Detection Limit
CSF	Complete SDG File
CV	Cold Vapor
%D	Percent Difference
DAS	Delivery of Analytical Services
DSF	Data Summary Form
EMSL-LV	Environmental Monitoring Support Laboratory - Las Vegas
EPA	United States Environmental Protection Agency
ICAL	Initial Calibration
ICB	Initial Calibration Blank
ICP	Inductively Coupled Plasma
ICS	Interference Check Sample
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
IRDA	Inorganic Regional Data Assessment
LCS	Laboratory Control Sample
LCL	Lower Control Limit
MCL	Maximum Contamination Level
MDC	Minimum Detectable Concentration
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
MSA	Method of Standard Addition
PB	Preparation Blank
PCB	Poly Chlorinated Biphenyl
PRP	Potential Responsible Party
QA/QC	Quality Assurance/Quality Control
QAPjP	Quality Assurance Project Plan
QC	Quality Control

%R	Percent Recovery of spiked amount
RAS	Routine Analytical Services
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
SDG	Sample Delivery Group
SMO	Sample Management Office
SOP	Standard Operation Procedures
SOW	Statement of Work
SSL	Samples Shipping Log
TAL	Target Analyte List
TR	Traffic Report
UCL	Upper Control Limit
VTSR	Validated Time of Sample Receipt

Terms:

Associated Samples

Any sample related to a particular QC analysis. For Example:
- For ICV, all samples run under the same calibration curve.
- For duplicate RPD, all SDG samples digested/distilled of the same matrix.

Case A finite, usually predetermined number of samples collected over a given time period for a particular site. A Case consists of one or more Sample Delivery Group(s).

Continuing Calibration Blank (CCB)

A deionized water sample run every ten (10) samples designed to detect any carryover contamination.

Continuing Calibration Verification (CCV)

A deionized water sample run every ten (10) samples designed to detect any carryover contamination.

Contract Compliance Screening (CCS)

A process in which the SMO inspects the data for contractual compliance and provides EMSL-LV laboratories and the Regions with their findings.

Contractual Holding Time

The time from VTSR (validated time of sample receipt) to laboratory extraction and /or analysis.

Data Validation Qualifier (DVQ)

This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

Data Validation Result (DVR)

This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit.

Field Blank Field blanks are intended to identify contaminants that may have been introduced in the field. Examples are rinsate blank (RB), field blanks (FB) and trip blank (TB).

Field Duplicate

A duplicate sample generated in the field; not in the laboratory.

Initial Calibration (ICAL)

The establishment of a calibration curve with the appropriate number of standards and concentration ranges. The calibration curve plots absorbancies and/or emissions versus concentration of the standards.

.

Initial Calibration Blank (ICB)

First blank run after the calibration curve .

Initial Calibration Verification (ICV)

First standard run after the calibration curve .

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Introduction of a known concentration of a compound into a sample to provide information about the effect of sample matrix on the extraction and/or measurement methodology.

Post Digestion Spike

The addition of known amount of standard after digestion. (Also identified as analytical spike, or spike, for furnace analyses.)

Preparation Blank (PB)

Blank taken through the digestion process to detect internal laboratory contamination.

Sample Delivery Group (SDG)

Defined by one of the following, whichever occurs first:

- case of sample
- each twenty field samples in a case or
- each 14-day calendar period during which field samples in a case are received, beginning with the receipt of the first sample in the SDG.

Serial Dilution

A sample run at a specific dilution to determine whether any significant chemical or physical interferences exist due to sample matrix effect, for ICP only.

Technical Holding Time

The time from sample collection to laboratory extraction and /or analysis.

COMMUNICATION RECORDS

N/A

GLOSSARY OF DATA VALIDATION QUALIFIERS

GLOSSARY OF DATA QUALIFIER CODES (INORGANIC)

CODES RELATED TO IDENTIFICATION:

(Confidence concerning presence or absence of analytes).

U	=	Not detected above the level of the associated value. The associated value is either the approximate sample quantitation or detection limit.
NO CODE	=	Confirmed identification
B	=	Not detected substantially above the level reported in laboratory or field blanks.
R	=	Unusable results. Analyte may or may not be present in the sample.
N	=	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION:

(Can be used for both positive results and sample detection limits)

J	=	Analyte present. Reported value may not be accurate or precise (estimated value).
K	=	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	=	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
[ ]	=	Analyte present. Value approaches the IDL, but less than the quantitation limit. The quantitation may not be accurate.
UJ	=	Not detected. Quantitation limit may be inaccurate or impresice.
UL	=	Not detected. Quantitation limit is probably higher.

OTHER CODES:

NJ	=	Qualitative identification questionable. Presumptively present at approximate quantity.
Q	=	No analytical Result.
X	=	Data not validated.

DATA VALIDATION REPORT NARRATIVE

MCGI

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DATE: September 24, 2012

SUBJECT: USEPA Inorganic Data Validation Report
Arsenic
ALS Lab SDG No. ERT-007
Site: Fort Stewart, GA
MCGI Project No. ER121201-007-I

FROM: Sherif N. Mina
Meridian Consultant Group, Inc.

TO: Mr. Mike Gearheart
Earth Resources Technology, Inc.

OVERVIEW

This Sample Delivery Group (SDG) consisted of eleven (11) soil and one (1) aqueous samples submitted to ALS Laboratories, Middletown, PA, for Arsenic (As) analysis according to SW-846, Methods 6020A. The sample set included one (1) equipment blank, and one (1) soil field duplicate pair. The samples were analyzed in accordance with the Chain-of-Custody (COC), see Sample Identification Summary.

Sample Identification Summary

SAMPLE INFORMATION			Analysis
Field ID	Lab ID	Matrix	A
FTSW-HR-SO-50 (10)	9981496001	Soil	x
FTSW-HR-SO-51 (10)	9981496002	Soil	x
FTSW-HR-SO-52 (10)	9981496003	Soil	x
FTSW-HR-SO-53 (10)	9981496004	Soil	x
FTSW-HR-SO-54 (10)	9981496005	Soil	x
FTSW-HR-SO-55 (07.5)	9981496006	Soil	x
FTSW-HR-SO-56 (10)	9981496007	Soil	x
FTSW-HR-SO-57 (10)	9981496008	Soil	x
FTSW-HR-SO-58 (10)	9981496009	Soil	x
FTSW-HR-SO-59 (10)	9981496010	Soil	x
FTSW-HR-SO-60 (07.5)	9981496011	Soil	x

SAMPLE INFORMATION			Analysis
Field ID	Lab ID	Matrix	A
FTSW-HR-SO-60 (07.5) ERB	9981496012	Aqueous	x

A=As

The analytical results were validated according to the pertinent parts of U.S. Environmental Protection Agency (USEPA) National Functional for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The validation was based on the following parameters:

Data Validation Summary

	Parameters	A		
		q	t	a
*	Data Completeness		12	0
*	Holding Time		12	0
*	Calibration Verification		12	0
*	Laboratory and Field Blanks analyses		12	0
*	ICP Interference Check Sample results		12	0
*	Matrix Spike recoveries (MS)		12	0
*	Laboratory and Field Duplicates		12	0
*	Laboratory Control Sample(LCS)		12	0
*	Serial Dilution results		12	0
*	Furnace Atomic Absorption results (FAA)		12	0
*	Analyte Identification		12	0
*	Analyte Quantitation		12	0
* All Criteria were met for that Parameter, M=Metals, A=As				

q=qualified; t=total number of samples analyzed; a=number of samples affected

SUMMARY

All samples were successfully analyzed for all target analytes according to U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. All instruments and method sensitivities were according to the specified analytical methods. Refer to Minor Problems for information regarding biases identified during data validation.

Deviation from USEPA NFG: The "U" qualifier recommended by USEPA NFG for blank contamination was replaced by the "B" qualifier to clearly indicate blank contamination on the EDDs.

MAJOR ISSUES

- None noted.

MINOR ISSUES

- Laboratory and Field Blanks analyses: Analytes detected in the laboratory and/or equipment blanks, that affect sample results, with concentration above the instrument detection limit (IDL) are listed below. Analytes in the samples with concentration less than five (5) times the blank concentration have been reported on the EDD and qualified "B".

Analyte	Blank Type

PB = Preparation Blank
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank
CB = Container Blank
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NOTES

- Electronic Data Deliverable (EDD): Several rows in an electronic data deliverable (EDD) are marked with an "X" and hidden before printing a data summary form. These rows may include quality control samples such as Method Blanks, Laboratory Control Samples, Matrix Spikes, or Matrix Spike Duplicates which are not validated. Additionally, some field sample results may not be used since only one (1) result for each compound is reported after validation. The following list indicates some instances in which an "X" may be placed in the DVQ column:
  1. The compounds in an analysis that have exceeded the instrument calibration range.
  2. All compounds in a diluted analysis that were within the calibration range in the initial analysis.
  3. All compounds in either the initial analysis or re-analysis of a sample, depending on which analysis is not reported on the EDD.

  Although QC samples and some field samples results may not be used, all data were reviewed and considered in the overall assessment.

- Data Validation Qualifier (DVQ): This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

- Data Validation Result (DVR): This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit. Results in the DVR column supersede those reported by the laboratory.

- Compound Quantitation: Positive results for compounds which are below the CRQL were qualified as estimated "J" on the EDD.

REPORT CONTENT STATEMENT

All data for this project were reviewed in accordance with the pertinent parts of the U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The text of the report addresses only those problems affecting data usability.

ATTACHMENTS

l) Glossary of Data Qualifiers
2) Electronic Data Deliverable (EDD). These include:
   (a) All results for target analytes with qualifier codes where applicable.
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3) Electronic Data Package (.pdf file) as Support Documentation

DCN: ER121201-007-I

Respectfully Submitted,

Sherif N. Mina Date: September 24, 2012
Sherif N. Mina

QA/Review: SM

MCGI

USEPA
Organic
Data Validation Report

Fort Stewart
GA

ALS Lab Report # ERT-007
MCGI Project No. ER121201-007-O

Prepared for:

Earth Resources Technology, Inc.
Laurel, MD

Prepared by:

"MCGI"
Meridian Consultant Group, Inc.
Environmental Services & Data Validation

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September 2012

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- SUPPORT DOCUMENTATION, Refer to the electronic Data Package PDF file.

GLOSSARY OF ACRONYMS & TERMS

GLOSSARY OF ACRONYMS & TERMS

One or more of the following acronyms and terms may have been used in the descriptive process of the Organic Data Validation.

Acronyms:

BFB	Bromofluorobenzene (volatile instrument performance check)
BNA	Base/Neutral/Acid
CARD	CLP Analytical Results Database
CCCs	Calibration Check Compounds
CCS	Contract Compliance Screening
CF	Calibration Factor
CLP	Contract Laboratory Program
COC	Chain of Custody
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
%D	Percent Difference
DAS	Delivery of Analytical Services
DCB	Decachlorobiphenyl (Pesticide/PCB/ surrogate compound)
DFTPP	Decafluorotriphenylphosphine (semivolatile instrument performance check)
DSF	Data Summary Form
ECD	Electron-Capture Detector
EICP	Extended Ion Current Profile
EMSL-LV	Environmental Monitoring Support Laboratory - Las Vegas
EPA	United States Environmental Protection Agency
GC	Gas Chromatography
GC/EC	Gas Chromatography/Electron Capture
GC/MS	Gas Chromatography/Mass Spectra
GPC	Gel Permeation Chromatography (Clean Up)
ICAL	Initial Calibration
IS	Internal Standard
LCS	Laboratory Control Sample
LCL	Lower Control Limit
MCL	Maximum Contamination Level
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
m/z	The ratio of mass (m) to charge (z) of ions measured by GC/MS
OADS	Organic Analysis Data Sheet (Form 1)
ORDA	Organic Regional Data Assessment
PCB	Poly Chlorinated Biphenyl
PEM	Performance Evaluation Mixture
PRP	Potential Responsible Party

QA/QC	Quality Assurance/Quality Control
QAPjP	Quality Assurance Project Plan
QC	Quality Control
%R	Percent Recovery of spiked amount
RAS	Routine Analytical Services
RF	Response Factor
RIC	Reconstructed Ion Chromatogram
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
RT	Retention Time
RTW	Retention Time Window
SDG	Sample Delivery Group
SMC	System Monitoring Compound
SMO	Sample Management Office
SOP	Standard Operation Procedures
SOW	Statement of Work
SPCCs	System Performance Check Compounds
SSL	Samples Shipping Log
SVOA	Semivolatile Organic Analyte
TCL	Target Compound List
TCX	Tetrachloro-m-Xylene (Pesticide/PCB surrogate compound)
TIC	Tentatively Identified Compound
TPH	Total Petroleum Hydrocarbons
TR	Traffic Report
UCL	Upper Control Limit
VOA	Volatile Organic Analyte
VTSR	Validated Time of Sample Receipt

Terms:

Associated Samples
: Any sample related to a particular QC analysis.

Case
: A finite, usually predetermined number of samples collected over a given time period for a particular site. A Case consists of one or more Sample Delivery Group(s).

Contract Compliance Screening (CCS)
: A process in which the SMO inspects the data for contractual compliance and provides EMSL-LV laboratories and the Regions with their findings.

Contractual Holding Time

The time from VTSR (validated time of sample receipt) to laboratory extraction and /or analysis.

Data Validation Qualifier (DVQ)

This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

Data Validation Result (DVR)

This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit.

Field Blank Field blanks are intended to identify contaminants that may have been introduced in the field. Examples are rinsate blank (RB), field blanks (FB) and trip blank (TB).

Field Duplicate

A duplicate sample generated in the field; not in the laboratory.

Initial Calibration (ICAL)

The establishment of a calibration curve with the appropriate number of standards and concentration ranges. The calibration curve plots absorbances and/or emissions versus concentration of the standards. .

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Introduction of a known concentration of a compound into a sample to provide information about the effect of sample matrix on the extraction and/or measurement methodology.

Perform ance Evaluation Mixture

A standard used to verify that the ICAL sequence is stable throughout the GC or GC/MS analyses.

Sample Delivery Group (SDG)

Defined by one of the following, whichever occurs first:

- case of sample
- each twenty field samples in a case or
- each 14-day calendar period during which field samples in a case are received, beginning with the receipt of the first sample in the SDG.

Technical Holding Time

The time from sample collection to laboratory extraction and /or analysis

COMMUNICATION RECORDS

“N/A”

GLOSSARY OF DATA VALIDATION QUALIFIERS

GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATED TO IDENTIFICATION:

(Confidence concerning presence or absence of compounds)

U	=	Not detected above the level of the associated value. The associated value is either the approximate sample quantitation or detection limit.
NO CODE	=	Confirmed identification
B	=	Not detected substantially above the level reported in laboratory or field blanks.
R	=	Unusable results. Analyte may or may not be present in the sample.
N	=	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION:

(Can be used for both positive results and sample quantitation limits)

J	=	Analyte present. Reported value may not be accurate or precise (estimated value).
K	=	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	=	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
UJ	=	Not detected. Quantitation limit may be inaccurate or imprecise.
UL	=	Not detected. Quantitation limit is probably higher.

OTHER CODES:

NJ	=	Qualitative identification questionable. Presumptively present at approximate quantity.
Q	=	No analytical result.
X	=	Data not Validated.

DATA VALIDATION REPORT NARRATIVE

MCGI

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DATE: September 24, 2012

SUBJECT: USEPA Organic Data Validation Report
1,4-Dithane, 1,4-Oxathiane & Thiodiglycol
ALS Lab SDG No. ERT-007
Site: Fort Stewart, GA
MCGI Project No. ER121201-007-O

FROM: Sherif N. Mina
Meridian Consultant Group, Inc.

TO: Mr. Mike Gearheart
Earth Resources Technology, Inc.

OVERVIEW

This Sample Delivery Group (SDG) consisted of eleven (11) soil and one (1) aqueous samples submitted to ALS Laboratories, Salt Lake City, Utah, for 1,4-Dithane, 1,4-Oxathiane & Thiodiglycol analyses according to SW-846, Method 8270 & 8321, respectively. The sample set included one (1) equipment blank, and one (1) soil field duplicate pair. The samples were analyzed in accordance with the Chain-of-Custody (COC), see Sample Identification Summary.

Sample Identification Summary

SAMPLE INFORMATION			Analysis	
Field ID	Lab ID	Matrix	DO	T
FTSW-HR-SO-50 (10)	1222142001	Soil	x	x
FTSW-HR-SO-51 (10)	1222142002	Soil	x	x
FTSW-HR-SO-52 (10)	1222142003	Soil	x	x
FTSW-HR-SO-53 (10)	1222142004	Soil	x	x
FTSW-HR-SO-54 (10)	1222142005	Soil	x	x
FTSW-HR-SO-55 (7.5)	1222142006	Soil	x	x
FTSW-HR-SO-56 (10)	1222142007	Soil	x	x
FTSW-HR-SO-57 (10)	1222142008	Soil	x	x
FTSW-HR-SO-58 (10)	1222142009	Soil	x	x

SAMPLE INFORMATION			Analysis	
Field ID	Lab ID	Matrix	DO	T
FTSW-HR-SO-59 (10)	1222142010	Soil	x	x
FTSW-HR-SO-60 (7.5)	1222142011	Soil	x	x
FTSW-HR-SO-60 (7.5) ERB	1222142012	Aqueous	x	x

DO=1,4-Dithane & 1,4-Oxathiane, T=Thiodiglycol

The analytical results were validated according to the pertinent parts of U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The validation was based on the following parameters:

Data Validation Summary

Parameters		DO			T		
		q	t	a	q	t	a
*	Data Completeness		12	0		12	0
*	Holding Time		12	0		12	0
*	Calibrations		12	0		12	0
*	Laboratory and Field Blanks analyses		12	0		12	0
*	Surrogate Recoveries		12	0		12	0
*	Matrix Spike/Matrix Spike Duplicate		12	0		12	0
*	Laboratory Control Sample(LCS)		12	0		12	0
*	Laboratory and/or Field Duplicates		12	0		12	0
*	Internal Standards		12	0		12	0
*	Pesticide Instrument Performance		12	0		12	0
*	Sample Cleanup		12	0		12	0
*	Compound Identification		12	0		12	0
*	Compound Quantitation		12	0		12	0
*	Sample Preservation		12	0		12	0

* All Criteria were met for that Parameter, DO=1,4-Dithane & 1,4-Oxathiane, T=Thiodiglycol

q=qualified; t=total number of samples analyzed; a=number of samples affected

SUMMARY

All samples were successfully analyzed for all target compounds according to U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. All instruments and method sensitivities were according to the specified analytical methods. Refer to Minor Problems for information regarding biases identified during data validation.

Deviation from USEPA NFG: The "U" qualifier recommended by USEPA NFG for blank contamination was replaced by the "B" qualifier to clearly indicate blank contamination on the EDDs.

MAJOR PROBLEMS

- None noted.

MINOR PROBLEMS

- None noted.

NOTES

- Electronic Data Deliverable (EDD): Several rows in an electronic data deliverable (EDD) are marked with an "X" and hidden before printing a data summary form. These rows may include quality control samples such as Method Blanks, Laboratory Control Samples, Matrix Spikes, or Matrix Spike Duplicates which are not validated. Additionally, some field sample results may not be used since only one (1) result for each compound is reported after validation. The following list indicates some instances in which an "X" may be placed in the DVQ column:
  1. The compounds in an analysis that have exceeded the instrument calibration range.
  2. All compounds in a diluted analysis that were within the calibration range in the initial analysis.
  3. All compounds in either the initial analysis or re-analysis of a sample, depending on which analysis is not reported on the EDD.

  Although QC samples and some field samples results may not be used, all data were reviewed and considered in the overall assessment.

- Data Validation Qualifier (DVQ):This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

- Data Validation Result (DVR):This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit. Results in the DVR column supersede those reported by the laboratory.

- Tentatively Identified Compounds (TICs): The TICs, if applicable, were reviewed during data validation.

- Compound Quantitation: Positive results for compounds which are below the CRQL were qualified as estimated "J" on the EDD.

- Blank Contaminants: The maximum concentration of all compounds found in the analyses of the trip, field or laboratory method blanks are listed in the following table. Associated samples with positive results of common laboratory contaminants less than ten times (<10X) the blank concentration, or positive results of other contaminants less than five times (<5X) the blank concentration, found in the associated samples were qualified as "B" on the DSFs.

Analytical Fraction	Compound	Maximum Concentration	Units	Blank Type
	None			

*Common lab contaminant

- Surrogate Recoveries: The base/neutral surrogate 2-Fluorobiphenyl displayed recoveries lower than the QC limit in soil samples FTSW-HR-SO-51 (10), FTSW-HR-SO-52 (10), FTSW-HR-SO-53 (10) & 289973-MB. No action was taken.

  The base/neutral surrogate terphenyl-d14 displayed recovery above the QC limit in soil sample FTSW-HR-SO-59 (10). No action was taken.

REPORT CONTENT STATEMENT

All data for this project were reviewed in accordance with the pertinent parts of the U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The text of the report addresses only those problems affecting data usability.

ATTACHMENTS

l) Glossary of Data Qualifiers
2) Electronic Data Deliverable (EDD). These include:
   (a) All results for target compounds with qualifier codes where applicable.
   (b) All unusable detection limits (qualified "R"), where applicable.
3) Electronic Data Package (.pdf file) as Support Documentation

DCN: ER121201-007-O

Respectfully Submitted,

Sherif N. Mina Date: September 24, 2012
Sherif N. Mina

QA/Review: SM

MCGI

USEPA
Inorganic
Data Validation Report

Fort Stewart
GA

ALS Lab Report # ERT-008
MCGI Project No. ER121201-00-I

Prepared for:

Earth Resources Technology, Inc.
Laurel, MD

Prepared by:

"MCGI"
Meridian Consultant Group, Inc.
Environmental Services & Data Validation

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GLOSSARY OF ACRONYMS & TERMS

GLOSSARY OF ACRONYMS & TERMS

One or more of the following acronyms and terms may have been used in the descriptive process of the Inorganic Data Validation.

Acronyms:

AA	Atomic Absorption
CARD	CLP Analytical Results Database
CCB	Continuing Calibration Blank
CCS	Contract Compliance Screening
CCV	Continuing Calibration Verification
CF	Calibration Factor
CLP	Contract Laboratory Program
COC	Chain of Custody
CRDL	Contract Required Detection Limit
CSF	Complete SDG File
CV	Cold Vapor
%D	Percent Difference
DAS	Delivery of Analytical Services
DSF	Data Summary Form
EMSL-LV	Environmental Monitoring Support Laboratory - Las Vegas
EPA	United States Environmental Protection Agency
ICAL	Initial Calibration
ICB	Initial Calibration Blank
ICP	Inductively Coupled Plasma
ICS	Interference Check Sample
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
IRDA	Inorganic Regional Data Assessment
LCS	Laboratory Control Sample
LCL	Lower Control Limit
MCL	Maximum Contamination Level
MDC	Minimum Detectable Concentration
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
MSA	Method of Standard Addition
PB	Preparation Blank
PCB	Poly Chlorinated Biphenyl
PRP	Potential Responsible Party
QA/QC	Quality Assurance/Quality Control
QAPjP	Quality Assurance Project Plan
QC	Quality Control

%R	Percent Recovery of spiked amount
RAS	Routine Analytical Services
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
SDG	Sample Delivery Group
SMO	Sample Management Office
SOP	Standard Operation Procedures
SOW	Statement of Work
SSL	Samples Shipping Log
TAL	Target Analyte List
TR	Traffic Report
UCL	Upper Control Limit
VTSR	Validated Time of Sample Receipt

Terms:

Associated Samples

Any sample related to a particular QC analysis. For Example:
- For ICV, all samples run under the same calibration curve.
- For duplicate RPD, all SDG samples digested/distilled of the same matrix.

Case A finite, usually predetermined number of samples collected over a given time period for a particular site. A Case consists of one or more Sample Delivery Group(s).

Continuing Calibration Blank (CCB)

A deionized water sample run every ten (10) samples designed to detect any carryover contamination.

Continuing Calibration Verification (CCV)

A deionized water sample run every ten (10) samples designed to detect any carryover contamination.

Contract Compliance Screening (CCS)

A process in which the SMO inspects the data for contractual compliance and provides EMSL-LV laboratories and the Regions with their findings.

Contractual Holding Time

The time from VTSR (validated time of sample receipt) to laboratory extraction and /or analysis.

Data Validation Qualifier (DVQ)

This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

Data Validation Result (DVR)

This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit.

Field Blank Field blanks are intended to identify contaminants that may have been introduced in the field. Examples are rinsate blank (RB), field blanks (FB) and trip blank (TB).

Field Duplicate

A duplicate sample generated in the field; not in the laboratory.

Initial Calibration (ICAL)

The establishment of a calibration curve with the appropriate number of standards and concentration ranges. The calibration curve plots absorbancies and/or emissions versus concentration of the standards.

.

Initial Calibration Blank (ICB)

First blank run after the calibration curve .

Initial Calibration Verification (ICV)

First standard run after the calibration curve .

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Introduction of a known concentration of a compound into a sample to provide information about the effect of sample matrix on the extraction and/or measurement methodology.

Post Digestion Spike

The addition of known amount of standard after digestion. (Also identified as analytical spike, or spike, for furnace analyses.)

Preparation Blank (PB)

Blank taken through the digestion process to detect internal laboratory contamination.

Sample Delivery Group (SDG)

Defined by one of the following, whichever occurs first:

- case of sample
- each twenty field samples in a case or
- each 14-day calendar period during which field samples in a case are received, beginning with the receipt of the first sample in the SDG.

Serial Dilution

A sample run at a specific dilution to determine whether any significant chemical or physical interferences exist due to sample matrix effect, for ICP only.

Technical Holding Time

The time from sample collection to laboratory extraction and /or analysis.

COMMUNICATION RECORDS

N/A

GLOSSARY OF DATA VALIDATION QUALIFIERS

GLOSSARY OF DATA QUALIFIER CODES (INORGANIC)

CODES RELATED TO IDENTIFICATION:

(Confidence concerning presence or absence of analytes).

U	=	Not detected above the level of the associated value. The associated value is either the approximate sample quantitation or detection limit.
NO CODE	=	Confirmed identification
B	=	Not detected substantially above the level reported in laboratory or field blanks.
R	=	Unusable results. Analyte may or may not be present in the sample.
N	=	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION:

(Can be used for both positive results and sample detection limits)

J	=	Analyte present. Reported value may not be accurate or precise (estimated value).
K	=	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	=	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
[ ]	=	Analyte present. Value approaches the IDL, but less than the quantitation limit. The quantitation may not be accurate.
UJ	=	Not detected. Quantitation limit may be inaccurate or impresice.
UL	=	Not detected. Quantitation limit is probably higher.

OTHER CODES:

NJ	=	Qualitative identification questionable. Presumptively present at approximate quantity.
Q	=	No analytical Result.
X	=	Data not validated.

DATA VALIDATION REPORT NARRATIVE

MCGI

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DATE: September 26, 2012

SUBJECT: USEPA Inorganic Data Validation Report
Arsenic
ALS Lab SDG No. ERT-008
Site: Fort Stewart, GA
MCGI Project No. ER121201-008-I

FROM: Sherif N. Mina
Meridian Consultant Group, Inc.

TO: Mr. Mike Gearheart
Earth Resources Technology, Inc.

OVERVIEW

This Sample Delivery Group (SDG) consisted of two (2) soil samples submitted to ALS Laboratories, Middletown, PA, for Arsenic (As) analysis according to SW-846, Methods 6020A. No field duplicate pairs were identified in this sample set. The samples were analyzed in accordance with the Chain-of-Custody (COC), see Sample Identification Summary.

Sample Identification Summary

SAMPLE INFORMATION			Analysis
Field ID	Lab ID	Matrix	A
FTSW-HR-SO-61 (09.5)	9981774001	Soil	x
FTSW-HR-SO-62 (10)	9981774002	Soil	x

A=As

The analytical results were validated according to the pertinent parts of U.S. Environmental Protection Agency (USEPA) National Functional for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The validation was based on the following parameters:

Data Validation Summary

	Parameters	A q	A t	A a
*	Data Completeness		2	0
*	Holding Time		2	0
*	Calibration Verification		2	0
*	Laboratory and Field Blanks analyses		2	0
*	ICP Interference Check Sample results		2	0
*	Matrix Spike recoveries (MS)		2	0
*	Laboratory and Field Duplicates		2	0
*	Laboratory Control Sample(LCS)		2	0
*	Serial Dilution results		2	0
*	Furnace Atomic Absorption results (FAA)		2	0
*	Analyte Identification		2	0
*	Analyte Quantitation		2	0
* All Criteria were met for that Parameter, M=Metals, A=As				

q=qualified; t=total number of samples analyzed; a=number of samples affected

SUMMARY

All samples were successfully analyzed for all target analytes according to U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. All instruments and method sensitivities were according to the specified analytical methods. Refer to Minor Problems for information regarding biases identified during data validation.

Deviation from USEPA NFG: The "U" qualifier recommended by USEPA NFG for blank contamination was replaced by the "B" qualifier to clearly indicate blank contamination on the EDDs.

MAJOR ISSUES

- None noted.

MINOR ISSUES

- Laboratory and Field Blanks analyses: Analytes detected in the laboratory and/or equipment blanks, that affect sample results, with concentration above the instrument detection limit (IDL) are listed below. Analytes in the samples with concentration less than five (5) times the blank concentration have been reported on the EDD and qualified "B".

Analyte	Blank Type

PB = Preparation Blank
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank
CB = Container Blank

EB = Equipment Blank

NOTES

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  Although QC samples and some field samples results may not be used, all data were reviewed and considered in the overall assessment.

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- Compound Quantitation: Positive results for compounds which are below the CRQL were qualified as estimated "J" on the EDD.

REPORT CONTENT STATEMENT

All data for this project were reviewed in accordance with the pertinent parts of the U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Inorganic Data Review, dated October 2004; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The text of the report addresses only those problems affecting data usability.

ATTACHMENTS

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Respectfully Submitted,

Sherif N. Mina Date: September 26, 2012
Sherif N. Mina

QA/Review: SM

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DFTPP	Decafluorotriphenylphosphine (semivolatile instrument performance check)
DSF	Data Summary Form
ECD	Electron-Capture Detector
EICP	Extended Ion Current Profile
EMSL-LV	Environmental Monitoring Support Laboratory - Las Vegas
EPA	United States Environmental Protection Agency
GC	Gas Chromatography
GC/EC	Gas Chromatography/Electron Capture
GC/MS	Gas Chromatography/Mass Spectra
GPC	Gel Permeation Chromatography (Clean Up)
ICAL	Initial Calibration
IS	Internal Standard
LCS	Laboratory Control Sample
LCL	Lower Control Limit
MCL	Maximum Contamination Level
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
m/z	The ratio of mass (m) to charge (z) of ions measured by GC/MS
OADS	Organic Analysis Data Sheet (Form 1)
ORDA	Organic Regional Data Assessment
PCB	Poly Chlorinated Biphenyl
PEM	Performance Evaluation Mixture
PRP	Potential Responsible Party

QA/QC	Quality Assurance/Quality Control
QAPjP	Quality Assurance Project Plan
QC	Quality Control
%R	Percent Recovery of spiked amount
RAS	Routine Analytical Services
RF	Response Factor
RIC	Reconstructed Ion Chromatogram
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
RT	Retention Time
RTW	Retention Time Window
SDG	Sample Delivery Group
SMC	System Monitoring Compound
SMO	Sample Management Office
SOP	Standard Operation Procedures
SOW	Statement of Work
SPCCs	System Performance Check Compounds
SSL	Samples Shipping Log
SVOA	Semivolatile Organic Analyte
TCL	Target Compound List
TCX	Tetrachloro-m-Xylene (Pesticide/PCB surrogate compound)
TIC	Tentatively Identified Compound
TPH	Total Petroleum Hydrocarbons
TR	Traffic Report
UCL	Upper Control Limit
VOA	Volatile Organic Analyte
VTSR	Validated Time of Sample Receipt

Terms:

Associated Samples
: Any sample related to a particular QC analysis.

Case
: A finite, usually predetermined number of samples collected over a given time period for a particular site. A Case consists of one or more Sample Delivery Group(s).

Contract Compliance Screening (CCS)
: A process in which the SMO inspects the data for contractual compliance and provides EMSL-LV laboratories and the Regions with their findings.

Contractual Holding Time

The time from VTSR (validated time of sample receipt) to laboratory extraction and /or analysis.

Data Validation Qualifier (DVQ)

This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

Data Validation Result (DVR)

This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit.

Field Blank Field blanks are intended to identify contaminants that may have been introduced in the field. Examples are rinsate blank (RB), field blanks (FB) and trip blank (TB).

Field Duplicate

A duplicate sample generated in the field; not in the laboratory.

Initial Calibration (ICAL)

The establishment of a calibration curve with the appropriate number of standards and concentration ranges. The calibration curve plots absorbances and/or emissions versus concentration of the standards. .

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Introduction of a known concentration of a compound into a sample to provide information about the effect of sample matrix on the extraction and/or measurement methodology.

Perform ance Evaluation Mixture

A standard used to verify that the ICAL sequence is stable throughout the GC or GC/MS analyses.

Sample Delivery Group (SDG)

Defined by one of the following, whichever occurs first:

- case of sample
- each twenty field samples in a case or
- each 14-day calendar period during which field samples in a case are received, beginning with the receipt of the first sample in the SDG.

Technical Holding Time

The time from sample collection to laboratory extraction and /or analysis

COMMUNICATION RECORDS

“N/A”

GLOSSARY OF DATA VALIDATION QUALIFIERS

GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATED TO IDENTIFICATION:

(Confidence concerning presence or absence of compounds)

U	=	Not detected above the level of the associated value. The associated value is either the approximate sample quantitation or detection limit.
NO CODE	=	Confirmed identification
B	=	Not detected substantially above the level reported in laboratory or field blanks.
R	=	Unusable results. Analyte may or may not be present in the sample.
N	=	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION:

(Can be used for both positive results and sample quantitation limits)

J	=	Analyte present. Reported value may not be accurate or precise (estimated value).
K	=	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	=	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
UJ	=	Not detected. Quantitation limit may be inaccurate or imprecise.
UL	=	Not detected. Quantitation limit is probably higher.

OTHER CODES:

NJ	=	Qualitative identification questionable. Presumptively present at approximate quantity.
Q	=	No analytical result.
X	=	Data not Validated.

DATA VALIDATION REPORT NARRATIVE

MCGI

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Environmental Services & Data Validation
1997 Annapolis Exchange Pkwy., Suite 300
Annapolis, MD 21401

(301)803-9207 Phone
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DATE: September 26, 2012

SUBJECT: USEPA Organic Data Validation Report
1,4-Dithane, 1,4-Oxathiane & Thiodiglycol
ALS Lab SDG No. ERT-008
Site: Fort Stewart, GA
MCGI Project No. ER121201-008-O

FROM: Sherif N. Mina
Meridian Consultant Group, Inc.

TO: Mr. Mike Gearheart
Earth Resources Technology, Inc.

OVERVIEW

This Sample Delivery Group (SDG) consisted of two (2) soil samples submitted to ALS Laboratories, Salt Lake City, Utah, for 1,4-Dithane, 1,4-Oxathiane & Thiodiglycol analyses according to SW-846, Method 8270 & 8321, respectively. No field duplicate pairs were identified in this sample set. The samples were analyzed in accordance with the Chain-of-Custody (COC), see Sample Identification Summary.

Sample Identification Summary

SAMPLE INFORMATION			Analysis	
Field ID	Lab ID	Matrix	DO	T
FTSW-HR-SO-61 (09.5)	1222302001	Soil	x	x
FTSW-HR-SO-62 (10)	1222302002	Soil	x	x

DO=1,4-Dithane & 1,4-Oxathiane, T=Thiodiglycol

The analytical results were validated according to the pertinent parts of U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The validation was based on the following parameters:

Data Validation Summary

Parameters		DO			T		
		q	t	a	q	t	a
*	Data Completeness		2	0		2	0
*	Holding Time		2	0		2	0
*	Calibrations		2	0		2	0
*	Laboratory and Field Blanks analyses		2	0		2	0
*	Surrogate Recoveries		2	0		2	0
*	Matrix Spike/Matrix Spike Duplicate		2	0		2	0
*	Laboratory Control Sample(LCS)		2	0		2	0
*	Laboratory and/or Field Duplicates		2	0		2	0
*	Internal Standards		2	0		2	0
*	Pesticide Instrument Performance		2	0		2	0
*	Sample Cleanup		2	0		2	0
*	Compound Identification		2	0		2	0
*	Compound Quantitation		2	0		2	0
*	Sample Preservation		2	0		2	0
* All Criteria were met for that Parameter, DO=1,4-Dithane & 1,4-Oxathiane, T=Thiodiglycol							

q=qualified; t=total number of samples analyzed; a=number of samples affected

SUMMARY

All samples were successfully analyzed for all target compounds according to U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. All instruments and method sensitivities were according to the specified analytical methods. Refer to Minor Problems for information regarding biases identified during data validation.

Deviation from USEPA NFG: The "U" qualifier recommended by USEPA NFG for blank contamination was replaced by the "B" qualifier to clearly indicate blank contamination on the EDDs.

MAJOR PROBLEMS

- None noted.

MINOR PROBLEMS

- None noted.

NOTES

- Electronic Data Deliverable (EDD): Several rows in an electronic data deliverable (EDD) are marked with an "X" and hidden before printing a data summary form. These rows may include quality control samples such as Method Blanks, Laboratory Control Samples, Matrix Spikes, or Matrix Spike Duplicates which are not validated. Additionally, some field sample results may not be used since only one (1) result for each compound is reported after validation. The following list indicates some instances in which an "X" may be placed in the DVQ column:
  1. The compounds in an analysis that have exceeded the instrument calibration range.
  2. All compounds in a diluted analysis that were within the calibration range in the initial analysis.
  3. All compounds in either the initial analysis or re-analysis of a sample, depending on which analysis is not reported on the EDD.

  Although QC samples and some field samples results may not be used, all data were reviewed and considered in the overall assessment.

- Data Validation Qualifier (DVQ):This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

- Data Validation Result (DVR):This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit. Results in the DVR column supersede those reported by the laboratory.

- Tentatively Identified Compounds (TICs): The TICs, if applicable, were reviewed during data validation.

- Compound Quantitation: Positive results for compounds which are below the CRQL were qualified as estimated "J" on the EDD.

- Blank Contaminants: The maximum concentration of all compounds found in the analyses of the trip, field or laboratory method blanks are listed in the following table. Associated samples with positive results of common laboratory contaminants less than ten times (<10X) the blank concentration, or positive results of other contaminants less than five times (<5X) the blank concentration, found in the associated samples were qualified as "B" on the DSFs.

Analytical Fraction	Compound	Maximum Concentration	Units	Blank Type
	None			

*Common lab contaminant

REPORT CONTENT STATEMENT

All data for this project were reviewed in accordance with the pertinent parts of the U.S. Environmental Protection Agency (USEPA) National Functional Guideline for Organic Data Review, dated June 2008; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The text of the report addresses only those problems affecting data usability.

ATTACHMENTS

l) Glossary of Data Qualifiers
2) Electronic Data Deliverable (EDD). These include:
   (a) All results for target compounds with qualifier codes where applicable.
   (b) All unusable detection limits (qualified "R"), where applicable.
3) Electronic Data Package (.pdf file) as Support Documentation

DCN: ER121201-008-O

Respectfully Submitted,

Sherif N. Mina Date: September 26, 2012
Sherif N. Mina

QA/Review: SM

Table F-1.
Fort Stewart
Background Soil Samples

		Sample ID	FTSW-AA-SO-23	FTSW-AA-SO-24	FTSW-AA-SO-25*	FTSW-AA-SO-25 DUP*	FTSW-AA-SO-26	FTSW-AA-SO-27	FTSW-AA-SO-28	FTSW-AA-SO-29	FTSW-AA-SO-30	FTSW-AA-SO-31	FTSW-AA-SO-32
		Parent ID											
		Sample Date	7/27/2012	7/27/2012	7/27/2012	7/27/2012	7/27/2012	7/27/2012	7/30/2012	7/30/2012	8/2/2012	8/2/2012	8/2/2012
Parameter	**Mean of Data**	**Background (defined as two times the mean)**											
Aluminum	5,137	10,273	5140 J	5060 J	2080 J	2530 J	9590 J	5670 J	2300	3000	4490	5500	8310
Copper	1.5	3.1	2.7 J	1.9 J	1.6 J	2.3 J	1.4 J	1.6 J	1 J	1.5 J	1 J	1.1 J	1.3 J
Lead	6.3	12.7	4.6 J	2.6 J	3.9 J	4.6 J	17 J	4 J	3.3	4.8	11.8	5.9	5
Zinc	9.9	19.9	12.9	12.8	1.8 J	6.5	11	14.2	7.8	6.8	4.5	4.3	20.8

Note:
*Mean calculated using the average of the detected value and its duplicate.

Table F-2.
Fort Stewart HHRA
Selection of COPCs in Surface Soil
Anti-Aircraft Range 90-mm - 2 (AAR) MRS (FTSW-002-R-01)

SURFACE SOIL

Sample ID / **Sample Date**							FTSW-AA-SO-01 7/26/2012	FTSW-AA-SO-03 7/26/2012	FTSW-AA-SO-03 DUP 7/26/2012	FTSW-AA-SO-05 7/26/2012	FTSW-AA-SO-07 7/26/2012	FTSW-AA-SO-09 7/26/2012	FTSW-AA-SO-11 7/26/2012	FTSW-AA-SO-13 7/26/2012	FTSW-AA-SO-15 7/26/2012	FTSW-AA-SO-17 7/27/2012	FTSW-AA-SO-19 7/27/2012
Parameter	Surface Soil (0 to 2 feet) Background (SAIC, 1999)	RFI Soil Background	USEPA Residential Soil RSL	USEPA Industrial Soil RSL	USEPA Protection of Groundwater SSL	Ecological Soil Screening Criteria											
Select Metals by SW6020A (mg/kg)																	
Aluminum	NS	10,273	7,700	110,000	3,000	50	*7060 J*	*5750 J*	*4370 J*	*4440 J*	*4050 J*	*2090 J*	*5520 J*	*4830 J*	***10900 J***	*4420 J*	***7870 J***
Copper	NS	3.1	310	4,700	46	40	1.3 J	2 J	3.2	1.5 J	4.6	2 U	2.4 J	1.4 J	1.4 J	3.1 J	1 J
Lead	8.8	12.7	400	800	14	50	5.3	3.8	3.5	4.4	3.3	2.9	5.1	5.8	7.8	4.2 J	6.5 J
Zinc	NS	19.9	2,300	35,000	37	50	9.7	6.5	7.6	9	10.4	3.1	11.2	7.4	8.4	11.1	11.6

Legend

value	bold value above USEPA Residential Soil RSL
value	highlighted value above background (SAIC, 1999 or RFI)
value	underlined value above USEPA Protection of Groundwater SSL
value	italicized value above Ecological Soil Screening Criteria
mg/kg	milligrams per kilogram
Surface Soil (0 to 2 feet) Background (SAIC, 1999)	Fort Stewart background soil data (value is two times the average background result) from Phase II RFI Appendix F (SAIC, 1999)
RFI Soil Background	Fort Stewart background soil data (value is two times the average background result) from current sampling program
USEPA Residential Soil RSL	USEPA RSL for Residential Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of **0.1** for non-carcinogens.
USEPA Industrial Soil RSL	USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of **0.1** for non-carcinogens.
USEPA Protection of Groundwater SSL	USEPA Protection of Groundwater Soil Screening Levels (SSLs) (May 2014) (for copper and lead, MCL-based)
Ecological Soil Screening Criteria	USEPA Region IV Ecological Screening Values for Soil (WSRC-TR98-00110)
NS	none specified
NA	not sampled in current program
blank cell	not analyzed
U	not detected, associated value is limit of detection (LOD)
J	estimated value

Table F-3.
Fort Stewart HHRA
Selection of COPCs in Subsurface Soil
Anti-Aircraft Range 90-mm - 2 (AAR) MRS (FTSW-002-R-01)

SUBSURFACE SOIL

Sample ID							FTSW-AA-SO-02 [01.5]	FTSW-AA-SO-04 [01.5]	FTSW-AA-SO-06 [01.5]	FTSW-AA-SO-08 [02]	FTSW-AA-SO-08 [02] DUP	FTSW-AA-SO-10 [02]	FTSW-AA-SO-12 [01.5]	FTSW-AA-SO-14 [02]	FTSW-AA-SO-16 [01.5]	FTSW-AA-SO-18 [01.5]	FTSW-AA-SO-20 [01.5]
Sample Date							7/26/2012	7/26/2012	7/26/2012	7/26/2012	7/26/2012	7/26/2012	7/26/2012	7/26/2012	7/26/2012	7/27/2012	7/27/2012
Parameter	Subsurface Soil (>2 feet) Background (SAIC, 1999)	RFI Soil Background	USEPA Residential Soil RSL	USEPA Industrial Soil RSL	USEPA Protection of Groundwater SSL	Ecological Soil Screening Criteria											
Select Metals by SW6020A (mg/kg)																	
Aluminum	NS	10,273	7,700	110,000	3,000	50	***8160 J***	***20200 J***	*4560 J*	***20600 J***	***30200 J***	*1130 J*	*4440 J*	***7710 J***	*6260 J*	*5370 J*	***11900 J***
Copper	NS	3.1	310	4,700	46	40	1.5 U	1.7 U	1.8 U	2 U	2 U	1.9 U	2 U	8.8	2.1 U	2 U	1.1 J
Lead	11.1	12.7	400	800	14	50	4.6	7.2	3.7	7.3	6.9	1.8	3.7	8	4.8	3.3 J	10.8 J
Zinc	NS	19.9	2,300	35,000	37	50	2.7	5.4	1.7 J	4.5	5.3	1.4 J	2 J	10.6	3.5	2.4 J	3.8

Legend

value	bold value above USEPA Residential Soil RSL
value	highlighted value above background (SAIC, 1999 or RFI)
value	underlined value above USEPA Protection of Groundwater SSL
value	italicized value above Ecological Soil Screening Criteria
mg/kg	milligrams per kilogram
Subsurface Soil (> 2 feet) Background (SAIC, 1999)	Fort Stewart background soil data (value is two times the average background result) from Phase II RFI Appendix F (SAIC, 1999)
RFI Soil Background	Fort Stewart background soil data (value is two times the average background result) from current sampling program
USEPA Residential Soil RSL	USEPA RSL for Residential Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of **0.1** for non-carcinogens.
USEPA Industrial Soil RSL	USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of **0.1** for non-carcinogens.
USEPA Protection of Groundwater SSL	USEPA Protection of Groundwater Soil Screening Levels (SSLs) (May 2014) (for copper and lead, MCL-based)
Ecological Soil Screening Criteria	USEPA Region IV Ecological Screening Values for Soil (WSRC-TR98-00110)
NS	none specified
NA	not sampled in current program
blank cell	not analyzed
U	not detected, associated value is limit of detection (LOD)
J	estimated value

Table F-4.
Fort Stewart HHRA
Selection of COPCs in Surface Soil
Hero Road Trench Area MRS (FTSW-008-R-01)

Sample ID							FTSW-HR-SO-01	FTSW-HR-SO-01 DUP	FTSW-HR-SO-03	FTSW-HR-SO-05	FTSW-HR-SO-06	FTSW-HR-SO-07	FTSW-HR-SO-09	FTSW-HR-SO-11	FTSW-HR-SO-13	FTSW-HR-SO-15	FTSW-HR-SO-17	FTSW-HR-SO-19	FTSW-HR-SO-21	FTSW-HR-SO-23	FTSW-HR-SO-25	FTSW-HR-SO-27	FTSW-HR-SO-29	FTSW-HR-SO-31
Sample Date							7/30/2012	7/30/2012	7/30/2012	7/30/2012	7/30/2012	7/30/2012	7/30/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	8/1/2012
Parameter	Surface Soil (0 to 2 feet) Background (SAIC, 1999)	RFI Soil Background	USEPA Residential Soil RSL	USEPA Industrial Soil RSL	USEPA Protection of Groundwater SSL	Ecological Soil Screening Criteria																		
Select Metals by SW6020A (mg/kg)																								
Arsenic	2.1	NA	0.67	3	0.29	10	1 U	**0.85 J**	1 U	**0.59 J**	**0.57 J**	1.1 U	1.1 U	**0.81 J**	**0.53 J**	1.1 U	0.98 U	1.1 U	**0.72 J**	1.1 U	**1.2 J**	**1 J**	1.1 U	1 U

Legend

value	bold value above USEPA Residential Soil RSL
value	highlighted value above background (SAIC, 1999 or RFI)
value	underlined value above USEPA Protection of Groundwater SSL
value	italicized value above Ecological Soil Screening Criteria
mg/kg	milligrams per kilogram
Subsurface Soil Background (SAIC, 1999)	Fort Stewart background subsurface soil data (value is two times the average background result), Phase II RFI (SAIC, 1999)
RFI Soil Background	Fort Stewart background soil data (value is two times the average background result) from current sampling program
USEPA Residential Soil RSL	USEPA RSL for Residential Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of **0.1** for non-carcinogens.
USEPA Industrial Soil RSL	USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of **0.1** for non-carcinogens.
USEPA Protection of Groundwater SSL	USEPA Protection of Groundwater Soil Screening Levels (SSLs) (May 2014) (for arsenic, MCL-based)
USEPA Ecological Soil Criteria	USEPA Region IV Ecological Screening Values for Soil (WSRC-TR98-00110)
NS	none specified
NA	not sampled in current program
blank cell	not analyzed
U	not detected, associated value is limit of detection (LOD)
J	estimated value

Table F-4.
Fort Stewart HHRA
Selection of COPCs in Surface Soil
Hero Road Trench Area MRS (FTSW-008-R-01)

Sample ID							FTSW-HR-SO-31 DUP	FTSW-HR-SO-33	FTSW-HR-SO-35	FTSW-HR-SO-36	FTSW-HR-SO-38	FTSW-HR-SO-39	FTSW-HR-SO-40	FTSW-HR-SO-41	FTSW-HR-SO-42	FTSW-HR-SO-43	FTSW-HR-SO-44	FTSW-HR-SO-45	FTSW-HR-SO-46	FTSW-HR-SO-46 DUP	FTSW-HR-SO-47	FTSW-HR-SO-48	FTSW-HR-SO-49
Sample Date							8/1/2012	8/1/2012	8/1/2012	8/1/2012	8/1/2012	8/1/2012	8/1/2012	8/1/2012	8/1/2012	8/1/2012	8/1/2012	8/1/2012	8/1/2012	8/1/2012	8/1/2012	8/1/2012	8/1/2012
Parameter	Surface Soil (0 to 2 feet) Background (SAIC, 1999)	RFI Soil Background	USEPA Residential Soil RSL	USEPA Industrial Soil RSL	USEPA Protection of Groundwater SSL	Ecological Soil Screening Criteria																	
Select Metals by SW6020A (mg/kg)																							
Arsenic	2.1	NA	0.67	3	0.29	10	**0.82 J**	**0.55 J**	0.99 U	**0.77 J**	**0.58 J**	**0.73 J**	**0.66 J**	**0.86 J**	**0.69 J**	1 U	1.1 U	1.1 U	**1.2 J**	1.3 U	1.1 U	1 U	1.1 U

Legend

value	bold value above USEPA Residential Soil RSL
value	highlighted value above background (SAIC, 1999 or RFI)
value	underlined value above USEPA Protection of Groundwater SSL
value	italicized value above Ecological Soil Screening Criteria
mg/kg	milligrams per kilogram
Subsurface Soil Background (SAIC, 1999)	Fort Stewart background subsurface soil data (value is two times the average background result), Phase II RFI (SAIC, 1999)
RFI Soil Background	Fort Stewart background soil data (value is two times the average background result) from current sampling program
USEPA Residential Soil RSL	USEPA RSL for Residential Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of **0.1** for non-carcinogens.
USEPA Industrial Soil RSL	USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of **0.1** for non-carcinogens.
USEPA Protection of Groundwater SSL	USEPA Protection of Groundwater Soil Screening Levels (SSLs) (May 2014) (for arsenic, MCL-based)
USEPA Ecological Soil Criteria	USEPA Region IV Ecological Screening Values for Soil (WSRC-TR98-00110)
NS	none specified
NA	not sampled in current program
blank cell	not analyzed
U	not detected, associated value is limit of detection (LOD)
J	estimated value

Table F-5.
Fort Stewart HHRA
Selection of COPCs in Subsurface Soil
Hero Road Trench Area MRS (FTSW-008-R-01)

Sample ID							FTSW-HR-SO-02 [01.5]	FTSW-HR-SO-04 [02]	FTSW-HR-SO-08 [02]	FTSW-HR-SO-10 [01.5]	FTSW-HR-SO-12 [01.5]	FTSW-HR-SO-14 [01.5]	FTSW-HR-SO-14 [01.5] DUP	FTSW-HR-SO-16 [01.5]	FTSW-HR-SO-18 [02]	FTSW-HR-SO-20 [01.5]	FTSW-HR-SO-22 [04]	FTSW-HR-SO-22 [04] DUP	FTSW-HR-SO-24 [06]	FTSW-HR-SO-26 [04]	FTSW-HR-SO-28 [05]	FTSW-HR-SO-30 [05]	FTSW-HR-SO-32 [10]
Sample Date							7/30/2012	7/30/2012	7/30/2012	7/30/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	8/1/2012
Parameter	Subsurface Soil (>2 feet) Background (SAIC, 1999)	RFI Soil Background	USEPA Residential Soil RSL	USEPA Industrial Soil RSL	USEPA Protection of Groundwater SSL	USEPA Ecological Soil Criteria																	
Select Metals by SW6020A (mg/kg)																							
Arsenic	8.04	NA	0.67	3	0.29	10	0.96 U	0.96 U	1 U	0.92 U	**0.47 J**	**0.52 J**	0.95 U	1 U	1.1 U	0.93 U	**0.89 J**	**0.75 J**	1.1 U	**1.1 J**	1 U	0.88 U	1.1 U

Legend

value	bold value above USEPA Residential Soil RSL
value	highlighted value above background (SAIC, 1999 or RFI)
value	underlined value above USEPA Protection of Groundwater SSL
value	italicized value above Ecological Soil Screening Criteria
mg/kg	milligrams per kilogram
Subsurface Soil Background (SAIC, 1999)	Fort Stewart background subsurface soil data (value is two times the average background result), Phase II RFI (SAIC, 1999)
RFI Soil Background	Fort Stewart background soil data (value is two times the average background result) from current sampling program
USEPA Residential Soil RSL	USEPA RSL for Residential Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of **0.1** for non-carcinogens.
USEPA Industrial Soil RSL	USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of **0.1** for non-carcinogens.
NA	not sampled in current program
blank cell	not analyzed
U	not detected, associated value is limit of detection (LOD)
J	estimated value

Table F-5.
Fort Stewart HHRA
Selection of COPCs in Subsurface Soil
Hero Road Trench Area MRS (FTSW-008-R-01)

Sample ID / **Sample Date**							FTSW-HR-SO-34 [10] 8/1/2012	FTSW-HR-SO-34 [10] DUP 8/1/2012	FTSW-HR-SO-37 [09.5] 8/1/2012	FTSW-HR-SO-50 [10] 8/3/2012	FTSW-HR-SO-51 [10] 8/3/2012	FTSW-HR-SO-52 [10] 8/3/2012	FTSW-HR-SO-53 [10] 8/3/2012	FTSW-HR-SO-54 [10] 8/6/2012	FTSW-HR-SO-55 [07.5] 8/6/2012	FTSW-HR-SO-56 [10] 8/6/2012	FTSW-HR-SO-57 [10] 8/6/2012	FTSW-HR-SO-58 [10] 8/6/2012	FTSW-HR-SO-59 [10] 8/6/2012	FTSW-HR-SO-60 [07.5] 8/6/2012	FTSW-HR-SO-61 [09.5] 8/7/2012	FTSW-HR-SO-62 [10] 8/7/2012
Parameter	Subsurface Soil (>2 feet) Background (SAIC, 1999)	RFI Soil Background	USEPA Residential Soil RSL	USEPA Industrial Soil RSL	USEPA Protection of Groundwater SSL	USEPA Ecological Soil Criteria																
Select Metals by SW6020A (mg/kg)																						
Arsenic	8.04	NA	0.67	3	0.29	10	1.1 U	1.1 U	1.2 U	1 U	1 U	1.1 U	1.2 U	1 U	1.1 U	1.1 U	1 U	1.1 U	1 U	1.1 U	1 U	1.1 U

Legend

value	bold value above USEPA Residential Soil RSL
value	highlighted value above background (SAIC, 1999 or RFI)
value	underlined value above USEPA Protection of Groundwater SSL
value	italicized value above Ecological Soil Screening Criteria
mg/kg	milligrams per kilogram
Subsurface Soil Background (SAIC, 1999)	Fort Stewart background subsurface soil data (value is two times the average background result), Phase II RFI (SAIC, 1999)
RFI Soil Background	Fort Stewart background soil data (value is two times the average background result) from current sampling program
USEPA Residential Soil RSL	USEPA RSL for Residential Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of **0.1** for non-carcinogens.
USEPA Industrial Soil RSL	USEPA RSL for Industrial Soil (May 2014); Generic RSLs used for selection of COPCs correspond to either a 10-6 risk level for carcinogens or a Hazard Quotient (HQ) of **0.1** for non-carcinogens.
NA	not sampled in current program
blank cell	not analyzed
U	not detected, associated value is limit of detection (LOD)
J	estimated value

Table F-6
Fort Stewart HHRA
Selection of COPCs in Sediment

							Sample ID	FTSW-AA-SO-21	FTSW-AA-SO-22
							Date	7/27/2012	7/27/2012
Select Metals by SW6020A (mg/kg)	Surface Soil (0 to 2 feet) Background (SAIC, 1999)	RFI Soil Background	USEPA Residential Soil RSL	USEPA Industrial Soil RSL	USEPA Region 4 Sediment Screening Values	Ecological Soil Screening Criteria			
Aluminum	NS	10,273	7,700	99,000	NS	50		6,540 J	886 J
Copper	NS	3.1	310	4,100	18.7	40		1.9 J	1.8 U
Lead	8.8	12.7	400	800	30.2	50		7.1 J	1.5 J
Zinc	NS	19.9	2,300	31,000	124	50		10.9	2.3 J

Legend

mg/kg	milligrams per kilogram
Surface Soil Background (SAIC, 1999)	Fort Stewart background soil data (value is two times the average background result) from Phase II RFI (SAIC, 1999)
RFI Soil Background	Fort Stewart background soil data (value is two times the average background result) from current sampling program
USEPA Residential Soil RSL	USEPA RSL for Residential Soil (May 2014); non-cancer-based RSLs adjusted down by 10
USEPA Industrial Soil RSL	USEPA RSL for Industrial Soil (May 2014); non-cancer-based RSLs adjusted down by 10
USEPA Region 4 Sediment Screening Values	USEPA 2001b
Ecological Soil Screening Criteria	USEPA Region IV Ecological Screening Values
NS	none specified
NA	not sampled in current program
blank cell	not analyzed
U	not detected, associated value is limit of detection (LOD)
J	estimated value
value	bold value above USEPA Residential Soil RSL
value	underlined value above USEPA Protection of Groundwater SSL
value	italicized value above USEPA ecological screening criteria
value	highlighted value above background (SAIC, 1999 or RFI)

Table F-7.
Fort Stewart
Selection of COPCs in Surface Water

			Sample ID	FTSW-AA-SW-21
			Sample Date	7/27/2012
Metals by SW6020A (mg/L)	Surface Water Screening Benchmarks		Groundwater Background (SAIC, 1999)	
Aluminum	0.087		2.4 (one sample)	2.3
Copper	0.005 (1)	0.009 (2)	0.004 (one sample)	0.0054 J
Lead	0.0012 (1)	0.0025 (2)	0.00469 (8 detected/ 18 samples)	0.0025
Zinc	0.065 (1)	0.116 (2)	0.0169 (ND - one sample)	0.075

Legend

mg/L	milligrams per liter
J	estimated value
ND	not detected
Surface Water Screening Benchmarks	For aluminum: EPA Freshwater Aquatic Life Criteria Table (USEPA, 1988) expressed in terms of total recoverable metal in the water column For copper, lead, and zinc: Georgia In-Stream Water Quality Standards - Freshwater Chronic (2012) 1. Assuming water hardness=50 mg/L $CaCO^3$ 2. Assuming water hardness=100 mg/L $CaCO^3$
Groundwater Background	From SAIC 1999 (Appendix F, Table F-9)

Table F-8. Exposure Factors for Current Outdoor Worker (Surface Soil)			
Exposure Factor	**Scenario [a/]**	**Rationale**	**Reference**
BW = Body Weight 80 kg [b/]	RME	Standard reference weight for adult males	USEPA, 2014a
EF = Exposure Frequency 225 days/yr	RME	Assumes year-round weekday exposure	USEPA, 2014a
ED = Exposure Duration 25 years	RME	Upper bound time at one place of employment	USEPA, 2011b
SA = Surface Area 3,470 cm^2 [d/]	RME	Exposed skin surface area (95th percentile adult skin surface area for head, arms, hands)	USEPA, 2014a
AT = Averaging Time 25,500 days (carcinogens) ED x 365 days/year (noncarcinogens)	RME	Conventional human lifespan. Intakes for carcinogens are averaged over the duration of exposure. Equal to the exposure duration (in days).	USEPA, 1989b
FI = Fraction Ingested (unitless) 1.0	RME	RME conservatively assumes 100 percent of daily soil incidental ingestion occurs on-site.	Professional judgment
DAF = Dermal Absorption Fraction Chemical-specific	RME	None specified for aluminum; for arsenic, 3% - used as default. Value in the past was 1% for inorganics (USEPA, 1995a)	USEPA, 2004a
OAF = Oral Absorption Fraction Chemical-specific	RME	100%	Assumed
IR = Incidental Soil Ingestion Rate 100 mg/day [e/]	RME	Default soil incidental ingestion rate for workers.	USEPA, 2014a
AF = Soil-to-Skin Adherence Factor 0.12 mg/cm^2-day [f/]	RME	Activity and body part-specific weighted based on exposed body parts.	USEPA, 2014a
ET = Fraction of EF breathing contaminated outdoor air (unitless) 33%	RME	Based on 8/24 hours per day (33 percent) of day spent outdoors at contaminated site.	Professional judgment

Notes:
a. RME = Reasonable Maximum Exposure
b. kg = kilogram
c. days/yr = days per year
d. cm^2 = square centimeters
e. mg/day = milligrams per day
f. mg/cm^2-day = milligrams per square centimeter-day

Table F-9. Exposure Factors for Future Construction Worker (Mixed Surface/Subsurface Soil)			
Exposure Factor	**Scenario [a/]**	**Rationale**	**Reference**
BW = Body Weight 80 kg [b/]	RME	Standard reference weight for adult males	USEPA, 2014a
EF = Exposure Frequency 225 days/yr [c/]	RME	Assumes year-round weekday exposure	USEPA, 2014a
ED = Exposure Duration 2 years	RME	Assumption for upper bound length of time of construction	Professional judgment
SA = Surface Area 3,470 cm^2 [d/]	RME	Standard default skin surface area (95th percentile adult skin surface area for head, arms, hands).	USEPA, 2014a
AT = Averaging Time (non-carcinogens) ED * 365 days/year	RME		USEPA, 1989b
AT = Averaging Time (carcinogens) 25,500 days	RME	Conventional human lifespan. Intakes for carcinogens are averaged over the duration of exposure	USEPA, 1989b
FI = Fraction Ingested (unitless) 1.0	RME	RME conservatively assumes 100 percent of daily soil incidental ingestion occurs on-site.	Professional judgment
DAF = Dermal Absorption Fraction Chemical-specific	RME	None specified for aluminum; for arsenic, 3% - use as default. Value in the past was 1% for inorganics (USEPA, 1995)	USEPA, 2004a
OAF = Oral Absorption Fraction Chemical-specific	RME	100%	Assumed
IR = Incidental Soil Ingestion Rate 100 mg/day [e/]	RME	Default soil incidental ingestion rate for workers.	USEPA, 2014a
AF = Soil-to-Skin Adherence Factor 0.12 mg/cm^2-day [f/]	RME	Activity and body part-specific weighted based on exposed body parts.	USEPA, 2014a
ET = Fraction of EF breathing contaminated outdoor air (unitless) 33%	RME	Based on 8/24 hours per day (33 percent) of day spent outdoors at contaminated site.	Professional judgment

Notes:
a/ RME = Reasonable Maximum Exposure
b/ kg = kilogram
c/ days/yr = days per year
d/ cm^2 = square centimeters
e/ mg/day = milligrams per day
f/ mg/cm^2-day = milligrams per square centimeter-day

Table F-10. Exposure Factors for Current Trespasser (Surface Soil)			
Exposure Factor	**Scenario [a/]**	**Rationale**	**Reference**
BW = Body Weight 45 kg [b/]	RME	Typical trespasser is represented by an adolescent aged 7-16 years old.	GAEPD guidance
EF = Exposure Frequency 100 days/yr [c/]	RME	GAEPD guidance.	GAEPD guidance
ED = Exposure Duration 10 years	RME	Upper bound time living in one location.	USEPA, 1997a
SA = Surface Area 3,470 cm^2 [d/]	RME	Standard default skin surface area (95th percentile adult skin surface area for head, arms, hands).	USEPA, 2004a
AT = Averaging Time 25,500 days (carcinogens)	RME	Conventional human lifespan. Intakes for carcinogens are averaged over the duration of exposure.	USEPA, 1989b
FI = Fraction Ingested (unitless) 1.0	RME	RME conservatively assumes 100 percent of daily soil incidental ingestion occurs on-site.	Professional judgment
DAF = Dermal Absorption Fraction Chemical-specific	RME	Chemical-specific.	USEPA, 2004a
OAF = Oral Absorption Fraction Chemical-specific	RME	Chemical-specific.	USEPA, 2004a
IR = Incidental Soil Ingestion Rate 100 mg/day [e/]	RME	Default soil incidental ingestion rate for adult residents.	USEPA, 2014a
AF = Soil-to-Skin Adherence Factor 0.07 mg/cm^2-day [f/]	RME	Mean adherence factor for face, arms, hands, legs, and feet for gardening activities.	USEPA, 2014a
ET = Fraction of EF breathing contaminated outdoor air (unitless) 33%	RME	Based on 8/24 hours per day (33 percent) of day spent outdoors at contaminated site.	Professional judgment

Notes:
a/ RME = Reasonable Maximum Exposure
b/ kg = kilogram
c/ days/yr = days per year
d/ cm^2 = square centimeters
e/ mg/day = milligrams per day
f/ mg/cm^2-day = milligrams per square centimeter-day

Table F-11. Exposure Factors for Future Adult Resident (Mixed Surface/Subsurface Soil)			
Exposure Factor	**Scenario [a/]**	**Rationale**	**Reference**
BW = Body Weight 80 kg [b/]	RME	Standard reference weight for adult males	USEPA, 2014a
EF = Exposure Frequency 350 days/yr [c/]	RME	Assumes year-round exposure with one 2-week vacation	Professional judgment
ED = Exposure Duration 20 years	RME	Upper bound time at one residence	USEPA, 2014a
SA = Surface Area 6,032 cm^2 [d/]	RME	Exposed skin surface area (for head, arms, hands, legs, and feet.)	USEPA, 2014a
AT = Averaging Time (non-carcinogens) ED * 365 days/year	RME		USEPA, 1989b
AT = Averaging Time 25,500 days (carcinogens)	RME	Conventional human lifespan. Intakes for carcinogens are averaged over the duration of exposure.	USEPA, 1989b
FI = Fraction Ingested (unitless) 1.0	RME	RME conservatively assumes 100 percent of daily soil incidental ingestion occurs on-site.	Professional judgment
DAF = Dermal Absorption Fraction Chemical-specific	RME	None specified for aluminum; for arsenic, 3% - use as default. Value in the past was 1% for inorganics (USEPA, 1995)	USEPA, 2004a
OAF = Oral Absorption Fraction Chemical-specific	RME	100%	Assumed
IR = Incidental Soil Ingestion Rate 100 mg/day [e/]	RME	Default soil incidental ingestion rate for adult residents.	USEPA, 2014a
AF = Soil-to-Skin Adherence Factor 0.07 mg/cm^2-day [f/]	RME	Mean adherence factor for face, arms, hands, legs, and feet for gardening activities.	USEPA, 2014a
ET = Fraction of EF breathing contaminated outdoor air (unitless) 100%	RME	Based on 24 hours per day (100 percent) of day exposed to dust from site.	Professional judgment

Notes:
a. RME = Reasonable Maximum Exposure
b. kg = kilogram
c. days/yr = days per year
d. cm^2 = square centimeters
e. mg/day = milligrams per day
f. mg/cm^2-day = milligrams per square centimeter-day

Table F-12. Exposure Factors for Future Child Resident (Mixed Surface/ Subsurface Soil)			
Exposure Variable	**Scenario [a/]**	**Rationale**	**Reference**
BW = Body Weight 15 kg [b/]	RME	Average body weight for children (1 to 6 years).	USEPA, 2011b
EF = Exposure Frequency 350 days/yr [c/]	RME	Assumes year-round exposure with one 2-week vacation.	Professional judgment
ED = Exposure Duration 6 years	RME	Time for ages 0 to 6 at one residence.	USEPA, 2011b
SA = Surface Area 2,690 cm^2 [d/]	RME	Assumed contact with head, arms, hands, legs, and feet.	USEPA, 2014a
AT = Averaging Time 25,500 days (carcinogens) ED x 365 days/year (noncarcinogens)	RME RME	Conventional human lifespan. Intakes for carcinogens are averaged over the duration of exposure. Equal to the exposure duration (in days).	USEPA, 1989b USEPA, 1989b
FI = Fraction Ingested 1.0 (unitless)	RME	Conservatively assume 100 percent of daily soil incidental ingestion occurs on-site.	Professional judgment
DAF = Dermal Absorption Fraction Chemical-specific	RME	None specified for aluminum; for arsenic, 3% - used as default. Value in the past was 1% for inorganics (USEPA, 1995)	USEPA, 2004a
OAF = Oral Absorption Fraction Chemical-specific	RME	100%	Assumed
IR = Incidental Soil Ingestion Rate 200 mg/day	RME	Default EPA soil ingestion rates for children	USEPA, 2011b
AF = Soil-to-Skin Adherence Factor 0.2 mg/cm^2 [f/]	RME	Mean adherence factor for arms, hands, legs, and feet for daycare children, playing both indoors and outdoors	USEPA, 2014a
ET = Exposure Time 8 hours/day	RME	8 hours/day outdoors	Professional judgment

a. RME = Reasonable Maximum Exposure
b. kg = kilogram
c. days/yr = days per year
d. cm^2 = square centimeters
e. mg/day = milligrams per day
f. mg/cm^2 = milligrams per square centimeter

Table F-13
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURES
Future Construction Worker Scenario

Scenario Timeframe: Future
Exposure Media: Surface and Subsurface Soil (0-10 foot)

Exposure Routes: Ingestion, dermal contact, inhalation
Exposure Point: Surface and Subsurface Soil
Receptor Population: Future Construction Worker
Receptor Age: Adult

Non-Cancer Hazard

Chemical of Potential Concern	RME Exposure Concentration (mg/kg)	Chronic RfD (mg/kg-day)	RME CDI (mg/kg-day)	RME Non-Cancer Hazard Quotients
Incidental Ingestion Exposure Pathway				
Aluminum	9,103	1.00E+00	7.01E-03	0.0070
			Total Pathway Hazard Index	0.0070
Dermal Exposure Pathway	RME Exposure Concentration (mg/kg)	Absorbed RFD for Dermal Pathway (mg/kg-day)	RME CDI (mg/kg-day)	RME Non-Cancer Hazard Quotients
Aluminum	9,103	1.00E+00	8.76E-04	0.00088
			Total Pathway Hazard Index	0.00088
Inhalation Pathway	RME Air Concentration (mg/m^3)	Inhalation Chronic RfC (mg/m^3)	RME Air Concentration (mg/m^3)	RME Non-Cancer Hazard Quotients
Aluminum	1.97E-06	5.00E-03	4.04E-07	0.000081
			Total Pathway Hazard Index	0.000081
Air Concentration = Concentration in Soil/Particulate Emission Factor Particulate Emission Factor calculated as described in text =4.63E+09 m^3/kg			Receptor HI Total =	RME **0.008**

Table F-14
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURES
Future Adult Resident Scenario

Scenario Timeframe: Future
Exposure Media: Surface and Subsurface Soil (0-10 foot)
Exposure Routes: Ingestion, dermal
contact, inhalation
Exposure Point: Surface and Subsurface Soil
Receptor Population: Resident
Receptor Age: Adult

Non-Cancer Hazard

Chemical of Potential Concern	RME Exposure Concentration (mg/kg)	Chronic RfD (mg/kg-day)	RME CDI (mg/kg-day)	RME Non-Cancer Hazard Quotients
Incidental Ingestion Exposure Pathway				
Aluminum	9,103	1.00E+00	1.09E-02	0.011
			Total Pathway Hazard Index	0.011
Dermal Exposure Pathway	RME Exposure Concentration (mg/kg)	Absorbed RFD for Dermal Pathway (mg/kg-day)	RME CDI [1] (mg/kg-day)	RME Non-Cancer Hazard Quotients
Aluminum	9,103	1.00E+00	1.38E-03	0.0014
			Total Pathway Hazard Index	0.0014
Inhalation Pathway	RME Air Concentration (mg/m^3)	Inhalation Chronic RfC (mg/m^3)	RME Air Concentration (mg/m^3)	RME Non-Cancer Hazard Quotients
Aluminum	1.97E-06	5.00E-03	1.51E-05	0.0030
			Total Pathway Hazard Index	0.0030
Air Concentration = Concentration in Soil/Particulate Emission Factor Particulate Emission Factor calculated as described in text =4.63E+09 m^3/kg			Receptor HI Total =	RME **0.02**

Table F-15
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURES
Future Child Resident Scenario

Scenario Timeframe: Future
Exposure Media: Surface and Subsurface Soil (0-10 foot)

Exposure Routes: Ingestion, dermal contact, inhalation
Exposure Point: Surface and Subsurface Soil
Receptor Population: Resident
Receptor Age: Child

Non-Cancer Hazard

Chemical of Potential Concern	RME Exposure Concentration (mg/kg)	Chronic RfD (mg/kg-day)	RME CDI (mg/kg-day)	RME Non-Cancer Hazard Quotients
Incidental Ingestion Exposure Pathway				
Aluminum	9,103	1.00E+00	1.16E-01	0.12
			Total Pathway Hazard Index	0.12
Dermal Exposure Pathway	RME Exposure Concentration (mg/kg)	Absorbed RFD for Dermal Pathway (mg/kg-day)	RME CDI [1] (mg/kg-day)	RME Non-Cancer Hazard Quotients
Aluminum	9,103	1.00E+00	9.39E-03	0.0094
			Total Pathway Hazard Index	0.0094
Inhalation Pathway	RME Air Concentration (mg/m^3)	Inhalation Chronic RfC (mg/m^3)	RME Air Concentration (mg/m^3)	RME Non-Cancer Hazard Quotients
Aluminum	1.97E-06	5.30E-03	1.51E-05	0.0028
			Total Pathway Hazard Index	0.0028
Air Concentration = Concentration in Soil/Particulate Emission Factor Particulate Emission Factor calculated as described in text =4.63E+09 m^3/kg NA=not applicable to pathway; ND=not detected			Receptor HI Total =	RME **0.1**

Table F-16
Summary of RME Non-Cancer Hazard Indices
Mixed Soils (0 - 10 feet)

Pathway	Incidental Ingestion	Dermal Contact	Inhalation	Total Hazard Index
Receptor				
Future Construction Worker	0.0070	0.00088	0.000081	0.008
Future Adult Resident	0.011	0.0014	0.0030	0.02
Future Child Resident	0.12	0.0094	0.0028	0.1



Photograph 01
Setting up GPS in Anti-Aircraft Range-90mm – 2 (FTSW-002-R-01) (AAR) MRS – 26 June 2012



Photograph 02
Laying out IVS for AAR MRS investigations – 26 June 2012



Photograph 03
Running EM61 in IVS for AAR MRS – 26 June 2012



Photograph 04
Scrap found in IVS for AAR MRS – 26 June 2012



Photograph 05
Surveying in AAR MRS – 19 June 2012



Photograph 06
Marking Offset to Point, AAR MRS– 19 June 2012



Photograph 07
Collecting DGM Data in AAR MRS – 27 June 27 2012



Photograph 08
Collecting DGM Data in Grid 07 in AAR MRS – 5 July 2012



Photograph 09
Recollecting DGM Data in Grid 09 in AAR MRS – 18 July 2012



Photograph 10
Flagging in Grid 04 in AAR MRS – 19 July 2012



Photograph 11
Reaquiring in AAR MRS – 20 July 2012



Photograph 12
Intrusive Operations in AAR MRS – 25 July 2012



Photograph 13
Intrusive Operations in AAR MRS – 25 July 2012



Photograph 14
Intrusive Operations Outside AAR Fence – 2 August 2012



Photograph 15
Intrusive Operations in AAR MRS with Excavator – 2 August 2012



Photograph 16
Excavator Hole in AAR MRS – 2 August 2012



Photograph 17
Surface Soil Sampling in AAR MRS – 26 July 2012



Photograph 18
Subsurface Soil Sampling in AAR MRS with Hand Auger – 28 July 2012



Photograph 19
Taking GPS Point for Sediment Sample in AAR MRS – 28 July 2012



Photograph 20
Background Sampling in Old Landfill – 26 July 2012



Photograph 21
Item found in AAR MRS Long Transect 1, Anomaly #33 – 31 July 2012



Photograph 22
Item found in AAR MRS Long Transect 4, Anomaly #213 – 31 July 2012



Photograph 23
Item found in AAR MRS Long Transect 5, Anomaly #113 – 31 July 2012



Photograph 24
Item found in AAR MRS Short Transect 1-B, Anomaly #37 – 1 August 2012



Photograph 25
Item found in AAR MRS Short Transect 2-A, Anomaly #18 – 1 August 2012



Photograph 26
Item found in AAR MRS Grid 13, Anomaly #3 – 23 July 2012



Photograph 27
Item found in AAR MRS Grid 15, Anomaly #16 – 23 July 2012



Photograph 28
Item found in AAR MRS Grid 16, Anomaly #17 – 23 July 2012



Photograph 29
Item found in AAR MRS Grid 18, Anomaly #7 – 24 July 2012



Photograph 30
MD: 37-mm Round Grid 22, Anomaly #15 – July 25, 2012



Photograph 31
ISO Item found in AAR MRS Grid 23, Anomaly #3 – 25 July 25 2012



Photograph 32
Item found in AAR MRS Grid 06, Anomaly #25 – 25 July 2012



Photograph 33
MD: 90-mm Round Grid 9, Anomaly #10 – 26 July, 2012



Photograph 34
Item found in AAR MRS Grid 02, Anomaly #48 – 27 July 2012



Photograph 35
Item found in AAR MRS Grid 04, Anomaly #99 – 1 August 2012



Photograph 36
Item found in AAR MRS Grid 05, Anomaly #4 – 2 August 2012



Photograph 37
Item found in AAR MRS Grid 05, Anomaly #27 – 2 August 2012



Photograph 38
MD: 90-mm Round Short Transect, Anomaly #40B – 2 August, 2012



Photograph 39
Hero Road Trench Area MRS (FTSW-008-R-01) (HRTA) Before Clearing – 29 May 2012



Photograph 40
HRTA MRS Before Clearing – 29 May 2012



Photograph 41
Bobcat and Cutter Blade for Brush Clearance in HRTA MRS – 7 June 2012



Photograph 42
Brush Clearance in HRTA MRS – 7 June 2012



Photograph 43
Brush Clearance in HRTA MRS – 13 June 2012



Photograph 44
Completed Brush Clearance in HRTA MRS – 13 June 2012



Photograph 45
Brush Clearance in HRTA MRS, Vines and Bushes – 21 June 2012



Photograph 46
Laying Transects in HRTA MRS – 12 June 2012



Photograph 47
Laying Transects in HRTA MRS – 14 June 2012



Photograph 48
Laying Transects in HRTA MRS – 16 June 2012



Photograph 49
Laying Transects in HRTA MRS – 18 June 2012



Photograph 50
Laying Transects in HRTA MRS – 20 June 2012



Photograph 51
Collecting DGM Data with EM31 in HRTA MRS – 2 July 2012



Photograph 52
UXO Leading Collection of DGM Data in HRTA MRS – 2 July 2012



Photograph 53
Collecting DGM Data with EM31 in HRTA MRS – 4 July 2012



Photograph 54
UXO Collecting DGM Data in HRTA MRS – 11 July 2012



Photograph 55
Collecting DGM Data over Asphalt in HRTA MRS – 13 July 2012



Photograph 56
End of Day EM 31 Check out in HRTA MRS – 13 July 2012



Photograph 57
Item in HRTA MRS Transect 36 – 11 June 2012



Photograph 58
Marking Surface Metal in HRTA MRS – 15 June 2012



Photograph 59
EM 31 Verification Strip for HRTA MRS – 15 June 2012



Photograph 60
Excavating Trenches in HRTA MRS – 30 July 2012



Photograph 61
Excavating Trenches in HRTA MRS – 30 July 2012



Photograph 62
USACE Observing Field Activities in HRTA MRS with SUXOS – 30 July 2012

Table A

MRS Background Information

DIRECTIONS: Record the background information below for the MRS to be evaluated. Much of this information is available from Service and DoD databases. If the MRS is located on a FUDS property, the suitable FUDS property information should be substituted. In the **MRS Summary**, briefly describe the UXO, DMM, or MC that are known or suspected to be present, the exposure setting (the MRS's physical environment), any other incidental nonmunitions-related contaminants (e.g., benzene, trichloroethylene) found at the MRS, and any potentially exposed human and ecological receptors. If possible, include a map of the MRS.

Munitions Response Site Name: Hero Road Trench Area (FTSW-008-R-01)

Component: U.S. Army

Installation/Property Name: Fort Stewart

Location (City, County, State): Fort Stewart, Liberty County, GA

Site Name/Project Name (Project No.): Fort Stewart MRSPP RFI (W912DR-09-D-0012 DO 001)

Date Information Entered/Updated: November 2012 (prepared by ERT)

Point of Contact (Name/Phone): Travis McCoun 410-962-6728

Project Phase (check only one):

❑ PA	❑SI	☑ RFI	❑ FS	❑ RD
❑ RA-C	❑ RI	❑ RA-O	❑RC	❑ LTM

Media Evaluated (check all that apply):

❑ Groundwater	❑ Sediment (human receptor)
☑ Surface soil	❑ Surface Water (ecological receptor)
❑ Sediment (ecological receptor)	❑ Surface Water (human receptor)

MRS Summary:

MRS Description: Describe the munitions-related activities that occurred at the installation, the dates of operation, and the UXO, DMM, or MC known or suspected to be present. When possible, identify munitions, CWM, and MC by type: Aerial photographs indicate disturbances from January 1941 to January 1957 that are indicative of possible improper burial activities associated with dilute agent CAIS kit. No munitions and explosives of concern (MEC) or munitions debris (MD) are expected to be present at this MRS.

Description of Pathways for Human and Ecological Receptors: Pathways for human and ecological receptors are incomplete for exposure to MC in surface and subsurface soil; no chemicals of potential concern were identified for this MRS (Section 5.5.2; ERT, 2014).

Description of Receptors (Human and Ecological): The current human receptors of the Hero Road Trench Area are authorized outdoor and construction workers, and trespassers. Future receptors also include future residents. There are a variety of biota at this MRS (Section 5.5.2; ERT, 2014).

Table 1

EHE Module: Munitions Type Data Element Table

DIRECTIONS: Below are 11 classifications of munitions and their descriptions. Circle the scores that correspond with **all** the munitions types known or suspected to be present at the MRS.

Note: The terms *practice munitions, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Sensitive	◆ UXO that are considered most likely to function upon any interaction with exposed persons (e.g., submunitions, 40mm high-explosive [HE] grenades, white phosphorus [WP] munitions, high-explosive antitank [HEAT] munitions, and practice munitions with sensitive fuzes, but excluding all other practice munitions). ◆ Hand grenades containing energetic filler. ◆ Bulk primary explosives, or mixtures of these with environmental media, such that the mixture poses an explosive hazard.	30
High explosive (used or damaged)	◆ UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive." ◆ DMM containing a high-explosive filler that have: ▪ Been damaged by burning or detonation ▪ Deteriorated to the point of instability.	25
Pyrotechnic (used or damaged)	◆ UXO containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades). ◆ DMM containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades) that have: ▪ Been damaged by burning or detonation ▪ Deteriorated to the point of instability.	20
High explosive (unused)	◆ DMM containing a high-explosive filler that: ▪ Have not been damaged by burning or detonation ▪ Are not deteriorated to the point of instability.	15
Propellant	◆ UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). ◆ DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor) that are: ▪ Damaged by burning or detonation ▪ Deteriorated to the point of instability.	15
Bulk secondary high explosives, pyrotechnics, or propellant	◆ DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). ◆ DMM that are bulk secondary high explosives, pyrotechnic compositions, or propellant (not contained in a munition), or mixtures of these with environmental media such that the mixture poses an explosive hazard.	10
Pyrotechnic (not used or damaged)	◆ DMM containing a pyrotechnic filler (i.e., red phosphorus), other than white phosphorus filler, that: ▪ Have not been damaged by burning or detonation ▪ Are not deteriorated to the point of instability.	10
Practice	◆ UXO that are practice munitions that are not associated with a sensitive fuze. ◆ DMM that are practice munitions that are not associated with a sensitive fuze and that have not: ▪ Been damaged by burning or detonation ▪ Deteriorated to the point of instability.	5
Riot control	◆ UXO or DMM containing a riot control agent filler (e.g., tear gas).	3
Small arms	◆ Used munitions or DMM that are categorized as small arms ammunition. (Physical evidence or historical evidence that no other types of munitions [e.g., grenades, subcaliber training rockets, demolition charges] were used or are present on the MRS is required for selection of this category.)	2
Evidence of no munitions	◆ Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	**0**
MUNITIONS TYPE	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 30).	**0**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Munitions Type*** classifications in the space provided.

This MRS was investigated for MC only. No MEC or MD is expected at this MRS and nothing was found during the RFI (Section 5.1.2; ERT, 2014).

Tables 2-9
EHE Module

Because there is there is no evidence of munitions at this MRS, Tables 2-9 have been omitted according to Active Army Guidance (U.S. Army, 2009).

Table 10
Determining the EHE Module Rating

DIRECTIONS:

1. From Tables 1–9, record the data element scores in the **Score** boxes to the right.
2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
3. Add the three **Value** boxes and record this number in the **EHE Module Total** box below.
4. Circle the appropriate range for the **EHE Module Total** below.
5. Circle the **EHE Module Rating** that corresponds to the range selected and record this value in the **EHE Module Rating** box found at the bottom of the table.

Note:
An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value
Explosive Hazard Factor Data Elements			
Munitions Type	Table 1	**0**	**0**
Source of Hazard	Table 2	**0**	
Accessibility Factor Data Elements			
Location of Munitions	Table 3	**0**	**0**
Ease of Access	Table 4	**0**	
Status of Property	Table 5	**0**	
Receptor Factor Data Elements			
Population Density	Table 6	**0**	**0**
Population Near Hazard	Table 7	**0**	
Types of Activities/Structures	Table 8	**0**	
Ecological and/or Cultural Resources	Table 9	**0**	
EHE MODULE TOTAL			**0**

EHE Module Total	EHE Module Rating
92 to 100	A
82 to 91	B
71 to 81	C
60 to 70	D
48 to 59	E
38 to 47	F
less than 38	G
Alternative Module Ratings	Evaluation Pending
	No Longer Required
	No Known or Suspected Explosive Hazard

Table 11

CHE Module: CWM Configuration Data Element Table

DIRECTIONS: Below are seven classifications of CWM configuration and their descriptions. Circle the scores that correspond with **all** the CWM configurations known or suspected to be present at the MRS.

Note: The terms *CWM/UXO, CWM/DMM, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
CWM, that are either UXO, or explosively configured damaged DMM	The CWM known or suspected of being present at the MRS are: ◆ CWM that are UXO (i.e., CWM/UXO) ◆ Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged.	30
CWM mixed with UXO	◆ The CWM known or suspected of being present at the MRS are undamaged CWM/DMM or CWM not configured as a munition that are commingled with conventional munitions that are UXO.	25
CWM, explosive configuration that are undamaged DMM	◆ The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	20
CWM/DMM, not explosively configured or CWM, bulk container	The CWM known or suspected of being present at the MRS are: ◆ Nonexplosively configured CWM/DMM either damaged or undamaged ◆ Bulk CWM (e.g., ton container).	15
CAIS K941 and CAIS K942	◆ The CWM/DMM known or suspected of being present at the MRS are CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	12
CAIS (chemical agent identification sets)	◆ CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.	10
Evidence of no CWM	◆ Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	0
CWM CONFIGURATION	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 30).	0

DIRECTIONS: Document any MRS-specific data used in selecting the ***CWM Configuration*** classifications in the space provided.

Anecdotal evidence suggested that a burial of dilute agent CAIS kits (Section 4.8.5.1; Malcolm Pirnie, 2007) may have taken place on this site; this type of CAIS is considered HTW not CWM. Additionally, a Probability Assessment also indicated that the probability of encountering CWM during subsequent actions or operations at FTSW is Unlikely (Section 8; USACE, 2010). There is no historical or current evidence of CWM existing on this MRS.

Tables 12-19
CHE Module

Because there is no historical or current evidence that CWM exists on this MRS, Tables 12-19 have been omitted according to Active Army Guidance (U.S. Army, 2009).

Table 20
Determining the CHE Module Rating

DIRECTIONS:

1. From Tables 11–19, record the data element scores in the **Score** boxes to the right.
2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
3. Add the three **Value** boxes and record this number in the **CHE Module Total** box below.
4. Circle the appropriate range for the **CHE Module Total** below.
5. Circle the **CHE Module Rating** that corresponds to the range selected and record this value in the **CHE Module Rating** box found at the bottom of the table.

Note:
An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value
CWM Hazard Factor Data Elements			
CWM Configuration	Table 11	**0**	**0**
Sources of CWM	Table 12	**0**	
Accessibility Factor Data Elements			
Location of CWM	Table 13	**0**	
Ease of Access	Table 14	**0**	
Status of Property	Table 15	**0**	
Receptor Factor Data Elements			
Population Density	Table 16	**0**	
Population Near Hazard	Table 17	**0**	
Types of Activities/Structures	Table 18	**0**	
Ecological and/or Cultural Resources	Table 19	**0**	
CHE MODULE TOTAL			

CHE Module Total	CHE Module Rating
92 to 100	A
82 to 91	B
71 to 81	C
60 to 70	D
48 to 59	E
38 to 47	F
less than 38	G
Alternative Module Ratings	Evaluation Pending
	No Longer Required
	No Known or Suspected CWM Hazard
CHE MODULE RATING	**No Known or Suspected CWM Hazard**

Table 21

HHE Module: Groundwater Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's groundwater and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional groundwater contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard present in the groundwater, select the box at the bottom of the table.

Contaminant	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
No groundwater samples collected.			

CHF Scale	CHF Value	Sum The Ratios
CHF > 100	H (High)	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$
100 > CHF > 2	M (Medium)	
2 > CHF	L (Low)	

CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).	

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the groundwater migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the groundwater is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in groundwater has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the groundwater to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the groundwater receptors at the MRS.

Classification	Description	Value
Identified	There is a threatened water supply well downgradient of the source and the groundwater is a current source of drinking water or source of water for other beneficial uses such as irrigation/agriculture (equivalent to Class I or IIA aquifer).	H
Potential	There is no threatened water supply well downgradient of the source and the groundwater is currently or potentially usable for drinking water, irrigation, or agriculture (equivalent to Class I, IIA, or IIB aquifer).	M
Limited	There is no potentially threatened water supply well downgradient of the source and the groundwater is not considered a potential source of drinking water and is of limited beneficial use (equivalent to Class IIIA or IIIB aquifer, or where perched aquifer exists only).	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

No Known or Suspected Groundwater MC Hazard ☑

Table 22

HHE Module: Surface Water – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's surface water and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional surface water contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with human endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
No surface water samples collected.			
CHF Scale	**CHF Value**	**Sum The Ratios**	
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface water to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

There were no surface water sample locations within this MRS.

No Known or Suspected Surface Water (Human Endpoint) MC Hazard ☑

Table 23

HHE Module: Sediment – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional sediment contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with human endpoints present in the sediment, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
No sediment samples collected.			

CHF Scale	CHF Value	Sum The Ratios	
CHF > 100	H (High)	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	M (Medium)		
2 > CHF	L (Low)		

CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right maximum value = H).	

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to sediment to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to sediment to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

There were no sediment sample locations within this MRS.

No Known or Suspected Sediment (Human Endpoint) MC Hazard ☑

Table 24

HHE Module: Surface Water – Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's surface water and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional surface water contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with ecological endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
No surface water samples collected.			

CHF Scale	CHF Value	Sum the Ratios	
CHF > 100	H (High)	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	M (Medium)		
2 > CHF	L (Low)		

CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).	

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L

MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface water to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.	L

RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

There were no surface water sample locations within this MRS.

No Known or Suspected Surface Water (Ecological Endpoint) MC Hazard ☑

Table 25

HHE Module: Sediment – Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional sediment contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with ecological endpoints present in the sediment, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
No sediment samples collected.			
CHF Scale	**CHF Value**	**Sum the Ratios**	
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to sediment to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to sediment to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

There were no sediment sample locations within this MRS.

No Known or Suspected Sediment (Ecological Endpoint) MC Hazard ☑

Table 26

HHE Module: Surface Soil Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's surface soil and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional surface soil contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard present in the surface soil, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratio
	Concentrations of arsenic in soil samples were within background.		
CHF Scale	**CHF Value**	**Sum the Ratios**	
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface soil migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface soil is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in surface soil has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the surface soil to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface soil receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface soil to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to surface soil to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to surface soil to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

No Known or Suspected Surface Soil MC Hazard ☑

Table 27

HHE Module: Supplemental Contaminant Hazard Factor Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Only use this table if there are more than five contaminants in any given medium present at the MRS. This is a supplemental table designed to hold information about contaminants that do not fit in the previous tables. Indicate the **media** in which these contaminants are present. Then record all **contaminants**, their **maximum concentrations** and their **comparison values** (from Appendix B of the Primer) in the table below. Calculate and record the **ratio** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** for each medium on the appropriate media-specific tables.

Note: Do not add ratios from different media.

Media	Contaminant	Maximum Concentration	Comparison Value	Ratio

Table 28

Determining the HHE Module Rating

DIRECTIONS:

1. Record the letter values (H, M, L) for the **Contaminant Hazard**, **Migration Pathway**, and **Receptor Factors** for the media (from Tables 21–26) in the corresponding boxes below.
2. Record the media's three-letter combinations in the **Three-Letter Combination** boxes below (three-letter combinations are arranged from Hs to Ms to Ls).
3. Using the **HHE Ratings** provided below, determine each media's rating (A–G) and record the letter in the corresponding **Media Rating** box below.

Media (Source)	Contaminant Hazard Factor Value	Migratory Pathway Factor Value	Receptor Factor Value		Three-Letter Combination (Hs-Ms-Ls)		Media Rating (A-G)
Groundwater (Table 21)	**-**	**-**	**-**		**-**		**-**
Surface Water/Human Endpoint (Table 22)	-	-	-		-		-
Sediment/Human Endpoint (Table 23)	-	-	-		-		-
Surface Water/Ecological Endpoint (Table 24)	-	-	-		-		-
Sediment/Ecological Endpoint (Table 25)	-	-	-		-		-
Surface Soil (Table 26)	-	-	-		-		-

DIRECTIONS (cont.):

4. Select the single highest Media Rating (A is highest; G is lowest) and enter the letter in the **HHE Module Rating** box.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more media, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

HHE MODULE RATING	

HHE Ratings (for reference only)

Combination	Rating
HHH	A
HHM	B
HHL	C
HMM	
HML	D
MMM	
HLL	E
MML	
MLL	F
LLL	G

Alternative Module Ratings	
	Evaluation Pending
	No Longer Required
	No Known or Suspected MC Hazard

Table 29
MRS Priority

DIRECTIONS: In the chart below, circle the letter **rating** for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical **priority** for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS Priority is the single highest priority; record this relative priority in the **MRS Priority or Alternative MRS Rating** at the bottom of the table.

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority
		A	1		
A	2	B	2	A	2
B	3	C	3	B	3
C	4	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		Evaluation Pending	
No Longer Required		No Longer Required		No Longer Required	
No Known or Suspected Explosive Hazard		**No Known or Suspected CWM Hazard**		**No Known or Suspected MC Hazard**	
MRS PRIORITY or ALTERNATIVE MRS RATING				**No Known or Suspected Hazards**	

References:

ERT, Inc. (ERT). 2012. Final Revised MMRP RCRA Facility Investigation Work Plan for Anti-aircraft Range 90-mm -2 MRS (FTSW-002-R-01) and Hero Road Trench Area MRS (FTSW-008-R-01) – Fort Stewart, Hinesville, GA. November.

ERT. 2014. Final RCRA Facility Investigation Report for Anti-Aircraft Range 90-mm – 2 MRS (FTSW-002-R01) and Hero Road Trench Area MRS (FTSW-008-R-01) – Fort Stewart, Hinesville, GA. January.

Malcolm Pirnie, Inc. 2007. *Confirmatory Sampling Report, Fort Stewart, Hinesville, Georgia* November.

U.S. Army, 2009. *Memorandum for: Assistant Chief of Staff for Installation Management, 600 Army Pentagon, Room 3E474, Washington, DC 20310-0600. Commander, Installation Management Command, 2511 Jefferson Davis Hwy, Arlington, VA 22202. Director, Military Programs Directorate, U.S. Army Corps of Engineers, U.S. Army Corps of Engineers, 441 G. Street, NW, Washington, DC 20314-1000.* Subject: Army Policy for Application of the Military Munitions Response Site Prioritization Protocol (MRSPP) - Corrected Copy, February.

U.S. Army Corps of Engineers (USACE). 2010. *Probability Assessment Hero Road Trench Area Fort Stewart Hinesville, Georgia*. February.

U.S. Department of Defense, 2007. *Memorandum for: Deputy Assistant Secretary of the Army (Environment, Safety, And Occupational Health). Deputy Assistant Secretary of the Navy (Environment). Deputy Assistant Secretary Of The Air Force (Environment, Safety, And Occupational Health).* Subject: Primer for the Munitions Response Site Prioritization Protocol, June.

U.S. Census Bureau. 2010. Census Tract 010103 in Liberty County, Georgia. http://www.usa.com/GA179010103.html Accessed 1 February 2013.

Table A

MRS Background Information

DIRECTIONS: Record the background information below for the MRS to be evaluated. Much of this information is available from Service and DoD databases. If the MRS is located on a FUDS property, the suitable FUDS property information should be substituted. In the **MRS Summary**, briefly describe the UXO, DMM, or MC that are known or suspected to be present, the exposure setting (the MRS's physical environment), any other incidental nonmunitions-related contaminants (e.g., benzene, trichloroethylene) found at the MRS, and any potentially exposed human and ecological receptors. If possible, include a map of the MRS.

Munitions Response Site Name: Anti-Aircraft Range 90-mm 2 (FTSW-002-R-01)

Component: U.S. Army

Installation/Property Name: Fort Stewart

Location (City, County, State): Fort Stewart, Liberty County, GA

Site Name/Project Name (Project No.): Fort Stewart MRSPP RFI (W912DR-09-D-0012 DO 001)

Date Information Entered/Updated: January 2013 (prepared by ERT)

Point of Contact (Name/Phone): Travis McCoun 410-962-6728

Project Phase (check only one):

❑ PA	❑SI	☑ RFI	❑ FS	❑ RD
❑ RA-C	❑ RI	❑ RA-O	❑RC	❑ LTM

Media Evaluated (check all that apply):

❑ Groundwater	☑ Sediment (human receptor)
☑ Surface soil	☑ Surface Water (ecological receptor)
☑ Sediment (ecological receptor)	☑ Surface Water (human receptor)

MRS Summary:

MRS Description: Describe the munitions-related activities that occurred at the installation, the dates of operation, and the UXO, DMM, or MC known or suspected to be present. When possible, identify munitions, CWM, and MC by type: This MRS is located within a former 90mm anti-aircraft range; five other former anti-aircraft and tank ranges overlap this MRS. This MRS is located within the safety zones of all six of the former overlapping ranges; these ranges were used from 1941 through 1964. The known munitions associated with this MRS include 40-mm and 90-mm anti-aircraft projectiles (Section 1.7, ERT, 2012). During RFI activities, three 40-mm projectiles were located in the subsurface at this MRS (Section 5.1.1, ERT, 2014).

Description of Pathways for Human and Ecological Receptors: Pathways for human receptors are incomplete for exposure to MEC in surface soil and potentially complete for construction workers in subsurface soil. Pathways for ecological receptors are incomplete for exposure to MC (Section 5.5.1, ERT, 2014).

Description of Receptors (Human and Ecological): The current human receptors of potential MEC or MC on Anti-Aircraft Range 90-mm - 2 include authorized outdoor and construction workers. Future human receptors include future residents. Ecological diversity at this MRS is low since the area is enclosed by a fence, relatively flat, and covered with maintained grass and buildings (Section 5.5.1; ERT, 2014).

Table 1

EHE Module: Munitions Type Data Element Table

DIRECTIONS: Below are 11 classifications of munitions and their descriptions. Circle the scores that correspond with **all** the munitions types known or suspected to be present at the MRS.

Note: The terms *practice munitions, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Sensitive	◆ UXO that are considered most likely to function upon any interaction with exposed persons (e.g., submunitions, 40mm high-explosive [HE] grenades, white phosphorus [WP] munitions, high-explosive antitank [HEAT] munitions, and practice munitions with sensitive fuzes, but excluding all other practice munitions). ◆ Hand grenades containing energetic filler. ◆ Bulk primary explosives, or mixtures of these with environmental media, such that the mixture poses an explosive hazard.	**30**
High explosive (used or damaged)	◆ UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive." ◆ DMM containing a high-explosive filler that have: ▪ Been damaged by burning or detonation ▪ Deteriorated to the point of instability.	**25**
Pyrotechnic (used or damaged)	◆ UXO containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades). ◆ DMM containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades) that have: ▪ Been damaged by burning or detonation ▪ Deteriorated to the point of instability.	20
High explosive (unused)	◆ DMM containing a high-explosive filler that: ▪ Have not been damaged by burning or detonation ▪ Are not deteriorated to the point of instability.	15
Propellant	◆ UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). ◆ DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor) that are: ▪ Damaged by burning or detonation ▪ Deteriorated to the point of instability.	15
Bulk secondary high explosives, pyrotechnics, or propellant	◆ DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). ◆ DMM that are bulk secondary high explosives, pyrotechnic compositions, or propellant (not contained in a munition), or mixtures of these with environmental media such that the mixture poses an explosive hazard.	10
Pyrotechnic (not used or damaged)	◆ DMM containing a pyrotechnic filler (i.e., red phosphorus), other than white phosphorus filler, that: ▪ Have not been damaged by burning or detonation ▪ Are not deteriorated to the point of instability.	10
Practice	◆ UXO that are practice munitions that are not associated with a sensitive fuze. ◆ DMM that are practice munitions that are not associated with a sensitive fuze and that have not: ▪ Been damaged by burning or detonation ▪ Deteriorated to the point of instability.	5
Riot control	◆ UXO or DMM containing a riot control agent filler (e.g., tear gas).	**3**
Small arms	◆ Used munitions or DMM that are categorized as small arms ammunition. (Physical evidence or historical evidence that no other types of munitions [e.g., grenades, subcaliber training rockets, demolition charges] were used or are present on the MRS is required for selection of this category.)	**2**
Evidence of no munitions	◆ Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	**0**
MUNITIONS TYPE	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 30).	**30**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Munitions Type*** classifications in the space provided.

Site was chosen as sensitive, because according to information obtained during the Phase 3 site visit and HRR, 90-mm anti-tank HE, 40-mm anti-aircraft HE, and small arms were used at the site. Numerous EOD calls involving C-4 plastic explosives (secondary explosives), M-222 Dragon high explosive anti-tank guided missile, M-7 grenades (riot control agent), and MK-2 fragmentation hand grenades were reported on this site. (Section 4.2.1; Malcolm Pirnie, 2007). These EOD calls may be related to the use of the site as an active ammunition supply point, rather than from the historical ranges.

During RFI activities, three 40-mm projectiles were located in the subsurface at this MRS (Section 5.1.1; ERT, 2014).

Table 2

EHE Module: Source of Hazard Data Element Table

DIRECTIONS: Below are 11 classifications describing sources of explosive hazards. Circle the scores that correspond with **all** the sources of explosive hazards known or suspected to be present at the MRS.

Note: The terms *former range, practice munitions, small arms range, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Former range	◆ The MRS is a former military range where munitions (including practice munitions with sensitive fuzes) have been used. Such areas include impact or target areas and associated buffer and safety zones.	**10**
Former munitions treatment (i.e., OB/OD) unit	◆ The MRS is a location where UXO or DMM (e.g., munitions, bulk explosives, bulk pyrotechnic, or bulk propellants) were burned or detonated for the purpose of treatment prior to disposal.	8
Former practice munitions range	◆ The MRS is a former military range on which only practice munitions without sensitive fuzes were used.	6
Former maneuver area	◆ The MRS is a former maneuver area where no munitions other than flares, simulators, smokes, and blanks were used. There must be evidence that no other munitions were used at the location to place an MRS into this category.	5
Former burial pit or other disposal area	◆ The MRS is a location where DMM were buried or disposed of (e.g., disposed of into a water body) without prior thermal treatment.	5
Former industrial operating facilities	◆ The MRS is a location that is a former munitions maintenance, manufacturing, or demilitarization facility.	4
Former firing points	◆ The MRS is a firing point, where the firing point is delineated as an MRS separate from the rest of a former military range.	4
Former missile or air defense artillery emplacements	◆ The MRS is a former missile defense or air defense artillery (ADA) emplacement not associated with a military range.	2
Former storage or transfer points	◆ The MRS is a location where munitions were stored or handled for transfer between different modes of transportation (e.g., rail to truck, truck to weapon system).	2
Former small arms range	◆ The MRS is a former military range where only small arms ammunition was used. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present to place an MRS into this category.)	1
Evidence of no munitions	◆ Following investigation of the MRS, there is physical evidence that no UXO or DMM are present, or there is historical evidence indicating that no UXO or DMM are present.	0
SOURCE OF HAZARD	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 10).	**10**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Source of Hazard*** classifications in the space provided.

Former range was chosen, because the 77 acre MRS area is comprised of the following overlapping range fans: the buffer area (near the firing point) of an Anti-Tank Range 90-mm (total acreage approximately 16,128, operational in 1941); the buffer area (near the firing point) of an Anti-Aircraft Range 40-mm (total acreage approximately 25,288, operational in 1941); and a portion of a Small Arms Range (total acreage approximately 1,241, operational in 1941). (Section 4.2.1; Malcolm Pirnie, 2007). The safety zones of three additional anti-aircraft ranges also overlap this MRS. The MRS is currently an active ammunition supply point (Section 1.5.2 ERT, 2014).

Table 3

EHE Module: Location of Munitions Data Element Table

DIRECTIONS: Below are eight classifications of munitions locations and their descriptions. Circle the scores that correspond with **all** the locations where munitions are known or suspected to be present at the MRS.

Note: The terms *confirmed, surface, subsurface, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Confirmed surface	◆ Physical evidence indicates that there are UXO or DMM on the surface of the MRS. ◆ Historical evidence (i.e., a confirmed report such as an explosive ordnance disposal [EOD], police, or fire department report that an incident or accident that involved UXO or DMM occurred) indicates there are UXO or DMM on the surface of the MRS.	**25**
Confirmed subsurface, active	◆ Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS, and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. ◆ Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM.	20
Confirmed subsurface, stable	◆ Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. ◆ Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed.	**20**
Suspected (physical evidence)	◆ There is physical evidence (e.g., munitions debris such as fragments, penetrators, projectiles, shell casings, links, fins), other than the documented presence of UXO or DMM, indicating that UXO or DMM may be present at the MRS.	10
Suspected (historical evidence)	◆ There is historical evidence indicating that UXO or DMM may be present at the MRS.	**5**
Subsurface, physical constraint	◆ There is physical or historical evidence indicating that UXO or DMM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the UXO or DMM.	2
Small arms (regardless of location)	◆ The presence of small arms ammunition is confirmed or suspected, regardless of other factors such as geological stability. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present at the MRS to place an MRS into this category.)	1
Evidence of no munitions	◆ Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
LOCATION OF MUNITIONS	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 25).	**25**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Location of Munitions*** classifications in the space provided.

Confirmed surface was chosen, because numerous EOD calls involving C-4 plastic explosives (secondary explosives), M-222 Dragon high explosive anti-tank guided missile, M-7 grenades (riot control agent), and MK-2 fragmentation hand grenades were reported on this site. (Section 4.2.1; Malcolm Pirnie, 2007).

During RFI activities, three 40-mm projectiles were located in the subsurface at this MRS (Section 5.1.1; ERT, 2014).

Table 4

EHE Module: Ease of Access Data Element Table

DIRECTIONS: Below are four classifications of barrier types that can surround an MRS and their descriptions. The barrier type is directly related to the ease of public access to the MRS. Circle the score that corresponds with the ease of access to the MRS.

Note: The term *barrier* is defined in Appendix C of the Primer.

Classification	Description	Score
No barrier	◆ There is no barrier preventing access to any part of the MRS (i.e., all parts of the MRS are accessible).	10
Barrier to MRS access is incomplete	◆ There is a barrier preventing access to parts of the MRS, but not the entire MRS.	8
Barrier to MRS access is complete but not monitored	◆ There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effectively preventing access to all parts of the MRS.	5
Barrier to MRS access is complete and monitored	◆ There is a barrier preventing access to all parts of the MRS, and there is active, continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS.	**0**
EASE OF ACCESS	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 10).	**0**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Ease of Access*** classification in the space provided.

This MRS is protected by fences and guards because it is currently an active ammunition supply point (Section 1.7; ERT, 2012).

Table 5

EHE Module: Status of Property Data Element Table

DIRECTIONS: Below are three classifications of the status of a property within the Department of Defense (DoD) and their descriptions. Circle the score that corresponds with the status of property at the MRS.

Classification	Description	Score
Non-DoD control	◆ The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal, or local governments; and land or water bodies managed by other federal agencies. ◆ The MRS is at a location that is owned by DoD, but that DoD has leased to another entity and for which DoD does not control access 24 hours per day.	5
Scheduled for transfer from DoD control	◆ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to the control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the Protocol is applied.	3
DoD control	◆ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD must control access to the MRS 24 hours per day, every day of the calendar year.	**0**
STATUS OF PROPERTY	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	**0**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Status of Property*** classification in the space provided.

This MRS is located on Fort Stewart property and is owned by the DoD (Section 1.1; ERT, 2012).

Table 6

EHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications for population density and their descriptions. Determine the population density per square mile that most closely corresponds with the population of the MRS, including the area within a two-mile radius of the MRS's perimeter. Circle the most appropriate score.

Note: Use the U.S. Census Bureau tract data available to capture the **highest** population density within a two-mile radius of the perimeter of the MRS.

Classification	Description	Score
> 500 persons per square mile	◆ There are more than 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	5
100–500 persons per square mile	◆ There are 100 to 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	3
< 100 persons per square mile	◆ There are fewer than 100 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	1
POPULATION DENSITY	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	3

DIRECTIONS: Document any MRS-specific data used in selecting the ***Population Density*** classification in the space provided.

According to the 2010 Census, there are 257.05 people per square mile within the FTSW Census Tract (http://www.usa.com/GA179010103.html).

Table 7

EHE Module: Population Near Hazard Data Element Table

DIRECTIONS: Below are six classifications describing the number of inhabited structures near the MRS. The number of inhabited buildings relates to the potential population near the MRS. Determine the number of inhabited structures within two miles of the MRS boundary and circle the score that corresponds with the number of inhabited structures.

Note: The term *inhabited structures* is defined in Appendix C of the Primer.

Classification	Description	Score
26 or more inhabited structures	◆ There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	5
16 to 25 inhabited structures	◆ There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	4
11 to 15 inhabited structures	◆ There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	3
6 to 10 inhabited structures	◆ There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	2
1 to 5 inhabited structures	◆ There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	1
0 inhabited structures	◆ There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	0
POPULATION NEAR HAZARD	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	1

DIRECTIONS: Document any MRS-specific data used in selecting the ***Population Near Hazard*** classification in the space provided.

An office for the ASP is located within two miles of the boundary of the MRS (Section 4.2.4.3.1; Malcolm Pirnie, 2007). There is an active ammunition supply point within this MRS (Section 1.7; ERT, 2012).

Table 8

EHE Module: Types of Activities/Structures Data Element Table

DIRECTIONS: Below are five classifications of activities and/or inhabited structures and their descriptions. Review the types of activities that occur and/or structures that are present within two miles of the MRS and circle the scores that correspond with **all** the activities/structure classifications at the MRS.

Note: The term *inhabited structure* is defined in Appendix C of the Primer.

Classification	Description	Score
Residential, educational, commercial, or subsistence	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, playgrounds, community gathering areas, religious sites, or sites used for subsistence hunting, fishing, and gathering.	5
Parks and recreational areas	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with parks, nature preserves, or other recreational uses.	4
Agricultural, forestry	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with agriculture or forestry.	3
Industrial or warehousing	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with industrial activities or warehousing.	2
No known or recurring activities	◆ There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary.	1
TYPES OF ACTIVITIES/STRUCTURES	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	2

DIRECTIONS: Document any MRS-specific data used in selecting the ***Types of Activities/Structures*** classifications in the space provided.

An office for the ASP is located within 2 miles of the MRS (Section 4.2.4.3.1; Malcolm Pirnie, 2007). There is an active ammunition supply point within this MRS (Section 1.7; ERT, 2012); training ranges and construction borrow-pit areas are located within 2 miles of the MRS boundary.

Table 9

EHE Module: Ecological and/or Cultural Resources Data Element Table

DIRECTIONS: Below are four classifications of ecological and/or cultural resources and their descriptions. Review the types of resources present and circle the score that corresponds with the ecological and/or cultural resources present on the MRS.

Note: The terms *ecological resources* and *cultural resources* are defined in Appendix C of the Primer.

Classification	Description	Score
Ecological and cultural resources present	◆ There are both ecological and cultural resources present on the MRS.	5
Ecological resources present	◆ There are ecological resources present on the MRS.	3
Cultural resources present	◆ There are cultural resources present on the MRS.	3
No ecological or cultural resources present	◆ There are no ecological resources or cultural resources present on the MRS.	**0**
ECOLOGICAL AND/OR CULTURAL RESOURCES	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	**0**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Ecological and/or Cultural Resources*** classification in the space provided.

The MRS is heavily developed and contains no ecological resources. There are no known cultural resources (Malcolm Pirnie, 2007) (Section 5.5.1; ERT, 2014).

Table 10
Determining the EHE Module Rating

DIRECTIONS:

1. From Tables 1–9, record the data element scores in the **Score** boxes to the right.
2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
3. Add the three **Value** boxes and record this number in the **EHE Module Total** box below.
4. Circle the appropriate range for the **EHE Module Total** below.
5. Circle the **EHE Module Rating** that corresponds to the range selected and record this value in the **EHE Module Rating** box found at the bottom of the table.

Note:
An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value
Explosive Hazard Factor Data Elements			
Munitions Type	Table 1	**30**	**40**
Source of Hazard	Table 2	**10**	
Accessibility Factor Data Elements			
Location of Munitions	Table 3	**25**	**25**
Ease of Access	Table 4	**0**	
Status of Property	Table 5	**0**	
Receptor Factor Data Elements			
Population Density	Table 6	**3**	**6**
Population Near Hazard	Table 7	**1**	
Types of Activities/Structures	Table 8	**2**	
Ecological and/or Cultural Resources	Table 9	**0**	
EHE MODULE TOTAL			**71**

EHE Module Total	EHE Module Rating
92 to 100	A
82 to 91	B
71 to 81	**C**
60 to 70	D
48 to 59	E
38 to 47	F
less than 38	G
Alternative Module Ratings	Evaluation Pending
	No Longer Required
	No Known or Suspected Explosive Hazard
EHE Module Rating	**C**

Table 11

CHE Module: CWM Configuration Data Element Table

DIRECTIONS: Below are seven classifications of CWM configuration and their descriptions. Circle the scores that correspond with **all** the CWM configurations known or suspected to be present at the MRS.

Note: The terms *CWM/UXO, CWM/DMM, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
CWM, that are either UXO, or explosively configured damaged DMM	The CWM known or suspected of being present at the MRS are: ◆ CWM that are UXO (i.e., CWM/UXO) ◆ Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged.	30
CWM mixed with UXO	◆ The CWM known or suspected of being present at the MRS are undamaged CWM/DMM or CWM not configured as a munition that are commingled with conventional munitions that are UXO.	25
CWM, explosive configuration that are undamaged DMM	◆ The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	20
CWM/DMM, not explosively configured or CWM, bulk container	The CWM known or suspected of being present at the MRS are: ◆ Nonexplosively configured CWM/DMM either damaged or undamaged ◆ Bulk CWM (e.g. ton container).	15
CAIS K941 and CAIS K942	◆ The CWM/DMM known or suspected of being present at the MRS are CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	12
CAIS (chemical agent identification sets)	◆ CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.	10
Evidence of no CWM	◆ Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	0
CWM CONFIGURATION	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 30).	0

DIRECTIONS: Document any MRS-specific data used in selecting the ***CWM Configuration*** classifications in the space provided.

There is no historical or current evidence of CWM existing on this MRS.

Tables 12-19
CHE Module

Because there is no historical or current evidence that CWM exists on this MRS, Tables 12-19 have been omitted according to Active Army Guidance (U.S. Army, 2009).

Table 20
Determining the CHE Module Rating

DIRECTIONS:

1. From Tables 11–19, record the data element scores in the **Score** boxes to the right.
2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
3. Add the three **Value** boxes and record this number in the **CHE Module Total** box below.
4. Circle the appropriate range for the **CHE Module Total** below.
5. Circle the **CHE Module Rating** that corresponds to the range selected and record this value in the **CHE Module Rating** box found at the bottom of the table.

Note:
An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value
CWM Hazard Factor Data Elements			
CWM Configuration	Table 11	**0**	**0**
Sources of CWM	Table 12	-	
Accessibility Factor Data Elements			
Location of CWM	Table 13	-	-
Ease of Access	Table 14	-	
Status of Property	Table 15	-	
Receptor Factor Data Elements			
Population Density	Table 16	-	-
Population Near Hazard	Table 17	-	
Types of Activities/Structures	Table 18	-	
Ecological and/or Cultural Resources	Table 19	-	
CHE MODULE TOTAL			**-**

CHE Module Total	CHE Module Rating
92 to 100	A
82 to 91	B
71 to 81	C
60 to 70	D
48 to 59	E
38 to 47	F
less than 38	G
Alternative Module Ratings	Evaluation Pending
	No Longer Required
	No Known or Suspected CWM Hazard
CHE MODULE RATING	**No Known or Suspected CWM Hazard**

Table 21

HHE Module: Groundwater Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's groundwater and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional groundwater contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard present in the groundwater, select the box at the bottom of the table.

Contaminant	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
No groundwater samples were collected in the MRS (Section 6.2.1.3; ERT, 2014).			

CHF Scale	CHF Value	Sum The Ratios
CHF > 100	H (High)	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$
100 > CHF > 2	M (Medium)	
2 > CHF	L (Low)	

CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).	

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the groundwater migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the groundwater is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in groundwater has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the groundwater to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the groundwater receptors at the MRS.

Classification	Description	Value
Identified	There is a threatened water supply well down gradient of the source and the groundwater is a current source of drinking water or source of water for other beneficial uses such as irrigation/agriculture (equivalent to Class I or IIA aquifer).	H
Potential	There is no threatened water supply well down gradient of the source and the groundwater is currently or potentially usable for drinking water, irrigation, or agriculture (equivalent to Class I, IIA, or IIB aquifer).	M
Limited	There is no potentially threatened water supply well down gradient of the source and the groundwater is not considered a potential source of drinking water and is of limited beneficial use (equivalent to Class IIIA or IIIB aquifer, or where perched aquifer exists only).	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

No Known or Suspected Groundwater MC Hazard ☐

Table 22

HHE Module: Surface Water – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's surface water and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional surface water contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with human endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
Aluminum	2300	3.6E+04	0.0639
Copper	5.4	1.5E+03	0.0036
Lead	2.5	1.5E+01	0.1667
Zinc	75	1.1E+04	0.0068
CHF Scale	**CHF Value**	**Sum The Ratios**	**0.241**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		

CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).	**L**

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	**L**

MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	**L**

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface water to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.	**L**

RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	**L**

Notes: Sample taken from a shallow ditch with very little flow within the gated, locked, and patrolled MRS area. No known background values are available for surface water for comparison purposes.

No Known or Suspected Surface Water (Human Endpoint) MC Hazard ☐

Table 23

HHE Module: Sediment – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional sediment contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with human endpoints present in the sediment, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
	Concentrations of select metals in sediment samples were below background (Section 5.3.2; ERT, 2014).		

CHF Scale	CHF Value	Sum The Ratios
CHF > 100	H (High)	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$
100 > CHF > 2	M (Medium)	
2 > CHF	L (Low)	

CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right maximum value = H).	

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L

MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to sediment to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to sediment to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.	L

RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Notes: Samples taken from a shallow ditch with very little flow within the gated, locked, and patrolled MRS area.

No Known or Suspected Sediment (Human Endpoint) MC Hazard ☑

Table 24

HHE Module: Surface Water – Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's surface water and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional surface water contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with ecological endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
Aluminum	2300	8.7E+01	26.4
Copper	5.4	9.0E+00	0.6
Lead	2.5	2.5E+00	1.0
Zinc	75	1.2E+02	0.625
CHF Scale	**CHF Value**	**Sum the Ratios**	**28.625**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		

CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).	**M**

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L

MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	**L**

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface water to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.	L

RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	**L**

Notes: Sample taken from a shallow ditch with very little flow within the gated, locked, and patrolled MRS area. No known background values are available for surface water for comparison purposes.

No Known or Suspected Surface Water (Ecological Endpoint) MC Hazard ☐

Table 25

HHE Module: Sediment – Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional sediment contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with ecological endpoints present in the sediment, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
	Concentrations of select metals in sediment samples were below background (Section 5.3.2; ERT, 2014).		

CHF Scale	CHF Value	Sum the Ratios
CHF > 100	H (High)	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$
100 > CHF > 2	M (Medium)	
2 > CHF	L (Low)	

CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).	

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to sediment to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to sediment to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Sample taken from a shallow ditch with very little flow within the gated, locked, and patrolled MRS area.

No Known or Suspected Sediment (Ecological Endpoint) MC Hazard ☑

Table 26

HHE Module: Surface Soil Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's surface soil and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional surface soil contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard present in the surface soil, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratio
Aluminum	7060	7.6E+04	0.0929
Copper	4.6	3.1E+03	0.0015
Lead	7.8	4.0E+02	0.0195
Zinc	11.6	2.3E+04	0.0005
CHF Scale	**CHF Value**	**Sum the Ratios**	**0.1144**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		**L**

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface soil migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface soil is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in surface soil has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the surface soil to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	**L**

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface soil receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface soil to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to surface soil to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to surface soil to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	**L**

No Known or Suspected Surface Soil MC Hazard ☐

Table 27

HHE Module: Supplemental Contaminant Hazard Factor Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Only use this table if there are more than five contaminants in any given medium present at the MRS. This is a supplemental table designed to hold information about contaminants that do not fit in the previous tables. Indicate the **media** in which these contaminants are present. Then record all **contaminants**, their **maximum concentrations** and their **comparison values** (from Appendix B of the Primer) in the table below. Calculate and record the **ratio** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** for each medium on the appropriate media-specific tables.

Note: Do not add ratios from different media.

Media	Contaminant	Maximum Concentration	Comparison Value	Ratio

Table 28

Determining the HHE Module Rating

DIRECTIONS:

1. Record the letter values (H, M, L) for the **Contaminant Hazard**, **Migration Pathway**, and **Receptor Factors** for the media (from Tables 21–26) in the corresponding boxes below.
2. Record the media's three-letter combinations in the **Three-Letter Combination** boxes below (three-letter combinations are arranged from Hs to Ms to Ls).
3. Using the **HHE Ratings** provided below, determine each media's rating (A–G) and record the letter in the corresponding **Media Rating** box below.

Media (Source)	Contaminant Hazard Factor Value	Migratory Pathway Factor Value	Receptor Factor Value		Three-Letter Combination (Hs-Ms-Ls)		Media Rating (A-G)
Groundwater (Table 21)	**-**	**-**	**-**		**-**		**-**
Surface Water/Human Endpoint (Table 22)	L	L	L		LLL		G
Sediment/Human Endpoint (Table 23)	-	-	-		-		-
Surface Water/Ecological Endpoint (Table 24)	M	L	L		MLL		F
Sediment/Ecological Endpoint (Table 25)	-	-	-		-		-
Surface Soil (Table 26)	L	L	L		LLL		G

DIRECTIONS (cont.):

4. Select the single highest Media Rating (A is highest; G is lowest) and enter the letter in the **HHE Module Rating** box.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more media, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

HHE MODULE RATING	**F**

HHE Ratings (for reference only)

Combination	Rating
HHH	A
HHM	B
HHL	C
HMM	
HML	D
MMM	
HLL	E
MML	
MLL	F
LLL	G

Alternative Module Ratings	Evaluation Pending
	No Longer Required
	No Known or Suspected MC Hazard
HHE Module Rating	**No Known or Suspected MC Hazard**

Table 29
MRS Priority

DIRECTIONS: In the chart below, circle the letter **rating** for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical **priority** for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS Priority is the single highest priority; record this relative priority in the **MRS Priority or Alternative MRS Rating** at the bottom of the table.

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority
		A	1		
A	2	B	2	A	2
B	3	C	3	B	3
C	**4**	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		Evaluation Pending	
No Longer Required		No Longer Required		No Longer Required	
No Known or Suspected Explosive Hazard		**No Known or Suspected CWM Hazard**		**No Known or Suspected MC Hazard**	
MRS PRIORITY or ALTERNATIVE MRS RATING				**4**	

References:

ERT, Inc. (ERT). 2012. Final Revised MMRP RCRA Facility Investigation Work Plan for Anti-aircraft Range 90-mm -2 MRS (FTSW-002-R-01) and Hero Road Trench Area MRS (FTSW-008-R-01) – Fort Stewart, Hinesville, GA. November.

ERT. 2014. Draft RCRA Facility Investigation Report for Anti-Aircraft Range 90-mm – 2 MRS (FTSW-002-R01) and Hero Road Trench Area MRS (FTSW-008-R-01) – Fort Stewart, Hinesville, GA. January.

Malcolm Pirnie, Inc. 2007. *Confirmatory Sampling Report, Fort Stewart, Hinesville, Georgia* November.

U.S. Army, 2009. *Memorandum for: Assistant Chief of Staff for Installation Management, 600 Army Pentagon, Room 3E474, Washington, DC 20310-0600. Commander, Installation Management Command, 2511 Jefferson Davis Hwy, Arlington, VA 22202. Director, Military Programs Directorate, U.S. Army Corps of Engineers, U.S. Army Corps of Engineers, 441 G. Street, NW, Washington, DC 20314-1000.* Subject: Army Policy for Application of the Military Munitions Response Site Prioritization Protocol (MRSPP) - Corrected Copy, February.

U.S. Department of Defense, 2007. *Memorandum for: Deputy Assistant Secretary of the Army (Environment, Safety, And Occupational Health). Deputy Assistant Secretary of the Navy (Environment). Deputy Assistant Secretary Of The Air Force (Environment, Safety, And Occupational Health).* Subject: Primer for the Munitions Response Site Prioritization Protocol, June.

U.S. Census Bureau. 2010. Census Tract 010103 in Liberty County, Georgia. http://www.usa.com/GA179010103.html Accessed 1 February 2013.

MEC HA Summary Information

Comments

Site ID: Ft. Stewart AAR
Date: 3/25/2013

Please identify the single specific area to be assessed in this hazard assessment. From this point forward, all references to "site" or "MRS" refer to the specific area that you have defined.

A. Enter a unique identifier for the site:

Anti-Aircraft Range 90-mm - 2 MRS (FTSW-002-R-01)

Provide a list of information sources used for this hazard assessment. As you are completing the worksheets, use the "Select Ref(s)" buttons at the ends of each subsection to select the applicable information sources from the list below.

Ref. No.	Title (include version, publication date)
1	USACE, 2006a. St. Louis District. Range Operations Repo
2	USACE, 2006b. St. Louis District. Range Operations Repo
3	ERT, 2012a. Baltimore District. Final Revised MMRP RCRA
4	ERT, 2012b. Baltimore District. Draft RCRA Facility Inv
5	Malcolm Pirnie, 2006. Baltimore District. Final Histor
6	Malcolm Pirnie, 2007. Baltimore District. Final Confirm
7	
8	
9	
10	
11	
12	

B. Briefly describe the site:

1. Area (include units): 77 acres
2. Past munitions-related use:

Safety Buffer Areas

3. Current land-use activities (list all that occur):

Ammunition Supply Point

4. Are changes to the future land-use planned? No
5. What is the basis for the site boundaries?

Previous investigations have delineated the six historical anti-aircraft and tank ranges that overlap this MRS. This MRS is positioned downrange of these ranges and does not overlap impact/target areas or firing points.

6. How certain are the site boundaries?

Boundaries are certain based on past and most recent investigations.

Reference(s) for Part B:

[redacted]

ERT, 2012a. Baltimore District. Final Revised MMRP RCRA Facility Investigation Work Plan for Anti-Aircraft Range 90-mm - 2MRS (FTSW-002-R-01) and Hero Road Trench Area MRS (FTSW-008-R-01). July.
ERT, 2012b. Baltimore District. Draft RCRA Facility Investigation Report. December.
Malcolm Pirnie, 2006. Baltimore District. Final Historical Records Review Fort Stewart, Fort Stewart, Georgia. September.
Malcolm Pirnie, 2007. Baltimore District. Final Confirmatory Sampling Report. Fort Stewart, Georgia. November.

C. Historical Clearances

1. Have there been any historical clearances at the site? No, none
2. If a clearance occurred:
   a. What year was the clearance performed? 2012
   b. Provide a description of the clearance activity (e.g., extent, depth, amount of munitions-related items removed, types and sizes of removed items, and whether metal detectors were used):

Three 40-mm projectiles were removed from the subsurface during RFI activities. DGM surveying was conducted using EM61-MK2

Reference(s) for Part C:

[redacted]

D. Attach maps of the site below (select 'Insert/Picture' on the menu bar.)

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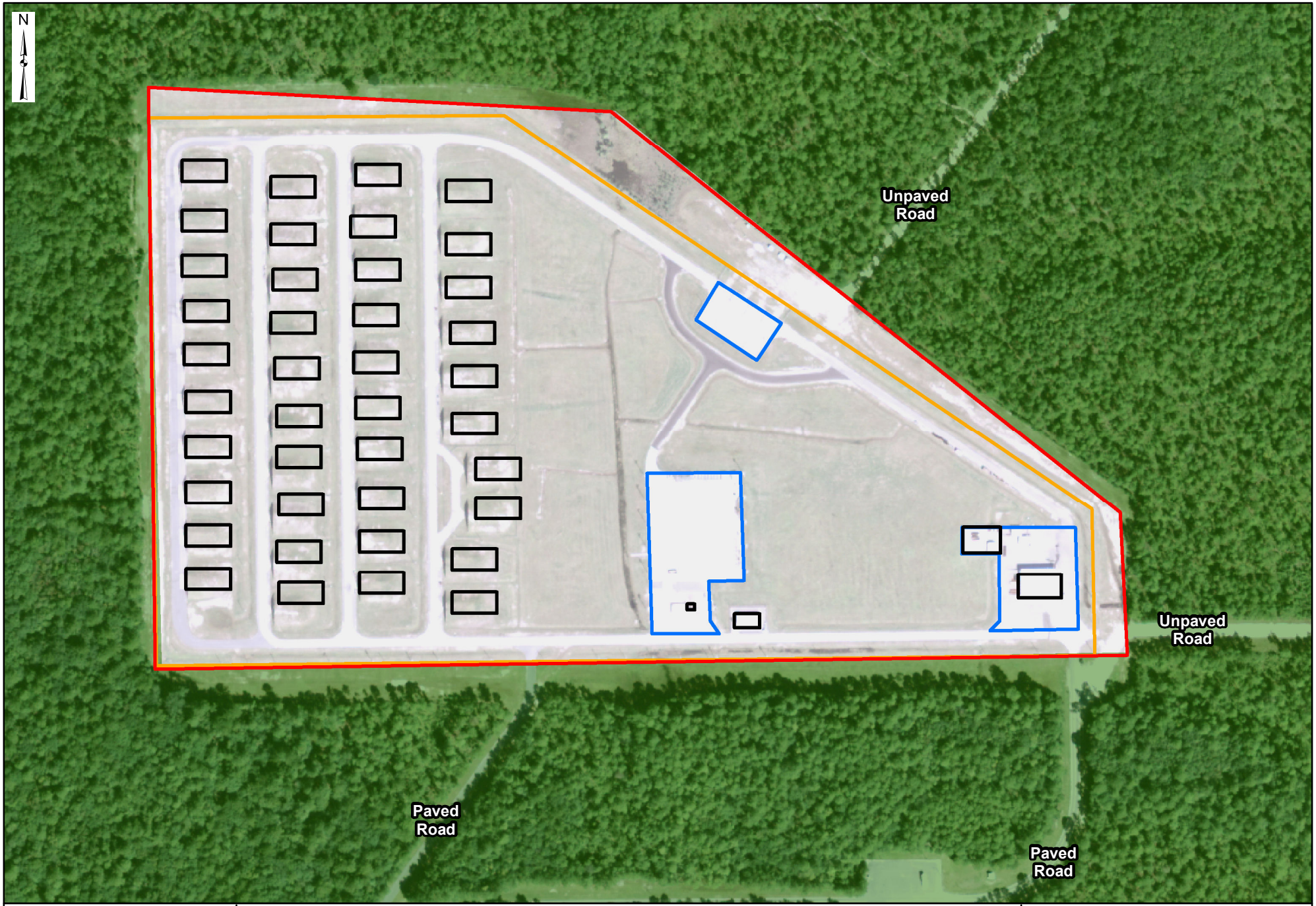

US Army Corps of Engineers
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Legend

0 150 300 Feet

MRS Boundary
Operational Range Area
IVS Location
Fence
Structures
Parking Areas

Figure 3
Anti-Aircraft Range 90-mm - 2 (FTSW-002-R-01) MRS
Fort Stewart, Georgia

Date: March 2013

Imagery Source: National Agriculture Imagery Program (NAIP) 2009

Site ID: **Ft. Stewart AAR**
Date: **3/25/2013**

Cased Munitions Information

Item No.	Munition Type (e.g., mortar, projectile, etc.)	Munition Size	Munition Size Units	Mark/ Model	Energetic Material Type	Is Munition Fuzed?	Fuzing Type	Fuze Condition	Minimum Depth for Munition (ft)	Location of Munitions	Comments (include rationale for munitions that are "subsurface only")
1	Artillery	40	mm	MK 1	High Explosive	Yes			0.5	Subsurface Only	3 items found in subsurface during RFI
2	Artillery	37	mm	M54	High Explosive	Yes			0.5	Subsurface Only	Subsurface MD from RFI
3	Artillery	90	mm		High Explosive	UNK			0.5	Subsurface Only	Subsurface MD from RFI
4	Grenades			MK 2	High Explosive	UNK			0.5	Surface and Subsurface	
5	Grenades			M 7	Incendiary	UNK			0.5	Surface and Subsurface	
6	Guided and Ballistic Missiles			M 222	High Explosive	UNK			0.5	Surface and Subsurface	
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

Reference(s) for table above:
ERT, 2012b. Baltimore District. Draft RCRA Facility Investigation Report. December.
Malcolm Pirnie, 2006. Baltimore District. Final Historical Records Review Fort Stewart, Fort Stewart, Georgia. September.

Bulk Explosive Information

Item No.	Explosive Type	Comments
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Reference(s) for table above:

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Site ID: **Ft. Stewart AAR**
Date: **3/25/2013**

Activities Currently Occurring at the Site

Activity No.	Activity	Number of people per year who participate in the activity	Number of hours per year a single person spends on the activity	Potential Contact Time (receptor hours/year)	Maximum intrusive depth (ft)	Comments
1	Ammunition Supply Point Personnel	5	2,000	**10,000**	0	Working hours for 5 personnel with 2 weeks vacation per year.
2	Ammunition issue/turn in	80	744	**59,520**	0	20 issues/turn ins a day @ 2 hours per evolution with 2 personnel times 248 days.
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
	Total Potential Contact Time (receptor hrs/yr):			**69,520**		
	Maximum intrusive depth at site (ft):				**0**	

Reference(s) for table above:

ERT, 2012a. Baltimore District. Final Revised MMRP RCRA Facility Investigation Work Plan for Anti-Aircraft Range 90-mm - 2MRS (FTSW-002-R-01) and Hero Road Trench Area MRS (FTSW-008-R-01). July.

ERT, 2012b. Baltimore District. Draft RCRA Facility Investigation Report. December.



Activities Planned for the Future at the Site (If any are planned: see 'Summary Info' Worksheet, Question 4)

Activity No.	Activity	Number of people per year who participate in the activity	Number of hours per year a single person spends on the activity	Potential Contact Time (receptor hours/year)	Maximum intrusive depth (ft)	Comments
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						

Total Potential Contact Time (receptor hrs/yr):

Maximum intrusive depth at site (ft):

Reference(s) for table above:



Site ID: **Ft. Stewart AAR**
Date: **3/25/2013**

Planned Remedial or Removal Actions

Response Action No.	Response Action Description	Expected Resulting Minimum MEC Depth (ft)	Expected Resulting Site Accessibility	Will land use activities change if this response action is implemented?	What is the expected scope of cleanup?	Comments
1	Land Use Controls	0.5	Very Limited Accessibility	No	No MEC cleanup	
2	Subsurface Clearance	0.5	Very Limited Accessibility	No	cleanup of MECs located both on the surface and subsurface	no MEC located on surface
3						
4						
5						
6						

According to the 'Summary Info' worksheet, no future land uses are planned. For those alternatives where you answered 'No' in Column E, the land use activities will be assessed against current land uses.

Reference(s) for table above:

ERT, 2012a. Baltimore District. Final Revised MMRP RCRA Facility Investigation Work Plan for Anti-Aircraft Range 90-mm - 2MRS (FTSW-002-R-01) and Hero Road Trench Area MRS (FTSW-008-R-01). July.
ERT, 2012b. Baltimore District. Draft RCRA Facility Investigation Report. December.

Site ID: **Ft. Stewart**
AAR
Date: **12/18/2012**

Energetic Material Type Input Factor Categories

The following table is used to determine scores associated with the energetic materials. Materials are listed in order from most hazardous to least hazardous.

	Baseline Conditions	Surface Cleanup	Subsurface Cleanup
High Explosive and Low Explosive Filler in Fragmenting Rounds	100	100	100
White Phosphorus	70	70	70
Pyrotechnic	60	60	60
Propellant	50	50	50
Spotting Charge	40	40	40
Incendiary	30	30	30

The most hazardous type of energetic material listed in the 'Munitions, Bulk Explosive Info' Worksheet falls under the category 'High Explosive and Low Explosive Filler in Fragmenting Rounds'.

Score

Baseline Conditions: **100**
Surface Cleanup: **100**
Subsurface Cleanup: **100**

Location of Additional Human Receptors Input Factor Categories

1. What is the Explosive Safety Quantity Distance (ESQD) from the Explosive Siting Plan or the Explosive Safety Submission for the MRS? 275 feet
2. Are there currently any features or facilities where people may congregate within the MRS, or within the ESQD arc? Yes
3. Please describe the facility or feature.

Ammunition Supply Point

MEC Item(s) used to calculate the ESQD for current use activities

Item #3. Artillery (90mm, High Explosive)

The following table is used to determine scores associated with the location of additional human receptors (current use activities):

	Baseline Conditions	Surface Cleanup	Subsurface Cleanup
Inside the MRS or inside the ESQD arc	30	30	30
Outside of the ESQD arc	0	0	0

4. Current use activities are 'Inside the MRS or inside the ESQD arc', based on Question 2.' ***Score***

Baseline Conditions: **30**
Surface Cleanup: **30**
Subsurface Cleanup: **30**

5. Are there future plans to locate or construct features or facilities where people may congregate within the MRS, or within the ESQD arc?
6. Please describe the facility or feature.

MEC Item(s) used to calculate the ESQD for future use activities

The following table is used to determine scores associated with the location of additional human receptors (future use activities):

	Baseline Conditions	Surface Cleanup	Subsurface Cleanup
Inside the MRS or inside the ESQD arc	30	30	30
Outside of the ESQD arc	0	0	0

7. Please answer Question 5 above to determine the scores. ***Score***

Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

Comments

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Site Accessibility Input Factor Categories

The following table is used to determine scores associated with site accessibility:

	Description	Baseline Conditions	Surface Cleanup	Subsurface Cleanup
Full Accessibility	No barriers to entry, including signage but no fencing	80	80	80
Moderate Accessibility	Some barriers to entry, such as barbed wire fencing or rough terrain	55	55	55
Limited Accessibility	Significant barriers to entry, such as unguarded chain link fence or requirements for special transportation to reach the site	15	15	15
Very Limited Accessibility	A site with guarded chain link fence or terrain that requires special equipment and skills (e.g., rock climbing) to access	5	5	5

Current Use Activities ***Score***

Select the category that best describes the site accessibility under the current use scenario:

Very Limited Accessibility

Baseline Conditions: **5**
Surface Cleanup: **5**
Subsurface Cleanup: **5**

Future Use Activities

Select the category that best describes the site accessibility under the future use scenario:

Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

Reference(s) for above information:

[redacted]

Response Alternative No. 1: Land Use Controls

Based on the 'Planned Remedial or Removal Actions' Worksheet, this alternative will lead to 'Very Limited Accessibility'.

Baseline Conditions: **5**
Surface Cleanup: **5**
Subsurface Cleanup: **5**

Response Alternative No. 2: Subsurface Clearance

Based on the 'Planned Remedial or Removal Actions' Worksheet, this alternative will lead to 'Very Limited Accessibility'.

Baseline Conditions: **5**
Surface Cleanup: **5**
Subsurface Cleanup: **5**

Response Alternative No. 3:

Please enter site accessibility information in the 'Planned Remedial or Removal Actions' Worksheet to continue.

Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

Response Alternative No. 4:

Please enter site accessibility information in the 'Planned Remedial or Removal Actions' Worksheet to continue.

Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

Response Alternative No. 5:

Please enter site accessibility information in the 'Planned Remedial or Removal Actions' Worksheet to continue.

Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

Response Alternative No. 6:

Please enter site accessibility information in the 'Planned Remedial or Removal Actions' Worksheet to continue.

Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

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Potential Contact Hours Input Factor Categories

The following table is used to determine scores associated with the total potential contact time:

	Description	Baseline Conditions	Surface Cleanup	Subsurface Cleanup
Many Hours	≥1,000,000 receptor-hrs/yr	120	90	30
Some Hours	100,000 to 999,999 receptor hrs/yr	70	50	20
Few Hours	10,000 to 99,999 receptor-hrs/yr	40	20	10
Very Few Hours	<10,000 receptor-hrs/yr	15	10	5

Current Use Activities:

Input factors are only determined for baseline conditions for current use activities. Based on the 'Current and Future Activities' Worksheet, the Total Potential Contact Time is: **69,520** receptor hrs/yr
Based on the table above, this corresponds to a input factor score for baseline conditions of: **40** Score

Future Use Activities:

Input factors are only determined for baseline conditions for future use activities. Based on the 'Current and Future Activities' Worksheet, the Total Potential Contact Time is: receptor hrs/yr
Based on the table above, this corresponds to a input factor score of: Score

Response Alternative No. 1: Land Use Controls

Based on the 'Planned Remedial or Removal Actions' Worksheet, land use activities will not change if this alternative is implemented.
Total Potential Contact Time, based on the contact time listed for current use activities (see 'Current and Future Activities' Worksheet) **69,520**
Based on the table above, this corresponds to input factor scores of: ***Score***
Baseline Conditions: **40**
Surface Cleanup: **20**
Subsurface Cleanup: **10**

Response Alternative No. 2: Subsurface Clearance

Based on the 'Planned Remedial or Removal Actions' Worksheet, land use activities will not change if this alternative is implemented.
Total Potential Contact Time, based on the contact time listed for current use activities (see 'Current and Future Activities' Worksheet) **69,520**
Based on the table above, this corresponds to input factor scores of: ***Score***
Baseline Conditions: **40**
Surface Cleanup: **20**
Subsurface Cleanup: **10**

Response Alternative No. 3:

Not enough information has been entered in the 'Planned Remedial or Removal Actions' Worksheet. Please complete the table before returning to this section.

Total Potential Contact Time
Based on the table above, this corresponds to input factor scores of: ***Score***
Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

Response Alternative No. 4:

Not enough information has been entered in the 'Planned Remedial or Removal Actions' Worksheet. Please complete the table before returning to this section.

Total Potential Contact Time
Based on the table above, this corresponds to input factor scores of: ***Score***
Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

Response Alternative No. 5:

Not enough information has been entered in the 'Planned Remedial or Removal Actions' Worksheet. Please complete the table before returning to this section.

Total Potential Contact Time
Based on the table above, this corresponds to input factor scores of: **Score**
Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

Response Alternative No. 6:

Not enough information has been entered in the 'Planned Remedial or Removal Actions' Worksheet. Please complete the table before returning to this section.

Total Potential Contact Time
Based on the table above, this corresponds to input factor scores of: **Score**
Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

Amount of MEC Input Factor Categories

The following table is used to determine scores associated with the Amount of MEC:

	Description	Baseline Conditions	Surface Cleanup	Subsurface Cleanup
Target Area	Areas at which munitions fire was directed	180	120	30
OB/OD Area	Sites where munitions were disposed of by open burn or open detonation methods. This category refers to the core activity area of an OB/OD area. See the "Safety Buffer Areas" category for safety fans and kick-outs.	180	110	30
Function Test Range	Areas where the serviceability of stored munitions or weapons systems are tested. Testing may include components, partial functioning or complete functioning of stockpile or developmental items.	165	90	25
Burial Pit	The location of a burial of large quantities of MEC items.	140	140	10
Maneuver Areas	Areas used for conducting military exercises in a simulated conflict area or war zone	115	15	5
Firing Points	The location from which a projectile, grenade, ground signal, rocket, guided missile, or other device is to be ignited, propelled, or released.	75	10	5
Safety Buffer Areas	Areas outside of target areas, test ranges, or OB/OD areas that were designed to act as a safety zone to contain munitions that do not hit targets or to contain kick-outs from OB/OD areas.	30	10	5
Storage	Any facility used for the storage of military munitions, such as earth-covered magazines, above-ground magazines, and open-air storage areas.	25	10	5
Explosive-Related Industrial Facility	Former munitions manufacturing or demilitarization sites and TNT production plants	20	10	5

Select the category that best describes the ***most hazardous*** amount of MEC: ***Score***

`Safety Buffer Areas`

Baseline Conditions: **30**
Surface Cleanup: **10**
Subsurface Cleanup: **5**

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Minimum MEC Depth Relative to the Maximum Intrusive Depth Input Factor Categories

Current Use Activities

The shallowest minimum MEC depth, based on the 'Cased Munitions Information' Worksheet: **0.5** ft

The deepest intrusive depth: **0** ft

No construciton or excavations planned

The table below is used to determine scores associated with the minimum MEC depth relative to the maximum intrusive depth:

	Baseline Conditions	Surface Cleanup	Subsurface Cleanup
Baseline Condition: MEC located surface and subsurface. After Cleanup: Intrusive depth overlaps with subsurface MEC.	240	150	95
Baseline Condition: MEC located surface and subsurface, After Cleanup: Intrusive depth does not overlap with subsurface MEC.	240	50	25
Baseline Condition: MEC located only subsurface. Baseline Condition or After Cleanup: Intrusive depth overlaps with minimum MEC depth.	150	N/A	95
Baseline Condition: MEC located only subsurface. Baseline Condition or After Cleanup: Intrusive depth does not overlap with minimum MEC depth.	50	N/A	25

Because the shallowest minimum MEC depth is greater than the deepest intrusive depth, the intrusive depth will not overlap after cleanup. MECs are located only subsurface, based on the 'Munitions, Bulk Explosive Info' Worksheet. Therefore, the category for this input factor is 'Baseline Condition: MEC located only subsurface. Baseline Condition or After Cleanup: Intrusive depth does not overlap with minimum MEC depth.' For 'Current Use Activities', only Baseline Conditions are considered. **50** ***Score***

Future Use Activities

Deepest intrusive depth: ft

Not enough information has been entered to determine the input factor category. ***Score***

Response Alternative No. 1: Land Use Controls

Expected minimum MEC depth (from the 'Planned Remedial or Removal Actions' Worksheet): **0.5** ft

Based on the 'Planned Remedial or Removal Actions' Worksheet, land use activities will not change if this alternative is implemented.

Maximum Intrusive Depth, based on the maximum intrusive depth listed for current use activities (see 'Current and Future Activities' Worksheet) **0** ft

Because the shallowest minimum MEC depth is greater than the deepest intrusive depth, the intrusive depth does not overlap. MECs are located only subsurface, based on the 'Munitions, Bulk Explosive Info' Worksheet. Therefore, the category for this input factor is 'Baseline Condition: MEC located only subsurface. Baseline Condition or After Cleanup: Intrusive depth does not overlap with minimum MEC depth.'

Score

Baseline Conditions: **50**

Surface Cleanup:

Subsurface Cleanup:

Response Alternative No. 2: Subsurface Clearance

Expected minimum MEC depth (from the 'Planned Remedial or Removal Actions' Worksheet): **0.5** ft

Based on the 'Planned Remedial or Removal Actions' Worksheet, land use activities will not change if this alternative is implemented.

Maximum Intrusive Depth, based on the maximum intrusive depth listed for current use activities (see 'Current and Future Activities' Worksheet) **0** ft

Because the shallowest minimum MEC depth is greater than the deepest intrusive depth, the intrusive depth does not overlap. MECs are located only subsurface, based on the 'Munitions, Bulk Explosive Info' Worksheet. Therefore, the category for this input factor is 'Baseline Condition: MEC located only subsurface. Baseline Condition or After Cleanup: Intrusive depth does not overlap with minimum MEC depth.'

Score

Baseline Conditions:

Surface Cleanup:

Subsurface Cleanup: **25**

Migration Potential Input Factor Categories

Is there any physical or historical evidence that indicates it is possible for natural physical forces in the area (e.g., frost heave, erosion) to expose subsurface MEC items, or move surface or subsurface MEC items? **No**

If "yes", describe the nature of natural forces. Indicate key areas of potential migration (e.g., overland water flow) on a map as appropriate (attach a map to the bottom of this sheet, or as a separate worksheet).

The following table is used to determine scores associated with the migration potential:

	Baseline Conditions	Surface Cleanup	Subsurface Cleanup
Possible	30	30	10
Unlikely	10	10	10

Based on the question above, migration potential is 'Unlikely.'

	Score
Baseline Conditions:	**10**
Surface Cleanup:	**10**
Subsurface Cleanup:	**10**

Reference(s) for above information:

ERT, 2012b. Baltimore District. Draft RCRA Facility Investigation Report. December.

MEC Classification Input Factor Categories

Cased munitions information has been inputed into the 'Munitions, Bulk Explosive Info' Worksheet; therefore, bulk explosives do not comprise all MECs for this MRS.

The 'Amount of MEC' category is 'Safety Buffer Areas'. It cannot be automatically assumed that the MEC items from this category are DMM. Therefore, the conservative assumption is that the MEC items in this MRS are UXO.

Has a technical assessment shown that MEC in the OB/OD Area is DMM?

Are any of the munitions listed in the 'Munitions, Bulk Explosive Info' Worksheet: **Yes**

- Submunitions
- Rifle-propelled 40mm projectiles (often called 40mm grenades)
- Munitions with white phosphorus filler
- High explosive anti-tank (HEAT) rounds
- Hand grenades
- Fuzes
- Mortars

At least one item listed in the 'Munitions, Bulk Explosive Info' Worksheet was identified as 'fuzed'.

The following table is used to determine scores associated with MEC classification categories:

UXO Special Case	Baseline Conditions	Surface Cleanup	Subsurface Cleanup
UXO Special Case	180	180	180
UXO	110	110	110
Fuzed DMM Special Case	105	105	105
Fuzed DMM	55	55	55
Unfuzed DMM	45	45	45
Bulk Explosives	45	45	45

Based on your answers above, the MEC classification is 'UXO Special Case'.

	Score
Baseline Conditions:	**180**
Surface Cleanup:	**180**
Subsurface Cleanup:	**180**

MEC Size Input Factor Categories

The following table is used to determine scores associated with MEC Size:

	Description	Baseline Conditions	Surface Cleanup	Subsurface Cleanup
Small	Any munitions (from the 'Munitions, Bulk Explosive Info' Worksheet) weigh less than 90 lbs; small enough for a receptor to be able to move and initiate a detonation	40	40	40
Large	All munitions weigh more than 90 lbs; too large to move without equipment	0	0	0

Based on the definitions above and the types of munitions at the site (see 'Munitions, Bulk Explosive Info' Worksheet), the MEC Size Input Factor is: **Small**

	Score
Baseline Conditions:	**40**
Surface Cleanup:	**40**
Subsurface Cleanup:	**40**

Scoring Summary

Site ID:	Ft. Stewart AAR	a. Scoring Summary for Current Use Activities	
Date:	3/25/2013	Response Action Cleanup:	No Response Action
Input Factor		Input Factor Category	Score
I. Energetic Material Type		High Explosive and Low Explosive Filler in Fragmenting Rounds	100
II. Location of Additional Human Receptors		Inside the MRS or inside the ESQD arc	30
III. Site Accessibility		Very Limited Accessibility	5
IV. Potential Contact Hours		10,000 to 99,999 receptor-hrs/yr	40
V. Amount of MEC		Safety Buffer Areas	30
VI. Minimum MEC Depth Relative to Maximum Intrusive Depth		Baseline Condition: MEC located only subsurface. Baseline Condition or After Cleanup: Intrusive depth does not overlap with minimum MEC depth.	50
VII. Migration Potential		Unlikely	10
VIII. MEC Classification		UXO Special Case	180
IX. MEC Size		Small	40
		Total Score	**485**
		Hazard Level Category	**4**

Site ID:	Ft. Stewart AAR	b. Scoring Summary for Future Use Activities	
Date:	3/25/2013	Response Action Cleanup:	No Response Action
Input Factor		Input Factor Category	Score
I. Energetic Material Type		High Explosive and Low Explosive Filler in Fragmenting Rounds	100
II. Location of Additional Human Receptors			
III. Site Accessibility			
IV. Potential Contact Hours			
V. Amount of MEC		Safety Buffer Areas	30
VI. Minimum MEC Depth Relative to Maximum Intrusive Depth			
VII. Migration Potential		Unlikely	10
VIII. MEC Classification		UXO Special Case	180
IX. MEC Size		Small	40
		Total Score	360
		Hazard Level Category	4

Site ID:	Ft. Stewart AAR	c. Scoring Summary for Response Alternative 1: Land Use Controls	
Date:	3/25/2013	Response Action Cleanup:	No MEC cleanup
Input Factor		Input Factor Category	Score
I. Energetic Material Type		High Explosive and Low Explosive Filler in Fragmenting Rounds	100
II. Location of Additional Human Receptors		Inside the MRS or inside the ESQD arc	30
III. Site Accessibility		Very Limited Accessibility	5
IV. Potential Contact Hours		10,000 to 99,999 receptor-hrs/yr	40
V. Amount of MEC		Safety Buffer Areas	30
VI. Minimum MEC Depth Relative to Maximum Intrusive Depth		Baseline Condition: MEC located only subsurface. Baseline Condition or After Cleanup: Intrusive depth does not overlap with minimum MEC depth.	50
VII. Migration Potential		Unlikely	10
VIII. MEC Classification		UXO Special Case	180
IX. MEC Size		Small	40
		Total Score	**485**
		Hazard Level Category	**4**

Site ID:	Ft. Stewart AAR	d. Scoring Summary for Response Alternative 2: Subsurface Clearance	
Date:	3/25/2013	Response Action Cleanup:	cleanup of MECs located both on the surface and subsurface
Input Factor		Input Factor Category	Score
I. Energetic Material Type		High Explosive and Low Explosive Filler in Fragmenting Rounds	100
II. Location of Additional Human Receptors		Inside the MRS or inside the ESQD arc	30
III. Site Accessibility		Very Limited Accessibility	5
IV. Potential Contact Hours		10,000 to 99,999 receptor-hrs/yr	10
V. Amount of MEC		Safety Buffer Areas	5
VI. Minimum MEC Depth Relative to Maximum Intrusive Depth		Baseline Condition: MEC located only subsurface. Baseline Condition or After Cleanup: Intrusive depth does not overlap with minimum MEC depth.	25
VII. Migration Potential		Unlikely	10
VIII. MEC Classification		UXO Special Case	180
IX. MEC Size		Small	40
		Total Score	**405**
		Hazard Level Category	**4**

MEC HA Hazard Level Determination		
Site ID: Ft. Stewart AAR **Date:** 3/25/2013	**Hazard Level Category**	**Score**
a. Current Use Activities	4	485
b. Future Use Activities	4	360
c. Response Alternative 1: Land Use Controls	4	485
d. Response Alternative 2: Subsurface Clearance	4	405
e. Response Alternative 3:		
f. Response Alternative 4:		
g. Response Alternative 5:		
h. Response Alternative 6:		

Characteristics of the MRS	
Is critical infrastructure located within the MRS or within the ESQD arc?	Yes
Are cultural resources located within the MRS or within the ESQD arc?	No
Are significant ecological resources located within the MRS or within the ESQD arc?	No

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Georgia Department of Natural Resources
2 Martin Luther King, Jr. Drive, S.E., Suite 1154, Atlanta, Georgia 30334
Noel Holcomb, Commissioner
Environmental Protection Division
Carol A. Couch, Ph.D., Director
404/656-7802

August 14, 2007

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Michael W. Biering
Director, Public Works
Headquarters, 3D Infantry Division (Mechanized) and Fort Stewart
Directorate of Public Works, Building 1137
Environmental Branch (ATTN: Tom Fry)
1550 Frank Cochran Drive
Fort Stewart, GA 31314-4927

RE: Notice of Decision; Reissuance of the Fort Stewart Hazardous Waste Facility Permit #HW-045(S), incorporating Permit Application dated February 9, 2007, as amended; EPA ID No. GA9 210 020 872.

Dear Mr. Biering:

Enclosed please find Hazardous Waste Facility Permit #HW-045(S) which is hereby reissued to Fort Stewart, Hinesville, Georgia. The Permit requires Fort Stewart to properly manage the storage of hazardous wastes and to investigate and conduct corrective action at solid waste management units (SWMUs) and areas of concern (AOC) identified during past and future investigations by Fort Stewart and the Environmental Protection Division.

This is also to acknowledge receipt of the facility's comments dated August 1, 2007, and as verbalized in a meeting with a representative of the Georgia Environmental Protection Division (GA EPD) on July 31, 2007. We additionally received comments from Algeana Stevenson of Fort Stewart on August 7, 2007 (after the public comment period). These comments were regarding the removal of the Area of Concern (AOC) Sites 1 – 5 and 7 - 8 from Appendix A of the Permit, and the investigation of these sites under an initiative the Department of Defense calls the Munitions Response Site Prioritization Protocol (MRSPP). We have considered the submitted comments and have the following responses to those comments:

- **AOC 1, AOC 4, and AOC 5:** Since, as indicated in Ms. Stevenson's August 7, 2007 comments, AOC 1, AOC 4, and AOC 5 are operating ranges, they will be noted as such in the permit, and will require investigation when the ranges are closed.

- **AOC 3 & AOC 7:** In the August 7, 2007 comments, Ms. Stevenson stated that the Draft Confirmatory Sampling Report concluded that none of the potential munition constituents of concern exceeded their respective regulatory levels at AOC 3 and AOC 7. However, we have not received a final report documenting these findings. If no hazardous constituents or UXO exist in the subject areas, no further action will be required.

- **AOC 2:** The August 7, 2007 comments also noted that Fort Stewart is proposing to revert AOC 2 back to an operational range; however, until that time, the status of the site in the permit remains unchanged.

- **AOC 8:** The August 7, 2007 comments indicated that AOC 8 requires further investigation and should remain in the permit; however, under the Munitions Response Site Prioritization Protocol (MRSPP), this site will not be investigated until 2011. Once we have evaluated the final MRSPP scoring and have been provided with a schedule for investigation of the site, the permit may be modified to incorporate the schedule.

For AOC 2, AOC 3, AOC 7, and AOC 8, we understand that the final Confirmatory Sampling Report will be submitted in September 2007, and will meet the initial deadline of Requirement III.C.4 of the permit.

The final permit is effective immediately and is subject to appeal for thirty (30) days after its issuance. You are hereby informed of the right to be represented by legal counsel, to petition for a hearing on this Permit within thirty (30) days from the date of issuance of the same, and that such Permit shall become final unless a petition for a hearing is filed with the Director as set forth below within thirty (30) days from the date of issuance of the Permit.

The original and three (3) copies of any petition for a hearing in this matter shall be filed with the Director by hand delivering same to the following address: Filing Clerk, Environmental Protection Division, 2 Martin Luther King, Jr., Drive, S.E., Suite 1152, Atlanta, Georgia 30334, or by mailing same to the Director at the following address:

Carol A. Couch, Ph.D., Director
ATTN.: Filing Clerk
Environmental Protection Division
2 Martin Luther King, Jr., SE, Suite 1152
Atlanta, Georgia 30334

The Petition for Hearing shall be deemed filed on the date received by the Filing Clerk or when mailed by first class mail, with proper postage attached, and properly addressed, whichever comes first. A separate copy of any Petition for Hearing shall be served on the Director's counsel of record, to wit:

John Hennelly, Senior Assistant Attorney General
132 State Judicial Building
40 Capitol Square, SW
Atlanta, Georgia 30334-1300

A copy of the rules governing the filing for a petition for hearing, and the procedures involved in any hearing thereon, may be found at Chapter 391-1-2 of the Rules and Regulations of the State of Georgia published by the Georgia Secretary of State.

Should you have any questions concerning this Permit, please contact Fred Rowe at (404) 656-2833

Sincerely,

Carol A. Couch, Ph.D.
Director

Attachment

c: Mr. Jon Johnston, EPA Region IV
GA EPD-Southeast Regional Office

File: Fort Stewart (Y)
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State of Georgia

Department of Natural Resources

ENVIRONMENTAL PROTECTION DIVISION

HAZARDOUS WASTE FACILITY PERMIT

Permit No. HW-045(S) **Facility I.D. No. GA9 210 020 872**

In accordance with the provisions of the Georgia Hazardous Waste Management Act and the Rules, Chapter 391-3-11, (as amended through **March 13, 2006**), adopted pursuant to that Act,

Fort Stewart

is issued a Permit for the following:

Storage of 124,080 gallons of hazardous waste in containers in Building No. 1157

at the following location:

Fort Stewart
1550 Frank Cochran Drive
Fort Stewart, Georgia 31314-5000

This Permit is conditioned upon compliance with all provisions of the Georgia Hazardous Waste Management Act, the Rules, Chapter 391-3-11 (as amended through **March 13, 2006**) adopted pursuant to that Act, and any other condition of this Permit.

This Permit is subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in the application(s) dated **February 9,2007** supporting data entered therein or attached thereto, or any subsequent submittals or supporting data; or for failure to disclose fully all relevant facts; or when the facility poses a threat to the environment or the health of humans.

This Permit is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **27** page(s), which page(s) are a part of this Permit.

Permit Issuance Date: **August 14, 2007**
Permit Termination Date: **August 14, 2017**

Director
Environmental Protection Division

Permit Number: HW-045(S)
Fort Stewart - EPA ID No. GA9 210 020 872, hereafter referred to as the Permittee.

SECTION I: GENERAL PERMIT CONDITIONS

I.A Scope and Effect of Permit

I.A.1 The Permittee is allowed to store and treat hazardous waste in accordance with the Conditions of this Permit. Any hazardous waste treatment, storage or disposal not authorized in this Permit is prohibited, unless such treatment or storage is specifically authorized by the Director. The Permittee must comply with the Georgia Hazardous Waste Management Act and the Georgia Rules for Hazardous Waste Management, Chapter 391-3-11, which Rules include certain portions of the Federal Hazardous Waste Regulations (found at 40 CFR Parts 260-266, 268, 270, 273, 279, and 124). Where a citation to the Federal Regulations is made in this Permit, it refers to the specific regulations adopted by the Environmental Protection Division of the Georgia Department of Natural Resources.

I.A.2 The issuance of this Permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

I.A.3 Compliance with this Permit does not constitute a defense to any action brought by the Director under Section §12-8-75, "Powers of Director in situations involving imminent and substantial endangerment to the environment or to public health," of the Georgia Hazardous Waste Management Act, as amended.

I.A.4 Nothing in this Permit shall be construed to preclude the institution of any legal action under Section 3008 of the Federal Resource Conservation and Recovery Act or under the Georgia Hazardous Waste Management Act, O.C.G.A. §§12-8-81 through 12-8-82, as amended.

I.A.5 This Permit may be modified, revoked and reissued, or terminated for cause as specified in Rule 391-3-11-.11(7) and 40 CFR §§270.41, 270.42, and 270.43. The filing of a request for a Permit modification, variation and reissuance, or termination or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability of any Permit Condition.

I.A.6 The provisions of this Permit are severable, and if any provision of this Permit or the application of any provision of this Permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this Permit shall not be affected thereby.

I.B **Management Requirements**

I.B.1 The Permittee shall give notice to the Director at least thirty (30) days prior to any planned physical alterations or additions to the Permitted facility or of any planned changes in the process generating the hazardous waste which changes might affect the performance of the Permitted facility.

I.B.2 The Permittee shall maintain at the facility until closure is completed and certified by an independent registered professional engineer, the following documents and amendments, revisions and modifications to these documents:

(a) Complete copy of this Permit and the Permit Application dated February 9, 2007, as amended;
(b) Waste Analysis Plan;
(c) Personnel Training documents and records;
(d) Contingency Plan;
(e) Closure and Post-Closure Plans;
(f) Miscellaneous Units Monitoring Plan;
(g) Operating Record; and
(h) Inspection Schedule and Log.

I.B.3 All amendments, revisions and modifications to any plan required by this Permit shall be submitted to the Director for approval and Permit modification as necessary.

I.B.4 When the Permittee becomes aware that the Permittee failed to submit any relevant facts in the Permit Application dated February 9, 2007, as amended, or submitted incorrect information in the Permit Application dated February 9, 2007, as amended, or in any report to the Director, the Permittee shall promptly submit such facts or information.

I.B.5 The Permittee shall at all times properly operate and maintain all facilities which are installed and/or used

by the Permittee to achieve compliance with the Conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of a back up or auxiliary facility or similar systems only when necessary to achieve compliance with the Conditions of this Permit.

I.B.6 The Permittee may not commence treatment, storage or disposal of hazardous waste at any new or modified portion of the facility or corrective action of any contaminated groundwater until the Permittee has submitted to the Director by certified mail or hand delivery a letter signed by the Permittee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the Permit where appropriate; and

(a) The Director has inspected the modified or newly constructed facility and finds it is in compliance with the Conditions of the Permit; or

(b) The Director has either waived the inspection or has not within fifteen (15) days notified the Permittee of his or her intent to inspect.

I.C Monitoring and Reporting

I.C.1 Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from 40 CFR Part 261 Appendix I. Laboratory methods must be those specified in the most recent editions of Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW 846; or Standard Methods for the Examination of Water and Wastewater; (or an equivalent method as specified in the Waste Analysis Plan). Sampling protocol shall follow the guidance as set forth in the most recent edition of the Environmental Protection Agency Region IV Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (EISOPQAM).

I.C.2 The Permittee shall retain records of all monitoring information, including all calibration and maintenance

records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports, records, and certifications required by this Permit and records of all data used to complete the application for this Permit including the certification required by 40 CFR §264.73(b)(9) for a period of at least three (3) years from the date of the sample, measurement, report or record. These periods are automatically extended during the course of any unresolved enforcement action regarding this facility and also may be extended at any time at the Director's discretion.

I.C.3 Records of monitoring information shall include:

(a) The date, exact place and time of sampling or measurements;
(b) The individual(s) who performed the sampling;
(c) The date(s) analyses were performed;
(d) The individual(s) who performed the analyses;
(e) The analytical techniques or methods used, the method of sample preservation, and quality assurance methods; and
(f) The results of such analyses.

I.C.4 The Permittee shall report to the Director or his representative orally within 1 hour from the time the Permittee becomes aware of any circumstances resulting from the conditions at the hazardous waste management facility which may endanger human health or the environment, or any unauthorized releases from the operation of the facility (including periods of noncompliance), including but not limited to:

(a) Release of any hazardous waste, hazardous waste constituent, or hazardous constituent that may cause an endangerment to public or private drinking water supplies; and

(b) Release or discharge of hazardous waste, hazardous waste constituents, or hazardous constituents, or a fire or explosion which could threaten human health or the environment outside the facility.

I.C.5 The description of the reportable incident, as defined in Condition I.C.4, shall include:

(a) Name, address and telephone number of the owner or operator;

(b) Name, address and telephone number of the facility;
(c) Date, time and type of incident;
(d) Name and quantity of materials involved;
(e) The extent of injuries, if any;
(f) An assessment of actual or potential hazards to the environment and human health inside and outside the facility, where this is applicable; and
(g) Estimated quantity and disposition of recovered material that resulted from the incident.

I.C.6 Within fifteen (15) days of becoming aware of any reportable incident as defined in Condition I.C.4 above, the Permittee shall submit a written report of the incident covering the following:

(a) Description of occurrence as in I.C.4 above;
(b) Cause of occurrence;
(c) Period of occurrence, including exact dates and times;
(d) Time occurrence expected to continue (if not already corrected); and
(e) Steps taken or planned to reduce, eliminate, and prevent recurrence.

I.C.7 Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than fourteen (14) days following each schedule date.

I.C.8 The Permittee shall report instances of non-compliance, other than those described in Conditions I.C.4 and I.C.7, semi-annually on July 15 (covering January 1 - June 30) and January 15 (covering July 1 - December 31). The report shall cover the information requested in Condition I.C.5 for each incident.

I.C.9 All reports or other information requested by the Director shall be signed and certified according to the requirements in 40 CFR §270.11.

I.D **Responsibilities**

I.D.1 Right of Entry. The Permittee shall allow the Director of GA EPD, the Regional Administrator of EPA, and/or their authorized representatives, agents, or employees, upon the presentation of credentials and other documents as may be required by law to:

(a) Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the Conditions of this Permit;

(b) Have access to and copy any records that must be kept under the Conditions of this Permit;

(c) Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and

(d) Sample or monitor for the purposes of assuring Permit compliance or as otherwise authorized by the Georgia Hazardous Waste Management Act, any substances or parameters at any location.

I.D.2 Transfer of Permits. This Permit may be transferred to a new owner or operator only if it is modified or revoked and reissued pursuant to 40 CFR §§270.40(b) or 270.41(b)(2) to identify the new Permittee and incorporate such other requirements as may be necessary under the appropriate Act. Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator in writing of the requirements of 40 CFR Parts 264, 268 and 270.

I.D.3 Duty to Comply. The Permittee shall comply with all Conditions of this Permit, except to the extent and for the duration such non-compliance is authorized by an emergency Permit. Any noncompliance with this Permit constitutes a violation of the Georgia Hazardous Waste Management Act and is grounds for enforcement action, Permit termination, revocation and reissuance, modification, or for denial of a Permit renewal application.

I.D.4 Duty to Reapply. If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, the Permittee must submit a complete application for a new Permit at least 180 days before this Permit expires.

I.D.5 Need to Halt or Reduce Activity Not a Defense. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or

reduce the Permitted activity in order to maintain compliance with the Conditions of this Permit.

I.D.6 Duty to Mitigate. The Permittee shall take all reasonable steps to minimize or correct any adverse impact on human health or the environment resulting from non-compliance with this Permit.

I.D.7 Duty to Provide Information. The Permittee shall furnish to the Director, within a reasonable time, any relevant information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit or to determine compliance with the Permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this Permit.

I.D.8 Anticipated Non-Compliance. The Permittee shall give advance notice to the Director of any planned changes in the Permitted facility or activity which may result in non-compliance with Permit requirements.

I.D.9 Reporting Planned Changes. The Permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the Permitted facility, including any investigative or corrective action activities.

I.E Definitions

For purposes of this Permit, terms used herein shall have the same meaning as those in 40 CFR Parts 124, 260 through 268, 270 and 279, unless this Permit specifically provides otherwise; where terms are not defined in the regulations or the Permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

Area of Concern (AOC) for the purposes of this Permit includes any area having a probable release of a hazardous waste, hazardous constituent, or hazardous waste constituent which is not from a solid waste management unit and is determined by the Director to pose a current or potential threat to human health or the environment. Investigation and remedial action of such areas of concern may be required under the Georgia Hazardous Waste Management Act, §12-8-60, et seq, and 40 CFR §270.32(b)(2) in order to ensure adequate protection of human health and the environment.

Contamination for the purposes of this Permit refers to the presence of any hazardous waste, hazardous waste constituents or hazardous constituents in a concentration which exceeds the naturally occurring concentration of that waste or constituent in the immediate vicinity of the facility (in areas not affected by the facility).

Corrective Action for prior or continuing releases from any solid waste management units at the facility, as well as for other releases, for the purposes of this Permit shall be any measure necessary to protect human health and the environment for all releases of hazardous waste or hazardous constituents from said solid waste management units at the facility, regardless of the time at which waste was placed in the unit, as required under 40 CFR §264.100 and/or §264.101, and as required under the Georgia Hazardous Waste Management Act §12-8-60, et. seq. Corrective action may address releases to air, soils, surface water or groundwater.

Day for the purposes of this Permit shall mean a calendar day.

Extent of contamination for the purposes of this Permit is defined as the horizontal and vertical area in which the concentrations of hazardous waste, hazardous waste constituents or hazardous constituents in the environmental media being investigated are above estimated quantitation limits, as defined in the most recent version of SW-846 or naturally occurring concentrations representative of the facility.

Facility for purposes of this Permit includes all contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (e.g. one or more landfills, surface impoundments, or combination of them). For the purposes of implementing corrective action under 40 CFR §264.101, a facility includes all contiguous property under the control of the owner or operator seeking a Permit under the Georgia Hazardous Waste Management Act.

Hazardous Constituents for the purposes of this Permit are those substances listed in 40 CFR Part 261 Appendix VIII, "Hazardous Constituents," and Part 264 Appendix IX, "Groundwater Monitoring List."

Investigation-Derived Waste (IDW) for the purposes of this permit is defined as waste generated through investigative processes. IDW may include, but is not limited to, drilling muds, cuttings, and purge water from test pit and well installations; purge water, soil, and other materials from collection of samples; residues (e.g., ash, spent carbon, well

development purge water) from testing of treatment technologies including pump and treat systems; contaminated personal protective equipment (PPE); and solutions (aqueous or otherwise) used to decontaminate equipment.

Interim Measures (IM) for purposes of this Permit are actions necessary to minimize or prevent the further migration of contaminants or limit actual or potential human and environmental exposure to contaminants while long-term corrective action remedies are evaluated and, if necessary, implemented.

Land Disposal Facility for purposes of this Permit is a facility that uses a surface impoundment, landfill, land treatment or waste pile unit to manage or dispose of hazardous waste pursuant to §12-8-66 of the Georgia Hazardous Waste Management Act, as amended, and §3004 of RCRA, as amended.

Qualified Groundwater Scientist for the purposes of this Permit means a scientist who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields, as demonstrated by a current State of Georgia registration and completion of accredited university courses, that enable that individual to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport.

Release for the purposes of this Permit includes any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of any hazardous waste, hazardous waste constituents or hazardous constituents.

Remediation waste for the purposes of this Permit includes all solid and hazardous wastes, and all media (including ground water, surface water, soils, and sediments) and debris, which contain listed hazardous wastes or which themselves exhibit a hazardous waste characteristic, that are managed for the purpose of implementing corrective action requirements under 40 CFR §264.101 and Section 12-8-71(b) of the Georgia Hazardous Waste Management Act. For a given facility, remediation wastes may originate only from within the facility boundary, but may include waste managed in implementing corrective action required under 40 CFR §264.101(c) for releases beyond the facility boundary.

Solid Waste Management Unit (SWMU) for the purposes of this Permit includes, but is not limited to, any landfill, surface

impoundment, waste pile, land treatment unit, incinerator, injection well, tank (including storage, treatment, and accumulation tanks), container storage unit, wastewater treatment unit, elementary neutralization unit, transfer station, or recycling unit or any other unit from which hazardous waste, hazardous waste constituents or hazardous constituents might migrate, irrespective of whether the units were intended for the management of solid and/or hazardous waste. SWMUs include areas that have been contaminated by routine and systematic releases of hazardous waste or hazardous constituents, excluding one-time accidental spills that are immediately remediated and cannot be linked to solid waste management activities (e.g., product or process spills).

Treatment for the purpose of this Permit refers to any method, technique, or process, including neutralization, designed to change the physical, chemical or biological character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste non-hazardous, or less hazardous; safer to transport, store, or dispose of; or amenable for recovery, amenable for storage or reduced in volume.

I.F Conditions Related to Compliance with General Facility Standards (40 CFR Part 264 Subparts B, C, D, E, G, H)

I.F.1 The Permittee must follow the procedures and plans described in detail in the Permit Application dated February 9, 2007, as amended, which are hereby incorporated by reference and include at least the following:

(a) Waste Analysis Plan - Section C-2
(b) Biennial Reporting - Section D-9
(c) Procedures to Prevent Hazards - Section F
(d) Contingency Plan - Section G
(e) Personal Training Program - Section H
(f) Closure and Post-Closure Plans - Section I

I.F.2 The following activities must be carried out as prescribed in 40 CFR Part 264 Subparts B, C, D, and E.

(a) Required Notices - §264.12(a) and (b)
(b) Security - §264.14(b) and (c)
(c) Repairs and Inspection Log - §264.15(c) and (d)
(d) Annual Review of Training - §264.16(c)

(e) General Requirements for Ignitable, Reactive and Incompatible Wastes - §264.17
(f) Design and Operation - §264.31
(g) Testing and Maintenance of Equipment - §264.33
(h) Access to Communications or Alarm System - §264.34
(i) Maintain Aisle Space - §264.35
(j) Arrangements with Local Authorities - §264.37
(k) Amendment of Contingency Plan - §264.54
(l) Operating Record - §264.73 and Disposition of Records §264.74
(m) Reports - §264.75 and §264.77
(n) Manifest System - §264.70 through §264.72

I.F.3 The following activities must be carried out as prescribed in 40 CFR Part 264 Subparts G & H, and Section I of the Permit Application dated February 9, 2007, as amended.

(a) Closure Performance Standard - §264.111 and §264.112
(b) Closure in Accordance with Approved Plan - §264.113
(c) Amendment of Closure Plan and Notification of Closure - §264.112(b) and (c)
(d) Disposal or Decontamination of Equipment - §264.114
(e) Certification of Closure - §264.115
(f) Contingent Post-Closure - §264.117
(g) Amendment of Post-Closure Plan - §264.118
(h) Post-Closure Notices - §264.119
(i) Certification of Completion of Post-Closure - §264.120

I.G Special Conditions Applicable to Entire Facility

I.G.1 Waste Minimization. The Permittee shall be required to certify no less often than annually that the Permittee has a program in place to reduce the volume and toxicity of hazardous waste that he generates to the degree determined by the Permittee to be economically practicable, and the proposed method of treatment, storage, or disposal is that practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment in accordance with 40 CFR §264.73(b)(9).

I.G.2 Land Disposal Restrictions. The Permittee shall comply with all provisions of 40 CFR §268 (Land Disposal Restrictions) for all wastes to which they are applicable.

I.G.3 Contingency Plan. The Permittee must submit any revisions of the Contingency Plan to those government agencies and local authorities listed in Section G of the application within twenty (20) days of approval of the revision by the Director.

I.G.4 Relationship with Tenant Commands and Other Activities. Each tenant command, contractor worksite, deployable unit, Army and Air Force Exchange Service (AAFES) operation, or other activity at the Facility is subject to the conditions of this permit.

a. All satellite accumulation areas including those at tenant commands and other activities shall be operated in accordance with all requirements of Section 391-3-11-.08 of the Rules (40 CFR 262 Subpart C).
b. Accumulated waste at any satellite accumulation area shall be removed within three days of completion of accumulation to Building 1157.

I.G.6 Generator Accumulation Sites. The Permittee shall provide the following at each individual or group generator accumulation site, 90-day area, satellite accumulation area, or area where IDW is managed at the Facility:

a. Secondary containment and leak detection for containers, conforming to the requirements of 40 CFR 264 Subpart I. All containers, regardless of age or contents, are subject to this requirement.
b. Secondary containment and leak detection for tanks, conforming to the requirements of 40 CFR 264 Subpart J. All tanks, regardless of age or contents, are subject to this requirement.
c. The secondary containment requirement for satellite accumulation areas and areas where Investigation-Derived Waste (IDW) is managed may be waived if the unit is located on a competent, impervious, compatible surface, and protected from precipitation.

I.H Standards for the Management of Used Oil

I.H.1 Definitions. Terms used in this section shall be defined as in 40 CFR Part 279.

I.H.2 Applicability. The conditions in this section apply to all used oil generation and management points at the Facility. The Facility is also subject to the applicable Spill Prevention, Control and Countermeasures

requirements (40 CFR Part 112) and, for those sites utilizing underground tanks, the Underground Storage Tank requirements (40 CFR Part 280), whether or not the used oil exhibits any characteristics of hazardous waste. Determination of jurisdiction for underground storage tanks at the Facility shall be performed by the Director on a unit-by-unit basis.

I.H.3 General. The Permittee shall be subject to the requirements of 40 CFR Part 279 for the generation and management of used oil generated by, received at, or shipped from the Facility. Unless otherwise stated in Section I.H.4 below, used oil activities at the Facility shall comply with the requirements of 40 CFR Part 279 Subpart C.

I.H.4 Storage of Used Oil. The Permittee shall store used oil only in containers or tanks; for the purposes of this authorized storage, secondary containment and spill prevention, control, and countermeasures structures or devices (specifically including Wash Racks) are not considered containers or tanks. Storage containers and tanks shall be maintained and labeled, and releases responded to, as in 40 CFR Part 279 Subpart F. Containers of used oil generated at the Facility shall be transferred within 72 hours of completion of accumulation to the accumulation tank assigned to the generating activity.

SECTION II: STORAGE IN CONTAINERS

II.A **General.** The Conditions in this section apply to the Hazardous Waste Storage Facility, Building Number 1157, as depicted in the Topographic Map, Figure B-2, and shown in Figures B-6, B-7, B-8, B-9, D-1 and D-2 of the Permit Application dated February 9, 2007, as amended.

II.B **Conditions Related Solely to Storage in Containers**

II.B.1 The Permittee is authorized to store a maximum of 124,080 gallons of hazardous waste in the Hazardous Waste Storage Facility, Building Number 1157, as identified in Section D of the Permit Application dated February 9, 2007, as amended.

II.B.2 If a container holding hazardous waste is not in good condition, or if it begins to leak, the Permittee shall transfer the hazardous waste from such container to a container that is in good condition.

II.B.3 Containers must be managed according to 40 CFR §264.173.

II.B.4 Spilled or leaked waste and accumulated precipitation must be managed in accordance with 40 CFR §264.175(b)(5).

II.B.5 Incompatible wastes and materials must be managed according to 40 CFR §264.177.

II.B.6 The Permittee shall maintain the containment system in accordance with 40 CFR §264.175.

II.B.7 Each container in the Hazardous Waste Storage Facility, Building 1157, must be clearly marked with the words "Hazardous Waste," the applicable EPA Hazardous Waste Number(s) found in 40 CFR Part 261, and a description of the actual contents of that container.

II.B.8 If applicable, the Permittee shall comply with all of the requirements and provisions of 40 CFR 264 Subpart AA - Air Emission Standards for Process Vents, 40 CFR 264 Subpart BB - Air Emission Standards for Equipment Leaks, and 40 CFR 264 Subpart CC - Air Emission Standards for Tanks, Surface Impoundments, and Containers.

SECTION III: CORRECTIVE ACTION FOR RELEASES FROM SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN

III.A **Applicability.** The Conditions of this Permit Section III apply to all solid waste management units (SWMUs) and Areas of Concern (AOCs) listed in Appendix A and any additional SWMUs or AOCs discovered by any other means. The determination of the need for and implementation of Corrective Action is required by 40 CFR §264.101(a) and §12-8-66 of the Georgia Hazardous Waste Management Act for releases from all SWMUs and AOCs contained within the facility property boundaries and, as required by 40 CFR §264.101(c) and §12-8-66 of the Georgia Hazardous Waste Management Act, for releases extending beyond the facility property boundaries.

The Conditions of Permit Section III apply to:

(1) The SWMUs and AOCs, identified in Appendix A, which are undergoing corrective action per an approved Corrective Action Plan (CAP);
(2) The SWMUs and AOCs, identified in Appendix A, which require RCRA Facility Investigation (RFI);
(3) The SWMUs and AOCs, identified in Appendix A, which require Confirmatory Sampling (CS);
(4) The SWMUs and AOCs, identified in Appendix A, which require a SWMU Assessment Report (SAR);
(5) The SWMUs and AOCs, identified in Appendix A, which require no further action under this Permit at this time; and
(6) Any additional SWMUs and AOCs discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means.

III.B **Notification and Assessment Requirements for Newly Identified SWMUs and AOCs and for Newly Discovered Releases at Previously Identified SWMUs and AOCs**

III.B.1 The Permittee shall notify the Director in writing, within fifteen (15) days of discovery, of any additional SWMUs or AOCs discovered during the course of groundwater monitoring, on-going field investigations, environmental audits, or any other means. This shall include, but is not limited to, newly discovered releases at previously identified SWMUs or AOCs. Notification shall include, at a minimum, the location of the SWMU or AOC and all available information pertaining to the nature of the release (e.g., media affected, hazardous constituents released, magnitude of release, etc.). The Permit shall be modified in accordance with 40 CFR Part 270 to incorporate the newly discovered SWMUs or AOCs.

III.B.2 The Permittee shall prepare and submit to the Director, within sixty (60) days of discovery of a SWMU or AOC as identified in Condition III.B.1 or within sixty (60) days of notification by the Director, a SWMU Assessment Report (SAR). The SAR shall describe the methods and specific actions used to determine whether a prior or continuing release of hazardous waste, hazardous constituents or hazardous waste constituents has occurred. At a minimum, the SAR shall provide the following information for each SWMU or AOC:

(a) Type of unit;
(b) Location of each unit in a topographic map of appropriate scale, as required by 40 CFR §270.14(b)(19);
(c) General dimensions, capacities and structural description of the unit (supply any available plans/drawings);
(d) Function of unit;
(e) Dates that the unit was operated;
(f) Description of the wastes that have been managed at/in the unit to the extent available. Include any available data on hazardous constituents in the wastes; and
(g) Description of any known releases or spills (to include groundwater data, soil analyses, sediment, air, and/or surface water data). If the report is being prepared as a result of a newly discovered release at a previously identified SWMU or AOC, the data may be limited to that pertaining to the newly discovered release, as long as a brief summary of the investigative and remedial actions taken in response to previous releases at the SWMU and/or AOC is provided, along with the current status in relation to those releases.

III.B.3 Based on the contents of the SAR, the Director shall determine the need for further investigations at the SWMU or AOC covered in the SAR. If the Director determines that such investigations are needed, the Permittee shall be notified to prepare a Confirmatory Sampling Work Plan, as outlined in Condition III.C, or an RFI Work Plan, as outlined in Condition III.D, for such investigations.

III.C **Confirmatory Sampling (CS)**

III.C.1 The Permittee shall prepare and submit to the Director, within forty-five (45) days of notification by the Director, a Confirmatory Sampling (CS) Work Plan to determine any release from SWMUs or AOCs identified in Condition III.B.3. The CS Work Plan shall include schedules of implementation and completion of specific actions necessary to determine whether or not a release has occurred.

III.C.2 The CS Work Plan must be approved by the Director, in writing, prior to implementation.

III.C.3 The Permittee shall implement the confirmatory sampling in accordance with the approved CS Work Plan.

III.C.4 The Permittee shall prepare and submit to the Director in accordance with the schedule in the approved CS Work Plan, a Confirmatory Sampling (CS) Report which includes all data (including raw data), a summary and analysis of the data, and a recommendation for further investigation or No Further Action based upon contents of the CS Report.

III.C.5 Based on the results of the CS Report, the Director shall determine the need for further investigations at the SWMUs or AOCs covered in the CS Report. If the Director determines that such investigations are needed, the Permittee shall be required to prepare a plan for such investigations as outlined in Condition III.D.1. The Director will notify the Permittee of any No Further Action decision.

III.D **RCRA Facility Investigation (RFI)**

III.D.1 RFI Work Plan

III.D.1.a The Permittee shall complete and submit to the Director, within ninety (90) days of notification by the Director, an RFI Work Plan for those units identified under Conditions III.B.3 and III.C.5.

III.D.1.b The Permittee shall complete and submit, within ninety (90) days of notification by the Director, an RFI Work Plan for those SWMUs and AOCs referenced in Condition III.A as requiring an RFI.

III.D.1.c The RFI Work Plan required by Condition III.D.1 shall include, but is not limited to, a schedule for implementation and report submittal; a description of the specific actions necessary to determine the nature and extent of contamination (including releases that extend beyond the facility's property boundary); potential migration pathways for releases (e.g., air, land, surface water, and groundwater); actual or potential receptors; and applicable background concentrations. The Permittee must provide sufficient justification that migration through a potential pathway is not likely if it is not included in the plan. Such deletions are subject to the approval of the Director.

III.D.1.d Upon a determination by the Director that the Work Plan required by Condition III.D.1.a is complete, the Permittee shall conduct the RFI in accordance with the schedule contained in the approved Work Plan.

III.D.2 RFI Report

III.D.2.a The Permittee shall complete and submit the RFI Report in accordance with the schedule contained in the RFI Work Plan required by Permit Section III.D.1. The report shall provide a summary of all activities undertaken during the RFI to implement the approved Work Plan. The report shall provide a complete description of the nature and extent of contamination identified during the RFI including sources, migration pathways, actual or potential receptors and applicable background concentrations. The RFI Report shall address all releases which extend beyond the facility property boundary unless the Permittee demonstrates to the Director's satisfaction that, despite the Permittee's best efforts, the Permittee was unable to obtain permission to undertake actions required by the Work Plan.

III.D.2.b If the time required to conduct the RFI is greater than one hundred eighty (180) days, the Permittee may be required to provide the Director with quarterly RFI Progress Reports (90 day intervals) beginning ninety (90) days from the initiation of the RFI, as specified in the approved RFI Work Plan. The Progress Report shall, at a minimum, contain the following information:

(i) A description of the portion of the RFI completed;
(ii) Summaries of findings;
(iii) Summaries of any deviations from the approved RFI Work Plan during the reporting period;
(iv) Summaries of all contacts with local community public interest groups or State government regarding RFI investigations;
(v) Summaries of any problems or potential problems encountered during the reporting period;
(vi) Actions taken to rectify problems;
(vii) Changes in relevant personnel; and
(viii) Projected work for the next reporting period.

III.D.2.c The Director shall review the RFI Report required by Condition III.D.2.a, and upon determination that the report is complete, shall notify the Permittee of the need for further investigative actions and/or the need for corrective action as required under 40 CFR §264.101 and/or §12-8-71(b) of the Georgia Hazardous Waste Management Act.

III.E Corrective Action Plan (CAP)

III.E.1 The Director shall review the RFI Report required by Conditions III.D.2 and, upon a determination that the report is complete, shall notify the Permittee of the need for corrective action as required 40 CFR §264.101(a).

III.E.2 Upon a determination by the Director that corrective action is needed, the Permittee shall submit a CAP in accordance with a schedule to be determined by the Director. The CAP shall provide a description of the corrective measures to be taken with regard to those releases identified by the RFI Report required by Conditions III.D.2 including a schedule of implementation and completion, and a cost estimate for completion of Corrective Action.

III.E.3. Upon a determination by the Director that the CAP is complete, the Director shall initiate a Permit modification pursuant to 40 CFR §270.41 for remedy selection.

III.E.4 Upon approval of a corrective action plan required in Condition III.E.2, the Permittee will implement the selected remedy in accordance with the approved CAP and the schedule of implementation contained in the CAP.

III.E.5 Upon completion of corrective action per an approved CAP, the Permittee shall request a Permit modification to reflect the corrective action status of the SWMU(s) and/or AOC(s). Such a modification request which would result in a No Further Action determination will be a Class 3 modification pursuant to 40 CFR §270.42.

III.E.6 The Permittee may propose Risk-based standards in any corrective action plan required by the Director to be submitted pursuant to this Permit.

III.E.7 All plans and schedules required by the conditions of this Permit are, upon approval by the Director, incorporated into this Permit by reference and become an enforceable part of this permit. Any noncompliance with such approved plans and schedules shall be termed noncompliance with this Permit.

III.F Interim Measures (IM)

III.F.1 IM Work Plan

III.F.1.a Upon notification by the Director that Interim Measures (IM) are necessary for any SWMU and/or AOC, the Permittee shall prepare and submit an IM Work Plan. The IM Work Plan shall be submitted within thirty (30) days of such notification and shall minimally include the elements listed in Condition III.F.1.b. The Permittee may initiate an IM by submitting an IM Work Plan for approval and reporting in accordance with the requirement under Condition III.F.

III.F.1.b The IM Work Plan shall ensure that the interim measures are designed to mitigate any current or potential threat(s) to human health or the environment and are consistent with and integrated into any long-term solution at the facility. The IM Work Plan shall minimally include the following: Introduction/Purpose, Conceptual Model of Contaminant Migration, Evaluation of Interim Measure Alternatives, Description of Interim Measures (including any designs, plans, or specifications), and a Schedule of Implementation.

III.F.1.c The IM Work Plan must be approved by the Director, in writing, prior to implementation.

III.F.2 IM Implementation

III.F.2.a The Permittee shall implement the IM in accordance with the specifications and schedule in the approved IM Work Plan.

III.F.2.b The Permittee shall give notice to the Director, for approval, at least fifteen (15) days prior to any planned changes, reductions or additions to the IM Work Plan.

III.F.2.c Final approval of corrective action required under 40 CFR §264.101 which is achieved through IM shall be in accordance with 40 CFR §270.41 for remedy selection.

III.F.3 IM Report

III.F.3.a Upon completion of interim measures, the Permittee shall complete and submit an interim measures report within ninety (90) days. The report shall provide the following information:

(i) A description of interim measures implemented;
(ii) A summary of all data or other information obtained during implementation of interim measures; and
(iii) A summary of the effectiveness of the interim measures in achieving the objective of Condition III.E.1.b.

III.F.3.b If the time required for completion of interim measures is greater than one year, the Permittee shall provide the Director with progress reports at intervals specified in the approved Work Plan. The Progress Reports shall minimally contain the following information:

(i) A description of the portion of the interim measures completed;
(ii) Summaries of any deviation from the IM Work Plan during the reporting period;
(iii) Summaries of any problems or potential problems encountered during the reporting period;
(iv) Projected work for the next reporting period; and
(v) Copies of laboratory/monitoring data.

III.G Reporting, Recordkeeping and Response

III.G.1 All work plans and schedules shall be subject to approval by the Director prior to implementation. Upon approval, the Permittee shall implement all work plans and schedules as written, or as specified by the Director.

III.G.2 Two (2) copies of all reports and work plans required by the Conditions of the Permit Section III shall be provided by the Permittee to the Director. The Permittee shall provide up to two (2) additional copies of each report or work plan at the written request of the Director.

III.G.3 All work plans and reports shall be submitted in accordance with the approved schedule. Extensions of the due date for submittals may be granted by the Director based upon the Permittee's demonstration that sufficient justification for the extension exists. The extension request (1) must be submitted to the Director in writing (2) must be made in a timely manner and (3) must specify an alternate submittal due date.

III.G.4 The Permittee shall enter all monitoring, testing and analytical data obtained pursuant to the Conditions of this Permit into the operating record, as required by 40 CFR §264.73(b)(6).

III.G.5 All geologic and engineering reports required by this permit shall be signed and sealed by the appropriate Georgia registered professional as defined by State law. Additionally, reports containing ground water data or interpretation shall be accompanied by the following certification statement:

> I certify that I am a qualified ground-water scientist who has received a baccalaureate or postgraduate degree in the natural sciences or engineering, and have sufficient training and experience in ground-water hydrology and related fields, as demonstrated by state registration and completion of accredited university courses, that enable me to make sound professional judgments regarding ground-water monitoring and contaminant fate and transport. I further certify that this report was prepared by myself or by a subordinate working under my direction.

III.G.6 The Permittee shall ensure that all plans, reports, notifications, and other submissions to the Director required by the Conditions of the Permit Section III are signed and certified in accordance with 40 CFR §270.11.

III.G.7 All raw data, such as laboratory reports, drilling logs, bench-scale or pilot-scale data, and any other supporting information gathered or generated during activities undertaken pursuant to this section shall be maintained at the facility during the term of this Permit, including any reissued Permits.

III.G.8 All plans and schedules required by the Conditions of Permit Section III are, upon approval by the Director, incorporated into this section by reference and become an

enforceable part of this Permit. Any non-compliance with such approved plans and schedules shall be termed non-compliance with this Permit.

III.G.9 If the Director or the Permittee at any time determines that any reports or activities conducted pursuant to any plan required by Section III of this Permit, no longer satisfies the requirements of 40 CFR §264.101, this Permit, or the intent of that plan or report for prior or continuing releases, the Permittee must submit an amended plan to the Director within sixty (60) days of such determination.

APPENDIX A:
FORT STEWART HAZARDOUS WASTE PERMIT HW-045(S)
SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN

SWMU/AOC NUMBER	SWMU/AOC NAME	CORRECTIVE ACTION REQUIREMENT
1	Post South Central Landfill	CAP dated 12/99 & revised 5/22/00
2	Camp Oliver Landfill	CAP dated 3/01
3	TAC-X Landfill	CAP dated 3/01 & revised 7/3/01
4A	Burn Pit A	NFA
4B	Burn Pit B	NFA
4C	Burn Pit C	NFA
4D	Burn Pit D	NFA
4E	Burn Pit E	NFA
4F	Burn Pit F	NFA
4G	Burn Pit G	NFA
5	Hospital Pathological Incinerator	NFA
6	Classified Document Incinerator	NFA
7	Veterinary Incinerator	NFA
8	Inactive EOD Area located approximately Nine (9) Miles Northeast of Garrison Area	CAP dated 5/01
9	Inactive EOD Area in Red Cloud Range, Hotel Area	CAP dated 5/01
10	Inactive EOD Area North of Garrison Area	CAP dated 7/01
11	Inactive EOD Area located approximately three (3) Miles Northeast of Garrison Area	CAP dated 5/01
12A	Active EOD containing Open Detonation Unit and Open Burn Unit	NFA
12B	Open Detonation (OD) Unit	NFA
12C	Open Burn (OB) Unit	NFA
13	Fire Training Area at Wright Army Airfield	CAP dated 1/06
14	Old Fire Training Area	NFA
15	Hospital Silver Recovery Unit	NFA

SWMU/AOC NUMBER	SWMU/AOC NAME	CORRECTIVE ACTION REQUIREMENT
16	PCB Transformer Storage Shed	NFA
17	DRMO Hazardous Waste Storage Area	NFA
18	Industrial Wastewater Treatment Plant	NFA
19	Old Sludge Drying Beds	NFA
20	Sewage Disposal Beds	NFA
21	Central Energy Plant	NFA
22	DPW Waste Oil Tanks	NFA
23	Wright Army Airfield Water POL Point	NFA
24A	Radiator Repair Shop	NFA
24B	Old Radiator Shop/Paint Booth	CAP dated 7/02 & revised 8/23/04
25	Eighty-six (86) Used Oil and Petroleum Underground Storage Tanks	NFA
26	Former 724th Tanker Purging Station	CAP dated 1/00 & revised 4/10/00
27A	3rd Squadron 7th Calvary Motor Pool and four (4) associated Oil/Water Separators	NFA
27B	1st BN, 3d ADA Motor Pool and associated Oil/Water Separator	NFA
27C	92d ECB (H) Motor Pool and associated Oil/Water Separator	NFA
27D	26th SPT BN Motor Pool and associated Oil/Water Separator	NFA
27E	703d SPT BN (Main) Motor Pool and associated two (2) Oil/Water Separators	NFA
27F	3d Inf. Engineer Brigade Motor Pool and associated two (2) Oil/Water Separators	CAP dated 7/02 & revised 10/29/04
27G	DISCOM Motor Pool and associated Oil/Water Separator	NFA
27H	DOL Maintenance Motor Pool and associated two (2) Oil/Water	NFA

SWMU/AOC NUMBER	SWMU/AOC NAME	CORRECTIVE ACTION REQUIREMENT
	Separators	
27I	NGTC Block 9900, 10300 Motor Pool and associated two (2) Oil/Water Separators	NFA
27J	GANG MATES Motor Pool and associated two (2) Oil/Water Separators	NFA
27K	3rd BN, 69th Armor Motor Pool Wash Rack and Oil/Water Separator	NFA
27L	NGTC Block 10200 Washrack and Oil/Water Separator	NFA
27M	NGTC Block 10100 Washrack and Oil/Water Separator	NFA
27N	NGTC Block 9800 Washrack and Oil/Water Separator	NFA
27O	NGTC Block 9700 Washrack and Oil/Water Separator	NFA
27P	NGTC Block 9500 Washrack and Oil/Water Separator	NFA
27Q	NGTC Block 9400 Washrack and Oil/Water Separator	NFA
27R	396 Transportation Company Washrack and Oil/Water Separator	NFA
27S	Two (2) 103d MI BN Washracks and associated two (2) Oil/Water Separators	NFA
27T	293 MP Company Washrack and Oil/Water Separator	NFA
27U	Two (2) Wright Army Airfield Washracks and Oil/Water Separator	NFA
27V	Auto Craft Center Oil/Water Separator	NFA
28	724th Battery Shop	NFA
29	Evans Army Heliport POL Storage Facility	NFA
30	Recirculating Wash Impoundment "Birdbath"	NFA
31	DEH Asphalt Tanks	NFA

SWMU/AOC NUMBER	SWMU/AOC NAME	CORRECTIVE ACTION REQUIREMENT
32	Supply Diesel Tank	NFA
33	DPW Pesticide Warehouse	NFA
34	DEH Equipment Wash Rack	NFA
35	Wright Army Airfield Bulk Fuel System	CAP - (Oversight of this site has been deferred to the Land Protection Branch.)
36	Hazardous Waste Storage Facility (Building 1157)	Operating HWMU, NFA
37	NGTC Equalization Basin	NFA
38	Waste Pile at Officer's Club	NFA
39	DSMF (Building 1160)	RFI
AOC 1	Anti Aircraft Range 1	Operating Range, NFA at this time*
AOC 2	Anti Aircraft Range 2	CS
AOC 3	Anti Tank Range 90 mm	CS
AOC 4	Hand Grenade Course	Operating Range, NFA at this time*
AOC 5	Small Arms Range 1	Operating Range, NFA at this time*
AOC 7	Small Arms Range 3	CS
AOC 8	Hero Road Trench Area	CS

KEY
AOC - Area of Concern
CAP - Corrective Action Plan
CS - Confirmatory Sampling
HWMU - Hazardous Waste Management Unit
ICM - Interim Corrective Measures
NFA - No Further Action required at this time.
RFI - RCRA Facility Investigation
SAR - SWMU Assessment Report
SWMU - Solid Waste Management Unit

* Investigations and potential corrective actions will be required upon range closure.

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MEMORANDUM

TO: Travis McCoun, USACE-CENAB
Tom Colozza, USACE- CENAB
David King, USACE-CENAB
Chris Larson, USACE-CENAB

FROM: Jennifer Harlan, ERT

DATE: June 14, 2012

SUBJECT: Transect spacing at the Hero Road Trench Area (HRTA) for the Military Munitions Response Program (MMRP) RCRA Facility Investigation (RFI), Fort Stewart, Georgia

On the morning of June 13, 2012, upon review of the first set of EM31 data collected the previous day at the HRTA, it was discovered that transects in the area had been laid out at a spacing of 6.09 m (20 feet) rather than the previously agreed upon 4.57 m (15 feet).

The transects were initially staked by licensed surveyors at an interval of 100 m or less at the 6.09 m spacing, based on coordinates provided by ERT to the surveyors; this work was completed on June 7, 2012. Brush cutting of these marked transects is currently ongoing and should be completed June 14, 2012. However, 6.09 m transect spacing does not meet the data quality objective (DQO) in the Work Plan. ERT therefore proposes to collect data on transects in between the currently marked transects, resulting in a final transect spacing of 3.05 m (10 feet). The additional transects will be pin flag marked by ERT field personnel using the existing stakes placed by surveyors. Brush cutting will proceed on the new transects after they are flagged, and then EM31 data will be acquired on these newly installed transects.

The addition of these new transects should not affect the overall project schedule as ERT will be bringing in additional field staff to complete the work.

ERT will continue to coordinate closely with CENAB to ensure that all work is conducted in accordance with approved methods and agreements, and will document all discussions during the field work phase.

Please contact me if you have any questions or concerns with this revised approach.

Jennifer Harlan, PMP
ERT Project Manager

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MEMORANDUM

TO: Ana del R. Vergara, USACE-CESAS, Travis McCoun, USACE-CENAB, Thomas Colozza, USACE-CENAB, David King, USACE-CENAB, Chris Larson, USACE-CENAB

FROM: Jennifer Harlan

DATE: June 29, 2012

SUBJECT: Instrument Verification Strip at Fort Stewart, GA

ERT, under contract with the U.S. Army Corps of Engineers (USACE), Baltimore District, is performing a RCRA Facility Investigation (RFI) at Fort Stewart, Georgia. This memorandum addresses the Instrument Verification Strip (IVS) for the geophysical equipment being used in the Anti-Aircraft Range 90mm – 2 Munitions Response Site (MRS). The IVS is located adjacent to the Ammunition Supply Point (ASP) outside of the MRS.

A 50 m x 15 m test area was flagged for data collection on June 26, 2012. A mag and dig sweep of the area by UXO personnel was conducted first, and 82 scrap and MD items were recovered (Appendix A). The EM61-MK2A, integrated with a Topcon HiperGa RTK GPS, was used for data collection over this area in order to check for anomalies. Approximately 18 anomalies were found within the area covered, and a smaller area of 9 m x 25 m for the IVS was selected (Figure 1). Seven anomalies within the smaller area were excavated by UXO Technicians; these were aluminum and brass items that were not picked up by the instruments used during the map and dig operation. Once the anomalies were removed, the EM61-MK2A was used to verify clearance. The onsite USACE geophysicist verbally approved the pre-seed clearance.

Industry Standard Objects (ISOs) were utilized as seed items and buried at the depths/orientations designated by the design shown in Figure 7 of the Final Work Plan (Figure 4). The EM61-MK2A data were collected on the IVS on the background line and on the seed line 6 feet away (Figure 2). For the QC purpose (data repeatability), the two lines were surveyed a second time (Figure 3). The data were evaluated and the two data sets were very similar. The maximum differences between the two surveys are less than 10%. All of the seeds were detected on both passes.

A Georgia licensed surveyor captured the horizontal coordinates and depths of each seed item. Seed orientation and depths are summarized in Table 1.

Profiles of the two passes (mV vs. distance for each channel) for background line and seed line are shown in Figure 5. The data from Channel 2 are selected to present the maps and will be used for selecting the targets.

The IVS data were presented to the onsite USACE geophysicist on 26 June 2012 and approval was granted to proceed with data collection.

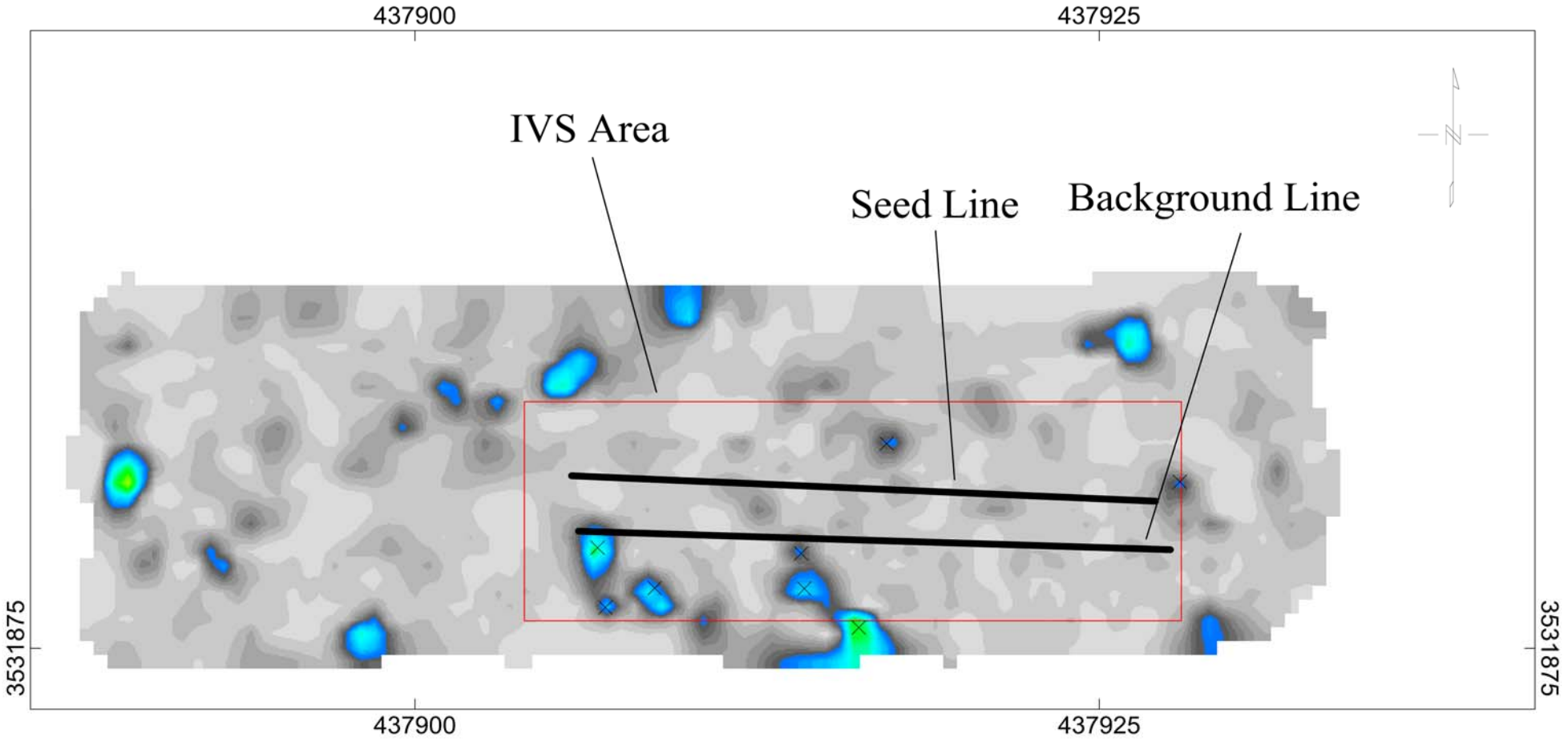
Table 1: Seed Items

Seed	ISO size	UTM Zone 17 N coordinates (m), center		Orientation	Direction	Seed depth (top) below ground surface (in)
		Easting	Northing			
1	Small	437924.168	3531880.858	Vertical	N/A	6
2	Small	437921.196	3531880.745	Horizontal	Across line	9
3	Medium	437918.071	3531881.108	Vertical	N/A	18
4	Medium	437911.924	3531881.068	Horizontal	Along line	18
5	Large	437915.106	3531880.953	Vertical	N/A	24

Profiles of the two passes (mV vs. distance for each channel) for background line and seed line are shown in Figure 5. The data from Channel 2 are selected to present the maps and will be used for selecting the targets.

The smallest MEC item recovered during previous investigations in this MRS was a 37mm high explosive round. The small ISO diameter is 33mm and was detected in the first pass of the survey with a peak value of 5.5 mV and the second pass with a peak value of 8.5 mV. The IVS background and noise values are 2 mV and 0.4 mV, respectfully. Given that this is a RFI to determine nature and extent of MEC and based on discussion with the onsite CENAB geophysical representative, an initial target threshold of **5 mV** is recommended for this investigation.

The EM61 ISO minimum response curves are shown in Figures 6-8, with actual responses plotted. All seed responses plotted above the theoretical minimum response calculated using EM61-MK2 Response v1.2.0.0 (NRL software).



Scale 1:250

2.5 0 2.5 5 7.5

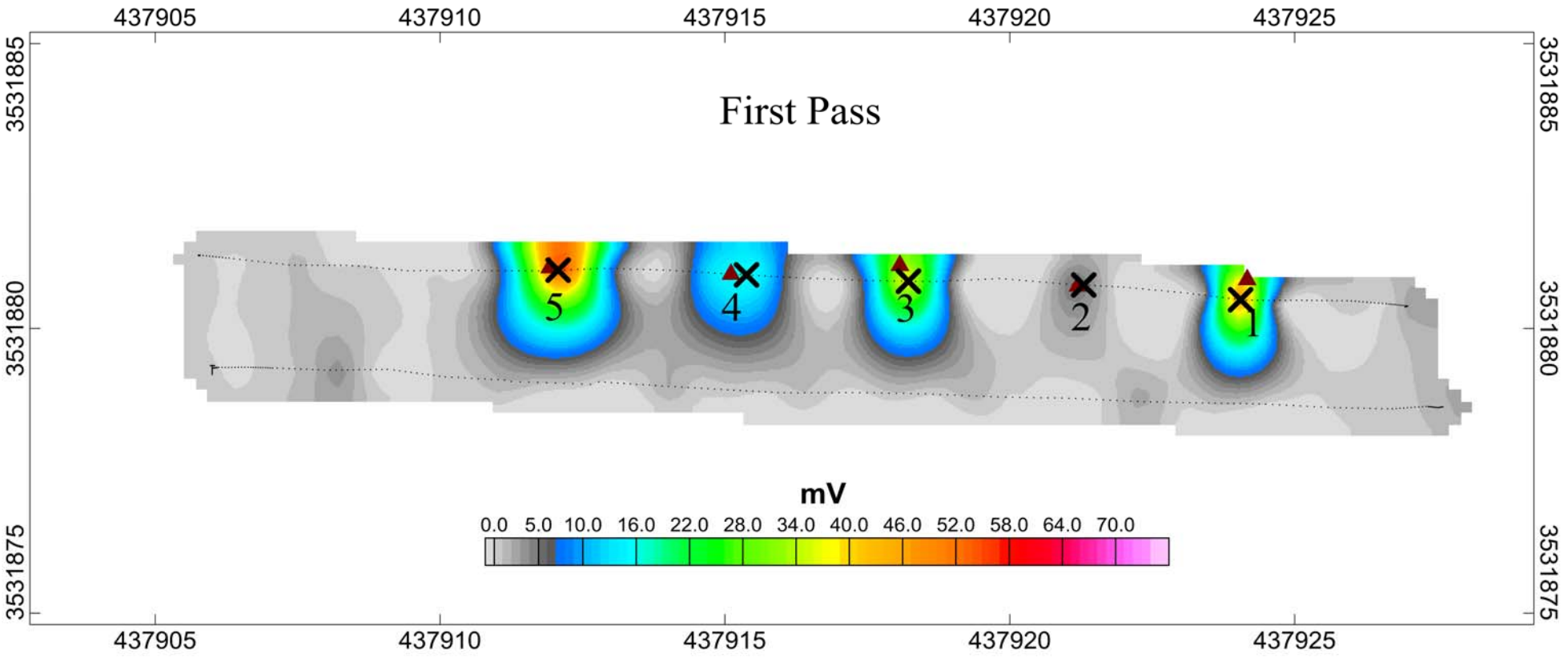
(meters)

WGS 84 / UTM zone 17N

Legend:

x Anomalies removed before buring the seeds

Figure 1: EM61MK2 Survey
Channel 2
IVS Area FT Stewart, GA
ERT Inc.



Legend:

- ▲ Seed Items
- 2 Seed Number
- x EM Targets

Scale 1:120

2.5 0 2.5

(meters)

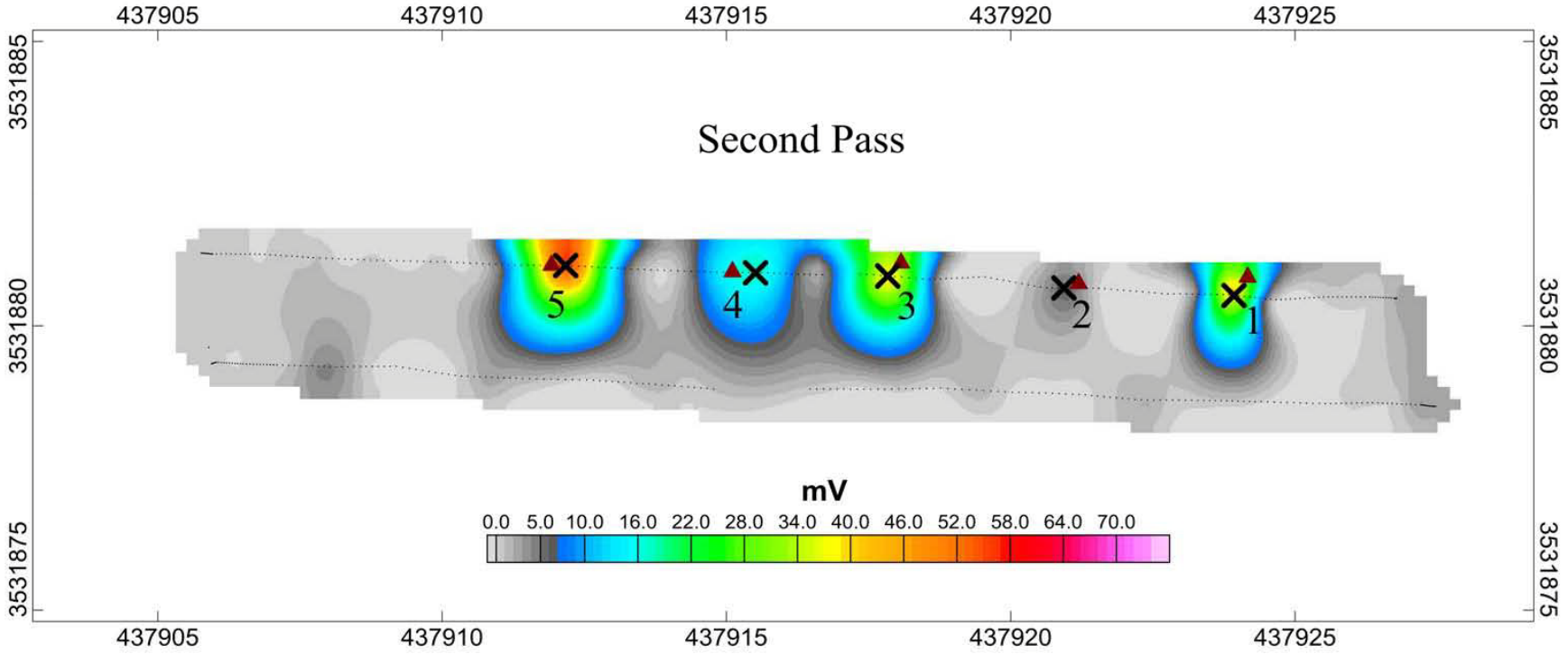
WGS 84 / UTM zone 17N

Figure 2: EM61MK2 Survey

Channel 2

IVS Area
FT Stewart, GA

ERT Inc.



Legend:

- ▲ Seed Items
- 2 Seed Number
- x EM Targets

Scale 1:120

2.5 0 2.5

(meters)

WGS 84 / UTM zone 17N

Figure 3: EM61MK2 Survey

Channel 2

IVS Area
FT Stewart, GA

ERT Inc.

LEGEND

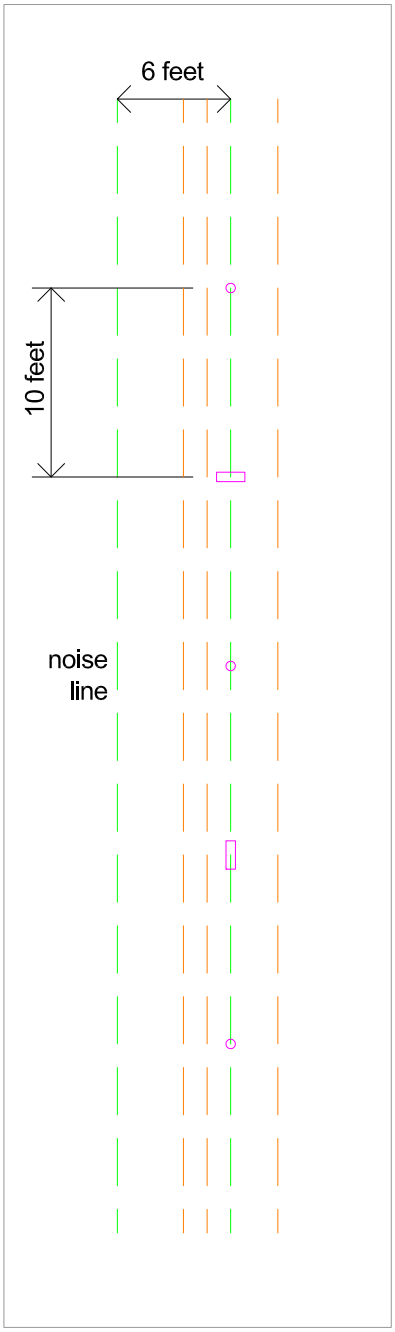
horizontal ISO, perpendicular to traverse

horizontal ISO, parallel to traverse

vertical ISO

ISOs are not shown to scale





IVS boundary
approximately 20.5 ft x 70 ft

1
Small ISO
depth: 6 in

2
Small ISO
depth: 9 in

3
Medium ISO
depth: 18 in

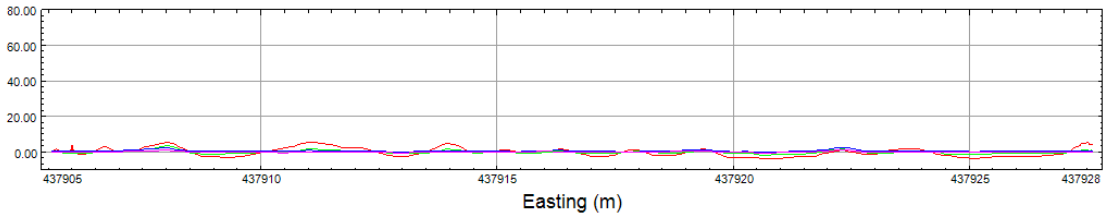
4
Medium ISO
depth: 18 in

5
Large ISO
depth: 24 in

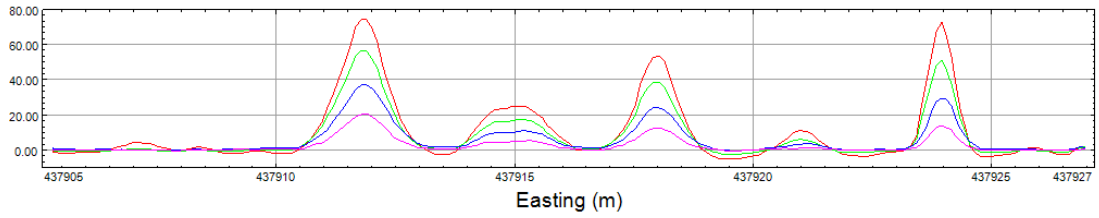
ERT EARTH RESOURCES TECHNOLOGY	Instrument Verification Strip Layout Anti-Aircraft Range 90mm - 2 MRS RCRA Facility Investigation, Fort Stewart, GA (copied from work plan)	Figure 4 June 2012 SCALE: 1" = 10'

Figure 5: EM61-MK2 Response Curves

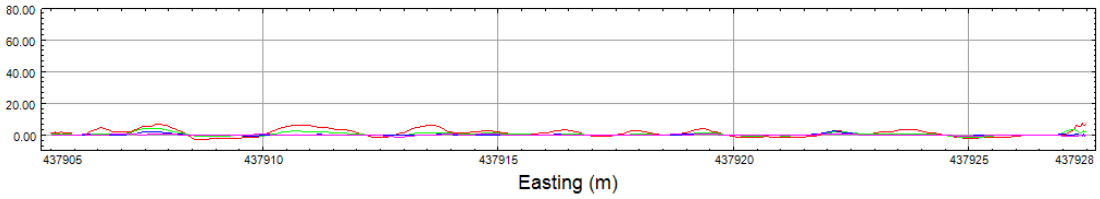
EM61MK2 Response (4 Channels), Background Line – 06/26/12, first pass



EM61MK2 Response (4 Channels), Seed Line – 06/26/12, first pass



EM61MK2 Response (4 Channels), Background Line – 06/26/12, second pass



EM61MK2 Response (4 Channels), Seed Line – 06/26/12, second pass

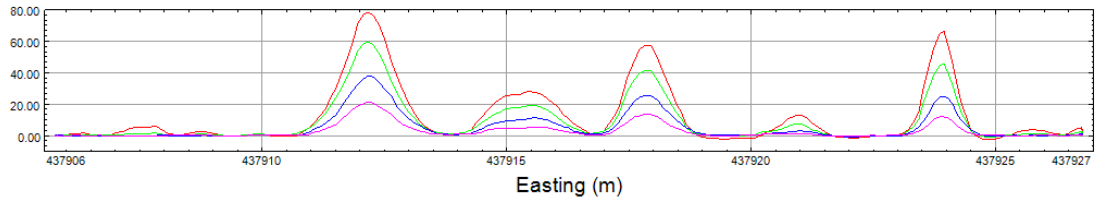


Figure 6: Min. EM61-MK2 Response to Small ISO with seed response

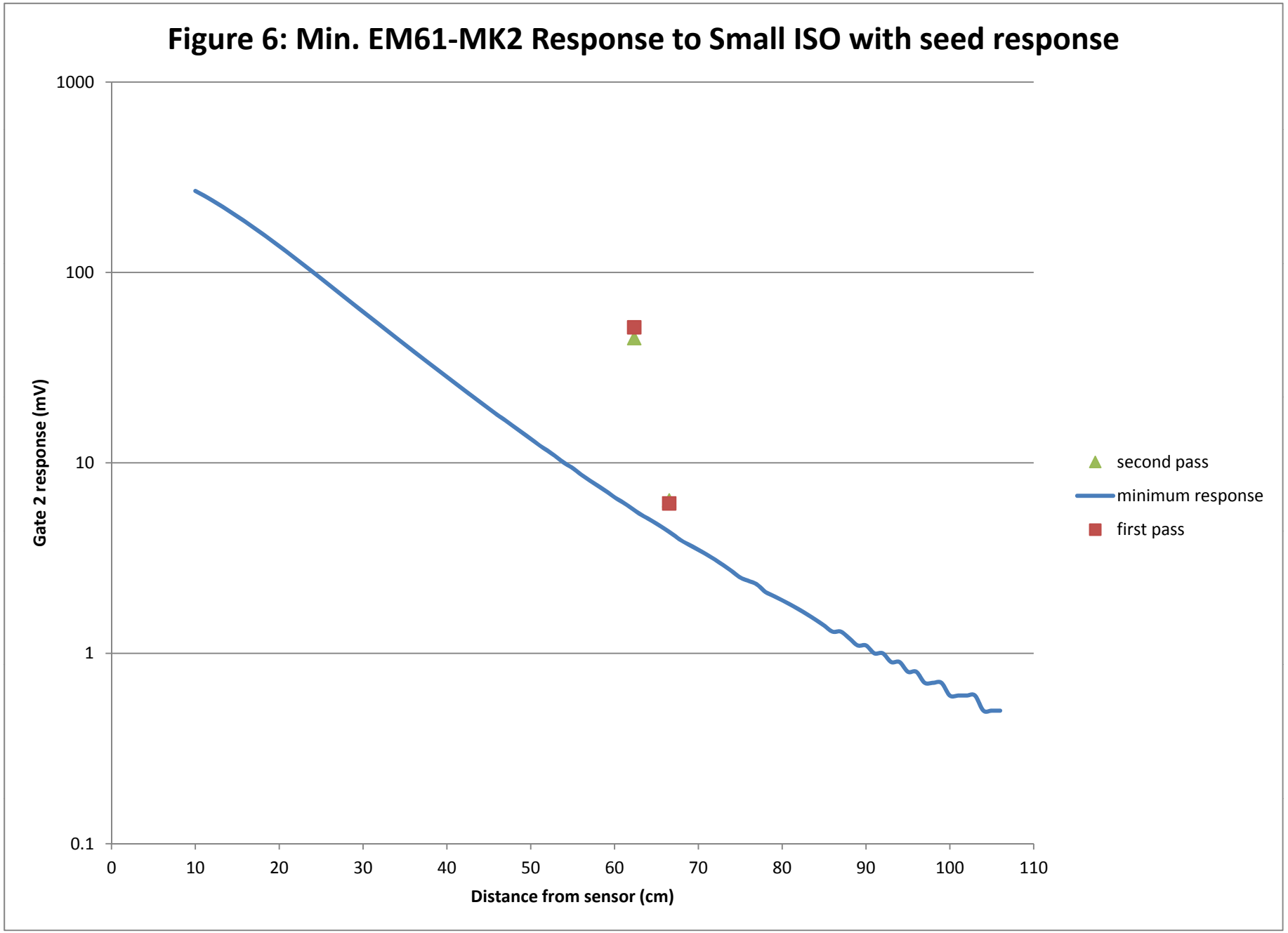


Figure 7: Min. EM61-MK2 Response to Medium ISO with seed response

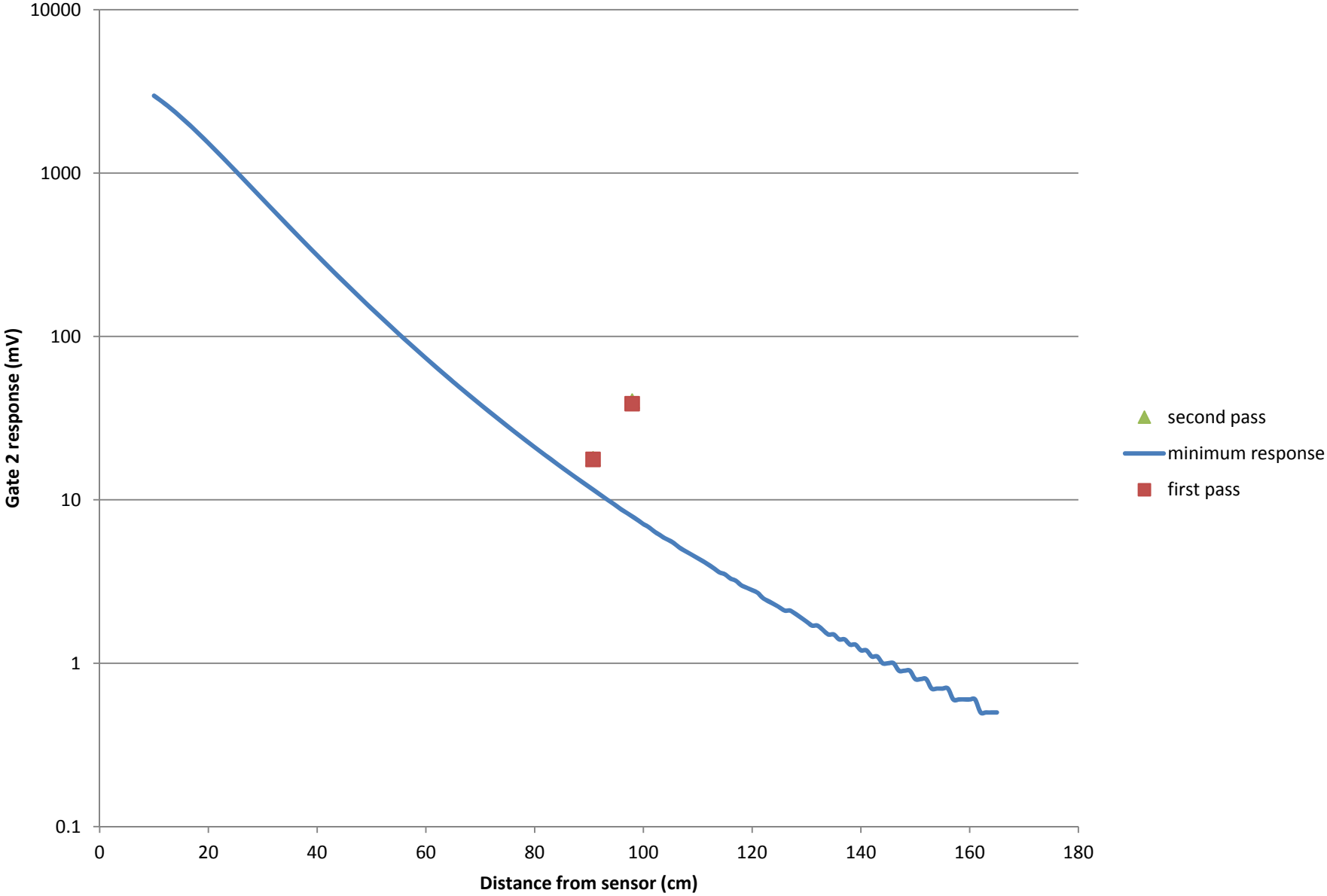
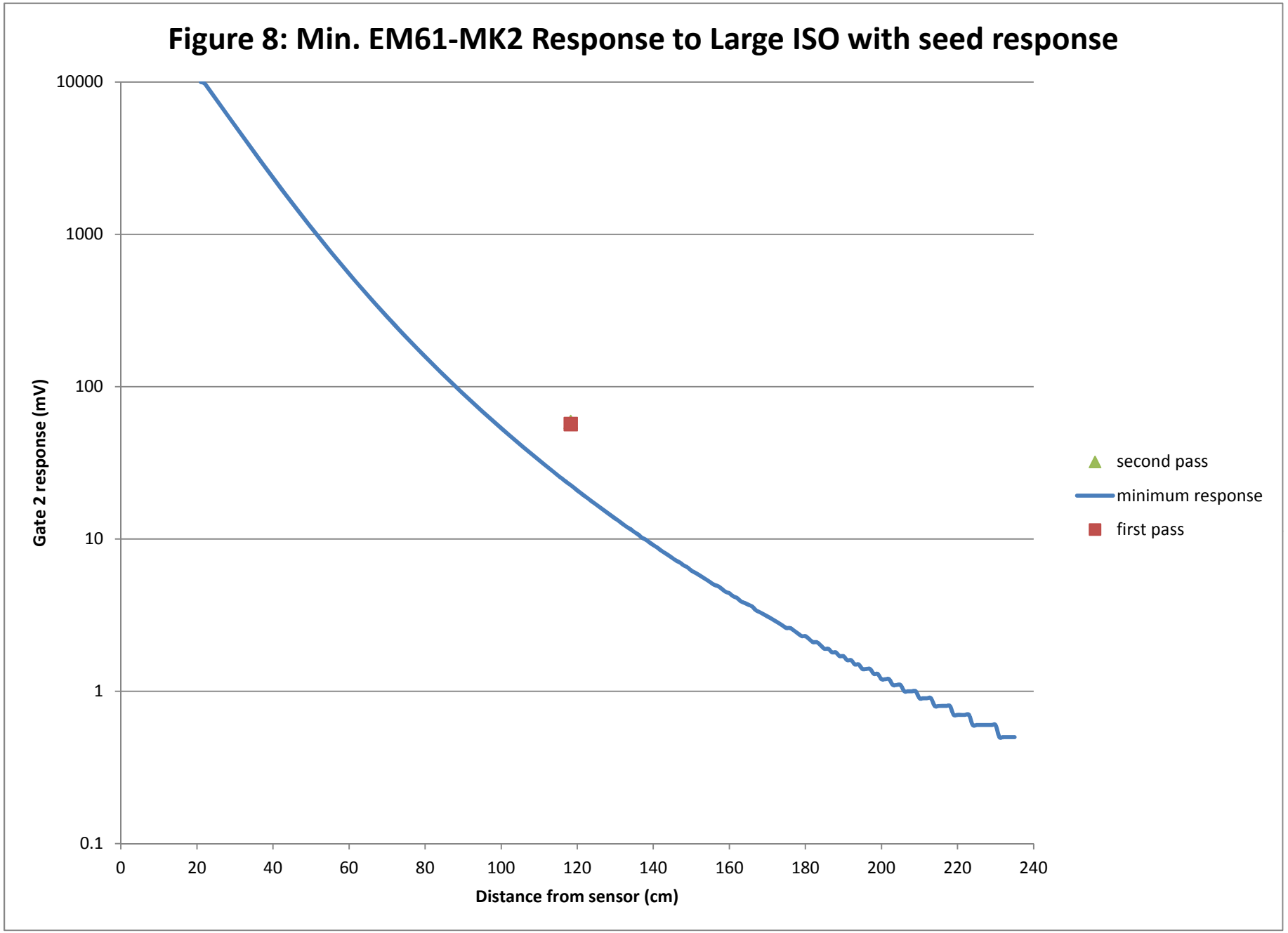


Figure 8: Min. EM61-MK2 Response to Large ISO with seed response



Appendix A: Site Photographs



Seed 1, small ISO



Seed 2, small ISO



Seed 3, medium ISO



Seed 4, medium ISO



Seed 5, large ISO



Scrap and MD from mag & dig sweep of IVS



Brass & aluminum items found with EM61



Cable check at IVS

FORT STEWART

TECHNICAL PROJECT PLANNING MEETING #2

MMRP RCRA Facility Investigation at
Anti-Aircraft Range 90mm – 2 MRS (FTSW-002-R-01) and
Hero Road Trench Area MRS (FTSW-008-R-01)
February 15, 2012

FINAL Meeting Summary

Attendees:

NAME	ORGANIZATION	EMAIL
Zsolt Haverland	USACE – Savannah	Zsolt.e.haverland@usace.army.mil
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Neil Jones	ERT	neil.jones@ertcorp.com
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Algeana Stevenson	Ft. Stewart	algeana.stevenson@us.army.mil
Mary Ellen Maly	USAEC	Mary.e.maly.civ@mail.mil
Amy Potter	DNR-EPD	amy.potter@gaepd.org
William Powell	DNR-EPD	william.powell@gaepd.org
Mo Ghazi	EPD	mo.ghazi@gaepd.org

Action Items:

- ERT will update the figures for the Hero Road Trench Area MRS to show that DGM and random soil sampling will not occur in the small parking area.
- ERT will keep the Project Team informed of the schedule for distribution and review of the Test Pit Recommendation Memo.

Meeting Minutes:

Travis McCoun started the meeting by thanking everyone for attending this TPP #2 meeting and asked everyone to introduce themselves. He recapped that at the last meeting we talked about the general approach and data quality objectives; since then the Work Plan has been drafted and the Team has reviewed it. The goal of this meeting is to resolve any outstanding issues, review the technical approach, and come to a point where we can finalize the Work Plan and get out into the field. The approach with the TPP is to plan your work and work your plan; the objective is to make sure that no one is surprised by the results at the end of the investigation and no data gaps are left.

Jennifer Harlan asked if the GA EPD had a chance to review the Work Plan yet. They responded that they had not and they had received the work plan the week prior to the meeting (Friday February 3rd). Travis McCoun noted that normally the idea is to talk about the issues after Work Plan review and added that we will adjust based on this fact and go over the highlights of the Work Plan. Algeana Stevenson asked when the Installation received the Work Plan. Jennifer Harlan responded it was received on January 5th. Algeana Stevenson noted that it can be a week to 2 weeks to get the plans/reports through Installation review prior to mailing to GA EPD. Later in the meeting Algeana Stevenson noted that the Work Plan was mailed out on February 1st.

Jennifer Harlan reviewed the agenda and began going over the action items from TPP #1 (October 2010). (Action item in italics below).

- *ERT will distribute the GA EPD, Army and EPA guidance for risk assessments.* Complete.
- *Algeana Stevenson will work with installation personnel to determine if construction documents for the bunkers can be located. Complete. Related to the bunkers at the Anti-Aircraft Range 90mm – 2 MRS.* Construction drawings showing material was removed from borrow areas within the Installation and design drawings for the bunkers made of concrete and reinforced steel were found. This information has been included in the Work Plan.
- *Algeana Stevenson will attempt to find any reports on EOD finds at the ASP.* No EOD records could be found related to historical EOD calls.
- *ERT will attempt to determine the target areas and insert them on the present maps of the Fort Stewart range fans.* ERT could not find any information specific to Ft. Stewart, but were above to find "typical" general range information, which we will review later on in this meeting.

Jennifer Harlan reviewed the maps of the locations of the MRSs being investigated. She reviewed the historical ranges that overlap the Anti-Aircraft Range 90-mm – 2 MRS (AAR). By reviewing general historical information ERT determined that targets used for anti-aircraft were either balloons towed behind planes or some other type of target in the air. Therefore, everything was random and there were no set impact areas. For the tank ranges, targets were also moving so again there is no set impact area. There are safety danger zones on the sides of all ranges; based on the historical information this MRS appears to be located only in the safety danger zones for the overlapping historical ranges.

Jennifer Harlan reviewed the conceptual site model (CSM) for the AAR and noted it is an active ammunition supply point (ASP). The site is 77 acres and is surrounding by heavily wooded undeveloped operational range. The AAR was developed using fill material from borrow areas within Ft. Stewart. The potential future land use is assumed to be the same as current use and the MRS does not contain any firing points, target zones, or impact areas. MEC is not expected on the surface as the area is maintained and regularly mowed.

For the AAR geophysical investigation, UXO Estimator was used to determine the area to be investigated. Per TPP #1 discussions, structures, roads and parking areas were excluded from the investigation area. The digital geophysical mapping (DGM) will cover approximately 5.56 acres or 9.78% of investigation area. Virtual Sampling Plan (VSP) was used to determine random grid locations. In addition, ERT added in an additional 13,630 linear feet of transects based on TPP #1 request in order to

have coverage between the bunkers. An instrument verification strip (IVS) with industry standard objects (ISO) will be installed just outside the MRS. An IVS simulates site- and MEC-specific items and is used to confirm equipment is working and giving a consistent response. A check over the IVS with the equipment is conducted at the beginning and end of each day. Blind seeding will be conducted in this MRS. One item will be placed in every survey grid and per every 10,000 linear feet of transect, which ensures that at least 1 blind seed is encountered on every day of DGM activities. The EM61 will be utilized for DGM. All targets above the target threshold based on DGM will be intrusively investigated; the threshold is based on IVS and background responses. All items will be catalogued and disposed of properly.

Jennifer Harlan reviewed the map showing the DGM locations for the AAR. Some of square grids were changed to rectangles so that we could fit them between the fence line and MRS boundary. Neil Jones noted that there are some internal fences within the AAR and therefore some of the grids may be adjusted based on field observations/conditions. Amy Potter asked if the fence created any kind of interference. Neil noted that within 5 feet of the fence the data would not be useful. Transects will be conducted between the bunkers, but we will not be doing any DGM on top of the bunkers based on their reinforced steel construction.

For the MC investigation, there will be 10 randomly (determined by VSP) placed surface, defined as 0-12 inches, and 10 subsurface, defined as 12-24 inches soil samples; sampling locations will be co-located. Additional biased samples will be collected if we find MEC that looks like it has been breached or there is evidence of soil staining; these will be collected on an as needed basis. Amy Rosenstein asked what intervals the GA EPD normally used for surface samples. Amy Potter responded that everything between 0-12 inches is defined as surface; everything below is subsurface. Samples will be analyzed for explosives and 4 metals: aluminum, copper, lead, and zinc. The selected metals are based on subset of TAL metals and are described in the MC Memo included as Appendix H of the Work Plan. The Munitions Items Disposition Action System (MIDAS) was used to identify any MC over 1% of the munitions calculated weight based on what we expected could have been used within the AAR. Travis McCoun noted that a difference between other MMRP projects and this one is that usually we have to confirm a release has occurred prior to conducting MC sampling; this is different as we are following the recommendations of the SI to conduct a RFI for MC. Travis McCoun questioned if there was a good database available so that naturally occurring metal levels would not be a concern. Jennifer Harlan noted that there is a background dataset for Ft. Stewart based on all the SWMU work; however, the only metal included in this dataset is lead. ERT will be collecting 10 background samples and analyzing for aluminum, copper, and zinc. We will be utilizing the same SWMU locations used for the existing background dataset and coordinating sampling locations with Algeana Stevenson.

Amy Potter asked which munitions were used. Neil Jones noted that the stuff that has been found may not be exactly what was used; Jennifer Harlan added that Table 1.1 of the Work Plan includes a list of what we based the MIDAS search on. Appendix H of the Work Plan provides detailed information including all MIDAS information gathered on each munition item investigated. Travis McCoun noted that the MRS is highly reworked. Jennifer Harlan stated that the rationale for depth interval sampling is based on risk assessment. Amy Rosenstein added that surface soil will be looked at for human contact,

and the subsurface is classified as 12-24 inches below ground surface and not deeper because future use is expected to remain the same so any excavation is expected to be minor.

Mary Ellen Maly asked if the surrounding area is swampy. Neil Jones replied there are areas nearby that are swampy, but the area immediately surrounding the ASP does not appear to be. Algeana Stevenson noted that there is a high percentage of wetland at Ft. Stewart and this area may have been wetland prior to being filled over 30 years ago. Jennifer Harlan stated if we have to do a blow in place, we will do incremental sampling that will include placing a grid approximately 100 x 100 feet and compositing the sample from that area. Based on the TPP #1 meeting discussion related to groundwater sampling and the location of the MRS surrounded by operational range, ERT will review the soil sampling results before determining if groundwater wells should be installed. Amy Potter asked what the depth to groundwater was in this area. Algeana Stevenson replied it was the same as across all of Ft. Stewart, which is 3-6 feet during a non-drought year and 6-10 feet during a drought year.

Will Powell asked if there were any drainage swales around the MRS. Neil Jones replied yes a few were seen during the site visit the day before. Travis McCoun reminded everyone these were manicured grounds. Will Powell asked if the swales were draining off the site. Neil Jones noted that the swales are only a few inches deep and the topography of the site is relatively flat, with the exception of the bunkers. Will Powell asked if there was anything on the inside of the fence line. Jennifer Harlan noted that ERT did not go into the MRS due to the security of the site. Jennifer Harlan mentioned that ERT had talked to the folks overseeing the ASP to let them know they were looking at the site and added that there will be a significant amount of coordination as there are exclusion zones for the ASP when gathering munitions in addition to the exclusion zones related to the intrusive investigation work. Neither Neil Jones or Jennifer Harlan thought there was any standing water within the MRS based on the site visit and aerial photos. Algeana Stevenson agreed that she hadn't ever seen any water at the site either. Mary Ellen Maly asked that if there is a drainage ditch with standing water within the MRS does that change GA EPD's opinion. Will Powell replied yes, they would want samples from that area. Amy Potter clarified that they would want a sediment sample from any wet drainage ditches.

No one had any questions related to the AAR approach. Everyone agreed that the plan looked good and that the coverage, specifically over 10% of the AAR with DGM, would provide good statistically based information.

Jennifer Harlan then reviewed the approach for the Hero Road Trench Area MRS (HTRA). The CSM for this MRS notes that the site is 34.5 acres in size with most of the area fenced. The property is undeveloped with a small parking area (not fenced) in the southern portion of the MRS. No potential future land use has been identified. The reason for the investigation is that there is ancillary information that dilute agent CAIS kits were buried in this MRS at no more than 10 feet below ground surface. Will Powell asked what the size of the CAIS kits were. Neil Jones responded it depends on if they were in a PIG or were individual kits. If they were individual kits these are no larger than a coffee can with individual glass vials. A pig is similar in size to a beer keg, although not as round. Travis McCoun added that CAIS kits were either dilute agents or vials used to train soldiers in the field as to how different gases smell. A very small number of CAIS kits actually contained dilute agent; the Army has accounted for all of these kits. As part of the technical approach, the Corps did a Probability Assessment to determine if

there was a risk or potential for the chemical warfare CAIS kits; the Probability Assessment determined the potential was low. He added, if in fact there were CAIS kits how do you do a geophysical investigation for something that has a low probability of being there especially something that is glass vials. Travis McCoun added another challenge is that anything that is classified as chemical warfare material requires additional resources. The Department of Defense has issued a policy that all CAIS kits with exception of the 100,000 already accounted for are not considered chemical warfare material.

Travis McCoun noted that the technical approach includes field observations, looking for broken vials, etc and added that degradation products will probably not be found due to mineralization. Neil Jones added the instrumentation selected for this investigation (EM31) has the potential to detect disturbed soils/changes in ground conductivity not related to metal presences. He added that there are metals at the site based on our site walk and the responses from those items may drown out the lower level non-metal responses. Will Powell asked what the danger in the dilute agent CAIS kits was. Travis McCoun replied nothing in the individual one; he added that in the field these are usually remediated by sticking them in a bucket of water. If there is any evidence of CAIS kit in the field, ERT will immediately stop work, backfill the excavation, and fall back and re-group to determine the path forward. Again the technical approach is based on the low probability of finding these kits. If there is any evidence the Corps will reevaluate the situation and update the Probability Assessment with the new data and get Huntsville involved to undertake a more robust investigation. Mary Ellen Maly asked what kind of debris was in the MRS. Neil Jones replied that there was various debris, such as radial tires, chunks of concrete, etc. Algeana Stevenson added that ground penetrating radar (GPR) of the area was previously done (about 8 or 9 years ago) and there were so many anomalies it was hard to determine what had transpired at the site. Neil Jones noted that GPR does detect tree trunks so it might not have been best instrument to use as the MRS is wooded. Travis McCoun noted that there is a good possibility that we will find HTRW materials at site (dunnage, concrete, etc.). In the event that ERT runs across it, they will do their best to determine what it is and then refer the site to the IRP. Jennifer Harlan reminded everyone this is not a MEC site, it's being investigated for MC only. As no historical ranges overlap this MRS, there is no maximum probability penetration depth and no MEC is expected to be found in this area.

Jennifer Harlan pointed out an area where there may be ground disturbances based on historical photos from the timeframe burial would have occurred. ERT will coordinate the results of the DGM with this information to see if there is an overlap in possible trenches and DGM results for ground disturbances. Jennifer Harlan noted that there is the parking area outside of the fenced area and that originally the plan was to do DGM using the EM31 on the whole MRS, but there doesn't appear to be a reason to do DGM on this area due to the gravel and the fact that it is used on a daily basis. Everyone agreed it was okay not to do DGM on this area.

Geophysical investigation at this MRS will be conducted using the EM31 with 15 foot line spacing. Brush removal will be conducted in order to use the robotic total station (RTS) navigation system that uses line of sight. Neil Jones noted that if there is an issue with RTS related to the vegetation/trees in the MRS that as a backup we may want to use line and fiducial. David King agreed and noted it was good to have a back-up plan. There will not be blind seeds in this MRS as we are not looking for individual anomalies. There will be an IVS with ISOs to check equipment daily. Once we get the DGM data back ERT will develop a Test Pit Recommendation Memo that will detail what we found and where we want to

dig. This will be sent out to the team for approval, and as we will already be out in the field we will need a quick turnaround. If we need to we will have a conference call/meeting to discuss the memo and get approval. Algeana Stevenson asked the GA EPD if, for this particular action, is it okay to just do an email correspondence. Amy Potter agreed that this would work in order to move things along and asked that they be kept in the loop for when the memo is coming and when approval/review is needed. Jennifer Harlan agreed.

Once the location of the pits/trenches is determined the initial plan is to hand dig the trenches. There is the possibility that we need to go more than 4 feet deep (will depend on location of groundwater, etc.) and ERT will bring in mechanical equipment to finish the excavation. If mechanical equipment is used, ERT will use skilled UXO techs for operation so there should not be a safety issue (these personnel use mechanical equipment to dig for bombs regularly). If we find CAIS kits we will backfill the hole, establish an exclusion zone, and coordinate with CENAB. Travis McCoun noted that ERT needs to be very specific on the things that we pull out of the ground; if MD, determine what kind and what type of munitions these are related to. Photos will be taken of the entire operation. Algeana Stevenson stated that for this site the preference is not to have land use controls at the end of this process; the MRS is adjacent to an elementary school.

The MC investigation associated with this MRS includes the collection of biased soil samples from each pit; the surface sample will be collected from the top 12 inches, while the subsurface sample will be collected from 1 foot to the bottom of the trench. The bottom of the trench will be 10 feet bgs or groundwater. Sixteen additional biased soil sampling locations will be determined based on the DGM results. Ten random surface and subsurface samples (co-located) as determined by VSP will also be collected. Analyzing for dilute agent CAIS kits degradation products: arsenic, 1,4 dithiane, 1,4-oxanthiane, and thiodiglycol.

Mary Ellen Maly asked what happens when you find HTRW – will you collect any samples? Travis McCoun replied that this project is under the MMRP program and therefore the scope only includes MEC and MC identification. If we find something unusual, ERT will collect samples to determine what the material is and then make proper notifications to Corps. ERT is not responsible for characterizing the nature and extent of HTRW. ERT will coordinate with Corps if something is found; the Corps will then work with AEC to determine the next steps.

Jennifer Harlan stated that the determination for the need to do groundwater wells will be based on review of the soil sampling results. Amy Potter noted that the GA EPD usually does this type of phased approach on RFIs and they are in agreement with this approach. Will Powell asked if the current figure for random sampling locations includes one in the parking lot. Jennifer Harlan replied yes, but based on this meeting ERT will update that figure.

Jennifer Harlan then turned the meeting over to Amy Rosenstein to review the risk assessment portion of the project. The risk assessment will follow the GA EPD guidelines from 1996; Amy Rosenstein did verify with GA EPD that this is the most recent version. It is limited on its direction for a human health risk assessment (HHRA) and more detailed for the ecological risk assessment. For the HHRA USEPA guidelines are generally accepted and used. The first step is to screen the chemicals for exceedances of

screening levels and look at any potential impacts to groundwater based on groundwater screening levels. The background information used for development of the risk assessment approach includes: secure facility, both MRSs are fenced; and future use will be the same as current use, except construction may occur at HRTA. Therefore it is more important to look at soil at depth at HRTA due to unknowns about future use. Receptors include workers, visitors and trespassers; trespassers are unlikely but are always added to the risk assessment. Mary Ellen Maly asked Algeana Stevenson if they were looking at having HRTA being an unrestricted site. Algeana Stevenson agreed with this statement as the MRS is in the cantonment area with a school and residential area nearby and this is prime property. ERT will need to revise the approach for HRTA to screen against residential numbers rather than industrial. The risk assessment for the AAR will be done as presented. Amy Rosenstein noted the GA EPD always uses residential to screen. This doesn't mean that you will have to clean up to residential numbers, but screen to this level as it is the most conservative. ERT will add in residential receptors for HRTA.

Amy Rosenstein noted that for the SLERA we will screen using EPA Region IV ecological screening levels and FTSW SWMU background dataset. Receptors are typical and ERT will do a search for endangered species or species of concern. For AAR if screening levels are exceeded ERT will go with a qualitative discussion because the MRS is a well developed area with grass that is mowed regularly and therefore is not good ecological habitat. The HRTA currently is forested and it provides good ecological habitat; if screening levels are exceeded would go to a quantitative risk assessment. If warranted, ERT will recommend a more detailed ecological risk assessment if the concentrations are significantly above the screening levels or there are species of concern. Jennifer Harlan added that a MEC hazard assessment will be conducted for the AAR only.

Mary Ellen Maly asked if we had screening levels for all of the parameters being looked at. Will Powell noted that if there isn't a screening criteria it automatically gets carried forward to the risk assessment. Amy Rosenstein noted that she has some experience with this, and other states as well as the Department of Defense (DoD) may have additional values. We would ensure GA EPD agrees with using these prior to completing the risk assessment. She added that some of these parameters do not have toxicity values. Amy Potter noted that you cannot use a surrogate for screening, but it can be used for toxicity. She added if a parameter doesn't have a screening value it goes into the risk assessment and that if we need help with any of the values to let her know and they will put us in contact with the right folks at GA EPD.

Travis McCoun noted if we don't see any of the compounds associated with the munitions then we wouldn't take the data into the risk assessment; this would be part of the CSM to support how to move forward. He noted this is more of a presence or absence situation. For example, if we find thiodiglycol we are going to know it's from CAIS and move forward to next step. Amy Potter noted if there are DoD screening values, ERT should provide them to GA EPD to review and they can use this information in the future. Amy Rosenstein stated that the current Work Plan does not include screening levels, once it is determined what chemicals are found we would then determine how to move forward in terms of finding additional screening levels or toxicity values.

Jennifer Harlan reviewed the schedule and noted the Work Plan needs review by the GA EPD, ERT will do a response to comments and then finalize the Work Plan. Current plan is to get out in the field by May which would have us finished by July (7-8 weeks). The Work Plan has a detailed field schedule in

Appendix E (QAPP). The RFI Report would then be ready for regulatory review in December 2012 followed by a TPP meeting to discuss the results/report in February 2013. Jennifer asked when the GA EPD thought they might be able to provide comments. Algeana Stevenson noted usually the State has 45-60 days for review of a document. Amy Potter noted they have a few things ahead of this Plan for review; they will get back to Algeana Stevenson with a timeframe as they are booked for the next 2-3 weeks. Algeana Stevenson added that the plan has already been reviewed by the Baltimore Corps, as well as the Installation and AEC. She added that for a Work Plan, the contractor can proceed at their own risk while the GA EPD is reviewing. The GA EPD can always come back and ask for additional sampling/analysis. Algeana Stevenson added that Work Plans are not a required State buy-off before field work begins. Algeana Stevenson asked if ERT was going to work on both sites at the same time. Jennifer Harlan responded that no, we will do some phased work and move back and forth between sites as needed based on what is going on. GA EPD noted that the plan does cover everything discussed at the last meeting and there does not seem to be any show stoppers or concerns based on this meeting.

Mary Ellen Maly asked how much coordination ERT has done with the staff running the ASP. Jennifer Harlan and Neil Jones responded that ERT talked to them the day before and that we will need to coordinate with them very closely as they will have exclusion zones when they have to remove munitions from the bunkers. ERT will also have exclusion zones when conducting the intrusive investigations. Everything will be coordinated through Algeana Stevenson; Algeana Stevenson noted Jimmie McGowen will be the POC for ERT and will assist with coordination. She noted ERT should send Jimmie McGowen and Dale Kiefer emails related to access stuff. Jennifer Harlan noted that Mr. Walker (who oversees ASP) noted he would need a rooster from ERT and ERT will also forward equipment frequencies to him. Algeana Stevenson noted it would be best to draft a letter to him to cover potential timelines, how we are going to approach the investigation, etc. Travis McCoun noted a Baltimore District OESS will be on site and they are former EOD guys who will work with everyone to minimize disruptions to regular activities.

After it was determined there were no additional questions or concerns related to the presented information, Jennifer Harlan thanked everyone for their participation and closed the meeting.

FORT STEWART

TECHNICAL PROJECT PLANNING MEETING #1

MMRP RCRA FACILITY INVESTIGATION

ANTI-AIRCRAFT RANGE (90mm - 2) AND HERO ROAD TRENCH

October 13, 2010

FINAL Meeting Summary

Attendees:

NAME	ORGANIZATION	EMAIL
Ana del R. Vergara	USACE – Savannah	Ana.delr.vergara@usace.army.mil
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William Powell	DNR-EPD	william.powell@dnr.state.ga.us
Mo Ghazi	EPD	mo.ghazi@gaepd.org

Action Items:

- ERT will distribute the GA EPD, Army and EPA guidance for risk assessments.
- Algeana Stevenson will work with installation personnel to determine if construction documents for the bunkers can be located.
- Algeana Stevenson will attempt to find any reports on EOD finds at the ASP.
- ERT will attempt to determine the target areas and insert them on the present maps of the Fort Stewart range fans.

Meeting Minutes:

Travis McCoun welcomed everyone to the meeting and stated that this was the first Technical Project Planning (TPP) for the Fort Stewart RCRA Facility Investigation (RFI). Travis McCoun noted that this project would be following RCRA guidelines, rather than CERCLA. He noted that the purpose of TPP is to engage everyone early on, understand the goals of the project and the questions that are being asked, and determine the data needed. The goal of the TPP is to come to a conclusion that answers all the questions and that everyone can agree on; this information will then be used to make decisions on the next steps. He then requested that everyone introduce themselves. After introductions he explained that the USACE group is a Project Delivery Team (PDT) and that while Ana del R. Vergara from the Savannah District is the Project Manager, the Baltimore District is assisting with the technical aspect of the project. Travis McCoun noted that this is primarily a geophysical project and that the overall goal is to have a concerted team effort from everyone in order to appropriately characterize the sites and take the right follow-up actions.

Travis McCoun reviewed the important terminology. He noted that ERT has a performance based contract with the object to complete an Army and regulator approved RFI that characterizes the nature and extent of any MMRP constituents. He also stated that munitions debris (MD) are the remnants that remain after munitions are used. Munitions and explosives of concern (MEC) are items with an explosive safety hazard that can cause immediate harm. These include items that were fired, but did not go off. Material potentially presenting an explosive hazard (MPPEH) are pieces of ordnance or items that potentially have an explosive hazard, but this is not known for sure. He noted that munitions constituents (MC) are the chemical components of what goes into an item to make it function and that there is no explosive safety hazard associated with the chemical component of MC.

Travis McCoun reviewed the MMRP and stated that it was established by the Department of Defense (DoD) in 2001 under the Defense Environmental Restoration Program (DERP) to address sites with MEC. With the MMRP, the DoD established a requirement to identify all locations other than operational ranges requiring a military munitions response, specifically Closed, Transferring and Transferred (CTT) ranges. Again he noted that while the MMRP program usually follows CERCLA guidelines, this project will be conducted under RCRA.

Travis McCoun noted that this project would primarily have visual and geophysical surveys and that the major outputs would include a revised conceptual site model (CSM), a MEC hazard assessment (HA) and a MC risk assessment (RA). He noted that a MEC HA is different from a RA due to the acute risk associated with an explosive safety hazard.

Travis McCoun then reviewed the TPP process, which includes developing data quality objectives (DQO) for the project and getting input from the group before the work plan is developed. He stated that the DQOs are used to identify and understand the project, to determine data needs and the quality of the data, and identify what the best data collection options are. The field sampling program is then finalized to support the DQOs. Once the work plans are drafted, they are distributed and reviewed and the second TPP meeting is held to discuss the comments and agree on resolutions. Once the work plan is finalized, the field work is conducted and the draft RFI is developed and distributed. At the third TPP meeting, everyone discusses the draft RFI and comes to an agreement on the content. The Corps' contractors usually develop draft work documents, which are only reviewed by the Corps and Army. A draft final is distributed for all the stakeholders to review and then the final is prepared and is considered the document of record. Algeana Stevenson noted that they usually have a draft report reviewed by the installation and then the final report is submitted to the stakeholders. If there are comments on the final report, a revised final report is developed. Travis McCoun noted that an agreement on report terminology would be developed, but that the important thing to note was that nothing leaves the Corps until it is peer reviewed.

Travis McCoun then reviewed the seven DQO steps and noted the goal was for everyone to be in agreement with the work plan (tools, questions asking, etc.). He then reviewed the site history and previous investigations. He noted that Ft. Stewart is the largest army installation east of the Mississippi River and that it has been used since the 1940s to train soldiers. The 2003 CTT report was a crude assemblage of data collection based on a request for information sent to the installations. AEC then hired contractors to conduct the Historical Records Review (HRR) and Confirmatory Sampling (CS) Study. The HRR identified 7 MRSs for CS, while the 2007 CS provided a rough evaluation of the sites and 2 MRSs were identified for further evaluation, the Anti-Aircraft Range 90 mm - 2 and the Hero Road Trench Area. He then noted that slide 14 shows the location of these MRSs. The Anti-Aircraft Range 90 mm – 2 MRS was recommended for MEC and MC investigations, while the Hero Road Trench Area was recommended for a MC investigation only.

Travis McCoun then reviewed the Anti-Aircraft Range 90 mm – 2 site map and historical range information. The current MRS boundary shown in the presentation is the boundary as we currently know it from the HRR and CS. The area functions as an ammunition supply point (ASP). Typically an ASP stays in an operational range, but in this case it was removed and is now an MRS. Some MEC was found during construction of the ASP bunkers. The historical range map provides some information on the activities that were occurring in this MRS and what MEC could possibly be found. Neil Jones noted that the MRS is not within the firing points or target point for any of the historical ranges that overlap it. Travis McCoun added that the MRS falls within the intermediate area or safety danger zone where rounds can fall short, etc. He also noted that there was heavy construction within this area and things have been moved around.

William Powell inquired about how targets were set up and stated that he would like to see where the impact/target areas were on the maps. The group replied that there were probably drums to fire on or a target could have been pulled by an aircraft. Everyone agreed that it was hard to determine exactly what occurred on these ranges. Debbie McKinley added that there are manuals that show typical range areas for types of ranges and these could be used to assist with determining the firing and target/impact areas. Travis McCoun noted the CS report had a preliminary CSM as its stopping point, which is the starting point for this RFI. ERT will figure out if there is additional information and will refine the CSM. Travis McCoun also noted that any MRS that has MEC or previously had MEC will have some kind of land use controls on the MRS forever.

Mo Ghazi asked if more than 2 sites were recommended for RFI. Algeana Stevenson responded that the Small Arms Range 2 will be addressed in a separate RFI. The Small Arms Range 2 MRS is currently undergoing an expanded HRR. Travis McCoun added that it was not ready to move forward with these 2 MRSs that are being discussed today, but an RFI for the Small Arms Range 2 MRS will be initiated in the future.

Travis McCoun reviewed the CSM for the Anti-Aircraft Range 90 mm – 2 and noted that it is a 77-acre site with 42 buildings and is an ASP. The operational area surrounding this MRS is undeveloped and heavily wooded. The MRS was originally part of the operational range and was then developed and turned into an ASP. Construction of the building began in the 1970's; the last 10 buildings were constructed in the mid-1990s. The assumption for this site is that any MEC is primarily in the subsurface as regular mowing/maintenance has been occurring throughout this MRS. Mo Ghazi asked if the MRS boundary matched the fence line. Travis McCoun responded that the boundaries are as shown on slides 16 and 23, and that it is not entirely matched up with the fence. Travis McCoun added that different groups in the Army keep different types of records and that we are using the boundary as we understand it from the CS report, but are trying to verify that G3 agrees with this boundary. If G3 wants the boundary to be the fence line, we will coordinate this change with the group.

Ira May began reviewing the DQOs for the geophysical investigation at the Anti-Aircraft Range 90 mm – 2. It was noted that for numbers 5 and 7 on the slide, 1 MEC/acre should be 0.5 MEC/acre. He stated that an EM61 would be used for this site to locate anomalies and that the boundary of this MRS is limited to the other than operational range area. Travis McCoun added that there have only been a handful of items found and that these were not items known to have been historically used at the site. Therefore, it can be assumed that MEC is not prevalent and that a conservative approach is needed. William Powell inquired about the amount of disturbance during construction and how much things may have been moved around, and expressed concern that the assumption that the subsurface distribution of MEC, if present, may not be homogeneous due to earth moving activities. Algeana Stevenson responded that they had

looked through the records for construction dates, but didn't look for plans or blueprints. She noted that they could go back and look for drawings showing the depth of disturbance. Ira May noted that this conservative approach is based on a worst-case scenario of what we currently know and if we get additional information, such as the construction information, we can update the approach. William Powell noted this seemed to be the best solution and Ira May agreed. Neil Jones added that if less MEC per acre (0.5 versus 1.0) are assumed then more data is actually collected. Travis McCoun noted that there is a statistical evaluation that goes into the planning to ensure that the areas investigated can be correlated back to the rest of the MRS. William Powell noted that this approach assumes the area is homogenous, which is not the case due to all the construction that has occurred. Neil Jones agreed, but noted there were no other tools available to set up the approach as there is no target area, firing zone or disposal area. Travis McCoun added that the Corps reviewed this approach with ERT and are in agreement based on what we know about the MRS.

Ira May then reviewed the geophysical investigation approach. UXO Estimator was used to determine the acreage to be investigated and then VSP was used to determine the random center points for the 100 x 100 foot grids. Each grid will have 100% survey coverage, meaning that there will be no space between the survey lanes. Discussions occurred about the locations of the grids and roads and everyone was in agreement that the roads should be removed from the investigation area, as the parking lots were. William Powell noted that none of the grids were located in the areas of the bunkers. Discussions transpired that noted that the 100 x 100 foot grids could not be fit between the bunkers and due to the construction of the bunkers with reinforced concrete, it would be almost impossible to get any data from any geophysical investigations around or on the bunkers. It was noted that biased transects could be added that went between the bunkers north to south. Travis McCoun stated that when developing the work plan, the end state should be considered. Based on previous EOD calls this MRS will have at least a land use control, if not some other type of action and that it was extremely unlikely that the bunkers would be dug up if something were found. Therefore, he asked if it was necessary to conduct transects between the buildings, based on what the end state will be. William Powell replied that he was more concerned about the "hills" on the sides of the bunkers. Neil Jones acknowledged that if surveys were done near the bunkers the instrumentation would not be able to pick out small metal objects. William Powell was concerned about the safety of grounds maintenance personnel. Agreement was made that the work plan should address if these areas can be surveyed effectively and if not, why.

Ira May stated that the DGM survey would be conducted using EM61, that brush removal was not needed and that there is an assumption that surface clearance is not needed due to the regular mowing of this MRS. The geophysical system verification (GSV) will be used for quality control. Neil Jones added that the RTS navigation system would also be used on this project. In responding to a question Neil Jones noted the EM61 survey area is 1 meter wide. Ira May stated

that based on the size of the area to be investigated (5.6 acres total), ERT is estimating 280 total anomalies based on an estimate of 50 anomalies per acre. He added that this estimated number is high and a worst-case scenario based on the historical site usage. In response to a question, Neil Jones noted that ERT was using GSV vs. a GPO. With GVS the instrument verification strip is checked two times a day vs. just once with the GPO. In addition, blind seed items will be placed within the investigation areas by an outside contractor.

Ira May then reviewed the DQOs and proposed plan for the environmental sampling in the Anti-Aircraft Range 90 mm – 2. He noted that the MC investigation includes collecting 10 biased soil samples based on MEC finds with a potential for release; an additional 21 random samples (determined by VSP) will be collected for risk assessments. All soil samples will be collected as discrete samples for the risk assessment, unless a blow-in-place (BIP) is required; if BIP is needed, multi-incremental sampling will be conducted. The current metals list included in the presentation is based on the CS report and will be updated based on the results of the MIDAS database investigation. Ira May noted that the biased samples will not be collected if no MEC with the potential for release are found. Travis McCoun stated that the usual rationale to conduct MC sampling is that first a demonstration of MEC release is needed and then MC sampling is conducted based off of that release. He's concerned that if there were no MEC, then sampling would be conducted just to collect samples. He feels a decision matrix is needed for the work plan that details that MC sampling will be conducted if MEC is found. Additionally, this matrix would determine how to justify the number of samples. For instance if only 1 MEC item is found in the 66 acre investigation area, how many soil samples are needed to characterize the area? Travis McCoun added that there could be a stepped/phased approach for the MC sampling based on the geophysical investigation finds. Neil Jones responded to a question regarding the depth of the sub-surface samples by stating that the samples will be collected just above the groundwater, which ERT has been told is 3-6 feet. Algeana Stevenson noted that the groundwater can fluctuate significantly and could be lower during a dry season. Everyone agreed that the groundwater depth will be unknown until the investigation is conducted. After some discussions regarding if soil sampling for MC was necessary depending on the geophysical investigations, William Powell noted that the soil samples are necessary to reinforce the conclusion of whether or not there are any concerns/issues. Debbie McKinley noted that the list of metals will determined with the MC memo and that metals in small amounts in the munitions should not be included in the analyte list. Amy Potter noted that if the metal is not considered hazardous, then it should not be included on the analyte list. She also stated that EPD would review the metal analyte list as part of the work plan review.

Ira May went on to discuss the groundwater investigation, which will only be conducted if the soil sampling results warrant additional investigations. Initially 4 piezometers would be installed to determine the groundwater flow direction and then 5 temporary wells will be installed for the sampling. If groundwater sampling is needed the groundwater would be analyzed for the same

parameters as the soil. Travis McCoun noted that this is a small area surrounding by operational range and if groundwater sampling was conducted and contamination was noted, how could it be attributed to this MRS and not the operational range. Amy Potter agreed and noted that there is a problem with the location of this site and that there would be no way to clean up the groundwater.

Ira May began to review the Hero Road Trench Area and noted that no historical ranges overlap this MRS. The site is 34.5 acres with 31 acres enclosed within a fence. No potential future land use has been identified. There is ancillary information that CAIS kits may have been buried in this area. No MEC is expected to be found since no explosives were fired in this area. Travis McCoun added that this investigation is based off of anecdotal information from a former DPW employee. Ira May stated that there are some historical photos that show possible areas of disturbance, but no one is sure what those disturbances were. Mo Ghazi asked if there was an erosion issue at this site. Algeana Stevenson noted that there is some surface water runoff in a small area that was noted in one of the previous reports. Ira May reviewed the geophysical investigation program which includes using an EM31 to identify large scale ground disturbances over the entire MRS. Neil Jones explained that the EM31 is carried and covers a much larger footprint than the EM61, but cannot locate small (MEC sized) individual items. Travis McCoun noted that the instrument is used to look for subsurface disturbances. Ira May noted that based on the prior days site visit, the vegetation is much more dense than expected and brush clearing will be needed. Ira May noted that the plans call for hand excavation, but everyone agreed that mechanical excavation might be needed depending on the depth of the trenches being dug. Again, the depth of the trenches will depend on field observations and the water table.

Ira May reviewed the MC investigations, which include the collection of 2 samples from each trench, an additional 16 soil samples based on the distribution of DGM anomalies and 21 random (VSP determined) samples. Discrete samples will be collected when possible. He then noted that the samples will be analyzed for the detectable agent breakdown products of the chemicals associated with the CAIS kits. William Powell asked what was in the CAIS kits and Neil Jones responded that they contained lewisite, mustard agent, phosgene, and chloropicrin.

Ira May went on to explain that in the worst-case scenario, groundwater sampling would be conducted if the soil sampling results warranted additional investigation. Similar to the Anti-Aircraft Range 90 mm – 2 site, the groundwater flow direction would be determined and then a total of 11 temporary wells (1 upstream and 10 downstream) would be installed around the MRS. Amy Potter noted that if groundwater sampling was needed, 10 wells might not be necessary. Ira May agreed and stated that the number of wells depended on the groundwater flow direction determination.

Ira May stated that the Ft. Stewart RFI will refine the CSM, include a MEC HA, if MEC is found, make boundary recommendations for the Hero Road Trench Area, and have results for a baseline human health RA and a screening level ecological RA. Amy Potter noted that there was guidance available from GA EPD for the ecological RA. Travis noted that both the Army and EPA have recently completed guidance for munitions work and risk assessments. Amy Rosenstein noted that it would be good for all of these documents to be distributed to the group.

The schedule was reviewed and it was noted that this was just an estimate and could change significantly. If all goes according to the schedule, the draft final work plan would be distributed to the stakeholders in April 2011. Travis McCoun added that the Army is looking to put temporary land use controls in place for all of the MRSs until the RI/RFIs are completed. He inquired about the normal review time that the EPD would need on documents. Amy Potter noted it depending on what was going on at the time, but that 45-60 days could be used for planning purposes.

Travis McCoun then closed the meeting by thanking everyone for their participation.

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MEMORANDUM

TO: Ana del R. Vergara, USACE-CESAS; Travis McCoun, USACE-CENAB; David King, USACE-CENAB; Thomas Colozza, USACE-CENAB; Chris Larson, USACE-CENAB; Debbie McKinley, USACE-CENAB; Eddie Lawhorn, USACE-CENAB; Elbert Caraballo, USACE-CENAB; Jeff Brewer, USACE-CENAB; Mary Ellen Maly, USAEC; Algeana Stevenson, FTSW; Zsolt Haverland, USACE-CESAS; Amy Potter, GAEPD; William Powell, GAEPD; Mo Ghazi, GAEPD

FROM: Jennifer Harlan, James Stuby, Neil Jones, and Lauren Franke (ERT)

DATE: 27 July 2012

SUBJECT: **Final** Hero Road Trench Area MRS Test Pit Memo

1. As part of the ongoing field investigations for the Fort Stewart (FTSW) RCRA Facility Investigation (RFI), ERT performed digital geophysical mapping (DGM) of the Hero Road Trench Area MRS (HTRA) (FTSW-008-R-01) from June 9, 2012 through July 13, 2012. The HTRA site is being investigated for MC only, specifically the degradation by-products (arsenic, 1,4-dithiane, 1,4-oxathiane, and thiodiglycol) of dilute agent CAIS kits.

2. While the Work Plan called for transects to be placed 15 feet apart, due to a software mapping error, the licensed surveyors staked out the transects at a 20 foot interval. After discussion with the CENAB geophysical staff, ERT added additional transects in between each 20 foot transect. Therefore, data at HRTA was collected on transects 10 foot apart; data was collected on a total of 119 transects (Figure 1).

3. Figures 2 and 3 provide the results of EM31 Conductivity and In-Phase mapping, respectively. The color scale selected for this contoured geophysical data was selected to highlight areas with geophysical responses typical of a burial area, rather than to identify potential individual items. The color scale is set up so that responses that exceed the top and bottom numbers are all the same color (i.e., everything over 11.5 is pink). Due to the varying responses, there is no way to set the scale to include the entire range of values without losing resolution. Mapped surface features and debris (varying size black dots, circles, and polygon) are shown along with the perimeter fence, and the locations of two ground scars based on historical photography (1957). Geophysical anomalies in the southeast portion of the southern ground scar resemble a potential burial area. Surface debris, such as radial tires, concrete piles, rusted drums, etc., in the area provides additional evidence that dumping has occurred in the region.

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4. The Revised Preliminary Memo dated 17 July 2012 provided the suggested locations of four (4) trenches and sixteen (16) biased sampling locations. These preliminary locations were selected based on both the ground conductivity and ground scar information.

5. A conference call was held on 26 July 2012 to discuss the memo and finalize trench and biased sampling locations. Call participants included: Amy Potter, Will Powell, and Mo Ghazi, GAEPD; Algeana Stevenson, Jimmie McGowan, and Dale Kiefer, Ft. Stewart; Debbie McKinley and Tom Colozza, CENAB; and Jennifer Harlan, Lauren Franke, Jim Stuby, and Neil Jones, ERT.

6. Based on this call, a total of 5 trenches will be investigated and 16 biased samples will be collected.

7. Three of the five final trench locations have conductivity responses with an absolute value higher than 20 mS/m (Table 1). Trench locations T1 though T3 are located in the southern historical ground scar. The preliminary trench location T4 was in the northern historical ground scar, in order to provide coverage to this area, but the anomaly had a relatively low response. Therefore, based on the 26 July 2012 conference call, T4 was moved to an area just south of the historical ground scar where preliminary soil sample bias-4 was located. Bias-4 will be collected from the preliminary T4 location. T2 is located within the largest surface debris area, which is surrounded by multiple strong conductivity anomalies. This cluster of surface debris and anomalies is the best indicator of a burial area shown by the data. T5 is located to the east of the southern historical ground scar and surface debris area. ERT field personnel will conduct a visual and Schonstedt assisted survey of this location to determine if the anomaly is caused by surface debris. If it is not, ERT will conduct trenching in this location.

Table 2: Trench Locations

ID #	X Coordinate	Y Coordinate	Conductivity mS/m
1	442259.6	3527310.0	-10
2	442306.3	3527359.4	-30
3	442222. 6	3527391.3	24
4	442304.9	3527324.3	-22
5	442329.1	3527381.5	12

8. The trenches will be 30 square feet in surface area and will be centered on the location of the conductivity response. The site is moderately to heavily vegetated with trees and brush that may limit where the trenches can be installed. Placement and orientation of the trenches will be made in the field in accessible areas, ensuring the anomalous response is bisected by the trench. GPS data on the outline of the pit will be collected and included in the RFI Report. The surface size of the trench may be increased if the

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trenches are extended below 5 feet (10 feet is the maximum depth of investigation at this MRS) in order to conduct stepping that is needed for safety concerns. A Trenching Competent Person will oversee all trenching work starting at a depth of 4 feet bgs, with sloping to occur starting at 5 feet bgs. All trenching work will be conducted using a mini-excavator.

9. Per Table 3-4 of the January 2012 Final Work Plan, two samples will be taken from the side wall of each trench. The first sample (surface) will be collected from the top 12 inches of the trench and the second sample (subsurface) will be collected from 1 foot bgs to the bottom of the trench. As detailed in Worksheet #11 of Appendix E, the determination of the location of the side wall samples will be made using best professional judgment by the geophysicist and sample team lead who will look for soil staining, the location of dilute agent CAIS kits (if found), and direction of groundwater flow (if found). If there are no field indicators available, the sample will be collected from the southern wall of the pit/trench. Additionally, biased soil samples will be collected if discrete areas of soil staining or contamination related to MC are observed.

10. Figure 4 shows the location of the 16 biased soil samples based on the distribution of the ground conductivity results and historical aerial photography. Both a surface (0-12 inches) and a subsurface sample will be collected from these 16 biased locations. As detailed in Table 2, each biased soil sample location was selected due to the response noted during the EM31 DGM work and the historical aerial photography. The geophysical responses from the EM31 within the ground scars were given highest priority in selecting biased sample locations. A lower priority was given to areas where a geophysical response was evident, but the location was unassociated with ground scars. The greater the difference in response from 0.0 mS/m, which is considered the background conductivity, the greater the chance the response is due to non-natural conditions (i.e., metallic anomaly, disturbed soil, etc.); therefore, these areas show the most promise to assist in characterizing the site as it related to MC contamination and the possible burial of dilute agent CAIS kits. ERT will collect the biased soil samples directly above the peak of the associated geophysical response, or as close to the peak as is reasonable based on field conditions. Approximately half of the biased sampling locations are within the historical ground scars; the other ones are outside of these areas in order to provide coverage of the entire MRS at these higher response sites.

11. Per the 26 July 2012 conference call and subsequent follow up by the GAEPD, the subsurface sample will be collected from the soil horizon immediately above the groundwater or if groundwater is not reached by 10 feet bgs from the interval 9-10 ft bgs at each biased sampling location. Per the GAEPD Risk Assessment unit, subsurface samples need to be collected no more than 10 feet bgs or the top of the water table for the construction worker scenario, which is being evaluated in the RFI Report. This is a slight deviation from the July 2012 Final Revised Work Plan, which stated that biased subsurface soil samples will be collected from the soil horizon immediately above the

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groundwater, or at a depth suggested by the DGM ground conductivity results. As the depth of the groundwater is not known and the DGM results are not able to provide a depth associated with each anomaly, the sampling approach needed to be revised to have an absolute bottom depth. All participants on the conference call agreed to this approach.

Table 2: Biased Soil Sampling Locations

Biased Soil ID #	X Coordinate	Y Coordinate	Conductivity
1	442320.6	3527225.9	-14
2	442225.4	3527271.6	-150
3	442273.9	3527310.9	-32
4	442166.2	3527562.8	-8
5	442293.3	3527345.1	-8
6	442325.7	3527347.4	-12
7	442253.1	3527349.7	-10
8	442328.9	3527439.4	50
9	442156.8	3527452.2	-7
10	442238.8	3527486.1	-8
11	442167.6	3527536.4	-5
12	442133.4	3527554.9	-7
13	442236.9	3527591.9	-7
14	442145.0	3527644.1	-10
15	442265.1	3527710.7	-10
16	442270.7	3527750.4	-70

12. The 10 random soil samples (as noted in yellow on Figure 4), as determined by VSP, are also shown. Both a surface (0-12 inches) and a subsurface (12-24 inches) sample will be collected from these 10 random locations.

13. Per request, the response to comment table for comments received on the preliminary 17 July 2012 memo and additional comments discussed during the 26 July 212 conference call are included at the end of this memo.

Figure 1: Hero Road Trench Area MRS Transects

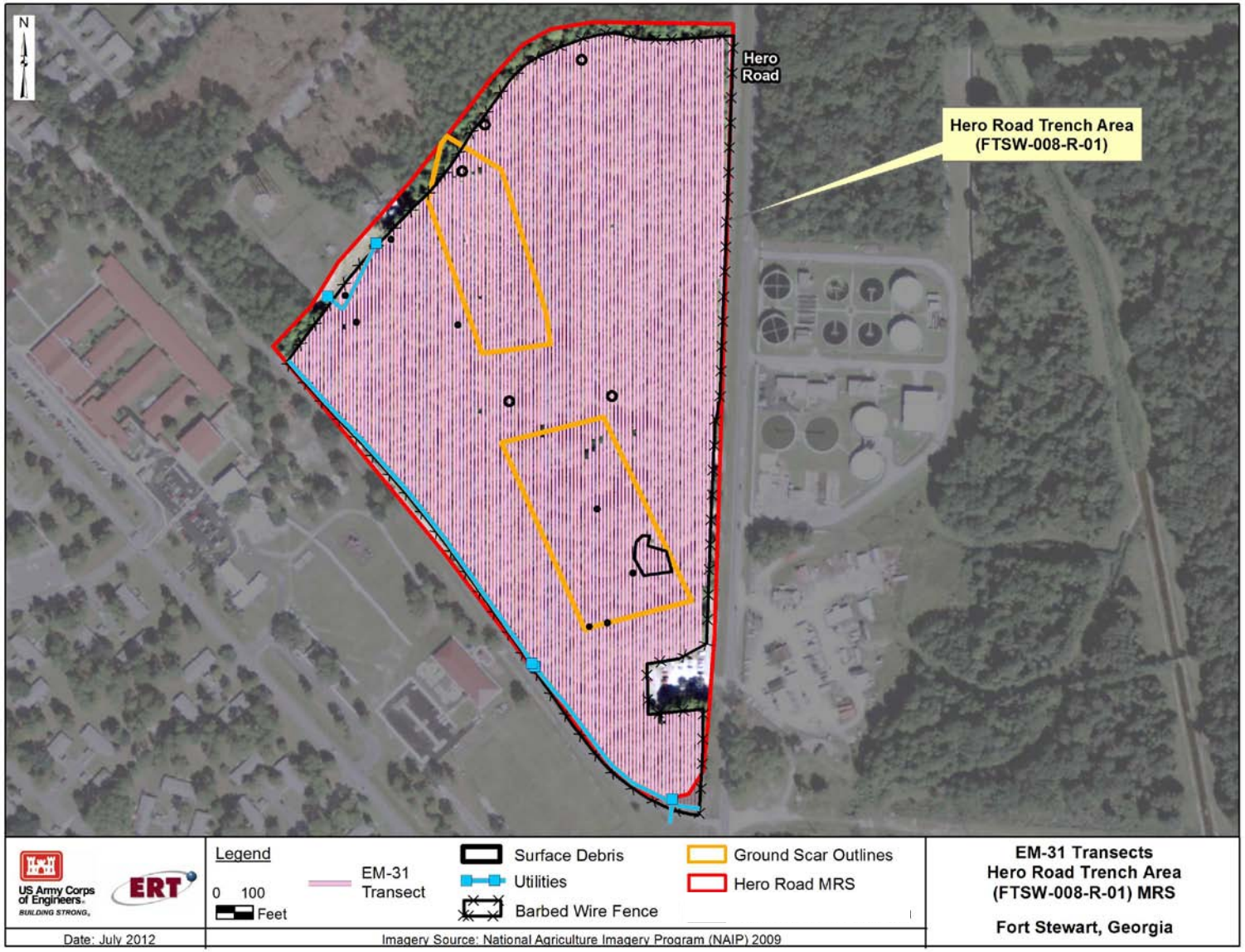


Figure 2: EM31 Conductivity Data and Final Trench Locations

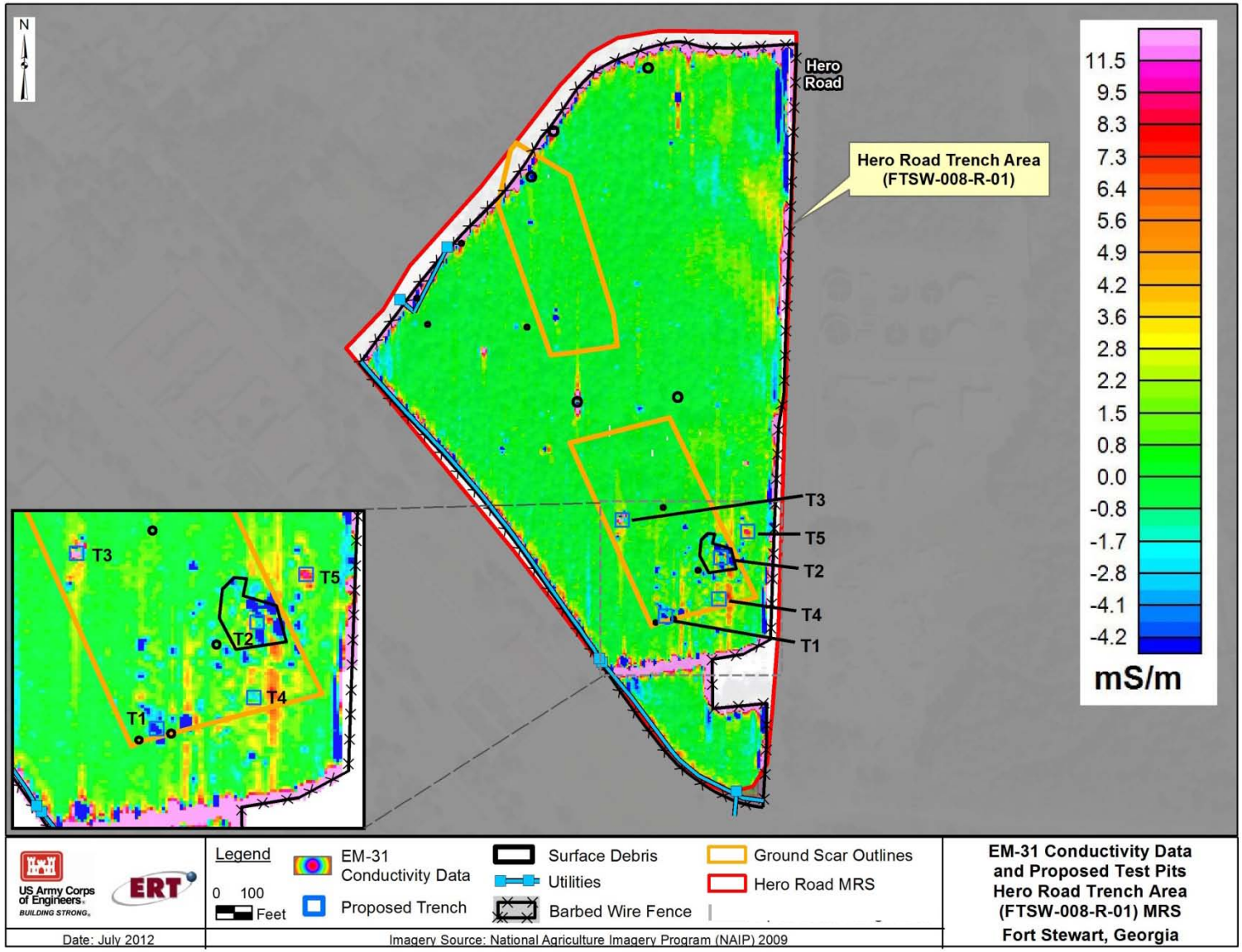


Figure 3: EM31 In-Phase Data and Suggested Test Pit Locations

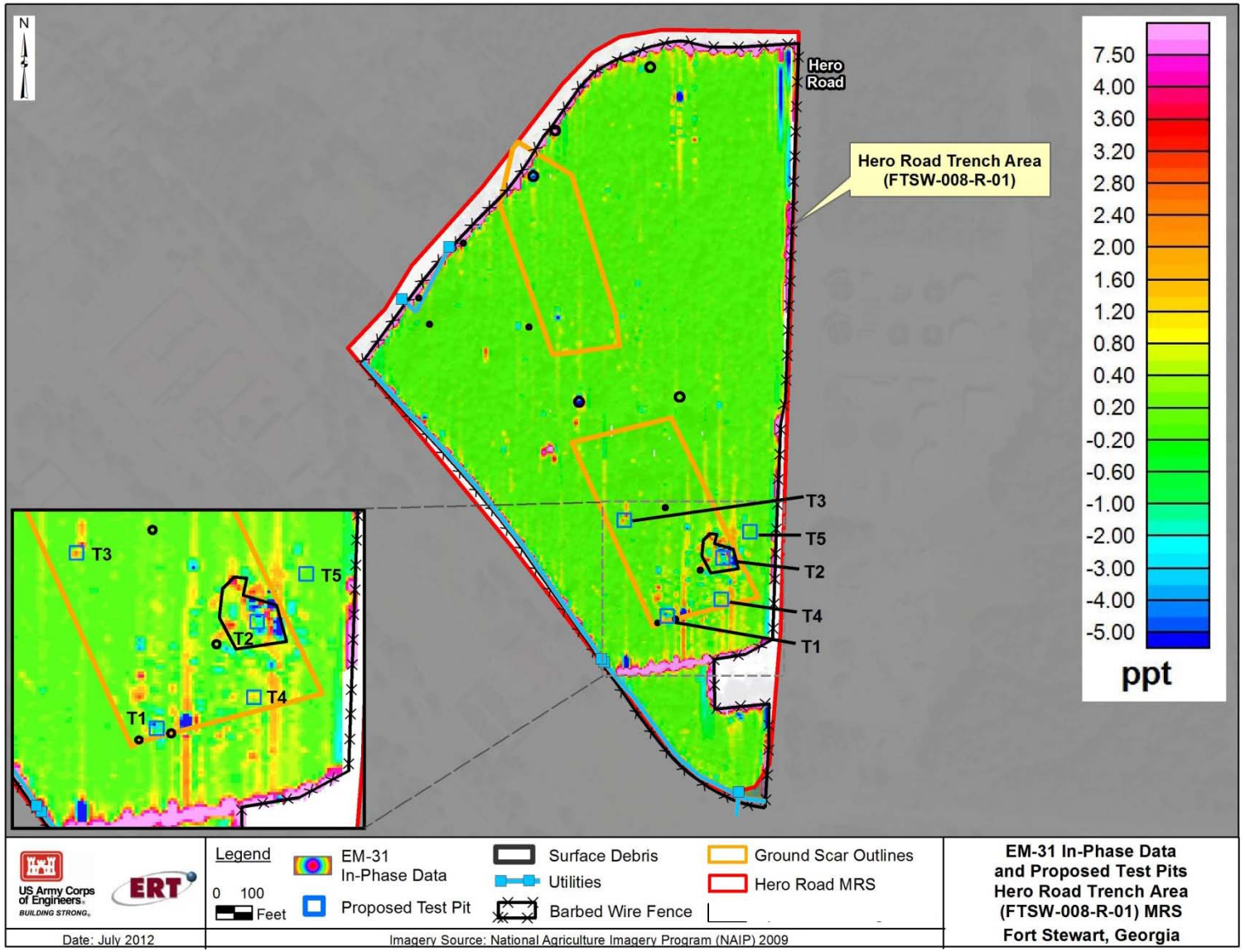
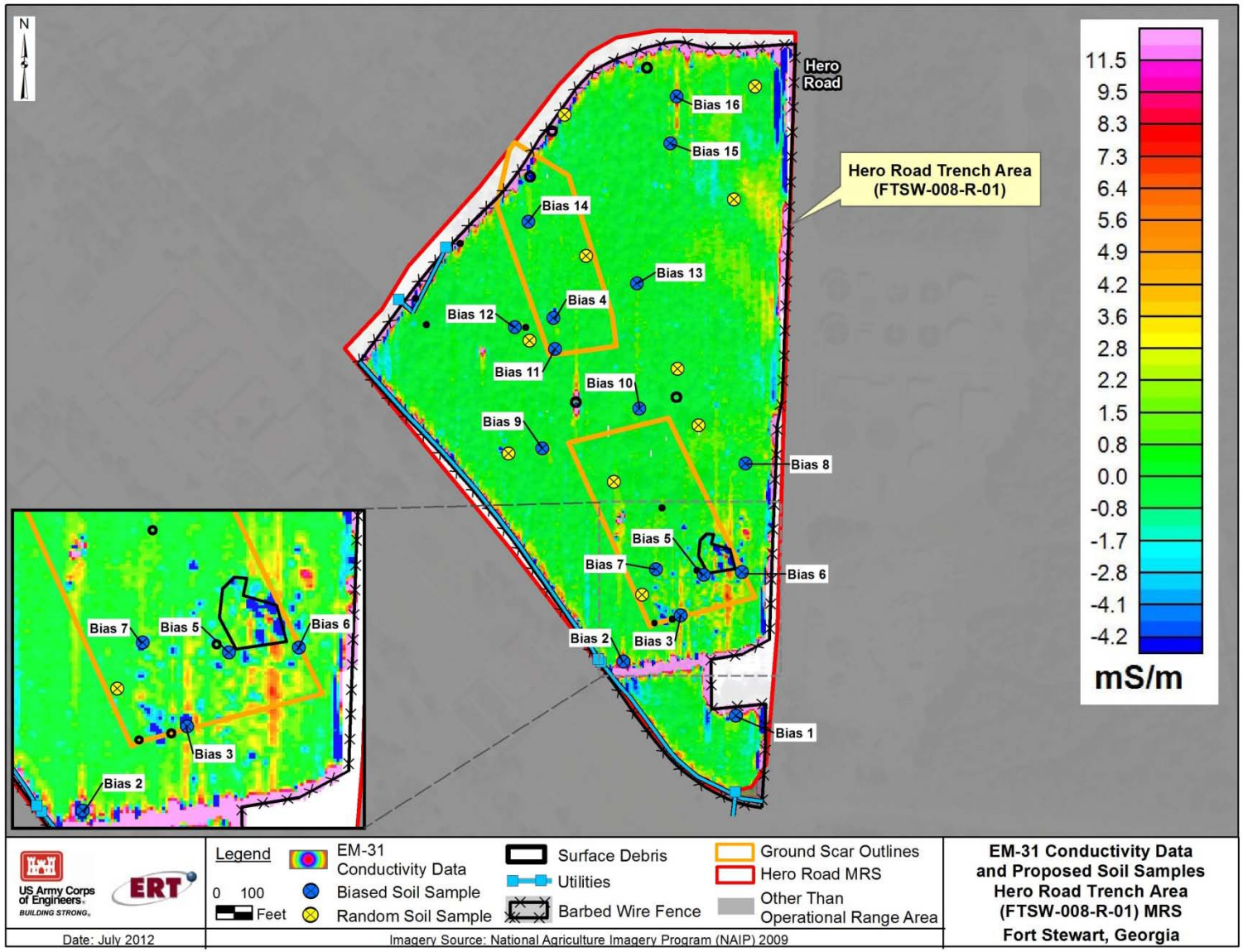


Figure 4: EM31 Conductivity Data and Suggested Biased Sampling Locations



PROJECT: FORT STEWART			
REVIEW COMENTS			
		REVIEW:	**MEMORANDUM**, **REVISED** Preliminary results of the Hero Road Trench Area MRS DGM and recommended Test Pit and biased sampling locations, 17 July 2012
		DATE:	18 July 2012
		NAME:	Debbie McKinley, P.E., CENAB
NO.	SECTION, PAGE OR OTHER REFERENCE	COMMENT	RESPONSE
Debbie McKinley's comments			
1.	Paragraph 5	Worksheet #11 of the Final Work Plan states that, if pits need to be dug deeper than 4 feet, ERT will implement the trenching and excavation plan detailed in the APP and may utilize mechanical excavation equipment to complete the trenches. This paragraph refers to a 5-foot cutoff. Please resolve this apparent discrepancy.	The reference to increasing the size of the trench if it is deeper than 5 feet is due to the safety regulations that require slopes/stepping out for trenches 5 feet or deeper. We will need to implement the trenching and excavation plan in the APP at 4 feet bgs and have an Excavation Competent Person onsite, but the footprint of the trench will not need to increase until a depth of 5 feet is reached. We do intend to use mechanical excavator from the beginning of the trench work, rather than digging by hand first and then using mechanical equipment.
2.	Paragraph 6	While the reference to Table 3-4 is correct, it would appear to be incomplete. Worksheet #11 of the Final Work Plan states that the determination of the location of the side wall samples will be made using best professional judgment by the geophysicist and sample team lead who will look for soil staining, the location of dilute agent CAIS kits (if found), and direction of groundwater flow (if found). If there are no field indicators available, the sample will be collected from the southern wall of the pit/trench. Suggest these specifics be added to the memo.	These additional specifics will be added to the memo.

3.	Paragraph 7	It is stated that the locations of the 16 biased soil samples are based on the distribution of the ground conductivity results and historical aerial photography. Yet, it is stated in the third sentence that each biased soil sample location was selected due to the response noted during the EM31 DGM work. Therefore, it is unclear what information from the historical aerial photography was used to assist in locating the biased samples. Please clarify and revise the text as appropriate.	The biased sample locations were selected based on both the ground conductivity and ground scar information. The following text was added after the 3rd sentence: "Geophysical responses from the EM31 within the ground scars were giving highest priority in selecting biased sample locations. A lower priority was given to areas where a geophysical response was evident, but the location was unassociated with ground scars."
4.	Paragraph 7	It is stated in Section 3.7.5.1 of the Final Work Plan that the biased subsurface soil samples will be collected from the soil horizon immediately above the groundwater, or at a depth suggested by the DGM ground conductivity results. What, therefore, is the basis for collecting the subsurface sample from 12-24 inches bgs at each of the 16 biased locations? Is this the depth suggested by the DGM ground conductivity results at each of the 16 biased locations? Please clarify and revise the text as appropriate.	The notation of subsurface samples 12-24 inches bgs was incorrectly included in the memo. When preparing the Work Plan, ERT thought that the depth of groundwater at this MRS would be 3-4 feet bgs, which is why the statement of sampling immediately above groundwater was included in the Work Plan. However, we now know that GW could be anywhere from 3 - 15 feet bgs and sampling to that depth is not needed to support the risk assessment work. Additionally, the DGM ground conductivity results do not provide justification for sampling at any particular depth. They do provide information for possible burial areas and if those areas have material, sampling should be conducted below the buried materials. This was discussed during the 26 July conference call, as detailed in the response to comment #17.
5.	Table 1	Several of the conductivity values exceed the mS/m color scale provided in Figure 4 (e.g., -14, -150, -32, 50, etc.). This, combined with the distance scale of the figure make it difficult to discern whether or not the biased soil samples are actually placed in the noted areas of conductivity or not.	The scale is set up so that responses that exceed the top and bottom numbers are all the same color (i.e., everything over 11.5 is pink). Due to the varying responses, there is no way to set the scale to include the entire range of values without losing resolution. A note to this issue will be included in the memo. Additionally, the following text will be added: "ERT will collect each biased soil samples directly above the peak of the associated geophysical response, or as close to the peak as is reasonable based on field conditions."

6.	Figure 4	Please verify that location Bias 3 is sited to address a separate conductivity response than the nearby test pit T-1. Again, the distance scale of the figure makes it difficult to discern this.	Bias 3 and T1 are two separate conductivity response areas. ERT revised the figures to include close-ups of the southern portion of the southern historical ground scar.
7.	Figure 4	The locations of the random soil samples differ from those presented in Figure 11 of the Final Work Plan, yet no explanation is given for revising the sampling locations. Please clarify and revise the text as appropriate.	Random soil locations were revised based on comments from TPP #2 that we did not need to collect a soil sample in the parking lot; ERT re-ran VSP to get the updated random samples shown in this memo. The Final Revised Work Plan, dated July 11th has a revised Figure 11 and table with the sample coordinates that match what was used in this memo.
Tom Colozza's comments			
8.	Item #3	All potential burial anomalies should be identified and labeled on the DGM maps.	The selected locations for the trenches represent the areas that have the highest possibility of being burial areas.
9.	Item #4	Why only consider anomalies within the ground scars, small excavations could have occurred which would not show up on aerial photography. All target anomalies present in both channels of the EM31 should be investigated.	These anomalies occurred on a single EM31 path and represent discrete items, rather than being indicative of burial areas. The focus of the trenching activity is not to resolve individual anomalies but to characterize broader anomalous areas that may represent burial pits/landfills. We believe that biased samples will be sufficient to characterize the individual anomalies.
Mary Ellen Maly's comments:			
10.	Page 1, Item 4:	I'm not sure I understand your 2nd sentence, particularly this part, "...but excluding areas outside of mapped surface debris areas". Does this mean that you ignored the EM31 data outside the surface debris areas with regards to where you put your test pits? If yes, why? It seems likely that there could be burials in areas w/o surface debris.	This statement notes that we did not pick locations for the test pits where there were large responses from surveyed surface debris areas so that the test pits locations were not biased to areas that only have a response due to the surface debris; we focused on non-surface debris areas initially, but did place 1 test pit the area with the most surface debris as there were indications that this area could also represent a subsurface burial area.
11.	Page 2, Item 5:	What will your test pit dimensions be? You say 30 sq feet, but that could be 1x30, 2x15, 5x6, etc. Can you be more specific?	We will use a light excavator with an 18" to 24" bucket. Most trenches will be the width of one bucket and approximately 15 feet long. However, it is expected that dimensions will vary based on field conditions (primarily trees) and may not be perfect rectangles. GPS data will be collected on each trench for the RFI Report.

12.	Page 2, Item 6:	You say the test pits will be from 5 to 10 ft deep. You say that your 2nd (deeper) side wall sample will be in the zone from 1 ft bgs to the bottom of the trench. That will be from a 4 - 9 ft zone, which seems excessively large. Would you composite over this zone? What if you see discrete areas of different staining or contamination? Will you collect additional samples?	There may be a difference in the depth of each test pit; however, the subsurface sample will be from a discrete sample of the trench wall covering the interval of 1 foot bgs to the bottom as noted in the approved Work Plan. The Work Plan also notes that additional biased samples will be collected as needed based on field observations related to MC (this includes soil staining). This information will be added to the memo.
13.	Test Pit locations	I'm not that familiar with interpreting EM31 data. Based on the conductivity results and the in-phase data maps, I tried to figure out why you chose the 4 locations for the test pits, but I didn't see anything obvious. Could you add your rationale for why each of the test pits was located where you recommend them to be?	As stated in #4, the test pit locations had response with an absolute value higher than 20 mS/m and three of these areas were within the historical ground scars. The fourth test pit location was selected due to the large area of surface debris and responses that noted this could be a potential burial area. A more detailed rationale for each location will be included in the Final Test Pit Memo that will be generated after the 26 July conference call.
26 July Conference Call Comments			
14.	Biased Sample location	GAEPD asked if Biased Sample 10 should be relocated further to the west where the conductivity data shows an anomaly.	ERT survey crews identified this area to the west of Biased Sample 10 to be surface debris (specifically metal pipes); therefore, a biased sample was not placed in that location.
15.	Test Pit and Biased Sample Locations	GAEPD suggested replacing Biased Sample #4 with a Test Pit in order to characterize this anomaly. Biased Sample #4 should then be moved from the southern ground scar area to the northern ground scar area where Test Pit #4 was previously located.	USACE, FTSW, and ERT agree. This information will be added to the memo. ERT will also revise the figures attached to the memo to reflect these changes.
16.	Biased Sample location	Tom Colozza expressed concern that a sampling location is not identified for the anomaly detected outside of the southern ground scar area to the east of Test Pit #2.	This location is noted as T5 on Figures 2 and 3. ERT field personnel will examine this area and determine if this area is associated with surface debris; if surface debris is not present, ERT will conduct trenching activities in this location. This information will be added to the memo.

17.	Depth of Subsurface Biased Samples	The project team discussed the depth of subsurface samples at the biased sample locations; previous indications were that the depth of groundwater may range from 3-15 ft. ERT stated that because the subsurface samples are being collected for use in the Risk Assessment, the maximum depth of the subsurface samples if groundwater is not encountered needs to be determined.	Per discussions, it was determined that groundwater may only be 3-6 feet bgs in this area, but this is unknown until the work is conducted. As such, the biased subsurface samples will be collected on the soil horizon above groundwater or if groundwater is not reached by 10 feet bgs, at the interval of 9 – 10 feet bgs. After the 26 July conference call, GAEPD followed up with their Risk Assessment Unit who indicated that subsurface samples can be taken at a maximum of 10ft bgs if groundwater is not encountered prior to this depth. This covers the construction worker scenario. This information will be added to the memo.
18	Excavator Safety	Ft. Stewart DPW personnel noted that if an excavator was being used for the project, a certified operator is required. This operator must have a physical within the last year. Additionally, the excavator must undergo a daily safety inspection that is documented in the field reports.	ERT noted that the operator was certified and per USACE safety requirements, every person working on the site has had a physical within the last year. Additionally, the ERT Project Manager will coordinate with the Safety Officer to ensure the safety inspections are completed and documented in the daily safety reports.

Hero Road Trench Area MRS Trench Report

Introduction:

As detailed in the 27 July 2012 Final Hero Road Trench Area MRS Test Pit Memo, a total of five (5) trenches were chosen for investigation based on the results of the digital geophysical mapping (DGM) investigation using the EM31. The goal of this trenching was to determine if dilute agent CAIS kits had been improperly disposed of at the MRS in burial pits. Three of the five final trench locations (T1 through T3) were located within the southern historical ground scar. Trench location T4 was in an area just south of the historical ground scar and trench location T5 was located to the east of the southern historical ground scar. A large surface debris area was associated with trench location T2. Figure 10 in Appendix A of this RFI Report shows the locations of the trenches. Additionally, a copy of the 27 July 12 memorandum is included in Appendix K.

ERT completed the excavation, sampling, and characterization of five trenches on 30 and 31 July 2012. Each trench had an approximately 8 by 4 feet surface area and was dug to native soil, as determined by the field soil scientist; the trench depth ranged from 4 to 6 feet. The Hero Road Trench Area MRS is a densely vegetated area that had loose organic vegetation covering the ground surface. This vegetation layer ranged from between 2 inches and 9 inches thick at the trench locations and was not included in the depth of the trench nor was it included in the soil surface sample.

Trench #1

This trench, located within the southern historical scar, was dug to a depth of 48 inches (4 feet) below ground surface (bgs) (Photo 1). Due to the development of the soil horizons and the colors of the soil, the field soil scientist determined that native soil had been reached at this depth. The western side wall was scraped with a knife to expose and accurately describe the soil horizons (Photo 2). The spoils from Trench #1 contained a large metal cable, drum remnants and other miscellaneous metal debris, which were the most likely cause for the DGM response in this location (Photos 3 through 7). The soil sample for Trench #1 was taken towards the middle of the western wall of the trench because of the presence of thick tree roots in other areas of the trench and because there was no evidence of soil staining or contamination at the sample location.

There was approximately 8 to 9 inches of ground surface organic matter and vegetation, consisting of tree roots, branches, and leaves; this organic layer was not included in the surface sample. The surface sample was taken from 0 to 12 inches bgs and consisted of dark brown to dark grey sandy loose soil with many small roots and contained little organic material (Photo 8).

The composite subsurface sample was taken 12 inches bgs to the bottom of the trench (48 inches bgs). The surface horizon in Trench #1 was underlain by a thin horizon of yellow sand, followed by approximately 24 inches of dark grey loose sand to a depth of 36 inches bgs. From 36 to 48

inches bgs the soil was dark grey sand with red oxidation; the presence of reddish spots (iron oxidation) in the soil is indicative of water saturation at some point. The bottom layer of Trench #1, starting at 48 inches bgs, consisted of yellowish brown very loose sand. There was no indication of contamination throughout the entire trench soil profile.

Trench #2

Trench #2, located in the southern historical ground scar, was dug to 48 inches (4 feet) bgs and was located in an area surrounded by old rusted metal drums and other surface debris (Photos 9-11). The field soil scientist determined that native soil had been reached at 48 inches bgs due to the development of soil horizons. The western side wall was scraped with a knife in order to expose the soil horizons. The spoils from Trench #2 contained bricks, construction debris, and other miscellaneous metal scrap (Photos 12-15), which were likely the cause of the DGM response at this location. The DGM results at this location were likely caused by the presence of this debris. A large piece of construction debris imbedded in the western wall on the north end of the trench was determined to be the likeliest location in Trench #2 for any contamination that may exist; therefore, this area was chosen for collection of the soil samples. Otherwise, no indication of contamination was observed in Trench #2.

There was approximately 2 inches of organic vegetation on the ground surface at Trench #2, which was not included in the surface sample. The surface sample was taken from 0 to 12 inches bgs, which consisted of dark brown sand to 1 inch bgs followed by dark brown sand mixed with construction debris down to 24 inches bgs (Photo 16).

The composite subsurface sample was taken from 12 inches bgs to the bottom of the trench; approximately 48 inches bgs (Photo 17). From 12 to 24 inches bgs, the soil horizon consisted of dark brown sand mixed with construction debris. The horizon from 24 inches to 36 inches bgs was dark brown to dark grey sand. Underlying that layer was another organic layer approximately 2 or 3 inches thick that contained wood chips and some red sandy soil to a depth of approximately 39 inches bgs. Directly beneath that layer was approximately 0.5 inches of black soil, which is indicative of dissolved organic matter, as well as the presence of iron reduction. From 39.5 inches bgs, the soil was light brown and light grey sand followed by dark grey and black sand down to 48 inches bgs. At 48 inches bgs there was a thick black horizon, which may indicate the presence of groundwater at some time in the past.

Trench #3

Trench #3, also located in the southern historical ground scar, was dug to 60 inches (5 feet) bgs (Photo 18). Due to the development of the soil horizons and the colors of the soil, the field soil scientist determined that native soil had been reached at this depth. There was a significant amount of large tree roots throughout the top 36 inches of soil. The southern side wall was exposed with a sharp knife in order to accurately describe the soil horizons. The spoils of Trench #3 contained barbed wire, and a large empty steel drum located on the south side wall of the trench (Photos 19-21), which was the likely cause of the DGM response at this location. There

was no noticeable soil discoloring or contamination evident in Trench #3; therefore, the soil sample was taken on the southern wall to the west of the empty drum.

The surface of the soil was covered with approximately 4 inches of organic vegetation, which was not included in the surface soil sample. The surface sample was taken from 0 to 12 inches bgs (Photo 22). The top horizon was dark brown sand with thick and medium-thick roots to 4 inches bgs. This was followed by a layer of light to dark brown mix sandy soil with few black spots to approximately 24 inches bgs.

The subsurface composite sample was taken from 12 inches bgs to 60 inches bgs at the trench bottom (Photo 23). At approximately 24 inches bgs, a very thin distinct black layer was present followed by 2 inches of dark to medium grey sand. This layer was followed by medium brown sand diffusing for about 3 inches to light brown with some reduction around the roots to approximately 36 inches bgs. Below this layer to 48 inches bgs, light brown sand was present that included some reddish lines. Dark brown sand was present at 48 inches bgs and diffused into very dark grey to black sand to the bottom of the trench at 60 inches.

Trench #4

Trench #4, located south of the southern historical trench, was dug to a depth of 72 inches bgs (6 feet) (Photo 24). Due to the development of the soil horizons and the colors of the soil, the field soil scientist determined that native soil had been reached at this depth. The east side wall of Trench #4 was scraped with a knife to expose the soil horizons. In this trench, extreme care was taken when sampling due to the presence of broken glass. The spoils of Trench #4 contained miscellaneous metal scrap and glass bottles (Photos 25-31); these glass bottles were representative of household debris, such as soda bottles, rather than small vials that would have been associated with dilute agent CAIS kits. A layer of glass bottles was present around the entire trench at approximately 18 inches bgs (Photo 32). This debris was the likely cause of the DGM response at this location. The glass layer also contained some reddish sandy soil. Since the glass layer continued around the entire trench, the sample was taken on the south end of the east wall where the clearest example of the glass deposit was noticed. Other than the reddish soil, which could also indicate iron reduction, no other contamination was noticed.

Approximately 3 inches of organic vegetation was present on top of the ground surface and was not included in the surface sample. The surface sample was taken above the glass layer from 0 to 12 inches bgs (Photo 33). The first soil horizon was dark grey sand to 18 inches bgs.

The composite subsurface sample was taken from 12 inches bgs to the bottom of the trench at 72 inches bgs (Photo 34). The sample began in the top soil horizon of dark grey sand, which extended to 18 inches bgs. Below this layer was approximately 6 inches of bottle debris and reddish soil to a depth of 24 inches bgs. At approximately 24 inches bgs there were 8 inches of dark grey sand with dark brown sand mixed in, as well as some spotting of reddish soil. From 32 inches bgs to approximately 35 inches bgs, dense organic roots with wood and what appeared to be decomposing palm branches (Photo 32) were present. Intermingled with this layer of organic

material was dark brown sandy soil. Below this organic layer approximately 24 inches of dark and medium dark brown sand followed by a 1 inch distinct black sand horizon was present to 60 inches bgs. The last horizon contained dark brown sand with some spots of black sand to 72 inches bgs. The black horizon is an accumulation of decomposed organic matter and could indicate the presence of groundwater at one time.

Trench #5

Trench #5, located east of the southern historical ground scar, was dug to a depth of 60 inches (5 feet) bgs and was directly adjacent to a very large, established tree having many large roots (Photo 35). At 60 inches bgs, the field soil scientist determined that native soil had been reached due to the color and development of the soil horizons. The western side of the trench was scraped with a knife to accurately describe the soil horizons. No significant amounts of debris were contained in the trench; however, some barbed wire was located around the tree adjacent to the trench (Photo 36), which was most likely the cause of the DGM response. Trench #5 was dug north to south and the samples were taken on the south end of the western wall (Photo 37). There was no indication or noticeable presence of contamination.

Approximately 2 to 3 inches of organic vegetation, including pine needles, was present above the ground surface, which was not included in the surface sample. The surface sample was taken from 0 to 12 inches bgs (Photo 38). The first soil horizon consisted of dark grey to medium grey sand with small to medium roots present to a depth of 18 inches bgs. The entire surface sample was taken from this horizon.

The subsurface sample was taken from 12 to 60 inches bgs (Photo 39). This sample began towards the end of the first soil horizon containing dark grey to medium grey sand until 18 inches bgs. The second horizon contained reddish orange soil with dark brown to black spots and a significant amount of reduced iron from 18 to 30 inches bgs. Dark grey sand with some light brown and white sand followed until 36 inches bgs. This was followed by a layer of dark brown, black, and light grey sand to the bottom of the trench at 60 inches bgs. A thick layer of black sand was present at the very bottom of Trench #5.

Conclusions:

Based on the DGM results and the trenching that was conducted at the areas that were most likely to be burial pits, there is no physical evidence that dilute agent CAIS kits were improperly buried at the Hero Road Trench Area MRS.



Photo 1: Trench #1 facing south



Photo 2: Trench #1 west wall sampling location



Photo 3: Trench #1 removed soil



Photo 4: Trench #1 metal cable



Photo 5: Trench #1 metal debris



Photo 6: Trench #1 metal debris



Photo 7: Trench #1 metal debris



Photo 8: Trench #1 roots and surface sampling location

Trench #2



Photo 9: Trench #2 surface debris north of trench



Photo 10: Trench #2 surface debris northeast of trench



Photo 11: Trench #2 surface debris southeast of trench



Photo 12: Trench #2 removed soil



Photo #13: Trench #3 surface construction debris



Photo 14: Trench #2 metal scrap/debris



Photo 15: Trench #2 construction and metal debris



Photo 16: Trench #2 surface soil profile



Photo 17: Trench #2 soil profile

Trench #3



Photo 18: Trench #3 facing east



Photo 19: Trench #3 barbed wire



Photo 20: Trench #3 metal drum on south side



Photo 21: Trench #3 removed soil



Photo 22: Trench #3 surface soil profile



Photo 23: Trench #3subsurface soil profile

Trench #4 Photos:



Photo 24: Trench #4 facing north



Photo 25: Trench #4 metal debris



Photo 26: Trench #4 metal debris



Photo 27: Trench #4 metal debris



Photo 28: Trench #4 metal debris



Photo 29: Trench #4 glass debris



Photo 30: Trench #4 glass debris



Photo 31: Trench #4 glass debris



Photo 32: Trench #4 close-up of glass layer



Photo 33: Trench #4 surface soil profile



Photo 34: Trench #4 subsurface soil profile

Trench #5 Photos:



Photo 35: Trench #5 west wall



Photo 36: Barbed wire next to Trench #5



Photo 37: Trench #5 south end



Photo 38: Trench #5 surface soil profile



Photo 39: Trench #5 subsurface soil profile

Form: QA-001
Date: ~~30 Apr 09~~ 21 JUNE 2012
Version 1.2

HEALTH AND SAFETY CHECKLIST

Project Name/Number:
Site Information/Location: HERO RD FT STEWART
Date: 21 June 2012

Answer each question by checking the appropriate column (yes, no, or N/A). If "no" is checked, please provide an explanation on the form.

Documentation	Yes	No	N/A
1 Is the Site Health and Safety Plan (SSHP) on the Site?	X	☐	☐
2 Has the SSHP and/or supplement been reviewed, dated, and signed within the last year?	X	☐	☐
3 Are the tasks being completed reflected in the Supplement?	X	☐	☐
4 Is there a written acknowledgement that all employees have been briefed on and read the SSHP (signature sheet)?	X	☐	☐
5 Are the following training records current and available:			
- 40-Hour HAZWOPER for ALL employees?	X	☐	☐
- 24 Hours Supervised Field Experience?	X	☐	☐
- 8-Hour HAZWOPER Annual Refresher?	X	☐	☐
- CPR/First Aid (minimum one person on site)?	X	☐	☐
- 8-Hour Hazardous Waste Site Supervisor and refresher?	X	☐	☐
- Initial Site Health and Safety Briefing?	X	☐	☐
6 Site Health and Safety Briefing for each location or site (record in field log notebook)?	X	☐	☐
7 Were fire extinguishers checked on first day?	X	☐	☐
8 Were applicable Material Safety Data Sheets at the Site (located in SamplingPlan)?	X	☐	☐
9 Are documents current and available that indicate personnel are medically fit towork and wear the required personal protective equipment (if required)?	X	☐	☐
10 Are work zones adequately designated?	X	☐	☐
11 Is required personal protective equipment available and correctly used, maintained, and stored?	X	☐	☐
12 Is the following emergency equipment located at each site:			
- Fire extinguisher?	X	☐	☐
- Eye wash (minimal)?	X	☐	☐
- Communications (walkie talkie or phone)?	X	☐	☐
- First aid kit?	X	☐	☐
13 Is the buddy system in use?	X	☐	☐
14 Are personnel refraining from drinking, chewing, smoking, taking medications, or other hand-to-mouth contact while working in the exclusion zone?	X	☐	☐
15 Is the site organized to allow the use of lifting equipment, and avoid tripping hazards and spreading contamination?	X	☐	☐
16 Was a random employee asked if he/she know site hazard and emergency procedures?	X	☐	☐

The QC Inspector shall sign this checklist upon completion of all items on the checklist.

QC Inspector Signature: [signature] 6/21/12

Notes:

Form: QA-001
Date: 30-Apr-09
Version 1.2

HEALTH AND SAFETY CHECKLIST

Project Name/Number: FORT FT STEWART 90mm/HERO RD
Site Information/Location: 90MM RUB/ASP FORT STEWART
Date: 06 29 12

Answer each question by checking the appropriate column (yes, no, or N/A). If "no" is checked, please provide an explanation on the form.

	Documentation	Yes	No	N/A
1	Is the Site Health and Safety Plan (SSHP) on the Site?	☒	☐	☐
2	Has the SSHP and/or supplement been reviewed, dated, and signed within the last year?	☒	☐	☐
3	Are the tasks being completed reflected in the Supplement?	☒	☐	☐
4	Is there a written acknowledgement that all employees have been briefed on and read the SSHP (signature sheet)?	☒	☐	☐
5	Are the following training records current and available:			
	- 40-Hour HAZWOPER for ALL employees?	☒	☐	☐
	- 24 Hours Supervised Field Experience?	☒	☐	☐
	- 8-Hour HAZWOPER Annual Refresher?	☒	☐	☐
	- CPR/First Aid (minimum one person on site)?	☒	☐	☐
	- 8-Hour Hazardous Waste Site Supervisor and refresher?	☒	☐	☐
	- Initial Site Health and Safety Briefing?	☒	☐	☐
6	Site Health and Safety Briefing for each location or site (record in field log notebook)?	☒	☐	☐
7	Were fire extinguishers checked on first day?	☒	☐	☐
8	Were applicable Material Safety Data Sheets at the Site (located in SamplingPlan)?	☒	☐	☐
9	Are documents current and available that indicate personnel are medically fit towork and wear the required personal protective equipment (if required)?	☒	☐	☐
10	Are work zones adequately designated?	☒	☐	☐
11	Is required personal protective equipment available and correctly used, maintained, and stored?	☒	☐	☐
12	Is the following emergency equipment located at each site:			
	- Fire extinguisher?	☒	☐	☐
	- Eye wash (minimal)?	☐	☐	☐
	- Communications (walkie talkie or phone)?	☐	☐	☐
	- First aid kit?	☐	☐	☐
13	Is the buddy system in use?	☒	☐	☐
14	Are personnel refraining from drinking, chewing, smoking, taking medications, or other hand-to-mouth contact while working in the exclusion zone?	☒	☐	☐
15	Is the site organized to allow the use of lifting equipment, and avoid tripping hazards and spreading contamination?	☒	☐	☐
16	Was a random employee asked if he/she know site hazard and emergency procedures?	☒	☐	☐

The QC Inspector shall sign this checklist upon completion of all items on the checklist.

QC Inspector Signature: _____

Notes:

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_____

Form: QA-001
Date: 30-Apr-09
Version 1.2

HEALTH AND SAFETY CHECKLIST

Project Name/Number: Hero RD 190mm RNG
Site Information/Location: MMRP / Ft Stewart
Date: 07 04 12

Answer each question by checking the appropriate column (yes, no, or N/A). If "no" is checked, please provide an explanation on the form.

	Documentation	Yes	No	N/A
1	Is the Site Health and Safety Plan (SSHP) on the Site?	☒	☐	☐
2	Has the SSHP and/or supplement been reviewed, dated, and signed within the last year?	☒	☐	☐
3	Are the tasks being completed reflected in the Supplement?	☒	☐	☐
4	Is there a written acknowledgement that all employees have been briefed on and read the SSHP (signature sheet)?	☒	☐	☐
5	Are the following training records current and available:			
	- 40-Hour HAZWOPER for ALL employees?	☒	☐	☐
	- 24 Hours Supervised Field Experience?	☒	☐	☐
	- 8-Hour HAZWOPER Annual Refresher?	☒	☐	☐
	- CPR/First Aid (minimum one person on site)?	☒	☐	☐
	- 8-Hour Hazardous Waste Site Supervisor and refresher?	☒	☐	☐
	- Initial Site Health and Safety Briefing?	☒	☐	☐
6	Site Health and Safety Briefing for each location or site (record in field log notebook)?	☒	☐	☐
7	Were fire extinguishers checked on first day?	☒	☐	☐
8	Were applicable Material Safety Data Sheets at the Site (located in Sampling Plan)?	☒	☐	☐
9	Are documents current and available that indicate personnel are medically fit to work and wear the required personal protective equipment (if required)?	☒	☐	☐
10	Are work zones adequately designated?	☒	☐	☐
11	Is required personal protective equipment available and correctly used, maintained, and stored?	☒	☐	☐
12	Is the following emergency equipment located at each site:			
	- Fire extinguisher?	☒	☐	☐
	- Eye wash (minimal)?	☒	☐	☐
	- Communications (walkie talkie or phone)?	☒	☐	☐
	- First aid kit?	☒	☐	☐
13	Is the buddy system in use?	☒	☐	☐
14	Are personnel refraining from drinking, chewing, smoking, taking medications, or other hand-to-mouth contact while working in the exclusion zone?	☒	☐	☐
15	Is the site organized to allow the use of lifting equipment, and avoid tripping hazards and spreading contamination?	☒	☐	☐
16	Was a random employee asked if he/she know site hazard and emergency procedures?	☒	☐	☐

The QC Inspector shall sign this checklist upon completion of all items on the checklist.

QC Inspector Signature: _____

Notes:
S. Burton
UXO, ERT

Earth Resources Technology

Form: QA-001
Date: 30-Apr-09
Version 1.2

HEALTH AND SAFETY CHECKLIST

Project Name/Number: FT Stewart MMRP
Site Information/Location: Hero Rd / 90mm Vac
Date: 07/11/12

Answer each question by checking the appropriate column (yes, no, or N/A). If "no" is checked, please provide an explanation on the form.

	Documentation	Yes	No	N/A
1	Is the Site Health and Safety Plan (SSHP) on the Site?	☒	☐	☐
2	Has the SSHP and/or supplement been reviewed, dated, and signed within the last year?	☒	☐	☐
3	Are the tasks being completed reflected in the Supplement?	☒	☐	☐
4	Is there a written acknowledgement that all employees have been briefed on and read the SSHP (signature sheet)?	☒	☐	☐
5	Are the following training records current and available:			
-	40-Hour HAZWOPER for ALL employees?	☒	☐	☐
-	24 Hours Supervised Field Experience?	☒	☐	☐
-	8-Hour HAZWOPER Annual Refresher?	☒	☐	☐
-	CPR/First Aid (minimum one person on site)?	☒	☐	☐
-	8-Hour Hazardous Waste Site Supervisor and refresher?	☒	☐	☐
-	Initial Site Health and Safety Briefing?	☒	☐	☐
6	Site Health and Safety Briefing for each location or site (record in field log notebook)?	☒	☐	☐
7	Were fire extinguishers checked on first day?	☒	☐	☐
8	Were applicable Material Safety Data Sheets at the Site (located in SamplingPlan)?	☒	☐	☐
9	Are documents current and available that indicate personnel are medically fit towork and wear the required personal protective equipment (if required)?	☒	☐	☐
10	Are work zones adequately designated?	☒	☐	☐
11	Is required personal protective equipment available and correctly used, maintained, and stored?	☒	☐	☐
12	Is the following emergency equipment located at each site:			
-	Fire extinguisher?	☒	☐	☐
-	Eye wash (minimal)?	☒	☐	☐
-	Communications (walkie talkie or phone)?	☒	☐	☐
-	First aid kit?	☒	☐	☐
13	Is the buddy system in use?	☒	☐	☐
14	Are personnel refraining from drinking, chewing, smoking, taking medications, or other hand-to-mouth contact while working in the exclusion zone?	☒	☐	☐
15	Is the site organized to allow the use of lifting equipment, and avoid tripping hazards and spreading contamination?	☒	☐	☐
16	Was a random employee asked if he/she know site hazard and emergency procedures?	☒	☐	☐

The QC Inspector shall sign this checklist upon completion of all items on the checklist.

QC Inspector Signature: [signature]

Notes:

Form: QA-001
Date: 30-Apr-09
Version 1.2

HEALTH AND SAFETY CHECKLIST

Project Name/Number: 40 mm RNG FT STEWART GA
Site Information/Location: MRS. ASP
Date: 07 26 12

Answer each question by checking the appropriate column (yes, no, or N/A). If "no" is checked, please provide an explanation on the form.

	Documentation	Yes	No	N/A
1	Is the Site Health and Safety Plan (SSHP) on the Site?	☒	☐	☐
2	Has the SSHP and/or supplement been reviewed, dated, and signed within the last year?	☒	☐	☐
3	Are the tasks being completed reflected in the Supplement?	☒	☐	☐
4	Is there a written acknowledgement that all employees have been briefed on and read the SSHP (signature sheet)?	☒	☐	☐
5	Are the following training records current and available:			
	- 40-Hour HAZWOPER for ALL employees?	☒	☐	☐
	- 24 Hours Supervised Field Experience?	☒	☐	☐
	- 8-Hour HAZWOPER Annual Refresher?	☒	☐	☐
	- CPR/First Aid (minimum one person on site)?	☒	☐	☐
	- 8-Hour Hazardous Waste Site Supervisor and refresher?	☒	☐	☐
	- Initial Site Health and Safety Briefing?	☒	☐	☐
6	Site Health and Safety Briefing for each location or site (record in field log notebook)?	☒	☐	☐
7	Were fire extinguishers checked on first day?	☒	☐	☐
8	Were applicable Material Safety Data Sheets at the Site (located in SamplingPlan)?	☒	☐	☐
9	Are documents current and available that indicate personnel are medically fit towork and wear the required personal protective equipment (if required)?	☒	☐	☐
10	Are work zones adequately designated?	☒	☐	☐
11	Is required personal protective equipment available and correctly used, maintained, and stored?	☒	☐	☐
12	Is the following emergency equipment located at each site:			
	- Fire extinguisher?	☒	☐	☐
	- Eye wash (minimal)?	☒	☐	☐
	- Communications (walkie talkie or phone)?	☒	☐	☐
	- First aid kit?	☒	☐	☐
13	Is the buddy system in use?	☒	☐	☐
14	Are personnel refraining from drinking, chewing, smoking, taking medications, or other hand-to-mouth contact while working in the exclusion zone?	☒	☐	☐
15	Is the site organized to allow the use of lifting equipment, and avoid tripping hazards and spreading contamination?	☒	☐	☐
16	Was a random employee asked if he/she know site hazard and emergency procedures?	☒	☐	☐

The QC Inspector shall sign this checklist upon completion of all items on the checklist.

QC Inspector Signature: [signature]

Notes:

Sampling & MEC/UXO operations

Form: QA-001
Date: 30-Apr-09
Version 1.2

HEALTH AND SAFETY CHECKLIST

Project Name/Number: 90 MM RNG / HERO RD LANDFILL
Site Information/Location: FT STEWART GA
Date: 08 01 12

Answer each question by checking the appropriate column (yes, no, or N/A). If "no" is checked, please provide an explanation on the form.

	Documentation	Yes	No	N/A
1	Is the Site Health and Safety Plan (SSHP) on the Site?	☒	☐	☐
2	Has the SSHP and/or supplement been reviewed, dated, and signed within the last year?	☒	☐	☐
3	Are the tasks being completed reflected in the Supplement?	☒	☐	☐
4	Is there a written acknowledgement that all employees have been briefed on and read the SSHP (signature sheet)?	☒	☐	☐
5	Are the following training records current and available:			
	- 40-Hour HAZWOPER for ALL employees?	☒	☐	☐
	- 24 Hours Supervised Field Experience?	☒	☐	☐
	- 8-Hour HAZWOPER Annual Refresher?	☒	☐	☐
	- CPR/First Aid (minimum one person on site)?	☒	☐	☐
	- 8-Hour Hazardous Waste Site Supervisor and refresher?	☒	☐	☐
	- Initial Site Health and Safety Briefing?	☒	☐	☐
6	Site Health and Safety Briefing for each location or site (record in field log notebook)?	☒	☐	☐
7	Were fire extinguishers checked on first day?	☒	☐	☐
8	Were applicable Material Safety Data Sheets at the Site (located in Sampling Plan)?	☒	☐	☐
9	Are documents current and available that indicate personnel are medically fit to work and wear the required personal protective equipment (if required)?	☒	☐	☐
10	Are work zones adequately designated?	☒	☐	☐
11	Is required personal protective equipment available and correctly used, maintained, and stored?	☒	☐	☐
12	Is the following emergency equipment located at each site:			
	- Fire extinguisher?	☒	☐	☐
	- Eye wash (minimal)?	☒	☐	☐
	- Communications (walkie talkie or phone)?	☒	☐	☐
	- First aid kit?	☒	☐	☐
13	Is the buddy system in use?	☒	☐	☐
14	Are personnel refraining from drinking, chewing, smoking, taking medications, or other hand-to-mouth contact while working in the exclusion zone?	☒	☐	☐
15	Is the site organized to allow the use of lifting equipment, and avoid tripping hazards and spreading contamination?	☒	☐	☐
16	Was a random employee asked if he/she know site hazard and emergency procedures?	☒	☐	☐

The QC Inspector shall sign this checklist upon completion of all items on the checklist.

QC Inspector Signature: [signature]

Notes:

WATER IS ALLOWED ON THE GRID DUE TO HEAT.

DAILY SAFETY AND HEALTH BRIEF

Site: Hero RD Ft Stewart

Contract No.:

Conducted By: S. Burhans Date: 6-11-12

Personnel Attending:

Print Name	Signature	Print Name	Signature
Steve Bell			
Lynelle Brade			
Tyler Zaal			
Chris Larson			

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp_____ Low Temp_____ Winds_____ Precipitation X

Radio Check Completed by: X

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location.

Ticks, Alligators, Slips trips, Falls, lightning.

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: Hess Road

Contract No.: W912DR-09-D-0012

Conducted By: S. Burhans Date: 06-12-12

Personnel Attending:

Print Name	Signature	Print Name	Signature
Steven Burhans			
Tyler Zaal			
Lynelle Brode			
Chris Larson			
Alex Mussio			

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp_____ Low Temp_____ Winds_____ Precipitation X

Radio Check Completed by: S. B

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location.

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: Hero Road

Contract No.:

Conducted By: S Burhans Date: 06/13/12

Personnel Attending:

Print Name	Signature	Print Name	Signature
Steven Burhans	[signature]	Herbert Warnell	[signature]
Tyler Zaal	[signature]		
Alvin Munro	[signature]		
Chris Larson	[signature]		
Lynelle Brode	[signature]		
Charlie Etheridge	[signature]	Charles Ethridge	

Level of Protection (A,B,C,D): D.

Weather Forecast: High Temp 88 Low Temp 64 Winds _____ Precipitation Possible

Radio Check Completed by: S [signature]

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location. Slips, trips, falls, cuttings equipment, Hydrate, Report Injuries Rally Point - Vehicle/Camera 911 - Radio + cell.

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: Helo RD FT Stewart

Contract No.:

Conducted By: S Burhans Date: 06 14 12

Personnel Attending:

Print Name	Signature	Print Name	Signature
S. Burhans		Norbert Darnell	
Tyler Zeal			
Chris Larson			
Lynelle Brode			

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp 85 Low Temp 64 Winds Precipitation 20%

Radio Check Completed by: S. Burhans

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location. Vehicle - Convoy,

Slips trips falls. - Distance from Cutting machines.

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: Hero RD.

Contract No.:

Conducted By: S. Burhans Date: 06/15/12

Personnel Attending:

Print Name	Signature	Print Name	Signature
Tyler Zaal	Tyler Zaal		
Lynelle Brode	Lynelle Brode		
Alex Mussio	[illegible]		
Steve Burh	[illegible]		
Chris Larson	[illegible]		

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp 64 Low Temp 81 Winds _____ Precipitation _____

Radio Check Completed by: S. [illegible]

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location.

EM 31 use, Traffic,

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: 90mm Range / Hero

Contract No.: W912DR-09-D-0012

Conducted By : S. Burhans Date:

Personnel Attending:

Print Name	Signature	Print Name	Signature
Steven Burhans			
Cynelle Brodie			
David King			
JTMA			
Tyler Zaal			
Shawn Rhodes			

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp 98 Low Temp Winds Precipitation

Radio Check Completed by: S. B

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location. Battle Point.

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: Hero MP

Contract No.:

Conducted By: S. Burbank Date: 06/18/12

Personnel Attending:

Print Name	Signature	Print Name	Signature
Steve Burbank			
Lynette Brode			
Tyler Zaal			
Alex Mosso			

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp 83 Low Temp 62 Winds _____ Precipitation _____

Radio Check Completed by: S. Burbank

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location.

Hydrate

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: Hero / Goma Rock

Contract No.: W912DR-09-D-0012

Conducted By : S. Burkhart Date: 6/19/12

Personnel Attending:

Print Name	Signature	Print Name	Signature
Steve Burkhart			
Tyler Zaal			
Lynelle Brode			
[illegible]			
[illegible]			
J. Craig Brewer			

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp 91 Low Temp 62 Winds _____ Precipitation _____

Radio Check Completed by: _____

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location.

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: Herod ND & Goman

Contract No.: W912DR-09-D-0012

Conducted By : S. Burhans Date: 06-20-12

Personnel Attending:

Print Name	Signature	Print Name	Signature
Steve Burhans			
Tyler Zaal			
Lynelle Brode			
Shawn Rhodes			
Mac Morris			
J. Craig Brewer			

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp 91 Low Temp 62 Winds _____ Precipitation _____

Radio Check Completed by: S. Burhans

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location.

Use Spray & Tape Pants - Keep out of ticks & wash Hands before eating.

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: Hero RD

Contract No.: W912DR-09-D-0012

Conducted By : S. Burk Date: 6-20-12

Personnel Attending:

Print Name	Signature	Print Name	Signature
Tyler Zaal	Tyler Zaal		
Shep Mussio	[illegible]		
Shawn Rhodes	Shawn Rhodes		
Lynelle Brode	Lynelle Brode		
Steve Burkman	[illegible]		

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp 90 Low Temp 60 Winds _____ Precipitation _____

Radio Check Completed by: S. S

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location.

Rally point - Vehicle + Conex
Head Count.

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: Hero 121. 90 mm RNG Ft Stewart

Contract No.: W912DR-09-D-0012

Conducted By : S. Burthans Date: 06-22-12

Personnel Attending:

Print Name	Signature	Print Name	Signature
Steven Burthans			
Lynelle Brode			
Tyler Zaal			
Shawn Rhodes			

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp 90 Low Temp 63 Winds _____ Precipitation _____

Radio Check Completed by: S. Burthans

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall, Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location. Vehicle # Convoy.

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: ASP 90 mm Hens RD

Contract No.: W912DR-09-D-0012

Conducted By : Sr Br Date:

Personnel Attending:

Print Name	Signature	Print Name	Signature
Steven Burton			
Shawn Rhodes			
David King			
Tyler Zeal			
Ji MA			
Lynelle Brodie			

Level of Protection (A,B,C,D):

Weather Forecast: High Temp_____ Low Temp_____ Winds_____ Precipitation_____

Radio Check Completed by:

Emergency Personnel Decontamination Station Setup: ☐ Yes ☐ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☐ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location.

Questions or Comments:

865 - 755 - 0579 (MA)

443 - 486 - 3440 (DAVID)

DAILY SAFETY AND HEALTH BRIEF

Site: Hell RD - 90mm / ASP FT STEWART

Contract No.: W912DR-09-D-0012

Conducted By: S. Burhans Date: 06-27-12

Personnel Attending:

Print Name	Signature	Print Name	Signature
Steven Burhans			
Lynelle Brode JI MA			
Tyler Zaal			
David King			
Shawna Rhodes			

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp 91 Low Temp 73 Winds _____ Precipitation _____

Radio Check Completed by: S

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location. Vehicle Rally Point - Hydrate

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: Hero RD Ft Stewart

Contract No.: W912DR-09-D-0012

Conducted By : S. Brihms Date: 07-02-12

Personnel Attending:

Print Name	Signature	Print Name	Signature
Steve Brihms			
Shawna Rhodes			
Tyler Zaal			
Lynelle Brode			

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp 94 Low Temp 72 Winds _____ Precipitation possible TS

Radio Check Completed by: S. Br

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety ~~Procedures~~; Any Unusual Event; and Daily Schedules. ***~~Biological Hazards~~***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location. Vehicle parking area.

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: ASP / Hero

Contract No.: W912DR-09-D-0012

Conducted By : S. Burhans Date: 07-03-12

Personnel Attending:

Print Name	Signature	Print Name	Signature
Steve Burhans			
Mike Murray			
Shawn Rhodes			
Lynelle Bode			
Tyler Zaal			

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp 98 Low Temp 72 Winds _____ Precipitation _____

Radio Check Completed by: S Burl

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location. Vehicle

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: Hero RD

Contract No.: W912DR-09-D-0012

Conducted By : S Burk Date: 07-04-12

Personnel Attending:

Print Name	Signature	Print Name	Signature
Steve Burkhas			
Lynelle Brode			
Shawn Rhodes			
Tyler Zook			
Alex Munro			

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp 90's Low Temp _____ Winds _____ Precipitation _____

Radio Check Completed by: S. Burk

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; ~~Any Unusual~~ Event; and Daily Schedules. ~~***Biological Hazards***~~: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location. Vehicles.

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: 90 mm Hems FT Stewart

Contract No.: W912DR-09-D-0012

Conducted By : S Burhans Date: 07-05-12

Personnel Attending:

Print Name	Signature	Print Name	Signature
Steven Burhans			
Shawn Rhodes			
Tyler Zgal			
Mike Moss			
Lynelle Brode			

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp 90's Low Temp 70's Winds _____ Precipitation _____

Radio Check Completed by: S. Burhans

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location. Rally Point Veh 6 Route to Hospital.

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: Hero RD, 40mm RNG FT Stewart

Contract No.: W912DR-09-D-0012

Conducted By: S. Burbas Date: 07-09-12

Personnel Attending:

Print Name	Signature	Print Name	Signature
Steve Burbas			
Lynelle Dodd			
Shawn Rhodes			
Tyler Zaal			
Mose Mussio			

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp 95 Low Temp 73 Winds _____ Precipitation _____

Radio Check Completed by: S. Burbas

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ~~***Biological Hazards***~~: ~~Bees~~, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location. Vehicle Rally point.

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: Hero RD / 98th / AFB

Contract No.:

Conducted By: S. Burkhart Date: 07-11-12

Personnel Attending:

Print Name	Signature	Print Name	Signature
Steve Burkhart			
Shawn Rhodes			
Lynelle Brode			
Tyler Zook			

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp_____ Low Temp_____ Winds_____ Precipitation_____

Radio Check Completed by:

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location. Vehicles - Breaks, Stay Alert

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: Hero RD FT STEWART

Contract No.: W912DR-09-D-0012

Conducted By : S. Burkhalter Date: 07-13-12

Personnel Attending:

Print Name	Signature	Print Name	Signature
Steve V. Burkhalter			
Tyler Zuel			
Shawn Rhodes			
Lynelle Brode			

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp 90 Low Temp 72 Winds _____ Precipitation 40%

Radio Check Completed by: S. B

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location. RALLY point Vehicle - wet Today. WATCH Buddy for heat Symptoms.

Questions or Comments:

(Alex Departed)

301 323 1429

DAILY SAFETY AND HEALTH BRIEF

Site: 90 MM RNG MMRP FT Stewart GA.

Contract No.: W912DR-09-D-0012

Conducted By: S Burkhams Date: 07 15 12

Personnel Attending:

Print Name	Signature	Print Name	Signature
Steven Burkhams			
Tyler Zaal			
Shawn Rhodes			
Lynelle Brode			
David King			

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp_____ Low Temp_____ Winds_____ Precipitation_____

Radio Check Completed by: S. Burkhams

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location. Vehicle Rally point -

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: 90 mm RNG / ASP FT STEWART GA

Contract No.: W912DR-09-D-0012

Conducted By: S. Burl Date: 07-17-12

Personnel Attending:

Print Name	Signature	Print Name	Signature
Steven Burhans			
Tyler Zaal			
David King			
Shawn Rhodes			
Ryndell Brodie			

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp 91 Low Temp 73 Winds _____ Precipitation _____

Radio Check Completed by: S. Burl

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down-breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location. Rally pt Vehicle - ASP parking lot

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: 90 mm MSP / Ft Stewart

Contract No.: W912DR-09-D-0012

Conducted By: S. Burhams Date: 071812

Personnel Attending:

Print Name	Signature	Print Name	Signature
Steven Burhams			
Lynelle Brock	Lynelle Brock		
Shawn Rhodes			
Tyler Zaal	Tyler Zaal		

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp 91 Low Temp 73 Winds _____ Precipitation _____

Radio Check Completed by: S. Burh

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, ~~and mosquitoes.~~ ***Heat Stress***: Drink plenty of fluids and take ~~cool down breaks.~~ ***Cold Stress***: Wear warm, layered clothing and take any and all ~~needed breaks~~ in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location. Rally Vehicle

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: 90 mm Rng

Contract No.: W912DR-09-D-0012

Conducted By : S. Date: 07-19-12

Personnel Attending:

Print Name	Signature	Print Name	Signature
Tyler Zeal	Tyler Zeal		
Shawn Rhodes	Shawn Rhodes		
Lynelle Brodie	Lynelle Brodie		
Steven Borhm	Steven Borhm		

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp 90's Low Temp _____ Winds _____ Precipitation _____

Radio Check Completed by: S BL

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location. – Vehicle –

Questions or Comments:

DAILY SAFETY AND HEALTH BRIEF

Site: 90 mm RAC/BST FT Stewart

Contract No.: W912DR-09-D-0012

Conducted By : S Burkhalter Date: 07-20-12

Personnel Attending:

Print Name	Signature	Print Name	Signature
Tyler Zaal	Tyler Zaal		
Steven Burkhalter			
Lynelle Brale	Lynelle Brale		
Shawn Rhodes	Shawn Rhodes		

Level of Protection (A,B,C,D): D

Weather Forecast: High Temp 91 Low Temp 73 Winds _____ Precipitation _____

Radio Check Completed by: S. Burkhalter

Emergency Personnel Decontamination Station Setup: ☐ Yes ☒ N/A

HAZMATCAD Setup (attach checklist): ☐ Yes ☒ N/A

Topics of Discussion: Emergency Procedures, Work Area Access Control, UXO Safety, HAZCOM, Slip, Trips, and Fall; Unauthorized Procedures; Cell Phones and Radios for emergency use only; Safety Procedures; Any Unusual Event; and Daily Schedules. ***Biological Hazards***: Bees, ticks, snakes, and mosquitoes. ***Heat Stress***: Drink plenty of fluids and take cool-down breaks. ***Cold Stress***: Wear warm, layered clothing and take any and all needed breaks in warm places if you get cold based on the area temperature. The designated rally point will be at the below listed location. Vehicle

Questions or Comments:

DAILY QUALITY CONTROL REPORT
Project:

Date: 7/26/12

Prepared By: R. McCoy

Weather: clear skies, hot, humid, slight breeze

Field Instrument Measurements: N/A

Calibrations: N/A

Deviations from UFP-QAPP: none

Problems Encountered: none

COR Directives: none

Sample Location	Sample ID	Sample Medium	Field (F) or Control (C) sample
AAR	FTSW-AA-SO-01	Surface soil	F
AAR	FTSW-AA-SO-02 (01.5)	Subsurface soil	F
AAR	FTSW-AA-SO-03	Surface soil	F
AAR	FTSW-AA-SC-03 DUP	↓	C
AAR	FTSW-AA-SO-03 MS	↓	C
AAR	FTSW-AA-SO-03 MSD	↓	C
AAR	FTSW-AA-SO-04 (01.5)	Subsurface soil	F

Sample Location	Sample ID	Sample Medium	Field (F) or Control (C) sample
AAR	FTSW-AA-SO-05	Surface soil	F
AAR	FTSW-AA-SO-06(01.5)	Subsurface soil	F
AAR	FTSW-AA-SO-07	Surface soil	F
AAR	FTSW-AA-SO-08(02)	Subsurface soil	F
AAR	FTSW-AA-SO-08(02)Dup	↓	C
AAR	FTSW-AA-SO-08(02)MS	↓	C
AAR	FTSW-AA-SO-08(02)MSD	↓	C
AAR	FTSW-AA-SO-09	Surface soil	F
AAR	FTSW-AA-SO-10(02)	Subsurface soil	F
AAR	FTSW-AA-SO-10(02)ERB	Water	C
AAR	FTSW-AA-SO-11	Surface soil	F
AAR	FTSW-AA-SO-12(01.5)	Subsurface soil	F
AAR	FTSW-AA-SO-13	Surface soil	F
AAR	FTSW-AA-SO-14(02)	Subsurface soil	F
AAR	FTSW-AA-SO-15	Surface soil	F
AAR	FTSW-AA-SO-16(01.5)	Subsurface soil	F

DAILY QUALITY CONTROL REPORT
Project:

Date: 7/27/12

Prepared By: R. McCoy

Weather: Hot, humid, little to no clouds, slight breeze at times

Field Instrument Measurements: N/A

Calibrations: N/A

Deviations from UFP-QAPP: none

Problems Encountered:

COR Directives: none

Sample Location	Sample ID	Sample Medium	Field (F) or Control (C) sample
AAR	FTSW-AA-SO-17	Surface soil	F
AAR	FTSW-AA-SO-18(01.5)	Subsurface soil	F
AAR	FTSW-AA-SO-19	Surface soil	F
AAR	FTSW-AA-SO-20(01.5)	Subsurface soil	F
AAR	FTSW-AA-SW-21	Surface water	F
AAR	FTSW-AA-SO-21	Sediment soil	F
AAR	FTSW-AA-SO-22	Sediment soil	F

Sample Location	Sample ID	Sample Medium	Field (F) or Control (C) sample
Background	FTSW-AA-SO-23	Surface soil	F
Background	FTSW-AA-SO-24	Surface soil	F
AAR	FTSW-AA-SO-22 ERB	Water	C
Background	FTSW-AA-SO-25	Surface soil	F
Background	FTSW-AA-SO-25 Dup	Surface soil	C
Background	FTSW-AA-SO-26	Surface soil	F
Background	FTSW-AA-SO-27	Surface soil	F

DAILY QUALITY CONTROL REPORT
Project:

Date: 7/30/12

Prepared By: R. McCoy

Weather: Sunny Hot, little to no breeze

Field Instrument Measurements: N/A

Calibrations: N/A

Deviations from UFP-QAPP: none

Problems Encountered: none

COR Directives: none

Sample Location	Sample ID	Sample Medium	Field (F) or Control (C) sample
Background	FTSW-AA-SO-28	Surface soil	F
Background	FTSW-AA-SO-29	Surface soil	F
Hero Road	FTSW-HR-SO-01	Surface soil	F
Hero Road	FTSW-HR-SO-01 DUP	↓	C
Hero Road	FTSW-HR-SO-01 MS	↓	C
Hero Road	FTSW-HR-SO-01 MSD	↓	C
Hero Road	FTSW-HR-SO-02(01.5)	Subsurface soil	F

Sample Location	Sample ID	Sample Medium	Field (F) or Control (C) sample
Hero Road	FTSW-HR-SO-02(01.5)ERB	Water	C
Hero Road	FTSW-HR-SO-03	Surface soil	F
Hero Road	FTSW-HR-SO-04(02)	Subsurface soil	F
Hero Road	FTSW-HR-SO-05	Surface soil	F
Hero Road	FTSW-HR-SO-06(01.5)	Subsurface soil	F
Hero Road	FTSW-HR-SO-07	Surface soil	F
Hero Road	FTSW-HR-SO-08(02)	Subsurface soil	F
Hero Road	FTSW-HR-SO-09	Surface soil	F
Hero Road	FTSW-HR-SO-10(01.5)	Subsurface soil	F

DAILY QUALITY CONTROL REPORT
Project:

Date: 7/31/12

Prepared By: R. McCoy

Weather: Overcast cooler light breeze

Field Instrument Measurements: N/A

Calibrations: N/A

Deviations from UFP-QAPP: none

Problems Encountered: none

COR Directives: none

Sample Location	Sample ID	Sample Medium	Field (F) or Control (C) sample
Hero Road	FTSW-HR-SO-11	Surface soil	F
Hero Road	FTSW-HR-SO-12(01.5)	Subsurface soil	F
Hero Road	FTSW-HR-SO-13	Surface soil	F
Hero Road	FTSW-HR-SO-14(01.5)	Subsurface soil	F
Hero Road	FTSW-HR-SO-14(01.5)Dup	Subsurface Soil	C
Hero Road	FTSW-HR-SO-15	Surface soil	F
Hero Road	FTSW-HR-SO-16(01.5)	Subsurface Soil	F

Sample Location	Sample ID	Sample Medium	Field (F) or Control (C) sample
Hero Road	FTSW-HR-SO-17	Surface Soil	F
Hero Road	FTSW-HR-SO-18(02)	Subsurface Soil	F
Hero Road	FTSW-HR-SO-19	Surface Soil	F
Hero Road	FTSW-HR-SO-20(01.5)	Subsurface Soil	F
Hero Road Trench #1	FTSW-HR-SO-21	Surface Soil	F
"	FTSW-HR-SO-22(04)	Subsurface Soil	F
"	FTSW-HR-SO-22(04) Dup	"	C
"	FTSW-HR-SO-22(04) MS	"	C
"	FTSW-HR-SO-22(04) MSD	"	C
Hero Road Trench #4	FTSW-HR-SO-23	Surface Soil	F
"	FTSW-HR-SO-24(06)	Subsurface Soil	F
Hero Road Trench #2	FTSW-HR-SO-25	Surface Soil	F
"	FTSW-HR-SO-26(04)	Subsurface Soil	F
Hero Road Trench #5	FTSW-HR-SO-27	Surface Soil	F
"	FTSW-HR-SO-28(05)	Subsurface Soil	F
Hero Road Trench #3	FTSW-HR-SO-29	Surface Soil	F
"	FTSW-HR-SO-30(05)	Subsurface Soil	F

DAILY QUALITY CONTROL REPORT
Project:

Date: 8/1/12

Prepared By: R. McCoy

Weather: Sunny, slight breeze slightly cooler

Field Instrument Measurements: N/A

Calibrations: N/A

Deviations from UFP-QAPP: None

Problems Encountered: Had difficult time reaching 10 ft on bias samples with hand auger. Decided to take all surface samples today and get help from UXO techs for subsurface samples.

COR Directives: none

Sample Location	Sample ID	Sample Medium	Field (F) or Control (C) sample
Hero Rd Bias #1	FTSW-HR-SO -31	Surface Soil	F
Hero Rd Bias #1	FTSW-HR-SO -31 Dup	"	C
Hero Rd Bias #1	FTSW-HR-SO -31 MS	"	C
Bias #1 Hero Rd	FTSW-HR-SO -31 MSD	"	C
Bias #1 Hero Rd	FTSW-HR-SO -32(10)	Subsurface Soil	F
Bias #2 Hero Rd	FTSW-HR-SO -33	Surface Soil	F
Bias #2 Hero Rd	FTSW-HR-SO -34(10)	Subsurface Soil	F

Sample Location	Sample ID	Sample Medium	Field (F) or Control (C) sample
Bias #2 Hero Rd	FTSW-HR-SO-34(10) Dup	Subsurface soil	C
Bias #3 Hero Rd	FTSW-HR-SO-35	Surface Soil	F
Bias #7 Hero Rd	FTSW-HR-SO-36	Surface Soil	F
Bias #7 Hero Rd	FTSW-HR-SO-37(09.5)	Subsurface soil	F
Bias #7 Hero Rd	FTSW-HR-SO-37(09.5) ERB	water	C
Bias #5 Hero Rd	FTSW-HR-SO-38	Surface soil	F
Bias #6 Hero Rd	FTSW-HR-SO-39	Surface soil	F
Bias #8 Hero Rd	FTSW-HR-SO-40	"	F
Bias #10 Hero Rd	FTSW-HR-SO-41	"	F
Bias #9 Hero Rd	FTSW-HR-SO-42	"	F
Bias #16 Hero Rd	FTSW-HR-SO-43	"	F
Bias #15 Hero Rd	FTSW-HR-SO-44	"	F
Bias #13 Hero Rd	FTSW-HR-SO-45	"	F
Bias #14 Hero Rd	FTSW-HR-SO-46	"	F
Bias #14 Hero Rd	FTSW-HR-SO-46 Dup	Surface Soil	C
Bias #11 Hero Rd	FTSW-HR-SO-47	"	F
Bias #4 Hero Rd	FTSW-HR-SO-48	"	F
Bias #12 Hero Rd	FTSW-HR-SO-49	"	F

DAILY QUALITY CONTROL REPORT
Project:

Date: 8/2/12

Prepared By: R. McCoy

Weather: Hot, sunny, few clouds slight breeze

Field Instrument Measurements: N/A

Calibrations: N/A

Deviations from UFP-QAPP: none

Problems Encountered: none

COR Directives: none

Sample Location	Sample ID	Sample Medium	Field (F) or Control (C) sample
Background	FTSW-AA-SO-30	Surface soil	F
Background	FTSW-AA-SO-31	Surface soil	F
Background	FTSW-AA-SO-32	Surface soil	F

Sample Location	Sample ID	Sample Medium	Field (F) or Control (C) sample

DAILY QUALITY CONTROL REPORT
Project:

Date: 8/3/12

Prepared By: R. McCoy

Weather: Sunny Hot little to no breeze

Field Instrument Measurements: N/A

Calibrations: N/A

Deviations from UFP-QAPP: Used excavator to assist w/ hand auger

Problems Encountered: Subsurface samples difficult to obtain. Used excavator to assist in removing up to 5ft of soil. Field sampler L. Brode incorrectly labeled samples on COC. Sample IDs corrected and listed on this form

COR Directions: None

Sample Location	Sample ID	Sample Medium	Field (F) or Control (C) sample
Bias #5 Hero Road	FTSW-HR-SO-50(10)	Subsurface Soil	F
Bias #6 Hero Road	FTSW-HR-SO-51(10)	Subsurface Soil	F
Bias #8 Hero Road	FTSW-HR-SO-52(10)	Subsurface Soil	F
Bias #3 Hero Road	FTSW-HR-SO-53(10)	Subsurface Soil	F
~~Hero Road~~			
~~Hero Road~~			
~~Hero Road~~			

Sample Location	Sample ID	Sample Medium	Field (F) or Control (C) sample

DAILY QUALITY CONTROL REPORT
Project:

Date: 8/6/12

Prepared By: R. McCoy

Weather: Sunny Hot clouds rolling in throughout day

Field Instrument Measurements: N/A

Calibrations: N/A

Deviations from UFP-QAPP: still using excavator to assist w/ subsurface

Problems Encountered: L. Brode mislabeled IDs on COC. Correct IDs listed below.

COR Directives: None

Sample Location	Sample ID	Sample Medium	Field (F) or Control (C) sample
Bias #12 Hero Road	FTSW-HR-SO-54(10)	Subsurface Soil	F
Bias #4 Hero Road	FTSW-HR-SO-55(07.5)	"	F
Bias #9 Hero Road	FTSW-HR-SO-56(10)	"	F
Bias #10 Hero Road	FTSW-HR-SO-57(10)	"	F
Bias #11 Hero Road	FTSW-HR-SO-58(10)	"	F
Bias #13 Hero Road	FTSW-HR-SO-59(10)	"	F
Bias #14 Hero Road	FTSW-HR-SO-60(07.5)	"	F

Sample Location	Sample ID	Sample Medium	Field (F) or Control (C) sample
Hero Road Brag #14	FTSW-HR-SC -60(07.5)ERB	Water	C

DAILY QUALITY CONTROL REPORT
Project:

Date: 8/7/12

Prepared By: R. McCoy

Weather:

Field Instrument Measurements: N/A

Calibrations: N/A

Deviations from UFP-QAPP: Using excavator to assist

Problems Encountered: Lab Broke mislabeled sample IDs on COC. correct sample IDs listed below.

COR Directives: None

Sample Location	Sample ID	Sample Medium	Field (F) or Control (C) sample
Bias #15 Hero Road	FTSW-HR-SO-61(09.5)	Subsurface Soil	F
Bias #16 Hero Road	FTSW-HR-SO-62(10)	Subsurface Soil	F
Hero Road	FTSW-IDW-01	IDW	C

Sample Location	Sample ID	Sample Medium	Field (F) or Control (C) sample

DAILY QUALITY CONTROL REPORT
Project:

Date: 9/6/12

Prepared By: R. McCoy

Weather: Sunny, partly cloudy ~ 80°F Slight breeze

Field Instrument Measurements: N/A

Calibrations: N/A

Deviations from UFP-QAPP: None

Problems Encountered: None

COR Directives: None

Sample Location	Sample ID	Sample Medium	Field (F) or Control (C) sample
Hero Road	FTSW-IDW-02	IDW Water	C

Sample Location	Sample ID	Sample Medium	Field (F) or Control (C) sample

CONTENTS

PAGE	REFERENCE	DATE

Location _____ Date 05 July 2012

Project / Client _____

0630 Safety brief
0700 Left hotel
0715 Arrived @ ASP
0730 Set up equipment. GPS rover not communicating w/ base
- Called Lynnlee
0915 QC tests
0930 Traveled to grid 02
0950 Finished G-2. Started G-1
1000 GPS issues → lost NMEA string to allgeo
- resent command
1020 Cont' collected G-1, G-8
12:15 – 13:20 Lunch
13:20 G-7
1430 G-6
1515 PM QC test

Location Fort Stewart ASP Date 09 July 2012

Project / Client EM61 survey

0630 Safety meeting

0700 Left hotel. Traveled to ASP

0720 Arrived @ site. Waited until 0730 for storage bldg to open/unlock

0740 Rec NEMA string from rover. Called Lynelle for field laptop.

0800 Recent NEMA command. QC test

0830 Start survey

1200 Lunch

1245 Restart survey

1445 Finished survey. Ran repeat lines

1500 PM QC tests. ~~Process~~ Breakdown GPS base station. Traveled to ASP & Drive unloaded equipment

1520 Left site

Location Fort Stewart ASP Date 10 July 2012

Project / Client EM61 survey

0700 Safety meeting. Traveled to site.

0725 Arrived @ site. Loaded equipment in truck. Traveled to ASP EVS. Setup equipment

0745 Rover GPS not sending NEMA to allegro. Used field laptop to resend NEMA command.

0800 EVS & QC test.

0815 Traveled to G-8 / G-5 area.

1200 – 1245 lunch

1300 Survey

1500 QC test.

- readings fluctuating. Turned equipment off and disconnected all connections. Blew out any possible dust on connection. Reconnected connections. Decrease in fluctuation. Let machine run

1530 Ran QC test. Channels 2–4 were level w/ a 10mV fluctuation on channel 1

1600 Left site

6

Location Fort Stewart ASP Date 11 July 2012

Project / Client EM61 survey

0700 Safety meeting. Left hotel

0745 Arrived @ site. Set up equipment. Rover base did not send NEMA string. Set up laptop and reprogrammed rover to send NEMA string to Allegro

0800 Ran QC tests

0845 Began collecting short transects between the 2 rows of western bunkers

1030 Finished data collection.

1035 Ran QC tests. Broke down equipment.

1100 Dropped equipment @ ASP Facility for storage

CONTENTS

PAGE	REFERENCE	DATE

Location Hero Road, Ft. Stewart Date 6/11/12

Project / Client

0630 Brode, Mussio met Steve Burnham & Tyler in hotel lobby
- Safety Briefing, review of SSHP, APP.

0700 leave for the site.

0715 Arrive on post. Unload van into Conex. ~~Set~~ Drive to North end of HRTA to set up for QC.

930 Start laying out transects w/ line + fiducial
- Steve radioed ... busted out eg. b/t Lines 36 + 37.
- Line 60: transect not cut 100% straight. Bends at 20m from S. Stake



Transects 59, 57, 48 need to be cut/re-cut.

11:15 Break. Run back to hotel to grab other radio/ lunch

Location _____ Date _____

Project / Client _____

AM QCs
- Zero Calibration ~~Tested~~ completed
- Inphase Calibration completed
- Phase Check completed
- Sensitivity verified.

06112A - AMQCs
Line - Static (3 min)
Line - Shake (1 min)
Line - Spike. (3 min)

NO DATA collected

12:15 Return to site. Resume setting up transects as line & flagged.

310 Rcvd msg from Chris Larson, USACE that he was on-site. Went out to meet him @ Px.

400 Thunder & lightning storm rolled in. Stop work for the day after returning EQ to Conex.

430 off site

~~1800~~ 1445 hotel

Location HRTA Date 6/12/12

Project / Client _____

0630 meet in hotel lobby for safety briefing. Drive to site.

0700 arrive on-site. Load equipment into van. go to North end of site.

0730 Walk several transects to see if we can continue flagging. Caught up to Charlie - - - more to do QCs

930 Start data collection on ~~line~~ Transect 61 eliminate 62 - only 10 feet long.

10:08 Finish acquisition for today

10:20 Spoke w/Jennifer Harlan about progress & brush cutter not showing up today. Geo will spend remainder of day flagging transects w/ Steve + tyner.

12:30 Break for lunch

1:15 Return to grid. Continue flagging transects. Chris Larson on site

4:30 offsite

Location _____ Date _____

Project / Client _____

AM QCs

All calibration tests completed.

061212 A - Line 1 Static

" Line 2 Shake

" Line 3 Spike.

061212 AA - AM Site Noise

Line 1 - on Transect 59

operator: Mussio → note: Line # = transect #

061212 B - Prodectran Data

Line 61 - Collect N-S

Line 60 - S→N ← Line 59 needs to be cut!

Line 58 - S→N ← Pickup 57. needs to be cut!

Line 56 - ~~S→N~~ S→N

Line 55 - N→S

Line 54 - S→N

Line 53 - N→S

Line 52 - S→N

Line 51 - N→S

Line 50 - S→N pile of metal @ ~20' from start of Transect.

Location HRTA Date 6/13/2012

Project / Client _____

0630 Meet in hotel lobby for safety meeting.

645 Leave for site

700 On-site. Brode + Mussio will spend the day flagging transects for the cutter.

1130 Received message from Jennifer that transect spacing is @ 20' not 15'. Jim Shuby discovered the problem occured in USP. The COR was notified of issue & ERT is in the process of resolving the issue.

~1200-1245 Break for lunch

~1245 Return to grid to continue flagging transects. Very hot & humid day.

500 Offsite

JB

Location HRTA Date 6/14/12

Project / Client

630	Brode & Mussio meet in lobby for safety meeting
645	Leave hotel for the site. Stop for ice.
700	Arrive on-site. We will spend the day flagging transects ~~for~~ for the cutter.
1130-1230	Lunch break
1230	Return to the grid.
~330	Rcvd word from Jennifer Harlan that we will be adding transects @ 10' to ~~acc~~ fix the data gap issues. Discuss approach with Charlie on how we can proceed w/ cutting of transects. He feels it would be best to clear ~~a~~ all brush.
430	off-site. ~~Stop for gas~~
445	Return to hotel.

LB

Location HRTA Date 6/15/12

Project / Client

630	Brode & Mussio met in lobby for safety meeting
645	Lv for ~~ho~~ site.
~700	Arrive on site. Pick up eq. in the conex. Spend the morning setting up fudicials for transects to be collected.
~1200	~~B~~ Stop for lunch
~100	Return to grid. Set up EM31 for QC tests & acquisition
330	Stop for a break. Very hot & humid.
400	We only had a few transects remaining to collect. Decided to lv. transects for Monday. Complete QCs & Return eq to conex.
~445	offsite. Stop for gas.
515	Return to hotel.

LB

Location HRTA Date 6/15/12

Project / Client

~~Transects~~ 42-37 need to be recut

Transect 38: Lg depression w/ steep Slope @ 272 m, ~~@ 272~~ 272 m offset Transect 6 feet east, rejoins @ 280 m.

Transect set up S→N

Transect 37: N→S. @ 33 m start depression (end collection here)

Restart @ 37 m (dbl flags)

- Exit depression 115 m / 118 m on top @ 120 m

Transect 36: S→N Pit full of knocked down trees 247-253.

- Depression 342-346, 445-453 (data gap - brush/deadfall.)

JB

Location HRTA Date 6/15/12

Project / Client

061512A - AM QCs

Line 1 - Static

" 2 - Shake

" 3 - Spike

061512AA - AM Site Noise

Line 1 - ~~to~~ N end of Transect 49

Dataset 061512B operator: Brode

Line	Transect	Dir	Notes
49	49	S-N	
48	48	N-S	

061512C

47	47	S-N	
46	46	N-S	missed next to last Fud?
45	45	S-N	
44	44	N-S	~~stop @ 272 m~~
38	38	S-N	stop @ 272 m
38A	38b	S-N	offset 6 ft East restart @ 272 m end 25' ~~from~~ past last fudicial

Location HRTA Date 6/15/12

Project / Client

Line	Transect	Dir	Notes
35B	35	S-N.	6m ⑤ of fiducial mark 1st 23m S of end of transect.

06 15 12 ZZ - PM site Noise
Line 1 - N end of line 35

06 15 12 Z PM QCS
Line 1 - Status
2 - Shake
3 - Spike

-end 6/15/12-



Location HRTA Date 6/18/12

Project / Client

Brodel + Mussio

630 Meet in hotel lobby for safety briefing.
645 Lv. hotel for site. Stop for lunch.
700 Arrive on-site Setup to go establish fiducials on transects
- Walked to (N) end of Transect 23
Set ~200 m of fiducials ? Could not continue due to brush not being cut. Transects 24 → 35? not cut all the way through.

To be cut

2, 3, 4, 5, 6, 7 Not cut at all
42 (From 42-2 to 42-1) Clean up
41 (From ~~42~~ bit to 41-1 to 41-2)
40 OK
39-36
35 (35 Slope area S. of depression)
34 (Slope area N & S to 34-3? of depression)
33 (OK 33-1 to 33-3
32 (clean up 33-2 to 33-3, cut 33-3 to
10-

Location _____ Date _____

Project / Client _____

Location HRTA Date 6/19/12

Project / Client _____

0630 Brodo & Mussio met UXO techs in hotel lobby for safety briefing. Seth(?), the new Tech I arrived last night & will be helping here on HRTA.

0645 Leave for the site, stop for ice.

710 On-site. Prep to go set up fiducials on transects 40, 39, 35, 34, 33.

830 Rcvd call from Craig Brewer GI straddles the fence so 4m is outside of fence. Lynelle instructed Craig to shift the grid inside the fence. He will shift grid to the east

Seth onsite. Brodo + Alex break

1035 Finish setting fiducials. Go get instrument from Conex & do QCs. & Calibration check

1130-1215 Lunch break

Location _____ Date _____

Project / Client _____

T39 N-S. edge of slope @ 15.50m
bottom @ 18m
- exit depression 37.5m to 40m

T35 N-S Slope 44m - 47m

T34 Slope 227 - 232
370 - 367

~~AM~~ 061912A - AM QCs
Line 1 - Static
2 - Shake
3 - Spike

061912AA - AM Site Noise
Line 1 - Top (N) of T59

061912 B - Production, Operator Brode.

Line	Transect	Dir	Notes
59	59	~~S→N~~ N→S	
57	57	N→S	

Location HRTA Date 6/19/12

Project / Client _____

061912C - Production data

Line	Transect	Dir	Notes
43	43	N→S	operator: Rhode
42	42	S→N	

* ~~Line~~ Transect 43 + 42 are in ~~same~~ same line
- Split Transects in data processing

41	41	~~S-N~~ N→S	
40	40	~~N-S~~ S→N	
39	39	N→S	end @ 15.50m
	39a	N→	start @ 18m end @ S. Stake 39-1

061912 D - Production operator: Brode

Line	Transect	Dir	Notes
37	37	N→S	end @ 33m
	37a	N→S	start @ 37m end at 37-1
36	36	S-N	end @ ~~247~~ 147 Pit of trees
	36a	S-N	start @ ~~253~~ 153 end @ 342 Depression
	36b	S-N	start @ 346 end @ 445 ↓
	36c	S-N	start @ 453 end @ ~~45~~ 36-S

Location _____ Date _____

Project / Client _____

06/18/12 D - ctd

Line	Transect	Dir	Notes
35	35	N-S	
34	34	S→N	∅ to 347
34a	}	S→N	349 to 370
34b		S→N	370 to EOL

06/18/12 ZZ - PM site noise: Line 1

06/18/12 Z - PM QCs

Line 1 - Static

Line 2 - ~~Shake~~ Spike

Line 3 - ~~Spike~~ Shake.

12:15-3:15 Acquired Transects 57+59 before lunch. After lunch 49- 39-43, 37-34.

3:15 Take a break.

335 Set up & complete PM ~~AM~~ QCs.

410 off site

430 hotel

Location HRTA Date 6/20/12

Project / Client _____

630 Brode, Mussio met UXO team in lobby for safety briefing & completing ~~of~~ incident reports on tick bites.

700 Leave hotel for the site. Stop for ice.

720 On-site. Set Geo & 1 UXO Tech (Shawn Rhodes) assisted w/ establishing fudicials in southern fenced in area.

830 Charlie Ethridge on-site. Brode met w/ him to give him instruction on cutting for today. Main goal is to get transects 100% complete. He started on. Transect 2 - 10, then is to call Brode.

~1100 Charlie called. He cut up to transect 15. 100% complete. Stopped to refuel.

1215-100 Brode, Mussio & Rhodes lunch on break & return to hotel for a couple of items.

100 Back on site. Geo began flagging T8 →T2

Location _____ Date _____

Project / Client _____

2300 - Ethridge called asking where
330 T33 needed to be cut at.
- Rhodes reported cut to Reg Shin to Brode. Brode instructed him to return to the van. Pull out first aid kit to clean wound & apply pressure dressing w/ gauze. Brode then phoned Safety, Steve Burnham. Steve met ~~Shaw~~ Rhodes @ van.
- Brode walked over to T33 to meet Ethridge. Showed him the depression area on the S. end of transect needed to be cut. ~~He & I~~ We decided he would finish clearing ~~T33~~ everything North of the thick vines (T32→17) then move South and clear below vines (T16-27, 29½-33)
- Shared Ethridge GPS unit for new transects. It looks like we can get it to work for him.

Location _____ Date _____

Project / Client _____

400 Geo finished setting fiducials for the day. Fenced in section of T3-21? Completed. T8 & 7 complete.
- Brode took Mussio + Uxo techs back to hotel.
430 Brode on site.
615 Decided to quit for the day.

Cutting completed: 2-15 100%
16→27: North & South portions completed. Center (b/t stakes -3½-4) have thick vines to be cut. 16+17 may be 100%??
28 100%
29-32 ~75% done. Need to be cut across depression
33-61 100%

Charles to return on 6/21/12.

Location _____ Date _____

Project / Client _____

Transect lengths w/in s. fenced in area:

T27	5m
T26	15m
T25	25m
T24	34m
T23	43m
T22	52m
T21	61m
T20	69m
T19	77m
T18	84m
T17	91m
T16	97m
T15	103m
T14	108m
T13	70m
T12	73m
T11	77m
T10	80m
T09	82m
T08	84m
T07	86m

Fence to 8-3: 77.6m

T7 length: 510m

Location HRTA Date 6/21/12

Project / Client _____

0630 Brode + Mussio met UXO team in lobby for safety briefing.

0645 IV hotel for site. Stop for ice

710 On-site Pick up em-3 & conex. 2 teams today. Alex & Tyler (UXO) will establish fiducials. Brode & Rhodes will acquire data

730 QC tests & instrument calibration. Changed batteries in em-3.

900 Set up to collect data on transects w/in fenced in area.

1200 Finish collecting T6-27 in southern fenced in area. Break.

1230 Charlie Ethridge on-site He will begin cutting on T34 working down towards T16.

100 Brad Reid call from Charlie - he finished T32-27 & is going to start on cutting lines. -walked up to check his progress.

Location _____ Date _____

Project / Client _____

AM 062112A - AM QCs

Line 1 - Static
Line 2 - Shake
Line 3 - Spike

062112AA - AM Site Noise

Line 1 - on T 7

062112B - Production operator Brad

Transect	Line	DIR	Notes
07	07	~~N→S~~	
08	08	S→N	
09	09	N→S	Double Fwd. @ 60M Delete First Fwd.
~~10~~	~~10~~	S→N	Bad Data
10A	10A	S→N	
11	11	N→S	67m fence → 71m (6m from fence).
	11a		67m 10m → 11-1 (10m from fence)
12	12	S→N	ended 2m shx of fence
13	13	N-S	Start 30m (S) of 13-2. Transect falls on fence line in parking lot.

Location HRTA Date 6/21/12

Project / Client _____

Transect	Line	Dir	Notes
13	13	N-S	Continued - end T14 @ (N) fence ~5m beyond 14-2. From 40m (S) of 14-2 to EOL, transect ~20ft off of fence. Data Noisy: Lots of trash.
14	14	S-N	
13-1 to last fwd. = 10m			
15	15	N-S	
16	16	S-N	
17	17	N-S	

062112C - Production operator: Brad

18	18	S→N	
19	19	N→S	
20	20	S-N	
21	21	N-S	
22	22	S-N	
23	23	N-S	
24	24	S-N	
25	25	N-S	
26	26	S-N	
~~27~~	27	—	transect too short from fence to 27-1 to collect.

Location _____ Date 6/21/12

Project / Client _____

06212 D - Production operator: Brode

OL	OL	S-N	T.6 from 6-1 to fence. 54m length.

06212E - Production. operator: Rhodes.

Transect	Line	Dir	Notes
2	2	S-N	Fnd. mark @ 2-3 Stake. end @ 2-5 Start @ 2-1?
3	3	N-S	
4	4	S-N	
5	5	N-S.	End @ 5-2. No fnds b/t 5-3 & 5-2.
	5a	N-S	5-2 to 5-1. No fudicials.
6	6	S-N	start @ fence. end 1m S of 6-8 due to trees.
7	7	N-S	

Location HRTA Date 6/21/12

Project / Client _____

Transect Lengths from Alex (N. or Parking Lot)

T5: 421m T-6: 490m

T4: 318m

T2: 31m → wrong. he missed 1st stake. Use surveyor data.

T-3: 226m

T-9: 515m

T10: 517m

T8: 84m to fence.

T7: 86m to fence.

T9: 82m to fence.

T10: 80m to fence.

360 - Rcvd call from Charlie that he had finished. Brode met up w/him to go verify that he was done. Without walking all transects, they looked satisfactory.

330 Alex & Shawn finished establishing T10. Picked them up in Parking lot. Put eq. away

~400 off site ~415 Return to hotel

Location HRTA Date 6/22/12

Project / Client

0630 Brode + Mussio meet UXO team in hotel lobby. ~~Conduc~~ Safety meeting conducted.
0645 Lv. hotel for the site
700 On site. Retrieve eq from trailer. Brode, Mussio & Rhodes (UXO) will spend the day establishing induction across the depression. BZ
730-930 Established T33-~~35~~. Break. Progress is slow due to trees & having issues maintaining line of site & the heat/humidity
950- Return to T31. Establish
1130 T31-30. ~~Break~~
1145-1230 Lunch ~~Break~~.
- Brode called Jennifer Harlan regarding hrs & schedule. Alex Mussio will demob. Sat & return ~~to~~ 7/3 for work @ ASP. Hrs will drop to 5 8's or 4 10's.
1245- Establish transects T29-27.
330 (1) break taken in this time period. Off site @ 330
4:00 hotel.

Location HRTA Date ~~6/23/12~~ 6/25/12

Project / Client

0630 Brode met UXO team in the lobby. Woke up to heavy rains due to tropical storm Debbie.
0700 Brode ran to Lowes to pick up 4 small ISO's, as Tyler (UXO) burned the 2 med. ISO's we need for IVS. & we were short 2 ISO's for the IVS. Filled van w/gas.
730 Brode gave Steve ~~see~~ ISO's. He + Tyler went to ASP to replace med. ISO's w/ small ISO's. @ same depth & location.
815 Jennifer Harlan notified of no work today via txt msg.
1154 - Charlie Ethridge was called to discuss & schedule for cutting new transects. Left msg. Charlie called back - assuming weather cooperates he will be on-site ~~&~~ Wed. morning.

Location _____ Date _____

Project / Client _____

QC spike N 4543796.57
E 353878.01

		Horizontal	Depth
Small	Vertical	10'	6"
Small	Horizontal	20'	9"
Med	V	30'	18"
Med	H	40'	18"
Lg	V	50'	24"

Location AAR Date 6/26/12

Project / Client _____

0630 Brode + Juma met the UXO team in hotel lobby for safety briefing.
- Dave King also @ meeting
700 leave hotel for the ASP.
730 On-site. Set up GPS + EM61
GPS initially set up @ SE corner of GY, as surveyor had it put in work Pts. later moved to Ref #1. While ~~830~~ J. & ~~I set up~~ EQ. UXO techs sweep the area & digs hits.
~~930~~ J. + Lynelle had to IVS area while UXO was digging. Went to CONEX to drop off EM61 boxes & to get J. lunch
1030 Rtn to IVS Area. J. completes background survey. 10'd 8 targets. Uploaded pts. to Allegro. Burned & J. verified targets w/ EM61. UXO techs dug on targets.
~~1330~~ King approved us to install targets before rain hits. Brewer picked up position & elevation data.
J. completed QC tests (Loling, IVS)

Location

Date 6/26/12

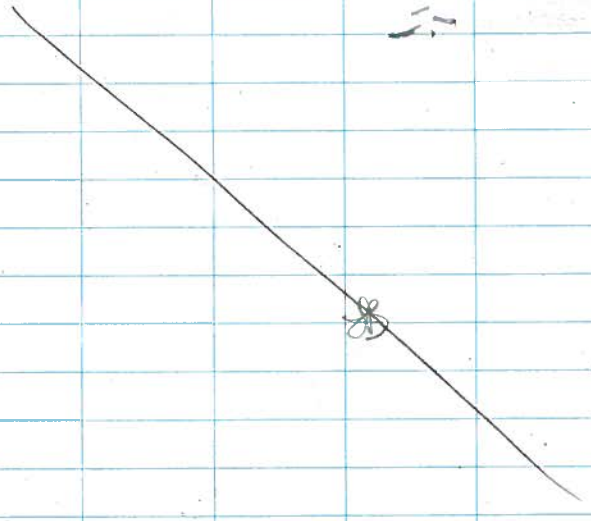
Project / Client

Continual problems w/GPS dropping out (Auto) during acquisition. We dont know why.

~300 - finish QC/IVS test. Break down eq. & put batteries on charge @ ASP building.

320 Leave site for hotel

~340 Return to hotel. Brode ran to ~~home~~ loves to get supplies for Jima. (Paint & Paint gun)



Location

Date 6/26/12

Project / Client

Transect notes

T12: Debris pile 82m to 100m

T18: Tree: 158m to 162m (data gap??)

T19: Tree: 76m to 2 ft (.61m) south of stake 19-4 (Data gap??)

Stake 19-4 coordinate:

N 442264.34

E 352798.6

Location [illegible] Date 6/26/12

Project / Client

0630 Brode [illegible] Ma met [illegible] UXO [illegible]
[illegible] for [illegible] meeting.
700 Leave hotel [illegible]
[illegible] on-site [illegible] (EM61 + GPS)
[illegible] (survey [illegible] not established
[illegible] work pts for US yet [illegible]
corner [illegible] for GPS
[illegible] Brewer on-site [illegible] UXO
[illegible]
1000 [illegible] ASP
[illegible]
1030 [illegible]
3330 [illegible] rover
[illegible]
[illegible] to [illegible]
[illegible] UXO cleared [illegible]
was [illegible] King [illegible]
ok to install [illegible]
[illegible] completed
all QC, [illegible] & [illegible]
400 offsite
430 Return to hotel

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[illegible]

Location HRTA Date 6/27/12

Project / Client

0630. Brode & Ma met UXO team in Lobby for Safety Meeting. Completed Vehicle Inspection @ hotel.
Ma → AAR Brode + Rhodes & HRTA
0645 Lv. hotel for AAR to drop off EM61
710 & reset pwr on TRL 35 to 2 watts.
715 Arrive @ aar. Set up base stations for [illegible]
[illegible] Lv for HRTA w/ Rhodes
815. Resume establishing fudicials on Transects 11 → 14.
1230- Charlie on-site. Brode had to him start on cutting on westernmost transects & work east. Monitored in his progress on first 8 transects, which looked ok & turned him loose
130- Continue setting up fudicials.
430 established T 11-17.
Rhodes + Zaal offsite @ 430 in ERT van. Brode + Burhans remained on-site to oversee charlie.
530 Charlie, Brode & Burhans offsite
600 Return to hotel.

Location HRTA Date 6/28/12

Project / Client

0630 Brodie + Ma met UXO team in Lobby for safety briefing

0700 Leave hotel for the ~~AAR~~ sites

0730 Brodie + Rhodes ~~stopped~~ @ post office to mail RTS battery to Shuby.

715

730 Arrive @ AAR Brodie connected laptop to RTK Base to take screen captures of settings + reset NVRAM. Also resent NMEA Code to Rover.

750 Set up GPS & verified it is working. Instant fix! The command for Port C on the Base station (set for echo) Lv. for HRTA w/Rhodes

830 Arrive @ HRTA. Resume establishing fiducials on 20' transects.

1230 Charlie informed ~~me~~ Brodie that he will not be on-site today. 1:00 lunch break.

130 Return from lunch Resume establishing fiducials on T18-23.

415 Finish for the day. Leave the site.

440 Return to hotel

* T 10 foot transect cutting progress: T62-36 are 100% D, with a few areas of deadfall to be cleaned up.

Location HRTA Date 6/29/12

Project / Client

0630 ~~He~~Brodie + Ma meet up w/ UXO team for in hotel lobby for Safety briefing & completion of vehicle inspections. J. Ma @ AAR, Brodie & Rhodes @ HRTA

710 On-site. Pick up eq. @ corex & return to and to finish establishing fiducials on 20' transects. (26-23)

930 Msgd Jenn Harlan that all fiducials are established. Walked back to van for break & to ~~set~~ start QCs.

1015 QCs & Instrument calibration completed

Charlie Ehrudge on-site

1030-1230 Called to transects. Break after every 2 transects due to heat.

1230-115 Lunch.

115 Resume acquisition on T14

215 Brodie came down w/ heat exhaustion - Headache, nausea) Stopped work

330 Conduct QC tests. Put EQ away & wait for Charlie to complete cutting

Location HRTA Date 6/29/12

Project / Client

062912A - am QCS

Line 1 - Static

2 - Shake

3 - Spike

062912AA - AM Site Noise

Line 1 - Southend T8.

062912B - Production

Line	Transect	Dir	Notes
8	8	S→N	} operator Brode
9	9	N-S	RPt? }
10	10	S-N	} operator Rhodes
11	11	N-S	}
12	12	S-N	Asphalt B/T/60 82 m Brode
~~13~~	~~13~~	~~N-S~~	- Last fwd. +1 meter AA
13	13	N-S	
~~14~~	~~14~~	~~S-N~~	

SB

Location HRTA Date 6/29/12

Project / Client

062912C - Production

Line	Transect	Dir	Notes
14	14	S→N	Rhodes
15	15	N-S	Data Gap 15ft S. 15-4
15A	15	N-S	← and 39ft S. of stake missed next to last fwd.

~400 ~~Offsite~~ Brode

420 Return to hotel

SB

Location HRTA Date 7/2/12

Project / Client

0645 Brode met w/ UXO team in lobby for safety meeting

710 On site. Pick up equipment in conex, then go do QCs. A pine tree fell across the access road during last nights storm. Fence is down where tree fell across.

745 Walk to T16 to begin acquisition

1215 Break for lunch. Brode has big blister heel.

115 Return to grid. Resume on T24. Collect transects 24-27

330 Finish acquisition. Go do QCs, put equipment away

415 off-site

445 Return to hotel

JB

Location HRTA Date 7/2/12

Project / Client

070212A - AM QCs

Line 1 - Static

Line 2 - Snake

Line 3 - Spike

070212AA - AM Site Noise

Line 1 - @16-2

070212B - Production

	Transect	Line	Dir	Notes
Grn	16	16	N-S	operator: Brode
Red	17	17	S-N	" Rhodes
				fnd 120 missed. 140 + 160. numerous fnd missed due to brush cutter running them over
	18	18	N-S	operator: Brode ~~Break Started 18A~~ Tree: end @ 158m N of fence
blue	18	18a	N-S	Start @ 162m N of fence
Pink	19	19	S-N	operator: Rhodes 80,200 fnd missed.

→

Location HRTA Date 7/02/12

Project / Client

Transect	Line	Dir	Notes
19	19	N-S	- After 100 m fnd: South of from 19-4 we got off track. Backed up to 100 m S of 19-4 fnd @ restarted acq in line 19a. Delete data after 100 m fnd S of 19-4.
	19a	N-S	delete
	19b	N-S	end @ S. fence.

070212 G - Production.

20	20	S-N	operator: Brode
21	21	N-S	Rhodes
22	22	S-N	operator: Zaal
23	23	N-S	Brode

11 to 20 on the -3 to -4 line

Location HRTA Date 7/02/12

Project / Client

070212 D - Production

Transect	Line	Dir	Notes
24	24	S→N	operator: Rhodes
~~25~~	~~25~~	~~N→S~~	~~operator: Zaal.~~
↳ delete bad data.			
26	26	S→N	operator: Brode.
25a	25a	N-S	" "
28	28	S→N	operator: Zaal
27	27	N→S	operator: Brode

070212ZZ - PM Site noise

Line 1 - S end of T27.

070212Z - PM QC

Line 1 - Static

Line 2 - Shake

Line 3 - Spike.

JB

Location HRTA Date 7/3/12

Project / Client

0630 Brode & Mussio met VXO team in Lobby for Safety Meeting. Mussio will be working @ AAR.

700 Lv hotel for AAR.

715 Arrive at ASP building. Pick up eq. in bldg. Set up GPS w/ Alex, explain QCs.

800 Leave AAR for HRTA. Arrive @ conex # to pick up eq., only to find that the lock was put on upside down. Called Steve to inform him. He stopped by to try & open lock - unsuccessful. He went to get bolt cutters.

900 Brode & Rhodes worked on establishing 10' transects. established fnd. along ~~75%~~ Southern most stakes.

10:00 Steve unlocked conex. Pick up instrument & complete QCs.

~1030 Begin acquisition on T29.

1230 Break for lunch

130 Return to the grid.

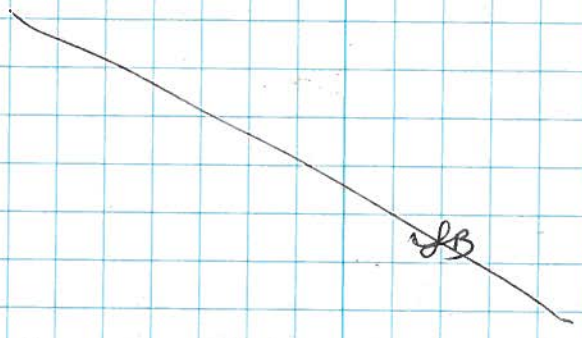
Location HRTA Date 7/3/12

Project / Client

400 PM QCs. Forgot to acquire a PM site Noise

430 Offsite

~445 Return to hotel.



JB

070312 AA - AM QCS

Line 1 - Static

Line 2 - Shake

Line 3 - Spike (460ms)

070312 AA - AM site Noise

Line 1 - N end of T29

070312 Z - PM QCs

Line 1 - Static

Line 2 - Shake

Line 3 - Spike

070312 ZZ - PM site Noise

Line 1 - N end of T29

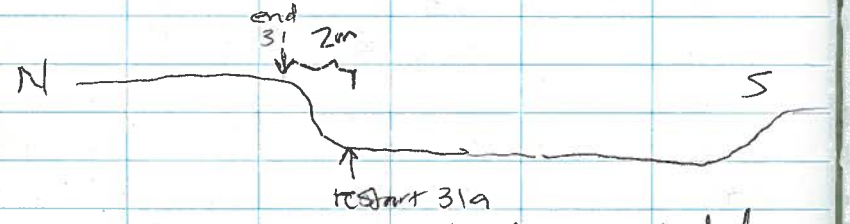
No PM Site NOISE

Location _____ Date _____

Project / Client _____

070312B - Production Data

Transect	Line	Dir	Notes
~~30~~ 29	29	N→S	operator: Brode
30	30	S→N	operator: Rhodes missed 2 fiducials near beginning of line
31	31	N-S	operator: Brode end @ edge of pit
31	31a	N-S	Start @ inside edge of pit - bottom of slope.



32	32	S-N	Rhodes 3 collected
33	33	N-S	Rhodes 3 as I file split missed fid. after 33.5 strike.
19	19	N-S	Brode

Location HRTA Date 7/4/12

Project / Client _____

0600 Geo & UXO teams met in lobby for safety Briefing

0630 Lv hotel for HRTA. 2 teams establishing fiducials & collecting data today as the ASP is closed.

645 On-site Brode briefed everyone on plan of action for today.

~~&~~ 730 Team 1 (Brode, Mussio) completed QC + calibration tests on EM31 Set up to collect 10' transects in southern fenced in area.

1145 Finish acquiring data on T6.5 to 26.5. Break for lunch.

1245 Return to HRTA.

100 Complete PM QCs.

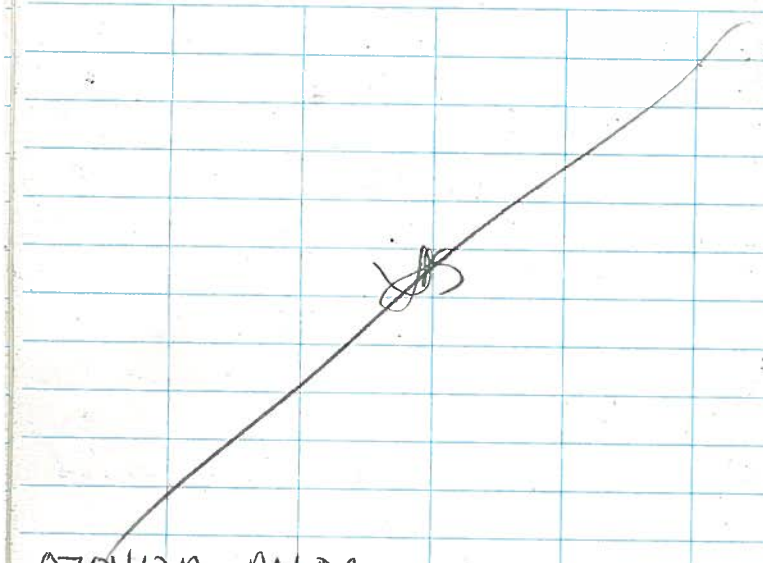
120 Brode + Mussio assisted Zaal & Rhodes to finish setting up new transects

200 Brode, et al decided to call it for the day. Put eq. away and in the s.t.

230 Return to hotel

Location _____ Date _____

Project / Client _____



070412A - AM QCs

Line 1 - Static

Line 2 - Shake

Line 3 - Spike. 467 m S

070412AA - AM Site Noise

Line 1 -

070412ZZ - PM Site Noise

Line 1 -

070412Z - PM QCs

Line 1 - Static

Line 2 - Shake

Line 3 - Spike

Location HRTA Date 7/4/12

Project / Client _____

070412B - Production

Transect	Line	Dir	Notes
7.5	7.5	S-N	operator: Brodie ~ 82m
6.5	6.5	N-S	Total length 79m end over concrete pile @ 1gtree
8.5		N-S	84m start @ 1.5m
9.5		S-N	82m
10.5		N-S	78m
11.5		S-N	75m end @ 65m missed 40m f.d
12.5		N-S	72m
13.5		S-N	110m
14.5		N-S	106m
15.5		S-N	100m
16.5		N-S	94m missed 40m f.d
17.5		S-N	88m
18.5		N-S	81m
19.5		S-N	74m
20.5		N-S	65m
21.5		S-N	57m
22.5		N-S	48m
23.5		S-N	39m
24.5		N-S	30m
25.5		S-N	20m
26.5		N-S	10m

Check line #'s

Location HRTM Date 7/5/12

Project / Client

1630	Brodie + Mussio met w/ VXO team in lobby for safety briefing. Transfer eq from van to Zahl's truck.
700	Brodie & Rhodes left for HRTM
715	On site. Pickup eq & complete QCs. Get ice from Steve. Setup to begin acquisition
815	Rcv call from Mussio – GPS issues. Shut down EM31 & go help. GPS issues = Baud & Comm Port (Radio) wrong
945	Return to HRTM

Location Date

Project / Client

070512A – AM QCs
Line1 – static
" 2 – Shake
" 3 – Spike 4doms

070512AA – AM site Noise
Line1 – On T62

blue glo 6GJL6 (10)

Location yellow Glow 6GJK5 (10) Date 070512

Project / Client

File: 070512B - Production

Transect	line	Dir	Notes
61.5	61.5	N-S	operator: Rhodes
60.5	60.5	S-N	
59.5	59.5	N-S	
58.5	58.5	S-N	
~~57.~~	~~57.5~~	~~N-S~~	~~LRB~~

070512C - Production

57.5	57.5	N-S	Labeled 56.5
52.5	52.5	S-N	Labeled 56.5a
55.5	55.5	N-S	op Brode
54.5	54.5	S-N	0 → 78
	54.5a	S-N	84m → eol
			* data gap = tree/lines
53.5	53.5	N-S	fence @ 13m
52.5	52.5	S-N	
51.5	51.5	N-S	
50.5	50.5	S-N	Rhodes

070512D Production

49.5	N-S	Brode	Missed 20m fwd.
48.5	S-N	Rhodes.	

Location HRM Date 7/9/12

Project / Client

630 Brode & Mussio met Vxo team in lobby for safety meeting

645 ~~to hotel for~~ Brode + Rhodes left hotel for the site

700 Onsite. Grab eq. from conex. Walked out to the -3 & -4 stakes for T11-20 to check cutting. A small area of lines was missed, but we can cut through it ourselves. Go do QCs.

740 Set up & start to begin acquisition.

1230 ~~to~~ Break - take lunch & go to hotel to pick up new tape measures.

140 Return to grid. Spray paint fiducials on new tapes. attach the 2 old tapes together.

415 Finish acquisition - go do QCs

430 Complete QCs & put away EQ.

435 off site

450 Return to hotel

LRB

Location _____ Date _____

Project / Client _____

070912AB - AM QCS

Line 1 - Static
" 2 - Shake
" 3 - Spike (360 mS ?)

070912AA AM Site Noise

Line 1 - N end of T47.5

070912B

Transect	Line	Dir	Notes
47.5	47.5	N→S	Operator: Brode
46.5	46.5	S→N	
45.5	45.5	N→S	
44.5	44.5	S→N	
43.5	43.5	N-S	Rhodes
42.5	42.5	S-N	Brode

070912C

41.5	41.5	N-S	Brode ↓

070912D

40.5	40.5	S→N	
39.5	39.5	N→S	Data ends 12m S of 39.5-5.
		N-S	
	39.5a	S-N	(S) 15m → 39.5

Location _____ Date 7/9/12

Project / Client _____

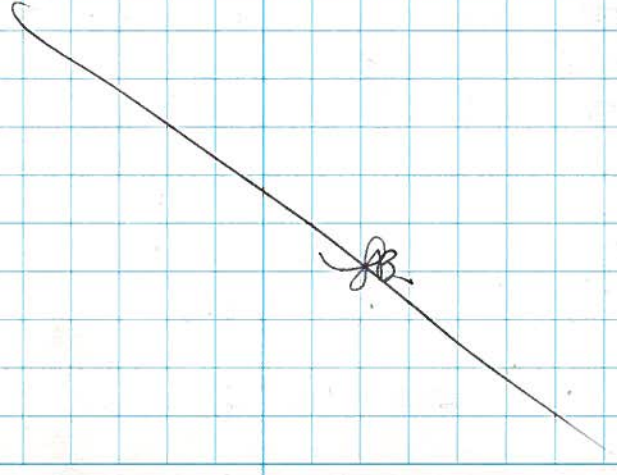
Transect	Line	Dir	Notes
38.5	38.5	S→N	38.5-1 → 25.5m S of 38.5-5
	38.5a	S→N	28m S of 38.5-5 to 38.5-5.

070912ZZ PM Site Noise

Line 1 - N end of T 38.5

070912Z - PM QCS

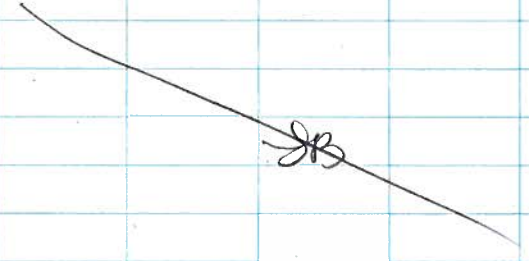
Line 1 - Static
" 2 - Shake
" 3 - Spike



Location HRTA Date 7/10/12

Project / Client

600	Brode & Rhodes met Burhans @ in hotel lobby for safety meeting.
615	Lv hotel for site.
630	On-site. Pick up eq & complete QCs.
~830	- Brode ~~rpt~~ reported being stung to (R) calf muscle to Burhans.
1145	lunch break
1215	Return to and to continue acquisition. Transects acquired today are requiring a significant amount of cutting, which is slowing progress
330	Stop acquisition - QCs
400	offsite
415	Return to hotel



Location Date

Project / Client

071012A - AM QCs
Line 1 - Static
" 2 - Shake
" 3 - Spike (460ms)

071012AA Any site Noise
Line 1 - N end of T 37.5

071012B - Production

Tran.	Line	Dir	Notes
37.5	37.5	N→S	0, Rhodes
			Missed 3rd fwd?
36.5	36.5	S→N	Brode
35.5	35.5	N→S	Brode
34.5	34.5	S→N	0 → 364 m?
	34.5a	S→N	367m(?) → ~~34.5-6~~

JB

071012C

33.5	33.5	N-S	Brode

071012D

32.5	32.5	~~N→S~~ S→N	Rhodes
31.5	31.5	N-S	"
~~30.5~~	~~30.5~~	~~S→N~~	

071012E

30.5	30.5	S→N	0 → 200m.

Location _____ Date _____

Project / Client _____

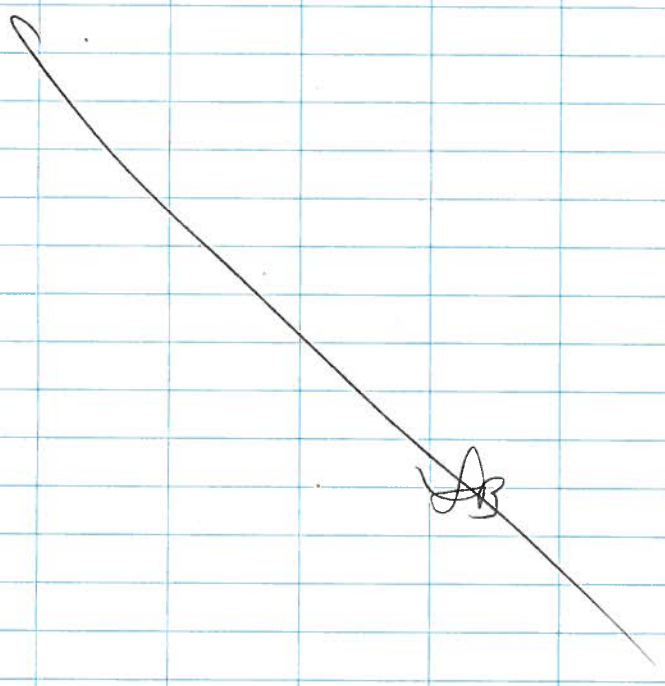
07101 2Z

Line 1 Static

2 Shake - drop in values but all connections tight.

3 Spike.

* tests were very noisy today, with a significant amount of fluctuation in MS values.



Location HRTA Date 07/11/12

Project / Client _____

0600 Meet in lobby for safety briefing with Steve.

625 In hotel for HRTA

640 On-site. Delayed getting on base this morning due to morning salute.

645 Set up for QCs.

Location _____ Date _____

Project / Client _____

07112 A - AM QCs

Line 1 Static

" 2 Shake

" 3 Spike (478 ms)

07112 AA - PM Site Noise

Line 1 - T30

07112 B - Production

Tran	Line	Dir	Notes
30.5	30.5	S→N	start @ 200m → 30.5 -6
29.5	29.5	N→S	missed 20m fid.
28.5	28.5	S→N	
27.5	27.5	N→S	27.5-6 to 306
	27.5a	N-S	315 → 27.5

07112C

26.5	26.5	S→N	Rhodes
25.5	25.5	N→S	Rhodes missed many fiducials
24.5	24.5	S→N	Rhodes
23.5	23.5	N→S	
22.5	22.5	S→N	Rhodes MUSSO
21.5	21.5	N-S	extra fid @ n280m end @ 240m S of 21.5

Location _____ Date _____

Project / Client _____

21.5 21.5a N→S start @ 350m. + deadfall

07112 22 PM Site Noise

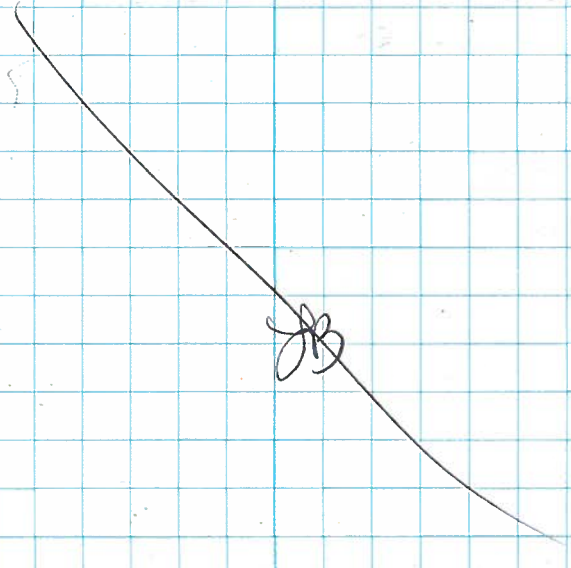
Line 1 - Line 21.5

07112Z

Line 1 Static

2 Shake

3 Spike



Location ARTA Date 7/12/12

Project / Client

615	Meet in hotel lobby for Safety meeting.
630	Lv hotel for site.
635	Arrive On-site. QCs.
700	Begun acquisition w/both teams (Brode, Mussio, Zaal, Rhodes)
930	Change batteries in EM3000
1130	Break for lunch
115	Return to Grid. Resume acquisition
400	Lv the grid / ~~QCs~~ stop acquisition
410	QCs
430	~~Lv~~ off-site.
445	Return to hotel

Location Date 7/12/12

Project / Client

071212A - AM QCs
Line 1 - Static
Line 2 Shake
Line 3 Spike

071212 - AM afte Nose
Line 1 - on T 20.5

071212 B

Transect	Line	Dir	Notes
~~20.5~~	20.5	S→N	Ø→182 *Brode > deadfall
	20.5a	S→N	194(?)→eol
19.5	19.5	N→S	Ø→332 } deadfall *Rhodes
	19.5a	N→S	340→eol
18.5	18.5	S→N	*Mussio (Station increment reversed)
17.5	17.5	N→S	Ø→380 -backed out of file during acquisition

071212 C

17.5	17.5a	N-S	380→eol *Zaal
~~18.5~~	~~18.5~~	~~S-N~~	~~*Brode~~

Location _____ Date _____

Project / Client _____

071212 D

Tran	Line	Dir	Notes
16.5	16.5	S→N	* Brode
15.5	15.5	N→S	Rhodes

071212 E

14.5	14.5	S→N	*Mussio
13.5	13.5	N→S	*Zaal

071212 F

12.5	12.5	S→N	Ø→98m ← HUGE DEAD SPOT!	*Brode
	12.5a	S→N	103m → EOL.	
12.5	11.50	N→S	Ø → EOL	Rhodes
10.5	10.50	S→N	Mussio	
9.50	9.50	N→S	Zaal	

071212 ZZ

Line 1 - PM ~~QCs~~ site Noise

071212 Z PM ~~site~~ QCs ~~N~~

Line 1 Static
Line 2 Shake
Line 3 Space

Location HR714 Date 07/13/12

Project / Client _____

0615 Meet UXO team in hotel lobby for safety meeting

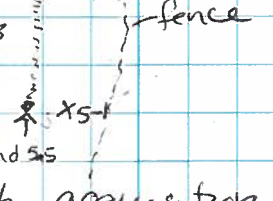
~~645~~ 700 leave hotel for the site

700 on-site. Setup for QCs.

~730 begin acquisition on final 8 transects

~1200 Spoke w/ Jen Harlan & James Struby about collecting on transects 2.5 & 3.5. Both transects are close to the fenceline & have trees that are tightly spaced where we can't get through w/ the cart. Any deviation would put our data on T2 or T3. (see note on next page per Struby's comments)

- T3.5 ended 200m S of N fenceline
- No data collected on 2.5 (w/in 15' of fenceline
- T5.5 ended @ ~~T5th~~ approx Stake 5-1



1:15pm finish acquisition.

200 off site.

Location _____ Date _____

Project / Client _____

071312A - AM QCs

Line 1 - Shake

" 2 - Shake

" 3 - Spike

071312AA - AM site Noise

Line 1 - on T 9.50

071312B - Production

Tran	Line	Dir	Notes
8.50	8.50	S→N	* Brode. Missed 40, 60 feds.

071312R - Repeat Data

8.50	8.50	S→N	*Brode

071312C - Production

7.50	7.50	N→S	*Zaal

071312RR - Repeats

7.50	7.50	N→S	*Zaal

Location _____ Date _____

Project / Client _____

071312D - Production

Tran	Line	Dir	Notes
6.50	~~S~~ N 6.5	S→N	* ~~Brode~~ Rhodes
5.50	N 5.5	N→S	Start @ N-fence End @ 5.5-1 * ~~Cut~~ ended here due to thick trees 3 fence.
4.50	4.50	S→N	Start @ 63 South of 4.0-1. End @ 4.5-7
	3.5	N-S	0→200m Cut short due to fence + trees

* Transects 2.5 + 3.5 have areas of very tight tree spacing & close proximity to fence - Shirley ok'd no question on transects w/in 15 feet of fence (garbage data)

30.5	30.5	S→N	0→200m

→ Transect 2.5 is w/in 15 feet of the fence No data collected.

Location AAR Date 7/16/12

Project / Client

0700	Brode met Oxo techs in hotel lobby for safety briefing
0715	Brode & Rhodes left hotel for Conex on post - pick up rover pole.
0730	Arrive at ASP. Pick up EQ. Setup EQ for QCs.
0830	Begin reacq. on G21. Teach Zaal & Rhodes how to locate targets w/ GPS rover.
945	Brode went back to hotel to get 2nd Allegro & resend GM37 data to Stuby. Also stopped for perm markers.
~1045	Return to AAR. Continue reacq. w/ EM161. G18, 21, ~~20, 23~~
12:15-12:30	lunch
12:30-2:30	Reacq. G20, & 23.
2:30	Go do QCs. Battery died during QCs switch batteries & recollect.
3:15	offsite
3:36	Return to hotel

Location Date 7/16/12

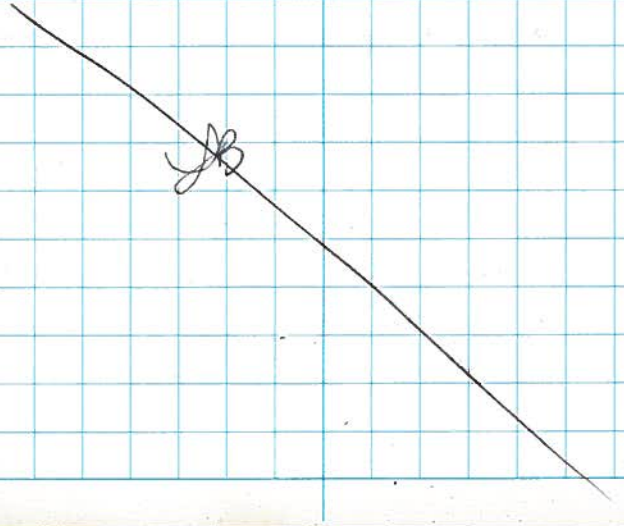
Project / Client

07162A

Line 1 - Static
" 2 - Shake
" 3 - Spike (59mV)
" 4 - IVS Noise
" 5 - IVS Seed

07162Z

Line 1 - Static
2 - Shake
3 - Spike
4 - IVS Noise
5 - IVS Seed



Location AAR Date 07/17/12

Project / Client

0600700 Brode met UXO team & Dave King in hotel lobby for safety briefing

0715 W hotel for site.

0730 On-site. Load eq. into van from ASP Building.

0745 Setup eq. & do QCs

830 Begin reacq G14, 11a G17 & G19

930-11:00 Reacq G24

Collect site Noise data in G3 & G9. Send to Jim

~12:00 Quick lunch break

12:15 - Reacq. 15, 12, 13, 11, & 10.

2:40 Total of 221 targets reacquired. Stop for the day to do QCs + break down eq.

315 offsite

330 hotel

JB

Location Date

Project / Client

071712A

Line 1 - Static

" 2 - Shake

" 3 - Spike (90mV ch4)

" 4 - IVS Noise

" 5 - IVS Seed.

071712B

Line 1 G3 Site Noise

071712C

Line 1 - G9 Site Noise

} used to determine if grids need to be recollected

071712Z

Line 1 - Static

" 2 - Shake

" 3 - Spike

" 4 - IVS Noise

" 5 - IVS Seed.

Location _____ Date 7/18/12

Project / Client _____

0700 Meet in hotel lobby w/ UXO team for safety briefing

0715 Load sampling coolers into Burhans truck to take to conex

0725 Brode + Rhodes left for ASP.

745 Arrive @ ASP. Load eq. into van. Go do QCs.

830 Recollect G3 + G9.

1030 Brode discovered data didn't save to the ~~data storage~~ storage card. Apparently there is a glitch where the software program doesn't save data there, although it recognizes the card.

1030-12 Recollect G9. Send data to J; it called. Data quality greatly improved. Recollect G03.

200 Start reacq. on G07. Reacq 20 targets

240 Go do QCs & break down equipment.

315 offsite

330 Return to hotel

Location _____ Date 7/18/12

Project / Client _____

071812 A

Line 1 - Static
Line 2 - Static
Line 3 - Spike (89mV)
Line 4 - IVS Noise
Line 5 - IVS Seed

} Very Noisy due to truck traffic +/- 10mV

071812 - G3

Line 1 - Production
Line 2 - Rpt.

Battery 12.75V

side profile



071812 C - G9

Line 1 - Production

* Zaal attempted to collect several lines, but did not hit the 'GO' button.
* QC Spike SE corner.

071812 D - G9

Line 1 - ~~Rpt~~ Production
Line 2 - ~~Production~~ Rpt
Line 3 - Production.

Location AAR Date 7/19/12

Project / Client

0700 Meet in lobby w/USO team for Safety Meeting.

715 Leave hotel for the site

735 Arrive on-site. Load eq from ASP bldg to van. Set up eq & complete QCs.

830 Begin reacq. on G07 (remaining 5 targets).

G-6 = 27 targets
G-3 = 27 targets
G-9 = 48 targets
G-22 = 23 targets.
~~G-1~~ = ~20 targets (53 total)

178 total

1230-100 Break for lunch, switch out batteries

*Note: G1 After reacq. ~20 targets at least 5 have been no finds on two high mV targets. Call Stubsy to inform him of issue & if we should continue or not.

1:00 Return to G-1 to continue reacq.

Location Date

Project / Client

2:00 Battery dead. Spend remainder of day draining batteries to a deep discharge.

Both chargers run @ 14V

Black/Pink Battery

11:15-1200	13.05V	45 min	
turn off → 1205	12.90V	> 17 min	
Instrument off < 12:22	12.75V		
12:50	12.75V	> 1 min	77 min
1:00	12.00V		1 hr 17 min

Tan battery

1:00	13.05V	> 2 min
1:02	12.75V	
1:15	12.75V	started getting fluctuations in voltage & instrument.

instrument started to fluctuate, distant voltage drop.

240 Do start QCs. Black battery had been charged for several hrs. read 12.75V on Allegro, but ~~data not~~ readings fluctuate greatly even after 10 min of warm up. Switch batteries & continue QCs.

Location AAR Date 7/19/12

Project / Client

071912A AM QCs
Line 1 - Static
2 - Shake
3 - Spike (91 mv ch 4)
4 - IVS Noise
5 - IVS Seed
6

071912Z
Line 1 - Static
2b - Shake
3 - Spike
4 - IVS Noise
5 - IVS Seed. (90.5 mV ch 4)

JB

Location AAR Date 7/20/12

Project / Client

0700 Brode met Oxo team in lobby for Safety Meeting
0715 leave hotel for job site
0732 On-site. Pick up eq @ ASF bldg
Setup for QCs
815 Begin Reacq.
G1 - 25/78 (completed)
G2 - 57
G3 - 2
G6 - 2
G7 - 2
G9 - 1
G4 - 113/(200)
G8 - 54
G5 - 45/301 targets reacq.

Sampling Supplies: 1 roll Paper towel
1 box (L) gloves, 2 cal gas, 2o disposable Scoop, Alconox
12-1230 lunch. Run to cones to check on sampling supplies ~~and~~ inventory.
1245-345 Reacq. finish G5 @ 345
Thunder & lightning rolled in, we can't do PM QCs due to lightning strikes
350 offsite
415 Hotel

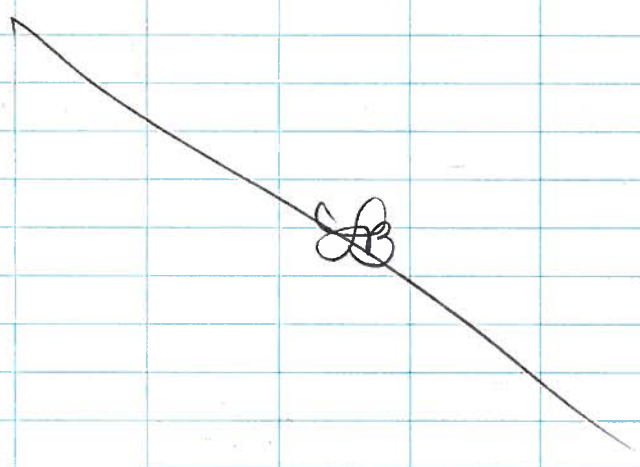
Location _____ Date _____

Project / Client _____

072012A - AM QCs

Line 1 Static
2 Shake
3 Spike (90mV ch4)
4 IVS Noise
5 IVS Seed

No PM QCs due to thunder & lightning storm. Lightning w/in 1 mile of job site



Location AAR Date 7/23/12

Project / Client _____

615 Meet UXO team in Conf. room @ hotel to brief in new UXO techs, review WP, etc

800 Brode took SUXOS TJ Planning to enterprise to pick up vehicle

~845 Leave hotel for AAR.

905 Arrive on-site. Pickup eq. in ASP Bldg. Load into van. QCs

1010 Setup for reacq. on long transects

1200 - 1230 Lunch break

1230 - 230 Continue reacq on long transects 152 targets completed

230 Go to grid 10 where UXO team had 4 N/C. Pinpoint 4 targets w/ em.61. Tech 2 dug on targets.

330 QCs

350 offsite. Stop for gas

430 Hotel.

Location _____ Date _____

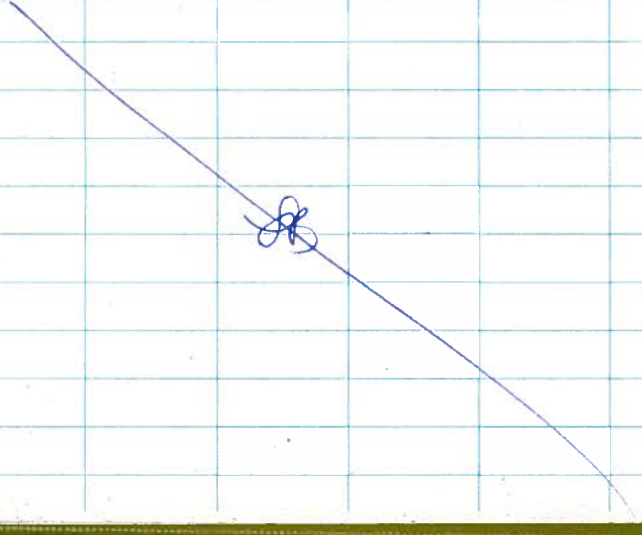
Project / Client _____

072312A

Line 1 - Static
2 - Shake
3 - Spike (89mV ch4)
4 - IVS Noise
5 - IVS Seed

072312Z

Line 1 - Static
Line 2 - Shake
Line 3 - Spike (89mV ch4)
Line 4 - IVS Noise
Line 5 - IVS Seed



Location AAR Date 7/24/12

Project / Client _____

0700 Meet UXO team in lobby for safety briefing.
720 LV hotel for AAR.
740 Arrive on-site. Pickup eq. Setup for QCs.
830 - Continue reacq. on long transect
1130 5 targets were not flagged. Had to setup GPS to flag + reacq. these targets. Numerous no finds on the long transects, particularly @ Southern ends of each transect. 58 targets reacq
1145 - 1215 lunch break
1215 - Perform QC check on G24 & locate 1 N/C.
230 - Go to G18 to perform QC check & locate 1 N/C on #9. #9 was dug & had a reading of 0mv. However #10 was open (pulled a 40mm round here) & had metal pieces on ground surface. Notified team lead of issue. He will review photo log.
300 QC G17 & located 1 N/C (brass cartridge)
815 QCs.
345 Offsite 405 hotel

Location _____ Date 7/24/12

Project / Client _____

072412A - AM QCs

Line 1 - Static
2 - Shake
3 - Spike (95mV ch4)
4 - IVS Noise
5 - IVS SEED

072412Z PM QCs

Line 1 - Static
2 - Shake
3 - Spike (96mV Ch4)
4 - IVS Noise
5 - IVS Seed
to.

~~12~~
46
80
213
215
228

Location AAR Date 07/25/12

Project / Client _____

0645 Meet the UXO team in Lobby for safety brief. Rebekah Lee on site for sampling.

710 Lv hotel. ~~Ta~~ Brode + Tech 2 took Lee over to the main gate to get her vehicle decal/contractors pass

730 Brode & Tech 2 arrive @ AAR Bldg & pick up eq.

740 Warm up EM61 10min. clean out van & complete QCs

810 Begin QCs of completed grids.
G15 - QC'd no N/C
G11 - QC'd & 2 N/C
G14 - QC'd & 2 N/C
G13 - QC'd & 2 N/C

1030 Rcvd msg from Jenn Harlan 18 of the short transects must be recollected. Brode ran over to Bldg to meet Lee & take her to AAR/TA. Discussed sampling that needs to be done & her schedule for the day

1130 Brode returns to AAR. Setup GPS for recollects

Location _____ Date _____

Project / Client _____

07251 2A AM QCs

Line 1 - IVS ~~See~~ Static

Line 2 - Shake

Line 3 - Spike (89 mV on ch4)

Line 4 - IVS Noise → Unit had significant amt of drift/noise. Performed full ~~&~~ & recollected.

Line 5 - IVS Seed

07251 2AA (~~on~~ collected w/NavG1)

Line 1 - IVS Noise } collected w/GPS.

Line 2 - IVS Seed

07251 2Z PM QCs w/GPS

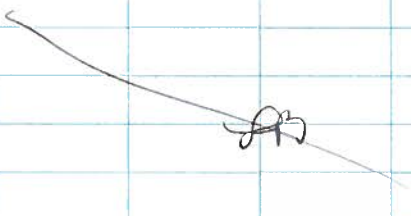
Line 1 Static

Line 2 Shake

Line 3 Spike

Line 4 IVS Noise

Line 5 IVS Seed



Location _____ Date 7/25/12

Project / Client _____

1130 - 130 Recollect 1½ short transects. Send data to J. & wait for approval that data is good.

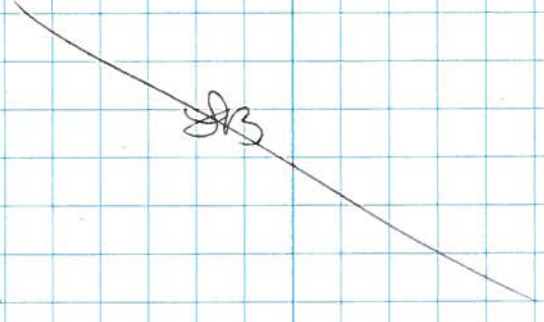
145 J. ok'd data. Gen continue w/ QC checks of grids.

315 Stop for the day - go do QCs

345 Tear down EQ. Put batteries on charge.

350 ~~Offsite~~. ~~Brad~~ went to rental place in Hunesville to verify the excavator is setup & ready to go for Monday. They will deliver by 8:30 to HIRTA.

430 Return to hotel



Location _____ Date 7/26/12

Project / Client _____

0645 Meet in lobby w/UXO team for safety brief

710 Lv hotel. Brodo stopped @ Canes for flags. Will spend the day reacquiring short transects

735 On-site @ ASP. Setup EQ. & Complete QCs.

815 Begin flagging targets w/ Zaal.

920 Finish flagging targets. Break.

940 Start reacq. on w138 targets

1230-100 ~~Lun~~ Lunch break

1:00 ~~1:00~~ Return to short transects to continue reacquisition.

3100 Complete reacq. Go do QCs

320 Put eq. on charge / off-site

340 Return to hotel. Assit Rebekah Lee in getting samples shipped out via fedex. Brodo drove her to Fedex facility.

~430 Return to hotel

Location _____ Date _____

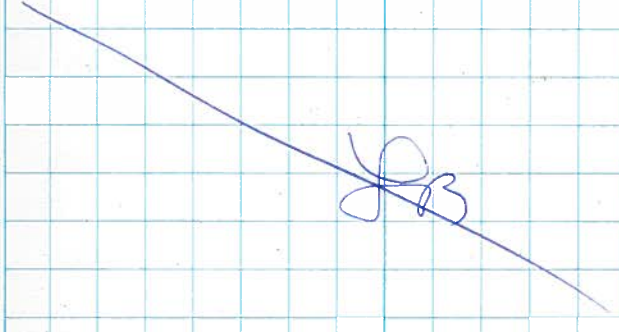
Project / Client _____

072612 A AM QCs

Line 1 - Static
" 2 - Shake
" 3 - Spike (84mV ch 4)
" 4 - IVS Noise
" 5 - IVS Seal

072612 Z - PM QCs

Line 1 - Static
2 - Shake
3 - Spike (88mV ch 4)
4 - IVS Noise
5 - IVS Seal



Location AAR Date 7/27/12

Project / Client

0645 Brode met UXO team in lobby for Safety Briefing

0720 Brode + Lee went to Cadex to drop off steel drum (10W) & pickup supplies

0750 Arrive @ ASP Bldg. Brode picked up batteries. Setup eq. & complete QCs.

0830- Begin QC of grids

G23	G12	
G19	G06	3NC, 1QC locate
G22	- 1NC on a no find.	
G03	- 3 NC G07	- 1NC
G(G21)	G09	1NC
G20	G16	1NC

1230-100 lunch break.

1:00 - 2:00 Continue recon on G16 & G

Brode was struggling w/heat & had to make a HD run for a breaker/tanker bar. Stopped QCs of grids & went to go do PM QCs.

230 Put eq. in ASP Bldg. offsite

Location Date 072712

Project / Client

072712A AM QCs

Line 1 - Static
" 2 - Shake
" 3 - Spike
" 4 - IVS Noise
" 5 - IVS Seed
"

072712Z - PM QCs

Line 1 - static
" 2 - Shake
" 3 - Spike
" 4 - IVS Noise
" 5 - IVS SEED

3:00 hotel. Change clothes.

4:00 head to Savannah to pick up breaker bar

600 Arrive @ HD.

Location

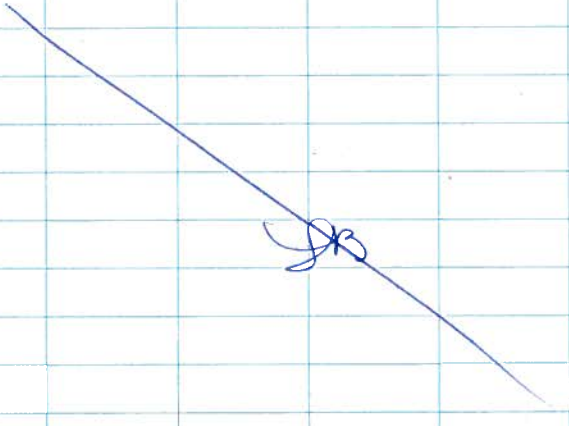
Date 7/30/12

Project / Client

0700 Brode met Uxo team in lobby for safety briefing.
- Operations splitting b/t HRTA & AAR for this week.
- Mini ex is to arrive around 830 am. Brode will assist Lee w/sampling today.
- Uxo team will start work @ HRTA. ~~[illegible]~~ for trenching ~~[illegible]~~ ops.

330 Brode offsite
345 Return to hotel

JB

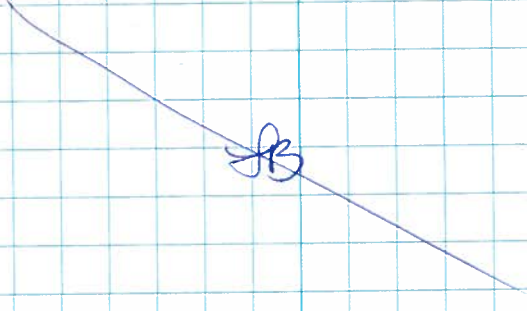


Location

Date 7/31/12

Project / Client

0645 Meet UXO team in hotel lobby
710 Leave hotel for Hero Road.
- Meet up w/ Rebekah Lee
- Prep for taking background samples.
~800 Drive out to first sampling loc. take samples.
900-
1100 Remaining locations are ~~[illegible]~~ behind fenced in areas. We cannot access - return to Hero Rd. Begin taking Random samples.
~330 Brode offsite
~345 Return to hotel.



JB

Location _____ Date 8/1/12

Project / Client _____

0645	Meet UXO team in hotel lobby.
0700	Lv hotel for Hero Rd
715	Onsite. Brode spent the day collecting samples w/ Lee.
3:00	Brode went to hotel to print Shp label.
330	Meet Lee @ Fedex to Ship ~~packages~~ samples to Lab.
400	Return to Hero Rd - continue sampling.
600	offsite
630	Return to hotel.

Location _____ Date 8/2/12

Project / Client _____

0645	Meet UXO team in lobby for safety briefing
720	Brode left hotel (delayed due to taking care of personal matters)
740	Met Lee at corner. Lee is organizing gear/ware & will be meeting w/ someone to finish background samples. Brode packed up tripod & batteries.
800	arrive @ ASP Bldg. Load eq.
830	~~Begin~~ Setup eq. for QCs.
900	Pick up a Tech 2 to assist w/ QCs & loading N/C
1200	Brode offsite for lunch
100	Brode returns - continue w/ QCs
410	By 410 G1, G2, G4, G5, G8 & Shot transects 2 were completed
430	Return to hotel.

No pm QCs due to lightning

Location _____ Date _____

Project / Client _____

AM QCs

080212 A

Line 1 Static

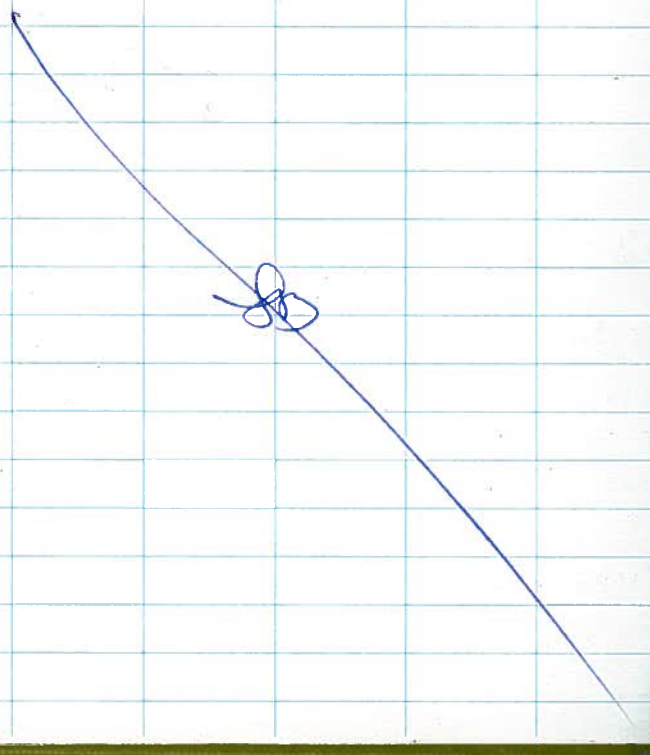
* 2a Shake

3 Spike (87mv Ch4)

4 IVS Noise

5 IVS Seed - missed fud

* 5a IVS Seed recollect.



Location _____ Date 8/3/12

Project / Client _____

0645 Brode met UXO team in lobby for safety briefing

705 lv hotel for ASP.

725 Arrive @ ASP. Wait for bldg to open to charge battery.

Setup for QCs.

800 Begin reacq. on Long + Short transects

1145 ~~1200~~ PM QCs.

1220 Brode picked up last of the equipment from the ASP Bldg. Head to hotel to pick up ice.

100 Brode arrives at Hero Road Breaks down DGM EQ & packs it into proper cases.

230 SUXOS + UXO team arrive onsite. Walk out to BIAS #5 (see notes on samples on following page)

600 Finish sampling for the day. Brode offsite

620 Brode return to hotel

Location _____ Date _____

Project / Client _____

080312 A - All QCs
Line 1 - Static
2 - Shake
3 - Spike (188 mV ch4)
4 - IVS Noise
5 - IVS Seed

080312 B
Line 1 - Static
2 - Shake
3 - Spike (188mV ch4)
4 - IVS Noise
5 - IVS Seed

14, 16, 15, 13, 10, 8, 16, 8, 8

Location _____ Date _____

Project / Client _____

BIAS #5
Predug to 4' Auger to 10' sample @ 10'
Groundwater @ 10'

@1524
FTSW-HR-SO-5(10) sandy soil
light to medium brown w/ little to no clay. some small pebbles
loose - with # black specks

1534
1534 pm arrive at Bias #6.
Predug to 4'2" Auger to 9.5' take sample @ 10'
FTSW-HR-SO-6(10) @1602
medium brown to black sand, loose
w/ small pebbles. little to no clay.

1610 arrive at Bias #8
Predug to 3.5' Auger to 9.5' sample @ 10'
FTSW-HR-SO-8(10) @1630
Black sandy soil, loose, little to no clay, slightly moist

Location _____ Date _____

Project / Client _____

1610 Head back to van to drop off samples & grab new glassware.

1705 Arrive @ BIAS #3.

Predug to 6'. Debris pile of ~~metal~~ lumber, glass metal @ 3-4.5' ~~clay~~ → 2-3' @ sandy soil, light brown compact. Auger to 9'6" Sample @ 10'

FTSW-HR-SO-03610 @ 1735
Reddish brown sandy soil, loose w/hard nodules of soil (break up easily).

Location _____ Date 8/6/10

Project / Client _____

0615 Brief met UXO team in lobby for safety briefing

0620 leave hotel for Hero Rd. UXO team to stop for ice.

0635 Brief arrive North gate Unlock gate & wait for UXO teams arrival

0650 UXO team arrives, get decon water & supplies out of Conex. Go up to N gate to walk out to BIAS #42

BIAS #42

Predug to 4' Auger to 9.50'

* Rain all day Sunday, soils may be saturated.

FTSW-HR-SO-(09.5) @ 747
medium to dark brown, coarse sandy soil w/hard nodules little to no clay (break apart easy) soil is slightly moist.

Location _____ Date _____

Project / Client _____

BIAS #4

Arrive @ 0753 Bias #4

FTSW - HR-SO-04 (7.50) @ 808

Dark brown to black, course, Sandy soil. Very Moist to wet little to no clay soil. Groundwater @ 7.50' bgs.

- Sample in ground scar, which is ~3' lower than surrounding ground surface. Horizon change bottom 2" of Auger. Reddish brown, little clay, very wet. no odor

Predug to 5'7" Auger to 7.5'

BIAS #11 - arrive @ 08.16

~~Ar~~ Predug 4'7" Auger to 9.5'

@ 0855 stop augering and return to the van - thunder and lightning

@ 1015 Return to BIAS #11 to resume augering - rain stopped, no odor

Location _____ Date _____

Project / Client _____

FTSW-HR-SO-11 (10) @ 1038

Reddish brown, loose sandy soil w/ hard nodules. little to no clay. Moist soil. No odor

BIAS #9 Arrive @ 1045

~~Ar~~ Predug to 3'3". ~~Pred~~ Auger to 10'

FTSW-HR-SO-09 (10) @ 1120

Light orange brown. fine sandy soil. little to no clay. ~~No~~ Dry. No odor.

BIAS #10 Arrive @ 1134

Predug to 4.0' Auger to 9.5'

FTSW-HR-SO-10 (10) @ 1159

Dark reddish brown to black Sandy soil, fine to medium grain. Dry. little to no clay. No odor

Location ~~1 2 3 4 5 6 7 8 9 10 11 12 13~~ Date 14 15 16

Project / Client

BIAS #13 arrive @ 1206
Predug to 3'9" Auger to 10'

FTSW-HR-SO-13(10) ~~3~~ @ 1234
~~Lht~~ light brown, grayish, ~~3~~ loose, Sandy soil. No clay. Dry. NO ODOR.

BIAS #14 arrive @ 1313
Predug to 4'6" Auger to

FTSW-HR-SO-14(7.5) @ 1335
Dark Reddish Brown, loose fine to medium grained sandy soil. Very Moist. No odor.

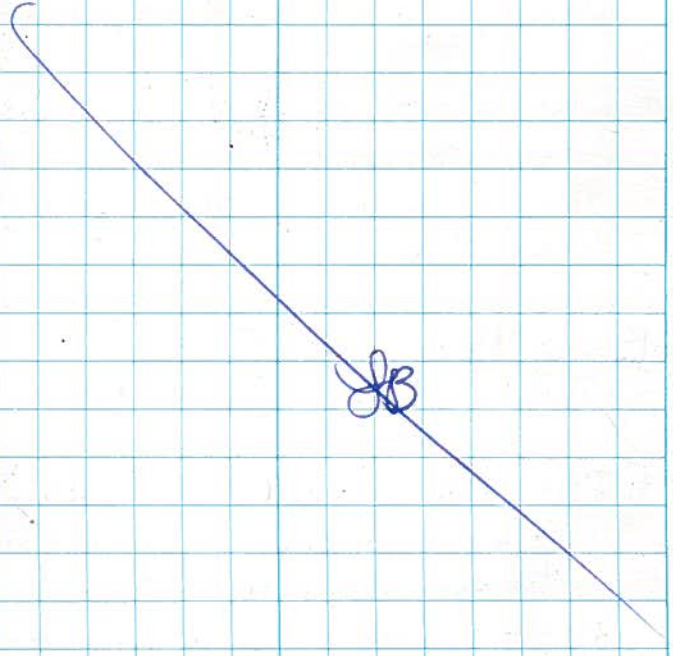
ERB
FTSW-HR-SO-14-ERB @ 1351

200 Another thunder & lightning storm is approaching. Stop to ~~take~~ prep samples for shipment to ALS
300 Return to the ~~ho~~ site.
Decided to quit for the day

Location Date 8/6/12

Project / Client

as the storm was about to hit us.
310 Rain started. Drop off ~~HCS~~ waste water
3 @ conex
320 offsite
~340 Return to hotel.



JB

Location _____ Date 8/7/12

Project / Client _____

0615 Brode met UXO team in lobby for safety briefing

0630 Leave for Hero Road. UXO team stopped for ice

0645 Arrive on-site. Setup for last 2 samples

BIAS #15 - arrive @ 706
Reding to 3'5" Auger to 9.5'

FTSW-HR-SO-15-(9.5) @ 708??
Greyish brown sandy soil, damp; Slightly packed. Little to no clay, fine grained, no odor

BIAS #16 Arrive @ 746
Reding to 3'6" Auger to 10'

FTSW-HR-SO-16(10) @ 815
Greyish brown sandy clay. Little to moderate clay (forms loose ribbon) Moist. fine grained, no odor

Location _____ Date _____

Project / Client _____

1DW
FTSW-1DW-01 @ 905

930 Finish sampling, pack samples then return to hotel to print Shp labels for samples & rental equipment.

~~1030~~ 130* Drop samples @ eq. offload FedEx

~~1035~~* Return to Hero Rd. UXO team assisted Brode w/ loading eq. & supplies into van.

1200 Brode returned Keys for Hero Rd. to Jimmy. He wasn't in office so Brode gave them to his coworker.

~~1230~~ 130 Bye

200 Return to hotel. Project is completed.

Ft. Stewart
Sunny, partly cloudy, around 80°F
slight breeze

0900 Rebekah M on site at Ft Stewart Hero Rd parking lot.

Collecting IDW sample

FTSW-IDW-02 @ 1015
4 1 L bottles
2 250mL bottles
brownish soapy water

0920 Headed to North Gate
lid on too tight, called Jimmy for wrench. Told me to go to Hazardous waste office.

0940 Headed to Hazardous waste office, borrowed wrench

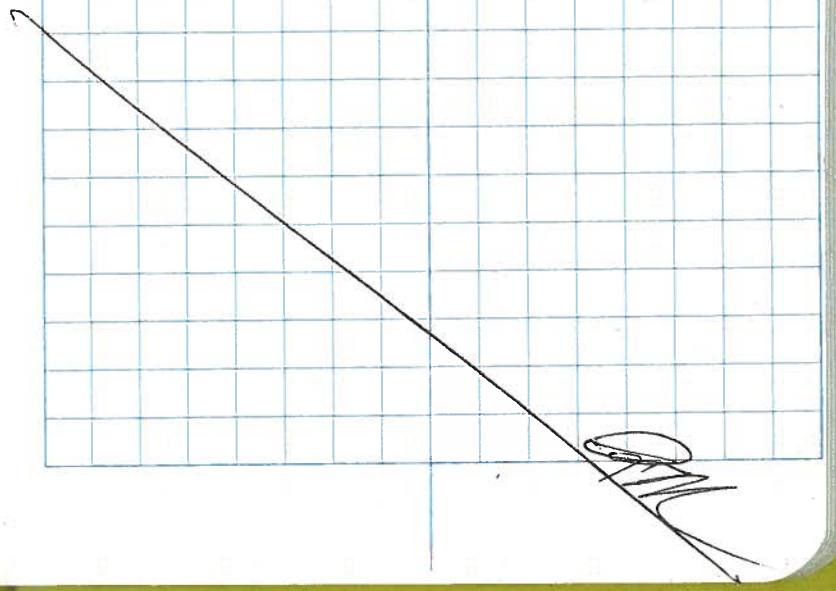
1000 Back at Hero Rd North Gate
Completed taking samples
filled 4 1 L bottles and
2 250mL just in case

1025 Returned wrench to Hazardous waste office and returned Hero Rd keys to Mr. Keifer since Jimmy was not available

1045 Rebekah M off Base and headed to hotel

1115 Dropped off cooler at Fed Ex

1125 Rebekah M Back at hotel



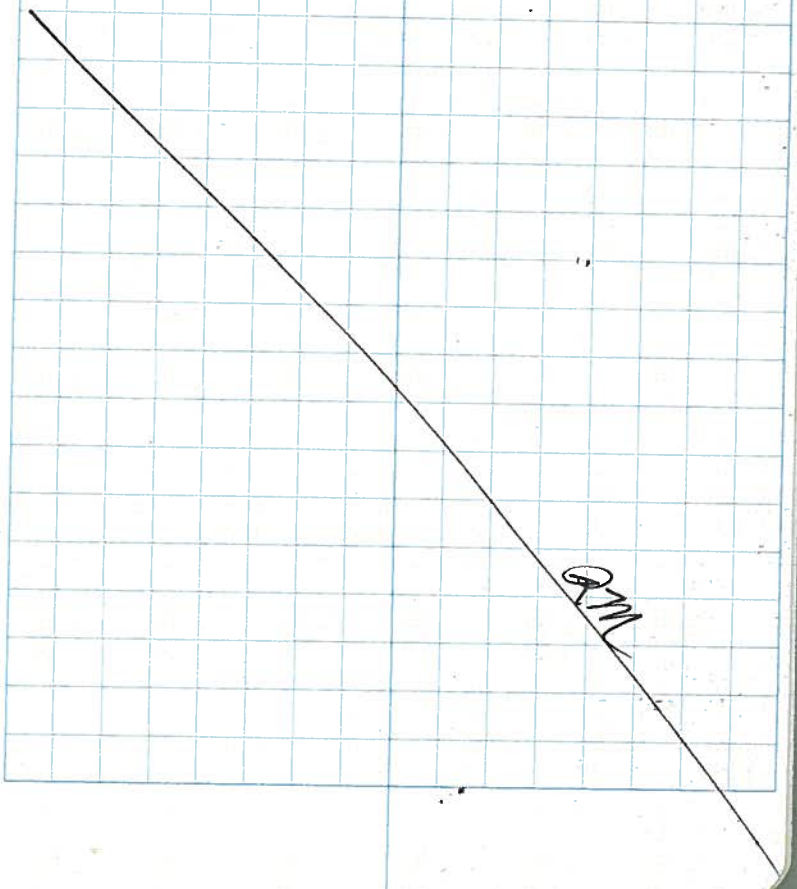
Fort Stewart, GA 3153-004

Jennifer Harlan - PM

7/24/12

1500 Rebekah McCoy arrived at hotel.

1730 Rebekah M, Lynelle B, TJ met to discuss sampling



Ft. Stewart

7/25/12 Sunny, Hot, Humid

0645 Safety Briefing at hotel

0735 Rebekah M arrived at security building to retrieve pass for vehicle

0900 ~~Headed~~ Called Jimmy McCallen and set up meeting with him now

0910 Arrived at building 1137 Jimmy's office. Discussed 12 sampling areas with him and Ag Determined That sites 2 and 3 were too far away. All other areas are within Cantonment area except 12A. Should be no issue going but Jimmy is going to double check. He sent shapefile of sampling areas. Will upload to trimble.

1011 Called Lynette to lead Rebekah to Hero Road.

1045 Met Lynette at Burger King parking Lot Discussed Background sampling and Scheduling, directions around Base

1115 Rebekah + Lynette Arrived at Hero Road Con Ex

1120 Lynette Left Conex, headed back to ASP. Rebekah inventoried, organized, seperated bottleware. Determined that Lab only sent 36 metals 4oz glass jars when supposed to send 38.

- Called lab - found out They only need 1 8oz glass jar for explosives. Also ordered additional glassware for 10 samples at AAR and 5 at Hero Road and ~~AAR~~ 2 additional sediment and surface water samples.
- Called Jenn Harlan and gave Update on background Samples. Decided That can take 2 Samples at one site if some sites are inaccesable.

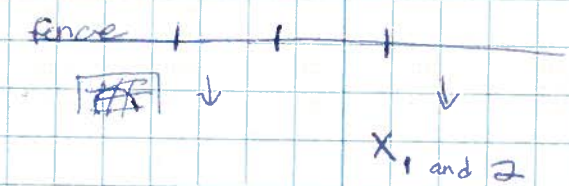
Cont At 1144 called Mike Gearheart to update him on bottle order from Lab and sampling schedule

1315 RM called Lynette B to inform her of completion at Conex and for notification That RM would be leaving the site

1320
1335 RM off site
1330 RM at hotel, proceeded to download new shapefiles of SWMUs from Jimmy Mcallen and edit, upload, and test Trimble

7/26/12 Clear skies, hot, humid, slight breeze

0645 Safety Briefing at hotel
0700 Team Left hotel
0742 Arrived at ASP
0800 Set up on first sampling location at edge of fence



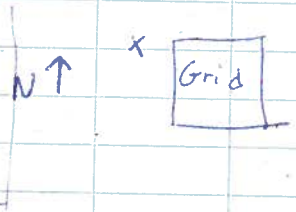
- Lots of grass, surface soil dark grey w/ lots of organic roots
- dug about 4" before taking surface sample

Subsurface - Sand until 2' then slight clay, orange + red blotches, (iron)

Surface sample FTSW-AA-SO-01 @ 814

Subsurface 1.5ft FTSW-AA-SO+02(1.5) @ 820

0855 Moved to next sample Location.



Surface soil dark grey sandy w/ lots of roots no evidence contamination

Surface Sample FTSW-AA-SO-03 @ 0902
Dup FTSW-AA-SO-03 Dup 0904
MS FTSW-AA-SO-03 MS 0906
MSD FTSW-AA-SO-03 MSD 0905

Subsurface very clayey light grey, orange, lots of oxidized iron, very crumbly no evidence of contamination no smell
FTSW-AA-SO-04 (1.5) @ 0917

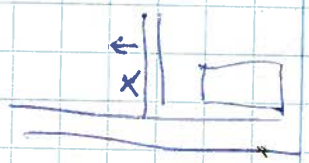
0950 Moved to 3rd Location



Surface Sample - next to animal hole, light grey sandy, no smell lots of roots, few bugs
FTSW-AA-SO-05 @ 0957

Subsurface - mix of light and dark grey sandy soils, little to no clay, few oxidations. no evidence of contamination
FTSW-AA-SO-06 (@1.5) @ 1002

1015 at 4th Location

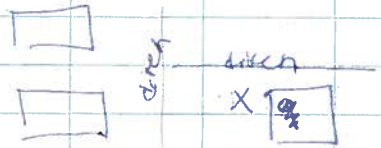


Surface - Sandy lots roots, light grey on hill, no smell
FTSW-AA-SO-07 @ 1033

Subsurface - light grey, clayey w/ some sand, lots of oxidation reddish blotches (iron) some reduction characteristics indicative of saturation took Dup, MS, MSD

FTSW-AA-SO-08 (02) @1041
FTSW-AA-SO-08 (02) Dup @1043
FTSW-AA-SO-08 (02) MS @1047
FTSW-AA-SO-08 (02) MSD @1050

1147
1120 at 5th Location



Surface - dark grey Sandy lots of roots, no evidence of contamination

FTSW-AA-SO-09 @ 1145

Subsurface - light grey, very light orangish, oxidation and reduction (red + black) present Sandy very loose

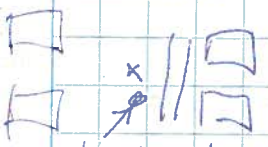
FTSW-AA-SO-10 (02) @1147

1157 - moved to outside gate for lunch, finished up notes + cleanup from last samples.

1230 Began ERB, from last sample @ sample 10

1245 FTSW-AA-SO-10 (03) ERB

1300 Arrived at 6th location



Surface Medium grey extreme amount of roots very loose Sand, no odor

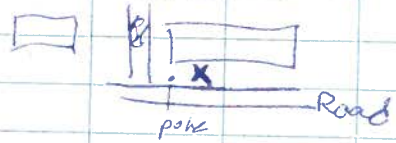
FTSW-AA-SO-11 @ 1320

Subsurface

Very gravely from about 6" to 1' had tech come w/ pick to loosen. Tech was then able to use augur to collect sample, RM took augur and extracted soil. Very Sandy, very packed, Sandy medium grey with some reduced iron.

FTSW-AA-SO-12 (01.5) @ 1330

1350 Arrive at 7th site



surface - dark brown sandy, loose, no odor, no sign of contamination

few redox coloration's in surface

FTSW-AA-SO-13 @ 1406

Subsurface - Sandy Dark grey, brown, reddish - redox and oxidation, very loose, no odor, no sign of decontamination

FTSW-AA-SO-14 (02) @1412

1425 Arrive at 8th site



Surface- very hard, sandy grey, large clumps had to use knife to break soil, no evidence of contamination

FTSW-AA-SO-15 @1436

Subsurface

FTSW-AA-SO-16(01.5)@1450

Sandy brownish grey with redox and some white no odor - no evidence of contamination

* Had UXO tech assist with pick on samples 16 and 12
* Decon'ed Auger after each subsample

1500 Steve gave ok to leave site
1525 arrive at hotel to complete COCs and ship the days samples,
1630 Delivered coolers to Fedex
1645 RM and Lynette Back at hotel

Ft Stewart

7/27/12 Hot, humid, little to no clouds slight breese at times

0645 Safety meeting at hotel

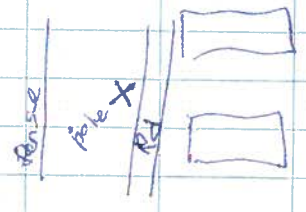
0700 Rebekah M left hotel to go get ice

0724 Rebekah M and Lynette B arrive at Hero Road comex

0745 Rebekah + Lynette left Hero Road

0755 Rebekah + Lynette on site at ASP

0805 Rebekah at random sample site



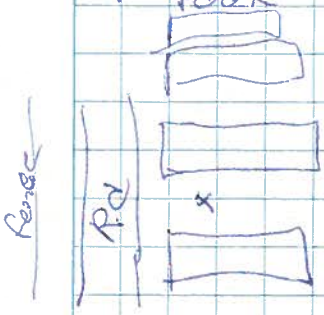
Surface - light grey loose, very dry no discoloration.

FTSW-AA-SO-17 @ 0825

Subsurface - hit rocks going down, sandy, few redox, dark grey w/ some white/light grey distinct odor - rotten eggs (sulfur) may have been saturated w/ water

FTSW-AA-SO-18(01.5) @ 0834

0839 Called Jenn Harlan, last sampling site on asphalt. She said to sample near there, chose location between bunkers + took GPS point



Surface - light grey, no odor, sandy, loose lots of roots

FTSW-AA-SO-19 @ 0915

Subsurface - needed UXO help to break up soil, very Hard dry clay redox and oxidized, dark grey to brown, no odor, some ants.

FTSW-AA-SO-20(01.5) @ 0944

0952 Arrive at North end of Ditch



Surface water present along w/ tadpoles + frogs, no odor

Surface water
FTSW-AA-SW-21 @ 1007

Sediment - Dark brown - much few organic roots. no odor
FTSW-AA-SO-21 @ 1010

1027 arrive at South end of ditch
no Surface water present
very fine layer of Dark grey sand then light grey light brown Sand w/ no odor. Some redox and oxidation
FTSW-AA-SO-22 @ 1036
1106 Rebekah M + Steve left ASP
1120 arrive @ background #1
located next to dirt road in field w/ multiple gas storage tanks, light-Dark brown loose Sand w/ few roots
FTSW-~~BK~~ AA-SO-23@1130

1140 arrive at background #2
- Located along fence + drainage ditch next to waste water containment.
- Had to dig through about 6" of gravel to get to very sandy light grey, w/ light brown sand w/ few roots
FTSW-~~BK~~ AA-SO-24 @ ~~10~~ 1152
GPS unit dead
1153 ~~1053~~ Steve left to head back to asp

1157 Rebekah Left Base for ~~hotel~~ Hero Rd Conex
1209 Rebekah @ HR conex
1220 Rebekah off site - hotel
1355 Rebekah left hotel to meet w/ Steve at Hero Rd conex

1410 Rebekah @ HR
1415 Steve @ HR
1425 Rebekah took ERB from Sample 22
FTSW-AA-SO-22 ERB @ 1425

1441 Rebekah + Steve left HR

1455 Arrive at edge of old landfill now old pine forest + lake on edge
All sandy soil, light brown, light gray loose, some roots
FTSW-~~BK~~ AA SO-25 @ 1502
FTSW-~~BK~~ AA-SO-25 Dup@1504

went farther down rd to entrance of landfill took on right side of Road near edge of forest Dark Brown sand loose w/ lots small rocks

FTSW-~~BK~~ AA-SO-26 @ 1516

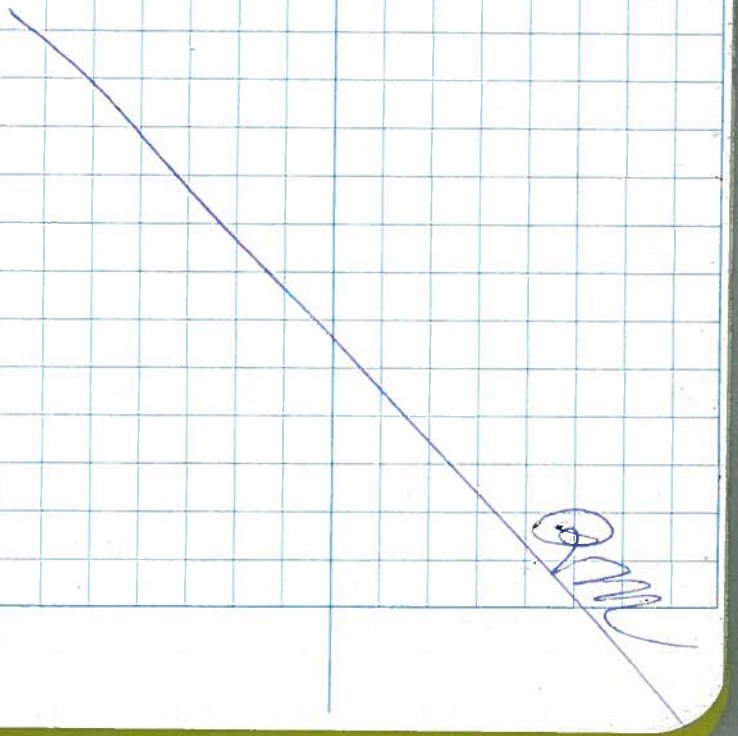
1525 Arrived at next location Waste Water plant - sample taken inside of fence at entrance, dark to light brown Sandy loose w/ some gravel, little to no rocks

FTSW-~~BK~~ AA-SO-27 @ 1530

1540 Next site - construction zone
1550 following site found by locked by gates will return on Monday

1605 Rebekah and Steve off Base
1620 Arrived at hotel

Samples will remain w/ Rebekah until Monday.



Ft. Stewart

7/30/12

0700 Safety Brief at hotel

0810 Rebekah arrive at HR parking lot

inputed trench coordinates going to flag location of trench's.

Lynelle brode will be buddy for Rebekah McCoy

0920 Completed placing flags for trenches

0929 Arrive at background location next to RR tracks + trains grass field + trees

FTSW-AA-SO-28 @ 940
Dark brown sandy soil, few roots, no odor

FTSW-AA-SO-29 @ 943
few roots Closer to train tracks, light to Dark brown sandy loose, no odor

1045 Arrive at HR parking Lot

Set up for Sampling at first site. About 6" organic peat + mat. Sandy soil with some roots, Dark brown soil, no odor, loose, few bugs

FTSW-HR-SO-01 @ 1134
FTSW-HR-SO-01 Dup @ 1134
FTSW-HR-SO-01 MS @ 1136
FTSW-HR-SO-01 MSD @ 1138

Subsurface - light grey, dark grey sandy loose soil cool. no odor no sign of contamination

FTSW-HR-SO-02 (01.5) @ 1144

collected ERB

FTSW-HR-SO-02 (01.5) ERB @ 1204

1225 At second random sample only about 1" peat + organic

Surface - medium grey w/ white specs, loose, no odor, sand some roots, lots organic

FTSW-HR-SO-03 @ 1233

Subsurface
Sand Dark + medium sand very loose no odor, no roots

FTSW-HR-SO-04 (02) @ 1237

1250 Arrive at 3rd site

Lots of peat x 6" worth Surface red w/ medium to Dark Grey Sand, no odor lots of roots

FTSW-HR-SO-05 @ 1310

Subsurface - orange to yellowish sand, no odor some black to dark grey mixed. no odor, very loose

FTSW-HR-SO-06 (01.5) @ 1315

1335 @ 4th random
Middle of woodchip pile

About 8" of organic and peat Medium to dark grey loose Sand w/ white specs. no odor

FTSW-HR-SO-07 @ 1349

Subsurface - grey/yellow sand w/ some black splotching, very loose no odor

FTSW-HR-SO-08 (02) @ 1354

1400 Arrive at 5th site
Next to large tree about 6" peat, lots of rocks, Medium to Dark Grey w/ white spots loose Sand no odor

FTSW-HR-SO-09 @ 1408

subsurface - Dark grey w/ some light grey w/ some white sand hit few roots, loose, no oder

FTSW-HR-SO-10 (01.5) @ 1420

1325 Rebekah M off site headed to hotel

1600 Rebekah M dropped off 2 coolers at Fedex location

1610 Rebekah M Back at hotel



Ft. Stewart

7/31/12 overcast, cooler light breeze

0645 Safety Brief at hotel

0710 Rebekah McCoy and Lynette brode at HR convey along w/ Jeff (USACE)

0745 Arrive at N gate at HR Head out to 1st sample

Medium to dark grey sand w/ white specs, lots of roots, loose no odor

FTSW-HR-SO-11 @ 0811

Subsurface

Some deep roots, dark grey, with some light grey sand loose, little organic no odor

FTSW-HR-SO-12 (10 1.5) @ 0818

0820 Arrive at next location

Some surrounding trees, lots roots

Medium to Dark grey sand w/ some white, loose, no odor

FTSW-HR-SO-13 @ 0827

Subsurface - some small roots
Dark to Medium grey loose sand
little organic. no odor

FTSW-HR-SO-14 (01.5) @ 0833
FTSW-HR-SO-14(01.5)Dup @ 0835

0834 Tornado warning sounded, gathered everything headed to van. Checked w/ Steve and w/ NWS - no warnings. Was a Drill.
0900 All clear
0905 Arrive at next site about 1" organic

lots roots Dark brown, Dark grey w/ some white specs loose sand no odor damp

FTSW-HR-SO-15 @ 0915

Subsurface - Dark brown sand little organic damp loose some red roots

FTSW-HR-SO-16(01.5)@0921

0935 Arrive at next site

About 6-7" organic layer

Surface Dark to medium grey w/ white sand, loose no odor, lots roots

FTSW-HR-SO-17 @ 0943

Subsurface
- Dark black w/ lots of wood (decaying tree or woodchips) sand w/ organic lots

FTSW-HR-SO-18(02)@1016

1045 Arrive at last location

About 1" organic layer
Dark to Medium grey loose sand with few white specs no odor

FTSW-HR-SO-19 @ 1058

Subsurface - some roots reaching 1'

Medium to light grey sand w/ some black and some white spots very loose, no odor

FTSW-HR-So-20(01.5)@1104

1120 Arrive (RM + LB) at south Gate AR.

1145 Trench #1

Anomaly most likely due to cable, drum remnants and other metal debri, random glass

8-9" of organic on top Dark Brown / Dark grey horizon followed by Thin layer yellow sand then 1.5-2' of Dark grey sand. About 3' down run into Dark grey w/ root oxidized red spots (groundwater at this point some time ago) At 4' run into yellowish brown sand.

prev Groundwater level and light sand indicate native soil

Surface

FTSW-HR-So-21 @ 1200

Subsurface 1' to 4'

FTSW-HR-So-22(04) @ 1204
FTSW-HR-So-22(04) @ 1207
FTSW-HR-So-22(04) @ 1210
FTSW-HR-So-22(04)MSD@1213

1215 Trench #4

about 6' deep possible vehicle debris Anomaly most likely due to metal scrap including round objects, lots of glass bottles, medical + beer

3" of organic Dark grey sandy 1.5' followed by 6" of bottle debr. w/ reddish s.i followed by about 6" of Dark grey with Dark brown sand, Then 3" organic

roots/ wood with Dark brown soil
few more 2" of Dark + medium
brown sand soil
1" black sand distinct
boundary
1' of Dark brown soil w/.
some black sand

Surface to 1'

FTSW-HR-So-23 @ 1239

Subsurface 1' - 6'

FTSW-HR-So-24(06)@1244

1300 Arrive at trench #2

Area surrounded by steel drums
Anomoly probably due to
steel drums, scrap metal, bricks
and other building materials

Top 2" organic pine + debris,
followed by 1" Dark brown
soil with mix of building
materials. About 2' down

where sample being taken, old buried
building material. All dark brown
to dark grey soil until about
3' then organic layer (wood
chips) with some red soil
followed by 1/2 in thin black
layer with some redox then
light brown, light grey sandy soil
followed by Dark grey/black
thick horizon (water level
may have been here) to 4'

Surface to 1'

FTSW-HR-So-25 @ 1319

Subsurface 1' to 4'

FTSW-HR-So-26(04)@1322

1330 Arrive at trench #5
about 5"
Anomoly may be due to wire fence
Nothing of note in spoils
from trench

Surface 1½' Dark grey to medium grey sand w/ lots roots, About 2' down reddish sal with Dark brown to black Splotches lots of redox for about 1', after Dark Grey w/ some light brown + white Sand for about 6" Then mix of Dark brown, Black and light grey Sand to bottom More black at bottom

Surface to 1'

FTSW-HR-So-27 @ 1340

Subsurface 1' to 5'

FTSW-HR-SO-28(05) @ 1343

1350 Trench #3

Anomaly due to steel barrel drum and lots barbed wire

Surface to 4" Dark grey to Dark brown sand, loose lots of roots, 6"s of light brown Dark brown mix w/ some black Spots, under lying very thin black layer followed by 2 in Dark to medium grey sand, then Medium Brown diffusing 3" below to light brown w some redox around roots about 1' followed by light brown w/ some reddish lines at about 3.5 to 4 ft Dark brown 4' and below Dark brown to black dense sand

Surface to 1'

FTSW-HR-So-29 @ 1414

Subsurface 1' to 5'

FTSW-HR-SO-30(05)@ 1418

1510 Rebekah M Left HR site

1540 Dropped off Samples at Fedex

Ft. Stewart

8/1/12

0645 Safety meeting at hotel

0655 Called Jenn to confirm subsurface sample taken 9-10', yes

0730 At HR site

Bias #1

Surface - Medium Grey sand loose no odor

FTSW-HR-SO-31@ 0744

FTSW-HR-SO-31D@ 0746

FTSW-HR-SO-31MS@ 0748

FTSW-HR-SO-31MSD@ 0751

Subsurface

Dark compact extremely hard in spots Reddish brown sand w/ little clay

FTSW-HR-SO-32(10)@ 853

Bias #2

Surface Medium to light grey sand, loose no odor

FTSW-HR-SO-33@ 0924

Subsurface

Dark compact hard spots Reddish brown sand w/ some clay

FTSW-HR-SO-34(10)@ 1016

FTSW-HR-SO-34(10) Dup@1018

Bias #3

Surface medium grey w/white specs loose sand

FTSW-HR-SO-35 @ 1046

Tried to do subsurface - got stuck at 3ft

Bias #7

Surface Medium to light grey loose sand no odor some roots

FTSW-HR-SO-36 @ 1128

* Hit metal scrap at around 2-3 ft

Hit very moist to saturated soil at 9.5 ft

FTSW-HR-SO-37(09.5) @ 1252

1264 Talked w/ Jenn Harlan about how long and amount of effort going into subsurface sampling. There might be a few options
- using excavator then auguring
- having techs help out
- using geoprobe

1309 Tried calling Jimmy again to gain access to last locations for background sampling

1325 Started collecting ERB

FTSW-HR-SO-37(09.5) ERB @ 1340

Bias #5

Medium to light grey loose sand w/ some roots.

FTSW-HR-SO-38 @ 1357

Bias #6

Medium to light grey loose sand w/ lots of roots + organic

FTSW-HR-SO-39 @ 1405

Bias #8

Medium to light grey loose sand w/ 6-8" peat + debris on top lots of roots

FTSW-HR-SO-40 @ 1415

Bias #10

Medium grey to brow loose sandy soil w/ lots roots metal plate buried

FTSW-HR-SO-41 @ 1425

Bias #9

Dark grey w/ white specs, lots of organic roots, sandy loose

FTSW-HR-SO-42 @ 1434

* Next to massive metal structure

1510 Headed out to ship current Samples, left HR Lot

1530-1545 talked w/ Dail about access to background sampling

~~1600~~ Dropped off samples at FedEx

1~~6~~00 Arrive at HR Northbank

Bias #16

Dark Grey Sand w/ some reddish soil from peat about 6" of organic on top

FTSW-HR-SO-43 @ 1621

Bias #15

In between 2 trees Medium to light grey loose sand covered w/ 1-1½ ft peat and organic

FTSW-HR-SO-44 @ 1633

Bias #13

Next to tree

Medium to Dark grey loose sandy soil 6 inch peat above

FTSW-HR-SO-45 @ 1645

Bias #14

1½ ft ~~peat~~ w/ ~~some~~ ~~reddish~~ Medium to light grey sandy soil with some white specs →

FTSW-HR-SO-46 @ 1700
FTSW-HR-SO-46 Dup @ 1705

Bias 11

4" peat Medium grey sand Soil w lots of roots throughout

FTSW-HR-SO-47 @ 1730

Bias # 4
on slope of ground scar

1' of peat ~ other organic light grey w/ some white Sand. loose

FTSW-HR-SO-48 @ 1740

Bias # 12

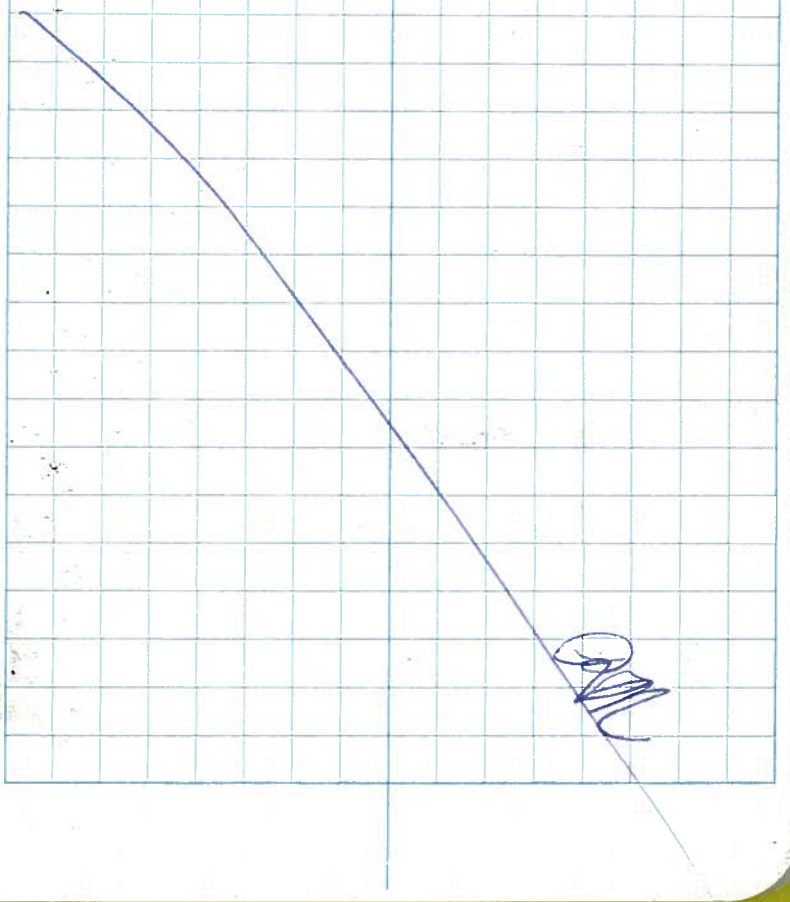
Point in middle of rusted metal chair (middle empty) no organic on top Dark grey Sandy Soil w/ some brown

Some to few roots

FTSW-HR-SO-49 @ 1750

1800 Rebekah M, Lynette B, + Steve Left HR site

1815 All back at hotel



Ft Stewart
8/2/12

645 Safety mtg at hotel
0715 Rebekah McCoy at Buddy B office building 1175 Division of Public Works O+M

He talked w/ willie and he will meet me at the gate to evans area wwtp at 10 am.

0740 Rebekah M. arrived at HR Conex

0910 Rebekah M Left HR conex headed to Evans Sampling area

0930 Arrived at Evans Sampling area Gate ~~had been~~ open but waited for Willie

0935 Willie Joe met Rebekah at Gate entrance, entered with vehicles and took samples Sampling are from top of ww treatment pad (west) to gate entrance.



Background # 8

Dark brown sandy Soil w/ some (little) clay few roots, low grass cover at bottom of slope to treatment area. no odor.

FTSW-AA-So-30 @ 0943

Background # 9

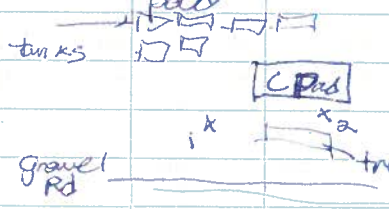
at NE area of sampling area.

. Dark ~~Red~~dish brown sandy clay loam with some roots few roots On top of slope at very edge of sampling area

FTSW-AA-SO-31 @ 0955

1000 Left Evans area and headed back to cantonment area.

1025 At 1st sampling location next to tank field + concrete pad



Dark Reddish Brown sand w/ very little clay, few roots, no odor few ants & grubs

FTSW-AA50-32 @ 1034

1040 Completed Sampling Rebekah heading back to hotel

1050 Arrive at hotel

1145 Dropped off samples at FedEx location

1155 RM Back at hotel

Ft. Stewart

8/3/12 overcast, hot, humid

0645 Safety meeting at hotel
0710 Rebekah M. arrived at Hero Road Conex
0720 3 UXO techs including leader at HR
0810 Rebekah M Left Hero Rd
0825 RM at hotel

MONDAY 23 July 2012

CONTENTS

PAGE	REFERENCE	DATE
	0600 - MET AT NOAL CONFERENCE ROOM FOR SITE SPECIFIC TRAINING	
	0830 - LOAD VEHICLES	
	0850 - PROCEED TO SITE	
	0920 - CHECK SCHONSTADTS AT IUS	
	262309 QC	
	262314 Bobby Morris	
	262312 Shawn Rhodes	
	262316 Rob Smith	
	262313 James Hamel	
	262315 Tyler Zaal	
	0930 - TAILGATE SAFETY ADJACENT GRIDS 10/12&15	
	0955 - STARTED G10 - 1 GEO NO FIND (NF)	
	1023 - ~~COMP~~ G10 13 ANOMALIES PLUS 1 GEO NF & 4 NO CONTACTS (NC)	
	1025 - STARTED G12	
	1054 G12 - 15 ANOMALIES INVESTIGATED WITH 04 ~~NOTED~~ NC (ZERO NO CONTACTS)	
	1146 STARTED G11	
	1127 G11-12 ANOMALIES INVESTIGATED WITH 4 NO CONTACTS	
	BREAK	

Location MONDAY 23 July 2012 Date

Project / Client CONTINUED

1149 STARTED G13
1222 G13 16 ANOMALIES INVESTIGATED WITH 3 NO CONTACTS
1230 STARTED G15 WITH 1 GEO NO FIND
1319 G15 19 ANOMALIES INVESTIGATED WITH ZERO NO CONTACTS
LUNCH
1355 STARTED G16 WITH 2 GEO NO FIND
1436 G16 COMPLETED WITH ZERO ADDITIONAL NO CONTACTS - 17 ANOMALIES
1438 STARTED G14
1520 G14 17 ANOMALIES INVESTIGATED WITH 1 NO CONTACT AND A 2ND QUESTIONABLE CONTACT
1530 EXITED ASP FOR END OF DAY ACTIVITIES
1600 PERSONNEL ACCOUNTED FOR AND RELEASED FOR DAY
Nothing Follows

Weldon Paul Rogers
23 July 2012

Location Tuesday 24 July 2012 Date

Project / Client

0700	SAFETY AND OPERATIONAL BRIEFING
0720	PROCEED TO SITE
0740	PERFORM SCHONSTEDT CHECKS AND CONDUCT VEHICLE INSPECTIONS
0800	TAILGATE SAFETY BRIEFING
0810	START G18 - 27 ANOMALIES
0910	1 MEC ITEM - 40MM, ZERO NO CONTACTS
0915	START G17 - 10 ANOMALIES
0945	1 NO CONTACT
	MORNING BREAK
0948	AS WE'RE DEPARTING, MEET WITH JIMMY MCGOWAN FROM DPW. HE CAME TO SEE THE 40MM WHICH EOD HAD ALREADY PICKED UP
WR	DIRECTED HIM TO SUXOS AND OBSS-USACE
1005	START G20 W/ 29 ANOMALIES, 1 GRO NO FIND
1052	LOCATED ANOMALIES ON ALL 29 FLAGS
1053	START G19 W/ 11 ANOMALIES
1120	ZERO NO CONTACTS AND ANOTHER 40MM
	SET UP ON G24 AND TOOK LUNCH
1150	START G24 - 89 ANOMALIES WITH 1 GRO NF
1428	G24 COMPLETED - TEAM SENT ON BREAK WHILE I COMPLETE DIG PHOTO
1445	TEAM STARTS G04 WITH 119 ANOMALIES

William Paul Rogers

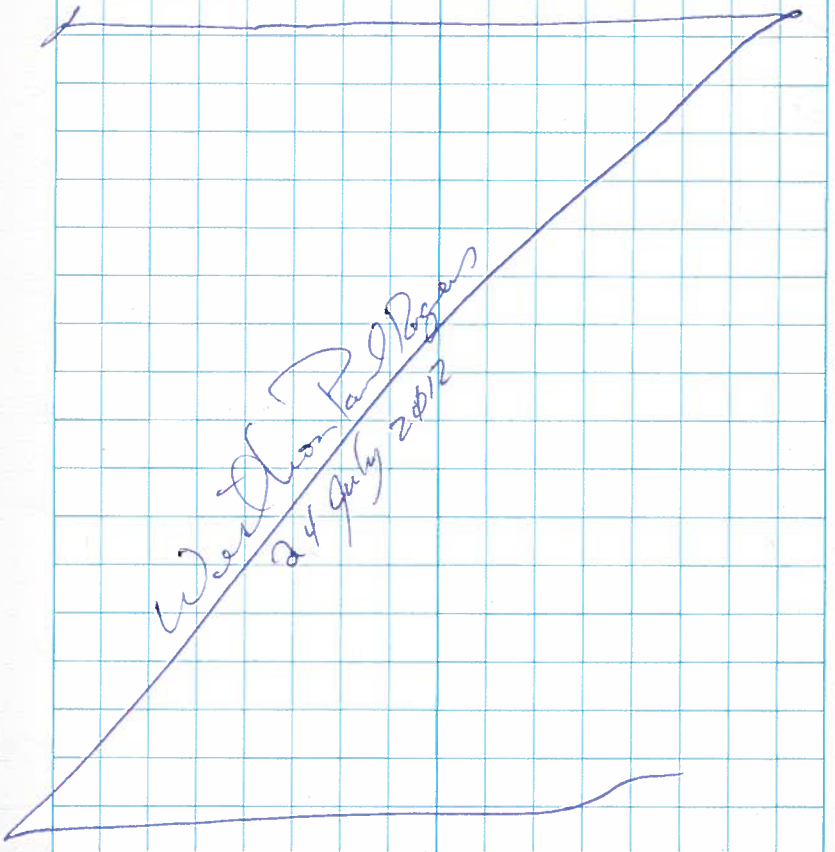
Location 24 July 2012 Date CONTINUED

Project / Client

1445 - CONTINUED - UNDER DIRECT SUPERVISION OF SUXOS WHILE I COMPLETE GRID PAPERWORK & PHOTOS

1545 - END OF DIG OPERATION DEPARTING ASP

1600 - TEAM RELEASED - NOTHING FOLLOWS



Location WEDNESDAY 25 July Date 2012

Project / Client

0645	SAFETY & OPERATIONS BRIEFINGS
0715	SCHONSTADT CHECK OUT
0730	START G-21 WITH 16 ANOMALIES WRONG AND 1 A GRO NO FIND
0806	LOCATED 1 40MM AND 21 FLAGGED ANOMALIES
0811	START G23 WITH 26 ANOMALIES - NO GRO NO FINDS
0855	~~LOCATED~~ ALL 26 ANOMALIES
0900	START G22 WITH 23 ANOMALIES, 1 A GRO NO FIND
0945	LOCATED 22 ANOMALIES, 1 A 37MM AP - 1 FLAG A NO CONTACT - MORNING BREAK
1005	START G03 WITH 29 ANOMALIES, 1 A GRO NO FIND
1024	GETTING TO MUCH ASP TRAFFIC, HAVING TO STOP TO FREQUENTLY - DECIDE TO RE LOCATE TO G07
1030	START G07 WITH 27 ANOMALIES, 1A GRO NO FIND
1115	COMPLETED - LOCATED 26 of 27, 1 NO CONTACT BREAK - TEMPERTURE CLIMBING

Wesley Paul Rogers

Location 25 July 2012 - CONTINUED Date

Project / Client

1145	- RETURN TO G03
1230	- COMPLETED WITH 1 NO CONTACT LUNCH
1320	- START G06 WITH 29 ANOMALIES 1 A GRO NO FIND SUKOS PROVIDED A SHADE TENT TO IMPROVE WORK/REST CYCLE DUE TO TEMPERATURE
1500	G06 COMPLETED 29 ANOMALIES - 1 GRO NF, 3 NO CONTACTS AND 4 ~~LOST~~ LEFT IN FLOOR (LIF) - MOVED TEAM BACK TO G24 TO FINISH FILLING DIG HOLES FROM YESTERDAY
1530	- ~~DEPART~~ ASP
1600	- ALL PERSONNEL RELEASED FOR DAY

— NOTHING FOLLOWS —

Wesley Paul Rogers
25 July 2012

8

Location THURSDAY 26 July 2012 Date

Project / Client

0645	MORNING SAFETY AND OPERATIONS BRIEFINGS
0720	CONDUCT SCHONSTADT CHECKS
0740	START of G01 WITH 49 ANOMALIES - NUMEROUS FLAGS ARR FENCE, TELEPHONE POLES OR SIGNS
0930	BREAK - VERY HOT AND VERY HUMID
0950	RETURN TO WORK, INCREASING WORK/REST cycle
1145	COMPLETED WITH 15 LIP AND 1 UNRESOLVED, LEAVING AS A NO CONTACT FOR BATTERY CLARIFICATION
1150	SETTING UP G01 - 78 ANOMALIES, NUMEROUS ARE GEO NO FINDS AND SEVERAL OBVIOUS FENCE, TELEPHONE POLES ETC
1200	LUNCH
1230	START INVESTIGATING G01 AT INCREASED WORK/REST CYCLE DUE TO HEAT
1525	COMPLETED G01 WITH 3 ANOMALIES LEFT AS NO CONTACTS
1530	DEPARTED ASP
1600	ALL PERSONNEL RELEASED

NOTHING FOLLOWS

Matthew Paul Rogers

26 July 2012

9

Location FRIDDAY 27 July 2012 Date

Project / Client

0645 - SAFETY BRIEFING AND OPERATIONAL GUIDANCE

0720 - CONDUCT SCHONSTADT CHECK

0730 - MOVE TO G02 FOR TALL GATE SAFETY

0900 COMPLETED WITH 16 LIP, 1 NO CONTACT 3 NOT DUG CULVERT, 4 NOT DUG UTILITY LINE (ONE of 5 DUG TO DEPTH - LOCATED POWER LINE - SAME ELECTRICAL GROUND ON OTHER 4)

0935 START ON SOUTHERN END OF LONG TRANSECTS 1 & 2 (240 ANOMALIES for ALL 6)

0945 - ASP WORK AT 2ND IGLOO - RELOCATE TEAM TO NORTHERN END

1200 - ONE TEAM COMPLETED T2, OTHER ABOUT 50% DONE WITH T1, UNABLE TO WORK BOTH TEAMS ON T1 DUE TO VERY HARD SOIL CONDITION AND ONLY HAVING 1 DIG BAR

MOVED TO LONG TRANSECTS 3 & 4 - SET-UP AND TOOK LUNCH

1245 - START ON T 3 & 4 - ONE TEAM EACH

1530 - ALL BUT COMPLETED AT 3 & 4 DUE TO ASP CLOSING

INVESTIGATED 99 of 240 ANOMALIES IN

Matthew Paul Rogers

Location 27 July CONTINUED Date

Project / Client

1530 LT's 1, 2, 3 + 4 - 50% of LT1 DONE
LT2 DONE, LT3 DONE, LT4 - 2 LEFT
TOTAL 8 NO CONTACTS AT THIS POINT
2 CULVERTS NOT DUG ON LT3, 2 UTIL
NOT DUG ON LT4 AND IN LT3
NUMEROUS ITEMS LIP PER SUROS GUIDANCE

1600 ALL PERSONNEL RELEASED - NOTHING
FOLLOWS

Walter Paul Rieger
27 July 2012

Location MONDAY 30 July Date 2012

Project / Client

0700 - SAFETY + OPERATIONS BRIEFING
ODR TEAM MEMBER DE MOB OVER WEEKEND
Rob SMITH

0730 - AT FORT STEWART HERO Rd CLOSED
LANDFILL TO ASSIST WITH SAMPLING
of TRENCHS - JAMES HAMRL ASSIGNED
AS 'COMPETENT PERSON' FOR TRENCHING
Bobby MORRIS. ASSIGNED AS MINI -
EXCAVATOR OPERATOR
TYLER ZAAL + SHAWN Rhodes WORKING
WITH ME ON SUROS ASSIGNED TASKS

1530 - SECURE EQUIPMENT AND SCRAP

1600 - ALL PERSONNEL RELEASED for the
DAY & NOTHING FOLLOWS

Walter Paul Rieger
30 July 2012

12

Location TUESDAY · 31 July 2012 Date

Project / Client

0645	MORNING SAFETY & OPERATIONS BRIEFING
0655	LOAD TRUCKS
0720	SCHONSTADT CHECKS
0730	START LONG TRANSECTS #5 & 6
1130	COMPLETED - 38 ANOMALIES - 10 CLIP
	7 REMAIN FOR EXCAVATOR TO DIG
	LUNCH
1200	START SHORT TRANSECT 1 - ALPHA ROW
1415	COMPLETED ST1A LAST 7 TO BE DUG
	BY EXCAVATOR
1430	MOVED TO SHORT TRANSECT 1 BRAVO SIDE
1530	STOP FOR DAY
1600	PERSONNEL RELEASED

NOTHING FOLLOWS

William Paul Rogers
31 July 2012

13

Location 1 AUG 2012 WEDNESDAY Date

Project / Client

0645 -	MORNING SAFETY & OPERATIONS BRIEFING
0655 -	LOAD TRUCKS
0720 -	SCHONSTADT CHECKS
0735 -	ASP GATE GATA
0740 -	CONTINUE SHORT TRANSECT 1 BRAVO
0845 -	COMPLETED - 5 EXCAVATOR DIGS
0855 -	STARTED SHORT TRANSECT 2 ALPHA
0940 -	MINI EXCAVATOR DELIVERED
0950 -	ST1B COMPLETED - 2 EX DIGS
	BREAK
1005 -	START SHORT TRANSECT 2 BRAVO
1120 -	ST2B COMPLETED 6 EXCAVATOR DIGS
	IANA SPLIT - HANNAH MORRIS
	OPERATING EXCAVATOR WHILE I
	FINISH PAPERWORK
	TORRES, RHOADES AND ZAAL WITH
	SUMOS GO TO 604 GRID
1225	LUNCH
1300	SAME OPERATION
1530	RUN OUT OF ASP
	MOVED TO 604 TO FINISH, PLOTS
	AND PAPERWORK
1625	DEPARTED
1700	RELEASED PERSONNEL - DONE FOR DAY

William Paul Rogers / Acft

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Location 2 AUG 2012 THURSDAY Date

Project / Client

0645 MORNING BRIEFINGS - ZAAK DEMOBBED
0655 LOAD TRUCKS
0745 DEPART HOME
0720 CHECK SCHOONERS
0730 SUKOS TAKES SHAWN RHOADES & ANDREW TORRES TO GOS, B MORRIS & W HAMAL COME WITH ME TO CLEAR EXCAVATOR HET
0900 B MORRIS SENT TO ESCORT GEO FOR QC
1200 LUNCH
1230 B MORRIS BACK WITH ME TILL GEO RETURNS
1400 B MORRIS SUPPORTING GEO FOR QC
1520 ALL EXCAVATIONS COMPLETED MOVED TO WORK WITH SUKOS TO FINISH GOS
1540 ENTIRE TEAM SUPPORTING QC OPERATIONS AND REMOVING STAKES AND FLAGS FROM QC'd GEOS
1630 DEPARTED FOR DAY
1700 RELEASED TEAM
NOTHING FOLLOWS

Walter Paul Rogers
2 AUG 2012

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Location 3 AUGUST 2012 Date

Project / Client FRIDAY

0715 - SAFETY & OPERATIONS BRIEFING TEAM TO BE SPLIT - S PHOADES (TI) & A TORRES (TI) GOING WITH SUKOS TO SUPPORT QC OPS AT AST - B MORRIS & J HAMEL WITH ME AT HERO DEL LANDFILL TO PREPARE SAMPLING SITES
0755 - LOAD TRUCKS
0805 - DEPART
0830 - HERO ROAD SITE - SITE PREPARATION
0930 - MINI EXCAVATOR ARRIVED - BEGAN REMOVING SOIL FOR SAMPLING PITS
1745 - DONE DAY
1805 - TEAM RELEASED
NOTHING FOLLOWS

Walter Paul Rogers
3 AUGUST 2012

Location 6 August 2012 Date

Project / Client Monday

0615 - Safety & Operations Briefing
0700 - On Site Hero Road Landfill conducting soil sampling
0900 - Lightning + Rain Delay
1000 - Returned to Sampling
1400 - L. Brode (GEO/Environmental) & A. Torres shipping current 14 completed samples
J. Hamel + Myself backfilling completed sampling pits
1500 - L. Brode + A. Torres return however called in a day due incoming severe weather
1515 - Team released for the day
+ Nothing follows

Weston Paul Rogers
6 August 2012

Location 7 August 2012 Date

Project / Client Tuesday

0615 - Safety & Operations Briefing
0710 - Supporting sampling at Hero Road Former Landfill
0830 - Sampling completed
Team sent to backfill sampling trenchs
Suxos & I assisting GEO with emptying conex and loading van
1045 Completed - Cleaning and turning in vehicles
1215 - Done for day - Team released
+ Nothing follows

Weston Paul Rogers
7 August 2012